**RCRA FACILITY INVESTIGATION/
REMEDIAL INVESTIGATION REPORT
WITH
BASELINE RISK ASSESSMENT**

FOR THE

**CENTRAL SHOPS BURNING/RUBBLE PIT
(631-6G)**

APPENDICES

Volume II
FINAL

APRIL 1996

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Appendix A

Results of Soil Gas Survey

Final Report

SOIL GAS INVESTIGATIONS

at the

CENTRAL SHOPS AREAS

BURNING RUBBLE PITS

(631-1G, 631-1GL, 631-3G, 631-5G, 631-6G)

SAVANNAH RIVER SITE

October, 1990 - November, 1991

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EXECUTIVE SUMMARY

Soil gas surveys were performed at the Central Shops Area Burning Rubble Pits (631-1G, 631-3G, 631-5G, and 631-6G) and at a small lagoon near 631-1G over the period October, 1990 to November, 1991. These surveys monitored the presence and distribution in these areas of the C_1 - C_4 hydrocarbons, BTXE, selected chlorinated hydrocarbons, and mercury.

At the 631-5G rubble pit, several chlorinated hydrocarbons were found in anomalous amounts including tetrachloroethylene, trichloroethylene, carbon tetrachloride, chloroform, and trans 1,2-dichloroethylene. Tetrachloroethylene and trichloroethylene were found in the largest amounts. Trace amounts of benzene and xylenes were also found at 631-5G. Light hydrocarbons, mostly methane, were moderately elevated. The presence of mercury was found substantially above background.

The magnitude of volatile organics found at the remaining sites was low, although methane at the 631-1G and 631-3G burning rubble pits was large, particularly at 631-3G where levels reached 35%. This methane is probably the result of biological degradation of cellulose and other buried organic materials. Mercury at these sites was low and may reflect background mercury normally present in soils in this area.

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I. INTRODUCTION

Soil gas surveys were designed and executed between October, 1990 and November, 1991 at SRS in the Central Shops Area at four burning rubble pits (631-5G, 631-6G, 631-3G, and 631-1G) and below the dam of a small lagoon near 631-1G. The general location of each area is shown on the index map on Figure 1. Since no building number was officially assigned to the lagoon area, the designation 631-1GL was used to designate sample sites and samples and is also used in this report. After the initial sampling at these areas, the survey in three of the areas was extended based on the review of the initial data. Area 631-5G was resampled on two occasions.

Species monitored were the light hydrocarbons (C_1-C_4), gasoline range aromatic hydrocarbons (BTXE), and selected chlorinated organics. Soil samples were analyzed for mercury. The objective of each survey was to determine the presence and extent, or absence of contamination in near surface soil gases in each area. Site locations were established, as shown on Figures 10, 29, 42, 49, and 60, and sampled for soil gases in order to accomplish these objectives. Before May, 1990 analyses of soil gas samples were carried out in an on-site laboratory staffed and equipped by Microseeps. After May, 1990 volatile organics were analyzed in Microseeps laboratory in Pittsburgh, PA. The results of these analyses are shown on Tables 1-10.

II. BACKGROUND

For many years, construction debris and other wastes at SRS were buried or burned in pits or piles in remote areas of the site. These burning rubble pits are examples of this practice. At none of these burning rubble pits was there any surficial evidence of waste except for the orange ball markers which generally outlined the area of the pits. The known disposal in these areas is documented on pages B15, B16, B17 and B18 of Volume I: Waste Management Unit Worksheets (October, 1990; WSRC-RP-90-1046). These are included in this report in Appendix II.

The Central Shops Area Lagoon survey, referenced as area 631-1GL in this report, was conducted below the dam of the small lagoon which was suspected to have received oils and or solvents. The survey was designed to determine if any such materials had spilled over the dam during periods of flooding.

The soil gas surveys were designed as a screening tool for the presence of the light hydrocarbons (C_1 - C_4); the aromatic hydrocarbons commonly associated with gasoline and other light petroleum distillates; and the more common chlorinated solvents used at SRS including methylene chloride, chloroform, carbon tetrachloride, trichloroethylene, tetrachloroethylene, trans 1,2-dichloroethylene, and vinyl chloride. Additionally, mobile mercury (mercury not associated with low vapor pressure inorganic compounds or trapped in crystal lattices) in soils was determined.

III. QUALITY ASSURANCE

Microseeps quality assurance procedures have been documented in its Quality Assurance Manual and have been audited and approved by the Department of Energy for implementation at the Westinghouse Savannah River Site. A copy of this manual in its entirety was submitted at the time of the audit and is on file. Documentation of applicable sampling and analytical methods and associated quality assurance procedures are on file in our laboratory at all times and are included in this report in Appendix I.

A. Sampling Methods

Methods and quality assurance procedures used to obtain soil gas samples are documented in Sampling Method SM1 in Appendix I. Samples were generally obtained from depths of 36" to 48". Actual sample depths for these surveys are recorded in the Sample Collection Log in Appendix II. Samples for the light hydrocarbon analyses were taken in previously evacuated 125 ml bottles. Samples for volatile organic compound (VOC) analyses were taken in previously evacuated 22 ml bottles. A duplicate sample and a blank was collected for every ten samples. The duplicate samples were taken from a separate location which was approximately 1 ft. from the original site. Logs which document the details of sample collection are included in Appendix II. Soil samples for mercury analyses were taken from a depth of 12 to 18 inches using the methods documented in Sample Method SM4 in Appendix I. A duplicate sample, from a separate location approximately 1 ft. away, was taken for every ten samples. Details of the collection of soil

samples for mercury are contained in the Mercury Sample Collection Logs in Appendix II.

B. Analytical Methods

Methods and quality assurance procedures for the analysis of light hydrocarbon soil gas samples are documented in Analytical Method AM1 and for VOC soil gas samples in Analytical Method AM4 in Appendix I. Representative chromatograms of samples and a blank from these data sets are shown on Figures 2, 3, and 4. Methods and quality assurance procedures for the analysis of mercury in soils are documented in Analytical Method AM8 in Appendix I.

C. Accuracy

Calibration of the C₁-C₄ hydrocarbon gas chromatograph was accomplished using a certified commercial standard (Matheson Gas Products Inc.) which is of the order 10 ppm for methane and 1 ppm for the other light hydrocarbons. A chromatogram of this C₁-C₄ standard (Microseeps' Standard M) is shown on Figure 5.

Calibration of the gas chromatograph used to analyze volatile organics was accomplished using standards prepared as a blend of pure compounds according to the methods documented in Standard Preparation Method SP3 which is included in Appendix I. These standards were prepared in methanol (Aldrich, HPLC grade. ICN #30), at six concentration levels as shown on Table 11. Initially standards from each of levels 1 through 6 were run to set up the calibration table. Thereafter, one standard was run for every 10 samples. A chromatogram

of Standard I, Level 3 for the FID is shown on Figure 6 and Level 4 for the ECD on Figure 7.

Calibration of the gas chromatograph for vinyl chloride was achieved using a commercial standard gas (Scotty Specialty Gases, Can Mix 74, ICN # 9) @ 1000 ppmv. Calibration of the chromatograph for hexane was achieved using a commercial standard gas (Scotty Specialty Gases, Can Mix 224, ICN #35) @ 1035 ppmv in nitrogen. Hexane must be calibrated separately since it co-elutes with trans 1,2-dichloroethylene. In cases where both are present in a sample, trans 1,2-dichloroethylene values are taken from the ECD signal and hexane is determined from the FID signal by difference. No such situation was encountered in this dataset.

D. Precision

The analytical precision was calculated using the repetitive analysis of standards as shown in Tables 12 - 15. Each Table contains all standards run as a part of a data directory. A data directory includes all sample, blank and standard data collected as a part of this soil gas contract over a period of three to five weeks. The standards, associated with this report, are a part of four data directories as shown in Tables 12 -15. Those standards directly associated with the Central Shops Area burning rubble pits surveys are designated as "6G", "5G", "3G", "1G", and "1GL" on these Tables.

For the VOC standards in general, percent standard deviations are less than 20%, and most are less than 5%. An exception is methylene chloride and the scatter in the data is due to interfering compounds

(possibly methylene chloride) from the septum. At the 10 ppbv level, percent standard deviations for the chlorinated hydrocarbons increase as background concentrations become a significant part of the overall signal.

For the light hydrocarbons, the precision is better than 4% for all hydrocarbons.

E. Minimum Detection Levels

Minimum detection levels reported in this survey for the light hydrocarbons, C_1 - C_4 , are 5 ppb. In practice a 5 ppb standard (Microseeps Standard M diluted 200:1) is reliably determined with $S/N > 2$. A chromatogram of this diluted standard is shown on Figure 9.

For the VOC standard, where peaks are well separated and the baseline is stable, signals of the order 8 uv may be detected with a $S/N \geq 4$. In a complex mixture of VOC's with many compounds, and overlapping peaks, we have determined that signals of the order 20 uv are the smallest that can be reliably and routinely determined. This corresponds to a concentration of about 70 ppbv for the gasoline range compounds; 5 ppbv for the tri- and tetra- halocarbons; and 100 ppbv for trans 1,2-dichloroethylene. We have visually checked the integration of each peak for these compounds down to these concentration levels. We have not reported concentration levels for smaller signals, though in some individual cases they may be valid.

Minimum detection levels for vinyl chloride and methylene chloride have been determined by background concentrations observed in system blanks as shown in Tables 18 - 21. The minimum detection levels for

these compounds were set at the mean plus two standard deviations of the background concentrations of these system blanks.

Under ideal conditions where an 8 uv signal can be reliably integrated, minimum detection levels may be considerably lower. Experience has shown that with our system, an 8 uv signal corresponds to approximately 40 area counts. We have used our calibration factors to calculate the amount of each compound corresponding to 40 area counts as shown on Table 17. In practice, we have set the "area reject" of our system to 40 area counts, which programs the system to reject lesser areas. This minimizes the integration of noise related events.

F. Blanks

System blanks are collected after normal purging of the probe sampler at each 10th sample location. Ambient air is drawn through the probe then displaced into evacuated vials. The vials are then given the same consideration as samples and analyzed as such. The purpose of the system blanks are to determine if and when sample to sample contamination occurs, and also to help establish background levels throughout the sampling/analysis process.

Results of the analyses of all blank samples collected during the periods of these surveys are shown on Tables 18 - 21. The symbol "ND" means "not detected" and suggests an area of less than 40 area counts as discussed above. For the calculation of means and standard deviations, the amounts indicated in Table 17 for 40 area counts were used when "ND" is indicated. Results of the analyses of blank samples for these Central Shops Area data sets are included on Tables 1 - 10, and a

representative chromatogram is shown on Figure 4. Amounts measured in the blanks have not been subtracted from the reported sample concentrations in this report.

G. Data On Magnetic Disk

All analytical data, including samples, duplicates, standards, and blanks are provided (one copy) on magnetic disk. All data are in units of ppmv or ppbv as reported on Tables 1 - 10.

All data are in Lotus 123 (Release 2, 1985) spreadsheet format using DOS (Version 4.01). All analytical data are accumulated and processed via Microseeps gas chromatographic data system. The processed data is transferred directly into the Lotus format thus ensuring the quality of the data.

V. RESULTS

A. 631-5G Burning Rubble Pit

The results of the analyses of soil gas samples for volatile organics and soil samples for mercury at the 631-5G Burning Rubble Pit are presented in Tables 1 and 2; and site locations are presented on Figure 10.

The level of several chlorinated hydrocarbons in the soil gases at this site are significant. The distribution of selected components monitored are shown in Figures 11 - 26. In particular, significant levels of tetrachloroethylene and trichloroethylene are found in the area as shown on Figures 11 - 14 and Table 1. Lower levels of chloroform, carbon tetrachloride and trans 1,2-dichloroethylene were also found in this area, as shown on Figures 15 - 18 and Table 1, however the extent of their distribution is limited relative to tetrachloroethylene and trichloroethylene. The highest levels of tetrachloroethylene and trichloroethylene are well clustered in the western end of the area as shown on Figures 11 - 14, suggesting that this may be the primary location of the contamination. Observations of carbon tetrachloride, chloroform, and trans 1,2-dichloroethylene are associated with this location as shown on Figures 15 - 18 and Table 1.

Levels of methane, as shown on Figures 19 and 20, and Table 2, are somewhat elevated in this area. Elevated levels are associated with the cluster of chlorinated hydrocarbon contamination discussed above, however the highest level observed is outside (east) of the designated pit area. Methane within the pit area may result from the biological degradation of some of the remaining discarded rubble, however the

observations to the east of the designated pit area may be due to degradation of naturally occurring organic material. Low levels of propane, shown on Figures 21 and 22, are associated with the cluster of chlorinated hydrocarbons, however only background levels are associated with the methane anomaly to the east of the pit. Levels of ethylene and propylene, which are also generated by biological processes, are low and are fairly uniformly distributed across the area.

Some low, but anomalous levels of o-xylene were found as shown in Table 1. Although, we have reported these observations, we believe that the chromatographic response at the retention time of o-xylene may in fact be due to a natural product associated with the large amounts of pinene present in the pine forest soils of this region. Although we are not calibrated for the pinenes, we are aware of their presence in soils in this area and have qualitatively verified the retention time of two major unknown peaks in many of our chromatograms as that of the pinenes. We have noticed that when we observe large pinene response, we also observe a response corresponding to o-xylene.

No concentrations of vinyl chloride are reported which are above our MDL (see section III.E) for this compound, however we acknowledge that our reported minimum detection levels are somewhat high. There are several potentially interfering compounds which co-elute with vinyl chloride on our chromatographic column. These compounds include: a freon which is present in the air in the laboratory provided to us at SRS, presumably the result of a leaking air conditioning system (freon is also present in SRS waste sites); butane, which is present in gasoline and other possible contaminants at SRS waste sites; and

methanol.

Finally, the elevated levels of mobile mercury found in soils at the 631-5G rubble pits are presented in Table 2 and on Figures 27 and 28. The highest level, 960 ng/g, was closely associated with the cluster of chlorinated hydrocarbons in the western end of the area, however several elevated observations were also found in the eastern end of the area. Levels of mercury from 2 to 6 ng/g around the perimeter of the area are representative of normal background in many areas.

B. 631-6G Burning Rubble Pit

The results of the analyses of soil gas samples for volatile organics and soil samples for mercury at the 631-6G Burning Rubble Pit are presented in Tables 3 and 4; and site locations are presented on Figure 29. Selected data are presented on Figures 30 - 41.

Only three isolated, and very low, observations of volatile organics were made at this location as shown on Figures 30 and 31, and on Table 3. These observations of toluene at site 39 and xylenes at site 29 are at the southeast end of the monitored area.

Levels of observed methane, as shown on Figures 32-33 and Table 4, are also elevated in the southeast end of the area corresponding generally to the isolated observations of aromatic hydrocarbons mentioned above. Other light hydrocarbons, as shown on Figures 34-39 are low and fairly uniformly distributed across the area.

Observed mercury concentrations, as shown on Figures 40-41 and Table 4, are in general low and perhaps represent background in this area. It is clear that the observed levels, though low, are highest in

the western end of the area.

C. 631-3G Burning Rubble Pit

The results of the analyses of soil gas samples for volatile organics and soil samples for mercury at the 631-3G Burning Rubble Pit are presented in Tables 5 and 6; and site locations are presented on Figure 42. Selected data are presented on Figures 43 - 48.

Only two observations of volatile organics were made at this area as shown on Table 5 and Figures 43 and 44. These observations of low concentrations of toluene were at the adjacent sites 6 and 7, and correspond to observations of high levels of methane as shown on Table 6 and Figures 45 and 46. The other light hydrocarbons, particularly propane, are elevated at these two sites as shown on Table 6, but are low elsewhere in the area.

Observations of mercury are generally low as shown on Table 6 and Figures 47 and 48, however they are highest in the general area of the sites where elevated levels of toluene and light hydrocarbons were observed.

D. 631-1G Burning Rubble Pit

The results of the analyses of soil gas samples for volatile organics and soil samples for mercury at the 631-1G Burning Rubble Pit are presented in Tables 7 and 8; and site locations are presented on Figure 49. Selected data are presented on Figures 50 - 59.

In general, levels of volatile organics observed at this area are low, and include trichloroethylene as shown on Figures 50 and 51, and

toluene as shown on Figures 52 and 53. Isolated, but low observations of benzene and tetrachloroethylene were made as recorded in Table 7. Several observations of o-xylene were also made as shown in Table 7 and on Figures 54 and 55. These may be related to naturally occurring pinenes as discussed above in the section related to 631-5G.

This burning rubble pit may best be outlined by the observed methane concentrations as shown on Table 8 and Figures 56 and 57. These concentrations are quite high, reaching 35% of the soil gas at one site and reflect active biological processes. The other light hydrocarbons are well correlated to the observed methane levels as shown on Table 8.

Mercury was observed to be low as shown on Table 8 and Figures 58 and 59. The highest observation, 89 ng/g , is at the southern end of the area and is not correlated to the observations of volatile organics or light hydrocarbons.

E. 631-1GL Central Shops Lagoon

The results of the analyses of soil gas samples for volatile organics and soil samples for mercury at the Central Shops Lagoon, 631-1GL are presented in Tables 9 and 10; and site locations are presented on Figure 60. Selected data are presented on Figures 61 - 62.

No evidence of volatile organics or mercury was found to indicate that waste has overflowed the dam of the small lagoon during periods of flooding.

V. CONCLUSIONS

Significant levels of tetrachloroethylene and trichloroethylene were found at the 631-5G burning rubble pit. The highest observations were well clustered in the western end of the pit and were associated with smaller levels of chloroform, carbon tetrachloride, and trans 1,2-dichloroethylene. Anomalous levels of mercury were also found, both with the clustered volatile organics and also in the eastern end of the pit.

At the 631-6G burning rubble pit, only traces of the aromatics toluene and xylenes were observed and those observations were outside the designated pit area. Somewhat elevated levels of methane were generally coincident with the aromatics.

At the 631-3G burning rubble pit, traces of toluene coincident with elevated levels of methane and other light hydrocarbons were observed at two sample locations.

At the 631-1G burning rubble pit, low levels of trichloroethylene and toluene were observed as well as isolated traces of benzene and tetrachloroethylene. Very high levels of methane were observed at numerous sites, presumably outlining the rubble pit.

No evidence of contamination associated with the Central Shops area lagoon, 631-1GL was found.

CENTRAL SHOPS AREA AREA INDEX MAP

Figure 1. Central Shops Area Index Map

File=E:\CP\D10\W10A3.17R Date printed = 01-31-1992 Time = 10:13:18

1.00 to 31.00 min. Low Y = 0.42111 mv High Y = 0.66468 mv Span = 0.24357 mv

Figure 2. Gas Chromatogram of 631-5G Soil Gases at Site 42 from the Flame Ionization Detector.

File=E:\CP\010\W1083.17R Date printed = 01-31-1992 Time = 10:03:21

1.00 to 30.00 min. Low Y = -0.65776 mv High Y = 183.52277 mv Span = 184.18053 mv

File=E:\CP\010\W1083.17R Date printed = 01-31-1992 Time = 10:04:44

1.89 to 29.91 min. Low Y = -0.11611 mv High Y = 2.02342 mv Span = 2.13953 mv

Figure 3. Gas Chromatogram of 631-5G Soil Gases at Site 42 from the Electron Capture Detector.

File=\\CP\\D10\\W10A3.11R Date printed = 01-31-1992 Time = 10:20:32

1.00 to 31.00 min. Low Y = 0.42254 mv High Y = 0.58622 mv Span = 0.16368 mv

File=\\CP\\D10\\W10B3.11R Date printed = 01-31-1992 Time = 10:23:36

2.34 to 24.49 min. Low Y = -0.00902 mv High Y = 0.81986 mv Span = 0.82888 mv

Figure 4. Gas Chromatogram of 631-5G System Blank #5

RUN # 172 OCT/28/90 18:12:09
 WORKFILE ID: B
 WORKFILE NAME:

ESTD	RT	AREA	TYPE	CAL #	AMOUNT
	0.20	2421200	SHB	1	9.800
	0.41	480750	TPV	2	0.999
	0.56	584760	TPV	3	0.999
	1.10	627440	PB	4R	0.992
	1.99	477430	PB	5	0.989
	3.21	642590	PV	6	1.003
	3.73	489990	VV	7	1.000

TOTAL AREA= 5724100
 MUL FACTOR= 1.0000E+00

Figure 5. Gas Chromatogram of C₁-C₄ Standard M

File=c:\cp\DATA1\W01A2.69R Date printed = 06-19-1991 Time = 10:46:07

4.28 to 29.86 min. Low Y = -0.40443 mv High Y = 5.86228 mv Span = 6.26671 mv

Figure 6. Gas Chromatogram of VOC Standard I, Level 3, from the Flame Ionization Detector

File=c:\cp\DATA2\W0182.95R Date printed = 06-19-1991 Time = 10:52:58

2.00 to 30.00 min. Low Y = -0.06531 mv High Y = 84.69101 mv Span = 84.75632 mv

File=c:\cp\DATA2\W0182.95R Date printed = 06-19-1991 Time = 10:54:59

2.50 to 29.91 min. Low Y = 0.00791 mv High Y = 8.84310 mv Span = 8.83519 mv

Figure 7. Gas Chromatogram of VOC Standard I, Level 4, from the Electron Capture Detector

Retention Time of Benzene vs. Room Temperature

Figure 8. Retention Time of Benzene vs. Room Temperature

File=A:\W1C2.17R from 0.01 to 4.00 min. Low scale = 0.1120 mv. High scale = 0.1473 mv.

File=A:\W1C2.17R from 0.02 to 1.05 min. Low scale = 0.1137 mv. High scale = 0.1273 mv.

Figure 9: Gas Chromatogram of C₁-C₄ Hydrocarbon Standard M @ 200:1 Dilution in N₂

631-5G RUBBLE PIT SAMPLE LOCATION MAP

SCALE 1 inch = 100 FEET

Figure 10. Burning Rubble Pit 631-5G Sample Location Map

631-5G RUBBLE PIT TETRACHLOROETHYLENE CONCENTRATION

Figure 11. Burning Rubble Pit 631-5G Tetrachloroethylene Symbol Map

631-5G RUBBLE PIT TETRACHLOROETHYLENE CONCENTRATION - (ppmv)

Figure 12. Burning Rubble Pit 631-5G Tetrachloroethylene (ppmv) Map

631-5G RUBBLE PIT TRICHLOROETHYLENE CONCENTRATION

Figure 13. Burning Rubble Pit 631-5G Trichloroethylene Symbol Map

Note: Posted 0 Denotes
< M.D.L. of .005 ppmv

ORANGE BALL

Concentration (ppmv)

51550 51650 51750 51850 51950 52050 52150 52250

64650 64750 64850 64950 65050 65150

2.689 4.04 0.033 0.151 0.044 0.056 0.602 0.109 0.031 0.007 0.008 0.006 0.005

[illegible]

Figure 14. Burning Rubble Pit 631-5G Trichloroethylene (ppmv) Map

631-5G RUBBLE PIT CARBON TETRACHLORIDE CONCENTRATION

Figure 15. Burning Rubble Pit 631-5G Carbon Tetrachloride Symbol Map

631-5G RUBBLE PIT CARBON TETRACHLORIDE CONCENTRATION - (ppmv)

Figure 16. Burning Rubble Pit 631-5G Carbon Tetrachloride (ppmv) Map

631-5G RUBBLE PIT CHLOROFORM CONCENTRATION

SCALE 1 Inch = 100 FEET

Figure 17. Burning Rubble Pit 631-5G Chloroform Symbol Map

631-5G RUBBLE PIT CHLOROFORM CONCENTRATION - (ppmv)

Figure 18. Burning Rubble Pit 631-5G Chloroform (ppmv) Map

631-5G RUBBLE PIT METHANE CONCENTRATION

SCALE 1 inch = 100 FEET

Figure 19. Burning Rubble Pit 631-5G Methane Symbol Map

631-5G RUBBLE PIT METHANE CONCENTRATION - (ppbv)

631-5G RUBBLE PIT PROPANE CONCENTRATION

Figure 21. Burning Rubble Pit 631-5G Propane Symbol Map

631-5G RUBBLE PIT PROPANE CONCENTRATION - (ppbv)

Figure 22. Burning Rubble Pit 631-5G Propane (ppbv) Map

631-5G RUBBLE PIT ETHYLENE CONCENTRATION

Figure 23. Burning Rubble Pit 631-5G Ethylene Symbol Map

631-5G RUBBLE PIT ETHYLENE CONCENTRATION -- (ppbv)

SCALE 1 inch = 100 FEET

Figure 24. Burning Rubble Pit 631-5G Ethylene (ppbv) Map

631-5G RUBBLE PIT PROPYLENE CONCENTRATION

SCALE 1 Inch = 100 FEET

Figure 25. Burning Rubble Pit 631-5G Propylene Symbol Map

631-5G RUBBLE PIT PROPYLENE CONCENTRATION - (ppbv)

Figure 26. Burning Rubble Pit 631-5G Propylene(ppbv) Map

631-5G RUBBLE PIT MERCURY CONCENTRATION

SCALE 1 Inch = 100 FEET

Figure 27. Burning Rubble Pit 631-5G Mercury Symbol Map

631-5G RUBBLE PIT MERCURY CONCENTRATION - (ng/g)

SCALE 1 Inch = 100 FEET

Figure 28. Burning Rubble Pit 631-5G Mercury (ng/g) Map

631-6G BURNING RUBBLE PIT SITE LOCATION MAP

Figure 29. Burning Rubble Pit 631-6G Site Location Map

Figure 30. Burning Rubble Pit 631-6G Toluene Symbol Map

Figure 31. Burning Rubble Pit 631-6G Toluene (ppmv) Map

Figure 32. Burning Rubble Pit 631-6G Methane Symbol Map

Figure 33. Burning Rubble Pit 631-6G Methane (ppbv) Map

Figure 34. Burning Rubble Pit 631-6G Propane Symbol Map

Figure 35. Burning Rubble Pit 631-6G Propane (ppbv) Map

Figure 36. Burning Rubble Pit 631-6G Ethylene Symbol Map

Figure 37. Burning Rubble Pit 631-6G Ethylene (ppbv) Map

Figure 38. Burning Rubble Pit 631-6G Propylene Symbol Map

Figure 39. Burning Rubble Pit 631-6G Propylene (ppbv) Map

Figure 40. Burning Rubble Pit 631-6G Mercury Symbol Map

Figure 41. Burning Rubble Pit 631-6G Mercury (ng/g) Map

Figure 42. Burning Rubble Pit 631-3G Site Location Map

Figure 43. Burning Rubble Pit 631-3G Toluene Symbol Map

Figure 44. Burning Rubble Pit 631-3G Toluene (ppmv) Map

631-3G RUBBLE BURN PIT METHANE CONCENTRATION

Figure 45. Burning Rubble Pit 631-3G Methane Symbol Map

Figure 46. Burning Rubble Pit 631-3G Methane (ppbv) Map

Figure 47. Burning Rubble Pit 631-3G Mercury Symbol Map

Figure 48. Burning Rubble Pit 631-3G Mercury (ng/g) Map

631-1G RUBBLE BURN PIT SITE LOCATION MAP

SCALE 1 Inch = 60 feet

Figure 49. Burning Rubble Pit 631-1G Site Location Map

631-1G RUBBLE BURN PIT TRICHLOROETHYLENE CONCENTRATION

Figure 50. Burning Rubble Pit 631-1G Trichloroethylene Symbol Map

631-1G RUBB1 BURN PIT

Figure 51. Burning Rubble Pit 631-1G Trichloroethylene (ppbv) Map

631-1G RUBBLE BURN PIT TOLUENE CONCENTRATION

Figure 52. Burning Rubble Pit 631-1G Toluene Symbol Map

631-1G RUBBLE PIT TOLUENE CONCENTRATION - (ppbv)

SCALE 1 inch = 60 feet

Figure 53. Burning Rubble Pit 631-1G Toluene (ppbv) Map

631-1G RUBBLE BURN PIT O-XYLENE CONCENTRATION

Figure 54. Burning Rubble Pit 631-1G o-Xylene Symbol Map

631-1G RUBBL₁ BURN PIT O-XYLENE CONCENTRATION - (ppbv)

SCALE 1 inch = 60 feet

Figure 55. Burning Rubble Pit 631-1G o-Xylene (ppbv) Map

631-1G RUBBLE BURN PIT METHANE CONCENTRATION

SCALE 1 inch = 60 feet

Figure 56. Burning Rubble Pit 631-1G Methane Symbol Map

631-1G RUBBL BURN PIT METHANE CONCENTRATION - (ppmv)

Figure 57. Burning Rubble Pit 631-1G Methane (ppbv) Map

631-1G RUBBLE BURN PIT MERCURY CONCENTRATION

Figure 58. Burning Rubble Pit 631-1G Mercury Symbol Map

631-1G RUBBLE PIT BURN MERCURY CONCENTRATION - (ng/g)

Figure 59. Burning Rubble Pit 631-1G Mercury (ng/g) Map

631 - 1GL RUBBLE BURN PIT SITE LOCATION MAP

Figure 60. Burning Rubble Pit 631-1GL Site Location Map

631 - 1GL RUBBLE BURN PIT METHANE CONCENTRATION

631 - 1GL RUBBLE BURN PIT METHANE CONCENTRATION - (ppmv)

Figure 62. Burning Rubble Pit 631-1GL Methane (ppmv) Map

----- SAVANNAH RIVER SITE -----
----- 631-5G AREA RUBBLE PIT -----
----- SOIL GAS CONCENTRATIONS (PPHV) -----

SAMPLE #	TRANS 1,2			CARBON			TRICHLORO			TETRA			H&P XYLENE	O XYLENE
	VINYL CHLORIDE	METHYLENE CHLORIDE	DICHLORO ETHYLENE	CHLOROFORM	CHLORIDE	TETRA	BENZENE	ETHYLENE	TOLUENE	ETHYLENE	CHLORO BENZENE			
631-5G 1	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	0.033	<.07	0.013	<.07	<.07	<.07	<.07
631-5G 2	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	4.040	<.07	3.460	<.07	<.07	<.07	<.07
631-5G 3	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	0.602	<.07	6.310	<.07	<.07	<.07	<.07
631-5G 4	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	0.031	<.07	1.580	<.07	<.07	<.07	<.07
631-5G 5	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	0.256	<.07	<.07	<.07	<.07
631-5G 6	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	0.090	<.07	<.07	<.07	<.07
631-5G 7	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	0.006	<.07	0.487	<.07	<.07	<.07	<.07
631-5G 8	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	0.026	<.07	<.07	<.07	<.07
631-5G 9	<2.0	<2.0	<1	0.016	0.026	0.10	0.10	0.151	<.07	0.174	<.07	<.07	0.14	<.07
631-5G 10	<2.0	<2.0	0.4	0.039	<.005	<.07	<.07	4.000	<.07	37.550	<.07	<.07	<.07	<.07
631-5G 10A	<2.0	<2.0	0.3	0.027	<.005	<.07	<.07	3.000	<.07	25.970	<.07	<.07	<.07	<.07
631-5G 11	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	0.109	<.07	2.430	<.07	<.07	<.07	<.07
631-5G 12	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	0.271	<.07	<.07	<.07	<.07
631-5G 13	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	0.007	<.07	0.050	<.07	<.07	<.07	<.07
631-5G 14	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	0.008	<.07	0.225	<.07	<.07	<.07	<.07
631-5G 15	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	0.218	<.07	<.07	<.07	<.07
631-5G 16	<2.0	<2.0	<1	<.005	0.037	0.037	<.07	0.044	<.07	0.035	<.07	<.07	<.07	<.07
631-5G 17	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	0.056	<.07	7.820	<.07	<.07	<.07	<.07
631-5G 18	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	2.410	<.07	<.07	<.07	<.07
631-5G 19	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	0.420	<.07	<.07	<.07	<.07
631-5G 20	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	0.033	<.07	<.07	<.07	<.07
631-5G 20A	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	0.023	<.07	<.07	<.07	<.07
631-5G 21	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	0.018	<.07	<.07	<.07	<.07
631-5G 22	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	0.033	<.07	<.07	<.07	<.07
631-5G 23	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	0.025	<.07	<.07	<.07	<.07
631-5G 24	<2.0	<2.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07
631-5G 25	<1.0	<1.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	0.017	<.07	<.07	<.07	<.07
631-5G 26	<1.0	<1.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	1.224	<.07	<.07	<.07	<.07
631-5G 27	<1.0	<1.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	0.047	<.07	<.07	<.07	<.07
631-5G 28	<1.0	<1.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	0.009	<.07	<.07	<.07	<.07

Table 1. Hydrocarbon and Chlorinated Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-5G Burning Rubble Pit

[illegible]

----- SAVANNAH RIVER SITE -----
----- 631-5G AREA RUBBLE PIT -----
----- SOIL GAS CONCENTRATIONS (PPHV) -----

SAMPLE #	TRANS 1,2				CARBON				TETRA				TRICHLORO				TETRA				O
	VINYL		METHYLENE		DICHLORO		TETRA		TRICHLORO		TETRA		TRICHLORO		TETRA		TETRA				
	CHLORIDE	CHLORIDE	CHLORIDE	CHLORIDE	ETHYLENE	CHLOROFORM	CHLORIDE	CHLORIDE	BENZENE	ETHYLENE	TOLUENE	ETHYLENE	CHLORO	ETHYL	MRP	XYLENE	XYLENE				
631-5G 56	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 57	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 58	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 59	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 60	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 60A	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 61	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 62	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	0.033	<.07	<.07	<.07	<.07	<.07			
631-5G 63	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 64	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	0.005	<.07	<.07	<.07	<.07	<.07			
631-5G 65	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 66	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 67	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 68	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 69	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 70	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	0.27	<.07			
631-5G 70A	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	0.21	<.07			
631-5G 71	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 72	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 73	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	0.006	<.07	<.07	<.07	<.07	<.07			
631-5G 74	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 75	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 76	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 77	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 78	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 79	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 80	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 80A	<1.0	<1.0	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 81	<2.0	<2.0	<2.0	<2.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07			
631-5G 82	<2.0	<2.0	<2.0	<2.0	<.1	<.005	<.005	<.005	<.07	0.005	<.07	0.005	0.101	<.07	<.07	<.07	<.07	<.07			

Table 1. Hydrocarbon and Chlorinated Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-5G Burning Rubble Pit

----- SAVANNAH RIVER SITE -----
----- 631-5G AREA RUBBLE PIT -----
----- SOIL GAS CONCENTRATIONS (PPHV) -----

SAMPLE #	VINYL		TRANS 1,2		CARBON		TRICHLORO		TOLUENE		TETRA		ETHYL		M&P		O
	CHLORIDE	METHYLENE CHLORIDE	ETHYLENE DICHLORO	ETHYLENE CHLOROFORM	TETRA CHLORIDE	TETRA	BENZENE	ETHYLENE	BENZENE	ETHYLENE	CHLORO ETHYLENE	BENZENE	BENZENE	XYLENE	XYLENE	XYLENE	
631-5G SB3	<2.0	<2.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07
631-5G SB4	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07
631-5G SB5	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07
631-5G SB6	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07
631-5G SB7	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07
631-5G SB8	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07
631-5G SB9	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07
631-5G SB10	<1.0	<1.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.005	<.07	<.07	<.07	<.07	<.07

Table 1. Hydrocarbon and Chlorinated Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-5G Burning Rubble Pit

----- SAVANNAH RIVER SITE -----
----- 631-5G AREA RUBBLE PIT -----
----- SOIL GAS CONCENTRATIONS (PPHV) -----

SAMPLE #		METHANE PPBV	ETHANE PPBV	PROPANE PPBV	I-BUTANE PPBV	N-BUTANE PPBV	ETHYLENE PPBV	PROPYLENE PPBV	MERCURY ng/g	SAMPLE #
631-5G	1	1078	40	15	<5	<5	23	24	56	631-5G 1
631-5G	2	3321	66	7	<5	<5	11	20	132	631-5G 2
631-5G	3	1087	30	9	<5	<5	10	13	22	631-5G 3
631-5G	4	3818	55	24	<5	<5	34	40	57	631-5G 4
631-5G	5	376	11	5	<5	<5	7	7	21	631-5G 5
631-5G	6	1140	38	21	10	<5	25	29	725	631-5G 6
631-5G	7	723	15	7	<5	<5	8	5	315	631-5G 7
631-5G	8	806	20	8	8	<5	13	16	337	631-5G 8
631-5G	9	5004	562	569	184	300	67	89	960	631-5G 9
631-5G	10	12117	1051	919	110	503	45	119	272	631-5G 10
631-5G	10A	10140	206	76	16	12	15	22	157	631-5G 10A
631-5G	11	1654	204	221	73	162	11	20	25	631-5G 11
631-5G	12	502	28	11	<5	<5	34	32	15	631-5G 12
631-5G	13	4896	75	51	10	12	15	19	277	631-5G 13
631-5G	14	1112	12	8	<5	<5	<5	5	152	631-5G 14
631-5G	15	726	<5	7	<5	<5	9	5	28	631-5G 15
631-5G	16	589	12	<5	<5	<5	6	5	12	631-5G 16
631-5G	17	1000	34	13	<5	<5	20	26	15	631-5G 17
631-5G	18	724	33	14	<5	<5	21	26	13	631-5G 18
631-5G	19	767	33	13	9	<5	21	27	10	631-5G 19
631-5G	20	189	18	7	<5	<5	13	11	209	631-5G 20
631-5G	20A	591	46	19	<5	<5	25	34	89	631-5G 20A
631-5G	21	456	17	<5	<5	<5	7	<5	10	631-5G 21
631-5G	22	603	10	5	<5	<5	6	<5	13	631-5G 22
631-5G	23	828	21	9	<5	<5	8	<5	69	631-5G 23
631-5G	24	650	28	10	10	<5	16	10	9	631-5G 24
631-5G	25	462	31	10	<5	<5	22	75	4	631-5G 25
631-5G	26	489	54	22	<5	<5	37	96	5	631-5G 26
631-5G	27	781	81	31	<5	<5	61	133	4	631-5G 27
631-5G	28	877	92	35	<5	<5	66	173	3	631-5G 28
631-5G	29	357	37	18	<5	<5	30	136	2	631-5G 29
631-5G	30	303	44	18	<5	<5	32	96	4	631-5G 30
631-5G	30A	340	33	13	<5	<5	26	86	3	631-5G 30A
631-5G	31	192	17	7	<5	<5	11	77	4	631-5G 31
631-5G	32	754	73	29	<5	<5	50	123	3	631-5G 32
631-5G	33	1211	118	47	<5	<5	90	219	1	631-5G 33
631-5G	34	462	35	22	<5	<5	25	90	3	631-5G 34
631-5G	35	363	42	21	<5	<5	29	108	3	631-5G 35
631-5G	36	1632	159	70	<5	<5	128	202	2	631-5G 36
631-5G	37	234	20	5	<5	<5	16	73	6	631-5G 37
631-5G	38	242	18	<5	<5	<5	12	62	6	631-5G 38
631-5G	39	363	34	12	<5	<5	22	84	3	631-5G 39
631-5G	40	1071	93	34	<5	<5	64	135	3	631-5G 40
631-5G	40A	357	57	14	<5	<5	30	85	5	631-5G 40A
631-5G	41	512	44	23	<5	<5	39	105	6	631-5G 41
631-5G	42	889	<5	15	<5	<5	34	123	3	631-5G 42
631-5G	43	1653	49	14	<5	<5	21	82	4	631-5G 43
631-5G	44	1172	97	36	<5	<5	72	150	2	631-5G 44
631-5G	45	364	35	17	<5	<5	25	78	4	631-5G 45
631-5G	46	1114	87	30	<5	<5	73	127	3	631-5G 46
631-5G	47	322	24	8	10	<5	13	21	8	631-5G 47

Table 2. Light Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-5G Burning Rubble Pit

----- SAVANNAH RIVER SITE -----
----- 631-5G AREA RUBBLE PIT -----
----- SOIL GAS CONCENTRATIONS (PPMV) -----

SAMPLE #		METHANE PPBV	ETHANE PPBV	PROPANE PPBV	I-BUTANE PPBV	N-BUTANE PPBV	ETHYLENE PPBV	PROPYLENE PPBV	MERCURY ng/g	SAMPLE #	
631-5G	48	642	69	22	35	<5	37	52	5	631-5G	48
631-5G	49	230	30	11	<5	<5	15	25	3	631-5G	49
631-5G	50	391	25	9	<5	<5	11	29	3	631-5G	50
631-5G	50A	288	27	9	6	<5	13	23	3	631-5G	50A
631-5G	51	452	15	<5	<5	<5	9	12	2	631-5G	51
631-5G	52	191	21	9	<5	<5	14	24	2	631-5G	52
631-5G	53	864	123	48	47	15	76	110	2	631-5G	53
631-5G	54	618	54	19	<5	<5	31	44	3	631-5G	54
631-5G	55	153	20	5	<5	<5	12	17	1	631-5G	55
631-5G	56	169	15	6	<5	<5	11	14	1	631-5G	56
631-5G	57	218	15	8	<5	<5	7	17	2	631-5G	57
631-5G	58	2179	100	33	45	<5	56	80	2	631-5G	58
631-5G	59	235	17	<5	5	<5	8	13	1	631-5G	59
631-5G	60	215	19	5	<5	<5	10	19	1	631-5G	60
631-5G	60A	199	19	<5	<5	<5	9	22	1	631-5G	60A
631-5G	61	169	16	<5	<5	<5	9	24	2	631-5G	61
631-5G	62	191	18	7	<5	<5	9	20	1	631-5G	62
631-5G	63	147	12	<5	<5	<5	7	22	2	631-5G	63
631-5G	64	236	21	6	<5	<5	13	25	1	631-5G	64
631-5G	65	290	46	17	<5	16	31	50	2	631-5G	65
631-5G	66	275	27	8	<5	<5	17	27	2	631-5G	66
631-5G	67	168	16	<5	<5	<5	10	22	2	631-5G	67
631-5G	68	137	22	5	<5	<5	14	23	2	631-5G	68
631-5G	69	195	21	9	<5	6	15	20	2	631-5G	69
631-5G	70	31017	28	14	<5	<5	19	27	6	631-5G	70
631-5G	70A	2293	105	39	<5	25	60	71	1	631-5G	70A
631-5G	71	16514	21	13	<5	<5	17	25	2	631-5G	71
631-5G	72	168	10	<5	<5	<5	5	9	2	631-5G	72
631-5G	73	175	20	5	<5	<5	18	26	6	631-5G	73
631-5G	74	662	62	17	<5	<5	33	46	2	631-5G	74
631-5G	75	427	43	13	<5	<5	28	36	2	631-5G	75
631-5G	76	160	20	6	<5	<5	14	24	2	631-5G	76
631-5G	77	229	27	11	<5	12	18	29	2	631-5G	77
631-5G	78	76	13	22	<5	<5	7	<5	3	631-5G	78
631-5G	79	237	29	7	<5	9	21	27	2	631-5G	79
631-5G	80	412	33	10	<5	<5	23	26	1	631-5G	80
631-5G	80A	214	23	15	<5	<5	18	36	3	631-5G	80A
631-5G	S81	2150	<5	<5	<5	<5	<5	<5	NA	631-5G	S81
631-5G	S82	2098	<5	<5	<5	<5	<5	<5	NA	631-5G	S82
631-5G	S83	2000	<5	<5	<5	<5	<5	<5	NA	631-5G	S83
631-5G	S84	2095	8	<5	<5	<5	<5	51	NA	631-5G	S84
631-5G	S85	2206	8	7	<5	<5	<5	50	NA	631-5G	S85
631-5G	S86	2206	7	<5	<5	<5	<5	85	NA	631-5G	S86
631-5G	S87	1816	11	<5	<5	<5	5	18	NA	631-5G	S87
631-5G	S88	1894	11	7	<5	<5	6	13	NA	631-5G	S88
631-5G	S89	1718	9	<5	<5	<5	<5	12	NA	631-5G	S89
631-5G	S810	1724	10	<5	<5	<5	<5	10	NA	631-5G	S810

Table 2. Light Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-5G Burning Rubble Pit

[illegible]

Table 3. Hydrocarbon and Chlorinated Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-6G Burning Rubble Pit

----- WESTINGHOUSE SAVANNAH RIVER SITE -----
----- 631-6G AREA RUBBLE PIT -----
----- SOIL GAS CONCENTRATIONS (PPHV) -----

SAMPLE #	VINYL		TRANS 1,2		CARBON		TRICHLORO		TETRA		TETRA		H&P	O
	CHLORIDE	METHYLENE CHLORIDE	DICHLORO ETHYLENE	CHLOROFORM	CHLORIDE	TETRA CHLORIDE	BENZENE	ETHYLENE	ETHYLENE	TOLUENE	CHLORO ETHYLENE	ETHYL BENZENE	XYLENE	XYLENE
631-6G 28	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G 29	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	0.10	0.20
631-6G 30A	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G 31	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G 32	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G 33	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G 34	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G 35	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G 36	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G 37	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G 38	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G 39	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	0.33	<.005	<.07	<.07	<.07
631-6G 40	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G 40A	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G 41	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G 42	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G 43	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G 44	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G 45	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G SB1	<2.0	<2.0	<2.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G SB2	<2.0	<2.0	<2.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G SB3	<2.0	<2.0	<2.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G SB4	<2.0	<2.0	<2.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G SB5	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G SB6	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07
631-6G SB7	<1.0	<1.0	<1.0	<.005	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.07	<.07	<.07

Table 3. Hydrocarbon and Chlorinated Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-6G Burning Rubble Pit

----- WESTINGHOUSE SAVANNAH RIVER SITE -----

----- 631-6G AREA RUBBLE PIT -----

----- SOIL GAS CONCENTRATIONS -----

SAMPLE #	METHANE PPBV	ETHANE PPBV	PROPANE PPBV	1-BUTANE PPBV	N-BUTANE PPBV	ETHYLENE PPBV	PROPYLENE PPBV	MERCURY ng/g	SAMPLE #
631-6G 1	2040	63	22	11	<5	45	48	23	631-6G 1
631-6G 2	5332	179	60	69	21	139	126	37	631-6G 2
631-6G 3	1026	67	26	9	2	44	52	22	631-6G 3
631-6G 4	1819	99	35	12	6	58	65	22	631-6G 4
631-6G 5C	3159	140	49	61	4	89	96	18	631-6G 5
631-6G 6C	2574	88	29	27	2	59	64	8	631-6G 6
631-6G 6D	584	35	15	8	<5	24	31	5	631-6G 6A
631-6G 7C	966	32	9	9	<5	16	17	15	631-6G 7
631-6G 8C	1676	112	43	27	3	74	91	7	631-6G 8
631-6G 9C	1530	110	40	43	4	84	86	25	631-6G 9
631-6G 10C	195	17	7	<5	<5	12	12	6	631-6G 10
631-6G 11	598	31	13	6	<5	22	28	3	631-6G 11
631-6G 12	429	26	12	4	2	19	26	4	631-6G 12
631-6G 13	206	14	6	9	<5	12	13	6	631-6G 13
631-6G 14	437	20	10	5	<5	11	17	9	631-6G 14
631-6G 15	540	25	12	7	<5	16	23	16	631-6G 15
631-6G 16	1451	201	230	59	188	18	37	44	631-6G 16
631-6G 16A	2985	476	528	116	264	21	40	6	631-6G 16A
631-6G 17	3210	1185	1616	344	1028	106	175	19	631-6G 17
631-6G 18	1405	70	26	1	<5	50	60	21	631-6G 18
631-6G 19	1622	48	20	23	<5	40	55	11	631-6G 19
631-6G 20	7683	279	92	125	40	242	249	6	631-6G 20
631-6G 21	5361	443	161	118	67	315	386	20	631-6G 21
631-6G 22	4625	190	59	62	8	118	151	3	631-6G 22
631-6G 23	810	16	6	<5	<5	12	15	3	631-6G 23
631-6G 24	1128	50	21	<5	<5	63	67	18	631-6G 24
631-6G 25	3543	142	48	<5	<5	89	113	8	631-6G 25
631-6G 26	4107	166	62	11	208	108	134	7	631-6G 26
631-6G 26A	2968	492	445	<5	<5	45	71	14	631-6G 26A
631-6G 27	780	78	30	8	<5	63	87	8	631-6G 27
631-6G 28	71054	73	41	<5	141	36	54	6	631-6G 28
631-6G 29	3576000	167	247	<5	28	136	234	6	631-6G 29
631-6G 30A	391410	121	144	<5	<5	83	119	5	631-6G 30A
631-6G 31	4674	187	61	<5	<5	92	129	2	631-6G 31
631-6G 32	49992	110	43	<5	<5	64	88	4	631-6G 32
631-6G 33	4545	174	58	<5	47	117	143	7	631-6G 33
631-6G 34	4818	329	134	<5	100	219	303	11	631-6G 34
631-6G 35	4874	702	243	<5	<5	306	417	2	631-6G 35
631-6G 36	1350	172	69	<5	<5	114	163	5	631-6G 36
631-6G 37	2427	138	49	<5	<5	80	106	6	631-6G 37
631-6G 38	1022	164	64	<5	<5	94	138	3	631-6G 38
631-6G 39	5204	262	78	<5	<5	99	129	3	631-6G 39
631-6G 40	5244	346	129	<5	<5	227	280	2	631-6G 40
631-6G 40A	4008	137	47	<5	<5	93	118	2	631-6G 40A
631-6G 41	4053	134	50	<5	<5	134	169	3	631-6G 41
631-6G 42	3303	149	54	<5	<5	135	234	1	631-6G 42
631-6G 43	817	105	126	8	79	29	96	NA	631-6G 43
631-6G 44	392	24	10	<5	<5	20	81	NA	631-6G 44
631-6G 45	679	53	23	<5	<5	42	121	NA	631-6G 45
631-6G SB1	1920	<5	<5	<5	<5	<5	<5	NA	631-6G SB1
631-6G SB2	2041	<5	<5	<5	<5	<5	<5	NA	631-6G SB2

Table 4. Light Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-6G Burning Rubble Pit

----- WESTINGHOUSE SAVANNAH RIVER SITE -----
----- 631-6G AREA RUBBLE PIT -----
----- SOIL GAS CONCENTRATIONS -----

SAMPLE #	METHANE PPBV	ETHANE PPBV	PROPANE PPBV	I-BUTANE PPBV	N-BUTANE PPBV	ETHYLENE PPBV	PROPYLENE PPBV	MERCURY ng/g	SAMPLE #
631-6G SB3	2061	<5	<5	<5	<5	<5	<5	NA	631-6G SB3
631-6G SB4	NA	NA	NA	NA	NA	NA	NA	NA	631-6G SB4
631-6G SB5	2364	8	<5	<5	<5	<5	18	NA	631-6G SB5
631-6G SB6	3447	9	<5	<5	<5	<5	19	NA	631-6G SB6
631-6G SB7	2173	10	<5	<5	<5	<5	56	NA	631-6G SB7

Table 4. Light Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-6G Burning Rubble Pit

..... SOIL GAS CONCENTRATIONS ✓)

SAMPLE #	VINYL		TRANS 1,2		CARBON			TETRA				TETRA				H&P XYLENE	O	SAMPLE #
	CHLORIDE	METHYLENE CHLORIDE	DICHLORO ETHYLENE	CHLOROFORM	TETRA CHLORIDE	TRICHLORO		CHLORO		ETHYL BENZENE	M&P XYLENE	CHLORO ETHYLENE	ETHYL BENZENE					
						BENZENE	ETHYLENE	TOLUENE	ETHYLENE									
631-3G 1	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 1		
631-3G 2	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 2		
631-3G 3	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 3		
631-3G 3A	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 3A		
631-3G 4	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 4		
631-3G 5	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 5		
631-3G 6	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	0.15	<0.05	<0.07	<0.07	<0.07	631-3G 6		
631-3G 7	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	0.22	<0.05	<0.07	<0.07	<0.07	631-3G 7		
631-3G 8	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 8		
631-3G 9	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 9		
631-3G 10	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 10		
631-3G 11	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 11		
631-3G 12A	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 12A		
631-3G 12B	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 12B		
631-3G 13A	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 13A		
631-3G 14	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 14		
631-3G 15	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 15		
631-3G 16	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 16		
631-3G 17	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 17		
631-3G 18	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 18		
631-3G 19	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 19		
631-3G 20	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 20		
631-3G 21	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 21		
631-3G 22	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 22		
631-3G 23	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 23		
631-3G 23A	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 23A		
631-3G 24	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 24		
631-3G 25	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 25		
631-3G 26	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 26		
631-3G 27	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 27		
631-3G 28	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 28		
631-3G 29	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 29		
631-3G 30	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G 30		
631-3G S81	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G S81		
631-3G S82	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G S82		
631-3G S83	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G S83		
631-3G S84	<2.0	<2.0	<1	<0.05	<0.05	<0.07	<0.05	<0.07	<0.05	<0.07	<0.07	<0.05	<0.07	<0.07	<0.07	631-3G S84		

Table 5. Hydrocarbon and Chlorinated Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-3G

----- SAVANNAH RIVER SITE -----
 ----- 631-3G AREA -----
 ----- SOIL GAS CONCENTRATIONS -----

SAMPLE #		METHANE %	METHANE PPBV	ETHANE PPBV	PROPANE PPBV	I-BUTANE PPBV	N-BUTANE PPBV	ETHYLENE PPBV	PROPYLENE PPBV	MERCURY PPB/WT
631-3G	1	0.0	2854	63	26	<5	<5	58	60	8
631-3G	2	0.0	5992	42	18	<5	<5	36	39	3
631-3G	3	0.0	70125	21	15	<5	<5	19	18	2
631-3G	3A	0.0	13736	19	10	<5	<5	17	16	6
631-3G	4	0.0	3038	19	9	<5	<5	17	17	2
631-3G	5	0.1	648256	38	93	34	39	20	22	6
631-3G	6	1.7	17218870	155	1546	188	113	14	84	4
631-3G	7	3.3	33001150	1132	7488	1277	1441	<5	602	8
631-3G	8	0.0	2151	19	6	<5	<5	9	13	21
631-3G	9	0.0	3369	96	35	16	<5	63	66	25
631-3G	10	0.0	10449	1198	876	143	334	1048	324	<1
631-3G	11	0.0	2409	43	19	15	<5	29	30	5
631-3G	12	0.0	3281	12	<5	<5	<5	9	<5	34
631-3G	12A	0.0	434523	73	170	28	<5	37	38	7
631-3G	13	0.0	24244	90	33	<5	<5	63	56	13
631-3G	14	0.1	558035	25	34	12	<5	11	16	6
631-3G	15	0.0	42749	84	33	11	<5	59	52	15
631-3G	16	0.0	2523	18	5	<5	<5	14	12	4
631-3G	17	0.0	2550	27	12	<5	<5	19	17	<1
631-3G	18	0.0	3775	70	20	<5	<5	61	50	5
631-3G	19	0.0	3476	50	17	<5	<5	40	38	12
631-3G	20	0.0	2474	64	22	<5	<5	46	43	4
631-3G	21	0.0	2118	40	16	<5	<5	30	34	6
631-3G	22	0.0	2561	10	<5	<5	<5	7	<5	4
631-3G	23	0.0	7375	21	9	<5	<5	20	18	5
631-3G	23A	0.0	3130	25	10	<5	<5	17	14	4
631-3G	24	0.0	3360	42	19	<5	<5	33	36	4
631-3G	25	0.0	3053	30	11	18	<5	24	25	66
631-3G	26	0.0	2755	28	9	<5	<5	19	18	31
631-3G	27	0.0	3008	39	15	19	<5	31	29	20
631-3G	28	0.0	3408	84	31	<5	<5	115	100	6
631-3G	29	0.0	88013	165	36	<5	<5	110	82	4
631-3G	30	0.0	5546	76	28	<5	<5	67	63	21
631-3G	SB1	0.0	2990	<5	<5	<5	<5	<5	<5	NA
631-3G	SB2	0.0	2446	<5	<5	<5	<5	<5	<5	NA
631-3G	SB3	0.0	2495	<5	<5	<5	<5	<5	<5	NA
631-3G	SB4	0.0	2438	<5	<5	<5	<5	<5	<5	NA

Table 6. Light Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-3G Burning Rubble Pit

----- SAVANNAH RIVER SITE -----
----- 631-1G AREA RUBBLE PIT -----
----- SOIL GAS CONCENTRATIONS (PPHV) -----

SAMPLE #	VINYL		TRANS 1,2		CARBON		TETRA				TRICHLORO		TETRA		H&P	O	SAMPLE #
	CHLORIDE	METHYLENE CHLORIDE	ETHYLENE	DICHLORO	CHLOROFORM	CHLORIDE	TETRA	BENZENE	ETHYLENE	TOLUENE	ETHYLENE	CHLORO	ETHYL BENZENE				
631-1G 1	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 1
631-1G 2	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 2
631-1G 3	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 3
631-1G 3A	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 3A
631-1G 4	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 4
631-1G 5	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 5
631-1G 6	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 6
631-1G 7	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 7
631-1G 8	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 8
631-1G 9	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 9
631-1G 10	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	0.005	<.07	<.07	0.10	<.07	631-1G 10
631-1G 11	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 11
631-1G 12	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 12
631-1G 13	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	0.10	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 13
631-1G 13A	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 13A
631-1G 14	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 14
631-1G 15	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 15
631-1G 16	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 16
631-1G 17	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	0.27	<.005	<.005	<.07	<.07	<.07	<.07	631-1G 17
631-1G 18	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.005	<.07	<.07	<.07	<.07	631-1G 18
631-1G 19	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.005	<.07	<.07	<.07	<.07	631-1G 19
631-1G 20	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.005	<.07	<.07	<.07	<.07	631-1G 20
631-1G 21	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.005	<.07	<.07	<.07	<.07	631-1G 21
631-1G 22	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.07	<.005	<.005	<.07	<.07	<.07	<.07	631-1G 22
631-1G 23	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	0.046	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 23
631-1G 23A	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	0.010	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 23A
631-1G 24	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	0.011	0.55	<.005	<.07	<.07	0.09	<.07	631-1G 24
631-1G 25	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	0.11	<.005	<.07	<.07	<.07	<.07	631-1G 25
631-1G 26	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	631-1G 26

Table 7. Hydrocarbon and Chlorinated Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-1G Burning Rubble Pit

----- SAVANNAH RIVER SITE -----
----- 631-1G AREA RUBBLE PIT -----
----- SOIL GAS CONCENTRATIONS (PPMV) -----

SAMPLE #	VINYL CHLORIDE		TRANS 1,2		CARBON		TRICHLORO		TETRA		ETHYL		M&P		XYLENE		SAMPLE #
	CHLORIDE	METHYLENE CHLORIDE	ETHYLENE	DICHLORO	CHLOROFORM	CHLORIDE	BENZENE	ETHYLENE	CHLORO	ETHYLENE	BENZENE	ETHYL	XYLENE	XYLENE	XYLENE	XYLENE	
631-1G 27	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 27
631-1G 28	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 28
631-1G 29	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 29
631-1G 30	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	0.08	<.07	631-1G 30
631-1G 31	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 31
631-1G 32	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 32
631-1G 33	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 33
631-1G 34	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 34
631-1G 35	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 35
631-1G 36	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 36
631-1G 37	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 37
631-1G 38	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 38
631-1G 39	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 39
631-1G 40	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	0.12	<.07	631-1G 40
631-1G 40A	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 40A
631-1G 41	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 41
631-1G 42	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 42
631-1G 43	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 43
631-1G 44	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 44
631-1G 45	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 45
631-1G 46	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 46
631-1G 47	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 47
631-1G 48	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 48
631-1G 49	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 49
631-1G 581	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 581
631-1G 582	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 582
631-1G 584	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 584
631-1G 585	<6.0	<3.0	<.1	<.1	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1G 585

Table 7. Hydrocarbon and Chlorinated Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-1G Burning Rubble Pit

----- SAVANNAH RIVER SITE -----
 ----- 631-1G AREA -----
 ----- SOIL GAS CONCENTRATIONS -----

SAMPLE #	METHANE %	METHANE PPBV	ETHANE PPBV	PROPANE PPBV	I-BUTANE PPBV	N-BUTANE PPBV	ETHYLENE PPBV	PROPYLENE PPBV	MERCURY PPB/WT
631-1G 1	0.0	20476	56	20	<5	<5	44	37	3
631-1G 2	0.0	9797	91	103	17	50	49	49	2
631-1G 3	0.6	5771905	170	299	66	148	226	280	6
631-1G 3A	0.0	17582	47	23	<5	<5	26	27	12
631-1G 4	0.7	7031868	163	186	34	113	154	187	4
631-1G 5	0.0	22623	275	92	<5	<5	166	158	7
631-1G 6	0.0	3697	132	46	<5	<5	122	113	6
631-1G 7	0.0	2162	45	15	<5	<5	22	24	21
631-1G 8	0.0	2568	33	11	<5	<5	31	28	4
631-1G 9	0.0	3475	53	18	<5	<5	56	33	1
631-1G 10	5.0	49939320	ND	1176	286	236	<5	185	5
631-1G 11	0.1	767527	28	17	<5	<5	21	22	4
631-1G 12	0.0	328358	90	46	<5	<5	86	78	5
631-1G 13	1.7	17031750	3667	6186	998	1049	1680	688	6
631-1G 13A	2.4	23857860	249	235	45	84	163	120	17
631-1G 14	2.8	27601400	5354	7860	3491	2336	17330	621	8
631-1G 15	0.1	943283	29	24	<5	<5	23	27	4
631-1G 16	0.1	674626	214	132	44	<5	114	103	8
631-1G 17	35.2	352310000	51553	13804	2405	2131	31003	1920	8
631-1G 18	23.0	230110000	6182	10996	995	1007	748	580	5
631-1G 19	0.8	7893965	387	286	64	156	113	140	2
631-1G 20	0.1	565671	99	50	18	<5	85	87	6
631-1G 21	0.0	1838	58	17	<5	<5	37	38	4
631-1G 22	0.2	2108955	96	80	5	<5	60	114	5
631-1G 23	3.6	36255790	3872	8758	1501	1590	1344	597	4
631-1G 23A	4.1	41381050	3902	9091	1492	1585	1282	615	3
631-1G 24	12.3	122910000	4093	7197	1434	1061	16486	1223	6
631-1G 25	4.1	41058000	1604	3634	602	565	970	416	4
631-1G 26	0.0	6686	283	960	286	141	101	122	4
631-1G 27	0.0	3902	86	27	<5	<5	80	66	20
631-1G 28	0.0	7299	220	88	<5	<5	248	232	5
631-1G 29	>4.0	>40000000	ND	7639	616	1136	<5	186	3
631-1G 30	>4.0	>40000000	7883	14505	1642	1352	<5	708	10
631-1G 31	0.0	786	41	16	<5	17	41	35	5
631-1G 32	0.0	205	23	8	<5	17	19	25	6
631-1G 33	0.0	227	18	8	<5	<5	17	21	3
631-1G 34	0.0	602	75	29	<5	51	60	72	2
631-1G 35	0.0	614	86	35	<5	42	63	71	2
631-1G 36	0.0	701	81	32	<5	46	55	71	34
631-1G 37	0.0	1529	139	53	<5	96	103	123	24
631-1G 38	0.0	2135	136	49	<5	114	95	112	6
631-1G 39	0.0	968	128	49	<5	60	84	99	5
631-1G 40	0.0	1751	155	59	<5	112	101	127	5
631-1G 40A	0.0	2225	161	55	<5	98	99	119	1
631-1G 41	0.0	1661	136	47	540	89	86	103	2
631-1G 42	9.6	95896020	ND	994	140	235	<5	177	6
631-1G 43	0.0	6597	669	892	<5	528	31	118	11
631-1G 44	0.0	21010	89	36	<5	<5	64	81	2
631-1G 45	0.5	5186600	28	13	<5	<5	24	31	1
631-1G 46	0.0	35891	31	14	<5	<5	35	37	14
631-1G 47	0.0	93841	39	21	<5	<5	29	29	3
631-1G 48	0.0	3935	34	30	<5	<5	29	26	<1
631-1G 49	0.0	21126	81	31	<5	<5	67	76	89

Table 8. Light Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-1GBurning Rubble Pit

----- SAVANNAH RIVER SITE -----
 ---- 631-1G AREA ----
 ----- SOIL GAS CONCENTRATIONS -----

SAMPLE #	METHANE %	METHANE PPBV	ETHANE PPBV	PROPANE PPBV	I-BUTANE PPBV	N-BUTANE PPBV	ETHYLENE PPBV	PROPYLENE PPBV	MERCURY PPB/WT
631-1G SB1	0.0	3092	<5	<5	<5	<5	<5	<5	NA
631-1G SB2	0.0	3408	<5	<5	<5	<5	<5	<5	NA
631-1G SB4	0.0	1834	7	<5	<5	<5	8	<5	NA
631-1G SB5	0.0	1863	12	8	<5	<5	9	9	NA

Table 8. Light Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-1GBurning Rubble Pit

----- SAVANNAH RIVER SITE -----
----- 631-1GL LAGOON AREA -----
----- SOIL GAS CONCENTRATIONS (PPHV) -----

SAMPLE #	VINYL		TRANS 1,2		CARBON		TRICHLORO		TETRA		TETRA		ETHYL		M&P		O		SAMPLE #
	CHLORIDE	METHYLENE CHLORIDE	ETHYLENE	DICHLORO ETHYLENE	CHLOROFORM	CHLORIDE	BENZENE	ETHYLENE	TOLUENE	ETHYLENE	CHLORO	BENZENE	BENZENE	XYLENE	XYLENE	XYLENE	XYLENE	XYLENE	
631-1GL 1	<6.0	<3.0	<1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1GL 1
631-1GL 2	<6.0	<3.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1GL 2
631-1GL 3	<6.0	<3.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1GL 3
631-1GL 4	<6.0	<3.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1GL 4
631-1GL 5	<6.0	<3.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1GL 5
631-1GL 6	<6.0	<3.0	<.1	<.005	0.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1GL 6
631-1GL 7	<6.0	<3.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1GL 7
631-1GL 8	<6.0	<3.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1GL 8
631-1GL 9	<6.0	<3.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	0.17	<.07	631-1GL 9
631-1GL 10	<6.0	<3.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1GL 10
631-1GL 10A	<6.0	<3.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1GL 10A
631-1GL SB1	<6.0	<3.0	<.1	<.005	<.005	<.005	<.07	<.005	<.07	<.005	<.07	<.005	<.07	<.07	<.07	<.07	<.07	<.07	631-1GL SB1

Table 9. Hydrocarbon and Chlorinated Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-1GL Central Shops Area Lagoon

----- SAVANNAH RIVER SITE -----
 ---- 631-1GL LAGOON AREA ----
 ----- SOIL GAS CONCENTRATIONS -----

SAMPLE #		METHANE %	METHANE PPBV	ETHANE PPBV	PROPANE PPBV	I-BUTANE PPBV	N-BUTANE PPBV	ETHYLENE PPBV	PROPYLENE PPBV	MERCURY PPB/WT
631-1GL	1	0.0	4243	70	24	<5	<5	51	52	6
631-1GL	2	0.2	2258800	267	134	5	<5	237	215	4
631-1GL	3	0.0	12922	46	20	<5	<5	42	34	3
631-1GL	4	0.0	1362	38	16	<5	<5	33	19	2
631-1GL	5	0.0	4986	66	25	<5	<5	47	40	3
631-1GL	6	0.0	942	29	12	<5	<5	29	26	2
631-1GL	7	0.0	22318	27	16	<5	<5	20	17	<1
631-1GL	8	0.0	854	22	10	<5	<5	23	18	<1
631-1GL	9	0.0	1753	45	19	<5	<5	42	38	<1
631-1GL	10	0.0	644	45	19	<5	<5	42	40	1
631-1GL	10A	0.0	2328	198	69	<5	<5	132	139	1
631-1GL	SB1	0.0	1698	8	5	<5	<5	9	<5	NA

Table 10. Light Hydrocarbon Soil Gas Concentrations and System Blanks at the 631-1GL Central Shops Area Lagoon

----- STANDARD CONCENTRATIONS (ppmv) -----
 ----- METHANOL SOLVENT -- 10/7/90 -----

COMPOUND	RANGE 1	RANGE 2	RANGE 3	RANGE 4	RANGE 5	RANGE 6
PENTANE	942.19	91.52	9.13	0.91	0.091	0.0091
11 DICHLOROETHYLENE	1358.80	131.99	13.16	1.32	0.132	0.0132
METHYLENE CHLORIDE	1694.16	164.57	16.41	1.64	0.164	0.0164
TRANS 1,2 DICHLORO	1408.09	136.78	13.64	1.36	0.136	0.0136
11 DICHLOROETHANE	1291.56	125.46	12.51	1.25	0.125	0.0125
CHLOROFORM	1356.81	131.80	13.14	1.31	0.131	0.0131
111 TRICHLOROETHANE	1089.10	105.79	10.55	1.05	0.105	0.0105
CARBON TETRACHLORIDE	1125.32	109.31	10.90	1.09	0.109	0.0109
HEPTANE	741.22	72.00	7.18	0.72	0.072	0.0072
BENZENE	1214.92	118.02	11.77	1.18	0.118	0.0118
TRICHLOROETHYLENE	1208.33	117.38	11.70	1.17	0.117	0.0117
OCTANE	668.30	64.92	6.47	0.65	0.065	0.0065
TOLUENE	1021.92	99.27	9.90	0.99	0.099	0.0099
TETRACHLOROETHYLENE	1062.81	103.24	10.29	1.03	0.103	0.0103
NONANE	607.90	59.05	5.89	0.59	0.059	0.0059
ETHYL BENZENE	886.78	86.14	8.59	0.86	0.086	0.0086
M-XYLENE	883.71	85.84	8.56	0.86	0.086	0.0086
P-XYLENE	880.64	85.54	8.53	0.85	0.085	0.0085
O-XYLENE	888.83	86.34	8.61	0.86	0.086	0.0086
DECANE	557.12	54.12	5.40	0.54	0.054	0.0054

Table 11. VOC Prepared Standard Concentrations

----- WESTINGHOUSE SAVANNAH RIVER SITE -----
----- OCTOBER, 1991 (W01) STANDARDS -----
----- GAS CONCENTRATIONS (PPMV) -----

STANDARD NAME	AREA	TRANS 1,2				CARBON		TRICHLORO		TETRA		ETHYL BENZENE	M&P XYLENE	O XYLENE	FILE CYCLE
		VINYL CHLORIDE	METHYLENE CHLORIDE	DICHLORO ETHYLENE	CHLOROFORM	TETRA CHLORIDE	BENZENE	ETHYLENE	TOLUENE	ETHYLENE	CHLORO ETHYLENE				
Std. "I" L6	ALL	NA	NA	NA	0.015	0.012	NA	0.013	NA	0.010	NA	NA	NA	NA	4
Std. "I" L6	ALL	NA	NA	NA	0.012	0.011	NA	0.011	NA	0.010	NA	NA	NA	NA	5
Std. "I" L6	ALL	NA	NA	NA	0.012	0.010	NA	0.011	NA	0.010	NA	NA	NA	NA	6
Std. "I" L6	3L	NA	NA	NA	0.013	0.011	NA	0.012	NA	0.011	NA	NA	NA	NA	257
Std. "I" L6	1G	NA	NA	NA	0.012	0.011	NA	0.012	NA	0.011	NA	NA	NA	NA	357
MEAN					0.013	0.011		0.012		0.010					
STD DEV					0.001	0.001		0.001		0.000					
% STD DEV					9.174	5.764		6.281		3.860					
Std. "I" L5	ALL	NA	NA	NA	0.132	0.110	NA	0.119	NA	0.104	NA	NA	NA	NA	7
Std. "I" L5	ALL	NA	NA	NA	0.132	0.110	NA	0.117	NA	0.104	NA	NA	NA	NA	8
Std. "I" L5	ALL	NA	NA	NA	0.129	0.107	NA	0.115	NA	0.101	NA	NA	NA	NA	9
Std. "I" L5	5G,6G	NA	NA	NA	0.133	0.114	NA	0.118	NA	0.104	NA	NA	NA	NA	55
Std. "I" L5	4F	NA	NA	NA	0.132	0.114	NA	0.118	NA	0.105	NA	NA	NA	NA	115
Std. "I" L5	4F	NA	NA	NA	0.130	0.112	NA	0.119	NA	0.104	NA	NA	NA	NA	164
Std. "I" L5	4F,3L	NA	NA	NA	0.129	0.111	NA	0.121	NA	0.107	NA	NA	NA	NA	216
Std. "I" L5	3L	NA	NA	NA	0.121	0.105	NA	0.112	NA	0.099	NA	NA	NA	NA	233
Std. "I" L5	3L	NA	NA	NA	0.134	0.112	NA	0.122	NA	0.108	NA	NA	NA	NA	283
Std. "I" L5	3L,3G	NA	NA	NA	0.127	0.107	NA	0.114	NA	0.102	NA	NA	NA	NA	307
Std. "I" L5	1G	NA	NA	NA	0.126	0.107	NA	0.116	NA	0.100	NA	NA	NA	NA	387
MEAN					0.130	0.110		0.117		0.104					
STD DEV					0.004	0.003		0.003		0.003					
% STD DEV					2.772	2.554		2.529		2.573					
Std. "I" L4	ALL	NA	1.68	1.33	1.294	1.076	1.18	1.163	0.86	1.017	0.86	1.69	0.84		10
Std. "I" L4	ALL	NA	1.62	1.41	1.335	1.103	1.20	1.185	0.87	1.053	0.88	1.77	0.87		11
Std. "I" L4	ALL	NA	1.64	1.36	1.302	1.091	1.18	1.161	0.86	1.021	0.85	1.70	0.88		12
Std. "I" L4	5G	NA	1.70	1.35	1.456	1.208	1.17	1.281	0.87	1.123	0.85	1.70	0.86		42
Std. "I" L4	6G	NA	1.73	1.39	1.397	1.180	1.23	1.266	0.88	1.130	0.90	1.79	0.89		79

Table 12. Analyses of All W01 Standards

----- WESTINGHOUSE SAVANNAH RIVER SITE -----
 ----- OCTOBER, 1991 (W01) STANDARDS -----
 ----- GAS CONCENTRATIONS (PPMV) -----

STANDARD NAME	AREA	VINYL CHLORIDE	METHYLENE CHLORIDE	TRANS 1,2		CARBON		TRICHLORO		TOLUENE		TETRA		ETHYL BENZENE	H&P XYLENE	O XYLENE	FILE CYCLE
				ETHYLENE	DICHLORO	CHLOROFORM	TETRA CHLORIDE	BENZENE	ETHYLENE	ETHYLENE	ETHYLENE	CHLORO ETHYLENE	ETHYL BENZENE				
Std. "I" L1	ALL	NA	1684.00	1402.05	1349.176	1114.588	1214.83	1203.417	1021.94	1059.080	886.52	1761.97	888.50	19			
Std. "I" L1	ALL	NA	1744.26	1449.31	1398.334	1165.247	1257.48	1246.942	1058.48	1098.398	917.84	1825.92	920.44	20			
Std. "I" L1	ALL	NA	1638.23	1358.34	1310.853	1086.591	1165.44	1162.166	980.01	1023.750	850.44	1694.08	851.86	21			
MEAN			1688.83	1403.23	1352.788	1122.142	1212.58	1204.175	1020.15	1060.410	884.93	1760.66	886.93				
STD DEV			43.42	37.15	35.805	32.552	37.61	34.614	32.06	30.489	27.54	53.84	28.02				
% STD DEV			2.57	2.65	2.647	2.901	3.10	2.874	3.14	2.875	3.11	3.06	3.16				
STD VC 10	ALL	10.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
STD VC 1000	ALL	1003.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
STD VC 1000	ALL	995.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
STD VC 1000	ALL	1023.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				

Table 12. Analyses of All W01 Standards

----- WESTINGHOUSE SAVANNAH RIVER SITE -----
 ----- DECEMBER, 1990 (W3) STANDARDS -----
 ----- GAS CONCENTRATIONS (PPHV) -----

STANDARD NAME	AREA	GC CYCLE	PENTANE	HEXANE	HEPTANE	BENZENE	OCTANE	TOLUENE	NONANE	ETHYL BENZENE	M&P-XYLENE	O-XYLENE	DECANE
STD 12 R6	ALL	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 12 R6	ALL	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 12 R6	S, 1G	229	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 12 R6	CMP	416	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 12 R6	CMP	436	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MEAN													
STD DEV													
% STD DEV													
STD 12 R5	ALL	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 12 R5	ALL	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 12 R5	S	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 12 R5	S, 1G	228	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 12 R5	1GL	270	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 12 R5	CMP	301	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 12 R5	CMP	415	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 12 R5	CMP	435	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 12 R5	CMP	449	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MEAN													
STD DEV													
% STD DEV													
STD 12 R4	ALL	7	NA	NA	0.75	1.17	0.67	0.90	0.66	0.90	1.76	1.03	0.58
STD 12 R4	ALL	8	NA	NA	0.71	1.17	0.64	0.99	0.58	0.85	1.70	0.85	0.54
STD 12 R4	ALL	16	NA	NA	0.67	1.11	0.65	0.99	0.60	0.87	1.73	0.85	0.59
STD 12 R4	G	29	NA	NA	0.74	1.20	0.67	1.02	0.61	0.87	1.74	0.89	0.54
STD 12 R4	G, H	54	NA	NA	0.76	1.20	0.70	1.05	0.61	0.89	1.77	0.88	0.55
STD 12 R4	H	66	NA	NA	0.75	1.20	0.65	1.01	0.62	0.88	1.73	0.89	0.56
STD 12 R4	H	78	NA	NA	0.74	1.21	0.68	0.89	0.61	0.87	1.72	0.85	0.58
STD 12 R4	H	90	NA	NA	0.75	1.20	0.66	0.83	0.61	0.89	1.80	0.88	0.52
STD 12 R4	G	103	NA	NA	0.74	1.18	0.67	0.98	0.58	0.87	1.73	0.88	0.50
STD 12 R4	S	115	NA	NA	0.75	1.19	0.67	0.92	0.59	0.87	1.73	0.82	0.51
STD 12 R4	S	127	NA	NA	0.73	1.20	0.65	0.83	0.59	0.87	1.73	0.83	0.51
STD 12 R4	S	139	NA	NA	0.74	1.13	0.64	0.88	0.58	0.85	1.69	0.80	0.50
STD 12 R4	S	151	NA	NA	0.74	1.19	0.66	0.86	0.59	0.86	1.72	0.83	0.50
STD 12 R4	S	163	NA	NA	0.74	1.18	0.65	0.88	0.57	0.85	1.69	0.87	0.49
STD 12 R4	S	175	NA	NA	0.73	1.19	0.67	1.03	0.59	0.86	1.72	0.85	0.51
STD 12 R4	S	187	NA	NA	0.74	1.21	0.65	0.83	0.59	0.87	1.74	0.89	0.51
STD 12 R4	S	212	NA	NA	0.73	1.21	0.67	1.04	0.59	0.87	1.72	0.82	0.49
STD 12 R4	S	224	NA	NA	0.72	1.18	0.63	0.98	0.57	0.85	1.69	0.82	0.49
STD 12 R4	1G	238	NA	NA	0.73	1.20	0.67	1.01	0.59	0.87	1.75	0.89	0.51
STD 12 R4	1G	253	NA	NA	0.76	1.24	0.66	1.04	0.61	0.90	1.81	0.91	0.53
STD 12 R4	1GL	271	NA	NA	0.75	1.19	0.64	0.80	0.60	0.87	1.71	0.88	0.53
STD 12 R4	1GL	277	NA	NA	0.75	1.20	0.70	1.09	0.60	0.88	1.76	0.81	0.53
STD 12 R4	CMP	289	NA	NA	0.73	1.19	0.64	1.09	0.64	0.89	1.76	0.94	0.52
STD 12 R4	CMP	317	NA	NA	0.74	1.20	0.64	1.00	0.61	0.88	1.73	0.88	0.54
STD 12 R4	CMP	328	NA	NA	0.74	1.21	0.64	1.00	0.60	0.87	1.71	0.87	0.53
STD 12 R4	CMP	340	NA	NA	0.74	1.20	0.64	1.00	0.63	0.89	1.76	0.89	0.54
STD 12 R4	CMP	352	NA	NA	0.74	1.18	0.64	0.99	0.61	0.86	1.70	0.85	0.57
STD 12 R4	CMP	376	NA	NA	0.73	1.18	0.63	0.99	0.61	0.86	1.71	0.89	0.54
STD 12 R4	CMP	388	NA	NA	0.73	1.20	0.64	0.99	0.59	0.87	1.73	0.89	0.51
STD 12 R4	CMP	400	NA	NA	0.74	1.20	0.64	1.00	0.59	0.86	1.73	0.85	0.50

Table 13. Analyses of All W3 Standards: a) Hydrocarbons

----- WESTINGHOUSE SAVANNAH RIVER SITE -----
 ----- DECEMBER, 1990 (W3) STANDARDS -----
 ----- GAS CONCENTRATIONS (PPMV) -----

STANDARD NAME	AREA	GC CYCLE	PENTANE	HEXANE	HEPTANE	BENZENE	OCTANE	TOLUENE	NONANE	ETHYL BENZENE	M&P- XYLENE	O- XYLENE	DECANE
STD 12 R4	CMP	414	NA	NA	0.73	1.20	0.64	0.81	0.60	0.88	1.77	0.84	0.52
STD 12 R4	CMP	429	NA	NA	0.74	1.19	0.64	0.99	0.59	0.86	1.72	0.84	0.50
MEAN					0.74	1.19	0.65	0.96	0.60	0.87	1.73	0.87	0.53
STD DEV					0.02	0.02	0.02	0.08	0.02	0.01	0.03	0.04	0.03
% STD DEV					2.16	1.91	2.75	8.49	3.13	1.57	1.67	4.93	5.15
STD 12 R3	ALL	9	8.70	NA	6.94	11.40	6.30	9.59	5.73	8.36	16.68	8.38	5.27
STD 12 R3	ALL	10	8.78	NA	7.11	11.65	6.43	9.77	5.86	8.54	16.99	8.59	5.35
STD 12 R3	G	42	8.92	NA	7.14	11.67	6.43	9.71	5.81	8.43	16.70	8.42	5.29
STD 12 R3	S	191	8.95	NA	7.23	11.88	6.57	10.04	6.00	8.75	17.49	8.79	5.51
STD 12 R3	CMP	303	8.89	NA	7.21	11.85	6.50	9.86	5.99	8.72	17.43	8.84	5.54
MEAN					7.13	11.69	6.45	9.79	5.88	8.56	17.06	8.60	5.39
STD DEV					0.10	0.17	0.09	0.15	0.10	0.15	0.35	0.19	0.11
% STD DEV					1.44	1.47	1.39	1.54	1.77	1.80	2.03	2.17	2.08
STD 12 R2	ALL	11	96.68	NA	73.71	120.67	66.12	101.56	60.07	87.68	174.16	87.73	55.10
STD 224	ALL	14	1019	1035	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 224	CMP	304	1034	1053	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 224	CMP	411	1021	1040	NA	NA	NA	NA	NA	NA	NA	NA	NA
VC 1000	ALL	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VC 1000	CMP	305	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VC 1000	CMP	412	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 13. Analyses of All W3 Standards: a) Hydrocarbons

----- WESTINGHOUSE SAVANNAH RIVER SITE -----
 ----- DECEMBER, 1990 (W3) STANDARDS -----
 ----- GAS CONCENTRATIONS (PPMV) -----

STANDARD NAME	AREA	GC CYCLE	VINYL CHLORIDE	METHYLENE CHLORIDE	TRANS 1,2 DICHLORO ETHYLENE	CHLORO FORM	111 TRI CHLORO ETHANE	CARBON TETRA CHLORIDE	TRICLORO ETHYLENE	TETRA CHLORO ETHYLENE
STD 12 R6	ALL	3	NA	NA	NA	0.010	0.008	0.011	0.009	0.010
STD 12 R6	ALL	4	NA	NA	NA	0.011	0.009	0.011	0.010	0.010
STD 12 R6	S,1G	229	NA	NA	NA	0.015	0.012	0.012	0.011	0.011
STD 12 R6	CMP	416	NA	NA	NA	0.015	0.013	0.013	0.011	0.011
STD 12 R6	CMP	436	NA	NA	NA	0.017	0.014	0.013	0.011	0.011
MEAN						0.014	0.011	0.012	0.010	0.011
STD DEV						0.003	0.002	0.001	0.001	0.000
% STD DEV						19.510	20.671	7.454	7.692	4.622
STD 12 R5	ALL	5	NA	NA	0.16	0.185	0.144	0.109	0.165	0.103
STD 12 R5	ALL	6	NA	NA	0.17	0.187	0.146	0.109	0.165	0.103
STD 12 R5	S	200	NA	NA	0.17	0.182	0.142	0.130	0.156	0.108
STD 12 R5	S,1G	228	NA	NA	0.17	0.185	0.138	0.132	0.157	0.109
STD 12 R5	1GL	270	NA	NA	0.17	0.188	0.146	0.135	0.159	0.111
STD 12 R5	CMP	301	NA	NA	0.17	0.188	0.151	0.135	0.159	0.108
STD 12 R5	CMP	415	NA	NA	0.18	0.190	0.153	0.137	0.158	0.109
STD 12 R5	CMP	435	NA	NA	0.19	0.197	0.157	0.141	0.163	0.112
STD 12 R5	CMP	449	NA	NA	0.19	0.201	0.162	0.145	0.169	0.114
MEAN					0.17	0.189	0.149	0.130	0.161	0.109
STD DEV					0.01	0.006	0.007	0.012	0.004	0.003
% STD DEV					4.51	3.028	4.834	9.327	2.595	3.224
STD 12 R4	ALL	7	NA	1.63	1.36	1.278	1.026	1.094	1.142	1.037
STD 12 R4	ALL	8	NA	1.61	1.35	1.273	1.022	1.086	1.135	1.025
STD 12 R4	ALL	16	NA	2.61	1.40	1.383	1.099	1.211	1.170	1.069
STD 12 R4	G	29	NA	1.56	1.49	1.408	1.121	1.315	1.211	1.243
STD 12 R4	G,H	54	NA	1.60	1.53	1.467	1.187	0.992	1.238	1.000
STD 12 R4	H	66	NA	2.21	1.48	1.436	1.175	1.497	1.206	1.217
STD 12 R4	H	78	NA	3.29	1.46	1.429	1.179	1.501	1.176	1.119
STD 12 R4	H	90	NA	2.13	1.60	1.552	1.273	1.348	1.294	1.148
STD 12 R4	G	103	NA	5.49	1.57	1.551	1.289	1.087	1.277	1.033
STD 12 R4	S	115	NA	2.01	1.61	1.563	1.287	1.358	1.289	1.140
STD 12 R4	S	127	NA	4.71	1.58	1.553	1.292	1.092	1.270	1.027
STD 12 R4	S	139	NA	9.47	1.55	1.549	1.299	1.089	1.251	0.987
STD 12 R4	S	151	NA	4.49	1.61	1.595	1.331	1.123	1.302	1.060
STD 12 R4	S	163	NA	5.96	1.59	1.588	1.333	1.119	1.287	1.033
STD 12 R4	S	175	NA	3.96	1.63	1.599	1.342	1.131	1.300	1.065
STD 12 R4	S	187	NA	4.54	1.63	1.612	1.360	1.148	1.301	1.068
STD 12 R4	S	212	NA	4.78	1.36	1.307	1.062	1.114	1.143	1.023
STD 12 R4	S	224	NA	4.22	1.36	1.289	1.041	1.093	1.133	1.008
STD 12 R4	1G	238	NA	5.36	1.36	1.308	1.054	1.115	1.143	1.025
STD 12 R4	1G	253	NA	4.13	1.42	1.355	1.094	1.160	1.191	1.104
STD 12 R4	1GL	271	NA	2.07	1.36	1.295	1.057	1.095	1.123	1.019
STD 12 R4	1GL	277	NA	2.08	1.38	1.328	1.088	1.143	1.165	1.068
STD 12 R4	CMP	289	NA	2.40	1.39	1.323	1.086	1.136	1.156	1.049
STD 12 R4	CMP	317	NA	2.59	1.40	1.345	1.109	1.157	1.165	1.061
STD 12 R4	CMP	328	NA	2.20	1.42	1.357	1.119	1.166	1.171	1.070
STD 12 R4	CMP	340	NA	2.57	1.41	1.351	1.118	1.161	1.165	1.060
STD 12 R4	CMP	352	NA	3.91	1.37	1.342	1.116	1.154	1.148	1.028
STD 12 R4	CMP	376	NA	2.91	1.39	1.345	1.119	1.160	1.155	1.046
STD 12 R4	CMP	388	NA	3.17	1.42	1.363	1.133	1.174	1.169	1.070
STD 12 R4	CMP	400	NA	4.97	1.41	1.369	1.145	1.181	1.172	1.067

Table 13. Analyses of All W3 Standards: b) Chlorinated Hydrocarbons

----- WESTINGHOUSE SAVANNAH RIVER SITE -----
 ----- DECEMBER, 1990 (W3) STANDARDS -----
 ----- GAS CONCENTRATIONS (PPMV) -----

STANDARD NAME	AREA	GC CYCLE	VINYL CHLORIDE	METHYLENE CHLORIDE	TRANS 1,2 DICHLORO ETHYLENE	CHLORO FORM	111 TRI CHLORO ETHANE	CARBON TETRA CHLORIDE	TRICLORO ETHYLENE	TETRA CHLORO ETHYLENE
STD 12 R4	CHP	414	NA	3.68	1.40	1.358	1.134	1.172	1.161	1.052
STD 12 R4	CHP	429	NA	5.44	1.40	1.373	1.151	1.186	1.167	1.049
MEAN				3.55	1.46	1.414	1.164	1.174	1.199	1.065
STD DEV				1.69	0.09	0.109	0.102	0.111	0.059	0.056
% STD DEV				47.58	6.50	7.706	8.722	9.494	4.923	5.230
STD 12 R3	ALL	9	NA	16.12	13.42	12.780	10.280	10.910	11.370	9.850
STD 12 R3	ALL	10	NA	16.71	13.79	13.040	10.470	10.710	11.630	10.590
STD 12 R3	G	42	NA	18.54	15.14	13.350	10.680	10.730	11.660	10.580
STD 12 R3	S	191	NA	14.57	13.56	13.420	10.630	11.380	11.880	10.810
STD 12 R3	CHP	303	NA	14.28	13.79	13.330	10.660	11.090	11.870	10.890
MEAN				16.04	13.94	13.184	10.544	10.964	11.682	10.544
STD DEV				1.55	0.62	0.240	0.151	0.249	0.187	0.368
% STD DEV				9.64	4.42	1.822	1.435	2.275	1.602	3.486
STD 12 R2	ALL	11	NA	167.34	NA	134.130	107.670	109.280	119.552	104.081
STD 224	ALL	14	NA	NA	NA	NA	NA	NA	NA	NA
STD 224	CHP	304	NA	NA	NA	NA	NA	NA	NA	NA
STD 224	CHP	411	NA	NA	NA	NA	NA	NA	NA	NA
VC 1000	ALL	15	1000	NA	NA	NA	NA	NA	NA	NA
/C 1000	CHP	305	1018	NA	NA	NA	NA	NA	NA	NA
VC 1000	CHP	412	1012	NA	NA	NA	NA	NA	NA	NA

Table 13. Analyses of All W3 Standards: b) Chlorinated Hydrocarbons

----- JULY/AUGUST, 1991 (W10) STANDARDS -----
----- GAS CONCENTRATIONS (PPMV) -----

STANDARD NAME	AREA	GC CYCLE	PENTANE	HEXANE	HEPTANE	BENZENE	OCTANE	TOLUENE	NONANE	ETHYL BENZENE	M&P-XYLENE	O-XYLENE	DECANE
STD K1 R6	ALL	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD K1 R6	ALL	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD K1 R6	108-4R	53	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD K1 R6	631-19G	132	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD K1 R6	761-13G	212	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD K1 R6	631-27G	288	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD K1 R6	231-4F	381	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MEAN													
STD DEV													
STD DEV													
STD K1 R5	ALL	9	NA	NA	0.07	0.11	0.07	0.11	0.07	0.08	0.19	0.09	0.05
STD K1 R5	ALL	14	NA	NA	0.08	0.12	0.07	0.11	0.07	0.09	0.19	0.10	0.06
STD K1 R5	108-4R	29	NA	NA	0.07	0.12	0.06	0.10	0.07	0.09	0.19	0.12	0.06
STD K1 R5	631-19G	108	NA	NA	0.07	0.12	0.07	0.10	0.07	0.09	0.19	0.10	0.05
STD K1 R5	761-13G	183	NA	NA	0.08	0.14	0.07	0.10	0.08	0.09	0.19	0.11	0.06
STD K1 R5	716-A	260	NA	NA	0.08	0.12	0.07	0.10	0.06	0.08	0.18	0.11	0.05
STD K1 R5	631-6G	337	NA	NA	0.07	0.13	0.05	0.09	0.07	0.08	0.17	0.10	0.05
STD K1 R5	716-A	434	NA	NA	0.07	0.12	0.07	0.10	0.07	0.09	0.19	0.11	0.06
MEAN					0.07	0.12	0.06	0.10	0.07	0.08	0.19	0.11	0.06
STD DEV					0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.00
STD DEV					7.41	6.64	9.11	3.51	4.73	4.44	3.30	6.42	7.57
STD K1 R4	ALL	8	<.07	NA	0.72	1.17	0.66	1.01	0.59	0.85	1.70	0.89	0.55
STD K1 R4	ALL	13	<.07	NA	0.72	1.19	0.66	1.02	0.59	0.85	1.70	0.89	0.54
STD K1 R4	ALL	17	<.07	NA	0.72	1.18	0.66	1.02	0.59	0.85	1.70	0.82	0.53
STD K1 R4	108-4R	41	<.07	NA	0.73	1.19	0.65	1.00	0.58	0.84	1.65	0.87	0.50
STD K1 R4	108-4R	69	<.07	NA	0.72	1.20	0.65	1.00	0.56	0.82	1.62	0.89	0.49
STD K1 R4	631-19G	96	<.07	NA	0.70	1.15	0.76	0.97	0.54	0.80	1.54	0.84	0.44
STD K1 R4	631-19G	120	<.07	NA	0.69	1.13	0.62	0.96	0.54	0.80	1.57	0.76	0.47
STD K1 R4	631-19G	144	<.07	NA	0.71	1.17	0.64	1.09	0.54	0.80	1.56	0.83	0.46
STD K1 R4	CMP	171	<.07	NA	0.71	1.16	0.61	0.95	0.52	0.78	1.49	0.80	0.42
STD K1 R4	761-13G	195	<.07	NA	0.73	1.20	0.64	0.98	0.56	0.82	1.61	0.84	0.48
STD K1 R4	761-13G	224	<.07	NA	0.71	1.16	0.63	0.96	0.54	0.80	1.54	0.81	0.45
STD K1 R4	631-27G	248	<.07	NA	0.67	1.10	0.60	0.92	0.51	0.76	1.49	0.78	0.42
STD K1 R4	631-27G	276	<.07	NA	0.68	1.15	0.61	0.94	0.51	0.76	1.48	0.78	0.41
STD K1 R4	631-6G	325	<.07	NA	0.67	1.16	0.64	0.98	0.56	0.82	1.62	0.85	0.49
STD K1 R4	631-6G	349	<.07	NA	0.64	1.09	0.60	0.94	0.50	0.76	1.48	0.78	0.39
STD K1 R4	231-4F	393	<.07	NA	0.68	1.17	0.61	0.95	0.52	0.78	1.48	0.78	0.40
STD K1 R4	231-4F	416	<.07	NA	0.62	1.09	0.59	0.93	0.52	0.77	1.52	0.80	0.44
STD K1 R4	716-A	446	<.07	NA	0.64	1.11	0.61	0.95	0.52	0.78	1.52	0.81	0.43
MEAN					0.69	1.15	0.63	0.97	0.54	0.80	1.57	0.82	0.46
STD DEV					0.03	0.03	0.04	0.04	0.03	0.03	0.08	0.04	0.05
STD DEV					4.64	2.90	5.88	4.13	5.23	3.85	4.87	4.94	10.10
STD K1 R3	ALL	7	9.06	NA	7.14	11.70	6.49	9.95	5.59	8.52	16.92	8.53	5.41
STD K1 R3	ALL	12	9.20	NA	7.23	11.85	6.57	10.09	5.63	8.61	17.06	8.68	5.40
STD K1 R3	631-19G	84	9.02	NA	6.98	11.44	6.21	9.53	5.09	7.96	15.46	7.95	4.48
STD K1 R3	CMP	159	9.23	NA	7.12	11.65	6.26	9.60	5.12	8.01	15.54	8.02	4.46
STD K1 R3	631-27G	236	9.06	NA	7.00	11.49	6.22	9.53	5.13	8.00	15.54	7.94	4.54
STD K1 R3	631-5G	312	8.89	NA	6.96	11.45	6.23	9.53	5.25	8.08	15.87	8.03	4.85
STD K1 R3	231-4F	405	8.88	NA	6.96	11.45	6.23	9.54	5.19	8.04	15.69	7.99	4.72
MEAN					7.06	11.58	6.31	9.68	5.28	8.18	16.01	8.16	4.84
STD DEV					0.10	0.15	0.14	0.22	0.21	0.25	0.63	0.29	0.38
STD DEV					1.36	1.28	2.20	2.26	3.99	3.08	3.96	3.50	7.84

Table 14. Analyses of All W10 Standards: a) Hydrocarbons

----- JULY/AUGUST, 1991 (W10) STANDARDS -----
 ----- GAS CONCENTRATIONS (PPHV) -----

STANDARD NAME	AREA	GC CYCLE	PENTANE	HEXANE	HEPTANE	BENZENE	OCTANE	TOLUENE	NONANE	ETHYL BENZENE	M&P- XYLENE	O- XYLENE	DECANE
STD K1 R2	ALL	54	91.31	NA	71.83	117.86	64.85	99.15	58.96	86.07	171.25	86.27	54.26
STD K1 R2	ALL	55	91.72	NA	72.18	118.19	65.00	99.40	59.01	86.22	171.53	86.42	54.04
STD K1 R1	ALL	56	942.19	NA	741.22	1214.92	668.30	1021.04	607.90	886.78	1764.35	888.34	557.12
STD 224	ALL	157	938	1035	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 220	ALL	5	94	100	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 220	ALL	156	98	103	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 220	ALL	324	96	102	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD VC 1027	ALL	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD VC 1027	ALL	155	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD VC 1027	ALL	323	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD VC 10.3	ALL	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 14. Analyses of All W10 Standards: a) Hydrocarbons

----- JULY/AUGUST, 1991 (W10) STANDARDS -----
 ----- GAS CONCENTRATIONS (PPMV) -----

STANDARD NAME	VINYL CHLORIDE	METHYLENE CHLORIDE	TRANS 1,2 DICHLORO ETHYLENE	CHLORO FORM	111 TRI CHLORO ETHANE	CARBON TETRA CHLORIDE	TRICLORO ETHYLENE	TETRA CHLORO ETHYLENE
STD K1 R6	NA	NA	NA	0.013	0.011	0.011	0.012	0.010
STD K1 R6	NA	NA	NA	0.013	0.010	0.011	0.012	0.010
STD K1 R6	NA	NA	NA	0.013	0.012	0.012	0.012	0.010
STD K1 R6	NA	NA	NA	0.013	0.012	0.011	0.012	0.010
STD K1 R6	NA	NA	NA	0.013	0.012	0.011	0.012	0.010
STD K1 R6	NA	NA	NA	0.012	0.012	0.010	0.011	0.009
STD K1 R6	NA	NA	NA	0.012	0.012	0.011	0.011	0.008
MEAN				0.013	0.012	0.011	0.012	0.010
STD DEV				0.000	0.001	0.001	0.000	0.001
% STD DEV				3.553	6.295	4.859	3.856	7.610
STD K1 R5	NA	NA	0.14	0.130	0.104	0.108	0.116	0.102
STD K1 R5	NA	NA	0.14	0.132	0.106	0.110	0.118	0.104
STD K1 R5	NA	NA	0.13	0.128	0.104	0.108	0.113	0.098
STD K1 R5	NA	NA	0.14	0.132	0.113	0.115	0.118	0.101
STD K1 R5	NA	NA	0.14	0.129	0.110	0.113	0.118	0.101
STD K1 R5	NA	NA	0.13	0.124	0.108	0.111	0.113	0.094
STD K1 R5	NA	NA	0.13	0.114	0.105	0.106	0.109	0.091
STD K1 R5	NA	NA	0.14	0.124	0.111	0.113	0.117	0.098
MEAN			0.13	0.127	0.108	0.111	0.115	0.099
STD DEV			0.00	0.005	0.003	0.003	0.003	0.004
% STD DEV			2.52	4.161	2.802	2.451	2.513	3.881
STD K1 R4	NA	NA	1.35	1.306	1.039	1.058	1.169	1.049
STD K1 R4	NA	NA	1.35	1.308	1.050	1.103	1.168	1.042
STD K1 R4	NA	NA	1.38	1.317	1.064	1.121	1.173	1.047
STD K1 R4	NA	NA	1.43	1.336	1.094	1.127	1.182	1.004
STD K1 R4	NA	NA	1.45	1.366	1.127	1.226	1.194	1.007
STD K1 R4	NA	NA	1.40	1.325	1.108	1.116	1.154	0.984
STD K1 R4	NA	NA	1.40	1.298	1.083	1.036	1.150	0.995
STD K1 R4	NA	NA	1.39	1.303	1.099	1.113	1.149	0.987
STD K1 R4	NA	NA	1.34	1.281	1.086	1.205	1.121	0.945
STD K1 R4	NA	NA	1.38	1.286	1.090	1.245	1.155	1.013
STD K1 R4	NA	NA	1.35	1.274	1.077	1.199	1.134	0.965
STD K1 R4	NA	NA	1.30	1.214	1.035	1.057	1.106	0.943
STD K1 R4	NA	NA	1.31	1.234	1.056	1.118	1.111	0.937
STD K1 R4	NA	NA	1.28	1.228	1.046	1.154	1.136	0.997
STD K1 R4	NA	NA	1.22	1.149	1.002	1.002	1.079	0.921
SRD K1 R4	NA	NA	1.26	1.208	1.050	1.076	1.105	0.932
STD K1 R4	NA	NA	1.19	1.161	0.993	1.104	1.081	0.937
STD K1 R4	NA	NA	1.23	1.191	1.023	1.058	1.104	0.948
MEAN			1.33	1.266	1.062	1.118	1.137	0.981
STD DEV			0.07	0.061	0.035	0.065	0.033	0.040
% STD DEV			5.41	4.79	3.33	5.84	2.93	4.12
STD K1 R3	NA	16.35	13.67	13.076	10.447	10.868	11.703	10.120
STD K1 R3	NA	16.47	13.61	13.134	10.553	10.926	11.697	10.170
STD K1 R3	NA	15.94	13.62	13.117	10.781	10.493	11.401	9.296
STD K1 R3	NA	16.16	13.72	13.068	10.905	10.924	11.471	9.318
STD K1 R3	NA	16.01	13.35	12.176	10.436	10.538	11.264	9.329
STD K1 R3	NA	16.10	13.51	12.260	10.523	10.820	11.370	9.584
STD K1 R3	NA	16.38	13.70	12.219	10.560	10.546	11.473	9.647
MEAN		16.20	13.60	12.721	10.602	10.731	11.483	9.638
STD DEV		0.19	0.12	0.437	0.164	0.181	0.152	0.345
% STD DEV		1.15	0.88	3.43	1.55	1.69	1.32	3.58

Table 14. Analyses of All W10 Standards: b) Chlorinated Hydrocarbons

27-Sep-91

MICROSEEPS

----- JULY/AUGUST, 1991 (W10) STANDARDS -----
 ----- GAS CONCENTRATIONS (PPMV) -----

STANDARD NAME	VINYL CHLORIDE	METHYLENE CHLORIDE	TRANS 1,2 DICHLORO ETHYLENE	CHLORO FORM	111 TRI CHLORO ETHANE	CARBON TETRA CHLORIDE	TRICLORO ETHYLENE	TETRA CHLORO ETHYLENE
STD K1 R2	NA	164.543	102.75	131.797	105.644	109.946	117.286	103.193
STD K1 R2	NA	164.596	102.58	131.798	105.936	108.655	117.479	103.210
STD K1 R1	NA	1694.158	1932.00	1356.807	1089.101	1125.326	1208.531	1063.000
STD 224	NA	NA	NA	NA	NA	NA	NA	NA
STD 220	NA	NA	NA	NA	NA	NA	NA	NA
STD 220	NA	NA	NA	NA	NA	NA	NA	NA
STD 220	NA	NA	NA	NA	NA	NA	NA	NA
STD VC 1027	1027	NA	NA	NA	NA	NA	NA	NA
STD VC 1027	1061	NA	NA	NA	NA	NA	NA	NA
STD VC 1027	1038	NA	NA	NA	NA	NA	NA	NA
STD VC 10.3	10.4	NA	NA	NA	NA	NA	NA	NA

Table 14. Analyses of All W10 Standards: b) Chlorinated Hydrocarbons

----- NOVEMBER, 1991 (W14) STANDARDS -----
 ----- GAS CONCENTRATIONS IN (PPMV) -----

SAMPLE NAME	GC												
	AREA	CYCLE	PENTANE	HEXANE	HEPTANE	BENZENE	OCTANE	TOLUENE	NONANE	BENZENE	ETHYL XYLENE	M&P- XYLENE	O- XYLENE DECANE
STD K2 R5	ALL	W14 8	NA	NA	0.08	0.12	0.07	0.10	0.06	0.09	0.17	0.09	0.06
STD K2 R5	ALL	W14 9	NA	NA	0.07	0.12	0.06	0.10	0.06	0.09	0.17	0.09	0.05
STD K2 R5	643-7G	W14 32	NA	NA	0.07	0.12	0.07	0.10	0.05	0.08	0.17	0.08	0.05
STD K2 R5	643-7G	W14 114	NA	NA	0.09	0.13	0.06	0.10	0.05	0.08	0.16	0.08	0.04
STD K2 R5	643-7G	W14 198	NA	NA	0.07	0.11	0.06	0.09	0.05	0.08	0.15	0.08	0.04
STD K2 R5	643-1G	W14 305	NA	NA	0.07	0.12	0.07	0.10	0.06	0.09	0.17	0.09	0.05
STD K2 R5	643-2G	W14 339	NA	NA	0.07	0.12	0.07	0.11	0.04	0.07	0.16	0.08	0.05
MEAN	.....				0.07	0.12	0.06	0.10	0.05	0.08	0.16	0.08	0.05
STD DEV	.....				0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00
% STD DEV	.....				8.74	4.15	3.86	3.96	12.68	7.25	5.12	3.86	9.79
STD K2 R4	ALL	W14 10	NA	NA	0.72	1.17	0.65	0.99	0.59	0.86	1.71	0.86	0.54
STD K2 R4	ALL	W14 11	NA	NA	0.73	1.19	0.65	0.99	0.59	0.87	1.72	0.86	0.55
STD K2 R4	643-7G	W14 19	NA	NA	0.75	1.23	0.68	1.02	0.61	0.90	1.77	0.89	0.57
STD K2 R4	643-7G	W14 41	NA	NA	0.72	1.18	0.63	0.98	0.57	0.85	1.67	0.84	0.51
STD K2 R4	643-7G	W14 67	NA	NA	0.69	1.13	0.61	0.92	0.53	0.78	1.52	0.77	0.44
STD K2 R4	643-7G	W14 101	NA	NA	0.70	1.15	0.62	0.94	0.52	0.79	1.54	0.79	0.45
STD K2 R4	643-7G	W14 133	NA	NA	0.69	1.14	0.63	0.95	0.57	0.83	1.62	0.82	0.49
STD K2 R4	643-7G	W14 159	NA	NA	0.76	1.28	0.62	0.95	0.55	0.81	1.59	0.81	0.46
STD K2 R4	643-7G	W14 185	NA	NA	0.70	1.15	0.62	0.94	0.53	0.80	1.55	0.79	0.44
STD K2 R4	643-7G	W14 235	NA	NA	0.73	1.20	0.64	0.97	0.60	0.86	1.67	0.85	0.51
STD K2 R4	643-5G	W14 263	NA	NA	0.71	1.17	0.64	0.98	0.59	0.86	1.70	0.85	0.52
STD K2 R4	643-1G	W14 306	NA	NA	0.73	1.17	0.65	0.98	0.60	0.86	1.69	0.86	0.53
STD K2 R4	643-1G	W14 307	NA	NA	0.71	1.19	0.65	1.00	0.58	0.86	1.72	0.86	0.55
STD K2 R4	643-3G	W14 326	NA	NA	0.70	1.17	0.65	0.98	0.59	0.85	1.68	0.83	0.52
STD K2 R4	643-4G	W14 352	NA	NA	0.72	1.19	0.63	0.97	0.55	0.83	1.64	0.82	0.48
STD K2 R4	643-9G	W14 375	NA	NA	0.70	1.15	0.62	0.94	0.55	0.81	1.59	0.79	0.46
STD K2 R4	643-10G	W14 398	NA	NA	0.69	1.15	0.62	0.97	0.53	0.80	1.57	0.80	0.45
STD K2 R4	643-10G	W14 405	NA	NA	0.76	1.24	0.66	1.02	0.62	0.89	1.78	0.91	0.59
MEAN	.....				0.72	1.18	0.64	0.97	0.57	0.84	1.65	0.83	0.50
STD DEV	.....				0.02	0.04	0.02	0.03	0.03	0.03	0.08	0.04	0.04
% STD DEV	.....				3.15	3.06	2.67	2.71	5.25	4.03	4.65	4.29	8.90
STD K2 R3	ALL	W14 12	9.14	NA	7.19	11.78	6.48	9.91	5.91	8.60	17.12	8.64	5.44
STD K2 R3	ALL	W14 13	9.12	NA	7.19	11.81	6.47	9.91	5.87	8.58	17.08	8.60	5.36
STD K2 R3	643-7G	W14 54	9.12	NA	7.00	11.50	6.19	9.48	5.46	8.08	15.88	8.08	4.76
STD K2 R3	643-7G	W14 172	9.17	NA	7.12	11.74	6.31	9.69	5.54	8.24	16.23	8.25	4.77
STD K2 R3	643-5G	W14 276	9.13	NA	7.11	11.72	6.42	9.83	5.82	8.49	16.97	8.53	5.31
STD K2 R3	643-1G	W14 313	9.13	NA	7.18	11.77	6.47	9.90	5.89	8.59	17.09	8.61	5.40
STD K2 R3	643-10G	W14 386	9.05	NA	7.06	11.68	6.22	9.59	5.41	8.09	15.88	8.06	4.58
MEAN	.....		9.12	NA	7.12	11.71	6.37	9.76	5.70	8.38	16.61	8.39	5.09
STD DEV	.....		0.03	NA	0.07	0.09	0.11	0.16	0.20	0.22	0.54	0.24	0.34
% STD DEV	.....		0.38	NA	0.95	0.81	1.80	1.66	3.57	2.63	3.25	2.84	6.69
STD K2 R2	ALL	W14 14	91.52	NA	72.08	118.22	64.94	99.32	59.05	86.15	171.44	86.37	54.12
STD K2 R1	ALL	W14 15	942.19	NA	741.82	1216.43	668.35	1022.20	608.25	886.94	1764.97	888.60	557.12

Table 15. Analyses of All W14 Standards: a) Hydrocarbons

----- NOVEMBER, 1991 (W14) STANDARDS -----
 ----- GAS CONCENTRATIONS IN (PPHV) -----

SAMPLE NAME	AREA	GC		PENTANE	HEXANE	HEPTANE	BENZENE	OCTANE	TOLUENE	NONANE	ETHYL	M&P-	O-	DECAHE
		CYCLE									BENZENE	XYLENE	XYLENE	
STD 220	ALL	W14 4	NA	100.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 220	ALL	W14 243	NA	96.76	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 220	ALL	W14 310	NA	100.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 224	ALL	W14 5	NA	1035.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STD 224	ALL	W14 303	NA	1035.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 15. Analyses of All W14 Standards: a) Hydrocarbons

----- NOVEMBER, 1991 (W14) STANDARDS -----

----- GAS CONCENTRATIONS IN (PPMV) -----

SAMPLE NAME	AREA	GC CYCLE	VINYL CHLORIDE	METHYLENE CHLORIDE	TRANS 1,2	CHLORO FORM	111 TRI	CARBON	TRI	TETRA
					DICHLORO ETHYLENE		CHLORO ETHANE	TETRA CHLORIDE	CHLORO ETHYLENE	CHLORO ETHYLENE
STD K2 R6	ALL	W14 6	NA	NA	NA	0.014	0.011	0.011	0.012	0.011
STD K2 R6	ALL	W14 7	NA	NA	NA	0.013	0.010	0.011	0.012	0.010
STD K2 R6	643-7G	W14 88	NA	NA	NA	0.015	0.012	0.012	0.012	0.010
STD K2 R6	643-7G	W14 146	NA	NA	NA	0.015	0.013	0.012	0.013	0.011
STD K2 R6	643-7G	W14 224	NA	NA	NA	0.014	0.017	0.011	0.011	0.009
STD K2 R6	643-1G	W14 304	NA	NA	NA	0.013	0.011	0.011	0.012	0.010
STD K2 R6	643-8G	W14 365	NA	NA	NA	0.014	0.012	0.012	0.012	0.010
MEAN	.....	.....	.....	.....	.....	0.014	0.012	0.011	0.012	0.010
STD DEV	.....	.....	.....	.....	.....	0.001	0.002	0.000	0.001	0.001
% STD DEV	.....	.....	.....	.....	.....	5.399	17.247	4.330	4.454	6.299
STD K2 R5	ALL	W14 8	NA	NA	0.14	0.131	0.105	0.109	0.117	0.103
STD K2 R5	ALL	W14 9	NA	NA	0.14	0.132	0.106	0.109	0.117	0.103
STD K2 R5	643-7G	W14 32	NA	NA	0.15	0.152	0.115	0.118	0.124	0.107
STD K2 R5	643-7G	W14 114	NA	NA	0.14	0.152	0.119	0.122	0.122	0.102
STD K2 R5	643-7G	W14 198	NA	NA	0.14	0.137	0.110	0.113	0.113	0.096
STD K2 R5	643-1G	W14 305	NA	NA	0.14	0.131	0.105	0.109	0.117	0.103
STD K2 R5	643-2G	W14 339	NA	NA	0.15	0.152	0.120	0.123	0.124	0.107
MEAN	.....	.....	.....	.....	0.14	0.141	0.111	0.115	0.119	0.103
STD DEV	.....	.....	.....	.....	0.01	0.010	0.006	0.006	0.004	0.003
% STD DEV	.....	.....	.....	.....	3.73	6.887	5.445	5.034	3.279	3.323
STD K2 R4	ALL	W14 10	NA	1.66	1.36	1.311	1.048	1.089	1.177	1.029
STD K2 R4	ALL	W14 11	NA	1.62	1.37	1.318	1.053	1.093	1.165	1.031
STD K2 R4	643-7G	W14 19	NA	1.66	1.56	1.567	1.172	1.182	1.299	1.111
STD K2 R4	643-7G	W14 41	NA	1.64	1.51	1.502	1.154	1.167	1.246	1.067
STD K2 R4	643-7G	W14 67	NA	1.61	1.43	1.439	1.121	1.142	1.168	1.000
STD K2 R4	643-7G	W14 101	NA	1.59	1.41	1.442	1.136	1.155	1.169	1.004
STD K2 R4	643-7G	W14 133	NA	1.52	1.46	1.454	1.129	1.150	1.197	1.039
STD K2 R4	643-7G	W14 159	NA	1.61	1.49	1.483	1.151	1.166	1.209	1.032
STD K2 R4	643-7G	W14 185	NA	1.60	1.46	1.478	1.157	1.170	1.195	1.015
STD K2 R4	643-7G	W14 235	NA	1.67	1.50	1.483	1.164	1.176	1.239	1.067
STD K2 R4	643-5G	W14 263	NA	1.55	1.48	1.466	1.148	1.166	1.251	1.075
STD K2 R4	643-1G	W14 306	NA	1.82	1.34	1.307	1.049	1.089	1.158	1.015
STD K2 R4	643-1G	W14 307	NA	1.39	1.39	1.314	1.049	1.091	1.184	1.045
STD K2 R4	643-3G	W14 326	NA	1.69	1.48	1.468	1.160	1.172	1.252	1.070
STD K2 R4	643-4G	W14 352	NA	1.53	1.49	1.477	1.162	1.173	1.232	1.057
STD K2 R4	643-9G	W14 375	NA	1.54	1.46	1.451	1.149	1.162	1.192	1.023
STD K2 R4	643-10G	W14 398	NA	1.62	1.46	1.456	1.150	1.164	1.200	1.017
STD K2 R4	643-10G	W14 405	NA	1.76	1.46	1.401	1.131	1.161	1.279	1.109
MEAN	.....	.....	.....	1.61	1.45	1.434	1.127	1.148	1.212	1.045
STD DEV	.....	.....	.....	0.09	0.06	0.072	0.043	0.032	0.040	0.032
% STD DEV	.....	.....	.....	5.75	3.93	5.053	3.822	2.798	3.338	3.070

Table 15. Analyses of All W14 Standards: b) Chlorinated Hydrocarbons

----- NOVEMBER, 1991 (W14) STANDARDS -----
 ----- GAS CONCENTRATIONS IN (PPMV) -----

SAMPLE NAME	AREA	GC CYCLE	VINYL CHLORIDE	METHYLENE CHLORIDE	TRANS 1,2 DICHLORO ETHYLENE	CHLORO FORM	111 TRI CHLORO ETHANE	CARBON TETRA CHLORIDE	TRI CHLORO ETHYLENE	TETRA CHLORO ETHYLENE
STD K2 R3	ALL	W14 12	NA	16.40	13.61	13.078	10.487	NA	11.678	NA
STD K2 R3	ALL	W14 13	NA	16.42	13.67	13.168	10.513	NA	11.722	NA
STD K2 R3	643-7G	W14 54	NA	16.10	14.02	14.055	11.021	NA	11.835	NA
STD K2 R3	643-7G	W14 172	NA	16.31	14.30	14.231	11.236	NA	12.071	NA
STD K2 R3	643-5G	W14 276	NA	16.39	14.32	14.089	11.159	NA	12.248	NA
STD K2 R3	643-1G	W14 313	NA	16.41	13.64	13.100	10.500	NA	11.700	NA
STD K2 R3	643-10G	W14 386	NA	16.55	14.28	14.131	11.238	NA	11.994	NA
MEAN	.....			16.37	13.98	13.693	10.879	NA	11.893	NA
STD DEV	.....			0.13	0.31	0.504	0.335	NA	0.201	NA
% STD DEV	.....			0.79	2.19	3.677	3.080	NA	1.694	NA
STD K2 R2	ALL	W14 14	NA	164.57	113.74	131.801	105.789	NA	117.486	NA
STD K2 R1	ALL	W14 15	NA	1694.16	2043.40	1356.809	1089.100	NA	1209.026	NA
STD VC-1027	ALL	W14 3	1024.2	NA	NA	NA	NA	NA	NA	NA
STD VC-1027	ALL	W14 17	1029.8	NA	NA	NA	NA	NA	NA	NA
STD VC-1027	ALL	W14 120	1010.0	NA	NA	NA	NA	NA	NA	NA
STD VC-1027	ALL	W14 289	997.2	NA	NA	NA	NA	NA	NA	NA
STD VC-1027	ALL	W14 311	1027.0	NA	NA	NA	NA	NA	NA	NA
MEAN	.....		1017.6	NA	NA	NA	NA	NA	NA	NA
STD DEV	.....		12.3	NA	NA	NA	NA	NA	NA	NA
% STD DEV	.....		1.2	NA	NA	NA	NA	NA	NA	NA

Table 15. Analyses of All W14 Standards: b) Chlorinated Hydrocarbons

----- SAVANNAH RIVER SITE -----
 ----- STANDARD "M" AND "224" ANALYSIS FOR CENTRAL SHOP AREAS -----

SAMPLE #	DATE ANALYZED	AREA	METHANE PPBV	ETHANE PPBV	PROPANE PPBV	I-BUTANE PPBV	N-BUTANE PPBV	ETHYLENE PPBV	PROPYLENE PPBV
STD M	10-20-90	6315G	10041	1001	1005	1003	1011	1005	996
STD M	10-20-90	6315G	9683	973	957	964	954	970	982
STD M	10-20-90	6315G	9678	974	971	996	1003	962	963
STD M	10-20-90	6315G	9436	948	942	995	1059	928	923
STD M	10-23-90	6316G	9878	996	994	1029	1074	994	994
STD M	10-23-90	6316G	9901	994	993	1001	1011	992	995
STD M	10-23-90	6316G	9889	992	991	1003	1016	990	958
STD M	10-31-90	6313G	9809	993	989	1003	1077	985	984
STD M	10-31-90	6313G	9895	999	993	1018	1034	992	991
STD M	11-1-90	6313G	9986	1001	996	971	926	998	998
STD M	11-1-90	6313G	9950	1001	999	1004	997	999	998
STD M	11-1-90	6311G	9914	999	997	1004	990	993	994
STD M	11-1-90	6311G	9825	992	990	1015	1028	985	984
STD M	11-1-90	6311G	9896	998	996	1031	1039	991	993
STD M	11-1-90	6311G	9950	999	1001	1045	1080	994	1000
STD M	12-16-90	6311G	10070	1010	1008	1015	1037	1014	1010
STD M	12-16-90	6311G	10152	1017	1018	1010	1010	1022	1014
STD M	12-16-90	6311G	10142	1015	1018	1003	1010	1016	1017
STD M	12-16-90	6311G	10182	1023	1024	1029	1043	1021	1022
STD M	12-16-90	6311G	10036	1006	1009	1008	1011	1002	1009
STD M	7-26-91	6315G	10317	1029	1027	1042	1057	1025	1015
STD M	7-26-91	6315G	10329	1033	1034	1039	1047	1029	1024
STD M	7-26-91	6315G	10393	1043	1042	1062	1086	1038	1034
STD M	7-26-91	6316G	10391	1043	1043	1074	1108	1037	1032
STD M	7-27-91	6316G	10228	1019	1018	1012	1003	1018	1010
STD M	7-27-91	6316G	10237	1020	1017	1010	1017	1017	1010
STD M	7-27-91	6316G	10327	1034	1034	1076	1076	1030	1032
STD M	11-21-91	6315G	10086	1016	1016	1039	1077	1016	1010
STD M	11-21-91	6315G	10073	1014	1011	1028	1071	1011	1017
STD M	11-25-91	6315G	10053	1003	1005	1026	1075	1005	1014
STD M	11-25-91	6315G	10074	1006	1007	1029	1070	1007	1010
STD M	11-25-91	6315G	10108	1012	1013	1043	1080	1013	1019
STD M	11-25-91	6315G	10100	1010	1016	1028	1048	1010	1019
MEAN			10031	1006	1005	1020	1037	1003	1003
STD DEV			212	19	21	25	40	22	21
% STD DEV			2.12	1.93	2.13	2.41	3.82	2.19	2.11
STD 224	7-27-91	6316G	1009600	1045600	1009000		1030100		
STD 224	7-27-91	6316G	1008000	1042500	1059000		1097400		

Table 16. Light Hydrocarbon Analyses of All Standards "M" and "224" for Central Shops Areas

----- SAVANNAH RIVER SITE -----
 ----- MINIMUM DETECTION LEVELS for CENTRAL SHOPS AREAS -----
 ----- AREA REJECT = 40, CONCENTRATIONS IN PPMV -----

COMPOUND NAME	IDEAL M.D.L.	ACTUAL M.D.L.
VINYL CHLORIDE	0.10	1.0 - 6.0
METHYLENE CHLORIDE	0.03	1.0 - 3.0
TRANS 1,2 DICHLORO CHLOROFORM	0.011 0.00019	0.020 0.005
111 TRICHLOROETHANE	0.00007	0.005
CARBON TETRACHLORIDE	0.00004	0.005
BENZENE	0.032	0.070
TRICHLOROETHYLENE	0.00015	0.005
TOLUENE	0.028	0.070
TETRACHLOROETHYLENE	0.00005	0.005
ETHYL BENZENE	0.024	0.070
M&P-XYLENE	0.025	0.070
O-XYLENE	0.024	0.070

Table 17. Minimum Detection Levels

----- WESTINGHOUSE SAVANNAH RIVER SITE -----

----- W01 SYSTEM BLANKS -----

----- CONCENTRATIONS IN PPHV -----

SAMPLE #	VINYL		TRANS 1,2		CARBON		TRICHLORO		TETRA		TETRA		M&P		O
	CHLORIDE	METHYLENE CHLORIDE	DICHLORO ETHYLENE	CHLOROFORM	CHLORIDE	TETRA CHLORIDE	BENZENE	ETHYLENE	TOLUENE	ETHYLENE	CHLORO ETHYLENE	ETHYL BENZENE	XYLENE	XYLENE	
631-5G BLK#1	ND	ND	ND	ND	0.002	ND	ND	0.005	ND	ND	ND	ND	ND	ND	ND
631-5G BLK#2	ND	0.4	0.1	ND	0.002	ND	ND	0.005	0.06	*	0.101	ND	ND	ND	ND
631-5G BLK#3	ND	ND	ND	ND	0.002	ND	ND	ND	ND	0.004	ND	ND	ND	ND	ND
631-6G BLK#1	ND	ND	ND	ND	0.002	ND	ND	ND	ND	0.002	ND	ND	0.05	ND	ND
631-6G BLK#2	ND	0.3	ND	ND	0.002	ND	ND	ND	ND	0.001	ND	ND	0.04	ND	ND
631-6G BLK#3	ND	0.4	ND	ND	0.002	ND	ND	ND	ND	0.001	ND	ND	ND	ND	ND
631-6G BLK#4	ND	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
231-4F BLK#1	ND	0.3	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
231-4F BLK#2	0.1	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
231-4F BLK#3	ND	0.4	ND	ND	0.002	ND	ND	ND	ND	0.001	ND	ND	ND	ND	ND
231-4F BLK#4	ND	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
231-4F BLK#5	ND	0.5	ND	ND	0.002	ND	ND	ND	ND	0.001	ND	ND	0.04	ND	ND
231-4F BLK#6	ND	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
231-4F BLK#7	ND	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
231-4F BLK#8	ND	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
131-3L BLK#1	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.001	ND	ND	ND	ND	ND
131-3L BLK#2	ND	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
131-3L BLK#3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
131-3L BLK#4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
131-3L BLK#5	ND	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
131-3L BLK#6	ND	0.4	ND	ND	0.002	ND	ND	ND	ND	0.001	ND	ND	ND	ND	ND
131-3L BLK#7	ND	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
131-3L BLK#8	0.1	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
131-3L BLK#9	0.1	0.5	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
631-3G BLK#1	ND	0.6	ND	ND	0.002	ND	ND	ND	ND	0.001	ND	ND	ND	ND	ND
631-3G BLK#2	ND	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
631-3G BLK#3	ND	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.04	ND	ND
631-3G BLK#4	ND	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
631-1Q BLK#1	ND	0.4	ND	ND	0.002	ND	ND	ND	ND	0.001	ND	ND	ND	ND	ND
631-1Q BLK#2	ND	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MEAN	0.1	0.28	0.1	0.00019	0.00180	0.032	0.00031	0.029	0.00050	0.024	0.027	0.024	0.024	0.024	0.024
STD DEV	0.0	0.12	0.0	0.00000	0.00059	0.000	0.00087	0.006	0.00083	0.000	0.006	0.000	0.000	0.000	0.000
MEAN+2 STD DEV	0.10	0.51	0.10	0.00019	0.00298	0.032	0.00205	0.041	0.00216	0.024	0.040	0.024	0.040	0.024	0.024

* NOTE: ISOLATED BACKGROUND OCCURENCE IS NOT USED IN ABOVE CALCULATIONS

Table 18. System Blank Analyses for W01

----- WESTINGHOUSE SAVANNAH RIVER SITE -----

----- SYSTEM BLANKS -----

----- SOIL GAS CONCENTRATIONS (PPMV) -----

SAMPLE #		BENZENE		ETHYL	M&P-	O-
		TOLUENE		BENZENE	XYLENE	XYLENE
H BLK	1	ND	ND	ND	ND	ND
H BLK	2	ND	ND	ND	0.030	ND
H BLK	3	ND	ND	ND	ND	ND
S BLK	1	ND	ND	ND	ND	ND
S BLK	2	ND	ND	ND	0.028	ND
S BLK	3	ND	ND	ND	0.025	ND
S BLK	4	ND	ND	ND	ND	ND
S BLK	5	ND	ND	ND	ND	ND
S BLK	6	ND	ND	ND	0.028	ND
S BLK	7	ND	ND	ND	ND	ND
S BLK	8	ND	ND	ND	ND	ND
S BLK	9	ND	ND	ND	ND	ND
S BLK	10	ND	ND	ND	ND	ND
6311G BLK	4	ND	ND	ND	ND	ND
6311G BLK	5	ND	ND	ND	ND	ND
1GL BLK	1	ND	ND	ND	ND	ND
CMP BLK	1	ND	ND	ND	ND	ND
CMP BLK	2	ND	ND	ND	0.030	ND
CMP BLK	3	ND	ND	ND	ND	ND
CMP BLK	4	ND	ND	ND	ND	ND
CMP BLK	5	ND	ND	ND	ND	ND
CMP BLK	6	ND	ND	ND	ND	ND
CMP BLK	7	ND	ND	ND	ND	ND
CMP BLK	8	ND	ND	ND	0.044	ND
CMP BLK	10	ND	ND	ND	ND	ND
CMP BLK	11	ND	ND	ND	ND	ND
CMP BLK	12	ND	ND	ND	ND	ND
1313L BLK	10	ND	ND	ND	ND	ND
1313L BLK	11	ND	ND	ND	ND	ND
1313L BLK	12	ND	ND	ND	ND	ND
1313L BLK	13	ND	ND	ND	ND	ND
1313L BLK	14	ND	ND	ND	ND	ND
1313L BLK	15	ND	ND	ND	ND	ND
1313L BLK	16	ND	ND	ND	ND	ND
CMP BLK	13	ND	ND	ND	ND	ND
CMP BLK	14	ND	ND	ND	ND	ND
CMP BLK	15	ND	ND	ND	ND	ND
H018 BLK	1	ND	ND	ND	ND	ND
H018 BLK	2	ND	ND	ND	ND	ND
H018 BLK	3	ND	ND	ND	ND	ND
R BLK	1	ND	ND	ND	ND	ND
R BLK	2	ND	ND	ND	ND	ND
R BLK	3	ND	ND	ND	ND	ND
R BLK	4	ND	ND	ND	ND	ND
R BLK	5	ND	ND	ND	ND	ND
R BLK	6	ND	ND	ND	ND	ND
LX BLK	1	ND	ND	ND	ND	ND
LX BLK	2	ND	ND	ND	ND	ND
LX BLK	3	ND	ND	ND	ND	ND
LX BLK	4	ND	ND	ND	ND	ND
LX BLK	5	ND	ND	ND	ND	ND
LX BLK	6	ND	ND	ND	ND	ND

Table 19. System Blank Analyses for W3: a) Hydrocarbons

18-Jun-91

MICROSEEPS

----- WESTINGHOUSE SAVANNAH RIVER SITE -----

----- SYSTEM BLANKS -----

----- SOIL GAS CONCENTRATIONS (PPMV) -----

SAMPLE #		BENZENE	TOLUENE	ETHYL BENZENE	M&P- XYLENE	O- XYLENE
LX BLK	7	ND	ND	ND	ND	ND
LX BLK	8	ND	ND	ND	ND	ND
LX BLK	9	ND	ND	ND	ND	ND
LX BLK	10	ND	ND	ND	ND	ND
AVG		0.032	0.028	0.024	0.025	0.024
STD DEV		0.000	0.000	0.000	0.003	0.000
AVG+2(STD DEV)		0.032	0.028	0.024	0.031	0.024

Table 19. System Blank Analyses for W3: a) Hydrocarbons

----- WESTINGHOUSE SAVANNAH RIVER SITE -----
 ----- SYSTEM BLANKS -----
 ----- SOIL GAS CONCENTRATIONS (PPMV) -----

SAMPLE #	VINYL CHLORIDE	METHYLENE CHLORIDE	TRANS 1,2 DICHLORO ETHYLENE	CHLORO FORM	111 TRI CHLORO ETHANE	CARBON TETRA CHLORIDE	TRICHLORO ETHYLENE	TETRA CHLORO ETHYLENE	SAMPLE #
H BLK 1	1.0	0.29	ND	ND	0.00200	ND	ND	0.00100	H BLK 1
H BLK 2	1.9	1.47	ND	ND	0.00300	ND	ND	ND	H BLK 2
H BLK 3	1.5	1.19	ND	ND	0.00200	ND	ND	ND	H BLK 3
S BLK 1	0.6	0.48	ND	ND	0.00100	ND	ND	0.00100	S BLK 1
S BLK 2	2.2	2.09	ND	ND	0.00300	ND	0.00100	ND	S BLK 2
S BLK 3	4.2	2.10	ND	ND	0.00300	ND	0.00100	ND	S BLK 3
S BLK 4	1.1	1.13	ND	ND	0.00200	ND	ND	0.00200	S BLK 4
S BLK 5	1.5	1.57	ND	ND	0.00200	ND	ND	ND	S BLK 5
S BLK 6	1.7	1.49	ND	ND	0.00200	ND	ND	ND	S BLK 6
S BLK 7	2.3	1.71	ND	ND	0.00300	ND	ND	ND	S BLK 7
S BLK 8	0.5	0.41	ND	ND	0.00100	ND	ND	0.00100	S BLK 8
S BLK 9	1.1	1.47	ND	ND	0.00200	ND	ND	ND	S BLK 9
S BLK 10	1.0	0.89	ND	ND	0.00200	ND	ND	ND	S BLK 10
6311G BLK 4	1.9	1.80	ND	ND	0.00300	ND	ND	ND	6311G BLK 4
6311G BLK 5	0.8	0.79	ND	ND	0.00200	ND	ND	ND	6311G BLK 5
1GL BLK 1	0.6	0.23	ND	ND	0.00100	ND	ND	ND	1GL BLK 1
CMP BLK 1	1.1	1.09	ND	ND	0.00200	ND	ND	ND	CMP BLK 1
CMP BLK 2	2.5	3.04	ND	ND	0.00400	ND	ND	ND	CMP BLK 2
CMP BLK 3	0.9	1.18	ND	ND	0.00300	ND	ND	ND	CMP BLK 3
CMP BLK 4	1.5	1.28	ND	ND	0.00200	ND	ND	ND	CMP BLK 4
CMP BLK 5	1.9	2.24	ND	ND	0.00300	ND	ND	ND	CMP BLK 5
CMP BLK 6	1.2	0.75	ND	ND	0.00200	ND	ND	0.00200	CMP BLK 6
CMP BLK 7	0.6	0.51	ND	ND	0.00200	ND	ND	ND	CMP BLK 7
CMP BLK 8	1.7	2.20	ND	ND	0.00400	ND	0.00100	ND	CMP BLK 8
CMP BLK 10	0.8	0.49	ND	ND	0.00200	ND	ND	ND	CMP BLK 10
CMP BLK 11	2.1	2.05	ND	ND	0.00400	ND	0.00100	ND	CMP BLK 11
CMP BLK 12	0.5	0.31	ND	ND	0.00100	ND	ND	ND	CMP BLK 12
1313L BLK 10	2.7	0.54	ND	ND	0.00300	ND	0.00100	ND	1313L BLK 10
1313L BLK 11	1.8	0.37	ND	ND	0.00300	ND	ND	ND	1313L BLK 11
1313L BLK 12	1.3	0.23	ND	ND	0.00200	ND	ND	ND	1313L BLK 12
1313L BLK 13	1.5	0.13	ND	ND	0.00200	ND	ND	ND	1313L BLK 13
1313L BLK 14	2.3	0.61	ND	ND	0.00300	ND	0.00100	ND	1313L BLK 14
1313L BLK 15	2.9	1.10	ND	ND	0.00500	ND	0.00100	ND	1313L BLK 15
1313L BLK 16	3.0	0.63	ND	ND	0.00500	ND	0.00100	ND	1313L BLK 16
CMP BLK 13	2.8	0.79	ND	ND	0.00300	ND	0.00100	ND	CMP BLK 13
CMP BLK 14	1.2	0.11	ND	ND	0.00200	ND	ND	ND	CMP BLK 14
CMP BLK 15	2.4	0.42	ND	ND	0.00300	ND	ND	ND	CMP BLK 15
H018 BLK 1	0.5	0.01	ND	ND	0.00100	ND	ND	ND	H018 BLK 1
H018 BLK 2	1.3	0.13	ND	ND	0.00200	ND	ND	ND	H018 BLK 2
H018 BLK 3	1.9	1.02	ND	ND	0.00400	ND	ND	ND	H018 BLK 3
R BLK 1	ND	0.01	ND	ND	0.00100	ND	ND	ND	R BLK 1
R BLK 2	1.3	0.08	ND	ND	0.00200	ND	ND	ND	R BLK 2
R BLK 3	ND	0.46	ND	ND	0.00300	ND	ND	ND	R BLK 3
R BLK 4	1.4	0.27	ND	ND	0.00300	ND	ND	ND	R BLK 4
R BLK 5	1.7	0.53	ND	ND	0.00400	ND	ND	ND	R BLK 5
R BLK 6	1.2	0.13	ND	ND	0.00300	ND	ND	ND	R BLK 6
LX BLK 1	2.4	0.67	ND	ND	0.00400	ND	ND	ND	LX BLK 1
LX BLK 2	1.0	0.03	ND	ND	0.00200	ND	ND	ND	LX BLK 2
LX BLK 3	2.5	0.46	ND	ND	0.00300	ND	ND	ND	LX BLK 3
LX BLK 4	1.1	0.02	ND	ND	0.00200	ND	ND	ND	LX BLK 4
LX BLK 5	0.9	0.14	ND	ND	0.00200	ND	ND	ND	LX BLK 5
LX BLK 6	0.9	0.03	ND	ND	0.00200	ND	ND	ND	LX BLK 6

Table 19. System Blank Analyses for W3: b) Chlorinated Hydrocarbons

----- WESTINGHOUSE SAVANNAH RIVER SITE -----
 ----- SYSTEM BLANKS -----
 ----- SOIL GAS CONCENTRATIONS (PPMV) -----

SAMPLE #	VINYL CHLORIDE	METHYLENE CHLORIDE	TRANS 1,2 DICHLORO ETHYLENE	CHLORO FORM	111 TRI CHLORO ETHANE	CARBON TETRA CHLORIDE	TRICLORO ETHYLENE	TETRA CHLORO ETHYLENE	SAMPLE #
LX BLK 7	1.7	0.15	ND	ND	0.00200	ND	ND	ND	LX BLK 7
LX BLK 8	1.4	0.88	ND	ND	0.00400	ND	ND	ND	LX BLK 8
LX BLK 9	0.6	0.01	ND	ND	0.00100	ND	ND	ND	LX BLK 9
LX BLK 10	1.9	0.45	ND	ND	0.00400	ND	ND	ND	LX BLK 10
AVG	1.5	0.80	0.011	0.00019	0.00255	0.00004	0.00029	0.00017	
STD DEV	0.8	0.71	0.000	0.00000	0.00100	0.00000	0.00031	0.00041	
AVG+2(STD DEV)	3.1	2.22	0.011	0.00019	0.00455	0.00004	0.00091	0.00099	

Table 19. System Blank Analyses for W3: b). Chlorinated Hydrocarbons

----- SAVANNAH RIVER SITE -----
 ----- SOIL GAS SYSTEM BLANKS -- W6 THRU W10 DATA DIRECTORIES -----
 ----- GAS CONCENTRATIONS (PPMV) -----

SAMPLE NAME	PENTANE	HEXANE	HEPTANE	BENZENE	OCTANE	TOLUENE	NONANE	ETHYL BENZENE	M&P- XYLENE	O- XYLENE	DECANE	FILE CYCLE
631-G-SB#1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 7
631-G-SB#2	ND	ND	ND	ND	ND	ND	ND	ND	0.018	ND	ND	w6 21
F-AREA-SB#1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 34
631-G-SB#3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 47
631-G-SB#4	ND	ND	ND	ND	ND	ND	ND	ND	0.020	ND	ND	w6 59
631-G-SB#5	ND	ND	ND	ND	ND	ND	ND	ND	0.020	ND	ND	w6 73
631-G-SB#6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 85
631-G-SB#7	ND	ND	ND	ND	ND	ND	ND	ND	0.019	ND	ND	w6 98
631-G-SB#8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 110
631-G-SB#9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 122
631-G-SB#10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 134
631-G-SB#11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 146
H-AY-SB#1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 181
716-A-SB#1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 195
716-A-SB#2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 207
716-A-SB#3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 221
716-A-SB#4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 232
716-A-SB#5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 247
716-A-SB#6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.016	w6 258
716-A-SB#7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 270
HSS-SB#1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 284
HSS-SB#2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 305
HSS-SB#3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 317
HSS-SB#4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 334
HSS-SB#5	ND	ND	ND	ND	ND	ND	ND	ND	0.021	ND	ND	w6 347
TX-SB#1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 356
TX-SB#2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 368
FR-SB#1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 379
FR-SB#2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 391
FR-SB#3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 403
KR SYSBLK 1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 415
KR SYSBLK 2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 427
KR SYSBLK 3	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.020	ND	w6 439
KR SYSBLK 4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w6 451
KR SYSBLK 5	ND	ND	ND	ND	0.020	ND	ND	ND	ND	ND	ND	w6 463
131-1R-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w7 33
131-1R-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w7 45
131-R-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w7 59
431-1D-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w7 75
431-1D-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w7 87
431-D-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.016	w7 93
131-1L-SB1	ND	ND	ND	ND	ND	ND	ND	ND	0.033	ND	ND	w7 100
131-L-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.070	w7 113
131-L-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w7 123
131-C-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w7 132
131-C-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w7 144
731-A-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w7 156
731-1A-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w7 168
231-F-SB1	ND	ND	ND	ND	ND	ND	ND	ND	0.026	ND	ND	w7 180
231-F-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w7 191
131-P-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w7 203
631-20G-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w7 215

----- SAVANNAH RIVER SITE -----
 ----- SOIL GAS SYSTEM BLANKS -- W6 THRU W10 DATA DIRECTORIES -----
 ----- GAS CONCENTRATIONS (PPMV) -----

SAMPLE NAME	PENTANE	HEXANE	HEPTANE	BENZENE	OCTANE	TOLUENE	NONANE	ETHYL BENZENE	M&P- XYLENE	O- XYLENE	DECANE	FILE CYCLE
631-20G-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.029	ND	w7 227
631-20G-SB3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w7 240
231-2F-SB1	ND	ND	ND	ND	ND	ND	ND	ND	0.036	ND	ND	w7 251
231-2F-SB2	ND	ND	ND	ND	ND	ND	ND	ND	0.034	ND	ND	w7 260
231-1F-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w7 269
731-2A-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.023	w7 282
716-A-SB8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w8 19
716-A-SB9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.019	w8 20
716-A-SB10	ND	ND	ND	ND	ND	ND	ND	ND	0.042	ND	ND	w8 39
631-G-SB12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w8 51
631-G-SB13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.016	w8 63
400-D SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w8 75
400-D-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w8 88
400-D-SB3	ND	ND	ND	ND	ND	ND	ND	ND	0.037	ND	ND	w8 100
400-D-SB4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w8 112
400-D-SB5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w8 124
400-D-SB6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w8 137
400-D-SB7	ND	ND	ND	ND	ND	0.022	ND	ND	ND	ND	0.015	w8 149
400-D-SB8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w8 161
400-D-SB9	ND	ND	ND	ND	ND	ND	ND	ND	0.058	ND	ND	w8 173
631-6A-SB1	ND	ND	ND	ND	ND	ND	ND	ND	0.031	ND	ND	w8 258
631-6A-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w8 269
731-6A-SB3	ND	ND	ND	ND	ND	ND	ND	ND	0.032	ND	0.027	w8 281
731-6A-SB4	ND	ND	ND	ND	ND	ND	ND	ND	0.028	ND	0.028	w8 293
731-6A-SB5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w8 306
731-6A-SB6	ND	ND	ND	ND	ND	ND	ND	ND	0.028	ND	ND	w8 318
731-6A-SB7	ND	0.053	ND	ND	ND	0.176	ND	ND	ND	ND	ND	w8 330
731-6A-SB8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w8 342
731-6A-SB9	ND	ND	ND	ND	ND	ND	ND	ND	0.028	ND	ND	w8 354
731-6A-SB10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.020	w8 366
731-6A-SB11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w8 386
131-K-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w8 399
131-2R-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w8 416
131-2R-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.018	w8 428
131-2R-SB3	ND	ND	ND	ND	ND	ND	ND	ND	0.028	ND	ND	w8 432
080-21G-SB1	ND	ND	ND	ND	ND	ND	ND	ND	0.039	ND	0.023	w8 440
080-22G-SB1	ND	ND	ND	ND	ND	ND	ND	ND	0.040	ND	ND	w8 452
080-22G-SB2	ND	ND	ND	ND	ND	ND	ND	ND	0.032	ND	0.031	w8 459
131-4L-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 24
131-4L-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 36
080-30G-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 48
080-30G-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 60
080-30G-SB3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 70
080-29G-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 73
080-29G-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 85
080-29G-SB3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 97
080-01R-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 112
080-01R-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 120
080-01R-SB3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 132
740-G-SB32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 144
740-G-SB33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 156
740-G-SB34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 169

Table 20. System Blank Analyses for W10: a) Hydrocarbons

----- SAVANNAH RIVER SITE -----
 ----- SOIL GAS SYSTEM BLANKS -- W6 THRU W10 DATA DIRECTORIES -----
 ----- GAS CONCENTRATIONS (PPMV) -----

SAMPLE NAME	PENTANE	HEXANE	HEPTANE	BENZENE	OCTANE	TOLUENE	NONANE	ETHYL BENZENE	M&P- XYLENE	O- XYLENE	DECANE	FILE CYCLE
904-83G-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 181
904-83G-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 193
904-83G-SB3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 213
904-83G-SB4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 225
904-83G-SB5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 392
904-83G-SB6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 249
904-83G-SB7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 261
904-83G-SB8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 273
904-83G-SB9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 285
904-83G-SB10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 299
904-83G-SB11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 311
904-83G-SB12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 323
904-83G-SB13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 335
904-83G-SB14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 347
904-83G-SB15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 359
904-83G-SB16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 371
904-83G-SB17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 383
904-49G-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 397
904-49G-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 409
904-49G-SB3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	w9 421
108-4R-SB1	ND	ND	ND	ND	ND	0.028	ND	ND	ND	ND	ND	w9 433
108-4R-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 16
108-4R-SB3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 28
108-4R-SB4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 40
108-4R-SB5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 52
108-4R-SB6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 68
108-4R-SB7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 79
631-19G-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 83
631-19G-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 95
631-19G-SB3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 107
631-19G-SB4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 119
631-19G-SB5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 131
631-19G-SB6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 143
CHP-SB16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 158
CHP-SB17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 170
CHP-SB18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 176
761-13G-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 182
761-13G-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 194
761-13G-SB3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 211
761-13G-SB4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 223
631-27G-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 235
631-27G-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 247
631-27G-SB3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 259
631-27G-SB4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 275
631-27G-SB5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 287
631-5G-SB4	ND	ND	ND	ND	ND	0.024	ND	ND	ND	ND	ND	W10 299
631-5G-SB5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 311
631-5G-SB6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 322
631-6G-SB5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 336
631-6G-SB6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 348
631-6G-SB7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 354
231-4F-SB9	ND	ND	ND	ND	ND	0.040	ND	ND	ND	ND	ND	W10 380

----- SAVANNAH RIVER SITE -----
 ----- SOIL GAS SYSTEM BLANKS -- W6 THRU W10 DATA DIRECTORIES -----
 ----- GAS CONCENTRATIONS (PPHV) -----

SAMPLE NAME	PENTANE	HEXANE	HEPTANE	BENZENE	OCTANE	TOLUENE	NONANE	ETHYL BENZENE	M&P- XYLENE	O- XYLENE	DECANE	FILE CYCLE
231-4F-SB10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 392
231-4F-SB11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 404
231-4F-SB12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 415
716-A-SB11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 433
716-A-SB12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 445
716-A-SB13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W10 450
AVERAGE	0.040	0.033	0.026	0.032	0.023	0.029	0.021	0.024	0.026	0.024	0.020	
STD DEV	0.000	0.002	0.000	0.000	0.000	0.012	0.000	0.000	0.004	0.001	0.004	
AVG+2STD DEV	0.040	0.036	0.026	0.032	0.023	0.052	0.021	0.024	0.034	0.025	0.029	

Table 20. System Blank Analyses for W10: a) Hydrocarbons

----- SAVANNAH RIVER SITE -----
 ----- SOIL GAS SYSTEM BLANKS -- W6 THRU W10 DATA DIRECTORIES -----
 ----- GAS CONCENTRATIONS (PPHV) -----

SAMPLE NAME	VINYL CHLORIDE	METHYLENE CHLORIDE	TRANS 1,2 DICHLORO ETHYLENE	CHLORO FORM	111 TRI CHLORO ETHANE	CARBON TETRA CHLORIDE	TRI CHLORO ETHYLENE	TETRA CHLORO ETHYLENE	FILE CYCLE
631-G-SB#1	0.5	ND	ND	ND	0.00100	ND	ND	ND	w6 7
631-G-SB#2	1.3	0.24	ND	ND	0.00200	ND	ND	ND	w6 21
F-AREA-SB#1	1.0	ND	ND	ND	0.00200	ND	ND	ND	w6 34
631-G-SB#3	2.1	0.26	ND	ND	0.00300	ND	ND	ND	w6 47
631-G-SB#4	2.5	0.49	ND	ND	0.00500	ND	ND	ND	w6 59
631-G-SB#5	2.2	0.39	ND	ND	0.00400	ND	ND	ND	w6 73
631-G-SB#6	0.6	ND	ND	ND	0.00100	ND	ND	ND	w6 85
631-G-SB#7	1.7	0.26	ND	ND	0.00300	ND	ND	0.00100	w6 98
631-G-SB#8	1.9	0.34	ND	ND	0.00300	ND	ND	ND	w6 110
631-G-SB#9	0.9	ND	ND	ND	0.00300	ND	ND	ND	w6 122
631-G-SB#10	1.6	0.37	ND	ND	0.00400	ND	ND	ND	w6 134
631-G-SB#11	1.8	ND	ND	ND	0.00300	ND	ND	ND	w6 146
H-AY-SB#1	1.0	ND	ND	ND	0.00200	ND	ND	ND	w6 181
716-A-SB#1	0.7	ND	ND	ND	0.00100	ND	ND	ND	w6 195
716-A-SB#2	1.7	ND	ND	ND	0.00200	ND	ND	ND	w6 207
716-A-SB#3	0.7	ND	ND	ND	0.00100	ND	ND	ND	w6 221
716-A-SB#4	0.9	ND	ND	ND	0.00200	ND	ND	ND	w6 232
716-A-SB#5	0.6	ND	ND	ND	0.00100	ND	ND	ND	w6 247
716-A-SB#6	1.9	0.26	ND	ND	0.00300	ND	ND	ND	w6 258
716-A-SB#7	0.5	ND	ND	ND	0.00100	ND	ND	ND	w6 270
HSS-SB#1	0.7	ND	ND	ND	0.00200	ND	ND	ND	w6 284
HSS-SB#2	1.5	0.24	ND	ND	0.00200	ND	ND	ND	w6 305
HSS-SB#3	2.1	0.34	ND	ND	0.00300	ND	ND	ND	w6 317
HSS-SB#4	0.9	ND	ND	ND	0.00200	ND	ND	ND	w6 334
HSS-SB#5	2.7	0.53	ND	ND	0.00700	ND	ND	ND	w6 347
TX-SB#1	0.5	ND	ND	ND	0.00100	ND	ND	ND	w6 356
TX-SB#2	1.4	ND	ND	ND	0.00300	ND	ND	ND	w6 368
FR-SB#1	ND	ND	ND	ND	0.00100	ND	ND	ND	w6 379
FR-SB#2	1.2	ND	ND	ND	0.00200	ND	ND	ND	w6 391
FR-SB#3	1.0	ND	ND	ND	0.00200	ND	ND	ND	w6 403
KR SYSBLK 1	1.0	ND	ND	ND	0.00200	ND	ND	ND	w6 415
KR SYSBLK 2	1.9	0.36	ND	ND	0.00400	ND	ND	ND	w6 427
KR SYSBLK 3	0.5	ND	ND	ND	0.00100	ND	ND	ND	w6 439
KR SYSBLK 4	1.1	ND	ND	ND	0.00300	ND	ND	ND	w6 451
KR SYSBLK 5	1.4	ND	ND	ND	0.00300	ND	ND	ND	w6 463
131-1R-SB1	0.2	ND	ND	ND	0.00100	ND	ND	ND	w7 33
131-1R-SB2	0.4	0.23	ND	ND	0.00100	ND	ND	ND	w7 45
131-R-SB1	0.2	ND	ND	ND	0.00100	ND	ND	ND	w7 59
431-1D-SB1	0.1	ND	ND	ND	0.00100	ND	ND	ND	w7 75
431-1D-SB2	0.3	0.21	ND	ND	0.00100	ND	ND	ND	w7 87
431-0-SB1	0.4	0.34	ND	ND	0.00100	ND	ND	ND	w7 93
131-1L-SB1	0.4	0.47	ND	ND	0.00200	ND	ND	ND	w7 100
131-L-SB1	0.3	ND	ND	ND	0.00100	ND	ND	ND	w7 113
131-L-SB2	0.4	0.36	ND	ND	0.00200	0.00100	ND	0.00800	w7 123
131-C-SB1	0.2	ND	ND	ND	0.00100	ND	ND	ND	w7 132
131-C-SB2	0.3	1.28	ND	ND	0.00100	ND	ND	ND	w7 144
731-A-SB1	0.4	0.24	ND	ND	0.00200	ND	ND	ND	w7 156
731-1A-SB1	0.3	0.29	ND	ND	0.00200	ND	ND	ND	w7 168
231-F-SB1	0.5	0.34	ND	ND	0.00200	ND	ND	ND	w7 180
231-F-SB2	0.3	0.24	ND	ND	0.00100	ND	ND	ND	w7 191
131-P-SB1	0.2	ND	ND	ND	0.00100	ND	ND	ND	w7 203
631-20G-SB1	0.2	0.25	ND	ND	0.00100	ND	ND	ND	w7 215

Table 20. System Blank Analyses for W10: b) Chlorinated Hydrocarbons

----- SAVANNAH RIVER SITE -----
 ----- SOIL GAS SYSTEM BLANKS -- W6 THRU W10 DATA DIRECTORIES -----
 ----- GAS CONCENTRATIONS (PPMV) -----

SAMPLE NAME	VINYL CHLORIDE	METHYLENE CHLORIDE	TRANS 1,2 DICHLORO ETHYLENE	CHLORO FORM	111 TRI CHLORO ETHANE	CARBON TETRA CHLORIDE	TRI CHLORO ETHYLENE	TETRA CHLORO ETHYLENE	FILE CYCLE
631-20G-SB2	0.4	ND	ND	ND	0.00100	ND	ND	ND	w7 227
631-20G-SB3	0.2	0.33	ND	ND	0.00100	ND	ND	ND	w7 240
231-2F-SB1	0.6	0.36	ND	ND	0.00200	ND	ND	ND	w7 251
231-2F-SB2	0.5	0.56	ND	ND	0.00200	ND	ND	ND	w7 260
231-1F-SB1	0.4	0.31	ND	ND	0.00200	ND	ND	ND	w7 269
731-2A-SB1	0.5	0.26	ND	ND	0.00200	ND	ND	ND	w7 282
716-A-SB8	0.3	0.22	ND	ND	0.00300	ND	ND	ND	w8 19
716-A-SB9	0.6	0.26	ND	ND	0.00400	ND	ND	0.00300	w8 20
716-A-SB10	0.2	ND	ND	ND	0.00300	ND	ND	ND	w8 39
631-G-SB12	0.3	ND	ND	ND	0.00200	ND	ND	ND	w8 51
631-G-SB13	0.4	0.29	ND	ND	0.00300	ND	ND	ND	w8 63
400-D SB1	0.2	ND	ND	ND	0.00100	ND	ND	ND	w8 75
400-D-SB2	0.5	ND	ND	ND	0.00200	ND	ND	ND	w8 88
400-D-SB3	0.2	ND	ND	ND	0.00100	ND	ND	ND	w8 100
400-D-SB4	0.3	0.25	ND	ND	0.00200	ND	ND	ND	w8 112
400-D-SB5	0.1	ND	ND	ND	0.00200	ND	ND	ND	w8 124
400-D-SB6	0.4	0.36	ND	ND	0.00300	ND	ND	ND	w8 137
400-D-SB7	0.3	ND	ND	ND	0.00200	ND	ND	ND	w8 149
400-D-SB8	0.4	0.28	ND	ND	0.00300	ND	ND	ND	w8 161
400-D-SB9	0.2	ND	ND	ND	0.00200	ND	ND	ND	w8 173
631-6A-SB1	0.7	0.42	ND	ND	0.00400	ND	ND	ND	w8 258
631-6A-SB2	0.6	0.29	ND	ND	0.00300	ND	ND	ND	w8 269
731-6A-SB3	0.7	0.44	ND	ND	0.00400	ND	ND	ND	w8 281
731-6A-SB4	0.4	0.34	ND	ND	0.00300	ND	ND	ND	w8 293
731-6A-SB5	0.3	ND	ND	ND	0.00200	ND	ND	ND	w8 306
731-6A-SB6	0.4	ND	ND	ND	0.00200	ND	ND	ND	w8 318
731-6A-SB7	0.3	0.37	ND	ND	0.00200	ND	ND	ND	w8 330
731-6A-SB8	0.6	0.27	ND	ND	0.00300	ND	ND	ND	w8 342
731-6A-SB9	0.4	0.21	ND	ND	0.00300	ND	ND	ND	w8 354
731-6A-SB10	0.4	0.31	ND	ND	0.00300	ND	ND	ND	w8 366
731-6A-SB11	0.4	0.57	ND	ND	0.00300	ND	ND	ND	w8 386
131-K-SB1	0.3	ND	ND	ND	0.00200	ND	ND	ND	w8 399
131-2R-SB1	0.3	0.30	ND	ND	0.00400	ND	ND	ND	w8 416
131-2R-SB2	0.3	0.42	ND	ND	0.00400	ND	ND	0.00100	w8 428
131-2R-SB3	0.4	ND	ND	ND	0.00300	ND	ND	ND	w8 432
080-21G-SB1	0.3	0.41	ND	ND	0.00400	ND	ND	ND	w8 440
080-22G-SB1	0.5	0.28	ND	ND	0.00300	ND	ND	ND	w8 452
080-22G-SB2	0.3	0.60	ND	ND	0.00500	ND	ND	ND	w8 459
131-4L-SB1	0.3	ND	0.048	ND	0.00200	ND	ND	ND	w9 24
131-4L-SB2	0.2	ND	0.072	ND	0.00200	ND	ND	ND	w9 36
080-30G-SB1	0.2	ND	0.053	ND	0.00200	ND	ND	ND	w9 48
080-30G-SB2	0.2	ND	0.036	ND	0.00200	ND	ND	ND	w9 60
080-30G-SB3	0.3	ND	0.037	ND	0.00200	ND	ND	ND	w9 70
080-29G-SB1	0.6	0.21	ND	ND	0.00100	ND	ND	ND	w9 73
080-29G-SB2	0.3	ND	ND	ND	0.00100	ND	0.00100	ND	w9 85
080-29G-SB3	0.5	0.24	ND	ND	0.00100	ND	ND	ND	w9 97
080-01R-SB1	0.4	0.24	ND	ND	0.00100	ND	0.00100	ND	w9 112
080-01R-SB2	0.6	0.31	0.028	ND	0.00200	ND	ND	ND	w9 120
080-01R-SB3	0.5	0.28	0.025	ND	0.00100	ND	0.00100	ND	w9 132
740-G-SB32	0.6	0.23	0.031	ND	0.00100	ND	ND	ND	w9 144
740-G-SB33	0.9	0.27	0.033	ND	0.00100	ND	ND	ND	w9 156
740-G-SB34	0.9	0.33	0.019	ND	0.00200	ND	ND	ND	w9 169

Table 20. System Blank Analyses for W10: b) Chlorinated Hydrocarbons

----- SAVANNAH RIVER SITE -----
 ----- SOIL GAS SYSTEM BLANKS -- W6 THRU W10 DATA DIRECTORIES -----
 ----- GAS CONCENTRATIONS (PPMV) -----

SAMPLE NAME	VINYL CHLORIDE	METHYLENE CHLORIDE	TRANS 1,2 DICHLORO ETHYLENE	CHLORO FORM	111 TRI CHLORO ETHANE	CARBON TETRA CHLORIDE	TRI CHLORO ETHYLENE	TETRA CHLORO ETHYLENE	FILE CYCLE
904-83G-SB1	0.5	ND	0.016	ND	0.00200	ND	ND	ND	w9 181
904-83G-SB2	0.5	ND	0.018	ND	0.00100	ND	ND	ND	w9 193
904-83G-SB3	0.3	ND	0.019	ND	0.00100	ND	0.00100	ND	w9 213
904-83G-SB4	0.5	ND	0.016	ND	0.00100	ND	ND	ND	w9 225
904-83G-SB5	0.6	ND	0.020	ND	0.00200	ND	ND	ND	w9 392
904-83G-SB6	0.4	ND	0.014	ND	0.00100	ND	ND	ND	w9 249
904-83G-SB7	0.5	ND	0.013	ND	0.00200	ND	ND	ND	w9 261
904-83G-SB8	0.3	0.20	0.027	ND	0.00100	ND	ND	ND	w9 273
904-83G-SB9	0.4	ND	0.018	ND	0.00200	ND	ND	ND	w9 285
904-83G-SB10	0.5	ND	0.018	ND	0.00100	ND	ND	ND	w9 299
904-83G-SB11	0.4	ND	0.016	ND	0.00100	ND	ND	ND	w9 311
904-83G-SB12	0.6	ND	0.014	ND	0.00100	ND	ND	ND	w9 323
904-83G-SB13	0.4	ND	0.018	ND	0.00100	ND	ND	ND	w9 335
904-83G-SB14	0.4	ND	0.011	ND	0.00100	ND	ND	ND	w9 347
904-83G-SB15	0.6	ND	0.016	ND	0.00100	ND	ND	ND	w9 359
904-83G-SB16	0.3	ND	0.011	ND	0.00100	ND	ND	ND	w9 371
904-83G-SB17	0.2	ND	0.012	ND	0.00100	ND	ND	ND	w9 383
904-49G-SB1	0.2	ND	ND	ND	0.00100	ND	ND	ND	w9 397
904-49G-SB2	0.2	ND	ND	ND	0.00100	ND	ND	ND	w9 409
904-49G-SB3	0.2	ND	0.009	ND	0.00100	ND	ND	ND	w9 421
108-4R-SB1	0.2	ND	ND	ND	0.00100	ND	0.00100	ND	w9 433
108-4R-SB2	0.2	ND	ND	ND	0.00100	ND	ND	ND	w10 16
108-4R-SB3	0.3	ND	0.006	ND	0.00100	ND	ND	ND	w10 28
108-4R-SB4	0.2	ND	0.011	ND	0.00100	ND	ND	ND	w10 40
108-4R-SB5	0.4	ND	0.013	ND	0.00100	ND	ND	ND	w10 52
108-4R-SB6	0.3	0.22	ND	ND	0.00100	ND	ND	ND	w10 68
108-4R-SB7	0.2	ND	0.014	ND	0.00100	ND	ND	ND	w10 79
631-19G-SB1	0.3	ND	0.015	ND	0.00100	ND	ND	ND	w10 83
631-19G-SB2	0.3	ND	0.013	ND	0.00100	ND	ND	ND	w10 95
631-19G-SB3	0.4	ND	0.012	ND	0.00200	ND	ND	ND	w10 107
631-19G-SB4	0.3	ND	0.011	ND	0.00200	ND	ND	ND	w10 119
631-19G-SB5	0.3	ND	0.011	ND	0.00200	ND	ND	ND	w10 131
631-19G-SB6	0.4	ND	0.014	ND	0.00100	ND	ND	ND	w10 143
CHP-SB16	0.2	ND	0.017	ND	0.00100	ND	0.00100	ND	w10 158
CHP-SB17	0.5	ND	0.015	ND	0.00200	ND	ND	ND	w10 170
CHP-SB18	0.2	ND	0.014	ND	0.00100	ND	ND	ND	w10 176
761-13G-SB1	0.2	ND	0.010	ND	0.00100	ND	ND	ND	w10 182
761-13G-SB2	0.2	ND	0.012	ND	0.00100	ND	ND	ND	w10 194
761-13G-SB3	0.3	ND	0.014	ND	0.00100	ND	ND	ND	w10 211
761-13G-SB4	0.2	ND	ND	ND	0.00100	ND	ND	ND	w10 223
631-27G-SB1	0.4	ND	0.014	ND	0.00200	ND	ND	ND	w10 235
631-27G-SB2	0.3	ND	0.013	ND	0.00100	ND	ND	ND	w10 247
631-27G-SB3	0.2	ND	0.009	ND	0.00100	ND	ND	ND	w10 259
631-27G-SB4	0.3	ND	0.006	ND	0.00100	ND	0.00100	ND	w10 275
631-27G-SB5	0.3	ND	0.009	ND	0.00100	ND	ND	ND	w10 287
631-5G-SB4	0.1	ND	ND	ND	0.00100	ND	ND	ND	w10 299
631-5G-SB5	0.2	ND	ND	ND	0.00100	ND	ND	ND	w10 311
631-5G-SB6	0.2	ND	ND	ND	0.00100	ND	ND	0.00100	w10 322
631-6G-SB5	0.1	ND	ND	ND	0.00100	ND	ND	ND	w10 336
631-6G-SB6	0.1	ND	ND	ND	0.00100	ND	ND	ND	w10 348
631-6G-SB7	0.2	ND	ND	ND	0.00100	ND	ND	ND	w10 354
231-4F-SB9	0.2	ND	ND	ND	0.00100	ND	ND	ND	w10 380

Table 20. System Blank Analyses for W10: b) Chlorinated Hydrocarbons

----- SAVANNAH RIVER SITE -----
 ----- SOIL GAS SYSTEM BLANKS -- W6 THRU W10 DATA DIRECTORIES -----
 ----- GAS CONCENTRATIONS (PPMV) -----

SAMPLE NAME	VINYL CHLORIDE	METHYLENE CHLORIDE	TRANS 1,2 DICHLORO ETHYLENE	CHLORO FORM	111 TRI CHLORO ETHANE	CARBON TETRA CHLORIDE	TRI CHLORO ETHYLENE	TETRA CHLORO ETHYLENE	FILE CYCLE
231-4F-SB10	0.3	ND	ND	ND	0.00100	ND	0.00100	ND	W10 392
231-4F-SB11	0.2	ND	ND	ND	0.00100	ND	ND	ND	W10 404
231-4F-SB12	0.2	ND	ND	ND	0.00100	ND	ND	ND	W10 415
716-A-SB11	0.2	ND	ND	ND	0.00100	ND	ND	ND	W10 433
716-A-SB12	0.1	ND	ND	ND	0.00100	ND	0.00400	0.00900	W10 445
716-A-SB13	ND	ND	ND	ND	0.00100	ND	0.00100	0.03000	W10 450
AVERAGE	0.5	0.14	0.013	0.00019	0.00182	0.00005	0.00022	0.00038	
STD DEV	0.5	0.17	0.008	0.00000	0.00105	0.00008	0.00036	0.00253	
AVG+2STD DEV	1.5	0.49	0.029	0.00019	0.00392	0.00020	0.00093	0.00543	

Table 20. System Blank Analyses for W10: b) Chlorinated Hydrocarbons

----- SAVANNAH RIVER SITE -----
 ----- SOIL GAS SYSTEM BLANKS -- D11 THRU D15 DATA DIRECTORIES -----
 ----- GAS CONCENTRATIONS (PPMV) -----

SAMPLE NAME	PENTANE	HEXANE	HEPTANE	BENZENE	OCTANE	TOLUENE	NONANE	ETHYL BENZENE	M&P-XYLENE	O-XYLENE	DECANE	FILE CYCLE
BGP-SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 44
BGP-SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 56
BGP-SB3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 68
BGP-SB4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 80
BGP-SB5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 93
BGP-SB6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 104
BGP-SB7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 116
BGP-SB8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 128
BGP-SB9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 140
BGP-SB10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 158
BGP-SB11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 169
BGP-SB12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 182
BGP-SB13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 195
716-A-SB14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 254
716-A-SB15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 267
716-A-SB16	ND	ND	ND	ND	ND	0.038	ND	ND	ND	ND	ND	W11 280
BGP-SB14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 291
BGP-SB15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 304
BGP-SB16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 317
BGP-SB17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 330
BGP-SB18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 343
BGP-SB19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 356
BGP-SB20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 374
BGP-SB21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 387
BGP-SB22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 401
BGP-SB23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 438
BGP-SB24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 451
BGP-SB25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 464
BGP-SB26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 477
BGP-SB27	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 490
BGP-SB28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W11 503
BGP-SB29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 75
BGP-SB30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 88
BGP-SB31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 101
BGP-SB32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 114
BGP-SB33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 127
BGP-SB34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 141
BGP-SB35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 153
BGP-SB36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 167
BGP-SB37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 209
BGP-SB38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 229
BGP-SB39	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 239
904-83G-SB18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 247
904-83G-SB19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 260
904-83G-SB20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 273
716-A-SB17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 285
716-A-SB18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 295
716-A-SB19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 308
716-A-SB20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 321
716-A-SB21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 334
716-A-SB22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 347
716-A-SB23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 360

Table 21. System Blank Analyses for W14: a) Hydrocarbons

----- SAVANNAH RIVER SITE -----
 ----- SOIL GAS SYSTEM BLANKS -- D11 THRU D15 DATA DIRECTORIES -----
 ----- GAS CONCENTRATIONS (PPHV) -----

SAMPLE NAME	PENTANE	HEXANE	HEPTANE	BENZENE	OCTANE	TOLUENE	NONANE	ETHYL BENZENE	M&P-XYLENE	O-XYLENE	DECANE	FILE CYCLE
716-A-SB24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W12 373
904-83G*S81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 54
904-65G*S82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 67
904-65G*S83	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 80
643-7G*S81	ND	ND	ND	ND	ND	0.022	ND	ND	ND	ND	ND	W13 180
643-7G*S82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 193
643-7G*S83	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 206
643-7G*S84	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 271
643-7G*S85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 284
643-7G*S86	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 297
643-7G*S87	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 345
643-7G*S88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 358
643-7G*S89	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 371
643-7G*S810	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 384
643-7G*S812	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 422
643-7G*S814	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 448
643-7G*S815	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 461
643-7G*S816	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 474
643-7G*S817	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 487
643-7G*S818	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W13 497
643-7G*S819	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 87
643-7G*S820	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 100
643-7G*S821	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 113
643-7G-400*S81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 18
643-7G-400*S82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 31
643-7G-500*S81	ND	0.041	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 40
643-7G-500*S82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 53
643-7G-500*S83	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 66
643-7G-500*S84	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 119
643-7G-500*S85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 234
643-7G-600*S81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 132
643-7G-600*S82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 145
643-7G-600*S83	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 158
643-7G-600*S84	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 171
643-7G-600*S85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 184
643-7G-600*S86	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 197
643-7G-600*S87	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 210
643-7G-600*S88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 223
631-5G*S87	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 242
631-5G*S88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 249
631-5G*S89	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 262
631-5G*S810	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 275
643-1G*S81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 312
643-3G*S81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 325
643-2G*S81	ND	ND	ND	ND	ND	0.049	ND	ND	ND	ND	ND	W14 338
643-4G*S81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 351
643-8G*S81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 364
643-9G*S81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 374
643-10G*S81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 385
643-10G*S82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W14 397
607-U*S81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 21
607-U*S82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 34

Table 21. System Blank Analyses for W14: a) Hydrocarbons

----- SAVANNAH RIVER SITE -----
 ----- SOIL GAS SYSTEM BLANKS -- D11 THRU D15 DATA DIRECTORIES -----
 ----- GAS CONCENTRATIONS (PPHV) -----

SAMPLE NAME	PENTANE	HEXANE	HEPTANE	BENZENE	OCTANE	TOLUENE	NONANE	ETHYL BENZENE	M&P- XYLENE	O- XYLENE	DECANE	FILE CYCLE
607-U*SB3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 47
FS-2*SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 59
FS-2*SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 72
FS-2*SB3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 85
761-9G*SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 97
643-E*SB1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 102
643-E*SB2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 115
643-E*SB3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 128
643-E*SB4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 149
643-E*SB5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 162
643-E*SB6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 175
643-E*SB7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 188
643-E*SB8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 210
643-E*SB9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 223
643-E*SB10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 236
643-E*SB11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 251
643-E*SB12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 264
643-E*SB13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 277
631-G*SB14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 285
631-G*SB15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	W15 297
AVERAGE	0.040	0.033	0.026	0.032	0.023	0.028	0.021	0.024	0.025	0.024	0.020	
STD DEV	0.000	0.001	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	
AVG+2STD DEV	0.040	0.034	0.026	0.032	0.023	0.032	0.021	0.024	0.025	0.024	0.020	

Table 21. System Blank Analyses for W14: a) Hydrocarbons

----- SAVANNAH RIVER SITE -----
 ----- SOIL GAS SYSTEM BLANKS -- D11 THRU D15 DATA DIRECTORIES -----
 ----- GAS CONCENTRATIONS (PPMV) -----

SAMPLE NAME	VINYL CHLORIDE	METHYLENE CHLORIDE	TRANS 1,2 DICHLORO ETHYLENE	CHLORO FORM	111 TRI CHLORO ETHANE	CARBON TETRA CHLORIDE	TRI CHLORO ETHYLENE	TETRA CHLORO ETHYLENE	FILE CYCLE
BGP-SB1	0.2	ND	0.005	ND	0.00100	ND	0.00100	ND	W11 44
BGP-SB2	0.3	ND	ND	ND	0.00100	ND	ND	ND	W11 56
BGP-SB3	0.2	ND	ND	ND	0.00100	ND	ND	ND	W11 68
BGP-SB4	0.3	ND	ND	ND	0.00100	ND	ND	ND	W11 80
BGP-SB5	0.2	ND	ND	ND	0.00100	ND	ND	ND	W11 93
BGP-SB6	0.2	ND	ND	ND	0.00100	ND	ND	ND	W11 104
BGP-SB7	0.6	ND	ND	ND	0.00100	ND	ND	ND	W11 116
BGP-SB8	0.2	ND	ND	ND	0.00100	ND	ND	ND	W11 128
BGP-SB9	0.2	ND	ND	ND	0.00100	ND	ND	ND	W11 140
BGP-SB10	0.2	ND	ND	ND	0.00100	ND	0.00100	ND	W11 158
BGP-SB11	0.3	ND	ND	ND	0.00100	ND	ND	ND	W11 169
BGP-SB12	0.2	ND	ND	ND	0.00100	ND	ND	ND	W11 182
BGP-SB13	0.1	ND	ND	ND	0.00100	ND	ND	ND	W11 195
716-A-SB14	0.2	ND	ND	ND	0.00200	ND	0.00100	0.00100	W11 254
716-A-SB15	0.2	ND	0.011	ND	0.00100	ND	0.00600	0.01500	W11 267
716-A-SB16	0.1	ND	0.012	ND	0.00200	ND	0.01900	0.02700	W11 280
BGP-SB14	0.2	ND	0.012	ND	0.00100	ND	0.00100	ND	W11 291
BGP-SB15	0.2	ND	0.010	ND	0.00100	ND	ND	ND	W11 304
BGP-SB16	0.3	ND	0.016	ND	0.00100	ND	ND	ND	W11 317
BGP-SB17	0.2	ND	0.009	ND	0.00100	ND	ND	ND	W11 330
BGP-SB18	0.1	ND	ND	ND	0.00100	ND	ND	ND	W11 343
BGP-SB19	ND	ND	ND	ND	0.00100	ND	ND	ND	W11 356
BGP-SB20	0.3	ND	0.018	ND	0.00200	ND	ND	ND	W11 374
BGP-SB21	0.2	ND	0.010	ND	0.00100	ND	ND	ND	W11 387
BGP-SB22	0.2	ND	0.011	ND	0.00100	ND	ND	ND	W11 401
BGP-SB23	0.2	ND	0.013	ND	0.00100	ND	ND	ND	W11 438
BGP-SB24	0.1	ND	0.012	ND	0.00100	ND	ND	ND	W11 451
BGP-SB25	0.2	ND	ND	ND	0.00100	ND	ND	ND	W11 464
BGP-SB26	0.3	ND	0.011	ND	0.00100	ND	ND	ND	W11 477
BGP-SB27	ND	ND	0.009	ND	0.00100	ND	ND	ND	W11 490
BGP-SB28	0.1	ND	0.009	ND	0.00100	ND	ND	ND	W11 503
BGP-SB29	0.3	ND	ND	ND	0.00100	ND	ND	ND	W12 75
BGP-SB30	0.2	ND	0.007	ND	0.00100	ND	ND	ND	W12 88
BGP-SB31	0.2	ND	0.008	ND	0.00100	ND	ND	ND	W12 101
BGP-SB32	0.3	ND	ND	ND	0.00100	ND	ND	ND	W12 114
BGP-SB33	0.2	ND	0.013	ND	0.00400	ND	ND	ND	W12 127
BGP-SB34	0.3	ND	ND	ND	0.00100	ND	ND	ND	W12 141
BGP-SB35	0.2	ND	ND	ND	0.00100	ND	ND	ND	W12 153
BGP-SB36	0.3	ND	ND	ND	0.00100	ND	ND	ND	W12 167
BGP-SB37	0.1	ND	ND	ND	0.00100	ND	ND	ND	W12 209
BGP-SB38	ND	ND	ND	ND	0.00100	ND	ND	ND	W12 229
BGP-SB39	0.2	ND	0.010	ND	0.00100	ND	ND	ND	W12 239
904-83G-SB18	0.1	ND	ND	ND	0.00100	ND	ND	ND	W12 247
904-83G-SB19	ND	ND	ND	ND	0.00100	ND	ND	ND	W12 260
904-83G-SB20	0.2	ND	ND	ND	0.00100	ND	ND	ND	W12 273
716-A-SB17	0.2	ND	ND	ND	0.00100	ND	ND	0.00100	W12 285
716-A-SB18	0.3	ND	ND	ND	0.00100	ND	0.00200	0.06900	W12 295
716-A-SB19	ND	ND	ND	ND	0.00100	ND	ND	0.00200	W12 308
716-A-SB20	0.1	ND	ND	ND	0.00100	ND	ND	0.00300	W12 321
716-A-SB21	ND	ND	ND	ND	0.00100	ND	0.01500	0.32200	W12 334
716-A-SB22	0.3	ND	ND	ND	0.00100	ND	ND	0.00200	W12 347
716-A-SB23	0.1	ND	ND	ND	0.00200	ND	ND	0.00100	W12 360

Table 21. System Blank Analyses for W14: b) Chlorinated Hydrocarbons

----- SAVANNAH RIVER SITE -----
 ----- SOIL GAS SYSTEM BLANKS -- D11 THRU D15 DATA DIRECTORIES -----
 ----- GAS CONCENTRATIONS (PPHV) -----

SAMPLE NAME	VINYL CHLORIDE	METHYLENE CHLORIDE	TRANS 1,2 DICHLORO ETHYLENE	CHLORO FORM	111 TRI CHLORO ETHANE	CARBON TETRA CHLORIDE	TRI CHLORO ETHYLENE	TETRA CHLORO ETHYLENE	FILE CYCLE
716-A-SB24	ND	ND	ND	ND	ND	ND	ND	0.00100	W12 373
904-83G*SB1	ND	ND	ND	ND	0.00100	ND	ND	ND	W13 54
904-65G*SB2	ND	ND	ND	ND	0.00100	ND	ND	ND	W13 67
904-65G*SB3	ND	ND	ND	ND	0.00100	ND	ND	ND	W13 80
643-7G*SB1	0.2	ND	ND	ND	0.00100	ND	ND	0.00100	W13 180
643-7G*SB2	ND	ND	ND	ND	0.00100	ND	ND	ND	W13 193
643-7G*SB3	0.2	ND	ND	ND	0.00100	ND	ND	ND	W13 206
643-7G*SB4	0.3	ND	ND	ND	0.00100	ND	ND	ND	W13 271
643-7G*SB5	0.3	ND	ND	ND	0.00200	ND	ND	ND	W13 284
643-7G*SB6	0.2	ND	ND	ND	0.00100	ND	ND	ND	W13 297
643-7G*SB7	0.3	ND	ND	ND	0.00100	ND	ND	ND	W13 345
643-7G*SB8	ND	ND	ND	ND	0.00200	ND	ND	ND	W13 358
643-7G*SB9	0.4	ND	ND	ND	0.00400	ND	ND	ND	W13 371
643-7G*SB10	0.2	ND	ND	ND	0.00200	ND	ND	ND	W13 384
643-7G*SB12	0.1	ND	ND	ND	0.00200	ND	ND	ND	W13 422
643-7G*SB14	0.2	ND	ND	ND	0.00100	ND	ND	ND	W13 448
643-7G*SB15	0.5	ND	ND	ND	0.00200	ND	ND	ND	W13 461
643-7G*SB16	0.2	ND	ND	ND	0.00300	ND	ND	ND	W13 474
643-7G*SB17	0.2	ND	ND	ND	0.00300	ND	ND	ND	W13 487
643-7G*SB18	0.1	ND	ND	ND	0.00200	ND	ND	ND	W13 497
643-7G*SB19	ND	ND	ND	ND	ND	ND	ND	ND	W14 87
643-7G*SB20	ND	ND	ND	ND	ND	ND	ND	ND	W14 100
643-7G*SB21	ND	ND	ND	ND	ND	ND	ND	ND	W14 113
643-7G-400*SB1	ND	ND	ND	ND	ND	ND	ND	ND	W14 18
643-7G-400*SB2	ND	ND	ND	ND	ND	ND	ND	ND	W14 31
643-7G-500*SB1	ND	ND	ND	ND	ND	ND	ND	ND	W14 40
643-7G-500*SB2	ND	ND	ND	ND	ND	ND	ND	ND	W14 53
643-7G-500*SB3	ND	ND	ND	ND	ND	ND	ND	ND	W14 66
643-7G-500*SB4	ND	ND	ND	ND	ND	ND	ND	ND	W14 119
643-7G-500*SB5	ND	ND	ND	ND	ND	ND	ND	ND	W14 234
643-7G-600*SB1	ND	ND	ND	ND	ND	ND	ND	ND	W14 132
643-7G-600*SB2	ND	ND	ND	ND	ND	ND	ND	ND	W14 145
643-7G-600*SB3	ND	ND	ND	ND	ND	ND	ND	ND	W14 158
643-7G-600*SB4	ND	ND	ND	ND	ND	ND	ND	ND	W14 171
643-7G-600*SB5	ND	ND	ND	ND	ND	ND	ND	ND	W14 184
643-7G-600*SB6	ND	ND	ND	ND	ND	ND	ND	ND	W14 197
643-7G-600*SB7	ND	ND	ND	ND	ND	ND	ND	ND	W14 210
643-7G-600*SB8	ND	ND	ND	ND	ND	ND	ND	ND	W14 223
631-5G*SB7	ND	ND	ND	ND	ND	ND	ND	ND	W14 242
631-5G*SB8	ND	ND	ND	ND	ND	ND	ND	ND	W14 249
631-5G*SB9	ND	ND	ND	ND	ND	ND	ND	ND	W14 262
631-5G*SB10	ND	ND	ND	ND	ND	ND	ND	ND	W14 275
643-1G*SB1	ND	ND	ND	ND	ND	ND	ND	ND	W14 312
643-3G*SB1	ND	ND	ND	ND	ND	ND	ND	ND	W14 325
643-2G*SB1	ND	ND	ND	ND	ND	ND	ND	ND	W14 338
643-4G*SB1	ND	ND	ND	ND	ND	ND	ND	ND	W14 351
643-8G*SB1	ND	ND	ND	ND	ND	ND	ND	ND	W14 364
643-9G*SB1	ND	ND	ND	ND	ND	ND	ND	ND	W14 374
643-10G*SB1	ND	ND	ND	ND	ND	ND	ND	ND	W14 385
643-10G*SB2	ND	ND	ND	ND	ND	ND	ND	ND	W14 397
607-U*SB1	ND	ND	ND	ND	0.01500	ND	ND	ND	W15 21
607-U*SB2	0.1	ND	ND	ND	0.00200	ND	ND	ND	W15 34

Table 21. System Blank Analyses for W14: b) Chlorinated Hydrocarbons

----- SAVANNAH RIVER SITE -----
 ----- SOIL GAS SYSTEM BLANKS -- D11 THRU D15 DATA DIRECTORIES -----
 ----- GAS CONCENTRATIONS (PPMV) -----

SAMPLE NAME	VINYL CHLORIDE	METHYLENE CHLORIDE	TRANS 1,2 DICHLORO ETHYLENE	CHLORO FORM	111 TRI CHLORO ETHANE	CARBON TETRA CHLORIDE	TRI CHLORO ETHYLENE	TETRA CHLORO ETHYLENE	FILE CYCLE
607-U*SB3	0.2	ND	0.013	ND	0.00300	ND	ND	0.00100	W15 47
FS-2*SB1	ND	ND	ND	ND	0.00200	ND	ND	ND	W15 59
FS-2*SB2	0.2	ND	ND	ND	0.00100	ND	ND	ND	W15 72
FS-2*SB3	ND	ND	ND	ND	0.00100	ND	ND	ND	W15 85
761-9G*SB1	0.1	ND	ND	ND	0.00100	ND	ND	ND	W15 97
643-E*SB1	0.1	ND	ND	ND	0.00100	ND	ND	ND	W15 102
643-E*SB2	ND	ND	ND	ND	0.00100	ND	ND	ND	W15 115
643-E*SB3	ND	ND	ND	ND	0.00100	ND	ND	ND	W15 128
643-E*SB4	ND	ND	ND	ND	0.00100	ND	ND	ND	W15 149
643-E*SB5	ND	ND	ND	ND	0.00100	ND	ND	ND	W15 162
643-E*SB6	ND	ND	ND	ND	0.00100	ND	ND	ND	W15 175
643-E*SB7	0.2	ND	ND	ND	0.00100	ND	ND	ND	W15 188
643-E*SB8	0.1	ND	ND	ND	0.00100	ND	ND	ND	W15 210
643-E*SB9	0.2	0.27	ND	ND	ND	ND	ND	ND	W15 223
643-E*SB10	0.3	0.32	ND	ND	ND	ND	ND	ND	W15 236
643-E*SB11	0.2	ND	ND	ND	0.00100	ND	ND	ND	W15 251
643-E*SB12	0.3	0.40	ND	ND	ND	ND	ND	ND	W15 264
643-E*SB13	0.2	0.45	ND	ND	ND	ND	ND	ND	W15 277
631-G*SB14	0.4	ND	0.008	ND	0.00100	ND	ND	ND	W15 285
631-G*SB15	0.2	0.23	ND	ND	ND	ND	ND	ND	W15 297
AVERAGE	0.2	0.04	0.011	0.00019	0.00104	0.00004	0.00051	0.00364	
STD DEV	0.1	0.06	0.001	0.00000	0.00147	0.00000	0.00220	0.02948	
AVG+2STD DEV	0.4	0.17	0.013	0.00019	0.00398	0.00004	0.00491	0.06261	

Table 21. System Blank Analyses for W14: b) Chlorinated Hydrocarbons

APPENDIX I

SAMPLING METHODS

SAMPLING METHOD SM1

SOIL GAS PROBE SAMPLING

1.0 Scope and Application

1.1 Soil gas probe samples are collected with Microseeps unique, portable soil gas sampling probe which permits access to any area. In addition, the probe allows unlimited purging between sample sites and incorporates the capability to discard the volume of air in the sample probe before the soil gas sample at each site is taken.

2.0 Apparatus

2.1 Soil Gas Probe: The soil gas probe consists of a 1/2 inch diameter steel tube equipped with a rubber packer and a 1/8" o.d. ss sample tube inserted concentrically to the bottom of the 1/2" diameter tube to minimize dead space in the sample volume. The 1/8" o.d. sample tube is connected through a three way valve to a 250 cc gas tight syringe mounted as an integral part of the sample probe. The third port of the three-way valve is terminated with a syringe needle and serves two functions: first a small amount of gas equal to or larger than the dead space volume of the 1/8" o.d. sample tube is discarded through this port before each soil gas sample is taken; second, the syringe needle serves to facilitate transfer of the soil gas sample through a rubber septum into a previously evacuated sample vial, minimizing the possibility of contamination of any sample.

2.2 Slide Hammer Plunger Bar: The slide hammer plunger bar contains a 5.5 ft. x .5 in rod with a 9/16 inch ball. Fitted over one end of the rod is a weighted slide hammer. (Heath Consultants cat# 478).

2.3 Sample vials: The sample vials used are determined by the analytical method that is required for analysis. All vials should be free of interferences and meet the specifications described in the analytical method to be used.

3.0 Procedure

3.1 Prior to any sampling, the soil gas sampling probe should be purged clean of interferences, the syringe needle should be removed, and the three way valve should be in the stop flow position.

3.2 A 9/16 inch diameter hole is created to the desired depth using the slide hammer plunger bar.

3.3 The plunger bar is removed and the sample probe is inserted into the hole. A seal should be obtained to prevent ambient air from entering the hole when the soil gas sample is removed.

3.4 The three way valve is turned to the probe/syringe position.

3.5 A 10 cc volume of gas is drawn into the syringe.

3.6 The three way valve is turned to the syringe/needle position (needle removed as described in section 3.1) and the 10 cc sample is discarded.

3.7 The three way valve is turned to the probe/syringe position and the appropriate amount of soil gas is drawn into the syringe.

3.8 The three way valve is turned to the stop flow position

3.9 The needle is attached to the probe needle fitting.

3.10 An evacuated sample vial is attached by inserting the sample vial septum onto the needle.

3.11 The three way valve is turned to the syringe/needle position. The volume of the evacuated vial will be drawn into the sample vial. Additional volume (positive pressure) can then be added by depressing the plunger and displacing the remaining volume in the syringe.

3.12 The sample vial should be quickly removed once desired volume is displaced.

3.13 A volume of approximately 50 cc of ambient air should be drawn back through the needle.

3.14 Remove the needle.

3.15 Remove the sample probe from the hole.

3.16 Purge the sample probe clean of interferences by filling and exhausting the syringe five times before taking the next sample.

4.0 Sample Documentation

4.1 All samples should be labeled immediately after collection with the following information:

1. Site number
2. Daily sequence number
3. Date and time
4. Samplers initials
5. Project

4.2 All samples taken in the field by Microseeps, Ltd. should be entered onto a Field Log Sheet. For each sample, the following entries will be made:

1. Site number
2. Daily sequence number
3. Date and time
4. Samplers initials
5. Project
6. Location
7. Sample description
8. Miscellaneous comments

4.3 When appropriate, samples will be security sealed and chain of custody records will be maintained.

5.0 Safety Precautions

5.1 Do not use a mechanical device to depress the sampling syringe plunger.

5.2 Do not attempt to collect soil gas probe samples without prior knowledge of the location of underground utilities and other possible environmental hazards.

5.3 Always cap or remove the soil gas probe syringe needle when transporting or handling the soil gas probe.

6.0 Preventive Maintenance

6.0 The soil gas sample probe should be cleaned when necessary or at the end of each day with soap and organic free water. It is especially important to keep the gas sampling syringe clean from fine soil particles as the particles will quickly deteriorate the teflon/glass plunger seal.

6.1 The glass wool filter plug (located in the probe tip) should be changed often and the probe tip should be kept clear of soil.

SAMPLING METHOD SM4

SOIL PLUG SAMPLING FOR MERCURY

Soil plugs of 6 inches in length are collected between the depths of 12 and 18 inches. A 1.25 inch stainless steel pipe is driven 12 inches, removed from the hole and the 12 inch core discarded. The pipe is re-inserted into the hole and the 6 inch soil plug is obtained between 12 and 18 inches.

A portion of this six inch soil plug is then placed directly into a plastic sample bag and labeled. A duplicate sample is collected for every 10 sites.

A field collection log is maintained which lists the sample name, date and time of collection, collection sequence number, sample depth, sample type, and comments.

APPENDIX I .

ANALYTICAL METHODS .

ANALYTICAL METHOD AM1

ANALYSIS OF C₁-C₄ HYDROCARBONS, HYDROGEN, HELIUM, IN SOIL GAS

1.0 Scope and Application

1.1 Method AM1 is used to determine the concentration of C₁-C₄ hydrocarbons, helium and hydrogen in soil gas samples. Specifically, Method AM1 may be used to detect the following substances:

- methane
- ethane
- ethylene
- propane
- propylene
- i-butane
- n-butane
- helium
- hydrogen

1.2 This method is recommended for use by, or under the supervision of, analysts experienced in the operation of gas chromatographs and in the interpretation of chromatograms.

2.0 Summary of Method

2.1 Analysis of the above constituents of free soil gas is accomplished with a custom chromatograph, built by Microseeps. The custom, dual detector gas chromatograph provides a sequential output from two detectors. First, the C₁-C₄ hydrocarbons are detected with a flame ionization detector (FID), next helium and hydrogen are detected with a thermal conductivity detector (TCD). The sample (and standard calibration gas) is flowed through the gas chromatograph and introduced into the columns by the mechanical injection of two sample loops.

3.0 Interferences

3.1 Contamination by carryover can occur whenever high-level and low-level samples are sequentially analyzed. A non-restricted flow of pure nitrogen from a 10 psig source should be purged for 30 seconds through the sample loops prior to all analyses.

3.2 The analyst should demonstrate the absence of contamination by carryover by analysis of the contents of the sample loops when purged with nitrogen. This demonstration should be performed prior to the

analysis of a sample set and when carryover contamination is suspected (after high samples). In the event that 'ghost peaks' (peaks similar to previous sample) appear when a pure nitrogen sample is analyzed, measures should be taken to eliminate the carryover contamination.

3.3 Extra peaks in a chromatogram can be actual peaks from a previous run. Contamination from late eluting peaks can occur when injection to injection time is too short. The dual gas chromatograph is set up in the backflush pre-column valve arrangement to minimize this interference.

3.4 The analyst should be certain that all peaks have eluted from the previous analysis prior to analyzing any sample or standard. If samples or standard chromatograms contain suspected 'extra peaks' the sample should again be analyzed after a clean baseline is established.

4.0 Apparatus and Materials

4.1 Sample vials: 125 ml glass vials (Wheaton #223748 or equivalent). Vials should be free of hydrocarbons, helium, and hydrogen prior to use. This can be accomplished by heating to 100 degrees C followed by purging with pure nitrogen.

4.2 Septums: Butyl rubber septums (Wheaton #224154 or equivalent) may be used provided vials are capped within two weeks prior to use. Other septums may be used, provided they are gas tight and do not produce interferences.

4.3 Gas Chromatograph: The chromatograph is equipped with two sets of the following: column oven, pre-column, analytical column, detector, injection port, sample valve and sample loop. The column and detector for determination of C₁-C₄ hydrocarbons are a granular 3 ft. x 3/16 in. alumina analytical column and a flame ionization detector. The alumina column is protected against contamination by heavy organics by a 3 in. x 3/16 in. pre-column which is back-flushed after butanes have entered the analytical column. This arrangement allows rapid turn-around for consecutive analyses and a clean baseline for accurate, reproducible results. The flame ionization detector is of a special design which allows considerably more sensitivity than commercially available models. In a laboratory setting, noise levels are commonly at the 500 ppt level. Although, these sensitivities are rarely realized in the field, 1 to 2 ppb is achievable and 5 ppb is routine. Hydrogen and helium, are simultaneously determined using a 3 ft. x 3/16 in. molecular sieve 5A (80/100 mesh) pre-column and 10 ft. x 3/16 in. analytical column connected to a thermal conductivity detector. Injection times and the signal output are sequenced so that the output of the two detectors is displayed in a single continuous chromatogram.

4.4 Data Collection: The output of the chromatograph is directed to a chart recorder and a Hewlett Packard (HP-3392A) Networking Integrator

5.0 Sample Preparation and Analysis

5.1 Sample vial preparation: All sample vials should meet specifications as noted in sections 4.1 and 4.2 above. Vials should be tightly capped and evacuated to a pressure of less than 100 millitorr. The vial septum should be punctured with needles of 22 gauge or smaller.

5.2 The evacuated sample vials should be filled with sample gas to a pressure of 9 psig. A positive pressure capable of delivering at least 25 cc of sample must be available per each injection.

5.3 The pressurized sample vial is connected to the sample loops through a needle fitting and flow control valve. The flow is monitored by a flow meter connected to the out port on the gas chromatograph.

5.4 After the appropriate volume of sample (minimum 25 cc) has been flushed through the sample loops of the gas chromatograph, the injection valves may be activated. This is accomplished by switching on the cycle timer.

6.0 Calibration

6.1 The standard calibration gas should be introduced in the same manner as described in section 5.4 above. Measured peak areas are converted to concentrations in parts per million by volume using certified commercial gas standards traceable to NBS standards. (Matheson Gas Products Inc., or Scott Specialty Gases). The sample concentrations are calculated from calibration points near the concentration level of the sample.

6.2 At the beginning of a project or sample set, standards of appropriate calibration ranges will be run at least three times or until the results agree with a percent standard deviation no greater than 10%.

6.3 The instrument response (for any one subsequent standard in section 6.5 above) must not vary by more than 20%; or any two consecutive standards must not vary by more than 15% from the mean of the three previous standards.

7.0 Quality Control

7.1 If the parameters set forth in section 6.3 are not met, the analytical program will be terminated until the cause is determined and a solution is effected. The cause and the solution will be recorded in the Laboratory Notebook and signed by the operator, before the analytical program is resumed.

7.2 Before and during sample analysis, instrument blanks (sample loops filled with flush nitrogen) should be analyzed to assure the absence of interferences as described in section 3.0 above.

7.3 Standards analyzed during the course of analyzing samples are averaged into the calibration table as well as being used for peak identification. All chromatograms should be examined by an experienced analyst.

7.4 Throughout analysis the soil gas samples are injected mechanically to achieve a uniform sample size from a flow directly from the soil gas sample vial which has been pressured at the time of sampling. This pressuring preserves sample integrity since any leakage is out of the vial and does not result in contamination or sample dilution.

7.5 Calibration records are generated and stored. All such records will be maintained in the laboratory during the course of the project.

8.0 Instrument Conditions

8.1 Gas Chromatograph:

Injection Temp. ambient

Flame Ionization Detector Temp. ambient

Thermal Conductivity Detector Temp. 45 deg. C.

C1-C4 Oven Temp. 100 deg. C. isothermal

Helium/Hydrogen Oven Temp. 45 deg. C. isothermal

Initial T.C.D. Signal Range 10

Initial F.I.D. Signal Range 10E9

Carrier Gas Regulator Pressures:

---T.C.D. 40 psig.

F.I.D. 17 psig.

Hydrogen Pressure 22 psig.

Flame Air Pressure 30 psig. (1.0 scfh)

ANALYTICAL METHOD AM4

ANALYSIS OF VOLATILE ORGANIC COMPOUNDS IN SOIL GAS

1.0 Scope and Application

1.1 Method AM4 is used to determine the concentration of volatile organic compounds in soil gas samples. Specifically, Method AM4 may be used to detect the following compounds:

pentane	benzene
hexane	toluene
heptane	m & p-xylene
octane	o-xylene
nonane	ethyl benzene
methane	
vinyl chloride	
1,1-dichloroethylene	
methylene chloride	
1,1-dichloroethane	
1,2-dichloroethane	
trans 1,2-dichloroethylene	
chloroform	
1,1,1-trichloroethane	
carbon tetrachloride	
trichloroethylene	
tetrachloroethylene	

1.2 This method is recommended for use by, or under the supervision of, analysts experienced in the operation of a gas chromatograph and in the interpretation of a chromatogram.

2.0 Summary of Method

The volatile organic compounds are analyzed using a Hewlett Packard Model 5890A Gas Chromatograph in conjunction with a Hewlett Packard Model 19395A Automated Headspace Sampler and an H.P. 3396A Networking Integrator. A Supelco, 60M x 0.75mm i.d. Vocol, wide bore capillary column is used in conjunction with an output splitter connected to an electron capture detector and a flame ionization detector. The integrator is interfaced to an IBM microcomputer for data storage and processing. Data transfer and analyses are facilitated using a chromatography data system (Chrom Perfect, Justice Innovations).

3.0 Interferences

3.1 Contamination by carryover can occur whenever high-level and low-level samples are sequentially analyzed. While in the standby mode, the HP 19395A provides continuous flushing of the sample loop and sample valve between sample analyses. This flush flow should be maintained and the sample valve and loop should be kept heated.

3.2 The analyst should demonstrate the absence of carryover contamination by analysis of the contents of the sample loop when purged with pure nitrogen. This demonstration should be performed prior to the analysis of a sample set and when carryover contamination is suspected (after high samples). In the event that 'ghost peaks' (peaks similar to previous sample) appear when a pure nitrogen sample is analyzed measures should be taken to eliminate the carryover contamination.

3.3 Extra peaks in a chromatogram can be actual peaks from a previous run. Contamination from compounds eluting late in the chromatogram can occur when injection to injection time is too short. The HP 5890A is equipped with a temperature programmable oven which can be utilized to minimize this interference.

3.4 The analyst should be certain that all peaks have eluted from the previous analysis prior to analyzing any sample or standard. This can be accomplished by elevating the oven temperature after an analysis until such time that a clean stable baseline is obtained. If samples or standard chromatograms contain suspected 'extra peaks' the sample should be reanalyzed after a clean baseline is established.

4.0 Materials and Equipment

4.1 Sample vials: 22 ml glass vials (Hewlett Packard #9301-0716 or equivalent). Vials should be free of chlorinated hydrocarbons prior to use. This can be accomplished by washing and rinsing with hydrocarbon free water then heating to 100 degrees C for 1 hour followed by purging with pure nitrogen.

4.2 Septums: Teflon lined septums (Wheaton #224168 or equivalent) may be used provided vials are capped within two weeks prior to use. Other septums may be used provided they are gas tight and do not produce interferences.

4.3 Gas Chromatograph: The Hewlett Packard 5890A Gas Chromatograph is equipped with a Supelco, 60M x 0.75mm i.d. Vocol, wide bore capillary column connected to an electron capture detector and flame ionization detector.

4.4 Headspace Sampler: A Hewlett Packard Model 19395A Automated Headspace Sampler is used which contains a heated bath with 24 slots for headspace vials, a heated sample valve, a heated sample loop and a heated transfer line to facilitate transfer of the sample onto the column in the gas chromatograph.

4.5 Data Collection: The output of the chromatograph is directed to a chart recorder and a Hewlett Packard (HP-3396A) Networking Integrator which passes the processed data to a microcomputer for data storage and/or further processing.

5.0 Sample Preparation and Analysis

5.1 Sample vial preparation: All sample vials should meet specifications as noted in sections 4.1 and 4.2 above. Vials should be tightly capped and evacuated to a pressure of less than 100 millitorr. The vial septum should be punctured only with needles of 22 gauge or smaller.

5.2 The evacuated sample vials should be filled with sample or standard gas to a positive gauge pressure. Sample vials should be used (filled with sample) within two weeks of preparation.

5.3 The 22 cc sample vials are placed directly into the heated headspace sampling unit for a minimum of 90 minutes prior to injection.

5.4 The headspace sampling unit is programmed to mechanically puncture the septum, transfer the sample to the heated sample loop, and mechanically inject the sample into the column flow stream via the heated transfer line.

6.0 Standards and Calibrations

6.1 Gas standards or liquid standards may be used to achieve calibrations. In some situations it may be necessary to use both types of standards. Certified commercial gas standards are most desirable, but may not always be available for all the compounds or for the concentration levels of the compounds of interest.

6.2 Commercial gas standards are introduced by filling a 22ml headspace vial with standard gas. The gas standards are placed in the vials and analyzed in the same manner as samples (as described in section 5.0). The concentrations are those certified by the manufacturer.

6.3 Liquid standard solutions are injected directly into a capped vial and allowed to vaporize. These standards are produced from high purity compounds as described in Standard Preparation Method SP1. The liquid standard solutions are placed in vials that meet specifications described in sections 4.1 and 4.2. The vials

used must be capped and be at atmospheric pressure when the liquid standard is injected. The vial is then analyzed in the same manner as a sample as described in section 5.3.

6.4 At the beginning of a project or sample set, standards of appropriate calibration ranges will be run at least three times or until the results agree with a percent standard deviation no greater than 10%.

6.5 Thereafter, at least one standard will be run for every 10 samples.

6.6 The instrument response (for any one subsequent standard in section 6.5 above) must not vary by more than 20%; or any two consecutive standards must not vary by more than 15% from the mean of the three previous standards.

7.0 Quality Control

7.1 If the parameters set forth in section 6.6 are not met the analytical program will be terminated until the cause is determined and a solution is effected. The cause and the solution will be recorded in the Laboratory Notebook and signed by the operator, before the analytical program is resumed.

7.2 Before and during sample analysis, instrument blanks (sample loops filled with flush nitrogen) should be analyzed to assure the absence of interferences as described in section 3.0 above.

7.3 Prior to the analysis of a sample set, multiple standards, at different concentration levels, should be analyzed to establish an initial calibration table. During sample analysis, standards should be run at a rate of 1 for each 10 samples.

7.4 Standards analyzed during the course of analyzing samples are compared to the calibration table as well as being used for peak identification. All chromatograms should be examined by an experienced analyst.

7.5 The soil gas sample vial is pressurized at the time of sampling. This pressure preserves sample integrity since any leakage is out of the vial and does not result in contamination or sample dilution.

7.6 The headspace sampling unit contains a heated bath as well as a heated sampling loop and transfer line. The latter two zones are continually flushed with nitrogen between sample analyses to minimize the chance of instrumental carry over. This nitrogen in the sample loop is injected periodically to check for instrument contamination.

7.7 Once the headspace vials are punctured in the headspace unit, the sample loop is allowed to equilibrate to atmospheric pressure just prior to injection (see section 8.2, vent time). This insures that an accurate, equal volume will be injected each time. Each vial is analyzed one time only.

7.8 Calibration records are generated and stored in the computer. All such records will be maintained in the laboratory during the course of the project.

8.0 Instrument Conditions

8.1 Gas Chromatograph:

Injection Temp. 220 deg. C.
Flame Ionization Detector Temp. 220 deg. C.
Electron Capture Detector Temp. 375 deg. C.
Oven Temp. Program:
 Initial temp. 30 deg. C.
 Hold 10 min.
 Rate 4 deg. min. to 110 deg. C.
 Hold .01 min.
 Rate 20 deg. min. to 200 deg. C.
 Hold 15 min.
Equilibration Time 1 min.
Initial E.C.D. Signal Range 5
Initial F.I.D. Signal Range 4
Carrier Flow Rates: (output of column split)
 Packed Injection Port 2 cc/min.
 Head Space Sampler 10 cc/min.
 Make up gas to E.C.D. 76 cc/min.
 Make up gas to F.I.D. 34 cc/min.
 Total column 12 cc/min.
Hydrogen Pressure 22 psig.
Flame Air Pressure 30 psig.

8.2 Headspace Sampler:

Bath Temp. 75 deg. C.
Valve/Loop Temp. 140 deg. C.
Headspace Method 1
Equilibration time 0 min.
Sampling interval 90 min (remote)
Valve Timing:
 Probe down 1 sec.
 Vent/fill loop 3 sec.
 Vent/fill loop off 13 sec.
 Inject to G.C. 15 sec.
 Inject return 1:15 sec.
 Probe up 1:17 sec.
Aux pressure (flush) .5 bar
Valve Air pressure 3.5 bar
Carrier Flow 10 cc/min.

ANALYTICAL METHOD AM8

ANALYSIS OF MOBILE MERCURY IN SOILS

1.0 Scope and Application

1.1 Method AM8 is used to determine the concentration of mobile (low temperature, adsorbed) mercury in soil samples.

1.2 This method is recommended for use by, or under the supervision of, analysts experienced in the operation of mercury analyzers and in the interpretation of mercury concentration data.

2.0 Summary of Method

2.1 Mobile (low temperature, adsorbed) mercury is analyzed using a Jerome Model 411 Gold Film Mercury Analyzer. A weighed soil sample (dried and sieved < 35 mesh) is placed in a silica test tube (6 mm id x 65mm) which has the bottom inside surface coated with a thin gold film. The soil in the tube is heated at 175 degrees centigrade for 1 hour. The soil is then discarded and each tube is heated individually to 600 degrees centigrade in a resistance heater. At 600 degrees C, vapors in the tube are caused to flow into the mercury analyzer where mercury is adsorbed onto the calibrated gold film. This gold film changes resistance proportional to the amount of mercury adsorbed. The resistance change is converted to weight of mercury adsorbed.

3.0 Interferences

3.1 The analyst should demonstrate that the gold coated test tubes are mercury free before soil is added. This may be accomplished by heating each tube to 600 degrees centigrade and flowing the heated vapors in the tube into the mercury analyzer. Temperature of the tube should be kept at 600 degrees centigrade until no mercury is detected on successive analyses.

3.2 In order to prevent interferences from sulfur gases, other compounds generated when soil is heated, and dust, the analyst should ensure that Malcosorb and dust filters are connected in series with the analyzer as shown in the instrument operation manual.

3.3 The analyst should demonstrate that the system is mercury free at the beginning of the analysis of a sample set. This may be accomplished by heating an uncoated test tube to 600 degrees

centigrade and flowing the heated vapors into the analyzer for measurement. The temperature should be maintained and the flow should be repeated until no mercury is detected on successive runs.

3.4 The analyst should regularly check the status of the gold film detector and burn of the accumulated mercury when appropriate.

4.0 Materials and Equipment

4.1 Sample test tubes: fused silica (6 mm id x 65 mm) with bottom half of inner surface coated with a thin gold film.

4.2 Heating block: aluminum block (12 x 12 x 2.5 inches) with sixty four 5/16 x 2 inch holes for holding gold coated silica tubes.

4.3 Hot plate: Thermodyne Sybron, Model 2200

4.4 Resistance heater: Nichrome wire coil to hold one silica test tube and heat to 600 degrees centigrade.

4.5 Mercury Analyzer: Jerome Model 411 Gold Film Mercury Analyzer including Malcosorb and dust filters.

4.6 Balance: Fisher Model 50 with +/- 0.005 gram accuracy.

5.0 Sample Preparation and Analysis

5.1 Sample test tube preparation: All sample test tubes should meet specifications as noted in sections 3.1 and 4.1 above.

5.2 The sample should be air dried overnight(8-10 hours), then sieved using a 35 mesh sieve. The < 35 mesh fraction should be collected, placed in a clean sample envelope and labeled.

5.3 A weighed, 0.25 - 0.50 gram, portion of the dried, sieved soil sample is placed into a gold coated silica test tube and the test tube number is recorded with the sample number.

5.4 The gold coated silica test tubes containing the weighed, sieved soil samples are placed in the heating block (4.2) and heated to 175 degrees centigrade for 1 hour.

5.5 After removal from the heating block, the soil is discarded from the gold coated silica test tubes. Excess dust may be removed from the vial with compressed air at room temperature.

5.6 Each empty gold coated silica tube is heated to 600

degrees centigrade in the resistance heater and the mercury vapor is caused to flow into the analyzer where it is absorbed on the gold film.

5.7 The change in film resistance is recorded as the number of counts which may be related to the amount of mercury absorbed.

6.0 Standards and Calibrations

6.1 Calibration of the mercury analyzer is achieved by injecting a known amount of mercury vapor directly into a stream of air flowing into the analyzer.

6.2 Mercury metal is maintained at known temperature inside each of six 125 ml sample bottles which are capped with septa.

6.3 A chart of mercury vapor pressure in air vs temperature is maintained.

6.4 A 1 ml volume of air saturated with mercury vapor at a known temperature from one or more of the 125 ml bottles (6.2) is injected into the input air flow to the analyzer and a reading is taken.

6.5 After three or more such procedures, the analyzer calibration is derived as average counts/ng mercury. Typical range is 5 - 8 counts-per-ng. mercury.

6.6 The analyst should ensure that each bottle of mercury is left at atmospheric pressure after calibration so that temperature and vapor pressure equilibration can occur before the next use. This is achieved by puncturing the septum with a syringe needle after several calibration volumes are removed from a bottle.

7.0 Quality Control

7.1 The analyzer should be calibrated before and after each set of 50 samples is analyzed.

7.2 The instrument response should not vary by more than 20% between any two successive calibrations.

7.3 One blank gold coated vial should be analyzed with every ten samples. The blank vial should be representative of background contamination that could be obtained in the sample vials.

7.4 The instrument detector status should be monitored and recorded during sample analysis.

APPENDIX I

STANDARD PREPARATION METHODS

STANDARD PREPARATION METHOD SP3

GAS STANDARD PREPARATION FOR VOC'S

1.0 Scope and Application

1.1 Gas standards may be prepared from pure liquid compounds when commercial gas standards are not available. Known weights of pure compounds are placed in a 22ml vial under known conditions. The ideal gas law is used to calculate gas volumes for each compound. Concentrations may be calculated in parts per million volume (ppmv) or micrograms per liter air (ug/l air).

2.0 Summary

2.1 Equal volumes of pure liquid compounds are combined. A uL amount of the pure blend is injected into a 22ml headspace vial (at atmos. pressure) to produce a known concentration gas (level 1 standard). The pure compound blend is diluted in solvent so that when uL amounts of the diluted blend are injected into a 22ml Headspace vial (at atmos. pressure) a known concentration of gas (level 2) is produced. The pure blend is again diluted in solvent to produce other gas standards (level 3 and 4). Level 5 and level 6 gas standard may be produced by further diluting level 2 and level 3 blends 1000:1. For each level number increase, the weight amount of compound (ug/uL blend) decreases by a factor of 10.

3.0 Apparatus and Materials

3.1 Solvent: The solvent normally used is high purity (99+%) chromatographic grade methyl alcohol. It must be determined if the solvent will interfere with or mask compounds of interest.

3.2 Pure compounds of interest: All compounds used must meet required specifications and be approved on the Supplies and Materials List.

3.3 Storage of Prepared Standards: Vials (Alltech #72716 or equivalent), Caps (Alltech #95246, mininert valves), septa (Alltech #9548).

3.4 1 ml disposable pipettes: Corning #7078-1CN or equivalent.

3.5 22 ml Headspace Vial: Hewlett Packard #9301-0716.

3.6 10 uL liquid syringe: Hamilton #701 or equivalent.

3.7 Pipette Dispenser, Micro-Pipex: Fisher Scientific.

4.0 Procedure

4.1 Add 1ml of each compound to a pre-cleaned 22ml vial using a new disposable 1ml pipette for each compound. The total volume of the pure blend should be greater than 9 ml. If less than 9 compounds are used then 2ml of each compound should be combined.

4.2 Using a disposable 1.0 ml glass pipette, fill at least two 4.5 ml vials with the pure blend. Immediately cap the vials with mininert valve caps. Label the vials "Pure Blend Standard [I.D.] Level 1" along with the date and the preparer's initials.

4.3 Using a disposable 1.0 ml glass pipete, fill each of three new pre-labeled 4.5ml vials with the following ml amounts of solvent; 3.960 (level 2), 4.355 (level 3), and 4.395 (level 4). The labels should reflect the appropriate standard I.D. and level. Cap all vials with mininert valve caps.

4.4 Using a clean 10ul syringe add 4.4 ul of pure blend to the vial containing 4.395 ml of solvent and labeled level 4.

4.5 Using the same 10 ul syringe as in step 4.4 add 44 ul of pure blend to the vial containing 4.355 and labeled level 3.

4.6 Using a clean 1 ml pipette add .44 ml of pure blend to the vial containing 3.960 ml of solvent and labeled level 2.

4.7 To produce level 5 and level 6 dilute blends add 4.395 ml of solvent to two clean prelabeled 4.5 ml vials. For level 5 add 4.4 ul of level 2 blend and for level 6 add 4.4 ul of level 3 blend.

4.8 Gas standards are produced by injecting ul amounts of blend (levels 1-6) into 22ml headspace vials containing clean air and capped with TFE lined septums. Refer to the appropriate Standard Calculations Table for actual amounts to inject into the headspace vials and resulting concentrations of each compound.

4.9 The standard calculations table is produced in spreadsheet format and contains at least the following information; solvent used, compound density and molecular weight, ul compound/1ul blend, compound weight/volume of blend, gas volume of compound, weight of compound per liter of air, and the parts per million of compound by volume for each concentration level of standard.

5.0 Calculations

5.1 The following formulas are used to calculate the gas concentration (vol/vol) originating from liquid (weight).

$$\text{CONCENTRATION in PPMV} = (\text{COMPOUND VOL}/\text{TOTAL VOL}) * 1000000$$

P = 1 ATM

V = 1 MOLE (IDEAL GAS) 22.4 LITER

T = TEMP. 273K

R = IDEAL GAS CONSTANT (.082) R = PV/NT R = (1*22.4)/(1*273)

N = COMPOUND WEIGHT/MOL. WEIGHT

W = WEIGHT OF COMPOUND USED (IN ug)

M = MOL. WEIGHT OF THE COMPOUND

D = DENSITY (GRAMS/mL)

L = LIQUID VOL. USED (IN uL)

t = TEMP. 25C + 273K = 298K

v = UNKNOWN VOLUME

Pv = Nrt

D = W/L*1000

v = N (Rt/P)

W = DL*1000

v = W/M (Rt/P)

v = W/M ((.082*298)/1)

v = (W/M)*24.4

5.2 To calculate the standard gas concentrations in ug/l air the above ideal gas law formula must be used to calculate the volume of gas of the compound when added to the headspace vial. This volume is then added to the volume of the headspace vial to determine the total volume. The following formula can then be used:

$$\text{CONCENTRATION (ug/l air)} = \frac{\text{(1 Liter air/total vol) (compound weight/total volume)}}{\text{(1 Liter air/total vol) (compound weight/total volume)}}$$

6.0 Safety Precautions

6.1 General laboratory safety precautions should be followed when preparing standards. The safety precautions should include, but not be limited to, the following safeguards; Eye and face protection, proper clothing (gloves, shoes, etc.), proper ventilation, spill protection, and an emergency response plan.

6.2 All safety precautions as stated on the material data sheets should be followed when handling hazardous materials.

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APPENDIX II

SOIL GAS SAMPLE COLLECTION LOGS

MICROSEEPS LTD.

CLIENT: WSR

LOCATION: 631-56

PROJECT(#): AA-00655N - Tank 1

PAGE: 1 OF 2

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): R.J. Pirker & A. Carion

SAMPLE ID#	DATE	TIME	SEQ.#	SAMPLE DEPTH	SAMPLE TYPE			SAMPLE SIZE	COMMENTS
					G	S	W		
631-56-58 blk 1	10/17/70	1336	1	0	✓			22 cc	
631-56-58 blk 1	10/17/70	1337	2	0	✓			125 cc	
0001		1341	3	3.0	✓			22 cc	
0001		1343	4	3.0	✓			125 cc	
0002		1345	5	3.0	✓			22 cc	
0002		1347	6	3.0	✓			125 cc	
0003		1349	7	3.0	✓			22	
0003		1350	8	3.0	✓			125	
0004		1352	9	3.0	✓			22	soil damp
0004		1353	10	3.0	✓			125	soil damp
0005		1356	11	3.0	✓			22	soil damp
0005		1357	12	3.0	✓			125	soil damp
0006		1400	13	3.0	✓			22	
0006		1401	14	3.0	✓			125	
0007		1404	15	3.0	✓			22	
0007		1405	16	3.0	✓			125	
0008		1408	17	3.0	✓			22	cavity at bottom of hole
0008		1409	18	3.0	✓			125	
0009		1414	19	3.0	✓			22	
0009		1415	20	3.0	✓			125	
0010		1419	21	3.0	✓			22	
0010		1420	22	3.0	✓			125	
0010A		1423	23	3.0	✓			22	dry
0010A		1424	24	3.0	✓			125	dry
543 blk 2		1428	25	0	✓			22	blk
543 blk 2		1429	26	0	✓			125	blk
0011		1431	27	3.0	✓			22	
0011		1432	28	3.0	✓			125	
0012		1435	29	3.0	✓			22	
0012		1436	30	3.0	✓			125	
0013		1439	31	3.0	✓			22	
0013		1440	32	3.0	✓			125	
0014		1443	33	3.0	✓			22	cavity at bottom
0014		1444	34	3.0	✓			125	" " "
0015		1447	35	3.0	✓			22	
0015		1449	36	3.0	✓			125	
0016		1455	37	3.0	✓			22	
0016		1456	38	3.0	✓			125	
0017		1500	39	3.0	✓			22	
0017		1501	40	3.0	✓			125	
0018		1504	41	3.0	✓			22	
0019		1505	42	3.0	✓			125	
0019		1506	43	3.0	✓			22	

MICROSEEPS LTD.

CLIENT: WSRC
LOCATION: 631-56
PROJECT(#): TASK 1
PAGE: 2 OF: 2

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S):

[illegible]

MICROSEEPS LTD.

CLIENT: WSRC

LOCATION: 631-66

PROJECT(1): Task 1

PAGE: 1 OF:

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S):

SAMPLE ID#	DATE	TIME	SEQ.#	SAMPLE DEPTH	SAMPLE TYPE			SAMPLE SIZE	COMMENTS
					G	S	W		
631-5556BK1	10/19/1	1531	1	0	✓			22	
631-5556BK1		1532	2	0	✓			125	
-0001		1536	3	3.0	✓			22	
-0001		1537	4	3.0	✓			125	
-0002		1540	5	3.0	✓			22	
-0002		1541	6	3.0	✓			125	
-0003		1542	7	3.0	✓			22	
-0003		1544	8	3.0	✓			125	
-0004		1547	9	3.0	✓			22	
-0004		1548	10	3.0	✓			125	
-0005		1551	11	3.0	✓			22	
-0005		1552	12	3.0	✓			125	
-0006		1555	13	3.0	✓			22	
-0006		1556	14	3.0	✓			125	
-0006A		1559	15	3.0	✓			22	
-0006A		1600	16	3.0	✓			125	
-0007		1602	17	3.0	✓			22	
-0007		1603	18	3.0	✓			125	
-0008		1608	19	3.0	✓			22	
-0008		1609	20	3.0	✓			125	
-0009		1610	21	3.0	✓			22	damp clay
-0009		1613	22	3.0	✓			125	damp clay
-0010		1615	23	3.0	✓			22	
-0010		1616	24	3.0	✓			125	
-5556BK2		1618	25	0	✓			22	
-5556BK2		1619	26	0	✓			125	
-0011		1620	27	3.0	✓			22	
-0011		1621	28	3.0	✓			125	
-0012		1623	29	3.0	✓			22	
-0012		1624	30	3.0	✓			125	
-0013		1627	31	3.0	✓			22	
-0013		1628	32	3.0	✓			125	
-0014		1630	33	3.0	✓			22	
-0014		1631	34	3.0	✓			125	
-0015		1633	35	3.0	✓			22	
NC12		1634	36	3.0	✓			125	

USE A NEW SHEET WHEN RESTARTING SEQUENCE #

2

WSRC

631-66

TASK 1

OF: _____

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): R. Pirke / A. Carro

[illegible]

USE A NEW SHEET WHEN RESTARTING SEQUENCE # .

MICROSEEPS LTD.

CLIENT: WJRC

LOCATION: C31-65

PROJECT(1): TASK 1

PAGE: 4 OF: 1

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): _____

[illegible]

USE A NEW SHEET WHEN RESTARTING SEQUENCE & .

CLIENT: WJRC

PROJECT(#): TASK 1

PAGE: 1 OF: 1

SAMPLER NAME(S): R Pirkle / A Carter

USE A NEW SHEET WHEN RESTARTING SEQUENCE #

MICROSEEPS LTD.

CLIENT: WSRC

LOCATION: 631-3E

PROJECT(S): TASK:

PAGE: 1 OF:

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): R. Pirkles / ACTION

[illegible]

CLIENT: WSRC
 LOCATION: 631-35
 PROJECT(#): TASK 1
 PAGE: 1 OF:

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): R. Pirkle / A. Carion

SAMPLE ID#	DATE	TIME	SEQ.#	SAMPLE DEPTH	SAMPLE TYPE			SAMPLE SIZE	COMMENTS
					G	S	M		
631-35-0001	10/29	1325	1	3.0	✓			22	-
-0001		1326	2					125	
-0030		1332	3					22	
-0030		1334	4					125	
-0029		1337	5					22	
-0029		1338	6					125	
-0028		1345	7					22	
-0028		1346	8					125	
-0027		1351	9					22	
-0027		1352	10					125	
-0026		1355	11					22	
-0026		1356	12					125	
-sys blk 2		1359	13	0				22	
-sys blk 2		1400	14	0				125	
-0025		1402	15	3.0				22	
-0025		1403	16					125	
-0024		1406	17					22	
-0024		1407	18					125	
-0023		1413	19					22	
-0023		1414	20					125	
-0023A		1415	21					22	
-0023A		1416	22					125	
-0022		1419	23					22	
-0022		1420	24					125	
-0021		1423	25					22	
-0021		1424	26					125	
-0020		1430	27					22	} move 25' toward 21?
-0020		1431	28					125	
-0019		1436	29					22	
-0019		1437	30					125	
-0018		1441	31					22	
-0018		1442	32					125	
-0017		1447	33					22	
-0017		1448	34					125	
-sys blk 3			35	0				22	
-sys blk 3			36	0				125	
-0016	10/30	0930	37	3.0				22	
-0016		0931	38					125	
-0015		0935	39					22	
-0015		0936	40					125	
-0014		0940	41					22	
-0014		0941	42					125	
-0013		0945	43					22	move 10' into gnd

MICROSEEPS LTD.

CLIENT: WBR

LOCATION: 631-35

PROJECT (#): TAB 21

PAGE: 2 OF:

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): R. Pirkle / A. Carion

SAMPLE ID#	DATE	TIME	SEQ.#	SAMPLE DEPTH	SAMPLE TYPE			SAMPLE SIZE	COMMENTS
					G	S	M		
631-3E-0003	10/30	0946	44	3.0				125	- 10' into grid
-0013A		0950	45					22	{ 10' into grid
-0013A		0951	46					125	}
-0012		0954	47					22	{ 5' into grid
-0012		0955	48					125	}
-0011		1004	49					22	
-0011		1005	50					125	
-0010		1009	51					22	
-0010		1010	52					125	
-sp HK 4		1012	53	⊙				22	
-sp HK 4		1013	54	○				125	

USE A NEW SHEET WHEN RESTARTING SEQUENCE :

CLIENT: W5RC
 LOCATION: 631-1E
 PROJECT(#): TASK 1
 PAGE: 1 OF:

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): R. Pirkle / A. Carion

SAMPLE ID#	DATE	TIME	SEQ.#	SAMPLE DEPTH	SAMPLE TYPE			SAMPLE SIZE	COMMENTS
					G	S	W		
631-1E-0001	10/30	1103	1	3.0	✓			22	-
-0001		1104	2					22	
-0002		1106	3					22	
-0002		1107	4					22	
-0003		1112	5					22	
-0003		1113	6					22	
-0003A		1117	7					22	
-0003A		1118	8					22	
-0004		1124	9					22	
-0004		1125	10					22	
-0005		1130	11					22	
-0005		1131	12					22	
-0006		1135	13					22	
-0006		1136	14					22	
-0007		1143	15					22	< Move 10' away 6/10/11
-0007		1144	16					22	1-2/12
-0008		1304	17					22	
-0008		1305	18					22	
-0009		1309	19					22	
-0009		1310	20					22	
-0010		1314	21					22	
-0010		1315	22					22	
-5xBL1		1316	23	0				22	
-4xBL1		1317	24	0				22	
-0011		1318	25	3.0				22	
-0011		1319	26					22	
-0012		1323	27					22	
-0012		1324	28					22	
-0013		1325	29					22	
-0013		1329	30					22	
-0013A		1333	31					22	
-0013A		1334	32					22	
-0014		1336	33					22	
-0014		1337	34					22	
-0015		1344	35					22	
-0015		1345	36					22	
-0016		1350	37					22	move 2 ft into mid
-0016		1357	38					22	
-0017		1354	39					22	
-0017		1355	40					22	
-0018		1357	41					22	
-0018		1400	42					22	

CLIENT: WSRC
 LOCATION: 131-15 + 3E
 PROJECT(#): 781
 PAGE: 1 OF: 1

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): R. Pirker/ALANION

SAMPLE ID#	DATE	TIME	SEQ.#	SAMPLE DEPTH	SAMPLE TYPE			SAMPLE SIZE	COMMENTS
					G	S	M		
631-35-0012A	10/31	1125	1	3.0	✓			22	(Fertilizer a dup because
631-35-0012A		1126	2	3.0	✓			125	sample 13 lost due to
7 -0012B		1130	3		✓			22	bow sailure on
1 -0012B		1131	4		✓			125	10/31/90
631-16-0019		1140	5					22	
1 -0019		1141	6					125	
1 -0020		1147	7					22	
-0020		1148	8					125	
-0021		1153	9					22	
1 -0021		1154	10					125	
1 -0022		1158	11					22	
1 -0022		1159	12					125	
-0023		1211	13					22	(Now 10' towing 24
-0023		1212	14					125	
-0023A		1215	15					22	
-0023A		1216	16					125	
-0024		1219	17	0				22	
-0024		1220	18	0				125	
-0024		1223	19	3.0				22	
-0024		1224	20					125	
-0025		1227	21					22	
-0025		1228	22					125	
-0026		1231	23					22	
-0026		1232	24					125	
-0027		1235	25					22	
-0027		1236	26					125	
-0028		1248	27					22	
-0028		1249	28					125	
-0029		1253	29					22	
-0029		1254	30					125	
-0030		1257	31					22	
-0030		1258	32					125	

CLIENT: WSRC
 LOCATION: 631-1E
 PROJECT(S): TASK 1
 PAGE: 1 OF:

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S):

RJG/DJM

SAMPLE ID#	DATE	TIME	SEQ.#	SAMPLE DEPTH	SAMPLE TYPE			SAMPLE SIZE	COMMENTS	C.O.C.
					G	S	W			
15-31	12/10	1335	1	3.0	✓			22	-	1440 HWA 12-10-90
16-31		1336	2	3.0	✓			125		
-32		1339	3		✓			22		
-32		1340	4		✓			125		
-33		1341	5		✓			22		
-33		1342	6		✓			125		
-34		1344	7		✓			22		
-34		1345	8		✓			125		
-35		1348	9		✓			22		
-35		1349	10		✓			125		
-36		1351	11		✓			22		
-36		1352	12		✓			125		
-37		1354	13		✓			22		
-37		1355	14		✓			125		
-38		1358	15		✓			22		
-38		1359	16		✓			125		
-39		1401	17		✓			22		
-39		1402	18		✓			125		
-40		1407	19		✓			22		
-40		1408	20		✓			125		
-40A		1410	21		✓			22		
-40A		1411	22		✓			125		
-SYS BLK 4		1412	23		✓			22		
-SYS BLK 4		1413	24		✓			125		
-41		1415	25		✓			22		
-41		1416	26		✓			125		
-42	12/11	0933	27		✓			22		1030 12-11-90
-42		0934	28		✓			125		
-43		0944	29		✓			22		
-43		0945	30		✓			125		
-44		0949	31		✓			22		
-44		0950	32		✓			125		
-45		0954	33		✓			22		
-45		0955	34		✓			125		
-46		0959	35		✓			22		
-46		1000	36		✓			125		
-49		1002	37		✓			22		
-49		1003	38		✓			125		
-48		1006	39		✓			22		
-48		1007	40		✓			125		
-47		1010	41		✓			22		
-47		1011	42		✓			125		
SYS BLK 5		1014	43		✓			22		
SYS BLK 5		1015	44		✓			125		

CLIENT: WSRC

LOCATION: 631-164900N

PROJECT(8): TASK 2

PAGE: OF:

SAMPLER NAME(S):

RyO/AS

USE A NEW CUBET WHEN RESTARTING SEQUENCE #

MICROSEEPS LTD.

CLIENT: WSRS / Doug Wyatt
 LOCATION: Central Shops
 PROJECT(#): 631-SG
 PAGE: 1 OF: 2

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): K98 / CDS

SAMPLE ID#	DATE	TIME	SEQ.#	SAMPLE DEPTH	SAMPLE TYPE			SAMPLE SIZE	COMMENTS
					G	S	W		
631-SG-SB4	7-22-91	9:20	59	-0-	✓			22	-
631-SG-SB4		9:22	60	-0-				125	
631-SG-25		9:25	61	3'					
631-SG-25		9:27	62						
631-SG-26		9:29	63						
631-SG-26		9:30	64						
-27		9:31	65						
-27		9:32	66						
-28		9:33	67						
-28		9:35	68						
-29		9:37	69						
-29		9:38	70						
-30		9:41	71						
-30		9:43	72						
-30A		9:45	73						
-30A		9:47	74	✓					
-SB5		9:49	75	-0-					
-SB5		9:51	76	-0-					
-31		9:53	77	3'					
-31		9:54	78						
-32		10:07	79						
-32		10:09	80						
-33		10:13	81						
-33		10:15	82						
-34		10:20	83						
-34		10:22	84						
-35		10:25	85						
-35		10:27	86						
-36		10:30	87						
-36		10:31	88						
-37		10:32	89						
-37		10:40	90						
-38		10:42	91						
-38		10:43	92						
-39		10:45	93						
-39		10:47	94						
-40		10:50	95						
-40		10:52	96						
-40A		10:53	97						
-40A		10:54	98	✓					
-SB6		10:55	99	-0-					
-SB6		10:56	100	-0-					
-41	✓	11:00	101	3'	✓			✓	

MICROSEEPS LTD.

CLIENT: USRS / Doug Watt

LOCATION: Central Shops

PROJECT(1): 631-5G

PAGE: 2 OF: 2

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): K9b / CDS

SAMPLE ID#	DATE	TIME	SEQ.#	SAMPLE DEPTH	SAMPLE TYPE			SAMPLE SIZE	COMMENTS
					G	S	W		
631-5G-41	7-22-91	1102	102	3'	✓			125	-
631-5G-42	1	1105	103	1				22	
631-5G-42	1	1107	104	1				1	
-43	1	1110	105	1				1	
-43	1	1112	106	1				1	
-44	1	1115	107	1				1	
-44	1	1117	108	1				1	
-45	1	1120	109	1				1	
-45	1	1121	110	1				1	
-46	1	1123	111	1				1	
-46	↓	1125	112	↓	✓			✓	

USE A NEW SHEET WHEN RESTARTING SEQUENCE 1

MICROSEEPS LTD.

CLIENT: NSRS/Doug WyattLOCATION: ...PROJECT(#): 631-6G (Second Visit)PAGE: 1 OF: 2

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): Ka8 / CDS

SAMPLE ID#	DATE	TIME	SEQ.#	SAMPLE DEPTH	SAMPLE TYPE			SAMPLE SIZE	COMMENTS
					G	S	W		
631-6G-SB-5	7-23-91	8:58	1	-0-	✓			22	-
631-6G-SB-5		9:00	2	-0-	✓			125	
631-6G-24		9:02	3	3'	✓				
631-6G-24		9:04	4		✓				
631-6G-25		9:05	5		✓				
631-6G-25		9:06	6		✓				
631-6G-26		9:15	7		✓				
631-6G-26		9:17	8						
-27		9:21	9						
-27		9:23	10		✓				
-28		9:26	11						
-28		9:27	12						
-29		9:31	13						
-29		9:33	14						
-30		9:39	15						
-30		9:41	16		✓				
-30A		9:42	17		✓				
-30A		9:49	18	✓	✓				
-SB-6		10:12	19	-0-	✓				
-SB-6		10:15	20	-0-	✓				
-31		10:17	21	3'	✓				
-31		10:18	22		✓				
-32		10:22	23		✓				
-32		10:23	24		✓				
-33		10:26	25		✓				
-33		10:28	26		✓				
-34		10:30	27		✓				Top Clay
-34		10:32	28		✓				
-35		10:40	29		✓				
-35		10:42	30		✓				
-36		10:45	31		✓				
-36		10:47	32		✓				
-37		10:49	33		✓				
-37		10:50	34		✓				
-38		10:52	35		✓				
-38		10:52	36		✓				
-39		10:55	37		✓				
-39		10:56	38		✓				
-40		11:20	39		✓				
-40		11:22	40		✓				
-40A		11:25	41		✓				
-40A		11:27	42		✓				
-SB-7	✓	11:35	43	-0-	✓			✓	

MICROSEEPS LTD.

CLIENT: WSRS / Doug Wyatt

LOCATION:

PROJECT(1): 631-6G

PAGE: 2 OF: 2

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): W.B./CDS

SAMPLE ID#	DATE	TIME	SEQ.#	SAMPLE DEPTH	SAMPLE TYPE			SAMPLE SIZE	COMMENTS
					G	S	W		
631-6G-SB-7	7-23-91	1136	44	-0-	✓			125	-
631-6G-41	"	1138	45	3'				22	
631-6G-41	"	1139	46	"				"	
-42	"	1144	47	"					
-42	"	1146	48	✓					
-43	"	1157	49	6'					
-43	"	1158	50	6'					
-44	"	1202	S1	6'					
-44	"	1204	S2	6'					
-45	"	1209	S3	6'					
-45	✓	1211	S4	6'	✓			✓	

CLIENT:

LOCATION: Central ShopsPROJECT(1): 631-5G- (3rd Visit)PAGE: 1 OF: 2

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): Kob/CDS

SAMPLE ID#	DATE	TIME	SEQ.#	SAMPLE DEPTH	SAMPLE TYPE			SAMPLE SIZE	COMMENTS
					G	S	W		
631-5G-SB-7	11/11/91	1400	1	-0-	✓			22	
631-5G-SB-7	11	1403	2	-0-	1			125	-
5G-47		1405	3	3'	1			22	
47		1407	4		1				
48		1410	5		1				
48		1412	6		1				
49		1415	7		1				
49		1417	8		1				
50		1420	9		1				
50		1421	10		1				
50A		1423	11		1				
50A		1425	12	✓	1				
SB-8		1427	13	-0-	1				
SB-8		1428	14	-0-	1				
-51		1430	15	3'	1				
-51		1432	16		1				
-52		1434	17		1				
-52		1435	18		1				
-53		1437	19		1				
-53		1438	20		1				
-54		1440	21		1				
-54		1441	22		1				
-55		1443	23		1				
-55		1445	24		1				
-56		1447	25		1				
-56		1448	26		1				
-57		1450	27		1				
-57		1451	28		1				
SB		1453	29		1				
SB		1454	30		1				
59		1456	31		1				
59		1457	32		1				
60		1459	33		1				
60		1501	34		1				
60A		1503	35		1				
60A	✓	1505	36	✓	✓			✓	
SB-9	11-12	1212	37	-0-	1				
SB-9		1214	38	-0-	1				
61		1215	39	3'	1				
61		1216	40		1				
62		1218	41		1				
62		1219	42		1				
63	✓	1221	43	✓	✓			✓	

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): Kqd/CDS

SAMPLE ID#	DATE	TIME	SEQ.#	SAMPLE DEPTH	SAMPLE TYPE			SAMPLE SIZE	COMMENTS
					G	S	W		
631-5G-63	11-12	1222	44	3'	✓			125	
64		1224	45					22	
64		1225	46						
65		1227	47						
65		1228	48						
66		1231	49						
66		1232	50						
67		1234	51						
67		1235	52						
68		1237	53						
68		1238	54						
69		1240	55						
69		1242	56						
70		1247	57						
70		1248	58						
70A		1249	59						
70A		1250	60	✓					
SB-10		1310	61	-0-					
SB-10		1312	62	-0-					
71		1315	63	3'					
71		1316	64						
72		1318	65						
72		1320	66						
73		1340	67						
73		1341	68						
74		1355	69						
74		1357	70						
75		1358	71						
75		1359	72						
76		1401	73						
76		1403	74						
77		1410	75						
77		1412	76						
78		1418	77						
78		1420	78						
79		1422	79						
79		1424	80						
80		1428	81						
80		1430	82						
80A		1432	83						
80A	✓	1434	84	✓	✓			✓	

APPENDIX II

MERCURY SAMPLE COLLECTION LOGS

MICROSEEPS LTD.

CLIENT: WSRCLOCATION: 131-36 Running Rabbit P.PROJECT(S): Task #1PAGE: 1 OF: 1

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): ACC. #1P+1S

SAMPLE ID#	DATE	TIME	SEQ.#	SAMPLE DEPTH	SAMPLE TYPE			SAMPLE SIZE	COMMENTS
					G	S	W		
131-36-1	1-7-91	13:30	1	12		✓			
-2			2	1					
-3			3						
-3A			4						
-4			5						
-5			6						
-6			7						
-7			8						
-8			9						
-9			10						
-10			11						
-11			12						
-12			13						
-13			14						
-13A			15						
-14			16						
-15			17						
-16			18						
-17			19						
-18			20						
-19			21						
-20			22						
-21			23						
-22			24						
-23			25						
-23A			26						
-24			27						
-25			28						
-26			29						
-27			30						
-28			31						
-29			32						
-30			33						

MICROSEEPS LTD.

CLIENT: WSRCLOCATION: 631-1G-Buena Vista P.L.PROJECT(S): Task #1PAGE: 1 OF:

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): AGC + JP

SAMPLE ID#	DATE	TIME	SEQ.#	SAMPLE DEPTH	SAMPLE TYPE			SAMPLE SIZE	COMMENTS
					G	S	W		
631-1G-1	1-8		1	1ft		✓			
-2			2			✓			
-3			3			✓			
-3A			4						
-4			5						
-5			6						
-6			7						
-7			8						
-8			9						
-9			10						
-10			11						
-11			12						
-12			13						
-13			14						
-13A			15						
-14			16						
-15			17						
-16			18						
-17			19						
-18			20						
-19			21						
-20			22						
-21			23						
-22			24						
-23			25						
-23A			26						
-24			27						
-25			28						
-26			29						
-27			30						
-28			31						
-29			32						
-30			33						
-31			34						
-32			35						
-33			36						
-33A			37						
-34			38						
-35			39						
-36			40						
-37			41						
-38			42						
-39			43						

CLIENT: WSRC

LOCATION: 631-16-J 16 LAGNON

PROJECT(8): TAS: 01

PAGE: 2 OF:

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): AGC ÷ JP

SAMPLE ID#	DATE	TIME	SEQ.#	SAMPLE DEPTH	SAMPLE TYPE			SAMPLE SIZE	COMMENTS
					G	S	W		
631-16-40	1-8		44	1.2		✓			
-41			45	1					
-42			46	1					
-43			47						
-43A			48						
-44			49						
-45			50						
-46			51						
-47			52	1					
-48			53	1					
-49			54	1					
631-16L-1			55						
-2			56						
-3			57	1					
-4			58	1					
-4A			59	1					
-5			60	1					
-6			61	1					
-7			62	1					
-8			63	1					
-9			64	1					
-10			65						

MICROSEEPS LTD.

CLIENT: WSRC

LOCATION: 631-16, 231-4F 631-3G+1G+1G!

PROJECT(8): TASK#1

PAGE: 6 OF:

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): AGC. - JP

[illegible]

USE A NEW SHEET WHEN RESTARTING SEQUENCE #

CLIENT: WSRC

LOCATION: 631-56

PROJECT(1): TASK=1

PAGE: / OF: /

SAMPLER NAME(S): AGC JPJS

USE A NEW SHEET WHEN RESTARTING SEQUENCE :

CLIENT: WSRC
LOCATION: 631-66
PROJECT(S): TASK #1
PAGE: 1 OF: 1

SAMPLER NAME(S): AGC + JS

[illegible]

USE A NEW SHEET WHEN RESTARTING SEQUENCE :

MICROSEEPS LTD.

CLIENT: WSRS

LOCATION: Catrol. Shops

PROJECT(1): 631-66 . Donna Wyatt

PAGE: OF:

***** SAMPLE COLLECTION LOG *****

SAMPLER NAME(S): DS, JP & JS

[illegible]

CLIENT: WSRS

LOCATION: WSRS TNX

PROJECT(#): 631-56

PAGE: OF:

SAMPLER NAME(S): QIS, JP & JS.

USE A NEW SHEET WHEN RESTARTING SEQUENCE 1

Appendix B

GPR Report

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508/1208E

EXECUTIVE SUMMARY

Ground penetrating radar surveys were executed at the 631-6G Burning Rubble Pits during August, 1992, for the purpose of locating disturbed soil which may indicate trenches and/or trench boundaries. Areas of disturbed soil were determined from the survey.

~~INFORMATION ONLY~~

SBW
9/3/93

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- Figure 8. GPR Line #6
- Figure 9. GPR Line #7
- Figure 10. GPR Line #8
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Table 1. Coordinates, Bearings, and Distances of GPR Lines

Table 2. Acquisition and Processing Parameters

I. INTRODUCTION

Ground Penetrating Radar(GPR) surveys were run at the 631-6G Burning Rubble Pits for the purpose of locating the presence of the disturbed soil which would indicate the extent the site was used for deposit of wastes. GPR data were acquired on a total of 18 lines totaling 2,578 feet as shown on Figure 1 and listed on Table 1.

II. BACKGROUND AND OBSERVATIONS

The Burning Rubble Pits (631-6G) is an area where wastes were dumped in a long trench and covered with soil. The area was in good condition for obtaining GPR data. The surface is flat with gravel cover and sparse grass and weeds. The weather during field acquisition was hot, sunny and dry. Personnel on-site during data acquisition were Boyd Sexton and Art Carion.

III. ACQUISITION AND PROCESSING PARAMETERS

The equipment used in the acquisition of the GPR data at this site as well as the software and parameters used to process the data are given on Table 2.

IV. RESULTS

The results of the GPR surveys at the 631-6G Burning Rubble Pits are shown on Figures 3 - 20. A sample GPR section with labeled interpretive information is shown on Figure 2. A typical signature of an area of disturbed soil is labeled so that similar areas on the actual lines on Figures 3 - 20 can be easily recognized. Also shown are the horizontal scale, vertical time scale, and maximum depth of penetration. The radar velocity in this area is 6-7 ns per foot.

The GPR sections in Figures 3 - 20 show areas of disturbed soil which could be indicative of areas where wastes were deposited.

V. CONCLUSIONS

Areas of disturbed soil were detected in the 631-6G Burning Rubble Pits which indicate possible areas where wastes were deposited.

TABLE 1
631-6G BURNING RUBBLE PITS
TABLE OF COORDINATES, BEARINGS, AND DISTANCES

NAME	NEW X EASTING	NEW Y NORTHING		BEARING		DISTANCE	LINE
A1	52592.08	60380.18	N	17.24146	E	123	1
B1	52628.54	60497.65					
A2	52611.18	60374.25	N	17.24146	E	123	2
B2	52647.64	60491.72					
A3	52630.28	60368.32	N	17.24146	E	123	3
B3	52666.74	60485.79					
A4	52649.38	60362.39	N	17.24146	E	123	4
B4	52685.84	60479.86					
A5	52668.48	60356.46	N	17.24146	E	123	5
B5	52704.94	60473.93					
A6	52706.68	60344.6	N	17.24146	E	123	6
B6	52743.14	60462.07					
A7	52725.78	60338.67	N	17.24146	E	123	7
B7	52762.24	60456.14					
A8	52744.88	60332.74	N	17.24146	E	123	8
B8	52781.34	60450.21					
A9	52763.98	60326.81	N	17.24146	E	123	9
B9	52800.44	60444.28					
A10	52783.09	60320.88	N	17.24146	E	123	10
B10	52819.54	60438.35					
A11	52802.19	60314.95	N	17.24146	E	123	11
B11	52838.64	60432.42					
A12	52821.29	60309.02	N	17.24146	E	123	12
B12	52857.74	60426.49					
A13	52840.39	60303.08	N	17.24146	E	123	13
B13	52876.84	60420.56					
A14	52859.49	60297.15	N	17.24146	E	123	14
B14	52895.95	60414.63					
A15	52687.58	60350.53	N	17.24146	E	123	15
B15	52724.04	60468					
A16	52611.45	60442.6	S	72.75203	E	317	16
B16	52914.2	60442.6					
A17	52669.31	60392.85	N	72.75203	W	100	17
B17	52573.8	60422.5					
A18	52592.08	60380.18	S	72.75203	E	316	18
B18	52893.87	60286.48					

TOTAL FOOTAGE IN SURVEY

2578

Table 2
Acquisition and Processing Parameters
for
631-6G BURNING RUBBLE PITS

Date Data Acquired	8/05/92
Instrument Type	GSSI (SIR 10) S/N 1158
Antenna Type	300 MHz
Calibration Numbers	Supplied by GSSI PG-90-177 Version 2.05 Max 141 Min 20 Diff 121
Post Processing Software	GSSI (RADANIII)
Range	120 ns
Start Position	-10 ns
End Position	110 ns
Survey Wheel	127.82 ticks/foot
Scans/Foot	6
Samples/Scan	512
Transmit Pulse Rate	50 KHz
Vertical IIR Low Pass Filter	N=2 F=70
Vertical IIR High Pass Filter	N=2 F=10
Horizontal Low Pass Filter	TC=3
Scans/Meter	19.685
Marks/Meter (on plot)	5 meters/mark

Figure 1

Figure 2

LIST Created Jul 29,1992 12:51 Modified Aug 23,1992 15:32
512 samples/scan 40.0026 scans/sec position: -10 ns range: 120 ns
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=2

SAVANNAH RIVER SITE
G AREA SEEPAGE BASIN

1 Created Aug 5, 1992 13:00 Modified Date Unknown
512 samples/scan 40.0026 scans/sec position: -10 ns range: 120 ns
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=3

631-6G
SAVANNAH RIVER SITE

Figure 4

2 Created Aug 5, 1992 13:03 Modified Date Unknown
512 samples/scan 40.0026 scans/sec position: -10 nS range: 120 nS
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=3

631-6G
SAVANNAH RIVER SITE

Figure 5

Created Aug 5, 1992 13:05 Modified Date Unknown
512 samples/scan 40.0026 scans/sec position: -10 nS range: 120 nS
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=3

631-6G
SAVANNAH RIVER SITE

Figure 6

4 Created Aug 5, 1992 13:07 Modified Date Unknown
512 samples/scan 40.0026 scans/sec position: -10 nS range: 120 nS
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=3

631-6G
SAVANNAH RIVER SITE

Figure 7

Created Aug 5, 1992 13:09 Modified Date Unknown
512 samples/scan 40.0026 scans/sec position: -10 nS range: 120 nS
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=3

631-6G
SAVANNAH RIVER SITE

Figure 8

6 Created Aug 5, 1992 13:13 Modified Date Unknown
512 samples/scan 40.0026 scans/sec position: -10 nS range: 120 nS
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=3

631-6G
SAVANNAH RIVER SITE

Figure 9

Created Aug 5, 1992 13:15 Modified Date Unknown
512 samples/scan 40.0026 scans/sec position: -10 ns range: 120 ns
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=3

631-6G
SAVANNAH RIVER SITE

Figure 10

8 Created Aug 5, 1992 13:16 Modified Date Unknown
512 samples/scan 40.0026 scans/sec position: -10 nS range: 120 nS
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=3

631-6G
SAVANNAH RIVER SITE

Figure 11

Created Aug 5, 1992 13:19 Modified Date Unknown
J12 samples/scan 40.0026 scans/sec position: -10 nS range: 120 nS
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=3

631-6G
SAVANNAH RIVER SITE

Figure 12

10 Created Aug 5, 1992 13:20 Modified Date Unknown
512 samples/scan 40.0026 scans/sec position: -10 nS range: 120 nS
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=3

631-6G
SAVANNAH RIVER SITE

Figure 13

11 Created Aug 5, 1992 13:26 Modified Date Unknown
512 samples/scan 40.0026 scans/sec position: -10 nS range: 120 nS
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=3

631-6G
SAVANNAH RIVER SITE

Figure 14

2 Created Aug 5, 1992 13:29 Modified Date Unknown
12 samples/scan 40.0026 scans/sec position: -10 ns range: 120 ns
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=3

31-6G
SAVANNAH RIVER SITE

Figure 15

13 Created Aug 5, 1992 13:41 Modified Date Unknown
512 samples/scan 40.0026 scans/sec position: -10 nS range: 120 nS
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=3

631-6G
SAVANNAH RIVER SITE

Figure 16

14 Created Aug 5, 1992 13:44 Modified Date Unknown
512 samples/scan 40.0026 scans/sec position: -10 nS range: 120 nS
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=3

631-6G
SAVANNAH RIVER SITE

Figure 17

'5 treated Aug 5, 1992 13:49 Modified Date Unknown
(12 samples/scan 40.0026 scans/sec position: -10 ns range: 120 ns
art. IIR low pass N=2 F=70
art. IIR high pass N=2 F=10
orig. low pass TC=3

631-6G
SAVANNAH RIVER SITE

Figure 18

16 Created Aug 5, 1992 13:56 Modified Date Unknown
512 samples/scan 40.0026 scans/sec position: -10 ns range: 120 ns
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass NC-3
631-56
SAVANNAH RIVER SITE

Figure 19

Processed Aug 5, 1992 14:11 Modified Aug 5, 1992 21:36
Samples/scan 40.0026 scans/sec position: -10 ns range: 120 ns
Filter: IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=3

331-6G

SAVANNAH RIVER SITE

Figure 20

18 Created Aug 5, 1992 14:15 Modified Date Unknown
512 samples/scan 40.0026 scans/sec position: -10 ns range: 120 ns
Vert. IIR low pass N=2 F=70
Vert. IIR high pass N=2 F=10
Horiz. low pass TC=3

631-6G
SAVANNAH RIVER SITE

Appendix C

Baseline Risk Assessment Tables

Appendix C1

Shapiro-Wilk W Test to Determine Population Distribution

Environmental data are usually represented by either a normal or lognormal data distribution. Through an iterative process, the distribution of each analyte in each medium is determined to be normal, lognormal, or neither. First, the data set including the 1/2 SQL (Sample Quantitation Limit) proxy values is used to test the assumption that the distribution is normal. If this assumption is rejected, the same data are log transformed and the hypothesis that the distribution is lognormal is tested. If this assumption is also rejected, the above-SQL data (i.e., detects) only are used to test the hypothesis that the distribution is normal. If this assumption is rejected, then the above-SQL data are used to test the hypothesis that the data are lognormally distributed. If this assumption is rejected, it is concluded that the data are neither normally nor lognormally distributed. Figure C1-1 shows the logical flowchart that is used for this iterative process.

Data sets which were determined to be neither normally nor lognormally distributed were assumed to be lognormally distributed for calculating the average concentration (see Appendix C2) and the upper 95% confidence limit concentration (see Appendix C3). This assumption gives more conservative estimates of both the average concentration and the upper 95% confidence limit concentration.

The Shapiro-Wilk W Test (Shapiro & Wilk, 1965; Gilbert, 1987) is an analysis of variance procedure that is used to test the assumption of a normal or transformed normal distribution. It has a good likelihood of distinguishing between the target distribution (normal) and other common distributions (for example, uniform or skewed), and is valid for samples with four or more observations (Shapiro & Wilk, 1965). For these reasons it was selected as the test to determine whether the data conform to the assumed distribution. All tests were performed at the $\alpha = 0.01$ level using the proc univariate procedure in the statistical computer software SAS® (version 6.09 for OpenVMS AXP) from the SAS Institute Inc.

The discussion below describes the step by step procedure and formulae used to perform the Shapiro-Wilk W Test. Sample calculations that show the process as it would be performed by hand are provided following the discussion.

Figure C1-1

Logic Flowchart for Determination of Data Distribution

Step 1: Compute the denominator d of the W test statistic, using the n data.

$$d := \sum_i (x_i)^2 - \frac{1}{n} \left(\sum_i x_i \right)^2 \quad (\text{C1.1})$$

Where: d = denominator of W test statistic
 n = sample size
 i = range variable from 1 to n
 x_i = i^{th} sample observation

Step 2: Order the n data from smallest to largest to obtain the sample order statistics $x[1] \leq x[2] \leq \dots \leq x[n]$.

Step 3: Compute k , the index of the center value, where

$$k = \begin{cases} \frac{n}{2} & \text{if } n \text{ is even} \\ \frac{n-1}{2} & \text{if } n \text{ is odd} \end{cases} \quad (\text{C1.2})$$

Where: k = the index of the center value
 n = sample size

Step 4: Determine the n coefficients $a_1, a_2, \dots, a_k$ from Table C1-1.

Where: n = sample size
 i = range variable from 1 to k

Step 5: Compute the W test statistic using:

$$W := \frac{1}{d} \left[\sum_K a_K \left[X_{(n-K+1)} - X_K \right] \right]^2 \quad (C1.3)$$

Where: W = Shapiro-Wilk W test statistic
 d = denominator as calculated in Step 1
 k = the index as calculated in Step 3
 K = range variable from 1 to k
 a_K = coefficient K as determined in Step 4
 x_K = the K^{th} ranked observation as ranked in Step 2

Step 6: Test the hypotheses. Reject the null hypothesis (H_0) if the computed W test statistic from Step 5 is smaller than the quantile determined from Table C1-2 based on the sample size (n) and the confidence level (0.01). Use the column labeled $W_{0.01}$.

H_0 : The data are normally distributed.

H_a : The data are not normally distributed.

This procedure can easily be adapted to test the null hypothesis that the data are lognormally distributed by performing the Shapiro-Wilk W test on the log-transformed values (y) where:

$$y_i = \ln(x_i) \quad (C1.4)$$

Where: y_i = the i^{th} transformed value
 x_i = the i^{th} observation
 i = range variable from 1 to n
 n = sample size

Table C1-1

**Coefficients a_i for the
Shapiro-Wilk W test for Normality**

i	n	2	3	4	5	6	7	8	9	10
1		0.7071	0.7071	0.6872	0.6646	0.6431	0.6233	0.6052	0.5888	0.5739
2		—	0.0000	0.1677	0.2413	0.2806	0.3031	0.3164	0.3244	0.3291
3		—	—	—	0.0000	0.0875	0.1401	0.1743	0.1976	0.2141
4		—	—	—	—	—	0.0000	0.0561	0.0947	0.1224
5		—	—	—	—	—	—	—	0.0000	0.0399

i	n	11	12	13	14	15	16	17	18	19	20
1		0.5601	0.5475	0.5359	0.5251	0.5150	0.5056	0.4968	0.4886	0.4808	0.4734
2		0.3315	0.3325	0.3325	0.3318	0.3306	0.3290	0.3273	0.3253	0.3232	0.3211
3		0.2260	0.2347	0.2412	0.2460	0.2495	0.2521	0.2540	0.2553	0.2561	0.2565
4		0.1429	0.1586	0.1707	0.1802	0.1878	0.1939	0.1988	0.2027	0.2059	0.2085
5		0.0695	0.0922	0.1099	0.1240	0.1353	0.1447	0.1524	0.1587	0.1641	0.1686
6		0.0000	0.0303	0.0539	0.0727	0.0880	0.1005	0.1109	0.1197	0.1271	0.1334
7		—	—	0.0000	0.0240	0.0433	0.0593	0.0725	0.0837	0.0932	0.1013
8		—	—	—	—	0.0000	0.0196	0.0359	0.0496	0.0612	0.0711
9		—	—	—	—	—	—	0.0000	0.0163	0.0303	0.0422
10		—	—	—	—	—	—	—	—	0.0000	0.0140

i	n	21	22	23	24	25	26	27	28	29	30
1		0.4643	0.4590	0.4542	0.4493	0.4450	0.4407	0.4366	0.4328	0.4291	0.4254
2		0.3185	0.3156	0.3126	0.3098	0.3069	0.3043	0.3018	0.2992	0.2968	0.2944
3		0.2578	0.2571	0.2563	0.2554	0.2543	0.2533	0.2522	0.2510	0.2499	0.2487
4		0.2119	0.2131	0.2139	0.2145	0.2148	0.2151	0.2152	0.2151	0.2150	0.2148
5		0.1736	0.1764	0.1787	0.1807	0.1822	0.1836	0.1848	0.1857	0.1864	0.1870
6		0.1399	0.1443	0.1480	0.1512	0.1539	0.1563	0.1584	0.1601	0.1616	0.1630
7		0.1092	0.1150	0.1201	0.1245	0.1283	0.1316	0.1346	0.1372	0.1395	0.1415
8		0.0804	0.0878	0.0941	0.0997	0.1046	0.1089	0.1128	0.1162	0.1192	0.1219
9		0.0530	0.0618	0.0696	0.0764	0.0823	0.0876	0.0923	0.0965	0.1002	0.1036
10		0.0263	0.0368	0.0459	0.0539	0.0610	0.0672	0.0728	0.0778	0.0822	0.0862
11		0.0000	0.0122	0.0228	0.0321	0.0403	0.0476	0.0540	0.0598	0.0650	0.0697
12		—	—	0.0000	0.0107	0.0200	0.0284	0.0358	0.0424	0.0483	0.0537
13		—	—	—	—	0.0000	0.0094	0.0178	0.0253	0.0320	0.0381
14		—	—	—	—	—	—	0.0000	0.0084	0.0159	0.0227
15		—	—	—	—	—	—	—	—	0.0000	0.0076

i	n	31	32	33	34	35	36	37	38	39	40
1		0.4220	0.4188	0.4156	0.4127	0.4096	0.4068	0.4040	0.4015	0.3989	0.3964
2		0.2921	0.2898	0.2876	0.2854	0.2834	0.2813	0.2794	0.2774	0.2755	0.2737
3		0.2475	0.2462	0.2451	0.2439	0.2427	0.2415	0.2403	0.2391	0.2380	0.2368
4		0.2145	0.2141	0.2137	0.2132	0.2127	0.2121	0.2116	0.2110	0.2104	0.2098
5		0.1874	0.1878	0.1880	0.1882	0.1883	0.1883	0.1883	0.1881	0.1880	0.1878
6		0.1641	0.1651	0.1660	0.1667	0.1673	0.1678	0.1683	0.1686	0.1689	0.1691
7		0.1433	0.1449	0.1463	0.1475	0.1487	0.1496	0.1505	0.1513	0.1520	0.1526
8		0.1243	0.1265	0.1284	0.1301	0.1317	0.1331	0.1344	0.1356	0.1366	0.1376
9		0.1066	0.1093	0.1118	0.1140	0.1160	0.1179	0.1196	0.1211	0.1225	0.1237
10		0.0899	0.0931	0.0961	0.0988	0.1013	0.1036	0.1056	0.1075	0.1092	0.1108
11		0.0739	0.0777	0.0812	0.0844	0.0873	0.0900	0.0924	0.0947	0.0967	0.0986
12		0.0585	0.0629	0.0669	0.0706	0.0739	0.0770	0.0798	0.0824	0.0848	0.0870
13		0.0435	0.0485	0.0530	0.0572	0.0610	0.0645	0.0677	0.0706	0.0733	0.0759
14		0.0289	0.0344	0.0395	0.0441	0.0484	0.0523	0.0559	0.0592	0.0622	0.0651
15		0.0144	0.0206	0.0262	0.0314	0.0361	0.0404	0.0444	0.0481	0.0515	0.0546
16		0.0000	0.0068	0.0131	0.0187	0.0239	0.0287	0.0331	0.0372	0.0409	0.0444
17		—	—	0.0000	0.0062	0.0119	0.0172	0.0220	0.0264	0.0305	0.0343
18		—	—	—	—	0.0000	0.0057	0.0110	0.0158	0.0203	0.0244
19		—	—	—	—	—	—	0.0000	0.0053	0.0101	0.0146
20		—	—	—	—	—	—	—	—	0.0000	0.0049

Source: Gilbert, 1987

Table C1-2
Quantiles of the
Shapiro-Wilk W Test for Normality

n	W _{0.01}	W _{0.02}	W _{0.05}	W _{0.10}	W _{0.20}
3	0.753	0.756	0.767	0.789	0.959
4	0.687	0.707	0.748	0.792	0.935
5	0.686	0.715	0.762	0.806	0.927
6	0.713	0.743	0.788	0.826	0.927
7	0.730	0.760	0.803	0.838	0.928
8	0.749	0.778	0.818	0.851	0.932
9	0.764	0.791	0.829	0.859	0.935
10	0.781	0.806	0.842	0.869	0.938
11	0.792	0.817	0.850	0.876	0.940
12	0.805	0.828	0.859	0.883	0.943
13	0.814	0.837	0.866	0.889	0.945
14	0.825	0.846	0.874	0.895	0.947
15	0.835	0.855	0.881	0.901	0.950
16	0.844	0.863	0.887	0.906	0.952
17	0.851	0.869	0.892	0.910	0.954
18	0.858	0.874	0.897	0.914	0.956
19	0.863	0.879	0.901	0.917	0.957
20	0.868	0.884	0.905	0.920	0.959
21	0.873	0.888	0.908	0.923	0.960
22	0.878	0.892	0.911	0.926	0.961
23	0.881	0.895	0.914	0.928	0.962
24	0.884	0.898	0.916	0.930	0.963
25	0.888	0.901	0.918	0.931	0.964
26	0.891	0.904	0.920	0.933	0.965
27	0.894	0.906	0.923	0.935	0.965
28	0.896	0.908	0.924	0.936	0.966
29	0.898	0.910	0.926	0.937	0.966
30	0.900	0.912	0.927	0.939	0.967
31	0.902	0.914	0.929	0.940	0.967
32	0.904	0.915	0.930	0.941	0.968
33	0.906	0.917	0.931	0.942	0.968
34	0.908	0.919	0.933	0.943	0.969
35	0.910	0.920	0.934	0.944	0.969
36	0.912	0.922	0.935	0.945	0.970
37	0.914	0.924	0.936	0.946	0.970
38	0.916	0.925	0.938	0.947	0.971
39	0.917	0.927	0.939	0.948	0.971
40	0.919	0.928	0.940	0.949	0.972
41	0.920	0.929	0.941	0.950	0.972
42	0.922	0.930	0.942	0.951	0.972
43	0.923	0.932	0.943	0.951	0.973
44	0.924	0.933	0.944	0.952	0.973
45	0.926	0.934	0.945	0.953	0.973
46	0.927	0.935	0.945	0.953	0.974
47	0.928	0.936	0.946	0.954	0.974
48	0.929	0.937	0.947	0.954	0.974
49	0.929	0.937	0.947	0.955	0.974
50	0.930	0.938	0.947	0.955	0.974

Source: Gilbert, 1987

Sample Calculation #1 **Determination of Sample Distribution**

Data (x):

$n = 9, i = 1 \text{ to } 9$

$x_i =$

1	5	5	3	33	37	5	1.9	25
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First, the following hypotheses are tested for the data:

H_0 : The data are normally distributed.

H_a : The data are not normally distributed.

1. Compute the denominator d of the W test statistic, using the n data.

$$d := \sum_i (x_i)^2 - \frac{1}{n} \cdot \left(\sum_i x_i \right)^2 \quad (C1.1)$$

$$d = 1.679 \cdot 10^3$$

2. Sort the n data from smallest to largest to obtain the sample order statistics $X_1 \leq X_2 \leq \dots \leq X_n$.

$X_i =$

1	1.9	3	5	5	5	25	33	37
---	-----	---	---	---	---	----	----	----

3. Compute k, the index of the center value, where:

$$k = \frac{n}{2} \quad \text{if } n \text{ is even}$$

$$k = \frac{n - 1}{2} \quad \text{if } n \text{ is odd}$$
(C1.2)

$$n = 9, \quad k = 4$$

4. Determine the n coefficients a₁, a₂, ...a_k from Table C1-1.

a_k =

0.5888	0.3244	0.1976	0.0947
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5. Compute the W test statistic using:

$$W := \frac{1}{d} \left[\sum_K a_K [X_{(n-K+1)} - X_K] \right]^2$$
(C1.3)

$$W = 0.756$$

6. Test the hypotheses. Reject the null hypothesis if the computed W test statistic from Step 5 is smaller than the quantile determined from Table C1-2 based on the sample size (n=9) and the confidence level (0.01).

Table C1-2 Value = 0.764

Since the calculated value of W (0.756) is less than the tabulated value of W (0.764), the null hypothesis (the data are normally distributed) is rejected in favor of the alternate hypothesis (the data are not normally distributed).

Next, if the hypothesis of normal distribution is rejected, the same procedure is used to test the null hypothesis that the data are lognormally distributed by using log-transformed values.

Data (y):

$n = 9, i = 1 \text{ to } 9$

$y_i =$

1	5	5	3	33	37	5	1.9	25
---	---	---	---	----	----	---	-----	----

Log-Transformed Values (x):

$$x_i = \ln(y_i) \quad (C1.4)$$

$n = 9, i = 1 \text{ to } 9$

$x_i =$

0	1.609	1.609	1.099	3.497	3.611	1.609	0.642	3.219
---	-------	-------	-------	-------	-------	-------	-------	-------

The following hypotheses are tested for the log transformed data:

Ho: The data are lognormally distributed. _____

Ha: The data are not lognormally distributed.

1. Compute the denominator d of the W test statistics, using the n data.

$$d := \sum_i (x_i)^2 - \frac{1}{n} \left(\sum_i x_i \right)^2 \quad (C1.1)$$

$$d = 13.299$$

2. Sort the n data from smallest to largest to obtain the sample order statistics $X_1 \leq X_2 \leq \dots \leq X_n$.

0	0.642	1.099	1.609	1.609	1.609	3.219	3.497	3.611
---	-------	-------	-------	-------	-------	-------	-------	-------

3. Compute k, the index of the center value, where:

$$k = \frac{n}{2} \quad \text{if } n \text{ is even}$$

$$k = \frac{n-1}{2} \quad \text{if } n \text{ is odd}$$

(C1.2)

$$n = 9, k = 4$$

4. Determine the n coefficients a₁, a₂, ...a_k from Table C1-1.

a_k =

0.5888	0.3244	0.1976	0.0947
--------	--------	--------	--------

5. Compute the W test statistic using:

$$W := \frac{1}{d} \left[\sum_K a_K [X_{(n-K+1)} - X_K] \right]^2$$

(C1.3)

$$W = 0.906$$

6. Test the hypotheses. Reject the null hypothesis if the computed W test statistic from Step 5 is smaller than the quantile determined from Table C1-2 based on the sample size (n=9) and the confidence level (0.01).

$$\text{Table C1-2 Value} = 0.764$$

Since the calculated value of W (0.756) is greater than the tabulated value of W (0.764), the null hypothesis (the data are lognormally distributed) is not rejected and the data are concluded to be from a lognormal distribution.

Sample Calculation #2

Determination of Sample Distribution

Data (x):

$n = 18, i = 1 \text{ to } 18$

$x_i =$

26.3	8.3	1.9	4.6	3.5	7.5	2.4	3.3	2.8
3.7	4	2.8	2.75	2.7	2.7	0.48	7.9	2.7

First, the following hypotheses are tested for the data:

H_0 : The data are normally distributed.

H_a : The data are not normally distributed.

1. Compute the denominator d of the W test statistics, using the n data.

$$d := \sum_i (x_i)^2 - \frac{1}{n} \left(\sum_i x_i \right)^2 \quad (C1.1)$$

$$d = 554.637$$

2. Sort the n data from smallest to largest to obtain the sample order statistics $X_1 \leq X_2 \leq \dots \leq X_n$.

$X_i =$

0.48	1.9	2.4	2.7	2.7	2.7	2.75	2.8	2.8
3.3	3.5	3.7	4	4.6	7.5	7.9	8.3	26.3

3. Compute k, the index of the center value, where:

$$k = \frac{n}{2} \quad \text{if } n \text{ is even}$$

$$k = \frac{n-1}{2} \quad \text{if } n \text{ is odd}$$

(C1.2)

$$n = 18, \quad k = 9$$

4. Determine the n coefficients a₁, a₂, ...a_k from Table C1-1.

a_k =

0.4886	0.3253	0.2553	0.2027	0.1587	0.1197	0.0837	0.0496	0.0163
--------	--------	--------	--------	--------	--------	--------	--------	--------

5. Compute the W test statistic using:

$$W := \frac{1}{d} \left[\sum_K a_K [X_{(n-K+1)} - X_K] \right]^2$$

(C1.3)

$$W = 0.562$$

6. Test the hypotheses. Reject the null hypothesis if the computed W test statistic from Step 5 is smaller than the quantile determined from Table C1-2 based on the sample size (n=9) and the confidence level (0.01).

Table C1-2 Value = 0.858

Since the calculated value of W (0.562) is less than the tabulated value of W (0.585), the null hypothesis (the data are normally distributed) is rejected in favor of the alternate hypothesis (the data are not normally distributed).

Next, if the hypothesis of normal distribution is rejected, the same procedure is used to test the null hypothesis that the data are lognormally distributed by using log-transformed values.

Data (y):

$n = 18, i = 1 \text{ to } 18$

$y_i =$

26.3	8.3	1.9	4.6	3.5	7.5	2.4	3.3	2.8
3.7	4	2.8	2.75	2.7	2.7	0.48	7.9	2.7

Log-Transformed Values (x):

$n = 18, i = 1 \text{ to } 18$

$x_i =$

3.27	2.116	0.642	1.526	1.253	2.015	0.876	1.194	1.03
1.308	1.386	1.03	1.012	0.993	0.993	-0.734	2.067	0.993

The following hypotheses are tested for the transformed data:

H_0 : The data are lognormally distributed.

H_a : The data are not lognormally distributed.

1. Compute the denominator d of the W test statistics, using the n data.

$$d := \sum_i (x_i)^2 - \frac{1}{n} \left(\sum_i x_i \right)^2 \quad (C1.1)$$

$$d = 10.968$$

2. Sort the n data from smallest to largest to obtain the sample order statistics $X_1 \leq X_2 \leq \dots \leq X_n$.

$X_i =$

-0.734	0.642	0.875	0.993	0.993	0.993	1.012	1.03	1.03
1.194	1.253	1.308	1.386	1.526	2.015	2.067	2.116	3.27

3. Compute k , the index of the center value, where:

$$k = \frac{n}{2} \quad \text{if } n \text{ is even}$$

$$k = \frac{n-1}{2} \quad \text{if } n \text{ is odd}$$

(C1.2)

$$n = 18, \quad k = 9$$

4. Determine the n coefficients $a_1, a_2, \dots, a_k$ from Table C1-1.

$a_k =$

0.4886	0.3253	0.2553	0.2027	0.1587	0.1197	0.0837	0.0496	0.0163
--------	--------	--------	--------	--------	--------	--------	--------	--------

5. Compute the W test statistic using:

$$W := \frac{1}{d} \left[\sum_K a_K [X_{(n-K+1)} - X_K] \right]^2 \quad (C1.3)$$

$$W = 0.886$$

6. Test the hypotheses. Reject the null hypothesis if the computed W test statistic from Step 5 is smaller than the quantile determined from Table C1-2 based on the sample size ($n=18$) and the confidence level (0.01).

Table C1-2 Value = 0.858

Since the calculated value of W (0.886) is greater than the tabulated value of W (0.858), the null hypothesis (the data are lognormally distributed) is not rejected and the data are concluded to be from a lognormal distribution.

Appendix C2

Determination of Average Concentration (for both normal and lognormal distributions)

The average concentration is calculated based on the appropriate estimator for the data distribution. The data distribution is determined by the process described in Appendix C1.

Calculation of Average Concentration Normal Distributions

For normal distributions the following estimator equation (C2.1) is used to determine average concentration.

$$\bar{y} = \frac{\sum_j y_j}{n} \quad (C2.1)$$

Where: $\bar{y}$ = average concentration
 n = sample size
 j = index variable from 1 to n
 y_j = the j^{th} observation

Calculation of Average Concentration Lognormal Distributions

For those data sets not meeting the assumption of normality, the following estimator (equation C2.5), based on the lognormal distribution is used. In order to calculate the estimator, the mean ($\bar{z}$) and standard deviation (s_z) of the log-transformed values are needed.

$$z_i = \ln(y_i) \quad (C2.2)$$

$$z_{\text{bar}} = \frac{\sum_i z_i}{n} \quad (\text{C2.3})$$

Where: z_{bar} = average of transformed values
 n = sample size
 i = index variable from 1 to n
 z_i = the i^{th} transformed observation

$$sz = \sqrt{\frac{\sum_i (z_i)^2 - \frac{(\sum_i z_i)^2}{n}}{n - 1}} \quad (\text{C2.4})$$

Where: sz = standard deviation of transformed values
 n = sample size
 i = index variable from 1 to n
 z_i = the i^{th} transformed observation

$$\text{AVE} = e^{z_{\text{bar}} \cdot \Psi_n \left(\frac{sz^2}{2} \right)} \quad (\text{C2.5})$$

Where: AVE = average concentration
 z_{bar} = average of transformed values
 sz = standard deviation of transformed values
 $\Psi_n(t)$ = value from Table C2-1.

Sample calculations illustrating the procedure for calculating the average for both normal and lognormal distributions are provided below.

Table C2-1
Multiplying Factor $\Psi_n(t)$ for
Estimating the Lognormal Mean and Variance

t	Number of Samples (n)																
	2	5	8	10	13	15	20	25	30	50	70	90	100	150	200	500	inf
0.05	1.025	1.041	1.045	1.046	1.047	1.048	1.049	1.049	1.049	1.050	1.050	1.051	1.051	1.051	1.051	1.051	1.051
0.10	1.050	1.082	1.091	1.093	1.096	1.097	1.099	1.100	1.101	1.103	1.103	1.104	1.104	1.104	1.105	1.105	1.105
0.15	1.076	1.125	1.138	1.143	1.147	1.149	1.152	1.154	1.155	1.158	1.159	1.160	1.160	1.161	1.161	1.161	1.162
0.20	1.102	1.169	1.187	1.194	1.200	1.203	1.207	1.210	1.212	1.216	1.217	1.218	1.218	1.219	1.220	1.221	1.221
0.25	1.128	1.214	1.238	1.247	1.255	1.259	1.265	1.268	1.271	1.276	1.278	1.280	1.280	1.281	1.282	1.283	1.284
0.30	1.154	1.260	1.291	1.302	1.312	1.317	1.325	1.330	1.333	1.340	1.342	1.344	1.345	1.346	1.347	1.349	1.350
0.35	1.180	1.307	1.345	1.359	1.372	1.378	1.387	1.393	1.398	1.406	1.410	1.412	1.412	1.415	1.416	1.418	1.419
0.40	1.207	1.356	1.401	1.418	1.433	1.441	1.453	1.460	1.465	1.476	1.480	1.483	1.484	1.486	1.488	1.490	1.492
0.45	1.234	1.406	1.459	1.479	1.498	1.506	1.521	1.530	1.536	1.548	1.554	1.557	1.558	1.562	1.563	1.566	1.568
0.50	1.261	1.457	1.519	1.542	1.564	1.574	1.592	1.602	1.610	1.625	1.631	1.635	1.637	1.641	1.643	1.646	1.649
0.55	1.288	1.509	1.581	1.608	1.633	1.645	1.666	1.678	1.687	1.705	1.713	1.717	1.719	1.724	1.726	1.730	1.733
0.60	1.315	1.563	1.645	1.675	1.705	1.719	1.743	1.757	1.768	1.789	1.798	1.803	1.805	1.811	1.813	1.819	1.822
0.65	1.343	1.618	1.711	1.746	1.780	1.796	1.823	1.840	1.852	1.876	1.887	1.893	1.895	1.902	1.905	1.911	1.916
0.70	1.371	1.675	1.779	1.818	1.857	1.876	1.907	1.926	1.940	1.968	1.981	1.988	1.990	1.998	2.002	2.009	2.014
0.75	1.399	1.733	1.849	1.894	1.938	1.959	1.994	2.016	2.032	2.064	2.079	2.087	2.090	2.099	2.103	2.111	2.117
0.80	1.427	1.792	1.922	1.971	2.021	2.045	2.085	2.110	2.128	2.165	2.182	2.191	2.194	2.205	2.210	2.219	2.226
0.85	1.456	1.853	1.996	2.052	2.108	2.134	2.179	2.208	2.228	2.270	2.289	2.300	2.304	2.316	2.322	2.332	2.340
0.90	1.485	1.915	2.074	2.135	2.197	2.227	2.278	2.310	2.333	2.381	2.402	2.415	2.419	2.432	2.439	2.451	2.460
0.95	1.514	1.979	2.153	2.221	2.291	2.323	2.380	2.417	2.442	2.496	2.521	2.535	2.539	2.555	2.562	2.576	2.586
1.00	1.543	2.044	2.235	2.310	2.387	2.424	2.487	2.528	2.557	2.617	2.645	2.660	2.666	2.683	2.692	2.707	2.718
1.05	1.573	2.111	2.320	2.403	2.487	2.528	2.598	2.644	2.676	2.744	2.774	2.792	2.798	2.818	2.827	2.845	2.858
1.10	1.602	2.180	2.407	2.498	2.591	2.636	2.714	2.765	2.800	2.876	2.911	2.930	2.938	2.959	2.970	2.990	3.004
1.15	1.632	2.250	2.497	2.596	2.699	2.748	2.834	2.891	2.930	3.014	3.053	3.075	3.083	3.108	3.120	3.143	3.158
1.20	1.662	2.321	2.589	2.698	2.810	2.864	2.960	3.022	3.066	3.159	3.203	3.227	3.236	3.263	3.277	3.303	3.320
1.25	1.693	2.395	2.685	2.803	2.926	2.985	3.090	3.159	3.207	3.311	3.359	3.387	3.397	3.427	3.442	3.471	3.490
1.30	1.724	2.470	2.783	2.911	3.045	3.111	3.226	3.301	3.354	3.470	3.523	3.554	3.565	3.599	3.616	3.648	3.669
1.35	1.754	2.547	2.884	3.023	3.169	3.241	3.367	3.450	3.508	3.636	3.695	3.729	3.741	3.779	3.798	3.833	3.857
1.40	1.786	2.626	2.988	3.139	3.298	3.376	3.513	3.604	3.669	3.809	3.875	3.912	3.926	3.968	3.989	4.028	4.055
1.45	1.817	2.706	3.096	3.259	3.431	3.515	3.666	3.766	3.836	3.991	4.063	4.105	4.120	4.166	4.190	4.233	4.263
1.50	1.849	2.788	3.206	3.382	3.569	3.661	3.825	3.933	4.011	4.181	4.260	4.306	4.323	4.374	4.400	4.448	4.482
1.55	1.880	2.873	3.320	3.510	3.711	3.811	3.990	4.108	4.193	4.379	4.467	4.518	4.536	4.592	4.621	4.675	4.711
1.60	1.913	2.959	3.437	3.642	3.859	3.967	4.161	4.291	4.383	4.587	4.683	4.739	4.759	4.821	4.853	4.912	4.953
1.65	1.945	3.047	3.558	3.777	4.012	4.129	4.339	4.480	4.581	4.804	4.910	4.971	4.993	5.062	5.097	5.162	5.207
1.70	1.977	3.137	3.682	3.918	4.171	4.297	4.525	4.678	4.788	5.031	5.147	5.215	5.239	5.314	5.353	5.424	5.474
1.75	2.010	3.229	3.810	4.062	4.334	4.471	4.717	4.883	5.003	5.269	5.395	5.469	5.496	5.578	5.621	5.700	5.755
1.80	2.043	3.323	3.942	4.212	4.504	4.651	4.917	5.097	5.227	5.517	5.655	5.736	5.766	5.856	5.903	5.989	6.050
1.85	2.077	3.420	4.077	4.366	4.680	4.838	5.125	5.320	5.461	5.776	5.927	6.016	6.048	6.147	6.198	6.294	6.360
1.90	2.110	3.518	4.216	4.525	4.861	5.031	5.341	5.552	5.705	6.048	6.212	6.309	6.344	6.453	6.509	6.613	6.686
1.95	2.144	3.619	4.359	4.688	5.049	5.232	5.566	5.794	5.959	6.331	6.511	6.616	6.655	6.773	6.834	6.949	7.028
2.00	2.178	3.721	4.506	4.858	5.243	5.439	5.799	6.045	6.224	6.628	6.823	6.938	6.980	7.109	7.176	7.302	7.389

Source: Gilbert, 1987

Sample Calculations **Determination of Average Concentrations**

For NORMAL distributions the following procedure is followed:

Data (x):

$n = 4, i = 1 \text{ to } 4$

$x_i =$

180	195	190	39 U
-----	-----	-----	------

note: U = indicates values is 1/2 the quantitation limit and the constituent was not detected.

1. Compute the sample mean ($\bar{x}$):

$$\bar{x} = \frac{\sum_{i=1}^n x_i}{n} \quad (C2.1)$$

Average = $\bar{x}$ = 151

For LOGNORMAL distributions the following procedure is followed:

Data (x):

$n = 3, i = 1 \text{ to } 3$

$x_i =$

19	9.5	9.5
----	-----	-----

Transform the actual values (x) to log-transformed values (y):

$$y_i = \ln(x_i) \quad (C2.2)$$

$y_i =$

2.944	2.251	2.251
-------	-------	-------

1. Compute the sample mean (ybar) and sample standard deviation (sy) of the log-transformed values:

$$y_{\text{bar}} := \frac{\sum_i y_i}{n} \quad (C2.3)$$

$$sy := \sqrt{\frac{\sum_i (y_i)^2 - \frac{\left(\sum_i y_i\right)^2}{n}}{n - 1}} \quad (C2.4)$$

Giving:

$$y_{\text{bar}} = 2.482$$

$$sy = 0.4$$

2. Compute the estimate of the average based on equation 13.3 of Gilbert (1987).

$$AVE = e^{y_{\text{bar}} + \psi_n \left(\frac{sy^2}{2} \right)} \quad (C2.5)$$

$$\text{Average} = 12.571$$

Appendix C3

Determination of Upper 95% Confidence Limit Concentration (UL 95) (for both normal and lognormal distributions)

Calculation of UL 95 for Normal Distributions

For normally distributed data, the UL 95 can be calculated using the following procedure:

Step 1: Compute the sample mean and sample standard deviation.

$$\bar{x} := \frac{\sum_i x_i}{n_{\text{site}}} \quad (\text{C3.1})$$

Where: $\bar{x}$ = arithmetic mean concentration
 n_{site} = site sample size
 i = index variable from 1 to n_{site}
 x_i = the i^{th} site observation

$$s_x := \sqrt{\frac{\sum_i (x_i)^2 - \frac{\left(\sum_i x_i\right)^2}{n_{\text{site}}}}{n_{\text{site}} - 1}} \quad (\text{C3.2})$$

Where: s_x = standard deviation of site values
 n_{site} = site sample size
 i = index variable from 1 to n_{site}
 x_i = the i^{th} site observation

Step 2: Determine the t-value for the upper 95% confidence limit.

The t-value is determined from Table C3-1 based on the degrees of freedom ($n-1$) and $\alpha = 0.05$ with one tail only.

Step 3: Compute the upper 95% confidence limit using equation (C3.3).

$$UL_{95} = \bar{x} + t \cdot \frac{s}{\sqrt{n}} \quad (C3.3)$$

Where: UL_{95} = upper 95% confidence limit
 $\bar{x}$ = arithmetic mean concentration
 t = tabulated t-value from Step 2 above.
 s = standard deviation of site values
 n = sample size

Calculation of UL 95 for Lognormal Distributions

For lognormally distributed data, the upper 95% confidence limit can be calculated using the following procedure:

Step 1. Transform the observed values (x) to log-transformed values (y):

$$y_i = \ln(x_i) \quad (C3.4)$$

Where: y_i = the i^{th} log-transformed site value
 x_i = the i^{th} site value
 i = range variable from 1 to the sample size

Step 2. Compute the sample mean ($\bar{y}$) and sample standard deviation (s_y) of the log-transformed values.

$$\bar{y} = \frac{\sum y_i}{n} \quad (C3.5)$$

Where: $\bar{y}$ = arithmetic mean concentration (log-transformed values)
 n = site sample size
 i = index variable from 1 to n_{site}
 y_i = the i^{th} log-transformed site value

$$s_y := \sqrt{\frac{\sum_i (y_i)^2 - \frac{\left(\sum_i y_i\right)^2}{n}}{n - 1}} \quad (C3.6)$$

Where: s_y = standard deviation of log-transformed site values
 n = site sample size
 i = index variable from 1 to n_{site}
 y_i = the i^{th} log-transformed site value

Step 3: Determine the H-value for the upper 95% confidence limit (H₉₅).

The H-value is determined from Table C3-2 based on the sample size (n) and the standard deviation of the log-transformed values (s_y).

Step 4: Compute the upper 95% confidence limit using equation (C3.7)

$$UL_{95} = e^{\left\{ y_{\text{bar}} + .5 \cdot s_y^2 + \frac{s_y \cdot H}{\sqrt{n - 1}} \right\}} \quad (C3.7)$$

Where: UL_{95} = upper confidence limit based on a lognormal distribution
 y_{bar} = arithmetic mean concentration (log-transformed values)
 s_y = standard deviation of log-transformed site values
 H = tabulated H₉₅ value from step 3 above.
 n = sample size

Table C3-1
Quantiles of the t Distribution

Degrees of Freedom	t Distribution					
	α					
	0.005 (one tail)	0.01 (one tail)	0.025 (one tail)	0.05 (one tail)	0.1 (one tail)	0.25 (one tail)
	0.01 (two tails)	0.02 (two tails)	0.05 (two tails)	0.1 (two tails)	0.2 (two tails)	0.5 (two tails)
1	63.656	31.821	12.706	6.314	3.078	1.000
2	9.925	6.965	4.303	2.920	1.886	0.816
3	5.841	4.541	3.182	2.353	1.638	0.765
4	4.604	3.747	2.776	2.132	1.533	0.741
5	4.032	3.365	2.571	2.015	1.476	0.727
6	3.707	3.143	2.447	1.943	1.440	0.718
7	3.499	2.998	2.365	1.895	1.415	0.711
8	3.355	2.896	2.306	1.860	1.397	0.706
9	3.250	2.821	2.262	1.833	1.383	0.703
10	3.169	2.764	2.228	1.812	1.372	0.700
11	3.106	2.718	2.201	1.796	1.363	0.697
12	3.055	2.681	2.179	1.782	1.356	0.695
13	3.012	2.650	2.160	1.771	1.350	0.694
14	2.977	2.624	2.145	1.761	1.345	0.692
15	2.947	2.602	2.131	1.753	1.341	0.691
16	2.921	2.583	2.120	1.746	1.337	0.690
17	2.898	2.567	2.110	1.740	1.333	0.689
18	2.878	2.552	2.101	1.734	1.330	0.688
19	2.861	2.539	2.093	1.729	1.328	0.688
20	2.845	2.528	2.086	1.725	1.325	0.687
21	2.831	2.518	2.080	1.721	1.323	0.686
22	2.819	2.508	2.074	1.717	1.321	0.686
23	2.807	2.500	2.069	1.714	1.319	0.685
24	2.797	2.492	2.064	1.711	1.318	0.685
25	2.787	2.485	2.060	1.708	1.316	0.684
26	2.779	2.479	2.056	1.706	1.315	0.684
27	2.771	2.473	2.052	1.703	1.314	0.684
28	2.763	2.467	2.048	1.701	1.313	0.683
29	2.756	2.462	2.045	1.699	1.311	0.683
Large (z)	2.576	2.326	1.960	1.645	1.282	0.674

Source: Triola, 1989

Table C3-2

Values of $H_{.95}$ for Computing a One-Sided
Upper 95% Confidence Limit on a Lognormal Mean

s	n									
	3	5	7	10	12	15	21	31	51	101
0.10	2.750	2.035	1.886	1.802	1.775	1.749	1.722	1.701	1.684	1.670
0.20	3.295	2.198	1.992	1.881	1.843	1.809	1.771	1.742	1.718	1.697
0.30	4.109	2.402	2.125	1.977	1.927	1.882	1.833	1.793	1.761	1.733
0.40	5.220	2.651	2.282	2.089	2.026	1.968	1.905	1.856	1.813	1.777
0.50	6.495	2.947	2.465	2.220	2.141	2.068	1.989	1.928	1.876	1.830
0.60	7.807	3.287	2.673	2.368	2.271	2.181	2.085	2.010	1.946	1.891
0.70	9.120	3.662	2.904	2.532	2.414	2.306	2.191	2.102	2.025	1.960
0.80	10.43	4.062	3.155	2.710	2.570	2.443	2.307	2.202	2.112	2.035
0.90	11.74	4.478	3.420	2.902	2.738	2.589	2.432	2.310	2.206	2.117
1.00	13.05	4.905	3.698	3.103	2.915	2.744	2.564	2.423	2.306	2.205
1.25	16.33	6.001	4.426	3.639	3.389	3.163	2.923	2.737	2.580	2.447
1.50	19.60	7.120	5.184	4.207	3.896	3.612	3.311	3.077	2.881	2.713
1.75	22.87	8.250	5.960	4.795	4.422	4.081	3.719	3.437	3.200	2.997
2.00	26.14	9.387	6.747	5.396	4.962	4.564	4.141	3.812	3.533	3.295
2.50	32.69	11.67	8.339	6.621	6.067	5.557	5.013	4.588	4.228	3.920
3.00	39.23	13.97	9.945	7.864	7.191	6.570	5.907	5.388	4.947	4.569
3.50	45.77	16.27	11.56	9.118	8.326	7.596	6.815	6.201	5.681	5.233
4.00	52.31	18.58	13.18	10.38	9.469	8.630	7.731	7.024	6.424	5.908
4.50	58.85	20.88	14.80	11.64	10.62	9.669	8.652	7.854	7.174	6.590
5.00	65.39	23.19	16.43	12.91	11.77	10.71	9.579	8.688	7.929	7.277
6.00	78.47	27.81	19.68	15.45	14.08	12.81	11.44	10.36	9.449	8.661
7.00	91.55	32.43	22.94	18.00	16.39	14.90	13.31	12.05	10.98	10.05
8.00	104.6	37.06	26.20	20.55	18.71	17.01	15.18	13.74	12.51	11.45
9.00	117.7	41.68	29.46	23.10	21.03	19.11	17.05	15.43	14.05	12.85
10.00	130.8	46.31	32.73	25.66	23.35	21.22	18.93	17.13	15.59	14.26

Source: Gilbert, 1987

Sample Calculations

Determination of Upper 95% Confidence Limit Concentration (UL 95)

For NORMAL distributions the following procedure is followed:

Site Data (x):

$n = 4, i = 1 \text{ to } 4$

$x_i =$

180	195	190	39 U
-----	-----	-----	------

note: U = indicates values is 1/2 the quantitation limit and the constituent was not detected.

1. Compute the sample mean (xbar) and sample standard deviation (s):

$$\bar{x} := \frac{\sum_i x_i}{n_{\text{site}}} \quad (\text{C3.1})$$

$$s_x := \sqrt{\frac{\sum_i (x_i)^2 - \frac{\left(\sum_i x_i\right)^2}{n_{\text{site}}}}{n_{\text{site}} - 1}} \quad (\text{C3.2})$$

Giving:

$$\bar{x} = 151$$

$$s_x = 74.927$$

2. Determine the t-value for the upper 95% confidence limit.

The t-value is determined from Table C3-1 based on degrees of freedom (n-1) and $\alpha = 0.05$ with one tail only.

$$\begin{aligned}\text{degrees of freedom} &= 3 \\ t &= 2.353\end{aligned}$$

3. Determine the upper 95% confidence limit

$$UL_{95} = \bar{x} + t \cdot \frac{s}{\sqrt{n}} \quad (C3.3)$$

$$UL_{95} = 239.151$$

For LOGNORMAL distributions the following procedure is followed:

Site Data (x):

$$n = 3, i = 1 \text{ to } 3$$

$$x_i =$$

19	9.5	9.5
----	-----	-----

1. Transform the actual values (x) to log-transformed values (y):

$$y_i = \ln(x_i) \quad (C3.4)$$

$$y_i =$$

2.944	2.251	2.251
-------	-------	-------

2. Compute the sample mean ($\bar{y}$) and sample standard deviation (s_y) of the log-transformed values:

$$\bar{y} := \frac{\sum_i y_i}{n} \quad (\text{C3.5})$$

$$s_y := \sqrt{\frac{\sum_i (y_i)^2 - \frac{\left(\sum_i y_i\right)^2}{n}}{n - 1}} \quad (\text{C3.6})$$

$$\begin{aligned} \bar{y} &= 2.482 \\ s_y &= 0.4 \end{aligned}$$

3. Determine the H-value for the upper 95% confidence limit (H_{95}).

Using Table C3-2, find the H-value (H_{95}) based on the sample size (n) and the standard deviation of the log-transformed values (s_y).

$$\begin{aligned} n &= 3 \\ s_y &= 0.4 \\ H &= 5.220 \end{aligned}$$

4. Determine the upper 95% confidence limit

$$UL_{95} = e^{\left(\bar{y} + .5 \cdot s_y^2 + \frac{s_y \cdot H}{\sqrt{n - 1}} \right)} \quad (\text{C3.7})$$

$$UL_{95} = 56.801$$

Appendix C4 - RME Exposure and Risk Equations

Equations for Exposure to Soil and Sediment

Equation 1, used to calculate intake (absorbed dose) of chemicals from dermal contact with surface soil or sediment, is obtained from EPA risk assessment guidance (EPA, 1989a) as follows:

$$\text{Absorbed Dose (mg/kg-day)} = \frac{\text{CS} \times \text{CF} \times \text{SA} \times \text{AF} \times \text{ABS} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT} \times \text{AD}} \quad (1)$$

Where:

CS	=	Chemical Concentration in Soil or Sediment (mg/kg)
CF	=	Conversion Factor (10^{-6} kg/mg)
SA	=	Skin Surface Area Available for Contact (cm^2/event)
AF	=	Soil to Skin Adherence Factor (mg/cm^2)
ABS	=	Absorption Factor (unitless)
EF	=	Exposure Frequency (events/year)
ED	=	Exposure Duration (years)
BW	=	Body Weight (kg)
AT	=	Averaging Time (365 days/year)
AD	=	Averaging Duration (years) (equal to ED for non-carcinogens and 70 years for carcinogens)

This equation is modified for the hypothetical future scenario to apportion intake between children and adults, based upon their different skin surface areas and exposure durations, shown in Equation 2.

For carcinogens, the two components of Equation 2 (adult and child) are summed to yield an age-adjusted intake value. For noncarcinogens, the intake values for the adult and child also are considered separately in order to evaluate the risk from noncarcinogens to young children (0-6 years old).

$$\text{Absorbed Dose (mg/kg-day)} = \frac{\text{CS} \times \text{CF} \times \text{SA}_a \times \text{AF} \times \text{ABS} \times \text{EF}_a \times \text{ED}_a}{\text{BW}_a \times \text{AT} \times \text{AD}} + \frac{\text{CS} \times \text{CF} \times \text{SA}_c \times \text{AF} \times \text{ABS} \times \text{EF}_c \times \text{ED}_c}{\text{BW}_c \times \text{AT} \times \text{AD}} \quad (2)$$

Where:

CS	=	Chemical Concentration in Soil (mg/kg)
CF	=	Conversion Factor (10^{-6} kg/mg)

SA_a	=	Adult Skin Surface Area Available for Contact (cm^2/event)
SA_c	=	Child Skin Surface Area Available for Contact (cm^2/event)
AF	=	Soil to Skin Adherence Factor (mg/cm^2)
ABS	=	Absorption Factor (unitless)
EF_a	=	Adult Exposure Frequency (events/year)
EF_c	=	Child Exposure Frequency (events/year)
ED_a	=	Adult Exposure Duration (years)
ED_c	=	Child Exposure Duration (years)
BW_a	=	Adult Body Weight (kg)
BW_c	=	Child Body Weight (kg)
AT	=	Averaging Time (365 days/year)
AD	=	Averaging Duration (years) (equal to ED for noncarcinogens and 70 years for carcinogens)

Equation 3, used to calculate intake for soil or sediment ingestion, is given in EPA risk assessment guidance (EPA, 1989a).

$$\text{Intake (mg/kg-day)} = \frac{CS_c \times IR_1 \times CF_c \times FI \times EF \times ED}{BW \times AT \times AD} \quad (3)$$

Where:

CS_c	=	Chemical Concentration in Soil or Sediment (mg/kg)
IR_1	=	Ingestion Rate ($\text{mg soil}/\text{day}$)
CF_c	=	Conversion Factor ($10^{-6} \text{ kg}/\text{mg}$)
FI	=	Fraction Ingested from Contaminated Source (unitless)
EF	=	Exposure Frequency (days/year)
ED	=	Exposure Duration (years)
BW	=	Body Weight (kg)
AT	=	Averaging Time (365 days/year)
AD	=	Averaging Duration (years) (equal to ED for non-carcinogens and 70 years for carcinogens)

Equation 3 is modified as recommended by EPA (EPA, 1991; EPA, 1989a) for the hypothetical future scenarios to apportion intake between young children (aged 1 to 6 years), the period of highest soil ingestion, and older children and adults. The modified equation is shown in Equation 4. As described above for Equation 2, the two components of Equation 4 are summed to derive carcinogenic intake and considered separately for non-carcinogenic intake.

$$\text{Intake (mg/kg-day)} = \frac{CS_c \times AIR_1 \times CF_c \times FI \times EF \times ED_a}{BW_a \times AT \times AD} +$$

$$\frac{CS_c \times CIR_1 \times CF_c \times FI \times EF \times ED_c}{BW_c \times AT \times AD} \quad (4)$$

Where:

- CS_c = Chemical Concentration in Soil (mg/kg)
- AIR_1 = Adult Ingestion Rate (mg soil/day)
- CIR_1 = Child Ingestion Rate (mg soil/day)
- CF_c = Conversion Factor (10^{-6} kg/mg)
- FI = Fraction Ingested from Contaminated Source (unitless)
- EF = Exposure Frequency (days/year)
- ED_a = Adult Exposure Duration (years)
- ED_c = Child Exposure Duration (years)
- BW_a = Adult Body Weight (kg)
- BW_c = Child Body Weight (kg)
- AT = Averaging Time (365 days/year)
- AD = Averaging Duration (years) (equal to ED for non-carcinogens and 70 years for carcinogens)

Equations for Exposure to Water

Equation 5 is obtained from EPA risk assessment guidance (EPA, 1989a) for the calculation of chemical intake from dermal contact with chemicals in water.

$$\text{Absorbed Dose (mg/kg-day)} = \frac{CW \times SA \times PC \times ET \times EF \times ED \times CF}{BW \times AT \times AD} \quad (5)$$

Where:

- CW = Chemical Concentration in Water (mg/l)
- SA = Skin Surface Area Available for Contact (cm^2)
- PC = Chemical-specific Dermal Permeability Constant (cm/hr)
- ET = Exposure Time (hour/day)
- EF = Exposure Frequency (days/year)
- ED = Exposure Duration (years)
- CF = Volumetric Conversion Factor for Water (1 liter/1000 cm^3)
- BW = Body Weight (kg)
- AT = Averaging Time (365 days/year)
- AD = Averaging Duration (years) (equal to ED for noncarcinogens and 70 years for carcinogens)

This equation is modified to estimate a weighted average of child and adult exposures to groundwater under the hypothetical residential scenario, as shown in Equation 6. The two components of Equation 6 are summed to derive carcinogenic intake, and considered separately for non-carcinogenic intake.

$$\text{Absorbed Dose (mg/kg-day)} = \frac{\text{CW} \times \text{SA}_a \times \text{PC} \times \text{ET} \times \text{EF} \times \text{ED}_a \times \text{CF}}{\text{BW}_a \times \text{AT} \times \text{AD}} + \frac{\text{CW} \times \text{SA}_c \times \text{PC} \times \text{ET} \times \text{EF} \times \text{ED}_c \times \text{CF}}{\text{BW}_c \times \text{AT} \times \text{AD}} \quad (6)$$

Where:

CW	=	Chemical Concentration in Water (mg/l)
SA _a	=	Adult Skin Surface Area Available for Contact (cm ²)
SA _c	=	Child Skin Surface Area Available for Contact (cm ²)
PC	=	Chemical-specific Dermal Permeability Constant (cm/hr)
ET	=	Exposure Time (hours/day)
EF	=	Exposure Frequency (days/year)
ED _a	=	Adult Exposure Duration (years)
ED _c	=	Child Exposure Duration (years)
CF	=	Volumetric Conversion Factor for Water (1 liter/1000 cm ³)
BW _a	=	Adult Body Weight (kg)
BW _c	=	Child Body Weight (kg)
AT	=	Averaging Time (365 days/year)
AD	=	Averaging Duration (years) (equal to ED for noncarcinogens and 70 years for carcinogens)

Equation 7 is obtained from EPA risk assessment guidance (EPA, 1989a) for the calculation of chemical intake from residential ingestion of groundwater utilized as a drinking water source. VOC intake from residential inhalation during household use of groundwater is assumed to be equivalent to the VOC intake from residential ingestion of groundwater. One hundred percent of the total drinking water ingested is considered to be from the aquifer below the unit. The equation is modified to apportion the intake between children and adults. The two components of Equation 7 are summed to represent intake for carcinogens. They are considered separately for non-carcinogenic intake.

$$\text{Intake (mg/kg-day)} = \frac{\text{CW}_c \times \text{AIR}_3 \times \text{EF} \times \text{ED}_a}{\text{BW}_a \times \text{AT} \times \text{AD}} + \frac{\text{CW}_c \times \text{CIR}_3 \times \text{EF} \times \text{ED}_c}{\text{BW}_c \times \text{AT} \times \text{AD}} \quad (7)$$

Where:

CW _c	=	Chemical Concentration in Water (mg/l)
AIR ₃	=	Adult Ingestion Rate (liters/day)
CIR ₃	=	Child Ingestion Rate (liters/day)
EF	=	Exposure Frequency (days/year)
ED _a	=	Adult Exposure Duration (years)
ED _c	=	Child Exposure Duration (years)

BW_a = Adult Body Weight (kg)
 BW_c = Child Body Weight (kg)
 AT = Averaging Time (365 days/year)
 AD = Averaging Duration (years) (equal to ED for non-carcinogens and 70 years for carcinogens)

Equations for Exposure to Air

The equation used to calculate intakes from inhalation of contaminated airborne soil particulates or vapor is obtained from EPA risk assessment guidance (EPA, 1989a). Equation 8 is used for exposure to particulates or organic vapors derived from surface soil.

$$\text{Intake (mg/kg-day)} = \frac{CA_c \times IR_2 \times ET \times EF \times ED}{BW \times AT \times AD} \quad (8)$$

Where:

CA_c = Chemical Concentration in Air (mg/m^3)
 IR_2 = Inhalation Rate (m^3/hour)
 ET = Exposure Time (hours/day)
 EF = Exposure Frequency (days/year)
 ED = Exposure Duration (years)
 BW = Body Weight (kg)
 AT = Averaging Time (365 days/year)
 AD = Averaging Duration (years) (equal to ED for non-carcinogens and 70 years for carcinogens)

Equation 8 is modified to estimate chemical intake for adults and children separately, based on their different inhalation rate, body weight, and exposure time as shown in Equation 9. This equation is used for exposure of hypothetical future on-unit residents to organic vapors from soils excavated and spread over the surface. The two components of Equation 9 are summed for carcinogens. For non-carcinogens, the first component is used for adult intake while the second component is used to represent intake for the child.

$$\text{Intake (mg/kg-day)} = \frac{CA_c \times AIR_x \times ET_a \times EF \times ED_a}{BW_a \times AT \times AD} + \frac{CA_c \times CIR_2 \times ET_c \times EF \times ED_c}{BW_c \times AT \times AD} \quad (9)$$

Where:

CA_c = Chemical Concentration in Air (mg/m^3)
 AIR_2 = Adult Inhalation Rate (m^3/hr)

CIR_2	=	Child Inhalation Rate (m^3/hr)
ET_a	=	Adult Exposure Time (hour/day)
ET_c	=	Child Exposure Time (hour/day)
EF	=	Exposure Frequency (days/year)
ED_a	=	Adult Exposure Duration (years)
ED_c	=	Child Exposure Duration (years)
BW_a	=	Adult Body Weight (kg)
BW_c	=	Child Body Weight (kg)
AT	=	Averaging Time (365 days/year)
AD	=	Averaging Duration (years) (equal to ED for noncarcinogens and 70 years for carcinogens)

Equation 10 is used to estimate the chemical concentrations in the air (CA_c) due to airborne soil particulates. The chemical concentration in the air is then be used in Equation 9.

$$CA_c = CS \times ADL \quad (10)$$

Where:

CA_c	=	Contaminant Concentration in Air (mg/m^3)
CS	=	Contaminant Concentration in Soil (mg/kg)
ADL	=	Atmospheric dust loading (kg/m^3) ($10^{-7} kg/m^3$)

The Atmospheric dust loading of ($10^{-7} kg/m^3$) is conservatively assumed based on the average background dust loading of about $4 \times 10^{-8} kg/m^3$ for nonurban locations in the U.S. (Ansbaugh et al. 1975) and an average dust loading of $6 \times 10^{-8} kg/m^3$ measured above two agricultural fields at SRS (Shinn et al. 1982).

Intake from inhalation of VOCs released from groundwater during groundwater sampling is calculated using Henry's Law (see equation 11). Contaminant concentration in air calculated using Henry's Law is conservative because it assumes that there is no dispersion after the VOC vapor is released from the groundwater and the transfer from the liquid phase to the gas phase occurs immediately (i.e., the air containing the VOC vapor is fully saturated and saturation occurs immediately). In reality the transfer from liquid to gas takes time, and dispersion does occur lowering the concentration of VOCs in the air.

$$CA_c = K_H \times CW \times CF \quad (11)$$

Where:

CA_c	=	Contaminant Concentration in Air (mg/m^3)
K_H	=	Henry's Law Constant (unitless), at $30^\circ C$ for this BRA
CW	=	Chemical Concentration in Water (mg/l)

CF = Volumetric Conversion Factor (1000 liter/m³)

Intake from inhalation of VOCs released from groundwater during showering and other household uses are not estimated using Equation 9. Instead, the intakes from inhalation during household uses is assumed to be equivalent to the intake from ingestion of 2 liters/day of groundwater, in accordance with EPA guidance (BNA, 1992).

Equation for Exposure to Homegrown Produce

The equation used to calculate the intake of contaminated vegetation is obtained from EPA risk assessment guidance (EPA, 1989a). Equation 12 is used to estimate the intake of contaminants from the edible portions of vegetation grown within a garden of a hypothetical future resident. The equation is modified to apportion the intake between children and adults. The two components of Equation 12 are summed to represent intake for carcinogens. They are considered separately for non-carcinogenic intake.

$$\text{Intake (mg/kg-day)} = \frac{\text{CV} \times \text{IR}_a \times \text{FI} \times \text{EF} \times \text{ED}_a \times \text{CF}}{\text{BW}_a \times \text{AT} \times \text{AD}} + \frac{\text{CV} \times \text{IR}_c \times \text{FI} \times \text{EF} \times \text{ED}_c \times \text{CF}}{\text{BW}_c \times \text{AT} \times \text{AD}} \quad (12)$$

Where:

CV = Contaminant Concentration in Vegetation (mg/kg)
IR_a = Adult Ingestion Rate (g/day)
IR_c = Child Ingestion Rate (g/day)
FI = Fraction Ingested (unitless)
EF = Exposure Frequency (days/year)
ED_a = Adult Exposure Duration (years)
ED_c = Child Exposure Duration (years)
CF = Conversion Factor (1 kg / 1000 g)
BW_a = Adult Body Weight (kg)
BW_c = Child Body Weight (kg)
AT = Averaging Time (365 days/year)
AD = Averaging Duration (years) (equal to ED for noncarcinogens and 70 years for carcinogens)

Equation 13 is used to estimate the vegetative plant uptake of contaminants from soils (CV). The plant uptake of contaminants is then be used in Equation 12.

$$\text{CV} = \text{CS} \times \text{BCF} \times \text{CF} \quad (13)$$

Where:

CV = Contaminant Concentration in Vegetation (mg/kg)
CS = Contaminant Concentration in Soil (mg/kg)

BCF = Soil-to-Plant Transfer Factor (mg/kg dry plant per mg/kg dry soil)
 CF = Dry-to-Wet Weight Conversion Factor (unitless), (0.2, 0.25, and 0.18 for leafy vegetables, tuberous vegetables, and fruits, respectively)

Equations 14, 15 and 16 are used to calculate Bioconcentration Factors (BCF). Equation 14 is used to calculate the Bioconcentration Factor for uptake of organic chemicals in leafy vegetables (BCFL) and equations 15 and 16 are used to calculate the Bioconcentration Factor for uptake of organic chemicals in root vegetables (BCFR) and fruits (BCFF) (Travis and Arms, 1988).

$$\log(\text{BCFL}) = 1.588 - 0.578 \times \log(\text{Kow}) \quad (14)$$

$$\text{BCFR} = \text{BCFF} = \text{RCF} / (\text{Koc} \times \text{foc}) \quad (15)$$

Where:

BCFL = Bioconcentration Factor for organic chemicals in leafy vegetables (unitless)
 BCFR = Bioconcentration Factor for organic chemicals in root vegetables (unitless)
 BCFF = Bioconcentration Factor for organic chemicals in fruits (unitless)
 RCF = Root concentration factor (unitless)
 Kow = Octanol / water partition coefficient (unitless), chemical specific
 Koc = Organic carbon / water partition coefficient (unitless), chemical specific
 foc = Fraction of organic carbon in soil (unitless), (assumed at 2.0%)

The RCF is calculated using equation 16

$$\log(\text{RCF} - 0.82) = 0.77 \times \log(\text{Kow}) - 1.52 \quad (16)$$

Risk Calculation for Noncarcinogens

The potential for noncarcinogenic health effects is evaluated using the "Noncancer Hazard Quotient" (EPA, 1989a) presented in equation 17.

$$\text{Noncancer Hazard Quotient} = E / \text{RfD} \quad (17)$$

Where:

E = exposure level (or intake);

RfD = reference dose; and

E and RfD are expressed in the same units and represent the same exposure period (i.e., chronic, subchronic, or shorter-term)

Reference dose values used with equation 17 are obtained from IRIS and/or HEAST.

Risk Calculation for Carcinogens

Risk for any carcinogens present at the CSBRP are expected to be low (i.e., below 0.01). The "Linear Low-dose Cancer Risk Equation" (EPA, 1989a) presented in equation 18 is used to calculate cancer risk for the CSBRP.

$$\text{Risk} = \text{CDI} \times \text{SF} \quad (18)$$

Where:

CDI = chronic daily intake averaged over 70 years (mg/kg-day); and

SF = slope factor, expressed in (mg/kg-day)⁻¹

Risk in equation 18 is expressed as a unitless probability of an individual developing cancer. Slope factors used with equation 18 are obtained from IRIS and/or HEAST.

Appendix C5 - RME Exposure Parameters

This appendix describes exposure scenario assumptions and the RME parameter values used in the RME calculations for the Central Shops Burning/Rubble Pit 631-6G. These values are summarized in Table 6.11.

Current groundwater sampler.

For the current groundwater sampler who visits the site on an infrequent or occasional basis. The ED is assumed to be 5 years, a reasonable maximum length for an individual to work as a well sampler. An EF of 4 days per year, or once every quarter, is used with an ET of 4.5 hours (45 minutes per well sample for 6 wells).

For the current groundwater sampler a body weight (BW) of 70 kg is used, the average adult weight over the exposure period (EPA, 1991). An inhalation rate of 2.5 m³/hr is used for the current groundwater sampler, based on a reasonable upper-bound inhalation rate of 20 m³/8-hour workday (EPA, 1991) for an adult male working at a moderate level of activity (i.e., $20 \text{ m}^3/\text{d} \div 8 \text{ hours/d} = 2.5 \text{ m}^3/\text{hr}$).

The skin surface area (SA) used for sampler dermal exposure to soil and groundwater is 2,320 cm² (i.e., 50th percentile value for head and forearms) (EPA, 1992b). The adherence factor (AF) assumed for soil is 0.2 mg/cm², which represents the lower end of the range believed to be typical for environmental exposures (EPA, 1994b). This value was selected because of the sandy nature of surface soil at the site.

Different dermal absorption factors (ABS) for soil are used for organic and inorganic COPCs: 1.0 percent for organics and 0.1 percent for inorganics (EPA, 1994b). Dermal permeability constants (PC) used for COPCs in groundwater and surface water are obtained from the EPA guidance document on dermal exposure assessment (EPA, 1992b). Where a PC could not be obtained from an EPA guidance document a PC was obtained from published or predicted values in open literature, or was calculated based on the COPC's octanol/water partition coefficient.

The assumed soil ingestion rate (IR) for the current groundwater sampler is 50 mg/d. The fraction ingested (FI) from a contaminated source is 1.0, a conservative estimate that all soil ingested is from the contaminated source.

Current material yard worker.

For the industrial worker located in the material storage yard adjacent to the CSBRP. The ED is assumed to be 10 years, a reasonable maximum length for an individual employed at SRS to work in the material yard. An EF of 250 days per year is used and an ET of 8 hours.

For the current material yard worker a BW of 70 kg is used, the average adult weight over the exposure period (EPA, 1991). An inhalation rate of 2.5 m³/hr is used for the current

material yard worker, based on a reasonable upper-bound inhalation rate of 20 m³/8-hour workday (EPA, 1991) for an adult male working at a moderate level of activity (i.e., 20 m³/d ÷ 8 hours/d = 2.5 m³/hr).

The assumed soil IR for the current material yard worker is 50 mg/d. The FI from a contaminated source is 1.0, a conservative estimate that all soil ingested is from the contaminated source.

Hypothetical on-unit industrial worker.

For the hypothetical industrial scenario an ED of 25 years is assumed. This value represents the national upper-bound (95th percentile) time working at the same location (EPA, 1991). An EF of 250 days/year is assumed for the industrial worker. Exposure time assumed for inhalation of VOCs from soil is 8 hour/day based on the amount of time the worker is assumed to spend outdoors while at the job site.

For the hypothetical industrial worker a BW of 70 kg is used, the average adult weight over the exposure period (EPA, 1991). An inhalation rate of 2.5 m³/hr is used for the hypothetical industrial worker, based on a reasonable upper-bound inhalation rate of 20 m³/8-hour workday (EPA, 1991) for an adult male working at a moderate level of activity (i.e., 20 m³/d ÷ 8 hours/d = 2.5 m³/hr).

An adult groundwater IR of 1 liter/day (90th percentile) is assumed for the hypothetical industrial worker (EPA, 1991). The assumed soil IR for the hypothetical industrial worker is 50 mg/d. The FI from a contaminated source is 1.0, a conservative estimate that all soil ingested is from the contaminated source.

Hypothetical on-unit resident adult and child.

For the residential scenario, an ED of 30 years is assumed. This value represents the national upper-bound (95th percentile) of time spent at one residence (EPA, 1991). Residential ED is apportioned between adult and child, with 24 years as an adult and 6 years as a child. An EF of 350 days/year is assumed for the resident. Exposure times assumed for inhalation of VOCs from soil is 15 hours/day (resident adult) and 18 hours/day (resident child) based on average time spent at home as reported in time use studies (EPA, 1989c). For dermal exposure to groundwater while bathing, an ET of 12 minutes (90th percentile) is assumed for child and adult receptors (EPA, 1989c).

The values used for BW is the average weight over the exposure period: 70 kg for adult and 15 kg for child (EPA, 1991). In accordance with EPA guidance (EPA, 1991), an adult body weight is used to calculate intake for older children and adults.

Skin SA used for resident dermal exposure to soil is 50th percentile values for the body parts representing the RME: head, hands, forearms and lower legs. It is assumed that the resident adult or child wears a short sleeve shirt, shorts, and shoes while gardening, working, or playing outdoors at home, with about 25 percent of the total skin surface area exposed. This equates to an SA of 5000 cm² for the adult and 1800 cm² for the child

(EPA, 1992b). The entire body surface area is used for exposure to groundwater while bathing (resident adult = 20,000 cm², resident child = 7300 cm²; EPA, 1992b).

The AF assumed for soil is 0.2 mg/cm², which represents the lower end of the range believed to be typical for environmental exposures (EPA, 1994b). This value was selected because of the sandy nature of surface soil at the site.

Different dermal ABS for soil are used for organic and inorganic COPCs: 1.0 percent for organics and 0.1 percent for inorganics (EPA, 1994b). Dermal PCs used for COPCs in groundwater and surface water are obtained from the EPA guidance document on dermal exposure assessment (EPA, 1992b). Where a PC can not be obtained from an EPA guidance document a PC is obtained from published or predicted values in open literature, or they is calculated based on the COPC's octanol/water partition coefficient.

An inhalation rate of 0.83 m³/hr (i.e., 20 m³/d ÷ 24 hours/d) is used for adult receptors in the residential scenario (EPA, 1991). This value represents the reasonable upper-bound inhalation rate over an entire day for indoor and outdoor activities, including periods of rest and light, moderate and heavy activity. The corresponding inhalation rate for the residential child is 1.0 m³/hr (EPA, 1989c).

For the on-unit residential receptor, an upper bound soil IR of 200 mg/d is assumed for children 1-6 years of age and 100 mg/d for older children and adults (EPA, 1991). An adult resident drinking water IR of 2 liters/day (90th percentile) is assumed (EPA, 1991). The child IR used is 1 liter/day (EPA, 1989c).

Intakes from the ingestion of homegrown produce by the hypothetical resident adult is calculated using IRs of 113, 202, and 123 g/d for leafy and tuberous vegetables, and fruits, respectively. IRs of 42, 75, and 45 g/d for leafy and tuberous roots, and fruits are used for the hypothetical resident child. The ingestion rates for the adult are based on an average daily consumption of total fruits and vegetables from a three-day dietary recall at the 95th percentile (EPA, 1989c). Ingestion rate for the child is assumed to be approximately equivalent to 37% of the ingestion rate for the adult.

For soil ingestion by the on-unit resident, adult and child, the value assumed for FI from a contaminated source is 1.0, a conservative estimate that all soil ingested is from the contaminated source. FI values used in the calculation of intakes from homegrown produce ingestion by the hypothetical resident adult are 0.042, 0.119, and 0.487 for leafy and tuberous vegetables, and fruits, respectively (EPA, 1989c). The same FI values are used for the hypothetical resident child. The FI values represent the homegrown portion of all vegetables ingested by the hypothetical adult and child resident.

Appendix C6 - Toxicity Profiles for Contaminants of Potential Concern

ACENAPHTHYLENE

CAS No.: 208-96-8
Major Synonym(s): Cyclopenta(de)naphthalene, HSDB 2661, NSC 59821

HUMAN HEALTH EFFECTS

Classification – D; not classifiable as to human carcinogenicity

Basis – Based on no human data and inadequate data from animal bioassays.

No tumors were observed in a lifetime study, when 0.25% acenaphthylene (purity not specified) was applied to the skin (dose, frequency and duration not stated) of mice (sex and strain not specified) (Cook, 1932). Survival was 65% at 6 months, and 35% at 1 year. It is not stated whether a control group was used. In the series of experiments, however, the dermal application of other polycyclic aromatic hydrocarbons did result in the formation of mouse skin tumors.

Acenaphthylene (1 mM) yielded positive results in a *Salmonella typhimurium* forward mutation assay (Kaden et al., 1979) and was not positive in a *Salmonella typhimurium* TA98 and TA100 in the presence of hepatic homogenates (Bos et al., 1988).

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	NA
Inhalation Slope Factor	NA
Chronic Oral RfD	NA
Chronic Inhalation RfC	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	NA
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	2.8E-3 µg/L
Human Health-Fish Ingestion Only	3.11E-2 µg/L
Aquatic Organisms-FW Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute LEC	3.0E+2 µg/L
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA=Data Not Available

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ARSENIC

CAS No(s): 7440-38-2
Major Synonym(s): None

Arsenic exists in low concentrations in all environmental media as a natural component of the earth's crust. Typical arsenic concentrations are less than ten parts per billion in water and less than 40 parts per million in soil (U.S. Department of Health and Human Services 1991). It is a silver-gray, brittle, crystalline substance (International Labor Office 1983) that is soluble in nitric acid but insoluble in water (Weast 1987-1988) and in caustic and non-oxidizing acids. It has a molecular weight of 74.92 g/mole, sublimates at 613°C, melts at 817°C (at 28 atmospheres), has a vapor pressure of 1 mm Hg at 372°C, and has a density of 5.73 at 14°C (U.S. Department of Health and Human Services 1991). Arsenic will vaporize when heated to 100°C, with rapid vaporization at 450°C (Merck 1983).

FATE AND TRANSPORT

Arsenic is found primarily in soil or rock and is mainly transported adsorbed onto particulate material. In water, soluble forms of arsenic can be carried long distances, but may be adsorbed onto sediments or soils due to chemical or biological reactions that change arsenic speciation (U.S. Department of Health and Human Services 1991). In soil, arsenic is subject to a number of transformation processes, such as oxidation-reduction reactions, ligand exchange, biotransformation, precipitation, and adsorption. It is rarely encountered as a free element in natural waters (U.S. Environmental Protection Agency 1980), where it is also subject to processes such as oxidation-reduction reactions, ligand exchange, biotransformation, precipitation, and adsorption (U.S. Department of Health and Human Services 1991). Arsenic accumulates to varying degrees in some organisms such as algae and shellfish, but does not biomagnify in the food chain. Some arsenic is absorbed via inhalation and oral routes, but dermal absorption is considered to be minor (U. S. Department of Health and Human Services 1991).

HUMAN HEALTH EFFECTS

Inorganic arsenic compounds are generally more toxic than organic forms. For inorganic arsenic, human oral exposures of approximately 1 to 3 mg per kg body weight appear to be the minimum lethal dose, based upon clinical reports (U.S. Department of Health and Human Services 1991). Populations at special risk from arsenic exposure include persons with existing diabetes, cardiovascular diseases, allergic or other skin diseases, neurologic or hepatic disease, or renal lesions. Children may be at special risk for the effects of inorganic arsenic. Exposure to high levels of arsenic results in a number of systemic effects on the respiratory system, heart and vascular system, gastrointestinal system, blood, liver, kidney, skin, eye, and nervous system. Specific effects reported include decreased production of red and white blood cells, abnormal heart and nerve function, damage to blood vessels, kidneys and liver, and possible mutagenic activity. The burden of evidence shows inorganic arsenic to be a carcinogen, resulting in an increased risk of lung and dermal cancer by inhalation and oral exposure, respectively. Organic arsenic has not been demonstrated to be carcinogenic to humans. The U.S. Environmental Protection Agency has classified arsenic as class A, a known human carcinogen.

ECOLOGICAL EFFECTS

Arsenic toxicity to microorganisms produces a decline in growth and metabolic rates. The more tolerant species can withstand arsenic levels up to 1,000 ppm, whereas the most sensitive organisms are affected by levels less than 375 ppm (National Research Council Canada 1978). An LC₅₀ of 10 mg/L is reported for black sea mussels (Pereladov and Erofeeva 1983). In rats an inhalation LC₅₀ of 2,100 ppm is reported by Stevens et al. (1979). Among mice, dermal application of 2.5 mg organic arsenic per kg body weight was reported to be the lowest observed adverse effect level for localized hyperplasia for 18 weeks of exposure (Boutwell 1963).

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	1.75 kg-day/mg
Inhalation Slope Factor	50 kg-day/mg
Chronic Oral RfD	3E-4 (mg/kg)/day
Chronic Inhalation RfC	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	0.05 mg/L
Maximum Concentration Limit Goal	0.05 mg/L

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	0.018 µg/L
Human Health-Fish Ingestion Only	0.14 µg/L
Aquatic Organisms-FW Acute	360 µg/L
Aquatic Organisms-FW Chronic	190 µg/L
Aquatic Organisms-Marine Acute	69 µg/L
Aquatic Organisms-Marine Chronic	36 µg/L

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA = Not Available

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BERYLLIUM

CAS No(s): 7440-41-7

Major Synonym(s): Beryllium-9, Glucinium, Glucinum, Beryllium metallic

Beryllium does not occur naturally, but is produced commercially from bertrandite and beryl ores (Weast 1985). Most of the beryllium produced is converted to alloys used in electrical parts, metal springs, aircraft engine parts, precision instruments, non-sparking tools, and injection molded plastics (EPA 1987). Pure beryllium metal, produced from beryllium hydroxide, is used in aircraft brakes, space technology, fuel containers, and precision instruments (EPA 1987). Beryllium oxide, also produced from beryllium hydroxide, is utilized in ceramics, electronics, microwave ovens, gyroscopes, military vehicles, rocket nozzles, and laser structural components (EPA 1987).

Beryllium is a hard, gray metal having a molecular weight of 9.012. It is a solid at ambient conditions with a melting point of 1,287-1,292°C and a boiling point of 2,970°C. It is insoluble in water, but certain of its compounds are water soluble. Beryllium metal and most of its compounds are soluble in acidic and/or alkaline solvents (HSDB 1990).

FATE AND TRANSPORT

Beryllium is released to the atmosphere during processing of ores and production and use of beryllium alloys and chemicals. Combustion of fuel oils and coal account for the majority of beryllium releases to the air; however much of the beryllium contained in coal fly ash is captured by emission control devices (Holcombe et al. 1985; Fishbein 1981). Beryllium is also released atmospherically in relatively small amounts from volcanoes and as wind-blown dusts (ATSDR 1991). It is suspected that most of the beryllium released atmospherically is in the form of beryllium oxide. This compound cannot be destroyed; however, it may be converted to other more water-soluble forms such as beryllium sulfate and beryllium nitrate. These compounds are subject to both wet and dry deposition to terrestrial and aquatic surfaces (ATSDR 1991; EPA 1987).

Beryllium deposited in soil is expected to adsorb tightly to particles and to displace other divalent cations with a lower affinity for soil particles (Fishbein 1981). The degree of adsorption is pH dependent with the affinity for soil higher at low pH's (Callahan et al. 1979). Beryllium in soils may be hydrolyzed (the soluble salts) and/or converted to other forms. There is no evidence that biotransformation of beryllium occurs in soils (ATSDR 1991).

Beryllium which reaches surface waters typically becomes concentrated in aquatic sediments, where it may be complexed with particles or simply present as insoluble forms of beryllium (Bowen 1979).

HUMAN HEALTH EFFECTS

In studies of inhalation exposure, the toxicity and subsequent lethality of beryllium was dependent on the water solubility of the specific beryllium compound inhaled. The soluble forms of beryllium produced acute pneumonitis whereas the insoluble forms of beryllium have been associated with chronic beryllium disease, a disease characterized by respiratory granulomas (ATSDR 1991). Case histories indicate that chronically exposed individuals suffered from respiratory irritation, anorexia, weight loss, increased fatigue, labored breathing, cough, and hypertrophy of the right atrium and ventricle (Hardy and Tabershaw 1946). The cardiovascular changes associated with beryllium inhalation may have been secondary and compensatory to the decreased respiratory function also noted in those individuals.

Chronic beryllium disease is thought to have an immunologic component (Curtis 1951). Patients suffering from chronic beryllium disease have a cellular-mediated immune response to beryllium and corticosteroid therapy controls disease (Rossman et al. 1988; Aronchick et al. 1987). Lung granulomas containing beryllium are formed by beryllium sensitized cells which accumulate in the lungs of patients

with chronic beryllium disease (Rossman et al. 1988), further indicating an immunologic link between beryllium exposure and chronic beryllium disease.

ECOLOGICAL EFFECTS

Beryllium is extremely toxic to temperate and tropical fish; however, the degree of toxicity tends to decrease with increasing hardness of the water (Callahan et al. 1979). There is no evidence, however, that beryllium bioaccumulates in aquatic organisms. Bioconcentration factors reported for freshwater and marine fish, aquatic plants, and invertebrates are low (Callahan et al. 1979; EPA 1980) and support the notion that beryllium does not bioaccumulate in living tissues and therefore does not biomagnify within the aquatic food chain.

It is unclear whether beryllium bioaccumulates in terrestrial organisms (ATSDR 1991). Beryllium has been detected in beans, cabbage, lettuce, eggs, mushrooms, rice, bread, potatoes, and tomatoes (Meehan and Smythe 1967; Reeves 1986), indicating that plants can take up beryllium from soil.

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	4.3 per (mg/kg)/day
Inhalation Slope Factor	8.4 per (mg/kg)/day
Chronic Oral RfD	0.005 mg/kg/day
Chronic Inhalation RfD	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	0.001 mg/L
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	6.8E-3 µg/L
Human Health-Fish Ingestion Only	1.17E-1 µg/L
Aquatic Organisms-FW Acute	1.3E2 µg/L
Aquatic Organisms-FW Chronic	5.3 µg/L
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA = Not Available

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BENZO(G,H,I)PERYLENE

CAS No(s): 191-24-2
Major Synonym(s): NA

HUMAN HEALTH EFFECTS

Benzo(g,h,i)perylene, being a PAH, is highly lipid soluble and is probably readily absorbed from the GI tract (U.S. EPA, 1984).

In general, PAH metabolism by the microsomal mixed function oxidase enzyme system yields several types of reactive and potentially carcinogenic intermediates (U.S. EPA, 1984). Chemicals known to induce or inhibit this enzyme system subsequently alter the patterns of PAH metabolism; therefore, their toxic and carcinogenic properties may also be altered.

Benzo(g,h,i)perylene has been classified in group D, not classifiable as to human carcinogenicity (U.S. EPA, 1992). No human data are available, and animal data from animal bioassays are inadequate to establish a positive classification as a human carcinogen.

No oral or inhalation RfDs have been established (U.S. EPA, 1992).

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	NA
Inhalation Slope Factor	NA
Chronic Oral RfD	NA
Chronic Inhalation RfC	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	NA
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	0.0028 µg/L
Human Health-Fish Ingestion Only	0.031 µg/L
Aquatic Organisms-FW Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA = Not Available

REFERENCES

BIS (2-ETHYLHEXYL) PHTHALATE

CAS No(s): 117-81-7
Synonym(s) DEHP, BEHP

Bis (2-ethylhexyl) phthalate is produced commercially for use as a plasticizer in polyvinyl chloride (PVC) and vinyl copolymer resins (EPA 1981). Other reported uses include bis (2-ethylhexyl) phthalate as an inert component of pesticides, a solvent for erasable ink, as a component of dielectric fluids, as a replacement for PCBs, and others (EPA 1981, HSDB 1987).

Bis (2-ethylhexyl) phthalate is a colorless liquid having a molecular weight of 391. It has a melting point of 50°C and a boiling point of 384°C. It has minimal solubility in water (0.4 mg/L) (EHRAV 1995), but is miscible with oil, hexane, and organic solvents (ATSDR 1988).

FATE AND TRANSPORT

Bis (2-ethylhexyl) phthalate may be volatilized into the atmosphere during its manufacture and from commercial plastics use. Bis (2-ethylhexyl) phthalate adsorbs to particulate matter, therefore wet deposition would assist in transport of bis (2-ethylhexyl) phthalate from air to other media (ATSDR 1988). The most likely mechanism for degradation of bis (2-ethylhexyl) phthalate in the atmosphere is through its reaction with hydroxyl radicals.

Bis (2-ethylhexyl) phthalate does not readily volatilize from surface waters to air. Its removal from water is principally through adsorption to suspended particulate matter and sediments and uptake and transformation by biotic organisms (ATSDR 1988).

In soils, bis (2-ethylhexyl) phthalate binds particles, particularly organic matter. There is little mobility of bis (2-ethylhexyl) phthalate in soils and biodegradation in soils occurs faster in aerobic versus anaerobic conditions.

HUMAN HEALTH EFFECTS

There is little data in the literature concerning the human health hazards of bis (2-ethylhexyl) phthalate exposure. Morbidity and mortality studies were unable to correlate long-term bis (2-ethylhexyl) phthalate exposure with increased incidence of deaths and/or illness (Theiss et al. 1978).

Animal studies indicate bis (2-ethylhexyl) phthalate is hepatotoxic, producing chemical and morphological changes (Carpenter et al. 1953; Mitchell et al. 1985). Bis (2-ethylhexyl) phthalate is a reproductive toxicant in rats and mice, causing testicular damage (Gangolli 1982; Reel et al. 1982). Bis (2-ethylhexyl) phthalate has also been associated with increased occurrence of hepatic carcinoma in a dose dependent manner (NTP 1982, Kluwe et al. 1982a).

ECOLOGICAL EFFECTS

Bis (2-ethylhexyl) phthalate is highly lipid soluble and tends to partition into the lipid compartments of animals and plants. However, with the exception of a few aquatic crustacea and midge larvae, most organisms metabolize bis (2-ethylhexyl) phthalate at a rate sufficient to offset the tendency for bioconcentration of bis (2-ethylhexyl) phthalate.

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	0.014 kg-day/mg
Inhalation Slope Factor	NA
Chronic Oral RfD	0.02 mg/kg/day
Chronic Inhalation RfD	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	0.006 mg/L
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	1.8 µg/L
Human Health-Fish Ingestion Only	5.9 µg/L
Aquatic Organisms-FW-Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA = Not Available

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BROMODICHLOROMETHANE

CAS No(s): 75-27-4
Major Synonym(s): NA

HUMAN HEALTH EFFECTS

A chronic mouse gavage bioassay (NTP, 1986) demonstrated that the critical effect of exposure to bromodichloromethane is renal cytomegaly. Based on this study, an oral RfD of 2E-2 mg/kg/day was determined. A factor of 100 was employed for extrapolation from animal data and for protection of sensitive human subpopulations. An additional factor of 10 was used because the RfD was based on a LOAEL (although minimally adverse), and to account for data base deficiencies (no reproductive studies).

Bromodichloromethane is classified as a B2 carcinogen (probable human carcinogen) based on inadequate human data and sufficient evidence of carcinogenicity in two animal species (mice and rats) as shown by increased incidence of kidney tumors and tumors of the large intestine in male and female rats, kidney tumors in male mice, and liver tumors in female mice. The oral slope factor derived for bromodichloromethane is 6.2E-2 per (mg/kg)/day.

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	0.062 kg-day/mg
Inhalation Slope Factor	NA
Chronic Oral RfD	0.02 mg/kg-day
Chronic Inhalation RfD	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	0.1 mg/L (total trihalomethanes)
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	0.27 µg/L
Human Health-Fish Ingestion Only	22 µg/L
Aquatic Organisms-FW Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA = Not Available

REFERENCES

IRIS, September 1994.

CHLOROFORM

CAS No.: 67-66-3
Major Synonym(s): Methenyl Chloride, Methane Trichloride, Methyl Trichloride, Trichloromethane.

Chloroform, or trichloromethane, is both a naturally occurring and man-made compound. It is used primarily in the production of fluorocarbon-22; however, past uses included its application as a dry cleaning spot remover, as an extraction solvent, in fire extinguishers, as an anesthetic, and in the manufacture of dyes and pesticides.

Chloroform is a colorless liquid with a pleasant, ethereal odor. It has a molecular weight of 119.38, a melting point of -63.2°C, and a boiling point of 61.3°C. Chloroform is highly soluble in water and is miscible with principal organic solvents (Deshon 1979).

FATE AND TRANSPORT

Release of chloroform to the atmosphere may occur during the manufacture and handling of product and from its use in the production of other chemicals (EA 1985a). Volatilization from contaminated or chlorinated water sources and contaminated soil are major sources of chloroform vapors in the air. Interaction of chloroform with photochemically produced hydroxyl radicals degrades airborne chloroform, which may otherwise travel vast distances. Large amounts of chloroform may be transported from air to soil and water through wet deposition (Kawamura and Kaplan 1983).

There is evidence that some biodegradation of chloroform may occur in soil and water; however, this does not appear to be a primary mechanism for removal from sediment (Bouwer et al. 1981b) or water (Bouwer et al. 1981a). Most chloroform is removed from these media through volatilization.

HUMAN HEALTH EFFECTS

Acute exposure (including its use as an anesthetic) of humans to chloroform has produced the following effects (U.S. EPA 1985; Ellenhom and Barceloux 1988; ACGIH 1986; Torkelson and Rowe 1981): 1) Central nervous system depression that produces symptoms ranging from nausea, lightheadedness, headache and malaise to stupor, narcosis and coma, 2) heart effects such as ventricular arrhythmias, extrasystoles, bradycardia and cardiac arrest, and 3) liver toxicity characterized by centrilobular, and in severe cases, mid-zonal and massive necrosis. Symptoms include progressive weakness, vomiting, delirium, jaundice, abnormal liver and kidney function, coma, and possible death.

Bomski et al. (1967) found high incidences of hepatomegaly, toxic hepatitis, and splenomegaly in workers exposed to 2-205 ppm chloroform for one to four years. A 33-year old male who habitually inhaled chloroform for 12 years had psychiatric and neurological symptoms of depression, appetite loss, hallucinations, ataxia, and dysarthria (HSDB 1989). Phoon et al. (1983) reported two separate outbreaks of jaundice in workers exposed to chloroform in a household appliance manufacturing plant. The duration of exposure to chloroform prior to the onset of jaundice averaged one to four months.

Challen et al. (1958) reported that workers exposed to ~ 77-237 ppm chloroform complained of tiredness, irritability, depression, headache, gastrointestinal distress, and frequent and scalding urination. There was no evidence of liver damage.

Acute inhalation exposure in laboratory animals results in narcosis, liver damage and respiratory tract irritation (NIOSH 1974; U.S. EPA 1985).

In a subchronic study, rats, guinea pigs and rabbits exposed to chloroform vapor at concentrations of up to 85 ppm for seven hours/day, five days/week for six months developed increased liver and kidney weights, cloudy swelling in the kidneys, and granular degeneration of the liver (Torkelson et al. 1976).

An increase in renal epithelial tumors was observed in mice chronically exposed by gavage to chloroform for 78 weeks followed by an observation period of 1-14 weeks (NCI 1976). This study was the basis for the development (by route-to-route extrapolation) of an inhalation slope factor of $0.081 \text{ mg/kg/day}^{-1}$ (U.S. EPA 1991).

Gosselin et al. (1984) have assigned a toxicity rating of 3 to chloroform, which means that it is moderately toxic to humans following a single oral dose. Chloroform has caused gonadal atrophy in male rats when administered by gavage (Palmer et al. 1979) and increased resorption rates and significant decreases in viable litter size and fetal body weights when administered to rats during gestation (Thompson et al. 1974).

Short-term gavage studies in mice (Munson et al. 1982) and rats (Palmer et al. 1979) demonstrated adverse effects on the liver at exposure levels of up to 410 mg/kg/day , including increased liver enzymes, increased liver weight, and necrosis of hepatocytes. Chronic gavage studies in mice and rats showed kidney lesions (Roe et al. 1979) and necrosis of the hepatic parenchyma (NCI 1976).

Beagle dogs were administered chloroform in a toothpaste base for seven years at dose levels of 15 or $30 \text{ mg chloroform/kg/day}$ for six days/week (Heywood et al. 1979). Treatment-related fatty cysts were observed in livers of some dogs in both treatment groups. A dose-related increase in SGPT levels was noted. A chronic oral RfD for chloroform of 1.0 E-02 has been established by the U.S. EPA (1991) based on the fatty cysts observed in orally exposed beagles.

NCI (1976) administered chloroform by gavage to rats for five days/week for 78 weeks followed by an observation period of 33 weeks. A statistically significant increase in renal epithelial tumors was observed in male rats. Jørgenson et al. (1985) found a statistically significant increase in the incidence of renal tumors in mice and rats administered chloroform in drinking water for 104 weeks.

The U.S. EPA (1991) considers chloroform to be a Class B2 carcinogen (probably carcinogenic to humans)

Application of liquid chloroform to human skin results in a burning pain within 3-5 minutes with an associated erythema, followed by hyperemia, and finally vesication (NIOSH 1975).

ECOLOGICAL EFFECTS

Chloroform enters the environment from a variety of sources, as discussed previously. The general population may be exposed to chloroform via ingestion, inhalation of contaminated air, and to a lesser extent through dermal contact. Although chloroform is persistent in the environment, with degradation occurring almost exclusively in air, it does not tend to bioaccumulate in biota.

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	0.0061 kg-day/mg
Inhalation Slope Factor	0.081 kg-day/mg
Chronic Oral RfD	0.01 mg/kg-day
Chronic Inhalation RfC	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	0.1 mg/L (total trihalomethanes)
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	5.7 mg/L
Human Health-Fish Ingestion Only	470 mg/L
Aquatic Organisms-FW Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA = Not Available

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4-CHLORO-m-CRESOL

CAS No(s): 59-50-7

Major Synonym(s): 4-Chloro-3-Methylphenol, 3-Methyl-4-chlorocresol

Chloro-methylphenol is a member of the group of halogenated phenolic compounds. It is used in germicides and disinfectants, glues, gums, paints, inks, and in the manufacture of textiles and leather goods.

Chloro-methylphenol is a pinkish-white crystalline solid having a molecular weight of 142.58. It is soluble in fats, oils, and organic solvents. Chloro-methylphenol has a melting point of 66°C and a boiling point of 235°C (HSDB 1994).

FATE AND TRANSPORT

4-Chloro-m-cresol may be released to the environment during its production, handling, and use. It may also be inadvertently released as an end product from water (potable water, wastewater, cooling water) which have undergone chlorine treatment (Bourquin and Gibson 1978). Certain herbicides biodegraded by soil microbes may release 4-chloro-m-cresol as a metabolite (EPA 1980). 4-Chloro-m-cresol which is released to the atmosphere is rapidly degraded by interaction with hydroxyl radicals. The half-life of this reaction is estimated at 1.1 days (HSDB 1994). Direct photolysis of 4-chloro-m-cresol may also help to degrade this pollutant in the atmosphere (Callahan et al. 1979).

In water, 4-chloro-m-cresol is photodegraded (EPA 1980) and biodegraded by aerobic microbes (HSDB 1994). In soils, this product is mobile, and may leach into deeper, anaerobic soil layers and groundwater. Biodegradation by aerobic microorganisms and volatilization are the pathways by which 4-chloro-m-cresol is degraded in soil (HSDB 1994).

HUMAN HEALTH EFFECTS

Ingestion of 4-chloro-m-cresol may cause burns in the GI tract, respiratory dysfunction, CNS excitation followed by CNS depression, tachycardia, hypotension, and arrhythmias. Dermal exposure reportedly causes contact dermatitis, vesicular dermatitis, and urticaria (Freitas and Brandao; EPA 1980; HSDB 1994).

ECOLOGICAL EFFECTS

Fish are sensitive to the toxic effects of 4-chloro-m-cresol and responded with behavioral changes such as the loss of schooling behavior, loss of equilibrium, and hypoactivity prior to death (Geiger 1985).

It is not known if aquatic and terrestrial organisms accumulate 4-chloro-m-cresol in their tissues; however, the lipid solubility of this compound indicates that the potential for bioaccumulation is present.

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	NA
Inhalation Slope Factor	NA
Chronic Oral RfD	NA
Chronic Inhalation RfC	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	NA
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	NA
Human Health-Fish Ingestion Only	NA
Aquatic Organisms-FW Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA = Not Available

REFERENCES

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CHLOROMETHANE

CAS No(s): 74-87-3
Major Synonym(s): Methyl chloride

Chloromethane, also known as methyl chloride, was once widely used as a refrigerant and is used in the manufacture of products such as polystyrene foam. It can be rapidly absorbed into the blood stream through oral and inhalation routes of exposure, and is widely distributed to most body compartments.

HUMAN HEALTH EFFECTS

Studies have indicated that chloromethane may metabolize to S-methylcysteine, S-methylglutathione, and other sulphur-containing compounds (Kombrust and Bus 1984, Landry et al. 1983, Dodd et al. 1982, and Redford-Ellis and Gowenlock 1971; all in U.S. Public Health Service 1989). Metabolites may be found in the liver, kidney, and brain tissues and are excreted primarily in the urine.

Based on a 24-month inhalation study with mice, U.S. EPA has classified chloromethane in group C, a possible human carcinogen (U.S. EPA, 1994). Neurotoxicity seems to be the most important documented effect of chloromethane in humans. Effects can range from mild to severe, including death. The threshold concentration for neurological effects in humans appears to be approximately 200 ppm chloromethane in air (Clement Associates, Inc. 1985).

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	0.013 kg-day/mg
Inhalation Slope Factor	0.0063 kg-day/mg
Chronic Oral RfD	NA
Chronic Inhalation RfC	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	NA
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	NA
Human Health-Fish Ingestion Only	NA
Aquatic Organisms-FW Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA = Not Available

CHRYSENE

CAS No(s): 218-01-9
Major Synonym(s): NA

HUMAN HEALTH EFFECTS

Absorption of chrysene occurs principally via the gastrointestinal tract and also through the skin. No quantitative data on the absorption of chrysene by inhalation exists (U.S. PHS, 1990). One study using rats found that orally absorbed chrysene is distributed to adipose, mammary, brain, liver, and blood tissues, but preferentially accumulates in the adipose and mammary tissues (U.S. PHS, 1990).

The EPA has classified chrysene in Group B2, as a probable human carcinogen (U.S. EPA, 1994a). Although no human data are available, sufficient data from animal bioassays exist to establish this classification (U.S. EPA, 1994a). Chrysene produced liver and lung tumors and malignant lymphoma in mice after intraperitoneal injection and skin carcinomas in mice following dermal exposure. Chromosomal abnormalities in hamster and mouse germ cells were produced after gavage exposure to chrysene; also, chrysene produced positive responses in bacterial gene mutation assays (U.S. EPA, 1994a).

The International Agency for Research on Cancer (IARC) listed chrysene only as a possible human carcinogen, not as a probable human carcinogen. It is the only EPA Group B2 PAH so designated by IARC. There is currently neither an oral cancer slope factor nor an inhalation unit risk for chrysene. Chrysene is considered to be weakly genotoxic (U.S. PHS, 1990).

According to EPA, data are inadequate for quantitative risk assessment of the subchronic or chronic toxicity (other than carcinogenicity) of chrysene (U.S. EPA, 1994b).

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	NA
Inhalation Slope Factor	NA
Chronic Oral RfD	NA
Chronic Inhalation RfD	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	NA
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	0.0028 µg/L
Human Health-Fish Ingestion Only	0.031 µg/L
Aquatic Organisms-FW Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA = Not Available

REFERENCES

2-HEXANONE

CAS No(s): 591-78-6
Major Synonym(s): NA

2-Hexanone, also known as methyl n-butyl ketone (MBK), is a waste product of wood pulping, coal gasification, and oil shale production (U.S. Public Health Service 1990). MBK has previously been used as a solvent in a number of commercial applications.

HUMAN HEALTH EFFECTS

Absorption can occur through inhalation, oral, and dermal routes of exposure. Studies in rats have shown that 2-hexanone is widely distributed in tissue with the highest concentrations in the liver and blood (DiVincenzo et al. 1977 in U.S. Public Health Service 1990). Metabolism may proceed through reduction to form 2-hexanol, or through a two-phase oxidation process resulting in the formation of 2,5-hexanedione. 2-Hexanone may also be cyclized as 5 hydroxy-2-hexanone to a dihydrofuran and then oxidized to 2,5-dimethyl-furan (DiVincenzo et al. 1977 in U.S. Public Health Service 1990). 2-Hexanone is excreted in urine and exhaled air.

Carcinogenicity assessment is pending. Oral and inhalation RfD assessments currently lack data to support any toxicity determinations (IRIS September 1994).

The most important target organ toxicological effects of 2-hexanone is the central nervous system and the subsequent development of peripheral neuropathy. The 2,5-hexanedione metabolite of 2-hexanone is the agent associated with the neuropathy. This compound has been identified in the urine of individuals suffering from MBK-induced peripheral neuropathy [Eben et al. (1979 in U.S. Public Health Service 1990)]. The relationship between 2,5-hexanedione and neuropathy has been demonstrated in hens (Abou-Donia et al. in U.S. Public Health Service 1990) and rats (Krasavage et al. in U.S. Public Health Service 1990). Neuropathological effects in humans were first noted in 1973 when an outbreak of distal neuropathy occurred in an Ohio fabric finishing plant which had recently introduced 2-hexanone to its operations. Symptoms included muscle weakness, sensory loss, and decrease or loss of reflexes.

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	NA
Inhalation Slope Factor	NA
Chronic Oral RfD	NA
Chronic Inhalation RfC	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	NA
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	NA
Human Health-Fish Ingestion Only	NA
Aquatic Organisms-FW Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA=Data Not Available

REFERENCES

IRON

CAS No(s): 7439-89-6
Major Synonym(s): NA

Iron is the 4th most abundant element in the earth's crust. Chemically unstable metallic iron is converted to the ferrous or ferric state. The ferric form of iron is insoluble in water and is found in rock and soils. Iron is used in the production of steel; oxides and carbonates are the primary ores from which the metal is extracted (Parmeggiani 1983).

Iron has a molecular weight of 55.85, a melting point of 1,535°C, and a boiling point of 2,750°C. It is insoluble in water but will dissolve in acids. It is a tough, malleable, silver magnetic metal.

FATE AND TRANSPORT

Iron is not subject to significant environmental release by natural weathering processes. However, air pollution may occur as releases of aerosols during the processing of iron. Smaller particles suspended in the air will be washed out by rain, whereas larger particles fall to the earth by gravity (Bowen 1979).

Contamination of surface waters may result from run off due to the industrial practice of using water to quench coke and slag and from scrubbing of particulates. Iron tends to sink in water, and aquatic sediments act as an effective sink in both fresh and estuarine systems (Moore and Moore 1976; Bowen 1979).

HUMAN HEALTH EFFECTS

Inhalation of silica or iron oxide dusts during mining and preparing iron ores may result in siderosis and pneumoconiosis (Parmeggiani 1983). Siderosis results when the body's iron storage capacities have been exceeded, and excess iron is deposited in vital organs. The liver and pancreas are primary target organs and damage to these systems produces cirrhosis of the liver and diabetes, respectively. A small amount of iron may be deposited in myocardium, producing abnormal rhythms of the heart. Pneumoconiosis is a lung disease, most commonly observed among coal miners. This disease progresses from diffuse fibroids in lung tissue to progressive massive fibrosis, affecting the air exchange tissues of the lungs. This disease is reversible prior to entering the progressive stage. Iron workers also have an increased incidence of lung cancer and hepatic cell carcinoma (Jorgensen 1973; Morgan 1978).

Ingested iron is toxic but rarely fatal in adults. Young children are most susceptible to iron poisoning. Acute symptoms include abdominal pain, diarrhea, and vomiting. Life-threatening effects are manifested as cyanosis, lassitude, drowsiness, acidosis, and dehydration and may culminate in cardiovascular collapse and shock (Finch 1980).

ECOLOGICAL EFFECTS

The availability of iron in nature is limited. It can be solubilized by acids or converted to organic compounds by microorganisms. Plants take up iron from soils and store it within their structures. Bacteria are also able to take up iron from soil and have adaptive mechanisms which make them efficient at this process. Iron is passed up the foodchain to higher vertebrates in the form of plant and animal food stuffs.

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	NA
Inhalation Slope Factor	NA
Chronic Oral RfD	NA
Chronic Inhalation RfD	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	NA
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	NA
Human Health-Fish Ingestion Only	NA
Aquatic Organisms-FW Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA = Not Available

REFERENCES

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LEAD

CAS No(s): 7439-92-1
Major Synonym(s): NA

Lead is an important commercial silvery gray metal that is lustrous when freshly cut and is very soft and malleable, thus it is easily melted, cast, rolled, and extruded. It is insoluble in water (Weast 1987-1988) but is soluble in nitric acid and in hot concentrated sulfuric acid (Merck Index 1983). Lead has a molecular weight of 207.20 g/mole, melts at 327°C (at one atmosphere), boils at 1,740°C (at one atmosphere), and has a vapor pressure of 1.77 mm Hg at 1,000°C and a specific gravity of 11.34 at 20°C.

FATE AND TRANSPORT

In water, lead is effectively removed from the water column to the sediment by adsorption to organic matter and clay minerals, precipitation as an insoluble salt, and reaction with hydrous iron and manganese oxide. The amount of lead that can remain in solution in water is a function of the pH and the dissolved salt content. Much of the lead carried by river water is in the form of suspended solids. Atmospheric lead is generally in the form of dust or adsorbed to particulate matter and subject to gravitational settling. If released or deposited on soil, lead will be retained in the upper 2 to 5 cm, especially soils with 75 percent organic matter and a pH of greater than five. While corrosion may be expected in soil, an inert coating of insoluble salt usually forms and limits further corrosion. Lead will convert to more insoluble forms such as PbSO_4 , $\text{Pb}_3(\text{PO}_4)_2$, PbS , and PbO . It also forms complexes with organic matter and clay minerals that limit its mobility. In lake sediments, microorganisms can directly methylate certain inorganic lead compounds. Biomethylation of lead by benthic microorganisms can lead to its remobilization into the aqueous environmental compartment (Frances 1985; and Stephenson and Lester 1987). Evidence suggests that lead uptake in fish is localized in the mucous on the epidermis, dermis, and scales, so that it poses no human health danger due to its lack of availability in edible portions of fish tissue (Schulz-Baldes et al. 1983; Biddinger and Glass 1984). Lead does not appear to bioconcentrate significantly in fish, but does in some shellfish, such as mussels. Log bioconcentration factors of 1.38 to 1.65 have been reported for freshwater fish; 2.70 to 3.23 for freshwater invertebrates; and 1.24 to 3.40 for various saltwater bivalves, mollusks, diatoms, and phytoplankton (Schulz-Baldes et al. 1983; and Biddinger and Glass 1984).

HUMAN HEALTH EFFECTS

The toxic effects of lead on the central nervous system are considered to be the most serious systemic effect in terms of human health. In children, cognitive or motor neurologic effects are of main concern, while peripheral neuropathy and nephropathy (effects on the kidney) are of concern in adults. Blood levels typically range from 30 to 50 mg lead per deciliter (Goyer 1986). Blood levels of 60 to 70 mg lead per deciliter, and greater than 80 mg per deciliter, are associated with encephalopathy in children and adults, respectively. In addition to central nervous system dysfunction, high blood levels of lead are associated with hematologic and renal effects and shortened life-span of erythrocytes and impaired heme synthesis. Renal effects include reversible renal tubular dysfunction in children following acute exposure to lead, and incurable interstitial nephropathy. Studies on the carcinogenicity of lead indicate that lead can induce cancer in kidneys of rodents fed high doses, but there is little evidence to indicate that lead is a human carcinogen. Nevertheless, the U.S. Environmental Protection Agency has classed lead as B2, a probable human carcinogen.

ECOLOGICAL EFFECTS

High lead levels (0.5 to 16 mg/kg body weight) in animal diets cause abortions and poisoning (International Association Research on Cancer 1980). Symptoms of poisoning in waterfowl that ingest lead pellets include anorexia, weight loss, weakness, lethargy, diarrhea, coma, and death (Booth and McDonald 1982). The acute oral lethal dose of lead in various species is: calves, 50 to 600 mg/kg as lead or lead salts; cattle, 600 to 800 mg/kg from lead salts; sheep and goats, 600 to 800 mg/kg from

lead salts, and fowl, 160 to 600 mg/kg from lead salts. The NOEL for sheep is 0.1 mg/kg/day for 60 weeks, biochemical aberrations occur when intake is 0.3 to 3 mg/kg/day. An LC₅₀ was established for Japanese quail at greater than 5,000 ppm.

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	NA
Inhalation Slope Factor	NA
Chronic Oral RfD	NA
Chronic Inhalation RfD	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	0 mg/L
Maximum Concentration Limit Goal	0.015 mg/L

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	NA
Human Health-Fish Ingestion Only	NA
Aquatic Organisms-FW Acute	82 µg/L
Aquatic Organisms-FW Chronic	3.2 µg/L
Aquatic Organisms-Marine Acute	220 µg/L
Aquatic Organisms-Marine Chronic	3.2 µg/L

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA = Not Available

REFERENCES

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MANGANESE

CAS No(s): 7439-96-5
Major Synonym(s): NA

Manganese is a widely-distributed metal constituting 0.085 percent of the earth's crust. It is found in the minerals manganosite and braunite, and in minute quantities in water, plants, and animals (Merck Index 1983). Nodules on the floors of the Pacific Ocean and Lake Michigan contain manganese (Clayton and Clayton 1981-1982; Worthing and Walker 1987). Manganese may be gray-pink, steel-gray, whitish-gray, or silvery white in color, depending upon its form or refining process (Weast 1988-1989; Merck Index 1983; Browning 1969). It has a molecular weight of 54.938 g/mole, melts at 1,244 $\pm$ 3°C, boils at 1,962 °C, and has a density of 7.47 for the alpha form. It is readily dissolved in dilute mineral acids and in sodium or potassium bicarbonate (Worthing and Walker 1987; Sittig 1985).

FATE AND TRANSPORT

Manganese enters the atmosphere primarily through anthropogenic sources. Vegetation may concentrate manganese under some conditions. Oats and barley grown in acid sulfate soils have unusually high concentrations of cobalt, nickel, and manganese (Palko and Yi-Hala 1988) due to higher concentrations of extractable cobalt, nickel, and manganese in the acidic soils. The World Health Organization (1981) reported availability of soil manganese to vegetation is influenced by the activity of soil microorganisms that can alter pH and oxidation/reduction potentials of manganese compounds. Heavy fertilization of acidic soils without liming increases manganese solubility and availability. Addition of organic material to soils can increase manganese uptake by vegetation under certain pH and aeration conditions. However, the absorption capacity of plants varies from species to species with as much as a 60-fold difference in absorption capacity between species. Honda et al. (1987), studied manganese accumulation in Japanese serows, which are long-lived and free-ranging ruminants related to cattle. The body burden of manganese in serow fetuses was low compared to mothers (less than one percent of the adult females). High manganese concentrations in the intestinal organs of two adult serows was thought to be specific to the species because serows have not developed an excretory system for manganese via bile. The serow's uptake of manganese correlated with the concentration found in plants utilized as a source of food.

HUMAN HEALTH EFFECTS

Human exposure to manganese is typically via inhalation, although ingestion through diet, drinking water, and inhaled particles cleared from the respiratory tract also occurs (U.S. Environmental Protection Agency 1984). Manganese is considered essential to human health. No cases of manganese toxicity have been reported from excessive human intake in foods or beverages (National Research Council 1980). The World Health Organization (1981) reported sixteen cases of manganese poisoning, including three fatalities, in a small Japanese community where dry-cell batteries were buried near water supply wells in which manganese concentrations varied from 8 mg/L to 14 mg/L. Individuals affected exhibited psychological and neurological disorders typical of industrial manganese poisoning. Susceptibility to inhaled manganese varies widely among individuals. The very young, individuals with iron deficiency, and workers exposed to manganese at or near the recommended threshold limit value are at greatest risk for adverse effects due to manganese exposure (U.S. Environmental Protection Agency 1984). High levels of manganese may increase anemia by interfering with iron absorption (National Research Council 1980). Inhalation of manganese and its compounds in aerosols or fine dusts may produce "metal fume fever" in exposed workers following acute exposure (Venugopal and Luckey 1978; Browning 1969). Chronic manganese poisoning usually affects the central nervous system, resulting in symptoms that include apathy, anorexia, weakness in the legs, uncontrollable laughter, and a stolid, mask-like appearance of the face (Clayton and Clayton 1981-1982). Chronic manganese poisoning is not usually fatal, although permanent disability may result if an individual does not receive treatment. No quantitative estimates of human carcinogenic risks from oral or inhalation exposure to manganese are available because

existing studies are not deemed adequate for an assessment of carcinogenicity (U.S. Environmental Protection Agency 1984, 1990).

Repetitive oral administration of manganese in moderate doses for prolonged periods of time does not cause evident injury to various animals (Clayton and Clayton 1981-1982). Growth was stimulated in animals where manganese doses ranged up to 100 parts per million. Manganese concentrations were measured in liver tissue of fetuses from rats, fed a diet containing manganese in concentrations of 4 to 1,004 mg/kg dry weight, during weaning and pregnancy. Offspring whose dams ate diets with 154 to 1,004 mg/kg of manganese contained manganese in their livers (Friberg et al. 1986). The maximum biliary excretion of bilirubin is markedly diminished in manganese-loaded rats (Casarett and Doull 1975). Acute pneumonitis can be produced by intratracheal administration of manganese dust or solutions of its compounds (Browning 1969). Histological changes were observed in the central nervous system of a monkey that was exposed to manganese in the form of an aerosol (Browning 1969), while behavioral changes were observed in other monkeys upon exposure to manganese aerosols (Clayton and Clayton 1981-1982).

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	NA
Inhalation Slope Factor	NA
Chronic Oral RfD	0.14 mg/kg-day (food)
	0.005 mg/kg-day (water)
Chronic Inhalation RfD	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	NA
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	NA
Human Health-Fish Ingestion Only	NA
Aquatic Organisms-FW Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA = Not Available

REFERENCES

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2-METHYLNAPHTHALENE

CAS No(s): NA
Major Synonym(s): NA

HUMAN HEALTH EFFECTS

2-Methylnaphthalene is used in the synthesis of organic chemicals and pesticides. The database for toxicological information is very limited.

This compound is not known or expected to be carcinogenic based on similarities with naphthalene.

This compound is generally less toxic than naphthalene (Sandmeyer, 1981). Specifically, methylnaphthalenes are not human skin irritants or photosensitizers (Sandmeyer, 1981). No oral or inhalation RfD has been established by the EPA for this compound.

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	NA
Inhalation Slope Factor	NA
Chronic Oral RfD	NA
Chronic Inhalation RfD	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	NA
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	NA
Human Health-Fish Ingestion Only	NA
Aquatic Organisms-FW Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA = Not Available

REFERENCES

OCTACHLORO-DIBENZO-P-DIOXIN, DIBENZOFURAN, or TETRACHLORO-DIBENZO-P-DIOXIN (2,3,7,8-TCDD)

CAS No(s): 1746-01-6 (2,3,7,8-TCDD)

Major Synonym(s): Dioxin

For the purpose of this report, the highly studied tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) will be used as a surrogate compound for those chemicals which exhibit dioxin (TCDD)-like effects both biologically and toxicologically. Collectively, these agents are known as dioxin. Where and EPA approved Toxicity Equivalency Factor (TEF) is available it will be applied in the calculation of risk (U.S. EPA, 1989)

Dioxin is produced as a by-product (and contaminant) of hexachlorophene, a germicide previously used to bathe babies, Agent Orange, an herbicide used extensively in the Vietnam War, and pentachlorophenol, a treatment for wood.

Chemically, dioxins are chlorinated phenolic compounds which are water insoluble. They are very persistent in the environment, as they are not readily biodegraded by most organisms.

FATE AND TRANSPORT

Although dioxin has an extremely low vapor pressure, it has been shown to volatilize and to occur in the atmosphere in both the gaseous and aerosol states (Podoll et al. 1986). Airborne dioxin has been shown to be subject to long-distance transportation prior to its removal from the atmosphere (ATSDR 1987). Dioxins react with hydroxyl radicals in the atmosphere with an estimated half-life of 8.3 days (Podoll et al. 1986). Although insoluble in water, dioxins may be removed from air through wet as well as dry deposition (NLM 1994).

Dioxin contaminants in water adsorb to sediments or suspended particulate matter which may slow down the rates of photolysis and evaporation, which occur at the water's surface. A half-life of 21 hours (in summer) to 118 hours (in winter) has been estimated for photolysis of dioxin at the water surface (ATSDR 1987). A volatilization half-life of 46 days has been estimated for dioxin, however, when adsorbance and sedimentation are accounted for, the total half-life is increased to 50 years, indicating that aquatic sediments represent a significant sink for dioxins (ATSDR 1987).

Soil-bound dioxin shows little vertical mobility and most is contained in the upper 8 cm (Di Domenico et al. 1980). Dioxin is very stable to metabolism, and biodegradation is considered rare (IARC 1977; Isensee and Jones 1975). Photolysis, however, may be significant, but confined to the upper 1 cm.

HUMAN HEALTH EFFECTS

Human exposure to 2,3,7,8-TCDD, whether acute or chronic, results in chloracne, altered liver function, hematological problems and altered blood chemistry, porphyria cutanea tarda, hyperpigmentation and hirsutism from all routes of exposure (Taylor 1979; Walker and Martin 1979; Crow 1981). Acute exposure can also cause nausea and vomiting, headache and eye irritation, and skin and respiratory tract irritation. Death usually occurs due to congestive heart failure (Reggiani 1982).

Occupational exposure to dioxin vapor has produced neurological problems of various kinds, including peripheral polyneuropathy, sensory impairments, weakness and impotence (Holmstedt 1980; Reggiani 1982; Kimbrough et al. 1984).

Several authors have reported cases of soft-tissue sarcoma and non-Hodgkins lymphoma in workers exposed to herbicides contaminated with 2,3,7,8-TCDD (Hardell 1977, 1981; Zack and Suskind 1980; Cook 1981; Moses and Selikoff 1981; Sarma and Jacobs 1981). In an extensive analysis of these and

other studies, the U.S. EPA (1985) concluded that the studies suggested phenoxyacetic acid herbicides, chlorophenols, or their impurities are carcinogenic in humans.

ECOLOGICAL EFFECTS

Dioxin bioconcentrates in aquatic organisms (ATSDR 1987). Its persistence in the environment, as well as its resistance to metabolism, indicate that dioxin is likely to biomagnify within the food chain.

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	150,000 kg-day/mg
Inhalation Slope Factor	150,000 kg-day/mg
Chronic Oral RfD	NA
Chronic Inhalation RfC	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	3E-08 mg/L
Maximum Concentration Limit Goal	0 mg/L

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	1.3E-08 µg/L
Human Health-Fish Ingestion Only	1.4E-08 µg/L
Aquatic Organisms-FW Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA=Data Not Available

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PHENANTHRENE

CAS No(s): 85-01-8
Major Synonym(s): NA

HUMAN HEALTH EFFECTS

Phenanthrene, as a PAH, is highly lipid soluble and is expected to be readily absorbed from the gastrointestinal tract after ingestion or from the lungs after inhalation, primarily by passive diffusion (U.S. EPA, 1984).

The EPA has designated phenanthrene in Group D, not classifiable for carcinogenicity, based on the weight of evidence (U.S. EPA, 1993).

Phenanthrene is known to cause phototoxic reactions when dermally applied to skin (Klaassen et al., 1986). The oral LD₅₀ for mice is 700 mg/kg. According to the EPA, the data are inadequate for quantitative risk assessment of this PAH (U.S. EPA, 1994).

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	NA
Inhalation Slope Factor	NA
Chronic Oral RfD	NA
Chronic Inhalation RfD	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	NA
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	NA
Human Health-Fish Ingestion Only	NA
Aquatic Organisms-FW Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA = Not Available

REFERENCES

ALUMINUM

CAS No(s): 7429-90-5

Major Synonym(s): NA

Aluminum is the third most abundant element (American Conference of Governmental Industrial Hygienists 1986) comprising about 8.8 percent of the earth's crust by weight (Merck Index 1983). Aluminum does not occur freely in nature, but is widely distributed combined with oxygen, fluorine, silicon, and other constituents. It is a silvery-white, malleable, ductile, light-weight metal. It is soluble in alkalines and in hydrochloric and sulfuric acid, and insoluble in concentrated nitric acid, hot acetic acid, and water (Weast 1979). It has a molecular weight of 26.98 g/mole, melts at 660°C, boils at 2,450°C (at 1 atmosphere), has a vapor pressure of 1 mm Hg at 1284°C, and has a specific gravity of 2.70 at 20°C/4°C.

FATE AND TRANSPORT

Aluminum is abundant in soils although concentrations vary with solubility, which is a function of pH (National Research Council 1981). It is amphoteric, being more soluble in acidic and basic solutions than in more neutral solutions (U.S. Environmental Protection Agency 1988). Some acid soils contain sufficient aluminum in soluble form to kill some types of plants (Farm Chemicals Handbook 1984). Soil concentrations of aluminum have been recorded up to 150 to 600 grams per kilogram (Friberg et al. 1979). Human activities tend to increase aluminum content in surface waters (Friberg et al. 1979) and acid rain can cause aluminum to leach out of soil at a higher than normal rate, thus increasing the aluminum uptake by plants and animals. Aluminum concentrations in urban air are reported as high as 10 mg per cubic meter. In nonurban areas, values as low as 0.5 mg per cubic meter have been reported (Friberg et al. 1979). Aluminum tends to bioaccumulate only slightly in aquatic organisms. Cleveland et al. (1986) reported BCFs of 50 to 230 among young brook trout.

HUMAN HEALTH EFFECTS

Humans are exposed to aluminum by ingestion of foods and beverages and by inhalation from the atmosphere. Human ingestion of aluminum is typically 30 to 50 mg per day (Bjorksten 1982), with a daily absorption rate 0.1 to 2 mg (Rosas 1978). Although not essential for human health, normal total body content of aluminum in humans is around 30 milligrams. Soluble forms of aluminum chloride, aluminum fluoride, and aluminum sulfate are potentially toxic, and may play a role in several disease conditions. Insoluble forms of aluminum do not seem to have a measurable acute response (Rumack and Spoerke 1989). Chronic inhalation of fine metallic aluminum dust, such as may occur in the manufacture of aluminum abrasives, explosives, and fireworks, has been shown to cause a distinctive type of pulmonary fibrosis with emphysema, chronic interstitial pneumonia, dyspnea, cough, and pneumothorax (Clayton and Clayton 1981). In addition, the inhalation of this aluminum dust has caused progressive encephalopathy, in which the brain shows evidence of neurofibrillary degeneration (Venugopal and Luckey 1978). Gastrointestinal problems develop when aluminum hydroxide is chronically administered orally, causing severe constipation by inhibiting muscle contraction of the intestines (Hamilton and Hardy 1974). It can also cause flatulence, inflammation, and colitis. Aluminum salts may cause a dialysis encephalopathy syndrome among kidney patients, resulting in progressive fatal brain disease characterized by impaired speech, dementia, and seizures (Rumack and Spoerke 1989). Increasing evidence indicates that the brains of Alzheimer's victims contain a much higher than normal level of aluminum (Rumack and Spoerke 1989). Repeated contact of the skin with soluble aluminum salts results in "acid irritation". Particles of aluminum deposited in the eye may cause necrosis of the cornea. Aluminum has not been shown to be carcinogenic among humans.

Focal pulmonary fibroses were observed among rats following intratracheal injection of 100 mg of aluminum per animal (Clayton and Clayton 1981). Respiratory infections were observed in rats and rabbits where aluminum dust was inhaled or injected intratracheally (Browning, 1969). Accompanying

the fibrosis was hyalinosis, emphysema, and hemorrhagic pneumonia. Fibrotic changes were also evident in the walls of the blood vessels and in the kidneys, while fibrous thickening of interstitial tissue in the spleen, liver, and meninges occurred.

ECOLOGICAL EFFECTS

Although oral toxic doses of aluminum are not well established for humans, oral mammalian LD₅₀'s range from 1 to 4 grams per kg body weight. Among aquatic plants, diatom growth is inhibited at aluminum concentrations of 810 mg/L, concentrations greater than 45.7 mg/L reduced frond production in duckweeds, and an EC₅₀ of 2.5 mg/L was reported for root development in Eurasian watermilfoil (Stanley 1974 and U.S. Environmental Protection Agency 1988). An aluminum concentration of 5.2 mg/L inhibited growth of young rainbow trout in water at a pH of 7.0 to 9.0 (Freeman 1973).

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	NA
Inhalation Slope Factor	NA
Chronic Oral RfD	NA
Chronic Inhalation RfC	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	NA
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	NA
Human Health-Fish Ingestion Only	NA
Aquatic Organisms-FW Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA= Not Available

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ANTHRACENE

CAS No(s): 120-12-7
Major Synonym(s): NA

HUMAN HEALTH EFFECTS

Anthracene, as a PAH, is highly lipid soluble and is readily absorbed from the GI tract (U.S. EPA, 1984). Anthracene has been classified in group D, not classifiable as to human carcinogenicity, due to lack of human data and inadequate data from animal bioassays (U.S. EPA, 1993).

A chronic oral RfD of 3×10^{-1} mg/kg/day was derived for anthracene based on a subchronic toxicity study in mice (U.S. EPA, 1993). Groups of male and female mice were exposed to anthracene by gavage at doses of 0, 250, 500 and 1000 mg/kg/day for at least 90 days. No treatment-related effects were noted. The NOEL is the highest dose tested (1000 mg/kg/day). An uncertainty factor of 3000 was used, to account for inter-species extrapolation, intra-species variability, use of a subchronic study for the chronic RfD derivation, lack of reproductive or developmental data, and lack of adequate toxicity data in a second species (U.S. EPA, 1993). Based on the same study, a subchronic oral RfD of 3 mg/kg/day was derived (U.S. EPA, 1994). No inhalation RfD has been generated.

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	NA
Inhalation Slope Factor	NA
Chronic Oral RfD	0.3 (mg/kg)/day
Chronic Inhalation RfC	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	NA
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	9600 µg/L
Human Health-Fish Ingestion Only	110,000 µg/L
Aquatic Organisms-FW Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA= Not Available

REFERENCES

4-CHLOROPHENYL PHENYL ETHER

CAS No(s): 7005-72-3
Major Synonym(s): NA
Chemical formula: $(4\text{-ClC}_6\text{H}_4)\text{OC}_6\text{H}_5$

HUMAN HEALTH EFFECTS

4-Chlorophenyl-phenyl ether is in the chemical class of phenols. The molecular weight is 204.66 and the boiling point ranges from 284-285°C (CRC Press). No specific information was found regarding the human health effects from 4-Chlorophenyl-phenyl, however, information regarding chlorinated phenyl ethers is provided.

The chlorinated phenyl ethers are a class of synthetic organic compounds that present potential industrial handling hazards. In general, the toxicity of these materials increases with the degree of chlorination. Toxic effects, which may result from exposure to the higher chlorinated derivatives, may appear as either an "acneform" dermatitis, a systemic intoxication, or both. The more common manifestation of excessive exposure to these materials is the skin condition which develops at the site of exposure, resembles common acne in appearance, and may be accompanied by intensive itching. This condition generally is caused by prolonged or repeated skin contact. Systemic intoxication has not been observed among men handling the chlorinated phenyl ethers so far as we are aware. However, toxicological work on laboratory animals has indicated that the effect is cumulative, and that liver damage will result if the material is taken into the body repeatedly. Repeated inhalation of vapors or fumes from the higher chlorinated materials would be most likely to cause such an effect.

Experience with human subjects has not been extensive but is sufficient to show conclusively that exposure to even small amounts of hexachlorophenyl ether may result in appreciable acneform dermatitis. No causes of systemic toxicity have been located.

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	NA
Inhalation Slope Factor	NA
Chronic Oral RfD	NA
Chronic Inhalation RfC	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	NA
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	NA
Human Health-Fish Ingestion Only	NA
Aquatic Organisms-FW Acute	NA
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	NA

South Carolina Department of Health and Environmental Control

Human Health Criteria
Fish and Aquatic Life-Continuous
Fish and Aquatic Life-Maximum

NA
NA
NA

NA= Not Available

REFERENCES

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CRC Press. "Handbook of Chemistry and Physics," 71st Edition, 1990-1991.

DIBROMOCHLOROMETHANE

CAS No.: 124-48-1

Major Synonym(s): Chlorodibromomethane, Dibromochloromethane, Dibromomonochloromethane, Monochlorodibromomethane

Chlorodibromomethane is a colorless, heavy, nonburnable liquid with a sweetish odor. Chlorodibromomethane was used in the past to make other chemicals such as fire extinguisher fluids, spray can propellants, refrigerator fluid, and pesticides. Currently, it is produced only in small amounts for use in laboratories.

Another source of chlorodibromomethane is drinking water. When chlorine is added to drinking water to kill any disease-causing organisms which might be present, the chlorine reacts with natural substances found in the water, producing low levels of chlorodibromomethane as undesired byproducts. Small amounts are also produced by plants in the ocean.

In the environment, chlorodibromomethane is not found as pure liquids, but rather is found either dissolved in water or evaporated into air as a gas. Chlorodibromomethane is relatively stable in the air, but reactions with other chemicals in the air cause it to break down slowly (about 50% in 1 or 2 months). Any chlorodibromomethane in water or soil may also be broken down by bacteria, but the speed of this process is not known.

Human Health Effects

Classification – C; possible human carcinogen

Basis – Based on inadequate human data and limited evidence of carcinogenicity in animals; namely, positive carcinogenic evidence in B6C3F1 mice (males and females), together with positive mutagenicity data, and structural similarity to other trihalomethanes, which are known animal carcinogens.

There are no epidemiologic studies of dibromochloromethane alone. Dibromochloromethane is one of several trihalomethanes (including chloroform, bromodichloromethane, and bromoform) which are formed from the interaction of chlorine with the organic materials found in water. Several ecologic studies (Cantor et al., 1978; Aldrich and Peoples, 1982; Isacson et al., 1983) and case-control studies (Young and Kanarek, 1983; Cantor et al., 1987) suggest a positive correlation between drinking chlorinated water and the incidence of several human cancers, particularly bladder, rectal and colon cancer. Although both types of studies have design limitations, which might include lack of individual information; misclassification of exposure; or no controls for diet, smoking, or alcohol consumption, the agreement of findings in several independent studies strengthens the association between drinking chlorinated water and cancer (Cantor, 1983; Crump, 1983; Crump and Guess, 1982). In all studies, the cases were exposed to a mixture of compounds, including chloroform, which is considered to be a probable human carcinogen. The data collected are inadequate for assessing the carcinogenic potential of dibromochloromethane.

Studies in animals and humans indicate that chlorodibromomethane can readily enter your body after you drink it in water or breathe it in air. It is likely that this chemical would also enter your body if you got them on your skin, but this has not been studied. The main way that chlorodibromomethane is removed from the body is by being breathed out through the lungs. Elimination is fairly rapid and complete (from 50% to 90% in 8 hours), so they do not tend to build up in the body.

Studies in animals and humans indicate that the main effect of eating or breathing large amounts of this chemical is a slowing down of normal brain activities. This occurs quite quickly, and tends to go away within a day. Studies in animals indicate that exposure to high doses of

chlorodibromomethane may also lead to injury to the liver and the kidneys within a short period of time. Studies in animals also suggest that chlorodibromomethane does not have a high risk of harming an unborn baby, but this has not been studied in humans.

Exposure to low levels of chlorodibromomethane does not appear to seriously affect the brain, liver, or kidneys, but studies in animals indicate that long-term intake of chlorodibromomethane can cause cancer. Although no cases of cancer in humans can be definitely attributed to this chemical, this is an effect of special concern, since many people are exposed to low levels of chlorodibromomethane in chlorinated drinking water.

The levels of chlorodibromomethane in air that affect humans are not known, but levels of around 1,000 to 2,000 ppb in air can be detected by smell. The levels of chlorodibromomethane in air that affect animals are not known.

The amount of chlorodibromomethane taken by mouth that would affect humans is not known. Studies in animals indicate that concentrations of around 190,000 ppb of chlorodibromomethane in food or water can lead to effects on liver or kidneys over a 2-week period. The amounts of chlorodibromomethane that would cause similar effects following skin contact are not known.

The U.S. Environmental Protection Agency (EPA) has set a Maximum Contaminant Level of 0.10 ppm (parts per million) for the combination of chlorodibromomethane, bromoform, and a group of similar compounds (trihalomethanes) in drinking water. Most water samples in the United States have levels of chlorodibromomethane lower than this. The Food and Drug Administration (FDA) has set the same limit for bottled water, but no rules have been set for chlorodibromomethane in food. There is no OSHA standard for chlorodibromomethane.

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	8.4E-2
Inhalation Slope Factor	NA
Chronic Oral RfD	2.0E-2
Chronic Inhalation RfC	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit [total trihalomethanes*]	0.10 mg/L
Maximum Concentration Limit Goal	NA

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	1.9E-1 ug/L
Human Health-Fish Ingestion Only	1.57E+1 ug/L
Aquatic Organisms-FW Acute	1.1E+4 ug/L
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	1.2E+4 ug/L
Aquatic Organisms-Marine Chronic	6.4E+3 ug/L

NA=Data Not Available

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POLYCHLORINATED BIPHENYLS - AROCLOR 1254, AROCLOR 1260

CAS No(s): 11097-69-1 (Aroclor 1254), 11096-82-5 (Aroclor 1260)
Major Synonym(s): PCB, Chlorodiphenyls

Polychlorinated biphenyls (PCBs) are anthropogenic in origin. They were widely used as coolants and lubricators in transformers, capacitors, and other electrical equipment. PCBs have also been used in fluorescent lighting fixtures, and as plasticizers for celluloses, vinyl resins, and crude rubbers. PCBs have not been manufactured in the United States since 1977 because of their harmful effects on human health and the environment. Unfortunately, because of their presence in landfills and equipment produced prior to the cessation of their production, PCBs still find their way into the environment.

There are 209 individual compounds which comprise the family of PCBs. Some of the PCB mixtures which were available commercially are known by the trade name Aroclor. These compounds are colorless to pale yellow viscous liquids which solidify below 50°F. They have a mild hydrocarbon odor and are non-flammable. Boiling points range from 689-734°F and vapor pressure is .00006 mm Hg at 20°C.

FATE AND TRANSPORT

PCBs were disposed of in landfills prior to the recognition of their harmful effects. Adsorption of PCBs to sediments is strong, particularly in organic soils. The atmospheric concentration of PCBs near Superfund hazardous waste sites is elevated above background concentrations, suggesting that volatilization is a transport mechanism from soil to air (Hermanson and Hites 1989). Degradation of PCBs in soil is slow and limited to biodegradation (ATSDR 1991). Storm water runoff may transport PCBs from sediments to surface waters.

In water, PCBs will adsorb to sediments or other organic matter (Eisenreich et al. 1983). While adsorbed to aquatic sediment, PCBs are sequestered from the water column; however, these sediments act as a sink and may release PCBs slowly for long periods of time (Baker et al. 1985). Photolysis, biodegradation, and evaporation are the pathways by which PCBs are degraded or removed from the water column. Photolysis of PCBs proceeds slowly but can be enhanced by the addition of sodium borohydride (Epling et al. 1988). Biodegradation of PCBs occurs in both aerobic and anaerobic conditions.

In the atmosphere, PCBs react with hydroxyl radicals and are transformed. The rate of transformation varies with the number of chlorines present in the molecule (Atkinson 1987). Photolytic degradation of PCBs has been observed under laboratory conditions and may also contribute to PCB degradation in air (Hutzinger et al. 1972).

HUMAN HEALTH EFFECTS

Workers exposed to Aroclor vapors developed chloracne, eczematous rashes, hyperpigmentation, eye irritation, respiratory irritation, gastrointestinal symptoms, neurological symptoms and liver damage (Meigs et al. 1954; Ouw et al. 1976; Fischbein et al. 1979).

Two additional occupational studies have reported an association between PCB exposure and increased risk of death from all neoplasms (Bertazzi et al. 1981) and incidence of malignant melanomas and pancreatic carcinomas (Bahn et al. 1976). Although there were methodological limitations to these studies, the IARC (1978) felt the study by Bahn et al. (1976) suggested evidence of human carcinogenicity.

Humans exposed to an average total oral dose of 500 - 800 mg PCBs (in contaminated food) showed dermatological symptoms, eye problems, chronic bronchitis, some neurologic and muscular disorders

and hepatotoxicity (Reggiani and Bruppacher 1985; Kuratsune et al. 1972). Exposure also causes suppression of the immune system, with resultant increased susceptibility to infections (Shigematsu et al. 1978; Chang et al. 1981; Chang et al. 1982; Lu and Wu 1985).

Subchronic and chronic PCB exposure in animals causes skin lesions, immune system effects and alterations to the liver (Zinki 1977; Barsotti et al. 1976; Allen et al. 1972; Kimbrough et al. 1975). Hepatic enzyme induction has been observed following exposure through the diet (Bruckner et al. 1974).

Many women exposed through a food contamination incident reported irregular menstrual cycles (Reggiani and Bruppacher 1985). Studies showing reduced birth weights, slow weight gain, reduced gestational ages, and behavioral deficits in infants following maternal ingestion of PCB-contaminated fish (Fein et al. 1984a,b; Jacobson et al. 1983; Jacobson et al. 1984) should be viewed with caution because of possible confounding factors (Kimbrough 1987).

In a follow-up of patients exposed to PCB-contaminated food, 35% of the deceased died from malignancies of various organs (Urabe et al. 1979). Further details on this study are lacking.

The U.S. EPA considers PCBs to be carcinogens from the oral route of exposure (weight of evidence B2), as reported in IRIS. The oral slope factor established for these PCBs is $7.7 \text{ (mg/kg/day)}^{-1}$. This value was derived from a study by Norback and Weltman (1985).

Workers exposed to PCBs through the skin developed skin diseases and hepatomegaly (Marconi et al. 1981). Dermal application has caused hepatic enzyme induction in laboratory animals (Bickers et al. 1975).

ECOLOGICAL EFFECTS

Aquatic species such as fish, shrimp, and oyster bioaccumulate PCBs many orders of magnitude higher than ambient water concentrations (Leifer et al. 1983). There is a correlation between the amount of bioconcentrated by a species and the water zone in which they predominantly reside and the fate of PCBs. For example, bottom dwelling species concentrate greater amounts of PCBs than species which reside in the median water zones. Likewise, the concentration of PCBs in the bottom sediments is several orders of magnitude higher than the concentration of PCBs within the water column (ATSDR 1991).

Terrestrial plants tend to accumulate PCBs, primarily from transfer of vapor phase PCBs from the atmosphere to aerial portions of plants. Uptake of PCBs from soil through the roots of plants is minimal based upon calculation of the bioconcentration factor (Concentration of PCB in the organism divided by concentration of PCB in the ambient medium) (O'Connor et al. 1990).

US ENVIRONMENTAL PROTECTION AGENCY HUMAN HEALTH CRITERIA

Oral Slope Factor	7.7 kg-day/mg
Inhalation Slope Factor	NA
Chronic Oral RfD	NA
Chronic Inhalation RfD	NA

DRINKING WATER CRITERIA AND STANDARDS

U.S. Environmental Protection Agency

Maximum Concentration Limit	0.0005 mL/g
Maximum Concentration Limit Goal	0 mL/g

AMBIENT WATER QUALITY CRITERIA

U.S. Environmental Protection Agency Ambient Water Quality Criteria

Human Health-Water and Fish Ingestion	4.4E-05 µg/L
Human Health-Fish Ingestion Only	4.5E-05 µg/L
Aquatic Organisms-FW Acute	0.014 µg/L
Aquatic Organisms-FW Chronic	NA
Aquatic Organisms-Marine Acute	NA
Aquatic Organisms-Marine Chronic	0.03 µg/L

South Carolina Department of Health and Environmental Control

Human Health Criteria	NA
Fish and Aquatic Life-Continuous	NA
Fish and Aquatic Life-Maximum	NA

NA = Not Available

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C.7 Calculation of Cancer Risk and Hazard Quotient

Table C1-1
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Dermal Contact with Soil
Current Groundwater Sampler
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Concentration (mg/kg)	ABS Factor	Carcinogenic Risk Calculation				Non-Carcinogenic Hazard Calculation			
			Absorbed Dose (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Absorbed Dose (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
2-Hexanone Anthracene Arsenic Benzo (g,h,i)perylene Beryllium Iron OCDD PCB1254	2.28E-04	0.01	1.18E-14	NA	ND	ND	1.66E-13	0.04	4.14E-12	0
	5.54E-04	0.01	2.87E-14	NA	ND	ND	4.02E-13	0.3	1.34E-12	0
	2.38E+00	0.001	1.23E-11	1.5	1.85E-11	29	1.73E-10	0.0003	5.76E-07	9
	4.45E-04	0.01	2.31E-14	NA	ND	ND	3.23E-13	0.00002	1.62E-08	0
	1.61E-01	0.001	8.35E-13	4.3	3.59E-12	6	1.17E-11	0.005	2.34E-09	0
	2.02E+04	0.001	1.05E-07	NA	ND	ND	1.47E-06	0.3	4.90E-06	77
	4.06E-03	0.01	2.11E-13	150	3.16E-11	50	2.95E-12	NA	ND	ND
	2.30E-02	0.01	1.19E-12	7.7	9.20E-12	15	1.67E-11	0.00002	8.36E-07	13
	Total Risk =			6.29E-11			Hazard Index =				6.33E-06

Absorbed Dose (mg/kg-day) =

$$\frac{CS \cdot SA \cdot AF \cdot ABS \cdot EF \cdot ED \cdot CF}{BW \cdot AT \cdot AD}$$

Where:

CS	=	Exposure point concentration in soil (mg/kg)	See above
SA	=	Skin surface area available for contact (cm ² /event)	2320
ABS	=	Absorption factor (unitless)	0.01 (Organics) or 0.001 (Inorganics)
AF	=	Adherence factor (mg/cm ²)	0.2
EF	=	Exposure frequency (events/yr)	4
ED	=	Exposure duration (yr)	5
CF	=	Conversion factor (10 ⁻⁶ kg/mg)	1.00E-06
BW	=	Body weight (kg)	70
AT	=	Averaging time (days/yr)	365
AD	=	Averaging duration (yr):	ED for noncarcinogens 70 for carcinogens
			/

(b) Provisional RFD's were used for 2-hexanone and Iron

NA/ND = Not Available/Not Determined

Table C1-2
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Ingestion of Soil
Current Groundwater Sampler
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Concentration (mg/kg)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation			
		Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient
2-Hexanone	2.28E-04	1.27E-13	NA	ND	ND	1.78E-12	0.04	4.46E-11
Anthracene	5.54E-04	3.10E-13	NA	ND	ND	4.34E-12	0.3	1.45E-11
Arsenic	2.38E+00	1.33E-09	1.5	2.00E-09	71	1.86E-08	0.0003	6.21E-05
Benzo (g,h,i) perylene	4.45E-04	2.49E-13	NA	ND	ND	3.48E-12	0.00002	1.74E-07
Beryllium	1.61E-01	9.00E-11	4.3	3.87E-10	14	1.26E-09	0.005	2.52E-07
Iron	2.02E+04	1.13E-05	NA	ND	ND	1.58E-04	0.3	5.28E-04
OCDD	4.06E-03	2.27E-12	150	3.41E-10	12	3.18E-11	NA	ND
PCB1254	2.30E-02	1.29E-11	7.7	9.91E-11	4	1.80E-10	0.00002	9.01E-06
		Total Risk = 2.82E-09				Hazard Index = 5.99E-04		

Intake (mg/kg-day) =

$$\frac{CS \cdot IR \cdot FI \cdot EF \cdot ED \cdot CF}{BW \cdot AT \cdot AD}$$

Where:

CS	=	Exposure point concentration in soil (mg/kg)	See above
IR	=	Ingestion rate (mg soil/day)	50
FI	=	Fraction Ing. from cont. source (unitless)	1.0
CF	=	Conversion factor (mg to kg)	1.00E-06
EF	=	Exposure frequency (days/yr)	4
ED	=	Exposure duration (yr)	5
BW	=	Body weight (kg)	70
AT	=	Averaging time (days/yr)	365
AD	=	Averaging duration (yr):	ED
			for noncarcinogens
			for carcinogens
			70

(b) Provisional RFD's were used for 2-hexanone and Iron

NA/ND = Not Available/Not Determined

Table C1-3
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Inhalation of Groundwater (Vapor Phase)
Current Groundwater Sampler
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Henry's Law Constant (unitless)	Chemical Concentration In Water (mg/L)	Exposure Point Concentration (mg/m^3)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation				
				Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
Aluminum	NA	4.12E+00	ND	ND	NA	ND	ND	ND	NA	ND	ND
Arsenic	NA	1.32E-03	ND	ND	50	ND	ND	ND	NA	ND	ND
Beryllium	NA	4.10E-04	ND	ND	8.4	ND	ND	ND	NA	ND	ND
Bis (2-ethylhexyl)phthalate	1.83E-05	2.10E-03	3.84E-05	4.84E-09	NA	ND	ND	6.77E-08	NA	ND	ND
Bromodichloromethane	10.6	3.00E-04	3.18	4.00E-04	NA	ND	ND	5.60E-03	NA	ND	ND
Chloroform	0.16	1.15E-03	0.18	2.31E-05	0.081	1.87E-06	100	3.24E-04	NA	ND	ND
Dibromochloromethane	0.19	1.80E-04	0.03	4.30E-06	NA	ND	ND	6.02E-05	NA	ND	ND
Iron	NA	7.37E+01	ND	ND	NA	ND	ND	ND	NA	ND	ND
				Total Risk = 1.87E-06			Hazard Index = ND				

Inhalation Intake (mg/kg-day) = $\frac{CA \cdot IR \cdot ET \cdot EF \cdot ED}{BW \cdot AT \cdot AD}$

Where:

CA	=	Exposure point concentration in water (mg/L)	See above
IR	=	Inhalation rate (m ³ /hr)	2.5
ET	=	Exposure time (hr/day)	4.5
EF	=	Exposure frequency (days/yr)	4
ED	=	Exposure duration (yr)	5
BW	=	Body weight (kg)	70
AT	=	Averaging time (days/yr)	365
AD	=	Averaging duration (yr):	ED for noncarcinogens 70 for carcinogens

Exposure point concentration, CA (mg/m³) = $KH \cdot CW \cdot CF$

Where:

KH	=	Henry's law constant
CW	=	Chemical concentration in water (mg/L)
CF	=	Volumetric conversion factor (1000 L/m ³)

(b) Provisional RFD's were used for aluminum and iron

NA/ND = Not Available/Not Determined

Table C1-4
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Dermal Contact with Groundwater
Current Groundwater Sampler
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Concentration (mg/L)	Dermal PC, (a) (cm/hr)	Carcinogenic Risk Calculation				Non-Carcinogenic Hazard Calculation			
			Absorbed Dose (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Absorbed Dose (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
Aluminum	4.12E+00	1.55E-03	7.45E-07	NA	ND	ND	1.04E-05	1	1.04E-05	2
Arsenic	1.32E-03	1.55E-03	2.39E-10	1.5	3.58E-10	39	3.34E-09	0.0003	1.11E-05	2
Beryllium	4.10E-04	1.55E-03	7.42E-11	4.3	3.19E-10	35	1.04E-09	0.005	2.08E-07	0
Bis (2-ethylhexyl)phthalate	2.10E-03	3.30E-02	8.09E-09	0.014	1.13E-10	12	1.13E-07	0.02	5.67E-06	1
Bromodichloromethane	3.00E-04	5.80E-03	2.03E-10	0.062	1.26E-11	1	2.84E-09	0.02	1.42E-07	0
Chloroform	1.15E-03	1.30E-01	1.75E-08	0.0061	1.06E-10	12	2.44E-07	0.01	2.44E-05	4
Dibromochloromethane	1.80E-04	3.90E-03	8.20E-11	0.084	6.88E-12	1	1.15E-09	0.02	5.74E-08	0
Iron	7.37E+01	1.55E-03	1.33E-05	NA	ND	ND	1.87E-04	0.3	6.23E-04	92
			Total Risk = 9.16E-10				Hazard Index = 6.76E-04			

Absorbed Dose (mg/kg-day) =

$$\frac{CW \cdot SA \cdot PC \cdot ET \cdot EF \cdot ED \cdot CF}{BW \cdot AT \cdot AD}$$

Where:

CW	=	Chemical concentration in water (mg/L)	See above
SA	=	Skin surface area available for contact (cm ²)	2320
PC	=	Dermal permeability constant (cm/hr)	See above
ET	=	Exposure time (hr/day)	4.5
EF	=	Exposure frequency (days/yr)	4
ED	=	Exposure duration (yr)	5
CF	=	Conversion factor (1 Liter/1000cm ³)	1.00E-03
BW	=	Body weight (kg)	70
AT	=	Averaging time (days/yr)	365
AD	=	Averaging duration (yr):	ED
			70

for noncarcinogens
for carcinogens

(a) All values estimated except for chloroform which was a measured value.
 Permeability constant for aluminum, arsenic, beryllium, and iron is the measured value for water (Reference: EPA, 1992b)

(b) Provisional RFD's were used for aluminum and iron

NA/ND = Not Available/Not Determined

Table C1-5
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Inhalation of Air (Particulates)
Current Groundwater Sampler
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Contaminant Concentration In Soil (mg/kg)	Exposure Point Concentration In Air (mg/m^3)	Carcinogenic Risk Calculation				Non-Carcinogenic Hazard Calculation			
			Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
2-Hexanone Anthracene Arsenic Benzo (g,h,i)perylene Beryllium Iron OCDD PCB1254	2.28E-04	2.28E-11	2.87E-15	NA	ND	ND	4.02E-14	0.00143	2.81E-11	100
	5.54E-04	5.54E-11	6.97E-15	NA	ND	ND	9.76E-14	NA	ND	ND
	2.38E+00	2.38E-07	2.99E-11	50	1.50E-09	98	4.19E-10	NA	ND	ND
	4.45E-04	4.45E-11	5.60E-15	NA	ND	ND	7.84E-14	NA	ND	ND
	1.61E-01	1.61E-08	2.03E-12	8.4	1.70E-11	1	2.84E-11	NA	ND	ND
	2.02E+04	2.02E-03	2.54E-07	NA	ND	ND	3.56E-06	NA	ND	ND
	4.06E-03	4.06E-10	5.11E-14	150	7.67E-12	1	7.16E-13	NA	ND	ND
	2.30E-02	2.30E-09	2.90E-13	NA	ND	ND	4.05E-12	NA	ND	ND
				Total Risk = 1.62E-09			Hazard Index = 2.81E-11			

Inhalation Intake (mg/kg-day) =

$$\frac{CA \cdot IR \cdot ET \cdot EF \cdot ED}{BW \cdot AT \cdot AD}$$

Where:

CA	=	Exposure point concentration in air (mg/m ³)	See above
IR	=	Inhalation rate (m ³ /hr)	2.5
ET	=	Exposure time (hr/day)	4.5
EF	=	Exposure frequency (days/yr)	4
ED	=	Exposure duration (yr)	5
BW	=	Body weight (kg)	70
AT	=	Averaging time (days/yr)	365
AD	=	Averaging duration (yr):	ED for noncarcinogens 70 for carcinogens

Exposure point concentration in the air, CA (mg/m³) =

$$CS \cdot ADL$$

Where:

CS	=	Contaminant concentration in soil (mg/kg)	See above
ADL	=	Atmospheric dust loading (kg/m ³)	1.00E-07

(b) Provisional RFD's were used for 2-hexanone and Iron

NA/ND = Not Available/Not Determined

Table C1-8
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Ingestion of Soil
Current Material Yard Worker
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Concentration (mg/kg)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation			
		Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient
2-Hexanone	2.28E-04	1.59E-11	NA	ND	ND	1.12E-10	0.04	2.79E-09
Anthracene	5.54E-04	3.87E-11	NA	ND	ND	2.71E-10	0.3	9.03E-10
Arsenic	2.38E+00	1.68E-07	1.5	2.49E-07	71	1.16E-06	0.0003	3.88E-03
Benzo (g,h,i) perylene	4.45E-04	3.11E-11	NA	ND	ND	2.18E-10	0.00002	1.09E-05
Beryllium	1.61E-01	1.13E-08	4.3	4.84E-08	14	7.88E-08	0.005	1.58E-05
Iron	2.02E+04	1.41E-03	NA	ND	ND	9.89E-03	0.3	3.30E-02
OCDD	4.06E-03	2.84E-10	150	4.26E-08	12	1.99E-09	NA	ND
PCB1254	2.30E-02	1.61E-09	7.7	1.24E-08	4	1.13E-08	0.00002	5.63E-04
		Total Risk = 3.53E-07			Hazard Index = 3.74E-02			

$$\text{Intake (mg/kg-day)} = \frac{CS \cdot IR \cdot FI \cdot ET \cdot EF \cdot ED \cdot CF}{BW \cdot AT \cdot AD}$$

Where:

CS	=	Exposure point concentration in soil (mg/kg)	See above
IR	=	Ingestion rate (mg soil/day)	50
FI	=	Fraction ing. from cont. source (unitless)	1.0
CF	=	Conversion factor (mg to kg)	1.00E-06
EF	=	Exposure frequency (days/yr)	250
ED	=	Exposure duration (yr)	10
BW	=	Body weight (kg)	70
AT	=	Averaging time (days/yr)	365
AD	=	Averaging duration (yr):	ED for noncarcinogens 70 for carcinogens

(b) Provisional RFD's were used for 2-hexanone and Iron

NA/ND = Not Available/Not Determined

Table C1-7
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Inhalation of Air (Particulates)
Current Material Yard Worker
Central Shops Burning/Rubble Pit (631-8G)

Chemicals of Potential Concern	Contaminant concentration In soil (mg/kg)	Exposure Point Concentration In air (mg/m ³)	Carcinogenic Risk Calculation				Non-Carcinogenic Hazard Calculation			
			Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
2-Hexanone Anthracene Arsenic Benzo (g,h,i)perylene Beryllium Iron OCDD PCB1254	2.28E-04	2.28E-11	6.37E-13	NA	ND	ND	4.46E-12	0.00143	3.12E-09	100
	5.54E-04	5.54E-11	1.55E-12	NA	ND	ND	1.08E-11	NA	ND	ND
	2.38E+00	2.38E-07	6.65E-09	50	3.33E-07	98	4.66E-08	NA	ND	ND
	4.45E-04	4.45E-11	1.24E-12	NA	ND	ND	8.71E-12	NA	ND	ND
	1.61E-01	1.61E-08	4.50E-10	8.4	3.78E-09	1	3.15E-09	NA	ND	ND
	2.02E+04	2.02E-03	5.65E-05	NA	ND	ND	3.96E-04	NA	ND	ND
	4.06E-03	4.06E-10	1.14E-11	150	1.70E-09	1	7.95E-11	NA	ND	ND
	2.30E-02	2.30E-09	6.44E-11	NA	ND	ND	4.51E-10	NA	ND	ND
				Total Risk = 3.38E-07				Hazard Index = 3.12E-09		

Inhalation Intake (mg/kg-day) =

$$\frac{CA \cdot IR \cdot ET \cdot EF \cdot ED}{BW \cdot AT \cdot AD}$$

Where:

CA	=	Exposure point concentration in air (mg/m ³)	See above
IR	=	Inhalation rate (m ³ /hr)	2.5
ET	=	Exposure time (hr/day)	8
EF	=	Exposure frequency (days/yr)	250
ED	=	Exposure duration (yr)	10
BW	=	Body weight (kg)	70
AT	=	Averaging time (days/yr)	365
AD	=	Averaging duration (yr):	ED
			for noncarcinogens
			for carcinogens

Exposure point concentration in the air, CA (mg/m³) =

$$CS \cdot ADL$$

Where:

CS	=	Contaminant concentration in soil (mg/kg)	See above
ADL	=	Atmospheric dust loading (kg/m ³)	1.00E-07

(b) Provisional RFD's were used for 2-hexanone and Iron

N/ND = Not Available/Not Determined

Table C1-8
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Ingestion of Soil
Future Industrial Worker
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Concentration (mg/kg)	Carcinogenic Risk Calculation				Non-Carcinogenic Hazard Calculation			
		Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
2-Hexanone	2.28E-04	3.98E-11	NA	ND	ND	1.12E-10	0.04	2.79E-09	0
Anthracene	5.54E-04	9.68E-11	NA	ND	ND	2.71E-10	0.3	9.03E-10	0
Arsenic	2.38E+00	4.16E-07	1.5	6.24E-07	71	1.16E-06	0.0003	3.88E-03	10
Benzo (g,h,i)perylene	4.45E-04	7.78E-11	NA	ND	ND	2.18E-10	0.00002	1.09E-05	0
Beryllium	1.61E-01	2.81E-08	4.3	1.21E-07	14	7.88E-08	0.005	1.58E-05	0
Iron	2.02E+04	3.53E-03	NA	ND	ND	9.89E-03	0.3	3.30E-02	88
OCDD	4.06E-03	7.10E-10	150	1.07E-07	12	1.99E-09	NA	ND	ND
PCB1254	2.30E-02	4.02E-09	7.7	3.10E-08	4	1.13E-08	0.00002	5.63E-04	2
		Total Risk = 8.82E-07				Hazard Index = 3.74E-02			

$$\text{Intake (mg/kg-day)} = \frac{CS \cdot IR \cdot FI \cdot EF \cdot ED \cdot CF}{BW \cdot AT \cdot AD}$$

Where:

CS	=	Exposure point concentration in soil (mg/kg)	See above
IR	=	Ingestion rate (mg soil/day)	50
FI	=	Fraction ing. from cont. source (unitless)	1.0
CF	=	Conversion factor (mg to kg)	1.00E-06
EF	=	Exposure frequency (days/yr)	250
ED	=	Exposure duration (yr)	25
BW	=	Body weight (kg)	70
AT	=	Averaging time (days/yr)	365
AD	=	Averaging duration (yr):	ED for noncarcinogens 70 for carcinogens

(b) Provisional RFD's were used for 2-hexanone and iron

NA/ND = Not Available/Not Determined

Table C1-9
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Inhalation of Air (Particulates)
Future Industrial Worker
Central Shops Burning/Rubble Pit (631-5G)

Chemicals of Potential Concern	Contaminant concentration in soil (mg/kg)	Exposure Point Concentration In air (mg/m^3)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation				
			Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
2-Hexanone Anthracene Arsenic Benzo (g,h,i)perylene Beryllium Iron OCDD PCB1254	2.28E-04	2.28E-11	1.59E-12	NA	ND	ND	4.46E-12	0.00143	3.12E-09	100
	5.54E-04	5.54E-11	3.87E-12	NA	ND	ND	1.08E-11	NA	ND	ND
	2.38E+00	2.38E-07	1.66E-08	50	8.31E-07	98	4.66E-08	NA	ND	ND
	4.45E-04	4.45E-11	3.11E-12	NA	ND	ND	8.71E-12	NA	ND	ND
	1.61E-01	1.61E-08	1.13E-09	8.4	9.45E-09	1	3.15E-09	NA	ND	ND
	2.02E+04	2.02E-03	1.41E-04	NA	ND	ND	3.96E-04	NA	ND	ND
	4.06E-03	4.06E-10	2.84E-11	150	4.26E-09	1	7.95E-11	NA	ND	ND
	2.30E-02	2.30E-09	1.61E-10	NA	ND	ND	4.51E-10	NA	ND	ND
				Total Risk = 8.45E-07			Hazard Index = 3.12E-09			

Inhalation Intake (mg/kg-day) =

$$\frac{CA \cdot IR \cdot ET \cdot EF \cdot ED}{BW \cdot AT \cdot AD}$$

Where:

CA	=	Exposure point concentration in air (mg/m ³)	See above
IR	=	Inhalation rate (m ³ /hr)	2.5
ET	=	Exposure time (hr/day)	8
EF	=	Exposure frequency (days/yr)	250
ED	=	Exposure duration (yr)	25
BW	=	Body weight (kg)	70
AT	=	Averaging time (days/yr)	365
AD	=	Averaging duration (yr):	ED
			for noncarcinogens
			for carcinogens
			70

Exposure point concentration in the air, CA (mg/m³) =

$$CS \cdot ADL$$

Where:

CS	=	Contaminant concentration in soil (mg/kg)	See above
ADL	=	Atmospheric dust loading (kg/m ³)	1.00E-07

(b) Provisional RFD's were used for aluminum and Iron

NA/ND = Not Available/Not Determined

Table C1-10
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Ingestion of Groundwater
Future Industrial Worker
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Concentration (mg/L)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation			
		Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Ingestion Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient
Aluminum	4.12E+00	1.44E-02	NA	ND	ND	4.03E-02	1	4.03E-02
Arsenic	1.32E-03	4.61E-06	1.5	6.91E-06	52	1.29E-05	0.0003	4.30E-02
Beryllium	4.10E-04	1.43E-06	4.3	6.16E-06	46	4.01E-06	0.005	8.02E-04
Bis (2-ethylhexyl)phthalate	2.10E-03	7.34E-06	0.014	1.03E-07	1	2.06E-05	0.02	1.03E-03
Bromodichloromethane	3.00E-04	1.05E-06	0.062	6.50E-08	0	2.94E-06	0.02	1.47E-04
Chloroform	1.15E-03	4.02E-06	0.0061	2.45E-08	0	1.13E-05	0.01	1.13E-03
Dibromochloromethane	1.80E-04	6.29E-07	0.084	5.28E-08	0	1.76E-06	0.02	8.81E-05
Iron	7.37E+01	2.58E-01	NA	ND	ND	7.22E-01	0.3	2.41E+00
		Total Risk = 1.33E-05			Hazard Index = 2.49E+00			

Absorbed Dose (mg/kg-day) =

$$\frac{CW \cdot IR \cdot EF \cdot ED}{BW \cdot AT \cdot AD}$$

Where:

CW	=	Chemical concentration in water (mg/L)	See above
IR	=	Ingestion rate (L/day)	1.0
EF	=	Exposure frequency (days/yr)	250
ED	=	Exposure duration (yr)	25
BW	=	Body weight (kg)	70
AT	=	Averaging time (days/yr)	365
AD	=	Averaging duration (yr):	ED
			for noncarcinogens
			for carcinogens

(b) Provisional RFD's were used for aluminum and Iron

NA/ND = Not Available/Not Determined

Table C1-11
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Dermal Contact with Soil
Future Resident
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Concentration (mg/kg)	ABS Factor	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation				
			Absorbed Dose (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Absorbed Dose (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
2-Hexanone Anthracene Arsenic Benzo (g,h,i)perylene Beryllium Iron OCDD PCB1254	2.28E-04	0.01	1.52E-11	NA	ND	ND	8.37E-11	0.04	2.09E-09	0
	5.54E-04	0.01	3.69E-11	NA	ND	ND	2.03E-10	0.3	6.78E-10	0
	2.38E+00	0.001	1.59E-08	1.5	2.38E-08	29	8.73E-08	0.0003	2.91E-04	9
	4.45E-04	0.01	2.97E-11	NA	ND	ND	1.63E-10	0.00002	8.17E-06	0
	1.61E-01	0.001	1.07E-09	4.3	4.62E-09	6	5.91E-09	0.005	1.18E-06	0
	2.02E+04	0.001	1.35E-04	NA	ND	ND	7.42E-04	0.3	2.47E-03	77
	4.06E-03	0.01	2.71E-10	150	4.07E-08	50	1.49E-09	NA	ND	ND
	2.30E-02	0.01	1.54E-09	7.7	1.18E-08	15	8.45E-09	0.00002	4.23E-04	13
				Total Risk = 8.09E-08			Hazard Index = 3.20E-03			

$$\text{Absorbed Dose (mg/kg-day)} = \frac{CS \cdot SAa \cdot AF \cdot ABS \cdot EF \cdot EDa \cdot CF}{BWa \cdot AT \cdot AD} + \frac{CS \cdot SAc \cdot AF \cdot ABS \cdot EF \cdot EDc \cdot CF}{BWc \cdot AT \cdot AD}$$

Where:

CS	=	Exposure point concentration in soil (mg/kg)	Adult	Child
SAa and SAc	=	Skin surface area available for contact (cm ² /event)	See above	See Above
ABS	=	Absorption factor (unitless)	5000	1800
AF	=	Adherence factor (mg/cm ²)	0.2	0.2
EF	=	Exposure frequency (events/yr)	350	350
EDa and EDc	=	Exposure duration (yr)	24	6
CF	=	Conversion factor (kg to mg)	1.00E-06	1.00E-06
BW	=	Body weight (kg)	70	15
AT	=	Averaging time (days/yr)	365	365
AD	=	Averaging duration (yr):	ED	ED
			70	70

(b) Provisional RFD's were used for 2-hexanone and iron

NA/ND = Not Available/Not Determined

Table C1-12
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Ingestion of Soil
Future Resident
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Concentration (mg/kg)	Carcinogenic Risk Calculation				Non-Carcinogenic Hazard Calculation			
		Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
2-Hexanone Anthracene Arsenic Benzo (g,h,i)perylene Beryllium Iron OCDD PCB1254	2.28E-04	3.57E-10	NA	ND	ND	3.23E-09	0.04	8.07E-08	0
	5.54E-04	8.67E-10	NA	ND	ND	7.84E-09	0.3	2.61E-08	0
	2.38E+00	3.72E-06	1.5	5.59E-06	71	3.37E-05	0.0003	1.12E-01	10
	4.45E-04	6.97E-10	NA	ND	ND	6.30E-09	0.00002	3.15E-04	0
	1.61E-01	2.52E-07	4.3	1.08E-06	14	2.28E-06	0.005	4.56E-04	0
	2.02E+04	3.17E-02	NA	ND	ND	2.86E-01	0.3	9.54E-01	88
	4.06E-03	6.36E-09	150	9.54E-07	12	5.75E-08	NA	ND	ND
	2.30E-02	3.60E-08	7.7	2.78E-07	4	3.26E-07	0.00002	1.63E-02	2
	Total Risk = 7.90E-06					Hazard Index = 1.08E+00			

$$\text{Intake (mg/kg-day)} =$$

$$\frac{CS \cdot IRa \cdot FI \cdot EF \cdot EDa \cdot CFc}{BWa \cdot AT \cdot AD}$$

$$+$$

$$\frac{CS \cdot IRc \cdot FI \cdot EF \cdot EDc \cdot CFc}{BWc \cdot AT \cdot AD}$$

Where:

CS	=	Exposure point concentration in soil (mg/kg)	Adult	See above	Child	See above
IRa and IRc	=	Ingestion rate (mg soil/day)	100	100	200	200
FI	=	Fraction ingested from contaminated source (unitless)	1.0	1.0	1.0	1.0
CFc	=	Conversion factor (kg to mg)	1.00E-06	1.00E-06	1.00E-06	1.00E-06
EF	=	Exposure frequency (days/yr)	350	350	350	350
EDa and EDc	=	Exposure duration (yr)	24	24	6	6
BWa and BWc	=	Body weight (kg)	70	70	15	15
AT	=	Averaging time (days/yr)	365	365	365	365
AD	=	Averaging duration (yr):	ED	ED	ED	ED
						70

(b) Provisional RFD's were used for 2-hexanone and iron

NA/ND = Not Available/Not Determined

Table C1-13
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Inhalation of Groundwater (Vapor Phase)
Future Resident
Central Shops Burning/Rubble Pit (631-SG)

Chemicals of Potential Concern	Exposure Point Concentration (mg/L)	Carcinogenic Risk Calculation				Non-Carcinogenic Hazard Calculation			
		Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Ingestion Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
Aluminum **	4.12E+00	ND	NA	ND	ND	ND	1	ND	ND
Arsenic **	1.32E-03	ND	1.5	ND	ND	ND	0.0003	ND	ND
Beryllium **	4.10E-04	ND	4.3	ND	ND	ND	0.005	ND	ND
Bis (2-ethylhexyl)phthalate	2.10E-03	3.12E-05	0.014	4.37E-07	42	1.92E-04	0.02	9.59E-03	43
Bromodichloromethane	3.00E-04	4.46E-06	0.062	2.77E-07	27	2.74E-05	0.02	1.37E-03	6
Chloroform	1.15E-03	1.71E-05	0.0061	1.04E-07	10	1.05E-04	0.01	1.05E-02	47
Dibromochloromethane	1.80E-04	2.68E-06	0.084	2.25E-07	22	1.64E-05	0.02	8.22E-04	4
Iron **	7.37E+01	ND	NA	ND	ND	ND	0.3	ND	ND
		Total Risk = 1.04E-06				Hazard Index = 2.23E-02			

* For the case of intake from the inhalation of VOCs released from groundwater, the intake was calculated using the equation for the ingestion of groundwater at 2 L/day (1 L/day for the child) and assuming this value as the inhalation intake.

** Intakes not calculated for inorganics

$$\text{Absorbed Dose (mg/kg-day)} = \frac{CW \cdot IR_a \cdot EF \cdot ED_a}{BW_a \cdot AT \cdot AD} + \frac{CW \cdot IR_c \cdot EF \cdot ED_c}{BW_c \cdot AT \cdot AD}$$

Where:

	Chemical concentration in water (mg/L)	Adult	Child
CW		See above	See above
IRa and IRC	Ingestion rate (L/day)	2.0	1.0
EF	Exposure frequency (days/yr)	350	350
EDa and EDc	Exposure duration (yr)	24	6
BWa and BWc	Body weight (kg)	70	15
AT	Averaging time (days/yr)	365	365
AD	Averaging duration (yr):	ED	ED
		70	70
			for noncarcinogens
			for carcinogens

(b) Provisional RFD's were used for aluminum and iron

NA/ND = Not Available/Not Determined

Table C1-14
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Dermal Contact with Groundwater
Future Resident
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Concentration (mg/L)	Dermal PC, (a) (cm/hr)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation				
			Absorbed Dose (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Absorbed Dose (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
Aluminum	4.12E+00	1.55E-03	1.71E-04	NA	ND	ND	9.45E-04	1	9.45E-04	2
Arsenic	1.32E-03	1.55E-03	5.48E-08	1.5	8.21E-08	39	3.03E-07	0.0003	1.01E-03	2
Beryllium	4.10E-04	1.55E-03	1.70E-08	4.3	7.32E-08	35	9.41E-08	0.005	1.88E-05	0
Bis (2-ethylhexyl)phthalate	2.10E-03	3.30E-02	1.86E-06	0.014	2.60E-08	12	1.03E-05	0.02	5.14E-04	1
Bromodichloromethane	3.00E-04	5.80E-03	4.66E-08	0.062	2.89E-09	1	2.58E-07	0.02	1.29E-05	0
Chloroform	1.15E-03	1.30E-01	4.00E-06	0.0061	2.44E-08	12	2.21E-05	0.01	2.21E-03	4
Dibromochloromethane	1.80E-04	3.90E-03	1.88E-08	0.084	1.58E-09	1	1.04E-07	0.02	5.20E-06	0
Iron	7.37E+01	1.55E-03	3.06E-03	NA	ND	ND	1.69E-02	0.3	5.64E-02	92
			Total Risk =			2.10E-07	Hazard Index =			
							6.12E-02			

$$\text{Absorbed Dose (mg/kg-day)} = \frac{\text{CW} \cdot \text{SAa} \cdot \text{PC} \cdot \text{ET} \cdot \text{EF} \cdot \text{EDa} \cdot \text{CF}}{\text{BWa} \cdot \text{AT} \cdot \text{AD}} + \frac{\text{CW} \cdot \text{SAC} \cdot \text{PC} \cdot \text{ET} \cdot \text{EF} \cdot \text{EDc} \cdot \text{CF}}{\text{BWc} \cdot \text{AT} \cdot \text{AD}}$$

Where:

CW	=	Chemical concentration in water (mg/L)	Adult	See above	Child	See above
SAa and SAC	=	Skin surface area available for contact (cm ² /event)		20000		7300
PC	=	Dermal permeability constant (cm/hr)		See above		See above
ET	=	Exposure time (hr/day)		0.2		0.2
EF	=	Exposure frequency (days/yr)		350		350
EDa and EDc	=	Exposure duration (yr)		24		6
CF	=	Conversion factor (1 Liter/1000cm ³)		1.00E-03		1.00E-03
BWa and BWc	=	Body weight (kg)		70		15
AT	=	Averaging time (days/yr)		365		365
AD	=	Averaging duration (yr):		ED		ED
				70		70

for noncarcinogens
for carcinogens

(a) All values estimated except for chloroform which was a measured value.
Permeability constant for aluminum, arsenic, beryllium, and iron is the measured value for water (Reference: EPA, 1992b)

(b) Provisional RFD's were used for aluminum and iron

NA/ND = Not Available/Not Determined

Table C1-14
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Dermal Contact with Groundwater
Future Resident
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Concentration (mg/L)	Dermal PC, (a) (cm/hr)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation				
			Absorbed Dose (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Absorbed Dose (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
Aluminum	4.12E+00	1.55E-03	1.71E-04	NA	ND	ND	9.45E-04	1	9.45E-04	2
Arsenic	1.32E-03	1.55E-03	5.48E-08	1.5	8.21E-08	39	3.03E-07	0.0003	1.01E-03	2
Beryllium	4.10E-04	1.55E-03	1.70E-08	4.3	7.32E-08	35	9.41E-08	0.005	1.88E-05	0
Bis (2-ethylhexyl)phthalate	2.10E-03	3.30E-02	1.86E-06	0.014	2.60E-08	12	1.03E-05	0.02	5.14E-04	1
Bromodichloromethane	3.00E-04	5.80E-03	4.66E-08	0.062	2.89E-09	1	2.58E-07	0.02	1.29E-05	0
Chloroform	1.15E-03	1.30E-01	4.00E-06	0.0061	2.44E-08	12	2.21E-05	0.01	2.21E-03	4
Dibromochloromethane	1.80E-04	3.90E-03	1.88E-08	0.084	1.58E-09	1	1.04E-07	0.02	5.20E-06	0
Iron	7.37E+01	1.55E-03	3.06E-03	NA	ND	ND	1.69E-02	0.3	5.64E-02	92
Total Risk = 2.10E-07						Hazard Index = 6.12E-02				

$$\text{Absorbed Dose (mg/kg-day)} = \frac{CW \cdot SAa \cdot PC \cdot ET \cdot EF \cdot EDa \cdot CF}{BWa \cdot AT \cdot AD} + \frac{CW \cdot SAC \cdot PC \cdot ET \cdot EF \cdot EDc \cdot CF}{BWc \cdot AT \cdot AD}$$

Where:

CW	=	Chemical concentration in water (mg/L)	Adult	See above	Child	See above
SAa and SAC	=	Skin surface area available for contact (cm ² /event)		20000		7300
PC	=	Dermal permeability constant (cm/hr)		See above		See above
ET	=	Exposure time (hr/day)		0.2		0.2
EF	=	Exposure frequency (days/yr)		350		350
EDa and EDc	=	Exposure duration (yr)		24		6
CF	=	Conversion factor (1 Liter/1000cm ³)		1.00E-03		1.00E-03
BWa and BWc	=	Body weight (kg)		70		15
AT	=	Averaging time (days/yr)		365		365
AD	=	Averaging duration (yr):		ED		ED
				70		70

(a) All values estimated except for chloroform which was a measured value.

Permeability constant for aluminum, arsenic, beryllium, and iron is the measured value for water (Reference: EPA, 1992b)

(b) Provisional RFD's were used for aluminum and iron

NA/ND = Not Available/Not Determined

Table C1-15
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Inhalation of Air (Particulates)
Future Resident
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Contaminant Concentration in Soil (mg/kg)	Exposure Point Concentration in air (mg/m^3)	Carcinogenic Risk Calculation				Non-Carcinogenic Hazard Calculation			
			Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
2-Hexanone Anthracene Arsenic Benzo (g,h,i)pe-ylene Beryllium Iron OCDD PCB1254	2.28E-04	2.28E-11	3.58E-12	NA	ND	ND	3.01E-11	0.00143	2.11E-08	100
	5.54E-04	5.54E-11	8.70E-12	NA	ND	ND	7.32E-11	NA	ND	ND
	2.38E+00	2.38E-07	3.74E-08	50	1.87E-06	98	3.14E-07	NA	ND	ND
	4.45E-04	4.45E-11	6.99E-12	NA	ND	ND	5.88E-11	NA	ND	ND
	1.61E-01	1.61E-08	2.53E-09	8.4	2.12E-08	1	2.13E-08	NA	ND	ND
	2.02E+04	2.02E-03	3.18E-04	NA	ND	ND	2.67E-03	NA	ND	ND
	4.06E-03	4.06E-10	6.38E-11	150	9.58E-09	1	5.37E-10	NA	ND	ND
	2.30E-02	2.30E-09	3.62E-10	NA	ND	ND	3.04E-09	NA	ND	ND
	Total Risk = 1.90E-06						Hazard Index = 2.11E-08			

Inhalation Intake (mg/kg-day) =

Where:

$$\frac{CA \cdot IRa \cdot ETa \cdot EF \cdot EDa}{BWa \cdot AT \cdot AD} + \frac{CA \cdot IRC \cdot ETc \cdot EF \cdot EDc}{BWc \cdot AT \cdot AD}$$

CA	=	Exposure point concentration in air (mg/m ³)	Adult	See above	Child	See above
IRa and IRC	=	Inhalation rate (m ³ /hr)		0.83		1
ETa and ETc	=	Exposure time (hr/day)		15		18
EF	=	Exposure frequency (days/yr)		350		350
EDa and EDc	=	Exposure duration (yr)		24		6
BWa and BWc	=	Body weight (kg)		70		15
AT	=	Averaging time (days/yr)		365		365
AD	=	Averaging duration (yr):		ED		ED
				70		70

for noncarcinogens
for carcinogens

Exposure point concentration in the air, CA (mg/m³) =

Where:

$$CS \cdot ADL$$

CS	=	Contaminant concentration in soil (mg/kg)
ADL	=	Atmospheric dust loading (kg/m ³)

(b) Provisional RFD's were used for 2-hexanone and Iron

NA/ND = Not Available/Not Determined

Table C-1-16
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Ingestion of Groundwater
Future Resident
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Concentration (mg/L)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation			
		Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Ingestion Intake (mg/kg-day)	Reference Dose (mg/kg-day)	% of Total Hazard
Aluminum	4.12E+00	6.12E-02	NA	ND	ND	3.76E-01	1	2
Arsenic	1.32E-03	1.96E-05	1.5	2.94E-05	52	1.20E-04	0.0003	2
Beryllium	4.10E-04	6.10E-06	4.3	2.62E-05	46	3.74E-05	0.005	0
Bis (2-ethylhexyl)phthalate	2.10E-03	3.12E-05	0.014	4.37E-07	1	1.92E-04	0.02	0
Bromodichloromethane	3.00E-04	4.46E-06	0.062	2.77E-07	0	2.74E-05	0.02	0
Chloroform	1.15E-03	1.71E-05	0.0061	1.04E-07	0	1.05E-04	0.01	0
Dibromochloromethane	1.80E-04	2.68E-06	0.084	2.25E-07	0	1.64E-05	0.02	0
Iron	7.37E+01	1.10E+00	NA	ND	ND	6.73E+00	0.3	97
		Total Risk = 5.67E-05			Hazard Index = 2.33E+01			

Absorbed Dose (mg/kg-day) =

$$\frac{CW \cdot IRa \cdot EF \cdot EDa}{BWA \cdot AT \cdot AD}$$

$$+ \frac{CW \cdot IRc \cdot EF \cdot EDc}{BWc \cdot AT \cdot AD}$$

Where:

CW	=	Chemical concentration in water (mg/L)	Adult	See above	Child	See above
IRa and IRc	=	Ingestion rate (L/day)		2.0		1.0
EF	=	Exposure frequency (days/yr)		350		350
EDa and EDc	=	Exposure duration (yr)		24		6
BWa and BWc	=	Body weight (kg)		70		15
AT	=	Averaging time (days/yr)		365		365
AD	=	Averaging duration (yr):		ED		ED
				70		70

for noncarcinogens
for carcinogens

NA/ND = Not Available/Not Determined

Table C1-17
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Ingestion of Produce, Leafy
Future Resident
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Conc. in Soil (mg/kg)	LOG Kow	Koc	RCF	BCF Leafy	Leafy Produce Conc. (mg/kg)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation			
							Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient
2-Hexanone	2.28E-04	1.38	14.8	1.17	6.17106	2.81E-04	8.99E-09	NA	ND	ND	5.00E-08	0.04	1.25E-06
Anthracene	5.54E-04	4.54	14000	95.40	0.09202	1.02E-05	3.26E-10	NA	ND	ND	1.81E-09	0.3	6.04E-09
Arsenic	2.38E+00	NA	NA	ND	0.04	1.90E-02	6.08E-07	1.5	9.12E-07	93	3.38E-06	0.0003	1.13E-02
Benzo (g,h,i)perylene	4.45E-04	6.51	160000	3110.39	0.00669	5.95E-07	1.90E-11	NA	ND	ND	1.06E-10	0.00002	5.29E-06
Beryllium	1.61E-01	NA	NA	ND	0.01	3.22E-04	1.03E-08	4.3	4.42E-08	5	5.72E-08	0.005	1.14E-05
Iron	2.02E+04	NA	NA	ND	0.004	1.62E+01	5.17E-04	NA	ND	ND	2.88E-03	0.3	9.59E-03
OCDD	4.06E-03	6.91	4570000	6320.57	0.00393	3.19E-06	1.02E-10	150	1.53E-08	2	5.67E-10	NA	ND
PCB1254	2.30E-02	6.94	2140000	6665.82	0.00377	1.74E-05	5.55E-10	7.7	4.27E-09	0	3.09E-09	0.00002	1.54E-04
							Total Risk = 9.8E-07			Hazard Index = 2.10E-02			

$$\text{Ingestion Intake (mg/kg-day)} = \frac{CV \cdot IRa \cdot FI \cdot EF \cdot EDa \cdot CF}{Bwa \cdot AT \cdot AD} + \frac{CV \cdot IRc \cdot FI \cdot EF \cdot EDc \cdot CF}{Bwc \cdot AT \cdot AD}$$

Where:

CV	=	Concentration in produce (mg/kg)	Adult	See above
IRa and IRc	=	Ingestion rate (g/day)	See above	42
FI	=	Fraction Ingested (unitless)	0.042	0.042
EF	=	Exposure frequency (days/yr)	350	350
CF	=	Conversion factor	0.001	0.001
EDa and EDc	=	Exposure duration (yr)	24	6
BWa and BWC	=	Body weight (kg)	70	15
AT	=	Averaging time (days/yr)	365	365
AD	=	Averaging duration (yr):	ED	ED
			for noncarcinogens	70
			for carcinogens	70

$$\text{Calculation of CV} = \frac{CS \cdot BCF \cdot CF}{\text{Where:}}$$

CS	=	Exposure point concentration in soil (mg/kg)	Leafy	See above
BCF	=	Total bioconcentration factor (mg/kg dry plant per mg/kg dry soil)	See above	See above
CF	=	Dry-to-wet conversion factor (unitless)	0.2	0.2

$$\text{Calculation of BCF (for organics), leafy} = \log(BCF) = 1.588 - 0.578 \cdot \log(Kow)$$

Where:

$$Kow = \text{Octanol / water partition coefficient (unitless)}$$

$$\log(RCF-0.82) = 0.77 \cdot \log(Kow) - 1.52$$

$$\text{Calculation of RCF (for organics)} =$$

(b) Provisional RFD's were used for 2-hexanone and iron

NAND = Not Available/Not Determined

Table C1-18
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Ingestion of Produce, Tuberos
Future Resident
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Conc. In Soil (mg/kg)	LOG Kow	Koc	RCF	BCF Tuberos	Tuberos Produce Conc. (mg/kg)	Carcinogenic Risk Calculation				Non-Carcinogenic Hazard Calculation			
							Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
2-Hexanone Anthracene Arsenic Benzo (g,h,i)perylene Beryllium Iron OCDD PCB1254	2.28E-04	1.38	14.8	1.17	3.95	2.25E-04	3.64E-08	NA	ND	ND	2.03E-07	0.04	5.06E-06	0
	5.54E-04	4.54	14000	95.40	0.34	4.72E-05	7.64E-09	NA	ND	ND	4.25E-08	0.3	1.42E-07	0
	2.38E+00	NA	NA	ND	0.006	3.57E-03	5.77E-07	1.5	8.66E-07	23	3.21E-06	0.0003	1.07E-02	15
	4.45E-04	6.51	160000	3110.39	0.97	1.08E-04	1.75E-08	NA	ND	ND	9.73E-08	0.00002	4.87E-03	7
	1.61E-01	NA	NA	ND	0.0015	6.04E-05	9.77E-09	4.3	4.20E-08	1	5.43E-08	0.005	1.09E-05	0
	2.02E+04	NA	NA	ND	0.001	5.05E+00	8.18E-04	NA	ND	ND	4.55E-03	0.3	1.52E-02	21
	4.08E-03	6.91	4570000	6320.57	0.07	7.03E-05	1.14E-08	150	1.71E-06	46	6.32E-08	NA	ND	ND
	2.30E-02	6.94	2140000	6665.82	0.16	8.98E-04	1.45E-07	7.7	1.12E-06	30	8.07E-07	0.00002	4.03E-02	57
Total Risk =							3.7E-06				Hazard Index = 7.11E-02			

$$\text{Ingestion Intake (mg/kg-day)} = \frac{CV \cdot IRa \cdot FI \cdot EF \cdot EDa \cdot CF}{BWa \cdot AT \cdot AD} + \frac{CV \cdot IRc \cdot FI \cdot EF \cdot EDc \cdot CF}{BWc \cdot AT \cdot AD}$$

Where:

CV	=	Concentration in produce (mg/kg)	Adult	See above
IRa and IRc	=	Ingestion rate (g/day)	See above	75
FI	=	Fraction Ingested (unitless)	0.119	0.119
EF	=	Exposure frequency (days/yr)	350	350
CF	=	Conversion factor	0.001	0.001
EDa and EDc	=	Exposure duration (yr)	24	6
BWa and BWc	=	Body weight (kg)	70	15
AT	=	Averaging time (days/yr)	365	365
AD	=	Averaging duration (yr):	ED	ED
CS*BCF*CF			for noncarcinogens	
			for carcinogens	

Calculation of CV =
Where:

CS	=	Exposure point concentration in soil (mg/kg)	Tuberos	See above
BCF	=	Total bioconcentration factor (mg/kg dry plant per mg/kg dry soil)	See above	See above
CF	=	Dry-to-wet conversion factor (unitless)	0.25	0.25
BCF = RCF/(Koc*oc)				

Calculation of BCF (for organics), tuberos =
Where:

Koc	=	Organic carbon / water partition coefficient (unitless)	See above	See above
oc	=	Fraction of organic carbon in soil (unitless)	See above	0.02

Calculation of RCF (for organics) =
Where:

$$\log(RCF-0.82) = 0.77 \cdot \log(Kow) - 1.52$$

Kow	=	Octanol / water partition coefficient (unitless)	See above	See above
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(b) Provisional RFD's were used for 2-hexanone and iron
NA/ND = Not Available/Not Determined

Table C1-19
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Ingestion of Produce, Fruits
Future Resident
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Conc. in Soil (mg/kg)	LOG Kow	Koc	RCF	BCF Fruits	Fruits Produce Conc. (mg/kg)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation				
							Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
2-Hexanone	2.28E-04	1.38	14.8	1.17	3.95	1.62E-04	6.51E-08	NA	ND	ND	3.60E-07	0.04	9.00E-06	0
Anthracene	5.54E-04	4.54	14000	95.40	0.34	3.40E-05	1.36E-08	NA	ND	ND	7.55E-08	0.3	2.52E-07	0
Arsenic	2.38E+00	NA	NA	ND	0.006	2.57E-03	1.03E-06	1.5	1.55E-06	23	5.71E-06	0.0003	1.90E-02	15
Benzo (g,h,i)perylene	4.45E-04	6.51	160000	3110.39	0.97	7.79E-05	3.13E-08	NA	ND	ND	1.73E-07	0.00002	8.65E-03	7
Beryllium	1.61E-01	NA	NA	ND	0.0015	4.35E-05	1.74E-08	4.3	7.50E-08	1	9.66E-08	0.005	1.93E-05	0
Iron	2.02E+04	NA	NA	ND	0.001	3.64E+00	1.46E-03	NA	ND	ND	8.08E-03	0.3	2.69E-02	21
OCDD	4.06E-03	6.91	4570000	6320.57	0.07	5.06E-05	2.03E-08	150	3.05E-06	46	1.12E-07	NA	ND	ND
PCB1254	2.30E-02	6.94	2140000	6665.82	0.16	6.45E-04	2.59E-07	7.7	1.99E-06	30	1.43E-06	0.00002	7.17E-02	57
							Total Risk = 6.7E-06			Hazard Index = 1.26E-01				

Ingestion Intake (mg/kg-day) =

$$\frac{CV \cdot IRa \cdot FI \cdot EF \cdot EDa \cdot CF}{BWa \cdot AT \cdot AD}$$

$$CV \cdot IRc \cdot FI \cdot EF \cdot EDc \cdot CF$$

$$BWc \cdot AT \cdot AD$$

Where:

CV = Concentration in produce (mg/kg)
IRa and IRc = Ingestion rate (g/day)
FI = Fraction Ingested (unitless)
EF = Exposure frequency (days/yr)
CF = Conversion factor
EDa and EDc = Exposure duration (yr)
BWa and BWc = Body weight (kg)
AT = Averaging time (days/yr)
AD = Averaging duration (yr)

Calculation of CV =

Where:

CS = Exposure point concentration in soil (mg/kg)
BCF = Total bioconcentration factor (mg/kg dry plant per mg/kg dry soil)
CF = Dry-to-wet conversion factor (unitless)
BCF = RCF / (Koc * foc)

Calculation of BCF (for organics), fruits =

Where:

Koc = Organic carbon / water partition coefficient (unitless)
foc = Fraction of organic carbon in soil (unitless)

Calculation of RCF (for organics) =

Where:

$$\log(RCF - 0.82) = 0.77 \cdot \log(Kow) - 1.52$$

Kow = Octanol / water partition coefficient (unitless)

(b) Provisional RFD's were used for 2-hexanone and Iron

NAND = Not Available/Not Determined

ing, produce, fruits

Adult See above 123
Child See above 45
0.487
350
0.001
6
15
365
ED
70
Fruits See above
See above
0.18
See above
0.02
See above

Table C1-20
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Dermal Contact with Soil
Future Resident Child Only
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Concentration (mg/kg)	ABS Factor	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation				
			Absorbed Dose (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Absorbed Dose (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
2-Hexanone Anthracene Arsenic Benzo (g,h,i)perylene Beryllium Iron OCDD PCB1254	2.28E-04	0.01	4.50E-12	NA	ND	ND	5.25E-11	0.04	1.31E-09	0
	5.54E-04	0.01	1.09E-11	NA	ND	ND	1.27E-10	0.3	4.25E-10	0
	2.38E+00	0.001	4.69E-09	1.5	7.04E-09	29	5.47E-08	0.0003	1.82E-04	9
	4.45E-04	0.01	8.78E-12	NA	ND	ND	1.02E-10	0.00002	5.12E-06	0
	1.61E-01	0.001	3.18E-10	4.3	1.37E-09	6	3.71E-09	0.005	7.41E-07	0
	2.02E+04	0.001	3.99E-05	NA	ND	ND	4.65E-04	0.3	1.55E-03	77
	4.06E-03	0.01	8.02E-11	150	1.20E-08	50	9.35E-10	NA	ND	ND
	2.30E-02	0.01	4.54E-10	7.7	3.50E-09	15	5.30E-09	0.00002	2.65E-04	13
				Total Risk = 2.39E-08			Hazard Index = 2.00E-03			

$$\text{Absorbed Dose (mg/kg-day)} = \frac{\text{CS} \cdot \text{SA} \cdot \text{AF} \cdot \text{ABS} \cdot \text{EF} \cdot \text{ED} \cdot \text{CF}}{\text{BW} \cdot \text{AT} \cdot \text{AD}}$$

Where:

CS	=	Exposure point concentration in soil (mg/kg)	See Above
SA	=	Skin surface area available for contact (cm ² /event)	1800
ABS	=	Absorption factor (unitless)	0.01 (Organics) or 0.001 (Inorganics)
AF	=	Adherence factor (mg/cm ²)	0.2
EF	=	Exposure frequency (events/yr)	350
ED	=	Exposure duration (yr)	6
CF	=	Conversion factor (kg to mg)	1.00E-06
BW	=	Body weight (kg)	15
AT	=	Averaging time (days/yr)	365
AD	=	Averaging duration (yr):	ED
			70
			for noncarcinogens
			for carcinogens

(b) Provisional RFD's were used for 2-hexanone and Iron

NA/ND = Not Available/Not Determined

Table C1-21
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Ingestion of Soil
Future Resident Child Only
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Concentration (mg/kg)	Carcinogenic Risk Calculation				Non-Carcinogenic Hazard Calculation			
		Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
2-Hexanone Anthracene Arsenic Benzo (g,h,i)perylene Beryllium Iron OCDD PCB1254	2.28E-04	2.50E-10	NA	ND	ND	2.92E-09	0.04	7.29E-08	0
	5.54E-04	6.07E-10	NA	ND	ND	7.08E-09	0.3	2.36E-08	0
	2.38E+00	2.61E-06	1.5	3.91E-06	71	3.04E-05	0.0003	1.01E-01	10
	4.45E-04	4.88E-10	NA	ND	ND	5.69E-09	0.00002	2.84E-04	0
	1.61E-01	1.76E-07	4.3	7.59E-07	14	2.06E-06	0.005	4.12E-04	0
	2.02E+04	2.22E-02	NA	ND	ND	2.59E-01	0.3	8.62E-01	88
	4.06E-03	4.45E-09	150	6.68E-07	12	5.20E-08	NA	ND	ND
	2.30E-02	2.52E-08	7.7	1.94E-07	4	2.94E-07	0.00002	1.47E-02	2
	Total Risk = 5.63E-06				Hazard Index = 9.78E-01				

$$\text{Intake (mg/kg-day)} = \frac{CS \cdot IR \cdot FI \cdot EF \cdot ED \cdot CF}{BW \cdot AT \cdot AD}$$

Where:

CS	=	Exposure point concentration in soil (mg/kg)	See above
IR	=	Ingestion rate (mg soil/day)	200
FI	=	Fraction ingested from contaminated source (unitless)	1.0
CF	=	Conversion factor (kg to mg)	1.00E-06
EF	=	Exposure frequency (days/yr)	350
ED	=	Exposure duration (yr)	6
BW	=	Body weight (kg)	15
AT	=	Averaging time (days/yr)	365
AD	=	Averaging duration (yr):	ED for noncarcinogens 70 for carcinogens

(b) Provisional RFD's were used for 2-hexanone and iron

NA/ND = Not Available/Not Determined

Table C1-22
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Inhalation of Groundwater (Vapor Phase)
Future Resident Child Only
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Concentration (mg/L)	Carcinogenic Risk Calculation				Non-Carcinogenic Hazard Calculation			
		Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Ingestion Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
Aluminum **	4.12E+00	ND	NA	ND	ND	ND	1	ND	ND
Arsenic **	1.32E-03	ND	1.5	ND	ND	ND	0.0003	ND	ND
Beryllium **	4.10E-04	ND	4.3	ND	ND	ND	0.005	ND	ND
Bis (2-ethylhexyl)phthalate	2.10E-03	1.15E-05	0.014	1.61E-07	42	1.34E-04	0.02	6.72E-03	43
Bromodichloromethane	3.00E-04	1.64E-06	0.062	1.02E-07	27	1.92E-05	0.02	9.59E-04	6
Chloroform	1.15E-03	6.30E-06	0.0061	3.84E-08	10	7.35E-05	0.01	7.35E-03	47
Dibromochloromethane	1.80E-04	9.86E-07	0.084	8.28E-08	22	1.15E-05	0.02	5.75E-04	4
Iron **	7.37E+01	ND	NA	ND	ND	ND	0.3	ND	ND
		Total Risk =			3.84E-07	Hazard Index =			1.56E-02

* For the case of Intake from the Inhalation of VOCs released from groundwater, the Intake was calculated using the equation for the Ingestion of groundwater at 2 L/day (1 L/day for the child) and assuming this value as the Inhalation Intake.

** Intakes not calculated for Inorganics

$$\text{Absorbed Dose (mg/kg-day)} = \frac{CW \cdot IR \cdot EF \cdot ED}{BW \cdot AT \cdot AD}$$

Where:

CW	=	Chemical concentration in water (mg/L)	See above
IR	=	Ingestion rate (L/day)	1.0
EF	=	Exposure frequency (days/yr)	350
ED	=	Exposure duration (yr)	6
BW	=	Body weight (kg)	15
AT	=	Averaging time (days/yr)	365
AD	=	Averaging duration (yr):	ED
			70

for noncarcinogens
for carcinogens

(b) Provisional RFD's were used for aluminum and Iron

NA/ND = Not Available/Not Determined

Table C1-23
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Dermal Contact with Groundwater
Future Resident Child Only
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Concentration (mg/L)	Dermal PC, (a) (cm/hr)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation				
			Absorbed Dose (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Absorbed Dose (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
Aluminum	4.12E+00	1.55E-03	5.11E-05	NA	ND	ND	5.96E-04	1	5.96E-04	2
Arsenic	1.32E-03	1.55E-03	1.64E-08	1.5	2.45E-08	39	1.91E-07	0.0003	6.36E-04	2
Beryllium	4.10E-04	1.55E-03	5.08E-09	4.3	2.19E-08	35	5.93E-08	0.005	1.19E-05	0
Bis (2-ethylhexyl)phthalate	2.10E-03	3.30E-02	5.55E-07	0.014	7.77E-09	12	6.47E-06	0.02	3.24E-04	1
Bromodichloromethane	3.00E-04	5.80E-03	1.39E-08	0.062	8.63E-10	1	1.62E-07	0.02	8.12E-06	0
Chloroform	1.15E-03	1.30E-01	1.20E-06	0.0061	7.30E-09	12	1.40E-05	0.01	1.40E-03	4
Dibromochloromethane	1.80E-04	3.90E-03	5.62E-09	0.084	4.72E-10	1	6.55E-08	0.02	3.28E-06	0
Iron	7.37E+01	1.55E-03	9.14E-04	NA	ND	ND	1.07E-02	0.3	3.56E-02	92
			Total Risk = 6.28E-08			Hazard Index = 3.85E-02				

$$\text{Absorbed Dose (mg/kg-day)} = \frac{C_W \cdot S_A \cdot P_C \cdot E_T \cdot E_F \cdot E_D \cdot C_F}{B_W \cdot A_T \cdot A_D}$$

Where:

CW	=	Chemical concentration in water (mg/L)	See above
SA	=	Skin surface area available for contact (cm ² /event)	7300
PC	=	Dermal permeability constant (cm/hr)	See above
ET	=	Exposure time (hr/day)	0.2
EF	=	Exposure frequency (days/yr)	350
ED	=	Exposure duration (yr)	6
CF	=	Conversion factor (1 Liter/1000cm ³)	1.00E-03
BW	=	Body weight (kg)	15
AT	=	Averaging time (days/yr)	365
AD	=	Averaging duration (yr):	ED
			70

for noncarcinogens
for carcinogens

(a) All values estimated except for chloroform which was a measured value.
 Permeability constant for aluminum, arsenic, beryllium, and iron is the measured value for water (Reference: EPA, 1992b)

(b) Provisional RFD's were used for aluminum and iron

NA/ND = Not Available/Not Determined

Table C1-24
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Inhalation of Air (Particulates)
Future Resident Child Only
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Contaminant Concentration in Soil (mg/kg)	Exposure Point Concentration in air (mg/m^3)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation				
			Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard
2-Hexanone Anthracene Arsenic Benzo (g,h,i)perylene Beryllium Iron OCDD PCB1254	2.28E-04	2.28E-11	2.25E-12	NA	ND	ND	2.62E-11	0.00143	1.83E-08	100
	5.54E-04	5.54E-11	5.46E-12	NA	ND	ND	6.37E-11	NA	ND	ND
	2.38E+00	2.38E-07	2.35E-08	50	1.17E-06	98	2.74E-07	NA	ND	ND
	4.45E-04	4.45E-11	4.39E-12	NA	ND	ND	5.12E-11	NA	ND	ND
	1.61E-01	1.61E-08	1.59E-09	8.4	1.33E-08	1	1.85E-08	NA	ND	ND
	2.02E+04	2.02E-03	1.99E-04	NA	ND	ND	2.33E-03	NA	ND	ND
	4.06E-03	4.06E-10	4.01E-11	150	6.01E-09	1	4.68E-10	NA	ND	ND
	2.30E-02	2.30E-09	2.27E-10	NA	ND	ND	2.65E-09	NA	ND	ND
				Total Risk = 1.19E-06			Hazard Index = 1.83E-08			

Inhalation Intake (mg/kg-day) =

$$\frac{CA \cdot IR \cdot ET \cdot EF \cdot ED}{BW \cdot AT \cdot AD}$$

Where:

CA	=	Exposure point concentration in air (mg/m ³)	See above
IR	=	Inhalation rate (m ³ /hr)	1
ET	=	Exposure time (hr/day)	18
EF	=	Exposure frequency (days/yr)	350
ED	=	Exposure duration (yr)	6
BW	=	Body weight (kg)	15
AT	=	Averaging time (days/yr)	365
AD	=	Averaging duration (yr):	ED
			70

Exposure point concentration in the air, CA (mg/m³) =

$$CS \cdot ADL$$

Where:

CS	=	Contaminant concentration in soil (mg/kg)	See above
ADL	=	Atmospheric dust loading (kg/m ³)	1.00E-07

(b) Provisional RFD's were used for 2-hexanone and Iron

NA/ND = Not Available/Not Determined

Table C1-25
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Ingestion of Groundwater
Future Resident Child Only
Central Shops Burning/Rubble Pit (631-SG)

Chemicals of Potential Concern	Exposure Point Concentration (mg/L)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation			
		Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Ingestion Intake (mg/kg-day)	Reference Dose (mg/kg-day)	Hazard Quotient
Aluminum	4.12E+00	2.26E-02	NA	ND	ND	2.63E-01	1	2.63E-01
Arsenic	1.32E-03	7.23E-06	1.5	1.08E-05	52	8.43E-05	0.0003	2.81E-01
Beryllium	4.10E-04	2.25E-06	4.3	9.66E-06	46	2.62E-05	0.005	5.24E-03
Bis (2-ethylhexyl)phthalate	2.10E-03	1.15E-05	0.014	1.61E-07	1	1.34E-04	0.02	6.72E-03
Bromodichloromethane	3.00E-04	1.64E-06	0.062	1.02E-07	0	1.92E-05	0.02	9.59E-04
Chloroform	1.15E-03	6.30E-06	0.0061	3.84E-08	0	7.35E-05	0.01	7.35E-03
Dibromochloromethane	1.80E-04	9.86E-07	0.084	8.28E-08	0	1.15E-05	0.02	5.75E-04
Iron	7.37E+01	4.04E-01	NA	ND	ND	4.71E+00	0.3	1.57E+01
		Total Risk = 2.09E-05			Hazard Index = 1.63E+01			

Absorbed Dose (mg/kg-day) =

$$\frac{CW \cdot IR \cdot EF \cdot ED}{BW \cdot AT \cdot AD}$$

Where:

CW	=	Chemical concentration in water (mg/L)	See above
IR	=	Ingestion rate (L/day)	1.0
EF	=	Exposure frequency (days/yr)	350
ED	=	Exposure duration (yr)	6
BW	=	Body weight (kg)	15
AT	=	Averaging time (days/yr)	365
AD	=	Averaging duration (yr):	ED for noncarcinogens 70 for carcinogens

NA/ND = Not Available/Not Determined

Table C1-26
Rf/E Carcinogenic Risk and Noncarcinogenic Hazard via
Ingestion of Produce, Leafy
Future Resident Child Only
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Conc. In Soil (mg/kg)	LOG Kow	Koc	RCF	BCF Leafy	Leafy Produce Conc. (mg/kg)	Carcinogenic Risk Calculation				Non-Carcinogenic Hazard Calculation					
							Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard		
2-Hexanone Anthracene Arsenic Benzo (g,h,i)perylene Beryllium Iron OCDD PCB1254	2.28E-04	1.38	14.8	1.17	6.17106	2.81E-04	2.72E-09	NA	ND	ND	3.17E-08	0.04	7.93E-07	0		
	5.54E-04	4.54	14000	95.40	0.09202	1.02E-05	9.85E-11	NA	ND	ND	1.15E-09	0.3	3.83E-09	0		
	2.38E+00	NA	NA	ND	0.04	1.90E-02	1.84E-07	1.5	2.76E-07	93	2.15E-06	0.0003	7.15E-03	54		
	4.45E-04	6.51	160000	3110.39	0.00669	5.95E-07	5.75E-12	NA	ND	ND	6.71E-11	0.00002	3.36E-06	0		
	1.61E-01	NA	NA	ND	0.01	3.22E-04	3.11E-09	4.3	1.34E-08	5	3.63E-08	0.005	7.26E-06	0		
	2.02E+04	NA	NA	ND	0.004	1.62E+01	1.56E-04	NA	ND	ND	1.82E-03	0.3	6.08E-03	46		
	4.06E-03	6.91	4570000	6320.57	0.00393	3.19E-06	3.08E-11	150	4.63E-09	2	3.60E-10	NA	ND	ND		
	2.30E-02	6.94	2140000	6665.82	0.00377	1.74E-05	1.88E-10	7.7	1.29E-09	0	1.98E-09	0.00002	9.80E-05	1		
Total Risk =							3.0E-07				Hazard Index =				1.33E-02	

$$\text{Ingestion Intake (mg/kg-day)} = \frac{\text{CV} \cdot \text{IR} \cdot \text{FI} \cdot \text{EF} \cdot \text{ED} \cdot \text{CF}}{\text{BW} \cdot \text{AT} \cdot \text{AD}}$$

Where:

CV = Concentration in produce (mg/kg)
IR = Ingestion rate (g/day)
FI = Fraction ingested (unitless)
EF = Exposure frequency (days/yr)
CF = Conversion factor
ED = Exposure duration (yr)
BW = Body weight (kg)
AT = Averaging time (days/yr)
AD = Averaging duration (yr):
for noncarcinogens
for carcinogens

$$\text{CS} \cdot \text{BCF} \cdot \text{CF}$$

Calculation of CV =
Where:

CS = Exposure point concentration in soil (mg/kg)
BCF = Total bioconcentration factor (mg/kg dry plant per mg/kg dry soil)
CF = Dry-to-wet conversion factor (unitless)

$$\log(\text{BCF}) = 1.588 - 0.578 \cdot \log(\text{Kow})$$

Calculation of BCF (for organics), leafy =
Where:

Kow = Octanol / water partition coefficient (unitless)

$$\log(\text{RCF} \cdot 0.82) = 0.77 \cdot \log(\text{Kow}) - 1.52$$

Calculation of RCF (for organics) =

(b) Provisional RFD's were used for 2-hexanone and Iron

NAND = Not Available/Not Determined

ing, produce, leafy

Table C1-27
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Ingestion of Produce, Tuberos
Future Resident Child Only
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Conc. In Soil (mg/kg)	LOG Kow	Koc	RCF	BCF Tuberosus	Tuberosus Produce Conc. (mg/kg)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation					
							Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard	
2-Hexanone Anthracene Arsenic Benzo (g,h,i)perylene Beryllium Iron OCDD PCB1254	2.28E-04	1.38	14.8	1.17	3.95	2.25E-04	1.10E-08	NA	ND	ND	1.28E-07	0.04	3.21E-06	0	
	5.54E-04	4.54	14000	95.40	0.34	4.72E-05	2.31E-09	NA	ND	ND	2.69E-08	0.3	8.97E-08	0	
	2.38E+00	NA	NA	ND	0.006	3.57E-03	1.75E-07	1.5	2.62E-07	23	2.04E-06	0.0003	6.79E-03	15	
	4.45E-04	6.51	160000	3110.39	0.97	1.08E-04	5.29E-09	NA	ND	ND	6.17E-08	0.00002	3.08E-03	7	
	1.61E-01	NA	NA	ND	0.0015	6.04E-05	2.95E-09	4.3	1.27E-08	1	3.44E-08	0.005	6.89E-06	0	
	2.02E+04	NA	NA	ND	0.001	5.05E+00	2.47E-04	NA	ND	ND	2.88E-03	0.3	9.61E-03	21	
	4.06E-03	6.91	4570000	6320.57	0.07	7.03E-05	3.44E-09	150	5.15E-07	46	4.01E-08	NA	ND	ND	
	2.30E-02	6.94	2140000	6665.82	0.16	8.96E-04	4.38E-08	7.7	3.38E-07	30	5.11E-07	0.00002	2.56E-02	57	
							Total Risk =			1.1E-06		Hazard Index =			4.51E-02

$$\text{Ingestion Intake (mg/kg-day)} = \frac{CV \cdot IR \cdot FI \cdot EF \cdot ED \cdot CF}{BW \cdot AT \cdot AD}$$

Where:

CV = Concentration in produce (mg/kg)
 IR = Ingestion rate (g/day)
 FI = Fraction ingested (unitless)
 EF = Exposure frequency (days/yr)
 CF = Conversion factor
 ED = Exposure duration (yr)
 BW = Body weight (kg)
 AT = Averaging time (days/yr)
 AD = Averaging duration (yr)

See above

75
0.119
350
0.001
6
15
365
ED
70

for noncarcinogens
for carcinogens

$$CS \cdot BCF \cdot CF$$

Calculation of CV =
Where:

CS = Exposure point concentration in soil (mg/kg)
 BCF = Total bioconcentration factor (mg/kg dry plant per mg/kg dry soil)
 CF = Dry-to-wet conversion factor (unitless)
 $BCF = RCF / (Koc \cdot foc)$

Tuberos
See above
See above
0.25

Calculation of BCF (for organics), tuberos =
Where:

Koc = Organic carbon / water partition coefficient (unitless)
 foc = Fraction of organic carbon in soil (unitless)

See above
0.02

Calculation of RCF (for organics) =
Where:

$$\log(RCF - 0.82) = 0.77 \cdot \log(Kow) - 1.52$$

Kow = Octanol / water partition coefficient (unitless)

See above

(b) Provisional RFD's were used for 2-hexanone and Iron
 (NA/ND = Not Available/Not Determined)

ing, produce, tuberos

Table C1-28
RME Carcinogenic Risk and Noncarcinogenic Hazard via
Ingestion of Produce, Fruits
Future Resident Child Only
Central Shops Burning/Rubble Pit (631-6G)

Chemicals of Potential Concern	Exposure Point Conc. in Soil (mg/kg)	LOG Kow	Koc	RCF	BCF Fruits	Fruits Produce Conc. (mg/kg)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation					
							Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk	% of Total Risk	Intake (mg/kg-day)	Reference Dose (b) (mg/kg-day)	Hazard Quotient	% of Total Hazard	
2-Hexanone	2.28E-04	1.38	14.8	1.17	3.95	1.62E-04	1.95E-08	NA	ND	ND	2.27E-07	0.04	5.68E-06	0	
Anthracene	5.54E-04	4.54	14000	95.40	0.34	3.40E-05	4.08E-09	NA	ND	ND	4.76E-08	0.3	1.59E-07	0	
Arsenic	2.38E+00	NA	NA	ND	0.006	2.57E-03	3.09E-07	1.5	4.63E-07	23	3.60E-06	0.0003	1.20E-02	15	
Benzo (g,h,i)perylene	4.45E-04	6.51	160000	3110.39	0.97	7.79E-05	9.35E-09	NA	ND	ND	1.09E-07	0.00002	5.45E-03	7	
Beryllium	1.61E-01	NA	NA	ND	0.0015	4.35E-05	5.22E-09	4.3	2.24E-08	1	6.09E-08	0.005	1.22E-05	0	
Iron	2.02E+04	NA	NA	ND	0.001	3.64E+00	4.37E-04	NA	ND	ND	5.10E-03	0.3	1.70E-02	21	
OCDD	4.06E-03	6.91	4570000	6320.57	0.07	5.06E-05	6.07E-09	150	9.11E-07	46	7.09E-08	NA	ND	ND	
PCB1254	2.30E-02	6.94	2140000	6665.82	0.18	6.45E-04	7.75E-08	7.7	5.97E-07	30	9.04E-07	0.00002	4.52E-02	57	
							Total Risk =			2.0E-06			Hazard Index =		7.97E-02

$$\text{Ingestion Intake (mg/kg-day)} = \frac{\text{CV} \cdot \text{IR} \cdot \text{FI} \cdot \text{EF} \cdot \text{ED} \cdot \text{CF}}{\text{BW} \cdot \text{AT} \cdot \text{AD}}$$

Where:

CV = Concentration in produce (mg/kg)
IR = Ingestion rate (g/day)
FI = Fraction ingested (unitless)
EF = Exposure frequency (days/yr)
CF = Conversion factor
ED = Exposure duration (yr)
BW = Body weight (kg)
AT = Averaging time (days/yr)
AD = Averaging duration (yr):
for noncarcinogens
for carcinogens

$$\text{Calculation of CV} = \text{CS} \cdot \text{BCF} \cdot \text{CF}$$

Where:

CS = Exposure point concentration in soil (mg/kg)
BCF = Total bioconcentration factor (mg/kg dry plant per mg/kg dry soil)
CF = Dry-to-wet conversion factor (unitless)
BCF = RCF/(Koc*foc)

$$\text{Calculation of BCF (for organics), fruits} =$$

Where:

Koc = Organic carbon / water partition coefficient (unitless)
foc = Fraction of organic carbon in soil (unitless)

$$\text{Calculation of RCF (for organics)} =$$

Where:

$$\log(\text{RCF} - 0.82) = 0.77 \cdot \log(\text{Kow}) - 1.52$$

Kow = Octanol / water partition coefficient (unitless)

(b) Provisional RFD's were used for 2-hexanone and Iron
NA/ND = Not Available/Not Determined

Ing, produce, fruits

See above

45

0.487

350

0.001

6

15

365

ED

70

Fruits

See above

See above

0.18

See above

0.02

See above

APPENDIX C8

STATISTICAL COMPARISON OF OPERABLE UNIT TO UNIT-SPECIFIC BACKGROUND SOILS DATA FOR THE CENTRAL SHOPS BURNING/RUBBLE PIT

This appendix provides results from an examination of the arsenic and beryllium data for soils from the Central Shops Burning/Rubble Pit (BRP). The examination involved the application of a tandem statistical examination using two nonparametric statistical evaluations. The evaluations were used to compare the operable unit (OU) arsenic and beryllium concentrations at both 0-to-2 foot and 0-to-5 foot intervals and to determine if either arsenic or beryllium are elevated significantly above background levels.

In the contaminant of potential concern (COPC) screening process, which was conducted as part of the baseline risk assessment (BRA) of the Central Shops BRP, the value of twice the mean background concentrations of arsenic and beryllium were compared to the OU measurements. In this comparison, if any measurement from the OU was greater than twice the mean background value, then the contaminant was carried through the BRA as a COPC. The twice mean background values for the arsenic and beryllium data sets are given in this appendix and the results of the comparison to OU measurements are compared to the results of the statistical analyses.

For statistical comparisons of background data to OU data, the null hypothesis, or H_0 , and the alternative hypothesis, or H_a , are typically stated as follows:

H_0 The OU contaminant data are not significantly greater than the background data.

H_a The OU contaminant data are significantly greater than the background data.

The goal of the statistical analysis is to accept or reject H_0 within a specified degree of confidence. Rejection of H_0 results in the acceptance of H_a . Acceptance of H_0 may allow the analyst to eliminate the OU contaminant as a COPC.

It should be understood that the use of these hypotheses will, in general, allow some OU measurements to be larger than some of the background measurements without rejecting H_0 . The real question addressed by the statistical tests is whether the OU measurements are sufficiently large enough to be considered significantly (statistically) different from background measurements.

Two types of decision errors can be made when a statistical test is performed:

1. Type I Error (α) Rejecting H_0 when it is true. This decision error may lead to unnecessary remedial actions.
2. Type II Error (β) Accepting H_0 when it is false. This decision error may lead to not performing necessary remedial actions.

Acceptable values of α and β should be specified as part of a procedure for determining the number of samples to collect to conduct a statistical test. The number of OU samples and

background samples must be sufficient to ensure that β does not exceed its specified level. The "power" or ability of a test to detect when OU concentrations are greater than background is $1-\beta$. For this investigation, the Type I error rate is set to 0.10 for the tandem test and the Type II error rate is 0.05. The Type I error rate is cumulative for the two tests; therefore, the error rate for the individual tests is one half the total rate, or, α equals 0.05.

In this statistical comparison, non-parametric statistical tests are used. These tests do not require that the measurements be normally distributed. The tandem test recommended by the U.S. Environmental Protection Agency (EPA) consists of two tests: the Quantile test and the Wilcoxon Rank Sum (WRS) test (EPA 1992). However, due to the presence of multiple detection limits in the data presented in this document, the Gehan test is used in place of the WRS test. The Gehan test is a generalization of the WRS test. It is used in place of the WRS test when the background or OU data sets contain multiple detection limits (Gilbert 1993). The Gehan test is also a non-parametric test.

The Quantile Test

The Quantile test is designed to compare the upper tails of two population distributions. The Quantile test is performed by listing the OU and background measurements from the smallest to largest. Then, the number n_k is counted (where n_k equals the number of OU measurements that are among the largest r measurements of the combined data sets). If n_k is greater than or equal to a predetermined k value, then the analyte is a contaminant of concern. EPA provides Table A.6 through A.9 to determine values of r and k (EPA 1992).

The Quantile test is limited to the following situations:

- When the background and OU data sets contain no non-detects

- When non-detects are present in one or both data sets, but all non-detects are less than the r th largest measurement

When multiple non-detects are present, some of which are greater than the r th largest measurement, then the recommended procedure is to rank the combined data set using the ranking procedure appropriate for the Gehan test (Gilbert 1993). Also, if fewer than r measurements are greater than the limit of detection, then the Quantile test cannot be used (EPA 1992). In the event that the r th largest measurement (counting down from the maximum measurement) is among a group of tied (equal-in-value) measurements, then r is increased to include that entire set of tied measurements (EPA 1992).

The Gehan Test

The Gehan test is designed to compare the means of two population distributions. The Gehan test is performed by (1) listing the combined background and OU measurements from the smallest to largest, (2) assigning a calculated rank to the ordered values, and (3) converting the ranks into scores. Gilbert outlines this method (Gilbert 1993). If the scores produce a Z-statistic (Z_{gt}) greater than the critical value Z-statistic (Z_p), then the analyte is considered a contaminant of concern.

For the case of the Central Shops arsenic data, Gilbert states that Z_{gt} is determined by the following equation:

$$Z_{gt} = \frac{\sum_{i=1}^N d_i a_i(R_i)}{\left\{ \frac{n_1 n_2}{N(N-1)} \sum_{i=1}^N a_i(R_i)^2 \right\}^{1/2}}$$

Where,

n_1	=	the number of OU measurements = 14
n_2	=	the number of background measurements = 9
N	=	$n_1 + n_2 = 23$
d_i	=	1, if the i th datum is from the OU data set
	=	0, if the i th datum is from the background data set
$a_i(R_i)$	=	Score = $2R_i - (N + 1)$
R_i	=	Rank

REFERENCES

- Gilbert, R. O. 1993. Letter with attachments from R. O. Gilbert, Pacific Northwest Laboratories, to Beverly Ramsey, Systematic Management Services, Inc. July 30.
- U.S. Environmental Protection Agency. 1992. *Statistical Methods for Evaluating the Attainment of Cleanup Standards, Volume 3: Referenced Based Standards for Soils and Soil Media*. Volume 3, Revision 1. EPA 230-R-94-004. December.

Data Analysis

The data examined in this analysis are from the Central Shops OU at the Savannah River Site (SRS). The data from two analytes, arsenic and beryllium, were grouped into two depth intervals, 0-to-2 feet and 0-to-5 feet. Each analyte and soil interval were compared to a background data set from the same soil interval. The four separate data sets, combined with their background data sets are shown in Tables 1 through 4, ordered from smallest concentration to largest. The Gehan test ranks are also shown.

Arsenic Data (0-to-2 feet)

The background for this data set contained no detections. Twice the mean background concentration of this data set is 1.70 milligrams per kilogram (mg/kg), substituting one-half of the detection limit for undetected results. Two OU measurements are greater than this value. Arsenic in the 0-to-2-foot depth interval would be carried through the BRA as a COPC.

The tandem statistical test begins with the Quantile test. The Type I error for the tandem test is 0.10. For the Quantile test and a Type I error equal to one-half of the tandem test error (α equals 0.05), Table A.8 (EPA 1992) gives r is equal to 8 and k is equal to 8 for 25 OU measurements and 9 background measurements. However, fewer than r measurement ranks are greater than the rank of the greatest detection limit; therefore, the Quantile test cannot be conducted.

The Gehan test resulted in a Z_{gt} statistic equal to 1.26 which is less than the Z_p statistic for α equals 0.05 which is equal to 1.645. The Z_p statistic is drawn from Table A.1 (EPA 1992) for p equals $1 - \alpha$. Therefore, based on the Gehan test, the null hypothesis cannot be rejected (i.e., the OU data is not significantly greater than the background data.)

To meet the specified power of 0.95 (β equals 0.05), the distribution of the OU data is considered the same as the background data if the mean of the OU data set is 0.99 or less, assuming non-detects to be equal to one-half the detection limit.

Arsenic Data (0-to-5 feet)

Twice the mean background concentration of this data set is 2.30 mg/kg, substituting one-half of the detection limit for undetected results. Six OU measurements are greater than this value. Thus, arsenic in the 0-to-5-foot depth interval would be carried through the BRA as a COPC.

The tandem statistical test begins with the Quantile test. The Type I error for the tandem test is 0.10. For the Quantile test and a Type I error equal to one-half the tandem test error (α equals 0.05), Table A.8 (EPA 1992) gives r is equal to 8 and k is equal to 8 for 37 OU measurements and 14 background measurements. Only seven of the highest ranked data are OU data; therefore, the null hypothesis cannot be rejected.

The Gehan test resulted in a Z_{gt} statistic equal to 2.87, which is greater than the Z_p statistic for α equals 0.05 which is equal to 1.645. The Z_p statistic is drawn from Table A.1 (EPA 1992) for p equals $1 - \alpha$. Based on the Gehan test, the null hypothesis cannot be accepted with 90 percent confidence; therefore, arsenic should be considered a COPC.

To meet the specified power of 0.95 (β equals 0.05), the distribution of the OU data is considered the same as the background data if the mean of the OU data set is 6.4 or less, assuming non-detects to be equal to one-half the detection limit.

Beryllium Data (0-to-2 feet)

Twice the mean background concentration of this data set is 0.32 mg/kg, substituting one-half of the detection limit for undetected results. No OU measurements are greater than this value. Thus, beryllium in the 0-to-2-foot depth interval would not be carried through the BRA as a COPC.

The tandem statistical test begins with the Quantile test. The Type I error for the tandem test is 0.10. For the Quantile test and a Type I error equal to one-half the tandem test error (α equals 0.05), Table A.8 (EPA 1992) gives r is equal to 8 and k is equal to 8 for 25 OU measurements and 9 background measurements. Only five of the highest ranked data are OU data; therefore, the null hypothesis cannot be rejected.

The Gehan test resulted in a Z_{gt} statistic equal to -0.8, which is less than the Z_p statistic for α equals 0.05, which is equal to 1.645. The Z_p statistic is drawn from Table A.1 (EPA 1992) for p equals $1 - \alpha$. Based on the Gehan test, the null hypothesis is not rejected (i.e., the OU data is not significantly greater than the background data.) Therefore, because the null hypothesis could not be rejected by either test, beryllium should not be considered a COPC.

To meet the specified power of 0.95 (β equals 0.05), the distribution of the OU data is considered the same as the background data if the mean of the OU data set is 0.36 or less, assuming non-detects to be equal to one-half the detection limit.

Beryllium Data (0-to-5 feet)

Twice the mean background concentration of this data set is 0.30 mg/kg, substituting one-half of the detection limit for undetected results. One OU measurement is greater than this value. Thus, beryllium in the 0-to-5-foot depth interval would be carried through the BRA as a COPC.

The tandem statistical test begins with the Quantile test. The Type I error for the tandem test is 0.10. For the Quantile test and a Type I error equal to one-half the tandem test error (α equals 0.05), Table A.8 (EPA 1992) gives r is equal to 8 and k is equal to 8 for 37 OU measurements and 15 background measurements. Only three of the highest ranked data are OU data; therefore, the null hypothesis cannot be rejected.

The Gehan test resulted in a Z_{gt} statistic equal to -0.031, which is less than the Z_p statistic for α equals 0.05, which is equal to 1.645. The Z_p statistic is drawn from Table A.1 (EPA 1992) for p equals $1 - \alpha$. Based on the Gehan test, the null hypothesis is not rejected (i.e., the OU data is not significantly greater than the background data.) Therefore, because the null hypothesis could not be rejected by either test, beryllium should not be considered a COPC.

To meet the specified power of 0.95 (β equals 0.05), the distribution of the OU data is considered the same as the background data if the mean of the OU data set is 0.36 or less, assuming non-detects to be equal to one-half the detection limit.

TABLE 1
ARSENIC DATA (0-to-2 FEET)

CONCENTRATION (mg/kg)	DATA QUALIFIER	GEHAN TEST RANK
1.47	UJ	15.5
1.49	UJ	15.5
1.50	U	15.5
<u>1.52</u>	<u>U</u>	<u>15.5</u>
1.54	U	15.5
1.55	U	15.5
1.57	UJ	15.5
1.60	U	15.5
1.61	U	15.5
<u>1.61</u>	<u>U</u>	<u>15.5</u>
1.63	UJ	15.5
1.63	U	15.5
1.63	U	15.5
1.65	U	15.5
1.65	U	15.5
1.65	U	15.5
<u>1.65</u>	<u>U</u>	<u>15.5</u>
1.67	U	15.5
1.67	U	15.5
1.69	U	15.5
1.69	U	15.5
<u>1.69</u>	<u>U</u>	<u>15.5</u>
<u>1.70</u>	<u>U</u>	<u>15.5</u>
1.72	U	15.5
<u>1.72</u>	<u>U</u>	<u>15.5</u>
<u>1.74</u>	<u>U</u>	<u>15.5</u>
1.75	U	15.5
<u>1.75</u>	<u>U</u>	<u>15.5</u>
1.79	U	15.5
<u>1.86</u>	<u>U</u>	<u>15.5</u>
1.98	J	31.0
2.78	J	32.0
5.23	J	33.0
7.92		34.0

Notes: mg/kg = milligram per kilogram
 Bold and underline designates a background sample
 U = non-detect
 J = detect, but approximate value

TABLE 2

ARSENIC DATA (0-to-5 FEET)

CONCENTRATION (mg/kg)	DATA QUALIFIER	GEHAN TEST RANK
1.47	UJ	23.5
1.49	UJ	23.5
1.50	U	23.5
<u>1.52</u>	<u>U</u>	23.5
1.54	U	23.5
1.55	U	23.5
1.57	UJ	23.5
1.60	U	23.5
1.60	U	23.5
1.61	UJ	23.5
1.61	U	23.5
<u>1.61</u>	<u>U</u>	<u>23.5</u>
1.63	UJ	23.5
1.63	U	23.5
1.63	U	23.5
1.65	U	23.5
1.65	U	23.5
1.65	U	23.5
<u>1.65</u>	<u>U</u>	<u>23.5</u>
1.67	U	23.5
1.67	U	23.5
1.69	U	23.5
1.69	U	23.5
<u>1.69</u>	<u>U</u>	<u>23.5</u>
1.70	U	23.5
1.70	U	23.5
1.71	UJ	23.5
1.71	U	23.5
1.72	U	23.5
<u>1.72</u>	<u>U</u>	<u>23.5</u>
1.74	U	23.5
<u>1.74</u>	<u>U</u>	<u>23.5</u>
1.75	U	23.5
<u>1.75</u>	<u>U</u>	<u>23.5</u>
<u>1.77</u>	<u>U</u>	<u>23.5</u>
<u>1.78</u>	<u>U</u>	<u>23.5</u>
1.79	U	23.5
<u>1.80</u>	<u>U</u>	<u>23.5</u>
1.81	U	23.5
1.83	U	23.5

TABLE 2 (CONTINUED)

ARSENIC DATA (0-to-5 FEET)

CONCENTRATION (mg/kg)	DATA QUALIFIER	GEHAN TEST RANK
1.86	U	23.5
<u>1.86</u>	<u>U</u>	<u>23.5</u>
<u>1.86</u>	<u>U</u>	<u>23.5</u>
1.98	J	45
2.78	J	46
4.54	J	47
5.23	J	48
<u>7.23</u>		<u>49</u>
7.42	U	26
7.92		50.5
8.48		51.5
9.22		52.5

Notes:

mg/kg = milligram per kilogram

Bold and underline designates a background sample

U = non-detect

J = detect, but approximate value

TABLE 3

BERYLLIUM DATA (0-to-2 FEET)

CONCENTRATION (mg/kg)	DATA QUALIFIER	GEHAN TEST RANK
0.0595	J	1
0.0605	J	2
<u>0.0744</u>	<u>J</u>	<u>3</u>
0.0837	J	4
0.0852	J	5
0.0883	J	6
0.0890	J	7
0.0934	J	8
0.0976	J	9
0.106	J	10
<u>0.112</u>	<u>J</u>	<u>11</u>
0.113	J	12
0.117	J	13
<u>0.117</u>	<u>J</u>	<u>14</u>
<u>0.132</u>	<u>J</u>	<u>15</u>
0.134	J	16
0.134	J	17
<u>0.139</u>	<u>J</u>	<u>18</u>
0.144	J	19
0.157	J	20
<u>0.157</u>	<u>J</u>	<u>21</u>
0.159	J	22
0.163	J	23
0.172	J	24
0.176	J	25
0.177	J	26
0.180	J	27
0.186	J	28
<u>0.187</u>	<u>J</u>	<u>29</u>
0.195	J	30
0.224	J	31
0.228	J	32
<u>0.245</u>	<u>J</u>	<u>33</u>
<u>0.287</u>	<u>J</u>	<u>34</u>

Notes:

mg/kg = milligram per kilogram

Bold and underline designates a background sample

U = non-detect

J = detect, but approximate value

TABLE 4

BERYLLIUM DATA (0-to-5 FEET)

CONCENTRATION (mg/kg)	DATA QUALIFIER	GEHAN TEST RANK
0.0595	J	1
0.0605	J	2
<u>0.0675</u>	<u>J</u>	<u>3</u>
0.0728	J	4
<u>0.0744</u>	<u>J</u>	<u>5</u>
<u>0.0769</u>	<u>J</u>	<u>6</u>
0.0792	J	7
0.0798	J	8
<u>0.0816</u>	<u>J</u>	<u>9</u>
0.0837	J	10
0.0852	J	11
0.0883	J	12
0.0890	J	13
0.0934	J	14
0.0976	J	15
0.0988	J	16
0.103	J	17
0.106	J	18
0.106	J	19
<u>0.112</u>	<u>J</u>	<u>20</u>
0.113	J	21
0.117	J	22
<u>0.117</u>	<u>J</u>	<u>23</u>
<u>0.119</u>	<u>J</u>	<u>24</u>
<u>0.122</u>	<u>J</u>	<u>25</u>
0.123	J	26
<u>0.132</u>	<u>J</u>	<u>27</u>
0.134	J	28
0.134	J	29
<u>0.139</u>	<u>J</u>	<u>30</u>
0.144	J	31
0.149	J	32
0.157	J	33
<u>0.157</u>	<u>J</u>	<u>34</u>
0.159	J	35
0.163	J	36
0.170	J	37
0.172	J	38
0.176	J	39
0.177	J	40

TABLE 4 (CONTINUED)

BERYLLIUM DATA (0-to-5 FEET)

CONCENTRATION (mg/kg)	DATA QUALIFIER	GEHAN TEST RANK
0.180	J	41
0.186	J	42
<u>0.187</u>	<u>J</u>	<u>43</u>
0.195	J	44
0.204	J	45
0.224	J	46
0.228	J	47
0.237	J	48
<u>0.245</u>	<u>J</u>	<u>49</u>
<u>0.287</u>	<u>J</u>	<u>50</u>
<u>0.288</u>	<u>J</u>	<u>51</u>
0.366	J	52

Notes:

mg/kg = milligram per kilogram

Bold and underline designates a background sample

U = non-detect

J = detect, but approximate value

APPENDIX C9
Data Used to Calculate Exposure Concentration and Risk
for Selected Constituents of Potential Concern

Aluminum in Groundwater

Well	Subclass	Analyte	Result	Units	Date	Detection Limit	Result Qualifier	Analytical Qualifier
CBR 2D	Groundwater	Aluminum	20	ug/L	52494	20	U	
CBR 3D	Groundwater	Aluminum	20	ug/L	52494	20	U	
CBR 3D	Groundwater	Aluminum	53.3	ug/L	111594	53	U	
CBR 3D	Groundwater	Aluminum	53.3	ug/L	111594	53	U	
CBR 2D	Groundwater	Aluminum	21	ug/L	72694	20	J	Y
CBR 2D	Groundwater	Aluminum	22.4	ug/L	72694	20	J	
CBR 2D	Groundwater	Aluminum	23.4	ug/L	72694	20		Y
CBR 3D	Groundwater	Aluminum	27	ug/L	72694	20		Y
CBR 3D	Groundwater	Aluminum	34.6	ug/L	22294	20		
CBR 3D	Groundwater	Aluminum	34.8	ug/L	22294	20		
CBR 3D	Groundwater	Aluminum	36.3	ug/L	22294	20		
CBR 2D	Groundwater	Aluminum	37.6	ug/L	111594	1.93	J	V
CBR 3D	Groundwater	Aluminum	38.2	ug/L	102094	1.93	J	V
CBR 2D	Groundwater	Aluminum	40.4	ug/L	22294	20		
CBR 3D	Groundwater	Aluminum	40.8	ug/L	22294	20		
CBR 3D	Groundwater	Aluminum	44.7	ug/L	111594	1.93	J	V
CBR 3D	Groundwater	Aluminum	45.1	ug/L	111594	1.93	J	V
CBR 2D	Groundwater	Aluminum	51.3	ug/L	30195	20		V
CBR 2D	Groundwater	Aluminum	52.9	ug/L	101994	1.93	J	V
CBR 3D	Groundwater	Aluminum	55.6	ug/L	30195	20		V
CBR 2D	Groundwater	Aluminum	86.8	ug/L	72694	20		Y
CBR 06	Groundwater	Aluminum	552	ug/L	121494	1.93		V
CBR 05	Groundwater	Aluminum	695	ug/L	10695	1.93		VY
CBR 06	Groundwater	Aluminum	1160	ug/L	10695	1.93		VY
CBR 05	Groundwater	Aluminum	3530	ug/L	121494	1.93		V
CBR 04	Groundwater	Aluminum	7990	ug/L	10695	1.93		VYX
CBR 04	Groundwater	Aluminum	41400	ug/L	121494	1.93		V
CBR 1D	BG Groundwater	Aluminum	20	ug/L	52394	20	U	
CBR 1D	BG Groundwater	Aluminum	30.1	ug/L	22394	20	J	
CBR 1D	BG Groundwater	Aluminum	94.8	ug/L	111594	1.93	J	V
CBR 1D	BG Groundwater	Aluminum	133	ug/L	102094	1.93	J	V
CBR 1D	BG Groundwater	Aluminum	149	ug/L	72694	20		Y
CBR 1D	BG Groundwater	Aluminum	295	ug/L	30195	20		V

Wells CBR-4, -5, -6 were bailed and apparently influenced by inclusion of soil particles

Result Qualifiers

U = Material analyzed but not detected

J = Analytical result is estimated

Analytical Qualifiers

V = Analyte detected in both the sample and associated method blank

X = duplicate analysis relative percent difference was not within control limits

Y = Unpreserved or improperly preserved sample

Arsenic in Groundwater

Well	Subclass	Analyte	Result	Units	Date	Detection Limit	Result Qualifier	Analytical Qualifier
CBR 2D	Groundwater	Arsenic	1.5	ug/L	101994	1.5	U	
CBR 2D	Groundwater	Arsenic	1.5	ug/L	111594	1.5	U	
CBR 3D	Groundwater	Arsenic	1.5	ug/L	102094	1.5	U	
CBR 3D	Groundwater	Arsenic	1.5	ug/L	111594	1.5	U	
CBR 3D	Groundwater	Arsenic	1.5	ug/L	111594	1.5	U	
CBR 05	Groundwater	Arsenic	1.5	ug/L	122394	1.5	U	
CBR 06	Groundwater	Arsenic	1.5	ug/L	122394	1.5	U	
CBR 04	Groundwater	Arsenic	1.5	ug/L	10495	1.5	U	Y
CBR 05	Groundwater	Arsenic	1.5	ug/L	10495	1.5	U	Y
CBR 06	Groundwater	Arsenic	1.5	ug/L	10495	1.5	U	Y
CBR 3D	Groundwater	Arsenic	1.7	ug/L	111594	1.7	U	
CBR 3D	Groundwater	Arsenic	1.7	ug/L	111594	1.7	U	
CBR 2D	Groundwater	Arsenic	2	ug/L	22294	2	U	
CBR 2D	Groundwater	Arsenic	2	ug/L	52494	2	U	
CBR 2D	Groundwater	Arsenic	2	ug/L	72694	2	U	
CBR 2D	Groundwater	Arsenic	2	ug/L	72694	2	U	Y
CBR 2D	Groundwater	Arsenic	2	ug/L	72694	2	U	Y
CBR 2D	Groundwater	Arsenic	2	ug/L	72694	2	U	Y
CBR 3D	Groundwater	Arsenic	2	ug/L	22294	2	U	
CBR 3D	Groundwater	Arsenic	2	ug/L	22294	2	U	
CBR 3D	Groundwater	Arsenic	2	ug/L	22294	2	U	
CBR 3D	Groundwater	Arsenic	2	ug/L	22294	2	U	
CBR 3D	Groundwater	Arsenic	2	ug/L	52494	2	U	
CBR 3D	Groundwater	Arsenic	2	ug/L	72694	2	U	Y
CBR 2D	Groundwater	Arsenic	5	ug/L	30195	5	U	
CBR 3D	Groundwater	Arsenic	5	ug/L	30195	5	U	
CBR 04	Groundwater	Arsenic	5.1	ug/L	122394	1.5		
CBR 1D	BG Groundwater	Arsenic	1.5	ug/L	102094	1.5	U	
CBR 1D	BG Groundwater	Arsenic	1.5	ug/L	111594	1.5	U	
CBR 1D	BG Groundwater	Arsenic	2	ug/L	22394	2	U	
CBR 1D	BG Groundwater	Arsenic	2	ug/L	52394	2	U	
CBR 1D	BG Groundwater	Arsenic	2	ug/L	72694	2	U	Y
CBR 1D	BG Groundwater	Arsenic	5	ug/L	30195	5	U	

Well CBR-4 was bailed and apparently influenced by inclusion of soil particles

Result Qualifiers

U = Material analyzed but not detected

J = Analytical result is estimated

Analytical Qualifiers

Y = Unpreserved or improperly preserved sample

Beryllium In Groundwater

Well	Subclass	Analyte	Result	Units	Date	Detection Limit	Result Qualifier	Analytical Qualifier
CBR 3D	Groundwater	Beryllium	0.3	ug/L	111594	0.33	U	
CBR 3D	Groundwater	Beryllium	0.3	ug/L	111594	0.33	U	
CBR 2D	Groundwater	Beryllium	3	ug/L	72694	3	U	
CBR 2D	Groundwater	Beryllium	0.18	ug/L	30195	3	J	E
CBR 2D	Groundwater	Beryllium	0.19	ug/L	101994	0.03	J	V
CBR 3D	Groundwater	Beryllium	0.19	ug/L	102094	0.03	J	V
CBR 06	Groundwater	Beryllium	0.191	ug/L	10695	0.027	J	VY
CBR 3D	Groundwater	Beryllium	0.2	ug/L	30195	3	J	E
CBR 3D	Groundwater	Beryllium	0.22	ug/L	111594	0.03	J	V
CBR 3D	Groundwater	Beryllium	0.23	ug/L	111594	0.03	J	V
CBR 2D	Groundwater	Beryllium	0.26	ug/L	111594	0.03	J	V
CBR 04	Groundwater	Beryllium	0.409	ug/L	10695	0.027	J	VY
CBR 1D	BG Groundwater	Beryllium	0.15	ug/L	102094	0.03	J	V
CBR 1D	BG Groundwater	Beryllium	0.17	ug/L	111594	0.03	J	V
CBR 1D	BG Groundwater	Beryllium	0.16	ug/L	30195	3	J	E

Well CBR-4 was bailed and apparently influenced by inclusion of soil particles

Result Qualifiers

U = Material analyzed but not detected

J = Analytical result is estimated

Analytical Qualifiers

E = Reported value is estimated because of the presence of interference, indicated by high recoveries

V = Analyte detected in both the sample and associated method blank

Y = Unpreserved or improperly preserved sample

Bis(2-ethylhexyl)phthalate in Groundwater

Well	Subclass	Analyte	Result	Units	Date	Detection Limit	Result Qualifier	Analytical Qualifier
CBR 2D	Groundwater	Bis(2-ethylhexyl)phthalate	1	ug/L	30195	1	UJ	Q
CBR 3D	Groundwater	Bis(2-ethylhexyl)phthalate	1	ug/L	30195	1	UJ	Q
CBR 05	Groundwater	Bis(2-ethylhexyl)phthalate	0.254	ug/L	10695	0.254	UJ	IY
CBR 2D	Groundwater	Bis(2-ethylhexyl)phthalate	0.25	ug/L	101994	0.25	U	
CBR 3D	Groundwater	Bis(2-ethylhexyl)phthalate	0.25	ug/L	102094	0.25	U	
CBR 3D	Groundwater	Bis(2-ethylhexyl)phthalate	0.27	ug/L	111594	0.27	U	
CBR 3D	Groundwater	Bis(2-ethylhexyl)phthalate	0.25	ug/L	111594	0.25	U	
CBR 05	Groundwater	Bis(2-ethylhexyl)phthalate	0.251	ug/L	120794	0.251	U	
CBR 04	Groundwater	Bis(2-ethylhexyl)phthalate	0.254	ug/L	10695	0.254	U	Y
CBR 2D	Groundwater	Bis(2-ethylhexyl)phthalate	0.58	ug/L	111594	0.25	J	
CBR 06	Groundwater	Bis(2-ethylhexyl)phthalate	2.71	ug/L	10695	0.254		Y
CBR 06	Groundwater	Bis(2-ethylhexyl)phthalate	3.87	ug/L	120794	0.249		
CBR 04	Groundwater	Bis(2-ethylhexyl)phthalate	6.11	ug/L	120794	0.249		
CBR 1D	BG Groundwater	Bis(2-ethylhexyl)phthalate	0.25	ug/L	102094	0.25	U	
CBR 1D	BG Groundwater	Bis(2-ethylhexyl)phthalate	0.25	ug/L	111594	0.25	U	
CBR 1D	BG Groundwater	Bis(2-ethylhexyl)phthalate	1	ug/L	30195	1	UJ	Q

Result Qualifiers

U = Material analyzed but not detected

J = Analytical result is estimated

Analytical Qualifiers

I = Spike recovery not within control limits

Q = Sample held beyond normal holding time

Y = Unpreserved or improperly preserved sample

Iron in Groundwater

Well	Subclass	Analyte	Result	Units	Date	Detection Limit	Result Qualifier	Analytical Qualifier
CBR 3D	Groundwater	Iron	18.2	ug/L	102094	18.2	U	
CBR 3D	Groundwater	Iron	13.7	ug/L	52494	4		
CBR 2D	Groundwater	Iron	15	ug/L	72694	4		
CBR 2D	Groundwater	Iron	16	ug/L	72694	4		Y
CBR 3D	Groundwater	Iron	16.3	ug/L	111594	3.3		
CBR 2D	Groundwater	Iron	19.7	ug/L	111594	18.2		
CBR 2D	Groundwater	Iron	21.7	ug/L	52494	4		
CBR 3D	Groundwater	Iron	21.7	ug/L	111594	18.2		
CBR 2D	Groundwater	Iron	22.1	ug/L	30195	18		
CBR 3D	Groundwater	Iron	24.2	ug/L	111594	18.2		
CBR 3D	Groundwater	Iron	25.5	ug/L	111594	3.3		
CBR 3D	Groundwater	Iron	30	ug/L	72694	4	J	VY
CBR 3D	Groundwater	Iron	42.1	ug/L	22294	4		
CBR 3D	Groundwater	Iron	46.5	ug/L	22294	4		
CBR 3D	Groundwater	Iron	47.9	ug/L	22294	4		
CBR 3D	Groundwater	Iron	49.8	ug/L	22294	4		
CBR 2D	Groundwater	Iron	59.6	ug/L	101994	18.2		
CBR 3D	Groundwater	Iron	74.3	ug/L	30195	18		
CBR 2D	Groundwater	Iron	90.4	ug/L	22294	4		
CBR 05	Groundwater	Iron	496	ug/L	10695	18.2		Y
CBR 05	Groundwater	Iron	3060	ug/L	121494	18.2		
CBR 06	Groundwater	Iron	12300	ug/L	121494	18.2		
CBR 06	Groundwater	Iron	15800	ug/L	10695	18.2		Y
CBR 04	Groundwater	Iron	24200	ug/L	10695	18.2		Y
CBR 04	Groundwater	Iron	94900	ug/L	121494	18.2		
CBR 1D	BG Groundwater	Iron	19.2	ug/L	52394	4		
CBR 1D	BG Groundwater	Iron	119	ug/L	22394	4		
CBR 1D	BG Groundwater	Iron	163	ug/L	111594	18.2		
CBR 1D	BG Groundwater	Iron	266	ug/L	102094	18.2		
CBR 1D	BG Groundwater	Iron	490	ug/L	30195	18		
CBR 1D	BG Groundwater	Iron	806	ug/L	72694	4		VY
CBR 1D	BG Groundwater	Iron	1130	ug/L	72694	4		

Wells CBR-4, -5, -6 were bailed and apparently influenced by inclusion of soil particles

Result Qualifiers

U = Material analyzed but not detected

J = Analytical result is estimated

Analytical Qualifiers

V = Analyte detected in both the sample and associated method blank

Y = Unpreserved or improperly preserved sample

Lead in Groundwater

Well	Subclass	Analyte	Result	Units	Date	Detection Limit	Result Qualifier	Analytical Qualifier
CBR 2D	Groundwater	Lead	3	ug/L	22294	3	U	
CBR 2D	Groundwater	Lead	3	ug/L	52494	3	U	
CBR 2D	Groundwater	Lead	3	ug/L	72694	3	U	
CBR 2D	Groundwater	Lead	3	ug/L	72694	3	U	Y
CBR 2D	Groundwater	Lead	3	ug/L	72694	3	U	Y
CBR 2D	Groundwater	Lead	3	ug/L	72694	3	U	Y
CBR 3D	Groundwater	Lead	3	ug/L	22294	3	U	
CBR 3D	Groundwater	Lead	3	ug/L	22294	3	U	
CBR 3D	Groundwater	Lead	3	ug/L	22294	3	U	
CBR 3D	Groundwater	Lead	3	ug/L	52494	3	U	
CBR 3D	Groundwater	Lead	3	ug/L	72694	3	U	Y
CBR 3D	Groundwater	Lead	2.5	ug/L	111594	2.4	U	
CBR 3D	Groundwater	Lead	2.5	ug/L	111594	2.4	U	I
CBR 05	Groundwater	Lead	1.13	ug/L	10595	0.69	J	Y
CBR 3D	Groundwater	Lead	1.4	ug/L	30195	5	J	E
CBR 2D	Groundwater	Lead	2.02	ug/L	30195	5	J	E
CBR 06	Groundwater	Lead	3.24	ug/L	10595	0.69	J	Y
CBR 3D	Groundwater	Lead	4.76	ug/L	111594	0.69	J	V
CBR 3D	Groundwater	Lead	5.2	ug/L	111594	0.69	J	V
CBR 3D	Groundwater	Lead	5.89	ug/L	102094	0.69	J	V
CBR 2D	Groundwater	Lead	6	ug/L	101994	0.69	J	V
CBR 2D	Groundwater	Lead	6.19	ug/L	111594	0.69	J	V
CBR 3D	Groundwater	Lead	6.4	ug/L	22294	3		
CBR 04	Groundwater	Lead	11.8	ug/L	10595	0.69		Y
CBR 04	Groundwater	Lead	89.1	ug/L	122394	0.69		V
CBR 1D	BG Groundwater	Lead	5.24	ug/L	52394	3		
CBR 1D	BG Groundwater	Lead	15.8	ug/L	22394	3		
CBR 1D	BG Groundwater	Lead	19.2	ug/L	111594	0.69	J	V
CBR 1D	BG Groundwater	Lead	20.8	ug/L	30195	5		
CBR 1D	BG Groundwater	Lead	21.6	ug/L	102094	0.69	J	V
CBR 1D	BG Groundwater	Lead	43.2	ug/L	72694	3		Y

Well CBR-4 was bailed and apparently influenced by inclusion of soil particles

Result Qualifiers

U = Material analyzed but not detected

J = Analytical result is estimated

Analytical Qualifiers

E = Reported value is estimated because of the presence of interference, indicated by high recoveries

I = Spike recovery not within control limits

V = Analyte detected in both the sample and associated method blank

Y = Unpreserved or improperly preserved sample

Manganese In Groundwater

Well	Subclass	Analyte	Result	Units	Date	Detection Limit	Result Qualifier	Analytical Qualifier
CBR 2D	Groundwater	Manganese	2	ug/L	52494	2	U	
CBR 2D	Groundwater	Manganese	2	ug/L	72694	2	U	
CBR 2D	Groundwater	Manganese	2	ug/L	72694	2	U	Y
CBR 2D	Groundwater	Manganese	2	ug/L	72694	2	U	Y
CBR 2D	Groundwater	Manganese	2	ug/L	72694	2	U	Y
CBR 2D	Groundwater	Manganese	1.49	ug/L	111594	0.24	J	
CBR 2D	Groundwater	Manganese	1.79	ug/L	101994	0.24	J	
CBR 3D	Groundwater	Manganese	1.94	ug/L	30195	2	J	E
CBR 3D	Groundwater	Manganese	2.05	ug/L	102094	0.24		
CBR 3D	Groundwater	Manganese	2.05	ug/L	111594	0.24		
CBR 3D	Groundwater	Manganese	2.06	ug/L	111594	0.24		
CBR 3D	Groundwater	Manganese	2.1	ug/L	72694	2		Y
CBR 3D	Groundwater	Manganese	2.2	ug/L	111594	0.67		
CBR 2D	Groundwater	Manganese	2.28	ug/L	22294	2	J	
CBR 3D	Groundwater	Manganese	2.3	ug/L	111594	0.67		
CBR 3D	Groundwater	Manganese	2.4	ug/L	52494	2	J	
CBR 2D	Groundwater	Manganese	2.41	ug/L	30195	2		
CBR 3D	Groundwater	Manganese	2.76	ug/L	22294	2	J	
CBR 3D	Groundwater	Manganese	3.24	ug/L	22294	2	J	
CBR 3D	Groundwater	Manganese	3.3	ug/L	22294	2		
CBR 3D	Groundwater	Manganese	3.9	ug/L	22294	2		
CBR 05	Groundwater	Manganese	16.6	ug/L	10695	0.239		Y
CBR 05	Groundwater	Manganese	28.6	ug/L	121494	0.239		
CBR 06	Groundwater	Manganese	54.5	ug/L	121494	0.239		
CBR 06	Groundwater	Manganese	62.6	ug/L	10695	0.239		Y
CBR 04	Groundwater	Manganese	88.9	ug/L	10695	0.239		Y
CBR 04	Groundwater	Manganese	297	ug/L	121494	0.239		
CBR 1D	BG Groundwater	Manganese	5.43	ug/L	52394	2		
CBR 1D	BG Groundwater	Manganese	7.12	ug/L	111594	0.24		
CBR 1D	BG Groundwater	Manganese	7.93	ug/L	102094	0.24		
CBR 1D	BG Groundwater	Manganese	8.39	ug/L	22394	2		
CBR 1D	BG Groundwater	Manganese	9.9	ug/L	72694	2		Y
CBR 1D	BG Groundwater	Manganese	10.5	ug/L	30195	2		

Wells CBR-4, -5, -6 were bailed and apparently influenced by inclusion of soil particles

Result Qualifiers

U = Material analyzed but not detected

J = Analytical result is estimated

Analytical Qualifiers

E = Reported value is estimated because of the presence of interference, indicated by high recoveries

Y = Unpreserved or improperly preserved sample

Arsenic in Soil 0' to 5'

Site	Subclass	Analyte	Result	Units	Date	Detection Limit	Result Qualifier	Analytical Qualifier	Depth in feet
CS6G 01	soil 0-5	Arsenic	1.71	MGKG	42094	1.71	UJ	R	5
CS6G 08	soil 0-5	Arsenic	1.63	MGKG	42094	1.63	UJ	RY	2
CS6G 04	soil 0-5	Arsenic	1.61	MGKG	42094	1.61	UJ	R	5
CS6G 06	soil 0-5	Arsenic	1.57	MGKG	42094		UJ	RY	2
CS6G 05	soil 0-5	Arsenic	1.49	MGKG	42094	1.49	UJ	R	2
CS6G 04	soil 0-5	Arsenic	1.47	MGKG	42094	1.47	UJ	R	2
CS6G 22	soil 0-5	Arsenic	7.42	MGKG	121694	2.47	U		4
CS6G 15	soil 0-5	Arsenic	1.83	MGKG	120694	1.83	U		4
CS6G 12	soil 0-5	Arsenic	1.81	MGKG	120994	1.81	U		4
CS6G 17	soil 0-5	Arsenic	1.79	MGKG	120694	1.79	U		2
CS6G 22	soil 0-5	Arsenic	1.75	MGKG	121694	1.75	U		2
CS6G 17	soil 0-5	Arsenic	1.74	MGKG	120694	1.74	U		4
CS6G 11	soil 0-5	Arsenic	1.72	MGKG	120694	1.72	U		1
CS6G 13	soil 0-5	Arsenic	1.71	MGKG	120994	1.71	U		4
CS6G 16	soil 0-5	Arsenic	1.7	MGKG	120694	1.7	U		4
CS6G 22	soil 0-5	Arsenic	1.69	MGKG	121694	1.69	U		1
CS6G 17	soil 0-5	Arsenic	1.69	MGKG	120694	1.69	U		1
CS6G 15	soil 0-5	Arsenic	1.67	MGKG	120694	1.67	U		2
CS6G 16	soil 0-5	Arsenic	1.67	MGKG	120694	1.67	U		1
CS6G 12	soil 0-5	Arsenic	1.65	MGKG	120994	1.65	U		2
CS6G 13	soil 0-5	Arsenic	1.65	MGKG	120994	1.65	U		1
CS6G 16	soil 0-5	Arsenic	1.65	MGKG	120694	1.65	U		2
CS6G 13	soil 0-5	Arsenic	1.63	MGKG	120994	1.63	U		2
CS6G 14	soil 0-5	Arsenic	1.63	MGKG	120994	1.63	U		1
CS6G 15	soil 0-5	Arsenic	1.61	MGKG	120694	1.61	U		1
CS6G 14	soil 0-5	Arsenic	1.6	MGKG	120994	1.6	U		2
CS6G 14	soil 0-5	Arsenic	1.6	MGKG	120994	1.6	U		4
CS6G 12	soil 0-5	Arsenic	1.55	MGKG	120694	1.55	U		1
CS6G 03	soil 0-5	Arsenic	1.54	MGKG	42194	1.54	U		2
CS6G 02	soil 0-5	Arsenic	1.5	MGKG	42194	1.5	U		2
CS6G 07	soil 0-5	Arsenic	1.98	MGKG	42094	1.57	J	RIY	2
CS6G 09	soil 0-5	Arsenic	2.78	MGKG	42094	1.59	J	R	2
CS6G 03	soil 0-5	Arsenic	4.54	MGKG	42194	1.63	J		5
CS6G 11	soil 0-5	Arsenic	5.23	MGKG	120694	1.76	J	B	2
CS6G 01	soil 0-5	Arsenic	7.92	MGKG	42194	1.57		Y	2
CS6G 11	soil 0-5	Arsenic	8.48	MGKG	120694	1.62			4
CS6G 02	soil 0-5	Arsenic	9.22	MGKG	42194	1.63			5
CS6G 10	bg soil 0-5	Arsenic	7.23	MGKG	42194	1.63		Y	5
CS6G 21	bg soil 0-5	Arsenic	1.86	MGKG	121694	1.86	U		2
CS6G 21	bg soil 0-5	Arsenic	1.86	MGKG	121694	1.86	U		4
CS6G 19	bg soil 0-5	Arsenic	1.8	MGKG	121394	1.8	U		4
CS6G 20	bg soil 0-5	Arsenic	1.78	MGKG	121394	1.78	U		4
CS6G 18	bg soil 0-5	Arsenic	1.77	MGKG	121394	1.77	U		4
CS6G 21	bg soil 0-5	Arsenic	1.75	MGKG	121694	1.75	U		1
CS6G 20	bg soil 0-5	Arsenic	1.74	MGKG	121394	1.74	U		2
CS6G 20	bg soil 0-5	Arsenic	1.72	MGKG	121394	1.72	U		1
CS6G 19	bg soil 0-5	Arsenic	1.7	MGKG	121394	1.7	U		2
CS6G 18	bg soil 0-5	Arsenic	1.69	MGKG	121394	1.69	U		2
CS6G 18	bg soil 0-5	Arsenic	1.65	MGKG	120694	1.65	U		1
CS6G 19	bg soil 0-5	Arsenic	1.61	MGKG	121394	1.61	U		1
CS6G 10	bg soil 0-5	Arsenic	1.52	MGKG	42194	1.52	U	Y	2

Result Qualifiers

U = Material analyzed but not detected

J = Analytical result is estimated

Analytical Qualifiers

B = Result is below contract required detection limit and above or equal to the instrument detection limit

I = Spike recovery not within control limits

R = ICP Interference criteria are not met

Y = Unpreserved or improperly preserved sample

Beryllium in Soil 0' to 5'

Site	Subclass	Analyte	Result	Units	Date	Detection Limit	Result Qualifier	Analytical Qualifier	Depth in feet
CS6G 22	soil 0-5	Beryllium	0.366	MGKG	121694	0.0211	J	B	4
CS6G 15	soil 0-5	Beryllium	0.237	MGKG	120694	0.0156	J	B	4
CS6G 22	soil 0-5	Beryllium	0.228	MGKG	121694	0.0149	J	B	2
CS6G 11	soil 0-5	Beryllium	0.224	MGKG	120694	0.0146	J	B	1
CS6G 13	soil 0-5	Beryllium	0.204	MGKG	120994	0.0145	J	B	4
CS6G 17	soil 0-5	Beryllium	0.195	MGKG	120694	0.0143	J	B	1
CS6G 15	soil 0-5	Beryllium	0.186	MGKG	120694	0.0142	J	B	2
CS6G 12	soil 0-5	Beryllium	0.18	MGKG	120994	0.014	J	B	2
CS6G 15	soil 0-5	Beryllium	0.177	MGKG	120694	0.0137	J	B	1
CS6G 01	soil 0-5	Beryllium	0.176	MGKG	42194	0.0134	J	Y	2
CS6G 14	soil 0-5	Beryllium	0.172	MGKG	120994	0.0139	J	B	1
CS6G 16	soil 0-5	Beryllium	0.17	MGKG	120694	0.0145	J	B	4
CS6G 05	soil 0-5	Beryllium	0.163	MGKG	42094	0.0127	J	R	2
CS6G 13	soil 0-5	Beryllium	0.159	MGKG	120994	0.014	J	B	1
CS6G 17	soil 0-5	Beryllium	0.157	MGKG	120694	0.0152	J	B	2
CS6G 12	soil 0-5	Beryllium	0.149	MGKG	120994	0.0154	J	B	4
CS6G 22	soil 0-5	Beryllium	0.144	MGKG	121694	0.0144	J	B	1
CS6G 11	soil 0-5	Beryllium	0.134	MGKG	120694	0.015	J	B	2
CS6G 13	soil 0-5	Beryllium	0.134	MGKG	120994	0.0139	J	B	2
CS6G 11	soil 0-5	Beryllium	0.123	MGKG	120694	0.0138	J	B	4
CS6G 03	soil 0-5	Beryllium	0.117	MGKG	42194	0.0131	J		2
CS6G 16	soil 0-5	Beryllium	0.113	MGKG	120694	0.014	J	B	2
CS6G 06	soil 0-5	Beryllium	0.106	MGKG	41594	0.0128	J	Y	2
CS6G 14	soil 0-5	Beryllium	0.106	MGKG	120994	0.0136	J	B	4
CS6G 17	soil 0-5	Beryllium	0.103	MGKG	120694	0.0148	J	B	4
CS6G 04	soil 0-5	Beryllium	0.0988	MGKG	42094	0.0137	J	R	5
CS6G 02	soil 0-5	Beryllium	0.0976	MGKG	42194	0.0128	J	X	2
CS6G 16	soil 0-5	Beryllium	0.0934	MGKG	120694	0.0142	J	B	1
CS6G 12	soil 0-5	Beryllium	0.089	MGKG	120694	0.0132	J	B	1
CS6G 14	soil 0-5	Beryllium	0.0883	MGKG	120994	0.0136	J	B	2
CS6G 09	soil 0-5	Beryllium	0.0852	MGKG	42094	0.0135	J	R	2
CS6G 07	soil 0-5	Beryllium	0.0837	MGKG	42094	0.0134	J	RYX	2
CS6G 03	soil 0-5	Beryllium	0.0798	MGKG	42194	0.0139	J		5
CS6G 02	soil 0-5	Beryllium	0.0792	MGKG	42194	0.0139	J		5
CS6G 01	soil 0-5	Beryllium	0.0728	MGKG	42094	0.0146	J	RX	5
CS6G 04	soil 0-5	Beryllium	0.0605	MGKG	42094	0.0125	J	R	2
CS6G 08	soil 0-5	Beryllium	0.0595	MGKG	42094	0.0139	J	RY	2
CS6G 21	bg soil 0-5	Beryllium	0.288	MGKG	121694	0.0158	J	B	4
CS6G 21	bg soil 0-5	Beryllium	0.287	MGKG	121694	0.0158	J	B	2
CS6G 20	bg soil 0-5	Beryllium	0.245	MGKG	121394	0.0148	J	B	2
CS6G 18	bg soil 0-5	Beryllium	0.187	MGKG	121394	0.0144	J	B	2
CS6G 21	bg soil 0-5	Beryllium	0.157	MGKG	121694	0.0149	J	B	1
CS6G 20	bg soil 0-5	Beryllium	0.139	MGKG	121394	0.0147	J	B	1
CS6G 18	bg soil 0-5	Beryllium	0.132	MGKG	120694	0.014	J	B	1
CS6G 19	bg soil 0-5	Beryllium	0.122	MGKG	121394	0.0154	J	B	4
CS6G 18	bg soil 0-5	Beryllium	0.119	MGKG	121394	0.015	J		4
CS6G 10	bg soil 0-5	Beryllium	0.117	MGKG	42194	0.0129	J	Y	2
CS6G 19	bg soil 0-5	Beryllium	0.112	MGKG	121394	0.0145	J	B	2
CS6G 20	bg soil 0-5	Beryllium	0.0816	MGKG	121394	0.0152	J	B	4
CS6G 10	bg soil 0-5	Beryllium	0.0769	MGKG	42194	0.0139	J	Y	5
CS6G 19	bg soil 0-5	Beryllium	0.0744	MGKG	121394	0.0137	J	B	1

Result Qualifiers

U = Material analyzed but not detected

J = Analytical result is estimated

Analytical Qualifiers

B = Result is below contract required detection limit and above or equal to the instrument detection limit

R = ICP interference criteria are not met

X = duplicate analysis relative percent difference was not within control limits

Y = Unpreserved or improperly preserved sample

Appendix D

Sample Collection Logbooks

First Sampling Period

(Taken From WSRC-RP-94-382, May 1994)

EPD/EMS SOIL SAMPLE LOGBOOK

Central Shops Burning/Rubble Pit

Project 631-66 FROM # 101800 TO # 101873

*CENTRAL SHOPS BURNING/RUBBLE PIT (Additional
Limit Assessment)*

Project 631-66 FROM # 101874 TO # 101899

Project _____ FROM # _____ TO # _____

Project _____ FROM # _____ TO # _____

Project _____ FROM # _____ TO # _____

Book in use from 3/25/94 to 1/1/

ENVIRONMENTAL PROTECTION DEPARTMENT

SAVANNAH RIVER SITE

SAMPLE IDENTIFICATION NUMBERS 101800 - 101899

EPD/EMS SOIL SAMPLE LOGBOOK

SIGNATURE PAGE

SIGNATURE	INITIALS	PRINTED NAME	COMPANY
<u>William D. Joyce</u>	<u>W.D.J</u>	<u>William D. Joyce</u>	<u>RUST E and I</u>
<u>Melanie D Hill</u>	<u>MDH</u>	<u>Melanie D. Hill</u>	<u>RUST E+I</u>
<u>Chester E. Nichols</u>	<u>C.E.N.</u>	<u>Chester E. Nichols</u>	<u>WSRC / EPD</u>
<u>Kelly Hunter</u>	<u>KDH</u>	<u>KELLY D. HUNTER</u>	<u>RUST E & I</u>
<u>Bruce S. Kristiansen</u>	<u>BSK</u>	<u>BRUCE S. KRISTIANSEN</u>	<u>RUST E & I</u>
<u>Melanie D. Hill</u>	<u>MDH</u>	<u>Melanie D. Hill</u>	<u>RUST E+I</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>

DIRECTIONS FOR FILLING OUT THE SAMPLE LOGBOOK

INTRODUCTION

The pages of this logbook are designed for rapid entry into computer files. The information on each line must be filled out carefully and legibly using the following directions.

GENERAL RULES

All samplers who record information must sign the signature page at the front of this logbook. Be sure that any previous samplers have also signed on the signature page.

Enter text by printing. Select from checklists with an "X" in the appropriate box.

Use a black, ball-point, indelible-ink pen.

Upon completing a page, the EPD/EMS Project Technical Manager or representative must review the page, sign, and enter the date in the spaces provided.

Once a book is finished, enter projects and associated Sample ID numbers on the first page. Confirm that the signature page has been completed.

SPECIFIC INSTRUCTIONS FOR EACH ENTRY

Sample Date

Record the date as a six-digit number, using only digits and leaving no blanks. The first two digits indicate the month, the second two digits indicate the day, and the final two digits indicate the year.

Time Sample Collected

Record the time the sample was collected as a four-digit number using military time. Use only digits and leave no blanks. If there is any unusual delay between the time the sample is collected and the sealing of the last sample jar, indicate this with an "X" in the box labeled "Check here if unusual delay in bottling samples" and record a description of the delay under "COMMENTS."

Sample Type

Select the type of sample with an "X" in the appropriate box. If none of the boxes supplied is appropriate, select "OTHER" and print the sample type in the space provided, adding explanatory text under "COMMENTS" if needed. Sample type is indicated on the Chain-of-Custody stub. If the sample is a duplicate, split, rinsate, etc., record the number (Sample ID) of the associated sample in the space provided.

Sample Matrix

Indicate the matrix with an "X" in the appropriate box. If none of the boxes supplied is appropriate, select "OTHER" and print the matrix in the space provided, adding explanatory text under "COMMENTS" if needed.

Sampler

The sampler is the person responsible for putting the sample into the bottle. The sampler enters his initials in the spaces provided. He also signs the signature line on the second page of the sample logbook.

Planned Station

Enter the planned station as printed on the Chain-of-Custody stub.

Planned Intervals

Enter the planned depth from the ground to the top of core and the depth from the ground to the bottom of core in feet and hundredths of feet. The top and bottom of the planned sampling interval are printed on the Chain-of-Custody stub.

Actual Station

If the actual station and intervals are the same as the planned station and intervals, check the box, otherwise enter the actual sample station.

Actual Intervals

Measure and enter the actual depth from the ground to the top of core and the depth from the ground to the bottom of core in feet and hundredths of feet. It is not necessary to enter the actual intervals if they are the same as the planned intervals and planned station and the appropriate box is checked.

Moisture Content

Indicate the moisture content with an "X" in the appropriate box. If the soil is powdery and doesn't stick together, mark it as "Dry". If the soil sticks together but doesn't ooze water, mark it as "Damp." If the soil exudes water when pressed or squeezed, mark it as "Wet." If the sample can be poured, doesn't mound, yet doesn't flow like water, mark it as "Sludge." If the sample flows like water, mark it "Liquid."

Munsell Color

Record the primary Munsell color designation in the first space provided. The character may be a capital letter or a numeral. (Use the standardized soil color chart available from the Munsell Color Company, 2441 North Calvert St., Baltimore, Maryland.) If there is a secondary color, enter it in the space captioned Secondary Munsell color.

Unified Soil Classification

Record the Unified Soil Classification for this sample in the space provided. (Use the American Geological Institute [AGI] data sheet 38.1, Technical Memorandum No. 3-357, prepared for Office, Chief of Engineers, by Waterways Equipment Station, Vicksburg, Mississippi, March 1953.)

Bottle Entry

Transfer the bottle number by peeling the label subtitled "(place in sample logbook)" from each bottle label associated with this Sample ID and sticking it in one of the rectangles at the bottom of the page. The six-digit Sample ID written on the bottle label must match the Sample ID at the top of this page. The eight-digit bottle number identifies each bottle. If there is no peel-off label, write the bottle number of each bottle in the rectangles provided. Enter one eight-digit number per rectangle.

Signature

The EPD/EMS Project Technical Manager or representative must review each page once it is completed for legibility and completeness. It is important to check that information from the Chain-of-Custody stub about the Planned Station has been transferred correctly. The Project Technical Manager or representative signs and dates the page once he is satisfied that the recorded data are legible and complete. No changes must be made to a page after it has been signed as read and understood.

Blank or Standard Description

Specify the type of blank if the sample is a blank: field, trip, equipment, etc. If the sample is a standard, describe its source and what it is.

Composition

List the components of the sample, including mineralogy (quartz, clay, heavy minerals, etc.) and foreign objects (asphalt, cement, shingles, etc.), as percents of the total.

Description

Describe the general character of the sample: whether it is a core, stream sediment, etc., and the general location from which it was taken. Provide a brief geologic description of the sample, including degree of sorting, grain size, etc.

List any bottles not filled

If the sample volume was not large enough to fill all the bottles listed on the Chain-of-Custody form, list the analyses requested for which bottles were not filled.

Comments

Write down the Project code from the Chain-of-Custody stub. Describe in detail any environmental factors that might affect the chemistry of the sample, including relationship of the sample interval to any sewer, pipeline, or other nearby structure. If there was any unusual delay between sample collection and sample bottling, record the duration of the delay, briefly describe the holding conditions of the sample during the delay, and record the reason for the delay. Record any unusual condition or situation involved with the site or the sampling process that may affect the chemical or physical properties of the sample. Any deviations from routine procedures must be described here.

Sample ID: 101800

Blank and Standard descriptions: NA

Composition: SAND

Description: silt (10%), very coarse to coarse grained,
moderate yellowish brown (10 YR 5/4) grading
to light brown (5 YR 5/6) subangular to sub-
rounded, poorly sorted, moist from recent
rain, some granules to pebbles quartz

List any bottles not filled: NA

Comments: NA

Sample ID: 101800

Sample Date: 3 / 25 / 94
mo day yrTime Sample Collected: 13 : 00
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: W D J

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-06-010.002.00☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10 YR 5/4Secondary Munsell color: 5 YR 5/6Unified Soil Classification: S.W. - 5/12/94

Stick Bar Code from every bottle label with this sample number below:

30030536 Field Worklist		30030158 Field Worklist		30030542 Field Worklist
	30030190 Field Worklist
			30030558 Field Worklist
30030524 Field Worklist		30030257 Field Worklist		30030530 Field Worklist

Read and understood by: Christie E. NicholsDate: 6/15/94

Sample ID: 101801

Blank and Standard descriptions: NA

Composition: SAND with charred debris from the bottom of the pit

Description: silt 10-15% with clay 5% as dry kaolin in pockets, medium to coarse grained, moderate reddish orange (10R 6/6) to moderate reddish brown (10R 4/6), subangular to subrounded, moderately sorted, dry to moderately moist (debris is wet)

List any bottles not filled: NA

Comments: Sample interval collected in one split spoon (16:00) for 10.70' - 12.00' and in a second split spoon 12.00' - 12.70' at 16:30. Difficulty in locating bottom of pit. Found bottom of pit at 11.7' and sampled 1.0' above and 1.0' below. Got no core from a 1' run above the bottom of the pit. Upper half of this ^{2'} interval was blackish muck (ash?) based on about 0.3' of material (recovered in the next core run) on top of undisturbed formation. This run had about 1' of water on top of the core with small black flecks (of carbon?) on it and a slight sheen visible when pouring the water. ds

Sample ID: 101801

Sample Date: 3 / 25 / 94
mo day yrTime Sample Collected: 14 : 10
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☒ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: W D J

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-06-0210.7012.70☒ Same as above

Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10 R 6/6Secondary Munsell color: 10 R 4/6Unified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

	38038635 38038635 Field Worklist		38038641 38038641 Field Worklist	
38038138 38038138 Field Worklist	38038154 38038154 Field Worklist		38038245 38038245 Field Worklist	38038285 38038285 Field Worklist
	38038629 38038629 Field Worklist		38038623 38038623 Field Worklist	
38038329 38038329 Field Worklist		38038125 38038125 Field Worklist		38038137 38038137 Field Worklist

Read and understood by: E. Chester E. NicholsDate: 6 / 15 / 94

Sample ID: 101802

Blank and Standard descriptions: DI Water with HCL preservative
GEL Trip Blank for samples
101800 and 101801

Composition: DI Water with HCL

Description: NA

List any bottles not filled: NA

Comments: Trip blanks utilized on 3/25/94 at 18:00

Sample ID: 101802

Sample Date: ^{25 AP}
3 / 15 / 94
mo day yrTime Sample Collected: 16 : 00
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other Trip Blank

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: W O JFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101800 and 101801

Station CS6G-TB-1B
~~NA GEL Trip Blank~~
 Planned CS6G-06-101 NA NA
~~7/25/94~~
 Actual NA NA NA
~~CS6G-TB-1B~~
~~7/25/94~~

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid
 Munsell Color: NA Secondary Munsell color: NA
 Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

38838439 Field Worklist				38838446 Field Worklist
38838453 Field Worklist				38838462 Field Worklist

Read and understood by: Chester E. NicholsDate: 6 / 15 / 94

Sample ID: 101803

Blank and Standard descriptions: DI Water with selected
preservatives

Composition: DI Water and preservatives

Description: NA

List any bottles not filled: NA

Comments: Left open 30 minutes before sealing.

Sample ID: 101803

Sample Date: 3 / 25 / 94
mo day yrTime Sample Collected: 18 : 10
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other Field Blank

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: W D JFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101800 and 101801Depth from ground
to top of intervalDepth from ground
to bottom of interval

Station

CS6G-FB-1C

(in feet)

(in feet)

Planned

NA - Only 25/7/94NANA☒ Same as above

Actual

NA CS6G-FB-1C
25/7/94 25/7/94NANACheck appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

38838437 Field Worklist		38838436 Field Worklist		38838633 Field Worklist
	38838367 Field Worklist		38838886 Field Worklist
38838387 Field Worklist		38838112 Field Worklist
	38838386 Field Worklist		38838357 Field Worklist	

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 101804

Blank and Standard descriptions: DI Water

Composition: DI Water

Description: NA

List any bottles not filled: NA

Comments: Trace of sand in water

Sample ID: 101804

Sample Date: 3 / 15 / 94
mo day yrTime Sample Collected: 18 : 25
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☒ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: W D JFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101800 and 101801

Station

CS6G-RB-1EDepth from ground
to top of interval

(in feet)

Depth from ground
to bottom of interval

(in feet)

Planned NA - Damp 20/7/2/94 NA NA

☒ Same as above Actual NA CS6G-RB-1E NA NA
20/7/2/94 20/7/2/94

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NA Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

38838388 Field Worklist		38838435 Field Worklist		
38838379 Field Worklist				38838429 Field Worklist
	38838851 Field Worklist		38838256 Field Worklist	
38838364 Field Worklist		38838103 Field Worklist		38838115 Field Worklist

Read and understood by: Ehster E. NicholsDate: 6/15/94

Sample ID: 101805

Blank and Standard descriptions: NA

Composition: Sand

Description: Very coarse to pebble size quartz sand,
5 to 10% silt and clay mottled, mottled moderate
red to dark reddish brown (5R 4/6 to 10R 3/4)
with dark yellowish orange (10 YR 6/6), pale red purple (5RP 6/2),
and ^{grayish} red purple (5RP 4/2), trace micas, trace heavy firm,
moist.

List any bottles not filled: NA

Comments:

This hole is offset 2' upgradient (NW) from an old hole. AN

Sample ID: 101805

Sample Date: 5 / 28 / 94
mo day yrTime Sample Collected: 08:30
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned C56G-06-0312.7014.70☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5R 4/6 Secondary Munsell color: 10R 3/4Unified Soil Classification: S.W. - SC
MWH 7/21/94

Stick Bar Code from every bottle label with this sample number below:

38038286 Field Worklist		38038534 Field Worklist		38038558 Field Worklist
	38038161 Field Worklist
		38038322 Field Worklist
38038648 Field Worklist				38038225 Field Worklist

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101806

Blank and Standard descriptions: DI Water with HCl preservative
GEZ Trip Blank for samples

101805, 101807, 101808, + 101809

Composition: DI Water with HCL

Description: NA

List any bottles not filled: NA

Comments: Trip blanks utilized on 3/28/94 at 16:00
hrs
dt.

Used this number because inadvertently
skipped at the beginning of the day.

Sample ID: 101806

Sample Date: 3/28/94
mo day yrTime Sample Collected: 16:00
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other Trip Blank

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay

in bottling samples.

Describe delay in Comments.

Sampler: MDHFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101805, 101807, 101808 + 101809Station C566-TB-2BDepth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned Get Trip Blank NA NA☒ Same as aboveActual C566-TB-2B NA NACheck appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

	38838448 Field Worklist
		38838463 Field Worklist
	38838454 Field Worklist		38838447 Field Worklist	

Read and understood by: Charles E. NicholsDate: 6/15/94

Sample ID: 101807

Blank and Standard descriptions: NA

Composition: Clay

Description: 30% very coarse, pebbles to cobble size quartz sand, dry, dense, white (N9) to pale red purple (5R-P6/2) to moderate red (5R 4/6), trace micas.

List any bottles not filled: NA

Comments: Hole extended due to very slight OVA Kick in this interval? (see Daily log) AB

Sample ID: 101807

Sample Date: 3/28/94
mo day yrTime Sample Collected: 09:30
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-06-0414.7016.70☒ Same as above Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ Liquid
 Munsell Color: N9 Secondary Munsell color: 5RP6/2
 Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

	38030252 Field Worklist		38030321 Field Worklist
38030168 Field Worklist		38030284 Field Worklist		38030673 Field Worklist
	38030678 Field Worklist		38030679 Field Worklist
38030667 Field Worklist				

Read and understood by: Chester E. NicholsDate: 6/14/94

Sample ID: 101808

Blank and Standard descriptions: NA

Composition: Clay that grades to Sand in lower
0.4 ft.

Description: As previous sample, but ^{dominant} color is pale red purple (5R P 6/2).
Grades to Sand, silt + clay (10%), V. coarse,
moderately to poorly sorted, moderate red
(5R P 4/6), dry to moist.

List any bottles not filled: NA

Comments: Miscommunication with depths so time delay
of 45 minutes (i.e. actual sample time of 1130).

Sample ID: 101808

Sample Date: 3/28/94
mo day yrTime Sample Collected: 11:30
(use military time)

RAP 27 JUL 94

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☒ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-06-0521.7023.7016.7018.70

NDK

NDK

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5RP6/2Secondary Munsell color: 5R 4/6Unified Soil Classification: C #

Stick Bar Code from every bottle label with this sample number below:

3883834E Field Worklist		38838488 Field Worklist		38838586 Field Worklist
	38838454 Field Worklist		38838580 Field Worklist	

Read and understood by: Charles E. NicholsDate: 6/15/94

Sample ID: 101809

Blank and Standard descriptions: NA

Composition: Interbedded silt and clay

Description: Silt; 20% clay, grayish red purple (5R.P. 4/2) and pale red purple (5RP 6/2), dry to moist, firm; micaceous (20%), trace heavies.
Clay, 20% silt, same colors as above with some occasional moderate red ^{stringers} (5R 4/6), dry to moist, plastic

List any bottles not filled: NA

Comments: Bottom of the hole. Last sample.

Sample ID: 101809

Sample Date: 31 28 94
mo day yrTime Sample Collected: 12:15
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval

(in feet)

Depth from ground
to bottom of interval

(in feet)

Planned CS64060628.70
18.70
NON30.70
20.70
NON☒ Same as above

Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5R 4/2Secondary Munsell color: 5R 6/2Unified Soil Classification: CH-10H
NON 12/1/94

Stick Bar Code from every bottle label with this sample number below:

32238507 Field Worklist		32238538 Field Worklist		32238489 Field Worklist
	32238532 Field Worklist		32238345 Field Worklist	

Read and understood by: Chester E. NicholDate: 6/1/94

Sample ID: 101810

Blank and Standard descriptions: Duplicate of sample
#101809.

Composition: silt + clay interbedded

Description: see previous sample (#101809)

List any bottles not filled: NA

Comments:

Sample ID: 101810

Sample Date: 3/28/94
mo day yrTime Sample Collected: 12:15
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☐ Rinsate
☒ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: CS65066A MDH
101809

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned: CS65066A

28.70
10.70
MDH

30.70
20.70
MDH

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5R 4/2Secondary Munsell color: 5R 6/2Unified Soil Classification: CH / M H MDH 3/21/94

Stick Bar Code from every bottle label with this sample number below:

3883851 Field Worklist		38838511 Field Worklist		3883858 Field Worklist
	38838517 Field Worklist		38838523 Field Worklist	

Read and understood by: Echeta E. NicholasDate: 6/15/94

Sample ID: 101811

Blank and Standard descriptions: DI water with selected
preservatives - field Blank

Composition: DI water with selected preservatives

Description: NA

List any bottles not filled: NA

Comments:

Sample ID: 101811

Sample Date: 3 / 28 / 94
mo day yrTime Sample Collected: 14 : 00
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☒ Rinsate
☐ Duplicate
☒ Other Field Blank

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H
101805, 101807,
101808 + 101809

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample:

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
<u>CS 66 - FB - 2C</u>		
Planned <u>NA Daily mon 7/21/94</u> <u>NA</u>		<u>NA</u>
☒ Same as above Actual <u>CS 66 - FB - 2C mon 7/21/94</u> <u>NA</u>		<u>NA</u>

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

	38838432 Field Worklist
38838485 Field Worklist		38838374 Field Worklist		38838438 Field Worklist
	38838396 Field Worklist		38838857 Field Worklist
38838121 Field Worklist		38838358 Field Worklist		38838187 Field Worklist

Read and understood by: Chester E. NicholsDate: 6 / 15 / 94

Sample ID: 101812

Blank and Standard descriptions: DI water with selected
preservatives - Rinse blank

Composition: DI water with selected preservatives

Description: NA

List any bottles not filled: NA

Comments: Started to drizzle rain while
sampling but ^{worked ok} under back of the truck's
camper.

Sample ID: 101812

Sample Date: 3 / 28 / 94
mo day yrTime Sample Collected: 14 : 30
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☒ Rinsate
☐ Duplicate
☒ Other Rinsate

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDHFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101805, 101807
101808, 101809

Station CS6G-RB-2E Depth from ground to top of interval (in feet) _____ Depth from ground to bottom of interval (in feet) _____
 Planned NA-Duty MDH 7/21/94 NA NA
☒ Same as above Actual CS6G-RB-2E MDH 7/21/94 NA NA

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

38838361 Field Worklist		38838373 Field Worklist		38838333 Field Worklist
	38838408 Field Worklist		38838423 Field Worklist
38838182 Field Worklist		38838116 Field Worklist		38838431 Field Worklist
	38838852 Field Worklist			

Read and understood by: E. Chester E. NicholsDate: 6 / 15 / 94

Sample ID: 101813

Blank and Standard descriptions: NA

Composition: Sand

Description: Silt + clay (5-10%), coarse to very coarse
grained, moderate yellowish brown (10 YR 7/4)
to light brown (5 YR 5/6), moderately sorted,
subangular to subrounded, dry to moist, clay in
stringers (very pale orange (10 YR 8/2) to very light
gray (N 8)]
List any bottles not filled: NA

Comments: Obviously fill material

Sample ID: 101813

Sample Date: 3/29/94
mo day yrTime Sample Collected: 08:15
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned C566-07-010.002.00

☒ Same as above Actual: _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5Y12.5/6 Secondary Munsell color: 10YR 5/4Unified Soil Classification: SP mod 21/94

Stick Bar Code from every bottle label with this sample number below:

				38838152 Field Worklist
38838655 Field Worklist	38838653 Field Worklist	38838656 Field Worklist	38838647 Field Worklist
38838322 Field Worklist		38838228 Field Worklist		38838159 Field Worklist

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101814

Blank and Standard descriptions: NA

Composition: sand (7.5 to 8.1')
Clay (8.1 to 9.5')

Description: same sand as above.

Clay, silt and very fine to medium sand (20%),
no fitted to banded appearance, predominantly
pale red purple (5R 6/2) and yellowish gray (5Y 7/2),
also white (N 9), dark yellowish orange (10YR 6/6), light
brown (5YR 5/6); and moderate reddish brown (10R 4/6) dry,
List any bottles not filled: NA micaceous (C 290), trace
heavies, slightly plastic.

Comments: TCLP sample

Bottom of pit at 8.1 ft.

Sample ID: 101814

Sample Date: 3 / 29 / 94
mo day yrTime Sample Collected: 09 : 10
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D N

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-07-027.50 9.50☒ Same as above

Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5RP6/2Secondary Munsell color: 5Y 7/2Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample-number below:

38838274 Field Worklist		38838153 Field Worklist		38838128 Field Worklist
	38838136 Field Worklist		38838328 Field Worklist
38838157 Field Worklist		38838131 Field Worklist		38838671 Field Worklist
	38838672 Field Worklist	38838677 Field Worklist	38838665 Field Worklist	

Read and understood by: Charles E. NicholsDate: 6 / 15 / 94

Sample ID: 101815

Blank and Standard descriptions: NA

Composition: Silt

Description: above graded to clayey (20%) silt,
Colors as above, dry to moist, less
sand (0-5%); fine.

List any bottles not filled: NA

Comments:

Sample ID: 101815

Sample Date: 3/29/94
mo day yrTime Sample Collected: 10:00
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned: CS66-07-039.50 - 11.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5 R 6/2 Secondary Munsell color: 5 Y 7/2Unified Soil Classification: M L

Stick Bar Code from every bottle label with this sample number below:

38838574 Field Worklist	38838562 Field Worklist	38838568 Field Worklist	38838588 Field Worklist	38838287 Field Worklist
38838155 Field Worklist	38838328 Field Worklist	38838281 Field Worklist		

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101816

Blank and Standard descriptions: Duplicate of soil sample
collected for #101815

Composition: silt

Description: see previous sample # 101815

List any bottles not filled: NA

Comments:

Sample ID: 101816

Sample Date: 3 129 94
mo day yr.Time Sample Collected: 10:00
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☒ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDHFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101815

Station

Depth from ground
to top of interval -
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-07-3A 9.50 11.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5 RP 6/2 Secondary Munsell color: 5 Y 7/2Unified Soil Classification: ML

Stick Bar Code from every bottle label with this sample number below.

38838584 Field Worklist	38838592 Field Worklist	38838596 Field Worklist	38838598 Field Worklist
38838602 Field Worklist	38838675 Field Worklist	38838624 Field Worklist	38838656 Field Worklist	

Read and understood by: Ernest E. NicholsDate: 6/15/84

Sample ID: 101817

Blank and Standard descriptions: NA

Composition: Silt (11 to 12.2') grading to
Sand

Description: Silt; from above, less Clay (10%), increase
very fine sand (5-10%), colors more banded in appearance
with yellowish gray (5Y 7/2) more predominant,
add dark reddish brown (10R 3/4) and grayish purple (5P 4/2)
sand, silt and clay (10-20%), very fine to fine, mottled/moleak
reddish brown (10R 4/6), dark yellowish orange (10YR 6/6),
List any bottles not filled: NA light brown (5YR 5/6) and
white (N9), well sorted, subangular
to subrounded, micaceous (23),
trace heavies, dry to moist, firm to
hard.

Comments:

Last sample of hole CS6G-07.
Bottom of the hole at 13.00 ft.

Sample ID: 101817

Sample Date: 3/29/94
mo day yrTime Sample Collected: 10:45
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
Planned <u>C566-07-04</u>	<u>11.00</u>	<u>13.00</u>
☒ Same as above Actual _____	_____	_____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5Y 7/2Secondary Munsell color: 5RP 6/2Unified Soil Classification: ML

Stick Bar Code from every bottle label with this sample number below:

	38838544 Field Worklist
38838558 Field Worklist	38838288 Field Worklist	38838556 Field Worklist	38838159 Field Worklist	38838319 Field Worklist
			38838618 Field Worklist
				38838272 Field Worklist

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101818

Blank and Standard descriptions: Rinstate Blank - DI water
with selected preservatives

Composition: DI water with selected
preservatives

Description: NA

List any bottles not filled: NA

Comments: Daily Rinstate Blank between holes
CS66-07 and CS66-08 (sample #'s
101817 and 101819).
101820

* Actually waited for Kevin to assist in
collecting rinstate so took sample at
1205.

Sample ID: 101818

Sample Date: 3/29/94
mo day yrTime Sample Collected: 12:05
17:30
(use military time)

RA 27 JUL 94

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☒ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☒ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDHFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101817, 101816, 101815101814 + 101813Depth from ground
to top of intervalDepth from ground
to bottom of interval

Station

CS66-RB-3E

(in feet)

(in feet)

Planned

NA dailyNANA☒ Same as above

Actual

CS66-RB-3ENANACheck appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

		38838128 Field Worklist		38838884 Field Worklist
	38838385 Field Worklist		38838383 Field Worklist
38838381 Field Worklist		38838418 Field Worklist		38838423 Field Worklist
	38838856 Field Worklist		38838355 Field Worklist	

Read and understood by: Charles E. NicholsDate: 6/15/94

Sample ID: 101819

Blank and Standard descriptions: DI water with selected
preservatives - Field Blank

Composition: DI water with selected preservatives

Description: N/A

List any bottles not filled: N/A

Comments: Field blank for the day 3/29/94.
taken between holes CS6G-07 and
CS6G-08

Sample ID: 101819

Sample Date: 3 / 29 / 94
mo day yrTime Sample Collected: 11 : 40
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other field

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H
101817, 101816, 101815,
101814, 101813

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101814, 101813

Station C566-FB-36 Depth from ground to top of interval (in feet) _____
 Depth from ground to bottom of interval (in feet) _____

Planned NA daily mdt 7/21/94 NA NA

☒ Same as above Actual C566-FB-36 NA NA
mdt 7/21/94

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

32238117 Field Worklist	32238101 Field Worklist	32238376 Field Worklist
32238426 Field Worklist	32238486 Field Worklist
32238427 Field Worklist	32238392 Field Worklist
32238858 Field Worklist	32238362 Field Worklist			

Read and understood by: Charles E. Nichols

Date: 6/15/94

Sample ID: 101820

Blank and Standard descriptions: NA

Composition: Sand

Description: silt+clay (1090), very fine to coarse grained with occasional pebbles, moderate reddish brown (10R 4/6) with dark yellowish orange (10YR 6/6) and yellowish gray (5Y 7/2) clays, poorly sorted, subangular to subrounded, moist, trace heavies.

List any bottles not filled: NA

Comments: Obviously disturbed soils or fill material.

Sample ID: 101820

Sample Date: 31 29 94
mo day yrTime Sample Collected: 12 : 45
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay

in bottling samples.

Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-08-01 0.00 2.00☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10 R 4/6 Secondary Munsell color: 10 YR 6/6Unified Soil Classification: SW - SC
mo 11/21/94

Stick Bar Code from every bottle label with this sample number below:

				38030151 Field Worklist
				38030327 Field Worklist
				38030543 Field Worklist
38030271 Field Worklist	38030200 Field Worklist	38030561 Field Worklist	38030555 Field Worklist	38030549 Field Worklist

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101821

Blank and Standard descriptions: NA

Composition: Clay

Description: silt (10-20%), very fine sand (<5%),
dense, brittle to slightly plastic, moderate
reddish-brown (10 R 4/6) with mottled
dark yellowish orange (10 YR 6/6), light brown
(5 YR 5/6) and grayish purple (5 P 4/2), dry.
micaceous (<2%) Trace heavies.
List any bottles not filled: NA

Comments: Pit (burnt, black material) from
5.7' to 6' - contains glass, clay pieces,
nails, etc.

TCLP sample

Sample ID: 101821

Sample Date: 31 29 94
mo day yrTime Sample Collected: 13 : 50
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: W D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned C566-08-025.007.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10 R 4/6Secondary Munsell color: 10 YR 6/6Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

38838279 Field Worklist	38838326 Field Worklist	38838281 Field Worklist	38838135 Field Worklist	3883815e Field Worklist
38838127 Field Worklist	38838132 Field Worklist	38838575 Field Worklist	38838585 Field Worklist	38838573 Field Worklist
38838567 Field Worklist				

Read and understood by: Chester E. NicholsDate: 6 1 94

Sample ID: 101822

Blank and Standard descriptions: NA

Composition: Clay

Description: see previous sample (#101822)
description

List any bottles not filled: NA

Comments:

Sample ID: 101822

Sample Date: 3 / 29 / 94
mo day yrTime Sample Collected: 14 : 45
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned C56G-08-037.009.00☒ Same as above Actual _____Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10 R 4/6Secondary Munsell color: 10 YR 6/6Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

38838262 Field Worklist
		38838276 Field Worklist	38838322 Field Worklist	38838689 Field Worklist
38838157 Field Worklist
		38838597 Field Worklist	38838222 Field Worklist	38838623 Field Worklist

Read and understood by: Ernest E. NicholsDate: 6 / 15 / 94

Sample ID: 101823

Blank and Standard descriptions:

NA

Composition:

clay

Description:

as above in previous sample (# 101822),
increase in sand (10%), very fine to medium,
add yellowish gray to mottled colors (5 Y 8/1).

List any bottles not filled:

NA

Comments:

Last sample in hole C566-08.
Bottom of the hole at 11 ft.

Sample ID: 101823

Sample Date: 3, 29, 94
mo day yrTime Sample Collected: 15 : 15
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-08-049:00 11:00☒ Same as above Actual _____Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10 R 4/6Secondary Munsell color: 10 YR 6/6Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

	38838568 Field Worklist	38838276 Field Worklist
	38838554 Field Worklist	38838152 Field Worklist
	38838542 Field Worklist	38838285 Field Worklist
	38838548 Field Worklist	38838318 Field Worklist		

Read and understood by: Christa E. NicholsDate: 6 / 15 / 94

Sample ID: 101824

Blank and Standard descriptions: DI water with HCL

preservative ; GEZ Trip. Blank for samples-

101813, 101814, 101815, 101816, 101817, 101820,
101821, 101822 and 101823

Composition: DI water with HCL

Description: NA

List any bottles not filled: NA

Comments: Trip Blanks utilized on 3/29/94
at 1600

Sample ID: 101824

Sample Date: 3 12 94
mo day yrTime Sample Collected: 16:00
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other Trip Blank

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H
101813, 101814, 101815,
101816, 101817, 101820,
101821, 101822 + 101823

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample:

Depth from ground
to top of intervalDepth from ground
to bottom of interval
(in feet)Station CS6G-TB-3B (in feet)Planned GEL Trip Blank ^{M D H} NA NA

☒ Same as above Actual CS6G-TB-3B ^{M D H} NA NA

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

				38838462 Field Worklist
				38838462 Field Worklist
				38838464 Field Worklist
				38838463 Field Worklist

Read and understood by: Chester E. Nichols Date: 6/15/94

Sample ID: 101825

Blank and Standard descriptions:

NA

Composition:

sand

Description:

silt and clay (10-20%), fine to very coarse, light brown (5 YR 5/6) to moderate reddish brown (10 R 4/6), poorly sorted, subangular to subrounded, trace heavies, dry to moist.

List any bottles not filled:

NA

Comments:

Sample ID: 101825

Sample Date: 3 130 194
mo day yrTime Sample Collected: 08 : 35
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned 0566-09-01 0.00 2.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5YR 5/6 Secondary Munsell color: 10 12 4/6Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

38838572 Field Worklist
	38838578 Field Worklist		38838566 Field Worklist
38838533 Field Worklist		38838165 Field Worklist		38838584 Field Worklist
	38838277 Field Worklist		38838538 Field Worklist	

Read and understood by: Ernest E. NicholsDate: 6 15 194

Sample ID: 101826

Blank and Standard descriptions: NA

Composition: Sand, as above to 4.4'

Black burnt material from 4.4' to 4.6'

Clay ~~Sand~~ from 4.6' to 5.6'
NDH

Description: 4.4' to 4.6' - Black, burnt material with rocks,
glass, vitrified clay, and other debris.

4.6' to 5.6' - ~~Sand~~ ^{NDH} Clay, silt and sand (10-15%),
fine to medium, mottled light brown (5YR 5/6),
moderate reddish brown (10R 4/6), and yellowish
gray (5Y 8/1); trace micas, trace heavy minerals, dry to moist,
List any bottles not filled: NA } brittle to slightly plastic.

Trace of micas and heavy minerals ok.

Comments: TCLP sample collected at this interval.

Base of the pit at 4.6' b/s.

Sample ID: 101826

Sample Date: 31 70 94
mo day yr

Time Sample Collected: 10 : 00
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-09-02 3.60 5.60

☒ Same as above Actual: _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ Liquid
Munsell Color: 5 YR 5/6 Secondary Munsell color: 10 R 4/6
Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

38838134 Field Worklist				38838133 Field Worklist
	38838547 Field Worklist	38838553 Field Worklist	38838555 Field Worklist
	38838165 Field Worklist	38838331 Field Worklist	38838255 Field Worklist
38838156 Field Worklist		38838541 Field Worklist		38838278 Field Worklist

Read and understood by: Chester E. Nichols Date: 6 15 94

Sample ID: 101827

Blank and Standard descriptions: NA

Composition: Clay

Description: As above, increase in sand content (20%)
more dense, harder.

List any bottles not filled: NA

Comments: next sample 101828 is duplicate
for this sample.

Sample ID: 101827

Sample Date: 3/30/94
mo day yrTime Sample Collected: 11:00
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M DH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned C564-09-035.607.60☒ Same as above

Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5 YR 5/6Secondary Munsell color: 10 R 4/6Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

38038286 Field Worklist		38038226 Field Worklist		38038178 Field Worklist
	38038322 Field Worklist		38038688 Field Worklist
38038602 Field Worklist		38038552 Field Worklist		38038596 Field Worklist

Read and understood by: Ernest E. NicholsDate: 6/15/94

Sample ID: 101828

Blank and Standard descriptions: Duplicate for sample #101827

Composition: see previous description for #101827

Description: see previous description for #101827

List any bottles not filled: NA

Comments:

Sample ID: 101828

Sample Date: 3 130 194
mo day yrTime Sample Collected: 11 : 00
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☒ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: ADNFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101827

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)

Planned

C56G-09-3A5.607.60☒ Same as above

Actual

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5Y R 5/4 Secondary Munsell color: 10 R 4/4Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

38030333 Field Worklist			38030222 Field Worklist	38030563 Field Worklist
	38030164 Field Worklist			38030583 Field Worklist
		38030227 Field Worklist		38030577 Field Worklist
				38030577 Field Worklist

Read and understood by:

Chester E. Nichols

Date:

6 15 194

Sample ID: 101829

Blank and Standard descriptions: NA

Composition: Clay

Description: as above with increase in sand and silt (30 to 40 %), fine to coarse, ^{add} add grayish red purple, to mottled colors as secondary and moderate reddish brown (10 R 4/6) as predominant

List any bottles not filled: NA

Comments: Last sample of this hole.

Bottom of the hole at 9.6' to 11.85' (pushed a Shelby tube from 9.6' to 11.85' (2.25')).

Sample ID: 101829

Sample Date: 3/30/94
mo day yrTime Sample Collected: 11:30
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-09-047.609.60☒ Same as above

Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5RP4/6Secondary Munsell color: 10R4/6Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

		38030293 Field Worklist	32238595 Field Worklist
		38030263 Field Worklist	32238569 Field Worklist
		38030224 Field Worklist	32238587 Field Worklist
		38030166 Field Worklist	32238521 Field Worklist	

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101830

Blank and Standard descriptions: Field Blank for 101825,
101826, 101827, 101828, 101829.

DI water with selected preservatives.
Composition: DI water with selected
preservatives

Description: NA

List any bottles not filled: NA

Comments: Field Blank taken between holes
CS66-09 and CS66-04 (sample #
101829 and 101832)

The oversight geologist said that she did not leave any of
the field blank sampler open to the atmosphere during this
sampling program at Central Shops. AP

Sample ID: 101830

Sample Date: 31 30 94
mo day yrTime Sample Collected: 12:20
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other Field

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D HFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101825, 101826, 101827, 101828, 101829Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)

Station

C566-FB-4C

Planned

NA - Daily monNANA☒ Same as above

Actual

C566-FB-4CNANACheck appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

38838184 Field Worklist	38838418 Field Worklist	38838483 Field Worklist	38838385 Field Worklist
38838856 Field Worklist
38838114 Field Worklist
38838355 Field Worklist	38838438 Field Worklist	38838371 Field Worklist		

Read and understood by: Ernest E. NicholsDate: 6/15/94

Sample ID: 101831

Blank and Standard descriptions: Rinse Blank For 101825,
101826, 101827, 101828 & 101829

D.I. water with selected preservatives
Composition: D.I. water with selected preservatives.

Description: NA

List any bottles not filled: NA

Comments: Rinse Blank between holes
CS6G-09 and CS6G-04 and
sample #s 101829 and 101832.

Sample ID: 101831

Sample Date: 3 / 30 / 94
mo day yr.Time Sample Collected: 12 : 45
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☒ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H101825, 101826, 101827,
101828 + 101829

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Depth from ground
to top of interval
(in feet).Depth from ground
to bottom of interval
(in feet)Station CS66-RB-4EPlanned NA - Daily MDH NAActual CS66-RB-4E MDH NA☒ Same as aboveCheck appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NA Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

			30030425 Field Worklist	30030354 Field Worklist
			30030426 Field Worklist	30030357 Field Worklist
			30030106 Field Worklist	30030378 Field Worklist
		30030095 Field Worklist	30030402 Field Worklist	30030122 Field Worklist

Read and understood by: Chester E. NicholsDate: 6 / 15 / 94

Sample ID: 101832

Blank and Standard descriptions: NA

Composition: Sand

Description: Silt + clay (5 to 10%), moderate reddish brown (10 R 4/6) with flecks of white (N9), and dark yellowish orange (10 YR 6/6), fine to very coarse, moderately to poorly sorted, subangular, moist to dry.

at $\approx 1.5'$ sand, silt (< 25%), very fine to fine with occasional
List any bottles not filled: NA medium grained, moderate yellowish brown (10 YR 5/4),

Comments: well sorted, subangular to subrounded, trace heavies,
Fill material -
No structure. moist, loose.

Sample ID: 101832

Sample Date: 3/30/94
mo day yrTime Sample Collected: 13:45
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-04-010.002.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10 R 4/6Secondary Munsell color: 10 YR 5/4Unified Soil Classification: SW Sh
MDH 7/21/94

Stick Bar Code from every bottle label with this sample number below:

			38838622 Field Worklist	38838616 Field Worklist
	38838256 Field Worklist	38838242 Field Worklist
	38838382 Field Worklist	38838154 Field Worklist
38838615 Field Worklist	38838621 Field Worklist			

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101833

Blank and Standard descriptions: NA

Composition: Sand
Clay at 4 ft.

Description: as above with more medium to coarse
- grains
Clay, sand and silt (20-30%), Very fine to
coarse, mottled moderate reddish brown (10R 4/6),
dark yellowish orange (10YR 6/6) and yellowish gray (5Y 7/6),
trace mica, dense, brittle.
List any bottles not filled: NA

Comments: TCLP sample
Base of pit estimated at 4.0'.

Sample ID: 101833

Sample Date: 3 / 30 / 194
mo day yr.

Time Sample Collected: 14 : 40
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: M.D.H.

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-04-02

3.00

5.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10YR 5/4 Secondary Munsell color: 10R 4/6

Unified Soil Classification: CH 10YR 5/4

Stick Bar Code from every bottle label with this sample number below:

38838648 Field Worklist	38838383 Field Worklist	38838634 Field Worklist		38838148 Field Worklist
		38838153 Field Worklist
	38838148 Field Worklist	38838648 Field Worklist	32238241 Field Worklist
32238264 Field Worklist		38838628 Field Worklist		32238143 Field Worklist

Read and understood by: Christine E. Nichols

Date: 6 / 15 / 194

Sample ID: 101834

Blank and Standard descriptions:

NA

Composition:

Clay

Description: as above with increase in silt and
very fine sand (20-30%), colors as above;
brittle to slightly plastic, moist to dry.

List any bottles not filled:

NA

Comments:

Sample ID: 101834

Sample Date: 3 30 94
mo day yrTime Sample Collected: 15:20
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: R D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-04-035.007.00☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10 R 4/6Secondary Munsell color: 10 YR 6/6Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

			38838652 Field Worklist	38838658 Field Worklist
			38838654 Field Worklist	38838657 Field Worklist
			38838655 Field Worklist	38838652 Field Worklist
			38838643 Field Worklist	38838658 Field Worklist

Read and understood by: Chester E. NicholsDate: 6 15 94

Sample ID: 101835

Blank and Standard descriptions: NA

Composition: Clay

Description: as above at 5 to 7 ft, micaceous (<2%)

List any bottles not filled: NA

Comments: Last sample of hole C566-04-04.
Bottom of the hole at 9.0 ft.

This sample was not well mixed and was only broken down to
about 3/4 inch diameter pieces. NP

Sample ID: 101835

Sample Date: 3/30/94
mo day yrTime Sample Collected: 15:45
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS69-04-047.009.00☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid
 Munsell Color: 10 R 4/6 Secondary Munsell color: 10 YR 6/6
 Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

38838645 Field Worklist	38838195 Field Worklist
38838651 Field Worklist	38838248 Field Worklist
38838635 Field Worklist	38838292 Field Worklist
38838633 Field Worklist	38838267 Field Worklist			

Read and understood by: Chuter E. NicholsDate: 6/15/94

Sample ID: 101836

Blank and Standard descriptions: DI water with HCL preservative,

GEL Trip Blank for sample numbers 101825)

101826, 101827, 101828, 101829, 101832, 101833,

101834, 101835
Composition: D.I. water with HCL

Description:

NA

List any bottles not filled:

NA

Comments:

Trip Blank utilized on 3/30/94
at 1720.

Sample ID: 101836

Sample Date: 31 30 94
mo day yrTime Sample Collected: 17:20
(use military time) NDH

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other Trip Blank

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: NDH
101825, 101826, 101827
101828, 101829, 101832
101833, 101834, 101835

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample:

Station

CS66-TB-4BDepth from ground
to top of interval

(in feet)

Depth from ground
to bottom of interval

(in feet)

Planned

CEL Trip Blank NDH 7/21/94 NANA☒ Same as above

Actual

CS66-TB-4B NDH 7/21/94 NANACheck appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

38038455 Field Worklist
38038448 Field Worklist
32238441 Field Worklist
32238456 Field Worklist				

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101837

Blank and Standard descriptions: NA

Composition: SAND

Description: silt 5%, very coarse to coarse grained
with loose granules and cobbles, moderate
reddish-brown (10R 4/6) grading to ^{predominantly} ~~predominant~~ 10/3/1/5/4
moderate yellowish brown (10YR 5/4), subangular-subrounded,
poorly sorted, dry

List any bottles not filled: NA

Comments: Hand augered interval.

Sample ID: 101837

Sample Date: 3 / 31 / 94
mo day yrTime Sample Collected: 08 : 45
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: W D J

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
Planned <u>CS6G-05-01</u>	<u>0.00</u>	<u>2.00</u>
☒ Same as above Actual _____	_____	_____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10 YR 5/4 Secondary Munsell color: 10 R 4/6Unified Soil Classification: S W

Stick Bar Code from every bottle label with this sample number below:

	38838187 Field Worklist		38838384 Field Worklist
	38838235 Field Worklist		38838259 Field Worklist
	38838632 Field Worklist		38838635 Field Worklist
	38838644 Field Worklist		38838656 Field Worklist	

Read and understood by: Chester E. NicholsDate: 6 / 15 / 94

Sample ID: 101838

Blank and Standard descriptions: NA

Composition: SAND

Description: (7.2'-7.6') silt 10-15% very coarse to coarse grained, light brown (5YR 5/6) subangular to subrounded, moderately sorted, moist to wet. (7.6'-8.2') charred black debris, (8.2'-9.2') silt 10-15%, clay 10-15% as dry kaolin ^{medium grained} mottled, moderately red (5R 4/6) to dark yellowish orange (10YR 6/6) to grayish orange (10YR 7/4) subangular to subrounded, moderately sorted, dry to moist

List any bottles not filled: NA

Comments: Actual sampling time was 13:50 due to
problems locating bottom of pit and delay due
to rig breakdown.

Bottom of pit at 8.2 ft.

Sample ID: 101838

Sample Date: 3 / 31 / 94
mo day yrTime Sample Collected: 13:50
09:30
(use military time)

RAP 27 JUL 94

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☒ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: W D J

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-05-027.209.20☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5R 4/6Secondary Munsell color: 5YR 5/6Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

38838268 Field Worklist				38838144 Field Worklist
38838147 Field Worklist		38838637 Field Worklist		38838236 Field Worklist
38838256 Field Worklist		38838643 Field Worklist		38838135 Field Worklist
38838623 Field Worklist		38838625 Field Worklist		38838152 Field Worklist

Read and understood by: Ernest E. NicholsDate: 1 / 1 / 94

Sample ID: 101839

Blank and Standard descriptions: NA

Composition: SAND

Description: See sample description for sample # 101838

List any bottles not filled: NA

Comments: Actual sampling time was 13:50 due to
problems locating bottom of pit and delay
due to rig break down.

Sample ID: 101839

Sample Date: 3 / 31 / 94
mo day yrTime Sample Collected: 13:50
09:30
(use military time)

Rel 27 Jun 94

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☒ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☒ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: W.D.J.For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101838

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-05-02A7.209.20☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5R 4/6Secondary Munsell color: 5YR 5/6Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

	38838191 Field Worklist	38838663 Field Worklist	38838263 Field Worklist
	38838259 Field Worklist		38838128 Field Worklist	38838669 Field Worklist
	38838145 Field Worklist		38838255 Field Worklist
	38838675 Field Worklist	38838657 Field Worklist	3883814E Field Worklist	

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101840

Blank and Standard descriptions: NA

Composition: SAND

Description: (silt 10-15%, clay 10-15% grading to 20-25% as dry kaolin) medium grained, mottled, moderate red (5R 4/6) to dark yellowish orange (10YR 6/6) to grayish orange (10YR 7/4) to very pale orange (10YR 8/2), subangular to subrounded, moderately sorted, dry to moist

List any bottles not filled: NA

Comments: Saved interval 9.20' - 10.0' from previous split spoon. Pushed from 10.0' - 11.2' for 2' sample run but only recovered 0.6'. Material from the bottom of the pit was smeared throughout the sample.

Sample ID: 101840

Sample Date: 3 / 31 / 94
mo day yrTime Sample Collected: 15 : 00
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: WOT

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-05-039.2011.20☒ Same as aboveActual CS66-05-039.2010.6010/
3/31/94Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5R 4/6Secondary Munsell color: 10 YR 6/6Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

38838185 Field Worklist				38838656 Field Worklist
	32232244 Field Worklist		38838668 Field Worklist
		38838237 Field Worklist
38838658 Field Worklist	38838662 Field Worklist		38838258 Field Worklist	

Read and understood by: Ernest E. MichokDate: 6/15/94

Sample ID: 101841

Blank and Standard descriptions: NA

Composition: SAND

Description: silt 10%, clay 15% as dry kaolin, very coarse to coarse grained with granules and pebbles, moderate red (5R 4/6) to grayish orange (10YR 7/4) to very pale orange (10YR 8/2), subangular to subrounded, poorly sorted, moist

List any bottles not filled: NA

Comments: Pushed from 11.20' - 13.20'. Recovered 1.0' from 11.20' - 12.20'. Slough from pit smeared through interval.

Last sampled interval of boring.

Shelby Tube collected from 25.0' - 27.0'

Sample ID: 101841

Sample Date: 3 / 31 / 94
mo day yrTime Sample Collected: 15 : 45
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: W D J

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station	Planned	Actual	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
	<u>CS6G-05-04</u>		<u>11.20</u>	<u>13.20</u>
☐ Same as above	<u>CS6G-05-04</u>		<u>11.20</u>	<u>12.20</u>

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5R 4/6Secondary Munsell color: 10YR 7/4Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

38838680 Field Worklist	38838251 Field Worklist	38838238 Field Worklist	38838385 Field Worklist	38838156 Field Worklist
	38838623 Field Worklist	38838645 Field Worklist	38838574 Field Worklist	

Read and understood by: Ernest E. NicholsDate: 6/15/94

Sample ID: 101842

Blank and Standard descriptions: DI Water with - selected
preservatives

Composition: DI Water with preservatives

Description: NA

List any bottles not filled: NA

Comments: NA

Sample ID: 101842

Sample Date: 3 / 31 / 94
mo day yrTime Sample Collected: 16 : 30
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other Field Blank

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: W D JFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101837 - 101841

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
Planned <u>Daily CS6G-FB-5C</u> <u>20/7/21/94</u> <u>NA</u>	<u>NA</u>	<u>NA</u>
☒ Same as above Actual <u>CS6G-FB-5C</u> <u>20/7/21/94</u> <u>NA</u>	<u>NA</u>	<u>NA</u>

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

38838854 Field Worklist	3883811E Field Worklist	388383E5 Field Worklist
388381E5 Field Worklist	38838421 Field Worklist
38838428 Field Worklist	3883837E Field Worklist
3883848E Field Worklist	38838384 Field Worklist	

Read and understood by: Charles E. NicholsDate: 6/15/94

Sample ID: 101843

Blank and Standard descriptions: DI Water

Composition: DI Water

Description: NA

List any bottles not filled: NA

Comments: NA

Sample ID: 101843

Sample Date: 3 / 31 / 94
mo day yrTime Sample Collected: 17 : 00
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☒ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: W D JFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101837-101841

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned Daily CS6G-RB-SE NA NA

☒ Same as above Actual CS6G-RB-SE NA NA
10/7/94

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NA Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

	38838188 Field Worklist			38838889 Field Worklist
38838335 Field Worklist			38838377 Field Worklist
		38838368 Field Worklist
38838422 Field Worklist	38838113 Field Worklist		38838417 Field Worklist	38838487 Field Worklist

Read and understood by: Chester E. Nichols Date: 6 / 15 / 94

Sample ID: 101844

Blank and Standard descriptions: DI Water with HCL preservative.

GEL Trip Blank for samples

101837 through 101841

Composition: DI Water with HCL

Description: NA

List any bottles not filled: NA

Comments: Trip blanks utilized on 3/31/94 at 18:45

Sample ID: 101844

Sample Date: 3 ¹⁵/_{mo} 15 ¹⁵/_{day} 1994 ¹⁵/_{yr.}
*20/7/94*Time Sample Collected:
(use military time)16 ⁰⁰/_{hr} : 45 ¹⁰/_{min}
7/8/94

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other Trip Blank

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: W D JFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101837 - 101841

Station

CS-6G-TB-5BDepth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CEL Trip Blank 20/7/94NANA☒ Same as aboveActual CS-6G-TB-5B
20/7/94NANACheck appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

			38838443 Field Worklist
	38838457 Field Worklist
			32238458 Field Worklist
	38838442 Field Worklist			

Read and understood by: Christa E. NicholsDate: 6/15/94

Sample ID: 101845

Blank and Standard descriptions: NA

Composition: Sand

Description: silt + clay (5 to 10%), moderate reddish brown (10 R 4/6) with flecks of white (N9) and dark yellowish orange (10 YR 6/6), fine to very coarse, moderately to poorly sorted, subangular, moist to dry at ± 1.5 ft b/s - Sand, silt (< 2%), very fine to fine with occasional coarse grains, moderate yellowish brown (10 YR 5/4), well sorted, subangular to subrounded, trace heavies, moist, loose.

Comments:

Looks like fill material

Sample ID: 101845

Sample Date: 4/4/94
mo day yrTime Sample Collected: 08:30
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M DH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-03-010.002.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10R 4/6Secondary Munsell color: 10YR 5/4Unified Soil Classification: SW-SM
mod clay

Stick Bar Code from every bottle label with this sample number below:

38838258 Field Worklist		38838617 Field Worklist
	38838313 Field Worklist		38838714 Field Worklist
38838788 Field Worklist		38838225 Field Worklist
	38838174 Field Worklist		38838611 Field Worklist

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101846

Blank and Standard descriptions: N/A

Composition: Sand

Description: silt + clay (10%), light brown (5YR 5/6),
fine to very coarse, poorly sorted, subangular to subrounded,
trace heavies, dry to moist

4ft - sand; silt and clay (10 to 15%) fine to medium
with occasional very coarse to pebble sized grains,

List any bottles not filled: N/A mottled light brown (5YR 5/6),
moderate reddish brown (10R 4/6)

Comments: and yellowish gray (5Y 8/1)

Base of pit at 4.0ft. moderately to poorly sorted,
subangular to subrounded,
trace heavies, trace micas,
dry to moist.

Sample ID: 101846

Sample Date: 4/4/94
mo day yrTime Sample Collected: 09:20
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-D3-02
3.60
3.60
MDH
5.00☒ Same as above Actual _____Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5YR 5/6 Secondary Munsell color: 10 R 4/6Unified Soil Classification: S.W. SC
MDH
7/21/94

Stick Bar Code from every bottle label with this sample number below:

38838181 Field Worklist	38838149 Field Worklist	38838213 Field Worklist	38838142 Field Worklist	38838249 Field Worklist
38838141 Field Worklist	38838294 Field Worklist	38838726 Field Worklist	38838612 Field Worklist	38838781 Field Worklist
38838616 Field Worklist				

Read and understood by: E. E. NicholsDate: 6/15/94

Sample ID: 101847

Blank and Standard descriptions: NA

Composition: Sand

Description: Sand as above at 4 ft. Add moderate
red (SR 4/6) to mottled colors, increase in
mica (< 2%) , heavies in stringers.

List any bottles not filled: NA

Comments:

Sample ID: 101847

Sample Date: 4/4/94
mo day yrTime Sample Collected: 10:00
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-03-035.007.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10 R 4/6Secondary Munsell color: 5 YR 5/6Unified Soil Classification: SW-SCL
MDH 4/1/94

Stick Bar Code from every bottle label with this sample number below:

38838186 Field Worklist	38838234 Field Worklist	38838382 Field Worklist
38838272 Field Worklist	38838681 Field Worklist	38838676 Field Worklist	32238672 Field Worklist	38838682 Field Worklist

Read and understood by: Ernest E. NicholsDate: 6/15/94

Sample ID: 101848

Blank and Standard descriptions: NA

Composition: sand

Description: as above at 5 ft with increase in silt and clay (15-20%), more homogeneous with fine to medium grain plastic clays at 8.8' - zone of 9 ft cobbles that were crushed by split spoon, well rounded.

List any bottles not filled: NA

Comments: last analytical sample collected from this borehole - CS 66-03.

Collect a Shelby tube from 13.5 to 15.5 ft 2 ft recovered.

T.D. hole = 15.5 ft.

Sample ID: 101848

Sample Date: 4/4/94
mo day yr

Time Sample Collected: 10:45
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: MDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
---------	--	---

Planned <u>CS66-03-04</u>	<u>7.00</u>	<u>9.00</u>
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☒ Same as above Actual _____

Check appropriate box to describe soil: ☒ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10R 4/6

Secondary Munsell color: 10YR 5/4

Unified Soil Classification: SW-SAT SC

5 YR 5/6

Stick Bar Code from every bottle label with this sample number below:

			38838214 Field Worklist	38838614 Field Worklist
			38838265 Field Worklist	38838628 Field Worklist
			38838175 Field Worklist	38838618 Field Worklist
			38838385 Field Worklist	38838613 Field Worklist

Read and understood by: Chester E. Nichols

Date: 6/15/94

Sample ID: 101849

Blank and Standard descriptions:

^{NDH 4/4/94}
~~NA~~ DI water with
selected preservatives - Field Blank

Composition:

^{NDH 4/4/94}
~~Sand~~ DI water with selected
preservatives.

Description:

^{NDH 4/4/94}
~~sand as above at 4 ft. Add moderate~~
~~red (5R 4/6) to mottled colors, increase its~~
~~mic (<2%) , heavies in stringers~~

List any bottles not filled:

NA

Comments:

Field Blank for 4/4/94 taken
between holes CS66-03 + CS66-02
and sample #5 101848 + 101851

Sample ID: 101849

Sample Date: 4/4/94
mo day yrTime Sample Collected: 11:30
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other Field Blank

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

 Sampler: M D H
101845, 101846, 101847
4101848

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample:

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
<u>CS66-FB-6C</u>		
Planned <u>NA - Daily</u> <u>7/2/94</u> <u>NA</u>		<u>NA</u>
☒ Same as above Actual <u>CS66-FB-6C</u> <u>7/2/94</u> <u>NA</u>		<u>NA</u>

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NA Secondary Munsell color: NAUnified Soil Classification: N/A

Stick Bar Code from every bottle label with this sample number below:

38038123 Field Worklist	38038359 Field Worklist	38038390 Field Worklist
38038418 Field Worklist	38038372 Field Worklist
38038416 Field Worklist	38038118 Field Worklist
38038415 Field Worklist	38038058 Field Worklist			

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101850

Blank and Standard descriptions: DI water with selected
preservatives - Rinsate Blank

Composition: DI water with selected preservative

Description: NA

List any bottles not filled: NA

Comments: Rinsate Blank for 4/4/94 collected
between holes CS66-03 and CS66-02
and sample #s 101848 and 101851

Sample ID: 101850

Sample Date: 4/14/194
mo day yrTime Sample Collected: 11:55
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☒ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

 Sampler: M.D.H.
101845, 101846, 101847
and 101848

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
<u>CS66-RB-62</u>	<u>NA</u>	<u>NA</u>
Planned <u>NA daily</u>	<u>NA</u>	<u>NA</u>
☒ Same as above Actual <u>CS66-RB-62</u>	<u>NA</u>	<u>NA</u>

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NA Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

			38838375 Field Worklist	38838115 Field Worklist
			38838489 Field Worklist	38838885 Field Worklist
			38838391 Field Worklist	38838109 Field Worklist
		38838366 Field Worklist	38838414 Field Worklist	38838424 Field Worklist

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101851

Blank and Standard descriptions: NA

Composition: sand

Description: silt and clay (20%), very fine to coarse
grained with some pebbles, light brown
(5.4R 5/6) to moderate yellowish brown
(10.4R 5/2); poorly sorted, subrounded, trace
heavies, moist. (metal shavings in top 6 inches)

List any bottles not filled: NA

Comments: still looks like fill material

Sample ID: 101851

Sample Date: 4 1 94
mo day yrTime Sample Collected: 12 : 30
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned C566-02-010.002.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5YR 5/6 Secondary Munsell color: 10YR 5/2Unified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

38838256 Field Worklist	38838658 Field Worklist
38838228 Field Worklist		38838749 Field Worklist
38838182 Field Worklist			38838715 Field Worklist
38838386 Field Worklist				38838656 Field Worklist

Read and understood by:

Charles E. NicholsDate: 6/15/94

Sample ID: 101852

Blank and Standard descriptions: NA

Composition: Clay

Description: silt and sand (20%), fine to coarse grained,
mottled light brown (5YR 5/6), yellowish
gray (5Y 8/1), and moderate reddish
brown (10R 4/6); dense, brittle to
slightly plastic.

List any bottles not filled: NA

Comments:

Sample ID: 101852

Sample Date: 4/14/94
mo day yrTime Sample Collected: 13:00
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-02-023.005.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5YR 5/6 Secondary Munsell color: 5Y 8/1Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

			30030683 Field Worklist	300306257 Field Worklist
		300306655 Field Worklist		30030160 Field Worklist
	300306689 Field Worklist			30030317 Field Worklist
30030782 Field Worklist				30030215 Field Worklist

Read and understood by: Charles E. NicholsDate: 6/15/94

Sample ID: 101853

Blank and Standard descriptions:

NA

Composition:

Clay

Description:

see previous sample # 101852 description

List any bottles not filled:

NA

Comments:

Only 1 ft recovered.

Sample ID: 101853

Sample Date: 4 / 4 / 94
mo day yrTime Sample Collected: 13 : 40
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M.D.H.

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-02-03 5.00 7.00
☐ Same as above Actual CS66-02-03 5.00 6.00
Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5YR 5/6 Secondary Munsell color: 5Y 8/1Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

38838183 Field Worklist				38838743 Field Worklist
38838312 Field Worklist			38838721 Field Worklist
38838212 Field Worklist		38838758 Field Worklist
38838248 Field Worklist	38838727 Field Worklist			

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101854

Blank and Standard descriptions: NA

Composition: clay

Description: as previous sample with fine sand, yellowish gray (5Y 8/1) is predominant, add very dusky red-purple to colors (5R P 2/2), increase in fines (< 290)

List any bottles not filled: NA

Comments: Last sample of hole CS66-02.
Bottom of hole at 9 ft

Sample ID: 101854

Sample Date: 4 14 1994
mo day yrTime Sample Collected: 14:25
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.

Describe delay in Comments.

Sampler: W D 17

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned C566-02-047.009.00☒ Same as above Actual _____Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5Y 8/1Secondary Munsell color: 5Y R 5/6Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

		38838176 Field Worklist	38838722 Field Worklist
	38838316 Field Worklist	38838713 Field Worklist	38838216 Field Worklist
	38838725 Field Worklist
38838787 Field Worklist	38838251 Field Worklist			

Read and understood by: Ernest E. AlibekDate: 6/15/94

Sample ID: 101855

Blank and Standard descriptions: DI water with HCL preservative
CEL Trip Blank for sample # 101845 through
101854

Composition: DI water with HCL

Description: N/A

List any bottles not filled: N/A

Comments: Trip Blanks filled 3/15/94 at
1600; utilized 4/9/94 @ 1500.

Sample ID: 101855

Sample Date: 4 14 1994
mo day yrTime Sample Collected: 15:00
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other Trip Blank

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDH
101845, 101846, 101847,
101848, 101851, 101852,
101853, 101854

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample:

Depth from ground
 to top of interval
 (in feet)

Depth from ground
 to bottom of interval
 (in feet)

Station CS66-TB-6B MDH 4/4/94 MDH 7/21/94
 Planned Get Trip Blank NA NA

☒ Same as above Actual CS66 TB-6B NA NA

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NA Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

				38838451 Field Worklist
				38838458 Field Worklist
				38838444 Field Worklist
				38838443 Field Worklist

Read and understood by: Chester E. NicholsDate: 6/15/94

.. Sample ID: 101856

Blank and Standard descriptions: NA

Composition: sand

Description: silt + clay (20-30%), very fine to coarse with some pebbles. light brown (5.4R 5/6) to moderate brown (5.4R 4/4), poorly sorted, subangular to subrounded, trace heavies, plastic, moist. (Note: metal shavings in top 6 inches) - looks like fill material.

List any bottles not filled: NA

Comments:

Sample ID: 101856

Sample Date: 4 / 5 / 94
mo day yrTime Sample Collected: 08 : 15
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-01-010.002.00☒ Same as above

Actual: _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5 YR 5/6 ^{MDH} Secondary Munsell color: 5 YR 4/4 ^{MDH} 7/21/94Unified Soil Classification: SC ^{MDH} SC 5 YR 4/4

Stick Bar Code from every bottle label with this sample number below:

			38838185 Field Worklist	38838632 Field Worklist
			38838314 Field Worklist	38838732 Field Worklist
			38838253 Field Worklist	38838697 Field Worklist
			38838218 Field Worklist	38838691 Field Worklist

Read and understood by: Chester E. NicholsDate: 6/15/94

.. Sample ID: 101857

Blank and Standard descriptions: NA

Composition: sand (3-3.5')

black, burnt material (3.5-4')

clay (4-5')

Description: sand from above (previous sample # 101856)

black, burnt material with glass metal shavings & other debris

clay, silt & sand (20-30%), fine to medium, mottled

white (NA), moderate red (5R 4/6), dark yellowish

orange (10YR 6/6) and light brown (5YR 5/6), dense,

slightly plastic, NA dry to moist, micaceous (<5%)

List any bottles not filled:

NA

Comments: Located pit from 3.5 to 4 ft.

Sample ID: 101857

Sample Date: 41 51 94
mo day yrTime Sample Collected: 08 : 40
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-01-023.005.00
☒ Same as above Actual _____
Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: N9 Secondary Munsell color: SR 4/6Unified Soil Classification: CH

Stick-Bar Code from every bottle label with this sample number below:

30038318 Field Worklist	30038716 Field Worklist
30038246 Field Worklist	30038784 Field Worklist
30038215 Field Worklist	30038596 Field Worklist
30038184 Field Worklist	30038710 Field Worklist			

Read and understood by: Charles E. NicholsDate: 61/51/94

Sample ID: 101858

Blank and Standard descriptions: NA

Composition: Clay

Description: Some clay as above in previous sample # 101857,
a cobble zone, well rounded quartz at the beginning
of interval (5 ft).

List any bottles not filled: NA

Comments:

Sample ID: 101858

Sample Date: 4 / 5 / 94
mo day yrTime Sample Collected: 09 : 00 ¹⁵ ^{in-DK}
(use military time) 4/5/94

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay

in bottling samples.

Describe delay in Comments.

Sampler: in D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)

Planned

C566-01-035.007.00☒ Same as above

Actual

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: MgSecondary Munsell color: 5R 4/6Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

		38838736 Field Worklist	38838311 Field Worklist
		38838744 Field Worklist	38838247 Field Worklist
		38838745 Field Worklist	38838217 Field Worklist
		38838751 Field Worklist	38838175 Field Worklist	

Read and understood by:

Charles E. Michale

Date:

6/15/94

Sample ID: 101859

Blank and Standard descriptions: NA

Composition: Clay

Description: as above at previous sample, sand mostly
fine, some partially cemented zones, more brittle,
dry to moist.

List any bottles not filled: NA

Comments:

Sample ID: 101859

Sample Date: 4 15 194
mo day yrTime Sample Collected: 09 : 50
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-01-047.009.00☒ Same as above Actual _____Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: N9Secondary Munsell color: 5R 4/6Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

				30030205 Field Worklist
				30030315 Field Worklist
			30030211 Field Worklist	30030175 Field Worklist
	30030684 Field Worklist	30030709 Field Worklist	30030703 Field Worklist	30030685 Field Worklist

Read and understood by: Chester E. NicholsDate: 4 15 194

Sample ID: 101860

Blank and Standard descriptions: Duplicate for sample #101859

Composition: Clay

Description: see sample description for 101859.

List any bottles not filled: N/A

Comments: was planned for earlier in hole, but collected
duplicate at this depth
Last sample of hole. Total Depth is 9 ft.

Sample ID: 101860

Sample Date: 4/5/94
mo day yrTime Sample Collected: 09:50
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☒ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M DHFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101059

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-01-BA3.005.00☐ Same as aboveActual CS66-01-4A7.009.00Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10YSecondary Munsell color: 5R 4/6Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

38838728 Field Worklist	38838254 Field Worklist
38838722 Field Worklist	38838177 Field Worklist
38838739 Field Worklist	38838218 Field Worklist
38838752 Field Worklist	38838386 Field Worklist			

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101861

Blank and Standard descriptions: Rinse Blank for 101856,

101857, 101858, 101859, 101860.

DI water with selected preservatives

Composition: DI water with selected preservatives

Description: N/A

List any bottles not filled: N/A

Comments: Rinse blank collected between holes
CS66-01 and CS66-10 (sample # 101859 and
101862)

Sample ID: 101861

Sample Date: 4 / 15 / 94
mo day yrTime Sample Collected: 11:10
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☒ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

 Sampler: LDH
101856, 101857, 101858,
101859 + 101860

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample:

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
<u>CS6G-RB-7E</u>		
Planned <u>NA Daily</u> <u>7/21/94</u>	<u>NA</u>	<u>NA</u>
☒ Same as above Actual <u>CS6G-RB-7E mod</u> <u>7/21/94</u>	<u>NA</u>	<u>NA</u>

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NA Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

38838124 Field Worklist
38838383 Field Worklist	38838897 Field Worklist
	38838368 Field Worklist	38838111 Field Worklist
	38838365 Field Worklist	38838481 Field Worklist	38838412 Field Worklist	38838411 Field Worklist

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101862

Blank and Standard descriptions: NA

Composition: Sand

Description: silt+clay (10-20%), fine to very coarse,
light brown (5YR 5/6), poorly sorted, sub angular
to subrounded, trace heavies, moist.
1/2 F - sand, silt (5%), very fine to medium,
moderate yellowish brown, moderately to well sorted,
subrounded, trace heavies, moist, loose.
List any bottles not filled: NA

Comments: no shavings in top of hole so confident
that outside pit area.

Sample ID: 101862

Sample Date: 4/5/94
mo day yrTime Sample Collected: 14:30
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: NDIT

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-10-010.002.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5YR 5/6Secondary Munsell color: 10YR 5/4Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below.

38838257 Field Worklist				38838593 Field Worklist
	38838225 Field Worklist		38838587 Field Worklist	38838685 Field Worklist
		38838171 Field Worklist	38838559 Field Worklist
			38832251 Field Worklist	

Read and understood by:

Christa E. NicholsDate: 6/15/94

Sample ID: 101863

Blank and Standard descriptions: NA

Composition: sand

Description: top 0.6 ft - sand as above in previous sample
sand, silt+clay (10%), medium to very coarse,
mottled light brown (5YR 5/6), pale
yellowish brown (10 YR 6/2), moderate reddish
brown (10 R 4/6) and dark yellowish orange,
(10 YR 6/6), poorly sorted, subrounded, trace heavies, trace
List any bottles not filled: NA micas, dry to moist,

Comments: some well rounded quartz
pebbles

Sample ID: 101863

Sample Date: 4/5/94
mo day yrTime Sample Collected: 11:45
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
Planned <u>CS66-10-02</u>	<u>3.00</u>	<u>5.00</u>
☐ Same as above Actual <u>CS66-10-02</u>	<u>3.00</u>	<u>4.60</u>

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ Liquid
 Munsell Color: 5YR 5/6 Secondary Munsell color: 10YR 6/2
 Unified Soil Classification: SW-SC MDH 3/21/94

Stick Bar Code from every bottle label with this sample number below:

30030172 Field Worklist	30030284 Field Worklist	30030336 Field Worklist	30030228 Field Worklist
30030546 Field Worklist	30030548 Field Worklist	30030556 Field Worklist	30030552 Field Worklist	

Read and understood by: Charles E. MichokDate: 6/15/94

Sample ID: 101864

Blank and Standard descriptions: N/A

Composition: Sand (5 to 6.7')
clay (6.7 to 7')

Description: silt + clay (<10%), fine to very coarse, moderate red (5R 4/6), white (N9) and dark yellowish orange (10YR 6/6), moderately to well sorted, subrounded, trace heavies, trace micas; dry, occasional pebble to cobble sized quartz (well rounded)

List any bottles not filled: N/A | clay, mottled very dusty red purple (5RP 2/2), silt

red mud
4/15/14
Comments: and sand (5 to 10%), medium to very coarse, dense, brittle, dry, occasional qtz pebble to cobble.
dark yellowish orange (10YR 6/6), light brown (5YR 5/6), and moderate red (5R 4/6)

Sample ID: 101864

Sample Date: 4 5 94
mo day yrTime Sample Collected: 12 : 15
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-10-035.007.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 7/21/94 5R 4/6 Secondary Munsell color: 5RP2/2 7/21/94Unified Soil Classification: S.P.Sc 5R4/6 5RP2/2
7/21/94

Stick Bar Code from every bottle label with this sample number below:

		38838163 Field Worklist	38838582 Field Worklist
		38838252 Field Worklist	38838576 Field Worklist
		38838231 Field Worklist	38838578 Field Worklist
		38838255 Field Worklist	38838564 Field Worklist	

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101865

Blank and Standard descriptions: NA

Composition: Clay

Description: 7 to 7.4 ft - silt and sand (20-30%), grayish red purple (5RP 4/2), plastic, dense, dry, coarse to very coarse
7.4 to 9 ft - silt and sand (10%), fine to medium, mottled, grayish red purple (5RP 4/2), white (10Y), yellowish gray (5Y 8/1), and moderate reddish brown (10R 4/6), dense, slightly plastic, dry to moist, micaceous (<5%)
List any bottles not filled: NA

Comments:

Sample ID: 101865

Sample Date: 4 1 5 1 9 4
mo day yrTime Sample Collected: 12 : 50
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS65-10-047.009.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5RP 4/2Secondary Munsell color: 5Y 8/1Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

38838594 Field Worklist				38838289 Field Worklist
38838688 Field Worklist				38838167 Field Worklist
38838686 Field Worklist				38838223 Field Worklist
38838588 Field Worklist				38838337 Field Worklist

Read and understood by: Chester E. Nichols Date: 6/15/94

Sample ID: 101866

Blank and Standard descriptions: NA

Composition: Clay to 9.6 ft.

Sand 9.6 - 11 ft

(5 P/2) Description: as above grading to sand, (silt + clay (>30%),
medium to very coarse with granule sized grains,
gray; 4th purple with flecks of white (N9); moderately
to poorly sorted, subangular to subrounded, trace
leaves, micaceous (2-5%), dry, moist.

List any bottles not filled: NA

Comments:

Sample ID: 101866

Sample Date: 4 15 1994
mo day yrTime Sample Collected: 13 : 15
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D/H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6610-059.0011.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5P 4/2Secondary Munsell color: N9Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

38838285 Field Worklist	38838291 Field Worklist			38838222 Field Worklist
			38838296 Field Worklist
	38838457 Field Worklist
38838166 Field Worklist			38838254 Field Worklist	38838334 Field Worklist

Read and understood by: Chester E. NicholsDate: 6 15 1994

11/11/11 101867

Blank and Standard descriptions: Field Blank for sample #5

1956 through 101866

DI water with selected preservatives

Composition: DI water with selected preservatives

Description: NA

Is any bottles not filled: NA

Comments: Field blank collected between
sample #5 101866 and 101868 in hole
1566-10

Sample ID: 101867

Sample Date: 4/5/94
mo day yrTime Sample Collected: 14:00
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other Field Blank

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D HFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101856 through 101866Station C565-FB-7CDepth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned C56MDHNANA☒ Same as above

Actual

C565-FB-7C 7/2/94NANACheck appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

		38838382 Field Worklist
	38838386 Field Worklist	38838413 Field Worklist	38838434 Field Worklist
	38838125 Field Worklist	38838168 Field Worklist	38838893 Field Worklist
		38838484 Field Worklist		38838358 Field Worklist

Read and understood by:

Charles E. NicholsDate: 6/15/94

Sample ID: 101868

Blank and Standard descriptions: NA

Composition: sand

Description: Same as above at sample # 101866 g
some pebble to cobble sized, well rounded quartz

List any bottles not filled: NA

Comments:

Sample ID: 101868

Sample Date: 41 51 94
mo day yrTime Sample Collected: 14:10
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)

Planned

0566-10-0611.0013.00☒ Same as above

Actual

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5P 4/2Secondary Munsell color: N9Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

38832456 Field Worklist	38832897 Field Worklist	38832896 Field Worklist	38832899 Field Worklist	38832898 Field Worklist
38832560 Field Worklist	38832463 Field Worklist	38832335 Field Worklist		

Read and understood by: Charles E. NicholsDate: 6/15/94

Sample ID: 101869

Blank and Standard descriptions: N/A

Composition: Sand

Description: As above in sample #101868 with
grains coarsening (coarse to v. coarse with
granules + pebbles + cobbles).

List any bottles not filled: N/A

Comments:

Sample ID: 101869

Sample Date: 4/5/94
mo day yrTime Sample Collected: 14:30
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: INDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
Planned <u>C56G-10-07</u>	<u>13.00</u>	<u>15.00</u>
Actual _____	_____	_____

☒ Same as above

Actual

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5P4/2 Secondary Munsell color: 109Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

		38832230 Field Worklist	38832285 Field Worklist	38832173 Field Worklist
38832578 Field Worklist	38832879 Field Worklist	38832686 Field Worklist	38832575 Field Worklist	38832252 Field Worklist

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101870

Blank and Standard descriptions:

NA

Composition:

Sand

Description:

as above in previous samples # 101869,
increase in fines (>5%).

List any bottles not filled:

NA

Comments:

Sample ID: 101870

Sample Date: 4 5 94
mo day yrTime Sample Collected: 15:00
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-10-0815.0017.00☒ Same as above Actual _____Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5 P4/2Secondary Munsell color: N9Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

	38832572 Field Worklist	38832829 Field Worklist	38832457 Field Worklist
		38832892 Field Worklist	38832688 Field Worklist
	38832559 Field Worklist	38832887 Field Worklist	38832681 Field Worklist	

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101871

Blank and Standard descriptions: NA

Composition: Clay

Description: silt and "sand" (>30%), granite to cobble
sized quartz, well rounded, pale red purple (5R 6 1/6),
pale pink (5R 8 1/2), pale purple (5P 6 1/2),
white (N9), and moderate red (5R 4 1/6),
dense, plastic, dry to moist.

List any bottles not filled: NA

Comments:

Sample ID: 101871

Sample Date: 4/5/94
mo day yrTime Sample Collected: 15:20
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station CS66-10-09
 Planned CS66-10-09 MDH 21.70 23.70
 Depth from ground to top of interval (in feet)
 Depth from ground to bottom of interval (in feet)

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5R P 6/6Secondary Munsell color: 5R P 8/2Unified Soil Classification: C-4

Stick Bar Code from every bottle label with this sample number below:

30830475 Field Worklist	30830352 Field Worklist	30830463 Field Worklist	30830483 Field Worklist	30830482 Field Worklist

Read and understood by: Chetan E. NicholsDate: 6/15/94

Sample ID: 101872

Blank and Standard descriptions: NA

Composition: Sand (28.7 to 29.1 ft and 29.75 to 30.8 ft)
Clay (29.1 to 29.75 ft and 30.0 to 30.7 ft)

Description: sand, silt + clay (20%), coarse to v. coarse, moderate red (5R 4/6) with flecks of white (W9) and dark yellowish orange (10YR 6/6); poorly sorted, subangular, trace heavies, trace micas. moist to dry.

clay, silt + v. fine sand (<5%), grayish purple (5P 4/2) to grayish red purple (5RP 4/2), plastic, micaceous (2%), moist.

Comments: Last sample of hole + bottom of hole at 30.7 ft.

Last ^{sed. off} sample of the project

Sample ID: 101872

Sample Date: 4 15 94
mo day yrTime Sample Collected: 15 : 45
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: M D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)

Planned

CS66-10-1029.7030.70☒ Same as above

Actual

Check appropriate box to describe soil: ☒ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5R 4/6Secondary Munsell color: 5P 4/2Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

30038353 Field Worklist	30038501 Field Worklist	30038520 Field Worklist	30038526 Field Worklist	30038493 Field Worklist

Read and understood by: Chester E. NicholsDate: 6 15 194

Sample ID: 101873

Blank and Standard descriptions: DI water with HCL preservative

Trip Blank

Composition: DI water w/ HCL preservative

Description: NA

List any bottles not filled: NA

Comments: Trip Blank for 4/5/94 samples.
Filled at GEL on 3/15/94 @ 1600. Utilized
4/5/94 @ 1710.

Sample ID: 101873

Sample Date: 4/5/94
mo day yrTime Sample Collected: 17:10
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other Trip Blank

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: MDH
101856 through
101872

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample:

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
<u>CS66-TB-7B</u>		
Planned <u>GET Trip Blank</u> ^{MDH} <u>NA</u>	<u>NA</u>	<u>NA</u>
☒ Same as above Actual <u>CS66-TB-7</u> ^{MDH} <u>NA</u>	<u>NA</u>	<u>NA</u>

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NA Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

38838452 Field Worklist
	38838455 Field Worklist
		38838459 Field Worklist
			38838445 Field Worklist	

Read and understood by: Chester E. NicholsDate: 6/15/94

Sample ID: 101874

Blank and Standard descriptions: RINSATE

Composition: NA

Description: NA

List any bottles not filled: NA

Comments:

NA ^{MON} 12/23/94

First sampling of additional unit assessment activities. Sample ID# 101874 through 101899, then refer to Sample ID# 103700 through 103799, then refer to sample ID# 102519 through 102558. This ^{mon 12/23/94 does} ~~does not~~ include the 2nd phase of ground water samples (for monitoring wells).

Note 1st
sampled
new well

+
note where
rest of
sample
10880

Appendix E

Field Reports for Individual Boreholes (3/25/94 - 4/5/94)

First Sampling Period

(Taken From WSRC-RP-94-382, May 1994)

*** Includes**

Daily Activity Records
Field Geologic Logs
Atmospheric Monitoring Logs
Soil Boring Installation Reports

(Former Appendix A from WSRC-RP-94-382, May 1994)

Field Reports for Individual Boreholes

CS6G-01

MONITORING WELL
COMPLETION CHECK LIST

WELL NUMBER:

CS66-01

GEOLOGIST/DATE:

Melanie D. Hill 4/6/94

DAILY ACTIVITY REPORTS

(Copied from RFF/RF Green book)

GEOLOGIC LOG

RUST CORE RUN TALLY

GEOPHYSICAL LOG

CHAIN OF CUSTODY

SIEVE ANALYSIS

GRAVEL PACK DESIGN

SRS MONITORING WELL CONSTRUCTION DETAILS

SRS MONITORING WELL INSTALLATION REPORT

SCDHEC WATER WELL RECORD

WELL DEVELOPMENT REPORT

PUMP INSTALLATION REPORT

SUBCONTRACTOR EXPENSE RECORD

(To Bob Hunter)

RUST WELL INSTALLATION DIAGRAM

RUST CASING/SCREEN TALLY

MDH to SRE Soil Boring Report
4/6/94 SRS Installation

✓

✓

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

✓

NA

NA

✓

1/15/94 Tuesday

50's foggy

0630 Arrive RUST office, load equipment + to SRS

0715 Arrive well bldg. Load decommed equipment, coolers, gel packs, sample bottles + radios. To site.

0740 Passed Drillers on the road over. Set up to sample CS66-01

Note: HP cleared CS66-03 + both Shelby tubes yesterday afternoon.

0800 Drillers on site. Mob onto CS66-01

0815 Collect first sample CS66-01-01 0 to 2 ft. (Kerin got okay from HP for 02) Sand, silt + clay (20-30%),

v. fine to coarse w/ some pebbles, lt brown (5 YR 5/6) to mod brown (5 YR 4/4), poorly sorted, sub A to sub B, trace heavies, plastic, moist. (metal shavings top bin)

0830 Auger down to 3 ft + collect next sample - CS66-01-02 (3 to 5 ft).

Encountered burnt, black material from 3.5 to 4 ft.

3 to 3.5' sand from above

3.5 to 4' black burnt material w/ glass, metal shavings + other debris.

4 to 5' Clay, silt + sand (20-30%), fine to medium, mottled yell gray white (N9), mod red (5R 4/6)

dk yell orange (10 YR 6/6) and lt brown (8 YR 5/6), dense, slightly plastic, dry to moist, micaceous (25%),

0900 Collect next sample 5 to 7' (CS66-01-03)

4/5/94

0915 Calibrak OVA.

Sample CS66-01-03 (5 to 7 ft)

same ^{clay part 4/5/94} sand as above, well rounded gtz collected @ 5 ft.

0945 Collect CS66-01-04 (7 to 9 ft).

Also collect duplicate here because omitted at previous interval (3 to 5 ft).

Clay, as above, sand is mostly fine, some partially cemented zones, more brittle, dry to moist.

1030 Sharon Fulton and Shirley McDaniel onsite. Scan 7 to 9 ft sample.

Non-detect. Techs take sample to HP.

1050

Not enough bottles - mix-up in labeling. Called Janelle. She said that she would make up more kits (3 more) & bring them out to us.

1110 Take Kissade Blank

1130 Take CS66-10-01 sample (0 to 2 ft). Janelle Janssen & Keith Johnson onsite with 3 sets. They put labels on COCs.

1145 Collect CS66-10-02 (3 to 5 ft) sample before bottling just samples to make sure we're out of pit. Janelle & Keith offsite.

CS66-10-01

sand (0-1 ft), silt + clay (10-20%), fine to v. coarse, lt brown (5YR 5/6), poorly sorted, sublt to sub R, trace heavies, moist

sand (1-2 ft), silt (5%), very fine to med, med yell brown (10 YR 5/4), med to well sorted, sub R, trace heavies, moist, loose.

415794

CS66-10-02 (only 1.6 ft recovered)
Strat (3-3.6') as above.

Sand (3.6-4.6'), silt + clay (10%),
 med to v coarse, mottled lt brown
 (5 YR 5/6), pale yell brown (10 YR 6/2)
 mod red brown (10 R 4/6) + dk yell
 orange (10 YR 6/6), poorly sorted,
 sub R, trace heavies, trace mica,
 dry to moist, some well rounded
 quartz pebbles.

215

Collect next sample from 5 to 7 ft
 CS66-10-03

Sand (5 to 6.7') silt + clay (<10%)
 fine to v coarse, mod red (5 R 4/6),
 white (N9) + dk yell orange (10 YR 6/6),
 mod to well sorted, sub R, trace heavies,
 trace mica, dry, occasional pebble
 to cobble sized, well rounded quartz.
 Clay (6.7 to 7'), silt and sand (5 to 6.7')
 mottled very dusky red purple (5 R P 4/2)
 dk yell orange (10 YR 6/6), lt brown
 (5 YR 5/6), and mod red (5 R 4/6),
 med to v coarse, dense, brittle,
 dry, occasional qtz pebble to cobble.

DVA reading of 5 to 7 ft = 0.2 ppm

250

Collect CS66-10-04 (7 to 9 ft).

Clay (7 to 7.4 ft), silt + sand (20-30%)
 grayish red purple (5 R P 4/2); pebbles,
 dense, dry, coarse to very coarse
 (7.4 to 9 ft) silt + sand (10%), fine to
 medium, mottled grayish red purple
 (5 R P 4/2), white (N9), yellowish
 gray (5 Y 6/1), and mod red brown (10 R 4/6).

4/5/94

1315 dense, slightly plastic, dry to moist,
micaceous (2-5%),
DVA reading for 7 to 9 ft sample = 0.3 ppm
Collect sample CS66-10-05 (9 to 11 ft)
as above grading to sand, (clay + silt (30%)),
med to very coarse ul granules,
grayish purple (SP 4 1/2) with flecks of
white (N9), med to poorly sorted,
Sub A to sub B, trace heavyies, micaceous
(2-5%), dry to moist.

1330 Drillers ran out of gas to off site to
get gas + call office. Teelis onsite.
Assist w/ decon procedures.

1400 Collect field blank while waiting
for Drillers return. DVA reading
for 9 to 11 ft sample = 0.0 ppm
Note: Possible that Kevin has
biased DVA. Last 2 readings he
has taken + both had slight ppm.
Possible that decon procedure
(i.e. isopropanol) is effecting reading.
Drillers back. Fill up gas tank on
rig + prepare to continue sampling.

1410 Collect CS66-10-06 (11 to 13 ft)
Same sand as above, some
pebble to cobble sized, well rounded
quartz.

1430 Collect CS66-10-07 (13 to 15 ft)
Same as above with increase in
grain size - coarse to v. coarse with
granules, pebbles + cobbles.

1450 DVA readings for 11 to 13 ft = 0.0 ppm
and 13 to 15 ft = 0.0 ppm

4/5/94

1500 Collect next sample - CS66-10-08 (15 to 17 ft)
Sand as above, increase in
mica (5%).

1520 DVA reading on 15 to 17 ft = 0.2 ppm
Collect next sample (21.7 to 23.7 ft).
Clay, silt and "sand" (30%), granule to
cobble sized quartz, well rounded,
pale red purple (5RP 4/6), pale pink
(5RP 8/2), pale purple (5P 6/2),
white (N9), and mod red (5R 4/6),
dense, plastic, dry to moist, CH

DVA reading when auger at 23.7 ft = 0.2 ppm
1545 HP stopped by Shirley + Sharon just
left to take sample to HP

Collect last sample (28.7 to 30.7 ft) -
CS66-10-10. DVA reading of last
sample (21.7 to 23.7 ft) = 0.6 ppm
CS66-10-10 -

Sand (28.7 to 29.1 ft), silt + clay
(20%), coarse to v. coarse, mod
red (5R 4/6) with flecks of
white + dk yell orange, poorly
sorted, sub-A, trace heavies,
trace mica, moist to dry.

Clay (29.1 to 29.75), silt + fine
sand (<5%), gray purple (5P 4/2)
to gray red purple (5RP 4/2),
plastic, micaceous (2%),
moist.

Sand (29.75 to 30.0) as above @ 28.7 ft.
Clay (30.0 to 30.7) as above @ 29.1 ft.

1600 Completed sampling. Driller
pull out auger + back fill hole.

4/5/94

1615 DUA reading on last sample was
a non-detect. Chet Nichols onsite.

Kevin decon + cleaning up site.

1650 TO well bldg to turn in radio,
sign over samples + unload equipment.

1800 Finished signing over samples + copied
drillers subcontractor expense records.

TO RUST office to unload equipment.

Melanie D. Hill

4/5/94

FIELD GEOLOGIC LOG

PROJECT Central Shops BRP 631-66				DATE 4/5/94	SHEET 1 of 1
WELL NO. CS66-01				DRILLING SUBCONTRACTOR Environmental Explorati	
LOGS PREPARED BY MDH/11				DRILLER J. Willis	
COMPANY RWST & I				DRILLING METHOD HSA 1 split spoon	
RUN NUMBER	DEPTH BELOW GROUND SURFACE FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS/REMARKS
Hand Auger	0				
	1		100%	Sand, silt + clay (20-30%), very fine to coarse w/ pebbles, 1/4 brown (5YR 5/6), to med brown (5YR 4/4), poorly sorted, sublt to sublt, trace heavies, plastic (looks like fill)	
	2			moist - metal shavings in top 6 inches Auger down to 3	
1	3.5			Sand as above	
	4		100%	Black, burnt material w/ loss, metal shavings & debris BOP@	
	5			clay, silt + sand (20-25%), fine to medium, mottled white (Mg), moderate red (5YR 4/6), dk yellow orange (10YR 6/6) and 1/4 brown (5YR 5/6), dense, slightly plastic, damp to moist, micaceous (<5%), well rounded gtz	46t
2	6		100%		
	7				
3	8		100%		
	9				
	10				Non-detect on DVA readings
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				
	20				

Page 1 of 1

Date 4/15/94

Circle: Sun Mon Tue Wed Thu Fri Sat

Project No.: 88 357.000

Site Safety Officer: MD H.11

Action Levels: / D q ' C q ' B q ' (Stop work, call in for instructions)

(check box and write in levels for upgrade)

Task/Equipment: monitor volatiles / OVA

Weather:

Time	OVA PPM	HNu PPM	O ₂ %	LEL %	H ₂ S PPM	Comments: Duration of Readings, Upgrades, Location, etc.
0950	0.3 / 0.3	—	—	—	—	ambient. reading / 5 to 7 ft San 602
0955	0.4 / 0.4	—	—	—	—	ambient. reading / 7 ft augh breath 7
1030	3.0 / 3.0	—	—	—	—	ambient. reading / 7 to 9 ft 22 read
Melvin D. Hill 4/15/94						

Additional Comments: CS6G-01

Signature: Melanie D. Hill

SOIL BORING INSTALLATION REPORT

Boring Number (AAA, NNN, *SB*)		0565 | 01 | SB	
GENERAL INFORMATION			
Project Name		Project Manager	Department
Central Shops Burnin / Rubble Pit 631-66		Kevin Wise	Environmental Restoration
Boring Purpose	County	Location Description	
Soil Sample Collection and Lithology Description	Barnwell	South of Original BRP-66	
SURVEY INFORMATION			
SRS North Grid Coordinate	SRS East Grid Coordinate	Latitude (decimal degrees)	Longitude (decimal degrees)
GROUND ELEVATION			
Ground Elevation			
DRILLING & SAMPLING INFORMATION			
Total Drilled Depth	Static Water Level	Drilling Start Date	Drilling Completion Date
9.0'	N/A	4/5/94	4/5/94
Sample Type	Sampling Interval	Sample Type	Sampling Interval
Hand Auger (3 1/4")	0.0' - 2.0'		
Continuous Split Spoon (2 1/2")	3.0' - 5.0'		
HSA	3.0' - 3.0'		
Continuous Split Spoon (2 1/2")	3.0' - 5.0'		
Continuous Split Spoon (2 1/2")	5.0' - 7.0'		
Continuous Split Spoon (2 1/2")	7.0' - 9.0'		
Drilling & Sampling Comments (Include drilling muds used, source of water, lost circulation zones, etc.)			
Hollow Stem Auger (4" dia) sampled intervals: 0.00' - 2.00', 3.00' - 5.00', 5.00' - 7.00', 7.00' - 9.00'			
Drilling Company	Driller (last name, first initial)	Overnight Company	Overnight (last name, first initial)
Environmental Exploration	Willis, J.	Rust E+I	Hill, M.
Disposition of Samples			
General Engineering Laboratories, Onsite			
ABANDONMENT			
Method of Abandonment		Materials Used in Abandonment	
Backfill		Natural Soil	
APPROVALS			
Abandonment Verified By	Date	Boring Installation Report Prepared By	Date
Melanie D. Hill	4/5/94	Melanie D. Hill	4/6/94

CS6G-02

RUST ENVIRONMENT &
INFRASTRUCTURE

MONITORING WELL
COMPLETION CHECK LIST

WELL NUMBER:

CS66-02

GEOLOGIST/DATE:

Melanie D Hill 4/6/94

DAILY ACTIVITY REPORTS

(Copied from RFI/KF Greenbook)

GEOLOGIC LOG

RUST CORE RUN TALLY

GEOPHYSICAL LOG

CHAIN OF CUSTODY

SIEVE ANALYSIS

GRAVEL PACK DESIGN

SRS MONITORING WELL CONSTRUCTION DETAILS

SRS MONITORING WELL INSTALLATION REPORT

SCDHEC WATER WELL RECORD

WELL DEVELOPMENT REPORT

PUMP INSTALLATION REPORT

SUBCONTRACTOR EXPENSE RECORD

TO Bob Hunter

RUST WELL INSTALLATION DIAGRAM

RUST CASING/SCREEN TALLY

SRS Well Soil Boring Installation Report

4/6/94

✓
✓

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

✓

NA

NA

✓

9/4/94 Monday

0630 Arrive RUST office to pick up charged
OVA + telephone + to SLS
0700 Arrive well bldg. Collect bottles,
tip blanks, coolers, gel packs + radio.
0740 Arrive site. Drillers not on site yet.
Set up for the day.

0745 Drillers onsite with Murphy Switch
replacement. Steam Clean -
verified water temp = 180 °F + move
onto CS66-03. Calibrate OVA.

0830 Collected first sample - CS66-03-01
Sand, silt + clay (5 to 10%), mod.
red brown (10 R 4/6) with
flecks of white (N9) + red dk yell
orange (10 YR 6/6), fine to
v. coarse, mod to poorly sorted,
sub A, moist to dry.

@ 1.5 ft bls - sand, silt (< 2%),
very fine to fine w/ occas. coarse,
mod yell brown (10 YR 5/4),
well sorted sub A to sub R,
trace heavies, moist, loose.

0900 Auger down to 3 ft + push a
spit spoon down 3 to 5 ft.

0920 Bottle sample. BOP ≈ 4 ft. NO
burnt, black material.

Sand, silt + clay (10%), lt brown (5YR 7/6).
fine to v. coarse, poorly sorted,
sub A to sub R, trace heavies, dry to moist.

3.6 to 4 ft - transition into
sand, (silt + clay (10-15%), fine to
med w/ occ. v. coarse, mottled lt brown,
mod red brown (10 R 4/6) and yell gray (5Y 4/6).

4/4/94

med to poorly sorted, subA to subR,
trace heavies, trace micas, dry to
moist, occ. pebbles.

1000

Collect sample from 5 to 7 ft
CS66-03-03

Sand as above w/ med red (SR 4/6)
added to mottled colors,
Increase in micas (<2%), heavies
in strings.

Shirley McDaniel + Sharon Fulton
stopped by to pick up DI water
jugs to get refills.

1045

Collect sample from 7 to 9 ft -

CS66-03-04. (Non-detect on previous sample)

Sand as above with increase in
silt and clay (15-20%), more
homogeneous with fine to med,
plastic clays.

at 8.8' bls - zone of well rounded
qtz cobbles that were crushed by
split spoon collection.

100

Techs on site w/ fresh water +
DI water. Waiting on HP sample.
DVI reading for 7 to 9' sample =
non detect. Techs take sample to
get clearance + to get isopropanol.

1130

Drillers drill down to purple clay.
Prepare to collect field + rinse blanks.

Good purple clay at 13 ft. Push the
shelby tube from 13.5 to 15.5

Clay, silt + sand (20%), med to
coarse, mottled pale red purple
(SR P 6/2), white (W9), + med

4/4/94

red brown (10 R 4/6), dense,
plastil, dry, trace heavies, trace
micas. 1 1/2 2 ft - 100% recovery
Drillers seal tube + fill in
hole with cuttings.

1215 Mob onto CS66-02. Prepare
bottles for first totenon sample
CS66-02-01.

1230 HP came by to smear Shelby tubes
+ take soil samples in to screen.

1245 Collect Hard Auger sample for CS66-02.
Donna Berlin onsite to take pictures
of sampling procedures.

Sand, silt + clay (20%), v. fine to coarse,
with pebble sized grains; lt brown
(5YR 5/6) to mod yell brown
(10YR 5/2); poorly sorted, subgl.,
trace leafies, moist.

Note: metal shavings in top 6 inches

1300 Janelle Janssen on site. Collected CS66-02-02.

1340 Donna offsite. Collect next sample.
CS66-02-03 description.

Clay, silt + sand (20%), fine to coarse,
mottled lt brown (5YR 5/6),
yellowish gray (5Y 8/1), and
mod red brown (10 R 4/6),
dense, brittle to slightly plastic.

Sample CS66-02-03 - same as
above. Shirley McDaniel Beck on site.

1400 Janelle Janssen offsite.

Prepare for next sample - CS66-02-04

1425 Collect next sample.

Clay as above, fine sand, yell gray

4/4/94

- is predominant color w/ v. dusky red purple (5RP 2/c) added to nothing, increase in mica ($\approx 2\%$).
- 1450 DVA reading on last sample = no detect. Ambient of 0.5 ppm.
- 1500 Shirley offsite with HP sample. Drillers fill in hole + prepare to mob to CS66-01. Decon equipment + prepare Trip Blank paperwork.
- 1545 Drillers finished steam cleaning but will wait to mob onto site tomorrow. Everyone offsite. Kevin + MTH to well bldg to unload deconned equipment into locked trailer. MTH returns radio + sign over CDC of samples to well bldg refrigerator for overnight storage.
- 1630 Offsite to RUST E&I office to change DVA
- 1710 exit office.

Melanie D. Hill 4/4/94

FIELD GEOLOGIC LOG

PROJECT Central Shops BRP 631-6G		DATE 4/4/94	SHEET 1 of 1
WELL NO. CS64-02		DRILLING/SUBCONTRACTOR Environmental Exp/Arch	
LOGS PREPARED BY MDH:11		DRILLER J. Willis	DRILLING METHOD HSA/split spoon
LOCATION		COMPANY RUSTE+I	

RUN NUMBER	DEPTH BELOW GROUND SURFACE FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS/REMARKS
Hand Auger	0		100%	sand, silt and clay (20%), v. fine to coarse, some pebbles, lt brown (5 YR 5/6)	
	1			to mod yell brown (10 YR 5/2)	
	2			poorly sorted, sub R, trace leaves, moist, incl shavings in top 6 in. down to 3 ft.	
1	3		100%	Clay, silt and sand (20%), fine to coarse, mottled lt brown (5 YR 5/6)	
	4			yell gray (5Y 8/1), and mod red brown (10R 4/6). dense,	
2	5		70%	brittle to slightly plast.	
	6			Clay as above.	
3	7		100%	Clay as above with fine sand, yell gray more predominant & color is dusky red purple (5 RP 2/2)	
	8			to mottled colors, increase in mica (K20)	
	9				
	0				DVA readings were non defect
	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	0				

ATMOSPHERIC MONITORING LOG

FIELD HEALTH AND SAFETY

Page 1 of 1

Date 41 41 94

Circle: Sun (Mon) Tue Wed Thu Fri Sat

Site: Central Shops BRP631-66

Project No.: 88 357.000

Site Safety Officer: NDH 11

Action Levels: ☒ Dq ☐ Cq ☐ Bq (Stop work, call in for instructions)
(check box and write in levels for upgrade)

Task/Equipment: monitor volatiles / OVA

Weather: Sunny 60's to 70's

Time	OVA PPM	HNu PPM	O ₂ %	LEL %	H ₂ S PPM	Comments: Duration of Readings, Upgrades, Location, etc.
1430	6.0 6.0	—	—	—	—	Ambient reading / 5 to 7' scan 6ae7
1430	6.0 6.0	—	—	—	—	Ambient reading / breathing zone 7' angles
1450	0.5 6.5	—	—	—	—	Ambient reading / 7 to 9' scan 6ae8
<div style="transform: rotate(-45deg);"> <i>Melanie D. Hill</i> 4/4/94 </div>						

Additional Comments: CS66-02

Signature: Thelma D. Hill

SOIL BORING INSTALLATION REPORT

Boring Number (AAA, NNN, 'SB')

C566 | 02 | SB

GENERAL INFORMATION

Project Name

Central Shops Burnine/Puddle Pit-631-66

Project Manager

Kevin Wise

Department

Environmental Restoration

Boring Purpose

Soil Sample Collection

County

Barnwell

Location Description

South west of Original BRP-66

SURVEY INFORMATION

SRS North Grid Coordinate

SRS East Grid Coordinate

Latitude (decimal degrees)

Longitude (decimal degrees)

Ground Elevation

DRILLING & SAMPLING INFORMATION

Total Drilled Depth

9.0

Static Water Level

N/A

Drilling Start Date

4/4/94

Drilling Completion Date

4/4/94

Drilling Method

Hollow Stem Auger (HSA) (4" dia)

Drilling & Sampling Comments

(Include drilling muds used, source of water, lost circulation zones, etc.)

 Sampled intervals: 0.00' - 2.00',
 3.00' - 5.00',
 5.00' - 7.00',
 7.00' - 9.00'

Sample Type	Sampling Interval	Sample Type	Sampling Interval
Hand Auger (3 1/4")	0.0' - 2.0'		
HSA	2.0' - 3.0'		
Split spoon (2 1/2")	3.0' - 5.0'		
Split spoon (2 1/2")	5.0' - 7.0'		
Split spoon (2 1/2")	7.0' - 9.0'		

Drilling Company

Environmental Exploration

Driller (last name, first initial)

Willis, J

Overight Company

RUST E&I

Overight (last name, first initial)

Hill, M.

Disposition of Samples

General Environmental Laboratories / Onsite

Method of Abandonment

Backfill

Materials Used in Abandonment

Natural Soil

ABANDONMENT

APPROVALS

Abandonment Verified By

Melanie D. Hill

Boring Installation Report Prepared By

Melanie D. Hill

Date

4/4/94

Date

4/6/94

CS6G-03

MONITORING WELL
COMPLETION CHECK LIST

WELL NUMBER:

CS66-03

GEOLOGIST/DATE:

Melanie D. Hill 4/6/94

DAILY ACTIVITY REPORTS

(Copied from RFT/NA Green Book)

GEOLOGIC LOG

RUST CORE RUN TALLY

GEOPHYSICAL LOG

CHAIN OF CUSTODY

SIEVE ANALYSIS

GRAVEL PACK DESIGN

SRS MONITORING WELL CONSTRUCTION DETAILS

SRS MONITORING WELL INSTALLATION REPORT

SCDHEC WATER WELL RECORD

WELL DEVELOPMENT REPORT

PUMP INSTALLATION REPORT

SUBCONTRACTOR EXPENSE RECORD

To Bob Hunter

RUST WELL INSTALLATION DIAGRAM

RUST CASING/SCREEN TALLY

SRS Soil Boring Installation Report

✓

✓

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

✓

NA

NA

✓

11/4/94 Monday

- 0630 Arrive RUST office to pick up charged OVA & telephone & to SRS
- 0700 Arrive well bldg. Collect bottles, hip bladders, coolers, gel packs & radio.
- 0740 Arrive site. Drillers not on site yet. Set up for the day.
- 0745 Drillers on site with Murphy Switch replacement. Steam Clean - Verified water temp = 180°F - & move onto CS66-03. Calibrate OVA.
- 0830 Collected first sample - CS66-03-01 Sand, silt & clay (5 to 10%), med red brown (10 R 4/6) with flecks of white (N9) & red dk. yell orange (10 YR 6/6), fine to v. coarse, med to poorly sorted, sub A, moist to dry.
- @ 1.5 ft bls - sand, silt (< 2%), very fine to fine w/ occas. coarse, med yell brown (10 YR 5/4), well sorted sub A to sub R, trace heavies, moist, loose.
- 0900 Auger down to 3 ft & push a split spoon from 3 to 5 ft.
- 0920 Bottle sample. BOP $\approx$ 4 ft. NO burnt, black material.
- Sand, silt & clay (10%), lt brown (5YR 5/6), fine to v. coarse, poorly sorted, sub A to sub R, trace heavies, dry to moist.
- 3.6 to 4 ft - transition into sand, (silt & clay (10-15%), fine to med w/ occ. v. coarse, mottled lt brown, mod red brown (10 R 4/6) and yell gray (5Y 4/6).

4/4/94

med to poorly sorted, subA to subR,
trace heavies, trace micos, dry to
moist, occ. pebbles.

1000

Collect sample from 5 to 7 ft
CS66-03-03

Sand as above w/ med red (SR 4/6)
added to mottled colors,
Increase in micos (<2%), heavies
in stringers.

Shirley McDaniel + Sharon Telford
stopped by to pick up DI water
jugs to get refills.

1045

Collect sample from 7 to 9 ft -

CS66-03-04. (Non-detect on previous sample)

Sand as above with increase in
silt and clay (15-20%), more
homogeneous with fine to med,
plastic clay.

at 8.8' bls - zone of well rounded
qtz cobbles that were crushed by
split spoon collection.

100

Techs on site w/ fresh water +
DI water. Waiting on HP sample.

DVA reading for 7 to 9' sample =
non detect. Techs take sample to
get clearance + to get isopropanol.

Drillers drill down to purple clay.

1130

Prepare to collect field + rinsate blanks.

Good purple clay at 13 ft. Push the
shelby tube from 13.5 to 15.5

Clay, silt + sand (20%), med to
coarse, mottled pale red purple
(SRP 6/2), white (W9), 2' mod

4/4/94

- red brown (10 R 4/6), dense,
plastic, dry, trace heavies, trace
micas. 1 1/2 2 ft - 100% recovery }
Drillers seal tube + fill in
hole with cuttings.
- 1215 Mob on to CS66-02. Prepare
bottles for first totemon sample
CS66-02-01.
- 1230 HP came by to smear Shelby tubes
+ take soil samples in to screen.
Collect Hard Auger sample for CS66-02.
- 1245 Donna Berlin onsite to take pictures
of sampling procedures.
Sand, silt + clay (20%), v. fine to coarse,
with pebble sized grains, lt brown
(5YR 5/6) to mod yell brown
(10YR 5/2), poorly sorted, subll,
trace leaves, moist.
note: metal shavings in top 6 inches
- 1300 Janelle Janssen onsite. Collect CS66-02-02.
- 1340 Donna offsite. Collect next sample.
CS66-02-02 description.
Clay, silt + sand (20%), fine to coarse,
mottled lt brown (5YR 5/6),
yellowish gray (5Y 8/1), and
mod red brown (10 R 4/6),
dense, brittle to slightly plastic.
Sample CS66-02-03 - same as
above. Shirley McDaniel Beck on site.
- 1400 Janelle Janssen offsite.
- 1425 Prepare for next sample - CS66-02-04
Collect next sample.
Clay as above, fine sand, yell gray

4/4/94

- is predominant color w/ v. dusky red purple (5RP 2/6) added to nothing, increase in mica ($\approx 2\%$).
- 1450 DUA reading on last sample = no detect. Ambient of 0.5 ppm.
- 1500 Shirley offsite with HP sample. Drillers fill in hole + prepare to mob to CS66-01. Decon equipment + prepare Trip Blank paperwork.
- 1545 Drillers finished steam cleaning, but will wait to mob onto site tomorrow. Everyone offsite. Kevin + MTH to well site to unload deconned equipment into locked trailer. MTH return radio + sign over CDC of samples to well site refrigerator for overnight storage.
- 1630 Offsite to RUST E&I office to change DUA
- 1710 Exit office.

Melanie D. Hill 4/4/94

FIELD GEOLOGIC LOG

PROJECT		DATE		SHEET	
WELL NO.		LOCATION		DRILLING SUBCONTRACTOR	
LOGS PREPARED BY		COMPANY		DRILLING METHOD	
Central Shops 631-66		4/4/94		1 OF 1	
CS 66-03				Environmental Exploration	
MD Hill		RUST E+I		James Willis	
				HSA/split spoon	
RUN NUMBER	DEPTH BELOW GROUND SURFACE FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS/REMARKS
Hand Auger	0		100%	Sand, silt + clay (5 to 10%), med red brown (10 R 4/6) with flecks of white (N9) and off yell orange (10 YR 6/6), fine to v coarse, med to poorly sorted, sub A, moist to dry	
1	1		100%	Sand, silt (< 10%), v fine to fine w/occas. coarse, med yell brown (10 YR 5/4), well sorted, sub A to sub R, trace heavies, moist, loose.	Auger to 3 1/4
2	2		100%	Sand, silt + clay (10%), lt brown (5 YR 5/6), fine to v coarse, poorly sorted, sub A to sub R, trace heavies, dry to moist.	Push 1st split spoon
3	3		100%	Sand, silt + clay (10-15%), fine to med w/occ. v coarse to pebble sized grains, mottled lt brown (5 YR 5/6), med red brown (10 R 4/6) and yell gray (5 Y 8/1), med to poorly sorted, sub A to sub R, trace heavies, trace mica, dry to moist.	Boo
4	4		100%	as above @ 4 ft. Add med red (5 R 4/6) to mottled colors, increase in mica (< 2%), trace heavies in stringers.	Auger to 13.5'
5	5		100%	as above, increase in silt + clay (15 to 20%), more homogeneous w/ fine to med, clay are plastic.	topush
6	6		100%	zone of well rounded qtz cobbles that were crushed by split spoon.	sub b
7	7		100%	Clay, silt + sand (30%), med to coarse, mottled pale red purple (5 R 6/2), white (N9), and med red brown (10 R 4/6), dense, plastic, clay, trace heavies, trace mica.	
8	8		100%		
9	9		100%		
10	10		100%		
11	11		100%		
12	12		100%		
13	13		100%		
14	14		100%		
15	15		100%		
16	16		100%		
17	17		100%		
18	18		100%		
19	19		100%		
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91	91		100%		
92	92		100%		
93	93		100%		
94	94		100%		
95	95		100%		
96	96		100%		
97	97		100%		
98	98		100%		
99	99		100%		
100	100		100%		

DVA readings were non detect

Page 7 of 7

Date 9/14/94

Circle: Sun (Mon) Tue Wed Thu Fri Sat

Project No.: 88357.000

Site Safety Officer: Melanie D. Hill

Action Levels: (D)q ' Cq ' Bq ' (Stop work, call in for instructions)
(check box and write in levels for upgrade)...

Task/Equipment: Monitor Volatiles/OVA

Weather: overcast, 50s

Additional Comments: C566-03

Signature: Melanie D. Hill

SOIL BORING INSTALLATION REPORT

Boring Number (AAA, NNN, "SB")

CS66 | D3 | SB

GENERAL INFORMATION

Project Name

Central Shops Burnire / Rubble Pit 631-66

Project Manager

Kevin Wise

Department

Environmental Restoration

Boring Purpose

Soil Sample Collection

County

Barnwell

Location Description

Eastern part of original BRP-66

and Lithology Description

SURVEY INFORMATION

SRS North Grid Coordinate

SRS East Grid Coordinate

Latitude (decimal degrees)

Longitude (decimal degrees)

Ground Elevation

DRILLING & SAMPLING INFORMATION

Total Drilled Depth

15.5'

Drilling Start Date

4/4/94

Drilling Completion Date

4/4/94

Drilling Method

Hand Low Stem Auger (HSA) (4" dia)

Static Water Level

N/A

Drilling & Sampling Comments

(Include drilling muds used, source of water, lost circulation zones, etc.)

 Sampled Intervals:
 0.00' - 2.00'
 3.00' - 5.00'
 5.00' - 7.00'
 7.00' - 9.00'

 Shelby Tube: 13.5' - 15.5'

Sample Type

Hand Auger (3 1/4")

Sampling Interval

0.0' - 2.0'

Sample Type

LSA

Sampling Interval

2.0' - 3.0'

Sample Type

Split Spoon (2 1/2")

Sampling Interval

3.0' - 5.0'

Sample Type

Split Spoon (2 1/2")

Sampling Interval

5.0' - 7.0'

Sample Type

Split Spoon (2 1/2")

Sampling Interval

7.0' - 9.0'

Sample Type

HSA

Sampling Interval

9.0' - 13.5'

Sample Type

Shelby Tube

Sampling Interval

13.5' - 15.5'

Drilling Company

Environmental Exploration

Driller (last name, first initial)

Willis, J.

Oversight Company

RUST & I

Oversight (last name, first initial)

Hill, M.

Disposition of Samples

General Engineering Laboratories / Onsite

ABANDONMENT

Method of Abandonment

Backfill

Materials Used In Abandonment

Natural Soil

APPROVALS

Abandonment Verified By

Melanie D. Neel

Date

4/4/94

Boring Installation Report Prepared By

Melanie D. Neel

Date

4/6/94

CS6G-04

RUST ENVIRONMENT &
INFRASTRUCTURE

MONITORING WELL
COMPLETION CHECK LIST

WELL NUMBER:

CS 66-04

GEOLOGIST/DATE:

Melanie D. Hill 4/6/94

DAILY ACTIVITY REPORTS

(Copied from RPT/RT greenbook)

GEOLOGIC LOG

RUST CORE RUN TALLY

GEOPHYSICAL LOG

CHAIN OF CUSTODY

SIEVE ANALYSIS

GRAVEL PACK DESIGN

SRS MONITORING WELL CONSTRUCTION DETAILS

SRS MONITORING WELL INSTALLATION REPORT

SCDHEC WATER WELL RECORD

WELL DEVELOPMENT REPORT

PUMP INSTALLATION REPORT

SUBCONTRACTOR EXPENSE RECORD

To Bob Hunter

RUST WELL INSTALLATION DIAGRAM

RUST CASING/SCREEN TALLY

SRS Soil Boring Installation Report

✓

✓

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

✓

NA

NA

✓

3/30/94

Wednesday, sunny, slight breeze, 40's

0630 Arrive RUST Office to pick up
Charged OVA, phone, etc.

Bill Joyce assisted in filling
hydrogen tank on OVA. Then
to SLS.

0705 Arrive well bldg. Informed drillers
and Kevin Wise that no faxed
information from Environmental
Exploration. We must have
this before starting drilling today.
Drillers also misplaced their
briefcase with all pertinent
paperwork. They went to check
hotel & call their office. Then
they have to get an adapter
from Janelle to push the
shelby tube. Load up coolers,
gel packs & deconned equipment.

0730 Kevin & NDH to site to set
up for the day. Prepare to take
first sample for CS66-09.

0830 Bill Joyce received fax from
Env. Exploration - Jim Willis
w/ the OSHA update & GC drillers license.
He'll bring it out to the site.

Called Janelle Janssen to check
on drillers. She tried to locate
adapter for pushing shelby tube.

0905 Finished collecting CS66-09-01.

Drillers called on radio. They are
on their way back to site.

Kevin called HH about CS66-08 sample.
(F+ cleared.)

3/30/94

Sample description for CS66-09-01:

Sand, fine to v. coarse, silt + clay
(10-20%), lt brown (5YR 5/6)
to med red brown (10 R 4/6),
poorly sorted, sub A to sub R,
trace heavies, dry to moist. (obvious fill)

0915 Drillers onsite. Auger down
3' + push 1st splitspoon from
3' to 5'.

0940 WSRG-ER techs (Shirley McDaniel
+ Sharon Fulton) onsite to see if
Kevin needs anything. Also, Bill
Joyce onsite w/ drillers paperwork.

0950 Splitspoon from 3' to 5' has Base of
Pit. Black, burnt material from 4.4'
to 4.6' so push a 2" dia splitspoon
from 5' to 5.6' so we can get
on right footage for sampling intervals.

1000 Collect CS66-09-02.
4.6' to 5.6' ^{sand} Clay, silt + clay (10-15%)
fine to med, mottled lt brown
(5 YR 5/6), med red brown (10 R 4/6),
and yellowish gray (5Y 8/1),
trace heavies, trace micas, dry to
moist, brittle to slightly plastic.

1040 DUA reading of bagged sample of soil
from CS66-09-02 is non detect.
Background or ambient reading
of 0.5 ppm. Bill Joyce off site.
Shirley + Sharon dropped off.
DJ water + adapter for Shelby tube.

1100 Push splitspoon from 5.6' to 7.6'.
CS66-09-03 + Duplicate.

3/30/94

Same Clay as above, increase in silt content (20%). more dense, hard.

11/30

DVA reading on previous soil sample was non-detect. Ambient lead drifted to 8 ppm. Collect next sample (7.6 to 9.6)

Clay as above grading to more silt and sand (30 to 40%), fine to coarse, mottled colors as above with gray red purple (5 RP 4/6) added in.

12/20

DVA reading on 7.6 to 9.6' sample box is non-detect, but ambient has drifted to 11.1 ppm.

Attempt to push a Shelby tube may be too dense.

2/10

Kevin to take composite sample of CS6G-09 to HP while Mark does Field Blank paperwork.

12/20

Pushed Shelby tube 2.25' (9.6 to 11.85'). At the bottom of the tube: Silt, clay (10%), sand (<5%), v. fine, mottled, grayish red purple (5 RP 4/6), pale red purple (5 RP 6/12), dusky red (5R 3/4) and white (W 9), moist, micaceous (20%).

Drillers seal tube while we finish Field Blank + start Ringate Blank.

12/45

Collect Ringate Blank. Drillers fill in hole + decon rig and augers. Andy Preston with Bechtel stopped by.

3/30/94

to talk with Kevin Wise.
+ 310 Kevin offsite. Drillers moving to CS6G-04 location.

Note: - Kevin Wise called Bill Weiss @ RUST E&I @ 1200. Mixup with change notice.

- Baylus Morgan called to ask if MDH could be replaced with Bill Joyce tomorrow so MDH can attend NSRC RCRA training. Kevin said okay.

1330 Prepare to collect borehole sample (0 to 2') on CS6G-04 location. Move sampling & decon location.

1405 Completed sampling CS6G-04-01. Sand, fine to v. coarse, silt & clay (5-10%), med red brown (10 R 4/6) with flecks of white (N 9) and dk yell orange (10 YR 4/6), med to poorly sorted, sub A, moist to dry. (fill - no structure)

@ ~ 1.5' sand, silt (< 2%), v. fine to fine w/ occasional med, med yell brown (10 YR 5/4) well sorted, sub A to sub B, trace heavies, moist, loose. (fill - no structure)

Drillers auger out top 2 ft + push a split spoon from 2 to 4 ft.

1410 Keith Johnson on site to observe.

1430 Kevin back on site. Keith off site. Update Kevin. 2 to 4 ft spoon still fill. 4 to 6 ft spoon has

3/30/94

no black, burnt material, but
at 4 ft - structured clay as
seen in previous holes so
call base of pit at 4 ft.

Sample description - CS66-04-02
(3 to 5 ft)

sand as above to 4 ft.

Clay, sand and silt (20-30%),
v. fine to coarse, mottled
mod. red brown (10R 4/6),
dk. yell orange (10YR 6/6) and
yellowish gray (5Y 7/2),
trace micas, dense, brittle.

1455 Clet Nichols on site. HP smeared shell by tube

1520 Collect CS66-04-03 (5' to 7')
after drillers take 1 ft split from
sample from 6' to 7'.

Clay as above, increase in silt
and v. fine sand (20-30%),
colors as above, brittle to slightly
plastic.

DVA reading for previous samples
0'-2' + 3' to 5' were non-detect,
but ambient was high 8.1 to 10 ppr.

1540 DVA reading for 5' to 7' was non-detect
but ambient was high - 8.1 ppr.

1545 Collect sample from 7' to 9'
for CS66-04-04.

Check atmosphere around
augers at depth of 7 ft.

Non-detect. Ambient of 6.8 ppr.
Sample is clay, as above, increase
in micas (< 2%).

3/30/94

- 1410 Chet Nichols offsite. Finish up paperwork + decon equipment.
Kevin to HP to deliver composite sample for CS6G-04.
- 1620 Kevin back from HP. HP cleared the Shelby tube from CS6G-09. Drillers pull out of hole + backfill as per WSKC (Kevin + Bill Joyce okayed with Janelle Janssen as per WSKC 3Q5)
- 1700 To well bldg to sign over samples + unload equipment.
- 1740 Leave well bldg for office to change OVA.
- 1810 Finished for the day.

Melanie D. Hill 3/30/94

FIELD GEOLOGIC LOG

PROJECT Central Shops BRP 631-66		DATE 3/30/94	SHEET 1 of 1
WELL NO. CS66-04		LOCATION	DRILLING SUBCONTRACTOR Environmental Explor
LOGS PREPARED BY A.D. Hill		COMPANY RUST E+F	DRILLER J. Willis
		DRILLING METHOD HSA / Split spoon	

RUN NUMBER	DEPTH BELOW GROUND SURFACE FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS/REMARKS
Hand Analyzed	0			Sand, silt + clay (5 to 10%), mod red brown (10 R 4/6) with flecks of white (U9) and dk yell orange (10 YR 6/6), fine to v. coarse, mod to poorly sorted, sublt, moist tacky	
1	1		100%		
	2		100%		
	3		100%		
2	4		100%		
	5		100%		
3	6		100%		
4	7		95%		
	8				
	8.9				
	9				
	10	T.D. Hole @ 9.0 ft			
	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	20				

DVA readings were non-defects. maximum ambient reading was 10ppm.

ATMOSPHERIC MONITORING LOG

FIELD HEALTH AND SAFETY

Page 1 of 1

Date 31 30 94

Circle: Sun Mon Tue Wed Thu Fri Sat

Site: Central Shops BRP 631-6G

Project No.: 88357.062

Site Safety Officer: ADH

Action Levels: ☒ D q ' C q ' B q ' (Stop work, call in for instructions)
(check box and write in levels for upgrade) /CDVA

Task/Equipment: Monitor Volatiles / OVA

Weather: Sunny, Windy 100-70°

[illegible]

Additional Comments:

CS 66-04

Signature: Melanie D Hill

SOIL BORING INSTALLATION REPORT					
<small>Boring Number (AAA, NNN, *SB*)</small> C366 | 04 | SB					
Project Name <i>Central Shops Burnitz / Rubble Pit b31-66</i>		Project Manager <i>Kevin Wise</i>		Department <i>Environmental Restoration</i>	
Boring Purpose <i>County</i>		Location Description <i>Western portion of Original BPP-66</i>			
SURVEY INFORMATION					
SRS North Grid Coordinate	SRS East Grid Coordinate	Latitude (decimal degrees)	Longitude (decimal degrees)	Ground Elevation	
DRILLING & SAMPLING INFORMATION					
Total Drilled Depth <i>9.0</i>	Static Water Level <i>N/A</i>	Drilling Start Date <i>3/30/94</i>	Drilling Completion Date <i>3/30/94</i>	Drilling Method <i>Hollow Stem Auger (HSA) (4' dia.)</i>	
Sample Type	Sampling Interval	Sample Type	Sampling Interval	Drilling & Sampling Comments (Include drilling fluids used, source of water, lost circulation zones, etc.) <i>Sampled Intervals: 0.00 - 2.00' 3.00' - 5.00' 5.00' - 7.00' 7.00' - 9.00'</i>	
<i>Hand Auger (3/4")</i>	<i>0.0 - 2.0</i>				
<i>Splitspoon (2 1/2")</i>	<i>2.0 - 4.0</i>				
<i>Splitspoon (2 1/2")</i>	<i>4.0 - 6.0</i>				
<i>Splitspoon (2 1/2")</i>	<i>6.0 - 7.0</i>				
<i>Splitspoon (2 1/2")</i>	<i>7.0 - 9.0</i>				
Drilling Company <i>Environmental Exploration</i>	Driller (last name, first initial) <i>Willis, J.</i>	Overight Company <i>DUST EXI</i>	Overight (last name, first Initial) <i>Hill, M.</i>		
Disposition of Samples <i>General Engineering Laboratories, Onsite</i>					
ABANDONMENT					
Method of Abandonment <i>Backfill</i>	Materials Used In Abandonment <i>Natural Soil</i>				
APPROVALS					
Abandonment Verified By: <i>Melanie D. Hill</i>	Date <i>3/30/94</i>	Boring Installation Report Prepared By: <i>Melanie D. Hill</i>	Date <i>4/6/94</i>		

CS6G-05

RUST ENVIRONMENT &
INFRASTRUCTURE

MONITORING WELL
COMPLETION CHECK LIST

WELL NUMBER:

CS 66-05

GEOLOGIST/DATE:

Melanie D. Hill 4/6/94

DAILY ACTIVITY REPORTS

(Copied from RUST Green Book)
GEOLOGIC LOG

RUST CORE RUN TALLY

GEOPHYSICAL LOG

CHAIN OF CUSTODY

SIEVE ANALYSIS

GRAVEL PACK DESIGN

SRS MONITORING WELL CONSTRUCTION DETAILS

SRS MONITORING WELL INSTALLATION REPORT

SCDHEC WATER WELL RECORD

WELL DEVELOPMENT REPORT

PUMP INSTALLATION REPORT

SUBCONTRACTOR EXPENSE RECORD

To Bob Hunter
RUST WELL INSTALLATION DIAGRAM

RUST CASING/SCREEN TALLY

SRS Soil Boring Installation Report ✓

✓

✓

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

✓

NA

NA

8/31/94 Thursday Clear and Cool (60's)

06:30 WDJ arrives at the RUST Aiken office, reviews M. Hill's notes and loads equipment.

06:45 WDJ departs the RUST office

07:10 WDJ arrives at the wellbuilding and meets Kevin Wyse and the drill crew (Jim Willis and Marvin Fowler). Begin to load sampling bottles and equipment. The crew is loading water on the rig.

07:20 The crew departs to set up on site C56G-05.

07:30 WDJ and Kevin depart.

07:40 WDJ and Kevin arrive at site C56G-05 and begin to set up. The rig is set up on site and the equipment has been steam cleaned.

08:25 WDJ calibrates OVA (see calibration log book). Begin to prepare sample bottles.

08:45 Hand auger sample 0.0'-20'. Description: SAND: (silt 5-10%) v/crse - crse grn with loose granules and cobbles, mod reddish brown grading to mod yellowish brown (10 YR 5/4), shag - strand, pty srt'd, dry. Prepare next bottles.

09:30 Push split spoon from 2.0'-4.0' looking for pit. Interval was fill material SAND: (silt 5-10%) v/crse - crse grn, mod yellowish brown (10 YR 5/4) - light brown (5 YR 5/6), shag - strand, mod srt'd, dry. Continue to push 4.0'-6.0'.

09:50 Pushed 4.0'-6.0' no recovery. Attempted same interval with catcher - no recovery. Auger to 6.0'.

10:15 Before pushing 6.0'-8.0' sample - Rig died. Attempt repairs on rig.

11:15 Attempts to repair the rig have failed. The drill crew leaves site to purchase parts.

11:35 Shirley McDaniel on site

12:10 Drill crew returns to site

12:30 Shirley departs the site.

5/31/94
13:30

Thursday

Rig repaired sufficiently to run. Push sample from 6.0'-8.0'. Hit top of pit at 7.6'. Run in with 3" ID split spoon to push from 8.0'-10.0'. Pushed hard through debris.

13:50

Run 6.0'-8.0' recovered 1.4'. Bottom 0.4' charred black debris (wet) upper 0.6' (6.0'-6.6') WDT will group with no recovery of previous interval because the split spoon pushed hard through pit (bottom 0.4') but soft through 6.0'-6.6' (no recovery) SAND (6.6'-7.6') (silt 10-15%) v/crse - crse grn, light brown (5YR 5/6), shag-shred, mod silt, moist-wet

Charred debris (7.6'-8.2'). SAND (8.2'-9.2') (silt 10-15%, clay 10-15% as dry kaolin)

med grn, mottled - mod red (5R 4/6) - drk yellowish orange (10YR 6/6) - grayish orange (10YR 7/4) - very pale orange (10YR 8/2)

shag-shred, mod silt, dry. recovered 100% from 8.0'-10.0' (saved 9.2'-10.0' for next sample).

14:20

Standing water on top of split spoon HP (Elaine Mills and Daryl Jenkins) on site for update - leave

14:35

Steve Hoove and Keith Johnson on site

14:50

Steve and Keith leave. WDT prepares bottles

15:00

Pushed split-spoon (2 1/2" ID) from 10.0'-11.2' recovered 0.6'. Description as above except kaolin content 20-25%. Standing water on top of split spoon with alot of slough.

15:30

WDT prepares bottles

15:45

Pushed split spoon from 11.2'-13.2' (recovered 1.0' 11.2'-12.2'). Slough from pit smeared through sample. SAND (silt 10% clay 15% as dry kaolin) v/crse - crse grn with granules and pebbles.

3/31/94

Thursday

mod red (5R 4/6) - grayish orange (10YR 7/4)
very pale orange (10YR 8/2), sandy-silty, priy
sctd moist

16:15

No detects in bag samples from 9.2' - 11.2' and
11.2' - 13.2' that were left standing for over
20 minutes. Will auger to pale red purple clay
and push shelby tube

16:20

Elaine Mills on site to pick up HP sample - leaves
WDJ prepares field blank bottles.

16:30

Have augered to 25' - cuttings indicate we
are in clay. Push the 2.5' Shelby Tube.

17:00

Pushed the tube 2.0' - collapsed the end of
the tube. Recovered 2.0'. WDJ prepares tube
and bottles for rinse. The crew pulls the
augers and fills in the holes.

17:20

The Chain of Custody for trip is at wellbuilding.
Will complete chain there.

17:30

The drill crew departs after WDJ and Jim
settled expense records

18:00

Have secured the samples and site. WDJ and
Kevin depart.

18:10

WDJ and Kevin arrive at the wellbuilding, turn in
the field radio, log in the trip blanks, seal the
top of the shelby tube (bottom sealed in field) and
secure the samples in the ^{10/7/94} cool refrigerator in
the copy room.

18:45

Kevin departs wellbuilding.

19:30

WDJ has signed off on the chain of custody,
to the seal on the refrigerator and departs.

19:55

WDJ arrives at the RUST office and unloads.

Tellum D. Dyer 3/31/94

FIELD GEOLOGIC LOG

PROJECT		DATE		SHEET	
WELL NO.		LOCATION		DRILLER	
LOGS PREPARED BY		COMPANY		DRILLING METHOD	
Central Shops BRP 631-66		3/31/94		1 of 2	
CS66-05				Environmental Exploration	
Bill Joyce		RUST & I		HSA Splitspoon	
RUN NUMBER	DEPTH BELOW GROUND SURFACE FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS/REMARKS
Hand Auger	0		Hand Auger	SAND (silt 5%) v/crse-crse grn with lsc	
	1			granules and cobbles, mod reddish brown (10YR 4/6) grading to mod yellowish brown (10YR 5/4) shag-strnd, prly srtld, dry.	Auger headspace - 0.0 ppm
	2				
1	3		100	SAND (silt 5-10%) v/crse-crse grn, mod yellowish brown (10YR 5/4) - light brown (5YR 5/6), shag-strnd, mod srtld, dry	Auger headspace - 0.0 ppm
	4				
2	5		0	No Recovery	Auger headspace - 0.3 ppm
	6				
3	7		70	Drilling response indicated no recovery from upper interval SAND (silt 10-15%) v/crse-crse grn, light brown (5YR 5/6) shag-strnd, mod srtld, moist-wet	
	8			Charred black debris from 7.6' - 8.2'	
4	9		100	SAND (silt 10-15%, clay 10-15% as dry kaolin in pockets) mod grn, mod red. (5R 4/6) - drk yellowish orange (10YR 6/6) - grayish orange (10YR 7/4) - very pale orange (10YR 8/2), shag-strnd, mod srtld, dry-moist, standing water on top of spoon	Pushed split spoon with 3" ID
	10			As Above kaolin content 20-25% alot of slough	No detect in headspace of bag sample from 9.2' - 11.2'
5	11		50	SAND (silt 10%, clay 15% as dry kaolin) v/crse-crse grn includes granules and pebbles mod red (5R 4/6) - grayish orange (10YR 7/4) - very pale orange (10YR 8/2), shag-strnd, prly srtld, moist, slough from pit smeared through interval	No detect in headspace of bag sample from 11.2' - 13.2'
	12		50		
6	13				
	14				
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	100				

Augered to 25' before pushing Shelby tube. Due to perch water from above cuttings were very wet and mixed. Difficult to distinguish separate formations.

FIELD GEOLOGIC LOG

PROJECT <i>Central Shops BRP 631-6G</i>		DATE <i>3/31/94</i>	SHEET <i>2</i> OF <i>2</i>
		DRILLING SUBCONTRACTOR <i>Environmental Exploration</i>	
WELL NO. <i>CS 6G-05</i>	LOCATION	DRILLER <i>Jim Willis</i>	
LOGS PREPARED BY <i>Bill Joyce</i>	COMPANY <i>RUST E and I</i>	DRILLING METHOD <i>HSA / Split Spoon</i>	

RUN NUMBER	DEPTH BELOW GROUND SURFACE FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS/REMARKS
	20				
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	100				

*Augered to 25' before pushing Shelby Tube
Due to perch water from above cuttings were
very wet and mixed. Difficult to distinguish
separate formations*

Total Depth for Boring - 27.0'

*Shelby
Tube
#1*

*Shelby
Tube
#1*

100

Page 1 of 1
Date 3/31/94
Circle: Sun Mon Tue Wed Thu Fri Sat

Site: Central Shops BRP 631-6G Project No.: 88357-000
Site Safety Officer: Bill Joyce
Action Levels: Dq · Cq · Bq (Stop work, call in for instructions)
(check box and write in levels for upgrade)
Task/Equipment: Vapor Monitoring / OVA
Weather: Clear and Cool (60's)

[illegible]

Signature:

Signature: Allen D. Pyper

SOIL BORING INSTALLATION REPORT										Boring Number (AAA, NNN, *SB*)			
CS6G										05		SB	
GENERAL INFORMATION													
Project Name			Central Shops Burning/Rubble Pit 631-6G			Project Manager		Kevin Wise			Department		
Boring Purpose			Soil Sample Collection and Lithology Description			County		Barnwell			Location Description		
								Eastern Corner of Zone 1					
SURVEY INFORMATION													
SRS North Grid Coordinate			SRS East Grid Coordinate			Latitude (decimal degrees)		Longitude (decimal degrees)		Ground Elevation			
27.0			N/A			3/31/94		3/31/94					
DRILLING & SAMPLING INFORMATION													
Total Drilled Depth		Static Water Level		Drilling Start Date		Drilling Completion Date		Drilling Method					
27.0		N/A		3/31/94		3/31/94		Hollow Stem Auger (4")					
Sample Type		Sampling Interval		Sample Type		Sampling Interval		Drilling & Sampling Comments (include drilling muds used, source of water, lost circulation zones, etc.)					
Hand Augered (3 1/4")		0.0' - 2.0'						Sampled Intervals: 0.0' - 2.0'					
Continuous Split Spoon (3 1/2")		2.0' - 8.0'						7.20' - 9.20'					
Split Spooned (3 1/2")		8.0' - 10.0'						9.20' - 10.60'					
Continuous Split Spoon (3 1/2")		10.0' - 13.2'						11.20' - 12.20'					
Augered		13.2' - 25.0'						Shelly Tube: 25.0' - 27.0'					
Shelly Tube		25.0' - 27.0'											
Drilling Company		Environmental Exploration		Driller (last name, first initial)		Overlight Company		RUST E and I		Overlight (last name, first initial)			
				Willis, J.							Joyce, W.		
Disposition of Samples													
General Engineering Laboratories, Onsite													
ABANDONMENT													
Method of Abandonment										Materials Used In Abandonment			
Backfill										Natural Soil			
APPROVALS													
Abandonment Verified By			Date			Boring Installation Report Prepared By			Date				
[Signature]			3/31/94			[Signature]			4/06/94				

CS6G-06

MONITORING WELL
COMPLETION CHECK LIST

WELL NUMBER:

CS66-06

GEOLOGIST/DATE:

Melanie D. H. 11/4/94

DAILY ACTIVITY REPORTS

(Copy from RFI/RI Green Book)

GEOLOGIC LOG

RUST CORE RUN TALLY

GEOPHYSICAL LOG

CHAIN OF CUSTODY

SIEVE ANALYSIS

GRAVEL PACK DESIGN

SRS MONITORING WELL CONSTRUCTION DETAILS

SRS MONITORING WELL INSTALLATION REPORT

SCDHEC WATER WELL RECORD

WELL DEVELOPMENT REPORT

PUMP INSTALLATION REPORT

SUBCONTRACTOR EXPENSE RECORD

RUST WELL INSTALLATION DIAGRAM

RUST CASING/SCREEN TALLY

SRS Soil Boring Installation Report

✓

✓

NA

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NA

✓

NA

NA

✓

3/25/94

Friday - Cloudy - Overcast Temp: Low 70's 50% rain

- 06:45 WDJ arrives at RUST Aiken office and loads equipment and paperwork.
- 07:10 WDJ departs the RUST office.
- 07:35 WDJ arrives at the well building and meets Kevin Wise, Janette Janssen, ^{201/7414} Keith Johnson and the Environmental Exploration Inc. drill crew (Jim Willis and Marvin Fowler). WDJ receives drill crew's training certificates and lines out the sampling packs and sampling equipment with Kevin. Janette lines the crew out with split-spoons (carbon steel).
- 08:10 Janette and Keith leave with crew for site.
- 08:20 Chet Nichols arrives at well building. WDJ, Kevin and Chet leave for site.
- 08:30 Arrive at Central Shops Burang/Rubble Pit (Building 631-66). Begin to set up.
- 08:50 Anne Stevenson and Harold Moore (RUST E&I) arrive on site for Health and Safety Meeting. Janette and Keith leave site. Keith to bring back appropriate trip blanks.
- 09:00 Shirley McDaniell on site. Shirley leaves to pick up HP at Central Shops.
- 09:05 Shirley returns with Elaine Mills and ^{201/7414} Elc Calvin Lark of HP (ER).
- 09:15 Begin H&S Meeting (see sign-in sheet).
- 09:35 Darryl Jenkins (HP-ER) on site.
- 09:50 Elaine departs.
- 10:05 The H&S meeting is over. Calvin and Darryl leave. Shirley leaves for supplies. Anne and Harold leave for supplies at L-Aren.
- 10:40 Anne and Harold return.

3/25/94 Friday

10:50 Shirley returns - leaves for well building for trip blanks. Anne and Harold return.

10:55 WDJ calibrates the OVA at 91 ppm with a calibration gas of 100 ppm

11:00 Anne and Harold depart. Continue to d-can the split-spoons.

12:25 The rig is set up and the split-spoons are d-canned and dry. WDJ prepares sample bottles. Shirley has brought the trip blanks and gear.

13:00 Pulled the 1st sample with a hand auger from 0.0' - 2.0' Sand: (10% silt) v/crse-crse grn, mod yellowish brown grading to light brown, shag-strad, prly srt'd, moist (from recent rain), includes a prominent granule-pebble gtz layer at 1.0'.

13:25 Dan Wells, Keith Johnson, Steve Hoover on site.

13:35 Shirley on site - leaves for D.I. Water.

14:10 Continue to split-spoon looking for the bottom of the pit. Spooned 2.0' - 4.0' - not in the pit.

14:35 Push split-spoon from 4.0' - 6.0'. Dan, Keith and Steve leave site. Did not encounter the pit from 4.0' - 6.0'. WDJ describes 2.0' - 4.0' interval - As Above to 2.5' then SAND: (silt/clay 10-15%) v/crse-crse grn with occ. granules, pale reddish brown - mod reddish orange, shag-strad, prly srt'd, moist (recent rain).

15:00 Push split-spoon from 6.0' - 8.0'. Did not encounter the pit. WDJ describes 4.0' - 6.0' SAND (10-15% silt) v/crse-crse grn with granules, pale reddish brown - mod yellowish brown.

3/25/97 Friday

(continue). Shag-strand, prly srt'd, mod, occ mottling.

15:25 Pushed from 8.0' - 10.0' : recovered 1.5' (8.0' - 9.5') black charred material on bottom

15:35 Pushed from 10.0' - 11.0'. Did not recover any formation in split ^{20/32 size} spoon.

15:40 Bottom of previous push appeared ^{14/20 size} solid to be solid formation. Decided to push in same hole from 11.0' - 12.0'. Recovered 1.3' of formation but had standing water in upper part of split-spoon (took sample in case). WDJ and Kevin agree base of pit is at 11.7'.

Will auger to 12' and then push 0.7' to get interval 1.0' above and 1.0' below bottom of pit.

16:10 Description for 6.0' - 8.0' is as above for 4.0' - 6.0'. Description for 8.0' - 9.5' interval SAND (silt 20-25%) med-crse grn with occ v/crse grn, pale reddish brown - mod yellowish brown, shag-strand, mod srt'd, wet.

16:30 Push from 12.0' - 12.7' : recovered 100%.

16:45 WDJ discussed sampling situation with Kevin and RUST office. Due to lack of daylight time it is decided to stop sampling here. Fill in the borehole and on Monday move over and sample 12.7' - 14.7' and 14.7' - 16.7'.

17:15 Drill crew departs. Description for 12.0' - 12.7' SAND (silt 10-15%, clay 5% as dry kaolin in packets) med-crse grn, mod reddish orange - mod reddish brown, shag-strand, mod srt'd, dry-mod moist, trace mang. oxide

17:45 Log in trip blanks and rinse bottles and field blanks. Complete sampling.

18:35 Kevin departs the site

3/25/94

Friday

19:20

WDS and Chet complete the onsite sample, field blank, secure the samples and secure the equipment on site. WDS and Chet depart the site.

19:30

WDS arrives at the wellbuilding, turns in the field radio and secures the samples in the refrigerator in the copy room by signing the chain of custody ~~form~~^{set of forms} over to the custody seal on the refrigerator.

20:05

WDS departs the wellbuilding and site.

20:30

WDS arrives at the RUST Aiken office and unloads equipment.

~~William~~

~~D~~

~~form~~

~~3/25/94~~

3/28/74 Monday

0630 Melanie D. Hill + Bill Joyce arrive RUST
Aker office. Load up equipment + to SRS.

0700 Met Kevin Wise at well bldg. Gather
coolers, gel packs + daily blanks for
the project.

0720 To site. Met drillers from Environment/
Exploration. Discussed plan of action -
moved over 2 ft. Drill down to 10.7'
to take a 2 ft split spoon to compare
w/ yesterday's (Friday's) hole. Then
start sampling for analysis at 11.7'.

0815 Pulled 10.7' to 12.7' spoon. A little less
of a burnt area in this spoon as
compared to the previous hole.

0830 Pulled 12.7' to 14.7' spoon + fill
sample bottles. 1.5' recovery -
mud in the top part of spoon.
Then some wood (burnt) material
+ into a v. coarse sand with pebble
size grains, silty clay mottling (F-108),
moist, mottled mud red to dk
reddish brown w/ various other
colors - DK yell orange, pale red
purple, gray red purple, trace mica,
trace heavies, firm. 5 R 4/6 to
10 R 3/4 with SW - S. S. SC,
poorly sorted. Bill calibrate
OVA + sniff sample that we
collected.

0920 Prepare for next sample. Techs
by + dropped off gloves. light drizzle
out of. Bill Joyce calibrate +
take readings w/ OVA.

3/28/94

0930

Pull sample 14.7' to 16.7'. Had some readings w/ OVA at auger + from samples collected in baggies for 12.7' to 14.7' and 14.7' to 16.7'. So well have to go deeper. Soil sample for 14.7' to 16.7'.

Clay, v. coarse to pebbles + cobbles of gtz sand ^(30%) white (N9) to pale red purple (5 R P 6/2) to mod red (5 R 4/6), trace micas, dense, dry. (CH)

1045

Pulled next sample. However, miscommunication w/ driller. He took next continuous spoon, not desired 5ft. Had to wait for spoon to dry.

1130

Pull 21.7' to 23.7' sample + put in bottles.

Same clay as above, but pale red purple dominate (5 R P 6/2). Grades to more mod red (5 R 4/6). Clayey/silty (10%) v. coarse sand, mod to poorly sorted, dry to moist. OVA reading of 0.5 ppm from previous.

1215

Pull 28.7' to 30.7' sample. Sample plan called for 15 to 17 ft below base of pit + we have 17 to 19 ft.

Interbedded silty (20%) clay and clayey (20%) silt. Grayish red purple (5 R P 4/2) and pale red purple (5 R P 6/2), dry to moist, firm, micaceous (20%), trace heavy, plastic, some occasional mod red (5 R 4/6).

3/28/94

Stringers.

1300 HP Cleared the soil samples from the top 4 samples.

1320 Bill Joyce off site. Techs back onsite with supplies back offsite (Shirley McDaniel + Sharon Talton)

1330 Drillers prepare to leave site. Kevin clear for tomorrow

1400 Collect Field Blanks.

1430 Kevin assist in collecting the Rinse Blanks. Finish up paperwork while Kevin finishes deconning

1600 To well bldg to sign over samples to the refrigerator. We put deconned supplies in the locked bldg there. Bill Joyce said that drillers bill out # of split spoons pushed, bagage of HSA + standby time.

1630 Kevin back to his office + NDT to RUST office.

Melanie D. Hill 3/28/94

TECHNICAL OVERSIGHT SIGNATURE Melanie D Hill DATE 3/28/94

DAILY ACTIVITIES REPORT

PROJECT Central Shops RFI/RI WP		DRILLING SUBCONTRACTOR Environmental Exploration	
WELL NUMBER C566-06		DRILLER James Willis	
TECHNICAL OVERSIGHT MD Hill		OVERSIGHT FIRM RUST E+I	
LOCATION		DATE 3/20/94	PAGE 1 of 2

START	STOP	DESCRIPTION OF ACTIVITIES; REMARKS
630	700	Arrive office. Load up equipment + to SRS
700	720	Arrive well b/dy. Load up coolers, gel packs + daily blanks.
720		To site. James Willis + hand from Environmental exploration onsite. Moved over 2 ft from C566-06 + drill down to 10.7' bls.
815	815	Hit black stuff from previous hole @ 9.5' bls.
815	830	Pull 10.7' to 12.7' spoon. Bill Joyce to LACB to recharge OVA. Label bottles for next sample.
830	920	Pull sample 12.7 to 14.7 + fill bottles. Bill back. Started raining so got into back of the truck to finish sampling.
920	930	Prepare for next sample. Techs by + dropped off gloves. Bill Joyce calibrate BUA + take readings. Slight readings in digest. then 2.5 ppm in sample bag from 12.7 to 14.7' and 0.6 ppm in sample bag from 14.7 to 16.7'.
930	1045	So well need to go at least 2 more samples. Take sample from 14.7 to 16.7'.
1045	1130	Attempted to take next sample, but miscommunication with driller. Needed to go 5 ft - not continuous.
1130	1215	Pull 21.7' to 23' sample + fill sample bottles.
1215		Pull 28.7' to 30.7' sample + fill sample bottles. Duplicate here. Our planned sample interval was 15 to 17 ft below base of pit. We had 17 to 19 ft.
1300		HP cleared the soil samples from the by 4 samples.

TECHNICAL OVERSIGHT SIGNATURE

Melanie D Hill

DATE

3/20/94

FIELD GEOLOGIC LOG

PROJECT		DATE		SHEET	
WELL NO.		LOCATION		DRILLING SUBCONTRACTOR	
LOGS PREPARED BY		COMPANY		DRILLING METHOD	
Central Shops BRP 031-66		3/25/94		1 OF 2	
CS6 G-06				Environmental Exploration	
W.D. Joyce		RUST E+I		Jim Willis	
				HSA/split spoon	
RUN NUMBER	DEPTH BELOW GROUND SURFACE FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS/REMARKS
Head Auger	0		Head Auger	SAND (silt 10%) v/crse-crse grn mod yellowish brown (10 YR 5/4) grading to light brown (5 YR 5/6), shag-strnd, prly srt'd, moist from recent rain, includes granule-pebble gtz layer at 1.0'	Begin to sample at 13:00 with a hand auger
1	1		100	SAND (silt/clay 10-15%) v/crse-crse grn with occ. granules, pale reddish brown (10R 5/4), mod reddish orange (10R 6/6), shag-strnd, prly srt'd, moist due to recent rain	Begin to split spoon at 2.0'
2	2		100	SAND (silt 10-15%) v/crse-crse grn with granules, pale reddish brown (10R 5/4), mod yellowish brown (10 YR 5/4), shag-strnd, prly srt'd, moist, occ. mottling	
	3		100	AS ABOVE	
	4		75	SAND (silt 20-25%) med-crse grn with occ v/crse grn, pale reddish brown (10R 5/4), mod yellowish brown (10 YR 5/4), shag-strnd, mod srt'd, wet, black charred material on bottom of run	
5	5		0	Standing water in split spoon	
6	6		100	Black charred material (wood, metal)	Recovered 0.3' from previous no recovery
7	7		100	SAND (silt 10-15%, clay 5% as dry hadlin in pockets) med-crse grn mod reddish orange (10R 6/6), mod reddish brown (10R 4/6), shag-strnd, mod srt'd, dry-mod moist, trace mang. oxide.	T.D. 3/25/94 moved over 2' and continued drilling.
8	8		75	some burnt wood at top of run + then	
9	9		100	Sand (silt + clay 5-10% mottled in matrix), v. coarse grn, mottled mod red (5R 4/6) to dk red brown (10R 3/4) with various other colors - dk yellow, pale red, purple, gray red + purple, poorly sorted, moist, e. rim, trace mica, trace heavies.	ova - 2.8' reading of sample bag Headspace = 2.5' to 1.5'
	10			Clay (v. coarse, pebble to cobble gtz sand 30%) white (N 9) to pale red purple (5R 6/2) to mod red (5R 4/6), trace mica, dense, dry	OVA reading of sample bag Headspace = 0.6 ppm to 0.4 ppm
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				
	20				

FIELD GEOLOGIC LOG

PROJECT Central Shops BRP 631-69		DATE 3/28/94	SHEET 2 of 2
WELL NO. CS66-06		LOCATION	DRILLING SUBCONTRACTOR Environmental Exptl
LOGS PREPARED BY MDH II		COMPANY RUST & T	DRILLER Jim Willis
		DRILLING METHOD HSA/split spoon	

RUN NUMBER	DEPTH BELOW GROUND SURFACE FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS/REMARKS
	20				
	1				
10	21.7			Clay as above, pale red purple	OVA reading of
	2			(SRP 6/2) more dominant	sample bag =
	23.33		100%	Sand, (10% silt + clay), mod red (SR 4/6)	0.3 ppm
	23.7			v. coarse, mud to poorly sorted, silty, dry to moist.	Headspace = 4 to 2 ppm
	4	Aug 10			
	28.7 ft				
	5				
	6				
	7				
	8				
	28.7				
11	9			Interbedded silt & clay	OVA reading
				Silt (20% clay), grayish red purple	of sample
				(SRP 4/2) and pale red purple	bag = 0.3
	30.7		100%	(SRP 6/2), dry to moist, firm, micaceous (2%), trace heavies.	0 ppm
	1	P.D. Borehole at 30.7 ft		Clay, (20% silt), plastic, dry to moist, occasional mod red stringers (SR 5/6) but colors as above	
	2			Silt.	
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	40				

ATMOSPHERIC MONITORING LOG

FIELD HEALTH AND SAFETY

Page 1 of 1
Date 3 124 194

Circle: Sun (Mon) Tue Wed Thu Fri Sat

Site: Central Shops BRP 631-66 Project No.: 88357.000

Site Safety Officer: W.D. Hill

Action Levels: D q C q B q (Stop work, call in for instructions)
(check box and write in levels for upgrade)

Task/Equipment: Vapor monitoring / DVA

Weather: Overcast, mid 70's

[illegible]

Additional Comments: CS66-06

Signature: Melanie D. Hall

Page 1 of 1
Date 3/25/94
Circle: Sun Mon Tue Wed Thu Fri Sat

Site: Central Shops BFP 631-66 Project No.: 88357.000
Site Safety Officer: W. D. Joyce
Action Levels: (D)q · Cq · Bq · (Stop work, call in for instructions)
(check box and write in levels for upgrade)
Task/Equipment: Vapor Analysis / OVA
Weather: Overcast mid 70's

[illegible]

Additional Comments: US66-06

Signature: William O. Jones

WIL BORING INSTALLATION REPORT

Boring Number (AAA, NNN, *SB)
CS66 D6 SB

GENERAL INFORMATION									
Project Name Central Shops Burnins / Ruddle Pit 63-66		Project Manager Kevin Wise		Department Environmental Restoration					
Boring Purpose Soil Sample Collection and Lithology Description		County Barnwell		Location Description Middle of Zone 1 (SW of original BLP-66)					
SURVEY INFORMATION									
SRS North Grid Coordinate		SRS East Grid Coordinate		Latitude (decimal degrees)		Longitude (decimal degrees)		Ground Elevation	
DRILLING & SAMPLING INFORMATION									
Total Drilled Depth 30.7	Static Water Level N/A	Drilling Start Date 3/25/94	Drilling Completion Date 3/28/94	Drilling Method Ho/low Stem Auger (HSA) (4" dia)	Drilling & Sampling Comments (Include drilling fluids used, source of water, lost circulation zones, etc.) Sampling Intervals: 0.00' - 2.00' 10.70' - 12.70' 12.70' - 14.70' 14.70' - 16.70' 21.70' - 23.70' 23.70' - 30.70'				
Sample Type Hand Auger (3/4")	Sampling Interval 0.0'-2.0'	Sample Type HSA	Sampling Interval 16.7'-21.7'	Driller (last name, first initial) Willis, J.	Oversight Company DUST, E+I	Oversight (last name, first initial) Hill, M.			
Sample Type Split Spoon (2 1/2")	Sampling Interval 2.0'-4.0'	Sample Type Split Spoon (2 1/2")	Sampling Interval 71.7'-23.7'	* Note: Abandoned first hole at 12.7' on 3/25/94 by backfilling with natural soils, moved over 2 ft. & augered down to 10.7' on 3/28/94. Push a split spoon from 10.7' to 12.7' to 16.7' to bottom of pit 16.7' & continue sampling.					
Sample Type Split Spoon (2 1/2")	Sampling Interval 4.0'-6.0'	Sample Type HSA	Sampling Interval 23.7'-28.7'						
Sample Type Split Spoon (2 1/2")	Sampling Interval 6.0'-8.0'	Sample Type Split Spoon (2 1/2")	Sampling Interval 28.7'-30.7'						
Sample Type Split Spoon (2 1/2")	Sampling Interval 8.0'-10.0'								
Sample Type Split Spoon (2 1/2")	Sampling Interval 10.0'-11.0'								
Sample Type Split Spoon (2 1/2")	Sampling Interval 11.0'-12.0'								
Sample Type Split Spoon (2 1/2")	Sampling Interval 12.0'-12.7'								
Sample Type * Split Spoon (2 1/2")	Sampling Interval 12.7'-14.7'								
Sample Type Split Spoon (2 1/2")	Sampling Interval 14.7'-16.7'								
Disposition of Samples Environmental Exploration									
Method of Abandonment Backfill				ABANDONMENT					
Materials Used in Abandonment Natural Soil				APPROVALS					
Abandonment Verified By Melanie D. Hill		Date 3/28/94		Boring Installation Report Prepared By Melanie D. Hill		Date 4/6/94			

CS6G-07

RUST ENVIRONMENT &
INFRASTRUCTURE

MONITORING WELL
COMPLETION CHECK LIST

WELL NUMBER:

CS66-07

GEOLOGIST/DATE:

Melanie D Hill 4/6/98

DAILY ACTIVITY REPORTS

(Copy from RFI/RE Green Book)

GEOLOGIC LOG

RUST CORE RUN TALLY

GEOPHYSICAL LOG

CHAIN OF CUSTODY

SIEVE ANALYSIS

GRAVEL PACK DESIGN

SRS MONITORING WELL CONSTRUCTION DETAILS

SRS MONITORING WELL INSTALLATION REPORT

SCDHEC WATER WELL RECORD

WELL DEVELOPMENT REPORT

PUMP INSTALLATION REPORT

SUBCONTRACTOR EXPENSE RECORD

RUST WELL INSTALLATION DIAGRAM

RUST CASING/SCREEN TALLY

SRS Soil Boring Installation Report

✓

✓

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

✓

NA

NA

✓

3/29/94

Tuesday - Sunny, Windy, 50-60's

0645 Arrive RUST Office; load equipment
+ to SRS

0710 Arrive well bldg to meet Keith
Wise. Load deconned equipment.
Get coolers, bottles, + ice packs.
Pick up radio + to site.

0730 Arrive site. Drillers steamcleaning
rig. Check temp = 180°F.

0805 Drillers finished steamcleaning.
Mob onto site. Set up OVA

0820 background reading of 0.6 to 1 ppm
Take hand auger sample from
0.0 to 2.0 ft.

Sand, silt + clay (5-10%), coarse
to v. coarse, med yell brown (10YR 5/4)
to lt brown (5YR 5/6), med
sorted, sublt to dubl, dry to moist,
clay in stringers (v. pale orange
(10YR 8/2) to v. lt gray (N8)).

0840 Janette Janssen + Keith Johnson
onsite to clarify sample shipment.
She said that Neil O'Halloran may
be by later to use steam cleaner.

Driller said okay. Then JT + K Toffik
0900 Finished collecting hand auger sample.
Driller augered down to 7.5 ft.
Push 2' splitspoon (7.5 to 9.5').
Check sample bag of CS66-0701
w/ OVA. No defect. Not that
background or ambient has drifted
to 1.2 ppm. Very windy.

3/29/54

0910 Shirley McDaniel onsite. Kevins gave her his wish list - Isoprop. from LXXX, DI water + new drinking water container. Tech offsite.

Splitspoon was opened. Top 0.6' was as above (no real burnt material) and then contact of natural soils. Thus bottom of the pit was $\pm$ 8.1 ft. We instructed driller to auger out the 7 ft, but the next spoon (a 3" dia) will only be pushed 1.5' so that we can get back on track with our sampling plan:

CS65-07-02 will be +0.5 to 1.5'

CS65-07-03 will be -1.5 to -3.5'

Fill out book, label bottles + collect sample.

Sand, as above for top 0.6'
7.5 to 8.1'

Clay, silt + v. fine to med sand (20%), mottled to banded colors - predominantly pale red purple (5R 6/2) and yellowish gray (5Y 7/2), with white, dk yel/orange, + brown, + med red browns (N 9, 10, YR 6/6, 5YR 5/6, 10R 4/6), dry micaceous ($\leq 2\%$), trace heavies slightly plastic. CH.

0950 Took OUA reading of soil sample collected in ziplock baggie.

3/29/94

Ambient was 1.4 ppm. None detect.
Push 3" dia split spoon from
9.5 to 11.0 ft.

1000 Collected sample CS 66-07-03
+ CS 66-07-3A (Duplicate).

1020 Silt, graded from up above,
clay (20%), v. fine sand (0-5%),
Colors from above, dry to
moist, still mottled, some
micaceous.

1035 DVA reading of sample baggie
is non-detect. Ambient reading
of 2 ppm.

1045 Prepare to take next sample

Collected 2" split spoon 11 to 13 ft.
Silt from above grading to
sand at 12.2'.

Silt, as above, less clay (10%),
increase in fine sand (5-10%),
colors more banded, more yell/gray,
add dk red brown (10 R 3/4)
and gray purple (5 P 4/2) to
spectrum of colors.

Sand, silt + clay (10-20%), v. fine to
fine, mottled mod red brown
(10 R 4/6), dk yellow orange (10 YR 6/6),
lt brown (5 YR 5/6), and
white (N9), well sorted, subangular,
micaceous (2%), trace heavies,
dry to moist, firm to hard.

1050 Neil O'Halloran, Tony Durbin &

3/29/94

- Shirley McDaniel on site. Neil + Tony to use steam cleaner. Shirley dropping off supplies + take sample of soils from CS66-07 to HP for screening.
- 1105 Take reading of soil sample in baggie with the OVA. Ambient at 2.1 ppm. Reading of 2.2 ppm. Drillers pull out augers, moving + decon for next hole - CS66-08.
- 1120 Neil, Tony + Shirley off site. Prepare to take Rinseate Blank + field Blank. Drillers to well bldg to call them off site about Shelby tubes + required paperwork.
- 1200 Bill Joyce on site with calibration gas. Calibrate OVA.
- 1215 Finished collecting Rinseate + field blanks. Drillers back from well bldg.
- 1220 Bill Joyce off site. Prepare samples for CS66-08-01.
- 1245 Start collecting CS66-08-01. Sand, silt + clay (10%), v. fine to coarse w/ some pebbles, mod red brown (10 R 4/6) with some dk yell orange (10 YR 6/6) and yell gray (5 Y 7/2) clays, poorly sorted, trace heavies, sub A to sub B.
- 1315 Push a ^{3 pit = poor} Shelby tube from 2-4 ft. We want to be sure of base of pit. 2 to 4 ft sample is obviously fill so drill down to 4 ft + push tube

3/29/54

1330

~~Stettin~~ ADH ^{3/29/54} Splitspoon from 4 to 6' had pit material (burnt debris) at 5.7' (had 1.9' recovery).

Push another spoon to 8'.

OVA reading on first sample is 0 ppm with 1 ppm back & round.

1345

6 to 8' splitspoon has base of pit in it with some "fill" at the top of the spoon. 1.8' recovery. Base of the pit at 6'. So collect sample CS66-08-02. Next planned interval will be 1.0' (8.0 to 9.0') to get back on track with sampling order.

Fill material

5.7' - Top of burnt material

6.0' - Base of pit

Natural material - Clay

1350

Collected sample.

Below base of pit

Clay, silt (10-20%), v fine sand (<5%), dense, brittle to slightly plastic, moderate red brown (10R 4/6) with mottled dk yell orange (10 YR 6/6), lt brown (5YR 5/6) and gray purple (5P 4/2), dry, micaceous (<2%), trace heavies.

1445

Collected sample from 8 to 9' splitspoon sample w/ rest of sample from previous spoon 7 to 8'. Clay as above.

1515

Pushed 9 to 11' splitspoon sample.

3/29/94

Shirley McDaniel dropped off more D.I. water. Also Jan Folke + Michael Shealy stopped by.

1540 Sample description:

Clay, as above with increase sand (10%), very fine to medium, add yellowish gray to mottled colors (54 8/1).

OVA reading of sample bag is non-detect. Ambient of D. 8 ppm.

1550 Chet Nichols stopped by.

1630 Jim + Marvin off site to well bldg to pick up Shelby tubes. Kevin continue decon. MDH finish up paperwork.

1700 Chet off site. Kevin + MDH to well bldg to unlocal decon equipment + gather bottles for tomorrow. MDH turn in radio + sign over samples to Chain of Custody seal on fridge at the well bldg + put up coolers.

1750 Kevin + MDH off site.

1820 Arrive RUST office. Charge OVA battery + gather Shelby tube sealing supplies.

1830 Finished for the day

Melanie D Hill 3/29/94

FIELD GEOLOGIC LOG

PROJECT Central Shops BRP-631-6G		DATE 3/29/94	SHEET 1 of 1
WELL NO. CS 6G-07		DRILLING SUBCONTRACTOR Environmental Explor	
LOCATION MD Hill		DRILLER J. Willis	
LOGS PREPARED BY MD Hill		DRILLING METHOD HSA/splitspoon	

RUN NUMBER	DEPTH BELOW GROUND SURFACE FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS/REMARKS
Hand Auger	0		100%	Sand, silt + clay (5-10%), coarse to v. coarse, mod yell brown (10 YR 5/4) to lt brown (5 YR 5/6), mod sorted, sublt to sub R, dry to moist; clay in stringers [very pale orange (10 YR 8/2) to very lt gray (N8)]	
	1				
	2				
	3	Auger to 7.5 ft			
	4				
	5				
	6				Auger down to 7.5 ft + push a split spoon
	7				
1	7.5			Sand as above.	
	8.1		100%	Clay, silt and v. fine to medium sand (20%), mottled to banded appearance, predominantly pale red purple (5 R P 6/2) and yell gray (5 Y 7/2) / also white (N9), dk yell orange (10 YR 6/6), lt brown (5 YR 5/6), and mod red brown (10 R 4/6), dry, micaceous (<2%), trace heavies, slightly plastic.	
2	9.5		100%	Silt, graded from above clay (20%), v. fine sand (0-5%), colors from above, dry to moist, still mottled, some micaceous.	
	10		100%	Silt, as above, less clay (10%), increase in v. fine sand (5-10%), colors more banded, more yell gray, add dk red brown (10 R 3/4) and gray purple (5 P 4/2) to spectrum of colors.	Non detects on DVA
3	12.2		100%	Sand, silt and clay (10-20%), v. fine to fine, mottled mod red brown (10 R 4/6), dk yell orange (10 YR 6/6), lt brown (5 YR 5/6), and white (N9), well sorted, sublt to sub R, micaceous (2%), trace heavies,	Reading Ambient lead max 0.2
	13	T.P. Borohide at 13.0 ft			
	14				
	15				
	16				
	17				
	18				
	19				
	20				

ATMOSPHERIC MONITORING LOG

FIELD HEALTH AND SAFETY

Page 1 of

Date 31/29/90

Circle: Sun Mon Tue Wed Thu Fri Sat

Site: Central Shops BLP 631-66

Project No.: 88357-000

Site Safety Officer: Melanie D. H. H.

Action Levels: (D) ' C q ' B q ' (Stop work, call in for instructions)

(check box and write in levels for upgrade)

Task/Equipment: monitor volatiles / OVA

Weather: windy, sunny, 50-60s

[illegible]

Additional Comments: CS6G-07

Signature: Melanie D. Hill

SOIL BORING INSTALLATION REPORT				Boring Number (AAA, NNN, -SB)	
				CS66	07 SB
GENERAL INFORMATION					
Project Name Central Shops Building / Cable Pit 631-65		Project Manager Kevin Wise		Department Environmental Restoration	
Boring Purpose Soil Boring Sample		Location Description Western portion of Zone 1			
Collection and Laboratory description W-0546194		County Barnwell			
SURVEY INFORMATION					
SRS North Grid Coordinate		SRS East Grid Coordinate		Latitude (decimal degrees)	Longitude (decimal degrees)
					Ground Elevation
DRILLING & SAMPLING INFORMATION					
Total Drilled Depth 13.0	Stable Water Level N/A	Drilling Start Date 3/29/94	Drilling Completion Date 3/29/94	Drilling Method Hollow Stem Auger (HSA) (4" dia.)	
Sample Type HSA	Sampling Interval 0.0'-2.0'	Sample Type	Sampling Interval	Drilling & Sampling Comments (Include drilling muds used, source of water, lost circulation zones, etc.)	
Split Spoon (2 1/2")	2.0'-7.5'			Sampling Intervals: 0.0'-2.0'	
Split Spoon (2 1/2")	7.5'-9.5'			7.50' - 9.50'	
Split Spoon (2 1/2")	9.5'-11.0'			9.50' - 11.00'	
Split Spoon (2 1/2")	11.0'-13.0'			11.00' - 13.00'	
Drilling Company Environmental Exploration		Driller (last name, first initial) Willis, J.	Overnight Company RUST & I	Oversight (last name, first initial) Hill, M.	
Disposition of Samples General Engineering Laboratories, Onsite					
ABANDONMENT					
Method of Abandonment Backfill		Materials Used in Abandonment Natural Soil			
APPROVALS					
Abandonment Verified By Melanie D. Hill		Date 3/29/94		Boring Installation Report Prepared By Melanie D. Hill	
		Date 3/29/94		Date 4/6/94	

CS6G-08

RUST ENVIRONMENT &
INFRASTRUCTURE

MONITORING WELL
COMPLETION CHECK LIST

WELL NUMBER:

C866-08

GEOLOGIST/DATE:

Melanie D. Hill 4/6/99

DAILY ACTIVITY REPORTS

(Copy from RFI/KI Green Book)

GEOLOGIC LOG

RUST CORE RUN TALLY

GEOPHYSICAL LOG

CHAIN OF CUSTODY

SIEVE ANALYSIS

GRAVEL PACK DESIGN

SRS MONITORING WELL CONSTRUCTION DETAILS

SRS MONITORING WELL INSTALLATION REPORT

SCDHEC WATER WELL RECORD

WELL DEVELOPMENT REPORT

PUMP INSTALLATION REPORT

SUBCONTRACTOR EXPENSE RECORD

to Bob Hunter
RUST WELL INSTALLATION DIAGRAM

RUST CASING/SCREEN TALLY

SRS Soil Boring Installation Report

✓

✓

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

✓

NA

NA

✓

3/29/94

Tuesday - Sunny, Windy, 50-60's

0645 Arrive RUST office; load equipment + to SRS

0710 Arrive well bldg to meet Kevin Wise. Load deconned equipment. Get coolers, bottles, + ice packs. Pick up radios + to site.

0730 Arrive site. Drillers steamcleaning rig. Check temp = 180°F.

0805 Drillers finished steam cleaning. Mob onto site. Set up OVA

0820 background reading of 0.6 to 1 ppm. Take hand auger sample from 0.0 to 2.0 ft.

Sand, silt + clay (5-10%), coarse to v. coarse, med yell brown (10 YR 5/6) to 15 ft brown (5 YR 5/6), med sorted, sublt to dublt, dry to moist, clay in stringers (v. pale orange (10 YR 8/2) to v. lt gray (N8).

0850 Janelle Janssen + Keith Johnson on site to clarify sample shipment. She said that Neil O'Halloran may be by later to use steam cleaner.

Driller said okay. Then JT + KJ took sample. Finished collecting hand auger sample. Driller augered down to 7.5 ft.

0900 Push 2' split spoon (7.5 to 9.5'). Check sample bag of CS66-0701 w/ OVA. No defect. Not that background or ambient has drifted to 1.2 ppm. Very windy.

3/29/94

0910

Shirley McDaniel onsite. Kevin gave her his wish list - Isoprop. from LARA, DI water + new drinking water container. Tech offsite.

Split spoon was opened. Top 0.6' was as above (no real burnt material) and then contact of natural soils. Thus bottom of the pit was $\approx$ 8.1 ft. We instructed driller to auger out the 7 ft, but the next spoon (a 3" dia) will only be pushed 1.5' so that we can get back on track with our sampling plan:

CS66-07-02 will be +0.5 to 1.5'

CS66-07-03 will be -1.5 to -3.5'

Fill out book, label bottles + collect sample.

Sand, as above for top 0.6'
7.5 to 8.1'

Clay, silt + v. fine to med sand (20%), mottled to banded colors - predominantly pale red purple (5R 6/2) and yellowish gray (5Y 7/2), with white, dk yel/orange, 1-1 1/2% brown, + med red brown (N 9, 10 YR 6/6), 5YR 5/6, 10 R 4/6, dry, micaceous ($\leq 2\%$), trace heavies slightly plastic. CH.

D 950

Took OUA reading of soil sample collected in ziplock baggie.

3/29/94

Ambient was 1.4 ppm. None detect.
Push 3" dia split spoon from
9.5 to 11.6 ft.

1000 Collected sample CS66-07-03
+ CS66-07-3A (Duplicate).

1000 ~~1000~~ Silt, graded from up above,
clay (20%), v. fine sand (0-5%),
Colors from above, dry to
moist, still mottled, some
micaceous.

1020 DVA reading of sample baggie
is non-detect. Ambient reading
of 2 ppm.

1035 Prepare to take next sample

1045 Collected 2" splitspoon 11 to 13 ft.
Silt from above grading to
sand at 12.2'.

Silt, as above, less clay (10%),
increase in fine sand (5-10%),
colors more banded, more yellow/gray,
add dk red brown (10 R 3/4)
and gray purple (5 P 4/2) to
spectrum of colors.

Sand, silt + clay (10-20%), v. fine to
fine, mottled mud red brown
(10 R 4/6), dk yellow orange (10 YR 6/6),
lt brown (5 YR 5/6), and
white (N9), well sorted, subangularly
micaceous (2%), trace heavies,
dry to moist, firm to hard!

1050 Neil O'Halloran, Tony Durbort

3/29/94

- Shirley McDaniell on site. Neil + Tony to use steam cleaner. Shirley dropping off supplies + take sample of soils from CS66-07 to HP for screening.
- 1105 Take reading of soil sample in baggie with the DUA. Ambient at 2.1 ppm. Reading of 2.2 ppm. Drillers pull out augers, moving, + decon for next hole CS66-08.
- 1120 Neil, Tony + Shirley off site. Prepare to take Rinse Blank + Field Blank. Drillers to well bldg to call their office about Shelby tubes + required paperwork.
- 1200 Bill Joyce on site with calibration gas. Calibrate DUA.
- 1215 Finished collecting Rinse + Field blanks. Drillers back from well bldg.
- 1220 Bill Joyce off site. Prepare samples for CS66-08-01.
- 1245 Start collecting CS66-08-01. Sand, silt + clay (10%), v. fine to coarse w/ some pebbles, mod red brown (10 R 4/6) with some dk yell orange (10 YR 6/6) and yell gray (5 Y 7/2) clays, poorly sorted moist, trace heavies, sub A to sub B.
- 1315 Push a ^{split spoon} Shelby tube from 2-4 ft. We want to be sure of base of pit. 2 to 4 ft sample is obviously fill so drill down to 4 ft + push tube

3/29/54

1330

3/29/54
STETSON Splitspoon from 4 to 6'
had pit material (burnt debris) at
5.7' (had 1.9' recovery).
Push another spoon to 8'.
OVA reading on first sample is
0 ppm with 1 ppm back & round.
1345 6 to 8' splitspoon has base of pit
in it with some "fill" at the top of
the spoon. 1.8' recovery. Base
of the pit at 6'. So collect
sample CS66-08-02. Next
planned interval will be 1.0'
(8.0 to 9.0') to get back on
track with sampling order.

Fill material

5.7' - Top of burnt material

6.0' - Base of pit

Natural material - Clay

1350

Collected sample.

Below base of pit

Clay, silt (10-20%), v. fine sand
($\leq 5\%$), dense, brittle to slightly
plastic, moderate red brown
(10R 4/6) with mottled
dk. yell orange (10 YR 6/6),
lt brown (5YR 5/6) and gray
purple (5P 4/2), dry, micaceous
($\leq 2\%$), trace heavies.

1445

Collected sample from 8 to 9'
splitspoon sample w/ rest of
sample from previous spoon
7 to 8'. Clay as above.

1515

Pushed 9 to 11' splitspoon sample.

3/29/94

Shirley McDaniel dropped off
more D.I. water. Also Jan Folke
+ Michael Shealy stopped by.

1540

Sample description:

Clay, as above with increase
sand (10%), very fine to medium,
add yellowish gray to mottled
colors (54 8/1).

OVA reading of sample bag is
non-defect. Ambient of
D. 8 ppm.

1550

Chet Nichols stopped by.

1630

Jim + Marvin off site to well
bldg to pick up Shelby tubes.
Kevin continue decon. MDH
finish up paper work.

1700

Chet off site. Kevin + MDH to well bldg
to unload decon equipment +
gather bottles for tomorrow. MDH
turn in radio + sign over samples
to Chain of Custody seal on fridge
at the well bldg + put up coolers.

1750

Kevin + MDH off site.

1820

Arrive RUST office. Charge OVA
battery + gather Shelby tube
sealing supplies.

1830

Finished for the day

Melanie R Hill 3/29/94

FIELD GEOLOGIC LOG

PROJECT			DATE		SHEET	
WELL NO.			LOCATION		DRILLING SUBCONTRACTOR	
LOGS PREPARED BY			COMPANY		DRILLING METHOD	
Central Shops BLP 631-6G			3/29/94		1 OF 1	
C56G-08					Environmental Exp.	
MD Hill			RUST E+I		J. Willis	
					HSAI splitspoon	
RUN NUMBER	DEPTH BELOW GROUND SURFACE FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS/REMARKS	
1	0		100%	Sand, silt + clay (10%), v. fine to coarse with some pebbles, mod red brown (10R 4/6) with some dk yell orange (10YR 6/6) and yell gray (5Y 7/2) clays, poorly sorted, moist, trace heavies, subA to subR,		
	1					
	2					
	3					
	4					
2	5.7 5.9		95%	Burnt material @ 5.7' - black, nails, pieces of glass + other debris	BOP	
3	7.8		90%	Natural Soil Clay, silt (10-20%), v. fine sand (<5%), dense, brittle to slightly plastic, mod red brown (10R 4/6) with mottled dk yell orange (10YR 6/6), lt brown (5YR 5/6) and gray purple (5P 4/2), clay, micaceous (<2%), trace heavies		
4	8		100%	as above with increase in sand (10%)		
5	10		100%	very fine to medium, add yellowish gray to mottled colors (5Y 8/1).		
	11	T.D. hole 11.0 ft				
	2				OHA readings	
	3				No defects	
	4				Maximum	
	5				Ambient	
	6				Reading = 3 ppm	
	7					
	8					
	9					
	20					

ATMOSPHERIC MONITORING LOG

FIELD HEALTH AND SAFETY

Page 1 of 1

Date 3 129 194

Circle: Sun Mon Tue Wed Thu Fri Sat

Site: Central Snags BRP 631-66

Project No.: 88357.00

Site Safety Officer: INDH 11

Action Levels: (D)q ' Cq ' Bq ' (Stop work, call in for instructions)

(check box and write in levels for upgrade)

Task/Equipment: Monitor Volatiles / OVA

Weather: Sunny, windy, 60-70s

[illegible]

Additional Comments: recalibrated just prior to starting CS6G-08

CS66-08

Signature: Melanie D Hill

SRS SOIL BORING INSTALLATION REPORT										Boring Number (AAA, NNN, "SB")	
GENERAL INFORMATION Project Name: <u>Central Shops Building / Public Pk 63166</u> Boring Purpose: <u>Soil Sample Collection</u> and lithology description										Department: <u>Environmental Resources</u>	
Project Manager: <u>Kevin Wise</u> Location Description: <u>Eastern portion of Zone 2</u>											
SURVEY INFORMATION SRS North Grid Coordinate: _____ SRS East Grid Coordinate: _____ Latitude (decimal degrees): _____ Longitude (decimal degrees): _____ Ground Elevation: _____											
DRILLING & SAMPLING INFORMATION											
Total Drilled Depth	11.0	Static Water Level	N/A	Drilling Start Date	3/29/94	Drilling Completion Date	3/29/94	Drilling Method	<u>Hand Auger (HSA) (4" dia.)</u> Drilling & Sampling Comments (Include drilling fluids used, source of water, lost circulation zones, etc.) <u>Sampling Interval:</u> 0.00' - 2.00' 5.00' - 7.00' 7.00' - 9.00' 9.00' - 11.00'		
Sample Type	Sampling Interval										
Hand Auger (3 1/4")	0.0' - 2.0'										
Split spoon (2 1/2")	2.0' - 4.0'										
Split spoon (2 1/2")	4.0' - 6.0'										
Split spoon (2 1/2")	6.0' - 8.0'										
Split spoon (2 1/2")	8.0' - 9.0'										
Split spoon (2 1/2")	9.0' - 11.0'										
Drilling Company		Driller (last name, first initial)		Oversight Company		Oversight (last name, first initial)					
Environmental Exploration		Willis, J.		TUST 2+I		Hill, M.					
Disposition of Samples: <u>General Engineering Laboratories, Onsite</u>											
ABANDONMENT Method of Abandonment: <u>Backfill</u> Materials Used in Abandonment: <u>Natural Soil</u>											
APPROVALS Abandonment Verified By: <u>Melanie D. Hill</u> Date: <u>3/29/94</u> Boring Installation Report Prepared By: <u>Melanie D. Hill</u> Date: <u>4/6/94</u>											

CS6G-09

RUST ENVIRONMENT &
INFRASTRUCTURE

MONITORING WELL
COMPLETION CHECK LIST

WELL NUMBER:

CS66-09

GEOLOGIST/DATE:

Melanie D. Hill 4/6/99

DAILY ACTIVITY REPORTS

(Copy from RPT/RI Green Book)

GEOLOGIC LOG

RUST CORE RUN TALLY

GEOPHYSICAL LOG

CHAIN OF CUSTODY

SIEVE ANALYSIS

GRAVEL PACK DESIGN

SRS MONITORING WELL CONSTRUCTION DETAILS

SRS MONITORING WELL INSTALLATION REPORT

SCDHEC WATER WELL RECORD

WELL DEVELOPMENT REPORT

PUMP INSTALLATION REPORT

SUBCONTRACTOR EXPENSE RECORD

TO Bob Hunter
RUST WELL INSTALLATION DIAGRAM

RUST CASING/SCREEN TALLY

SRS Soil Boring Installation Report

✓

✓

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

✓

NA

NA

✓

3/30/94

Wednesday, sunny, slight breeze, 40's

0630 Arrive RUST Office to pick up
Charged OVA, phone, etc.

Bill Joyce assisted in filling
hydrogen tank on OVA. Then
to SRS.

0705 Arrive well bldg. Informed drillers
and Kevin Wise that no faxed
information from Environmental
Exploration. We must have
this before starting drilling today.
Drillers also misplaced their
briefcase with all pertinent
paperwork. They went to check
hotel & call their office. Then
they have to get an adapter
from Janelle to push the
shelby tube. Load up coolers,
gel packs & disconnected equipment.

0730 Kevin & MDTT to site to set
up for the day. Prepare to take
first sample for CS66-09.

0830 Bill Joyce received fax from
Env. Exploration - Jim Willis
on the OSHA update & GC drillers license.
He'll bring it out to the site.
Called Janelle Janssen to check
on drillers. She tried to locate
adapter for pushing shelby tube.

0905 Finished collecting CS66-09-01.
Drillers called on radio. They are
on their way back to site.
Kevin called HP about CS66-08 sample.
(It cleared.)

3/30/94

Sample description for CS66-09-01:

Sand, fine to v. coarse, silt + clay
(10-20%), lt brown (5YR 5/6)
to med red brown (10R 4/6),
poorly sorted, sub A to sub R,
trace heavies, dry to moist. (obvious fill)

0915

Drillers onsite. Auger down
3' + push 1st splitspoon from
3' to 5'.

0940

WSRC-ER techs (Shirley McDaniel
+ Sharon Fulton) onsite to see if
Kevin needs anything. Also, Bill
Joyce onsite w/ drillers paperwork.

0950

Splitspoon from 3' to 5' has Base of
Pit. Black, burnt material from 4.4'
to 4.6' so push a 2" dia splitspoon
from 5' to 5.6' so we can get
on right footage for sampling intervals.

1000

Collect CS66-09-02. ^{sand}
4.6' to 5.6' Clay, silt + clay (10-15%)
fine to med, mottled lt brown
(5YR 5/6), med red brown (10R 4/6),
and yellowish gray (5Y 8/1),
trace heavies, trace micas, dry to
moist, brittle to slightly plastic.

1040

DVA reading of bagged sample of soil
from CS66-09-02 is non detect
background or ambient reading
of 0.5 ppm. Bill Joyce off site.
Shirley + Sharon dropped off
DJ water + adapter for Shelby tube.

1100

Push splitspoon from 5.6' to 7.6'.
CS66-09-03 + Duplicate.

3/30/94

Same Clay as above, increase in silt content (20%). more dense, hard.

1130

DVA reading on previous soil sample was nondetect. Ambient lead drifted to 8 ppm. Collect next sample (7.6 to 9.6)

Clay as above grading to more silt and sand (30 to 40%), fine to coarse, mottled colors as above with gray red purple (5 RP 4/6) added in.

1200

DVA reading on 7.6 to 9.6' sample box is nondetect, but ambient has drifted to 11.1 ppm.

Attempt to push a Shelby tube may be too dense.

1210

Kevin to take composite sample of CS6G-09 to HP while M.J. does Field Blank paperwork.

1220

Pushed Shelby tube 2.25' (9.6 to 11.85'). At the bottom of the tube: Silt, clay (10%), sand (<5%), v. fine, mottled grayish red purple (5 RP 4/6), pale red purple (5 RP 6/12), dusky red (5R 3/4) and white (W 9); moist, micaceous (20%).

Drillers seal tube while we finish Field Blank + start Rinsate Blank.

1245

Collect Rinsate Blank. Drillers fill in hole + decom rig and augers. Andy Preston with Bechtel stopped by.

3/30/94

- to talk with Kevin Wise.
- 1310 Kevin offsite. Drillers mob rig to CS6G-04 location.
- Note:- Kevin Wise called Bill Weiss @ RUST E&I @ 1200. Mixup with change notice.
- Baylus Morgan called to ask if MDT could be replaced with Bill Joyce tomorrow so MDT can attend WSRC RCRA training. Kevin said okay.
- 1330 Prepare to collect borehole sample (0 to 2') on CS6G-04 location. Move sampling & decon location.
- 1405 Completed sampling CS6G-04-01. Sand, fine to v. coarse, silt & clay (570%), mod red brown (10 R 4/6) with flecks of whk (N 9) and dk yell orange (10 YR 6/6), mod to poorly sorted, sub A, moist to dry. (fill - no structure)
- @ ~ 1.5' sand, silt (< 2%), v. fine to fine w/ occasional med, mod yell brown (10 YR 5/4), well sorted, sub A to sub B, trace heavies, moist, loose. (fill - no structure)
- Drillers auger out top 2 ft + push a split spoon from 2 to 4 ft.
- 1410 Keith Johnson on site to observe.
- 1430 Kevin back on site. Keith off site. Update Kevin. 2 to 4 ft spoon still fill. 4 to 6 ft spoon has

3/30/94

no black, burnt material, but
at 4 ft - structured clay as
seen in previous holes so
call base of pit at 4 ft.

Sample description - CS66-04-02
(3 to 5 ft)

sand as above to 4 ft.

Clay, sand and silt (20-30%),
v. fine to coarse, mottled
mud red brown (10 R 4/6),
dk. yell orange (10 Y 12 6/6) and
yellowish gray (5 Y 7/2),
trace micas, dense, brittle.

1455 Clot Nichols on site. HP smeared slightly.

1520 Collect CS66-04-03 (5 to 7')
after drillers take 1 ft split spoon
sample from 6' to 7'.

Clay as above, increase in silt
and v. fine sand (20-30%),
colors as above, brittle to slightly
plastic.

DVA reading for previous samples
0'-2' + 3' to 5' were non-detect,
but ambient was high 8.1 to 10 ppr.

1540 DVA reading for 5' to 7' was non-detect
but ambient was high - 8.1 ppr.

1545 Collect sample from 7' to 9'
for CS66-04-04.

Check atmosphere around
augers at depth of 7 ft.

Non-detect. Ambient of 6.8 ppr.
Sample is clay, as above, increase
in micas (< 2%).

3/30/94

1410 Chet Nichols offsite. Finish up
paperwork + decon equipment.
Kevin to HP to deliver composite
sample for CS6G-04.

1620 Kevin back from HP. HP cleared
the Shelby tube from CS6G-09.
Drillers pull out of hole + backfill
as per WSKC (Kevin + Bill Joyce
okayed with Janelle Janssen as per
WSKC 3Q5)

1700 To well bldg to sign over samples
+ unload equipment.

1740 Leave well bldg for office to change
OHA.

1810 finished for the day.

Melanie D Hill 3/30/94

FIELD GEOLOGIC LOG

PROJECT		DATE		SHEET	
Central Shops BRP 631-66		3/30/94		1 OF 1	
WELL NO.		LOCATION		DRILLING SUBCONTRACTOR	
CG 66-09				Environmental Exp	
LOGS PREPARED BY		COMPANY		DRILLING METHOD	
MD Hill		RUST E&T		HSA/splitspoon	
RUN NUMBER	DEPTH BELOW GROUND SURFACE FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS/REMARKS
Hand Auger	0			Sand silt+clay (10-20%), fine to v. coarse, H brown (5 YR 5/6) to mod red brown (10 R 4/6), poorly sorted, sublt to sublt, trace heavies, dry to moist.	
	1		100%		
	2				
	3			Sand as above.	Auger down to 3' + push a splitspoon from 3 to 5'.
1	4		100%	Black, burnt material w/ rails, glass, pieces of vitrified clay + other debris from 4.4 to 4.6'	
2	5		100%	Clay, silt + sand (10-15%), fine to med, mottled lt brown (5 YR 5/6), mod red brown (10 R 4/6) and yell gray (5 Y 8/1), trace mica, trace heavies, brittle to slightly plastic, dry to moist.	
3	6		100%	(Definite structure)	
4	7		100%	Clay as above / increase sand (20%), more dense, hard.	
	8				
	9				
Shelby Tube	10			Clay, as above grading to more silt and sand (30 to 40%), fine to coarse, mottled colors as above with gray red purple (5 RP 4/6) added in.	last soil sample collected at 7.6 to 9.6'
	11.95				
	12	T.O. Hole at 11.95		Graded to	All AUA readings non-detect Ambient < 11.2 ppb
	13			Silt, clay (10%), sand (55%), fine, mottled gray red purple (5 RP 4/6), pale red purple (5 RP 6/2), dusky red (5R 3/4) and white (N9), moist, micaceous (2%).	
	14				
	15				
	16				
	17				
	18				
	19				
	20				

ATMOSPHERIC MONITORING LOG

FIELD HEALTH AND SAFETY

Page 1 of 1
Date 3130194

Circle: Sun Mon Tue (Wed) Thu Fri Sat

Site: Central Shops BRP 631-66 Project No.: 88357.000

Site Safety Officer: Melanie Dhill

Action Levels: (D)q ' Cq ' Bq ' (Stop work, call in for instructions)
(check box and write in levels for upgrade)

Task/Equipment: Monitor 1024x768 / CVA

Weather: sunny, windy, 40 to 50s

Time	OVA PPM	HNu PPM	O ₂ %	LEL %	H ₂ S PPM	Comments: Duration of Readings, Upgrades, Location, etc.
1040	0.5 / 6.5	—	—	—	—	Ambient / Headpace of bagged sample of 316 to 5.6'
1130	8.0 / 8.0	—	—	—	—	Ambient / Headpace of bagged sample of 316 to 5.6'
1200	11.1 / 11.1	—	—	—	—	Ambient / Headpace of bagged sample of 316 to 5.6'
1220	11.2 / 11.2	—	—	—	—	Ambient / Headpace of bagged sample of 316 to 5.6'
<p><i>Melanie D. Hill 3/30/94</i></p>						

Additional Comments: CS66-09

Signature: Melanie D. Hill

CS6G-10

RUST ENVIRONMENT &
INFRASTRUCTURE

MONITORING WELL
COMPLETION CHECK LIST

WELL NUMBER:

CS66-10

GEOLOGIST/DATE:

Shelene D. Hill 4/6/94

DAILY ACTIVITY REPORTS

(Copy RFE/RF Greenbook)
GEOLOGIC LOG

RUST CORE RUN TALLY

GEOPHYSICAL LOG

CHAIN OF CUSTODY

SIEVE ANALYSIS

GRAVEL PACK DESIGN

SRS MONITORING WELL CONSTRUCTION DETAILS

SRS MONITORING WELL INSTALLATION REPORT

SCDHEC WATER WELL RECORD

WELL DEVELOPMENT REPORT

PUMP INSTALLATION REPORT

SUBCONTRACTOR EXPENSE RECORD

TO Bob Hunter
RUST WELL INSTALLATION DIAGRAM

RUST CASING/SCREEN TALLY

SRS Soil Boring Installation Report

✓

✓

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

✓

NA

NA

✓

11/5/94 Tuesday

8:30 foggy

0638

Arrive RUST office, load equipment + to SRS

0715

Arrive well bldg. Load decontaminated equipment, coolers, gel packs, sample bottles + radio. To site.

0740

Passed Drillers on the road over. Set up to sample CS66-01

Note: HP cleared CS66-03 + both Shelby tubes yesterday afternoon.

0800

Drillers on site. Moved onto CS66-01

0815

Collect first sample CS66-01-01 0 to 2 ft. (Kevin got okay from HP for 02)

Sand, silt + clay (20-30%),

v. fine to coarse w/ some pebbles, lt brown (5.4R 5/6) to mod brown (5.4R 4/4), poorly sorted, sub A to sub B,

trace heavies, plastic, moist. (metal shavings)

0830

Auger down to 3 ft + collect next sample - CS66-01-02 (3 to 5 ft)

Encountered burnt, black material from 3.5 to 4 ft.

3 to 3.5' sand from above

3.5 to 4' black burnt material w/ glass, metal shavings + other debris.

4 to 5' Clay, silt + sand (20-30%), fine to medium, mottled yellow

gray white (N9), mod red (5R 4/6)

dk yellow orange (10YR 6/6) and

lt brown (5.4R 5/6), dense,

slightly plastic, dry to moist,

micaceous (25%),

0900

Collect next sample 5 to 7' (CS66-01-03)

4/5/94

0915 Calibrak OVA.

Sample CS66-01-03 (5 to 7 ft)

same ^{clay pit 415 ft} sand as above, well rounded & collected @ 5 ft.

0945 Collect CS66-01-04 (7 to 9 ft).

Also collect duplicate here because omitted at previous interval (3 to 5 ft).

Clay, as above, sand is mostly fine, some partially cemented zones, more brittle, dry to moist.

1030 Sharon Fulton and Shirley McDaniel onsite. Scan 7 to 9 ft sample.

Non-detect. Techs take sample to HP.

1050

Not enough bottles - mix-up in labeling. Called Janelle. She said that she would make up more kits (3 more) & bring them out to us.

1110

Take Kirsate Blank

1130

Take CS66-10-01 sample (0 to 2 ft). Janelle Janssen & Keith Johnson onsite with 3 sets. They put labels on COCs.

1145

Collect CS66-10-02 (3 to 5 ft) sample before bottling just samples to make sure we're out of pit. Janelle & Keith offsite.

CS66-10-01

Sand (0-1 ft), silt + clay (10-20%), fine to v. coarse, lt brown (5YR 5/6), poorly sorted, sublt to sub R, trace heavies, moist

sand (1-2 ft), silt (5%), very fine to med, med yell brown (10 YR 5/4), med to well sorted, sub R, trace heavies, moist, loose.

4/5/94

CS66-10-02 (only 1.6 ft recovered)
Strat (3-3.6') as above.

Sand (3.6-4.6'), silt + clay (10%),
 med to v coarse, mottled lt brown
 (5 YR 5/6), pale yell brown (10 YR 6/2)
 mod red brown (10 R 4/6) + dk yell
 orange (10 YR 6/6), poorly sorted,
 sub R, trace heavies, trace mica,
 dry to moist, some well rounded
 quartz pebbles.

215

Collect next sample from 5 to 7 ft
 CS66-10-03

Sand (5 to 6.7') silt + clay (<10%)
 fine to v coarse, mod red (5 R 4/6)
 white (N9) + dk yell orange (10 YR 6/6)
 mod to well sorted, sub R, trace heavies,
 trace mica, dry, occasional pebble
 to cobble sized, well rounded quartz.
Clay (6.7 to 7'), silt and sand (5 to 6%)
 mottled very dusky red purple (5 RP 2/2)
 dk yell orange (10 YR 6/6), lt brown
 (5 YR 5/6), and mod red (5 R 4/6)
 med to v coarse, dense, brittle,
 dry, occasional qtz pebble to cobble.

DVA reading of 5 to 7 ft = 0.2 ppm

250

Collect CS66-10-04 (7 to 9 ft).

Clay (7 to 7.4 ft), silt + sand (20-30%)
 grayish red purple (5 RP 4/2); pebbles
 dense, dry, coarse to very coarse
 (7.4 to 9 ft) silt + sand (10%), fine to
 medium, mottled grayish red purple
 (5 RP 4/2), white (N9), yellowish
 gray (5 Y 6/1), and mod red brown (10 R 4/6).

4/5/94

1315 dense, slightly plastic, dry to moist,
micaceous (<5%),
DVA reading for 7 to 9 ft sample = 0.3 ppm
Collect sample CS66-10-05 (9 to 11 ft)
as above grading to sand, (clay + silt (30%),
med to very coarse w/ granules,
gray, sh. purple (SP 4/2) with flecks of
white (N9), med to poorly sorted,
Sub A to sub R, trace heavies, micaceous
(2-5%), dry to moist.

1330 Drillers ran out of gas to off site to
get gas + call office. Techs on site.

1400 Assist w/ decon procedures.
Collect Field Blank while waiting
for Drillers return. DVA reading
for 9 to 11 ft sample = 0.0 ppm

Note: Possible that Kevin has
biased DVA. Last 2 readings he
has taken + both had slight ppm.
Possible that decon procedure
(i.e. isopropyl) is effecting reading.

Drillers back. Fill up gas tank on
rig + prepare to continue sampling

1410 Collect CS66-10-06 (11 to 13 ft)
Same sand as above, some
pebble to cobble sized, well rounded
quartz.

1430 Collect CS66-10-07 (13 to 15 ft)
Same as above with increase in
grain size - coarse to v. coarse with
granules, pebbles + cobbles.

490 DVA readings on 11 to 13 ft = 0.0 ppm
and 13 to 15 ft = 0.0 ppm

4/5/94

1520 Collect next sample - CS66-10-08 (15 to 17 ft)
Sand as above, increase in
micas (5%).

1520 DVA reading on 15 to 17 ft = 0.2 ppm
Collect next sample (21.7 to 23.7 ft).
Clay, silt and "sand" (23%), granule to
cobble sized quartz, well rounded,
pale red purple (SRP 4/6), pale pink
(SRP 8/2), pale purple (SP 4/2),
white (N9), and mod red (SR 4/6),
dense, plastic, dry to moist, LT

DVA reading when auger at 23.7 ft = 0 ppm
1545 HP stopped by Shirley + Sharon just
left to take sample to HP
Collect last sample (28.7 to 30.7 ft) -
CS66-10-10. DVA reading of last
sample (21.7 to 23.7 ft) = 0.0 ppm
CS66-10-10 -

Sand (28.7 to 29.1 ft), silt + clay
(20%), coarse to v. coarse, mod
red (SR 4/6) with flecks of
white + dk yell orange, poorly
sorted, sublt, trace heavies,
trace micas, moist to dry.

Clay (29.1 to 29.75), silt + fine
sand (45%), gray purple (SP 4/2)
to gray red purple (SRP 4/2),
plastic, micaceous (2%),
moist.

Sand (29.75 to 30.0) as above @ 29.7 ft.

Clay (30.0 to 30.7) as above @ 29.1 ft.

1600 Completed sampling. Driller's
pull out auger + backfill hole.

4/5/94

1615 DUA reading on last sample was
a non-detect. Chet Nichols onsite
Kevin Decon + cleaning up site.

1650 TO well bldg to turn in radio,
sign over samples + unload equipment.

1800 Finished signing over samples + copied
drillers subcontractor expense records.
TO RUST office to unload equipment.

Melanie D. Hill 4/5/94

FIELD GEOLOGIC LOG

PROJECT Central Shops BRP 1031-6G		DATE 4/5/94	SHEET 1 of 2
WELL NO. CS66-10		DRILLING SUBCONTRACTOR Environmental Expts	
LOGS PREPARED BY MD Hill		DRILLER James Willis	DRILLING METHOD HSA/split spoon
COMPANY RUST E+T			

RUN NUMBER	DEPTH BELOW GROUND SURFACE, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS/REMARKS
Hand Auger	0		90%	sand, silt + clay (10-20%) / fine to v. coarse, lt brown (5YR 5/6), poorly sorted, sub A to sub R / trace heavies, moist.	
	1		90%	sand, silt (5%) / v. fine to med, med yell brown (10YR 5/4), med to well sorted, sub R / trace heavies, moist, loose.	Auger down to 3 ft.
1	3.6		90%	sand, silt + clay (10%), med to v. coarse, mottled lt brown (5YR 5/6), pale yell brown (10YR 6/2), med red brown (10R 4/6), + dk yell orange (10YR 6/6), poorly sorted, sub R, trace heavies, trace micas, dry to moist, some well rounded qtz pebbles	
2	4.2		100%	sand, silt + clay (<10%), fine to v. coarse, mod red (5R 4/6), white (N9), + dk yell orange (10YR 6/6), med to well sorted, sub R, trace heavies, trace micas, dry, occasional pebble to cobble sized, well rounded qtz	
3	6.2		90%	Clay, silt and sand (5-10%), mottled v. dusky red purple (5R 2 1/2), dk yell orange (10YR 6/6), lt brown (5YR 5/6), and mod red (5R 4/6), med to v. coarse, dense, brittle, dry	→ 6.2 to 7.0 ft
4	7.4		90%	Clay, silt and sand (20-30%), gray red purple (5R 4/2), plastic, dense, dry, coarse to v. coarse.	→ 7.0 to 7.4 ft
5	8		100%	Clay, silt and sand (10%), fine to med, mottled gray red purple (5R 4 1/2), white (N9), yell gray (5Y 9/1), and mod red brown (10R 4/6), dense, slightly plastic, dry to moist, micaceous (<5%)	→ 7.4 to 8.0 ft
6	10		100%	above gradline to sand, clay + silt (>30%), med to v. coarse w/ granules, gray purple (5P 4/2) with flecks of white (N9), med to poorly sorted, sub A to sub R, trace heavies, micaceous (2-5%), dry to moist.	→ 8.0 to 9.0 ft
7	11		100%	as above, some pebble to cobble sized, well rounded qtz	
8	12		100%	as above, grains coarsening (coarse to v. coarse with granules, pebbles + cobbles).	
9	13		100%		
10	14		100%		
11	15		100%		
12	16		100%		
13	17		100%		
14	18		100%		
15	19		100%		
16	20		100%		

FIELD GEOLOGIC LOG

PROJECT <u>Central Shops BRP 631-66</u>		DATE <u>4/5/94</u>	SHEET <u>2</u> OF <u>2</u>
WELL NO: <u>C 56G-10</u>		LOCATION	DRILLING SUBCONTRACTOR <u>Environmental Exploration</u>
LOGS PREPARED BY <u>MD Hill</u>		COMPANY <u>RWST & I</u>	DRILLER <u>James Willis</u>
		DRILLING METHOD <u>HSA/splitspoon</u>	

RUN NUMBER	DEPTH BELOW GROUND SURFACE, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS/REMARKS
	20				
	1				
8	21.7				
	2		100%	Clay, silt and "sand" (>30%), granule to cobble sized quartz, well rounded, pale red purple (5R 6/6), pale pink (5RP 8/2), pale purple (5P 6/2), white (N9), and moderate red (5R 4/6), dense, plastic, dry to moist.	
	3
	23.7				
	4	Angel to 28.7ft.			
	5				
	6				
	7				
	8				
9	29.7				
	9		100%	sand (29.7 to 29.1 ft and 29.75 to 30.6 ft), silt and clay (20%), coarse to v. coarse, mod red (5R 4/6), with flecks of white (N9) and dk yellow orange (10YR 6/6), poorly sorted, sub A, trace heavies, trace micas, moist to dry.	
	30
	30.7				
	1	T.D. 10k @ 30.7ft		Clay (29.1 to 29.75ft and 30.0 to 30.7ft), silt + v. fine sand (<5%), gray purple (5P 4/2) to gray red purple (5RP 4/2), plastic, micaceous (2%), moist.	
	2				
	3				
	4				
	5				DVA readings < 0.3 ppm
	6				
	7				
	8				
	9				
	40				

ATMOSPHERIC MONITORING LOG FIELD HEALTH AND SAFETY

Page 1 of 1

Date 4/5/94

Circle: Sun Mon Tue Wed Thu Fri Sat

Site: Central Shops BLP 631-66

Project No.: 88 357-000

Site Safety Officer: M.D.H.

Action Levels: (D) q · C q · B q · (Stop work, call in for instructions)

(check box and write in levels for upgrade)

Task/Equipment: Monitor volatiles / OVA

Weather: _____

Time	OVA PPM	HNu PPM	O ₂ %	LEL %	H ₂ S PPM	Comments: Duration of Readings, Upgrades, Location, etc.
* 1240	7.0 / 7.2	—	—	—	—	ambient reading / 5 to 7 ft sample bag
* 1315	7.9 / 8.1	—	—	—	—	ambient reading / 7 to 9 ft sample bag
1400	10.0 / 10.0	—	—	—	—	ambient reading / 9 to 11 ft sample bag
1450	5.2 / 5.2	—	—	—	—	ambient reading / 11 to 13 ft sample bag
1450	6.0 / 6.0	—	—	—	—	ambient reading / 13 to 15 ft sample bag
* 1520	5.8 / 6.0	—	—	—	—	ambient reading / 15 to 17 ft sample bag
1525	6.0 / 6.0	—	—	—	—	ambient reading / heads up + breeze zone when breeze
1545	8.2 / 8.2	—	—	—	—	ambient reading / 21.7 to 23.7 ft sample bag
1615	9.0 / 9.0	—	—	—	—	ambient reading / 25.7 to 30.7 ft sample bag

Additional Comments: OS66-10

* Kevin wise took reading (note: He was doing decon of equipment with 140 prop-41).

Signature: Melanie D.H.

SRS
SAYAMPAH ALIVE SITE

CSG	10	SB
-----	----	----

Project Name <i>Central Shops Boring/Puddle Pit 631-66</i>		Project Manager <i>Kevin Wise</i>		Department <i>Environmental Restoration</i>	
Boring Purpose <i>Soil Sample Collection and Lithology Description</i>		County <i>Barnwell</i>		Location Description <i>Background location</i>	
SURVEY INFORMATION					
SRS North Grid Coordinate		SRS East Grid Coordinate		Latitude (decimal degrees)	Longitude (decimal degrees)
DRILLING & SAMPLING INFORMATION					
Total Drilled Depth <i>30.7</i>	Static Water Level <i>N/A</i>	Drilling Start Date <i>4/5/94</i>	Drilling Completion Date <i>4/5/94</i>	Drilling Method <i>Hand Auger (HSA) (4" dia)</i>	
Sample Type	Sampling Interval	Sample Type	Sampling Interval	Drilling & Sampling Comments (Include drilling muds used, source of water, lost circulation zones, etc.)	
<i>Hand Auger (3 1/4")</i>	<i>0.0'-2.0'</i>	<i>Split spoon (2 1/2")</i>	<i>21.7'-23.7'</i>	<i>Sampling Intervals: 0.0'-2.00', 3.00'-4.60', 5.00'-7.00', 7.00'-9.00', 9.00'-11.00', 11.00'-13.00', 13.00'-15.00', 15.00'-17.00', 17.00'-19.00', 19.00'-21.7'</i>	
<i>HSA</i>	<i>2.0'-3.0'</i>	<i>HSA</i>	<i>23.7'-28.7'</i>		
<i>Split spoon (2 1/2")</i>	<i>3.0'-5.0'</i>	<i>Split spoon (2 1/2")</i>	<i>28.7'-30.7'</i>		
<i>Split spoon (2 1/2")</i>	<i>5.0'-7.0'</i>				
<i>Split spoon (2 1/2")</i>	<i>7.0'-9.0'</i>				
<i>Split spoon (2 1/2")</i>	<i>9.0'-11.0'</i>				
<i>Split spoon (2 1/2")</i>	<i>11.0'-13.0'</i>				
<i>Split spoon (2 1/2")</i>	<i>13.0'-15.0'</i>				
<i>Split spoon (2 1/2")</i>	<i>15.0'-17.0'</i>				
<i>HSA</i>	<i>17.0'-21.7'</i>				
Drilling Company <i>Environmental Restoration</i>	Driller (last name, first initial) <i>Willis, J.</i>	Oversight Company <i>Rust E+I</i>	Oversight (last name, first initial) <i>Hill, Ph.</i>		
Disposition of Samples <i>General Engineering Laboratories, Onsite</i>					
ABANDONMENT					
Method of Abandonment <i>Backfill</i>		Materials Used in Abandonment <i>Natural Soil</i>			
APPROVALS					
Abandonment Verified By <i>Melanie D.H.</i>		Date <i>4/5/94</i>		Boring Installation Report Prepared By <i>Melanie D.H.</i>	
		Date <i>4/6/94</i>			

Appendix F

Sample Collection Logbooks

Second Sampling Period

(Taken From WSRC-RP-95-81, February 1995)

Sample ID: 101874

Sample Date: 11 / 14 / 94
mo day yr

Time Sample Collected: 11 : 50
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☒ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-11-01E

0.00

1.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA

Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

30125678 Field Worklist	30125682 Field Worklist	30125681 Field Worklist	30125679 Field Worklist	30125737 Field Worklist
30125657 Field Worklist	30125733 Field Worklist	30125736 Field Worklist	30125787 Field Worklist	30125688 Field Worklist
30125734 Field Worklist	30125735 Field Worklist	30125688 Field Worklist	30125654 Field Worklist	

Read and understood by: _____

Date: ___ / ___ / ___

Sample ID: 101876

Blank and Standard descriptions: NA

Composition:

~~NA~~ ^{741 11-30-11 12/23/94}
~~NA~~ CLAY

Description: CLAY, moderate yellowish brown (10Yr 4/2)
med - to - fine sand, moist - wet, med plasticity
(SC)

List any bottles not filled: NA

Comments:

NA

Sample ID: 101876

Sample Date: 11 / 14 / 94
mo day yr

Time Sample Collected: 13:25
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned C56G-11-01 0.00 1.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10YR 4/2 Secondary Munsell color: NA

Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

30128788 Field Worklist	30128775 Field Worklist	30125355 Field Worklist	30125286 Field Worklist	30125438 Field Worklist
30125283 Field Worklist				

Read and understood by: _____ Date: ____/____/____

Sample ID: 101877

Blank and Standard descriptions: NA

Composition:

MDH 12/23/97

~~HT~~
~~PLA~~

CLAY

Description: Sandy CLAY, very pale orange (10Yr 8/2)
to dark yellowish orange (10Yr 6/6); med-fine
sand, moderate plasticity - stiff to hard (SC)

List any bottles not filled: NA

Comments:

NA

Sample ID: 101877

Sample Date: 11 / 14 / 94
mo day yr

Time Sample Collected: 13 : 45
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: KDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: CS 6 NDH 12/23/94

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned: CS 66-11-02 1.00 2.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☒ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10Yr 8/6 2.5 Secondary Munsell color: 10Yr 6/6

Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

30128705 Field Worklist	30128708 Field Worklist	30125265 Field Worklist	30125262 Field Worklist	30125406 Field Worklist
30128710 Field Worklist				

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 101878

Blank and Standard descriptions: NA

Composition:

MDN 12/23/94
~~AL~~ CLAY

Description:

Sandy CLAY, dark yellowish orange
(10 Yr 6/6) very pale orange (10 Yr 8/2),
med to fine grained rounded, med plasticity.
(SC)

List any bottles not filled: NA

Comments:

NA

Sample ID: 101878

Sample Date: 11 / 14 / 94
mo day yrTime Sample Collected: 14 : 15
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-11-032.004.00☐ Same as above, Actual CS6G-11-032.004.00Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10 Yr 6/6Secondary Munsell color: 10 Yr 8/2Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

	30125483 Field Worklist	30125789 Field Worklist	30125787 Field Worklist	30125434 Field Worklist
			30125278 Field Worklist	30125284 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 101879

Blank and Standard descriptions: NA

Composition:

NGA 12/23/94
~~ALAKH~~ CLAY

Description:

Sandy CLAY, Light brown (5% 5%)
med-fine grained, low plasticity (SC) (HARD)

List any bottles not filled: NA

Comments:

NA

Sample ID: 101879

Sample Date: 11 / 14 / 94
mo day yr

Time Sample Collected: 14 : 50
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-11-04 4.00 6.00

☐ Same as above, Actual CS6G-11-04 4.00 6.00

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5Yr 5/6 Secondary Munsell color: NA

Unified Soil Classification: S.C

Stick Bar Code from every bottle label with this sample number below:

30125279 Field Worklist	30125713 Field Worklist	30125711 Field Worklist	30125433 Field Worklist	30125281 Field Worklist
				30125354 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 101880

Blank and Standard descriptions: NA

Composition:

^{12/23/94}
~~NA~~ ^{NA} CLAY

Description:

Sandy CLAY, very pale orange
(10 Yr 8/2) med - fine grained, rounded
high plasticity, rounded, high plasticity
(SC)

List any bottles not filled: NA

Comments:

SAMPLE LOCATION - 6.00' - 8.00',
BOTTOM OF PIT NOT LOCATED.

Sample ID: 101880

Sample Date: 11 / 14 / 94
mo day yr

Time Sample Collected: 15:25
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
---------	--	---

Planned <u>C56G-11-05</u>	<u>6.00</u>	<u>8.00</u>
---------------------------	-------------	-------------

☒ Same as above	Actual _____	<u>6.00</u>	<u>8.00</u>
---	--------------	-------------	-------------

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10Yr 8/2 Secondary Munsell color: N/A

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

30125266 Field Worklist	30125357 Field Worklist	30125710 Field Worklist	30125712 Field Worklist	30125437 Field Worklist
30125277 Field Worklist				

Read and understood by: _____ Date: ____/____/____

Sample ID: 101881

Blank and Standard descriptions: NA

Composition:

MDA 12/23/94
~~ALASH~~ CLAY

Description: SAME AS 101880

List any bottles not filled: NA

Comments:

NA

Sample ID: 101881

Sample Date: 11/14/94
mo day yr

Time Sample Collected: 16:00
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B. S. K.

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned C56G-11-06 8.00 10.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10Yr 8/2 Secondary Munsell color: NA

Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

38125275 Field Worklist	38125496 Field Worklist	38125356 Field Worklist	38125276 Field Worklist	
38128714 Field Worklist	38128715 Field Worklist			

Read and understood by: _____ Date: ____/____/____

Sample ID: 101882

Blank and Standard descriptions: DUPLICATE

Composition:

ADA 12/23/94
24
AA CLAY

Description: SAME 101880

List any bottles not filled: NA

Comments:

NA

Sample ID: 101882

Sample Date: 11 / 14 / 94
mo day yr

Time Sample Collected: 16:20
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☒ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101881

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned C36G-11-06A

8.00

10.00

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10 Yr 8/2

Secondary Munsell color: NA

Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

30125245 Field Worklist	30125247 Field Worklist	30125435 Field Worklist	30125342 Field Worklist	
30128716 Field Worklist	30128717 Field Worklist			

Read and understood by: _____

Date: / /

Sample ID: 101883

Blank and Standard descriptions: TRIP BLANK

Composition: NA

Description: NA

List any bottles not filled: NA

Comments: SAMPLE TRIP IS TIMED & DATED
WHEN FILLED @ LAB

Sample ID: 101883

Sample Date: ~~11/1/94~~ ^{15 KH} 10/17/94
mo day yr

Time Sample Collected: ~~14:45~~ ^{14:45 KH}
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other TRIP

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101884

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned C56G-TB-02B

0.00

1.00

☒ Same as above

Actual

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA

Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

	30125928 Field Worklist	30125927 Field Worklist	30125925 Field Worklist	30125926 Field Worklist

Read and understood by: _____

Date: ___/___/___

Sample ID: 101884

Blank and Standard descriptions: NA

Composition:

~~12/23/94~~
~~12/23/94~~
~~NA~~ SAND

Description: Silty SAND, moderate yellowish brown (5Yr 5/4), fine grained sand, moist (SM) - Cobble Stones @ 1'

List any bottles not filled:

NA

Comments:

NA

Sample ID: 101884

Sample Date: 11 / 15 / 94
mo day yr

Time Sample Collected: 08:30
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned C56G-12-01 0.00 1.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5Yr 5/4 Secondary Munsell color: NA

Unified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

38125248 Field Worklist	38125432 Field Worklist	38125341 Field Worklist
	38125245 Field Worklist	38125689 Field Worklist	38125686 Field Worklist	

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 101885

Blank and Standard descriptions: NA

Composition:

^{MDH 12/23/14}
~~NA~~ ~~DE~~ ~~H₂O~~ ~~OK~~ SILT

Description:

Sandy Silt Burn material, Dusky blue (5PB 3/2), possible burn, fine to med grained (SM)

List any bottles not filled:

NA

Comments:

NA

Sample ID: 101885

Sample Date: 11 / 15 / 94
mo day yr

Time Sample Collected: 8 : 50
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-12-02 1.00 2.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5 PB3/2 Secondary Munsell color: NA

Unified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

30125243 Field Worklist	30125243 Field Worklist	30125243 Field Worklist	30125243 Field Worklist	30125252 Field Worklist
				30125346 Field Worklist

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 101886

Blank and Standard descriptions: NA

Composition: CLAY

Description: Sandy CLAY, pale yellowish brown
(10.Yr. 6/2) fine-med plasticity (SC)

List any bottles not filled: NA

Comments: NA

Sample ID: 101886

Sample Date: 11 / 15 / 94
mo day yr

Time Sample Collected: 09 : 15
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: KDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned C566-12-03

2.00 4.00

☒ Same as above

Actual C566-12-03

2.00 4.00

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10Yr 6/2

Secondary Munsell color: NA

Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

30125243 Field Worklist	30125244 Field Worklist	30125382 Field Worklist	30125574 Field Worklist	30125698 Field Worklist
30125632 Field Worklist				

Read and understood by: _____

Date: / /

Sample ID: 101887

Blank and Standard descriptions: NA

Composition: CLAY

Description: Sandy CLAY, MARBLED. DARK YELLOWISH
ORANGE (10 Yr. 6/6) & PALE YELLOWISH BROWN
(10 Yr. 6/2) Low Plasticity (SC)

List any bottles not filled: NA

Comments: NA

Sample ID: 101887

Sample Date: 11 / 15 / 94
mo day yr

Time Sample Collected: 9 : 30
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-12-04 4.00 6.00

☐ Same as above Actual CS66-12-04 4.00 6.00

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10Yr 6/6 Secondary Munsell color: 10Yr 6/2

Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

30125239 Field Worklist	30125381 Field Worklist	30125695 Field Worklist	30125573 Field Worklist	30125242 Field Worklist
30125631 Field Worklist				

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 101888

Blank and Standard descriptions: NA

Composition: CLAY

Description: SAME AS 161888

List any bottles not filled: NA

Comments: PLANNED SAMPLE INTERVAL WAS +1 & -3
FEET BELOW THE BOTTOM OF THE PET AT TIME OF

SAMPLING. IT IS UNKNOWN THE DEPTH OF THE BOP

DURING SAMPLING - THE SAMPLE WAS COLLECTED FROM

-2.0 to -^{4.0} FT BOP OR ^{MDR/13/94} ~~4-8~~ BGS

MDH
12/13/94

6-8'

Sample ID: 101888

Sample Date: 1/15/94
mo day yr

Time Sample Collected: 10:00
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval

Depth from ground
to bottom of interval

(in feet)

(in feet)

Planned CS6G-12-05

MDH 2/23/94
24 00 8.00

☐ Same as above

Actual CS6G-12-05

MDH 2/23/94
24 00 8.00

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10Yr 6/6

Secondary Munsell color: 20Yr 6/2

Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

3012572 Field Worklist	30125241 Field Worklist	30125240 Field Worklist	30125693 Field Worklist	30125379 Field Worklist
				30125694 Field Worklist

Read and understood by: _____

Date: ___/___/___

Sample ID: 101889

Blank and Standard descriptions: RINSATE

Composition: DI H₂O

Description: NA

List any bottles not filled: NA

Comments: HOLE TERMINATED PRIOR TO
PLANNED DEPTH - RINSATE FROM TOOLS
USED AT 6.0 - 8.0 BLS.

Sample ID: 101889

Sample Date: 11 / 15 / 99
mo day yr

Time Sample Collected: 11 : 00
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☒ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101888

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned C56G-12-07E

6.00

8.00

☒ Same as above

Actual C56G-12-07E

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA

Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

30125865 Field Worklist	30125866 Field Worklist	30125867 Field Worklist	30125868 Field Worklist
	30125869 Field Worklist	30125870 Field Worklist		

Read and understood by: _____

Date: ___ / ___ / ___

Sample ID: 101890

Blank and Standard descriptions: NA

Composition: CLAY

Description: FILL: Sandy CLAY, moderate yellowish brown (10Yr 5/4), fine grained (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 101890

Sample Date: 11/15/94
mo day yr

Time Sample Collected: 11:25
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-13-01

0.00 1.00

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10Yr 5/4

Secondary Munsell color: _____

Unified Soil Classification: C-L

Stick Bar Code from every bottle label with this sample number below:

30125743 Field Worklist	30125426 Field Worklist	30125258 Field Worklist	30125428 Field Worklist	30125741 Field Worklist
				30125262 Field Worklist

Read and understood by: _____ Date: ____/____/____

Sample ID: 101891

Blank and Standard descriptions: RINSATE

Composition: DI H₂O

Description: NA

List any bottles not filled: NA

Comments: RINSATE SAMPLE - HAND RINGER - SPOON - AND SAMPLE
BOWL - ALL STAINLESS STEEL

Sample ID: 101891

Sample Date: 11 / 15 / 94
mo day yr

Time Sample Collected: 11 : 50
(use military time)

Sample type:

- ☒ Normal ADP
☐ Blank or Standard 12/23/94
☐ Split
☒ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil AD
☐ Rock AD
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101892

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS67-13-02E

NA

NA

☒ Same as above

Actual _____

NA

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA

Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

30125731 Field Worklist	30125741 Field Worklist	30125748 Field Worklist	30125659 Field Worklist	30125742 Field Worklist
30125732 Field Worklist	30125738 Field Worklist	30125666 Field Worklist	30125653 Field Worklist	30125692 Field Worklist
	30125858 Field Worklist	30125036 Field Worklist	30125841 Field Worklist	30125842 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 101892

Blank and Standard descriptions: NA

Composition: BURN MATERIAL

Description: BURN MATERIAL - GENERAL REFUSE - BLACK -
NAILS / COPPER WIRE WOOD ETC - GRAYISH BLACK (NZ)

List any bottles not filled: NA

Comments: NA

Sample ID: 101892

Sample Date: 11 / 15 / 94
mo day yr

Time Sample Collected: 12 : 28
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned: CS66-13-02

1.00 2.00

☐ Same as above Actual CS66-13-02

1.00 2.00

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☒ Wet ☐ Sludge ☐ Liquid

Munsell Color: N 2.5 R 4.0 B 1.0 Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

30125424 Field Worklist	30128745 Field Worklist	30128744 Field Worklist	30125257 Field Worklist	30125427 Field Worklist
				30125259 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 101893

Blank and Standard descriptions: NA

Composition: CLAY

Description: Sandy CLAY, very pale orange (10YR 8/2)
med-fine grained rounded, low plasticity (SC)

List any bottles not filled: NA

Comments: NA

Sample ID: 101893

Sample Date: 11 15 94
mo day yr

Time Sample Collected: 12 : 50
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B.S.K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS667-13-03

2.00

4.00

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10YR 8/2

Secondary Munsell color: NA

Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below.

30125423 Field Worklist	30125256 Field Worklist	30128742 Field Worklist	30128743 Field Worklist	30125255 Field Worklist
				30125423 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 101894

Blank and Standard descriptions: NA

Composition: CLAY

Description: SAME AS 101893

List any bottles not filled: NA

Comments: NA

Sample ID: 101894

Sample Date: 11 / 15 / 94
mo day yr

Time Sample Collected: 13:10
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-13-04 4.00 6.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 2.5Y 10Yr 8 1/2 Secondary Munsell color: NA

Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

38125422 Field Worklist	38125251 Field Worklist	38125254 Field Worklist	38125438 Field Worklist	38128749 Field Worklist
				38128748 Field Worklist

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 101895

Blank and Standard descriptions: DUPLICATE

Composition: CLAY

Description: SAME AS 801893

List any bottles not filled: NA

Comments: NA

Sample ID: 101895

Sample Date: 11 / 15 / 94
mo. day yr

Time Sample Collected: 13 : 10
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☒ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101894

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CSGG-13-04D 4.00 6.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10Yr 8/2 Secondary Munsell color: NA

Unified Soil Classification: SC-NDH 12/23/94
SC

Stick Bar Code from every bottle label with this sample number below:

181703023	181705004	181701005	181702222	181704002
				181713002

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 101896

Blank and Standard descriptions: NA

Composition: CLAY

Description: SAME AS 801893

List any bottles not filled: NA

Comments: NA

Sample ID: 101896

Sample Date: 11 / 15 / 94
mo day yr

Time Sample Collected: 13:45
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS67-13-05

6.00

8.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10YR 8/2

Secondary Munsell color: NA

Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

30125253 Field Worklist	30125252 Field Worklist	30128746 Field Worklist	30128747 Field Worklist	30125571 Field Worklist
				30125428 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 101897

Blank and Standard descriptions: NA

Composition: SAND

Description: FILL: Silty SAND, olive gray (5Y 4/1)
fine grained, moist

List any bottles not filled: NA

Comments: NA

Sample ID: 101897

Sample Date: 11 16 19
mo day yr

Time Sample Collected: 07:45
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-14-01

0.00 1.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: (5Y 4/1) Secondary Munsell color: NA

Unified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

	30128757 Field Worklist	30125298 Field Worklist	30128758 Field Worklist	30125481 Field Worklist
			30125237 Field Worklist	30128566 Field Worklist

Read and understood by: _____

Date: ____/____/____

Sample ID: 101898

Blank and Standard descriptions: NA

Composition: NA

Description: FILL: silty SAND, light Brown (5 Yr 6/4)
fine grained, moist/DAMP (SM)

List any bottles not filled: NA

Comments: NA

Sample ID: 101898

Sample Date: 11/16/94
mo day yrTime Sample Collected: 7:55
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-14-021.002.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5YR 6/4Secondary Munsell color: NAUnified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

32125567 Field Worklist	32125422 Field Worklist	32125236 Field Worklist	32125773 Field Worklist	32128772 Field Worklist
				32125227 Field Worklist

Read and understood by: _____

Date: ____/____/____

Sample ID: 101899

Blank and Standard descriptions: NA

Composition: SAND

Description: Clayey SAND, LIGHT BROWN (5Yr 6/4)
fine grained, moist (CL)

List any bottles not filled: NA

Comments: NA ^{MDA} 12/23/94

Last sample in this book. Sampling continued
with sample ID# 103700.

Sample ID: 101899

Sample Date: 11 / 16 / 94
mo day yr

Time Sample Collected: 8 : 00
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-14-03

2.00

4.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5YR 6/4

Secondary Munsell color: NA

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

38125235 Field Worklist	38128568 Field Worklist	38128771 Field Worklist	38128771 Field Worklist	38128778 Field Worklist
				38125232 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

EPD/EMS SOIL SAMPLE LOGBOOK

CENTRAL SHOPS BURNING RUBBLE PIT EXTRA SAMPLES

Project 631-6G FROM # 103700 TO # 103799

Project _____ FROM # _____ TO # _____

Project _____ FROM # _____ TO # _____

Project _____ FROM # _____ TO # _____

Project _____ FROM # _____ TO # _____

Book in use from ___ / ___ / ___ to ___ / ___ / ___

ENVIRONMENTAL PROTECTION DEPARTMENT

SAVANNAH RIVER SITE

SAMPLE IDENTIFICATION NUMBERS 103700 - 103799

EPD/EMS SOIL SAMPLE LOGBOOK

SIGNATURE PAGE

SIGNATURE

INITIALS

PRINTED NAME

COMPANY

Kelly Hunter

KDH

KELLY HUNTER

RUSS E&I

Bruce S. Kristiansen

BSK

BRUCE S. KRISTIANSEN

RUSS E&I

Melanie D Hill

MDH

Melanie D. Hill

RUSS E&I

DIRECTIONS FOR FILLING OUT THE SAMPLE LOGBOOK

INTRODUCTION

The pages of this logbook are designed for rapid entry into computer files. The information on each line must be filled out carefully and legibly using the following directions.

GENERAL RULES

All samplers who record information must sign the signature page at the front of this logbook. Be sure that any previous samplers have also signed on the signature page.

Enter text by printing. Select from checklists with an "X" in the appropriate box.

Use a black, ball-point, indelible-ink pen.

Upon completing a page, the EPD/EMS Project Technical Manager or representative must review the page, sign, and enter the date in the spaces provided.

Once a book is finished, enter projects and associated Sample ID numbers on the first page. Confirm that the signature page has been completed.

SPECIFIC INSTRUCTIONS FOR EACH ENTRY

Sample Date

Record the date as a six-digit number, using only digits and leaving no blanks. The first two digits indicate the month, the second two digits indicate the day, and the final two digits indicate the year.

Time Sample Collected

Record the time the sample was collected as a four-digit number using military time. Use only digits and leave no blanks. If there is any unusual delay between the time the sample is collected and the sealing of the last sample jar, indicate this with an "X" in the box labeled "Check here if unusual delay in bottling samples" and record a description of the delay under "COMMENTS."

Sample Type

Select the type of sample with an "X" in the appropriate box. If none of the boxes supplied is appropriate, select "OTHER" and print the sample type in the space provided, adding explanatory text under "COMMENTS" if needed. Sample type is indicated on the Chain-of-Custody stub. If the sample is a duplicate, split, rinsate, etc., record the number (Sample ID) of the associated sample in the space provided.

Sample Matrix

Indicate the matrix with an "X" in the appropriate box. If none of the boxes supplied is appropriate, select "OTHER" and print the matrix in the space provided, adding explanatory text under "COMMENTS" if needed.

Sampler

The sampler is the person responsible for putting the sample into the bottle. The sampler enters his initials in the spaces provided. He also signs the signature line on the second page of the sample logbook.

Planned Station

Enter the planned station as printed on the Chain-of-Custody stub.

Planned Intervals

Enter the planned depth from the ground to the top of core and the depth from the ground to the bottom of core in feet and hundredths of feet. The top and bottom of the planned sampling interval are printed on the Chain-of-Custody stub.

Actual Station

If the actual station and intervals are the same as the planned station and intervals, check the box, otherwise enter the actual sample station.

Actual Intervals

Measure and enter the actual depth from the ground to the top of core and the depth from the ground to the bottom of core in feet and hundredths of feet. It is not necessary to enter the actual intervals if they are the same as the planned intervals and planned station and the appropriate box is checked.

Moisture Content

Indicate the moisture content with an "X" in the appropriate box. If the soil is powdery and doesn't stick together, mark it as "Dry". If the soil sticks together but doesn't ooze water, mark it as "Damp." If the soil exudes water when pressed or squeezed, mark it as "Wet." If the sample can be poured, doesn't mound, yet doesn't flow like water, mark it as "Sludge." If the sample flows like water, mark it "Liquid."

Munsell Color

Record the primary Munsell color designation in the first space provided. The character may be a capital letter or a numeral. (Use the standardized soil color chart available from the Munsell Color Company, 2441 North Calvert St., Baltimore, Maryland.) If there is a secondary color, enter it in the space captioned Secondary Munsell color.

Unified Soil Classification

Record the Unified Soil Classification for this sample in the space provided. (Use the American Geological Institute [AGI] data sheet 38.1, Technical Memorandum No. 3-357, prepared for Office, Chief of Engineers, by Waterways Equipment Station, Vicksburg, Mississippi, March 1953.)

Bottle Entry

Transfer the bottle number by peeling the label subtitled "(place in sample logbook)" from each bottle label associated with this Sample ID and sticking it in one of the rectangles at the bottom of the page. The six-digit Sample ID written on the bottle label must match the Sample ID at the top of this page. The eight-digit bottle number identifies each bottle. If there is no peel-off label, write the bottle number of each bottle in the rectangles provided. Enter one eight-digit number per rectangle.

Signature

The EPD/EMS Project Technical Manager or representative must review each page once it is completed for legibility and completeness. It is important to check that information from the Chain-of-Custody stub about the Planned Station has been transferred correctly. The Project Technical Manager or representative signs and dates the page once he is satisfied that the recorded data are legible and complete. No changes must be made to a page after it has been signed as read and understood.

Blank or Standard Description

Specify the type of blank if the sample is a blank: field, trip, equipment, etc. If the sample is a standard, describe its source and what it is:

Composition

List the components of the sample, including mineralogy (quartz, clay, heavy minerals, etc.) and foreign objects (asphalt, cement, shingles, etc.), as percents of the total.

Description

Describe the general character of the sample: whether it is a core, stream sediment, etc., and the general location from which it was taken. Provide a brief geologic description of the sample, including degree of sorting, grain size, etc.

List any bottles not filled

If the sample volume was not large enough to fill all the bottles listed on the Chain-of-Custody form, list the analyses requested for which bottles were not filled.

Comments

Write down the Project code from the Chain-of-Custody stub. Describe in detail any environmental factors that might affect the chemistry of the sample, including relationship of the sample interval to any sewer, pipeline, or other nearby structure. If there was any unusual delay between sample collection and sample bottling, record the duration of the delay, briefly describe the holding conditions of the sample during the delay, and record the reason for the delay. Record any unusual condition or situation involved with the site or the sampling process that may affect the chemical or physical properties of the sample. Any deviations from routine procedures must be described here.

Sample ID: 103700

Blank and Standard descriptions: NA

Composition:

^{11/12/14}
~~12/23/14~~
~~NA~~ SAND

Description: 4'-5' Clayey SAND, Light brown (5% 6/4)
fine grained, moist (cl)

5'-6' - BURN MATERIAL, BLACK, BURNED WOOD, GLASS FRAGMENT,
MISC NAILS, YELLOW plastic, concrete RUBBLE, WET

List any bottles not filled: NA

Comments:

~~45 - 1*~~ NA
^{11/12/14}
~~12/23/14~~

Sampling continued from Sample ID #101899.
Sample ID #s 103700 through 103799.
Then continued with Sample ID #102519
through 102558. This does not include
the 2nd phase of groundwater sampling
(monitor wells)

Sample ID: 103700

Sample Date: 11/16/94
mo day yr

Time Sample Collected: 08:27
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS67-14-04

4.00

6.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: (5YR 6/4)

Secondary Munsell color: NA

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

	30125111 30125111 Field Worklist	30125238 30125238 Field Worklist	30125231 30125231 Field Worklist	30125394 30125394 Field Worklist	30125776 30125776 Field Worklist
					30125564 30125564 Field Worklist

Read and understood by: _____

Date: ____/____/____

Sample ID: 103701

Blank and Standard descriptions: N/A

Composition: CLAY

Description: 6-7' BURNED MATERIAL AS DESCRIBED IN
SAMPLE ID 103700

7-8' - RESIDUUM SANDY CLAY LIGHT BROWN, fine rounded,
2nd interbedded very pale orange (10Yr 8/2) ~~sand~~ ^{2H} fine Dry (CL)
MDH 12/13/94

List any bottles not filled: N/A

Comments: PROPOSED DEPTH FROM -1 to -3 ft BOP
THE ACTUAL DEPTH IS FROM 6 to 8 ft BGS

Sample ID: 103701

Sample Date: 11 / 16 / 94
mo day yr

Time Sample Collected: 08:55
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS67-14-05

6.00

8.00

☐ Same as above Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5Yr 5/2 (4Yr 8/2) Secondary Munsell color: NA

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

38125228 Field Worklist	38128774 Field Worklist	38128775 Field Worklist	38125391 Field Worklist	38128565 Field Worklist	38125229 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103702

Blank and Standard descriptions: NA

Composition: CLAY

Description: SAME AS SAMPLE ID 103701 FROM 7-8

List any bottles not filled: NA

Comments: Proposed depth from -3 to -5 BOP - THE
ACTUAL DEPTH IS FROM 8 to 10 ft BGS

NDH 12/23/94
BOP

Sample ID: 103702

Sample Date: 11 / 16 / 94
mo day yr

Time Sample Collected: 09 : 30
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-14-06

8.00

10.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☒ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10Yr 8/2

Secondary Munsell color: NA

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

38128563 Field Worklist	38125226 Field Worklist	38128657 Field Worklist	38128658 Field Worklist	38125393 Field Worklist	38125225 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103703

Blank and Standard descriptions: Duplicate

Composition: CLAY

Description: CLAY - INTERBEDDED VERY PALE ORANGE
(10 Yr 8/2) and Light BROWN (5 Yr 5/6) - HIGH
PLASTICITY, SATURATED (CH)

List any bottles not filled: NA

Comments: PROPOSED SAMPLE INTERVAL IS WITH RESPECT
TO THE BOTTOM OF THE PIT - SAMPLE COLLECTED
WITH RESPECT TO GROUND SURFACE

Sample ID: 103703

Sample Date: 11/16/94
mo day yr

Time Sample Collected: 10:05
(use military time)

Sample type:

- ☒ Normal INDIA 12/23/94
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☒ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103704

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned C566-14-07A

13.00

15.00

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☒ Wet ☐ Sludge ☐ Liquid

Munsell Color: (10YR 8/2) (5YR 5/6) Secondary Munsell color: NA

Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

			<small>38126724</small> Field Worklist	<small>32126722</small> Field Worklist	<small>38125353</small> Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 103704

Blank and Standard descriptions: N/A

Composition: CLAY

Description: CLAY, very pale orange (10Yr 8/2) and light brown (5Yr 5/6) and, High plasticity, Saturated (CH)
MDH 12/23/94

List any bottles not filled: N/A

Comments: N/A

Sample ID: 103704

Sample Date: 11/16/94
mo day yr

Time Sample Collected: 10:05
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☒ Duplicate Kit
☐ Other

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103704 Kit
MDN 12/23/94

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS67-14-07

13.00

15.00

☒ Same as above Actual

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10Yr 8/2

Secondary Munsell color: 5Yr 5/6

Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

			38128725 Field Worklist	38128719 Field Worklist	38125358 Field Worklist

Read and understood by: _____

Date: ___/___/___

Sample ID: 103705

Blank and Standard descriptions:

MDH 12/23/94
ATA Trip Blank

Composition:

DI H₂O

Description:

NA

List any bottles not filled:

NA

Comments:

TRIP BLANKS FILLED @ LAB
ON 10/17/94 @ 14:45

Sample ID: 103705

Sample Date: 10/17/94
 mo day yr
10/17/94

Time Sample Collected: 17:45
 (use military time)

Sample type:

- ☐ Normal
☒ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K P 17

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103704

Station

Depth from ground
 to top of interval
 (in feet)

Depth from ground
 to bottom of interval
 (in feet)

Planned CS66-TB-04B

NA

NA

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA

Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

		30125913 Field Worklist	30125914 Field Worklist	30125921 Field Worklist	30125922 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103706

Blank and Standard descriptions: RE-NATE

Composition: NA

Description: NA

List any bottles not filled: NA

Comments: NA

Sample ID: 103706

Sample Date: 111 16 94
mo day yr

Time Sample Collected: 12 : 00
(use military time)

Sample type:

- ☐ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☒ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103704

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-14-08E

NA

NA

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA

Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

<p>-----</p> <p>30125656</p> <p>Field Worklist</p>	<p>-----</p> <p>30125656</p> <p>Field Worklist</p>	<p>-----</p> <p>30125656</p> <p>Field Worklist</p>	<p>-----</p> <p>30125656</p> <p>Field Worklist</p>	<p>-----</p> <p>30125656</p> <p>Field Worklist</p>	<p>-----</p> <p>30125656</p> <p>Field Worklist</p>

Read and understood by: _____

Date: / /

Sample ID: 103707

Blank and Standard descriptions: NA

Composition: SAND

Description: Fill: silty SAND, olive gray (5Yr 4/1)
fine grained, moist (SM)

List any bottles not filled: NA

Comments: NA

Sample ID: 103707

Sample Date: 11 / 17 / 94
mo day yr

Time Sample Collected: 07:55
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CSGG-15-01

0.00

1.00

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: (5Yr 4/1)

Secondary Munsell color: TYA

Unified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

38125345 Field Worklist	38125221 Field Worklist	32126538 Field Worklist	38125224 Field Worklist	38126635 Field Worklist	38126636 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103708

Blank and Standard descriptions: NA

Composition: SAND

Description: ~~Silt~~ SEE 103707
MDH 12/23/14

List any bottles not filled: NA

Comments: NA

Sample ID: 103708

Sample Date: 11/17/94
mo day yr

Time Sample Collected: 07:55
(use military time)

Sample type:

- ☐ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☒ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103708

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-15-01A

0.00

1.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: NA

Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

30128537 Field Worklist	30128537 Field Worklist	30128538 Field Worklist	30125344 Field Worklist	30125222 Field Worklist	30125223 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 103709

Blank and Standard descriptions: MDA 12/23/94 Trip Blank

Composition: DI H₂O

Description: NA

List any bottles not filled: NA

Comments: TRIP BLANK FILLED @ LAB - WESTON

Sample ID: 103709

Sample Date: 11 / 16 / 94
mo day yr

Time Sample Collected: 14:00
(use military time)

Sample type:

- ☐ Normal
☒ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 101875

Station

NDH 12/23/94

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned

*1-1018 CS6G-TB-23B

NA

NA

☒ Same as above

Actual

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid
Munsell Color: NA Secondary Munsell color: NA
Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

Read and understood by: _____

Date: / /

Sample ID: 103710

Blank and Standard descriptions: NA

Composition: ~~X11~~ ~~NA~~ SAND
MDH
12/23/14

Description: Silty Sand, dark yellowish orange^(10 YR 6/6), fine
grained, moist (SM) - some metal shavings

List any bottles not filled: NA

Comments: NA

Sample ID: 103710

Sample Date: 11 / 17 / 94
mo day yr

Time Sample Collected: 08:45
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned C566-15-02

1.00

2.00

☒ Same as above Actual _____

MD12/23/94

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5YR 6/6 Secondary Munsell color: NA

Unified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

38128536 Field Worklist	38128661 Field Worklist	38128238 Field Worklist	38128219 Field Worklist	38128343 Field Worklist	38128668 Field Worklist

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 103711

Blank and Standard descriptions: NA

Composition: CLAY

Description: RESIDuum: Sandy CLAY, very pale orange
(10 Yr 8/2) INTERBEDDED WITH LIGHT BROWN (5 Yr 5/6)
fine grained moist (CL)

List any bottles not filled: NA -

Comments: NA

Sample ID: 103711

Sample Date: 11 / 17 / 94
mo day yr

Time Sample Collected: 08:40
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-15-03

2.00

4.00

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid
Munsell Color: 10Yr 8/2 Secondary Munsell color: 5Yr 5/6
Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

	38125539 Field Worklist	38125538 Field Worklist	38125338 Field Worklist	38125218 Field Worklist	38125533 Field Worklist
					38125217 Field Worklist

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 103712

Blank and Standard descriptions: ~~ALA-KH~~ R INSATE

MDA
12/23/14

Composition:

~~CLA-KH~~
MDA
12/23/14

DI H₂O

Description: SEE 103711

List any bottles not filled:

N.A.

Comments:

NA

Sample ID: 103712

Sample Date: 11/17/94
mo day yrTime Sample Collected: 08:55
(use military time)

Sample type:

- ☐ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☒ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S KFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103712 ^{11/17/94}

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned C56G-15-03E2.004.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

30125838 Field Worklist	30125719 Field Worklist	30125720 Field Worklist	30125663 Field Worklist	30125697 Field Worklist	30125655 Field Worklist
30125840 Field Worklist	30125835 Field Worklist	30125724 Field Worklist	30125665 Field Worklist	30125722 Field Worklist	30125723 Field Worklist
				30125721 Field Worklist	30125837 Field Worklist

Read and understood by: _____

Date: ____/____/____

Sample ID: 103713

Blank and Standard descriptions: N/A

Composition: CLAY

Description: Same as 103711

List any bottles not filled: N/A

Comments: ACTUAL SAMPLE DEPTH WAS ALTERED BECAUSE

FILL WAS OBSERVED TO 2.5' BGS and residuum observed

thereafter, A sample from 4 to 6 would be the next
interval below the fill material

Sample ID: 103713

Sample Date: 11 / 17 / 94
mo day yrTime Sample Collected: 09:25
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned C566-15-04

5.0
4.0 2H
11/17/94
7.0
6.0 2H
11/17/94
6.0
4.6 2H
12/23/94

☐ Same as above Actual C566-15-04
Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10 Yr 8/2Secondary Munsell color: 5 Yr 5/6Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

30128663 Field Worklist	30128662 Field Worklist	30128639 Field Worklist	30128535 Field Worklist	30128215 Field Worklist	30128216 Field Worklist

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 103714

Blank and Standard descriptions: NA

Composition: CLAY

Description: SAME AS 103711

List any bottles not filled: NA

Comments: NA

Sample ID: 103714

Sample Date: 11 / 17 / 94
mo day yr

Time Sample Collected: 10:05
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay

in bottling samples.

Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-15-05

10.00

12.00

☒ Same as above

Actual CS6G-7H 11/17/94

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10 Yr 8/2

Secondary Munsell color: 5 Yr 5/6

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

		38125633 Field Worklist	38125190 Field Worklist	38128656 Field Worklist	38128664 Field Worklist
				38128534 Field Worklist	38125348 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103715

Blank and Standard descriptions: TRIP BLANK

Composition: DI H₂O

Description: SAME AS 103711

List any bottles not filled: NA

Comments: TRIP BLANK WAS FILLED @ LABORATORY

Sample ID: 103715

Sample Date: 10/17/94
mo day yr

Time Sample Collected: 15:30
(use military time)

Sample type:

- ☐ Normal
☒ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103714

Station

Planned CS6G-TB-04B

Depth from ground
to top of interval
(in feet)

NA

Depth from ground
to bottom of interval
(in feet)

NA

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

				38125935 Field Worklist	38125934 Field Worklist
				38125936 Field Worklist	38125933 Field Worklist

Read and understood by: _____ Date: ____/____/____

Sample ID: 103716

Blank and Standard descriptions: NA

Composition: SAND

Description: Silty SAND, moderate yellowish brown
(10 Yr 5/4), fine grained, moist (SM)

List any bottles not filled: NA

Comments: NA

Sample ID: 103716

Sample Date: 11 / 17 / 94
mo day yr

Time Sample Collected: 11:15
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-16-01

0.0

1.00

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10 Yr 5/4

Secondary Munsell color: NA

Unified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

30125312 Field Worklist	3012532 Field Worklist	30125323 Field Worklist	30125313 Field Worklist	30125323 Field Worklist	30125324 Field Worklist

Read and understood by: _____

Date: ___ / ___ / ___

Sample ID: 103717

Blank and Standard descriptions: N/A

Composition: SAND

Description:

Silty SAND, Grayish black (N2), fine grained,
MDIST (SM)

List any bottles not filled: N/A

Comments:

N/A

Sample ID: 103717

Sample Date: 11 / 17 / 94
mo day yr

Time Sample Collected: 11 : 25
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Planned CS66-16-02

Actual _____

Depth from ground
to top of interval
(in feet)

12/23/94
1.0

Depth from ground
to bottom of interval
(in feet)

2.00

☒ Same as above

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: N 2.5 Secondary Munsell color: NA

Unified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

38125187 Field Worklist	38128531 Field Worklist	32125634 Field Worklist	38125338 Field Worklist	38128611 Field Worklist	38128614 Field Worklist

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 103718

Blank and Standard descriptions: NA

Composition: SILT

Description: Silt, Grayish black ^{MD 12/23/74} (N2), WET

List any bottles not filled: _____

Comments: NA

Sample ID: 103718

Sample Date: 11 / 17 / 94
mo day yrTime Sample Collected: 11 : 40
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS 66-16-032.004.00☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☐ Damp ☒ Wet ☐ Sludge ☐ LiquidMunsell Color: N 2.5 R 8.5 Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

	30128616 Field Worklist	30128615 Field Worklist	30128530 Field Worklist	30125325 Field Worklist	30125188 Field Worklist
					30125189 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103719

Blank and Standard descriptions: NA

Composition: C.LAY

Description: Sandy CLAY, pale yellowish brown
(10 $\frac{1}{4}$ 9/2), interbedded w/ light brown (5 $\frac{1}{4}$ 5/6)
fine grained, HARD (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103719

Sample Date: 11 / 17 / 94
mo day yrTime Sample Collected: 11:55
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station	Planned	Actual	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
	<u>CS6 G-16-04</u>		<u>5.00</u>	<u>7.00</u>
☐ Same as above	<u>CS6 G-16-04</u>		<u>4.00</u>	<u>6.00</u>

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid
 Munsell Color: 10 Yr 6/2 Secondary Munsell color: 5 Yr 5/6
 Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

38125326 Field Worklist	38125186 Field Worklist	38125185 Field Worklist	38128617 Field Worklist	38128618 Field Worklist	38128523 Field Worklist

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 103720

Blank and Standard descriptions: NA

Composition:

~~NA~~^{YH} CLAY
12/23/94

Description: Sandy CLAY, w/ Quartz fragments med - fine
grained, very light grey (NS), HARD, med plasticity
(C.H.)

List any bottles not filled: NA

Comments:

NA

Sample ID: 103720

Sample Date: 11 / 17 / 94
mo day yr

Time Sample Collected: 12:30
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CSOG-16-05

10.00

12.00

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: L₅ 10YR 8/2

Secondary Munsell color: PA

Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

			30128621 Field Worklist	30125327 Field Worklist	30128622 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103721

Blank and Standard descriptions: N4

Composition: SAND

Description: SAND, grayish orange (10% 7/4), fine
grained moist

List any bottles not filled: NA

Comments: NA

Sample ID: 103721

Sample Date: 11/17/94
mo day yrTime Sample Collected: 13:50
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-17-010.01.0

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10Yr 7/4 Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

	REPORT A COPY FROM THIS FIELD WORKLIST 38125184 Field Worklist	REPORT A COPY FROM THIS FIELD WORKLIST 38125361 Field Worklist	REPORT A COPY FROM THIS FIELD WORKLIST 38125181 Field Worklist	REPORT A COPY FROM THIS FIELD WORKLIST 38128597 Field Worklist	REPORT A COPY FROM THIS FIELD WORKLIST 38128598 Field Worklist
					REPORT A COPY FROM THIS FIELD WORKLIST 38128528 Field Worklist

Read and understood by: _____ Date: ___/___/___

Sample ID: 103722

Blank and Standard descriptions: NA

Composition: CLAY

Description: Sandy CLAY, light brown (5Yr 6/4)
fine-med grained (CL)

List any bottles not filled: NA-

Comments: NA

Sample ID: 103722

Sample Date: 11/17/94
mo day yrTime Sample Collected: 14:05
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS68-17-021.002.00☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5Yr 6/4

Secondary Munsell color: _____

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

	38125182 Field Worklist	38125368 Field Worklist	38126602 Field Worklist	38126601 Field Worklist	38126527 Field Worklist
					38125183 Field Worklist

Read and understood by: _____

Date: ____/____/____

Sample ID: 103723

Blank and Standard descriptions: NA

Composition: CLAY

Description: SAME AS 103722

List any bottles not filled: NA

Comments: NA

Sample ID: 103723

14:20

Sample Date: 11 / 17 / 94
mo day yrTime Sample Collected: 14:20
(use military time)MDJ
12/23/94

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned C566-17-03 2:00 4:00☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5 Yr 6/4 Secondary Munsell color: NAUnified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

	38128594 Field Worklist	38125359 Field Worklist	38125312 Field Worklist	38125582 Field Worklist	38125311 Field Worklist
					38128591 Field Worklist

Read and understood by: _____ Date: ____/____/____

Sample ID: 103724

Blank and Standard descriptions: N/A

Composition: CLAY

Description: SEE 103723

List any bottles not filled: N/A

Comments: NA

Sample ID: 103724

Sample Date: 11/17/94
mo day yr

Time Sample Collected: 14:20
(use military time)

Sample type:

- ☐ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☒ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103723

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-17-3A

2.00

4.00

☐ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5YR 6/4

Secondary Munsell color: NA

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

	38125349 Field Worklist	38125763 Field Worklist	38126784 Field Worklist	38125351 Field Worklist	38125352 Field Worklist
					38125348 Field Worklist

Read and understood by: _____

Date: ____/____/____

Sample ID: 103725

Blank and Standard descriptions: NA

Composition: CLAY

Description: CLAY, very pale orange (10Yr 8/2)
Light brown 5Yr 6/4, moderate plasticity, moist
hard (CH)

List any bottles not filled: NA

Comments: NA

Sample ID: 103725

Sample Date: 11 / 17 / 94
mo day yr

Time Sample Collected: 14 : 45
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-17-04 : 5.00 7.60

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10Yr 8/2 Secondary Munsell color: 5Yr 6/4

Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

	30125313 Field Worklist	30128581 Field Worklist	30125362 Field Worklist	30128588 Field Worklist	30128599 Field Worklist
					30125316 Field Worklist

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 103726

Blank and Standard descriptions: NA

Composition: ~~2H NA~~ CLAY
MDH 12/23/14

Description: CLAY very pale orange (10Yr 8/2)
High plasticity, moist, HARD - very HARD (CH)

List any bottles not filled: NA

Comments: NA

Sample ID: 103726

Sample Date: 11 / 17 / 94
mo day yr

Time Sample Collected: 15:05
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-17-05 10.00 12.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10Yr 8/2 Secondary Munsell color: NA

Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

			38128593 Field Worklist	38128592 Field Worklist	38125487 Field Worklist

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 103727

Blank and Standard descriptions: NA

Composition: SAND

Description: clayey sand, moderate brown (5Yr 4/4)
fine-med grained, (CL) moist

List any bottles not filled: NA

Comments: NA

Sample ID: 103727

Sample Date: 11 / 18 / 94
mo day yrTime Sample Collected: 08 : 20
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned 2566-18-010.01.0☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5Y 4/4

Secondary Munsell color: _____

Unified Soil Classification: C L

Stick Bar Code from every bottle label with this sample number below:

FIELD WORKLIST 38125314 Field Worklist	FIELD WORKLIST 38128628 Field Worklist	FIELD WORKLIST 38128627 Field Worklist	FIELD WORKLIST 38125415 Field Worklist	FIELD WORKLIST 38125315 Field Worklist	FIELD WORKLIST 38128578 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103728

Blank and Standard descriptions: NA

Composition: CLAY

Description: Sandy CLAY, light brown (5Yr 5/6), fine
grained (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103728

Sample Date: 11 / 18 / 94
mo day yr

Time Sample Collected: 08:30
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval

Depth from ground
to bottom of interval

(in feet) 11/18/94

(in feet)

Planned CS67-18-02

1.0

2.0

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5 Yr 5/6

Secondary Munsell color: NA

Unified Soil Classification: C L

Stick Bar Code from every bottle label with this sample number below:

38125414 Field Worklist	38125319 Field Worklist	38125318 Field Worklist	38126632 Field Worklist	38126633 Field Worklist	38126577 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 103729

Blank and Standard descriptions: NA

Composition: CLAY

Description: SAME AS 103728

List any bottles not filled: NA

Comments: NA

Sample ID: 103729

Sample Date: 11/18/94
mo day yrTime Sample Collected: 08:45
(use military time)

Sample type:

☒ Normal☐ Trip Blank☐ Field Blank☐ Split☐ Rinsate☐ Duplicate☐ Other _____

Sample matrix:

☒ Soil☐ Rock☐ Sludge☐ Water☐ Sediment☐ Other _____☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned: CS67-18-032.004.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5Yr 5/6Secondary Munsell color: NAUnified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

38128573 Field Worklist	38125328 Field Worklist	38125417 Field Worklist	38125317 Field Worklist	38128534 Field Worklist	38128631 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103730

Blank and Standard descriptions: NA

Composition: SAND

Description: Silty sand, w/ QUARTZ FRAGMENTS fine
grained to gravel, light brown (5/6);
HARD - VERY HARD, moist, med-coarse, rounded & angular
(SP)

List any bottles not filled: NA

Comments: NA

Sample ID: 103730

Sample Date: 11 / 18 / 94
mo day yrTime Sample Collected: 09:15
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS69-18-045.007.00☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5YR 5/6Secondary Munsell color: NAUnified Soil Classification: SP

Stick Bar Code from every bottle label with this sample number below:

30125418 Field Worklist	30125418 Field Worklist	30125418 Field Worklist	30125321 Field Worklist	30125322 Field Worklist	30125322 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103731

Blank and Standard descriptions: RINSE

Composition:

NA ^{7H} DI H₂O
MDA
12/23/14

Description: NA

List any bottles not filled: NA

Comments:

NA

Sample ID: 103731

Sample Date: 11/18/94
mo day yr

Time Sample Collected: 09:15
(use military time)

Sample type:

- ☐ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☒ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103730

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-18-04E

5.00

7.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☒ Liquid
Munsell Color: NA Secondary Munsell color: NA
Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

	30125698 Field Worklist	30125699 Field Worklist	30125699 Field Worklist	30125699 Field Worklist	30125699 Field Worklist
	30125693 Field Worklist	30125725 Field Worklist	30125725 Field Worklist	30125725 Field Worklist	30125643 Field Worklist
		30125655 Field Worklist	30125727 Field Worklist	30125732 Field Worklist	30125726 Field Worklist

Read and understood by: _____

Date: ___/___/___

Sample ID: 103732

Blank and Standard descriptions: NA

Composition: SAND

Description: CLAYEY SAND, w/QUARTZ FRAGMENTS, fine-coarse
gravel, grayish red purple (5RP 4/2), angular (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103732

Sample Date: 11/18/94
mo day yrTime Sample Collected: 10:15
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-18-05-10.0012.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5RP 4/2Secondary Munsell color: NAUnified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

3012576 Field Worklist	3012555 Field Worklist	30125618 Field Worklist	30125287 Field Worklist	30125288 Field Worklist	30125412 Field Worklist

Read and understood by: _____

Date: ____/____/____

Sample ID: 103733

Blank and Standard descriptions: NA

Composition: SAND

Description: SEE 103732 / SAME AS

List any bottles not filled: NA

Comments: NA

Sample ID: 103733

Sample Date: 11 / 18 / 94
mo day yrTime Sample Collected: 10:30
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS67-18-0615.0017.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5 RP 4/2Secondary Munsell color: NAUnified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

			38128684 Field Worklist	38128726 Field Worklist	38125358 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103734

Blank and Standard descriptions: NA

Composition: SAND

Description: Clayey SAND, SPECKLED moderate pink
(5R 7/4), grayish pink (5R 8/2), light Red
(5R 6/6), Sand coarse rounded gravel w/QUARTZ
FRAGMENTS, very hard (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103734

Sample Date: 11 / 18 / 94
mo day yr

Time Sample Collected: 11:00
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS64-18-07

20.00

22.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5R 8/2

Secondary Munsell color: 5R 7/4 - 5R 6/6

Unified Soil Classification: C2

Stick Bar Code from every bottle label with this sample number below:

			30128734 Field Worklist	30128782 Field Worklist	30128533 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 103735

Blank and Standard descriptions: Duplicate

Composition: SAND

Description: SAME AS 103735^U

List any bottles not filled: NA

Comments: NA

Sample ID: 103735

Sample Date: 11/18/94
mo day yr

Time Sample Collected: 11:00
(use military time)

Sample type:

- ☒ Normal 11/18/94
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☒ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103734

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-18-7A

20.0

22.0

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5R 8/2

Secondary Munsell color: 5R 7/4 - 5R 6/6

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

			38128552 Field Worklist	38128785 Field Worklist	38128733 Field Worklist

Read and understood by: _____

Date: 11/18/94

Sample ID: 103736

Blank and Standard descriptions: NA

Composition: SAND

Description: SAME AS 103734 WITH HIGHER
CLAY CONTENT

List any bottles not filled: NA

Comments: NA

Sample ID: 103736

Sample Date: 11 / 18 / 94
mo day yrTime Sample Collected: 11 : 30
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned 0566-18-0825.0027.00☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5R 8/2Secondary Munsell color: 5R 7/4 - 5R 6/6Unified Soil Classification: C L

Stick Bar Code from every bottle label with this sample number below:

			38128557 Field Worklist	38128739 Field Worklist	38128738 Field Worklist

Read and understood by: _____

Date: 1 / 1 / 1

Sample ID: 103737

Blank and Standard descriptions: N/A

Composition: CLAY

Description: CLAY, grayish red purple (SRP 6/2), moist
High plasticity (CH) STIFF

List any bottles not filled: NA

Comments: NA

(11)

5(RP)4/2

5(RP)6/2

NG 8

NY 2.5

~~XXXXXXXXXXXXXXXXXXXX~~
* TRACEY EARLE

103732 103748

103733

103749

103737

103751

103792

103793

103794

102535

102536

SL

Sample ID: 103737

Sample Date: 11 / 18 / 94
mo day yr

Time Sample Collected: 11:50
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K.

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-18-09

30.00

32.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5 RP 6/2

Secondary Munsell color: NA

Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

			30126555 30126555 Field Worklist	30126685 30126685 Field Worklist	30126683 30126683 Field Worklist

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 103738

Blank and Standard descriptions: NA

Composition: NA CLAY

MDH
12/23/14

Description: SAME AS 103737

List any bottles not filled: NA

Comments: NA

Sample ID: 103738

Sample Date: 11 / 18 / 94
mo day yr

Time Sample Collected: 12 : 15
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S i L

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-18-10 35.00 37.00

☐ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5 R 6/2 Secondary Munsell color: NA

Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

			38128723 Field Worklist	38128682 Field Worklist	38128558 Field Worklist

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 103739

Blank and Standard descriptions: NA

Composition: CLAY

Description: Same as 103737

List any bottles not filled: NA

Comments: NA

Sample ID: 103739

Sample Date: 11 / 18 / 94
mo day yr

Time Sample Collected: 12:30
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-18-11

40.00

42.00

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5R 6/2

Secondary Munsell color: NA

Unified Soil Classification: C H

Stick Bar Code from every bottle label with this sample number below:

			38125374 Field Worklist	38126728 Field Worklist	38126727 Field Worklist

Read and understood by: _____

Date: ___ / ___ / ___

Sample ID: 103740

Blank and Standard descriptions: NA

Composition: CLAY

Description: SAME AS 103737

List any bottles not filled: NA

Comments: NA

Sample ID: 103740

Sample Date: 11/18/94
mo day yrTime Sample Collected: 12:45
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station CS6G-18-12Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned ~~CS6G-12-18~~ 11/1845.00 47.00☒ Same as aboveActual MD 12/23/84Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5R 6/2Secondary Munsell color: N/AUnified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

			30128721 Field Worklist	30128723 Field Worklist	30125373 Field Worklist

Read and understood by: _____

Date: / /

..Sample ID: 103741

Blank and Standard descriptions: MDH 12/23/94 DUPLICATE

Composition: CLAV

Description: same as 103740

List any bottles not filled: NA

Comments:

$$N \cdot A =$$

Sample ID: 103741

Sample Date: 11 18 94
mo day yr

Time Sample Collected: 12 : 45
(use military time)

Sample type:

☒ Normal KH 11/18/94

☐ Trip Blank

☐ Field Blank

☐ Split

☐ Rinsate

☒ Duplicate

☐ Other _____

Sample matrix:

☒ Soil

☐ Rock

☐ Sludge

☐ Water

☐ Sediment

☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103740

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-18-12A

45.00

47.00

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5R 4/2

Secondary Munsell color: _____

Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

			<small>38125347</small> Field Worklist	<small>38125738</small> Field Worklist	<small>38128728</small> Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103742

Blank and Standard descriptions: NA

Composition: 7th
NA DI H₂O
MDH
12/23/24

Description: NA

List any bottles not filled: NA

Comments: TRIP BLANK FILLED @ LAB

Sample ID: 103742

Sample Date: 10/12/94 ^{NOV 12/23/94}
~~11/18/94~~ KH
 mo day yr

Time Sample Collected: 15:30
 (use military time)

Sample type:

- ☒ Normal ~~2H~~ 12/23/94
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103741

Station

Planned C56G-TB-05B

Depth from ground
 to top of interval
 (in feet)

NA

Depth from ground
 to bottom of interval
 (in feet)

NA

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA

Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

38125938 Field Worklist	38125937 Field Worklist	38125939 Field Worklist			

Read and understood by: _____

Date: ___/___/___

Sample ID: 103743

Blank and Standard descriptions: NA

Composition: SAND

Description: SAND grayish orange (104r 7/4), fine grained
moist

List any bottles not filled: NA

Comments: NA

Sample ID: 103743

Sample Date: 11 / 22 / 94
mo day yr

Time Sample Collected: 07:35
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6 G-19-01

0.0

21.0

☒ Same as above Actual _____

MDJ
12/23/94

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10YR 7/4

Secondary Munsell color: NA

Unified Soil Classification: SP

Stick Bar Code from every bottle label with this sample number below:

<small>FIELD USE ONLY - DO NOT WRITE IN THESE SPACES</small> <small>38125386</small> Field Worklist	<small>FIELD USE ONLY - DO NOT WRITE IN THESE SPACES</small> <small>38125291</small> Field Worklist	<small>FIELD USE ONLY - DO NOT WRITE IN THESE SPACES</small> <small>38125292</small> Field Worklist	<small>FIELD USE ONLY - DO NOT WRITE IN THESE SPACES</small> <small>38128645</small> Field Worklist	<small>FIELD USE ONLY - DO NOT WRITE IN THESE SPACES</small> <small>38128586</small> Field Worklist	<small>FIELD USE ONLY - DO NOT WRITE IN THESE SPACES</small> <small>38128687</small> Field Worklist

Read and understood by: _____

Date: ___ / ___ / ___

Sample ID: 103744

Blank and Standard descriptions: NA

Composition: SAND

Description: Silty sand, grayish orange (104r 7/4), fine grained
moist (SM)

List any bottles not filled: NA

Comments: NA

Sample ID: 103744

Sample Date: 11 / 22 / 94
mo day yrTime Sample Collected: 07:50
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-19-021.002.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10YR 7/1Secondary Munsell color: NAUnified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

32125416 Field Worklist	32125289 Field Worklist	32125290 Field Worklist	32125575 Field Worklist	32125596 Field Worklist	32125589 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103745

Blank and Standard descriptions: NA

Composition: CLAY

Description: Sandy CLAY, Light Brown (5Yr 5/6), pale yellowish brown, (10Yr 6/2), fine grained moist, low plasticity (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103745

Sample Date: 11 / 22 / 94
mo day yr

Time Sample Collected: 08:05
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-19-03

2.0

4.0

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5 Yr 5/6

Secondary Munsell color: 10 Yr 4/2

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

30125483 Field Worklist	30125294 Field Worklist	30125295 Field Worklist	30125583 Field Worklist	30125548 Field Worklist	30125587 Field Worklist

Read and understood by: _____

Date: ___ / ___ / ___

.. Sample ID: 103746

Blank and Standard descriptions: NA

Composition: CLAY

Description: Sandy CLAY, Light Brown (5Yr 9/6), Very pale Orange (10Yr 8/2), fine grained, moist, very hard (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103746

Sample Date: 11 / 22 / 94
mo day yrTime Sample Collected: 08:30
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-19-04 5.00 7.00

☒ Same as above Actual _____ _____ _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5Y 5/10 Secondary Munsell color: 10Y 8/2Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

38125413 Field Worklist	38125293 Field Worklist	38125298 Field Worklist	38128685 Field Worklist	38128684 Field Worklist	38128584 Field Worklist

Read and understood by: _____ Date: ____/____/____

Sample ID: 103747

Blank and Standard descriptions:

~~NA~~ ³⁴⁴ DUPLICATE
ADH
12/23/94

Composition:

CLAY

Description:

SAME AS 1037470

List any bottles not filled:

NA

Comments:

NA

Sample ID: 103747

Sample Date: 11 / 22 / 94
mo day yr

Time Sample Collected: 08:30
(use military time)

Sample type:

- ☒ Normal *ack mDA 12/23/94*
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☒ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103746

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-19-04A

5.00

7.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid
Munsell Color: 5Yr 5/6 Secondary Munsell color: 10Yr 8/2

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

38125296 Field Worklist	38125297 Field Worklist	38125384 Field Worklist	38125588 Field Worklist	38125688 Field Worklist	38125585 Field Worklist

Read and understood by: _____ Date: ___/___/___

Sample ID: 103748

Blank and Standard descriptions: NA

Composition: CLAY

Description: ~~Sandy CLAY, LIGHT Brown (5Yr 5/6), very pale KH 11/22/94~~
~~Orange (10Yr 8/2), KH 11/22/94~~
CLAY, Grayish red purple (5 RP 4/2), innerbedded very pale
orange (10Yr 8/2), very hard, low plasticity (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103748

Sample Date: 11 / 22 / 94
mo day yr

Time Sample Collected: 08:55
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned C566-19-05

10.00 12.00

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid
Munsell Color: 5RP 4/2 Secondary Munsell color: 10Yr 8/2

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

30125211 Field Worklist	30125212 Field Worklist	30125418 Field Worklist	30125689 Field Worklist	30128654 Field Worklist	30128525 Field Worklist

Read and understood by: _____ Date: ____/____/____

Sample ID: 102563

Sample Date: 12/28/94
mo day yrTime Sample Collected: 11:05
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate

☒ Other TRIP BLANK

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: _____

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CBR-TB-23B_____. NA_____. NA☒ Same as above

Actual _____

_____. _____

_____. _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

				RECORD A COPY FOR EACH OF THE FOLLO 38142788 Field Worklist
				RECORD A COPY FOR EACH OF THE FOLLO 38142787 Field Worklist

Read and understood by: _____

Date: ____/____/____

Sample ID: 102562

Blank and Standard descriptions: NA

Composition: GROUNDWATER

Description: SLIGHTLY TURBID YELLOWISH TINT

List any bottles not filled: NA

Comments: GROUNDWATER COLLECTED FROM TEMPORARY WELL
CBR-T3

Sample ID: 102562

Sample Date: 12 / 28 / 94
mo day yrTime Sample Collected: 10 : 40
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CBR - T3 - 01_____. NA_____. NA
☒ Same as above Actual _____
Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NA Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

		30144851 Field Worklist	30144852 Field Worklist	30142798 Field Worklist
		30144853 Field Worklist	30144856 Field Worklist	30142799 Field Worklist
		30144852 Field Worklist	30144857 Field Worklist	30142797 Field Worklist
		30144873 Field Worklist	30144874 Field Worklist	30144872 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102561

Blank and Standard descriptions: RINSATE

Composition: DISTILLED WATER

Description: RINSED SAMPLING DEVICE (BAILER) WITH DI
WATER - COLLECTED THE WATER IN A STAINLESS STEEL
Bottle ^{12/28/14} AFTER RUNNING/POURING THROUGH DECONED BAILER
BEFORE SAMPLING 102560

List any bottles not filled: NA

Comments: NA

Sample ID: 102561

Sample Date: 12/28/94
mo day yrTime Sample Collected: 09:30
(use military time)

Sample type:

☒ Normal LT 12/27/94☐ Blank or Standard☐ Split☒ Rinsate☐ Duplicate☐ Other _____

Sample matrix:

☐ Soil☐ Rock☐ Sludge☒ Water☐ Sediment☐ Other _____☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station _____

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CBR-T2-01E_____. NA_____. NA☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

		30142795 Field Worklist	30144581 Field Worklist	30144585 Field Worklist
		30142792 Field Worklist	30144583 Field Worklist	30144592 Field Worklist
		30142791 Field Worklist	30144585 Field Worklist	30144593 Field Worklist
		30142796 Field Worklist	30142796 Field Worklist	30144575 Field Worklist

Read and understood by: _____

Date: ____/____/____

Sample ID: 102560

Blank and Standard descriptions: NA

Composition: GROUNDWATER

Description: NO VISUAL TURBIDITY - CLEAR.

List any bottles not filled: NA

Comments: GROUNDWATER SAMPLE FROM TEMPORARY WELL CBR-TZ

Sample ID: 102560

Sample Date: 12 / 28 / 94
mo day yrTime Sample Collected: 9 : 50
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CBR-T2-01_____. NA_____. NA☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

		30144897 Field Worklist	32144895 Field Worklist	30142881 Field Worklist
		30144896 Field Worklist	32142884 Field Worklist	30144871 Field Worklist
		30144894 Field Worklist	32144875 Field Worklist	30142880 Field Worklist
		30142882 Field Worklist	32144875 Field Worklist	30144878 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102559

Blank and Standard descriptions: NA

Composition: GROUNDWATER

Description: SLIGHTLY TURBIT - RED TENT

List any bottles not filled: NA

Comments: FIRST SAMPLE OF THE RESAMPLING OF THE
THREE TEMPORARY WELLS. THIS SAMPLE COLLECTED FROM
TEMPORARY WELL CBR-T1

Sample ID: 102559

Sample Date: 12 / 28 / 94
mo day yrTime Sample Collected: 8 : 45
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CBR-TI-01NANA☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NA Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

		38142793 Field Worklist	38144877 Field Worklist	38144852 Field Worklist
		38142794 Field Worklist	38144884 Field Worklist	38144899 Field Worklist
		38142789 Field Worklist	38144895 Field Worklist	38144896 Field Worklist
		38142796 Field Worklist	38144881 Field Worklist	38144898 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102558

Blank and Standard descriptions: TRIP BLANK

Composition: DI H₂O

Description: N/A

List any bottles not filled: N/A

Comments: TRIP BLANK FILLED @ LAB ON 10/17/94

SAMPLER NOT KNOWN

Note: Last sample collected for Central Shops
This does not include planned groundwater
sampling (monitor wells)

See also EPD/EMS soil sample log books
101900 + 103700.

Sample ID: 102558

12/17/94 MDH
~~10/17/94~~ 12/23/94
 Sample Date: 12/01/94 ~~12/17/94~~
 mo day yr 12/17/94

Time Sample Collected: 15:30
 (use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other TRIP BLANK

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: BS K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample:

102551

Station

Depth from ground
 to top of interval
 (in feet)

Depth from ground
 to bottom of interval
 (in feet)

Planned CS67-TB-11BN/AN/A☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: N/ASecondary Munsell color: N/AUnified Soil Classification: N/A

Stick-Bar Code from every bottle label with this sample number below:

				38125938 Field Worklist
		38125931 Field Worklist	38125942 Field Worklist	38125942 Field Worklist

Read and understood by: _____

Date: ____/____/____

Sample ID: 102557

Blank and Standard descriptions: TRIP BLANK

Composition: NAK H₂O

MDH
12/23/14

Description: NA

List any bottles not filled: NA

Comments: TRIP BLANK FILLED @ LAB (WESTON)

SAMPLE DATE & SAMPLER NOT KNOWN

Sample ID: 102557

Sample Date: 12 / 7 / 94
mo day yrTime Sample Collected: 13 : 45
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other TRIP BLANK

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: BSKFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 102554

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-TB-30BNANA☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102556

Blank and Standard descriptions: SPLIT TO WESTON LABS

Composition: SAND

Description: SAME AS 102542 ^{MDH} 12/23/94

List any bottles not filled: N/A

Comments: N/A

Sample ID: 102556

Sample Date: 12 / 7 / 94
mo day yrTime Sample Collected: 12:30
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☒ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☐ Water
☒ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: BSKFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 102546

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-127194
B31-02DNA NA☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☒ Sludge ☐ LiquidMunsell Color: 5Yr 5/6Secondary Munsell color: NAUnified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

				181787821
			181718821	181786381
			181785221	181785222
			181787821	181711821

Read and understood by: _____

Date: / /

Sample ID: 102555

Blank and Standard descriptions: SPLIT W/ WESTON LAB

Composition: SURFACE WATER SAMPLE

Description: NA

List any bottles not filled: NA

Comments: NA

Sample ID: 102555

Sample Date: 12/07/94
mo day yrTime Sample Collected: 12:00
(use military time)

Sample type:

☒ Normal 12/12/94☐ Blank or Standard☒ Split☐ Rinsate☐ Duplicate☐ Other _____

Sample matrix:

☐ Soil☐ Rock☐ Sludge☒ Water☐ Sediment☐ Other _____☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.Sampler: BSKFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 102545

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-31-01DNANA☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

				18171480
			18171288	18171384
			18171581	18171382
			18171582	18171583

Read and understood by: _____

Date: / /

Sample ID: 102554

Blank and Standard descriptions: FIELD BLANK

Composition: DI H₂O

Description: NA

List any bottles not filled: NA

Comments: DI WATER

Sample ID: 102554

Sample Date: 12 / 67 / 94
mo day yrTime Sample Collected: 11 : 00
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other FIELD BLANK

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K
1 0 2 5 4 4For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 1 0 2 5 4 3

Station

Planned CS66-30-01CDepth from ground
to top of interval
(in feet)NADepth from ground
to bottom of interval
(in feet)NA☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NA Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

			38125827 Field Worklist
			38125832 Field Worklist	38125849 Field Worklist
	38125828 Field Worklist		38125648 Field Worklist
				38125664 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102553

Blank and Standard descriptions:

~~NA~~ Trip Blank
NDH 12/23/94

Composition:

NA

Description:

NA

List any bottles not filled:

NA

Comments:

SAMPLE FILLED @ LAB DATE FILLED AND

SAMPLER UNKNOWN

Sample ID: 102553

Sample Date: 12 / 7 / 94
mo day yrTime Sample Collected: 07 : 50
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other TRIP BLANK

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D HFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 102537

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-TB-29B_____NA_____NA☒ Same as above

Actual _____

_____NA_____NACheck appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102552

Blank and Standard descriptions: Duplicate

Composition: SAME AS 102552

Description: SAME AS 102552

List any bottles not filled: NA

Comments: ~~TRIP BLANK FOR 12/10/99 YH~~ NA
MDH 12/23/94

Sample ID: 102552

Sample Date: 12 / 7 / 94
mo day yrTime Sample Collected: 15 00
07:50 ZH
(use military time) NOV 12/23/94

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☒ Duplicate
☒ Other TRSP NOV 12/23/94

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water 2H NOV 12/23/94
☒ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D HFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 102551
02537 NOV 12/23/94Station CS6G-33-2A
2HDepth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-TB-27B
NOV 12/23/94NANA☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☒ Sludge ☐ LiquidMunsell Color: 5 Yr 5/6Secondary Munsell color: NAUnified Soil Classification: OM
RAP CB Mez 95

Stick Bar Code from every bottle label with this sample number below:

	Field Worklist
	Field Worklist	Field Worklist
			Field Worklist	Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102551

Blank and Standard descriptions: NA

Composition: SAND

Description: SAME AS 102542 WITH SILVER
METALIC SHAVINGS

List any bottles not filled: NA

Comments: NA

Sample ID: 102551

Sample Date: 12 7 194
mo day yrTime Sample Collected: 15:00
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☐ Water
☒ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-33-02NANA☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☒ Sludge ☐ LiquidMunsell Color: 5Yr 5/6 Secondary Munsell color: NAUnified Soil Classification: SM *RAP CORRECTION*

Stick Bar Code from every bottle label with this sample number below:

	30125328 FIELD WORKIST WITH A BOTTLE WITH THIS 30125328 Field Workist			FIELD WORKIST WITH A BOTTLE WITH THIS 30125398 Field Workist
	FIELD WORKIST WITH A BOTTLE WITH THIS 30125398 Field Workist			
	FIELD WORKIST WITH A BOTTLE WITH THIS 30125397 Field Workist			FIELD WORKIST WITH A BOTTLE WITH THIS 32125399 Field Workist

Read and understood by: _____

Date: ____/____/____

Sample ID: 102550

Blank and Standard descriptions: DUPLICATE

Composition: SURFACE WATER SAMPLE

Description: NA

List any bottles not filled: NA

Comments: NA

Sample ID: 102550

Sample Date: 12/07/94
mo day yrTime Sample Collected: 14:30
(use military time)

Sample type:

☒ Normal 12/12/94☐ Blank or Standard☐ Split☐ Rinsate☒ Duplicate☐ Other _____

Sample matrix:

☐ Soil☐ Rock☐ Sludge☒ Water☐ Sediment☐ Other _____☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.Sampler: BSKFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 102550 12/12/94

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
Planned <u>CS6G-33-01A</u>	<u>NA</u>	<u>NA</u>
☒ Same as above Actual _____	_____	_____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NA Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

				FIELD WORKLIST 38125797 Field Worklist
	FIELD WORKLIST 38125718 Field Worklist		FIELD WORKLIST 38125796 Field Worklist	FIELD WORKLIST 38125889 Field Worklist
				FIELD WORKLIST 38125785 Field Worklist
FIELD WORKLIST 38125647 Field Worklist		FIELD WORKLIST 38125711 Field Worklist	FIELD WORKLIST 38125881 Field Worklist	FIELD WORKLIST 38125887 Field Worklist

Read and understood by: _____

Date: 12/12/94

Sample ID: 102549

Blank and Standard descriptions: N/A

Composition: N/A

Description: N/A

List any bottles not filled: N/A

Comments: SURFACE WATER SAMPLE

Sample ID: 102549

Sample Date: 12 7 94
mo day yrTime Sample Collected: 14 : 30
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-33-01NANA☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NA Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

30125620 Field Worklist	30125608 Field Worklist	30125621 Field Worklist		30125788 Field Worklist
30125819 Field Worklist				30125683 Field Worklist
30125739 Field Worklist				30125782 Field Worklist
30125643 Field Worklist	30125674 Field Worklist	30125678 Field Worklist	30125688 Field Worklist	30125637 Field Worklist

Read and understood by: _____ Date: ____/____/____

Sample ID: 102548

Blank and Standard descriptions: NA

Composition: SAND

Description: SAME AS 102542 LMDN 12/23/74

List any bottles not filled: NA

Comments: NA

Sample ID: 102548

Sample Date: 12 / 7 / 94
mo day yrTime Sample Collected: 14 : 00
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil NA
☐ Rock
☐ Sludge
☐ Water
☒ Sediment
☐ Other _____

MDH
12/23/94

Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-32-02NANA☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☒ Sludge ☐ LiquidMunsell Color: 5 Yr 5/6Secondary Munsell color: NAUnified Soil Classification: Sm

Stick Bar Code from every bottle label with this sample number below:

				38125378 Field Worklist
				38125372 Field Worklist
			38128764 Field Worklist	38128767 Field Worklist
			38128522 Field Worklist	38125485 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102547

Blank and Standard descriptions: NA

Composition: NA

Description: NA

List any bottles not filled: NA

Comments: SURFACE WATER SAMPLE

Sample ID: 102547

Sample Date: 12 / 07 / 94
mo day yrTime Sample Collected: 13 : 30
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-32-01____ NA ________ NA ____~~Same as above~~ Actual _____

____ . ____

____ . ____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

			RETURN TO FIELD WORKLIST BY DATE 30125663 Field Worklist	RETURN TO FIELD WORKLIST BY DATE 30125672 Field Worklist
		RETURN TO FIELD WORKLIST BY DATE 30125662 Field Worklist	RETURN TO FIELD WORKLIST BY DATE 30125676 Field Worklist	RETURN TO FIELD WORKLIST BY DATE 30125677 Field Worklist
	RETURN TO FIELD WORKLIST BY DATE 30125675 Field Worklist	RETURN TO FIELD WORKLIST BY DATE 30125644 Field Worklist	RETURN TO FIELD WORKLIST BY DATE 30125715 Field Worklist	RETURN TO FIELD WORKLIST BY DATE 30125642 Field Worklist
	RETURN TO FIELD WORKLIST BY DATE 30125712 Field Worklist	RETURN TO FIELD WORKLIST BY DATE 30125685 Field Worklist	RETURN TO FIELD WORKLIST BY DATE 30125698 Field Worklist	RETURN TO FIELD WORKLIST BY DATE 30125784 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102546

Blank and Standard descriptions: NA

Composition: SAND

Description: SAME AS 102542 ¹MDH 12/23/24

List any bottles not filled: NA

Comments: NA

Sample ID: 102546

Sample Date: 12 07 94
mo day yrTime Sample Collected: 12 : 30
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☐ Water
☒ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-31-02NANA☐ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☒ Sludge ☐ LiquidMunsell Color: 5 Yr 5/6Secondary Munsell color: NAUnified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

				38128766 Field Worklist
				38128765 Field Worklist
				38125371 Field Worklist
		38125377 Field Worklist	38128521 Field Worklist	38125395 Field Worklist

Read and understood by: _____

Date: ____/____/____

Sample ID: 102545

Blank and Standard descriptions: NA

Composition: NA

Description: NA

List any bottles not filled: NA

Comments: SURFACE WATER SAMPLE

Sample ID: 102545

Sample Date: 12 / 7 / 94
mo day yrTime Sample Collected: 12 : 00
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-31-01

NA + 7.14 NA
12/23/94

☒ Same as above Actual _____
Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

38125651 Field Worklist	38125674 Field Worklist		38125714 Field Worklist
38125656 Field Worklist		38125717 Field Worklist		38125781 Field Worklist
38125673 Field Worklist	38125694 Field Worklist		38125645 Field Worklist
		38125682 Field Worklist		38125681 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102544

Blank and Standard descriptions: NA

Composition: SAND

Description: SAME AS 102542

List any bottles not filled: NA

Comments: NA

Sample ID: 102544

Sample Date: 12 7 94
mo day yrTime Sample Collected: 11 : 30
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil ~~12/10/94~~
☐ Rock
☐ Sludge
☐ Water
☒ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned C566-30-02_____. NA_____. NA☒ Same as aboveActual MD12123194

_____. _____

_____. _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 7.5YR 5/6 Secondary Munsell color: NAUnified Soil Classification: A/A-KH
MD12123194

Stick Bar Code from every bottle label with this sample number below:

38125332 Field Worklist				38125332 Field Worklist
	38128518 Field Worklist		38128768 Field Worklist
		38128756 Field Worklist
		38125376 Field Worklist		

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102543

Blank and Standard descriptions: NA

Composition: NA

Description: NA

List any bottles not filled: NA

Comments: SURFACE WATER SAMPLE

Sample ID: 102543

Sample Date: 12/7/94
mo day yrTime Sample Collected: 11:15
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-30-01NANA☒ Same as above . Actual _____Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

FIELD WORKLIST 30125672		FIELD WORKLIST 30125703		FIELD WORKLIST 30125676
	FIELD WORKLIST 30125689		FIELD WORKLIST 30125718	FIELD WORKLIST 30125679
FIELD WORKLIST 30125653		FIELD WORKLIST 30125646	FIELD WORKLIST 30125709	FIELD WORKLIST 30125685
	FIELD WORKLIST 30125677		FIELD WORKLIST 30125636	FIELD WORKLIST 30125643

Read and understood by: _____

Date: ____/____/____

Sample ID: 102542

Blank and Standard descriptions: Rinsate Blank

Composition: SAND NA
MDA 12/23/94

Description: SAME AS 102542 NA
MDA 12/23/94

List any bottles not filled: NA

Comments: ~~SAND~~ NA
MDA 12/23/94

Sample ID: 102542

Sample Date: 12 / 7 / 94
mo day yrTime Sample Collected: 9 : 40
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☒ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S KFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 102541

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS69-29-02ENA NA☒ Same as above

Actual

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☒ Sludge ☒ LiquidMunsell Color: 5Y 5/6 NA Secondary Munsell color: NA NA NAUnified Soil Classification: SM NA

Stick Bar Code from every bottle label with this sample number below:

		30125854 Field Worklist		30125663 Field Worklist
			30125834 Field Worklist
		30125871 Field Worklist		30125635 Field Worklist
			30125876 Field Worklist	

Read and understood by: _____

Date: ___ / ___ / ___

Sample ID: 102541

Blank and Standard descriptions: NA

Composition: SURFACE WATER SAMPLE / SEDIMENT
SAND

Description: SAND, light brown (5 Yr 5/6), fine-med
grained, SATURATED

List any bottles not filled: NA

Comments: NA

Sample ID: 102541

Sample Date: 12 / 7 / 94
mo day yrTime Sample Collected: 10 : 10
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil ~~Rock~~
☐ Rock
☐ Sludge
☐ Water
☒ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.

Describe delay in Comments.

Sampler: BSIC

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-29-02NANA☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☒ Sludge ☐ LiquidMunsell Color: 5Y 5/6Secondary Munsell color: NAUnified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

		38125263 Field Worklist		38125519 Field Worklist
			38128755 Field Worklist
		38125334 Field Worklist		38128759 Field Worklist
			38125265 Field Worklist	

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102540

Blank and Standard descriptions: NA

Composition: AA SURFACE WATER SAMPLE
MDH 12/23/94

Description: AA⁴⁴ NA
MDH 12/23/94

List any bottles not filled: NA

Comments: SURFACE WATER SAMPLE

Sample ID: 102540

Sample Date: 12 / 07 / 94
mo day yrTime Sample Collected: 10 : 00
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-29-01NANA☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

30125706 Field Worklist		30125708 Field Worklist		30125673 Field Worklist
	30125641 Field Worklist		30125680 Field Worklist	30125830 Field Worklist
30125847 Field Worklist		30125648 Field Worklist		30125713 Field Worklist
30125829 Field Worklist	30125684 Field Worklist		30125716 Field Worklist	30125948 Field Worklist

Read and understood by: _____ Date: ___ / ___ / ___

Sample ID: 102538

Blank and Standard descriptions: FIELD BLANK

Composition: DI H₂O

Description: NA

List any bottles not filled: NA

Comments: FILLED SAMPLE W/ DI H₂O

Sample ID: 102538

Sample Date: 12 / 06 / 94
mo day yrTime Sample Collected: 13 : 00
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other FIELD BLANK

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D HFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 102537

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
Planned <u>CS66-FB-07C</u>	<u>NA</u>	<u>NA</u>
Actual _____	_____	_____

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

	20125734 Field Worklist	20125770 Field Worklist	20125811 Field Worklist	20125787 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102537

Blank and Standard descriptions: SPLIT

Composition: SAME AS 102535

Description: SAME AS 102535

List any bottles not filled: NA

Comments: NA

Sample ID: 102537

Sample Date: 12 / 06 / 94
mo day yrTime Sample Collected: 12 : 20
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☒ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: KDHFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 102537

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-22-03D2.004.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☒ Sludge ☐ LiquidMunsell Color: N1Secondary Munsell color: NAUnified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

18178583	181785203	181784823	181787236	181781823
				18178320

Read and understood by: _____

Date: / /

Sample ID: 102536

Blank and Standard descriptions: NA

Composition: SAME AS 102535

Description: SAME AS 102535

List any bottles not filled: NA

Comments: NA

Sample ID: 102536

Sample Date: 12 / 06 / 94
mo day yrTime Sample Collected: 12 : 20
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-22-032.00 4.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☒ Sludge ☐ LiquidMunsell Color: N 1/2 R 5/10 2.5 Secondary Munsell color: NAUnified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

30125200 Field Worklist	30125201 Field Worklist	30135945 Field Worklist	30135939 Field Worklist	30128544 Field Worklist
				30125369 Field Worklist

Read and understood by: _____ Date: ____/____/____

Sample ID: 102535

Blank and Standard descriptions: N/A

Composition: BURN MATERIAL - SILTY SAND

Description: BURN - MATERIAL, GRAVEL, SILTY SAND,
MISC NAILS, WOOD PARTICLES & METAL FRAGMENTS,
BLACK (N) SATURATED

List any bottles not filled: N/A

Comments: N/A

Sample ID: 102535

Sample Date: 12 / 06 / 94
mo day yrTime Sample Collected: 11 : 50
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-22-021.002.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☒ Sludge ☐ LiquidMunsell Color: N/2 R 10 Y 5 Secondary Munsell color: NAUnified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

38125343 Field Worklist	38125378 Field Worklist	38125348 Field Worklist	38125343 Field Worklist	38125388 Field Worklist
				38125383 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102534

Blank and Standard descriptions: N/A

Composition:

^C
~~CLAY~~
MCH
12/23/74

Description:

Sandy CLAY, moderate reddish orange
(10 R 6/6), and pale red (10 R 6/2) (CL)

List any bottles not filled:

NA

Comments:

NA

Sample ID: 102534

Sample Date: 12/6/94
mo day yrTime Sample Collected: 11:45
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-22-010.061.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☒ Sludge ☐ LiquidMunsell Color: 10R 6/6Secondary Munsell color: 10R 6/2Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

30125385 Field Worklist	30125364 Field Worklist	30135936 Field Worklist	30135937 Field Worklist	30128542 Field Worklist
				30125318 Field Worklist

Read and understood by: _____

Date: ____/____/____

Sample ID: 102533

Blank and Standard descriptions: TRIP BLANK

Composition: NA

Description: NA

List any bottles not filled: NA

Comments: TRIP BLANK WAS FILLED @ LAB ON 10/17/94
SAMPLER NOT KNOWN

Sample ID: 102533

Sample Date: 10/17/94
mo day yrTime Sample Collected: 15:45
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☒ Other TRIP BLANK

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D HFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 102532

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CSGG-TB-10BNANA☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NA Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

	38125953 Field Worklist	38125959 Field Worklist	38125958 Field Worklist	38125958 Field Worklist

Read and understood by: _____

Date: ____/____/____

Sample ID: 102532

Blank and Standard descriptions: N/A

Composition: SAND

Description: SAME AS 102532

List any bottles not filled: NA

Comments: N/A

Sample Date: 12 6 94
mo day yrTime Sample Collected: 09 : 55
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS67-23-010.00 1.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☒ Wet ☐ Sludge ☐ LiquidMunsell Color: 10 R 6/6Secondary Munsell color: NAUnified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

	38125192 Field Worklist	38125388 Field Worklist	38125191 Field Worklist
		38125311 Field Worklist
		38125688 Field Worklist
		38126675 Field Worklist		

Read and understood by: _____

Date: / /

Sample ID: 102531

Blank and Standard descriptions: NA

Composition: SAND

Description: Silty SAND, moderate reddish orange (OR 6/6),
fine-med grained, saturated (SM)

List any bottles not filled: NA

Comments: NA

Sample ID: 102531

Sample Date: 12 6 94
mo day yrTime Sample Collected: 9 : 40
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned 25 KH 12/6/94
C56G-24-010.001.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☒ Wet ☐ Sludge ☐ LiquidMunsell Color: 10 R 6/6Secondary Munsell color: NAUnified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

		FIELD WORKLIST 30128778 Field Worklist		FIELD WORKLIST 30128512 Field Worklist
	FIELD WORKLIST 30125331 Field Worklist		FIELD WORKLIST 30128653 Field Worklist	
		FIELD WORKLIST 30125194 Field Worklist		FIELD WORKLIST 30125193 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 102530

Blank and Standard descriptions: N/A

Composition: ~~MSA~~ SAND
MSA
12/23/94

MSA
12/23/94
Description: ~~MSA~~ SAME AS 102530

List any bottles not filled: N/A

Comments: N/A

Sample ID: 102530

Sample Date: 12/5/94
mo day yrTime Sample Collected: 15:15
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D #

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)

Planned

CS66-24-010.001.00☒ Same as above . ActualMDP 12/23/94MDP 12/23/94Check appropriate box to describe soil: ☐ Dry ☐ Damp ☒ Wet ☐ Sludge ☐ LiquidMunsell Color: 10R6/6 Secondary Munsell color: NAUnified Soil Classification: CL
MDP 12/23/94

Stick Bar Code from every bottle label with this sample number below:

30125272 Field Worklist	30125273 Field Worklist	30125641 Field Worklist	30125642 Field Worklist	30125513 Field Worklist
				30125397 Field Worklist

Read and understood by: _____

Date: ____/____/____

Sample ID: 102529

Blank and Standard descriptions: NA

Composition: ~~KA~~ ~~AA~~ SAND

MOH/2/23/94

Description: ~~KA~~ ~~AA~~ ~~KA~~ Clayey SAND; moderate reddish orange
(10 R₄₀), fine-medium grained; wet-moist, stiff (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 102529

Sample Date: 12 5 194
mo day yrTime Sample Collected: 14:45
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS67-26-010.001.00☒ Same as above Actual _____NDH, 2/23/94Check appropriate box to describe soil: ☐ Dry ☐ Damp ☒ Wet ☐ Sludge ☐ LiquidMunsell Color: 10R4/0 Secondary Munsell color: NAUnified Soil Classification: CL NDH, 2/23/94

Stick Bar Code from every bottle label with this sample number below:

30125269 Field Worklist	30125274 Field Worklist	30125677 Field Worklist	30125671 Field Worklist	30125515 Field Worklist
				30125383 Field Worklist

Read and understood by: _____

Date: 1 / 1 / _____

Sample ID: 102528

Blank and Standard descriptions: NA

Composition: NA

Description: ALAKH SEE 102526
MDH
12/23/74

List any bottles not filled: NA

Comments: NA

Sample ID: 102528

Sample Date: 12/05/94
mo day yrTime Sample Collected: 13:30
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: KDH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-27-010.001.00☒ Same as above

Actual

KDH 12/23/94Check appropriate box to describe soil: ☐ Dry ☐ Damp ☒ Wet ☐ Sludge ☐ LiquidMunsell Color: 5Yr 5/6 Secondary Munsell color: NAUnified Soil Classification: NA
MDN 12/23/94

Stick Bar Code from every bottle label with this sample number below:

38125398 Field Worklist		38125678 Field Worklist		38125516 Field Worklist
	38125278 Field Worklist		38125676 Field Worklist
		38125271 Field Worklist		

Read and understood by: _____

Date: 1/1/

Sample ID: 102527

Blank and Standard descriptions: DUPLICATE

Composition: ~~ALL~~ ^{2H} SAND

MDP
12/23/94

Description: ~~NA~~ ^{2H} SEE 102526

MDP
12/23/94

List any bottles not filled: NA

Comments: NA

Sample ID: 102527

Sample Date: 12/05/94
mo day yrTime Sample Collected: 13:15
(use military time)

Sample type:

- ☒ Normal KH 12/5/94
☐ Blank or Standard
☐ Split
☐ Rinsate
☒ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D HFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 102527MDN 12/23/94

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-28-01A0.001.00☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☐ Damp ☒ Wet ☐ Sludge ☐ LiquidMunsell Color: ALB 5Yr 5/6 Secondary Munsell color: NAUnified Soil Classification: ALB SM
MDN 12/23/94

Stick Bar Code from every bottle label with this sample number below:

38125266 Field Worklist	38125366 Field Worklist	38128754 Field Worklist	38128732 Field Worklist	38128517 Field Worklist
				38125264 Field Worklist

Read and understood by: _____ Date: ____/____/____

Sample ID: 102526

Blank and Standard descriptions: NA

Composition: ~~NA~~^{2H} SAND

NDH
12/23/94

Description: ~~NA~~^{2H}

NDH
12/23/94

Silty Sand, light brown (5 Yr 5/6), fine-med
grained, rounded (SM)

List any bottles not filled: NA

Comments: NA

Sample ID: 102526

Sample Date: 12 / 5 / 94
mo day yrTime Sample Collected: 13:15
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: K D H

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station _____ Depth from ground to top of interval (in feet) _____ Depth from ground to bottom of interval (in feet) _____

Planned CS66-28-01 _____ 0.00 _____ 1.00☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☐ Damp ☒ Wet ☐ Sludge ☐ LiquidMunsell Color: 5Yr 5/0 Secondary Munsell color: NAUnified Soil Classification: KA SM MDN 12/23/94

Stick Bar Code from every bottle label with this sample number below:

		30125267 Field Worklist		30125267 Field Worklist
	30125268 Field Worklist		30125261 Field Worklist	
		30125389 Field Worklist		30125735 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102525

Blank and Standard descriptions: TRIP BLANK

Composition: NA

Description: NA

List any bottles not filled: NA

Comments: TRIP BLANKS FILLED AT LAB -
TIME & DATE REFLECTS THAT
WHEN FILLED

Sample ID: 102525

Sample Date: 10 12 5 94
mo day yr

Time Sample Collected: 15:30
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 102521

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
Planned <u>CBR-TB-21B</u>	<u>NA</u>	<u>NA</u>

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

38125945 Field Worklist	38125943 Field Worklist	38125946 Field Worklist	38125944 Field Worklist	

Read and understood by: _____ Date: ____/____/____

Sample ID: 102524

Blank and Standard descriptions: TRIP BLANK

Composition: DI H₂O

Description: - NA -

List any bottles not filled: NA

Comments: SAMPLE FILLED BY LABORATORY - DATE & SAMPLER
UNKNOWN

Sample ID: 102524

Sample Date: 12/05/94
mo day yrTime Sample Collected: 09:00
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: BSK
BSK ^{MDH}
12/23/94

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 102523

Station

 Depth from ground
 to top of interval
 (in feet)

 Depth from ground
 to bottom of interval
 (in feet)
Planned C56G-TB-25BNANA☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

189567883	189567882	189567881		

Read and understood by: _____

Date: ____/____/____

Sample ID: 102523

Blank and Standard descriptions: NA²⁴⁴ SPLIT TO WESTON
MDH
12/23 R4

Composition: NA

Description: _____

List any bottles not filled: _____

Comments: _____

Sample ID: 102523

Sample Date: 12 05 94
mo day yrTime Sample Collected: 08 : 50
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☒ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S KFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 102521

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CBR-T3-01DNANA☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

185504801	185504802	185504803
185505001	185505002	185505003	185505004	185505005
185505001	185505002	185505003		

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102522

Blank and Standard descriptions: DUPLT CATE

Composition: NA

Description: NA

List any bottles not filled: NA

Comments: NA

Sample ID: 102522

Sample Date: 12 / 05 / 94
mo day yrTime Sample Collected: 08:40
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☒ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S KFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 102521

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in-feet)Planned CBR-T3-01ANANA☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

30125753 Field Worklist	30125784 Field Worklist	30125773 Field Worklist	30125768 Field Worklist	
30136836 Field Worklist	30136846 Field Worklist	30136835 Field Worklist	30136857 Field Worklist	30136858 Field Worklist
30136863 Field Worklist	30136858 Field Worklist	30136769 Field Worklist		

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID:-102521

Blank and Standard descriptions: NA

Composition: NA

Description: NA

List any bottles not filled: NA

Comments: NA

Sample ID: 102521

Sample Date: 12 10 51 94
mo day yrTime Sample Collected: 08 : 30
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
Planned <u>CBR-T3-01</u>	<u>NA</u>	<u>NA</u>
☒ Same as above Actual _____	_____	_____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NA Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

30125756 Field Worklist	30125758 Field Worklist	30125757 Field Worklist	30125778 Field Worklist
30136848 Field Worklist	30136847 Field Worklist	30136833 Field Worklist	30136858 Field Worklist	30136848 Field Worklist
30136861 Field Worklist	30136862 Field Worklist	30136765 Field Worklist		

Read and understood by: _____

Date: ____/____/____

Sample ID: 102520

Blank and Standard descriptions:

~~XH~~
~~NA~~ FIELD BLANK
NDH
12/23/94

Composition:

NA

Description:

NA

List any bottles not filled:

NA

Comments:

NA

Sample ID: 102520

Sample Date: 12/05/94
mo day yrTime Sample Collected: 08:00
(use military time)

Sample type:

- ☐ Normal
☒ Blank or Standard FIELD
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S KFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 102519

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)

Planned

CBR-~~12~~-01CNANA☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

30125777 Field Worklist	30125788 Field Worklist	30125884 Field Worklist	30125881 Field Worklist	
30136841 Field Worklist	30136845 Field Worklist	30136838 Field Worklist	30136852 Field Worklist	30136851 Field Worklist
30136878 Field Worklist	30136857 Field Worklist	30136765 Field Worklist		

Read and understood by: _____

Date: ____/____/____

Sample ID: -102519

Blank and Standard descriptions: NA

Composition: NA

Description: NA

List any bottles not filled: NA

Comments: MDH
NA 12/23/94

Continued from Sample ID# 103799.
Sampling for Central Shops continues through
Sample ID# 102558. This does not include
the planned groundwater sampling (monitor
wells).

Sample ID: 102519

Sample Date: 12 10 51 94
mo day yrTime Sample Collected: 07:50
(use military time)

Sample type:

- ☒ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: FSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station	Depth from ground to top of interval (in feet)	Depth from ground to bottom of interval (in feet)
Planned <u>CBR-TZ-01</u>	<u>NA</u>	<u>NA</u>
☒ Same as above Actual _____	_____	_____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid
 Munsell Color: NA Secondary Munsell color: NA
 Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

30125908 Field Worklist	30125905 Field Worklist	30125781 Field Worklist	30125776 Field Worklist	
30136030 Field Worklist	30136042 Field Worklist	30136031 Field Worklist	30136054 Field Worklist	30136053 Field Worklist
30136060 Field Worklist	30136065 Field Worklist	30113468 Field Worklist		

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 102518

Sample Date: ___ / ___ / ___
mo day yr

Time Sample Collected: ___ : ___
(use military time)

Sample type:

- ☐ Normal
☐ Blank or Standard
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: _____

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned _____

☐ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: _____

Secondary Munsell color: _____

Unified Soil Classification: _____

Stick Bar Code from every bottle label with this sample number below:

Read and understood by: Judi Phillips

Date: 11 / 7 / 94

Comments

Write down the Project code from the Chain-of-Custody stub. Describe in detail any environmental factors that might affect the chemistry of the sample, including relationship of the sample interval to any sewer, pipeline, or other nearby structure. If there was any unusual delay between sample collection and sample bottling, record the duration of the delay, briefly describe the holding conditions of the sample during the delay, and record the reason for the delay. Record any unusual condition or situation involved with the site or the sampling process that may affect the chemical or physical properties of the sample. Any deviations from routine procedures must be described here.

Unified Soil Classification

Record the Unified Soil Classification for this sample in the space provided. (Use the American Geological Institute [AGI] data sheet 38.1, Technical Memorandum No. 3-357, prepared for Office, Chief of Engineers, by Waterways Equipment Station, Vicksburg, Mississippi, March 1953.)

Bottle Entry

Transfer the bottle number by peeling the label subtitled "(place in sample logbook)" from each bottle label associated with this Sample ID and sticking it in one of the rectangles at the bottom of the page. The six-digit Sample ID written on the bottle label must match the Sample ID at the top of this page. The eight-digit bottle number identifies each bottle. If there is no peel-off label, write the bottle number of each bottle in the rectangles provided. Enter one eight-digit number per rectangle.

Signature

The EPD/EMS Project Technical Manager or representative must review each page once it is completed for legibility and completeness. It is important to check that information from the Chain-of-Custody stub about the Planned Station has been transferred correctly. The Project Technical Manager or representative signs and dates the page once he is satisfied that the recorded data are legible and complete. No changes must be made to a page after it has been signed as read and understood.

Blank or Standard Description

Specify the type of blank if the sample is a blank: field, trip, equipment, etc. If the sample is a standard, describe its source and what it is.

Composition

List the components of the sample, including mineralogy (quartz, clay, heavy minerals, etc.) and foreign objects (asphalt, cement, shingles, etc.), as percents of the total.

Description

Describe the general character of the sample: whether it is a core, stream sediment, etc., and the general location from which it was taken. Provide a brief geologic description of the sample, including degree of sorting; grain size, etc.

List any bottles not filled

If the sample volume was not large enough to fill all the bottles listed on the Chain-of-Custody form, list the analyses requested for which bottles were not filled.

Sample Matrix

Indicate the matrix with an "X" in the appropriate box. If none of the boxes supplied is appropriate, select "OTHER" and print the matrix in the space provided, adding explanatory text under "COMMENTS" if needed.

Sampler

The sampler is the person responsible for putting the sample into the bottle. The sampler enters his initials in the spaces provided. He also signs the signature line on the second page of the sample logbook.

Planned Station

Enter the planned station as printed on the Chain-of-Custody stub.

Planned Intervals

Enter the planned depth from the ground to the top of core and the depth from the ground to the bottom of core in feet and hundredths of feet. The top and bottom of the planned sampling interval are printed on the Chain-of-Custody stub.

Actual Station

If the actual station and intervals are the same as the planned station and intervals, check the box, otherwise enter the actual sample station.

Actual Intervals

Measure and enter the actual depth from the ground to the top of core and the depth from the ground to the bottom of core in feet and hundredths of feet. It is not necessary to enter the actual intervals if they are the same as the planned intervals and planned station and the appropriate box is checked.

Moisture Content

Indicate the moisture content with an "X" in the appropriate box. If the soil is powdery and doesn't stick together, mark it as "Dry". If the soil sticks together but doesn't ooze water, mark it as "Damp." If the soil exudes water when pressed or squeezed, mark it as "Wet." If the sample can be poured, doesn't mound, yet doesn't flow like water, mark it as "Sludge." If the sample flows like water, mark it "Liquid."

Munsell Color

Record the primary Munsell color designation in the first space provided. The character may be a capital letter or a numeral. (Use the standardized soil color chart available from the Munsell Color Company, 2441 North Calvert St., Baltimore, Maryland.) If there is a secondary color, enter it in the space captioned Secondary Munsell color

DIRECTIONS FOR FILLING OUT THE SAMPLE LOGBOOK

INTRODUCTION

The pages of this logbook are designed for rapid entry into computer files. The information on each line must be filled out carefully and legibly using the following directions.

GENERAL RULES

All samplers who record information must sign the signature page at the front of this logbook. Be sure that any previous samplers have also signed on the signature page.

Enter text by printing. Select from checklists with an "X" in the appropriate box.

Use a black, ball-point, indelible-ink pen.

Upon completing a page, the EPD/EMS Project Technical Manager or representative must review the page, sign, and enter the date in the spaces provided.

Once a book is finished, enter projects and associated Sample ID numbers on the first page. Confirm that the signature page has been completed.

SPECIFIC INSTRUCTIONS FOR EACH ENTRY

Sample Date

Record the date as a six-digit number, using only digits and leaving no blanks. The first two digits indicate the month, the second two digits indicate the day, and the final two digits indicate the year.

Time Sample Collected

Record the time the sample was collected as a four-digit number using military time. Use only digits and leave no blanks. If there is any unusual delay between the time the sample is collected and the sealing of the last sample jar, indicate this with an "X" in the box labeled "Check here if unusual delay in bottling samples" and record a description of the delay under "COMMENTS."

Sample Type

Select the type of sample with an "X" in the appropriate box. If none of the boxes supplied is appropriate, select "OTHER" and print the sample type in the space provided, adding explanatory text under "COMMENTS" if needed. Sample type is indicated on the Chain-of-Custody stub. If the sample is a duplicate, split, rinsate, etc., record the number (Sample ID) of the associated sample in the space provided.

EPD/EMS SOIL SAMPLE LOGBOOK

SIGNATURE PAGE

SIGNATURE	INITIALS	PRINTED NAME	COMPANY
<u>Lemuel Wayne Revels</u>	<u>LWR</u>	<u>Lemuel Wayne Revels</u>	<u>M+E</u>
<u>David Humphreys</u>	<u>DDH</u>	<u>David Humphreys</u>	<u>M+E</u>
<u>Bruce S. Kristiansen</u>	<u>BSK</u>	<u>BRUCE S. KRISTIANSEN</u>	<u>RUST E+I</u>
<u>Kelly D. Hunter</u>	<u>KDH</u>	<u>KELLY D. HUNTER</u>	<u>RUST E+I</u>
<u>Melanie D. Hill</u>	<u>MDH</u>	<u>Melanie D. Hill</u>	<u>RUST E+I</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>

EPD/EMS SOIL SAMPLE LOGBOOK

Project ABRP FROM # 102500 TO # 102517

Project CS-BRP FROM # 102518 TO # 102563 ^{12/24/94} ~~33~~

Project _____ FROM # _____ TO # _____

Project _____ FROM # _____ TO # _____

Project _____ FROM # _____ TO # _____

Book in use from 7/27/94 to 1/1/95

ENVIRONMENTAL PROTECTION DEPARTMENT

SAVANNAH RIVER SITE

SAMPLE IDENTIFICATION NUMBERS 102500 - 102599

Sample ID: 103799

0945

Sample Date: 12/15/94
mo day yrTime Sample Collected: 15:35 H
(use military time)

H-D A; 2/23/94

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☒ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CBR-T1-01NANA☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

30125823 Field Worklist	30125779 Field Worklist	30125826 Field Worklist	30125822 Field Worklist	30135837 Field Worklist	30135843 Field Worklist
30135854 Field Worklist	30135865 Field Worklist	30135849 Field Worklist	30135853 Field Worklist		
30135834 Field Worklist			30138767 Field Worklist		

Read and understood by: _____

Date: ____/____/____

Sample ID: 103799

Blank and Standard descriptions: NA

Composition: NA

Description: NA

List any bottles not filled: NA

Comments: SAMPLES WERE PLANNED TO BE SAMPLED
ON 12/1/94 - HOWEVER THE WELL COVER WAS PAINTED
ON 12/1/94 & PAINT WAS STILL WET THEREFORE
SCHEDULED FOR 12/5/94

Note: Samples continued with: Sample ID#
102519 through 102558. This does not
include the planned 2nd phase of
groundwater sampling (monitor wells).

Sample ID: 103798

Sample Date: 12 / 01 / 94
mo day yrTime Sample Collected: 15 40 30
(use military time)

Sample type:

- ☐ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☒ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☒ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: BSKFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103799

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CBR-T2-01 ENANA☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

30136011 Field Worklist	30136039 Field Worklist	30125775 Field Worklist	30125774 Field Worklist	30125759 Field Worklist	30125783 Field Worklist
30136044 Field Worklist	30136032 Field Worklist	30136034 Field Worklist	30136039 Field Worklist	30136055 Field Worklist	30136056 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103798

Blank and Standard descriptions: RINSATE

Composition: DI. H₂O

Description: NA

List any bottles not filled: NA

Comments: RINSATE WAS COLLECTED ON 12/1/94 PRIOR
TO REALIZING THE WELLS HAD WET PAINT ON THEM

Sample ID: 103797

Sample Date: 12 / 1 / 94
mo day yr

Time Sample Collected: 14:45
(use military time)

Sample type:

- ☐ Normal
☐ Trip Blank
☒ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103794

Station

Planned CS66 - FB - OZC

Depth from ground
to top of interval
(in feet)

NA

Depth from ground
to bottom of interval
(in feet)

NA

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA

Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

		38125785 Field Worklist	38125761 Field Worklist	38125785 Field Worklist	38125772 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 103797

Blank and Standard descriptions: FIELD BLANK

Composition: DI H₂O

Description: DI H₂O

List any bottles not filled: NA

Comments: NA

Sample ID: 103796

Sample Date: 12 / 11 / 94
mo day yr

Time Sample Collected: 14:40
(use military time)

Sample type:

- ☐ Normal
☒ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

BSK ADH
12/23/94
GLH

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103798

Station

Planned C566 - TB - 27B

Depth from ground
to top of interval
(in feet)

NA

Depth from ground
to bottom of interval
(in feet)

NA

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA

Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

		15171722	151716281	151716282

Read and understood by: _____

Date: / /

Sample ID: 103796

Blank and Standard descriptions: TRIP BLANK

Composition: DI H₂O

Description: NA

List any bottles not filled: NA

Comments: FILLED @ LAB (WESTON - DATE &
SAMPLER NOT KNOWN)

Sample Date: 10 / 17 / 94
mo day yr

Sample ID: 103795

Time Sample Collected: 14:45
(use military time)

Sample type:

- ☐ Normal
☒ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103794

Station

Planned CS6G-TB-09E

Depth from ground
to top of interval
(in feet)

NA

Depth from ground
to bottom of interval
(in feet)

NA

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid
Munsell Color: NA
Unified Soil Classification: NA
Secondary Munsell color: NA

Stick Bar Code from every bottle label with this sample number below:

		38125895 Field Worklist	38125896 Field Worklist	38125898 Field Worklist	38125897 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 103794

Blank and Standard descriptions: NA

Composition: SAND

Description: SAME AS 103792

List any bottles not filled: NA

Comments: NA

Sample ID: 103793

Sample Date: 12 / 1 / 94
mo day yrTime Sample Collected: 04:00
(use military time) NDH
12/23/94

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delayin bottling samples.
Describe delay in Comments.Sampler: BS K
NDH
12/23/94

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned C567-21-1140.0042.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: N 9.0 R 10.0 Secondary Munsell color: N 4Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

			30135963 Field Worklist	30135963 Field Worklist	30135963 Field Worklist

Read and understood by: _____

Date: 1 / 1 / 94

Sample ID: 103793

Blank and Standard descriptions: NA

Composition: SAND

Description: SAME AS 103792

List any bottles not filled: NA

Comments: NA

Sample ID: 103792

Sample Date: 12 / 01 / 94
mo day yr

Time Sample Collected:
(use military time)

1339
01:39 ~~24~~
MD ^H 12/23/94

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-21-10

35.00

37.00

☒ Same as above

Actual _____

Check appropriate box to describe soil:

☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: N 9.0 DS 10w 2.5

Secondary Munsell color: NA

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

			38135964 Field Worklist	38135967 Field Worklist	38136821 Field Worklist

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 103792

Blank and Standard descriptions: NA

Composition: SAND

Description: CLAYEY SAND, white (N 9), fine grained,
damp, hard (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103791

Sample Date: 12 / 1 / 94
mo day yr

Time Sample Collected: 12:50
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CSGG-21-09 30.00 32.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10 Yr 8/2 Secondary Munsell color: NA

Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

			30135959 Field Worklist	30135956 Field Worklist	30136826 Field Worklist

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 103791

Blank and Standard descriptions: NA

Composition: CLAY

Description: CLAY, Very pale orange (10YR 8/2),
high plasticity, Damp, Very Hard (CH)

List any bottles not filled: NA

Comments: NA

Sample ID: 103790

Sample Date: 12 / 1 / 94
mo day yrTime Sample Collected: 11:50
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned C564-21-0825.0027.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5Y8/1Secondary Munsell color: 5RP 4/2Unified Soil Classification: C#

Stick Bar Code from every bottle label with this sample number below:

			38135824 Field Worklist	38135947 Field Worklist	38135951 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103790

Blank and Standard descriptions: NA

Composition:

~~AT~~ ^{2H} CLAY
12/23/94

Description: CLAY, yellowish gray (5Y 8/1), Grayish
red purple (5RP 4/2), high plasticity; damp
very hard (CH)

List any bottles not filled: NA

Comments: NA

Sample ID: 103789

Sample Date: 12 / 1 / 94
mo day yrTime Sample Collected: 11 15
~~10:25~~ KH
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.

Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-21-0720.0022.00
☒ Same as above Actual _____
Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5RP 4/2 Secondary Munsell color: NAUnified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

			38135965 Field Worklist	38135965 Field Worklist	38136828 Field Worklist

Read and understood by: _____ Date: ___/___/___

Sample ID: 103789

Blank and Standard descriptions: NA

Composition: CLAY

Description: CLAY; Grayish red purple (5 RP 4/2)
Damp, very hard, high plasticity (CH)

List any bottles not filled: NA

Comments: NA

Sample ID: 103788

Sample Date: 12 / 1 / 94
mo day yr

Time Sample Collected: 11:15
(use military time)

Sample type:

- ☐ Normal
☐ Trip Blank
☐ Field Blank
☒ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103789

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-21-07D

20.00

22.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5 RP 4/2 Secondary Munsell color: NA

Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103788

Blank and Standard descriptions: SPLIT TO WESTON

Composition: CLAY

Description: SAME AS 103789

List any bottles not filled: ALL

Comments: ALL ^{MDH} 12/23/94 Split sample sent to
Weston Labs.

Sample ID: 103787

Sample Date: 12 / 1 / 94
mo day yrTime Sample Collected: 10:25
(use military time)

Sample type:

- ☐ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☒ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B SKFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103786

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-21-06A15.0017.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10YR 8/2Secondary Munsell color: 5YR 5/6Unified Soil Classification: C #

Stick Bar Code from every bottle label with this sample number below:

			30135958 Field Worklist	30135957 Field Worklist	30136886 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 103787

Blank and Standard descriptions: DUPLICATE

Composition: CLAY

Description: SAME AS 103786

List any bottles not filled: NA

Comments: NA

Sample ID: 103786

Sample Date: 12 / 1 / 94
mo day yr

Time Sample Collected: 10:25
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-21-06

15.00

17.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10 Yr 8/2 Secondary Munsell color: 5 Yr 5/6

Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

			38135958 Field Worklist	38135969 Field Worklist	38136227 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103786

Blank and Standard descriptions: NA

Composition: CLAY

Description: CLAY; very pale orange (10 Yr 8/2),
light brown (5 Yr 5/6) - pale red purple (5 RP 4/2);
very hard, damp--high plasticity (CH)

List any bottles not filled: NA

Comments: NA

Sample ID: 103785

Sample Date: 12 / 1 / 94
mo day yr

Time Sample Collected: 09:55
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-21-05

10.00

12.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ Liquid
Munsell Color: 10Yr 8/2 Secondary Munsell color: 5 Yr 5/6
Unified Soil Classification: C L

Stick Bar Code from every bottle label with this sample number below:

			30128547 30128547 Field Worklist	30128546 30128546 Field Worklist	30136225 30136225 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 103785

Blank and Standard descriptions: NA

Composition: CLAY

Description: SAME AS 103784

List any bottles not filled: NA

Comments: NA

Sample ID: 103784

Sample Date: 12 / 1 / 94
mo day yrTime Sample Collected: 09:35
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CSGG-21-045.007.00☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10 Yr 8/2Secondary Munsell color: 5 Yr 5/6Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

30128624 UNIVERSITY OF CALIFORNIA 30128624 Field Worklist	30128623 UNIVERSITY OF CALIFORNIA 30128623 Field Worklist	30128546 UNIVERSITY OF CALIFORNIA 30128546 Field Worklist	30125362 UNIVERSITY OF CALIFORNIA 30125362 Field Worklist	30125367 UNIVERSITY OF CALIFORNIA 30125367 Field Worklist	30125364 UNIVERSITY OF CALIFORNIA 30125364 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 103784

Blank and Standard descriptions: NA

Composition: CLAY

Description: Sandy CLAY, very pale orange (10YR 8/2),
light brown (5Y 5/6), fine grained, damp
very hard, (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103783

Sample Date: 12 / 1 / 94
mo day yrTime Sample Collected: 08:40
(use military time)

Sample type:

☒ Normal NA 12/23/94☐ Trip Blank☐ Field Blank☐ Split☒ Rinsate☐ Duplicate☐ Other _____

Sample matrix:

☐ Soil☐ Rock☐ Sludge☒ Water☐ Sediment☐ Other _____☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.Sampler: B S KFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103782

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CSGG-21-03E2.004.00☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

30125750 Field Worklist	30125753 Field Worklist	30125652 Field Worklist	30125667 Field Worklist	30125662 Field Worklist	30125668 Field Worklist
30125657 Field Worklist	30125633 Field Worklist	30125745 Field Worklist	30125751 Field Worklist	30125748 Field Worklist	30125754 Field Worklist
				30125944 Field Worklist	30125835 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 103783

Blank and Standard descriptions: RINSE - DI H₂O

Composition: NA

Description: SAME AS 103782 12/1/94
NA MDH 12/23/94

List any bottles not filled: NA

Comments: NA

Sample ID: 103782

Sample Date: 12 / 1 / 94
mo day yrTime Sample Collected: 08:45
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if-unusual delay

in bottling samples.

Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned C507-21-032.004.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10Yr 8/2Secondary Munsell color: 5Yr 5/6Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

30125328 Field Worklist	30125329 Field Worklist	30125330 Field Worklist	30125333 Field Worklist	30125335 Field Worklist	30125345 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 103782

Blank and Standard descriptions: NA

Composition: CLAY

Description: Sandy CLAY, very pale orange (10 Yr 8/2),
light brown (5 Yr 5/6), fine grained, damp &
very hard, (i 2)

List any bottles not filled: NA

Comments: NA

Sample ID: 103781

Sample Date: 12 / 11 / 94
mo day yr

Time Sample Collected: 08:30
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned C.566-21-02

1.00

2.00

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ Liquid
Munsell Color: 10 Yr 6/6 Secondary Munsell color: 10 R 6/4
Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

38125255 Field Worklist	38125363 Field Worklist	38125552 Field Worklist	38125381 Field Worklist	38125629 Field Worklist	38125538 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103781

Blank and Standard descriptions: NA

Composition:

~~NA~~ CLAY
AD 4
12/23/14

Description: SAME AS 103780 EXCEPT NO PEAT

List any bottles not filled: NA

Comments:

NA

Sample ID: 103780

Sample Date: 12 / 1 / 94
mo day yr

Time Sample Collected: 06:20
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned C566-21-C1

0.00

1.00

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid
Munsell Color: 10 Yr 6/4 Secondary Munsell color: 10 R 6/4
Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

30120625 30120625 Field Worklist	30120626 30120626 Field Worklist	30120627 30120627 Field Worklist	30120628 30120628 Field Worklist	30120629 30120629 Field Worklist	30120630 30120630 Field Worklist

Read and understood by: _____ Date: ____/____/____

Sample ID: 103780

Blank and Standard descriptions: NA

Composition: CLAY

Description: Sandy CLAY, dark yellowish orange
(10 1/2 % w/w), moderate red (5 R 6/4), some peat,
fine grained, moist (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103779

Sample Date: 11 / 30 / 94
mo day yr

Time Sample Collected: 16:00
(use military time)

Sample type:

- ☐ Normal
☒ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK
AAANDK
12/21/94

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103776

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CSGG-TB-26B

NA

NA

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA

Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

Read and understood by: _____ Date: ____/____/____

Sample ID: 103779

Blank and Standard descriptions: TRIP BLANK

Composition: DI WATER

Description: NA

List any bottles not filled: NA

Comments: TRIP BLANK FILLED @ LAB (WESTON)

Sample ID: 103778

Sample Date: 10 / 17 / 94
mo day yr

Time Sample Collected: 14 : 45
(use military time)

Sample type:

- ☐ Normal
☒ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK
HA MDH
12/3/94

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103777

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CSG G-TB-082

NA

NA

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA

Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

		30125924 Field Worklist	30125923 Field Worklist	30125922 Field Worklist	30125921 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 103778

Blank and Standard descriptions: TRIP BLANK

Composition: DI H₂O

Description: NA

List any bottles not filled: NA

Comments: - TRIP BLANK FILLED @ LAB ON 10/17/94

Sample ID: 103777

Sample Date: 11 / 30 / 94
mo day yr

Time Sample Collected: 12 : 15
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-20-12

45.00

47.00

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☒ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10 Yr 8/2

Secondary Munsell color: NA

Unified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

			38136813 Field Worklist	38135925 Field Worklist	38135926 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

..Sample ID: 103777

Blank and Standard descriptions: NA

Composition: SILT

Description: SAME AS 103774

List any bottles not filled: NA

Comments: NA

Sample ID: 103776

Sample Date: 11/30/94
mo day yr

Time Sample Collected: 12:15
(use military time)

Sample type:

- ☐ Normal
☐ Trip Blank
☐ Field Blank
☒ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103777

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-20-12D

45.00

47.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☒ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10Yr 8/2

Secondary Munsell color: NA

Unified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

		101787222	101781881	101782222

Read and understood by: _____ Date: ____/____/____

Sample ID: 103776

Blank and Standard descriptions: SPLIT

Composition: SILT

Description: SAME AS 103774

List any bottles not filled: NA

Comments: ^{MDA 23/14}
~~7/14~~ Split sample to be sent to Weston

Sample ID: 103775

Sample Date: 11/30/94
mo day yrTime Sample Collected: 11:00
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned C5067-20-1140.0042.00☒ Same as above

Actual

MDH 12/23/94Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 2.5YR 8/2 Secondary Munsell color: NAUnified Soil Classification: NA SM MDH 12/23/94

Stick Bar Code from every bottle label with this sample number below:

			38135934 Field Worklist	38135935 Field Worklist	38136818 Field Worklist

Read and understood by: _____ Date: ____/____/____

Sample ID: 103775

Blank and Standard descriptions: NA

Composition: 2F SILT

ND⁺ 12/23/94

Description: SAME AS 103774

List any bottles not filled: NA

Comments: NA

Sample ID: 103774

Sample Date: 11/30/94
mo day yr

Time Sample Collected: 11:00
(use military time)

Sample type:

- ☐ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☒ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103775

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-20A11A

40.00

42.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10Yr 8/2

Secondary Munsell color: NA

Unified Soil Classification: SM

Stick Bar Code from every bottle label with this sample number below:

			38135531 Field Worklist	38135538 Field Worklist	38135884 Field Worklist

Read and understood by: _____

Date: ___/___/___

Sample ID: 103774

Blank and Standard descriptions: DUPLICATE

Composition: SILT

Description: Sandy SILT, very pale orange
(10% 8/2), fine grained, stiff (SM)

List any bottles not filled: NA

Comments: NA

Sample ID: 103773

Sample Date: 11 / 30 / 94
mo day yr

Time Sample Collected: 10 : 45
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS69-20-10

35.00

37.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10 R 7/4 Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

			38135942 Field Worklist	38135941 Field Worklist	38136887 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103773

Blank and Standard descriptions: NA

Composition: SAND

Description: SAND, moderate orange pink, fine grained
(10 R 7/4)

List any bottles not filled: NA

Comments: NA

11/18/94

Sample ID: 103772

Sample Date: 11/18/94
mo day yrTime Sample Collected: 12:45
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSE

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)

Planned _____

☐ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: _____

Secondary Munsell color: _____

Unified Soil Classification: _____

Stick Bar Code from every bottle label with this sample number below:

Read and understood by: _____

Date: ____/____/____

Sample ID: 103772

Blank and Standard descriptions:

Composition:

Description:

List any bottles not filled:

Comments:

Melanie D. Hill 12/23/94

Sample ID: 103771

Sample Date: 11 / 30 / 94
mo day yr

Time Sample Collected: 10 : 15
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-20-09

30.00

32.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10 Yr 8/2

Secondary Munsell color: 5 RP 4/2

Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

			38135554 Field Worklist	38135561 Field Worklist	38135522 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 103771

Blank and Standard descriptions: NA

Composition: CLAY

Description: SAME AS 103769

List any bottles not filled: NA

Comments: NA

Sample ID: 103770

Sample Date: 11 / 30 / 94
mo day yr

Time Sample Collected: 09 : 35
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S R

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned C567-20-08

25.00

27.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10Yr 8/2 Secondary Munsell color: SRP 4/2

Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

			30135949 Field Worklist	30135952 Field Worklist	30135954 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103770

Blank and Standard descriptions: NA

Composition: 0.24%

Description: SAME AS 103769

List any bottles not filled: NA

Comments: NA

Sample ID: 103769

Sample Date: 11 / 30 / 94
mo day yr

Time Sample Collected: 09 : 00
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned C56G-2C-07

20.00

22.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10 Yr 8/2 Secondary Munsell color: 5 RP 4/2

Unified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

			38135962 Field Worklist	38135946 Field Worklist	38136829 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103769

Blank and Standard descriptions: NA

Composition: CLAY

Description: CLAY very pale orange (10 Yr 8/2),
grayish red purple (5 RP 4/2), high plasticity
(CH)

List any bottles not filled: NA

Comments: NA

Sample ID: 103768

Sample Date: 11 / 30 / 94
mo day yr

Time Sample Collected: 08 : 45
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned C567-20-06

15.00

17.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid
Munsell Color: 10 Yr 8/2 Secondary Munsell color: 10 R 3/4
Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

			3813552 Field Worklist	38135548 Field Worklist	38136819 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103768

Blank and Standard descriptions: NA

Composition: ~~SH~~ CLAY

MD-11
12/23/94

Description: Sandy CLAY, dark reddish brown (10 R³/4),
very pale orange (10 Y_r 8/2) (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103767

Sample Date: 11 128 194
mo day yr

Time Sample Collected: 14:00
(use military time)

Sample type:

- ☐ Normal
☒ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103762

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-TB-24B

NA

NA

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry. ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA

Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

	:S1717822	:S1717824	:S1717822

Read and understood by: _____

Date: ____/____/____

Sample ID: 103767

Blank and Standard descriptions: TRIP BLANK

Composition: DI H₂O

Description: NA

List any bottles not filled: NA

Comments: TRIP BLANK TO GO TO WESTON FILLED @
WESTON

Sample ID: 103766

Sample Date: 10 / 17 / 94
mo day yr

Time Sample Collected: 14 : 45
(use military time)

Sample type:

- ☐ Normal
☒ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK
NA 12/23/94

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103764

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-TB-07B

NA

NA

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA

Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

		38125529 Field Worklist	38125532 Field Worklist	38125523 Field Worklist	38125511 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 103766

Blank and Standard descriptions: TRIP BLANK

Composition: DI H₂O

Description: NA

List any bottles not filled: NA

Comments: TRIP BLANK FILLED @ LAB

11/23/94

Sample ID: 103765

Sample Date: 11 / 23 / 94
 . mo day yr

Time Sample Collected: 09:40
 (use military time)

Sample type:

- ☐ Normal
☐ Trip Blank
☒ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103764

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-FB-01C

NA

NA

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ Liquid

Munsell Color: NA Secondary Munsell color: NA

Unified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

		38125886 Field Worklist	38125799 Field Worklist	38125798 Field Worklist	38125782 Field Worklist

Read and understood by: _____

Date: ___ / ___ / ___

Sample ID: 103765

Blank and Standard descriptions: FIELD BLANK

Composition: DI H₂O

Description: NA

List any bottles not filled: NA

Comments: FILLED w/ DI H₂O

Sample ID: 103764

30 ~~XH~~
 29
 Sample Date: 11 / 28 / 94
 mo day yr
 ADP 12/23/94

Time Sample Collected: 12 : 08 : 10
 (use military time)

Sample type:

- ☒ Normal
- ☐ Trip Blank
- ☐ Field Blank
- ☐ Split
- ☐ Rinsate
- ☐ Duplicate
- ☐ Other _____

Sample matrix:

- ☒ Soil
- ☐ Rock
- ☐ Sludge
- ☐ Water
- ☐ Sediment
- ☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
 to top of interval
 (in feet)

Depth from ground
 to bottom of interval
 (in feet)

Planned CSOG-20-05

10.00

12.00

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10 Y 8/2

Secondary Munsell color: 10 R 5/4

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

			30126568 Field Worklist	30126574 Field Worklist	30125336 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 103764

Blank and Standard descriptions: NA

Composition: NA ^{7/11} CLAY

^{MD 11}
12/23 FY

Description: CLAY pale greenish yellow (10Y 8/2)
moist, med plasticity (CL), pale reddish brown
(10R 5/4)

List any bottles not filled: NA

Comments: NA

Sample ID: 103763

Sample Date: 11/26/94
mo day yr

Time Sample Collected: 7:45
(use military time)

Sample type:

- ☐ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-20-04

5.00

7.00

☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10 Yr 6/6

Secondary Munsell color: NA

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

38125337 Field Worklist	38125288 Field Worklist	38125283 Field Worklist	38125548 Field Worklist	38125573 Field Worklist	38125572 Field Worklist

Read and understood by: _____

Date: ___/___/___

Sample ID: 103763

Blank and Standard descriptions: NA

Composition: SAND

Description: Clayey SAND, Dark yellowish orange
(ic 1/16), fine grained, moist (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103762

Sample Date: 11 / 28 / 94
mo day yr

Time Sample Collected: 11 : 15
(use military time)

Sample type:

- ☐ Normal
☐ Trip Blank
☐ Field Blank
☒ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103761

Station _____ Depth from ground to top of interval (in feet) _____ Depth from ground to bottom of interval (in feet) _____

Planned CS6G-20-03D 2.00 4.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10Yr 8/6 Secondary Munsell color: NA

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

Read and understood by: _____ Date: / /

Sample ID: 103762

Blank and Standard descriptions: SPLIT

Composition: CLAY

Description: SEE 103762

List any bottles not filled: NA

Comments: SPLIT TO GO TO WESTON

Sample ID: 103761

Sample Date: 11 / 28 / 94
mo day yr

Time Sample Collected: 1 : 15
(use military time)

Sample type:

- ☒ Normal
- ☐ Trip Blank
- ☐ Field Blank
- ☐ Split
- ☐ Rinsate
- ☐ Duplicate
- ☐ Other _____

Sample matrix:

- ☒ Soil
- ☐ Rock
- ☐ Sludge
- ☐ Water
- ☐ Sediment
- ☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66 - 20-03

2.00

4.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 10 Yr 8/0

Secondary Munsell color: NA

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

30125328 Field Worklist	30125286 Field Worklist	30125287 Field Worklist	30128667 Field Worklist	30128665 Field Worklist	30128526 Field Worklist

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 103761

Blank and Standard descriptions: NA

Composition: CLAY

Description: Sandy CLAY; pale yellowish orange (10.YR 8/6),
fine grained, rounded moist (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103760

Sample Date: 11 / 28 / 94
mo day yrTime Sample Collected: 10:50
(use military time)

Sample type:

- ☒ Normal 11/28 12/23/94
☐ Trip Blank
☐ Field Blank
☐ Split
☒ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil 11/28 12/23/94
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: BSKFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103757

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-20-02E 100 200☒ Same as above Actual _____Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NA Secondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

38125747 Field Worklist	38125749 Field Worklist	38125751 Field Worklist	38125699 Field Worklist	38125744 Field Worklist	38125743 Field Worklist
38125667 Field Worklist	38125870 Field Worklist	38125555 Field Worklist	38125661 Field Worklist	38125752 Field Worklist	38125746 Field Worklist
				38125831 Field Worklist	38125846 Field Worklist

Read and understood by: _____

Date: ____/____/____

Sample ID: 103760

Blank and Standard descriptions: RENSATE

Composition: DI H₂O

Description: SEE 103760

List any bottles not filled: NA

Comments: NA

Sample ID: 103759

Sample Date: 11 / 26 / 94
mo day yrTime Sample Collected: 11 : 00
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-20-021.002.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10 Yr 8/6Secondary Munsell color: NAUnified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

38125289 Field Worklist	38125411 Field Worklist	38125214 Field Worklist	38125678 Field Worklist	38125579 Field Worklist	38125523 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103759

Blank and Standard descriptions: NA

Composition: CLAY

Description: Sandy Clay, pale yellowish orange (10Yr 9/6), (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103758

Sample Date: 11 / 26 / 94
mo day yrTime Sample Collected: 10:30
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

- ☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: P. S. K.

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-20-010.001.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 10Yr 6/6Secondary Munsell color: 10Yr 6/2Unified Soil Classification: SC

Stick Bar Code from every bottle label with this sample number below:

30125213 Field Worklist	30125218 Field Worklist	30125428 Field Worklist	30128524 Field Worklist	30128595 Field Worklist	30128596 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103758

Blank and Standard descriptions: NA

Composition: SAND

Description: Clayey Sand, dark yellowish orange
(10 1/2 6/10), INNER-BEDDED WITH PALE YELLOWISH
brown (10 1/2 6/2), fine grained, rounded, moist (SC)

List any bottles not filled: NA

Comments: NA

Sample ID: 103757

Sample Date: 10 / 17 / 94
mo day yrTime Sample Collected: 14:45
(use military time)

Sample type:

- ☐ Normal
☒ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☐ Soil
☐ Rock
☐ Sludge
☒ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: BSKFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103756

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CSGG-TB-06BNANA☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☐ Damp ☐ Wet ☐ Sludge ☒ LiquidMunsell Color: NASecondary Munsell color: NAUnified Soil Classification: NA

Stick Bar Code from every bottle label with this sample number below:

		32125525 Field Worklist	32125987 Field Worklist	32125529 Field Worklist	32125918 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103757

Blank and Standard descriptions: DI H₂O - TRIP BLANK

Composition: DI H₂O

Description: NA

List any bottles not filled: NA

Comments: TRIP BLANK FILLED @ LAB ON 10/17/04

Sample ID: 103756

Sample Date: 11 / 22 / 94
mo day yrTime Sample Collected: 12:40
(use military time)

Sample type:

- ☐ Normal
☐ Trip Blank
☐ Field Blank
☒ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: BSKFor duplicate, split, rinsate, etc. enter the Sample ID of associated sample: 103755

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-19-12D45.0047.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5R 7/4Secondary Munsell color: NAUnified Soil Classification: SP

Stick Bar Code from every bottle label with this sample number below:

			38128751 Field Worklist	38128752 Field Worklist	38128753 Field Worklist

Read and understood by: _____

Date: / /

Sample ID: 103756

Blank and Standard descriptions:

~~XH~~
~~AT~~ ~~DUPLICATE~~ ~~XH~~
MDA 12/23/94

SPLIT TO WESTON

Composition: SAND

Description: SEE 103755

List any bottles not filled: NA

Comments: NA

Sample ID: 103755

Sample Date: 11 / 22 / 94
mo day yr

Time Sample Collected: 12 : 40
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS67-19-12

45.00

47.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5R 7/4 Secondary Munsell color: NA

Unified Soil Classification: SP

Stick Bar Code from every bottle label with this sample number below:

			38128648 38128648 Field Worklist	38125155 38125155 Field Worklist	32128762 32128762 Field Worklist

Read and understood by: _____ Date: ____ / ____ / ____

Sample ID: 103755

Blank and Standard descriptions: NA

Composition: SAND

Description: SAND, moderate pink (SR 7/4), fine-med,
saturated, rounded, some quartz fragments (SP)

List any bottles not filled: NA

Comments: NA

Sample ID: 103754

Sample Date: 11 / 22 / 94
mo day yr

Time Sample Collected: 12 : 10
(use military time)

Sample type:

- ☒ Normal
- ☐ Trip Blank
- ☐ Field Blank
- ☐ Split
- ☐ Rinsate
- ☐ Duplicate
- ☐ Other _____

Sample matrix:

- ☒ Soil
- ☐ Rock
- ☐ Sludge
- ☐ Water
- ☐ Sediment
- ☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS6G-19-11

40.00

42.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5P 6/2

Secondary Munsell color: NA

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

			30128681 Field Worklist	30128656 Field Worklist	30125382 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103754

Blank and Standard descriptions: NA

Composition: CLAY

Description: Sandy CLAY, QUARTZ FRAGMENTS, pale
PURPLE (S P 6/2) (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103753

Sample Date: 11 / 22 / 94
mo day yr

Time Sample Collected: 11:40
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS64-19-10

35:00

37.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5P 6/2

Secondary Munsell color: NA

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

			30128548 Field Worklist	30128639 Field Worklist	30128763 Field Worklist

Read and understood by: _____

Date: ___ / ___ / ___

Sample ID: 103753

Blank and Standard descriptions: NA

Composition: CLAY

Description: CLAY, pale purple (SP 6/2), med
plasticity, moist micaceous (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103752

Sample Date: 11 / 22 / 94
mo day yrTime Sample Collected: 11 : 10
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: BSK

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-19-0930.0032.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5R 4/0Secondary Munsell color: NHUnified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

			38129644 Field Worklist	38129543 Field Worklist	38125261 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103752

Blank and Standard descriptions: NA

Composition: CLAY

Description: Sandy CLAY moderate red (5R 4/6),
low plasticity, moist micaceous (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103751

Sample Date: 11 / 22 / 94
mo day yrTime Sample Collected: 10:40
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS66-19-0825.0027.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5 RP 6/2Secondary Munsell color: NAUnified Soil Classification: CH

Stick Bar Code from every bottle label with this sample number below:

			<small>30128541</small> <small>Field Worklist</small>	<small>30128651</small> <small>Field Worklist</small>	<small>30128652</small> <small>Field Worklist</small>

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103751

Blank and Standard descriptions: NA

Composition: CLAY

Description: CLAY, pale red purple (5 RP 1/2), high plasticity, moist (CH)

List any bottles not filled: NA

Comments: NA

Sample ID: 103750

Sample Date: 11 / 22 / 94
mo day yrTime Sample Collected: 10:10
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
 in bottling samples.
 Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)Depth from ground
to bottom of interval
(in feet)Planned CS6G-19-0720.0022.00☒ Same as above

Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ LiquidMunsell Color: 5 R 4/6Secondary Munsell color: NKUnified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

			38128649 Field Worklist	38128658 Field Worklist	38125268 Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103750

Blank and Standard descriptions: NA

Composition: CLAY

Description: Sandy CLAY, moderate red (5R 4/6), medium angular, moist (CL)

List any bottles not filled: NA

Comments: NA

Sample ID: 103749

Sample Date: 11 / 22 / 94
mo day yr

Time Sample Collected: 09:40
(use military time)

Sample type:

- ☒ Normal
☐ Trip Blank
☐ Field Blank
☐ Split
☐ Rinsate
☐ Duplicate
☐ Other _____

Sample matrix:

- ☒ Soil
☐ Rock
☐ Sludge
☐ Water
☐ Sediment
☐ Other _____

☐ Check here if unusual delay
in bottling samples.
Describe delay in Comments.

Sampler: B S K

For duplicate, split, rinsate, etc. enter the Sample ID of associated sample: _____

Station

Depth from ground
to top of interval
(in feet)

Depth from ground
to bottom of interval
(in feet)

Planned CS66-19-06

15.00

17.00

☒ Same as above Actual _____

Check appropriate box to describe soil: ☐ Dry ☒ Damp ☐ Wet ☐ Sludge ☐ Liquid

Munsell Color: 5 RP 4/2

Secondary Munsell color: 5 Y 3/1

Unified Soil Classification: CL

Stick Bar Code from every bottle label with this sample number below:

			<small>FIELD USE ONLY - DO NOT WRITE IN THESE SPACES</small> <small>38128697</small> Field Worklist	<small>FIELD USE ONLY - DO NOT WRITE IN THESE SPACES</small> <small>38128696</small> Field Worklist	<small>FIELD USE ONLY - DO NOT WRITE IN THESE SPACES</small> <small>38128578</small> Field Worklist

Read and understood by: _____

Date: ____ / ____ / ____

Sample ID: 103749

Blank and Standard descriptions: NA

Composition: CLAY

Description: CLAY, Grayish red purple (5 RP 4/2), yellowish gray (5 Y 8/1), very hard, moderate plasticity, (CL) micaceous

List any bottles not filled: NA

Comments: NA

Sample ID: 102563

Blank and Standard descriptions: TRIP BLANK -

Composition: DI WATER

Description: NA

List any bottles not filled: NA

Comments: BOTTLES FILLED @ LAB

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 0501	0	2	1,1,2,2-Tetrachloroethane	0.0543	ug/kg	-	-	-	0.015 ug/kg	1
CS6G 1103	2	4	1,4-Dichlorobenzene	34	ug/kg	J			5.852 ug/kg	1
CS6G 1303	2	4	1-Eicosanol	190	ug/kg	J	N		?	?
CS6G 1401	0	1	1-Hexadecene	210	ug/kg	J	N		?	?
CS6G 1401	0	1	1-Methyl-4-(1-methylethyl)-cyclohexane	5	ug/kg	J	N		?	?
CS6G 1401	0	1	1-Nonadecene	170	ug/kg	J	N		?	?
CS6G 1401	0	1	1-Octadecanethiol	330	ug/kg	J	N		?	?
CS6G 1403	2	4	14-Pentadecenoic acid	200	ug/kg	J	N		?	?
CS6G 0703	9.5	11	2,4-Dinitrotoluene	28.9	ug/kg	-			0.639 ug/kg	1
CS6G 1403	2	4	2-(2-Ethoxy ethoxy) ethanol	150	ug/kg	J	N		340 ug/kg	0
CS6G 1401	0	1	2-(2-Ethoxy ethoxy) ethanol	260	ug/kg	J	N			
CS6G 2203	2	4	2-(2-Ethoxy ethoxy) ethanol	320	ug/kg	J	N			
CS6G 1402	1	2	2-[(2-Ethylhexyl)oxy]-ethanol	150	ug/kg	J	N		?	?
CS6G 1304	4	6	2-[(2-Ethylhexyl)oxy]-ethanol	710	ug/kg	J	N			
CS6G 0703	9.5	11	2-Chlorophenol	19	ug/kg	J			2.8 ug/kg	1
CS6G 0501	0	2	2-Hexanone	0.38	ug/kg	J	-	-	0.224 ug/kg	1 of 1
CS6G 1401	0	1	2-Methylnaphthalene	5.74	ug/kg	J	B	-	1.608 ug/kg	8 of 8
CS6G 2203	2	4	2-Methylnaphthalene	6.06	ug/kg	J	B			
CS6G 1501	0	1	2-Methylnaphthalene	9.27	ug/kg	J				
CS6G 1405	6	8	2-Methylnaphthalene	13.5	ug/kg					
CS6G 0603	12.7	14.7	2-Methylnaphthalene	21.1	ug/kg	J	Y			
CS6G 0502	7.2	9.2	2-Methylnaphthalene	46.3	ug/kg					
CS6G 0602	10.7	12.7	2-Methylnaphthalene	127	ug/kg	J	YI	P		
CS6G 1404	4	6	2-Methylnaphthalene	1210	ug/kg					
CS6G 1202	1	2	3-Octadecene	150	ug/kg	J	N		?	?
CS6G 0701	0	2	4-Chloro-m-cresol	5.31	ug/kg	J			1.331 ug/kg	2 of 2
CS6G 0703	9.5	11	4-Chloro-m-cresol	70.8	ug/kg					
CS6G 1501	0	1	4-Chlorophenyl phenyl ether	7.49	ug/kg	J			1.197ug/kg	2 of 2
CS6G 1104	4	6	4-Chlorophenyl phenyl ether	7.84	ug/kg	J				
CS6G 1405	6	8	Acenaphthene	22	ug/kg	-	-	-	1.691 ug/kg	3 of 3
CS6G 0902	3.6	5.6	Acenaphthene	166	ug/kg		Y			
CS6G 1404	4	6	Acenaphthene	6830	ug/kg					
CS6G 1104	4	6	Acenaphthylene	5.97	ug/kg	J			0.904 ug/kg	2 of 2
CS6G 1501	0	1	Acenaphthylene	10.3	ug/kg	J				
CS6G 0203	5	6	Acetone	3.9	ug/kg	J			28.869 ug/kg	10 of 63
CS6G 0204	7	9	Acetone	4.09	ug/kg	J				
CS6G 0501	0	2	Acetone	4.5	ug/kg	J				
CS6G 1503	2	4	Acetone	4.85	ug/kg	J				
CS6G 0302	3	5	Acetone	6.33	ug/kg					
CS6G 0103	5	7	Acetone	6.42	ug/kg	J	I	P		
CS6G 1501	0	1	Acetone	6.49	ug/kg					
CS6G 0602	10.7	12.7	Acetone	6.58	ug/kg		Y			
CS6G 1505	10	12	Acetone	7.2	ug/kg					
CS6G 0404	7	9	Acetone	7.29	ug/kg					
CS6G 0303	5	7	Acetone	7.3	ug/kg					
CS6G 0301	0	2	Acetone	7.61	ug/kg					

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 1104	4	6	Acetone	7.67	ug/kg					
CS6G 0903	5.6	7.6	Acetone	7.89	ug/kg	J	V			
CS6G 1203	2	4	Acetone	7.89	ug/kg					
CS6G 1202	1	2	Acetone	7.91	ug/kg					
CS6G 1106	8	10	Acetone	7.98	ug/kg					
CS6G 0104	7	9	Acetone	8.11	ug/kg					
CS6G 0304	7	9	Acetone	8.26	ug/kg					
CS6G 0504	11.2	12.2	Acetone	8.49	ug/kg					
CS6G 1304	4	6	Acetone	8.55	ug/kg					
CS6G 0202	3	5	Acetone	9.01	ug/kg					
CS6G 0102	3	5	Acetone	9.51	ug/kg	J	Q	L		
CS6G 1205	6	8	Acetone	9.74	ug/kg					
CS6G 1305	6	8	Acetone	10.4	ug/kg					
CS6G 1303	2	4	Acetone	12.9	ug/kg					
CS6G 1401	0	1	Acetone	14.2	ug/kg					
CS6G 0502	7.2	9.2	Acetone	14.6	ug/kg					
CS6G 0201	0	2	Acetone	14.8	ug/kg					
CS6G 1504	4	6	Acetone	15	ug/kg					
CS6G 1601	0	1	Acetone	15	ug/kg					
CS6G 0403	5	7	Acetone	16	ug/kg	J				
CS6G 1602	1	2	Acetone	16.2	ug/kg					
CS6G 0802	5	7	Acetone	17	ug/kg	J	YV			
CS6G 1704	5	7	Acetone	17.7	ug/kg					
CS6G 1105	6	8	Acetone	17.8	ug/kg					
CS6G 1701	0	1	Acetone	18.3	ug/kg					
CS6G 1702	1	2	Acetone	18.6	ug/kg					
CS6G 0402	3	5	Acetone	18.8	ug/kg	J				
CS6G 1201	0	1	Acetone	19.1	ug/kg					
CS6G 1103	2	4	Acetone	20.1	ug/kg					
CS6G 0101	0	2	Acetone	20.5	ug/kg		Y			
CS6G 0902	3.6	5.6	Acetone	21.1	ug/kg	J	OY	H		
CS6G 0904	7.6	9.6	Acetone	21.3	ug/kg	J	V			
CS6G 0401	0	2	Acetone	21.8	ug/kg					
CS6G 1703	2	4	Acetone	22	ug/kg					
CS6G 1301	0	1	Acetone	22.4	ug/kg					
CS6G 0901	0	2	Acetone	22.5	ug/kg	J	V			
CS6G 1302	1	2	Acetone	22.7	ug/kg					
CS6G 0801	0	2	Acetone	27.4	ug/kg	J	YV			
CS6G 1502	1	2	Acetone	28.2	ug/kg					
CS6G 1604	4	6	Acetone	29.7	ug/kg					
CS6G 1404	4	6	Acetone	36.5	ug/kg					
CS6G 1402	1	2	Acetone	38.4	ug/kg					
CS6G 1603	2	4	Acetone	38.7	ug/kg	J				
CS6G 1406	8	10	Acetone	40.9	ug/kg					
CS6G 1403	2	4	Acetone	46.4	ug/kg					
CS6G 2203	2	4	Acetone	50.7	ug/kg		V			
CS6G 1101	0	1	Acetone	58.5	ug/kg					
CS6G 1102	1	2	Acetone	62.5	ug/kg					
CS6G 1405	6	8	Acetone	788	ug/kg					
				30.66	average of 61 detects					
CS6G 1401	0	1	Alkane	1.8	ug/kg	J	N		?	?
CS6G 1102	1	2	Alkyl naphthalene	160	ug/kg	J			?	?
CS6G 1401	0	1	Alkyl naphthalene	610	ug/kg	J	N			
CS6G 1501	0	1	alpha-Pinene	0.6	ug/kg	J			357.7 ug/kg	0
CS6G 1102	1	2	alpha-Pinene	0.7	ug/kg	J				
CS6G 1402	1	2	alpha-Pinene	1	ug/kg	J	N			
CS6G 1404	4	6	alpha-Pinene	4.3	ug/kg	J	N			
CS6G 1401	0	1	alpha-Pinene	80.7	ug/kg	J	N			
CS6G 0103	5	7	Aluminum	2160	mg/kg				10,282 mg/kg	18 of 56
CS6G 0504	11.2	12.2	Aluminum	2160	mg/kg	J	R			
CS6G 0703	9.5	11	Aluminum	2370	mg/kg	J				
CS6G 0704	11	13	Aluminum	2490	mg/kg	J				

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 0503	9.2	10.6	Aluminum	2540	mg/kg	J	R			
CS6G 0404	7	9	Aluminum	2720	mg/kg	J				
CS6G 0401	0	2	Aluminum	2930	mg/kg	J				
CS6G 0801	0	2	Aluminum	3470	mg/kg	J	RY			
CS6G 0104	7	9	Aluminum	3480	mg/kg					
CS6G 0804	9	11	Aluminum	3750	mg/kg	J	RY			
CS6G 1602	1	2	Aluminum, total recoverable	3970	mg/kg					
CS6G 1402	1	2	Aluminum, total recoverable	4010	mg/kg					
CS6G 0203	5	6	Aluminum	4090	mg/kg					
CS6G 0201	0	2	Aluminum	4190	mg/kg					
CS6G 0102	3	5	Aluminum	4520	mg/kg	J	R			
CS6G 0301	0	2	Aluminum	4570	mg/kg					
CS6G 0603	12.7	14.7	Aluminum	4680	mg/kg		Y			
CS6G 0502	7.2	9.2	Aluminum	4870	mg/kg	J	R			
CS6G 1401	0	1	Aluminum, total recoverable	5020	mg/kg					
CS6G 1601	0	1	Aluminum, total recoverable	5080	mg/kg					
CS6G 0303	5	7	Aluminum	5120	mg/kg					
CS6G 0204	7	9	Aluminum	5190	mg/kg					
CS6G 1202	1	2	Aluminum, total recoverable	5230	mg/kg		X			
CS6G 1201	0	1	Aluminum, total recoverable	5270	mg/kg					
CS6G 1501	0	1	Aluminum, total recoverable	5350	mg/kg					
CS6G 0803	7	9	Aluminum	5360	mg/kg		Y			
CS6G 0304	7	9	Aluminum	5550	mg/kg					
CS6G 0901	0	2	Aluminum	5670	mg/kg	J	R			
CS6G 0501	0	2	Aluminum	5800	mg/kg	J	R			
CS6G 1505	10	12	Aluminum, total recoverable	5890	mg/kg					
CS6G 1603	2	4	Aluminum, total recoverable	5900	mg/kg					
CS6G 0903	5.6	7.6	Aluminum	6340	mg/kg	J	R			
CS6G 0904	7.6	9.6	Aluminum	6440	mg/kg	J	R			
CS6G 0403	5	7	Aluminum	6510	mg/kg	J				
CS6G 0604	14.7	16.7	Aluminum	6740	mg/kg		Y			
CS6G 1604	4	6	Aluminum, total recoverable	6950	mg/kg					
CS6G 1403	2	4	Aluminum, total recoverable	6990	mg/kg					
CS6G 1502	1	2	Aluminum, total recoverable	7090	mg/kg					
CS6G 0902	3.6	5.6	Aluminum	7100	mg/kg	J	RY			
CS6G 1302	1	2	Aluminum, total recoverable	7150	mg/kg					
CS6G 0701	0	2	Aluminum	7160	mg/kg	J				
CS6G 1106	8	10	Aluminum, total recoverable	7160	mg/kg					
CS6G 0702	7.5	9.5	Aluminum	7630	mg/kg					
CS6G 1304	4	6	Aluminum, total recoverable	7900	mg/kg					
CS6G 0601	0	2	Aluminum	8050	mg/kg		Y			
CS6G 0302	3	5	Aluminum	9100	mg/kg					
CS6G 0602	10.7	12.7	Aluminum	9140	mg/kg		Y			
CS6G 0202	3	5	Aluminum	9280	mg/kg					
CS6G 1404	4	6	Aluminum, total recoverable	10200	mg/kg					
CS6G 1102	1	2	Aluminum, total recoverable	10600	mg/kg					
CS6G 1105	6	8	Aluminum, total recoverable	10600	mg/kg					
CS6G 1504	4	6	Aluminum, total recoverable	10600	mg/kg					
CS6G 1703	2	4	Aluminum, total recoverable	10700	mg/kg					
CS6G 1701	0	1	Aluminum, total recoverable	11200	mg/kg					
CS6G 2201	0	1	Aluminum, total recoverable	11600	mg/kg		V			
CS6G 1203	2	4	Aluminum, total recoverable	11800	mg/kg					
CS6G 0101	0	2	Aluminum	12100	mg/kg		Y			
CS6G 1103	2	4	Aluminum, total recoverable	12100	mg/kg					
CS6G 0402	3	5	Aluminum	12600	mg/kg	J				
CS6G 1405	6	8	Aluminum, total recoverable	12700	mg/kg					
CS6G 1704	5	7	Aluminum, total recoverable	13000	mg/kg					
CS6G 1702	1	2	Aluminum, total recoverable	13300	mg/kg					
CS6G 1303	2	4	Aluminum, total recoverable	13600	mg/kg					
CS6G 1301	0	1	Aluminum, total recoverable	14200	mg/kg					
CS6G 1406	8	10	Aluminum, total recoverable	14500	mg/kg					
CS6G 1305	6	8	Aluminum, total recoverable	14700	mg/kg					
CS6G 1104	4	6	Aluminum, total recoverable	14700	mg/kg					
CS6G 0802	5	7	Aluminum	15200	mg/kg		Y			
CS6G 1205	6	8	Aluminum, total recoverable	15400	mg/kg					
CS6G 2202	1	2	Aluminum, total recoverable	17600	mg/kg		V			

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 1101	0	1	Aluminum, total recoverable	17700	mg/kg					
CS6G 1503	2	4	Aluminum, total recoverable	21000	mg/kg					
CS6G 2203	2	4	Aluminum, total recoverable	21300	mg/kg		V			
CS6G 1204	4	6	Aluminum, total recoverable	31900	mg/kg					
CS6G 0502	7.2	9.2	Anthracene	12.6	ug/kg	J			0.452 ug/kg	5 of 5
CS6G 1501	0	1	Anthracene	14.6	ug/kg	J				
CS6G 1405	6	8	Anthracene	31.6	ug/kg					
CS6G 0902	3.6	5.6	Anthracene	555	ug/kg		Y			
CS6G 1404	4	6	Anthracene	17200	ug/kg					
CS6G 0504	11.2	12.2	Antimony	1.99	mg/kg	J	RI	P	3.12 mg/kg	13 of 16
CS6G 1106	8	10	Antimony, total recoverable	2.15	mg/kg	J				
CS6G 0702	7.5	9.5	Antimony	2.84	mg/kg	J				
CS6G 0802	5	7	Antimony	3.25	mg/kg	J	RY			
CS6G 0901	0	2	Antimony	3.34	mg/kg	J	R			
CS6G 1503	2	4	Antimony, total recoverable	3.35	mg/kg	J				
CS6G 0203	5	6	Antimony	3.56	mg/kg	J				
CS6G 0204	7	9	Antimony	3.77	mg/kg	J				
CS6G 0701	0	2	Antimony	3.78	mg/kg	J				
CS6G 0402	3	5	Antimony	3.79	mg/kg	J				
CS6G 0502	7.2	9.2	Antimony	3.99	mg/kg	J	R			
CS6G 0602	10.7	12.7	Antimony	4.13	mg/kg	J	RIY	L		
CS6G 0101	0	2	Antimony	4.16	mg/kg	J	Y			
CS6G 0902	3.6	5.6	Antimony	4.2	mg/kg	J	RY			
CS6G 0904	7.6	9.6	Antimony	4.91	mg/kg	J	R			
CS6G 0103	5	7	Antimony	5.29	mg/kg	J				
				3.6563	average of 16 detects					
CS6G 0701	0	2	Arsenic	1.98	mg/kg	J			5.436 mg/kg	18 of 31
CS6G 1406	8	10	Arsenic, total recoverable	2.37	mg/kg	J	B			
CS6G 0901	0	2	Arsenic	2.78	mg/kg	J	R			
CS6G 1705	10	12	Arsenic, total recoverable	2.86	mg/kg	J				
CS6G 1505	10	12	Arsenic, total recoverable	3.49	mg/kg	J				
CS6G 1104	4	6	Arsenic, total recoverable	3.71	mg/kg	J				
CS6G 1105	6	8	Arsenic, total recoverable	3.76	mg/kg	J				
CS6G 0403	5	7	Arsenic	3.88	mg/kg	J				
CS6G 0302	3	5	Arsenic	4.54	mg/kg	J				
CS6G 0902	3.6	5.6	Arsenic	4.69	mg/kg	J	RY			
CS6G 0702	7.5	9.5	Arsenic	5.1	mg/kg	J				
CS6G 0803	7	9	Arsenic	5.12	mg/kg	J	RY			
CS6G 1102	1	2	Arsenic, total recoverable	5.23	mg/kg	J				
CS6G 0203	5	6	Arsenic	5.59	mg/kg	J				
CS6G 0502	7.2	9.2	Arsenic	6.09	mg/kg	J	R			
CS6G 0504	11.2	12.2	Arsenic	6.11	mg/kg	J	R			
CS6G 1704	5	7	Arsenic, total recoverable	6.17	mg/kg	J				
CS6G 0103	5	7	Arsenic	6.46	mg/kg					
CS6G 0204	7	9	Arsenic	6.53	mg/kg					
CS6G 1504	4	6	Arsenic, total recoverable	6.54	mg/kg					
CS6G 0903	5.6	7.6	Arsenic	6.56	mg/kg	J	R			
CS6G 0304	7	9	Arsenic	6.65	mg/kg					
CS6G 0904	7.6	9.6	Arsenic	6.73	mg/kg	J	R			
CS6G 0606	28.7	30.7	Arsenic	6.8	mg/kg	J	RY			
CS6G 1404	4	6	Arsenic, total recoverable	7.72	mg/kg					
CS6G 0101	0	2	Arsenic	7.92	mg/kg		Y			
CS6G 1103	2	4	Arsenic, total recoverable	8.48	mg/kg					
CS6G 0802	5	7	Arsenic	9.21	mg/kg	J	RY			
CS6G 0202	3	5	Arsenic	9.22	mg/kg					
CS6G 0602	10.7	12.7	Arsenic	9.55	mg/kg	J	RIY	L		
CS6G 1405	6	8	Arsenic, total recoverable	12	mg/kg					
				5.9303	average of 31 detects					
CS6G 0704	11	13	Barium	1.11	mg/kg	J			13.44 mg/kg	33 of 79
CS6G 0703	9.5	11	Barium	1.21	mg/kg	J				
CS6G 0404	7	9	Barium	1.39	mg/kg	J				

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 0803	7	9	Barium	1.78	mg/kg	J	Y			
CS6G 0103	5	7	Barium	2.13	mg/kg	J				
CS6G 1705	10	12	Barium, total recoverable	2.35	mg/kg	J				
CS6G 0304	7	9	Barium	2.81	mg/kg	J				
CS6G 0204	7	9	Barium	3.11	mg/kg	J				
CS6G 0605	21.7	23.7	Barium	3.14	mg/kg		Y			
CS6G 0804	9	11	Barium	3.26	mg/kg	J	RY			
CS6G 0303	5	7	Barium	3.26	mg/kg	J				
CS6G 0603	12.7	14.7	Barium	3.72	mg/kg		Y			
CS6G 0903	5.6	7.6	Barium	3.8	mg/kg	J	RV	H		
CS6G 0604	14.7	16.7	Barium	3.86	mg/kg		Y			
CS6G 0104	7	9	Barium	3.89	mg/kg					
CS6G 0904	7.6	9.6	Barium	4	mg/kg	J	R			
CS6G 0702	7.5	9.5	Barium	4.65	mg/kg					
CS6G 0403	5	7	Barium	4.72	mg/kg	J				
CS6G 0504	11.2	12.2	Barium	5.05	mg/kg	J	RXV	H		
CS6G 0302	3	5	Barium	5.42	mg/kg	J				
CS6G 0203	5	6	Barium	5.65	mg/kg	J				
CS6G 0202	3	5	Barium	5.87	mg/kg	J				
CS6G 1103	2	4	Barium, total recoverable	5.93	mg/kg					
CS6G 0801	0	2	Barium	5.97	mg/kg	J	RY			
CS6G 0503	9.2	10.6	Barium	6.19	mg/kg	J	RV	H		
CS6G 1605	10	12	Barium, total recoverable	6.4	mg/kg					
CS6G 0606	28.7	30.7	Barium	6.64	mg/kg		Y			
CS6G 0901	0	2	Barium	6.79	mg/kg	J	R			
CS6G 1703	2	4	Barium, total recoverable	6.97	mg/kg					
CS6G 1406	8	10	Barium, total recoverable	7.46	mg/kg					
CS6G 1704	5	7	Barium, total recoverable	7.5	mg/kg					
CS6G 1105	6	8	Barium, total recoverable	8.13	mg/kg					
CS6G 1407	13	15	Barium, total recoverable	8.18	mg/kg					
CS6G 0701	0	2	Barium	8.36	mg/kg	J				
CS6G 1106	8	10	Barium, total recoverable	8.58	mg/kg					
CS6G 1505	10	12	Barium, total recoverable	8.62	mg/kg					
CS6G 1104	4	6	Barium, total recoverable	8.66	mg/kg					
CS6G 0401	0	2	Barium	9.1	mg/kg	J				
CS6G 1604	4	6	Barium, total recoverable	9.92	mg/kg					
CS6G 1102	1	2	Barium, total recoverable	10.8	mg/kg					
CS6G 1601	0	1	Barium, total recoverable	11.6	mg/kg					
CS6G 0601	0	2	Barium	11.8	mg/kg		Y			
CS6G 1504	4	6	Barium, total recoverable	11.9	mg/kg					
CS6G 1205	6	8	Barium, total recoverable	12.1	mg/kg					
CS6G 0402	3	5	Barium	12.8	mg/kg	J				
CS6G 1201	0	1	Barium, total recoverable	13.3	mg/kg					
CS6G 2201	0	1	Barium, total recoverable	14.1	mg/kg					
CS6G 1402	1	2	Barium, total recoverable	15.5	mg/kg					
CS6G 1304	4	6	Barium, total recoverable	15.7	mg/kg					
CS6G 0201	0	2	Barium	16.8	mg/kg	J				
CS6G 1403	2	4	Barium, total recoverable	17.4	mg/kg					
CS6G 1305	6	8	Barium, total recoverable	18.2	mg/kg					
CS6G 0102	3	5	Barium	19.2	mg/kg	J	RXI	P		
CS6G 1401	0	1	Barium, total recoverable	19.3	mg/kg					
CS6G 1101	0	1	Barium, total recoverable	21.6	mg/kg					
CS6G 1602	1	2	Barium, total recoverable	22.1	mg/kg					
CS6G 1204	4	6	Barium, total recoverable	22.5	mg/kg					
CS6G 1702	1	2	Barium, total recoverable	23.9	mg/kg					
CS6G 1603	2	4	Barium, total recoverable	24.3	mg/kg					
CS6G 0301	0	2	Barium	24.5	mg/kg	J				
CS6G 0101	0	2	Barium	26.1	mg/kg		Y			
CS6G 0501	0	2	Barium	28.8	mg/kg	J	RV	H		
CS6G 1503	2	4	Barium, total recoverable	30.1	mg/kg					
CS6G 2202	1	2	Barium, total recoverable	31.5	mg/kg					
CS6G 1502	1	2	Barium, total recoverable	34.6	mg/kg					
CS6G 1701	0	1	Barium, total recoverable	37.9	mg/kg					
CS6G 1203	2	4	Barium, total recoverable	38.4	mg/kg					
CS6G 1501	0	1	Barium, total recoverable	39.2	mg/kg					
CS6G 1303	2	4	Barium, total recoverable	42.4	mg/kg					

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 0602	10.7	12.7	Barium	47.5	mg/kg		YX			
CS6G 0502	7.2	9.2	Barium	49.9	mg/kg	J	RV	H		
CS6G 1202	1	2	Barium, total recoverable	53.5	mg/kg		X			
CS6G 1301	0	1	Barium, total recoverable	53.8	mg/kg					
CS6G 0902	3.6	5.6	Barium	67	mg/kg	J	RY			
CS6G 1405	6	8	Barium, total recoverable	73.5	mg/kg					
CS6G 1404	4	6	Barium, total recoverable	90.1	mg/kg					
CS6G 1302	1	2	Barium, total recoverable	97.4	mg/kg					
CS6G 0802	5	7	Barium	165	mg/kg		Y			
CS6G 2203	2	4	Barium, total recoverable	290	mg/kg					
				23.566	average of 79 detects					
CS6G 1404	4	6	Benz(e)scephenanthrylene	380	ug/kg	J	N		?	?
CS6G 0602	10.7	12.7	Benzene	0.0617	ug/kg	J	Y		0.333 ug/kg	24 of 41
CS6G 1401	0	1	Benzene	0.0769	ug/kg	J	B			
CS6G 1301	0	1	Benzene	0.0778	ug/kg	J	B			
CS6G 0603	12.7	14.7	Benzene	0.0824	ug/kg	J	Y			
CS6G 1204	4	6	Benzene	0.0964	ug/kg	J	B			
CS6G 1601	0	1	Benzene	0.133	ug/kg	J				
CS6G 0504	11.2	12.2	Benzene	0.136	ug/kg	J				
CS6G 0804	9	11	Benzene	0.153	ug/kg	J	Y			
CS6G 0502	7.2	9.2	Benzene	0.167	ug/kg	J				
CS6G 1104	4	6	Benzene	0.184	ug/kg	J				
CS6G 0802	5	7	Benzene	0.193	ug/kg	J	Y			
CS6G 1403	2	4	Benzene	0.226	ug/kg	J	B			
CS6G 1103	2	4	Benzene	0.276	ug/kg	J				
CS6G 1305	6	8	Benzene	0.301	ug/kg	J	B			
CS6G 2203	2	4	Benzene	0.317	ug/kg	J	B			
CS6G 1501	0	1	Benzene	0.323	ug/kg	J				
CS6G 1304	4	6	Benzene	0.329	ug/kg	J	B			
CS6G 1405	6	8	Benzene	0.345	ug/kg	J	B			
CS6G 1503	2	4	Benzene	0.402	ug/kg	J				
CS6G 1604	4	6	Benzene	0.465	ug/kg	J				
CS6G 1702	1	2	Benzene	0.583	ug/kg	J				
CS6G 1205	6	8	Benzene	0.651	ug/kg					
CS6G 1302	1	2	Benzene	0.659	ug/kg					
CS6G 1404	4	6	Benzene	0.688	ug/kg					
CS6G 1502	1	2	Benzene	0.711	ug/kg	J				
CS6G 1201	0	1	Benzene	0.802	ug/kg	J				
CS6G 1703	2	4	Benzene	0.802	ug/kg	J				
CS6G 1407	13	15	Benzene	0.963	ug/kg					
CS6G 1202	1	2	Benzene	1.02	ug/kg					
CS6G 1406	8	10	Benzene	1.04	ug/kg					
CS6G 1701	0	1	Benzene	1.12	ug/kg	J				
CS6G 1303	2	4	Benzene	1.23	ug/kg					
CS6G 1105	6	8	Benzene	1.25	ug/kg					
CS6G 1402	1	2	Benzene	1.32	ug/kg					
CS6G 1505	10	12	Benzene	1.39	ug/kg					
CS6G 1504	4	6	Benzene	1.61	ug/kg					
CS6G 1603	2	4	Benzene	2.47	ug/kg	J				
CS6G 1602	1	2	Benzene	2.65	ug/kg					
CS6G 0902	3.6	5.6	Benzo(a)anthracene	3140	ug/kg		Y		1.356 ug/kg	2 of 2
CS6G 1404	4	6	Benzo(a)anthracene	74000	ug/kg					
CS6G 0401	0	2	Benzo(a)pyrene	9.54	ug/kg				1.138 ug/kg	5 of 5
CS6G 0904	7.6	9.6	Benzo(a)pyrene	16.6	ug/kg	J	I	P		
CS6G 1405	6	8	Benzo(a)pyrene	69.5	ug/kg					
CS6G 0902	3.6	5.6	Benzo(a)pyrene	5200	ug/kg		Y			
CS6G 1404	4	6	Benzo(a)pyrene	85800	ug/kg					
				18219	average of 5 detects					
CS6G 1406	8	10	Benzo(b)fluoranthene	5.54	ug/kg				1.076 ug/kg	8 of 8

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 0901	0	2	Benzo(b)fluoranthene	5.78	ug/kg					
CS6G 0401	0	2	Benzo(b)fluoranthene	9.19	ug/kg					
CS6G 0904	7.6	9.6	Benzo(b)fluoranthene	25.6	ug/kg	J	I	P		
CS6G 1501	0	1	Benzo(b)fluoranthene	27.1	ug/kg					
CS6G 1405	6	8	Benzo(b)fluoranthene	91.8	ug/kg					
CS6G 0902	3.6	5.6	Benzo(b)fluoranthene	7020	ug/kg		Y			
CS6G 1404	4	6	Benzo(b)fluoranthene	119000	ug/kg					
				15773	average of 8 detects					
CS6G 0904	7.6	9.6	Benzo(g,h,i)perylene	9.34	ug/kg	J	I	P	0.452 ug/kg	6 of 6
CS6G 0502	7.2	9.2	Benzo(g,h,i)perylene	18.9	ug/kg	J				
CS6G 0401	0	2	Benzo(g,h,i)perylene	21.9	ug/kg	J				
CS6G 1405	6	8	Benzo(g,h,i)perylene	45.1	ug/kg					
CS6G 0902	3.6	5.6	Benzo(g,h,i)perylene	2780	ug/kg		Y			
CS6G 1404	4	6	Benzo(g,h,i)perylene	30600	ug/kg					
				5579.2	average of 6 detects					
CS6G 0401	0	2	Benzo(k)fluoranthene	4.24	ug/kg				1.138 ug/kg	6 of 6
CS6G 0904	7.6	9.6	Benzo(k)fluoranthene	7.31	ug/kg	J	I	P		
CS6G 1501	0	1	Benzo(k)fluoranthene	18.5	ug/kg					
CS6G 1405	6	8	Benzo(k)fluoranthene	43.6	ug/kg					
CS6G 0902	3.6	5.6	Benzo(k)fluoranthene	2760	ug/kg		Y			
CS6G 1404	4	6	Benzo(k)fluoranthene	41500	ug/kg					
				7388.9	average of 6 detects					
CS6G 1601	0	1	Benzoic acid	8.01	ug/kg	J			13.17 ug/kg	10 of 11
CS6G 1201	0	1	Benzoic acid	17	ug/kg	J	B			
CS6G 1302	1	2	Benzoic acid	20.4	ug/kg	J	B			
CS6G 1602	1	2	Benzoic acid	22.4	ug/kg	J				
CS6G 1104	4	6	Benzoic acid	27.6	ug/kg	J				
CS6G 1604	4	6	Benzoic acid	31.3	ug/kg	J				
CS6G 1202	1	2	Benzoic acid	49.1	ug/kg					
CS6G 1603	2	4	Benzoic acid	50	ug/kg					
CS6G 2201	0	1	Benzoic acid	50.9	ug/kg					
CS6G 1402	1	2	Benzoic acid	57.9	ug/kg					
CS6G 1604	4	6	Beryllium, total recoverable	0.0544	mg/kg	J			0.1524 mg/kg	18 of 74
CS6G 0801	0	2	Beryllium	0.0595	mg/kg	J	RY			
CS6G 0303	5	7	Beryllium	0.0595	mg/kg	J				
CS6G 0401	0	2	Beryllium	0.0605	mg/kg	J				
CS6G 0203	5	6	Beryllium	0.0632	mg/kg	J				
CS6G 0304	7	9	Beryllium	0.0668	mg/kg	J				
CS6G 0503	9.2	10.6	Beryllium	0.0691	mg/kg	J	R			
CS6G 0403	5	7	Beryllium	0.0711	mg/kg	J				
CS6G 0103	5	7	Beryllium	0.0714	mg/kg	J				
CS6G 0204	7	9	Beryllium	0.0725	mg/kg	J				
CS6G 0102	3	5	Beryllium	0.0728	mg/kg	J	RX			
CS6G 0504	11.2	12.2	Beryllium	0.0767	mg/kg	J	RX			
CS6G 0804	9	11	Beryllium	0.0782	mg/kg	J	RY			
CS6G 0202	3	5	Beryllium	0.0792	mg/kg	J				
CS6G 0902	3.6	5.6	Beryllium	0.0798	mg/kg	J	RY			
CS6G 0302	3	5	Beryllium	0.0798	mg/kg	J				
CS6G 0404	7	9	Beryllium	0.0828	mg/kg	J				
CS6G 0704	11	13	Beryllium	0.0834	mg/kg	J				
CS6G 0701	0	2	Beryllium	0.0837	mg/kg	J				
CS6G 0104	7	9	Beryllium	0.085	mg/kg	J				
CS6G 0901	0	2	Beryllium	0.0852	mg/kg	J	R			
CS6G 0903	5.6	7.6	Beryllium	0.0866	mg/kg	J	R			
CS6G 1505	10	12	Beryllium, total recoverable	0.0882	mg/kg	J				
CS6G 1402	1	2	Beryllium, total recoverable	0.0883	mg/kg	J	B			
CS6G 0904	7.6	9.6	Beryllium	0.0888	mg/kg	J	R			
CS6G 1201	0	1	Beryllium, total recoverable	0.089	mg/kg	J	B			
CS6G 1304	4	6	Beryllium, total recoverable	0.0923	mg/kg	J	B			
CS6G 1305	6	8	Beryllium, total recoverable	0.0926	mg/kg	J	B			
CS6G 1601	0	1	Beryllium, total recoverable	0.0934	mg/kg	J				
CS6G 0502	7.2	9.2	Beryllium	0.0959	mg/kg	J	R			

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 0201	0	2	Beryllium	0.0976	mg/kg	J				
CS6G 0402	3	5	Beryllium	0.0988	mg/kg	J				
CS6G 0603	12.7	14.7	Beryllium	0.0995	mg/kg	J	Y			
CS6G 0604	14.7	16.7	Beryllium	0.101	mg/kg	J	Y			
CS6G 1703	2	4	Beryllium, total recoverable	0.103	mg/kg	J				
CS6G 1205	6	8	Beryllium, total recoverable	0.105	mg/kg	J	B			
CS6G 0801	0	2	Beryllium	0.106	mg/kg	J	Y			
CS6G 1403	2	4	Beryllium, total recoverable	0.106	mg/kg	J	B			
CS6G 1602	1	2	Beryllium, total recoverable	0.113	mg/kg	J				
CS6G 0803	7	9	Beryllium	0.117	mg/kg	J	Y			
CS6G 0301	0	2	Beryllium	0.117	mg/kg	J				
CS6G 1406	8	10	Beryllium, total recoverable	0.117	mg/kg	J	B			
CS6G 1103	2	4	Beryllium, total recoverable	0.123	mg/kg	J				
CS6G 0702	7.5	9.5	Beryllium	0.124	mg/kg	J				
CS6G 1704	5	7	Beryllium, total recoverable	0.124	mg/kg	J				
CS6G 0602	10.7	12.7	Beryllium	0.125	mg/kg	J	YX			
CS6G 1504	4	6	Beryllium, total recoverable	0.125	mg/kg	J				
CS6G 1405	6	8	Beryllium, total recoverable	0.127	mg/kg	J	B			
CS6G 1104	4	6	Beryllium, total recoverable	0.129	mg/kg	J				
CS6G 1106	8	10	Beryllium, total recoverable	0.132	mg/kg	J				
CS6G 1302	1	2	Beryllium, total recoverable	0.134	mg/kg	J	B			
CS6G 1102	1	2	Beryllium, total recoverable	0.134	mg/kg	J				
CS6G 0703	9.5	11	Beryllium	0.138	mg/kg	J				
CS6G 1404	4	6	Beryllium, total recoverable	0.141	mg/kg	J	B			
CS6G 2201	0	1	Beryllium, total recoverable	0.144	mg/kg	J	B			
CS6G 1203	2	4	Beryllium, total recoverable	0.149	mg/kg	J	B			
CS6G 1702	1	2	Beryllium, total recoverable	0.157	mg/kg	J				
CS6G 1301	0	1	Beryllium, total recoverable	0.159	mg/kg	J	B			
CS6G 0501	0	2	Beryllium	0.163	mg/kg	J	R			
CS6G 1603	2	4	Beryllium, total recoverable	0.17	mg/kg	J				
CS6G 1401	0	1	Beryllium, total recoverable	0.172	mg/kg	J	B			
CS6G 0101	0	2	Beryllium	0.176	mg/kg	J	Y			
CS6G 1501	0	1	Beryllium, total recoverable	0.177	mg/kg	J				
CS6G 1202	1	2	Beryllium, total recoverable	0.18	mg/kg	J	B			
CS6G 1502	1	2	Beryllium, total recoverable	0.186	mg/kg	J				
CS6G 0802	5	7	Beryllium	0.189	mg/kg	J	Y			
CS6G 1701	0	1	Beryllium, total recoverable	0.195	mg/kg	J				
CS6G 1303	2	4	Beryllium, total recoverable	0.204	mg/kg	J	B			
CS6G 1101	0	1	Beryllium, total recoverable	0.224	mg/kg	J				
CS6G 2202	1	2	Beryllium, total recoverable	0.228	mg/kg	J	B			
CS6G 1503	2	4	Beryllium, total recoverable	0.237	mg/kg	J				
CS6G 1204	4	6	Beryllium, total recoverable	0.257	mg/kg	J	B			
CS6G 1105	6	8	Beryllium, total recoverable	0.351	mg/kg	J				
CS6G 2203	2	4	Beryllium, total recoverable	0.366	mg/kg	J	B			
				0.1253	average of 74 detects					
CS6G 1404	4	6	beta-Pinene	1.6	ug/kg	J	N			
CS6G 1401	0	1	beta-Pinene	18.4	ug/kg	J	N			
CS6G 0903	5.6	7.6	Bis(2-ethylhexyl) phthalate	37.2	ug/kg	J	V	H	4.624 ug/kg	2 of 2
CS6G 0701	0	2	Bis(2-ethylhexyl) phthalate	78.1	ug/kg	J				
CS6G 0603	12.7	14.7	Cadmium	0.211	mg/kg	J	Y		0.212 mg/kg	8 of 9
CS6G 0602	10.7	12.7	Cadmium	0.244	mg/kg	J	Y			
CS6G 0604	14.7	16.7	Cadmium	0.248	mg/kg	J	Y			
CS6G 0102	3	5	Cadmium	0.405	mg/kg	J	R			
CS6G 1105	6	8	Cadmium, total recoverable	0.418	mg/kg	J				
CS6G 0902	3.6	5.6	Cadmium	0.456	mg/kg	J	RY			
CS6G 2202	1	2	Cadmium, total recoverable	0.497	mg/kg	J	B			
CS6G 0802	5	7	Cadmium	1.34	mg/kg	J	Y			
CS6G 2203	2	4	Cadmium, total recoverable	2.87	mg/kg	J	B			
				0.7432	average of 9 detects					
CS6G 0704	11	13	Calcium	5.07	mg/kg	J			138.85 mg/kg	51 of 74
CS6G 0703	9.5	11	Calcium	7.84	mg/kg	J				

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 0702	7.5	9.5	Calcium	55.1	mg/kg					
CS6G 0404	7	9	Calcium	61.1	mg/kg	J				
CS6G 0401	0	2	Calcium	66.6	mg/kg	J				
CS6G 1106	8	10	Calcium, total recoverable	67.3	mg/kg					
CS6G 1604	4	6	Calcium, total recoverable	77.6	mg/kg					
CS6G 0804	9	11	Calcium	79	mg/kg	J	RY			
CS6G 1601	0	1	Calcium, total recoverable	81.6	mg/kg					
CS6G 0303	5	7	Calcium	84	mg/kg					
CS6G 1402	1	2	Calcium, total recoverable	90.4	mg/kg					
CS6G 0904	7.6	9.6	Calcium	93.4	mg/kg	J	R			
CS6G 1602	1	2	Calcium, total recoverable	102	mg/kg					
CS6G 1704	5	7	Calcium, total recoverable	108	mg/kg					
CS6G 1105	6	8	Calcium, total recoverable	110	mg/kg					
CS6G 1305	6	8	Calcium, total recoverable	111	mg/kg					
CS6G 0901	0	2	Calcium	112	mg/kg	J	R			
CS6G 0304	7	9	Calcium	114	mg/kg					
CS6G 0801	0	2	Calcium	123	mg/kg	J	RY			
CS6G 0701	0	2	Calcium	124	mg/kg	J				
CS6G 0202	3	5	Calcium	129	mg/kg					
CS6G 0403	5	7	Calcium	136	mg/kg	J				
CS6G 0803	7	9	Calcium	138	mg/kg		Y			
CS6G 1202	1	2	Calcium, total recoverable	144	mg/kg		X			
CS6G 1304	4	6	Calcium, total recoverable	144	mg/kg					
CS6G 1103	2	4	Calcium, total recoverable	146	mg/kg					
CS6G 0903	5.6	7.6	Calcium	149	mg/kg	J	R			
CS6G 1603	2	4	Calcium, total recoverable	149	mg/kg					
CS6G 0203	5	6	Calcium	153	mg/kg					
CS6G 0604	14.7	16.7	Calcium	159	mg/kg		Y			
CS6G 0204	7	9	Calcium	163	mg/kg	J				
CS6G 0601	0	2	Calcium	167	mg/kg		Y			
CS6G 1201	0	1	Calcium, total recoverable	174	mg/kg					
CS6G 1403	2	4	Calcium, total recoverable	183	mg/kg					
CS6G 1502	1	2	Calcium, total recoverable	184	mg/kg					
CS6G 1703	2	4	Calcium, total recoverable	194	mg/kg					
CS6G 0201	0	2	Calcium	198	mg/kg	J				
CS6G 1203	2	4	Calcium, total recoverable	212	mg/kg					
CS6G 0301	0	2	Calcium	230	mg/kg	J				
CS6G 1104	4	6	Calcium, total recoverable	237	mg/kg					
CS6G 1505	10	12	Calcium, total recoverable	256	mg/kg					
CS6G 0302	3	5	Calcium	279	mg/kg	J				
CS6G 1401	0	1	Calcium, total recoverable	282	mg/kg					
CS6G 0501	0	2	Calcium	286	mg/kg	J	R			
CS6G 2201	0	1	Calcium, total recoverable	339	mg/kg					
CS6G 0402	3	5	Calcium	348	mg/kg	J				
CS6G 1501	0	1	Calcium, total recoverable	352	mg/kg					
CS6G 1701	0	1	Calcium, total recoverable	369	mg/kg					
CS6G 1503	2	4	Calcium, total recoverable	371	mg/kg					
CS6G 1406	8	10	Calcium, total recoverable	377	mg/kg					
CS6G 0603	12.7	14.7	Calcium	386	mg/kg		Y			
CS6G 1102	1	2	Calcium, total recoverable	416	mg/kg					
CS6G 1301	0	1	Calcium, total recoverable	444	mg/kg					
CS6G 1101	0	1	Calcium, total recoverable	481	mg/kg					
CS6G 1702	1	2	Calcium, total recoverable	501	mg/kg					
CS6G 0101	0	2	Calcium	504	mg/kg		Y			
CS6G 0103	5	7	Calcium	516	mg/kg					
CS6G 0504	11.2	12.2	Calcium	517	mg/kg	J	R			
CS6G 2202	1	2	Calcium, total recoverable	561	mg/kg					
CS6G 0104	7	9	Calcium	614	mg/kg					
CS6G 0503	9.2	10.6	Calcium	626	mg/kg	J	R			
CS6G 1504	4	6	Calcium, total recoverable	677	mg/kg					
CS6G 1205	6	8	Calcium, total recoverable	715	mg/kg					
CS6G 1204	4	6	Calcium, total recoverable	793	mg/kg					
CS6G 1303	2	4	Calcium, total recoverable	906	mg/kg					
CS6G 0102	3	5	Calcium	1020	mg/kg	J	RIX	H		
CS6G 0502	7.2	9.2	Calcium	1670	mg/kg	J	R			
CS6G 0902	3.6	5.6	Calcium	1670	mg/kg	J	RY			

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 1302	1	2	Calcium, total recoverable	1980	mg/kg				.	
CS6G 0602	10.7	12.7	Calcium	2010	mg/kg		Y		.	
CS6G 1404	4	6	Calcium, total recoverable	2990	mg/kg				.	
CS6G 1405	6	8	Calcium, total recoverable	3460	mg/kg				.	
CS6G 0802	5	7	Calcium	7730	mg/kg		Y		.	
CS6G 2203	2	4	Calcium, total recoverable	19400	mg/kg				.	
CS6G 1401	0	1	Camphene	5	ug/kg	J	N		.	
CS6G 1403	2	4	Carbon disulfide	0.204	ug/kg	J	B		1.049 ug/kg	3 of 17
CS6G 1305	6	8	Carbon disulfide	0.289	ug/kg	J	B		.	
CS6G 1201	0	1	Carbon disulfide	0.352	ug/kg	J	B		.	
CS6G 1302	1	2	Carbon disulfide	0.352	ug/kg	J	B		.	
CS6G 1304	4	6	Carbon disulfide	0.353	ug/kg	J	B		.	
CS6G 1303	2	4	Carbon disulfide	0.402	ug/kg	J	B		.	
CS6G 1301	0	1	Carbon disulfide	0.511	ug/kg	J	B		.	
CS6G 1205	6	8	Carbon disulfide	0.535	ug/kg	J	B		.	
CS6G 0502	7.2	9.2	Carbon disulfide	0.595	ug/kg	J			.	
CS6G 1204	4	6	Carbon disulfide	0.602	ug/kg	J	B		.	
CS6G 0504	11.2	12.2	Carbon disulfide	0.693	ug/kg	J			.	
CS6G 1202	1	2	Carbon disulfide	0.744	ug/kg	J	B		.	
CS6G 0304	7	9	Carbon disulfide	0.965	ug/kg	J			.	
CS6G 0103	5	7	Carbon disulfide	0.988	ug/kg	J	I	P	.	
CS6G 0203	5	6	Carbon disulfide	1.06	ug/kg	J			.	
CS6G 0204	7	9	Carbon disulfide	2.67	ug/kg				.	
CS6G 0104	7	9	Carbon disulfide	6.89	ug/kg				.	
				1.0709	average of 17 detects					
CS6G 1301	0	1	Chloroform	0.0889	ug/kg				0.856 ug/kg	20 of 38
CS6G 1204	4	6	Chloroform	0.108	ug/kg				.	
CS6G 1203	2	4	Chloroform	0.11	ug/kg				.	
CS6G 1403	2	4	Chloroform	0.226	ug/kg				.	
CS6G 1104	4	6	Chloroform	0.287	ug/kg				.	
CS6G 2202	1	2	Chloroform	0.388	ug/kg				.	
CS6G 2201	0	1	Chloroform	0.443	ug/kg				.	
CS6G 1304	4	6	Chloroform	0.447	ug/kg				.	
CS6G 1305	6	8	Chloroform	0.494	ug/kg				.	
CS6G 1102	1	2	Chloroform	0.513	ug/kg				.	
CS6G 1704	5	7	Chloroform	0.553	ug/kg	J			.	
CS6G 1103	2	4	Chloroform	0.586	ug/kg				.	
CS6G 1302	1	2	Chloroform	0.593	ug/kg				.	
CS6G 1501	0	1	Chloroform	0.602	ug/kg				.	
CS6G 1503	2	4	Chloroform	0.72	ug/kg				.	
CS6G 1405	6	8	Chloroform	0.762	ug/kg				.	
CS6G 1705	10	12	Chloroform	0.762	ug/kg	J			.	
CS6G 1404	4	6	Chloroform	0.763	ug/kg				.	
CS6G 1201	0	1	Chloroform	0.945	ug/kg				.	
CS6G 1205	6	8	Chloroform	0.953	ug/kg				.	
CS6G 1605	10	12	Chloroform	1.13	ug/kg	J			.	
CS6G 1702	1	2	Chloroform	1.17	ug/kg	J			.	
CS6G 1303	2	4	Chloroform	1.18	ug/kg				.	
CS6G 1202	1	2	Chloroform	1.31	ug/kg				.	
CS6G 1601	0	1	Chloroform	1.34	ug/kg				.	
CS6G 1502	1	2	Chloroform	1.37	ug/kg	J			.	
CS6G 1701	0	1	Chloroform	1.46	ug/kg	J			.	
CS6G 1407	13	15	Chloroform	1.58	ug/kg				.	
CS6G 1703	2	4	Chloroform	1.72	ug/kg	J			.	
CS6G 1401	0	1	Chloroform	1.87	ug/kg				.	
CS6G 1406	8	10	Chloroform	1.96	ug/kg				.	
CS6G 1402	1	2	Chloroform	2.28	ug/kg				.	
CS6G 1505	10	12	Chloroform	2.47	ug/kg				.	
CS6G 1105	6	8	Chloroform	2.58	ug/kg				.	
CS6G 1504	4	6	Chloroform	3.11	ug/kg				.	
CS6G 1604	4	6	Chloroform	3.64	ug/kg				.	
CS6G 1602	1	2	Chloroform	4.16	ug/kg				.	
CS6G 1603	2	4	Chloroform	4.61	ug/kg	J			.	

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
					1.2969	average of 38 detects				
CS6G 0104	7	9	Chromium	1.91	mg/kg	J			21.67 mg/kg	21 of 79
CS6G 0703	9.5	11	Chromium	2.72	mg/kg	J				
CS6G 0603	12.7	14.7	Chromium	3.06	mg/kg		Y			
CS6G 0704	11	13	Chromium	3.22	mg/kg	J				
CS6G 1202	1	2	Chromium, total recoverable	3.51	mg/kg					
CS6G 1602	1	2	Chromium, total recoverable	3.9	mg/kg					
CS6G 1402	1	2	Chromium, total recoverable	4.83	mg/kg					
CS6G 1603	2	4	Chromium, total recoverable	5.54	mg/kg					
CS6G 0102	3	5	Chromium	5.67	mg/kg	J	RIX	H		
CS6G 0401	0	2	Chromium	6.1	mg/kg	J				
CS6G 0604	14.7	16.7	Chromium	6.16	mg/kg		Y			
CS6G 0504	11.2	12.2	Chromium	6.22	mg/kg	J	RX			
CS6G 0103	5	7	Chromium	6.44	mg/kg					
CS6G 1403	2	4	Chromium, total recoverable	6.91	mg/kg					
CS6G 1501	0	1	Chromium, total recoverable	6.97	mg/kg					
CS6G 0301	0	2	Chromium	7.01	mg/kg					
CS6G 1604	4	6	Chromium, total recoverable	7.05	mg/kg					
CS6G 0501	0	2	Chromium	7.23	mg/kg	J	R			
CS6G 1601	0	1	Chromium, total recoverable	7.34	mg/kg					
CS6G 0503	9.2	10.6	Chromium	8.2	mg/kg	J	R			
CS6G 1502	1	2	Chromium, total recoverable	8.53	mg/kg					
CS6G 0303	5	7	Chromium	8.84	mg/kg					
CS6G 1203	2	4	Chromium, total recoverable	9.23	mg/kg					
CS6G 0804	9	11	Chromium	9.24	mg/kg	J	RY			
CS6G 0801	0	2	Chromium	9.46	mg/kg	J	RY			
CS6G 1303	2	4	Chromium, total recoverable	9.55	mg/kg					
CS6G 0404	7	9	Chromium	9.68	mg/kg	J				
CS6G 1201	0	1	Chromium, total recoverable	9.68	mg/kg					
CS6G 1106	8	10	Chromium, total recoverable	10.1	mg/kg					
CS6G 1605	10	12	Chromium, total recoverable	10.2	mg/kg					
CS6G 1701	0	1	Chromium, total recoverable	11	mg/kg					
CS6G 1302	1	2	Chromium, total recoverable	11.1	mg/kg					
CS6G 1705	10	12	Chromium, total recoverable	11.1	mg/kg					
CS6G 1304	4	6	Chromium, total recoverable	12.1	mg/kg					
CS6G 0502	7.2	9.2	Chromium	12.3	mg/kg	J	R			
CS6G 0606	28.7	30.7	Chromium	12.7	mg/kg		Y			
CS6G 1401	0	1	Chromium, total recoverable	12.7	mg/kg					
CS6G 1505	10	12	Chromium, total recoverable	13	mg/kg					
CS6G 1305	6	8	Chromium, total recoverable	13.4	mg/kg					
CS6G 0904	7.6	9.6	Chromium	13.7	mg/kg	J	R			
CS6G 0605	21.7	23.7	Chromium	14	mg/kg		Y			
CS6G 0702	7.5	9.5	Chromium	14	mg/kg					
CS6G 0304	7	9	Chromium	14.1	mg/kg					
CS6G 0701	0	2	Chromium	14.4	mg/kg	J				
CS6G 0803	7	9	Chromium	14.7	mg/kg		Y			
CS6G 1301	0	1	Chromium, total recoverable	14.8	mg/kg					
CS6G 0403	5	7	Chromium	15	mg/kg	J				
CS6G 1407	13	15	Chromium, total recoverable	15.3	mg/kg					
CS6G 0402	3	5	Chromium	16.2	mg/kg	J				
CS6G 0602	10.7	12.7	Chromium	16.4	mg/kg		YX			
CS6G 0601	0	2	Chromium	17.2	mg/kg		Y			
CS6G 2202	1	2	Chromium, total recoverable	17.2	mg/kg					
CS6G 0204	7	9	Chromium	17.5	mg/kg					
CS6G 1404	4	6	Chromium, total recoverable	18.3	mg/kg					
CS6G 2201	0	1	Chromium, total recoverable	18.3	mg/kg					
CS6G 0901	0	2	Chromium	20.1	mg/kg	J	R			
CS6G 0903	5.6	7.6	Chromium	20.2	mg/kg	J	R			
CS6G 1702	1	2	Chromium, total recoverable	21	mg/kg					
CS6G 0302	3	5	Chromium	23.9	mg/kg					
CS6G 1503	2	4	Chromium, total recoverable	24.3	mg/kg					
CS6G 1504	4	6	Chromium, total recoverable	25.6	mg/kg					
CS6G 1406	8	10	Chromium, total recoverable	26.5	mg/kg	J	I	L		
CS6G 1205	6	8	Chromium, total recoverable	26.7	mg/kg					
CS6G 1703	2	4	Chromium, total recoverable	27.1	mg/kg					

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 1104	4	6	Chromium, total recoverable	28.1	mg/kg					
CS6G 1405	6	8	Chromium, total recoverable	29	mg/kg					
CS6G 1102	1	2	Chromium, total recoverable	31.2	mg/kg					
CS6G 0902	3.6	5.6	Chromium	32.2	mg/kg	J	RY			
CS6G 2203	2	4	Chromium, total recoverable	34.4	mg/kg					
CS6G 1704	5	7	Chromium, total recoverable	36.3	mg/kg					
CS6G 1103	2	4	Chromium, total recoverable	36.4	mg/kg					
CS6G 0202	3	5	Chromium	38.5	mg/kg					
CS6G 0802	5	7	Chromium	42.3	mg/kg		Y			
CS6G 0101	0	2	Chromium	43	mg/kg		Y			
CS6G 1204	4	6	Chromium, total recoverable	45.9	mg/kg					
CS6G 1101	0	1	Chromium, total recoverable	46.9	mg/kg					
CS6G 1105	6	8	Chromium, total recoverable	78.9	mg/kg					
CS6G 0203	5	6	Chromium	95.4	mg/kg					
CS6G 0201	0	2	Chromium	108	mg/kg	J				
				19.075	average of 79 detects					
CS6G 0902	3.6	5.6	Chrysene	3990	ug/kg		Y		0.825 ug/kg	2 of 2
CS6G 1404	4	6	Chrysene	60200	ug/kg					
CS6G 0304	7	9	Cobalt	0.126	mg/kg	J			0.5127 mg/kg	30 of 71
CS6G 0704	11	13	Cobalt	0.144	mg/kg	J				
CS6G 0801	0	2	Cobalt	0.145	mg/kg	J	RY			
CS6G 0703	9.5	11	Cobalt	0.147	mg/kg	J				
CS6G 0303	5	7	Cobalt	0.151	mg/kg	J				
CS6G 0803	7	9	Cobalt	0.165	mg/kg	J	Y			
CS6G 0603	12.7	14.7	Cobalt	0.178	mg/kg	J	Y			
CS6G 1505	10	12	Cobalt, total recoverable	0.198	mg/kg	J				
CS6G 0604	14.7	16.7	Cobalt	0.202	mg/kg	J	Y			
CS6G 1601	0	1	Cobalt, total recoverable	0.207	mg/kg	J				
CS6G 1604	4	6	Cobalt, total recoverable	0.217	mg/kg	J				
CS6G 0804	9	11	Cobalt	0.223	mg/kg	J	RY			
CS6G 0204	7	9	Cobalt	0.231	mg/kg	J				
CS6G 0503	9.2	10.6	Cobalt	0.232	mg/kg	J	R			
CS6G 1304	4	6	Cobalt, total recoverable	0.25	mg/kg	J	B			
CS6G 0504	11.2	12.2	Cobalt	0.258	mg/kg	J	R			
CS6G 0904	7.6	9.6	Cobalt	0.262	mg/kg	J	R			
CS6G 0403	5	7	Cobalt	0.291	mg/kg	J				
CS6G 1403	2	4	Cobalt, total recoverable	0.297	mg/kg	J	B			
CS6G 0401	0	2	Cobalt	0.298	mg/kg	J				
CS6G 0702	7.5	9.5	Cobalt	0.304	mg/kg	J				
CS6G 0903	5.6	7.6	Cobalt	0.308	mg/kg	J	R			
CS6G 1202	1	2	Cobalt, total recoverable	0.327	mg/kg	J	B			
CS6G 1205	6	8	Cobalt, total recoverable	0.337	mg/kg	J	B			
CS6G 0701	0	2	Cobalt	0.352	mg/kg	J				
CS6G 0302	3	5	Cobalt	0.356	mg/kg	J				
CS6G 0901	0	2	Cobalt	0.362	mg/kg	J	R			
CS6G 1703	2	4	Cobalt, total recoverable	0.38	mg/kg	J				
CS6G 1502	1	2	Cobalt, total recoverable	0.387	mg/kg	J				
CS6G 1602	1	2	Cobalt, total recoverable	0.403	mg/kg	J				
CS6G 1504	4	6	Cobalt, total recoverable	0.406	mg/kg	J				
CS6G 1401	0	1	Cobalt, total recoverable	0.41	mg/kg	J	B			
CS6G 0301	0	2	Cobalt	0.426	mg/kg	J				
CS6G 1406	8	10	Cobalt, total recoverable	0.442	mg/kg	J	B			
CS6G 0104	7	9	Cobalt	0.445	mg/kg	J				
CS6G 1704	5	7	Cobalt, total recoverable	0.457	mg/kg	J				
CS6G 1305	6	8	Cobalt, total recoverable	0.493	mg/kg	J	B			
CS6G 1103	2	4	Cobalt, total recoverable	0.506	mg/kg	J				
CS6G 1201	0	1	Cobalt, total recoverable	0.507	mg/kg	J	B			
CS6G 1203	2	4	Cobalt, total recoverable	0.51	mg/kg	J	B			
CS6G 1106	8	10	Cobalt, total recoverable	0.514	mg/kg	J				
CS6G 0202	3	5	Cobalt	0.562	mg/kg	J				
CS6G 0601	0	2	Cobalt	0.564	mg/kg	J	Y			
CS6G 0402	3	5	Cobalt	0.623	mg/kg	J				
CS6G 1501	0	1	Cobalt, total recoverable	0.635	mg/kg	J				
CS6G 1303	2	4	Cobalt, total recoverable	0.645	mg/kg	J	B			

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 1603	2	4	Cobalt, total recoverable	0.651	mg/kg	J				
CS6G 0102	3	5	Cobalt	0.656	mg/kg	J	RX			
CS6G 1102	1	2	Cobalt, total recoverable	0.657	mg/kg	J				
CS6G 0602	10.7	12.7	Cobalt	0.667	mg/kg	J	YX			
CS6G 1105	6	8	Cobalt, total recoverable	0.677	mg/kg	J				
CS6G 1104	4	6	Cobalt, total recoverable	0.701	mg/kg	J				
CS6G 1702	1	2	Cobalt, total recoverable	0.732	mg/kg	J				
CS6G 2201	0	1	Cobalt, total recoverable	0.862	mg/kg	J	B			
CS6G 0502	7.2	9.2	Cobalt	0.93	mg/kg	J	R			
CS6G 1301	0	1	Cobalt, total recoverable	0.931	mg/kg	J	B			
CS6G 0501	0	2	Cobalt	0.985	mg/kg	J	R			
CS6G 1701	0	1	Cobalt, total recoverable	1.04	mg/kg	J				
CS6G 1204	4	6	Cobalt, total recoverable	1.1	mg/kg	J	B			
CS6G 1503	2	4	Cobalt, total recoverable	1.1	mg/kg	J				
CS6G 0101	0	2	Cobalt	1.32	mg/kg	J	Y			
CS6G 2202	1	2	Cobalt, total recoverable	1.36	mg/kg	J	B			
CS6G 0203	5	6	Cobalt	1.39	mg/kg	J				
CS6G 1302	1	2	Cobalt, total recoverable	1.41	mg/kg	J	B			
CS6G 1101	0	1	Cobalt, total recoverable	1.69	mg/kg	J				
CS6G 0902	3.6	5.6	Cobalt	1.72	mg/kg	J	RY			
CS6G 1404	4	6	Cobalt, total recoverable	2.38	mg/kg	J	B			
CS6G 1405	6	8	Cobalt, total recoverable	2.57	mg/kg	J	B			
CS6G 0201	0	2	Cobalt	2.62	mg/kg	J				
CS6G 0802	5	7	Cobalt	3.48	mg/kg		Y			
CS6G 2203	2	4	Cobalt, total recoverable	6.35	mg/kg					
				0.7586	average of 71 detects					
CS6G 0704	11	13	Copper	0.536	mg/kg	J			5.58 mg/kg	45 of 73
CS6G 0703	9.5	11	Copper	0.695	mg/kg	J				
CS6G 0404	7	9	Copper	0.775	mg/kg	J				
CS6G 0104	7	9	Copper	1.19	mg/kg	J				
CS6G 0303	5	7	Copper	1.54	mg/kg	J				
CS6G 0403	5	7	Copper	1.59	mg/kg	J				
CS6G 1603	2	4	Copper, total recoverable	1.66	mg/kg	J				
CS6G 0304	7	9	Copper	1.96	mg/kg	J				
CS6G 0302	3	5	Copper	2.11	mg/kg	J				
CS6G 1602	1	2	Copper, total recoverable	2.16	mg/kg	J				
CS6G 0702	7.5	9.5	Copper	2.29	mg/kg	J				
CS6G 0402	3	5	Copper	2.42	mg/kg	J				
CS6G 0604	14.7	16.7	Copper	2.51	mg/kg	J	Y			
CS6G 1604	4	6	Copper, total recoverable	2.52	mg/kg	J				
CS6G 0701	0	2	Copper	2.62	mg/kg	J				
CS6G 0603	12.7	14.7	Copper	2.63	mg/kg	J	Y			
CS6G 1505	10	12	Copper, total recoverable	2.69	mg/kg	J				
CS6G 0803	7	9	Copper	2.74	mg/kg	J	Y			
CS6G 0804	9	11	Copper	2.82	mg/kg	J	RY			
CS6G 1502	1	2	Copper, total recoverable	3.05	mg/kg					
CS6G 1106	8	10	Copper, total recoverable	3.08	mg/kg					
CS6G 1303	2	4	Copper, total recoverable	3.27	mg/kg					
CS6G 0204	7	9	Copper	3.54	mg/kg					
CS6G 0401	0	2	Copper	3.64	mg/kg	J				
CS6G 1703	2	4	Copper, total recoverable	3.86	mg/kg					
CS6G 1205	6	8	Copper, total recoverable	3.87	mg/kg					
CS6G 1504	4	6	Copper, total recoverable	4.34	mg/kg					
CS6G 1406	8	10	Copper, total recoverable	4.67	mg/kg					
CS6G 1503	2	4	Copper, total recoverable	5.7	mg/kg					
CS6G 0903	5.6	7.6	Copper	6.21	mg/kg	J	R			
CS6G 1204	4	6	Copper, total recoverable	6.53	mg/kg					
CS6G 1103	2	4	Copper, total recoverable	7.04	mg/kg					
CS6G 0901	0	2	Copper	7.73	mg/kg	J	R			
CS6G 1402	1	2	Copper, total recoverable	7.76	mg/kg					
CS6G 0301	0	2	Copper	7.85	mg/kg					
CS6G 1105	6	8	Copper, total recoverable	9.4	mg/kg					
CS6G 0501	0	2	Copper	9.74	mg/kg	J	R			
CS6G 0202	3	5	Copper	10.9	mg/kg					
CS6G 0601	0	2	Copper	12.8	mg/kg		Y			

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 0503	9.2	10.6	Copper	12.9	mg/kg	J	R			
CS6G 1104	4	6	Copper, total recoverable	13	mg/kg					
CS6G 1304	4	6	Copper, total recoverable	13.4	mg/kg					
CS6G 1702	1	2	Copper, total recoverable	15.4	mg/kg					
CS6G 1501	0	1	Copper, total recoverable	17	mg/kg					
CS6G 1301	0	1	Copper, total recoverable	19.9	mg/kg					
CS6G 0102	3	5	Copper	21	mg/kg	J	RXI	P		
CS6G 1403	2	4	Copper, total recoverable	21.6	mg/kg					
CS6G 1305	6	8	Copper, total recoverable	21.8	mg/kg					
CS6G 0602	10.7	12.7	Copper	22.1	mg/kg		YX			
CS6G 0504	11.2	12.2	Copper	28.3	mg/kg	J	RXI	P		
CS6G 1704	5	7	Copper, total recoverable	32.2	mg/kg					
CS6G 0904	7.6	9.6	Copper	33.8	mg/kg	J	R			
CS6G 1203	2	4	Copper, total recoverable	39	mg/kg					
CS6G 1405	6	8	Copper, total recoverable	45.6	mg/kg					
CS6G 1601	0	1	Copper, total recoverable	48.4	mg/kg					
CS6G 0101	0	2	Copper	48.6	mg/kg		Y			
CS6G 1102	1	2	Copper, total recoverable	55.9	mg/kg					
CS6G 0103	5	7	Copper	56	mg/kg					
CS6G 1404	4	6	Copper, total recoverable	59.3	mg/kg					
CS6G 0203	5	6	Copper	60.3	mg/kg					
CS6G 1701	0	1	Copper, total recoverable	97.9	mg/kg					
CS6G 0201	0	2	Copper	106	mg/kg	J				
CS6G 1401	0	1	Copper, total recoverable	129	mg/kg					
CS6G 1202	1	2	Copper, total recoverable	136	mg/kg	J	I	L		
CS6G 2202	1	2	Copper, total recoverable	140	mg/kg					
CS6G 0502	7.2	9.2	Copper	146	mg/kg	J	R			
CS6G 1101	0	1	Copper, total recoverable	160	mg/kg					
CS6G 2203	2	4	Copper, total recoverable	369	mg/kg					
CS6G 2201	0	1	Copper, total recoverable	400	mg/kg					
CS6G 0802	5	7	Copper	548	mg/kg		Y			
CS6G 1201	0	1	Copper, total recoverable	1160	mg/kg					
CS6G 0902	3.6	5.6	Copper	1250	mg/kg	J	RY			
CS6G 1302	1	2	Copper, total recoverable	1380	mg/kg					
				94.107	average of 73 detects					
CS6G 0801	0	2	Cyanide	46.2	ug/kg	J	LY		99.215 ug/kg	15 of 21
CS6G 0902	3.6	5.6	Cyanide	49.5	ug/kg	J	LY			
CS6G 0701	0	2	Cyanide	57.5	ug/kg	J				
CS6G 0603	12.7	14.7	Cyanide	59.4	ug/kg	J	LY			
CS6G 0101	0	2	Cyanide	63.3	ug/kg	J	LYV	H		
CS6G 0604	14.7	16.7	Cyanide	78.9	ug/kg	J	LY			
CS6G 0602	10.7	12.7	Cyanide	101	ug/kg	J	LY			
CS6G 1501	0	1	Cyanide	117	ug/kg					
CS6G 0803	7	9	Cyanide	125	ug/kg	J	LY			
CS6G 0103	5	7	Cyanide	152	ug/kg	J	LV	H		
CS6G 0503	9.2	10.6	Cyanide	171	ug/kg	J	LV	H		
CS6G 0501	0	2	Cyanide	184	ug/kg	J	LV	H		
CS6G 0502	7.2	9.2	Cyanide	221	ug/kg	J	LV	H		
CS6G 0504	11.2	12.2	Cyanide	290	ug/kg	J	LV	H		
CS6G 0702	7.5	9.5	Cyanide	370	ug/kg	J				
CS6G 0302	3	5	Cyanide	438	ug/kg	J				
CS6G 0301	0	2	Cyanide	534	ug/kg	J				
CS6G 0102	3	5	Cyanide	673	ug/kg	J	LXV	H		
CS6G 0202	3	5	Cyanide	687	ug/kg	J				
CS6G 0804	9	11	Cyanide	693	ug/kg	J	LYI	P		
CS6G 0601	0	2	Cyanide	703	ug/kg	J	LY			
				276.85	average of 21 detects					
CS6G 1401	0	1	Cyclohexadecane	170	ug/kg	J	N		?	?
CS6G 1401	0	1	Cyclopentadecane	180	ug/kg	J	N			
CS6G 1401	0	1	Cyclopentadecane	270	ug/kg	J	N			
CS6G 1401	0	1	Cyclotetracosane	400	ug/kg	J	N		?	?
CS6G 1101	0	1	CYPD	150	ug/kg	J			?	?

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 1601	0	1	D-Friedoolean-14-ene, 3-methoxy-, (3-beta)	330	ug/kg	J			1020 ug/kg	0
CS6G 1603	2	4	D-Friedoolean-14-ene, 3-methoxy-, (3-beta)	360	ug/kg	J				
CS6G 1502	1	2	D-Friedoolean-14-ene, 3-methoxy-, (3-beta)	440	ug/kg	J				
CS6G 1302	1	2	D-Friedoolean-14-ene, 3-methoxy-, (3-beta)	820	ug/kg	J	N			
CS6G 1401	0	1	D-Limonene	3.1	ug/kg	J	N		?	?
CS6G 1106	8	10	Di-n-butyl phthalate	10.5	ug/kg	JV			49.8 ug/kg	0 of 36
CS6G 1103	2	4	Di-n-butyl phthalate	13.7	ug/kg	JV				
CS6G 1105	6	8	Di-n-butyl phthalate	15.4	ug/kg	JV				
CS6G 0604	14.7	16.7	Di-n-butyl phthalate	16	ug/kg	J	Y			
CS6G 1101	0	1	Di-n-butyl phthalate	17.4	ug/kg	JV				
CS6G 1104	4	6	Di-n-butyl phthalate	20.9	ug/kg	JV				
CS6G 1505	10	12	Di-n-butyl phthalate	22.2	ug/kg	JV				
CS6G 1102	1	2	Di-n-butyl phthalate	22.5	ug/kg	JV				
CS6G 0601	0	2	Di-n-butyl phthalate	23.2	ug/kg	J	Y			
CS6G 1504	4	6	Di-n-butyl phthalate	23.7	ug/kg	JV				
CS6G 1702	1	2	Di-n-butyl phthalate	24.5	ug/kg	JV				
CS6G 0603	12.7	14.7	Di-n-butyl phthalate	24.7	ug/kg	J	Y			
CS6G 1701	0	1	Di-n-butyl phthalate	24.7	ug/kg	JV				
CS6G 1704	5	7	Di-n-butyl phthalate	26.2	ug/kg	JV				
CS6G 1604	4	6	Di-n-butyl phthalate	26.4	ug/kg	JV				
CS6G 1603	2	4	Di-n-butyl phthalate	26.9	ug/kg	JV				
CS6G 1502	1	2	Di-n-butyl phthalate	29.7	ug/kg	JV				
CS6G 1602	1	2	Di-n-butyl phthalate	31.1	ug/kg	JV				
CS6G 1503	2	4	Di-n-butyl phthalate	31.7	ug/kg	JV				
CS6G 1703	2	4	Di-n-butyl phthalate	36.5	ug/kg	JV				
CS6G 1501	0	1	Di-n-butyl phthalate	39.2	ug/kg	V				
CS6G 1601	0	1	Di-n-butyl phthalate	43	ug/kg	V				
				25.005	average of 42 detects					
CS6G 0902	3.6	5.6	Dibenz(a,h)anthracene	1090	ug/kg		Y		0.584 ug/kg	2 of 2
CS6G 1404	4	6	Dibenz(a,h)anthracene	10400	ug/kg					
CS6G 0301	0	2	Dibenzofuran	3.72	ug/kg	J			1.522 ug/kg	7 of 7
CS6G 2203	2	4	Dibenzofuran	7.71	ug/kg	J	B			
CS6G 1104	4	6	Dibenzofuran	9.33	ug/kg	JV				
CS6G 1501	0	1	Dibenzofuran	9.63	ug/kg	JV				
CS6G 1405	6	8	Dibenzofuran	15.4	ug/kg					
CS6G 0902	3.6	5.6	Dibenzofuran	114	ug/kg	J	Y			
CS6G 1404	4	6	Dibenzofuran	3750	ug/kg					
				558.54	average of 7 detects					
CS6G 1204	4	6	Dichloromethane (Methylene chloride)	0.373	ug/kg	J	B		1.678 ug/kg	6 of 28
CS6G 1203	2	4	Dichloromethane (Methylene chloride)	0.378	ug/kg	J	B			
CS6G 0601	0	2	Dichloromethane (Methylene chloride)	0.389	ug/kg	J	YV			
CS6G 0603	12.7	14.7	Dichloromethane (Methylene chloride)	0.4	ug/kg	J	YV			
CS6G 1104	4	6	Dichloromethane (Methylene chloride)	0.414	ug/kg	J				
CS6G 0604	14.7	16.7	Dichloromethane (Methylene chloride)	0.425	ug/kg	J	YV			
CS6G 0701	0	2	Dichloromethane (Methylene chloride)	0.448	ug/kg	J				
CS6G 0702	7.5	9.5	Dichloromethane (Methylene chloride)	0.452	ug/kg	J				
CS6G 0803	7	9	Dichloromethane (Methylene chloride)	0.453	ug/kg	J	YV			
CS6G 0605	21.7	23.7	Dichloromethane (Methylene chloride)	0.471	ug/kg	J	YV			
CS6G 0704	11	13	Dichloromethane (Methylene chloride)	0.471	ug/kg	J				
CS6G 1503	2	4	Dichloromethane (Methylene chloride)	0.488	ug/kg	J				
CS6G 0703	9.5	11	Dichloromethane (Methylene chloride)	0.524	ug/kg	J				
CS6G 0804	9	11	Dichloromethane (Methylene chloride)	0.565	ug/kg	J	YV			
CS6G 1304	4	6	Dichloromethane (Methylene chloride)	0.6	ug/kg					
CS6G 1201	0	1	Dichloromethane (Methylene chloride)	0.637	ug/kg					
CS6G 1302	1	2	Dichloromethane (Methylene chloride)	0.725	ug/kg					
CS6G 1303	2	4	Dichloromethane (Methylene chloride)	0.747	ug/kg					
CS6G 1305	6	8	Dichloromethane (Methylene chloride)	0.747	ug/kg					
CS6G 1103	2	4	Dichloromethane (Methylene chloride)	0.747	ug/kg					
CS6G 1202	1	2	Dichloromethane (Methylene chloride)	0.933	ug/kg					
CS6G 1205	6	8	Dichloromethane (Methylene chloride)	1.15	ug/kg					

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R	Q	A	Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS												
CS6G 1604	4	6	Dichloromethane (Methylene chloride)	1.79	ug/kg							
CS6G 1602	1	2	Dichloromethane (Methylene chloride)	2.15	ug/kg							
CS6G 1505	10	12	Dichloromethane (Methylene chloride)	2.27	ug/kg							
CS6G 1504	4	6	Dichloromethane (Methylene chloride)	2.32	ug/kg							
CS6G 1105	6	8	Dichloromethane (Methylene chloride)	2.74	ug/kg							
CS6G 1603	2	4	Dichloromethane (Methylene chloride)	3.68	ug/kg	J						
				0.9817	average of 28 detects							
CS6G 1603	2	4	Dieldrin	1.06	ug/kg	J					1.3 ug/kg	3 of 5
CS6G 1701	0	1	Dieldrin	1.24	ug/kg	J						
CS6G 2202	1	2	Dieldrin	1.52	ug/kg	J		B				
CS6G 1602	1	2	Dieldrin	2.34	ug/kg	J						
CS6G 2201	0	1	Dieldrin	4.8	ug/kg							
				2.192	average of 5 detects							
CS6G 1106	8	10	Diethyl phthalate	3.89	ug/kg	JV					8.109 ug/kg	7 of 18
CS6G 1403	2	4	Diethyl phthalate	4.25	ug/kg	J		B				
CS6G 1402	1	2	Diethyl phthalate	4.62	ug/kg	J		B				
CS6G 1505	10	12	Diethyl phthalate	5.06	ug/kg	JV						
CS6G 0201	0	2	Diethyl phthalate	5.49	ug/kg	J						
CS6G 1406	8	10	Diethyl phthalate	5.54	ug/kg	J		B				
CS6G 1302	1	2	Diethyl phthalate	5.65	ug/kg	J		B				
CS6G 1301	0	1	Diethyl phthalate	5.92	ug/kg	J		B				
CS6G 0303	5	7	Diethyl phthalate	7.14	ug/kg	J						
CS6G 0304	7	9	Diethyl phthalate	7.41	ug/kg	J						
CS6G 0204	7	9	Diethyl phthalate	7.76	ug/kg	J						
CS6G 1504	4	6	Diethyl phthalate	8.18	ug/kg	JV						
CS6G 1203	2	4	Diethyl phthalate	8.31	ug/kg	J		B				
CS6G 0202	3	5	Diethyl phthalate	8.6	ug/kg	J						
CS6G 0203	5	6	Diethyl phthalate	8.75	ug/kg	J						
CS6G 1102	1	2	Diethyl phthalate	15.4	ug/kg	JV						
CS6G 0301	0	2	Diethyl phthalate	22.7	ug/kg	J						
CS6G 0602	10.7	12.7	Diethyl phthalate	78	ug/kg	J		YI	P			
				11.815	average of 18 detects							
CS6G 1501	0	1	Dimethyl phthalate	8.56	ug/kg	J					0.583 ug/kg	2 of 2
CS6G 1104	4	6	Dimethyl phthalate	8.58	ug/kg	J						
CS6G 1405	6	8	Docosane	260	ug/kg	J		IN			?	?
CS6G 1201	0	1	Eicosane	180	ug/kg	J		N			?	?
CS6G 2203	2	4	Eicosane	280	ug/kg	J		N				
CS6G 1501	0	1	Endosulfan I	4.69	ug/kg	J					0.987 ug/kg	1 of 1
CS6G 2202	1	2	Endrin	3.15	ug/kg						0.945 ug/kg	1 of 1
CS6G 1505	10	12	Ethylbenzene	0.0588	ug/kg	J					0.069 ug/kg	15 of 17
CS6G 1502	1	2	Ethylbenzene	0.0667	ug/kg	V						
CS6G 1604	4	6	Ethylbenzene	0.0698	ug/kg							
CS6G 1504	4	6	Ethylbenzene	0.0706	ug/kg							
CS6G 1404	4	6	Ethylbenzene	0.075	ug/kg							
CS6G 1603	2	4	Ethylbenzene	0.0795	ug/kg	J						
CS6G 1105	6	8	Ethylbenzene	0.107	ug/kg							
CS6G 1602	1	2	Ethylbenzene	0.121	ug/kg							
CS6G 0304	7	9	Ethylbenzene	0.129	ug/kg							
CS6G 2203	2	4	Ethylbenzene	0.133	ug/kg							
CS6G 0204	7	9	Ethylbenzene	0.141	ug/kg							
CS6G 0301	0	2	Ethylbenzene	0.157	ug/kg							
CS6G 0101	0	2	Ethylbenzene	0.184	ug/kg			Y				
CS6G 0201	0	2	Ethylbenzene	0.253	ug/kg							
CS6G 0202	3	5	Ethylbenzene	0.345	ug/kg							
CS6G 0302	3	5	Ethylbenzene	0.393	ug/kg							
CS6G 0203	5	6	Ethylbenzene	0.47	ug/kg							
				0.1678	average of 17 detects							

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 1402	1	2	Fluoranthene	4.27	ug/kg	J	B		1.125 ug/kg	22 of 22
CS6G 0403	5	7	Fluoranthene	4.7	ug/kg	J				
CS6G 0301	0	2	Fluoranthene	4.83	ug/kg	J				
CS6G 1104	4	6	Fluoranthene	5.97	ug/kg	JV				
CS6G 0901	0	2	Fluoranthene	6.17	ug/kg	J				
CS6G 2201	0	1	Fluoranthene	8.3	ug/kg	J	B			
CS6G 0803	7	9	Fluoranthene	8.51	ug/kg	J	YI	P		
CS6G 0401	0	2	Fluoranthene	11.3	ug/kg	J				
CS6G 2203	2	4	Fluoranthene	18.7	ug/kg	J	B			
CS6G 1102	1	2	Fluoranthene	22.5	ug/kg	JV				
CS6G 1501	0	1	Fluoranthene	22.5	ug/kg	J				
CS6G 1101	0	1	Fluoranthene	24.7	ug/kg	JV				
CS6G 0904	7.6	9.6	Fluoranthene	26	ug/kg	J	I	P		
CS6G 1401	0	1	Fluoranthene	28	ug/kg	J	B			
CS6G 0502	7.2	9.2	Fluoranthene	54.6	ug/kg					
CS6G 0603	12.7	14.7	Fluoranthene	79.1	ug/kg		Y			
CS6G 1405	6	8	Fluoranthene	131	ug/kg					
CS6G 0602	10.7	12.7	Fluoranthene	197	ug/kg	J	YI	P		
CS6G 0902	3.6	5.6	Fluoranthene	6000	ug/kg		Y			
CS6G 1404	4	6	Fluoranthene	108000	ug/kg					
				5732.9	average of 20 detects					
CS6G 1501	0	1	Fluorene	4.28	ug/kg	J			1.453 ug/kg	5 of 5
CS6G 0603	12.7	14.7	Fluorene	9.79	ug/kg	J	Y			
CS6G 0502	7.2	9.2	Fluorene	11	ug/kg	J				
CS6G 0902	3.6	5.6	Fluorene	145	ug/kg	J	Y			
CS6G 1404	4	6	Fluorene	8080	ug/kg					
CS6G 1101	0	1	gamma-Sitosterol	630	ug/kg	J			?	?
CS6G 1602	1	2	Gross alpha	4.98	pCi/g				30.566 pCi/g	0 of 62
CS6G 1201	0	1	Gross alpha	5.6	pCi/g					
CS6G 2201	0	1	Gross alpha	5.65	pCi/g					
CS6G 2202	1	2	Gross alpha	5.92	pCi/g					
CS6G 2203	2	4	Gross alpha	6.12	pCi/g					
CS6G 0401	0	2	Gross alpha	6.3	pCi/g					
CS6G 0602	10.7	12.7	Gross alpha	6.7	pCi/g	J	Y			
CS6G 1301	0	1	Gross alpha	7.23	pCi/g					
CS6G 0601	0	2	Gross alpha	8.1	pCi/g		Y			
CS6G 1103	2	4	Gross alpha	8.24	pCi/g					
CS6G 1402	1	2	Gross alpha	8.82	pCi/g					
CS6G 1302	1	2	Gross alpha	9.18	pCi/g					
CS6G 1501	0	1	Gross alpha	9.28	pCi/g					
CS6G 1202	1	2	Gross alpha	9.68	pCi/g					
CS6G 0103	5	7	Gross alpha	9.69	pCi/g		V			
CS6G 1502	1	2	Gross alpha	10.1	pCi/g					
CS6G 0102	3	5	Gross alpha	11	pCi/g		V			
CS6G 1203	2	4	Gross alpha	11.1	pCi/g					
CS6G 1604	4	6	Gross alpha	11.1	pCi/g					
CS6G 0104	7	9	Gross alpha	11.5	pCi/g		V			
CS6G 0801	0	2	Gross alpha	11.6	pCi/g		Y			
CS6G 1303	2	4	Gross alpha	11.8	pCi/g					
CS6G 1603	2	4	Gross alpha	11.8	pCi/g					
CS6G 0702	7.5	9.5	Gross alpha	12.1	pCi/g					
CS6G 0603	12.7	14.7	Gross alpha	12.2	pCi/g		Y			
CS6G 0804	9	11	Gross alpha	12.2	pCi/g		Y			
CS6G 1406	8	10	Gross alpha	12.6	pCi/g					
CS6G 1504	4	6	Gross alpha	13.3	pCi/g					
CS6G 1204	4	6	Gross alpha	13.6	pCi/g					
CS6G 0901	0	2	Gross alpha	13.7	pCi/g					
CS6G 0704	11	13	Gross alpha	13.7	pCi/g					
CS6G 0703	9.5	11	Gross alpha	13.8	pCi/g					
CS6G 1401	0	1	Gross alpha	14.2	pCi/g					
CS6G 0902	3.6	5.6	Gross alpha	14.5	pCi/g		Y			
CS6G 0701	0	2	Gross alpha	14.6	pCi/g					

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 0502	7.2	9.2	Gross alpha	15.3	pCi/g		V		.	
CS6G 0802	5	7	Gross alpha	15.4	pCi/g		Y		.	
CS6G 1701	0	1	Gross alpha	15.5	pCi/g				.	
CS6G 1404	4	6	Gross alpha	17.1	pCi/g				.	
CS6G 0402	3	5	Gross alpha	17.1	pCi/g				.	
CS6G 1505	10	12	Gross alpha	17.6	pCi/g				.	
CS6G 0904	7.6	9.6	Gross alpha	17.9	pCi/g				.	
CS6G 1304	4	6	Gross alpha	18	pCi/g				.	
CS6G 1403	2	4	Gross alpha	18.1	pCi/g				.	
CS6G 0404	7	9	Gross alpha	18.1	pCi/g				.	
CS6G 1205	6	8	Gross alpha	18.3	pCi/g				.	
CS6G 0803	7	9	Gross alpha	18.5	pCi/g		Y		.	
CS6G 1601	0	1	Gross alpha	19	pCi/g				.	
CS6G 0101	0	2	Gross alpha	19.1	pCi/g		YV		.	
CS6G 0604	14.7	16.7	Gross alpha	19.5	pCi/g		Y		.	
CS6G 1305	6	8	Gross alpha	19.6	pCi/g				.	
CS6G 1405	6	8	Gross alpha	20.2	pCi/g				.	
CS6G 0903	5.6	7.6	Gross alpha	21.5	pCi/g				.	
CS6G 1101	0	1	Gross alpha	21.9	pCi/g				.	
CS6G 1102	1	2	Gross alpha	23	pCi/g				.	
CS6G 1702	1	2	Gross alpha	24.3	pCi/g				.	
CS6G 1503	2	4	Gross alpha	25.6	pCi/g				.	
CS6G 1703	2	4	Gross alpha	26.7	pCi/g				.	
CS6G 1106	8	10	Gross alpha	27.8	pCi/g				.	
CS6G 1704	5	7	Gross alpha	28.2	pCi/g	J			.	
CS6G 1105	6	8	Gross alpha	28.4	pCi/g				.	
CS6G 1104	4	6	Gross alpha	29.4	pCi/g				.	
CS6G 1101	0	1	Heneicosane	220	ug/kg	J			?	?
CS6G 2203	2	4	Heneicosane	250	ug/kg	J	N		.	
CS6G 1405	6	8	Heptadecane	180	ug/kg	J	IN		?	?
CS6G 1104	4	6	Hexachlorobenzene	10.4	ug/kg				0.94 ug/kg	2 of 2
CS6G 1501	0	1	Hexachlorobenzene	12.1	ug/kg	V			.	
CS6G 1401	0	1	Hexadecane	190	ug/kg	J	N		?	?
CS6G 1401	0	1	Hexatriacontane	180	ug/kg	J	N		?	?
CS6G 1405	6	8	Hexatriacontane	180	ug/kg	J	IN		.	
CS6G 1101	0	1	Hexatriacontane	180	ug/kg	J			.	
CS6G 1201	0	1	Hexatriacontane	190	ug/kg	J	N		.	
CS6G 0401	0	2	Indeno(1,2,3-c,d)pyrene	8.84	ug/kg				0.94 ug/kg	6 of 6
CS6G 1102	1	2	Indeno(1,2,3-c,d)pyrene	9.98	ug/kg				.	
CS6G 0904	7.6	9.6	Indeno(1,2,3-c,d)pyrene	11	ug/kg	J	I	P	.	
CS6G 1405	6	8	Indeno(1,2,3-c,d)pyrene	35.9	ug/kg				.	
CS6G 0902	3.6	5.6	Indeno(1,2,3-c,d)pyrene	3440	ug/kg		Y		.	
CS6G 1404	4	6	Indeno(1,2,3-c,d)pyrene	31300	ug/kg				.	
CS6G 1402	1	2	IPACACID	210	ug/kg	J	N		?	?
CS6G 1202	1	2	IPACACID	500	ug/kg	J	N		.	
CS6G 0104	7	9	Iron	1410	mg/kg	J	V	H	26,637 mg/kg	13 of 74
CS6G 1603	2	4	Iron, total recoverable	2470	mg/kg				.	
CS6G 1602	1	2	Iron, total recoverable	3050	mg/kg				.	
CS6G 1202	1	2	Iron, total recoverable	3090	mg/kg		X		.	
CS6G 1604	4	6	Iron, total recoverable	3180	mg/kg				.	
CS6G 1303	2	4	Iron, total recoverable	3630	mg/kg				.	
CS6G 1402	1	2	Iron, total recoverable	4380	mg/kg				.	
CS6G 0301	0	2	Iron	4650	mg/kg				.	
CS6G 0401	0	2	Iron	4850	mg/kg	J			.	
CS6G 1501	0	1	Iron, total recoverable	4940	mg/kg				.	
CS6G 1203	2	4	Iron, total recoverable	5200	mg/kg				.	
CS6G 1305	6	8	Iron, total recoverable	5440	mg/kg				.	
CS6G 1502	1	2	Iron, total recoverable	5790	mg/kg				.	

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 0704	11	13	Iron	6060	mg/kg	J				
CS6G 1403	2	4	Iron, total recoverable	6250	mg/kg					
CS6G 0604	14.7	16.7	Iron	6690	mg/kg		Y			
CS6G 1601	0	1	Iron, total recoverable	6930	mg/kg					
CS6G 0501	0	2	Iron	7060	mg/kg	J	R			
CS6G 1401	0	1	Iron, total recoverable	7890	mg/kg					
CS6G 0201	0	2	Iron	8000	mg/kg					
CS6G 1302	1	2	Iron, total recoverable	8020	mg/kg					
CS6G 1701	0	1	Iron, total recoverable	8710	mg/kg					
CS6G 0603	12.7	14.7	Iron	9610	mg/kg		Y			
CS6G 0303	5	7	Iron	10400	mg/kg					
CS6G 0503	9.2	10.6	Iron	10600	mg/kg	J	R			
CS6G 0804	9	11	Iron	10800	mg/kg		Y			
CS6G 0703	9.5	11	Iron	11000	mg/kg	J				
CS6G 1201	0	1	Iron, total recoverable	11300	mg/kg					
CS6G 0404	7	9	Iron	11800	mg/kg	J				
CS6G 1301	0	1	Iron, total recoverable	12300	mg/kg					
CS6G 0601	0	2	Iron	14100	mg/kg		Y			
CS6G 0701	0	2	Iron	15100	mg/kg					
CS6G 0103	5	7	Iron	15400	mg/kg	J	V	H		
CS6G 2202	1	2	Iron, total recoverable	16000	mg/kg					
CS6G 0504	11.2	12.2	Iron	16100	mg/kg	J	R			
CS6G 1106	8	10	Iron, total recoverable	16600	mg/kg					
CS6G 1505	10	12	Iron, total recoverable	16600	mg/kg					
CS6G 0502	7.2	9.2	Iron	16800	mg/kg	J	R			
CS6G 1304	4	6	Iron, total recoverable	17100	mg/kg					
CS6G 0102	3	5	Iron	17200	mg/kg	J	R			
CS6G 0304	7	9	Iron	17200	mg/kg					
CS6G 0403	5	7	Iron	18000	mg/kg	J				
CS6G 0402	3	5	Iron	18100	mg/kg					
CS6G 0203	5	6	Iron	18300	mg/kg					
CS6G 0204	7	9	Iron	19300	mg/kg					
CS6G 1702	1	2	Iron, total recoverable	19700	mg/kg					
CS6G 0602	10.7	12.7	Iron	19800	mg/kg		Y			
CS6G 0702	7.5	9.5	Iron	19900	mg/kg					
CS6G 0901	0	2	Iron	20000	mg/kg					
CS6G 0902	3.6	5.6	Iron	20000	mg/kg	J	LY			
CS6G 0101	0	2	Iron	20300	mg/kg	J	YV	H		
CS6G 0904	7.6	9.6	Iron	21100	mg/kg					
CS6G 1404	4	6	Iron, total recoverable	21200	mg/kg					
CS6G 2201	0	1	Iron, total recoverable	22800	mg/kg					
CS6G 1205	6	8	Iron, total recoverable	22900	mg/kg					
CS6G 0803	7	9	Iron	23000	mg/kg		Y			
CS6G 1101	0	1	Iron, total recoverable	24400	mg/kg					
CS6G 0302	3	5	Iron	25400	mg/kg					
CS6G 0903	5.6	7.6	Iron	25800	mg/kg	J	R			
CS6G 1503	2	4	Iron, total recoverable	25800	mg/kg					
CS6G 1703	2	4	Iron, total recoverable	27800	mg/kg					
CS6G 0202	3	5	Iron	28000	mg/kg					
CS6G 1104	4	6	Iron, total recoverable	30400	mg/kg					
CS6G 1102	1	2	Iron, total recoverable	31400	mg/kg					
CS6G 1504	4	6	Iron, total recoverable	32800	mg/kg					
CS6G 1406	8	10	Iron, total recoverable	34900	mg/kg					
CS6G 1704	5	7	Iron, total recoverable	39500	mg/kg					
CS6G 1103	2	4	Iron, total recoverable	41700	mg/kg					
CS6G 2203	2	4	Iron, total recoverable	49300	mg/kg					
CS6G 1405	6	8	Iron, total recoverable	53400	mg/kg					
CS6G 0802	5	7	Iron	54400	mg/kg		Y			
CS6G 1204	4	6	Iron, total recoverable	59700	mg/kg					
CS6G 1105	6	8	Iron, total recoverable	69600	mg/kg					
CS6G 0302	3	5	Lead	2.68	mg/kg	J			12.31 mg/kg	22 of 78
CS6G 0104	7	9	Lead	3.09	mg/kg	J				
CS6G 0903	5.6	7.6	Lead	3.32	mg/kg	J	R			
CS6G 0801	0	2	Lead	3.38	mg/kg	J	RY			

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 1402	1	2	Lead, total recoverable	3.41	mg/kg	J	B			
CS6G 0401	0	2	Lead	3.47	mg/kg	J				
CS6G 0304	7	9	Lead	3.49	mg/kg	J				
CS6G 0404	7	9	Lead	3.49	mg/kg	J				
CS6G 0103	5	7	Lead	4.15	mg/kg	J				
CS6G 0804	9	11	Lead	4.29	mg/kg	J	RY			
CS6G 0701	0	2	Lead	4.32	mg/kg	J				
CS6G 1403	2	4	Lead, total recoverable	4.34	mg/kg	J	B			
CS6G 0403	5	7	Lead	4.47	mg/kg	J				
CS6G 0704	11	13	Lead	4.58	mg/kg	J				
CS6G 1202	1	2	Lead, total recoverable	4.6	mg/kg	J	B			
CS6G 0402	3	5	Lead	4.97	mg/kg	J				
CS6G 0301	0	2	Lead	5.24	mg/kg	J				
CS6G 1602	1	2	Lead, total recoverable	5.43	mg/kg	J				
CS6G 0901	0	2	Lead	5.5	mg/kg	J	R			
CS6G 1407	13	15	Lead, total recoverable	5.5	mg/kg	J	B			
CS6G 0204	7	9	Lead	5.6	mg/kg	J				
CS6G 1605	10	12	Lead, total recoverable	6.34	mg/kg					
CS6G 1505	10	12	Lead, total recoverable	6.46	mg/kg					
CS6G 0501	0	2	Lead	6.51	mg/kg	J	R			
CS6G 2202	1	2	Lead, total recoverable	6.59	mg/kg					
CS6G 1303	2	4	Lead, total recoverable	6.72	mg/kg					
CS6G 0703	9.5	11	Lead	7.11	mg/kg	J				
CS6G 1203	2	4	Lead, total recoverable	7.12	mg/kg					
CS6G 1603	2	4	Lead, total recoverable	7.2	mg/kg					
CS6G 1703	2	4	Lead, total recoverable	7.29	mg/kg					
CS6G 1604	4	6	Lead, total recoverable	7.47	mg/kg					
CS6G 0603	12.7	14.7	Lead	7.87	mg/kg		Y			
CS6G 0503	9.2	10.6	Lead	7.94	mg/kg	J	R			
CS6G 1702	1	2	Lead, total recoverable	8.09	mg/kg					
CS6G 2201	0	1	Lead, total recoverable	8.1	mg/kg					
CS6G 1705	10	12	Lead, total recoverable	8.18	mg/kg					
CS6G 0702	7.5	9.5	Lead	8.35	mg/kg					
CS6G 1406	8	10	Lead, total recoverable	8.49	mg/kg					
CS6G 0904	7.6	9.6	Lead	8.67	mg/kg	J	R			
CS6G 0803	7	9	Lead	8.69	mg/kg		Y			
CS6G 1305	6	8	Lead, total recoverable	8.69	mg/kg					
CS6G 1106	8	10	Lead, total recoverable	8.7	mg/kg					
CS6G 1205	6	8	Lead, total recoverable	8.76	mg/kg					
CS6G 1601	0	1	Lead, total recoverable	8.79	mg/kg					
CS6G 1502	1	2	Lead, total recoverable	9.07	mg/kg					
CS6G 0604	14.7	16.7	Lead	9.28	mg/kg		Y			
CS6G 1304	4	6	Lead, total recoverable	9.38	mg/kg					
CS6G 0202	3	5	Lead	9.6	mg/kg					
CS6G 1701	0	1	Lead, total recoverable	9.75	mg/kg					
CS6G 1501	0	1	Lead, total recoverable	9.85	mg/kg					
CS6G 1504	4	6	Lead, total recoverable	10.7	mg/kg					
CS6G 1704	5	7	Lead, total recoverable	11.1	mg/kg					
CS6G 0605	21.7	23.7	Lead	11.7	mg/kg		Y			
CS6G 1401	0	1	Lead, total recoverable	12	mg/kg					
CS6G 1103	2	4	Lead, total recoverable	12	mg/kg					
CS6G 0504	11.2	12.2	Lead	12.2	mg/kg	J	RX			
CS6G 1104	4	6	Lead, total recoverable	12.8	mg/kg					
CS6G 0601	0	2	Lead	13.2	mg/kg		Y			
CS6G 1503	2	4	Lead, total recoverable	13.7	mg/kg					
CS6G 1204	4	6	Lead, total recoverable	15.3	mg/kg					
CS6G 1102	1	2	Lead, total recoverable	17.9	mg/kg					
CS6G 0102	3	5	Lead	19.7	mg/kg	J	RXI	P		
CS6G 0101	0	2	Lead	20.5	mg/kg		Y			
CS6G 0606	28.7	30.7	Lead	23.5	mg/kg		Y			
CS6G 0203	5	6	Lead	24.8	mg/kg					
CS6G 1105	6	8	Lead, total recoverable	29.6	mg/kg					
CS6G 1201	0	1	Lead, total recoverable	32.2	mg/kg					
CS6G 1301	0	1	Lead, total recoverable	45.9	mg/kg					
CS6G 1405	6	8	Lead, total recoverable	47.6	mg/kg					
CS6G 0201	0	2	Lead	48	mg/kg	J				

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 1101	0	1	Lead, total recoverable	54.5	mg/kg					
CS6G 0502	7.2	9.2	Lead	65.4	mg/kg	J	R			
CS6G 0602	10.7	12.7	Lead	65.7	mg/kg		YX			
CS6G 1404	4	6	Lead, total recoverable	92.7	mg/kg					
CS6G 1302	1	2	Lead, total recoverable	120	mg/kg					
CS6G 0802	5	7	Lead	250	mg/kg		Y			
CS6G 2203	2	4	Lead, total recoverable	301	mg/kg					
CS6G 0902	3.6	5.6	Lead	477	mg/kg	J	RY			
				28.014	average of 77 detects					
CS6G 0704	11	13	Magnesium	23.8	mg/kg	J			109 mg/kg	32 of 74
CS6G 0703	9.5	11	Magnesium	31	mg/kg	J				
CS6G 0401	0	2	Magnesium	32.6	mg/kg	J				
CS6G 0103	5	7	Magnesium	33.8	mg/kg					
CS6G 0404	7	9	Magnesium	33.8	mg/kg	J				
CS6G 0801	0	2	Magnesium	43.4	mg/kg	J	RY			
CS6G 0901	0	2	Magnesium	44.6	mg/kg	J	R			
CS6G 1505	10	12	Magnesium, total recoverable	46.3	mg/kg					
CS6G 0804	9	11	Magnesium	48.9	mg/kg	J	RY			
CS6G 0504	11.2	12.2	Magnesium	54.3	mg/kg	J	RX			
CS6G 1402	1	2	Magnesium, total recoverable	54.7	mg/kg		V			
CS6G 0304	7	9	Magnesium	56.4	mg/kg					
CS6G 0303	5	7	Magnesium	59.2	mg/kg					
CS6G 0904	7.6	9.6	Magnesium	59.6	mg/kg	J	R			
CS6G 0503	9.2	10.6	Magnesium	61.6	mg/kg	J	R			
CS6G 0701	0	2	Magnesium	61.8	mg/kg	J				
CS6G 0803	7	9	Magnesium	63.7	mg/kg		Y			
CS6G 0301	0	2	Magnesium	64.8	mg/kg					
CS6G 0702	7.5	9.5	Magnesium	66.2	mg/kg					
CS6G 1601	0	1	Magnesium, total recoverable	67.3	mg/kg					
CS6G 0604	14.7	16.7	Magnesium	68.1	mg/kg		Y			
CS6G 0403	5	7	Magnesium	69.2	mg/kg	J				
CS6G 0104	7	9	Magnesium	70.3	mg/kg					
CS6G 1602	1	2	Magnesium, total recoverable	72.7	mg/kg					
CS6G 0201	0	2	Magnesium	74.9	mg/kg	J				
CS6G 0903	5.6	7.6	Magnesium	76.1	mg/kg	J	R			
CS6G 0204	7	9	Magnesium	76.4	mg/kg					
CS6G 1201	0	1	Magnesium, total recoverable	79.3	mg/kg					
CS6G 0203	5	6	Magnesium	81.6	mg/kg					
CS6G 1603	2	4	Magnesium, total recoverable	82.3	mg/kg	J				
CS6G 1502	1	2	Magnesium, total recoverable	83	mg/kg					
CS6G 1504	4	6	Magnesium, total recoverable	85.1	mg/kg					
CS6G 1304	4	6	Magnesium, total recoverable	86.7	mg/kg		V			
CS6G 0601	0	2	Magnesium	87.9	mg/kg		Y			
CS6G 0603	12.7	14.7	Magnesium	89	mg/kg		Y			
CS6G 1604	4	6	Magnesium, total recoverable	90.7	mg/kg					
CS6G 1103	2	4	Magnesium, total recoverable	95	mg/kg					
CS6G 1202	1	2	Magnesium, total recoverable	98.3	mg/kg		VX			
CS6G 0202	3	5	Magnesium	99.9	mg/kg					
CS6G 0302	3	5	Magnesium	101	mg/kg					
CS6G 1501	0	1	Magnesium, total recoverable	101	mg/kg					
CS6G 1704	5	7	Magnesium, total recoverable	106	mg/kg					
CS6G 1105	6	8	Magnesium, total recoverable	110	mg/kg					
CS6G 1403	2	4	Magnesium, total recoverable	115	mg/kg		V			
CS6G 1106	8	10	Magnesium, total recoverable	117	mg/kg					
CS6G 1703	2	4	Magnesium, total recoverable	119	mg/kg					
CS6G 1102	1	2	Magnesium, total recoverable	120	mg/kg					
CS6G 0402	3	5	Magnesium	127	mg/kg	J				
CS6G 0501	0	2	Magnesium	131	mg/kg	J	R			
CS6G 1406	8	10	Magnesium, total recoverable	131	mg/kg	J	VI	L		
CS6G 1205	6	8	Magnesium, total recoverable	136	mg/kg		V			
CS6G 1104	4	6	Magnesium, total recoverable	138	mg/kg					
CS6G 1401	0	1	Magnesium, total recoverable	142	mg/kg		V			
CS6G 0102	3	5	Magnesium	159	mg/kg	J	RIX	H		
CS6G 1302	1	2	Magnesium, total recoverable	177	mg/kg		V			
CS6G 0101	0	2	Magnesium	183	mg/kg		Y			

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 2201	0	1	Magnesium, total recoverable	184	mg/kg				.	
CS6G 1303	2	4	Magnesium, total recoverable	185	mg/kg		V		.	
CS6G 1702	1	2	Magnesium, total recoverable	187	mg/kg				.	
CS6G 1301	0	1	Magnesium, total recoverable	191	mg/kg		V		.	
CS6G 0502	7.2	9.2	Magnesium	192	mg/kg	J	R		.	
CS6G 1305	6	8	Magnesium, total recoverable	194	mg/kg		V		.	
CS6G 0602	10.7	12.7	Magnesium	199	mg/kg		Y		.	
CS6G 1203	2	4	Magnesium, total recoverable	215	mg/kg		V		.	
CS6G 1701	0	1	Magnesium, total recoverable	231	mg/kg				.	
CS6G 1503	2	4	Magnesium, total recoverable	237	mg/kg				.	
CS6G 1204	4	6	Magnesium, total recoverable	291	mg/kg		V		.	
CS6G 1101	0	1	Magnesium, total recoverable	309	mg/kg				.	
CS6G 2202	1	2	Magnesium, total recoverable	329	mg/kg				.	
CS6G 0902	3.6	5.6	Magnesium	375	mg/kg	J	RY		.	
CS6G 1405	6	8	Magnesium, total recoverable	525	mg/kg		V		.	
CS6G 1404	4	6	Magnesium, total recoverable	534	mg/kg		V		.	
CS6G 0802	5	7	Magnesium	690	mg/kg		Y		.	
CS6G 2203	2	4	Magnesium, total recoverable	2430	mg/kg				.	
				166.02	average of 74 detects					
CS6G 1505	10	12	Manganese, total recoverable	1.1	mg/kg	J			27.15 mg/kg	28 of 74
CS6G 0303	5	7	Manganese	1.15	mg/kg	J				
CS6G 0304	7	9	Manganese	1.5	mg/kg	J				
CS6G 0403	5	7	Manganese	1.56	mg/kg	J				
CS6G 0103	5	7	Manganese	2.16	mg/kg	J	V	H	.	
CS6G 0302	3	5	Manganese	2.21	mg/kg	J			.	
CS6G 0903	5.6	7.6	Manganese	2.8	mg/kg	J	R		.	
CS6G 1604	4	6	Manganese, total recoverable	3.06	mg/kg				.	
CS6G 1703	2	4	Manganese, total recoverable	3.13	mg/kg				.	
CS6G 1103	2	4	Manganese, total recoverable	3.14	mg/kg				.	
CS6G 1106	8	10	Manganese, total recoverable	3.39	mg/kg				.	
CS6G 1504	4	6	Manganese, total recoverable	3.44	mg/kg				.	
CS6G 1406	8	10	Manganese, total recoverable	4.6	mg/kg		V		.	
CS6G 0204	7	9	Manganese	4.9	mg/kg	J			.	
CS6G 1204	4	6	Manganese, total recoverable	5.21	mg/kg		V		.	
CS6G 1704	5	7	Manganese, total recoverable	5.33	mg/kg				.	
CS6G 0801	0	2	Manganese	5.77	mg/kg	J	RYV	H	.	
CS6G 0402	3	5	Manganese	5.77	mg/kg	J			.	
CS6G 1104	4	6	Manganese, total recoverable	5.8	mg/kg				.	
CS6G 1305	6	8	Manganese, total recoverable	5.85	mg/kg		V		.	
CS6G 0202	3	5	Manganese	6.49	mg/kg	J			.	
CS6G 1205	6	8	Manganese, total recoverable	7.69	mg/kg		V		.	
CS6G 0604	14.7	16.7	Manganese	8.39	mg/kg		Y		.	
CS6G 1503	2	4	Manganese, total recoverable	8.64	mg/kg				.	
CS6G 0904	7.6	9.6	Manganese	8.94	mg/kg	J	RV	H	.	
CS6G 0404	7	9	Manganese	9.33	mg/kg	J			.	
CS6G 1702	1	2	Manganese, total recoverable	9.84	mg/kg				.	
CS6G 0104	7	9	Manganese	10	mg/kg	J	V	H	.	
CS6G 0804	9	11	Manganese	10	mg/kg	J	RYV	H	.	
CS6G 0701	0	2	Manganese	10.4	mg/kg	J			.	
CS6G 0702	7.5	9.5	Manganese	11.2	mg/kg				.	
CS6G 0503	9.2	10.6	Manganese	11.6	mg/kg	J	R		.	
CS6G 1304	4	6	Manganese, total recoverable	11.7	mg/kg		V		.	
CS6G 1105	6	8	Manganese, total recoverable	12	mg/kg				.	
CS6G 0901	0	2	Manganese	12.8	mg/kg	J	RV	H	.	
CS6G 0704	11	13	Manganese	14.6	mg/kg	J			.	
CS6G 0603	12.7	14.7	Manganese	15.7	mg/kg		Y		.	
CS6G 1102	1	2	Manganese, total recoverable	16.5	mg/kg				.	
CS6G 1203	2	4	Manganese, total recoverable	16.8	mg/kg		V		.	
CS6G 0504	11.2	12.2	Manganese	18.1	mg/kg	J	RX		.	
CS6G 2201	0	1	Manganese, total recoverable	19	mg/kg		V		.	
CS6G 1601	0	1	Manganese, total recoverable	21.9	mg/kg				.	
CS6G 0803	7	9	Manganese	22.1	mg/kg		Y		.	
CS6G 0703	9.5	11	Manganese	23.4	mg/kg	J			.	
CS6G 1701	0	1	Manganese, total recoverable	24.3	mg/kg				.	
CS6G 1502	1	2	Manganese, total recoverable	26.6	mg/kg				.	

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 0301	0	2	Manganese	30.3	mg/kg	J				
CS6G 0203	5	6	Manganese	31.1	mg/kg	J				
CS6G 0401	0	2	Manganese	34.3	mg/kg	J				
CS6G 0601	0	2	Manganese	39.9	mg/kg		Y			
CS6G 1201	0	1	Manganese, total recoverable	40.3	mg/kg					
CS6G 1403	2	4	Manganese, total recoverable	41.3	mg/kg		V			
CS6G 1303	2	4	Manganese, total recoverable	41.4	mg/kg		V			
CS6G 2202	1	2	Manganese, total recoverable	41.5	mg/kg		V			
CS6G 1402	1	2	Manganese, total recoverable	42	mg/kg		V			
CS6G 1603	2	4	Manganese, total recoverable	44	mg/kg					
CS6G 1301	0	1	Manganese, total recoverable	63.4	mg/kg		V			
CS6G 0101	0	2	Manganese	64.8	mg/kg	J	YV	H		
CS6G 0201	0	2	Manganese	67.5	mg/kg	J				
CS6G 0102	3	5	Manganese	68.8	mg/kg	J	RIV	P		
CS6G 1101	0	1	Manganese, total recoverable	71.1	mg/kg					
CS6G 0902	3.6	5.6	Manganese	72.1	mg/kg	J	RYV	H		
CS6G 1602	1	2	Manganese, total recoverable	75.6	mg/kg					
CS6G 0501	0	2	Manganese	79.7	mg/kg	J	R			
CS6G 0502	7.2	9.2	Manganese	82	mg/kg	J	R			
CS6G 1401	0	1	Manganese, total recoverable	84.5	mg/kg		V			
CS6G 0602	10.7	12.7	Manganese	102	mg/kg	J	YI	P		
CS6G 1501	0	1	Manganese, total recoverable	133	mg/kg					
CS6G 1202	1	2	Manganese, total recoverable	153	mg/kg	J	VXI	L		
CS6G 1302	1	2	Manganese, total recoverable	172	mg/kg		V			
CS6G 1405	6	8	Manganese, total recoverable	228	mg/kg		V			
CS6G 0802	5	7	Manganese	252	mg/kg		Y			
CS6G 1404	4	6	Manganese, total recoverable	265	mg/kg		V			
CS6G 2203	2	4	Manganese, total recoverable	681	mg/kg		V			
				47.858	average of 74 detects					
CS6G 1703	2	4	Mercury, total recoverable	17.3	ug/kg	J			19.3 ug/kg	32 of 33
CS6G 0504	11.2	12.2	Mercury	19.5	ug/kg	J				
CS6G 0601	0	2	Mercury	19.5	ug/kg	J	YV	H		
CS6G 0605	21.7	23.7	Mercury	20.6	ug/kg	J	YV	H		
CS6G 0603	12.7	14.7	Mercury	21	ug/kg	J	YV	H		
CS6G 2202	1	2	Mercury, total recoverable	21.8	ug/kg	J	B			
CS6G 0101	0	2	Mercury	24.1	ug/kg	J	Y			
CS6G 1305	6	8	Mercury, total recoverable	25.1	ug/kg	J	BC			
CS6G 0702	7.5	9.5	Mercury	26.6	ug/kg	J				
CS6G 1704	5	7	Mercury, total recoverable	27.8	ug/kg	J				
CS6G 0803	7	9	Mercury	28.9	ug/kg	J	YV	H		
CS6G 1404	4	6	Mercury, total recoverable	29.7	ug/kg	J	BC			
CS6G 0102	3	5	Mercury	31.5	ug/kg	J				
CS6G 0801	0	2	Mercury	31.6	ug/kg	J	YV	H		
CS6G 1304	4	6	Mercury, total recoverable	31.8	ug/kg	J	BC			
CS6G 0904	7.6	9.6	Mercury	32.6	ug/kg	J				
CS6G 0501	0	2	Mercury	37.1	ug/kg	J				
CS6G 0903	5.6	7.6	Mercury	38.1	ug/kg	J				
CS6G 0901	0	2	Mercury	38.8	ug/kg	J				
CS6G 0404	7	9	Mercury	40	ug/kg	J				
CS6G 0602	10.7	12.7	Mercury	42.5	ug/kg	J	YV	H		
CS6G 1204	4	6	Mercury, total recoverable	42.7	ug/kg	J	BC			
CS6G 0502	7.2	9.2	Mercury	46.7	ug/kg	J				
CS6G 1503	2	4	Mercury, total recoverable	47.1	ug/kg	J				
CS6G 0701	0	2	Mercury	47.4	ug/kg	J				
CS6G 0902	3.6	5.6	Mercury	50.8	ug/kg	J	Y			
CS6G 0403	5	7	Mercury	58.7	ug/kg	J				
CS6G 0402	3	5	Mercury	64.8	ug/kg	J				
CS6G 0401	0	2	Mercury	74.6	ug/kg	J				
CS6G 0704	11	13	Mercury	76.7	ug/kg	J				
CS6G 0503	9.2	10.6	Mercury	85.2	ug/kg	J				
CS6G 2203	2	4	Mercury, total recoverable	130	ug/kg	J	B			
CS6G 0802	5	7	Mercury	252	ug/kg	J	YV	H		
				47.958	average of 33 detects					
CS6G 1602	1	2	Methoxychlor	9.24	ug/kg	J			9.49 ug/kg	1 of 2

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 1603	2	4	Methoxychlor	10	ug/kg	J				
CS6G 1401	0	1	Methyl ethyl ketone	0.165	ug/kg	J	B		0.346 ug/kg	8 of 16
CS6G 1101	0	1	Methyl ethyl ketone	0.232	ug/kg	JV				
CS6G 1701	0	1	Methyl ethyl ketone	0.236	ug/kg	V				
CS6G 1702	1	2	Methyl ethyl ketone	0.238	ug/kg	JV				
CS6G 1104	4	6	Methyl ethyl ketone	0.253	ug/kg	JV				
CS6G 1505	10	12	Methyl ethyl ketone	0.271	ug/kg	JV				
CS6G 1602	1	2	Methyl ethyl ketone	0.308	ug/kg	JV				
CS6G 1402	1	2	Methyl ethyl ketone	0.323	ug/kg	J	B			
CS6G 1106	8	10	Methyl ethyl ketone	0.365	ug/kg	JV				
CS6G 1704	5	7	Methyl ethyl ketone	0.388	ug/kg	J				
CS6G 1703	2	4	Methyl ethyl ketone	0.395	ug/kg	JV				
CS6G 1604	4	6	Methyl ethyl ketone	0.465	ug/kg	JV				
CS6G 1405	6	8	Methyl ethyl ketone	1.46	ug/kg					
CS6G 1603	2	4	Methyl ethyl ketone	1.68	ug/kg	JV				
CS6G 1403	2	4	Methyl ethyl ketone	2.24	ug/kg		V			
CS6G 2203	2	4	Methyl ethyl ketone	3.07	ug/kg					
				0.7556	average of 16 detects					
CS6G 0501	0	2	Methyl Isobutyl ketone	0.337	ug/kg	J			0.236 ug/kg	1 of 1
CS6G 1501	0	1	N-Nitrosodiphenylamine	4.64	ug/kg	J			1.076 ug/kg	2 of 2
CS6G 1104	4	6	N-Nitrosodiphenylamine	5.97	ug/kg	J				
CS6G 1405	6	8	Naphthalene	45.9	ug/kg				1.608 ug/kg	3 of 3
CS6G 0502	7.2	9.2	Naphthalene	55.8	ug/kg					
CS6G 0602	10.7	12.7	Naphthalene	168	ug/kg	J	YI	P		
CS6G 0803	7	9	Nickel	0.509	mg/kg	J	Y		1.075 mg/kg	42 of 60
CS6G 0503	9.2	10.6	Nickel	0.529	mg/kg	J	R			
CS6G 0603	12.7	14.7	Nickel	0.571	mg/kg	J	Y			
CS6G 0302	3	5	Nickel	0.575	mg/kg	J				
CS6G 0104	7	9	Nickel	0.576	mg/kg	J				
CS6G 1304	4	6	Nickel, total recoverable	0.604	mg/kg	J	B			
CS6G 1604	4	6	Nickel, total recoverable	0.628	mg/kg	J				
CS6G 1601	0	1	Nickel, total recoverable	0.635	mg/kg	J				
CS6G 0303	5	7	Nickel	0.643	mg/kg	J				
CS6G 1703	2	4	Nickel, total recoverable	0.653	mg/kg	J				
CS6G 0801	0	2	Nickel	0.687	mg/kg	J	RY			
CS6G 0901	0	2	Nickel	0.717	mg/kg	J	R			
CS6G 0701	0	2	Nickel	0.781	mg/kg	J				
CS6G 0604	14.7	16.7	Nickel	0.791	mg/kg	J	Y			
CS6G 0401	0	2	Nickel	0.798	mg/kg	J				
CS6G 1602	1	2	Nickel, total recoverable	0.836	mg/kg	J				
CS6G 1504	4	6	Nickel, total recoverable	0.872	mg/kg	J				
CS6G 1103	2	4	Nickel, total recoverable	0.983	mg/kg	J				
CS6G 1403	2	4	Nickel, total recoverable	1.1	mg/kg	J				
CS6G 1603	2	4	Nickel, total recoverable	1.11	mg/kg	J				
CS6G 1704	5	7	Nickel, total recoverable	1.27	mg/kg	J				
CS6G 0402	3	5	Nickel	1.29	mg/kg	J				
CS6G 1401	0	1	Nickel, total recoverable	1.3	mg/kg	J	B			
CS6G 1406	8	10	Nickel, total recoverable	1.3	mg/kg	J	B			
CS6G 1202	1	2	Nickel, total recoverable	1.4	mg/kg	J	B			
CS6G 0501	0	2	Nickel	1.52	mg/kg	J	R			
CS6G 0702	7.5	9.5	Nickel	1.69	mg/kg	J				
CS6G 1102	1	2	Nickel, total recoverable	1.69	mg/kg	J				
CS6G 1501	0	1	Nickel, total recoverable	1.72	mg/kg	J				
CS6G 1502	1	2	Nickel, total recoverable	1.76	mg/kg	J				
CS6G 0301	0	2	Nickel	1.89	mg/kg	J				
CS6G 1702	1	2	Nickel, total recoverable	1.93	mg/kg	J				
CS6G 1201	0	1	Nickel, total recoverable	1.98	mg/kg	J	B			
CS6G 1205	6	8	Nickel, total recoverable	2.44	mg/kg	J	B			
CS6G 1305	6	8	Nickel, total recoverable	2.46	mg/kg	J	B			
CS6G 1104	4	6	Nickel, total recoverable	2.46	mg/kg	J				
CS6G 0602	10.7	12.7	Nickel	2.64	mg/kg	J	Y			

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 1303	2	4	Nickel, total recoverable	2.65	mg/kg	J	B			
CS6G 2201	0	1	Nickel, total recoverable	2.68	mg/kg	J	B			
CS6G 0102	3	5	Nickel	2.92	mg/kg	J	RIX	L		
CS6G 1203	2	4	Nickel, total recoverable	2.92	mg/kg	J	B			
CS6G 1301	0	1	Nickel, total recoverable	3.04	mg/kg					
CS6G 1701	0	1	Nickel, total recoverable	3.17	mg/kg					
CS6G 0502	7.2	9.2	Nickel	3.25	mg/kg	J	R			
CS6G 0204	7	9	Nickel	3.33	mg/kg					
CS6G 0601	0	2	Nickel	3.37	mg/kg		Y			
CS6G 1503	2	4	Nickel, total recoverable	3.85	mg/kg					
CS6G 1302	1	2	Nickel, total recoverable	3.9	mg/kg					
CS6G 1204	4	6	Nickel, total recoverable	4.54	mg/kg					
CS6G 2202	1	2	Nickel, total recoverable	5.21	mg/kg					
CS6G 0902	3.6	5.6	Nickel	5.28	mg/kg	J	RY			
CS6G 1404	4	6	Nickel, total recoverable	7.62	mg/kg					
CS6G 1405	6	8	Nickel, total recoverable	7.66	mg/kg					
CS6G 0802	5	7	Nickel	15.1	mg/kg		Y			
CS6G 0101	0	2	Nickel	16.2	mg/kg		Y			
CS6G 1101	0	1	Nickel, total recoverable	19.6	mg/kg					
CS6G 0202	3	5	Nickel	25.5	mg/kg					
CS6G 2203	2	4	Nickel, total recoverable	27.6	mg/kg					
CS6G 0203	5	6	Nickel	92.4	mg/kg					
CS6G 0201	0	2	Nickel	350	mg/kg	J				
				10.952	average of 60 detects					
CS6G 1405	6	8	Nonadecane	210	ug/kg	J	IN		?	?
CS6G 0504	11.2	12.2	Nonvolatile beta	1.44	pCi/g	J			17.874 pCi/g	1 of 63
CS6G 0303	5	7	Nonvolatile beta	1.61	pCi/g	J				
CS6G 0202	3	5	Nonvolatile beta	2.22	pCi/g	J				
CS6G 1602	1	2	Nonvolatile beta	3.26	pCi/g					
CS6G 0304	7	9	Nonvolatile beta	3.62	pCi/g	J				
CS6G 1504	4	6	Nonvolatile beta	3.95	pCi/g					
CS6G 0201	0	2	Nonvolatile beta	4.24	pCi/g	J				
CS6G 0203	5	6	Nonvolatile beta	4.28	pCi/g	J				
CS6G 2202	1	2	Nonvolatile beta	4.42	pCi/g					
CS6G 1302	1	2	Nonvolatile beta	4.45	pCi/g					
CS6G 1701	0	1	Nonvolatile beta	4.46	pCi/g					
CS6G 1201	0	1	Nonvolatile beta	4.77	pCi/g					
CS6G 0401	0	2	Nonvolatile beta	4.9	pCi/g	J				
CS6G 1402	1	2	Nonvolatile beta	5.13	pCi/g					
CS6G 1103	2	4	Nonvolatile beta	5.17	pCi/g					
CS6G 1303	2	4	Nonvolatile beta	5.64	pCi/g					
CS6G 1301	0	1	Nonvolatile beta	5.75	pCi/g					
CS6G 1401	0	1	Nonvolatile beta	5.75	pCi/g					
CS6G 1305	6	8	Nonvolatile beta	5.97	pCi/g					
CS6G 1406	8	10	Nonvolatile beta	6.01	pCi/g					
CS6G 1203	2	4	Nonvolatile beta	6.14	pCi/g					
CS6G 1202	1	2	Nonvolatile beta	6.53	pCi/g					
CS6G 1403	2	4	Nonvolatile beta	6.64	pCi/g					
CS6G 0501	0	2	Nonvolatile beta	6.83	pCi/g	J				
CS6G 1603	2	4	Nonvolatile beta	6.88	pCi/g					
CS6G 1304	4	6	Nonvolatile beta	6.95	pCi/g					
CS6G 2203	2	4	Nonvolatile beta	7.05	pCi/g					
CS6G 1502	1	2	Nonvolatile beta	7.23	pCi/g					
CS6G 1501	0	1	Nonvolatile beta	7.25	pCi/g					
CS6G 0804	9	11	Nonvolatile beta	7.3	pCi/g	J	Y			
CS6G 0901	0	2	Nonvolatile beta	7.4	pCi/g	J				
CS6G 0701	0	2	Nonvolatile beta	7.4	pCi/g	J				
CS6G 0802	5	7	Nonvolatile beta	7.5	pCi/g	J	Y			
CS6G 0603	12.7	14.7	Nonvolatile beta	7.7	pCi/g	J	Y			
CS6G 0702	7.5	9.5	Nonvolatile beta	8	pCi/g	J				
CS6G 1205	6	8	Nonvolatile beta	8.01	pCi/g					
CS6G 1404	4	6	Nonvolatile beta	8.01	pCi/g					
CS6G 1604	4	6	Nonvolatile beta	8.24	pCi/g					
CS6G 1702	1	2	Nonvolatile beta	8.29	pCi/g					

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 1703	2	4	Nonvolatile beta	8.87	pCi/g					
CS6G 0602	10.7	12.7	Nonvolatile beta	9.1	pCi/g	J	Y			
CS6G 0604	14.7	16.7	Nonvolatile beta	9.1	pCi/g	J	Y			
CS6G 0801	0	2	Nonvolatile beta	9.2	pCi/g	J	Y			
CS6G 1704	5	7	Nonvolatile beta	9.23	pCi/g					
CS6G 1102	1	2	Nonvolatile beta	10.1	pCi/g					
CS6G 0902	3.6	5.6	Nonvolatile beta	10.4	pCi/g	J	Y			
CS6G 0904	7.6	9.6	Nonvolatile beta	10.7	pCi/g	J				
CS6G 0402	3	5	Nonvolatile beta	10.7	pCi/g	J				
CS6G 1405	6	8	Nonvolatile beta	10.9	pCi/g					
CS6G 0703	9.5	11	Nonvolatile beta	11.1	pCi/g	J				
CS6G 1204	4	6	Nonvolatile beta	11.4	pCi/g					
CS6G 0404	7	9	Nonvolatile beta	11.5	pCi/g	J				
CS6G 1106	8	10	Nonvolatile beta	11.5	pCi/g					
CS6G 0803	7	9	Nonvolatile beta	11.6	pCi/g	J	Y			
CS6G 0704	11	13	Nonvolatile beta	11.8	pCi/g	J				
CS6G 0104	7	9	Nonvolatile beta	11.9	pCi/g	J	V			
CS6G 1505	10	12	Nonvolatile beta	11.9	pCi/g					
CS6G 1104	4	6	Nonvolatile beta	12.1	pCi/g					
CS6G 1503	2	4	Nonvolatile beta	12.9	pCi/g					
CS6G 1105	6	8	Nonvolatile beta	14.6	pCi/g					
CS6G 0502	7.2	9.2	Nonvolatile beta	15	pCi/g					
CS6G 1101	0	1	Nonvolatile beta	15.8	pCi/g					
CS6G 1601	0	1	Nonvolatile beta	715	pCi/g					
				19.092	average of 63 detects					
CS6G 1402	1	2	Octachlorodibenzo-p-dioxin	0.227	ug/kg	J	B		1.287 ug/kg	13 of 28
CS6G 1304	4	6	Octachlorodibenzo-p-dioxin	0.244	ug/kg	J	B			
CS6G 1303	2	4	Octachlorodibenzo-p-dioxin	0.252	ug/kg	J	B			
CS6G 1504	4	6	Octachlorodibenzo-p-dioxin	0.264	ug/kg	J				
CS6G 1403	2	4	Octachlorodibenzo-p-dioxin	0.285	ug/kg	J	B			
CS6G 1203	2	4	Octachlorodibenzo-p-dioxin	0.312	ug/kg	J	B			
CS6G 1305	6	8	Octachlorodibenzo-p-dioxin	0.312	ug/kg	J	B			
CS6G 1405	6	8	Octachlorodibenzo-p-dioxin	0.504	ug/kg	J	B			
CS6G 1603	2	4	Octachlorodibenzo-p-dioxin	0.536	ug/kg	J				
CS6G 1704	5	7	Octachlorodibenzo-p-dioxin	0.574	ug/kg	J				
CS6G 1301	0	1	Octachlorodibenzo-p-dioxin	0.761	ug/kg	J	B			
CS6G 1205	6	8	Octachlorodibenzo-p-dioxin	0.872	ug/kg	J	B			
CS6G 1501	0	1	Octachlorodibenzo-p-dioxin	0.991	ug/kg	J				
CS6G 1701	0	1	Octachlorodibenzo-p-dioxin	1.19	ug/kg					
CS6G 1102	1	2	Octachlorodibenzo-p-dioxin	1.23	ug/kg	J				
CS6G 1204	4	6	Octachlorodibenzo-p-dioxin	1.86	ug/kg					
CS6G 1301	0	1	Octachlorodibenzo-p-dioxin	2.07	ug/kg					
CS6G 1304	4	6	Octachlorodibenzo-p-dioxin	2.39	ug/kg					
CS6G 1503	2	4	Octachlorodibenzo-p-dioxin	2.41	ug/kg					
CS6G 1101	0	1	Octachlorodibenzo-p-dioxin	2.64	ug/kg					
CS6G 1205	6	8	Octachlorodibenzo-p-dioxin	2.67	ug/kg					
CS6G 1703	2	4	Octachlorodibenzo-p-dioxin	2.95	ug/kg					
CS6G 1702	1	2	Octachlorodibenzo-p-dioxin	2.97	ug/kg					
CS6G 1305	6	8	Octachlorodibenzo-p-dioxin	4.6	ug/kg					
CS6G 1502	1	2	Octachlorodibenzo-p-dioxin	7.59	ug/kg					
CS6G 1204	4	6	Octachlorodibenzo-p-dioxin	7.87	ug/kg					
CS6G 1303	2	4	Octachlorodibenzo-p-dioxin	11	ug/kg					
CS6G 1203	2	4	Octachlorodibenzo-p-dioxin	19.4	ug/kg					
				2.8205	average of 28 detects					
CS6G 1405	6	8	Octacosane	670	ug/kg	J	IN		?	?
CS6G 1402	1	2	Octadecanoic acid	290	ug/kg	J	N		660 ug/kg	0
CS6G 1401	0	1	Octadecanol	320	ug/kg	J	N		?	?
CS6G 1601	0	1	p,p'-DDE	1.04	ug/kg	J			1.211 ug/kg	10 of 12
CS6G 1603	2	4	p,p'-DDE	1.17	ug/kg	J				
CS6G 1701	0	1	p,p'-DDE	1.4	ug/kg	J				

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 1102	1	2	p,p'-DDE	1.48	ug/kg	J				
CS6G 1301	0	1	p,p'-DDE	1.53	ug/kg	J	B			
CS6G 2202	1	2	p,p'-DDE	1.58	ug/kg	J	B			
CS6G 1602	1	2	p,p'-DDE	2.31	ug/kg	J				
CS6G 0102	3	5	p,p'-DDE	3.43	ug/kg					
CS6G 0601	0	2	p,p'-DDE	5.31	ug/kg					
CS6G 2201	0	1	p,p'-DDE	5.4	ug/kg					
CS6G 1201	0	1	p,p'-DDE	5.77	ug/kg	J	B			
CS6G 1303	2	4	p,p'-DDE	9.09	ug/kg					
				3.2925	average of 12 detects					
CS6G 1701	0	1	p,p'-DDT	3.08	ug/kg	J			2.759 ug/kg	2 of 2
CS6G 0601	0	2	p,p'-DDT	5.5	ug/kg					
CS6G 1102	1	2	PCB 1254	25.9	ug/kg	J			22.7 ug/kg	2 of 2
CS6G 1201	0	1	PCB 1254	115	ug/kg					
CS6G 1102	1	2	PCB 1260	31.2	ug/kg	J			22.7 ug/kg	1 of 1
CS6G 0703	9.5	11	Pentachlorophenol	50.6	ug/kg				13.019 ug/kg	1 of 1
CS6G 2203	2	4	Pentadecane hydrocarbon	280	ug/kg	J	N		?	?
CS6G 0603	12.7	14.7	Phenanthrene	53.3	ug/kg		Y		0.639 ug/kg	5 of 5
CS6G 0502	7.2	9.2	Phenanthrene	62.4	ug/kg					
CS6G 1405	6	8	Phenanthrene	113	ug/kg					
CS6G 0902	3.6	5.6	Phenanthrene	3160	ug/kg		Y			
CS6G 1404	4	6	Phenanthrene	59100	ug/kg					
				12498	average of 5 detects					
CS6G 1402	1	2	Phenanthrenecarboxylic acid	150	ug/kg	J	N		600 ug/kg	1 of 6
CS6G 1603	2	4	Phenanthrenecarboxylic acid	170	ug/kg	J				
CS6G 1101	0	1	Phenanthrenecarboxylic acid	180	ug/kg	J				
CS6G 1102	1	2	Phenanthrenecarboxylic acid	230	ug/kg	J				
CS6G 1202	1	2	Phenanthrenecarboxylic acid	260	ug/kg	J	N			
CS6G 1401	0	1	Phenanthrenecarboxylic acid	1100	ug/kg	J	N			
CS6G 0304	7	9	Potassium	32.9	mg/kg	J			67.85 mg/kg	41 of 69
CS6G 0401	0	2	Potassium	34.4	mg/kg	J				
CS6G 0303	5	7	Potassium	35.8	mg/kg	J				
CS6G 0403	5	7	Potassium	36.2	mg/kg	J				
CS6G 1202	1	2	Potassium, total recoverable	40.2	mg/kg	J	B			
CS6G 1601	0	1	Potassium, total recoverable	42.1	mg/kg	J				
CS6G 0904	7.6	9.6	Potassium	43.7	mg/kg	J	R			
CS6G 0103	5	7	Potassium	45.4	mg/kg	J				
CS6G 1304	4	6	Potassium, total recoverable	46.5	mg/kg	J	B			
CS6G 0504	11.2	12.2	Potassium	46.6	mg/kg	J	R			
CS6G 0204	7	9	Potassium	47.1	mg/kg	J				
CS6G 0302	3	5	Potassium	47.3	mg/kg	J				
CS6G 0202	3	5	Potassium	48.1	mg/kg	J				
CS6G 0901	0	2	Potassium	48.8	mg/kg	J	R			
CS6G 0203	5	6	Potassium	50.4	mg/kg	J				
CS6G 0702	7.5	9.5	Potassium	50.7	mg/kg	J				
CS6G 1403	2	4	Potassium, total recoverable	51.8	mg/kg	J	B			
CS6G 0903	5.6	7.6	Potassium	54	mg/kg	J	R			
CS6G 0301	0	2	Potassium	55.1	mg/kg	J				
CS6G 0201	0	2	Potassium	55.4	mg/kg	J				
CS6G 1505	10	12	Potassium, total recoverable	55.7	mg/kg	J				
CS6G 1201	0	1	Potassium, total recoverable	59.1	mg/kg	J	B			
CS6G 1602	1	2	Potassium, total recoverable	59.2	mg/kg	J				
CS6G 0701	0	2	Potassium	61.8	mg/kg	J				
CS6G 1703	2	4	Potassium, total recoverable	62.2	mg/kg	J				
CS6G 1501	0	1	Potassium, total recoverable	64.1	mg/kg	J				
CS6G 1603	2	4	Potassium, total recoverable	65.4	mg/kg	J				
CS6G 0804	9	11	Potassium	67.1	mg/kg	J	RY			
CS6G 0803	7	9	Potassium	70.6	mg/kg	J	Y			

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 0801	0	2	Potassium	71.3	mg/kg	J	RY		.	
CS6G 0102	3	5	Potassium	76	mg/kg	J	R		.	
CS6G 1604	4	6	Potassium, total recoverable	77.5	mg/kg	J			.	
CS6G 0104	7	9	Potassium	79	mg/kg	J			.	
CS6G 0601	0	2	Potassium	79.6	mg/kg	J	Y		.	
CS6G 0603	12.7	14.7	Potassium	81.4	mg/kg	J	Y		.	
CS6G 1704	5	7	Potassium, total recoverable	83.2	mg/kg	J			.	
CS6G 1103	2	4	Potassium, total recoverable	83.6	mg/kg	J			.	
CS6G 1105	6	8	Potassium, total recoverable	84.2	mg/kg	J			.	
CS6G 1504	4	6	Potassium, total recoverable	84.2	mg/kg	J			.	
CS6G 0503	9.2	10.6	Potassium	85.9	mg/kg	J	R		.	
CS6G 1102	1	2	Potassium, total recoverable	87.5	mg/kg	J			.	
CS6G 0604	14.7	16.7	Potassium	88.5	mg/kg	J	Y		.	
CS6G 1106	8	10	Potassium, total recoverable	91	mg/kg	J			.	
CS6G 0501	0	2	Potassium	92.2	mg/kg	J	R		.	
CS6G 0402	3	5	Potassium	93	mg/kg	J			.	
CS6G 1303	2	4	Potassium, total recoverable	98.9	mg/kg	J	B		.	
CS6G 1203	2	4	Potassium, total recoverable	102	mg/kg	J	B		.	
CS6G 1702	1	2	Potassium, total recoverable	103	mg/kg	J			.	
CS6G 1305	6	8	Potassium, total recoverable	107	mg/kg	J	B		.	
CS6G 1401	0	1	Potassium, total recoverable	112	mg/kg	J	B		.	
CS6G 1104	4	6	Potassium, total recoverable	116	mg/kg	J			.	
CS6G 0902	3.6	5.6	Potassium	118	mg/kg	J	RY		.	
CS6G 0101	0	2	Potassium	121	mg/kg	J	Y		.	
CS6G 1301	0	1	Potassium, total recoverable	121	mg/kg	J	B		.	
CS6G 1302	1	2	Potassium, total recoverable	129	mg/kg	J	B		.	
CS6G 1503	2	4	Potassium, total recoverable	133	mg/kg	J			.	
CS6G 1205	6	8	Potassium, total recoverable	139	mg/kg	J	B		.	
CS6G 2201	0	1	Potassium, total recoverable	150	mg/kg	J	B		.	
CS6G 1406	8	10	Potassium, total recoverable	152	mg/kg	J			.	
CS6G 0502	7.2	9.2	Potassium	164	mg/kg	J	R		.	
CS6G 1701	0	1	Potassium, total recoverable	173	mg/kg	J			.	
CS6G 0602	10.7	12.7	Potassium	180	mg/kg	J	YX		.	
CS6G 1204	4	6	Potassium, total recoverable	198	mg/kg	J	B		.	
CS6G 2202	1	2	Potassium, total recoverable	218	mg/kg	J	B		.	
CS6G 1101	0	1	Potassium, total recoverable	250	mg/kg	J			.	
CS6G 1404	4	6	Potassium, total recoverable	364	mg/kg				.	
CS6G 1405	6	8	Potassium, total recoverable	551	mg/kg				.	
CS6G 0802	5	7	Potassium	588	mg/kg		Y		.	
CS6G 2203	2	4	Potassium, total recoverable	851	mg/kg				.	
				116.73	average of 69 detects					
CS6G 0503	9.2	10.6	Pyrene	3.86	ug/kg	J			.	21 of 30
CS6G 0601	0	2	Pyrene	4.42	ug/kg	J	Y		.	
CS6G 0403	5	7	Pyrene	5.09	ug/kg	J			.	
CS6G 1202	1	2	Pyrene	5.13	ug/kg	JV	VB		.	
CS6G 0301	0	2	Pyrene	5.2	ug/kg	J			.	
CS6G 1203	2	4	Pyrene	5.94	ug/kg	J	B		.	
CS6G 1104	4	6	Pyrene	5.97	ug/kg	JV			.	
CS6G 1105	6	8	Pyrene	6.33	ug/kg	JV			.	
CS6G 1106	8	10	Pyrene	6.62	ug/kg	JV			.	
CS6G 0901	0	2	Pyrene	7.71	ug/kg	J			.	
CS6G 0803	7	9	Pyrene	8.51	ug/kg	J	YI	P	.	
CS6G 0903	5.6	7.6	Pyrene	9.19	ug/kg	J			.	
CS6G 1403	2	4	Pyrene	11.3	ug/kg	J	B		.	
CS6G 0701	0	2	Pyrene	11.8	ug/kg	J			.	
CS6G 1201	0	1	Pyrene	13.1	ug/kg	JV	VB		.	
CS6G 2202	1	2	Pyrene	16	ug/kg	J			.	
CS6G 2201	0	1	Pyrene	16.6	ug/kg	J	B		.	
CS6G 2203	2	4	Pyrene	19.8	ug/kg	J	B		.	
CS6G 0904	7.6	9.6	Pyrene	21.1	ug/kg	J	I	P	.	
CS6G 1102	1	2	Pyrene	21.2	ug/kg	JV			.	
CS6G 1501	0	1	Pyrene	22.5	ug/kg	J			.	
CS6G 1401	0	1	Pyrene	29.1	ug/kg	J	B		.	
CS6G 1101	0	1	Pyrene	30.8	ug/kg	JV			.	
CS6G 0502	7.2	9.2	Pyrene	46.3	ug/kg				.	

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 0703	9.5	11	Pyrene	50.2	ug/kg					
CS6G 0603	12.7	14.7	Pyrene	63.1	ug/kg		Y			
CS6G 1405	6	8	Pyrene	134	ug/kg					
CS6G 0602	10.7	12.7	Pyrene	181	ug/kg	J	YI	P		
CS6G 0902	3.6	5.6	Pyrene	4200	ug/kg		Y			
CS6G 1404	4	6	Pyrene	83700	ug/kg					
				2955.4	average of 30 detects					
CS6G 0304	7	9	Selenium	3.74	mg/kg	J			4.839 mg/kg	11 of 14
CS6G 0202	3	5	Selenium	4.06	mg/kg	J				
CS6G 1703	2	4	Selenium, total recoverable	4.72	mg/kg	J				
CS6G 1704	5	7	Selenium, total recoverable	4.99	mg/kg	J				
CS6G 1603	2	4	Selenium, total recoverable	5.15	mg/kg	J				
CS6G 0302	3	5	Selenium	5.16	mg/kg	J				
CS6G 1102	1	2	Selenium, total recoverable	5.45	mg/kg	J				
CS6G 1104	4	6	Selenium, total recoverable	7.14	mg/kg					
CS6G 1106	8	10	Selenium, total recoverable	7.34	mg/kg					
CS6G 1504	4	6	Selenium, total recoverable	7.48	mg/kg					
CS6G 1101	0	1	Selenium, total recoverable	8.36	mg/kg					
CS6G 1503	2	4	Selenium, total recoverable	9.81	mg/kg					
CS6G 1105	6	8	Selenium, total recoverable	11.4	mg/kg					
CS6G 1103	2	4	Selenium, total recoverable	14.3	mg/kg					
				7.0786	average of 14 detects					
CS6G 0901	0	2	Silver	0.3	mg/kg	J	R		0.335 mg/kg	13 of 15
CS6G 0402	3	5	Silver	0.316	mg/kg	J				
CS6G 0605	21.7	23.7	Silver	0.381	mg/kg	J	Y			
CS6G 0606	28.7	30.7	Silver	0.385	mg/kg	J	Y			
CS6G 0403	5	7	Silver	0.42	mg/kg	J				
CS6G 0502	7.2	9.2	Silver	0.45	mg/kg	J	R			
CS6G 0602	10.7	12.7	Silver	0.462	mg/kg	J	Y			
CS6G 0903	5.6	7.6	Silver	0.471	mg/kg	J	R			
CS6G 0803	7	9	Silver	0.498	mg/kg	J	Y			
CS6G 0504	11.2	12.2	Silver	0.53	mg/kg	J	R			
CS6G 0702	7.5	9.5	Silver	0.541	mg/kg	J				
CS6G 0802	5	7	Silver	0.723	mg/kg	J	Y			
CS6G 2202	1	2	Silver, total recoverable	0.983	mg/kg	J	B			
CS6G 2201	0	1	Silver, total recoverable	1.81	mg/kg	J	B			
CS6G 2203	2	4	Silver, total recoverable	3.77	mg/kg	J	B			
				0.8027	average of 15 detects					
CS6G 0601	0	2	Sodium	8.67	mg/kg	J	Y		9.04 mg/kg	15 of 16
CS6G 0503	9.2	10.6	Sodium	9.4	mg/kg	J	R			
CS6G 0203	5	6	Sodium	9.63	mg/kg	J				
CS6G 0702	7.5	9.5	Sodium	9.86	mg/kg	J				
CS6G 0803	7	9	Sodium	12.7	mg/kg	J	Y			
CS6G 0604	14.7	16.7	Sodium	14.4	mg/kg	J	Y			
CS6G 1301	0	1	Sodium, total recoverable	15.8	mg/kg	J	B			
CS6G 0603	12.7	14.7	Sodium	16.6	mg/kg	J	Y			
CS6G 0902	3.6	5.6	Sodium	37.2	mg/kg	J	RY			
CS6G 0502	7.2	9.2	Sodium	48.1	mg/kg	J	R			
CS6G 0602	10.7	12.7	Sodium	51.9	mg/kg	J	YX			
CS6G 0802	5	7	Sodium	219	mg/kg		Y			
CS6G 1302	1	2	Sodium, total recoverable	36.8	mg/kg	J	B			
CS6G 1404	4	6	Sodium, total recoverable	147	mg/kg					
CS6G 2203	2	4	Sodium, total recoverable	274	mg/kg					
CS6G 1405	6	8	Sodium, total recoverable	294	mg/kg					
CS6G 1402	1	2	Stigmast-4-en-3-one	240	ug/kg	J	N		?	?
CS6G 2202	1	2	Tetrachloroethylene	0.0824	ug/kg				0.059 ug/kg	2 of 2
CS6G 2201	0	1	Tetrachloroethylene	0.148	ug/kg					
CS6G 1405	6	8	Tetracosane	220	ug/kg	J	IN		?	?
CS6G 2203	2	4	Tetracosane	250	ug/kg	J	N			

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 0401	0	2	Thallium	3.05	mg/kg	J			3.70 mg/kg	6 of 9
CS6G 0902	3.6	5.6	Thallium	3.46	mg/kg	J	RY			
CS6G 0301	0	2	Thallium	3.6	mg/kg	J				
CS6G 0101	0	2	Thallium	3.71	mg/kg	J	Y			
CS6G 0303	5	7	Thallium	4.2	mg/kg	J				
CS6G 0201	0	2	Thallium	4.4	mg/kg	J				
CS6G 1202	1	2	Thallium, total recoverable	5.89	mg/kg		V			
CS6G 1301	0	1	Thallium, total recoverable	7.82	mg/kg		V			
CS6G 0802	5	7	Thallium	18.1	mg/kg		Y			
				6.0256	average of 9 detects					
CS6G 0103	5	7	Toluene	0.0843	ug/kg	J	I	P	0.755 ug/kg	6 of 28
CS6G 1106	8	10	Toluene	0.106	ug/kg	JV				
CS6G 0102	3	5	Toluene	0.15	ug/kg	J	Q	L		
CS6G 1102	1	2	Toluene	0.15	ug/kg	JV				
CS6G 1601	0	1	Toluene	0.156	ug/kg	JV				
CS6G 1103	2	4	Toluene	0.172	ug/kg	JV				
CS6G 1605	10	12	Toluene	0.186	ug/kg	JV				
CS6G 1101	0	1	Toluene	0.207	ug/kg	JV				
CS6G 1704	5	7	Toluene	0.224	ug/kg	JV				
CS6G 1702	1	2	Toluene	0.226	ug/kg	JV				
CS6G 1503	2	4	Toluene	0.232	ug/kg	JV				
CS6G 1604	4	6	Toluene	0.233	ug/kg	JV				
CS6G 1703	2	4	Toluene	0.256	ug/kg	JV				
CS6G 1104	4	6	Toluene	0.264	ug/kg	JV				
CS6G 1105	6	8	Toluene	0.298	ug/kg	JV				
CS6G 1501	0	1	Toluene	0.355	ug/kg	JV				
CS6G 1502	1	2	Toluene	0.367	ug/kg	JV				
CS6G 1705	10	12	Toluene	0.417	ug/kg	JV				
CS6G 0101	0	2	Toluene	0.494	ug/kg	J	YV			
CS6G 1504	4	6	Toluene	0.541	ug/kg	JV				
CS6G 1505	10	12	Toluene	0.694	ug/kg	V				
CS6G 1701	0	1	Toluene	0.708	ug/kg	V				
CS6G 1602	1	2	Toluene	0.989	ug/kg	V				
CS6G 1603	2	4	Toluene	1.26	ug/kg	JV				
CS6G 1302	1	2	Toluene	2.33	ug/kg		V			
CS6G 1202	1	2	Toluene	2.91	ug/kg		V			
CS6G 1201	0	1	Toluene	4.11	ug/kg		V			
CS6G 1303	2	4	Toluene	5.91	ug/kg		V			
				0.8582	average of 28 detects					
CS6G 2202	1	2	Trichloroethylene	0.2	ug/kg				0.052 ug/kg	2 of 2
CS6G 2201	0	1	Trichloroethylene	0.261	ug/kg					
CS6G 1101	0	1	Tritetracontane	250	ug/kg	J			?	?
CS6G 1602	1	2	Unknown acid	220	ug/kg	J			820 ug/kg	0
CS6G 1504	4	6	Unknown acid	360	ug/kg	J				
CS6G 1601	0	1	Unknown acid	430	ug/kg	J				
CS6G 1502	1	2	Unknown alcohol	150	ug/kg	J			582.85ug/kg	3 of 11
CS6G 1504	4	6	Unknown alcohol	160	ug/kg	J				
CS6G 1604	4	6	Unknown alcohol	160	ug/kg	J				
CS6G 1603	2	4	Unknown alcohol	180	ug/kg	J				
CS6G 1601	0	1	Unknown alcohol	210	ug/kg	J				
CS6G 1505	10	12	Unknown alcohol	370	ug/kg	J				
CS6G 1701	0	1	Unknown alcohol	550	ug/kg	J				
CS6G 1101	0	1	Unknown alcohol	570	ug/kg	J				
CS6G 1304	4	6	Unknown alcohol	710	ug/kg	J	N			
CS6G 1401	0	1	Unknown alcohol	820	ug/kg	J	N			
CS6G 1503	2	4	Unknown alcohol	1600	ug/kg	J				
CS6G 1602	1	2	Unknown alkane	160	ug/kg	J			320 ug/kg	1 of 4
CS6G 1503	2	4	Unknown alkane	250	ug/kg	J				
CS6G 1402	1	2	Unknown alkane	370	ug/kg	J	N			

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 1503	2	4	Unknown amide	180	ug/kg	J				
CS6G 1702	1	2	Unknown amide	210	ug/kg	J				
CS6G 1402	1	2	Unknown amine	180	ug/kg	J	N		?	?
CS6G 2203	2	4	Unknown aromatic	250	ug/kg	J	N		680 ug/kg	0
CS6G 1202	1	2	Unknown azulene	150	ug/kg	J	N		420 ug/kg	0
CS6G 1405	6	8	Unknown furan	190	ug/kg	J	IN		1120 ug/kg	0
CS6G 1101	0	1	Unknown furan	450	ug/kg	J				
CS6G 1602	1	2	Unknown hydrocarbon	210	ug/kg	J			455 ug/kg	0
CS6G 1602	1	2	Unknown hydrocarbon	420	ug/kg	J				
CS6G 1402	1	2	Unknown ketone	410	ug/kg	J	N		?	?
CS6G 1202	1	2	Unknown phenol	200	ug/kg	J	N		?	?
CS6G 1101	0	1	Unknown silane compound	440	ug/kg	J			360 ug/kg	1 of 1
CS6G 1405	6	8	Unknown sulfur compound	160	ug/kg	J	IN		?	?
CS6G 2203	2	4	Unknown sulfur compound	260	ug/kg	J	N			
CS6G 2203	2	4	Unknown sulfur compound	310	ug/kg	J	N			
CS6G 1602	1	2	Vanadium, total recoverable	8.18	mg/kg				68.475 mg/kg	15 of 74
CS6G 1202	1	2	Vanadium, total recoverable	9.88	mg/kg		V			
CS6G 0104	7	9	Vanadium	10.3	mg/kg					
CS6G 1603	2	4	Vanadium, total recoverable	10.3	mg/kg					
CS6G 0201	0	2	Vanadium	12	mg/kg	J				
CS6G 1501	0	1	Vanadium, total recoverable	12.4	mg/kg					
CS6G 1402	1	2	Vanadium, total recoverable	12.6	mg/kg		V			
CS6G 0401	0	2	Vanadium	13.3	mg/kg	J				
CS6G 0301	0	2	Vanadium	14	mg/kg					
CS6G 1302	1	2	Vanadium, total recoverable	15.7	mg/kg		V			
CS6G 0501	0	2	Vanadium	17.1	mg/kg	J	R			
CS6G 1403	2	4	Vanadium, total recoverable	17.4	mg/kg		V			
CS6G 1604	4	6	Vanadium, total recoverable	17.7	mg/kg					
CS6G 0102	3	5	Vanadium	17.8	mg/kg	J	RXI	P		
CS6G 1601	0	1	Vanadium, total recoverable	17.9	mg/kg					
CS6G 1201	0	1	Vanadium, total recoverable	18.6	mg/kg					
CS6G 1404	4	6	Vanadium, total recoverable	20.6	mg/kg		V			
CS6G 0603	12.7	14.7	Vanadium	21.6	mg/kg		Y			
CS6G 0604	14.7	16.7	Vanadium	21.6	mg/kg		Y			
CS6G 0801	0	2	Vanadium	21.7	mg/kg	J	RY			
CS6G 1303	2	4	Vanadium, total recoverable	21.9	mg/kg		V			
CS6G 1203	2	4	Vanadium, total recoverable	23	mg/kg		V			
CS6G 1701	0	1	Vanadium, total recoverable	23.6	mg/kg					
CS6G 0704	11	13	Vanadium	23.8	mg/kg	J				
CS6G 1401	0	1	Vanadium, total recoverable	25.4	mg/kg		V			
CS6G 1502	1	2	Vanadium, total recoverable	29.1	mg/kg					
CS6G 0601	0	2	Vanadium	30.1	mg/kg		Y			
CS6G 1305	6	8	Vanadium, total recoverable	30.5	mg/kg		V			
CS6G 1301	0	1	Vanadium, total recoverable	31.6	mg/kg		V			
CS6G 0503	9.2	10.6	Vanadium	31.7	mg/kg	J	R			
CS6G 0303	5	7	Vanadium	32.2	mg/kg					
CS6G 2203	2	4	Vanadium, total recoverable	33.8	mg/kg					
CS6G 0502	7.2	9.2	Vanadium	34.3	mg/kg	J	R			
CS6G 1106	8	10	Vanadium, total recoverable	34.8	mg/kg					
CS6G 0804	9	11	Vanadium	34.9	mg/kg	J	RY			
CS6G 0602	10.7	12.7	Vanadium	35.8	mg/kg		YX			
CS6G 0701	0	2	Vanadium	37.7	mg/kg	J				
CS6G 2202	1	2	Vanadium, total recoverable	37.7	mg/kg					
CS6G 0703	9.5	11	Vanadium	38	mg/kg	J				
CS6G 0402	3	5	Vanadium	39.3	mg/kg	J				

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 0101	0	2	Vanadium	39.4	mg/kg		Y			
CS6G 0504	11.2	12.2	Vanadium	39.5	mg/kg	J	RX			
CS6G 0902	3.6	5.6	Vanadium	39.9	mg/kg	J	RY			
CS6G 1505	10	12	Vanadium, total recoverable	40.7	mg/kg					
CS6G 0901	0	2	Vanadium	45.8	mg/kg	J	R			
CS6G 0403	5	7	Vanadium	46.8	mg/kg	J				
CS6G 0404	7	9	Vanadium	48.2	mg/kg	J				
CS6G 1702	1	2	Vanadium, total recoverable	48.3	mg/kg					
CS6G 0702	7.5	9.5	Vanadium	50.6	mg/kg					
CS6G 1304	4	6	Vanadium, total recoverable	50.7	mg/kg		V			
CS6G 0304	7	9	Vanadium	50.9	mg/kg					
CS6G 0203	5	6	Vanadium	52.6	mg/kg					
CS6G 2201	0	1	Vanadium, total recoverable	52.7	mg/kg					
CS6G 1101	0	1	Vanadium, total recoverable	55.4	mg/kg					
CS6G 0904	7.6	9.6	Vanadium	61.1	mg/kg	J	R			
CS6G 0302	3	5	Vanadium	61.4	mg/kg					
CS6G 0204	7	9	Vanadium	63.3	mg/kg					
CS6G 1205	6	8	Vanadium, total recoverable	63.3	mg/kg		V			
CS6G 1703	2	4	Vanadium, total recoverable	66.9	mg/kg					
CS6G 0103	5	7	Vanadium	69.1	mg/kg					
CS6G 0803	7	9	Vanadium	69.5	mg/kg		Y			
CS6G 0903	5.6	7.6	Vanadium	71.6	mg/kg	J	R			
CS6G 0202	3	5	Vanadium	74.7	mg/kg					
CS6G 1405	6	8	Vanadium, total recoverable	75.5	mg/kg		V			
CS6G 1104	4	6	Vanadium, total recoverable	76.2	mg/kg					
CS6G 1503	2	4	Vanadium, total recoverable	78.9	mg/kg					
CS6G 1504	4	6	Vanadium, total recoverable	79.2	mg/kg					
CS6G 0802	5	7	Vanadium	81	mg/kg		Y			
CS6G 1102	1	2	Vanadium, total recoverable	84.3	mg/kg					
CS6G 1406	8	10	Vanadium, total recoverable	84.9	mg/kg	J	VI	L		
CS6G 1103	2	4	Vanadium, total recoverable	102	mg/kg					
CS6G 1704	5	7	Vanadium, total recoverable	102	mg/kg					
CS6G 1204	4	6	Vanadium, total recoverable	150	mg/kg		V			
CS6G 1105	6	8	Vanadium, total recoverable	161	mg/kg					
				44.287	average of 74 detects					
CS6G 1403	2	4	Xylenes	0.0753	ug/kg	J	B		0.357 ug/kg	13 of 45
CS6G 0401	0	2	Xylenes	0.0753	ug/kg	J				
CS6G 1501	0	1	Xylenes	0.0753	ug/kg	J				
CS6G 0501	0	2	Xylenes	0.0761	ug/kg	J				
CS6G 0502	7.2	9.2	Xylenes	0.0833	ug/kg	J				
CS6G 0703	9.5	11	Xylenes	0.0833	ug/kg	J				
CS6G 0904	7.6	9.6	Xylenes	0.0854	ug/kg	J				
CS6G 1102	1	2	Xylenes	0.0875	ug/kg	J				
CS6G 0601	0	2	Xylenes	0.0889	ug/kg	J	Y			
CS6G 0504	11.2	12.2	Xylenes	0.0909	ug/kg	J				
CS6G 1104	4	6	Xylenes	0.092	ug/kg	J				
CS6G 0704	11	13	Xylenes	0.0941	ug/kg	J				
CS6G 0802	5	7	Xylenes	0.0964	ug/kg	J	YV			
CS6G 1703	2	4	Xylenes	0.105	ug/kg	J				
CS6G 0603	12.7	14.7	Xylenes	0.106	ug/kg	J	Y			
CS6G 0804	9	11	Xylenes	0.106	ug/kg	J	YV			
CS6G 1103	2	4	Xylenes	0.115	ug/kg	J				
CS6G 1505	10	12	Xylenes	0.129	ug/kg	J				
CS6G 0902	3.6	5.6	Xylenes	0.131	ug/kg	J	OY	H		
CS6G 1601	0	1	Xylenes	0.133	ug/kg	J				
CS6G 1303	2	4	Xylenes	0.138	ug/kg	J	B			
CS6G 1405	6	8	Xylenes	0.143	ug/kg	JV	VB			
CS6G 1702	1	2	Xylenes	0.143	ug/kg	J				
CS6G 1704	5	7	Xylenes	0.153	ug/kg	J				
CS6G 1406	8	10	Xylenes	0.179	ug/kg	J	B			
CS6G 1404	4	6	Xylenes	0.188	ug/kg	J	B			
CS6G 1504	4	6	Xylenes	0.247	ug/kg					
CS6G 1401	0	1	Xylenes	0.264	ug/kg	V	V	H		
CS6G 1502	1	2	Xylenes	0.267	ug/kg					
CS6G 0602	10.7	12.7	Xylenes	0.284	ug/kg		Y			

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 1603	2	4	Xylenes	0.295	ug/kg	J				
CS6G 2203	2	4	Xylenes	0.317	ug/kg					
CS6G 1701	0	1	Xylenes	0.337	ug/kg					
CS6G 1604	4	6	Xylenes	0.372	ug/kg					
CS6G 1602	1	2	Xylenes	0.462	ug/kg					
CS6G 1105	6	8	Xylenes	0.464	ug/kg					
CS6G 1402	1	2	Xylenes	0.581	ug/kg	V	V	H		
CS6G 0304	7	9	Xylenes	0.612	ug/kg	J				
CS6G 0204	7	9	Xylenes	0.706	ug/kg	J				
CS6G 0301	0	2	Xylenes	0.809	ug/kg	J				
CS6G 0101	0	2	Xylenes	1.24	ug/kg		Y			
CS6G 0203	5	6	Xylenes	2.64	ug/kg	J				
CS6G 0302	3	5	Xylenes	3.25	ug/kg	J				
CS6G 0202	3	5	Xylenes	3.96	ug/kg	J				
CS6G 0201	0	2	Xylenes	3.97	ug/kg	J				
				0.5322	average of 45 detects					
CS6G 0703	9.5	11	Zinc	0.484	mg/kg	J			2.736 mg/kg	50 of 73
CS6G 0404	7	9	Zinc	0.518	mg/kg	J				
CS6G 0704	11	13	Zinc	0.551	mg/kg	J				
CS6G 0302	3	5	Zinc	0.572	mg/kg	J				
CS6G 0903	5.6	7.6	Zinc	0.605	mg/kg	J	R			
CS6G 1505	10	12	Zinc, total recoverable	0.676	mg/kg	J				
CS6G 0103	5	7	Zinc	0.729	mg/kg	J				
CS6G 0303	5	7	Zinc	1.04	mg/kg	J				
CS6G 1604	4	6	Zinc, total recoverable	1.12	mg/kg	J				
CS6G 0304	7	9	Zinc	1.15	mg/kg	J				
CS6G 1502	1	2	Zinc, total recoverable	1.26	mg/kg	J				
CS6G 1504	4	6	Zinc, total recoverable	1.26	mg/kg	J				
CS6G 1106	8	10	Zinc, total recoverable	1.34	mg/kg	J				
CS6G 1703	2	4	Zinc, total recoverable	1.42	mg/kg	J				
CS6G 0701	0	2	Zinc	1.6	mg/kg	J				
CS6G 1105	6	8	Zinc, total recoverable	2.02	mg/kg	J				
CS6G 0402	3	5	Zinc	2.04	mg/kg	J				
CS6G 0104	7	9	Zinc	2.17	mg/kg	J				
CS6G 0801	0	2	Zinc	2.18	mg/kg	J	RY			
CS6G 1602	1	2	Zinc, total recoverable	2.3	mg/kg	J				
CS6G 1103	2	4	Zinc, total recoverable	2.51	mg/kg	J				
CS6G 0702	7.5	9.5	Zinc	2.66	mg/kg	J				
CS6G 1402	1	2	Zinc, total recoverable	2.66	mg/kg	J	B			
CS6G 0401	0	2	Zinc	2.74	mg/kg	J				
CS6G 1603	2	4	Zinc, total recoverable	2.81	mg/kg	J				
CS6G 0803	7	9	Zinc	2.88	mg/kg		Y			
CS6G 0804	9	11	Zinc	3.09	mg/kg	J	RY			
CS6G 0204	7	9	Zinc	3.69	mg/kg					
CS6G 1304	4	6	Zinc, total recoverable	3.94	mg/kg					
CS6G 1704	5	7	Zinc, total recoverable	4.15	mg/kg					
CS6G 1601	0	1	Zinc, total recoverable	4.39	mg/kg					
CS6G 1403	2	4	Zinc, total recoverable	4.47	mg/kg					
CS6G 0603	12.7	14.7	Zinc	4.53	mg/kg		Y			
CS6G 1205	6	8	Zinc, total recoverable	4.94	mg/kg					
CS6G 1503	2	4	Zinc, total recoverable	4.95	mg/kg					
CS6G 1501	0	1	Zinc, total recoverable	4.97	mg/kg					
CS6G 1305	6	8	Zinc, total recoverable	5.07	mg/kg					
CS6G 1702	1	2	Zinc, total recoverable	5.11	mg/kg					
CS6G 0301	0	2	Zinc	5.18	mg/kg					
CS6G 0604	14.7	16.7	Zinc	5.23	mg/kg		Y			
CS6G 0901	0	2	Zinc	5.23	mg/kg	J	R			
CS6G 1406	8	10	Zinc, total recoverable	5.35	mg/kg					
CS6G 1303	2	4	Zinc, total recoverable	5.51	mg/kg					
CS6G 1104	4	6	Zinc, total recoverable	5.84	mg/kg					
CS6G 1203	2	4	Zinc, total recoverable	6.16	mg/kg					
CS6G 1202	1	2	Zinc, total recoverable	7.08	mg/kg					
CS6G 1204	4	6	Zinc, total recoverable	7.74	mg/kg					
CS6G 0504	11.2	12.2	Zinc	7.79	mg/kg	J	RX			
CS6G 0202	3	5	Zinc	8.58	mg/kg					

SOILHITS

SAMPLE	TOP	BOT	ANALYTE	RES.	UNITS	R_Q	A_Q	BIAS	BKG_X_2	OVER_2_X
SOIL DETECTS										
CS6G 0501	0	2	Zinc	9.04	mg/kg	J	R			
CS6G 0904	7.6	9.6	Zinc	9.46	mg/kg	J	R			
CS6G 0601	0	2	Zinc	11.8	mg/kg		Y			
CS6G 1401	0	1	Zinc, total recoverable	12.7	mg/kg					
CS6G 2201	0	1	Zinc, total recoverable	13.8	mg/kg					
CS6G 0101	0	2	Zinc	16.2	mg/kg		Y			
CS6G 1102	1	2	Zinc, total recoverable	16.2	mg/kg					
CS6G 1201	0	1	Zinc, total recoverable	18.3	mg/kg					
CS6G 0503	9.2	10.6	Zinc	19.8	mg/kg	J	R			
CS6G 2202	1	2	Zinc, total recoverable	20.1	mg/kg					
CS6G 1701	0	1	Zinc, total recoverable	23.8	mg/kg					
CS6G 1101	0	1	Zinc, total recoverable	28.4	mg/kg					
CS6G 1301	0	1	Zinc, total recoverable	55	mg/kg					
CS6G 0201	0	2	Zinc	60.3	mg/kg	J				
CS6G 0602	10.7	12.7	Zinc	92.8	mg/kg	J	YXI	P		
CS6G 0203	5	6	Zinc	101	mg/kg					
CS6G 0502	7.2	9.2	Zinc	104	mg/kg	J	R			
CS6G 1405	6	8	Zinc, total recoverable	151	mg/kg					
CS6G 1404	4	6	Zinc, total recoverable	161	mg/kg					
CS6G 0102	3	5	Zinc	188	mg/kg	J	RIX	P		
CS6G 1302	1	2	Zinc, total recoverable	281	mg/kg					
CS6G 2203	2	4	Zinc, total recoverable	433	mg/kg					
CS6G 0802	5	7	Zinc	552	mg/kg		Y			
CS6G 0902	3.6	5.6	Zinc	678	mg/kg	J	RY			
				44.123	average of 73 detects					

Appendix G-1

SSL - Calculations

Project Central Shops Burning/Rubble Pit RFI/RI/BRA		Calculation Number K-CLC-G-00015		Project Number NA		
Title Soil Screening Calculations for the Central Shops Burning/Rubble Pit RFI/RI/BRA (U)		Functional Classification PS		Sheet 1 of 19		
		Discipline E&CSD				
Confirmed Calculation						
Computer Program No. (s) N/A				Version/Release No. N/A		
Purpose and Objective The purpose of this calc-note is to determine if dieldrin found in the soils at the Central Shops Burning/Rubble Pit Waste Unit (631-6G) could migrate to the groundwater and pose an unacceptable risk to a future hypothetical resident.						
Summary of Conclusion For the Central Shops Burning/Rubble Pit Waste Unit, the soil concentration of dieldrin was determined to be higher than both the EPA Generic Soil Screening Levels (SSLs) and Site Specific SSLs. Further evaluations determined that dieldrin in the soil would reach the groundwater table in 28 years at a peak concentration of 3.02E-5 mg/L resulting in a total risk of 7.89E-6 and an estimated Hazard Index of 0.0564.						
Revisions						
Rev. No.	Revision Description					
0	Original Issue					
Sign Off						
Rev No.	Originator (Print) Sign / Date	Verification / Checking Method	Verifier / Checker (Print) Sign / Date	Manager (Print) Sign / Date		
0	D.D. Brett		M.S. Rabin	B. A. Hamm		
	<i>D.D. Brett 3/14/96</i>					
Classification						

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CALC-NOTE CHECKLIST

REVIEWER(S) NAME
(PRINT OR TYPE)

SIGNATURE

DATE

CIRCLE ONE

1. Is the Subject and/or Purpose clearly stated?	YES	NO
2. Are the required Input Data and their references and source provided and are they consistent with the Calc-note purpose?	YES	NO
3. Are the Assumptions clearly identified, valid, and consistent with the calc-note purpose?	YES	NO
4. Are the Analytical Methods clearly identified?	YES	NO
5. Are all pages consecutively numbered and identified by the calc-note number?	YES	NO
6. Is/are the version(s) of the computer program(s) used identified?	YES
N/A	NO
7. Are input listings for all computer programs documented in this calc-note?	YES
N/A	NO
8. Are the Results and Conclusions clearly stated?	YES	NO
9. Are all OUTPUT documents (if not part of the calculation) clearly referenced in the results section?	YES
N/A	NO

IF NO TO ANY OF THE ABOVE, SHEET NUMBER(S) WITH JUSTIFICATION:

REVIEWER'S NOTES (use additional pages as necessary)

Review method used: Alternate calculation Attached? Y__ N____
Approximated Originator steps_____

1.0 INTRODUCTION

The purpose of this calc-note is to determine if dieldrin found in the soils at the Central Shops Burning/Rubble Pit Waste Unit (631-6G) could migrate to the groundwater and pose an unacceptable risk to a future hypothetical resident. The evaluation of dieldrin leachability to groundwater is performed with various screening process. The first screening process employed, was to the compare average soil contaminant concentration to the Environmental Protection Agency (EPA) published soil screening level (SSL). If the average soil contaminant concentration exceeded EPA's SSL, then a simplified site-specific screening calculation was performed to estimate the SSL based on Savannah River Site (SRS) data; however, the basic assumptions employed by EPA's SSL methodology were still employed. If the average soil concentration exceeded the site-specific calculated SSL, further evaluation of the migration to groundwater pathway was performed to estimate the pore water concentration of the contaminant, the time (years) for the contaminant to reach the groundwater, and the resulting groundwater concentration.

2.0 ASSUMPTIONS

An important assumption made in this calculation is that contamination which reaches the groundwater travels in the water table only. No consideration is made for downward migration of contaminants below the confining unit underlying the water table.

3.0 INPUTS

3.1 *Generic Screening Inputs*

The input used in the generic screening of the soil contaminants include the average concentration of the contaminants reported above the detection limit and the EPA published SSLs. EPA has published SSLs for various contaminants (EPA 1994) for dilution and attenuation factors (DAF) of 1 and 10. EPA guidance (EPA 1994) states that a DAF of 10 is appropriate in most cases except when the waste unit area is greater than 30 acres, the waste unit contaminated zone is within the aquifer, or if karst or fractured rock exists below the waste unit. For sites where conditions may result in little or no dilution or attenuation between the source and the receptor well, a DAF of 1 may be more appropriate. A DAF of 1 was used for initial comparison for this site because the DAF calculated during the simplified site specific screening step (Section 3.2) was less than 10. The soil concentration for dieldrin and the EPA published SSL (for a DAF of 1 and 10) are provided in Table 1.

Table 1. Comparison of Average Soil Concentration to EPA Published SSLs

CENTRAL SHOPS BURNING/RUBBLE PIT	Average Concentration n	Units	SSL (with 10 DAF)	SSL (with 1 DAF)	Pass/ Fail
DIELDRIN TOTAL	0.00219	mg/kg	0.001	0.0001	fail
pass - Concentrations < SSL					
fail - Concentrations > SSL					

3.2 Simplified Site Specific Screening Inputs

The inputs required to perform a simplified site-specific screening in accordance with EPA guidance (EPA 1994) include site specific parameters for the calculation of site specific screening levels to compare to the average concentration of the contaminants that failed the generic screening process or for which generic SSLs were not available. Dieldrin labeled in Table 1 as "Fail" in the last column was further evaluated in the simplified site specific screening.

Site data and chemical specific data were used in EPA standardized equations (EPA 1994) to derive the site specific SSL for dieldrin as represented on the attached EXCEL spreadsheets (Attachment A). Site specific parameters required to calculate the site specific screening levels include the fraction of organic carbon in soil, water-filled soil porosity, average soil moisture content, dry soil bulk density, soil porosity, soil particle density, air-filled soil porosity, soil organic carbon/water partition coefficient, soil-water partition coefficient, and the dilution attenuation factor. Additional inputs included Henry's Law Constant, maximum contaminant level goals (MCLG), and the maximum contaminant levels (MCL) (EPA 1995b).

Once derived, the site specific screening level was compared to the average concentration of dieldrin at the waste unit. If the average concentration had not exceeded the site specific SSL, the contaminant would have been excluded from further evaluation. However, the soil concentration of dieldrin exceeded the site-specific calculated SSL requiring further evaluation of the migration to groundwater pathway in order to estimate the pore water, the groundwater concentration, and the transport time (years) for the contaminant to reach the groundwater.

3.3 Site-Specific Method Considering Transport Time For Migration To Groundwater

The inputs required to estimate the porewater concentration of the contaminant and the transport time (years) for the contaminant to reach the groundwater include additional site specific parameters. The parameters are represented on the attached EXCEL spreadsheet (Attachment B).

3.4 Risk Characterization Inputs

Risk calculations and the non-carcinogenic hazard index (HI) was determined for the hypothetical future residential adult/child for ingestion, inhalation and dermal contact of dieldrin in groundwater to assess the potential for adverse health effects. Calculations are represented in Attachment C.

Inputs for the Calculation of Total Risk and HI for Ingestion of Groundwater

The concentration in groundwater (Cw), after degradation, was determined in Attachment B, Section II. The remaining input parameters were obtained from EPA guidance (EPA 1989) and are represented in Attachment C, Table C.1.

Inputs for the Calculation of Total Risk and HI for Dermal Contact with Groundwater

The concentration in groundwater (Cw) was determined in Attachment B, Section II. A dermal permeability constant of $1.6E-02$ cm/hr was used for dieldrin (EPA 1992). A dermal reference dose for dieldrin was not provided but was calculated by assuming 50% of the oral reference dose for dieldrin (EPA 1995c). The remaining input parameters were obtained from EPA guidance (EPA 1989) and are represented in Attachment C, Table C.2.

Inputs for the Calculation of Total Risk and HI for Inhalation of Groundwater

The concentration in groundwater (Cw), after degradation, was determined in Attachment B, Section II. The exposure concentration in air (CA) was determined by multiplying the exposure concentration in water (Cw) by 0.5 as recommended by Andelman (EPA 1989). An HI for dieldrin was not calculated for inhalation since no reference dose for inhalation exists. The remaining input parameters were obtained from EPA guidance (EPA 1989) and are represented in Attachment C, Table C.3.

4.0 ANALYTICAL METHODS AND CALCULATIONS

Some analytical methods and calculations were performed as part of each step of the soil screening process. The following sections describe these methods and calculations.

4.1 Simplified Site-Specific Analytical Methods and Calculations

Calculations necessary to compare the average soil concentrations to SSLs computed using site-specific parameters are provided in Attachment A. The analytical methods used are those recommended by EPA (EPA 1994).

4.2 Site-Specific Method Considering Transport Time For Migration To Groundwater and Calculations

The contaminant that failed the simplified site-specific screening was evaluated using standard groundwater modeling equations to determine the transport time for migration to groundwater and the pore water concentration. The input parameters are provided in Attachment B of this calc-note and the equations are described below.

Calculation of Transport Time For Migration to Groundwater

Determination of the transport time (T) for migration to groundwater is dependent on the distance (L) of the contaminant to the groundwater table, the contaminant migration velocity through the vadose zone (V), and retardation effects (R).

$$T \equiv \frac{L}{V/R}$$

Retardation is based on the assumption that adsorption of hydrophobic contaminants is due to sorption to organic carbon in the soil. Input parameters to determine the retardation factor for migration from soil to groundwater include the soil water partition coefficient (K_d), the dry soil bulk density (P_b), and the effective porosity (p_e).

$$R = 1 + \frac{P_b}{p_e} * K_d$$

The velocity of the contaminant migration through the vadose zone (V) is dependent on the infiltration rate (I), the effective porosity (p), and the average soil saturation (S_a).

$$V = \frac{I}{p_i * S_a}$$

Calculation of the Contaminant Concentration in Groundwater

The concentration of the contaminant in the groundwater (C_w) is determined based on the concentration of the contaminant in the soil (C_s), the soil water partition coefficient (K_d), and the dilution attenuation factor (DAF). For contaminants that have a biological or radiological decay constant, the maximum concentration in the soil (C_{s_d}) at the time that the contaminant enters the groundwater table is calculated using the contaminant half-life (t_{1/2}) and the transport time (t_{max}) for the contaminant to reach the groundwater table.

Maximum concentration in the soil with decay:

$$C_{s_d} = (C_s) e^{-(\ln 2 * t_{\max} / t_{1/2})}$$

Maximum concentration in the groundwater after decay:

$$C_w = \left(\frac{C_{s_d}}{K_d} \right) \div DAF$$

4.3 Risk Characterization Methods and Calculations

The total risk and HI for dieldrin was evaluated using standard EPA risk equations (EPA 1989). The input parameters are provided in Section 3.3 of this calc-note and calculations used to derive the inventory of the contaminants are provided in Attachment C.

REFERENCES:

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- WSRC (Westinghouse Savannah River Company) 1987, "Savannah River Plant Basin Hydrogeologic Investigation Phase II Report (U)", DPST-86-674, November 1987.
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Analyte Name	Pit		MCL (mg/L or $\mu\text{Ci}/\text{mL}$)	MCLG (mg/l)	RBC (mg/L or $\mu\text{Ci}/\text{mL}$)	Cw* (w/o DAF) (mg/l or $\mu\text{Ci}/\text{mL}$)	Koc (L/kg)	Kd (L/kg)	Henry's Law Constant ($\text{atm}\cdot\text{m}^3/\text{mol}$)	Pit	
	Soil Mean Detection (mg/kg or $\mu\text{Ci}/\text{kg}$)									SSL (mg/kg or $\mu\text{Ci}/\text{kg}$)	SSL TEST
dieldrin	0.00219		N/A	N/A	0.000004	0.000004	1700.00	1.7	1.100E-05	0.0000120	Fail

All metal Kds pH 6.8
All Koc and Henry Law Constants from Electronic Handbook of Risk Assessment Values, June 1995
• Order for choosing Cw: (1) MCLG, (2) MCL, and (3) RBCs
The Cw column does not include multiplication to the DAF. This step is completed in the SSL calculation.

Soil Screening Level (SSL) = $Cw[Kd+(Ow + OaH')/Pb]$
where:
Cw = MCLG, MCL, or RBC x DAF, mg/L
Kd = soil water partition (chemical specific), kg/L
Ow = 0.2 (unitless)
Oa = 0.2 (unitless)
H' = Henry's Law Constant x 41 (chemical specific)
Pb = 1.6 kg/L

SOIL SCREENING LEVEL PARTITIONING EQUATION FOR MIGRATION TO GROUNDWATER

$$\text{Screening Level in Soil} = \frac{C_w}{K_d + (O_w + O_a H') / P_b}$$

Variable	Value	Units	Parameter	Source
C _w =	Variable	mg/L	Chemical specific - MCL, MCLG, HBL x DAF	EPA 1995a, EPA 1995b
K _d =	Variable	L/kg	Soil-water partition coefficient, K _{oc} x F _{oc}	EPA 1994
K _{oc} =	Variable	L/kg	Soil organic carbon/water partition coefficient	EPA 1995b
F _{oc} =	0.001	g/g	Fraction organic carbon in soil	Dilek et al. 1993
O _w =	0.2	(Lwater/Lsoil)	Water-filled soil porosity	Looney et al. 1987
w =	0.2 (KGwater/KGsoil or Lwater/KGsoil)		Average soil moisture content	EPA 1994, default value
P _b =	1.6	kg/L	Dry soil bulk density P _s	Looney et al. 1987
n =	0.4	(Lpore/Lsoil)	Soil porosity (loam)	Looney et al. 1987
P _s =	2.65	kg/L	Soil particle density	EPA 1994, default value
O _a =	0.2	(Lair/Lsoil)	Air-filled soil porosity (n-Ow)	Calculated
H' =	Variable	Unitless	Henry's Law Constant (H x 41)	Calculated
H =	Variable	atm-m ³ /mol	Henry's Law Constant (Chemical specific)	EPA 1995b

DILUTION ATTENUATION FACTOR

$$DAF = 1 + K_d / L$$

Variable	Value	Units	Parameter	Source
K =	58.96	m/yr	Aquifer hydraulic conductivity	WSRC 1994
L =	0.007	m/m	hydraulic gradient	WSRC 1994
d =	8.02	m	mixing zone depth	Calculated
i =	0.38	m/yr	Infiltration rate	Hubbard et al. 1988
L =	15.24	m	Source length parallel to groundwater flow	WSRC 1994
DAF =	1.571559331			

ESTIMATION OF MIXING ZONE DEPTH

$$d = (.0112L^2)^{.5} + d_a(1 - \exp((-L)/i)/(Kda))$$

Variable	Value	Units	Parameter	Source
	0.0112			
L =	15.24	m	Source length parallel to groundwater flow	WSRC 1994
i =	0.38	m/yr	Infiltration rate	Hubbard et al. 1988
K =	58.96	m/yr	Aquifer hydraulic conductivity	WSRC 1994
d _a =	7.62	m	Aquifer thickness	WSRC 1994
i =	0.007	m/m	Hydraulic gradient	WSRC 1994
d =	8.024405216			

Attachment B: Site-Specific Method Considering Transport Time For Migration To Groundwater

Section I: Calculation of Transport Time

$$\text{Transport Time (T)} = L/(V/R)$$

Variable	Value	Units	Parameter	Source
L=	1.22E+01	m	Distance from contaminant to water table	WSRC 1990
V=	6.33E+00	m/yr	Velocity through vadose zone	calculated
R=	1.46E+01	unitless	Retardation factor	calculated
T=	2.81E+01	years	Transport Time	calculated

Calculation of Retardation Factor

$$\text{Retardation Factor (R)} = 1 + (Pb/Pe) \cdot Kd$$

Variable	Value	Units	Parameter	Source
Pb	1.60E+00	kg/L	Dry soil bulk density	Looney et al 1987
Pe	2.00E-01	unitless	Effective porosity	Looney et al 1987
Kd	1.70E+00	L/kg	Soil-water partition coefficient for chromium	Appendix A
R	1.46E+01	unitless	retardation factor	calculated

Calculation of Vadose Zone Velocity

$$\text{Velocity (V)} = I/(Pe \cdot Sa)$$

Variable	Value	Units	Parameter	Source
I	3.80E-01	m/yr	Infiltration rate	Hubbard et al. 1988
Pe	2.00E-01	unitless	Effective porosity	Looney et al 1987
Sa	3.00E-01	unitless	Average soil saturation	Looney et al 1987
V	6.33E+00	calculated	velocity	calculated

Section II: Calculation of Groundwater (Pore Water Concentration)

$$\text{Decayed Chemical Concentration (Cs}_d\text{)} = (Cs)_e^{-(\ln 2 \cdot t_{max})/t_{1/2}}$$

Variable	Value	Units	Parameter	Source
Cs	2.19E+03	mg/kg	Concentration in soil	WSRC 1994
t _{1/2}	5.90E+00	years	Chemical half life	WSRC 1994
t _{max}	2.81E+01	years	Transport Time	Calculated
Cs _d	8.05E-05	mg/kg	Degradation concentration in soil	Calculated

$$\text{Pore Water Concentration (Cw)} = (Cs_d/Kd)/DAF$$

Variable	Value	Units	Parameter	Source
Cs _d	8.05E-05	mg/kg	Concentration of dieldrin in soil	Calculated
Kd	1.70E+00	L/kg	Soil-water partition coefficient for chromium	Attachment A
DAF	1.57E+00	unitless	Dilution attenuation factor	Attachment A
Cw	3.02E-05	mg/L	Pore water concentration	calculated

Attachment C: Risk Characterization

TABLE C.1
INGESTION OF CHEMICALS IN GROUNDWATER
HYPOTHETICAL FUTURE RESIDENTIAL ADULT/CHILD

Chemicals of Potential Concern	RME CW (mg/L)	Carcinogenic Risk Calculation				Non-Carcinogenic Hazard Calculation			
		Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk (1)	% of Total Risk	Intake (mg/kg-day)	Reference Dose (mg/kg-day)	Hazard Quotient (2)	% of Total Hazard
Dieldrin	3.02E-05	4.49E-07	1.60E+01	7.19E-06	100	2.76E-06	5.00E-05	5.52E-02	100
		Total Risk = 7.19E-06				Hazard Index = 5.52E-02			

(1) Risk = Intake * Slope Factor

(2) Hazard Index = Intake/Reference Dose

RME = Reasonable Maximum Exposure; NA/ND - Not Available/Not Determined

METHODOLOGY

$$\text{Intake (mg/kg-day)} =$$

$$\frac{CW \cdot IRa \cdot EF \cdot EDa}{BWA \cdot AT \cdot AD}$$

+

$$\frac{CW \cdot IRC \cdot EF \cdot EDc}{BWC \cdot AT \cdot AD}$$

Where:

CW

= Chemical concentration in water (mg/L)

IRa and IRC

= Ingestion rate (L/day)

EF

= Exposure frequency (days/yr)

EDa and EDc

= Exposure duration (yr)

BWa and BWc

= Body weight (kg)

AT

= Averaging time (days/yr)

AD

= Averaging duration (yr):

for noncarcinogens
for carcinogens

Adult

See above

Child

See above

1.0

350

6

15

365

ED

70

2.0

350

24

70

365

ED

70

TABLE C.2
DERMAL CONTACT WITH CHEMICALS IN GROUNDWATER
HYPOTHETICAL FUTURE RESIDENTIAL ADULT/CHILD

Chemicals of Potential Concern	RME CW (mg/L)	PC (cm/hr)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation			
			Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk (1)	% of Total Risk	Intake (mg/kg-day)	Reference Dose (mg/kg-day)	% of Total Hazard
Dieldrin	3.02E-05	1.60E-02	5.18E-09	1.28E+01	6.63E-08	100	2.86E-08	2.50E-05	100
			Total Risk = 6.63E-08			Hazard Index = 1.15E-03			

(1) Risk = Intake * Slope Factor

(2) Hazard Index = Intake/Reference Dose

RME = Reasonable Maximum Exposure; NA/ND - Not Available/Not Determined

METHODOLOGY

$$\text{Intake (mg/kg-day)} =$$

$$\frac{\text{CW} \cdot \text{SAa} \cdot \text{PC} \cdot \text{ET} \cdot \text{EF} \cdot \text{EDa} \cdot \text{CF}}{\text{BWa} \cdot \text{AT} \cdot \text{AD}} + \frac{\text{CW} \cdot \text{SAC} \cdot \text{PC} \cdot \text{ET} \cdot \text{EF} \cdot \text{EDc} \cdot \text{CF}}{\text{BWc} \cdot \text{AT} \cdot \text{AD}}$$

Where:

CW	=	Chemical concentration in water (mg/L)	Adult	See above	Child	See above
SAa and SAC	=	Skin surface area available for contact (cm ²)	See above	20000	7300	7300
PC	=	Dermal permeability constant (cm/hr)	See above	See above	See above	See above
ET	=	Exposure time (hr/day)	0.08	0.08	0.08	0.08
EF	=	Exposure frequency (days/yr)	350	350	350	350
EDa and EDc	=	Exposure duration (yr)	24	24	6	6
CF	=	Conversion factor (1 Liter/1000cm ³)	1.00E-03	1.00E-03	1.00E-03	1.00E-03
BWa and BWc	=	Body weight (kg)	70	70	15	15
AT	=	Averaging time (days/yr)	365	365	365	365
AD	=	Averaging duration (yr): for noncarcinogens for carcinogens	ED	ED	ED	ED
			70	70	70	70

Reference dose (dermal) = 50% of oral reference dose

Dermal permeability constant from Dermal Exposure Assessment, Table 5-3, EPA 1992

TABLE C.3
INHALATION OF VAPORS WHILE SHOWERING - GROUNDWATER
HYPOTHETICAL FUTURE RESIDENTIAL ADULT/CHILD

Chemicals of Potential Concern	RME CA (mg/m ³)	Carcinogenic Risk Calculation			Non-Carcinogenic Hazard Calculation			
		Intake (mg/kg-day)	Slope Factor (kg-day/mg)	Risk (1)	% of Total Risk	Intake (mg/kg-day)	Reference Dose (mg/kg-day)	Hazard Quotient (2)
Dieldrin	1.51E-05	3.96E-08	1.60E+01	6.34E-07	100	3.18E-07	NA	ND
		Total Risk = 6.34E-07			Hazard Index = 0.00E+00			

(1) Risk = Intake * Slope Factor

(2) Hazard Index = Intake/Reference Dose

NA/ND - Not Available/Not Determined

RME - Reasonable Maximum Exposure = Exposure concentration in water (3.02E-5 mg/L * 0.5) (EPA 1989)

METHODOLOGY

Intake (mg/kg-day) =

$$\frac{Ca \cdot IRa \cdot ET \cdot EF \cdot EDa}{BWA \cdot AT \cdot AD} + \frac{Ca \cdot IRC \cdot ET \cdot EF \cdot EDc}{BWC \cdot AT \cdot AD}$$

Where:

CA	=	Exposure concentration in air (mg/m ³)	Adult	Child
IRa and IRC	=	Inhalation rate (m ³ /hr)	See above	See above
ET	=	Exposure time in shower/bath (hr/day)	0.83	1
EF	=	Exposure frequency (days/yr)	0.28	0.28
EDa and EDc	=	Exposure duration (yr)	350	350
BWa and BWc	=	Body weight (kg)	24	6
AT	=	Averaging time (days/yr)	70	15
AD	=	Averaging duration (yr): for noncarcinogens	365	365
		for carcinogens	ED	ED
			70	70

Appendix H

**Field Reports for Individual Boreholes
(11/14/94 - 12/6/94)**

Second Sampling Period

(Taken From WSRC-RP-95-81, February 1995)

***Includes:**

Daily Field Logs

Soil Boring Installation Reports

Field Geologic Logs

(Former Appendix B from WSRC-RP-95-81, February 1995)

Daily Field Logs

KH ~ 48°F CLEAR

11/2/94 - WED

NOTES BY: KELLY HUNTER - Kelly Hunter - KH

7:20 - @ WELL BUILDING - WAITING ON DRILL CREW

7:50 - SPOKE W/ Janelle Janson w/ WERC - Janelle
CALLED THE DRILL CREW - THEY (THE DRILL CREW)
DID NOT KNOW OF THE PROJECT - IT WILL
TAKE ~ 2 HOURS TO COLLECT THE TOOLS
AND SHOW UP ON SITE - TRIED TO CALL
DAVID CLARK TO LET HIM KNOW.

8:35 - DAVID CLARK AND RAY PLUNKETT @
WELL BUILDING - WE WENT OVER SCOPE
& PROJECT DETAILS

8:50 - DAVID CLARK & RAY PLUNKETT LEFT
SITE TO RETURN @ 10:00 ~~W/~~ ETA
OF DRILL CREW. ~ 10:00 DRILL CREW @ WELL B.

10:45 - ON SITE - DAVID CLARK & RAY PLUNKETT
ON SITE ALSO DOE REPRESENTATIVE

11:05 - WENT OVER HAS PLAN W/ ALL WHO
WERE IN ATTENDANCE - A

11:10 - CHECKED OSHA TRAINING CERTIFICATES
FOR ALL DRILLING SUB EMPLOYEES
CHECKED - OK.

- MOVED TO CBR-6 LOCATION -
PLACED PLASTIC IN PROPOSED
LOCATION

11:22 - CALIBRATED H.N.

11:22 - DRILLERS BEGIN SETUP FOR DRILLING

11:30 - DRILLERS LEFT SITE TO GET THE
WATER TRUCK FOR MUD ROTARY

11:30 - Janelle Janson ON SITE

12:00 - Janelle Janson LEFT SITE

12:05 - RAY PLUNKETT " "

12:15 - DAVE CLARK & I RECON ACCESS
TO CBR-6

12:38 - DRILLERS BACK ON SITE W/ WATER

13:15 TRUCK. DRILLERS DON'T HAVE
BARRIER ROPE - LEFT SITE TO RETRIEVE

13:

13:

13:

14:

14:

14:

14:

14:

15:

15:

15:

16:

16:

16:

16:

16:

KH 11/2/94 CLEAR ≈ 62°F

13:30 - DRILLER HELPERS SETTING UP RIG

- MEASUREMENTS

7 ⁷/₈" MUD ROTARY BIT

BIT & TWO SUBS - 3.0'

MEASURED THREE RODS @ 20.00

13:47 - BEGAN DRILLING - CBR-06

- CHECKED NOISE LEVEL AROUND THE RIG

THE HIGHEST LEVEL WAS 87.7 dB.

13:55 - CHECKED BREATHING ZONE WITH HNu ϕ .ppm

14:05 - MEASURED THREE RODS -

14:10 - DRILLER SHOWED BACK UP @ SITE

14:15 - HOOKED UP THE DESANDER & STARTED

UP - I CLASSIFIED SOIL TO BE A
COARSE-MED SILTY SAND

14:25 - ADDING A DRILL ROD - 20.0' BGS

14:37 - BEGAN DRILLING AGAIN

15:30 - PEA GRAVEL & CLAY CLOGGED UP DE-SANDER

PUMP - TRYING TO REMOVE OBSTRUCTION -

15:39 - REMOVED OBSTRUCTION -

15:42 - ADDING ON ANOTHER DRILL ROD

16:02 - BORING TERMINATED @ 61.0' BGS

3+20+20+18 ⇒ 61.0' BGS

16:05 - CIRCULATING MUD TO CLEAN OUT

BORING - IT APPEARS TO BE IN
CLAY

16:05 - DAVID CLARK LEFT SITE

16:20 - DRILLERS @ TRIP OUT RODS

16:30 - LEFT SITE FOR WELL BUILDING

KF

7:05 C

7:20 ON

7:50 D

8:00 -

8:40 -

9:00 -

-

-

9:00 T

-

S

9:25 -

9:30 -

-

-

10:00 -

-

-

-

-

10:30

10:38 -

-

11:14 -

-

11:35 -

-

12:19 -

12:32 -

-

-

1:50 -

2:00 -

-

-

2:25 -

-

2:54 -

-

-

3:20 -

Handwritten notes:
Keller
10:38
11:14
11:35
12:19
12:32

KH 11/3/94 CLEAR 49°F.

7:05 - @ WELL BUILDING TO PICK UP TWO WAY RADIO

7:20 - ON SITE - WAITING ON DRILLERS

7:50 - DRILLERS ON SITE

8:00 - DAVID CLARK ON SITE

8:40 - Began Clean Out of Boring w/ mud

9:00 - HP ON SITE TO TAKE RAD READINGS &

TOOK A SAMPLE FOR LAB WORK 0-20'

9:00 - DRILLERS SAFETY AUDIT PERSONELL ON SITE -

9:25 - AUDIT PERSONELL LEFT SITE

9:30 - INSTALLING WELL MATERIAL

CENTRALIZERS PLACED ABOVE WELL SCREEN 38-39
AND THE SECOND WAS @ 18-19'

10:00 - MEASURED TO BOTTOM OF BORING @ 62' BGS

Set BOTTOM OF SCREEN @ 60' BGS

- TOP OF SAND @ 35.9' BGS - (8) 100 lb

- TOP OF BENT @ 32.5' BGS - (1) 50 lb (3/8" PELLETS)

10:38 - FINISHED SETTING WELL CBR-6

10:38 - BEGAN SETUP FOR DECON-WELL MOBE TO

NEXT LOCATION TO DECON

11:14 - MOBED TO CBR-5 LOCATION BEGAN DECON
OF THE MUD TUB AND ALL DOWN HOLE FOMT

11:35 - FINISHED DECON - BEGAN SETUP OF EQUIPMENT
FOR NEXT WELL

12:19 - Began Drilling CBR-5

12:32 - CHECKED B2 - ϕ ppm - BREATHING ZONE
w/ OVA #5 @ 8' BGS

1:50 - CHECKED BREATHING ZONE - ϕ ppm @ $\approx$ 28' BGS

2:00 - CLAY MUD CLOGGED THE DRILLING FLUID
DE-SANDER -

2:25 - BORING TERMINATED @ 57' BGS - DRILLER'S
HELPER LEFT SITE TO GET MORE H₂O

2:54 - Water TRUCK BACK ON SITE - WILL CIRCULATE
WATER TO THEN THE MUD MIXTURE TO
ALLOW SAND TO FALL THROUGH

3:27 - SET WELL @ 55' BGS | 75 BAGS OF SAND

TOP OF SAND @ 32.95 BGS

TOP OF BENT @ 29.76 BGS

11
4:00 S

4:45 F

5:00 - /

Handwritten notes along a diagonal line, possibly including the word "Killed" and other illegible scribbles.

11/3/94 KH CLEAR 2 78°F

4:00 - SCREEN USED 0.016" SLOTTED
(2) 10' SECTIONS - SEE WELL CONSTRUCTION/MATERIAL
INFORMATION FORMS FOR MEASUREMENTS OF MATL. ETC.

4:45 - FINISHED SETTING WELL - PREPARE FOR
MOBE TO CBR-04 LOCATION IN THE
MORNING

5:00 - LEFT SITE FOR WELL BUILDING

[Handwritten signature]

K

- 7:15 - @
- 7:24 - ON
- 7:40 - CI
- 7:55 - DI
- 8:10 - M
- 8:30 - N
- 8:30 - T
- 9:30 -
- 10:00 -
- 10:40 - @
- 11:00 - MEI
- 11:15 - B0
- 11:18 - CI
- 11:45 - L
- 12:37 - S
- 1:55 - FE
- 2:05 - MC
- 2:15 - B
- 2:30 - C
- 2:45 - M

KH CLEAR $\approx 70^{\circ}\text{F}$ 11/4/94

7:15 - @ WELL BUILDING TO PICKUP TWO
WAY RADIO

7:24 - ON SITE WAITING ON DRILLERS

7:40 - CHECKED WATER LEVEL IN CBR-06 - 49.72 FROM
TOP OF CASING

7:55 - DRILLERS ON SITE - DEWONED ~~ERMT~~ - YESTERDAY EVENING

8:10 - MOBED TO CBR-04

8:30 - NEW DRILLER ON SITE - WENT OVER
HIS PLAN - WITH C. BAILEY - NOTE: CHECKED
HIS OSHA TRAINING CERTIFICATES - ALL IN ORDER

8:30 - RIG SET UP FOR WELL INSTALLATION @ CBR-04

9:30 - BEGAN DRILLING

10:00 - THE OVA WAS LEFT ON OVER NIGHT AND
THE BATTERY IS DEAD. I CHECKED WITH
THE DRILL CREW AND TOLD THEM IF THEY
WANTED WE COULD SHUT DOWN DRILLING OPERATIONS
UNTIL WE GET A NEW OVA - THEY SAID
IT WAS NOT NECESSARY TO SHUT DOWN BUT
IF THEY SMELLED ORGANIC VAPORS THEY WOULD.
IF

10:40 - @ $\approx 42'$ - CHANGING RODS (ADDING 20' SECTION)

11:00 - MEASURED ALL PVC WELL MATERIAL (SCREEN, PULG, CASING)

11:15 - BORING TERMINATED @ 62.0' BGS

11:18 - CIRCULATING WATER & MUD TO THEN THE
MUD SO SAND WILL FALL - ALSO WATER TRUCK
LEFT TO REFILL FOR TRIMMING OF SAND & BENT
FOR WELL CONSTRUCTION.

11:45 - WATER TRUCK BACK ON SITE.

12:37 - SET WELL @ 60.0 ft BGS WELL CONSTRUCTION
DETAILS - MEASUREMENTS - MATERIAL USED - (ETC.) ARE
ON THE WELL CONSTRUCTION DIAGRAMS & TALLY SHEET.

1:55 - FINISHED SETTING CBR-04

2:05 - MOVED TO CBR-06 TO GROUT TO GROUND
SURFACE

2:15 - BEGAN MIXING GROUT - TYPE 1 CEMENT PORTLAND

2:30 - GROUTED TO GROUND SURFACE - GROUT 13.2 (b/gd)

2:45 - MOVED TO CBR-05 WITH THE SAME GROUT/REMAINDER

11/1/94 KH $\approx 80^\circ E$ YKA

3:30

Roller

11/4/94 KH $\approx 80^{\circ}\text{F}$ CLEAR

3:00 - CONCRETE TRIMITE PIPE PUMPED REMAINDER OF 13.2 MIX

3:30 - MIXED ANOTHER GROUT MIX 13.4 lb/gal

GROUTED TO SURFACE

3:50 - LEFT SITE FOR WELL BUILDING

WELL

KI

11:00 - O

mi

TO

11:12 - D

11:40 - DR.

me

TO

12:23 - LE

KH 11/7/94 CLEAR $\approx 70^{\circ}\text{F}$

11:00 - ON SITE TO OVERSEE GROUTING OF CBR-4 -
MEASURED TOP OF BENTONITE @ 18.9' - TOLD DRILLERS
TO GET A SIDE DISCHARGE PIPE TO GROUT TO SURFACE -

11:12 - DRILLERS LEFT SITE TO GET SIDE DISCHARGE CONNECTION.

11:40 - DRILLERS BACK ON SITE W/ SIDE DISCHARGE PIPE - BEGAN
MIXING GROUT - MIXED 13.4 lb/sll MIX $\rightarrow$ GROUTED
TO GROUND SURFACE.

12:23 - LEFT SITE

10:25 - JR

11:30 - B1

11:50 - Cc

SS

12:15 - FI

B1

12:30 - H

N1

KEU

HRL

CHA

RAY

BRUCE

12:35 - C

12:40 - Cf

12:50 - D

13:00 - DA

13:25 - CO

13:45 - Co

14:15 - Co

14:50 - Co

15:25 -

15:30 CHECK

BREA

BORI

SOIL

15:45 -

SOIL

SOIL

16:00 - San

16:20 - Du

KH CLEAR ~ 70°F 11/14/94
(KELLY HUNTER RECORDING)

- 10:25 - BRUCE KRISTENSON, RAY PLUNKETT ON SITE
11:30 - BEGAN SET UP & DECON SAMPLING EQUIPMENT
11:50 - COLLECTED RINSEATE SAMPLE W/ DRONET SS- SPOON
SS- HAND AUGER & SS BOWL
12:15 - FILLED OUT CHAIN OF CUSTODY FOR TRIP
BLANK - DRILLERS ON SITE
12:30 - HEALTH & SAFETY PLAN MEETING

NAME	REPRESENTING	SIGNATURE
KELLY HUNTER	RUST E&T	Kelly Hunter
Harold Reed	Harold E. Reed	Harold E. Reed
CHARLES CRENSHAW	E.E.T.	Charles Crenshaw
RAY PLUNKETT	WSPC	Ray Plunkett
BRUCE S. KRISTENSON	RUST E&T	B. Kristenson

- 12:35 - CHECKED OSHA TRAINING RECORDS FOR DRIVER
& DRILLER'S HELPER - PAPER IN ORDER & UP
TO DATE
12:40 - CALIBRATED OVA
12:50 - DRILLERS BEGAN DECON EQMT
13:00 - DAVED CLARK ON SITE - BEGAN DRILLING CS6G-11
13:25 - COLLECTED SOIL SAMPLE FROM 0-1 FT BGS
13:45 - COLLECTED SOIL SAMPLE FROM 1-2' FT BGS
14:15 - COLLECTED SOIL SAMPLE FROM 2-4 FT BGS
14:50 - COLLECTED SOIL SAMPLE FROM 4-6 FT BGS
15:25 - " " " " 6-8 FT BGS
15:30 CHECKED SOIL SAMPLES W/ OVA & BREATHING ZONE
BREATHING ZONE @ ppm
BORHOLE @ ppm
SOIL SAMPLE FROM 4-6' BGS @ ppm
15:45 SOIL SAMPLE FROM 6-8 BGS @ ppm
SOIL sample FROM THE BOTTOM OF 8' BGS @ ppm
SOIL sample FROM SAMPLE FROM 8'-10' BGS @ ppm
16:00 - Sample FROM 8'-10'

2.

16:25 - 7.

7

7

7

17:10 - 7.

7

Handwritten signature/initials

KH CLEAR COOL $\approx 70^{\circ}\text{F}$ 11/14/94

16:25 - BORING TERMINATED @ 12' BGS

DID NOT DETECT THE BOTTOM OF THE
~~BBP~~
~~TRB~~ - RESIDUUM DETECTED @ 2' BGS

CONTINUED DRILLING PER THE WORK PLAN

17:10 - LEFT SITE - BK - TAKING SOIL SAMPLES TO
THE WELL BUILDING

[Handwritten signature]

7:05 ON

ON

7:10 - B

E

7:40 - C

8:00 - I

C

8:30 - T

8:50 -

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9:15 - 7

9:30 -

9:45 - C

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10:00 - Col

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6 - 8

10:30 - SI

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10:30

11:00 - C

11:25 - C

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11:50 - RI

11/15/94 KH CLEAR $\approx 60^{\circ}\text{F}$

7:05 - ON SITE - BC & DRILLERS ALREADY
ON SITE

7:10 - BEGAN MOVE OF DECON EQMT - DRILL RIG
ETC TO BORING CS6G-12

7:40 - CALIBRATED OVA -

8:00 - FILLED OUT TRIP BLANK COC & RED BOOK
(SAMPLE BOOK)

8:30 - TOOK 1ST HAND AUGER 0-1

8:50 - TOOK 2ND HAND AUGER 1.0-1.5 - DARK ORGANIC
MATERIAL DET & POSSIBLE BURN MATERIAL
@ 1.5' BGS A SAND PALE IN COLOR BEGINS
STILL BELIEVED TO BE FILL HOWEVER NO SUSPECT
BURN MATERIAL

9:15 - TOOK SAMPLE FROM 2-4 FT BGS

9:30 - " " " 4-6 FT BGS

9:45 - WSPC PERSONNEL ON SITE

- RESIDUUM OBSERVED @ 4' BGS - THEREFORE
THE BOTTOM OF THE PIT OBSERVED

10:00 - COLLECTED SOIL SAMPLE FROM 6-8' BGS

10:15 - TAKING OVA READINGS ON SAMPLES

DEPTH	OVA READING (ppm)
0-2	0
2-4	0
4-6	0
6-8	0

10:30 - SINCE THE BOTTOM OF THE PIT WAS
OBSERVED @ 3.5' BGS - TWO SAMPLES WERE
COLLECTED BELOW THE BOTTOM OF THE PIT
WITH NON DETECT ON THE OVA. THEREFOR
BORING WAS TERMINATED @ 6' BGS AND
THE LAST SPLIT SPOON WAS FROM 6-8'
BGS

10:35 - BEGAN MOVE TO CS6G-13

11:00 - COLLECTED 2 RINSE BLANK

11:25 - COLLECTED 2 SAMPLE FROM 0-1.0' BGS
WITH HAND AUGER

12:21 Co.
 12:50 -
 13:10 -
 13:10 -
 13:45 -
 14:00 - CH.
 DE
 O.
 2-
 4-
 6-8
 14:00 - B/
 S.
 E
 14:20 - B.
 15:00 - L
 T
 15:30 - F
 - I
 - L
 16:00 - L

11/15/94 KH CLEAR $\approx 75^{\circ}\text{F}$

- 12:28 - Collected sample from 1 to 2 ft BGS w/ HAND AUGER
12:50 - " " " 2 to 4 ft BGS w/ SPLIT SPOON
13:10 - " " " 4 to 6 ft BGS w/ SPLIT SPOON
13:10 - " " " 4 to 6 ft Duplicate
13:45 - " " " 6 to 8 ft BGS w/ SPLIT SPOON
14:00 - CHECKING SOIL SAMPLES w/ OVA

DEPTH	READINGS
0-2	0 ppm
2-4	0 ppm
4-6	0 ppm
6-8	0 ppm

- 14:00 - BASED ON THE OVA READINGS NO FURTHER SAMPLING REQUIRED - BORING TERMINATED @ 6' w/ LAST SAMPLE COLLECTED FROM 6'-8' BGS.

- 14:20 - BEGAN DECON OF DRILLING EQUIPMENT

- 15:00 - CALLED IT A DAY - DID NOT WANT TO START DRILLING AND NOT BE ABLE TO FINISH THE BORING TODAY - DRILLERS LEFT SITE

- 15:30 - BK LEFT SITE

- I STAYED AND WORKING ON PAPER WORK
- LABELED BOTTLES FOR THE MORNING

- 16:00 - LEFT SITE

6:58 on

7:10 - B

7:10 - SE

7:45 - TO

7:55 -

8:00 -

8:25 -

8:55 -

9:30 -

10:05 -

10:30 Took

SAM

10:40 - B

10:45 - u

10:55 - A

10:55 - I

6/

12:00 -

Blow

14:00 - A

14:00 - I

KH CLOUDY $\approx 68^{\circ}\text{F}$ 11/16/94

6:58 - ON SITE - DRILLERS ON SITE
7:10 - BK ON SITE - MOBE TO CS66-014
7:10 - SET UP FOR DAYS SAMPLING - CALIBRATED OVA
7:45 - TOOK SOIL SAMPLE FROM 0-1' BGS - HAND AUGER
7:55 - " " " " 1-2' BGS - HAND AUGER
8:00 - " " " " 2-4' BGS - SPLIT SPOON
8:25 - " " " " 4-6' BGS - SPLIT SPOON
8:55 - " " " " 6-8' BGS - SPLIT SPOON
9:30 - " " " " 8-10' BGS - " "
10:05 - " " " " 13-15' BGS - " "

10:30 TOOK OVA READINGS

SAMPLE INTERVAL	OVA READING (ppm)
0-1	15
1-2	20
2-4	3
4-6	10
6-8	12
8-10	0
13-15	0

10:40 - BORING TERMINATED @ 15' BGS
10:45 - WERC PERSONNEL ON SITE
10:55 - MOBE TO DEON DRILLING EQUIPMENT
10:55 - MOBE TO CS66-15 & BEGAN GENERAL
SETUP

12:00 - LIGHT RAIN WELL WAIT UNTIL IT
BLOWS OVER

14:00 - NO RAIN HEAVY WELL SHUT DOWN FOR DAY

16:00 - LEFT SITE

Kelly

K

7:20 - ON

VAD

7:20 - GE

7:30 - CA

8:25 - Co

7:55 - Co

8:40 -

8:55 -

T.H.I

BGS

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TO

COLL

4

9:25 - Co

10:05 - COLL

10:25 -

10:25 BO

SAMP

0-1

1-2

2-4

4-6

10-12

10:35 BEGA

SAMPLE

11:15 - COLLEC

11:25 - COLLEC

11:40 - Collecto

11:55 - Collecto

12:30 - LI

12:45 - CHECK

0-1

1

2-4

4-6

10-12

KH 11/17/94 55°F CLOUDY

7:20 - ON SITE - DRILLERS & BK ON SITE
VAN ARRIVAL

7:20 - GENERAL SETUP CSGG-15

7:30 - CALIBRATED OVA

8:25 - COLLECTED SOIL SAMPLE FROM 1.0 to 2.0 HAND AUGER

7:55 - COLLECTED " " " 0.0 to 1.0 " "

8:40 - " SOIL SAMPLE FROM 2.0 to 4.0 SPLIT SPOON

8:55 - " " " 4.0 to 6.0 " "

THIS sample 4 to 6 was proposed @ 5' to 7' BGS However since fill ^{was} observed @ 2.5' BGS & RESIDUUM WAS OBSERVED @ 2.5' IT WAS DECIDED TO CHANGE THE SAMPLE DEPTH TO HAVE ON SAMPLE COLLECTED BENEATH THE FILL/RESIDUUM INTERFACE 4 to 6

9:25 - COLLECTED RINSE SAMPLE

10:05 - COLLECTED SOIL SAMPLE FROM 10' - 12' BGS

10:25 - CHECKED SOIL SAMPLES WITH OVA

10:25 BORING TERMINATED @ 12' BGS

SAMPLE DEPTH	OVA READINGS (ppm)
--------------	--------------------

0-1	0
-----	---

1-2	0
-----	---

2-4	0
-----	---

4-6	0
-----	---

10-12	0
-------	---

10:35 - BEGAN DECON OF DRILLING EQMT & SOIL

SAMPLE EQUIPMENT - MOVED TO CSGG-16

11:15 - COLLECTED 1st SAMPLE 0-1 ft BGS w/ HAND AUGER

11:25 - Collected Sample 1-2 ft BGS " " "

11:40 - Collected Sample 2-4 ft " " SPLIT SPOON

11:55 - Collected Sample 4-6 ft " " " "

12:30 - " " 10-12 ft " " " "

12:45 - CHECKED SOIL SAMPLES w/ OVA

0-1	0 ppm
-----	-------

1-2	6 ppm
-----	-------

2-4	15 ppm
-----	--------

4-6	0 ppm
-----	-------

10-12	0 ppm
-------	-------

11

130

130

1330

1350

1400

142

1420

1440

150

15:2

15:2

10.00

11/17/94 KH $\approx 50^{\circ}\text{F}$ CLOUDY

1300 - BOREING TERMINATED @ 12' BGS

1305 - BEGAN DECON OF DRILLING EQMT

1330 - MOVED TO CS66-17 LOCATION

1350 - TOOK 1st SOIL SAMPLE FROM 0-1' BGS

1405 - " 2nd " " " 1-2' BGS

1420 - " 3rd " " " 2-4' BGS

1420 - " DUPLICATE OF 3rd SAMPLE

1445 - " 4th " " " 5-7' BGS

1505 - " 5th " " " 10'-12'

1530 - BEGAN GENERAL SITE CLEANUP - DECON

1520 - TOOK OVA READINGS

DEPTH	OVA READING (PPM)
-------	-------------------

0-1	0
-----	---

1-2	3
-----	---

2-4	6
-----	---

5-7	0
-----	---

10-12	0
-------	---

16:00 - LEFT SITE

7:00 - Y
7:20 - Mot.
7:45 - Bru
8:00 - Dec
8:20 - Coll
8:30 -
8:45 -
9:15 -
9:15 -
10:15 -
10:30 -
11:00 -
11:00 -
11:30 -
11:50 -
12:15 -
12:30 -
12:45 -
12:45 -
13:00 - B.
14:00 - C.H.
DEPTH
ALL
14:00 DRIL
15:00 - B.K.

11/18/90 KH ~ 55°F CLOUDY

7:00 - ON SITE - DRILLERS ON SITE UPON ARRIVAL

7:20 - MOBE TO CS66-18 LOCATION

7:45 - Bruce Kristenson on SITE - DAVE CLARK - RAY PLUNKETT

8:00 - DECONED SAMPLING EQMT

8:20 - COLLECTED 1st Sample From 0-1 ft BGS - HAND AUGER

8:30 - " 2nd Sample From 1-2 " " " "

8:45 - " 3rd Sample From 2-4 " " SPLIT SPOON

9:15 - " 4th Sample " 5-7 " " " "

9:15 - " RINSATE w/ 4th Sample SPLIT SPOON

10:15 - " 5th Sample From 10-12 ft BGS SPLIT SPOON

1:30 - " 6th Sample From 15-17 " " "

1:00 - " 7th Sample " 20-22 " " "

1:00 - " 8th " " 20-22 - DUPLICATE

1:30 - " 9th " " 25-27-

1:50 - " 10th " " 30-32

2:15 - " 11th " " 35-37

2:30 - " 12th " " 40-42

2:45 - " 13th " " 45-47

1:45 - " 14th " " 45-47 DUPLICATE

3:00 - BORING TERMINATED @ 45' BGS

4:00 - CHECKING SOIL SAMPLES w/ OVA

DEPTH OVA READING (ppm)

ALL 0

4:00 DRILLERS LEFT SITE

5:00 BK & I LEFT SITE

RA3

9:10 - AT

10:00 - DI

MO

UP

BELO

11:30 - COU

LOC

THI

12:35 - DR3

PROF

1:35 - BRUCI

EQUIF

2:15 - PRT

EQM

3:30 - LEF

RAIN KH $\approx 65^{\circ}\text{F}$ 11/21/94

K. HUNTER RECORDING -

- AT WELL BUILDING WAITING ON DRILLERS
- DRILLERS ARRIVE @ WELL BUILDING - WE
MOVE TO CENTRAL SHOPS - PREPARE TO GROUT
UP BORING CS66-18 - BECAUSE WE DRILLED
BELOW THE WATER TABLE -

- COULD NOT GET THE DRILL RIG TO CS66-18
LOCATION DUE TO RAIN/MUD - WILL GROUT LATER
THIS WEEK (WED).

- DRILLERS SERVICING THE STEAM CLEANER - NOT WORKING
PROPERLY

- BRUCE KRISTIANSEN ON SITE - LOADED ALL DECON
EQUIPMENT - TABLES ETC TO CS66-19 LOCATION.

- DRILLERS STILL PERFORMING MAINTNANCE ON
EQMT - WE ARE CALLING IT A DAY.

LEFT SITE

11/
7:15
ON
7:20 - SET
7:30 - TO
HAN
7:50 took
8:05 "
8:30 "
8:55 "
9:40 "
10:10 "
10:40 "
11:10 "
11:40 "
12:10 "
12:40
12:50
1:30 DRI
1:30 - MOV
LOC
2:45 - DR:
5:00 - ABAI
£ 12
5:45 LEFT

11/22/94 KH CLEAR $\approx 55^{\circ}\text{F}$

1:15 ON SITE - BRUCE KRISTENSEN & DRILLERS
ON SITE UPON ARRIVAL

1:20 SET UP FOR SOIL SAMPLING CS66-19

1:30 TOOK 1st SAMPLE FROM 0-1' BGS WITH
HAND AUGER -

1:50 TOOK 2nd Sample 1-2' BGS w/ HAND AUGER

2:05 " 3rd " 2-4' BGS " SPLIT SPOON

2:30 " 4th " 5-7' BGS " " "

2:45 " DUPLICATE @ 5-7' BGS " "

3:55 " 5th Sample 10-12' BGS @ 8' "

4:40 " 6th " 15-17 BGS " "

5:10 " 7th " 20-22 BGS " "

6:40 " 8th " 25-27 BGS " "

7:10 " 9th " 30-32 BGS " "

7:40 " 10th " 35-37 BGS " "

8:10 " 11th " 40-42 BGS " "

8:40 " 12th " 45-47 BGS " & DUPLICATE

12:50 BORING TERMINATED @ 45' BGS

1:30 DRILLERS LEFT SITE TO GET SUPPLES FOR GROUT

1:30 MOVED SAMPLE/DECON STATION TO CS66-20
LOCATION

2:45 DRILLERS BACK ON SITE

3:00 ABANDONED CS66-19 USED 6 BAGS PC
& 13.5 lb/gal BENT CEMENT GROUT.

3:45 LEFT SITE

11/

7:00

7:10

MO

AB

8:30

CO

GO

8:45

LE

11/23/94 KH CLEAR $\approx 45^{\circ}\text{F}$

1:00 - ON SITE DRILLERS

1:10 - MOVED TO CS66-18 LOCATION TO
ABANDON

3:30 - COMPLETED BORING ABANDONMENT

6 BAGS PC, 13.5 lb/gal grout.

3:45 - LEFT SITE

~~See 7/1/95~~

9:20
DRELL
& RIC
THEY
AND P
CLEANE
CALLED
10:00 - BEGAN
10:30 - TOOK
11:00 - "
11:50 - TOO
12:15 - COLL
11:20 - BEG
12:00 - LEA

Full Mark

11/28/94 KIT CLOUDY $\approx 70^{\circ}\text{F}$

(KELLY HUNTER RECORDING)

- 120 ON SITE - DRILLERS ON SITE UPON ARRIVAL
130 DRILLERS PUT ANTI-FREEZE IN THE STEAM CLEANER
140 & RIG PUMP/BROUT PUMP - DUE TO EXPECTED FREEZE
150 THEY DRAINED ALL ANTI-FREEZE FROM THE STEAM CLEANER
160 AND BLEW OUT RESIDUE WITH STEAM - RAN STEAM
170 CLEANER ≈ 5 MIN BEFORE STEAM CLEANING AUGERS. I
180 ^{WSRC} CALLED JANELLE JANSON & LET HER KNOW.
190
200 BEGAN SET UP OF SAMPLING STATION
210
220 TOOK 1st sample w/ HAND AUGER
230
240 " 2nd " " " "
250
260 TOOK RINSATE BLANK HAND AUGER
270
280 COLLECTED SOIL SAMPLE FROM 2-4' BGS & SPLIT
290
300 BEGAN RAINING - STOPPED DRILLING
310
320 LEFT SITE CONTINUED TO RAIN

11/29/

7:15 - c

7:45 - 12K

8:20 - Let

2000

11/29/94 KH CLOUDY LIGHT RAIN $\approx 60^{\circ}\text{F}$
KELLY HUNTER RECORDING
ON SITE - WAITING ON DRILLERS
BK & Drillers ON SITE - HEAVY RAIN
LEFT SITE DUE TO RAIN

[Handwritten signature: Kelly Hunter]

7:10	C.	S
-	UPON	
7:45	-	COLL
8:10	-	
8:40	-	C.
8:45	-	C
9:00	-	(
9:35	-	
10:15	-	
10:45		
11:00		
11:00		
12:15		
12:15		
12:30	BORI.	
12:45	CHECKED	
1:15	43.20	F
12:45	- B	
1:40	- CHECKED	
	CASING.	
1:40	BAILED	
1:30	ABANDONED	
	13.5 lb/c	
1:40	CHECKED	
	CASING	
15:30	- BAILED	
16:00	- LEFT	

11/30/94 KIT CLOUDY $\approx 45^{\circ}\text{F}$

7:10 ON SITE - DRILLERS & BK ON SITE
UPON ARRIVAL

7:45 COLLECTED SAMPLE FROM 5'-7' BHS

8:10 " " " " 10'-12' BGS

8:40 Collected Field Blank w/ DI H₂O

8:45 - Collected sample from 15'-17' BGS

9:00 - Collected sample " 20-22' BGS

9:30 - Collected SOIL SAMPLE FROM 25-27' BGS

9:45 " " " " 30-32' "

9:45 " " " " 35-37' "

1:00 " " " " 40-42' BHS

1:20 " 4th ~~split~~ DUPLICATE 40'-42' BGS

2:15 " SPLIT FROM 45'-47' BHS

2:15 COLLECTED SOIL SAMPLE FROM 45'-47' BGS

2:30 BORING TERMINATED

2:45 CHECKED FLUID LEVEL IN WELL CBR-05

43.24 FEET BELOW TOP OF CASING

2:55 BRUCE KRISTENSEN STARTED BAILING CBR-05 & BAILED DRY

3:10 CHECKED FLUID LEVEL IN CBR-06 - 50.78' FROM TOP OF

CASING. & BEGAN BAILING

4:40 BAILED DRY

4:30 ABANDONED BORING w/ BENTONITE CEMENT GROUT

13.5 lb/gal. 5 BAGS PC

4:40 CHECKED H₂O LEVEL IN CBR-04 41.20' BELOW TOP OF

CASING

5:20 BAILED 3 WELL VOLUMES ≈ 10 gal H₂O

6:00 LEFT SITE

~~Handwritten signature/initials~~

12/1

7:50 - ON
8:00 - DRI
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24:00 -

WILLIAMSON

12/1/94 KH CLEAR $\approx$ 48°F

1:50 ON SITE BK & DRILLERS ON SITE UPON ARRIVAL

2:00 DRILLERS SETTING UP ON CS66-21 BORING

2:20 TOOK 1ST SOIL SAMPLE WITH HAND AUGER 0-1'

2:30 " 2ND " " " " " 1-2'

2:45 " 3RD " " " " " " SPLIT SPOON & RINSATE 2-4'

2:55 " 4TH " " " " " " 5-7' BGS

3:05 " 5TH " " " " " " 10-12' BGS

3:20 " 6TH " " " " " " 15-17 BGS & DUPLICATE

3:35 " 7TH " " " " " " 20-22 BGS & SPLIT

3:50 " 8TH " " " " " " 25-27 BGS

4:00 " 9TH " " " " " " 30-32 BGS

4:15 " 10TH " " " " " " 35-37 BGS

4:30 " 11TH " " " " " " 40-42 BGS

4:45 " 12TH " " " " " " 45-47 BGS

5:00 GROUTED CS66-21 BORING TO SURFACE 5.5 BAGS OF PC
BENTONITE CEMENT GROUT / WITH 13.5 lb/gal MIX

5:30 TOOK RINSATE SAMPLE FOR WELL CBR-TZ

AFTER WE TOOK THE SAMPLE WE NOTICED THE
PROTECTIVE COVER WAS FRESHLY PAINTED $\approx$ 1 HOUR.
WE DECIDED NOT TO SAMPLE THE WELL DUE TO
POTENTIALLY CONTAMINATING THE SAMPLE & THE
INTEGRITY OF THE WELL - WILL TRY TO SAMPLE
IN THE MORNING OF 12/2/94. CALLED DAVID
CLARK AND NOTIFIED HIM OF THE SITUATION.
I SPOKE W/ DAVE CLARK (WSRC) AND TOLD HIM
BK & I WOULD BAIL THE WELLS ON SUNDAY
AND SAMPLE THEM MONDAY MORNING

12/4,

10:00

ON

10:00 - BEGA

10:20 - BEG

10:00 - FIN.

11:15 - BA

11:15 - BEG

11:00 - FIN

12:15 - LE.

Handwritten signature

12/4/94 KH CLOUDY ~65°F

100 - ON SITE TO PURGE WELLS FOR SAMPLING

ON 12/5/94.

100 - BEGAN BAILING CBR-05 - BRUCE KRISTIANSON

100 - BEGAN BAILING CBR-04 - KELLY HUNTER

100 - FINISHED BAILING CBR-05 - DRY

15 - BAILED 10 gal OF H₂O FROM CBR-04 - 3 WELL VOLUMES

15 - BEGAN BAILING CBR-06 -

100 - FINISHED BAILING CBR-06 - 7.5 gal H₂O - 3 WELL VOLUMES

15 - LEFT SITE

12/5

6:50 -

7:25 - BRU

7:40 - DECO

8:00 - COLL

8:50 - COLLE

9:15 - CBR

8:30 - COLLE

8:40 - COLLE

9:00 - DU

9:45 - COLLE

10:00 - LEF

10:25 - AT

11:00 - SOIL

12:15 - BACK

12:30 - SAMP

12:50 - DECO

1:15 - DPT

1:35 - S

1:50 - AND

1:30 - COLLECT

1:45 - DECON

1:45 - COLLEC

1:55 - "

1:30 - LEFT

WELL

12/5/94 KH PC $\approx 65^{\circ}\text{F}$

KELLY HUNTER RECORDING

- 00 - ON SITE TO SAMPLE WELLS
- 05 - BRUCE KRISTIANSON ON SITE
- 10 - DECONED SAMPLING EQUIPMENT
- 20 - COLLECTED FIELD BLANK
- 30 - COLLECTED A GROUNDWATER SAMPLE FROM WELL CBR-05 (CBR-T2)
- 40 - COLLECTED GROUNDWATER SAMPLE FROM CBR-06 (CBR-T3)
- 45 - COLLECTED GROUNDWATER SAMPLE FROM CBR-06 (CBR-T3) DUPLICATE & SPLIT
- 45 - COLLECTED GROUNDWATER SAMPLE FROM CBR-04 (CBR-T1)
- 50 - LEFT SITE FOR SHIPPING
- 55 - AT RUST LAB/TRAILER TO PREPARE FOR HAND AUGER SOIL SAMPLES
- 1:00 - BACK ON SITE TO COLLECT HAND AUGER SOIL SAMPLES
- 1:30 - DECONED SAMPLING EQUIPMENT - WAITING ON DRYING
- 1:55 - COLLECTED SOIL SAMPLE CS66-28-01 FROM 0-1' BGS AND ASSOCIATED DUPLICATE
- 2:20 - COLLECTED SOIL SAMPLE CS66-27-01 FROM 0-1' BGS
- 2:35 - DECONED SAMPLING EQUIPMENT
- 2:55 - COLLECTED SOIL SAMPLE CS66-26-01 FROM 0-1' BGS
- 3:15 - " " " CS66-24-01 FROM 0-1' BGS
- 3:20 - LEFT SITE FOR TRAILER & DELIVERY SAMPLES TO WELL BUILDING

Handwritten signature

	12,
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9:00	-- Co.
9:40	- COLLE
9:55	- Co L
10:00	- DE
10:15	- F
10:30	- D.
11:05	--
11:45	- Co
/	C
11:50	- Co
12:20	- Co
/	AL
/	AL
12:30	- BR
/	DEC
/	STRE.
13:00	"
13:30	- L
/	

12/16/94 KH CLOUDY $\approx$ 65°F
KELLY HUNTER RECORDING
8:55 ON SITE
9:00 DECONED SAMPLING EQUIPMENT
9:10 COLLECTED SOIL SAMPLE CS66-25-01 0-1' BGS
9:55 COLLECTED " " CS66-23-01 0-1' BGS
10:00 DECONED SAMPLE EQUIPMENT
10:15 FILLING OUT SAMPLE FORMS
10:30 DEAN THOMAS ON SITE FOR INSPECTION
11:00 " " LEFT SITE
11:15 COLLECTED HAND AUGER SOIL SAMPLE FROM
CS66-22-01 FROM 0 to 1 ft BGS
11:50 COLLECTED SAMPLE CS66-22-02 1 to 2 ft BGS
12:00 COLLECTED SOIL SAMPLE 2 to 3.5 FT BGS
AUGER REFUSAL @ 3.5' BGS - DID NOT
AUGER THROUGH THE BURN MATERIAL
12:30 BRUCE KRISTIANSON ON SITE - HE HELPED
DECON / GENERAL SITE CLEANUP - IDENTIFIED
STREAM SAMPLE LOCATIONS
3:00 COLLECTED FIELD BLANK SAMPLE
3:30 LEFT SITE

12/7/

9:00

SAM.

10:00

COLL

TEMP

DO

pH

10:15

- CO

11:00

- CO

LOC

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- CO

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- CO

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- CO

TE

pt

DS

15:00

- CO

15:15

- GE

15:20

- LCF

25
10/15/71
10:15
11:00
12:00
13:30
14:00
14:30
15:00
15:15
15:20

12/7/94 KH CLEAR $\approx 55^{\circ}\text{F}$

KELLY HUNTER RECORDING

1000 - ON SITE SETUP FOR SURFACE WATER & SEDIMENT SAMPLING

1100 - COLLECTED 1st SW SAMPLE @ CS66-29 LOCATION

TEMP 13.4°C ^{12/1/94}

DO ~~0.77~~ ^{7.85} ~~mg/L~~ ^{7.85 mg/L}

pH 10.51

1115 - COLLECTED SEDIMENT SAMPLE

1200 - COLLECTED SURFACE WATER SAMPLE @ CS66-30 LOCATION

TEMP 66°F ^{12/1/94}

DO ~~10.6~~ ^{9.4} ~~mg/L~~ ^{9.4 mg/L}

pH ~~9.4~~ ^{10.5}

1300 - COLLECTED SURFACE WATER SAMPLE & DUPLICATE @ CS66-31

TEMP 73°

pH 9.68

DO 8.00 mg/L

1400 - COLLECTED SURFACE WATER SAMPLE @ CS66-32 location

TEMP 15.8°C

pH 9.22

DO 6.63

1415 - COLLECTED SEDIMENT SAMPLE @ CS66-32

1500 - COLLECTED SURFACE WATER SAMPLE @ CS66-33 & DUPLICATE

TEMP 16.0°C

pH 6.61

DO 5.38 mg/L

1515 - COLLECTED SEDIMENT SAMPLE @ CS66-33

1530 - GENERAL SITE CLEANUP

1545 - LEFT SITE

1155 - ON S
TEST
1155 - BEGA
1155 - CBR
1155 - FIN
SETUP
1155 - FIN
C
R
1155 - COR

12/20/94 KH CLEAR 30°F

TRANSCRIBED ON 12/27/94 FROM NOTES
TAKEN 12/20/94 - KELLY HUNTER RECORDING

ON SITE W/ RAY PLUNKETT TO PERFORM SLUG
TEST ON CBR-4, CBR-5 & CBR-6

BEGAN PREPARATION OF SLUG TEST

CBR-~~5~~⁶ - CBR-T1

STATIC WATER LEVEL @ 50.85' ^{12/27/94} BTTS BELOW TOC

USED A HERMET AND DATA LOGGER

FALLING HEAD TEST RECORDED ON CHANEL 0

RISING HEAD TEST RECORDED ON CHANEL 1

FINISHED SLUG TEST FOR CBR-6 - MOBE AND

SETUP FOR SLUG TEST @ CBR-4 - CBR-T3

STATIC H₂O LEVEL @ 41.37 BELOW TOC

FALLING HEAD TEST RECORDED ON CHANEL 2

RISING " " " " " 3

FINISHED SLUG TEST @ CBR-4 MOBE & SETUP

CBR-T2 5
@ CBR-5 - STATIC WATER LEVEL @ 43.13

FALLING HEAD TEST RECORDED ON CHANEL 4

RISING " " " " " 5

COMPLETED SLUG TEST - LEFT SITE

12/25
 16
 230 - C
 IN N
 T W2
 CALCUL
 CBR
 TOT
 THE
 GRC
 1
 310 - BRUCE
 355 - BAILED
 355 - MOBE
 19.11
 17.35
 1410 -
 1415 - MOBE
 TOTAL
 DEP
 14
 TH
 1430 - BATTLE
 1435 - MOBE
 1500 - FINISH
 1500 - LEFT

12/27/94 KH CLEAR $\approx 50^{\circ}\text{F}$
 KELLY HUNTER RECORDING
 DECON SITE - SET UP DECON AREA
 SDO NOT HAVE WATER LEVEL PROBE HOWEVER
 I WILL USE 12/20/94 WATER LEVELS TO
 CALCULATE AMOUNT OF WATER TO WITHDRAWL..
 CBR-6 / CBR-T1 - 50.85' BELOW TOC
 TOTAL DEPTH OF WELL 60.40' BGS
 THEREFORE WITH 2.5' STICK UP (CASING) ABOVE
 GROUND SURFACE - 12.05' OF WATER IN WELL
 $1.97 \text{ gal} \times 3 \text{ WELL VOLUME} = 5.89 \text{ gal}$
 BRUCE KRISTENSON ON SITE - BEGAN BAILING
 BAILED 6 gal
 MOBE TO CBR-T3 LOCATION
 TOTAL DEPTH OF WELL ^{57.98} 55.0 ft BGS
 DEPTH TO H₂O ^{41.57} 43.13 ft Below TOC
 DEPTH TO H₂O ^{38.87} 40.63 ft BGS
^{19.11} 17.35 ^{KH} 14.37' OF WATER
^{3.11} 2.34 gal - Three well volumes
 BAILED 10 gal
 MOBE TO CBR-T2 LOCATION
 TOTAL DEPTH - 55.0' BGS
 DEPTH TO WATER @ 43.13 ft Below TOC
 " " @ 40.63 ft BGS
 14.37' OF WATER IN WELL OR 2.34 gal
 THREE WELL VOLUMES 7.03 gal
 BAILED 7 gal
 MOBED TO CBR-T1 LOCATION TO DECON BAILERS
 FINISHED BAIL DECON
 LEFT SITE

12/28/94 1CH

KELL

830 - ON

MONZ...

845 - SAMPLED

910 - MOBED

920 - SETUP F

925 - Bruce

BLANK

935 - Bruce

930 - COLLECTED

DECONED

940 - SETUP FO

950 - SAMPLED

1010 - MOBE T

1015 - SETUP F

1015 - THE ST

WENT I

1000 - DECONED

1040 - BE

1105 - LOGGED

1120 - GENERAL

BATLER

TO WE

12/28/94

Study

12/28/94 1CH CLEAR $\approx 35^{\circ}\text{F}$

KELLY HUNTER RECORDING

50 - ON SITE TO COLLECT GROUNDWATER SAMPLES FROM
MONITOR WELLS CBR-T1, CBR-T2, AND CBR-T3

15 - SAMPLED CBR-T1 - DECONED BAILER USED

10 - MOVED TO CBR-T2

20 - SETUP FOR RINSATE SAMPLE

25 - Bruce Kristenson ON SITE TO HELP W/ RINSATE
BLANK CBR-T2E

35 - Bruce Kristenson LEFT SITE

40 - COLLECTED RINSATE POURED DI H_2O THROUGH
DECONED BAILER INTO BOTTLES

45 - SETUP FOR SAMPLE CBR-T2

50 - SAMPLED CBR-T2

55 - MOVED TO CBR-T3

60 - SETUP FOR SAMPLING & BEGAN SAMPLING

65 - THE STRING TIED TO THE BAILER BROKE AND BAILER
WENT INSIDE WELL

70 - DECONED ANOTHER BAILER

75 - BEGAN SAMPLING CBR-T3

80 - LOGGED IN TRIP BLANK

85 - GENERAL SITE CLEANUP & LEFT SITE - WILL RETRIEVE

BAILER LATER IN DAY - DELIVERING SAMPLES & COL'S
TO WELL BUILDING FOR SHIPPING.

(Former Appendix D from WSRC-RP-95-81, February 1995)

Field Reports for Individual Boreholes

CS6G-11

CS6G-12

CS6G-13

CS6G-14

CS6G-15

CS6G-16

CS6G-17

CS6G-18

CS6G-19

CS6G-20

CS6G-21

CS6G-22

CS6G-11

SOIL BORING INSTALLATION REPORT

Boring Number (AAA, NNN, AAA)

C.S. 69 | 11

GENERAL INFORMATION			
Project Name	Project Manager	Department	
CENTRAL SHOPS BURNING RUBBIE PIT	RAY PLUNKETT	WERC	
Boring Purpose	Location Description		
SOIL SAMPLING	CENTRAL SHOPS AREA		

SRS North Grid Coordinate	SRS East Grid Coordinate	Latitude (decimal degrees)	Longitude (decimal degrees)	Ground Elevation

DRILLING & SAMPLING INFORMATION				
Total Drilled Depth	Static Water Level	Drilling Start Date	Drilling Completion Date	Drilling Method
8 FT	NA	11/14/94	11/14/94	3 1/4 ID HSA
Sample Type	Sampling Interval	Sample Type	Sampling Interval	Drilling & Sampling Comments
HAND AUGER	0-1			(Include drilling fluids used, source of water, lost circulation zones, etc.)
"	1-2			HP SCREENING OF COMPOSITE SAMPLES
SPLIT SPOON 3"	2-4			SCREENING WITH A ORGANIC VAPOR ANALYZER (OVA)
"	4-6			
"	6-8			
"	8-10			

Drilling Company	Driller (last name, first initial)	Oversight Company	Oversight (last name, first initial)
EET	HOOD, H	RUST E & F	HUNTER, K

Disposition of Samples	GENERAL ENGINEERING LABORATORIES
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ABANDONMENT	
Method of Abandonment	Materials Used in Abandonment
BACKFILLED WITH CUTTINGS	NA

APPROVALS	
Abandonment Verified By	Date
KELLY HUNTER	11/14/94
Boring Installation Report Prepared By	Date
KELLY HUNTER	11/29/94

FIELD GEOLOGIC LOG

PROJECT		CENTRAL STOPS BRP		DATE	11/14/94	SHEET	1 of 1
WELL NO.		C-566-11		REFERENCE DATUM	DRILLING CONTRACTOR E.E.I.		
LOGGED BY		K. HUNTER		SRP COORDINATES	DRILLER H. HOOD		
				COMPANY	DRILLING METHOD 3 1/4 ID HSA		
RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION		DRILLING COMMENTS	
1	0			CLAY, moderate yellowish brown (10YR 4/2)		HAND AUGER	
				med to fine sand, moist-wet,		0-1	
				MED PLASTICITY (SC)			
2	1			SANDY CLAY, very pale orange (10YR 8/2)		HAND AUGER	
	2			TO DARK YELLOWISH ORANGE (10YR 6/2),		1-2	
				med-fine sand, med-plasticity stiff-HARD (SC)			
3	3			SAND, CLAY, Dark yellowish orange (10YR 6/2)		SPLIT SPOON	
	4			very pale orange (10YR 8/2), med-fine grained		2-4	
				rounded, med plasticity SC			
4	5			SANDY CLAY, Light brown (5YR 7/6)			
	6			med-fine grained, low plasticity		N-10-14-14-30	
				(SC) HARD			
5	7			SANDY CLAY, very pale orange (10YR 8/2)			
	8			med-fine grained, rounded, high plasticity			
				SC			
6	9						
	0			DRILLING TERMINATED @ 8' BGS			
				TOOK A SPOON FROM 8'-10' BGS			
	1						
	2						
	3						
	4						
	5						
	6						
	7						
	8						
	9						
	0						

CS6G-12

SOIL BORING INSTALLATION REPORT
		Boring Number (AAA, NNN, AAA) CS06 | 12							
GENERAL INFORMATION									
Project Name		Project Manager		Department					
CENTRAL SHOPS BURNING RUBBLE PIT		RAY PLUNKETT		WSRC					
Boring Purpose		Location Description							
SOIL SAMPLING		CENTRAL SHOPS AREA							
County		Latitude (decimal degrees)		Longitude (decimal degrees)		Ground Elevation			
BARNWELL									
SRS North Grid Coordinate		SRS East Grid Coordinate							
DRILLING & SAMPLING INFORMATION									
Total Drilled Depth	Static Water Level	Drilling Start Date	Drilling Completion Date	Drilling Method					
6' BHS	NA	11/15/94	11/15/94	3 1/4 ID HSA					
Sample Type	Sampling Interval	Sample Type	Sampling Interval	Drilling & Sampling Comments					
HAND AUGER	0-1			(Include drilling fluids used, source of water, lost circulation zones, etc.)					
" "	1-2			HP SCREENING OF COMPOSITE SAMPLES					
SPLIT SPON 3"	2-4			SCREENING WITH OVA					
" "	4-6								
" "	6-8								
Drilling Company	Driller (last name, first initial)	Overight Company	Overight (last name, first initial)						
E E I	HOOD, H	RWST E & J	HUNTER, K						
Disposition of Samples									
GENERAL ENGINEERING LABORATORIES									
ABANDONMENT									
Method of Abandonment	Materials Used in Abandonment								
BACKFILL W/ SOIL CUTTINGS	NATIVE SOIL								
APPROVALS									
Abandonment Verified By	Date	Boring Installation Report Prepared By	Date						
K. HUNTER	11/15/94	Kelly Hunter	11/29/94						

FIELD GEOLOGIC LOG

PROJECT CENTRAL SHOPS BURNING RUBBLE PIT		DATE 11/15/94	SHEET 1 of 1
WELL NO. CS6G-12		REFERENCE DATUM	DRILLING CONTRACTOR EEI
LOGGED BY K. HUNTER		SRP COORDINATES	DRILLER H. HOOD
		COMPANY RUST E & I	DRILLING METHOD 3/4 ID HSA

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
1	0			FILL: SAND silty, moderate yellowish brown (5% 5/4), fine grained sand, moist (SM) - Cobble stones @ 1' BGS	HAND AUGER FROM 0-1 AND FROM 1-3
2	1			1.0-1.5 - SILT sandy, burn material, high organic	
	2			Dusky blue (SPR 3/2) - 1.5-2.0 SAND, grayish orange (10% 3/4), fine-med grained	SPLIT SPOON SAMPLING THEREAFTER
3	3		20-25	SAND, silty, grayish orange (10% 3/4), fine-med	
	4			2.5-3.5 - CLAY sandy, pale yellowish brown 10% 6/4, fine-medium medium plasticity (CL) - 3.5-4.0 CLAY sandy, mottled dark yellowish orange 10% 6/4 & pale yellowish brown 10% 6/4, low plasticity	
4	5			RESIDUUM: CLAY, sandy mottled dark yellowish orange (10% 6/4) & pale yellowish brown (10% 6/4)	
	6			Low plasticity (CL)	
5	7			SAME AS ABOVE	
	8				
	9			BORING TERMINATED @ 6' BGS	
	0				
	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	0				

CS6G-13

SRS SOIL BORING INSTALLATION REPORT				Boring Number (AAA, HRR, AAA)
GENERAL INFORMATION				CS69 13
Project Name CENTRAL SHOPS BURNING RUBBLE PIT		Project Manager RAY PLUNKETT		Department WSRC
Boring Purpose SOIL SAMPLING		Location Description CENTRAL SHOPS AREA		
County BARNWELL				
SRS North Grid Coordinate	SRS East Grid Coordinate	Latitude (decimal degrees)	Longitude (decimal degrees)	Ground Elevation
DRILLING & SAMPLING INFORMATION				
Total Drilled Depth 6' BGS	Stallio Water Level NA	Drilling Start Date 11/15/94	Drilling Completion Date 11/15/94	Drilling Method 3 1/4 ID HSA
Sample Type	Sampling Interval	Sampling Interval		
HAND AUGER	0-1			
" "	1-2			
SPLIT SPOON	2-4			
" "	4-6			
" "	6-8			
Drilling Company EEI	Driller (last name, first initial) HOOD, H	Overnight Company RUST E & I	Oversight (last name, first initial) HUNTER, K	
Disposition of Samples GREENEAL ENGINEERING LABORATORIES				
ABANDONMENT				
Method of Abandonment BACKFILL w/ SOIL CUTTINGS		Materials Used In Abandonment NA		
APPROVALS				
Abandonment Verified By K. HUNTER	Date 11/29/94	Boring Installation Report Prepared By KELLY HUNTER		Date 11/29/94

FIELD GEOLOGIC LOG

PROJECT CENTRAL SHOPS BURNING RUBBLE PITS		DATE 11/15/94	SHEET 1 of 1
REFERENCE DATUM		DRILLING CONTRACTOR EEI	
WELL NO. CS66-13	SRP COORDINATES	DRILLER H. HOOD	
LOGGED BY K. HUNTER	COMPANY RUST E & I	DRILLING METHOD 3 1/4 ID HSA	

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
1	0			Fill: Clay sandy, moderate yellowish brown (10Yr 5/4)	
				fine grained - 70.5 to 1.0 BURN MATERIAL, ASH BLACK WITH ORGANICS	HAND AUGER
2	1			SAME AS 0.5 to 1.0 WITH OLD NAILS, COPPER WIRE	
	2			SAND GRAVEL to 15" BGS - FROM 15" to 24" BGS	
3	3			SAND, silty light olive gray (5GY 6/1) fine grained, rounded	SPLIT SPOON
	4			24" to 30" BURN MATERIAL AS DESCRIBED ABOVE	
4	5			30" to 46" CLAY, sandy - light olive gray (5Y 7/1) rounded	
	6			fine-mid grained - 46" to 48" RESIDUUM: CLAY, sandy, very pale orange (10Yr 8/2), med-fine grained rounded low plasticity	
5	7			SAME AS ABOVE 46" to 48"	
	8				
	9				
	10				
	11				
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BORING TERMINATED @ 6'

CS6G-14

L BORING INSTALLATION REPORT

Boring Number (AAA, BBB, AAA)

C-569 | 14

GENERAL INFORMATION

Project Name CENTRAL SHOPS BURNING RUBBLE PIT		Project Manager RAY PLUNKETT	Department WSRC
Boring Purpose SOIL SAMPLES		Location Description CENTRAL SHOPS AREA	

SRS North Grid Coordinate	SRS East Grid Coordinate	Latitude (decimal degrees)	Longitude (decimal degrees)	Ground Elevation
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DRILLING & SAMPLING INFORMATION

Total Drilled Depth 13	Static Water Level NA	Drilling Start Date 11/16/94	Drilling Completion Date 11/16/94	Drilling Method 3 1/4 ID HSA
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Sample Type	Sampling Interval	Sample Type	Sampling Interval	Drilling & Sampling Comments (include drilling muds used, source of water, lost circulation zones, etc.)
HAND AUGER	0-1			
"	1-2			
SPLIT SPOON	2-4			
"	4-6			
"	6-8			
"	8-10			
"	13-15			

Drilling Company FEI	Driller (last name, first initial) HOOD, H	Overight Company RUST E & J	Overight (last name, first initial) HUNTER, K
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Disposition of Samples

ABANDONMENT

Method of Abandonment	Materials Used In Abandonment
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APPROVALS

Abandonment Verified By	Date	Boring Installation Report Prepared By	Date
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FIELD GEOLOGIC LOG

PROJECT		CENTRAL SHOPS BRP		DATE	11/16/94	SHEET	1 of 1
WELL NO.		CS66-14		REFERENCE DATUM			
LOGGED BY		K HUNTER		DRILLING CONTRACTOR	E.E.I.		
SRP COORDINATES				DRILLER	H. HOOD		
COMPANY		RUST E & I		DRILLING METHOD	3/4 ID HSA		

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
1	0			FILL: Silty SAND, Olive gray (5Y 4/1)	HAND AUGER
				fine grained, moist (SM)	0-1'
2	1			SAA EXCEPT LIGHT BROWN (5Yr 6/4)	HAND AUGER
					1-2'
3	2			clayey SAND, Light Brown (5Yr 6/4)	SPLIT SPOON
				fine grained, moist (CL)	2-4'
	3				
	4			FROM 4-5' (SAA) (SAME AS ABOVE)	
4	5			FROM 5-6 - BURN MATERIAL, BLACK	
				BURNED WOOD, GLASS FRAGMENTS, MISC NATLS,	
	6			YELLOW PLASTIC, CONCRETE RUBBLE, WET	
5	7			6-7 - BURN MATERIAL AS DESCRIBED	
				ABOVE - 7-8' RESIDUUM Light Brown	
	8			(5Yr 5/6) SANDY CLAY with Very Pale	
				ORANGE (2Yr 8/2) CLAY INTERBEDDED w/	
	9			Sand. Lin grained rounded, Dry (CL)	
6	10			SAA FROM 7-8' BGS	
	11				
	12				
	13			PURCHED H ₂ O @ 12-13 BGS	
	14			13-15 - CLAY INTERBEDDED Very Pale	
	15			ORANGE (2Yr 8/2) and Light Brown	
	16			(5Yr 5/6) - HIGH PLASTICITY. Saturated	
	17			(C.I.)	
	18				
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CS6G-15

- BORING INSTALLATION REPORT

Boring Number (AAA, BBB, AAA)		C-566 15	
GENERAL INFORMATION			
Project Name		Project Manager	Department
CENTRAL SHOPS BURNING RUBBLE PIT		RAY PLUNKETT	WSRC
Boring Purpose		Location Description	
SOIL SAMPLING		CENTRAL SHOPS AREA	
County		Ground Elevation	
BARNWELL			
SRS North Grid Coordinate		Latitude (decimal degrees)	Longitude (decimal degrees)
DRILLING & SAMPLING INFORMATION			
Drilled Depth	Static Water Level	Drilling Start Date	Drilling Completion Date
10	NA	11/17/94	11/17/94
Sample Type		Sample Interval	Drilling Method
HAND AUGER		0-1	3/4 ID HSA
" "		1-2	
SPLIT SPOON		2-4	
" "		4-6	
" "		10-12	
Drilling Company		Driller (last name, first initial)	Overlight Company
EEI		HOOD, H	REISTE ET
Isolation of Samples		Overlight (last name, first initial)	
GENERAL ENGINEERING LABORATORIES		HUNTER, K	
ABANDONMENT			
Method of Abandonment		Materials Used In Abandonment	
BACKFILL WITH SOIL CUTTINGS		NA	
APPROVALS			
Abandonment Verified By		Date	Date
K. HUNTER		11/17/94	11/29/94

FIELD GEOLOGIC LOG

PROJECT		CENTRAL SHOPS BRP		DATE	11/18/94	SHEET	1 of 1
WELL NO.		CS66-15		REFERENCE DATUM			
LOGGED BY		K. HUNTER		DRILLING CONTRACTOR	E.E.F.		
		SRP COORDINATES		DRILLER	H. HOOD		
		COMPANY		DRILLING METHOD	3/4 ID HSA		
		RUST E & I					

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
1	0			FILL: SILTY SAND, OLIVE GRAY (5Yr 4/1)	
	1			Fine grained; moist (SM)	
2	1-1.5			SAA - 1.5-2.0 Silty Sand, Dark yellowish orange, fine grained, moist (SM)	
3	2			SOME METAL SAWINGS	
	2-2.5			SAA	
4	2.5-4.0			RESIDUAL SANDY CLAY, VERY pale orange (10Yr 8/2) INTERBEDDED WITH Light Brown (5Yr 5/6) - fine grained moist (CL)	
	4			SAA	
	6				
	7			NOT SAMPLED BUT ASSUMED CLAY	
	8				
	9				
	10			SAA	
5	11				
	12				
	3			BORING TERMINATED @ 10'	
	4			BGS	
	5				
	6				
	7				
	8				
	9				
	0				

CS6G-16

FIELD GEOLOGIC LOG

PROJECT CENTRAL SHOPS BRP			DATE 11/17/94	SHEET 1 OF 1
WELL NO. CS6G-16			REFERENCE DATUM	DRILLING CONTRACTOR EEI
LOGGED BY K. HUNTER			SRP COORDINATES	DRILLER H. HODD
			COMPANY RUST E & I	DRILLING METHOD 3/4 ID HSA

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
1	0			SAND Silty, moderate yellowish brown 10 yr (5/4), fine grained moist	0-1 HAND AUGER
2	1			1.0' to 1.5' SAME AS ABOVE	
3	2			1.5 to 2.0 SAND, silty, grayish black (N2) fine grained, moist (SM)	1-2 SPLIT SPOON
3	3			2.0 → 2.5 - SAME AS ABOVE - 2.5 - 3.5 SILT, grayish black (N2), WET	
4	4			3.5 → 4.0 ^{5/8"} CLAY sandy, medium light gray (N6), wet moist, fine grained (CL)	
4	5			4.0 → 5.5 SAME AS ABOVE	
	6			5.5 → 6.0 CLAY, sandy pale yellowish brown (10 yr 5/2), light brown (5 yr 5/6), fine grained, HARD (CL)	
	7				
	8				
	9				
	10				
5	1			CLAY, sandy, w/ QUARTZ FRAGMENTS, med - fine grained, very light grey, HARD, med plasticity, (CH)	
	2				
	3				
	4			BORING TERMINATED AT 10' BGS	
	5				
	6				
	7				
	8				
	9				
	10				

CS6G-17

L BORING INSTALLATION REPORT

Boring Number (AAA, BBB, AAA)

CS069 | 17

GENERAL INFORMATION									
Project Name CENTRAL SHOPS BURNING RUBBLE PIT			Project Manager RAY PLUNKETT		Department WSRC			Boring Number (AAA, BBB, AAA) CS069 | 17	
Boring Purpose SOIL SAMPLING		County BARNWELL		Location Description CENTRAL SHOPS AREA					
SRS North Grid Coordinate		SRS East Grid Coordinate		Latitude (decimal degrees)		Longitude (decimal degrees)		Ground Elevation	
DRILLING & SAMPLING INFORMATION									
Total Drilled Depth	Static Water Level	Drilling Start Date	Drilling Completion Date	Drilling Method	Drilling & Sampling Comments (Include drilling fluids used, source of water, lost circulation zones, etc.)				
10	NA	11/17/94	11/17/94	3 1/4 TD HSA					
Sample Type	Sampling Interval	Sample Type	Sampling Interval						
HAND AUGER	0-1								
"	1-2								
SPLIT SPHER 3"	2-4								
"	5-7								
"	10-12								
Drilling Company EEI	Driller (last name, first initial) HOOD, H	Overnight Company RUST E & I	Overnight (last name, first initial) HUNTER, K						
Disposition of Samples GENERAL ENGINEERING LABORATORIES									
ABANDONMENT									
Method of Abandonment BACKFILL W/ NATIVE SOIL CEMENTS		Materials Used In Abandonment NA							
APPROVALS									
Abandonment Verified By HUNTER, K		Date 11/17/94		Boring Installation Report Prepared By HUNTER, K		Date 11/29/94			

FIELD GEOLOGIC LOG

PROJECT <u>CENTRAL STAIRS BR</u>		DATE <u>11/17/94</u>	SHEET <u>1 of 1</u>
WELL NO. <u>CS66-17</u>		REFERENCE DATUM	DRILLING CONTRACTOR
LOGGED BY <u>K. HUNTER</u>		SRP COORDINATES	DRILLER <u>H. HOOD</u>
		COMPANY <u>JUST E&I</u>	DRILLING METHOD <u>3/4 ID HSH</u>

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
1	0			<u>0'-8" SAND, Grayish orange (10Yr 7/4),</u>	
	1			<u>fine grained moist - 8"-12" sandy CLAY</u>	<u>RESIDUUM FROM</u>
2	2			<u>light brown (5Yr 6/4) fine-med grained (CL) 8" →</u>	
3	3			<u>SAA FROM 8"-12"</u>	
	4			<u>SAA</u>	
4	5			<u>RESIDUUM:</u>	
	6			<u>CLAY, INTERBEDDED VERY PALE ORANGE</u>	
	7			<u>(10Yr 8/2) and light brown (5Yr 6/4),</u>	
	8			<u>mod plasticity, moist, HARD (CH)</u>	
5	10			<u>CLAY, VERY PALE ORANGE (10Yr 8/2)</u>	
	11			<u>HIGH PLASTICITY, moist, HARD-VERY</u>	
	12			<u>HARD (CH)</u>	
	3			<u>BORING TERMINATED</u>	
	4			<u>(C) 10' BGS</u>	
	5				
	6				
	7				
	8				
	9				
	0				

CS6G-18

OIL BORING INSTALLATION REPORT

Boring Number (AAA HHH AAA)

C566 181

GENERAL INFORMATION

Project Name CENTRAL SHOPS BURNING RUBBLE PIT		Project Manager RAY PLUNKETT	Department WSRC
Boring Purpose SOIL SAMPLES		Location Description CENTRAL SHOPS AREA	
County BARNWELL			

SRS North Grid Coordinate 45	SRS East Grid Coordinate 43	Latitude (decimal degrees)	Longitude (decimal degrees)	Ground Elevation
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DRILLING & SAMPLING INFORMATION

Total Drilled Depth	Stall Water Level	Drilling Start Date	Drilling Completion Date	Drilling Method
45	43	11/18/94	11/18/94	3 1/4 ID HSA
Sample Type	Sampling Interval	Sample Type	Sampling Interval	Drilling & Sampling Comments
HAND AUGER	0-1	SPLIT SPON	40-42	(Include drilling muds used, source of water, lost circulation zones, etc.)
"	1-2	"	43-47	
SPLIT SPON	2-4			
"	5-7			
"	10-12			
"	15-17			
"	20-22			
"	25-27			
"	30-32			
"	35-37			

Drilling Company EEI	Driller (last name, first initial) HOD, H	Overlight Company RUST E & I	Overlight (last name, first initial) HUNTER, K
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GENERAL ENGINEERING LABORATORIES

Method of Abandonment PRESSURE CAPOUT	Materials Used in Abandonment 13.5 lb/gal	ABANDONMENT G BAGS OF PORTLAND CEMENT & BENT BOWDER
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APPROVALS

Abandonment Verified By K. HUNTER	Date 11/23/94	Boring Installation Report Prepared By K. HUNTER	Date 11/29/94
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FIELD GEOLOGIC LOG

PROJECT CENTRAL SHOPS BRP		DATE 7/18/94	SHEET 1 of 3
REFERENCE DATUM		DRILLING CONTRACTOR EEI	
WELL NO. C566-18	SRP COORDINATES	DRILLER H. HOOD	
LOGGED BY K. HUNTER	COMPANY RUST E&I	DRILLING METHOD 3/4 ID HSA	

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
1	0			Clayey SAND, Moderate brown (5Yr 4/4), 0-1' HAND AUGER	
	1			fine-med grained, (CL) (MOIST)	
2	2			Sandy CLAY, Light brown (5Yr 5/6),	1-2 HAND AUGER
	3			fine grained, (CL)	
3	4			SAA	SPLIT SPOON
	5				
4	6			Silty SAND, w/ QUARTZ FRAGMENTS, ^{fine} grained,	
	7			Light Brown (5Yr 5/6), HARD-VERY HARD,	
	8			MOIST, med-coarse, rounded & angular (SP)	
	9				
	10				
5	11			Clayey SAND, w/ QUARTZ FRAGMENTS,	
	12			fine-coarse grained, Greenish red	
	13			purple (5 RP 4/2), angular, (CL)	
	14				
	15				
6	16			SAA	
	17				
	18				
	19				
	20				

FIELD GEOLOGIC LOG

CENTRAL SHOPS BRP		DATE 11/18/94	SHEET 2 of 2
WELL NO. CS6G-18		REFERENCE DATUM	DRILLING CONTRACTOR EEI
LOGGED BY K. HUNTER		SRP COORDINATES	DRILLER H. HOOD
		COMPANY RUST E&I	DRILLING METHOD 3 1/4 ID HSA

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
7	20			CLAYEY SAND, SPECKLED moderate pink (SR 7/4), Greenish pink (SR 8/2), light red (SR 4/2), Sand coarse rounded, gravel w/ QUARTZ FRAGMENTS, very hard (CL)	SPLIT SPOON
	21				
	22				
	23				
	24				
	25			SAA WITH HIGHER CLAY CONTENT	
	26			LESS HARD, HARD	
	27				
	28			mm ——— PURCHED L ₂ D ZONE ——— mm	
	29				
	30				
9	31			CLAY, CLEAN NO SAND, GREENISH red purple, moist (SR 6/2), HIGH PLASTICITY (CH) STIFF	
	32				
	33				
	34				
	35				
10	36			SAA	
	37				
	38				
	39				
	40				

FIELD GEOLOGIC LOG

PROJECT CENTRAL SHOPS BRP			DATE 11/18/94	SHEET 3 of 3
WELL NO. CS66-18			REFERENCE DATUM	DRILLING CONTRACTOR EEI
LOGGED BY K. HUNTER			SRP COORDINATES	DRILLER H. HOOD
			COMPANY RUST EEI	DRILLING METHOD 3 1/4 ID HSA

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
11	40				SPLIT SPOON
	41			SAA	
	42				
	43				
12	44				
	45				
	46			SAA w/ MICACEOUS - SATURATED LESS DENSE	
	47				
	48			BORING TERMINATED	
	49			@ 45' BGS	
	50				
	1				
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CS6G-19

SRS SOIL BORING INSTALLATION REPORT

ORIGINAL (continued)

REVISION AFTER 0121

CS66 19

GENERAL INFORMATION

Project Name CENTRAL SHOPS BURNING RUBBLE PIT		Project Manager RAY PLUNKETT	Department WSRC
Boring Purpose SOIL SAMPLING	County BARNWELL	Location Description CENTRAL SHOPS AREA	

SRS North Grid Coordinate	SRS East Grid Coordinate	Latitude (decimal degrees)	Longitude (decimal degrees)	Ground Elevation
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DRILLING & SAMPLING INFORMATION

Total Drilled Depth 45	Stallo Water Level 42	Drilling Start Date 11/22/94	Drilling Completion Date 11/22/94	Drilling Method .31/4 ID HSA
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Sample Type	Sampling Interval		Sample Type		Drilling & Sampling Comments (Include drilling fluids used, source of water, lost circulation zones, etc.)
	Sample Type	Sampling Interval	Sample Type	Sampling Interval	
HAND AUGER		0-1	SPLIT SPOON	40-42	
"		1-2	"	45-47	
SPLIT SPOON		2-4			
"		5-7			
"		10-12			
"		15-17			
"		20-22			
"		25-27			
"		30-32			
"		35-37			

Drilling Company E & I	Driller (last name, first initial) HOOB, H	Overnight Company RUST E & I	Overnight (last name, first initial) HUNTER, K
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Disposition of Samples

GENERAL ENGINEERING LABORATORIES

ABANDONMENT

Method of Abandonment	Materials Used in Abandonment
PRESSURE GROUT 13.5 15/901	6 BAGS OF PORTLAND CEMENT & BENTONITE POWDER

APPROVALS

Abandonment Verified By K. HUNTER	Date 11/23/94	Boring Installation Report Prepared By K. HUNTER	Date 11/29/94
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FIELD GEOLOGIC LOG

PROJECT		CENTRAL SHOPS BRP		DATE	11/22/94	SHEET	1 of 3
WELL NO.		CS66-19		REFERENCE DATUM			
LOGGED BY		K. HUNTER		SRP COORDINATES			
COMPANY		RUST E&I		DRILLING CONTRACTOR	EEF		
DRILLER		H. Hood		DRILLING METHOD	3/4 ID HSA		

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
1	0			SAND, GRAYISH ORANGE 10Yr 7/4, fine grained, moist.	0-1 - HAND AUGER
2	1			SAA TO 10" - SILTY SAND, GRAYISH ORANGE, (10Yr 7/4), fine grained, moist (SM)	1-2
3	2			SANDY CLAY (SP), LIGHT BROWN (5Yr 5/6), pale yellowish brown (10Yr 6/2), fine-grained, moist, low plasticity (CL)	2-4 SPLIT SPON
	3				
	4				
	5			SANDY CLAY, light brown (5Yr 5/6), VERY PALE ORANGE (10Yr 8/2), fine-grained, moist, very hard (CL)	
4	6				
	7				
	8				
	9				
	10				
5	11			CLAY, Grayish red purple (5RP 4/2), interbedded very pale orange (10Yr 8/2), very hard, low plasticity, (CL)	
	12				
	13				
	14				
	15				
6	16			CLAY, Grayish red purple (5RP 4/2) yellowish gray (5Y 8/1), very hard, moderate plasticity, (CL), MICACEOUS	
	17				
	18				
	19				
	20				

FIELD GEOLOGIC LOG

CENTRAL SHOPS BRP

DATE

11/22/94

SHEET

2 of 3

REFERENCE DATUM

DRILLING CONTRACTOR

WELL NO.

CS66-19

SRP COORDINATES

DRILLER

H. HOOD

LOGGED BY

K. HUNTER

COMPANY

RUST E&I

DRILLING METHOD

3/4 JD HSA

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
7	20				SPLIT SPDRW
	21			Sandy CLAY, moderate red (SR 4/6), medium angular, moist, (CL)	
	22				
	23				
	24				
	25			CLAY, Pale red purple (SR 6/2), high plasticity, moist (CH) (HARD)	
	26				
	27				
	28				
	29				
9	30			Sandy CLAY, moderate red (SR 4/6), low plasticity, moist, micaceous (CL)	
	31				
	32				
	33				
	34				
10	35			CLAY, Pale purple (SR 6/2), no sands, med plasticity, moist, micaceous, (CL)	
	36				
	37				
	38				
	39				
	40				

FIELD GEOLOGIC LOG

PROJECT CENTRAL SHOPS BRP		DATE 11/22/94	SHEET 3 of 3
WELL NO. CSGG-19		REFERENCE DATUM	DRILLING CONTRACTOR EEI
LOGGED BY K. HUNTER		SRP COORDINATES	DRILLER H. HOOD
		COMPANY RUST E&I	DRILLING METHOD 3/4 ID HSA

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
	40				SPLIT SPOON
11	41			Sandy CLAY, quartz fragments, pale purple (SP ⁶ / ₂), (CL)	
	42				
	43				
	44				
	45			(SR ⁷ / ₄)	
12	46			Sand, moderate pink ⁿ , fine-med, saturated rounded, some quartz fragments	
	47				
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BORING TERMINATED @ 45' BGS

CS6G-20

FIELD GEOLOGIC LOG

PROJECT CENTRAL SHOPS - BRP		DATE 11/28/94	SHEET 1 of 3
REFERENCE DATUM		DRILLING CONTRACTOR E E I	
WELL NO. C566-20	SRP COORDINATES	DRILLER H. HOOD	
LOGGED BY K. HUNTER	COMPANY RUST E & I	DRILLING METHOD 3/4 ID HSA	

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
1	0			Clayey SAND, Dark yellowish orange (10 Yr 6/6), INNER-BEDDED WITH pale yellowish brown (10 Yr 6/2), fine grained, rounded, moist (SC)	HAND AUGER
2	1				
	2			Sandy CLAY, pale yellowish orange (10 Yr 8/6), fine grained, rounded moist (CL)	SPLIT SPOON
3	3				
	4				
	5			Clayey SAND, Dark yellowish orange (10 Yr 8/6), fine grained, moist (CL)	
4	6				
	7				
	8				
	9				
5	10			CLAY, Pale greenish yellow (10 Yr 8/2), moist, med plasticity (CL), Pale reddish brown (10R 5/4)	
	11				
	12				
	13				
	14				
6	15			Sandy CLAY, Dark reddish-brown (10R 3/4), Very pale orange (10 Yr 3/2), (CL)	
	16				
	17				
	18				
	19				
	20				

FIELD GEOLOGIC LOG

CENTRAL SHOPS BRP

DATE 11/30/94

SHEET 2 of 3

REFERENCE DATUM

DRILLING CONTRACTOR
EEI

WELL NO.

CS66-20

SRP COORDINATES

DRILLER

H. HOOD

LOGGED BY

K. HUNTER

COMPANY

RUST E & I

DRILLING METHOD

3/4 ID HSA

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
7	20			CLAY, Very pale orange (10YR 8/2),	SPLIT SPOON
	21			Grayish red purple (5RP 4/2), (CH)	
	22			high plasticity (CH)	
	23				
	24				
	25				
	26			SAA	
	27				
	28				
	29				
9	30				
	31			SAA	
	32				
	33				
	34				
10	35				
	36			SAND, moderate orange pink (10R 7/4),	
	37			fine grained	
	38				
	39				
	40				

FIELD GEOLOGIC LOG

PROJECT CENTRAL SHOPS BRP		DATE 11/30/94	SHEET 3 of 3
WELL NO. CS66-20		REFERENCE DATUM	DRILLING CONTRACTOR EEI
LOGGED BY K. HUNTER		SRP COORDINATES	DRILLER H. HOOD
		COMPANY RUST EEI	DRILLING METHOD 3 1/4 ID HSA

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
11	40			Sandy SILT, Very pale orange (10YR 8/2), fine grained, STIFF (SM)	SPLIT SPOON
	41				
	42				
	43				
12	44				
	45			SAA	
	46				
	47				
	48			BORING TERMINATED @ 45' BGS	
	49				
	50				
	51				
	52				
	53				
	54				
	55				
	56				
	57				
	58				
	59				
	60				

CS6G-21

SOIL BORING INSTALLATION REPORT

Boring Number (AAA, RRR, AAA)

25667 21

GENERAL INFORMATION

Project Name CENTRAL SHOPS BURNING RUBBLE PIT		Project Manager RAY PLUNKETT	Department WATER
Boring Purpose SOIL SAMPLING		Location Description CENTRAL SHOPS AREA	
County BARNWELL			

SRS North Grid Coordinate	SRS East Grid Coordinate	Latitude (decimal degrees)	Longitude (decimal degrees)	Ground Elevation

DRILLING & SAMPLING INFORMATION

Total Drilled Depth	Stallo Water Level	Drilling Start Date	Drilling Completion Date	Drilling Method
45	NA	12/1/94	12/1/94	3 1/4 ID HSA
Sample Type Sampling Interval Sample Type Sampling Interval				
HAND AUGER	0-1	SPLIT SPOON	40-42	Drilling & Sampling Comments (Include drilling muds used, source of water, lost circulation zones, etc.)
"	1-2	"	45-47	
SPLIT SPOON	2-4			
"	5-7			
"	10-12			
"	15-17			
"	20-22			
"	25-27			
"	30-32			
"	35-37			

Drilling Company EET	Driller (last name, first initial) HOOD, H	Overnight Company RUST E&I	Overnight (last name, first initial) HUNTER, K
-------------------------	---	-------------------------------	---

Disposition of Samples

GENERAL ENGINEERING LABORATORIES

ABANDONMENT

Method of Abandonment PRESSURE GROUT - TRIMMIZE	Materials Used in Abandonment PORTLAND CEMENT BENTONITE SLURRY GROUT
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APPROVALS

Abandonment Verified By K. HUNTER	Date 12/1/94	Boring Installation Report Prepared By K. HUNTER	Date 12/15/94
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FIELD GEOLOGIC LOG

PROJECT CENTRAL SHOPS BRP		DATE 12/1/94	SHEET 1 of 3
REFERENCE DATUM		DRILLING CONTRACTOR EEI	
WELL NO. CS66-21	SRP COORDINATES	DRILLER H. HOOD	
LOGGED BY K. HUNTER	COMPANY RUST EEI	DRILLING METHOD 3/4 ID HSA	

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
1	0			RESIDUUM: Sandy CLAY, Dark yellowish orange (10YR 8/6), moderate red (5R 4/4), some peat, fine grained, moist (CL)	HAND AUGER
2	1			SAA, NO PEAT	
3	2			SAA, NO PEAT	SPLIT SPOON
4	3				
5	4				
6	5			Sandy CLAY, Very pale orange (10YR 8/2), Light Brown (5YR 5/6), fine grained, DAMP, VERY HARD, (CL)	
7	6				
8	7				
9	8				
10	9				
11	10				
12	11			SAA	
13	12				
14	13				
15	14				
16	15			CLAY, Very pale orange (10YR 8/2), Light Brown (5YR 5/6), pale red purple (5R 4/2), VERY HARD, DAMP (CH)	
17	16			HIGH PLASTICITY	
18	17				
19	18				
20	19				
	20				

FIELD GEOLOGIC LOG

CT CENTRAL SHOPS BRP		DATE 12/1/94	SHEET 2 of 3
WELL NO. CS66-21		REFERENCE DATUM	DRILLING CONTRACTOR EEI
LOGGED BY K. HUNTER		SRP COORDINATES	DRILLER H. HOOD
		COMPANY RUST EEI	DRILLING METHOD 3/4 ID HSA

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
7	20			CLAY, Grayish red purple (SRP 4/2),	SPLIT SPOON
	21			HIGH PLASTICITY, DAMP, VERY HARD (CH)	
	22				
	23				
	24				
	25			CLAY, yellowish gray (SY 8/1),	
	26			Grayish red purple (SRP 4/2), HIGH PLASTICITY	
	27			DAMP, VERY HARD (CH)	
	28				
	29				
9	30			CLAY, very pale orange (10YR 8/2),	
	31			HIGH PLASTICITY, DAMP, VERY HARD (CH)	
	32				
	33				
	34				
10	35			CLAYEY SAND, WHITE (N9), fine	
	36			grained, DAMP, HARD (CL)	
	37				
	38				
	39				
	30				

FIELD GEOLOGIC LOG

PROJECT CENTRAL SHOPS BRP		DATE 12/1/94	SHEET 3 of 3
REFERENCE DATUM		DRILLING CONTRACTOR EEI	
WELL NO. C564-21	SRP COORDINATES	DRILLER H. HOOD	
LOGGED BY K. HUNTER	COMPANY RUST E&I	DRILLING METHOD 3/4 ID HSA	

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
	40			SAA	SPLIT SPON
	41
	42
	43
	44
	45			SAA	
	46
	47
	48			BORING TERMINATED	
	49			@ 45	
	50				
	51				
	52				
	53				
	54				
	55				
	56				
	57				
	58				
	59				
	60				

CS6G-22

GENERAL INFORMATION									
Project Name CENTRAL SHOPS BRP		Project Manager RAY PLUNKETT		Department GO - ENVIRONMENTAL ENGINEERING		Boring Number (AAA, BBB, CXX)		22	
Boring Purpose SOIL BORING		County BARRETT		Location Description CENTRAL SHOPS BURNING RUBBLE PIT		Longitude (decimal degrees)		Ground Elevation	
SRS North Grid Coordinate		SRS East Grid Coordinate		Latitude (decimal degrees)		Longitude (decimal degrees)		Ground Elevation	
DRILLING & SAMPLING INFORMATION									
Total Drilled Depth 3.5	Stall Water Level NA	Drilling Start Date 12/6/94	Drilling Completion Date 12/6/94	Drilling Method HAND AUGER - STAINLESS STEEL	Drilling & Sampling Comments (include drilling muds used, source of water, lost circulation zones, etc.)				
Sample Type	Sampling Interval	Sample Type	Sampling Interval						
HAND AUGER	0 - 1								
"	1 - 2								
"	2 - 3.5								
Drilling Company NA	Driller (last name, first initial) NA	Oversight Company RUST E&I	Oversight (last name, first initial) HUNTER, K						
Disposition of Samples									
GENERAL ENGINEERING, LABORATORIES									
ABANDONMENT									
Method of Abandonment		Materials Used in Abandonment							
BACKFILL WITH CUTTINGS		SOIL CUTTINGS							
APPROVALS									
Abandonment Verified By <i>Kelly John</i>		Date 12/6/94		Boring Installation Report Prepared By		Date			

FIELD GEOLOGIC LOG

PROJECT CENTRAL SHOPS BRP		DATE 12/10/94	SHEET 1 of 1
WELL NO. CS66-22		REFERENCE DATUM	DRILLING CONTRACTOR NA
LOGGED BY K. HUNTER		SRP COORDINATES	DRILLER NA
		COMPANY RUST E&I	DRILLING METHOD HAND AUGER

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
	0			FILL	HAND AUGER
1				Sandy CLAY, moderate reddish orange (10R 6/6), 2nd Pale Red (10R 6/6)	
2	1			S&A TO 18" - 18" - 24" BURN MATERIAL	
3	2			GRAVEL, SILTY SAND, MISC nails, wood particles & metal fragments; Black, Saturated	
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	0				
	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	0				

Appendix I

Groundwater Monitoring Well Field Data

Second Sampling Period

(Taken From WSRC-RP-95-81, February 1995)

***Includes:**

Well Installation Reports
Monitoring Well Construction Diagrams
Well Construction Tally Sheets
Well Development Records
Field Permeability Data (Slug Tests)

(Former Appendix C from WSRC-RP-95-81, February 1995)

Field Reports for Groundwater Monitoring Wells

CBR-1

CBR-2

CBR-3

CBR-4

CBR-5

CBR-6

CBR-1

MONITORING WELL CONSTRUCTION DIAGRAM

DRILLING SUBCONTRACTOR EMTC

WELL NUMBER CBR-1D

OWNER Baue Cunningham #649

SRS COORDINATES N 60° 41' 47" E 52.822' 14"

DATE OF WELL INSTALLATION 01-25-90

SANITARY SEAL ELEVATION 300.60'

Riser pipe el. 300.82'

TECH. O.S./CO. NAME Eric J. Stern / W.E.G.S.

NOTE: ALL MEASUREMENTS
ARE FROM GROUND
SURFACE AT START
OF BORING - MEASUREMENTS
TO NEAREST 0.1 FOOT.

1) Total Drilled Depth/Hole Diameter 74.40 / 9 7/8"

2) Casing/Screen Tally (Measured to Nearest 0.01 Foot)

(a) Sump & Plug Length 5.40 ft.

(b) Screen Length 20.02 ft.

(c) Casing Joint Lengths (Measured in Up-hole Sequence From Top of Screen) 10.02, 10.02

10.01, 10.03, 10.02

(d) Depth to Top of Screen 47.58 ft.

3) Depths to Centralizers ✓ 68.58 ft, 48.58 ft, 6.50 ft.

4) Total Depth of Installed Well 73.00 ft.

5) Casing Stick Up (Standard 2.5' A.G.S.)

6) Depth to Top of Filter Pack 44.0 ft.

7) Depth to Top of Fine Sand Seal 46.30 ft.

8) Depth to Top of Bentonite Seal 37.30 ft.

9) Thickness of Grout 37.30'

WESTINGHOUSE SAVANNAH RIVER COMPANY

GROUNDWATER MONITORING WELL
INSTALLATION

SRS MONITORING WELL INSTALLATION REPORT

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DPSOP 254

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8/1/89

Environmental
Protection Section

SRS MONITORING WELL INSTALLATION REPORT

GENERAL INFORMATION

Well number C.B.R. C.S.B. I.D.
Installation purpose RFI Rbble Pt AT Borma Road, monitoring
Project name Borma Road RFI Rbble Pt BRP-6G, Central Shops
Custodian S.J. Mentrup Custodial dept. _____
SRS coordinates: North _____ East _____
Location description _____
County Barnwell
Drilling contractor E.M.T.C. Driller Bave Cunningham
Oversight contractor G.E.G.S. Oversight Eric J. Stern
SCDHEC well site approval date / / Well start date 01/24/90

Verified by _____ Report prepared by Eric J. Stern G.E.G.S.
Date / / Date 01/26/90

WESTINGHOUSE SAVANNAH RIVER COMPANY

GROUNDWATER MONITORING WELL
INSTALLATION

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DRILLING INFORMATION

Well number C.B.R. C.B.R. L.D.

Drill rig(s) used (make/model):

1) Gardner Denver 15002) From/To (ft) Surface to 77.0 ft.Total drilled depth of borehole 77.0 ft.Date hole completed 01 125 190 Oversight Cecy J. Sten

Note: Depths are measured from ground surface to the nearest 0.1 ft.

DRILLING METHOD:

	Dia. (in)	From (ft)	To (ft)
Auger			
Mud rotary	<u>9 7/8</u>	<u>0.0</u>	<u>75.0</u>

REAMING HOLE:

Purpose	Dia. (in)	From (ft)	To (ft)
<u>well installation</u>	<u>9 7/8</u>	<u>0.0</u>	<u>75.0</u>

Total borehole deviation (degrees/minutes) n/rType of drilling mud used Baroid quick gelWater source potable water (production well)

DRILLING FLUID ADDITIVES USED:

Type	Quantity
1) <u>n/r</u>	
2) _____	

LOST CIRCULATION ZONE ADDITIVES USED:

Product	Quantity	Depth Interval (ft)
1) <u>n/r</u>		
2) _____		
3) _____		

WESTINGHOUSE SAVANNAH RIVER COMPANY

GROUNDWATER MONITORING WELL INSTALLATION

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CAVING, SQUEEZING CLAY, AND/OR LOST CIRCULATION ZONES:

	Problem	From (ft)	To (ft)	Solution to Problem
1)	n/r			
2)				
3)				

GEOLOGIC SAMPLING:

Sampling Method	Sampling Frequency	From (ft)	To (ft)
Wireline coring	Continuous	12.0	77.0
Conventional coring			
Wash cuttings			
Split spoon			
Shelby tube			

Percent core recovery 55 Lithologic descriptions by Cecy J. Stern
Sample storage location Gunsite

HOLE BACKFILLED:

	Material Used	Quantity	From (ft)	To (ft)	Date
1)	n/r				
2)					/ /

Drilling/Sampling comments

Verified by _____
Date / /

Report prepared by Cecy J. Stern
Date 01/26/90

WESTINGHOUSE SAVANNAH RIVER COMPANY

GROUNDWATER MONITORING WELL
INSTALLATION

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GEOPHYSICAL LOGGING

Well number C.B.R. 1111

Geophysical logging subcontractor GEAves Well Drilling

Logging truck operator Dan Wells Oversight Per J. Stern

GEOPHYSICAL LOGS PERFORMED:

Date logged 01/24/90 Date logged 1/1

	Type of log	From (ft)	To (ft)	From (ft)	To (ft)
1)	Long and Short	0	77.0		
	Normal Resistivity	0	77.0		
2)	Single Point Resistivity	0	77.0		
3)	Spontaneous Potential	0	77.0		
4)	Natural Gamma Ray	0	77.0		
5)	Borehole Caliper	0	77.0		
6)	Neutron Density				
7)					
8)					

Depth logging tool encountered bottom of hole 76.80

Geophysical logging comments

Verified by _____
Date 1/1/90

Report prepared by Per J. Stern
Date 01/26/90

WESTINGHOUSE SAVANNAH RIVER COMPANY

GROUNDWATER MONITORING WELL
INSTALLATION

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Environmental
Protection SectionWELL INSTALLATION

Well number C.B.R. 1001-11D Installed by EMTC
 Date well installed 01/25/90 Oversight David Stern @ E.G.S.
 Sieve analysis performed? Y N X

Note: Depths are measured from ground surface to the nearest 0.1 ft.

SURFACE CASING:

Type of Material	Schedule or Thickness	Nominal I.D. (in)	Type Joint	Bottom Depth	Sacks Grout
<u>n/r</u>					

WELL CASING:

Type of Material	Schedule or Thickness	Nominal I.D. (in)	Type Joint	From (ft)	To (ft)
<u>PVC</u>	<u>40</u>	<u>4.0</u>	<u>Threaded</u>	<u>+2.50</u>	<u>47.60</u>

Number and type of casing centralizers used 3, PVC

WELL SCREEN:

Type of Material	Nominal I.D. (in)	Slot Type	Slot Size (in)	From (ft)	To (ft)
<u>PVC</u>	<u>4.0</u>	<u>MACHINE</u>	<u>0.010</u>	<u>47.60</u>	<u>67.60</u>

WELL SUMP AND SUMP CAP:

Type of Material	Schedule or Thickness	Nominal I.D. (in)	Type Joint	Sump Only:	
<u>PVC</u>	<u>40</u>	<u>4.0</u>	<u>Threaded</u>	From (ft)	To (ft)
				<u>67.60</u>	<u>72.60</u>

Type of sump cap installed PVC Length (ft) .40

Depth from ground surface to bottom of sump cap 73.00 ft

WESTINGHOUSE SAVANNAH RIVER COMPANY

GROUNDWATER MONITORING WELL INSTALLATION

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FILTER PACK:

Product Name	Average Grain Size (Units)	Uniformity Coefficient	Number of Sacks/Wt.	From (ft)	To (ft)
Foster Diviana	70.010"	n/r	11/94lbs.	44.00	74.40
FX-50/ R.N.S. SAND				41.30	44.00

BENTONITE SEAL:

Method of installation Tremie pipe emplacement technique

Product Name	Size (in)	Hydration Time (hrs)	Number of 5-Gal Buck.	From (ft)	To (ft)
Apache					
Bentonite Pellets	3/8	20	2	37.30	41.30

ANNULAR GROUT:

Date grouting of well completed / / Oversight
Grout mix used

Method of installation

Grout Stage	Date Installed	Sacks of Cement	Sacks of Bentonite	Pumped Weight	From (ft)	To (ft)
1	2/12/90	9	.4	13.6	11	37.30
2	2/16/90	4	< 1/4		0	11
3						
4						
5						
Total						

Well installation/grouting comments Grouting not completed prior to development as per Janelle Janssen

Verified by Report prepared by
Date / / Date 01/12/1990

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Well number Developed by _____

Date started / /

Date completed / /

Oversight _____

	<u>Hours</u>	<u>Results</u>
Bailing		
Swabbing and surging		
Air lift		
Pumping		
<u>Total hours</u>		

Type and quantity of additives (including water) placed in well during development:

Estimated volume of water removed during development (gal) _____

	pH	Conductivity	Turbidity	Water Level
Start of development				
End of development				
Well yield (gpm)				

Well development comments _____

Verified by _____
Date ____/____/____

Report prepared by _____
Date ____/____/____

"Experience makes the difference."

PUMP DATE SHEET

Corporate Office:
P.O. Box 750
New Ellenton, SC 29809
(803) 652-2718

Corporate Locations:
3605 Ventura Drive, East
Lakeland, FL 33811
(813) 647-1664

RL 3, Box 159
Kingston, TN 37763
(615) 376-1546

P.O. Box 1752
Burlington, NC 27216-1752
(919) 227-0720

4435 Acworth Industrial Dr.
Acworth, GA 30101
(404) 975-1502

P.O. Box 29
Molokai, GA 31318
(912) 746-7007

WELL NUMBER: CBR 1-D

DATE OF INSTALLATION: 2/21/90

LOCATION: Central Shops

ACTIVITIES: Pump Installation

PUMP TYPE: Grundfos 1/2 HP ^{115V} SERIAL # 8738

RISER PIPE: 1" SCH 80 WATER LEVEL PIPE: 1" Tri-Loct

CONNECTOR TYPE: Butt WIRE TYPE: 12/3

CABLE TYPE: 3/16" S.S.

DEPTH OF WELL: 73 DEPTH OF PUMP SETTING: 68

WATER LEVEL: 65.4 55.4 GALLONS PER PUMP SETTING:

INSTALLER(S): BURRIS, Fulmer

TECHNICAL OVERSIGHT PERSONNEL:

COMMENTS ON INSTALLATION:

Environmental Soil Sampling
&
Drilling Service

Pump Sales
&
Service

WESTINGHOUSE SAVANNAH RIVER COMPANY

GROUNDWATER MONITORING WELL
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SURVEY REPORT

Well number C1B1R 1111 11D1

SRS Coordinates: North 60419.47 East 57822.14

Latitude 33-14-44.12 Longitude 81-38-42.27

Height of top of well seal above ground surface datum (ft) 2.5'

Surveyed well elevation (height of top of well seal above mean sea level) (ft) 300.60

^{PAD}
Ground surface elevation (mean sea level) (ft) 298.5

Elevation of liquid level pipe (ft) 300.82

Verified by _____ Report prepared by Janella Janssen
Date 8/1/89 Date 4/2/90

WESTINGHOUSE SAVANNAH RIVER COMPANY

GROUNDWATER MONITORING WELL
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Environmental
Protection Section

WELL INSPECTION/ACCEPTANCE

Well number ICBIR 1111 111

Well inspected by Janelle Janssen

Date 3/15/90

Well accepted by Janelle Janssen

Date 3/15/90

SAVANNAH RIVER PLANT DAILY ACTIVITIES REPORT

PROJECT BAP-6G RFI 2bble #1		DRILLING SUBCONTRACTOR EMTC	
WELL NO. CSB-1D		DRILLER BAVE Cunningham #649	
SRP COORDINATES		OVERSIGHT FIRM W.E.G.S.	
CUSTODIAN S.J. Montrop		DATE 01-24-90	PAGE 1

START	STOP	DESCRIPTION OF ACTIVITIES; REMARKS				
0730		- crew at site completing setup.				
0745		- pickup radio travel to site CSB-1D BAP-6G				
0820		- CSB-2D water level 150.0 ft				
0845		- commence drilling to 12.0' ft. with 9 7/8" bit				
1000		- at 12.0' ft, crew to pull bit and add core bit.				
		then commence coring. - mix 1 bag of Gel-toner.				
1030		- begin coring				
		Run #	From / To	Rec / Corcd	%	Comments
1030	1100	1	12 / 20	8.0 / 8.0	100	
1100	1138	2	20 / 30	4.75 / 10.0	48	
1138	1200	3	30 / 32	1.50 / 2.0	25	
1200	1205	4	32 / 40	.5 / 8.0	6	
1205	1215	5	40 / 45	4.0 / 5.0	80	
1215	1235	6	45 / 52	5.0 / 7.0	71	
1235	1260	7	52 / 60	7.0 / 8.0	88	
1300	1315	8	60 / 70	1.0 / 10.0	10	
1315	1330	9	70 / 72	1.0 / 2.0	50	
1330		- Denney here to see if we need Graves to log.				
1350	1410	Self to well house to check on HVB-1 information				
		- Decide to core to 77.0 ft.				
1430	1440	10	72 / 77	5.0 / 5.0	100	
1440		- crew to pull core pipe, Graves (DAN Wells) arrives to run geophysical logger.				
1545		- logger leaves (1hr) - On CSB-2D development is in progress				
1555		- crew to begin reaming hole to 77.0 ft T.D. with 9 7/8" bit				
1645		- crew at 30.0 ft. with 9 7/8" bit.				

FIELD REPRESENTATIVE SIGNATURE

DATE 01-24-90

SAVANNAH RIVER PLANT DAILY ACTIVITIES REPORT

PROJECT BRP-6G RFI Rubble Pit		DRILLING SUBCONTRACTOR EMTC	
WELL NO. CBR-1D		DRILLER Dave Cunningham #649	
SRP COORDINATES		OVERSIGHT FIRM W.B.G.S	
CUSTODIAN S.J. Mentrop		DATE 01-26-90	PAGE 2

START	STOP	DESCRIPTION OF ACTIVITIES; REMARKS
0715		- Crew at site - Continue to ream. Terry on CSB-2D
0730		- At well house to get radio & core boxes. Talk to Janelle about grout inside CSB-2D.
0810		- AT CSB-2D - Sound T.D. of well at 79.0 ft. WATER level AT 50.45 ft. , Alt at 12.01 - evidence of construction deficiencies.
0838		- Reaming with 9 7/8" bit AT 35.0 ft.
0850		- To well house to confer with Janelle Janssen on well CSB-2D - crew continues reaming.
0937		- Back at site, reaming AT 44.0 ft.
1030		- crew AT 62.0 ft. with 9 7/8" bit.
1100		- crew AT 75.0 ft. 2.0 ft "ATHOLD" - WORK TO BE SET AT 73.0'
		slump / plug length X5.40'
		screen 20.02 note: 1 section is broken replace section
		Risers 10.02, 10.02, 10.01, 10.03, 10.02, 5.02
		HOLD T.D. TAG 74.40 ft.
		gravel pack TAG 44.00 11 BAGS Fine sand tag 41.30, 1 BAG Bentonite TAG 37.30, 2 Buckets
1115		clean Tremie Pipe, Borehole fluids at 29.0 seconds utilizing Marsh Funnel
1150		- pull rods check T.D. install well PVC.
1211		- Slump T.D. AT 73.0 ft. install gravel pack (FX-50).
1234		- 6 BAGS TAGGED AT 57.0' - 11 BAGS TAGGED AT 44.0 ft.
		- 1 BAG Fine SAND (FX30) Tagged AT 41.30 ft.
		- 2 Buckets Bentonite Pellets Tagged AT 37.30 ft.
1310	1340	Jim Furlow arrives at site to audit. Self off-site at 1615

FIELD REPRESENTATIVE SIGNATURE

DATE 01-26-90

Screen Zone Elevation Work Sheet

Date: 5-2-90

Well I.D.: 1B12 1D

Calculations by: Bathy Kanni

Screen Zone Elevation (MSL): Top 250.9 (Bottom) 230.9

Method of Calculation:

* Ground Elevation

298.5

** Length of Casing to Top of Screen

- 47.6

250.9 Top of Screen

** Length of Screen

- 20.0

230.9 Bottom of Screen

* Data from Dan Lindsey, Surveying & Mapping Consultants, Savannah River Site Monitoring Well Data, 3-30-90.

** Data from DPSOP 254, 8-1-89, SRP Monitoring Well Installation Report.

Proofed by: Linda Switzer

Date: May 10, 1990

CBR-2

MONITORING WELL CONSTRUCTION DIAGRAM

DRILLING SUBCONTRACTOR EMTC

WELL NUMBER CBR-2D

OWNER Bruce Cunningham #649

SRS COORDINATES _____

DATE OF WELL INSTALLATION 01-23-90

SANITARY SEAL ELEVATION _____

TECH. O.S./CO. NAME Eric J. Stern / W.G.S.

NOTE: ALL MEASUREMENTS
ARE FROM GROUND
SURFACE AT START
OF BORING - MEASUREMENTS
TO NEAREST 0.1 FOOT.

1) Total Drilled Depth/Hole Diameter 82.05 ft / 9 7/8"

2) Casing/Screen Tally (Measured to Nearest 0.01 Foot)

(a) Sump & Plug Length 5.39

(b) Screen Length 20.00

(c) Casing Joint Lengths (Measured in Up-hole Sequence From Top of Screen) 10.02, 10.02, 10.01, 10.03, 10.02, 10.02

(d) Depth to Top of Screen 53.61

3) Depths to Centralizers 74.61, 52.61, 12.61

4) Total Depth of Installed Well 79.00 ft

5) Casing Stick Up (Standard 2.5' A.G.S.) _____

6) Depth to Top of Filter Pack 47.57

7) Depth to Top of Fine Sand Seal 45.57

8) Depth to Top of Bentonite Seal 41.03

9) Thickness of Grout 13.5, 13.1 lbs/gal 315'

WESTINGHOUSE SAVANNAH RIVER COMPANY

GROUNDWATER MONITORING WELL
INSTALLATION

SRS MONITORING WELL INSTALLATION REPORT

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Protection Section

SRS MONITORING WELL INSTALLATION REPORT

GENERAL INFORMATION

Well number CBB 21D1 111

Installation purpose RFI Rubble Pit AT BPP-6G monitoring

Project name BPP-6G RFI Buried Rubble Pit

Custodian S.J. Montrop Custodial dept. _____

SRS coordinates: North _____ East _____

Location description _____

County Barnwell

Drilling contractor S.M.T.C.

Driller BAVE Cunningham

Oversight contractor W.G.G.S.

Oversight Eric J. Stern

SCDHEC well site approval date 1/1/90

Well start date 01/19/90

Verified by _____

Date 1/1/90

Report prepared by Eric J. Stern W.G.G.S.

Date 01/25/90

WESTINGHOUSE SAVANNAH RIVER COMPANY

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DRILLING INFORMATIONWell number C.B.R. 211

Drill rig(s) used (make/model):

1) Gardner Denver 1500 From/To (ft) Surface to 80.0 ft.
2) From/To (ft)

Total drilled depth of borehole 80.0 ft.Date hole completed 01 / 23 / 90 Oversight Eric J. Stern

Note: Depths are measured from ground surface to the nearest 0.1 ft.

DRILLING METHOD:

	<u>Dia. (in)</u>	<u>From (ft)</u>	<u>To (ft)</u>
Auger			
Mud rotary	<u>9 7/8</u>	<u>0.0</u>	<u>80.0</u>

REAMING HOLE:

<u>Purpose</u>	<u>Dia. (in)</u>	<u>From (ft)</u>	<u>To (ft)</u>
<u>well installation</u>	<u>9 7/8</u>	<u>0.0</u>	<u>80.0</u>

Total borehole deviation (degrees/minutes) n/rType of drilling mud used Baroid quick gelWater source potable water (production well)DRILLING FLUID ADDITIVES USED:

	<u>Type</u>	<u>Quantity</u>
1)	<u>n/r</u>	
2)		

LOST CIRCULATION ZONE ADDITIVES USED:

	<u>Product</u>	<u>Quantity</u>	<u>Depth Interval (ft)</u>
1)	<u>n/r</u>		
2)			
3)			

WESTINGHOUSE SAVANNAH RIVER COMPANY

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Protection Section

CAVING, SQUEEZING CLAY, AND/OR LOST CIRCULATION ZONES:

	Problem	From (ft)	To (ft)	Solution to Problem
1)	n/r			
2)				
3)				

GEOLOGIC SAMPLING:

Sampling Method	Sampling Frequency	From (ft)	To (ft)
Wireline coring	continuous	12.0	80.0
Conventional coring			
Wash cuttings			
Split spoon			
Shelby tube			

Percent core recovery 51 Lithologic descriptions by C. J. Stern
Sample storage location Gunsite

HOLE BACKFILLED:

	Material Used	Quantity	From (ft)	To (ft)	Date
1)	n/r				
2)					

Drilling/Sampling comments

Verified by _____
Date 1/1/90

Report prepared by C. J. Stern
Date 01/25/90

WESTINGHOUSE SAVANNAH RIVER COMPANY

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GEOPHYSICAL LOGGING

Well number C.B.R. 2.D

Geophysical logging subcontractor n/r

Logging truck operator Oversight

GEOPHYSICAL LOGS PERFORMED: n/r

Date logged / / Date logged / /

	Type of log	From (ft)	To (ft)	From (ft)	To (ft)
1)	Long and Short				
	Normal Resistivity				
2)	Single Point Resistivity				
3)	Spontaneous Potential				
4)	Natural Gamma Ray				
5)	Borehole Caliper				
6)	Neutron Density				
7)					
8)					

Depth logging tool-encountered bottom of hole

Geophysical logging comments

Verified by
Date / /

Report prepared by
Date 01/25/90

WESTINGHOUSE SAVANNAH RIVER COMPANY

GROUNDWATER MONITORING WELL INSTALLATION

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WELL INSTALLATION

Well number CBR 21D Installed by EMIC
Date well installed 01/23/90 Oversight Eric J. Stew W.E.G.S.
Sieve analysis performed? Y N ✓

Note: Depths are measured from ground surface to the nearest 0.1 ft.

SURFACE CASING:

Type of Material	Schedule or Thickness	Nominal I.D. (in)	Type Joint	Bottom Depth	Sacks Grout
<u>n/r</u>					

WELL CASING:

Type of Material	Schedule or Thickness	Nominal I.D. (in)	Type Joint	From (ft)	To (ft)
<u>PVC</u>	<u>40</u>	<u>4.0</u>	<u>Threaded</u>	<u>+2.50</u>	<u>47.57</u>

Number and type of casing centralizers used 3, PVC

WELL SCREEN:

Type of Material	Nominal I.D. (in)	Slot Type	Slot Size (in)	From (ft)	To (ft)
<u>PVC</u>	<u>4.0</u>	<u>machine</u> <u>0.010</u>	<u>0.010</u>	<u>53.61</u>	<u>73.61</u>

WELL SUMP AND SUMP CAP:

Type of Material	Schedule or Thickness	Nominal I.D. (in)	Type Joint	Sump Only:	
<u>PVC</u>	<u>40</u>	<u>4.0</u>	<u>Threaded</u>	From (ft)	To (ft)
				<u>73.61</u>	<u>78.61</u>
Type of sump cap installed <u>PVC</u>				Length (ft)	<u>.39</u>
Depth from ground surface to bottom of sump can <u>79.00 ft</u>					

WESTINGHOUSE SAVANNAH RIVER COMPANY

GROUNDWATER MONITORING WELL INSTALLATION

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FILTER PACK:

Product Name	Average Grain Size (Units)	Uniformity Coefficient	Number of Sacks/Wt.	From (ft)	To (ft)
<u>Foster-Durham 20.010"</u>	<u>1/2</u>	<u>9/94lbs</u>	<u>47.57</u>	<u>79.00</u>	
<u>FX-50/ Fine Sand</u>			<u>45.57</u>	<u>47.57</u>	

BENTONITE SEAL:

Method of installation Tremie pipe emplacement technique

Product Name	Size (in)	Hydration Time (hrs)	Number of 5-Gal Buck.	From (ft)	To (ft)
<u>APACHE</u>					
<u>Bentonite Pellets</u>	<u>3/8</u>	<u>2.0</u>	<u>2</u>	<u>41.03</u>	<u>45.57</u>

ANNULAR GROUT:

Date grouting of well completed 01/23/90 Oversight Eric J. Stern W.E.G.S.
 Grout mix used Portland Type I cement w/ Bentonite additive

Method of installation Tremie pipe emplacement, side discharge technique

Grout Stage	Date Installed	Sacks of Cement	Sacks of Bentonite	Pumped Weight	From (ft)	To (ft)
<u>1</u>	<u>01/23/90</u>	<u>13</u>	<u>1</u>	<u>13.5/13.1 lbs/gal</u>	<u>Surface</u>	<u>41.03</u>
<u>2</u>	<u> / / </u>					
<u>3</u>	<u> / / </u>					
<u>4</u>	<u> / / </u>					
<u>5</u>	<u> / / </u>					
<u>Total</u>						

Well installation/grouting comments Borehole fluids at 29 seconds
utilizing Marsh funnel prior to well installation.

Verified by _____
 Date / /

Report prepared by Eric J. Stern W.E.G.S.
 Date 01/23/90

SRS MONITORING WELL INSTALLATION REPORT

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Well number Developed by

Date started / / Date completed / /

Oversight

	<u>Hours</u>	<u>Results</u>
Bailing		
Swabbing and surging		
Air lift		
Pumping		
<u>Total hours</u>		

Estimated volume of water removed during development (gal) _____

Well development comments _____

Verified by _____ Report prepared by _____
Date ____/____/____ Date ____/____/____

WESTINGHOUSE SAVANNAH RIVER COMPANY

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PUMP INSTALLATION/WELLHEAD COMPLETION

Well number

Date pad and protective well housing installed ____/____/____

Date pump installed ____/____/____ Capacity (gpm) _____

Pump installed by _____

Pump type _____ Diameter (in) _____

Pump model number _____ Manufacturer _____

Serial number _____ Horsepower _____ Voltage _____

Depth from ground surface to top of pump (ft) _____

Depth to static water level (ft) _____

Depth from top of casing to top of pump (ft) _____

Comments _____

Date well ready for sampling ____/____/____

Verified by _____ Report prepared by _____

Date _____

Date ____/____/____

WESTINGHOUSE SAVANNAH RIVER COMPANY

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Environmental

Protection Section

SURVEY REPORT

Well number

SRS Coordinates: North East

Latitude Longitude

Height of top of well seal above ground surface datum (ft)

Surveyed well elevation (height of top of well seal above mean sea level) (ft)

Ground surface elevation (mean sea level) (ft)

Elevation of liquid level pipe (ft)

Verified by Report prepared by

Date / /

Date / /

WESTINGHOUSE SAVANNAH RIVER COMPANY

GROUNDWATER MONITORING WELL
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WELL INSPECTION/ACCEPTANCE

Well number

Well inspected by _____ Date ____/____/____

Well accepted by _____ Date ____/____/____

[illegible]

DATE 1/19/90

SAVANNAH RIVER PLANT DAILY ACTIVITIES REPORT

PROJECT		CSR-20 RET Pebble Pit BRP-6G		DRILLING SUBCONTRACTOR		EMTC	
WELL NO.		CSR-20		DRILLER		Dave Cunningham 649	
SRP COORDINATES				OVERSIGHT FIRM		W. E. G. S.	
CUSTODIAN		S.J. Mentrup		DATE		01-22-90	
				PAGE		1	

START	STOP	DESCRIPTION OF ACTIVITIES; REMARKS				
0600		- Leave Columbia to well House				
0745		- At well house - obtaining info				
0830		- Set up for coring - fill tub with water				
0900		Run # 1 to Rec/cored No comments				
0900		1 / n/a				
0905	0935	- core barrel is hung up in core bit - pulled to attempt removal.				
0935	0955	1	12/20	42/2.0	50 %	
0955	1030	2	20/25	1.5/5.0	30	slow coring
1030	1130	3	25/30	1.0/5.0	20	
1130	1135	4	30/32	1.0/2.0	50	
1135	1150	5	32/40	1.5/8.0	6	
1150	12:05	6	40/45	3.0/5.0	20	
1205	1220	7	45/50	1.0/5.0	20	
1225	1240	8	50/52	0.5/2.0	25	
1240	1300	9	52/60	5.0/8.0	62	
1300	1320	10	60/70	7.5/10	75	
1320	1325	11	70/72	1.75/2.0	83	
1325	1330	12	72/80	8.0/8.0	100	
1340		- STOP to get water - Denny at site				
1400		- Denny off-site.				
1410		- STOP back with water truck - Hole T.D. at 81.0 ft.				
		- ream hole to core T.D. (80') with 9 7/8 bit				
1445		- pulled core pipe (75.0') - Install 9 7/8" bit to ream				
1530		- Denny of BRP at site - said Hole is to be logged				
	1630	prior to well construction - self off-site				
1700		- BRP - leaves site				

FIELD REPRESENTATIVE SIGNATURE

DATE 01-22-90

SAVANNAH RIVER PLANT DAILY ACTIVITIES REPORT

PROJECT DRP-68 REI Rubble Pit		DRILLING SUBCONTRACTOR EMTC	
WELL NO. CSR-20		DRILLER Dave Cunningham # 649	
SRP COORDINATES		OVERSIGHT FIRM (W) B.G.S.	
CUSTODIAN JAH S.J. Montrop		DATE 01-23-90	PAGE 1

START	STOP	DESCRIPTION OF ACTIVITIES; REMARKS
0730		CREW ARRIVES & CONTINUES TO EXAM - SELF AT WELL HEAD (TC1)
0800		SELF AT SITE - CREW AT 40.0' WITH REAMING BIT
		- SHORE TO GET WATER - CUNNINGHAM / RABBIT TO CALL
0845	0905	DENNY ON BROKEN HOSE - HOSE AT 160.0 FT.
0930		- 9 7/8" AT 82.0' (2.02 HOURS). WAITING ON
		LOGGER (GRAVES) - CONDITION / CIRCULATE HOLE
0940		- GRAVES HERE TO LOG. EMTC TO PULL DRILL ROD
		TO ENABLE LOGGING
1030		- GRAVES DRILL IS INOPERATIVE TO LOG (DAN) TO CALL
		OFFICE FOR ADVICE - ASPER Janelle Janssen "SKIP
		LOGGING INTERCOM ON ANOTHER WELL.
1130		CHINA LENGTHS 6 10.02, 10.02, 10.01, 10.03, 10.02, 10.02 FT.
		CENTRALIZED DEPTHS [74.6, 52.6, 12.6] TOTAL 85.52
		JUMP / PLUG LENGTH 5.39 FT. STICK UP 6.52 6.52
		GRAVEL PACK TAG 47.57 FT.
		FINE SAND TAG 45.57 FT.
		BENTONITE TAG 41.03
		GROUT WEIGHT 13.5 / 13.1 LBS/GAL
		SCREEN [73.61 to 53.61] 20.02 (PAIL + 10.01 FT.)
		11 OPEN HOLE TAG LINE 79.00 FT.
1150		- COMPLETE DECONTAMINATION PROCEDURES ON WELL
		MATERIALS, TREMIE PIPE & TAG LINE.
1240		- 7 BAGS AT 55.50'
		- 9 BAGS AT (EX-50) TO 47.57 FT.
		- 1 BAG AT (EX-30) FINE TO 45.57 FT.
1315		- 2 BIRKETS BENTONITE PELLETS TO 41.03 FT.
		- CREW TO (OA) PIG & SET UP AT CSB-1D / DECON ETC. - ALSO OBTAIN
		- GROUT MIX TO COMPLETE WELL.

FIELD REPRESENTATIVE SIGNATURE

DATE 01-23-90

CBR-3

MONITORING WELL CONSTRUCTION DIAGRAM

DRILLING SUBCONTRACTOR E.M.T.C.

WELL NUMBER CBR-3D

DRILLER B. Cunningham

SRS COORDINATES N60.388.53 E 52627.19.

DATE OF WELL INSTALLATION 2/14/90

SANITARY SEAL ELEVATION 301.76

TECH. O.S./CO. NAME Kevin D. Craig / WEGS.

liquid level pipe elev. 301.98

NOTE: ALL MEASUREMENTS
ARE FROM GROUND
SURFACE AT START
OF BORING - MEASUREMENTS
TO NEAREST 0.1 FOOT.

1) Total Drilled Depth/Hole Diameter 75 ft / 9.78"

2) Casing/Screen Tally (Measured to Nearest 0.01 Foot)

(a) Sump & Plug Length 4.98 ft / 0.29 ft

(b) Screen Length 20.00 ft

(c) Casing Joint Lengths (Measured in Up-hole Sequence From Top of Screen)

10.01, 10.01, 10.01, 10.01, 7.96

(d) Depth to Top of Screen 45.5 ft

3) Depths to Centralizers 66.5, 44.5, 4.5

4) Total Depth of Installed Well 70.77 ft

5) Casing Stick Up (Standard 2.5' A.G.S.) 2.5 ft

6) Depth to Top of Filter Pack 41.4 ft

7) Depth to Top of Fine Sand Seal 39.4 ft

8) Depth to Top of Bentonite Seal 34.5 ft

9) Thickness of Grout 34.5 ft

SAVANNAH RIVER PLANT DAILY ACTIVITIES REPORT

PROJECT BRP 6 G		DRILLING SUBCONTRACTOR E. MTC	
WELL NO. CBR-3D		DRILLER B. Cunningham	
COORDINATES		OVERSIGHT FIRM D.E.G.S.	
CUSTODIAN J. Janssen		DATE 2/13/90	PAGE 1/2

START	STOP	DESCRIPTION OF ACTIVITIES; REMARKS
0800		At well house picking up materials
0845	0845	At site, complete records + prepare for coring
0930		SCDAEC on site w/ visitors:
		Bob Benson SCDAEC
		Mary Flora WSRC
		Elizabeth Razer NUS
		Tracy Killian WSRC
		Jim Furlow
		Janelle Janssen
	1000	Benson approved locations; going with total 4 wells
1000	1015	Visitors off site
1015		Crew setting up on CBR-3D.
		(water level in CSR-2D @ 50.5 ft b/s.)
	1110	16 inches from l.s. to top of mud pan
1110		Don Morris (WSRC Env. Protection) checking if site (BRP) has proper signs; *not related to drilling project; Don off site
	1115	Drillers ready to start drilling; begin reaming
1115	1135	out hole
1135		At 12 ft b/s setting up to core
		mixed 1 bag of gel
		Run from/to rec/cored %
1210		1 12/30 8/8 100 Run to get water
1245		2 20/27 6/7 93
1320		3 27/32 3.4/5 78
1355		4 82/40 8/8 100

FIELD REPRESENTATIVE SIGNATURE

*Ken King*DATE **2/14/90**

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

Ground Water Protection Division 2600 Bull Street Columbia, S.C. 29201 (803) 734-5213 Water Well Record

1. LOCATION OF WELL

County: **BARNWELL** System Name: **CBR-3D**

Latitude: **33-14-49.62** Longitude: **81-38-52.17**

Distance And Direction from Road Intersections

* SEE ATTACHED MAP

Street address & City of Well Location

Sketch Map:

*SEE ATTACHED MAP

2. CUTTING SAMPLES ☒ Yes ☐ No

Geophysical Logs ☒ Yes (Please Enclose) ☐ No

FORMATION DESCRIPTION

THICKNESS
OF
STRATUM DEPTH TO
BOTTOM OF
STRATUM

CLAYEY SAND	19.5	19.5
SAND	3	22.5
CLAY	25	47.5
SAND TO CLAYEY SAND	17	64.5
CLAYEY SAND TO CLAY	10.5	75

* Indicate water bearing zones

(use a 2nd sheet if needed)

3. REMARKS

** ALL MEASUREMENTS ARE RELATIVE
TO GROUND SURFACE

4. OWNER OF WELL:

Address DEPARTMENT OF ENERGY
AIKEN, S.C. 29801

Telephone No.

Engineer WESTINGHOUSE ENVIRONMENTAL & GEOTECHNICAL SERVICES
Address 11 TECHNOLOGY CIRCLE
COLUMBIA, SC 29203
Telephone No. (803) 735-0578

5. WELL DEPTH (Completed)

70.8 ft. Date Started: 2-13-90
Date Completed: 2-21-90

6. DRILL METHOD MUD ROTARY

7. USE: MONITOR WELL

Public Supply-Permit No. _____

8. CASING THREADED

Diam. 4 in.

Type PUC

4 in. to 45.5 ft. depth

Height: Above/Below (ft.)

Surface 2.5 / 45.5

Weight: NR lbs./ft.

Drive Shoe? Yes ☐ No ☒

9. SCREEN:

Type: PUC SCH 40 Diam 4 in.

Slot/Gauze 0.016 in. Length 20.0 ft.

Set Between 45.5 ft. and 65.5 ft. NOTE: MULTIPLE SCREENS
USE SECOND SHEET

Sieve Analysis ☐ Yes (Please Enclose) ☒ No

10. STATIC WATER LEVEL

52.5 ft. below land surface after 24 hours

11. PUMPING LEVEL Below Land Surface

_____ ft. after _____ hrs. pumping _____ GPM

Pumping Test: ☐ Yes (Please Enclose) ☒ No

Yield _____

12. WATER QUALITY

Chemical Analysis ☐ Yes ☒ No Bacterial Analysis ☐ Yes ☒ No

Please Enclose Lab Results

13. ARTIFICIAL FILTER (Gravel Pack) ☒ Yes ☐ No

Installed from 39.4 ft. to 75 ft.

Effective size .45-.55mm uniformity coefficient < 1.7

14. WELL GROUTED? ☒ Yes ☐ No

NEAT CEMENT, 6% BENTONITE

Depth From 0.0 ft. to 34.5 ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction

_____ Type Well disinfected ☐ Yes ☒ No Type _____
upon completion

Amount _____

16. PUMP Date Installed 2-21-90

not installed ☐

Mfr. name GRUNDFOS

Model no. 10305-9

HP. 1/2 VOLTS 115

Length of drop pipe 66.0 ft.

Capacity 10 gpm Pump Type SUBMERSIBLE

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

REGISTERED ENVIRONMENTAL
BUSINESS ADDRESS BOX 750
NAME MONITORING & TESTING CO NEW ELLENTON, SC

CERT. NO. 609

Signed

Reinhold C. Corder
AUTHORIZED REPRESENTATIVE

Date 6-8-90

SAVANNAH RIVER PLANT DAILY ACTIVITIES REPORT

PROJECT Central Shops BRP-6G		DRILLING SUBCONTRACTOR E.M.T.C.	
WELL NO. CBR-3D		DRILLER B. Cunningham	
COORDINATES		OVERSIGHT FIRM (W) EGS	
CUSTODIAN J. Janssen		DATE 2/14/90	PAGE 1/2

START	STOP	DESCRIPTION OF ACTIVITIES; REMARKS
0730		Craig at well house; crew going to site to begin reaming out hole; Craig to work on reports
0930	1000	Steve picking up materials; " "
1000		Craig + crew at site; Craig to get W.C.P. signed;
1051		Back on site; Steve steam cleaning all materials
		1 casing 10.07
		2 casing 10.09
		3 casing 10.01
		4 casing 10.01
		5 casing 10.01
		6 screen 10.0
		7 screen 10.0
		8 sump 4.98 feet
		9 plug 3.5 inches
		Well material inspected; free from defect.
		Inspected gravel pack tremie line; clean free of grout (grout not used w/ anything but pack)
1115	1155	Red pipe out of hole; 70' tagged at 73.8 ft b/s; installing well material
		Adding gravel pack (EX-50)
1150	1157	6 sacks Tag at 56.7 ft b/s
1150	1157	4 sacks Tag at 44.8 ft b/s
1157		1.25 sack Tag at 41.4 ft b/s
1215		Adding fine sand Br-3D

FIELD REPRESENTATIVE SIGNATURE

Kent Craig

DATE 2/14/90

[illegible]

SAVANNAH RIVER PLANT DAILY ACTIVITIES REPORT

PROJECT <u>Central Shops</u>		DRILLING SUBCONTRACTOR <u>EMITC</u>	
WELL NO. <u>CBR-3D</u>		DRILLER <u>B. Cunningham</u>	
COORDINATES		OVERSIGHT FIRM <u>(12) EGS</u>	
CUSTODIAN <u>S. Janssen</u>		DATE <u>2/14/90</u>	PAGE <u>2/2</u>

START	STOP	DESCRIPTION OF ACTIVITIES; REMARKS
1215		1 sacks tag at 39.4
	1225	Adding bentonite
		2 buckets tag at 34.5
		tagged top of bentonite inside tremie
	1235	and outside tremie on backside of pipe
1235		Waiting on pellets to hydrate ;
		Crew cleaning up, deconing equipment
	1425	Craig to well house to
1425		Craig + crew on site ; tagged top of
	1440	bentonite (hard tag) at 34.2 ft b.l.s.
1440		(tagged all the way around pipe)
1440		Installed 30 ft of tremie
		* Tagged top of cement in CBR-1D at 11.3
		ft b.l.s.
	1455	Mixing 7 sacks cement ; adding bentonite
1455		Grout weight as pumped : 13.7 lbs/gal
		Mixing 5 sacks cement adding bentonite
	1510	Grout weight as pumped 13.8 lbs/gal
1510		Craig to well house to get sample
	1539	bags.
1539		Craig on site ; Drillers setting up
	1615	on Replacement well for CBR-2D
1615		Start drilling
	1644	At 20 ft. ; clean up & leave site
1644	1700	Craig at well house, return equipment, off site

FIELD REPRESENTATIVE SIGNATURE

Kerith

DATE

2/14/90

Screen Zone Elevation Work Sheet

Date: 5-2-90

Well I.D.: CBR 30

Calculations by: Cathy Kerner

Screen Zone Elevation (MSL): Top 254.1 (Bottom) 234.1

Method of Calculation:

* Ground Elevation	<u>299.6</u>	
** Length of Casing to Top of Screen	<u>- 45.5</u>	
	<u>254.1</u>	Top of Screen
** Length of Screen	<u>- 20.0</u>	
	<u>234.1</u>	Bottom of Screen

* Data from Dan Lindsey, Surveying & Mapping Consultants, Savannah River Site Monitoring Well Data, 3-30-90.

** Data from DPSOP 254, 8-1-89, SRP Monitoring Well Installation Report.

Proofed by: Linda Bassinger Date: 5/10/90

WESTINGHOUSE SAVANNAH RIVER COMPANY

GROUNDWATER MONITORING WELL
INSTALLATION

SRS MONITORING WELL INSTALLATION REPORT

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SRS MONITORING WELL INSTALLATION REPORT

GENERAL INFORMATION

Well number C.B.R. 1131 D

Installation purpose _____

Project name Central Shops Burning Rubble Pit (BRP-6G) RFI

Custodian S. S. Wentrup Custodial dept. _____

SRS coordinates: North _____ East _____

Location description _____

Drilling contractor E. M. T. C. County _____

Oversight contractor W. E. G. S. Driller Bare Cunningham

SCDHEC well site approval date 2/13/90 Oversight Kevin D. Craig

Well start date 2/13/90

Verified by _____

Date 1/1/

Report prepared by Kevin D. Craig WEGS

Date 2/14/90

WESTINGHOUSE SAVANNAH RIVER COMPANY

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DRILLING INFORMATION

Well number C.B.R. 1131A

Drill rig(s) used (make/model):

1) Gardner Denver 1500 From/To (ft) 0 - 75
2) _____ From/To (ft) _____

Total drilled depth of borehole 75 ft

Date hole completed 21/3/90 Oversight Kevin D. Craig

Note: Depths are measured from ground surface to the nearest 0.1 ft.

DRILLING METHOD:

	Dia. (in)	From (ft)	To (ft)
Auger			
Mud rotary			
<u>Continuous Core</u>	<u>4.5</u>	<u>12.0</u>	<u>75.0</u>

REAMING HOLE:

Purpose	Dia. (in)	From (ft)	To (ft)
<u>to set well</u>	<u>9 7/8</u>	<u>0</u>	<u>75</u>

Total borehole deviation (degrees/minutes) N/A

Type of drilling mud used Baroid quick gel

Water source Potable water TCI

DRILLING FLUID ADDITIVES USED:

Type	Quantity
1) <u>N/A</u>	
2) _____	

LOST CIRCULATION ZONE ADDITIVES USED:

Product	Quantity	Depth Interval (ft)
1) <u>N/A</u>		
2) _____		
3) _____		

WESTINGHOUSE SAVANNAH RIVER COMPANY

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CAVING, SQUEEZING CLAY, AND/OR LOST CIRCULATION ZONES:

	Problem	From (ft)	To (ft)	Solution to Problem
1)	N/A			
2)				
3)				

GEOLOGIC SAMPLING:

Sampling Method	Sampling Frequency	From (ft)	To (ft)
Wireline coring	continuous	12.0	75.0
Conventional coring			
Wash cuttings			
Split spoon			
Shelby tube			

Percent core recovery 90

Sample storage location

Lithologic descriptions by Kevin A. Craig
Granite

HOLE BACKFILLED:

	Material Used	Quantity	From (ft)	To (ft)	Date
1)					/ /
2)					/ /

Drilling/Sampling comments

Verified by _____
 Date 1/1/

Report prepared by Kevin A. Craig
 Date 2/14/90

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GEOPHYSICAL LOGGING

Well number C1B1R 1113 111D

Geophysical logging subcontractor Graves Well Drilling

Logging truck operator L.F. Alaniz Oversight Kevin A. Craig

GEOPHYSICAL LOGS PERFORMED:

Date logged 2/13/90 Date logged 1/1/

Type of log	From (ft)	To (ft)	From (ft)	To (ft)
1) Long and Short	0	76		
Normal Resistivity	0	76		
2) Single Point Resistivity	0-	76		
3) Spontaneous Potential	0	76		
4) Natural Gamma Ray	0	76		
5) Borehole Caliper	0	76		
6) Neutron Density	0	76		
7)				
8)				

Depth logging tool encountered bottom of hole 76.4

Geophysical logging comments

Verified by _____
Date 1/1/

Report prepared by Kevin A. Craig
Date 2/14/90

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WELL INSTALLATION

Well number C1B1R 1113 110 Installed by Kevin R. M.T.C.

Date well installed 2/14/90 Oversight Kevin D. Craig

Sieve analysis performed? Y N X

Note: Depths are measured from ground surface to the nearest 0.1 ft.

SURFACE CASING: N/A

Type of Material	Schedule or Thickness	Nominal I.D. (in)	Type Joint	Bottom Depth	Sacks Grout

WELL CASING:

Type of Material	Schedule or Thickness	Nominal I.D. (in)	Type Joint	From (ft)	To (ft)
<u>PVC</u>	<u>4</u>	<u>4</u>	<u>Flush Threaded</u>	<u>0</u>	<u>45.5</u>

Number and type of casing centralizers used 3 / PVC

WELL SCREEN:

Type of Material	Nominal I.D. (in)	Slot Type	Slot Size (in)	From (ft)	To (ft)
<u>PVC</u>	<u>4</u>	<u>Machine</u>	<u>0-016</u>	<u>45.5</u>	<u>65.5</u>

WELL SUMP AND SUMP CAP:

Type of Material	Schedule or Thickness	Nominal I.D. (in)	Type Joint	Sump Only:	
<u>PVC</u>	<u>40</u>	<u>4</u>	<u>Flush threaded</u>	From (ft)	To (ft)
				<u>65.5</u>	<u>70.5</u>

Type of sump cap installed PVC Length (ft) 3 ft

Depth from ground surface to bottom of sump cap 70.8

WESTINGHOUSE SAVANNAH RIVER COMPANY

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FILTER PACK:

Product Name	Average Grain Size (Units)	Uniformity Coefficient	Number of Sacks/Wt.	From (ft)	To (ft)
EX-50	45-55	1.7	11.25	41.4	73.8
BX-30	fine sand			39.4	41.4

BENTONITE SEAL:

Method of installation Wash tremie

Product Name	Size (in)	Hydration Time (hrs)	Number of 5-Gal Buck.	From (ft)	To (ft)
Apache Bentonite	1/4	2.3	2	34.5	39.4

ANNULAR GROUT:

Date grouting of well completed 2/14/90 Oversight Kent Gray
Grout mix used 1 sack cement / 2 lbs bentonite / 7 gal H₂O

Method of installation pumped through tremie

Grout Stage	Date Installed	Sacks of Cement	Sacks of Bentonite	Pumped Weight	From (ft)	To (ft)
1	2/14/90	12	.25	13.7/13.8	3	34.5
2	1/1					
3	1/1					
4	1/1					
5	1/1					
Total						

Well installation/grouting comments

Verified by

Date 1/1/

Report prepared by

Date

Kent Gray
2/15/90

WESTINGHOUSE SAVANNAH RIVER COMPANY

GROUNDWATER MONITORING WELL
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WELL DEVELOPMENTWell number CBR 3DDeveloped by 7-11-Terry Hornsby
11-5-Jonathan ShopeDate started 2/15/90Date completed 2/16/90

Oversight _____

DEVELOPMENT METHOD:

	Hours	Results
Bailing	<u>2/15 7-5</u>	<u>Bailed from 7-5 and then started</u>
Swabbing and surging	<u>2/15 11-5</u>	<u>Swabbing. Bail for an hour and</u>
Air lift	<u>2/16 7-10</u>	<u>Swab for an hour. Got very muddy</u>
Pumping	_____	<u>But started clearing up after the</u>
	_____	<u>second swabbing process.</u>
Total hours	<u>13 hrs.</u>	

Type and quantity of additives (including water) placed in well during development:

I added enough water to fill the well for swabbing.
since when I haven't had to add any more. Really very good
 Estimated volume of water removed during development (gal) 236 Gal.

	pH	Conductivity	Turbidity	Water Level
Start of development	<u>5</u>	_____	<u>Muddy</u>	<u>48.3</u>
End of development	<u>4</u>	_____	<u>little cloudy</u>	_____
Well yield (gpm)	_____	_____	_____	_____

Well development comments

After swabbing the well - The recovery
got very good, and the well started clearing up very
good, the pH hasn't dropped any. 2-16-90 - The pH
has dropped from 5 to 4, and clearing up very good - little cloudy

Verified by _____

Date 1/1/90

Report prepared by _____

Date 2/16/90

"Experience makes the difference."

PUMP DATE SHEET

Corporate Office:
P.O. Box 750
New Ellenton, SC 29809
(803) 652-2718

Corporate Locations:
3605 Ventura Drive, East
Lakeland, FL 33811
(813) 647-1664

RL 3, Box 159
Kingsport, TN 37763
(615) 376-1546

P.O. Box 1752
Burlington, NC 27216-1752
(919) 227-0720

4435 Acworth Industrial Dr.
Acworth, GA 30101
(404) 975-1502

P.O. Box 29
Macon, GA 31318
(912) 746-7007

WELL NUMBER: CBR 3D

DATE OF INSTALLATION: 2/21/90

LOCATION: Central Shops

ACTIVITIES: Pump Installation

PUMP TYPE: Grundfos 1/2 H.P. ^{115'} SERIAL # 8805

RISER PIPE: 1" SCH 80 WATER LEVEL PIPE: 1" TRI-LOC

CONNECTOR TYPE: Butt WIRE TYPE: 12/3

CABLE TYPE: 3/16" S.S.

DEPTH OF WELL: 73 DEPTH OF PUMP SETTING: 68.5

WATER LEVEL: 52.5 GALLONS PER PUMP SETTING:

INSTALLER(S): BURRIS, Fulmer

TECHNICAL OVERSIGHT PERSONNEL:

COMMENTS ON INSTALLATION:

Environmental Soil Sampling
&
Drilling Service

Pump Sales
&
Service

WESTINGHOUSE SAVANNAH RIVER COMPANY

GROUNDWATER MONITORING WELL
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SURVEY REPORT

Well number C1B1R1 11131 1101

SRS Coordinates: North 60388.53 East 52627.09

Latitude 33-14-42.72 Longitude 81-38-43.92

Height of top of well seal above ground surface datum (ft) 2.5

Surveyed well elevation (height of top of well seal above mean sea level) (ft) 301.76

^{PAD}
Ground surface elevation (mean sea level) (ft) 299.6

Elevation of liquid level pipe (ft) 301.98

Verified by _____ Report prepared by Janelle Janssen
Date 1/1/ Date 4/21/89

WESTINGHOUSE SAVANNAH RIVER COMPANY

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Environmental
Protection Section

WELL INSPECTION/ACCEPTANCE

Well number LCBIR 113 1D

Well inspected by Janelle Janssen

Date 3/15/90

Well accepted by Janelle Janssen

Date 3/15/90

CBR-4

MONITORING WELL INSTALLATION REPORT

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WELL NUMBER (AAA.NNN.N)

CBR 04

GENERAL

Project Name

CENTRAL SHOPS BRF

Project Manager (last name, first initial)

RAY BLUNKETT

Installation Purpose (Monitoring, Piezometer, etc.)

TEMPORARY MONITORING

SRS North Grid Coordinate

SRS East Grid Coordinate

County

BARNWELL

Latitude (decimal degrees)

Longitude (decimal degrees)

Ground Elev.

Top Casing Elev.

Liq. Level Pipe Elev.

Department

GO - ENVIRONMENTAL ENGINEERING

Location Description

CENTRAL SHOPS BURNING RUBBLE PIT

DRILLING & SAMPLING

Drilling Start Date

11/4/94

Drilling Comp Date

11/4/94

Total Drilled Depth

62.0

Init. Static Water Level/Date

NA

Total Borehole Deviation (angle/direction)

NA

Drilling/Sampling Method

7 7/8" MUD ROTARY

Top Depth

NA

Bot Depth

NA

Diameter *

NA

Drilling/Sampling Method

Top Depth

Bot Depth

Diameter *

Drilling Company

EMTC

Driller (last name, initial)

BARNES, G

Overnight Company

RUST E & F

Overnight (petroleum, initial)

HUNTER, K

Drilling & Sampling Comments (drilling fluids used, source of water, lost circulation zones, etc.)

GEOPHYSICAL LOGGING

Date Logged

Logging Top Depth

Logging Bottom Depth

Logging Subcontractor

Logging Truck Operator

Geophysical Logs

☐ Calliper ☐ Gamma ☐ Natural Gamma ☐ Neutron Density ☐ Resistivity ☐ Single Pt. Resistivity ☐ L&S Normal Resistivity ☐ Spontaneous Potential

Other Geophysical Logs (list)

Backfill Top Depth

Backfill Bot Depth

Backfill Material (include type quantity and units)

Elevations measured from height above MSL.

Depths measured from ground surface to nearest 0.1 ft.

* Enter an "X" if cuttings were taken.

MONITORING WELL CONSTRUCTION DIAGRAM

DR. & SUBCONTRACTOR EMTC

WELL NUMBER CBR-04

DRILLER G. BARNES

SRS COORDINATES _____

DATE OF WELL INSTALLATION 11/4/94

SANITARY SEAL ELEVATION _____

TECH. O.S./CO. NAME KELLY HUNTER / RUST ETI

NOTE: ALL MEASUREMENTS
ARE FROM GROUND
SURFACE AT START
OF BORING - MEASUREMENTS
TO NEAREST 0.1 FOOT.

1) Total Drilled Depth/Hole Diameter 62.0 / 7 7/8"

2) Casing/Screen Tally (Measured to Nearest 0.01 Foot)

(a) Sump & Plug Length 0.32

(b) Screen Length 20.08

(c) Casing Joint Lengths (Measured in Up-hole Sequence From Top of Screen) 10.06, 10.05, 10.05, 10.00, 2.74

(d) Depth to Top of Screen 40.08

3) Depths to Centralizers 19.0 & 39.0

4) Total Depth of Installed Well 60.48

5) Casing Stick Up (Standard 2.5' A.G.S.) 2.5

6) Depth to Top of Filter Pack 36.6

7) Depth to Top of Fine Sand Seal NA

8) Depth to Top of Bentonite Seal 18.9 - 48 hrs hydrated

9) Thickness of Grout 13.4 lb/gal

CLIENT WSRC
PROJECT CENTRAL SHOPS BRP

SUBJECT Well Construction

Prepared By Kelly [Signature] Date 11/4/9

Reviewed By _____ Date _____

Approved By _____ Date _____

CLIENT WSRC
PROJECT CENTRAL SHOPS RRP

SUBJECT Casing Tally

PROJECT NO. _____

Prepared By Arti Date 11/4

Reviewed By _____ Date _____

Approved By _____ Date _____

CBR-05

Casing
Tally

Screen
Zone

Materials
List

Screen / Plug
Tally

5.00
10.00
10.05
10.05
10.06
45.16

40.16 → 60.16

CASING - SCHEDULE 40
PVC 2" Ø

SCREEN - 0.016" SLOTTED
2" Ø PVC

0.62

10.05

BORING TERMINATED @ 62.0' BGS

• SET WELL @ 60.48' BGS

• TOP OF SCREEN @ 40.16' BGS

• TOP OF SAND @ 36.60

• TOP OF BENTONITE @ 27.3'

• GROUT TO SURFACE 13.4' 16/32

• 2 BUCKETS OF BENTONITE

2 (50 lb)

• 8 (100 lbs) SAND

• 3.5 BAGS PC

0.64

0.62

10.03

0.62

NA

PLUG 0.32

NOTE: PLACED SAND THROUGH TRIMMIE PIPE AND REMOVED 10' OF TRIMMIE PIPE AS APPROPRIATE TO ALLOW BENTONITE TO FALL TO THE TOP OF SAND. & IT APPEARS THERE IS A CLAY BALL

BETWEEN THE TOP OF THE SAND AND THE BOTTOM OF THE TRIMMIE PIPE. THE BENTONITE WAS @ 27.5' BGS, THEREFORE LEAVING AN APPROXIMATE 5 FOOT SECTION ABOVE THE SAND PACK & BELOW THE BENTONITE SEAL WITHOUT A SEAL (VOID). BECAUSE THIS IS A PIEZOMETER AND OCCURED APPROXIMATELY 10 FEET ABOVE THE WATER TABLE WE ADDED AN ADDITIONAL BUCKET OF BENTONITE TO ENSURE AN ADEQUATE SEAL EXIST TO AVOID INTRUSION OF CEMENT GROUT. TOP OF BENTONITE @ 23.6' BGS.

CLIENT WSRC

SUBJECT WELL CONSTRUCTION Prepared By KH Date 11/4/9

PROJECT CENTRAL SHOPS BRP

Reviewed By _____ Date _____

Approved By _____ Date _____

CBR-04

Theoretical:

COARSE SAND

BOREHOLE DIAMETER - 7.875

BOREHOLE DEPTH - .62

SET WELL @ -60.48

TOP OF SAND (THEORETICAL) 38.48

ONE BAG OF SAND (100 lb) = 1.2 ft³

$$V = \pi r^2 h$$

$$V = \pi \left(\frac{3.94}{12} \right)^2 (23.52) - \pi \left(\frac{1}{12} \right)^2 (22)$$

$$V = 7.48 \text{ ft}^3 \text{ OR } 6.23 \text{ BAGS OF SAND (100 lb)}$$

BENTONITE

$$V = \pi r^2 h = \pi \left(\frac{3.94}{12} \right)^2 (2) - \pi \left(\frac{1}{12} \right)^2 (2)$$

$$V = 0.6337 \text{ ft}^3$$

∴ - 1 Bucket BENTONITE

CBR-5

MONITORING WELL INSTALLATION REPORT

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WELL NUMBER (AAA,NNN)
CBR 05

GENERAL

Project Name CENTRAL SHOPS BURNING RUBBLE PIT	
Project Manager (last name, first initial) RAY PLUNKETT	
Installation Purpose (Monitoring, Piezometer, etc.) TEMPORARY MONITORING	County BARNWELL
SRS North Grid Coordinate	SRS East Grid Coordinate
Department GO-ENVIRONMENTAL ENGINEERING	
Location Description CENTRAL SHOPS BURNING RUBBLE PIT	
Longitude (decimal degrees)	Ground Elev.
Top Casing Elev.	Liq. Level Pipe Elev.

DRILLING & SAMPLING

Drilling Start Date 11/3/94	Drilling Comp Date 11/3/94	Total Drilled Depth 57	Init. Static Water Level/Date NA	Total Borehole Deviation (angle/direction) NA
Drilling/Sampling Method 7 7/8" MUD ROTARY	Top Depth	Bot Depth	Diameter *	Drilling/Sampling Method
Drilling Company EMTC	Driller (last name, first initial) John Shope	Overlight Company RUST E & I	Overlight (last name, first initial) K. Hunter	
Drilling & Sampling Comments (drilling fluids used, source of water, lost circulation zones, etc.)				

GEOPHYSICAL LOGGING

Date Logged	Logging Top Depth	Logging Bottom Depth	Logging Subcontractor	Logging Truck Operator
Geophysical Logs				
☐ Calliper ☐ Gamma ☐ Natural Gamma ☐ Neutron Density ☐ Resistivity ☐ Single Pt. Resistivity ☐ L&S Normal Resistivity ☐ Spontaneous Potential				
Other Geophysical Logs (list)				
Backfill Top Depth	Backfill Bot Depth	Backfill Material (include type quantity and units)		
Elevations measured from height above MSL. Depths measured from ground surface to nearest 0.1 ft. * Enter an 'X' if cuttings were taken.

MONITORING WELL INSTALLATION REPORT

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WELL NUMBER (AAA.NNN.AA)

CBR 05

Date Well Installed 11/3/94		Installed By E.M.T.C.		WELL INSTALLATION (WELL MATERIALS)				Sieve Analysis?	
CBR-05				Overview	Reinforcement	Controlizer Type	☐ Yes ☐ No		
				Material and Schedule	Diameter	Joint Type			
CASING	Top Depth	2.50	34.8	PVC Schedule 40	2"	FLUSH THREADED			
	Bot Depth								
SCREEN	Top Depth	34.8	54.8	PVC SCHEDULE 40	2"	MACHINE SLOTTED			
	Bot Depth								
SUMP	Top Depth	NA	NA	NA	NA	Joint Type			
	Bot Depth								
SUMP CAP	Top Depth	54.8	55.0	PVC SCHEDULE 40	2"	FLUSH THREADED			
	Bot Depth								
WELL INSTALLATION (ANNULAR MATERIALS)									
FILTER PACK	Top Depth	32.95	57.10	FX 50	7 1/2	100	TREMIE - FLUSHED w/H ₂ O		
	Bot Depth								
FINE SAND SEAL	Top Depth	NA	NA	NA	NA	NA	Installation Method		
	Bot Depth								
BENTONITE	Top Depth	29.93	32.95		Units and Size (sacks, buckets, etc.)		Installation Method		
	Bot Depth								
GROUT	Top Depth	0	29.99	13.4 lb/gal	5.0	94	Grout Date 11/4/94		
	Bot Depth						PRESSURE GROUTED		
Report Prepared By K. Hunter				Date 11/10/94		Well Accepted By		Date	

MONITORING WELL CONSTRUCTION DIAGRAM

DF IG SUBCONTRACTOR EMTC

WELL NUMBER CBR -05

DRILLER John Shope

SRS COORDINATES _____

DATE OF WELL INSTALLATION 11/3/94

SANITARY SEAL ELEVATION _____

TECH. O.S./CO. NAME Kelly Hunter/Rust E&I

NOTE: ALL MEASUREMENTS
ARE FROM GROUND
SURFACE AT START
OF BORING - MEASUREMENTS
TO NEAREST 0.1 FOOT.

1) Total Drilled Depth/Hole Diameter 57

2) Casing/Screen Tally (Measured to Nearest 0.01 Foot)

(a) Sump & Plug Length 0.20

(b) Screen Length 20.0

(c) Casing Joint Lengths (Measured in Up-hole Sequence From Top of Screen)

10.0, 10.0, 10.0, 5.0, 2.50

(d) Depth to Top of Screen 34.80

3) Depths to Centralizers 15.0 & 29.0

4) Total Depth of Installed Well 55.0

5) Casing Stick Up (Standard 2.5' A.G.S.) 2.5' A.G.S

6) Depth to Top of Filter Pack 32.95

7) Depth to Top of Fine Sand Seal NA

8) Depth to Top of Bentonite Seal 29.99

9) Thickness of Grout 13.4 16/21

CLIENT WSRC

SUBJECT Well Construction

Prepared By _____ ate _____

PROJECT _____

Reviewed By _____ Date _____

Approved By _____ Date _____

BOREING TERMINATED @ 57' BHS

SET BOTTOM OF WELL / PLUG @ 55' BHS

CALCULATION SHEET

PAGE 2 OF 2

CLIENT WSRC

SUBJECT Casing Tally

PROJECT NO. _____

PROJECT _____

Prepared By Bill Date _____

Reviewed By _____ Date _____

Approved By _____ Date _____

Casing
Tally

Screen
Zone

Materials
List

Screen / Plug
Tally

5.00
2.50
10.00
10.00

TOP OF SCREEN 34.80
BOTTOM OF SCREEN 54.80
BOTTOM OF PLUG 55.00
TOP OF SAND @ 32.95
TOP OF BENT @ 29.99

0.05
10.00
0.20
0.05
10.00
0.20
NA
NA
0.20
PLUG 0.20

CLIENT WSRC

SUBJECT WELL CONSTRUCTION Prepared By KH Date 11/4/04

PROJECT CENTRAL SHOPS BRP

Reviewed By _____ Date _____

Approved By _____ Date _____

CBR-05

Theoretical

COARSE SAND

BOREHOLE DIAMETER 7.875

DEPTH 57'

SET WELL 55'

TOP OF SAND (THEORETICAL) 32.8'

ONE BAG OF SAND (100 lb) = 1.2 ft³

$$V = \pi r^2 h$$

$$V = \pi \left(\frac{3.94}{12} \right)^2 (24.2) - \pi \left(\frac{1}{12} \right)^2 (22.2)$$

$$V = \pi (2.61) - \pi (0.154)$$

$$V = 7.71 \text{ ft}^3 \text{ OR } = 6.4 \text{ BAGS OF SAND}$$

CBR-6

MONITORING WELL INSTALLATION REPORT

WELL NUMBER (AAA.NNN.NN.AA)
CBR 06

GENERAL

Project Name CENTRAL SHOPS BRP		Department GO - ENVIRONMENTAL ENGINEERING
Project Manager (last name, first initial) RAY PLUNKETT		Location Description CENTRAL SHOPS BURNING'S RUBBLE PIT
Installation Purpose (Monitoring, Piezometer, etc.) TEMPORARY MONITORING	County BARNWELL	Longtude (decimal degrees) NA
SRS North Grid Coordinate	SRS East Grid Coordinate	Ground Elev.
		Top Casing Elev.
		Liq. Level Pipe Elev.

DRILLING & SAMPLING

Drilling Start Date 11/3/94	Drilling Comp Date 11/3/94	Total Drilled Depth 62.0	Int. Static Water Level/Date NA	Total Borehole Deviation (angle/direction) NA
Drilling/Sampling Method 7 7/8" MUD ROTARY	Top Depth	Bot Depth	Diameter	Drilling/Sampling Method
Drilling Company FEMTC	Driller (last name, initials) SHOFFE, J	Overnight Company RUST E & F	Overnight (last name, initials) HUNTER, K	
Drilling & Sampling Comments (drilling fluids used, source of water, lost circulation zones, etc.)				

GEOPHYSICAL LOGGING

Date Logged	Logging Top Depth	Logging Bottom Depth	Logging Subcontractor	Logging Truck Operator
Geophysical Logs				
☐ Caliper ☐ Gamma ☐ Natural Gamma ☐ Neutron Density ☐ Resistivity ☐ Single Pt. Resistivity ☐ L&S Normal Resistivity ☐ Spontaneous Potential				
Other Geophysical Logs (list)				
Backfill Top Depth	Backfill Bot Depth	Backfill Material (include type quantity and units)		
Elevations measured from height above MSL. Depths measured from ground surface to nearest 0.1 ft. * Enter an 'X' if cuttings were taken.

MONITORING WELL INSTALLATION REPORT

Page 2 of 4

WELL NUMBER (AAA.NNN.AA)	
CBR	06

WELL INSTALLATION (WELL MATERIALS)									
Date Well Installed 11/3/94	Installed By FMT	Overall RUST E d F	HeadCasing 2	Centrizer Type 2" STAINLESS STEEL	Sieve Analysis? ☐ Yes ☒ No				
Top Depth 2.2' AG	Bot Depth 40.2	Material and Schedule SCHEDULE 40 PVC	Diameter 2"	Joint Type RUSH THREADED					
Top Depth	Bot Depth	Material	Diameter	Slot Size	Slot Type				
40.2	60.2	PVC	2"	0.010	MACHINE SLOTTED				
Top Depth	Bot Depth	Material and Schedule	Diameter	Joint Type					
NA									
Top Depth	Bot Depth	Material and Schedule	Diameter	Cap Type					
0.20	60.4	PVC SCHEDULE 40	2"	FLUSH THREADED					

WELL INSTALLATION (ANNULAR MATERIALS)									
Filter Pack	Top Depth 62.0-35.0	Bot Depth 62.0	Trade Name FK 50	Grain Size (mm) 0.45-0.55	Amount (sacks) 9.0	Sack Size (lbs) 100	Installation Method TRIMMIE - FLUSHED w/ WATER		
FINE SAND SEAL	Top Depth NA	Bot Depth	Trade Name	Grain Size (mm)	Amount (sacks)	Sack Size (lbs)	Installation Method		
BENTONITE SEAL	Top Depth 32.50	Bot Depth 35.50	Hydratlon Time (hrs) 30 hrs	Amount 1	Units and Size (sacks, buckets, etc.) BUCKET		Installation Method TRIMMIE - FLUSHED w/ WATER		
GROUT	Top Depth 0	Bot Depth 32.50	Grout Mix 13.2 16/481		Amount (sacks) 5 BAGS	Sack Size (lbs) 90	Grout Date 11/4/94	Installation Method PRESSURE GROUTED w/ TRIMMIE	

Report Prepared By K. HANRAHAN	Date 11/10/94	Well Accepted By	Date
-----------------------------------	------------------	------------------	------

MONITORING WELL CONSTRUCTION DIAGRAM

DRILLING SUBCONTRACTOR. EMTC

WELL NUMBER CBR-06

DRILLER John Shope

SRS COORDINATES _____

DATE OF WELL INSTALLATION 11/3/94

SANITARY SEAL ELEVATION _____

TECH. O.S./CO. NAME K. Hunter

NOTE: ALL MEASUREMENTS
ARE FROM GROUND
SURFACE AT START
OF BORING - MEASUREMENTS
TO NEAREST 0.1 FOOT.

1) Total Drilled Depth/Hole Diameter 7 7/8"

2) Casing/Screen Tally (Measured to Nearest 0.01 Foot)

(a) Sump & Plug Length 0.20

(b) Screen Length 20

(c) Casing Joint Lengths (Measured in Up-hole Sequence From Top of Screen)

9.96, 10.00, 9.90, 9.95, 2.51

(d) Depth to Top of Screen 40.2

3) Depths to Centralizers 14-15 & 28-29

4) Total Depth of Installed Well 60.40

5) Casing Stick Up (Standard 2.5' A.G.S.) 2.2

6) Depth to Top of Filter Pack 35.90

7) Depth to Top of Fine Sand Seal NA

8) Depth to Top of Bentonite Seal 32.50

9) Thickness of Grout 32.50

ENT W.S.R.C.

SUBJECT Well Construction

Prepared By K. HUNTER Date 11/3

PROJECT CENTRAL SHOPS BRP

Reviewed By _____ Date _____

88351.000

Approved By _____ Date _____

From
Bottom
Casing

CBR-6

From
Ground
Surface

Centralizers

@ 14-15 & 28-29

BORING TERMINATED @ 62 ft BGS

SET WELL @ 60.40 w/ PLUG

CLIENT WSRC

SUBJECT Casing Tally

Prepared By B.EE Date _____

PROJECT _____

Reviewed By _____ Date _____

Approved By _____ Date _____

CBR 06

Casing Tally	Screen Zone	Materials List	Screen / Plug Tally
SCREEN - 0.016" SCOTED	2" ϕ PVC		0.05
TOP OF SAND @ 35.90'			10.00
TOP OF BENTONITE @ 32.5'			
BORING TERMINATED @ 62 ft BGS			
SET WELL @ 60.40 w/ PLUG			0.20
9 (100 lb) BAGS OF SAND			0.05
GROUT MIX 13.2 lb/gal			
5 BAGS PC (70 lb)			10.00
TOP OF SCREEN @ 60.2 $\rightarrow$ 40.2			
			0.20
		RA SURF	
		0.20	PLUG

CLIENT _____

SUBJECT _____

Prepared By _____ Date _____

PROJECT _____

Reviewed By _____ Date _____

Approved By _____ Date _____

CBR-06

Theoretical:COARSE SAND

BOREHOLE DIAMETER - 7.875

BOREHOLE DEPTH - 62.0

SET WELL @ - 60.40

TOP OF SAND @ - 35.90

ONE BAG OF SAND = 1.2 ft³~~ONE BAG OF SAND~~

$$V = \pi r^2 h$$

$$V = \pi \left(\frac{3.94}{12} \right)^2 (26.10) - \pi \left(\frac{1}{12} \right)^2 (24.5)$$

$$V = 8.30 \text{ ft}^3 \text{ OR } 6.9 \text{ BAGS OF SAND}$$

(Former Appendix F from WSRC-RP-95-81, February 1995)

Well Development Forms

CBR-4

CBR-5

CBR-6

CBR-4

DEVELOPMENT SHEET

WELL # CBR-T3

DEVELOPED BY Frank Cooper

DEVELOPMENT OVERSIGHT Rust

DATE STARTED 9 NOV 94

STARTING WATER LEVEL 29 ft

STARTING FLOW METER READING N/A

STARTING WELL YIELD (AFTER BAILING) A 35 Gal PH₂

DATE FINISHED 14 NOV 94

FINAL WATER LEVEL 41.5

FINAL FLOW METER READING N/A

TOTAL VOLUME OF WATER REMOVED 425

FINAL WELL YIELD 35

HOURS BAILED 4 1/2

HOURS PUMPED N/A

HOURS BLOWN 6 1/2

HOURS OTHER Swabbing 1

COMMENTS _____

FORM MUST BE TURNED IN THE FIRST WORKING DAY AFTER DEVELOPMENT IS COMPLETED.
EVERY LINE MUST BE COMPLETED. PLACE NA (NOT APPLICABLE) IN EACH LINE THAT IS NOT
FILLED OUT WITH DATA.

PROJECT		WELL NO.		DRILLER		S.G. CERTIFICATION NO.		DATE STARTED		DATE FINISHED		DEVELOPMENT METHODS	
P 3-4		BKT-3		Frank C.		969		9 NOV 94		14 NOV 94		Swabbing / Air Lift / Bailing	
SRP COORDINATOR		S. Sang		OVERSIGHT FIRM		RUST		DEVELOPMENT METHODS		DATE STARTED		DATE FINISHED	
TOTAL DEVELOPMENT TIME		12		SITE HYDROGEOLOGIST									
DATE/TIME	DISCHARGE RATE (GPM)	VOL. PURGED (GALLONS)	WATER TEMP. (°C)	pH	SPECIFIC CONDUCTANCE (µMHO/CM)	TOTAL DISSOLVED SOLIDS (PPM)	COLOR TURBIDITY	SAND CONTENT (PER CENT)	REMARKS				
9 NOV							Light		Water level 25 ft				
730							BROWN	..	Muddy water				
1100	30	110					CLEAR BROWN		Clear no w Bailer				
10 NOV	94												
2300	35								Added water				
430	35	187.5							50 Gal water Truck				
11 NOV	94								Water level 36 ft				
715	35								Add APPROX 30 Gall				
1100	35	320							of water & Swabbed				
14 NOV	94												
1200	35								Water level 32.5 ft				
250	35	425							Water level 41.5 ft				
14 NOV 94		425											
		TOTAL											

WESTINGHOUSE SAVANNAH RIVER COMPANY

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Organization: Environmental

GROUNDWATER MONITORING WELL
INSTALLATION

SRS MONITORING WELL INSTALLATION REPORT

Protection Section

WELL DEVELOPMENT

Well number CBR IT3 Developed by Frank CooperDate started 9/11/94Date completed 14 NOV 94Oversight RUST

DEVELOPMENT METHOD:

	Hours	Results
Bailing	<u>4 1/2</u>	<u>110 Gall no sands</u>
Swabbing and surging	<u>1 1/2</u>	
Air lift	<u>3 3/4</u>	
Pumping	<u>0</u>	
Total hours	<u>12</u>	

Type and quantity of additives (including water) placed in well during development:

Approx 30 Gal of water did not seem to help.Estimated volume of water removed during development (gal) 425

	pH	Conductivity	Turbidity	Water Level
Start of development				<u>29 ft/294</u>
End of development				<u>41.5</u>
Well yield (gpm)	<u>Ap. 3/4</u>			

Well development comments water does not clear up.

Verified by _____

Date 1/1

Report prepared by _____

Date 1/1

"Environmental makes the difference"

P.O. Box 760
Now Ellenton, SC 29800
(803) 652-2718

WELL DEVELOPMENT FORM

WELL: CRR T-3 DATE STARTED: 9 NOV 94 DATE FINISHED: 14 NOV 94 PAGE 1 OF 2
LOCATION: C Baybot TIME STARTED: 7:30 TIME FINISHED: 1500

TYPE OF DEVELOPMENT					WATER QUALITY					COMMENTS	
DATE	TIME	BAILING	AIRLIFT	PUMPING	SWABBING	MUDDY	MILKY	SANDY	CLEAR	SANDFREE	COMMENTS
NOV 94	730	✓				✓					WES NOT CLEAR HP
NOV 94	1000		✓		✓		✓				WES NOT CLEAR HP
NOV 94	1250	✓			✓				✓		clear brown HAD TO add water during AIR LIFT
NOV 94	1430	✓			✓				✓		

TOTAL NUMBER OF HOURS DEVELOPMENT: 3 / RIG USED: 9 INSPECTOR'S SIGNATURE: _____

NAME OF DEVELOPER: Frank Cooper

CBR-5

DEVELOPMENT SHEET

WELL # CDR - T2

DEVELOPED BY Frank Cooper

DEVELOPMENT OVERSIGHT Rust

DATE STARTED 9 NOV 94

STARTING WATER LEVEL 41 ft

STARTING FLOW METER READING ^{Bailing} 1/2 Gal

STARTING WELL YIELD (AFTER BAILING) _____

DATE FINISHED 14 NOV 94

FINAL WATER LEVEL 30 ft

FINAL FLOW METER READING NA

TOTAL VOLUME OF WATER REMOVED 152 A ~~155~~ Gal

FINAL WELL YIELD 1.30 GPH

HOURS BAILED 3 1/2

HOURS PUMPED NA

HOURS BLOWN 2

^{swabbing}
HOURS OTHER 1

COMMENTS Had to Add water to well could
not air lift

FORM MUST BE TURNED IN THE FIRST WORKING DAY AFTER DEVELOPMENT IS COMPLETED.
EVERY LINE MUST BE COMPLETED. PLACE NA (NOT APPLICABLE) IN EACH LINE THAT IS NOT
FILLED OUT WITH DATA.

SAVANNAH RIVER PLANT WELL DEVELOPMENT REPORT

PROJECT		DRILLING SUBCONTRACTOR	
PJ4		EMTC	
WELL NO.	DRILLER	DATE STARTED	DATE FINISHED
CBR-T2	Frank C.	9 NOV 94	14 NOV 94
SRP COORDINATES		DEVELOPMENT METHODS	
S JANSSEN		Bailings swab / AIR LIFT	
TOTAL DEVELOPMENT TIME		SITING HYDROGEOLOGIST	
8		RUST	

DATE/TIME	DISCHARGE RATE (GPM)	VOL. PURGED (GALLONS)	WATER TEMP. (°C)	pH	SPECIFIC CONDUCTANCE (µMHOS/CM)	TOTAL DISSOLVED SOLIDS (PPM)	COLOR/TURBIDITY	SAND CONTENT (PER CENT)	REMARKS
9 NOV									
11:15	30	30					Reddish		water level 41 ft
3:00	30	60					Reddish		water level 48 ft
10 NOV		0							water level Air lift
11:00	0	0		unknown					want lift water
12:00	0	0							adding water
11 NOV 94	1	61							
1:30	1	62					Reddish		water level 44 ft
3:30	1	62							filled well water
									don't help any
									swabbed Air lift
14 NOV 94	97								water level 44 ft
9:00	30	92							Swabbing & Bailings
12:00	30	122							water Clearing 40
	30	152							Bailed 10 more gal
									well is Clear

152 TOTAL

WESTINGHOUSE SAVANNAH RIVER COMPANY

GROUNDWATER MONITORING WELL
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Environmental
Protection Section

SRS MONITORING WELL INSTALLATION REPORT

WELL DEVELOPMENT

Well number CIBR 111 T12 Developed by Frank Cooper

Date started 9 NOV, 94

Date completed 14 NOV, 94

Oversight RUST

DEVELOPMENT METHOD:

	<u>Hours</u>	<u>Results</u>
Bailing	<u>3 1/2</u>	<u>pH 6.14</u>
Swabbing and surging	<u>1 1/2</u>	
Air lift	<u>3</u>	<u>NO water Calling water TRUCKS</u>
Pumping		
Total hours	<u>8 HRS</u>	

Type and quantity of additives (including water) placed in well during development:

Water Approx 50 Gal total

Estimated volume of water removed during development (gal) 15 Gal

	<u>pH</u>	<u>Conductivity</u>	<u>Turbidity</u>	<u>Water Level</u>
Start of development	<u>6.14</u>			<u>41 ft</u> 50 ft
End of development				<u>- 50 ft</u>
Well yield (gpm) <u>4</u>	<u>30 GPH</u>			

Well development comments

Could not air lift, bailed good
& cleaned

Verified by

Date

Report prepared by

Date

P.O. Box 750
Now Ellenton, SC 29800
(803) 652-2710

WELL DEVELOPMENT FORM

WELL: CRR-72 DATE STARTED: 9 NOV 94 DATE FINISHED: 14 NOV 94 PAGE 1 OF 4
 LOCATION: C TIME STARTED: 115 TIME FINISHED: 1200

DATE	TIME	BAILING	AIRLIFT	PUMPING	SHABBING	MUDDY	MILKY	WATER QUALITY			COMMENTS
								SANDY	CLEAR	SANDFREE	
NOV 94	115	✓						✓	Red	..	water level 41 ft
NOV 94	305	✓									water level 50 ft
NOV 94	1400		✓								water level 44 ft
NOV 94	1200										NO water
NOV 94	1300										water level 44 ft
NOV 94	350		✓								NO water
NOV 94	900	✓			✓						water level 44 ft
NOV 94	1200	✓			✓						water level 50 ft

TOTAL NUMBER OF HOURS DEVELOPMENT: 8 1/2 RIG USED: 9 INSPECTORS SIGNATURE: _____
 NAME OF DEVELOPER: Frank Cooper

CBR-6

DEVELOPMENT SHEET

WELL # CBR - T1

DEVELOPED BY Frank Cooper

DEVELOPMENT OVERSIGHT RUST

DATE STARTED 9 NOV 94

STARTING WATER LEVEL 48ft

Bailing
STARTING FLOW METER READING 1/3 Gal

STARTING WELL YIELD (AFTER BAILING) 15

DATE FINISHED 14 NOV 94

FINAL WATER LEVEL 53.5

FINAL FLOW METER READING N/A

TOTAL VOLUME OF WATER REMOVED 202

FINAL WELL YIELD 35 GPH

HOURS BAILED 2 HR,

HOURS PUMPED N/A

HOURS BLOWN 3 1/2

HOURS OTHER Swabbed 1 HR.

COMMENTS Had to add water to well could
not air lift

FORM MUST BE TURNED IN THE FIRST WORKING DAY AFTER DEVELOPMENT IS COMPLETED.
EVERY LINE MUST BE COMPLETED. PLACE NA (NOT-APPLICABLE) IN EACH LINE THAT IS NOT
FILLED OUT WITH DATA.

F-10

WESTINGHOUSE SAVANNAH RIVER COMPANY

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Protection Section

SRS MONITORING WELL INSTALLATION REPORT

WELL DEVELOPMENT

Well number E.B.R. 111 Developed by Frank Cooper

Date started 9 NOV, 94 Date completed 14 NOV, 94

Oversight RUST

DEVELOPMENT METHOD:

	Hours	Results
Bailing	<u>2</u>	<u>light sand</u>
Swabbing and surging	<u>1</u>	
Air lift	<u>3.5</u>	<u>no water / calling for water truck</u>
Pumping	<u>0</u>	
Total hours	<u>6.5</u>	

Type and quantity of additives (including water) placed in well during development:

NONE slow to Recharge filled well w/
4 TIME approx 60 Gall. water

Estimated volume of water removed during development (gal) 20.2

	pH	Conductivity	Turbidity	Water Level
Start of development	<u>6.25</u>			<u>48ft / 3</u>
End of development				<u>53.5</u>
Well yield (gpm)	<u>4 Gal</u>	<u>Per HR</u>		

Well development comments slow Recharge water level
47 feet filled well with water swabbed to
min no change

Verified by _____ Report prepared by _____

Date 1/1/

Date 1/1/

"Approved makes the difference"

P.O. Box 750
Now Ellenton, SC 29800
(803) 662-2718

WELL DEVELOPMENT FORM

WELL: CBR T1 DATE STARTED: 9 NOV 94 DATE FINISHED: 14 NOV 94 PAGE 1 OF 4
LOCATION: C. AREA TIME STARTED: 11:00 - 1:00 TIME FINISHED: 5:00

TYPE OF DEVELOPMENT						WATER QUALITY				COMMENTS	
DATE	TIME	BAILING	AIRLIFT	PUMPING	SWABBING	MUDDY	MILKY	SANDY	CLEAR	SANDFREE	COMMENTS
NOV 94	11:00	✓				✓					water level 48 ft
NOV 94	1:00	✓					✓				water level 53 ft
NOV 94	1:00		✓								no water at 4 ft
NOV 94	1:15		✓				✓				very little water
NOV 94	3:00	✓			✓						
NOV 94	4:45	✓			✓						CLEANED 40 GOOD but not CLEARED

TOTAL NUMBER OF HOURS DEVELOPMENT: 3.75 RIG USED: 9 INSPECTOR'S SIGNATURE: _____
NAME OF DEVELOPER: Frank Cooper 1100 - 100 2445

(Former Appendix H from WSRC-RP-95-81, February 1995)

Field Permeability Testing

Falling and Rising Head Slug Tests For:

CBR-4

CBR-5.

CBR-6

CBR-4

CBR-04 RISING HEAD TEST

DATA SET:
A14RISE.A07
01/22/96

AQUIFER TYPE:
Unconfined
SOLUTION METHOD:
Dowd-Rice

ESTIMATED PARAMETERS:
 $K = 3.1800E-06$ ft/sec
 $Y0 = 0.0251$ ft

TEST DATA:
 $H0 = 1.$ ft
 $Z0 = 0.0033$ ft
 $FW = 0.3261$ ft
 $L = 20.$ ft
 $b = 100.$ ft
 $K = 21.61$ ft

CBR-5

CBR-05 FALLING HEAD TEST

DATA SET:
A:STALL.AGT
01/22/96

AQUIFER TYPE:
Unconfined
SOLUTION METHOD:
Dowd-Rice

ESTIMATED PARAMETERS:
K = 3.1801E-06 ft/sec
Y0 = 0.3512 ft

TEST DATA:
H0 = 1. ft
Z0 = 0.0033 ft
ZV = 0.3261 ft
L = 14.37 ft
b = 100. ft
K = 14.07 ft

CBR-05 RISING HEAD TEST

DATA SET:
A16R102.AQT
01/22/96

AQUIFER TYPE:
Unconsolidated
SOLUTION METHOD:
Dowd-Rice

ESTIMATED PARAMETERS:
 $K = 1.3770E-05$ ft/sec
 $Y_0 = 0.9591$ ft

TEST DATA:
 $H_0 = 1$ ft
 $Z_0 = 0.0033$ ft
 $ZW = 0.3281$ ft
 $L = 14.37$ ft
 $b = 100$ ft
 $K = 14.37$ ft

CBR-6

CBR-06 FALLING HEAD TEST

DATA SET:
A16FALL.AQT
01/22/95

AQUIFER TYPE:
Unconfined
SOLUTION METHOD:
Bouwer-Rice

ESTIMATED PARAMETERS:
 $K = 9.6826E-07$ ft/sec
 $Y0 = 0.6761$ ft

TEST DATA:
 $H0 = 1.0$ ft
 $ra = 0.0833$ ft
 $rw = 0.3201$ ft
 $L = 13.65$ ft
 $b = 100.0$ ft
 $H = 13.65$ ft

CBR-06 RISING HEAD TEST

DATA SET:
A16R102.AGT
01/22/98

AQUIFER TYPE:
Unconfined

SOLUTION METHOD:
Dowd-Rice

ESTIMATED PARAMETERS:
 $K = 1.2507E-05$ ft/sec
 $Y0 = 2.46$ ft

TEST DATA:
 $H0 = 1.42$
 $z0 = 0.0033$ ft
 $rw = 0.3281$ ft
 $L = 13.65$ ft
 $b = 100.42$
 $K = 13.65$ ft

Appendix J

Well Sampling Analytes, Sampling Data

CBR-1D GROUNDWATER DATA

Well Name=CBR 1D Secondary ID= Sample Date=012992

1ST QTR/92.

OBS	TESTNAME	LABDUP	RESQAL	ANNUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
1	Silver, dissolved	U				2 ug/L		GE		2.0000	EPA6010	1.00
2	Gross alpha	U				2 pCi/L		GE		2.0000	EPA900.0	1.00
3	Arsenic, dissolved	U				2 ug/L		GE		2.0000	EPA7060	1.00
4	Barium, dissolved					11.7 ug/L		GE		3.0000	EPA6010	1.00
5	Nonvolatile beta	U				2 pCi/L		GE		2.0000	EPA900.0	1.00
6	Bromodichloromethane	U				1 ug/L		GE		1.0000	EPA8240	1.00
7	Calcium, dissolved	J2				629 ug/L		GE		10.0000	EPA6010	1.00
8	Trichlorofluoromethane	U				1 ug/L		GE		1.0000	EPA8240	1.00
9	Carbon tetrachloride	U				1 ug/L		GE		1.0000	EPA8240	1.00
10	Cadmium, dissolved	U				2 ug/L		GE		2.0000	EPA6010	1.00
11	Bromoform	U				1 ug/L		GE		1.0000	EPA8240	1.00
12	Chloroform	U				1 ug/L		GE		1.0000	EPA8240	1.00
13	Dichloromethane (Methylene chloride)	U				1 ug/L		GE		1.0000	EPA8240	1.00
14	Bromomethane (Methyl bromide)	U				1 ug/L		GE		1.0000	EPA8240	1.00
15	Chloromethane (Methyl chloride)	U				1 ug/L		GE		1.0000	EPA8240	1.00
16	Chloride					2100 ug/L		GE		0.2500	EPA300.0	1.00
17	Chlorobenzene	U				1 ug/L		GE		1.0000	EPA8240	1.00
18	Specific conductance					30 uS/cm		GE		1.0000	EPA120.1	1.00
19	Chromium, dissolved	U				4 ug/L		GE		4.0000	EPA6010	1.00
20	Chloroethene (Vinyl chloride)	U				1 ug/L		GE		1.0000	EPA8240	1.00
21	Chloroethane	U				1 ug/L		GE		1.0000	EPA8240	1.00
22	Benzene	U				1 ug/L		GE		1.0000	EPA8240	1.00
23	Dibromochloromethane	U				1 ug/L		GE		1.0000	EPA8240	1.00
24	Silica, dissolved					12400 ug/L		GE		100.0000	EPA6010	1.00
25	Endrin	JQ				0.006 ug/L		GE		0.0060	EPA8080	1.00
26	Ethylbenzene	U				1 ug/L		GE		1.0000	EPA8240	1.00
27	Fluoride	U				100 ug/L		GE		0.1000	EPA340.2	1.00
28	Iron, dissolved					13.4 ug/L		GE		4.0000	EPA6010	1.00
29	Mercury, dissolved	U				0.2 ug/L		GE		0.2000	EPA7470	1.00
30	Potassium, dissolved					1010 ug/L		GE		500.0000	EPA6010	1.00
31	Lindane	JQ				0.005 ug/L		GE		0.0050	EPA8080	1.00
32	Toluene	U				1 ug/L		GE		1.0000	EPA8240	1.00
33	Methoxychlor	JQ				0.5 ug/L		GE		0.5000	EPA8080	1.00
34	Magnesium, dissolved					170 ug/L		GE		2.0000	EPA6010	1.00
35	Manganese, dissolved					10.7 ug/L		GE		10.0000	EPA6010	1.00
36	Sodium, dissolved					3790 ug/L		GE		10.0000	EPA6010	1.00
37	Nitrate-nitrite as nitrogen					1170 ug/L		GE		0.0500	EPA353.3	1.00
38	Lead, dissolved					6.52 ug/L		GE		3.0000	EPA7421	1.00
39	pH	JQ				5.89 PH		GE		0.0000	EPA150.1	1.00
40	Selenium, dissolved	U				2 ug/L		GE		2.0000	EPA7740	1.00
41	2,4,5-TP (Silvex)	JQ				0.09 ug/L		GE		0.0900	EPA8150	1.00
42	Sulfate					1460 ug/L		GE		1.0000	EPA300.0	1.00
43	1,1,2,2-Tetrachloroethane	U				1 ug/L		GE		1.0000	EPA8240	1.00
44	Tetrachloroethylene	U				1 ug/L		GE		1.0000	EPA8240	1.00
45	Total dissolved solids	V				29000 ug/L		GE		1.0000	EPA160.1	1.00
46	Total organic carbon	U				1000 ug/L		GE		1.0000	EPA9060	1.00
47	Radon, total alpha-emitting	U				1 pCi/L		GE		1.0000	EPA900.1	1.00
48	Total organic halogens	U				5 ug/L		GE		5.0000	EPA9020	1.00
49	Phenols	U				5 ug/L		GE		5.0000	EPA420.2	1.00
50	Total phosphates (as P)	U				50 ug/L		GE		0.0500	EPA365.1	1.00
51	Trichloroethylene	U				1 ug/L		GE		1.0000	EPA8240	1.00
52	Trifluoromethane	U				3.42 pCi/mL		0.2000	GE	0.7000	EPA906.0	1.00
53	Toxaphene	JQ				0.24 ug/L		GE		0.2400	EPA8080	1.00
54	trans-1,2-Dichloroethylene	U				1 ug/L		GE		1.0000	EPA8240	1.00

Well Name=CBR ID Secondary ID= Sample Date=012992
(continued)

OBS	TESTNAME	LADDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
55	trans-1,3-Dichloropropene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
56	1,1-Dichloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
57	1,1-Dichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
58	1,1,1-Trichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
59	1,1,2-Trichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
60	1,2-Dichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
61	1,2-Dichloropropane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
62	cis-1,3-Dichloropropene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
63	2-Chloroethyl vinyl ether	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
64	2,4-Dichlorophenoxyacetic acid	JQ				0.3	ug/L	.	GE	0.3000	EPA8150	1.00

Well Name=CBR ID Secondary ID= Sample Date=060392 2nd QTR 92

OBS	TESTNAME	LADDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
65	Silver, dissolved	U				2	ug/L	.	GE	2.0000	EPA6010	1.00
66	Gross alpha	1	U			2	pci/L	.	GE	2.0000	EPA900.0	1.00
67	Gross alpha	U				2	pci/L	.	GE	2.0000	EPA900.0	1.00
68	Arsenic, dissolved	U				2	ug/L	.	GE	2.0000	EPA7060	1.00
69	Barium, dissolved					14.5	ug/L	.	GE	3.0000	EPA6010	1.00
70	Nonvolatile beta	1	U			2	pci/L	.	GE	2.0000	EPA900.0	1.00
71	Nonvolatile beta	U				2	pci/L	.	GE	2.0000	EPA900.0	1.00
72	Bromodichloromethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
73	Calcium, dissolved					644	ug/L	.	GE	10.0000	EPA6010	1.00
74	Trichlorofluoromethane	UJ				1	ug/L	.	GE	1.0000	EPA8240	1.00
75	Carbon tetrachloride	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
76	Cadmium, dissolved	U				2	ug/L	.	GE	2.0000	EPA6010	1.00
77	Bromoform	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
78	Chloroform	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
79	Dichloromethane (Methylene chloride)	J2				3.36	ug/L	.	GE	1.0000	EPA8240	1.00
80	Bromomethane (Methyl bromide)	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
81	Chloromethane (Methyl chloride)	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
82	Chloride					2050	ug/L	.	GE	0.2500	EPA300.0	1.00
83	Chloride	1				2060	ug/L	.	GE	0.2500	EPA300.0	1.00
84	Chlorobenzene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
85	Specific conductance					30	us/cm	.	GE	1.0000	EPA120.1	1.00
86	Chromium, dissolved	U				4	ug/L	.	GE	4.0000	EPA6010	1.00
87	Chloroethene (Vinyl chloride)	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
88	Chloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
89	Benzene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
90	Dibromochloromethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
91	Silica, dissolved					12000	ug/L	.	GE	100.0000	EPA6010	1.00
92	Endrin	U				0.006	ug/L	.	GE	0.0060	EPA8080	1.00
93	Ethylbenzene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
94	Fluoride	1	U			100	ug/L	.	GE	0.1000	EPA340.2	1.00
95	Fluoride	U				100	ug/L	.	GE	0.1000	EPA340.2	1.00
96	Iron, dissolved					90	ug/L	.	GE	4.0000	EPA6010	1.00
97	Mercury, dissolved	U				0.2	ug/L	.	GE	0.2000	EPA7470	1.00
98	Potassium, dissolved					1310	ug/L	.	GE	500.0000	EPA6010	1.00
99	Lindane	U				0.005	ug/L	.	GE	0.0050	EPA8080	1.00
100	Toluene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
101	Methoxychlor	U				0.5	ug/L	.	GE	0.5000	EPA8080	1.00

Well Name=CBR 1D Secondary ID= Sample Date=060592
(continued)

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OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLN	METHOD	DILFACT
102	Magnesium, dissolved					224	ug/L	.	GE	2.0000	EPA6010	1.00
103	Manganese, dissolved					10.4	ug/L	.	GE	2.0000	EPA6010	1.00
104	Sodium, dissolved					4390	ug/L	.	GE	10.0000	EPA6010	1.00
105	Nitrate-nitrite as nitrogen					1100	ug/L	.	GE	0.0500	EPA353.3	1.00
106	Lead, dissolved					7.14	ug/L	.	GE	3.0000	EPA7421	1.00
107	pH	JQ				5.93	PH	.	GE	0.0000	EPA150.1	1.00
108	Selenium, dissolved	U				2	ug/L	.	GE	2.0000	EPA7740	1.00
109	2,4,5-Tp (Silvex)	U				0.09	ug/L	.	GE	0.0900	EPA8150	1.00
110	Sulfate	U				1000	ug/L	.	GE	1.0000	EPA300.0	1.00
111	Sulfate	U				1000	ug/L	.	GE	1.0000	EPA300.0	1.00
112	1,1,2,2-Tetrachloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
113	Tetrachloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
114	Total dissolved solids	V				47000	ug/L	.	GE	1.0000	EPA160.1	1.00
115	Total organic carbon	U				1000	ug/L	.	GE	1.0000	EPA9060	1.00
116	Radium, total alpha-emitting	U				1	pCi/L	.	GE	1.0000	EPA900.1	1.00
117	Total organic halogens	U				5	ug/L	.	GE	5.0000	EPA9020	1.00
118	Phenols	U				5	ug/L	.	GE	5.0000	EPA420.2	1.00
119	Total phosphates (as P)	U				50	ug/L	.	GE	0.0500	EPA365.1	1.00
120	Trichloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
121	Tritium					5.84	pCi/mL	0.5000	GE	0.7000	EPA906.0	1.00
122	Toxaphene	U				0.24	ug/L	.	GE	0.2400	EPA8080	1.00
123	trans-1,2-Dichloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
124	trans-1,3-Dichloropropene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
125	1,1-Dichloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
126	1,1-Dichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
127	1,1,1-Trichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
128	1,1,2-Trichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
129	1,2-Dichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
130	1,2-Dichloropropene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
131	cis-1,3-Dichloropropene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
132	2-Chloroethyl vinyl ether	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
133	2,4-Dichlorophenoxyacetic acid	U				0.3	ug/L	.	GE	0.3000	EPA8150	1.00

Well Name=CBR 1D Secondary ID= Sample Date=072992

3 QTR 92

OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLN	METHOD	DILFACT
134	Silver, dissolved	U				2	ug/L	.	GE	2.0000	EPA6010	1.00
135	Gross alpha	U				2	pCi/L	.	GE	2.0000	EPA900.0	1.00
136	Arsenic, dissolved	U				2	ug/L	.	GE	2.0000	EPA7060	1.00
137	Barium, dissolved					12.9	ug/L	.	GE	3.0000	EPA6010	1.00
138	Nonvolatile beta					8.7	pCi/L	2.0000	GE	2.0000	EPA900.0	1.00
139	Bromodichloromethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
140	Calcium, dissolved					374	ug/L	.	GE	10.0000	EPA6010	1.00
141	Trichlorofluoromethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
142	Carbon tetrachloride	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
143	Cadalum, dissolved	U				2	ug/L	.	GE	2.0000	EPA6010	1.00
144	Bromoform	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
145	Chloroform	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
146	Dichloromethane (Methylene chloride)	UJ				1	ug/L	.	GE	1.0000	EPA8240	1.00
147	Bromomethane (Methyl bromide)	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
148	Chloromethane (Methyl chloride)	U				1	ug/L	.	GE	1.0000	EPA8240	1.00

Well Name=CBR 1D Secondary ID= Sample Date=072992

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(continued)

OBS	TESTNAME	LADDUP	RESQUAL	ANNUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
149	Chloride					2100	ug/L	.	GE	0.2500	EPA300.0	1.00
150	Chlorobenzene					1	ug/L	.	GE	1.0000	EPA8240	1.00
151	Specific conductance	1	U			30	uS/cm	.	GE	1.0000	EPA120.1	1.00
152	Specific conductance					50	uS/cm	.	GE	1.0000	EPA120.1	1.00
153	Chromium, dissolved					4	ug/L	.	GE	4.0000	EPA6010	1.00
154	Chloroethane (Vinyl chloride)					1	ug/L	.	GE	1.0000	EPA8240	1.00
155	Chloroethane					1	ug/L	.	GE	1.0000	EPA8240	1.00
156	Benzene					1	ug/L	.	GE	1.0000	EPA8240	1.00
157	Dibromochloromethane					1	ug/L	.	GE	1.0000	EPA8240	1.00
158	Silica, dissolved					12700	ug/L	.	GE	100.0000	EPA6010	1.00
159	Endrin					0.006	ug/L	.	GE	0.0060	EPA8080	1.00
160	Ethylbenzene					1	ug/L	.	GE	1.0000	EPA8240	1.00
161	Fluoride					100	ug/L	.	GE	0.1000	EPA340.2	1.00
162	Iron, dissolved					5.28	ug/L	.	GE	4.0000	EPA6010	1.00
163	Mercury, dissolved	1	U			0.2	ug/L	.	GE	0.2000	EPA7470	1.00
164	Mercury, dissolved					0.2	ug/L	.	GE	0.2000	EPA7470	1.00
165	Potassium, dissolved					1140	ug/L	.	GE	500.0000	EPA6010	1.00
166	Lindane					0.005	ug/L	.	GE	0.0050	EPA8080	1.00
167	Toluene					1	ug/L	.	GE	1.0000	EPA8240	1.00
168	Hexachlor					0.5	ug/L	.	GE	0.5000	EPA8080	1.00
169	Heptachlor, dissolved					189	ug/L	.	GE	2.0000	EPA6010	1.00
170	Manganese, dissolved					6.25	ug/L	.	GE	2.0000	EPA6010	1.00
171	Sodium, dissolved					3220	ug/L	.	GE	10.0000	EPA6010	1.00
172	Nitrate-nitrite as nitrogen					1160	ug/L	.	GE	0.0500	EPA353.3	1.00
173	Lead, dissolved					3	ug/L	.	GE	3.0000	EPA7421	1.00
174	pH					5.52	PH	.	GE	0.0000	EPA150.1	1.00
175	Selenium, dissolved					2	ug/L	.	GE	2.0000	EPA7740	1.00
176	2,4,5-TP (Silvex)					0.09	ug/L	.	GE	0.0900	EPA8150	1.00
177	Sulfate					1000	ug/L	.	GE	1.0000	EPA300.0	1.00
178	1,1,2,2-Tetrachloroethane					1	ug/L	.	GE	1.0000	EPA8240	1.00
179	Tetrachloroethylene					1	ug/L	.	GE	1.0000	EPA8240	1.00
180	Total dissolved solids					26000	ug/L	.	GE	1.0000	EPA160.1	1.00
181	Total organic carbon					1000	ug/L	.	GE	1.0000	EPA9060	1.00
182	Radium, total alpha-emitting					1	pCi/L	.	GE	1.0000	EPA900.1	1.00
183	Total organic halogens	1	U			5	ug/L	.	GE	5.0000	EPA9020	1.00
184	Total organic halogens					5	ug/L	.	GE	5.0000	EPA9020	1.00
185	Phenols					50	ug/L	.	GE	0.0500	EPA365.1	1.00
186	Total phosphates (as P)	1	U			60	ug/L	.	GE	0.0500	EPA365.1	1.00
187	Total phosphates (as P)					4.11	pCi/mL	.	GE	1.0000	EPA8240	1.00
188	Trichloroethylene					0.24	ug/L	.	GE	0.2400	EPA8080	1.00
189	Tritium					1	ug/L	.	GE	1.0000	EPA8240	1.00
190	Toxaphene					1	ug/L	.	GE	1.0000	EPA8240	1.00
191	trans-1,2-Dichloroethylene					1	ug/L	.	GE	1.0000	EPA8240	1.00
192	trans-1,3-Dichloropropene					1	ug/L	.	GE	1.0000	EPA8240	1.00
193	1,1-Dichloroethylene					1	ug/L	.	GE	1.0000	EPA8240	1.00
194	1,1-Dichloroethane					1	ug/L	.	GE	1.0000	EPA8240	1.00
195	1,1,1-Trichloroethane					1	ug/L	.	GE	1.0000	EPA8240	1.00
196	1,1,2-Trichloroethane					1	ug/L	.	GE	1.0000	EPA8240	1.00
197	1,2-Dichloroethane					1	ug/L	.	GE	1.0000	EPA8240	1.00
198	1,2-Dichloropropene					1	ug/L	.	GE	1.0000	EPA8240	1.00
199	cis-1,3-Dichloropropene					1	ug/L	.	GE	1.0000	EPA8240	1.00
200	2-Chloroethyl vinyl ether					1	ug/L	.	GE	1.0000	EPA8240	1.00
201	2,4-Dichloro-phenoxacetic acid					0.3	ug/L	.	GE	0.3000	EPA8150	1.00

Well Name=CBR 1D Secondary ID= Sample Date=121092

4TH QTR 92

OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
202	Silver, total recoverable	U				2 ug/L			GE	2.0000	EPA6010	1.00
203	Gross alpha	U				2 pCi/L			GE	2.0000	EPA900.0	1.00
204	Arsenic, total recoverable	U				2 ug/L			GE	2.0000	EPA7060	1.00
205	Barium, total recoverable	U				15.9 ug/L			GE	3.0000	EPA6010	1.00
206	Nonvolatile beta	U				2 pCi/L			GE	2.0000	EPA900.0	1.00
207	Bromodichloromethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
208	Bromodichloromethane	1	U			1 ug/L			GE	1.0000	EPA8240	1.00
209	Calcium, total recoverable	U				551 ug/L			GE	10.0000	EPA6010	1.00
210	Trichlorofluoromethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
211	Trichlorofluoromethane	1	U			1 ug/L			GE	1.0000	EPA8240	1.00
212	Carbon tetrachloride	U				1 ug/L			GE	1.0000	EPA8240	1.00
213	Carbon tetrachloride	1	U			1 ug/L			GE	1.0000	EPA8240	1.00
214	Cadmium, total recoverable	U				2 ug/L			GE	2.0000	EPA6010	1.00
215	Bromoform	U				1 ug/L			GE	1.0000	EPA8240	1.00
216	Bromoform	1	U			1 ug/L			GE	1.0000	EPA8240	1.00
217	Chloroform	U				1 ug/L			GE	1.0000	EPA8240	1.00
218	Chloroform	1	U			1 ug/L			GE	1.0000	EPA8240	1.00
219	Dichloromethane (Methylene chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
220	Dichloromethane (Methylene chloride)	1	U			1 ug/L			GE	1.0000	EPA8240	1.00
221	Bromomethane (Methyl bromide)	U				1 ug/L			GE	1.0000	EPA8240	1.00
222	Bromomethane (Methyl bromide)	1	U			1 ug/L			GE	1.0000	EPA8240	1.00
223	Chloromethane (Methyl chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
224	Chloromethane (Methyl chloride)	1	U			1 ug/L			GE	1.0000	EPA8240	1.00
225	Chloride	U				2210 ug/L			GE	0.2500	EPA300.0	1.00
226	Chlorobenzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
227	Chlorobenzene	1	U			1 ug/L			GE	1.0000	EPA8240	1.00
228	Specific conductance	U				29 uS/cm			GE	1.0000	EPA120.1	1.00
229	Chromium, total recoverable	U				4 ug/L			GE	4.0000	EPA6010	1.00
230	Chloroethene (Vinyl chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
231	Chloroethene (Vinyl chloride)	1	U			1 ug/L			GE	1.0000	EPA8240	1.00
232	Chloroethene	U				1 ug/L			GE	1.0000	EPA8240	1.00
233	Chloroethene	1	U			1 ug/L			GE	1.0000	EPA8240	1.00
234	Benzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
235	Benzene	1	U			1 ug/L			GE	1.0000	EPA8240	1.00
236	Dibromochloromethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
237	Dibromochloromethane	1	U			1 ug/L			GE	1.0000	EPA8240	1.00
238	Endrin	U				0.006 ug/L			GE	0.0060	EPA8080	1.00
239	Ethylbenzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
240	Ethylbenzene	1	U			1 ug/L			GE	1.0000	EPA8240	1.00
241	Fluoride	U				100 ug/L			GE	0.1000	EPA340.2	1.00
242	Fluoride	1	U			100 ug/L			GE	0.1000	EPA340.2	1.00
243	Iron, total recoverable	U				75.6 ug/L			GE	4.0000	EPA6010	1.00
244	Mercury, total recoverable	U				0.2 ug/L			GE	0.2000	EPA7470	1.00
245	Potassium, total recoverable	U				1190 ug/L			GE	500.0000	EPA6010	1.00
246	Lindane	U				0.005 ug/L			GE	0.0050	EPA8080	1.00
247	Toluene	U				1 ug/L			GE	1.0000	EPA8240	1.00
248	Toluene	1	U			1 ug/L			GE	1.0000	EPA8240	1.00
249	Methoxychlor	U				0.5 ug/L			GE	0.5000	EPA8080	1.00
250	Manganese, total recoverable	U				236 ug/L			GE	2.0000	EPA6010	1.00
251	Manganese, total recoverable	U				7.89 ug/L			GE	2.0000	EPA6010	1.00
252	Sodium, total recoverable	U				3650 ug/L			GE	10.0000	EPA6010	1.00
253	Nitrate-nitrite as nitrogen	U				1120 ug/L			GE	0.0500	EPA353.3	1.00
254	Lead, total recoverable	J2				5.55 ug/L			GE	3.0000	EPA7421	1.00
255	pH	J0				5.97 PH			GE	0.0000	EPA150.1	1.00

Well Name=CBR 1D Secondary ID= Sample Date=121092 4TH QTR 92

(continued)

OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
256	Selenium, total recoverable	U				2 ug/L			GE	2.0000	EPA7740	1.00
257	2,4,5-TP (Silvex)	U				0.09 ug/L			GE	0.0900	EPA0150	1.00
258	Sulfate	U				1000 ug/L			GE	1.0000	EPA300.0	1.00
259	1,1,2,2-Tetrachloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
260	1,1,2,2-Tetrachloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
261	Tetrachloroethylene	U				1 ug/L			GE	1.0000	EPA8240	1.00
262	Tetrachloroethylene	U				1 ug/L			GE	1.0000	EPA8240	1.00
263	Total dissolved solids	V				30000 ug/L			GE	1.0000	EPA160.1	1.00
264	Total organic carbon	U				1000 ug/L			GE	1.0000	EPA9060	1.00
265	Radium, total alpha-emitting	U				1 pCi/L			GE	1.0000	EPA900.1	1.00
266	Total organic halogens	U				5.3 ug/L			GE	5.0000	EPA9020	1.00
267	Phenols	U				5 ug/L			GE	5.0000	EPA420.2	1.00
268	Total phosphates (as P)	U				60 ug/L			GE	0.0500	EPA365.1	1.00
269	Trichloroethylene	U				1 ug/L			GE	1.0000	EPA8240	1.00
270	Trichloroethylene	U				1 ug/L			GE	1.0000	EPA8240	1.00
271	Tritium	U				3.89 pCi/mL		0.5000	GE	0.7000	EPA906.0	1.00
272	Silica, total recoverable	U				12300 ug/L			GE	100.0000	EPA6010	1.00
273	Toxaphene	U				0.24 ug/L			GE	0.2400	EPA8080	1.00
274	trans-1,2-Dichloroethylene	U				1 ug/L			GE	1.0000	EPA8240	1.00
275	trans-1,2-Dichloroethylene	U				1 ug/L			GE	1.0000	EPA8240	1.00
276	trans-1,3-Dichloropropene	U				1 ug/L			GE	1.0000	EPA8240	1.00
277	trans-1,3-Dichloropropene	U				1 ug/L			GE	1.0000	EPA8240	1.00
278	1,1-Dichloroethylene	U				1 ug/L			GE	1.0000	EPA8240	1.00
279	1,1-Dichloroethylene	U				1 ug/L			GE	1.0000	EPA8240	1.00
280	1,1-Dichloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
281	1,1-Dichloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
282	1,1,1-Trichloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
283	1,1,1-Trichloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
284	1,1,2-Trichloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
285	1,1,2-Trichloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
286	1,2-Dichloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
287	1,2-Dichloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
288	1,2-Dichloropropene	U				1 ug/L			GE	1.0000	EPA8240	1.00
289	1,2-Dichloropropene	U				1 ug/L			GE	1.0000	EPA8240	1.00
290	cis-1,3-Dichloropropene	U				1 ug/L			GE	1.0000	EPA8240	1.00
291	cis-1,3-Dichloropropene	U				1 ug/L			GE	1.0000	EPA8240	1.00
292	2-Chloroethyl vinyl ether	U				1 ug/L			GE	1.0000	EPA8240	1.00
293	2-Chloroethyl vinyl ether	U				1 ug/L			GE	1.0000	EPA8240	1.00
294	2,4-Dichlorophenoxyacetic acid	U				0.3 ug/L			GE	0.3000	EPA8150	1.00

Well Name=CBR 1D Secondary ID= Sample Date=030593. 1ST QTR 93

OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
295	Silver, total recoverable	U				2 ug/L			GE	2.0000	EPA6010	1.00
296	Gross alpha	U				2 pCi/L			GE	2.0000	EPA900.0	1.00
297	Aluminum, total recoverable	U				21.5 ug/L			GE	20.0000	EPA6010	1.00
298	Arsenic, total recoverable	U				2 ug/L			GE	2.0000	EPA7060	1.00
299	Barium, total recoverable	U				17.1 ug/L			GE	3.0000	EPA6010	1.00
300	Nonvolatile beta	U				2 pCi/L			GE	2.0000	EPA900.0	1.00
301	Bromodichloromethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
302	Bromodichloromethane	U				1 ug/L			GE	1.0000	EPA8240	1.00

Well Name=CBR 1D Secondary ID= Sample Date=030393 1ST QTR 93

(continued)

DBS TESTNAME	LABDUP RESQUAL	ANNUAL BIAS	RESULT UNITS	ACCURACY LAB	DETLIN	METHOD	DILFACT
303 Calcium, total recoverable	0	U	587 ug/L	GE	10.0000	EPA6010	1.00
304 Trichlorofluoromethane	0	U	1 ug/L	GE	1.0000	EPA8240	1.00
305 Trichlorofluoromethane	1	U	1 ug/L	GE	1.0000	EPA8240	1.00
306 Carbon tetrachloride	0	U	1 ug/L	GE	1.0000	EPA8240	1.00
307 Carbon tetrachloride	1	U	1 ug/L	GE	1.0000	EPA8240	1.00
308 Cadmium, total recoverable	0	U	2 ug/L	GE	2.0000	EPA6010	1.00
309 Bromoform	0	U	1 ug/L	GE	1.0000	EPA8240	1.00
310 Bromoform	1	U	1 ug/L	GE	1.0000	EPA8240	1.00
311 Chloroform	0	U	1 ug/L	GE	1.0000	EPA8240	1.00
312 Chloroform	1	U	1 ug/L	GE	1.0000	EPA8240	1.00
313 Dichloromethane (Methylene chloride)	0	U	1 ug/L	GE	1.0000	EPA8240	1.00
314 Dichloromethane (Methylene chloride)	1	U	1.2 ug/L	GE	1.0000	EPA8240	1.00
315 Bromomethane (Methyl bromide)	0	U	1 ug/L	GE	1.0000	EPA8240	1.00
316 Bromomethane (Methyl bromide)	1	U	1 ug/L	GE	1.0000	EPA8240	1.00
317 Chloromethane (Methyl chloride)	0	U	1 ug/L	GE	1.0000	EPA8240	1.00
318 Chloromethane (Methyl chloride)	1	U	1 ug/L	GE	1.0000	EPA8240	1.00
319 Chloride	0	U	1990 ug/L	GE	0.2500	EPA300.0	1.00
320 Chlorobenzene	0	U	1 ug/L	GE	1.0000	EPA8240	1.00
321 Chlorobenzene	1	U	1 ug/L	GE	1.0000	EPA8240	1.00
322 Specific conductance	0	U	28 uS/cm	GE	1.0000	EPA120.1	1.00
323 Chromium, total recoverable	0	U	4 ug/L	GE	4.0000	EPA6010	1.00
324 Chloroethane (Vinyl chloride)	0	U	1 ug/L	GE	1.0000	EPA8240	1.00
325 Chloroethane (Vinyl chloride)	1	U	1 ug/L	GE	1.0000	EPA8240	1.00
326 Chloroethane	0	U	1 ug/L	GE	1.0000	EPA8240	1.00
327 Chloroethane	1	U	1 ug/L	GE	1.0000	EPA8240	1.00
328 Benzene	0	U	1 ug/L	GE	1.0000	EPA8240	1.00
329 Benzene	1	U	1 ug/L	GE	1.0000	EPA8240	1.00
330 Dibromochloromethane	0	U	1 ug/L	GE	1.0000	EPA8240	1.00
331 Dibromochloromethane	1	U	1 ug/L	GE	1.0000	EPA8240	1.00
332 Endrin	0	U	0.006 ug/L	GE	0.0060	EPA8080	1.00
333 Ethylbenzene	0	U	1 ug/L	GE	1.0000	EPA8240	1.00
334 Ethylbenzene	1	U	1 ug/L	GE	1.0000	EPA8240	1.00
335 Fluoride	0	U	100 ug/L	GE	0.1000	EPA340.2	1.00
336 Iron, total recoverable	0	U	73.7 ug/L	GE	4.0000	EPA6010	1.00
337 Mercury, total recoverable	0	U	0.2 ug/L	GE	0.2000	EPA7470	1.00
338 Mercury, total recoverable	1	U	0.2 ug/L	GE	0.2000	EPA7470	1.00
339 Potassium, total recoverable	0	U	1290 ug/L	GE	500.0000	EPA6010	1.00
340 Lindane	0	U	0.005 ug/L	GE	0.0050	EPA8080	1.00
341 Toluene	0	U	1 ug/L	GE	1.0000	EPA8240	1.00
342 Toluene	1	U	1 ug/L	GE	1.0000	EPA8240	1.00
343 Methoxychlor	0	U	0.5 ug/L	GE	0.5000	EPA8080	1.00
344 Magnesium, total recoverable	0	U	250 ug/L	GE	2.0000	EPA6010	1.00
345 Manganese, total recoverable	0	U	7.03 ug/L	GE	2.0000	EPA6010	1.00
346 Sodium, total recoverable	0	U	3710 ug/L	GE	10.0000	EPA6010	1.00
347 Nitrate-nitrite as nitrogen	0	U	1040 ug/L	GE	0.0500	EPA353.3	1.00
348 Lead, total recoverable	0	U	6.83 ug/L	GE	3.0000	EPA7421	1.00
349 pH	0	U	5.86 pH	GE	0.0000	EPA150.1	1.00
350 Selenium, total recoverable	0	U	2 ug/L	GE	2.0000	EPA7740	1.00
351 2,4,5-TP (Silvex)	0	U	0.09 ug/L	GE	0.0900	EPA8150	1.00
352 Sulfate	0	U	1000 ug/L	GE	1.0000	EPA300.0	1.00
353 1,1,2,2-Tetrachloroethane	0	U	1 ug/L	GE	1.0000	EPA8240	1.00
354 1,1,2,2-Tetrachloroethane	1	U	1 ug/L	GE	1.0000	EPA8240	1.00
355 Tetrachloroethylene	0	U	1 ug/L	GE	1.0000	EPA8240	1.00

Well Name=CBR 1D Secondary ID= Sample Date=030393

1ST QTR 93

(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
356	Tetrachloroethylene	1	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
357	Total dissolved solids	0	JQ			19000 ug/L		.	GE	1.0000	EPA160.1	1.00
358	Total organic carbon	0	U			1000 ug/L		.	GE	1.0000	EPA9060	1.00
359	Radium, total alpha-emitting	0	U			1 pCi/L		.	GE	1.0000	EPA900.1	1.00
360	Total organic halogens	0	U			5 ug/L		.	GE	5.0000	EPA9020	1.00
361	Total organic halogens	1	U			5 ug/L		.	GE	5.0000	EPA9020	1.00
362	Phenols	0	U			5 ug/L		.	GE	5.0000	EPA420.2	1.00
363	Phenols	1	U			5 ug/L		.	GE	5.0000	EPA420.2	1.00
364	Total phosphates (as P)	0	U			50 ug/L		.	GE	0.0500	EPA365.1	1.00
365	Trichloroethylene	0	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
366	Trichloroethylene	1	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
367	Tritium	0				4.43 pCi/mL		0.4000	GE	0.7000	EPA906.0	1.00
368	Silica, total recoverable	0				11900 ug/L		.	GE	100.0000	EPA6010	1.00
369	Toxaphene	0	U			0.24 ug/L		.	GE	0.2400	EPA8080	1.00
370	trans-1,2-Dichloroethylene	0	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
371	trans-1,2-Dichloroethylene	1	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
372	trans-1,3-Dichloropropene	0	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
373	trans-1,3-Dichloropropene	1	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
374	1,1-Dichloroethylene	0	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
375	1,1-Dichloroethylene	1	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
376	1,1-Dichloroethane	0	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
377	1,1-Dichloroethane	1	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
378	1,1,1-Trichloroethane	0	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
379	1,1,1-Trichloroethane	1	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
380	1,1,2-Trichloroethane	0	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
381	1,1,2-Trichloroethane	1	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
382	1,2-Dichloroethane	0	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
383	1,2-Dichloroethane	1	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
384	1,2-Dichloropropene	0	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
385	1,2-Dichloropropene	1	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
386	cis-1,3-Dichloropropene	0	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
387	cis-1,3-Dichloropropene	1	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
388	2-Chloroethyl vinyl ether	0	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
389	2-Chloroethyl vinyl ether	1	U			1 ug/L		.	GE	1.0000	EPA8240	1.00
390	2,4-Dichlorophenoxyacetic acid	0	U			0.3 ug/L		.	GE	0.3000	EPA8150	1.00

Well Name=CBR 1D Secondary ID= Sample Date=031593

3RD QTR 93

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
391	Aluminum, total recoverable	0				34.7 ug/L		.	GE	20.0000	EPA6010	1.00
392	Iron, total recoverable	0				74.1 ug/L		.	GE	4.0000	EPA6010	1.00

Well Name=CBR 1D Secondary ID= Sample Date=022394

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
393	Silver, total recoverable	1	U			2 ug/L		.	GE	2.0000	EPA6010	1.00
394	Silver, total recoverable	1	U			2 ug/L		.	GE	2.0000	EPA6010	1.00
395	Aldrin	1	U			0.05 ug/L		.	GE	0.0001	EPA8080	1.00
396	Aldrin	1	U			0.05 ug/L		.	GE	0.0001	EPA8080	1.00

Well Name=CBR 1D Secondary ID= Sample Date=022394 1ST QTR 94

(continued)

OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
397	Gross alpha	J				0.962 pCi/L		0.3910 GP		1.5000	EPIA-001	1.00
398	Aluminum, total recoverable	1	J			32.4 ug/L			GE	20.0000	EPA6010	1.00
399	Aluminum, total recoverable		J			30.1 ug/L			GE	20.0000	EPA6010	1.00
400	Arsenic, total recoverable		U			2 ug/L			GE	2.0000	EPA7060	1.00
401	Barium, total recoverable	1				24.1 ug/L			GE	3.0000	EPA6010	1.00
402	Barium, total recoverable					24.2 ug/L			GE	3.0000	EPA6010	1.00
403	Nonvolatile base	J				2.12 pCi/L		0.6680 GP		2.0000	EPIA-001	1.00
404	Bromodichloromethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
405	Boron, total recoverable	U				30 ug/L			GE	30.0000	EPA6010	1.00
406	Calcium, total recoverable	1				695 ug/L			GE	10.0000	EPA6010	1.00
407	Calcium, total recoverable					689 ug/L			GE	10.0000	EPA6010	1.00
408	Trichlorofluoromethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
409	Carbon tetrachloride	U				1 ug/L			GE	1.0000	EPA8240	1.00
410	Cadaluam, total recoverable	1	U			2 ug/L			GE	2.0000	EPA6010	1.00
411	Cadaluam, total recoverable		U			2 ug/L			GE	2.0000	EPA6010	1.00
412	Bromoform	U				1 ug/L			GE	1.0000	EPA8240	1.00
413	Chloroform	U				1 ug/L			GE	1.0000	EPA8240	1.00
414	Dichloromethane (Methylene chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
415	Bromomethane (Methyl bromide)	U				1 ug/L			GE	1.0000	EPA8240	1.00
416	Chloromethane (Methyl chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
417	Chloride	1				2250 ug/L			GE	0.2500	EPA300.0	1.00
418	Chloride					2260 ug/L			GE	0.2500	EPA300.0	1.00
419	Chlorobenzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
420	Specific conductance					29 uS/cm			GE	1.0000	EPA120.1	1.00
421	Chromium, total recoverable	1	U			4 ug/L			GE	4.0000	EPA6010	1.00
422	Chromium, total recoverable		U			4 ug/L			GE	4.0000	EPA6010	1.00
423	Chloroethene (Vinyl chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
424	Chloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
425	Benzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
426	Dibromochloromethane	U				0.5 ug/L			GE	0.0005	EPA8080	1.00
427	Dieldrin	1	U			0.5 ug/L			GE	0.0005	EPA8080	1.00
428	Dieldrin	U				0.006 ug/L			GE	0.0000	EPA8080	1.00
429	Endrin	1	U			0.006 ug/L			GE	0.0000	EPA8080	1.00
430	Endrin	U				1 ug/L			GE	1.0000	EPA8240	1.00
431	Ethylbenzene	U				100 ug/L			GE	0.1000	EPA340.2	1.00
432	Fluoride	U				119 ug/L			GE	4.0000	EPA6010	1.00
433	Iron, total recoverable	1				119 ug/L			GE	4.0000	EPA6010	1.00
434	Iron, total recoverable					0.2 ug/L			GE	0.2000	EPA7470	1.00
435	Mercury, total recoverable	1	U			0.05 ug/L			GE	0.0001	EPA8080	1.00
436	Heptachlor	U				0.05 ug/L			GE	0.0001	EPA8080	1.00
437	Heptachlor	U				1530 ug/L			GE	500.0000	EPA6010	1.00
438	Potassium, total recoverable	1				1540 ug/L			GE	500.0000	EPA6010	1.00
439	Potassium, total recoverable					0.005 ug/L			GE	0.0000	EPA8080	1.00
440	Lindane	1	U			0.005 ug/L			GE	0.0000	EPA8080	1.00
441	Lindane	U				5 ug/L			GE	5.0000	EPA6010	1.00
442	Lithium, total recoverable	1	U			5 ug/L			GE	5.0000	EPA6010	1.00
443	Lithium, total recoverable	U				1 ug/L			GE	1.0000	EPA8240	1.00
444	Toluene	U				0.5 ug/L			GE	0.0005	EPA8080	1.00
445	Methoxychlor	1	U			0.5 ug/L			GE	0.0005	EPA8080	1.00
446	Methoxychlor	U				328 ug/L			GE	2.0000	EPA6010	1.00
447	Magnesium, total recoverable	1				322 ug/L			GE	2.0000	EPA6010	1.00
448	Magnesium, total recoverable					8.46 ug/L			GE	2.0000	EPA6010	1.00
449	Manganese, total recoverable	1							GE			

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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
450	Manganese, total recoverable					8.39	ug/L	.	GE	2.0000	EPA6010	1.00
451	Sodium, total recoverable	1				3510	ug/L	.	GE	10.0000	EPA6010	1.00
452	Sodium, total recoverable					3510	ug/L	.	GE	10.0000	EPA6010	1.00
453	Nitrate-nitrite as nitrogen					1060	ug/L	.	GE	0.0500	EPA353.1	1.00
454	Lead, total recoverable					15.8	ug/L	.	GE	3.0000	EPA742.1	1.00
455	pH	1	J	Q	L	5.89	PH	.	GE	0.0100	EPA150.1	1.00
456	pH		J	Q	L	5.86	PH	.	GE	0.0100	EPA150.1	1.00
457	P,p'-DDT	1	U			0.1	ug/L	.	GE	0.0001	EPA8080	1.00
458	P,p'-DDT		U			0.1	ug/L	.	GE	0.0001	EPA8080	1.00
459	Selenium, total recoverable		U			2	ug/L	.	GE	2.0000	EPA7740	1.00
460	2,4,5-TP (Silvex)		U			0.000464	ug/L	.	GE	0.0005	EPA8150	1.00
461	Sulfate	1	U			1000	ug/L	.	GE	1.0000	EPA300.0	1.00
462	Sulfate		U			1000	ug/L	.	GE	1.0000	EPA300.0	1.00
463	1,1,2,2-Tetrachloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
464	Tetrachloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
465	Total dissolved solids	1				32000	ug/L	.	GE	1.0000	EPA160.1	1.00
466	Total dissolved solids					34000	ug/L	.	GE	1.0000	EPA160.1	1.00
467	Total organic carbon		U	V	H	1000	ug/L	.	GE	1.0000	EPA9060	1.00
468	Radium, total alpha-emitting		U			0.7	pci/L	0.6000	GP	0.5000	EPA-010	1.00
469	Total organic halogens		J			19.6	ug/L	.	GE	5.0000	EPA9020	1.00
470	Phenols		U			5	ug/L	.	GE	5.0000	EPA420.2	1.00
471	Total phosphates (as P)	1	U			50	ug/L	.	GE	0.0500	EPA365.1	1.00
472	Total phosphates (as P)		U			50	ug/L	.	GE	0.0500	EPA365.1	1.00
473	Trichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
474	Trifluoromethane		U			4.8	pci/L	0.4950	GP	0.7000	EPA-002	1.00
475	Silica, total recoverable	1				11200	ug/L	.	GE	100.0000	EPA6010	1.00
476	Silica, total recoverable					11300	ug/L	.	GE	100.0000	EPA6010	1.00
477	Toxaphene	1	U			0.24	ug/L	.	GE	0.0002	EPA8080	1.00
478	Toxaphene		U			0.24	ug/L	.	GE	0.0002	EPA8080	1.00
479	trans-1,2-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
480	1,1-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
481	1,1-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
482	1,1,1-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
483	1,1,2-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
484	1,2-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
485	1,2-Dichloropropane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
486	cis-1,3-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
487	trans-1,3-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
488	2-Chloroethyl vinyl ether		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
489	2,4-Dichlorophenoxyacetic acid		U			0.00155	ug/L	.	GE	0.0016	EPA8150	1.00

Well Name=CBR 1D Secondary ID= Sample Date=022394

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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
490	Silver, total recoverable		U			2	ug/L	.	GE	2.0000	EPA6010	1.00
491	Gross alpha		J			0.506	pci/L	0.4490	GP	1.5000	EPA900.0	1.00
492	Aluminum, total recoverable		U			20	ug/L	.	GE	20.0000	EPA6010	1.00
493	Arsenic, total recoverable		U			2	ug/L	.	GE	2.0000	EPA7060	1.00
494	Barium, total recoverable					18.8	ug/L	.	GE	3.0000	EPA6010	1.00
495	Nonvolatile beta	J				2.41	pci/L	0.9170	GP	2.0000	EPA900.0	1.00
496	Bromodichloromethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00

Well Name=CBR 1D Secondary ID= Sample Date=052394
(continued)

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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFAC
497	Boron, total recoverable	U				52.1 ug/L			GE	0.0521	EPA6010	1.00
498	Calcium, total recoverable	U				398 ug/L			GE	10.0000	EPA6010	1.00
499	Trichlorofluoromethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
500	Carbon tetrachloride	U				1 ug/L			GE	1.0000	EPA8240	1.00
501	Cadalam, total recoverable	U				2 ug/L			GE	2.0000	EPA6010	1.00
502	Bromoform	U				1 ug/L			GE	1.0000	EPA8240	1.00
503	Chloroform	U				1 ug/L			GE	1.0000	EPA8240	1.00
504	Dichloromethane (Methylene chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
505	Bromomethane (Methyl bromide)	U				1 ug/L			GE	1.0000	EPA8240	1.00
506	Chloromethane (Methyl chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
507	Chloride	U				2490 ug/L			GE	0.2500	EPA300.0	1.00
508	Chlorobenzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
509	Specific conductance	U				27.9 uS/cm			GE	1.0000	EPA120.1	1.00
510	Chromium, total recoverable	U				4 ug/L			GE	4.0000	EPA6010	1.00
511	Chloroethane (Vinyl chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
512	Chloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
513	Benzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
514	Dibromochloromethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
515	Endrin	U				0.006 ug/L			GE	0.0000	EPA8080	1.00
516	Ethylbenzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
517	Fluoride	U				100 ug/L			GE	0.1000	EPA340.2	1.00
518	Iron, total recoverable	U				19.2 ug/L			GE	4.0000	EPA6010	1.00
519	Mercury, total recoverable	U				0.2 ug/L			GE	0.2000	EPA7470	1.00
520	Mercury, total recoverable	U				0.2 ug/L			GE	0.2000	EPA7470	1.00
521	Potassium, total recoverable	U				1300 ug/L			GE	500.0000	EPA6010	1.00
522	Lindane	U				0.005 ug/L			GE	0.0000	EPA8080	1.00
523	Lithium, total recoverable	U				5 ug/L			GE	5.0000	EPA6010	1.00
524	Toluene	U				1 ug/L			GE	1.0000	EPA8240	1.00
525	Methoxychlor	U				0.5 ug/L			GE	0.0005	EPA8080	1.00
526	Magnesium, total recoverable	U				249 ug/L			GE	2.0000	EPA6010	1.00
527	Manganese, total recoverable	U				5.43 ug/L			GE	2.0000	EPA6010	1.00
528	Sodium, total recoverable	U				2820 ug/L			GE	10.0000	EPA6010	1.00
529	Nitrate-nitrite as nitrogen	U				1090 ug/L			GE	0.0500	EPA353.1	1.00
530	Lead, total recoverable	U				5.24 ug/L			GE	3.0000	EPA7421	1.00
531	pH	J		Q	L	5.4 PH			GE	0.0100	EPA150.1	1.00
532	pH	J		Q	L	5.43 PH			GE	0.0100	EPA150.1	1.00
533	Selenium, total recoverable	U				2 ug/L			GE	2.0000	EPA7740	1.00
534	2,4,5-TP (Slivex)	U				0.000459 ug/L			GE	0.0005	EPA8150	1.00
535	Sulfate	J				1440 ug/L			GE	1.0000	EPA300.0	1.00
536	1,1,2,2-Tetrachloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
537	Tetrachloroethylene	U				1 ug/L			GE	1.0000	EPA8240	1.00
538	Total dissolved solids	U				32000 ug/L			GE	1.0000	EPA160.1	1.00
539	Total organic carbon	U				1000 ug/L			GE	1.0000	EPA9050	1.00
540	Radium, total alpha-emitting	U				-1.4 pCi/L	0.3000 GP		GE	0.5000	EPA900.1	1.00
541	Total organic halogens	U				5 ug/L			GE	5.0000	EPA9020	1.00
542	Phenols	U				50 ug/L			GE	5.0000	EPA420.2	1.00
543	Total phosphates (as P)	U				1 ug/L			GE	0.0500	EPA365.1	1.00
544	Trichloroethylene	U				4770 pCi/L	487.0000 GP		GE	1.0000	EPA8240	1.00
545	Tritium	U				13800 ug/L			GE	100.0000	EPA905.0	1.00
546	Silica, total recoverable	U				0.24 ug/L			GE	0.0002	EPA8080	1.00
547	Toxaphene	U				1 ug/L			GE	1.0000	EPA8240	1.00
548	trans-1,2-Dichloroethylene	U				1 ug/L			GE	1.0000	EPA8240	1.00
549	1,1-Dichloroethylene	U				1 ug/L			GE	1.0000	EPA8240	1.00

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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
550	1,1-Dichloroethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
551	1,1,1-Trichloroethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
552	1,1,2-Trichloroethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
553	1,2-Dichloroethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
554	1,2-Dichloropropane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
555	cis-1,3-Dichloropropane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
556	trans-1,3-Dichloropropane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
557	2-Chloroethyl vinyl ether	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
558	2,4-Dichlorophenoxyacetic acid	U				0.00153 ug/L		.	GE	1.0000	EPA8240	1.00
								.	GE	0.0015	EPA8150	1.00

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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
559	Silver, total recoverable	U		Y		2 ug/L		.	HA	2.0000	EPA200.7	1.00
560	Silver, total recoverable	U		Y		2 ug/L		.	HA	2.0000	EPA200.7	1.00
561	Gross alpha	UI				0.717 pCi/L		0.5360	GP	0.8070	EPIA-001	1.00
562	Aluminum, total recoverable			Y		149 ug/L		.	HA	20.0000	EPA200.7	1.00
563	Aluminum, total recoverable			Y		138 ug/L		.	HA	20.0000	EPA200.7	1.00
564	Arsenic, total recoverable	U		Y		2 ug/L		.	HA	2.0000	EPA206.2	1.00
565	Arsenic, total recoverable	U		Y		2 ug/L		.	HA	2.0000	EPA206.2	1.00
566	Barium, total recoverable	U		Y		20.9 ug/L		.	HA	4.0000	EPA200.7	1.00
567	Barium, total recoverable	U		Y		20.4 ug/L		.	HA	4.0000	EPA200.7	1.00
568	Nonvolatile beta	UI				1.34 pCi/L		0.8170	GP	1.6100	EPIA-001	1.00
569	Broadchloromethane	U		Y		5 ug/L		.	HA	5.0000	EPA8240	1.00
570	Boron, total recoverable	UJ		L		30 ug/L		.	GE	30.0000	EPA6010	1.00
571	Calcium, total recoverable			VY		677 ug/L		.	HA	10.0000	EPA200.7	1.00
572	Calcium, total recoverable			VY		567 ug/L		.	HA	10.0000	EPA200.7	1.00
573	Trichlorofluoromethane	U		Y		5 ug/L		.	HA	5.0000	EPA8240	1.00
574	Carbon tetrachloride	U		Y		5 ug/L		.	HA	5.0000	EPA8240	1.00
575	Cadmium, total recoverable	U		Y		2 ug/L		.	HA	2.0000	EPA200.7	1.00
576	Cadmium, total recoverable	U		Y		2 ug/L		.	HA	2.0000	EPA200.7	1.00
577	Bromoform	U		Y		5 ug/L		.	HA	5.0000	EPA8240	1.00
578	Chloroform	U		Y		5 ug/L		.	HA	5.0000	EPA8240	1.00
579	Dichloromethane (Methylene chloride)	UJ		VY		48 ug/L		.	HA	5.0000	EPA8240	1.00
580	Bromomethane (Methyl bromide)	U		Y		10 ug/L		.	HA	5.0000	EPA8240	1.00
581	Chloromethane (Methyl chloride)	U		Y		10 ug/L		.	HA	10.0000	EPA8240	1.00
582	Chloride			Y		2270 ug/L		.	HA	0.2500	EPA325.1	1.00
583	Chlorobenzene	U		Y		5 ug/L		.	HA	5.0000	EPA8240	1.00
584	Specific conductance			Y		25.8 uS/cm		.	HA	1.0000	EPA120.1	1.00
585	Chromium, total recoverable	U		Y		4 ug/L		.	HA	4.0000	EPA200.7	1.00
586	Chromium, total recoverable	U		Y		4 ug/L		.	HA	4.0000	EPA200.7	1.00
587	Chloroethene (Vinyl chloride)	U		Y		10 ug/L		.	HA	10.0000	EPA8240	1.00
588	Chloroethane	U		Y		10 ug/L		.	HA	10.0000	EPA8240	1.00
589	Benzene	U		Y		5 ug/L		.	HA	5.0000	EPA8240	1.00
590	Dibromochloromethane	U		Y		5 ug/L		.	HA	5.0000	EPA8240	1.00
591	Endrin	U		Y		0.101 ug/L		.	HA	0.1000	EPA8080	1.01
592	Endrin	U		Y		0.202 ug/L		.	HA	0.1000	EPA8080	2.02
593	Ethylbenzene	U		Y		5 ug/L		.	HA	5.0000	EPA8240	1.00
594	Fluoride	U		Y		100 ug/L		.	HA	0.1000	EPA340.2	1.00
595	Iron, total recoverable			VY		806 ug/L		.	HA	4.0000	EPA200.7	1.00
596	Iron, total recoverable			VY		775 ug/L		.	HA	4.0000	EPA200.7	1.00

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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
597	Iron, total recoverable					1130	ug/L	.	WA	4.0000	EPA200.7	1.00
598	Mercury, total recoverable		U	Y		0.2	ug/L	.	WA	0.2000	EPA245.1	1.00
599	Potassium, total recoverable			Y		1130	ug/L	.	WA	500.0000	EPA200.7	1.00
600	Potassium, total recoverable	1		Y		1110	ug/L	.	WA	500.0000	EPA200.7	1.00
601	Lindane		U	Y		0.0505	ug/L	.	WA	0.0500	EPA8080	1.01
602	Lindane	1	U	Y		0.101	ug/L	.	WA	0.0500	EPA8080	2.02
603	Lithium, total recoverable		UJ	VV		33.5	ug/L	.	WA	5.0000	EPA200.7	1.00
604	Lithium, total recoverable	1	U	VV	H	5	ug/L	.	WA	5.0000	EPA200.7	1.00
605	Toluene		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
606	Methoxychlor		U	Y		0.505	ug/L	.	WA	0.5000	EPA8080	1.01
607	Methoxychlor	1	U	Y		1.01	ug/L	.	WA	0.5000	EPA8080	2.02
608	Methoxychlor	1	U	Y		1.01	ug/L	.	WA	0.5000	EPA8080	2.02
609	Magnesium, total recoverable			Y		272	ug/L	.	WA	7.5000	EPA200.7	1.00
610	Magnesium, total recoverable	1		Y		264	ug/L	.	WA	7.5000	EPA200.7	1.00
611	Magnesium, total recoverable			Y		9.9	ug/L	.	WA	2.0000	EPA200.7	1.00
612	Manganese, total recoverable	1		Y		9.6	ug/L	.	WA	2.0000	EPA200.7	1.00
613	Sodium, total recoverable		Y	Y		2950	ug/L	.	WA	11.5000	EPA200.7	1.00
614	Sodium, total recoverable	1		Y		2880	ug/L	.	WA	11.5000	EPA200.7	1.00
615	Nitrate as nitrogen		Y	Y		1080	ug/L	.	WA	0.0200	EPA353.2	5.00
616	Lead, total recoverable		Y	Y		43.2	ug/L	.	WA	3.0000	EPA239.2	1.00
617	Lead, total recoverable	1		Y		44.8	ug/L	.	WA	3.0000	EPA239.2	1.00
618	pH		J	QV	P	5.8	PH	.	WA	0.1000	EPA150.1	1.00
619	Selenium, total recoverable		U	Y		2	ug/L	.	WA	2.0000	EPA270.2	1.00
620	Selenium, total recoverable	1	U	Y		2	ug/L	.	WA	2.0000	EPA270.2	1.00
621	2,4,5-TP (Silvex)		U	Y		0.53	ug/L	.	WA	0.5000	EPA150	1.06
622	Sulfate		U	Y		1000	ug/L	.	WA	1.0000	EPA300.0	1.00
623	1,1,2,2-Tetrachloroethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
624	Tetrachloroethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
625	Total dissolved solids		U	Y		34000	ug/L	.	WA	1.0000	EPA160.2	1.00
626	Total organic carbon		U	Y		1000	ug/L	.	WA	1.0000	EPA415.1	1.00
627	Radium, total alpha-emitting		UI	Y		0.2	pCi/L	0.3000	GP	0.4720	EPIA-010	1.00
628	Total organic halogens		U	Y		7.13	ug/L	.	WA	5.0000	SH9020A	1.00
629	Phenols		U	IV		5	ug/L	.	WA	5.0000	EPA420.2	1.00
630	Total phosphates (as P)		U	Y		50	ug/L	.	WA	0.0500	EPA365.2	1.00
631	Trichloroethylene		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
632	Tritium		U	Y		4.5	pCi/mL	0.4750	GP	0.6030	EPIA-002	1.00
633	Silica, total recoverable		J	IV	P	10700	ug/L	.	WA	100.0000	EPA200.7	2.10
634	Silica, total recoverable	1	J	IV	P	10400	ug/L	.	WA	100.0000	EPA200.7	2.10
635	Toxaphene		U	Y		1.01	ug/L	.	WA	1.0000	EPA8080	1.01
636	Toxaphene	1	U	Y		2.02	ug/L	.	WA	1.0000	EPA8080	2.02
637	Toxaphene	1	U	Y		2.02	ug/L	.	WA	1.0000	EPA8080	2.02
638	trans-1,2-Dichloroethylene		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
639	1,1-Dichloroethylene		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
640	1,1-Dichloroethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
641	1,1,1-Trichloroethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
642	1,1,2-Trichloroethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
643	1,2-Dichloroethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
644	1,2-Dichloropropane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
645	cis-1,3-Dichloropropene		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
646	trans-1,3-Dichloropropene		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
647	2-Chloroethyl vinyl ether		U	Y		10	ug/L	.	WA	10.0000	EPA8240	1.00
648	2,4-Dichlorophenoxyacetic acid		U	Y		1.06	ug/L	.	WA	1.0000	EPA8150	1.06

Well Name=CBR 1D Secondary ID= Sample Date=102094

4TH QTR 94

ONS TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
649 alpha-Benzene hexachloride	U				0.0124	ug/L	.	GE	0.0124	EPA8080	1.00
650 Acetone	U				3.17	ug/L	.	GE	3.1700	EPA8260	1.00
651 alpha-Chlordane	U				0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
652 Silver, total recoverable	U				0.512	ug/L	.	GE	0.5120	EPA6010	1.00
653 Aldrin	U				0.0124	ug/L	.	GE	0.0124	EPA8080	1.00
654 Gross alpha	UI				0.529	pci/L	0.4700	GP	0.7420	EPTA-001	1.00
655 Aluminum, total recoverable	J			V	133	ug/L	.	GE	1.9300	EPA6010	1.00
656 Acenaphthene	U	1		I	0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
657 Acenaphthene	U			I	0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
658 Acenaphthylene	UJ			V	0.017	ug/L	.	GE	0.0170	EPA8270	1.00
659 Anthracene	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
660 Arsenic, total recoverable	U	1			1.5	ug/L	.	GE	1.5000	EPA7060	1.00
661 Arsenic, total recoverable	U				1.5	ug/L	.	GE	1.5000	EPA7060	1.00
662 Benzo(a)anthracene	U				0.151	ug/L	.	GE	0.1510	EPA8270	1.00
663 Benzo(a)pyrene	U				0.076	ug/L	.	GE	0.0760	EPA8270	1.00
664 Barium, total recoverable	J			V	22.3	ug/L	.	GE	0.0480	EPA6010	1.00
665 Benzo(b)fluoranthene	U				0.133	ug/L	.	GE	0.1330	EPA8270	1.00
666 beta-Benzene hexachloride	U				0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
667 Butylbenzyl phthalate	U				0.036	ug/L	.	GE	0.0360	EPA8270	1.00
668 Bis(2-chloroisopropyl) ether	U				0.042	ug/L	.	GE	0.0420	EPA8270	1.00
669 Benzoic acid	U				0.081	ug/L	.	GE	0.0810	EPA8270	1.00
670 Nonvolatile beta	J				2.05	pci/L	0.8810	GP	1.6100	EPTA-001	1.00
671 Beryllium, total recoverable	J			V	0.15	ug/L	.	GE	0.0270	EPA6010	1.00
672 Benzo(g,h,i)perylene	U				0.309	ug/L	.	GE	0.3090	EPA8270	1.00
673 Benzo(k)fluoranthene	U				0.079	ug/L	.	GE	0.0790	EPA8270	1.00
674 Bromodichloromethane	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
675 Benzyl alcohol	U				0.025	ug/L	.	GE	0.0250	EPA8270	1.00
676 Bis(2-chloroethoxy) methane	U				0.018	ug/L	.	GE	0.0180	EPA8270	1.00
677 Bis(2-chloroethyl) ether	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
678 Bis(2-ethylhexyl) phthalate	U				0.254	ug/L	.	GE	0.2540	EPA8270	1.00
679 Calcium, total recoverable	U				560	ug/L	.	GE	12.0000	EPA6010	1.00
680 Carbon tetrachloride	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
681 Cadmium, total recoverable	U				0.48	ug/L	.	GE	0.4800	EPA6010	1.00
682 Bromoform	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
683 Chloroform	U				0.36	ug/L	.	GE	0.0170	EPA8260	1.00
684 Chrysene	U				0.012	ug/L	.	GE	0.0120	EPA8270	1.00
685 Dichloromethane (Methylene chloride)	UJ			V	0.294	ug/L	.	GE	0.2940	EPA8260	1.00
686 Bromomethane (Methyl bromide)	U				0.026	ug/L	.	GE	0.0260	EPA8260	1.00
687 Chloromethane (Methyl chloride)	U				0.024	ug/L	.	GE	0.0240	EPA8260	1.00
688 Chloride	U				1800	ug/L	.	GE	64.0000	EPA300.0	1.00
689 Chlorobenzene	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
690 Hexachlorobenzene	U				0.028	ug/L	.	GE	0.0280	EPA8270	1.00
691 Hexachlorocyclopentadiene	U				0.042	ug/L	.	GE	0.0420	EPA8270	1.00
692 Hexachloroethane	U				0.022	ug/L	.	GE	0.0220	EPA8270	1.00
693 Specific conductance	J				29.5	US/cm	.	GE	0.3000	EPA120.1	1.00
694 Cobalt, total recoverable	U				1.14	ug/L	.	GE	0.5980	EPA6010	1.00
695 Chromium, total recoverable	U				2.28	ug/L	.	GE	2.2800	EPA6010	1.00
696 Carbon disulfide	U				0.129	ug/L	.	GE	0.1290	EPA8260	1.00
697 Copper, total recoverable	J			V	44.6	ug/L	.	GE	0.4580	EPA6010	1.00
698 Cyanide	U				0.81	ug/L	.	GE	0.7000	EPA335.2	1.00
699 Chloroethane (Vinyl chloride)	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
700 Chloroethane	U				0.025	ug/L	.	GE	0.0250	EPA8260	1.00
701 Benzene	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
702 Dibenz(a,h)anthracene	U				0.09	ug/L	.	GE	0.0900	EPA8270	1.00

Well Name=CBR ID Secondary ID= Sample Date=102094 4TH QTR 94
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLTH	METHOD	DILFACT
703	delta-Benzene hexachloride	U	U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
704	Dibromochloroethane	U	U			0.017	ug/L	.	GE	0.0170	EPA8260	1.00
705	Diethyl phthalate	U	U			0.015	ug/L	.	GE	0.0150	EPA8270	1.00
706	Dibenzofuran	UJ	U	V	H	0.017	ug/L	.	GE	0.0170	EPA8270	1.00
707	Dieldrin	U	U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
708	Dimethyl phthalate	U	U			0.017	ug/L	.	GE	0.0170	EPA8270	1.00
709	Di-n-butyl phthalate	UJ	U	V	H	0.443	ug/L	.	GE	0.4430	EPA8270	1.00
710	Di-n-octyl phthalate	U	U			0.07	ug/L	.	GE	0.0700	EPA8270	1.00
711	Endrin ketone	U	U			0.0495	ug/L	.	GE	0.0495	EPA8080	1.00
712	Endrin	U	U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
713	Endosulfan I	U	U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
714	Endosulfan II	U	U			0.0495	ug/L	.	GE	0.0495	EPA8080	1.00
715	Endosulfan sulfate	U	U			0.0495	ug/L	.	GE	0.0495	EPA8080	1.00
716	Ethylbenzene	U	U			0.015	ug/L	.	GE	0.0150	EPA8260	1.00
717	Fluorethane	U	U			0.024	ug/L	.	GE	0.0240	EPA8270	1.00
718	Iron, total recoverable	U	U			266	ug/L	.	GE	18.2000	EPA6010	1.00
719	Fluorene	U	U			0.012	ug/L	.	GE	0.0120	EPA8270	1.00
720	gamma-Chlordane	U	U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
721	Hexachlorobutadiene	U	U			0.067	ug/L	.	GE	0.0670	EPA8270	1.00
722	Mercury, total recoverable	1	J			0.05	ug/L	.	GE	0.0400	EPA7470	1.00
723	Mercury, total recoverable	J	J			0.047	ug/L	.	GE	0.0400	EPA7470	1.00
724	Heptachlor epoxide	U	U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
725	Heptachlor	U	U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
726	Indeno(1,2,3-c,d)pyrene	U	U			0.035	ug/L	.	GE	0.0350	EPA8270	1.00
727	Isophorone	U	U			0.099	ug/L	.	GE	0.0990	EPA8270	1.00
728	Potassium, total recoverable	U	U			1040	ug/L	.	GE	91.6000	EPA6010	1.00
729	Lindane	U	U			0.0124	ug/L	.	GE	0.0124	EPA8080	1.00
730	Toluene	J	J	V	H	0.07	ug/L	.	GE	0.0440	EPA8260	1.00
731	Methyl ethyl ketone	UJ	U	V	H	0.14	ug/L	.	GE	0.1400	EPA8260	1.00
732	Methoxychlor	U	U			0.248	ug/L	.	GE	0.2480	EPA8080	1.00
733	Magnesium, total recoverable	J	J	V	H	288	ug/L	.	GE	2.6800	EPA6010	1.00
734	Methyl isobutyl ketone	U	U			0.204	ug/L	.	GE	0.2040	EPA8260	1.00
735	Manganese, total recoverable	U	U			7.93	ug/L	.	GE	0.2390	EPA6010	1.00
736	Naphthalene	U	U			0.017	ug/L	.	GE	0.0170	EPA8270	1.00
737	Sodium, total recoverable	U	U			2860	ug/L	.	GE	37.8000	EPA6010	1.00
738	Nitrobenzene	U	U			0.031	ug/L	.	GE	0.0310	EPA8270	1.00
739	N-Nitrosodipropylamine	1	U			0.036	ug/L	.	GE	0.0360	EPA8270	1.00
740	N-Nitrosodipropylamine	U	U			0.036	ug/L	.	GE	0.0360	EPA8270	1.00
741	Ammonia nitrogen	U	U			30	ug/L	.	GE	30.0000	EPA350.1	1.00
742	Nickel, total recoverable	J	J	V	H	2.98	ug/L	.	GE	1.8400	EPA6010	1.00
743	N-Nitrosodiphenylamine	UJ	U			0.018	ug/L	.	GE	0.0180	EPA8270	1.00
744	Nitrate-nitrite as nitrogen	1	U			1020	ug/L	.	GE	30.0000	EPA353.1	1.00
745	Lead, total recoverable	U	U			20.7	ug/L	.	GE	0.6900	EPA7421	1.00
746	Lead, total recoverable	J	J	V	H	21.6	ug/L	.	GE	0.6900	EPA7421	1.00
747	PCB 1016	U	U			0.0564	ug/L	.	GE	0.0564	EPA8080	1.00
748	PCB 1221	U	U			0.0732	ug/L	.	GE	0.0732	EPA8080	1.00
749	PCB 1232	U	U			0.0612	ug/L	.	GE	0.0612	EPA8080	1.00
750	PCB 1242	U	U			0.0407	ug/L	.	GE	0.0407	EPA8080	1.00
751	PCB 1248	U	U			0.0594	ug/L	.	GE	0.0594	EPA8080	1.00
752	PCB 1254	U	U			0.0772	ug/L	.	GE	0.0772	EPA8080	1.00
753	PCB 1260	U	U			0.0783	ug/L	.	GE	0.0783	EPA8080	1.00
754	Pentachlorophenol	1	U			0.192	ug/L	.	GE	0.1920	EPA8270	1.00
755	Pentachlorophenol	U	U			0.192	ug/L	.	GE	0.1920	EPA8270	1.00

Mail Name=CBR 1D Secondary ID=' ' Sample Date=102094
(continued)

4TH 4TH 94

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
756	pH		J	Q	L	5.75	PH	.	GE	0.0100	EPA150.1	1.00
757	Phenanthrene		U	.	.	0.017	ug/L	.	GE	0.0170	EPA8270	1.00
758	Phenol	1	U	.	.	0.043	ug/L	.	GE	0.0430	EPA8270	1.00
759	Phenol		U	.	.	0.043	ug/L	.	GE	0.0430	EPA8270	1.00
760	p,p'-DDD		U	.	.	0.0495	ug/L	.	GE	0.0495	EPA8080	1.00
761	p,p'-DDE		U	.	.	0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
762	p,p'-DDT		U	.	.	0.0495	ug/L	.	GE	0.0495	EPA8080	1.00
763	Pyrene	1	J	V	.	0.11	ug/L	.	GE	0.0220	EPA8270	1.00
764	Pyrene		J	V	H	0.2	ug/L	.	GE	0.0220	EPA8270	1.00
765	Antimony, total recoverable	1	U	.	.	1.94	ug/L	.	GE	1.9400	EPA7041	1.00
766	Antimony, total recoverable		U	.	.	1.94	ug/L	.	GE	1.9400	EPA7041	1.00
767	Selenium, total recoverable	1	U	.	.	1.25	ug/L	.	GE	1.2500	EPA7740	1.00
768	Selenium, total recoverable		U	.	.	1.25	ug/L	.	GE	1.2500	EPA7740	1.00
769	Sulfate	J	J	.	.	299	ug/L	.	GE	90.0000	EPA300.0	1.00
770	Styrene		U	.	.	0.017	ug/L	.	GE	0.0170	EPA8260	1.00
771	1,1,2,2-Tetrachloroethane		U	.	.	0.012	ug/L	.	GE	0.0120	EPA8260	1.00
772	Tetrachloroethylene		U	.	.	0.026	ug/L	.	GE	0.0260	EPA8260	1.00
773	Total dissolved solids			.	.	33000	ug/L	.	GE	6300.000	EPA160.1	1.00
774	Thallium, total recoverable	1	U	.	.	9.66	ug/L	.	GE	0.6600	EPA7841	1.00
775	Thallium, total recoverable		U	.	.	0.66	ug/L	.	GE	0.6600	EPA7841	1.00
776	Trichloroethylene		U	.	.	0.017	ug/L	.	GE	0.0170	EPA8260	1.00
777	Tritium			.	.	5230	pCi/L	491.0000	GP	604.0000	EPIA-002	1.00
778	Toxaphene		U	.	.	0.743	ug/L	.	GE	0.7430	EPA8080	1.00
779	Vinyl acetate		U	.	.	0.142	ug/L	.	GE	0.1420	EPA8260	1.00
780	Vanadium, total recoverable		J	.	.	0.568	ug/L	.	GE	0.5140	EPA6010	1.00
781	Xylenes		U	.	.	0.06	ug/L	.	GE	0.0600	EPA8260	1.00
782	1,1-Dichloroethylene		U	.	.	0.018	ug/L	.	GE	0.0180	EPA8260	1.00
783	1,1-Dichloroethane		U	.	.	0.027	ug/L	.	GE	0.0170	EPA8260	1.00
784	1,1,1-Trichloroethane		U	.	.	0.022	ug/L	.	GE	0.0220	EPA8260	1.00
785	1,1,2-Trichloroethane		U	.	.	0.017	ug/L	.	GE	0.0170	EPA8260	1.00
786	1,2-Dichloroethylene		U	.	.	0.03	ug/L	.	GE	0.0500	EPA8260	1.00
787	1,2-Dichlorobenzene		U	.	.	0.017	ug/L	.	GE	0.0170	EPA8270	1.00
788	1,2-Dichloroethane		U	.	.	0.015	ug/L	.	GE	0.0150	EPA8260	1.00
789	1,2-Dichloropropane		U	.	.	0.015	ug/L	.	GE	0.0150	EPA8260	1.00
790	1,2,4-Trichlorobenzene		U	.	.	0.075	ug/L	.	GE	0.0750	EPA8270	1.00
791	1,3-Dichlorobenzene		U	.	.	0.117	ug/L	.	GE	0.1170	EPA8270	1.00
792	cis-1,3-Dichloropropene		U	.	.	0.012	ug/L	.	GE	0.0120	EPA8260	1.00
793	trans-1,3-Dichloropropene		U	.	.	0.015	ug/L	.	GE	0.0150	EPA8260	1.00
794	1,4-Dichlorobenzene		U	.	.	0.024	ug/L	.	GE	0.0240	EPA8270	1.00
795	2-Chlorophenol	1	U	.	.	0.031	ug/L	.	GE	0.0310	EPA8270	1.00
796	2-Chlorophenol		U	.	.	0.117	ug/L	.	GE	0.0310	EPA8270	1.00
797	2-Chloronaphthalene		U	.	.	0.117	ug/L	.	GE	0.1170	EPA8270	1.00
798	2-Hexanone		UJ	V	H	0.194	ug/L	.	GE	0.1940	EPA8260	1.00
799	2-Methylnaphthalene		U	.	.	0.017	ug/L	.	GE	0.0170	EPA8270	1.00
800	o-Cresol (2-Methylphenol)		U	.	.	0.068	ug/L	.	GE	0.0480	EPA8270	1.00
801	o-Nitroaniline		U	.	.	0.031	ug/L	.	GE	0.0310	EPA8270	1.00
802	2-Nitrophenol		U	.	.	0.012	ug/L	.	GE	0.0120	EPA8270	1.00
803	2,4-Dichlorophenol		U	.	.	0.022	ug/L	.	GE	0.0220	EPA8270	1.00
804	2,4-Dimethyl phenol		U	.	.	0.104	ug/L	.	GE	0.1040	EPA8270	1.00
805	2,4-Dinitrophenol		U	.	.	0.332	ug/L	.	GE	0.3320	EPA8270	1.00
806	2,4-Dinitrotoluene		U	.	.	0.092	ug/L	.	GE	0.0920	EPA8270	1.00
807	2,4-Dinitrotoluene	1	U	.	.	0.092	ug/L	.	GE	0.0920	EPA8270	1.00
808	2,4,5-Trichlorophenol		U	.	.	0.051	ug/L	.	GE	0.0510	EPA8270	1.00

The SAS System

Wall Name=CBR ID Secondary ID= Sample Date=102094 4TH QTR 94
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
809	2,4,6-Trichlorophenol		U			0.012	ug/L	.	GE	0.0120	EPA8270	1.00
810	2,6-Dinitrotoluene		U			0.11	ug/L	.	GE	0.1100	EPA8270	1.00
811	m-Nitroaniline		U			0.142	ug/L	.	GE	0.1420	EPA8270	1.00
812	3,3'-Dichlorobenzidine		U			0.113	ug/L	.	GE	0.1130	EPA8270	1.00
813	m,p-Cresol		U			0.49	ug/L	.	GE	0.4900	EPA8270	1.00
814	4-Bromophenyl phenyl ether		U			0.057	ug/L	.	GE	0.0570	EPA8270	1.00
815	4-Chloroaniline		U			0.015	ug/L	.	GE	0.0150	EPA8270	1.00
816	4-Chlorophenyl phenyl ether		UJ	V	H	0.015	ug/L	.	GE	0.0150	EPA8270	1.00
817	4-Chloro-m-cresol	1	U			0.026	ug/L	.	GE	0.0260	EPA8270	1.00
818	4-Chloro-m-cresol		U			0.026	ug/L	.	GE	0.0260	EPA8270	1.00
819	p-Nitroaniline		U			0.102	ug/L	.	GE	0.1020	EPA8270	1.00
820	4-Nitrophenol	1	U			0.191	ug/L	.	GE	0.1910	EPA8270	1.00
821	4-Nitrophenol		U			0.191	ug/L	.	GE	0.1910	EPA8270	1.00
822	2-Methyl-4,6-dinitrophenol		U			0.28	ug/L	.	GE	0.2800	EPA8270	1.00
823	Zinc, total recoverable					39.5	ug/L	.	GE	2.2200	EPA6010	1.00

Wall Name=CBR ID Secondary ID= Sample Date=11594 4TH QTR 94

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
824	alpha-Benzene hexachloride		U			0.0123	ug/L	.	GE	0.0123	EPA8080	1.00
825	Acetone		U			3.17	ug/L	.	GE	3.1700	EPA8260	1.00
826	alpha-Chlordane		U			0.0245	ug/L	.	GE	0.0245	EPA8080	1.00
827	Silver, total recoverable		U			0.512	ug/L	.	GE	0.5120	EPA6010	1.00
828	Aldrin		U			0.0123	ug/L	.	GE	0.0123	EPA8080	1.00
829	Gross alpha		J			0.765	pci/L	0.5350	GP	0.7440	EPIA-001	1.00
830	Aluminum, total recoverable		J	V	H	94.8	ug/L	.	GE	1.9300	EPA6010	1.00
831	Acenaphthene		U	I		0.0166	ug/L	.	GE	0.0166	EPA8270	1.00
832	Acenaphthylene		U			0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
833	Anthracene		U			0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
834	Arsenic, total recoverable		U			1.5	ug/L	.	GE	1.5000	EPA7060	1.00
835	Benzo(a)anthracene		U			0.15	ug/L	.	GE	0.1500	EPA8270	1.00
836	Benzo(a)pyrene		U			0.0752	ug/L	.	GE	0.0752	EPA8270	1.00
837	Barium, total recoverable		U			22.2	ug/L	.	GE	0.0480	EPA6010	1.00
838	Benzo(b)fluoranthene		U			0.132	ug/L	.	GE	0.1320	EPA8270	1.00
839	beta-Benzene hexachloride		U			0.0245	ug/L	.	GE	0.0245	EPA8080	1.00
840	Butylbenzyl phthalate		U			0.0356	ug/L	.	GE	0.0356	EPA8270	1.00
841	Bis(2-chloroisopropyl) ether		U			0.0416	ug/L	.	GE	0.0416	EPA8270	1.00
842	Benzoic acid		U			0.0802	ug/L	.	GE	0.0802	EPA8270	1.00
843	Nonvolatiles beta		UI			0.991	pci/L	0.6050	GP	1.6700	EPIA-001	1.00
844	Beryllium, total recoverable		J	V	H	0.165	ug/L	.	GE	0.0270	EPA6010	1.00
845	Benzo(b,h,i)perylene		U			0.306	ug/L	.	GE	0.3060	EPA8270	1.00
846	Benzo(k)fluoranthene		U			0.0782	ug/L	.	GE	0.0782	EPA8270	1.00
847	Bromodichloromethane		U			0.012	ug/L	.	GE	0.0120	EPA8260	1.00
848	Benzyl alcohol		U			0.0248	ug/L	.	GE	0.0248	EPA8270	1.00
849	Bis(2-chloroethoxy) methane		U			0.0178	ug/L	.	GE	0.0178	EPA8270	1.00
850	Bis(2-chloroethyl) ether		U			0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
851	Bis(2-ethylhexyl) phthalate		U			0.251	ug/L	.	GE	0.2510	EPA8270	1.00
852	Calcium, total recoverable		J	V	H	616	ug/L	.	GE	12.0000	EPA6010	1.00
853	Carbon tetrachloride		U			0.012	ug/L	.	GE	0.0120	EPA8260	1.00
854	Cadmium, total recoverable		U			0.48	ug/L	.	GE	0.4800	EPA6010	1.00
855	Bromoform		U			0.012	ug/L	.	GE	0.0120	EPA8260	1.00

Holl Name=CDR 1D Secondary ID= Sample Date=11/5/94
(continued)

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OBS	TESTNAME	LABDDP	RESQVAL	ANGLAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
856	Chloroform					0.07	ug/L	.	GE	0.0170	EPA8260	1.00
857	Chrysene		U			0.0119	ug/L	.	GE	0.0119	EPA8270	1.00
858	Dichloromethane (Methylene chloride)		UJ	V	H	0.294	ug/L	.	GE	0.2940	EPA8260	1.00
859	Bromomethane (Methyl bromide)		U			0.026	ug/L	.	GE	0.0260	EPA8260	1.00
860	Chloromethane (Methyl chloride)		U			0.024	ug/L	.	GE	0.0240	EPA8260	1.00
861	Chloride					1770	ug/L	.	GE	64.0000	EPA300.0	1.00
862	Chlorobenzene		U			0.012	ug/L	.	GE	0.0120	EPA8260	1.00
863	Hexachlorobenzene		U			0.0277	ug/L	.	GE	0.0277	EPA8270	1.00
864	Hexachlorocyclopentadiene		U			0.0416	ug/L	.	GE	0.0416	EPA8270	1.00
865	Hexachloroethane		U			0.0218	ug/L	.	GE	0.0218	EPA8270	1.00
866	Specific conductance					27.4	uS/cm	.	GE	0.3000	EPA120.1	1.00
867	Cobalt, total recoverable		J			1.01	ug/L	.	GE	0.5980	EPA6010	1.00
868	Chromium, total recoverable		U			2.28	ug/L	.	GE	2.2800	EPA6010	1.00
869	Carbon disulfide		U			0.129	ug/L	.	GE	0.1290	EPA8260	1.00
870	Copper, total recoverable					49.8	ug/L	.	GE	0.4580	EPA6010	1.00
871	Cyanide		U			0.7	ug/L	.	GE	0.7000	EPA335.2	1.00
872	Chloroethene (Vinyl chloride)		U			0.015	ug/L	.	GE	0.0150	EPA8260	1.00
873	Chloroethane		U			0.025	ug/L	.	GE	0.0250	EPA8260	1.00
874	Benzene		U			0.017	ug/L	.	GE	0.0170	EPA8260	1.00
875	Dibenz(a,h)anthracene		U			0.0891	ug/L	.	GE	0.0891	EPA8270	1.00
876	delta-Benzene hexachloride		U			0.0245	ug/L	.	GE	0.0245	EPA8080	1.00
877	Dibromochloromethane		U			0.017	ug/L	.	GE	0.0170	EPA8260	1.00
878	Diethyl phthalate		U			0.0149	ug/L	.	GE	0.0149	EPA8270	1.00
879	Dibenzofuran		U			0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
880	Dieldrin		U			0.0168	ug/L	.	GE	0.0168	EPA8080	1.00
881	Dimethyl phthalate		U			0.439	ug/L	.	GE	0.4390	EPA8270	1.00
882	DI-n-butyl phthalate		UJ	V	H	0.0693	ug/L	.	GE	0.0693	EPA8270	1.00
883	DI-n-octyl phthalate		U			0.049	ug/L	.	GE	0.0490	EPA8080	1.00
884	Endrin ketone		U			0.049	ug/L	.	GE	0.0490	EPA8080	1.00
885	Endrin		U			0.0245	ug/L	.	GE	0.0245	EPA8080	1.00
886	Endosulfan I		U			0.0245	ug/L	.	GE	0.0245	EPA8080	1.00
887	Endosulfan II		U			0.049	ug/L	.	GE	0.0490	EPA8080	1.00
888	Endosulfan sulfate		U			0.049	ug/L	.	GE	0.0490	EPA8080	1.00
889	Ethylbenzene		U			0.015	ug/L	.	GE	0.0150	EPA8260	1.00
890	Fluoranthene		U			0.0238	ug/L	.	GE	0.0238	EPA8270	1.00
891	Iron, total recoverable					163	ug/L	.	GE	18.2000	EPA6010	1.00
892	Fluorene		U			0.0119	ug/L	.	GE	0.0119	EPA8270	1.00
893	gamma-Chlordane		U			0.0245	ug/L	.	GE	0.0245	EPA8080	1.00
894	Hexachlorobutadiene		U			0.0663	ug/L	.	GE	0.0663	EPA8270	1.00
895	Mercury, total recoverable		U			0.04	ug/L	.	GE	0.0400	EPA7470	1.00
896	Heptachlor		U			0.0245	ug/L	.	GE	0.0245	EPA8080	1.00
897	Heptachlor epoxide		U			0.0245	ug/L	.	GE	0.0245	EPA8080	1.00
898	Indeno(1,2,3-c,d)pyrene		U			0.0347	ug/L	.	GE	0.0347	EPA8270	1.00
899	Isophorone		U			0.098	ug/L	.	GE	0.0980	EPA8270	1.00
900	Potassium, total recoverable					1070	ug/L	.	GE	91.6000	EPA6010	1.00
901	Lindane		U			0.0123	ug/L	.	GE	0.0123	EPA8080	1.00
902	Toluene		J	V	H	0.18	ug/L	.	GE	0.0440	EPA8260	1.00
903	Methyl ethyl ketone		UJ	V	H	0.14	ug/L	.	GE	0.1400	EPA8260	1.00
904	Methoxychlor		U			0.245	ug/L	.	GE	0.2450	EPA8080	1.00
905	Magnesium, total recoverable					297	ug/L	.	GE	2.6800	EPA6010	1.00
906	Methyl isobutyl ketone		U			0.204	ug/L	.	GE	0.2040	EPA8260	1.00
907	Manganese, total recoverable					7.12	ug/L	.	GE	0.2390	EPA6010	1.00
908	Naphthalene		U			0.0168	ug/L	.	GE	0.0168	EPA8270	1.00

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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLM	METHOD	DILFACT
909	Sodium, total recoverable					2880	ug/L	.	GE	57.8008	EPA6010	1.00
910	Nitrobenzene	U				0.0307	ug/L	.	GE	0.0307	EPA8270	1.00
911	N-Nitrosodipropylamine	U				0.0356	ug/L	.	GE	0.0356	EPA8270	1.00
912	Ammonia nitrogen	U		I		30	ug/L	.	GE	30.0000	EPA350.1	1.00
913	Nickel, total recoverable	U				1.84	ug/L	.	GE	1.8400	EPA6010	1.00
914	N-Nitrosodiphenylamine	U				0.0178	ug/L	.	GE	0.0178	EPA8270	1.00
915	Nitrate-nitrite as nitrogen	U				1100	ug/L	.	GE	30.0000	EPA353.1	1.00
916	Lead, total recoverable	J		V	H	19.2	ug/L	.	GE	0.6900	EPA7421	1.00
917	PCB 1016	U				0.0559	ug/L	.	GE	0.0559	EPA8080	1.00
918	PCB 1221	U				0.0725	ug/L	.	GE	0.0725	EPA8080	1.00
919	PCB 1232	U				0.0606	ug/L	.	GE	0.0606	EPA8080	1.00
920	PCB 1242	U				0.0403	ug/L	.	GE	0.0403	EPA8080	1.00
921	PCB 1248	U				0.0588	ug/L	.	GE	0.0588	EPA8080	1.00
922	PCB 1254	U				0.0765	ug/L	.	GE	0.0765	EPA8080	1.00
923	PCB 1260	U				0.0696	ug/L	.	GE	0.0696	EPA8080	1.00
924	Pentachlorophenol	U				0.19	ug/L	.	GE	0.1900	EPA8270	1.00
925	pH	J		Q	L	5.71	pH	.	GE	0.0100	EPA150.1	1.00
926	Phenanthrene	U				0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
927	Phenol	U		I		0.0426	ug/L	.	GE	0.0426	EPA8270	1.00
928	P,p'-DDD	U				0.049	ug/L	.	GE	0.0490	EPA8080	1.00
929	P,p'-DDE	U				0.0245	ug/L	.	GE	0.0245	EPA8080	1.00
930	P,p'-DDT	U				0.049	ug/L	.	GE	0.0490	EPA8080	1.00
931	Pyrene	U		I		0.0218	ug/L	.	GE	0.0218	EPA8270	1.00
932	Antimony, total recoverable	U				1.94	ug/L	.	GE	1.9400	EPA7041	1.00
933	Antimony, total recoverable	U				1.25	ug/L	.	GE	1.2500	EPA7740	1.00
934	Sulfate	J				325	ug/L	.	GE	90.0000	EPA300.0	1.00
935	Styrene	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
936	1,1,2,2-Tetrachloroethane	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
937	Tetrachloroethylene	U				0.026	ug/L	.	GE	0.0260	EPA8260	1.00
938	Total dissolved solids	U				3500	ug/L	.	GE	6300.000	EPA160.1	1.00
939	Thallium, total recoverable	U				0.66	ug/L	.	GE	0.6600	EPA7841	1.00
940	Trichloroethylene	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
941	Tritium	U				4710	pci/L	540.0000	GP	622.0000	EPIA-002	1.00
942	Toxaphene	U				0.755	ug/L	.	GE	0.7350	EPA8080	1.00
943	Vinyl acetate	U				0.142	ug/L	.	GE	0.1420	EPA8260	1.00
944	Vanadium, total recoverable	U				0.314	ug/L	.	GE	0.3140	EPA6010	1.00
945	Xylenes	U				0.06	ug/L	.	GE	0.0600	EPA8260	1.00
946	1,1-Dichloroethylene	U				0.018	ug/L	.	GE	0.0180	EPA8260	1.00
947	1,1-Dichloroethane	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
948	1,1,1-Trichloroethane	U				0.022	ug/L	.	GE	0.0220	EPA8260	1.00
949	1,1,2-Trichloroethane	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
950	1,2-Dichloroethylene	U				0.03	ug/L	.	GE	0.0300	EPA8260	1.00
951	1,2-Dichlorobenzene	U				0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
952	1,2-Dichloroethane	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
953	1,2-Dichloropropane	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
954	1,2,4-Trichlorobenzene	U				0.0743	ug/L	.	GE	0.0743	EPA8270	1.00
955	1,3-Dichlorobenzene	U				0.116	ug/L	.	GE	0.1160	EPA8270	1.00
956	cis-1,3-Dichloropropene	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
957	trans-1,3-Dichloropropene	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
958	1,4-Dichlorobenzene	U				0.0238	ug/L	.	GE	0.0238	EPA8270	1.00
959	2-Chlorophenol	U				0.0307	ug/L	.	GE	0.0307	EPA8270	1.00
960	2-Chloronaphthalene	U				0.116	ug/L	.	GE	0.1160	EPA8270	1.00
961	2-Hexanone	UJ		V	H	0.194	ug/L	.	GE	0.1940	EPA8260	1.00

Well Name=CBR ID Secondary ID= Sample Date=111594 4TH QTR 94
(continued)

OBS	TESTNAME	LADDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
962	2-Methylnaphthalene	U				0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
963	o-Cresol (2-Methylphenol)	U				0.0475	ug/L	.	GE	0.0475	EPA8270	1.00
964	o-Nitroaniline	U				0.0307	ug/L	.	GE	0.0307	EPA8270	1.00
965	2-Nitrophenol	U				0.0119	ug/L	.	GE	0.0119	EPA8270	1.00
966	2,4-Dichlorophenol	U				0.0218	ug/L	.	GE	0.0218	EPA8270	1.00
967	2,4-Dimethyl phenol	U				0.103	ug/L	.	GE	0.1030	EPA8270	1.00
968	2,4-Dinitrophenol	U				0.329	ug/L	.	GE	0.3290	EPA8270	1.00
969	2,4-Dinitrotoluene	U				0.0911	ug/L	.	GE	0.0911	EPA8270	1.00
970	2,4,5-Trichlorophenol	U				0.0505	ug/L	.	GE	0.0505	EPA8270	1.00
971	2,4,6-Trichlorophenol	U				0.0119	ug/L	.	GE	0.0119	EPA8270	1.00
972	2,6-Dinitrotoluene	U				0.109	ug/L	.	GE	0.1090	EPA8270	1.00
973	m-Nitroaniline	U				0.141	ug/L	.	GE	0.1410	EPA8270	1.00
974	3,3'-Dichlorobenzidine	U				0.112	ug/L	.	GE	0.1120	EPA8270	1.00
975	m,p-Cresol	U				0.485	ug/L	.	GE	0.4850	EPA8270	1.00
976	4-Bromophenyl phenyl ether	U				0.0564	ug/L	.	GE	0.0564	EPA8270	1.00
977	4-Chloroaniline	U				0.0149	ug/L	.	GE	0.0149	EPA8270	1.00
978	4-Chlorophenyl phenyl ether	U				0.0149	ug/L	.	GE	0.0149	EPA8270	1.00
979	4-Chloro-m-cresol	U				0.0257	ug/L	.	GE	0.0257	EPA8270	1.00
980	p-Nitroaniline	U				0.101	ug/L	.	GE	0.1010	EPA8270	1.00
981	4-Nitrophenol	U				0.189	ug/L	.	GE	0.1890	EPA8270	1.00
982	2-Methyl-4,6-dinitrophenol	U				0.277	ug/L	.	GE	0.2770	EPA8270	1.00
983	Zinc, total recoverable	J	V	H		52.8	ug/L	.	GE	2.2200	EPA6010	1.00

Well Name=CBR ID Secondary ID= Sample Date=030195

OBS	TESTNAME	LADDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
984	alpha-Benzene hexachloride	U				0.0253	ug/L	.	GE	0.0253	EPA8080	1.00
985	Acetone	U		0		5	ug/L	.	GE	5.0000	EPA8260	1.00
986	Acetone	UJ		0	L	5	ug/L	.	GE	5.0000	EPA8260	1.00
987	alpha-Chlordane	U				0.0505	ug/L	.	GE	0.0505	EPA8080	1.00
988	Silver, total recoverable	U				0.65	ug/L	.	GE	0.6500	EPA6010	1.00
989	Aldrin	U				0.0253	ug/L	.	GE	0.0253	EPA8080	1.00
990	Gross alpha	UI				0.702	pci/L	0.4620	GP	0.7210	EPIA-001	1.00
991	Aluminum, total recoverable		V			295	ug/L	.	GE	20.0000	EPA6010	1.00
992	Acenaphthene	UJ			L	1	ug/L	.	GE	1.0000	EPA8270	1.00
993	Acenaphthylene	UJ			L	1	ug/L	.	GE	1.0000	EPA8270	1.00
994	Anthracene	UJ			L	1	ug/L	.	GE	1.0000	EPA8270	1.00
995	Arsenic, total recoverable	U			L	5	ug/L	.	GE	5.0000	EPA7060	1.00
996	Benzo(a)anthracene	UJ			L	0.1	ug/L	.	GE	0.1000	EPA8270	1.00
997	Benzo(a)pyrene	UJ			L	0.1	ug/L	.	GE	0.1000	EPA8270	1.00
998	Barium, total recoverable	UJ			L	27.9	ug/L	.	GE	3.0000	EPA6010	1.00
999	Benzo(b)fluoranthene	UJ			L	0.1	ug/L	.	GE	0.1000	EPA8270	1.00
1000	beta-Benzene hexachloride	U				0.0505	ug/L	.	GE	0.0505	EPA8080	1.00
1001	Butylbenzyl phthalate	UJ			L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1002	Bis(2-chloroisopropyl) ether	UJ			L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1003	Benzoic acid	UJ			L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1004	Nonvolatile beta					1.4	pci/L	0.6890	GP	1.3200	EPIA-001	1.00
1005	Nonyllium, total recoverable	J	E			0.162	ug/L	.	GE	3.0000	EPA6010	1.00
1006	Benzo(g,h,i)perylene	UJ			L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1007	Benzo(k)fluoranthene	UJ			L	0.1	ug/L	.	GE	0.1000	EPA8270	1.00
1008	Bromodichloromethane	U		0		0.05	ug/L	.	GE	0.0500	EPA8260	1.00

Well Name=CBR 1D Secondary ID= Sample Date=030195
(continued)

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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1009	Bromodichloromethane	1	UJ	0	L	0.05 ug/L			GE	0.0500	EPA8260	1.00
1010	Benzyl alcohol		UJ	Q	L	1 ug/L			GE	1.0000	EPA8270	1.00
1011	Bis(2-chloroethoxy) methane		UJ	Q	L	1 ug/L			GE	1.0000	EPA8270	1.00
1012	Bis(2-chloroethyl) ether		UJ	Q	L	1 ug/L			GE	1.0000	EPA8270	1.00
1013	Bis(2-ethylhexyl) phthalate		UJ	Q	L	1 ug/L			GE	1.0000	EPA8270	1.00
1014	Calcium, total recoverable					738 ug/L			GE	20.0000	EPA6010	1.00
1015	Carbon tetrachloride		U	0	L	0.05 ug/L			GE	0.0500	EPA8260	1.00
1016	Carbon tetrachloride	1	UJ	0	L	0.05 ug/L			GE	0.0500	EPA8260	1.00
1017	Cadmium, total recoverable		U	0	L	2 ug/L			GE	2.0000	EPA6010	1.00
1018	Bromoform		U	0	L	0.05 ug/L			GE	0.0500	EPA8260	1.00
1019	Bromoform	1	UJ	0	L	0.05 ug/L			GE	0.0500	EPA8260	1.00
1020	Chloroform		J	0	L	0.07 ug/L			GE	0.0500	EPA8260	1.00
1021	Chloroform	1	UJ	Q	L	0.1 ug/L			GE	0.1000	EPA8270	1.00
1022	Chrysene		UJ	Q	L	0.5 ug/L			GE	0.5000	EPA8260	1.00
1023	Dichloromethane (Methylene chloride)		UJ	Q	L	0.5 ug/L			GE	0.5000	EPA8260	1.00
1024	Dichloromethane (Methylene chloride)	1	UJ	Q	L	0.5 ug/L			GE	0.5000	EPA8260	1.00
1025	Bromomethane (Methyl bromide)		U	0	L	0.1 ug/L			GE	0.1000	EPA8260	1.00
1026	Bromomethane (Methyl bromide)	1	UJ	Q	L	0.1 ug/L			GE	0.1000	EPA8260	1.00
1027	Chloromethane (Methyl chloride)		U	0	L	0.1 ug/L			GE	0.1000	EPA8260	1.00
1028	Chloromethane (Methyl chloride)	1	UJ	Q	L	0.1 ug/L			GE	0.1000	EPA8260	1.00
1029	Chloride		U	0	L	2120 ug/L			GE	250.0000	EPA300.0	1.00
1030	Chlorobenzene		U	0	L	0.05 ug/L			GE	0.0500	EPA8260	1.00
1031	Chlorobenzene	1	UJ	Q	L	0.05 ug/L			GE	0.0500	EPA8260	1.00
1032	Hexachlorobenzene		UJ	Q	L	0.1 ug/L			GE	0.1000	EPA8270	1.00
1033	Hexachlorocyclopentadiene		UJ	Q	L	1 ug/L			GE	1.0000	EPA8270	1.00
1034	Hexachloroethane		UJ	Q	L	0.1 ug/L			GE	0.1000	EPA8270	1.00
1035	Specific conductance		J	E		28.3 uS/cm			GE	0.3000	EPA120.1	1.00
1036	Cobalt, total recoverable		J	E		2.05 ug/L			GE	4.0000	EPA6010	1.00
1037	Chromium, total recoverable		J	E		2.6 ug/L			GE	4.0000	EPA6010	1.00
1038	Carbon disulfide		U	0	L	1 ug/L			GE	1.0000	EPA8260	1.00
1039	Carbon disulfide	1	UJ	Q	L	1 ug/L			GE	1.0000	EPA8260	1.00
1040	Copper, total recoverable		U	0	L	51.8 ug/L			GE	4.0000	EPA6010	1.00
1041	Cyanide		U	0	L	20 ug/L			GE	20.0000	EPA335.3	1.00
1042	Chloroethene (Vinyl chloride)		U	0	L	0.1 ug/L			GE	0.1000	EPA8260	1.00
1043	Chloroethene (Vinyl chloride)	1	UJ	Q	L	0.1 ug/L			GE	0.1000	EPA8260	1.00
1044	Chloroethene		U	0	L	0.1 ug/L			GE	0.1000	EPA8260	1.00
1045	Chloroethene	1	UJ	Q	L	0.1 ug/L			GE	0.1000	EPA8260	1.00
1046	Benzene		U	0	L	0.5 ug/L			GE	0.5000	EPA8260	1.00
1047	Benzene	1	UJ	Q	L	0.5 ug/L			GE	0.5000	EPA8260	1.00
1048	Dibenz(a,h)anthracene		UJ	Q	L	0.1 ug/L			GE	0.1000	EPA8270	1.00
1049	delta-Benzene hexachloride		U	0	L	0.0505 ug/L			GE	0.0505	EPA8080	1.00
1050	Dibromochloromethane		U	0	L	0.05 ug/L			GE	0.0500	EPA8260	1.00
1051	Dibromochloromethane	1	UJ	Q	L	0.05 ug/L			GE	0.0500	EPA8260	1.00
1052	Diethyl phthalate		UJ	QV	L	1 ug/L			GE	1.0000	EPA8270	1.00
1053	Dibenzofuran		UJ	Q	L	0.0505 ug/L			GE	0.0505	EPA8080	1.00
1054	Dieldrin		U	0	L	1 ug/L			GE	1.0000	EPA8270	1.00
1055	Dimethyl phthalate		UJ	Q	L	1 ug/L			GE	1.0000	EPA8270	1.00
1056	Di-n-butyl phthalate		UJ	Q	L	1 ug/L			GE	1.0000	EPA8270	1.00
1057	Di-n-octyl phthalate		UJ	Q	L	1 ug/L			GE	1.0000	EPA8270	1.00
1058	Endrin ketone		U	0	L	0.101 ug/L			GE	0.1010	EPA8080	1.00
1059	Endrin		U	0	L	0.0505 ug/L			GE	0.0505	EPA8080	1.00
1060	Endosulfan I		U	0	L	0.0505 ug/L			GE	0.0505	EPA8080	1.00
1061	Endosulfan II		U	0	L	0.101 ug/L			GE	0.1010	EPA8080	1.00

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OBS	TESTNAME	LADDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1062	Endosulfan sulfate		U			0.101	ug/L	.	GE	0.1010	EPA8080	1.00
1063	Ethylbenzene		U	0		0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1064	Ethylbenzene	1	UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1065	Fluoranthene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1066	Iron, total recoverable		UJ	I		490	ug/L	.	GE	18.0000	EPA6010	1.00
1067	Fluorene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1068	gamma-Chlordane		U			0.0505	ug/L	.	GE	0.0505	EPA8080	1.00
1069	Hexachlorobutadiene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1070	Mercury, total recoverable		U			0.2	ug/L	.	GE	0.2000	EPA7470	1.00
1071	Mercury, total recoverable	1	U			0.2	ug/L	.	GE	0.2000	EPA7470	1.00
1072	Heptachlor		U			0.0505	ug/L	.	GE	0.0505	EPA8080	1.00
1073	Heptachlor epoxide		U			0.0505	ug/L	.	GE	0.0505	EPA8080	1.00
1074	Indeno(1,2,3-c,d)pyrene		UJ	Q	L	0.1	ug/L	.	GE	0.1000	EPA8270	1.00
1075	Isophorone		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1076	Potassium, total recoverable		UJ	Q	L	1350	ug/L	.	GE	500.0000	EPA6010	1.00
1077	Lindane		U			0.0253	ug/L	.	GE	0.0253	EPA8080	1.00
1078	Toluene		JV	IVO	P	0.09	ug/L	.	GE	0.5000	EPA8260	1.00
1079	Toluene	1	JV	IVO	L	0.11	ug/L	.	GE	0.5000	EPA8260	1.00
1080	Methyl ethyl ketone		U	0		1	ug/L	.	GE	1.0000	EPA8260	1.00
1081	Methyl ethyl ketone	1	UJ	0	L	1	ug/L	.	GE	1.0000	EPA8260	1.00
1082	Methoxychlor		U			0.505	ug/L	.	GE	0.5050	EPA8080	1.00
1083	Magnesium, total recoverable					362	ug/L	.	GE	20.0000	EPA6010	1.00
1084	Methyl isobutyl ketone		U	0		1	ug/L	.	GE	1.0000	EPA8260	1.00
1085	Methyl isobutyl ketone	1	UJ	0	L	1	ug/L	.	GE	1.0000	EPA8260	1.00
1086	Manganes, total recoverable					10.5	ug/L	.	GE	2.0000	EPA6010	1.00
1087	Naphthalene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1088	Sodium, total recoverable					3280	ug/L	.	GE	100.0000	EPA6010	1.00
1089	Nitrobenzene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1090	N-Nitrosodipropylamine		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1091	Ammonia nitrogen		U			100	ug/L	.	GE	100.0000	EPA350.1	1.00
1092	Nickel, total recoverable		J	E		3.9	ug/L	.	GE	10.0000	EPA6010	1.00
1093	N-Nitrosodiphenylamine		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1094	Nitrate-nitrite as nitrogen					1020	ug/L	.	GE	100.0000	EPA353.1	1.00
1095	Lead, total recoverable					20.6	ug/L	.	GE	5.0000	EPA7421	1.00
1096	PCB 1016		U			0.101	ug/L	.	GE	0.1010	EPA8080	1.00
1097	PCB 1221		U			0.101	ug/L	.	GE	0.1010	EPA8080	1.00
1098	PCB 1232		U			0.101	ug/L	.	GE	0.1010	EPA8080	1.00
1099	PCB 1242		U			0.101	ug/L	.	GE	0.1010	EPA8080	1.00
1100	PCB 1248		U			0.101	ug/L	.	GE	0.1010	EPA8080	1.00
1101	PCB 1254		U			0.101	ug/L	.	GE	0.1010	EPA8080	1.00
1102	PCB 1260		U			0.101	ug/L	.	GE	0.1010	EPA8080	1.00
1103	Pentachlorophenol		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1104	pH		J	Q	L	5.65	PH	.	GE	0.0100	EPA150.1	1.00
1105	Phenanthrene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1106	Phenol		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1107	P,p'-DDD		U			0.101	ug/L	.	GE	0.1010	EPA8080	1.00
1108	P,p'-DDE		U			0.0505	ug/L	.	GE	0.0505	EPA8080	1.00
1109	P,p'-DDT		U			0.101	ug/L	.	GE	0.1010	EPA8080	1.00
1110	Pyrene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1111	Antimony, total recoverable		U			5	ug/L	.	GE	5.0000	EPA7041	1.00
1112	Selenium, total recoverable		U			5	ug/L	.	GE	5.0000	EPA7740	1.00
1113	Sulfate		J	E		624	ug/L	.	GE	1000.000	EPA300.0	1.00
1114	Styrene		U	0		0.05	ug/L	.	GE	0.0500	EPA8260	1.00

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OBS	TESTNAME	LADUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1115	Styrene	1	UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1116	1,1,2,2-Tetrachloroethane	U	U	0		0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1117	1,1,2,2-Tetrachloroethane	1	UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1118	Tetrachloroethylene	U	U	0		0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1119	Tetrachloroethylene	1	UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1120	Total dissolved solids					30000	ug/L	.	GE	5000.000	EPA160.1	1.00
1121	Thallium, total recoverable	U				5	ug/L	.	GE	5.0000	EPA7841	1.00
1122	Trichloroethylene	U	U	0		0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1123	Trichloroethylene	1	UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1124	Tridium					5130	pg/L	564.0000	GP	640.0000	EPA1-002	1.00
1125	Toxaphene	U				1.01	ug/L	.	GE	1.0100	EPA8080	1.00
1126	Vinyl acetate	U	U	0		1	ug/L	.	GE	1.0000	EPA8260	1.00
1127	Vinyl acetate	1	UJ	0	L	1	ug/L	.	GE	1.0000	EPA8260	1.00
1128	Vanadium, total recoverable	J	E			1.43	ug/L	.	GE	10.0000	EPA6010	1.00
1129	Xylenes	U				0.15	ug/L	.	GE	0.1500	EPA8260	1.00
1130	Xylenes	1	UJ	0	L	0.15	ug/L	.	GE	0.1500	EPA8260	1.00
1131	1,1-Dichloroethylene	U	U	0		0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1132	1,1-Dichloroethylene	1	UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1133	1,1-Dichloroethane	U	U	0		0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1134	1,1-Dichloroethane	1	UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1135	1,1,1-Trichloroethane	U	U	0		0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1136	1,1,1-Trichloroethane	1	UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1137	1,1,2-Trichloroethane	U	U	0		0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1138	1,1,2-Trichloroethane	1	UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1139	1,2-Dichloroethylene	U	U	0		0.1	ug/L	.	GE	0.1000	EPA8260	1.00
1140	1,2-Dichloroethylene	1	UJ	0	L	0.1	ug/L	.	GE	0.1000	EPA8260	1.00
1141	1,2-Dichlorobenzene	UJ	Q	L		1	ug/L	.	GE	1.0000	EPA8270	1.00
1142	1,2-Dichloroethane	U	U	0		0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1143	1,2-Dichloroethane	1	UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1144	1,2-Dichloropropane	U	U	0		0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1145	1,2-Dichloropropane	1	UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1146	1,2,4-Trichlorobenzene	UJ	Q	L		0.1	ug/L	.	GE	0.1000	EPA8270	1.00
1147	1,3-Dichlorobenzene	UJ	Q	L		1	ug/L	.	GE	1.0000	EPA8270	1.00
1148	cis-1,3-Dichloropropene	U	U	0		0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1149	cis-1,3-Dichloropropene	1	UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1150	trans-1,3-Dichloropropene	U	U	0		0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1151	trans-1,3-Dichloropropene	1	UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
1152	1,4-Dichlorobenzene	UJ	Q	L		1	ug/L	.	GE	1.0000	EPA8270	1.00
1153	2-Chlorophenol	J	GE	L		0.14	ug/L	.	GE	1.0000	EPA8270	1.00
1154	2-Chloronaphthalene	UJ	Q	L		1	ug/L	.	GE	1.0000	EPA8270	1.00
1155	2-Hexanone	U	U	0		1	ug/L	.	GE	1.0000	EPA8260	1.00
1156	2-Hexanone	1	UJ	0	L	1	ug/L	.	GE	1.0000	EPA8260	1.00
1157	2-Methylnaphthalene	UJ	Q	L		1	ug/L	.	GE	1.0000	EPA8270	1.00
1158	o-Cresol (2-Methylphenol)	UJ	Q	L		1	ug/L	.	GE	1.0000	EPA8270	1.00
1159	o-Nitroaniline	UJ	Q	L		1	ug/L	.	GE	1.0000	EPA8270	1.00
1160	2-Nitrophenol	UJ	Q	L		1	ug/L	.	GE	1.0000	EPA8270	1.00
1161	2,4-Dichlorophenol	UJ	Q	L		1	ug/L	.	GE	1.0000	EPA8270	1.00
1162	2,4-Dimethyl phenol	UJ	Q	L		10	ug/L	.	GE	10.0000	EPA8270	1.00
1163	2,4-Dinitrophenol	UJ	Q	L		0.1	ug/L	.	GE	0.1000	EPA8270	1.00
1164	2,4-Dinitrotoluene	UJ	Q	L		1	ug/L	.	GE	1.0000	EPA8270	1.00
1165	2,4,5-Trichlorophenol	UJ	Q	L		1	ug/L	.	GE	1.0000	EPA8270	1.00
1166	2,4,6-Trichlorophenol	UJ	Q	L		0.1	ug/L	.	GE	0.1000	EPA8270	1.00
1167	2,6-Dinitrotoluene	UJ	Q	L		0.1	ug/L	.	GE	0.1000	EPA8270	1.00

Well Name=CBR 1D Secondary ID= Sample Date=030195
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OBS	TESTNAME	LADDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1168	m-Nitroaniline	UJ		Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1169	3,3'-Dichlorobenzidine	UJ		Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1170	m,p-Cresol	UJ		Q	L	0.01	ug/L	.	GE	0.0100	EPA8270	1.00
1171	4-Bromophenyl phenyl ether	UJ		Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1172	4-Chloroaniline	UJ		Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1173	4-Chlorophenyl phenyl ether	UJ		Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1174	4-Chloro-m-cresol	UJ		Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1175	p-Nitroaniline	UJ		Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1176	4-Nitrophenol	UJ		Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
1177	2-Methyl-4,6-dinitrophenol	UJ		Q	L	10	ug/L	.	GE	10.0000	EPA8270	1.00
1178	Zinc, total recoverable					61.4	ug/L	.	GE	5.0000	EPA6010	1.00

Well Name=CBR 2D Secondary ID= Sample Date=012892

OBS	TESTNAME	LADDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1179	Silver, dissolved	U				2	ug/L	.	GE	2.0000	EPA6010	1.00
1180	Gross alpha	U				2	pci/L	.	GE	2.0000	EPA900.0	1.00
1181	Arsenic, dissolved	U				2	ug/L	.	GE	2.0000	EPA7060	1.00
1182	Barium, dissolved					46.7	ug/L	.	GE	3.0000	EPA6010	1.00
1183	Nonvolatille beta					3.23	pci/L	0.5800	GE	2.0000	EPA900.0	1.00
1184	Bromodichloromethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1185	Calcium, dissolved	U				400	ug/L	.	GE	10.0000	EPA6010	1.00
1186	Trichlorofluoromethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1187	Carbon tetrachloride	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1188	Cadmium, dissolved	U				2	ug/L	.	GE	2.0000	EPA6010	1.00
1189	Bromoform	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1190	Chloroform	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1191	Dichloromethane (Methylene chloride)	J2				1.05	ug/L	.	GE	1.0000	EPA8240	1.00
1192	Dromomethane (Methyl bromide)	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1193	Chloromethane (Methyl chloride)	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1194	Chloride	U				4040	ug/L	.	GE	0.2500	EPA300.0	2.00
1195	Chlorobenzene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1196	Specific conductance	U				30	us/cm	.	GE	1.0000	EPA120.1	1.00
1197	Chromium, dissolved	U				4	ug/L	.	GE	4.0000	EPA6010	1.00
1198	Chloroethane (Vinyl chloride)	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1199	Chloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1200	Benzene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1201	Dibromochloromethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1202	Silica, dissolved	JQ				16400	ug/L	.	GE	100.0000	EPA6010	1.00
1203	Endrin	U				0.006	ug/L	.	GE	0.0060	EPA8080	1.00
1204	Ethylbenzene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1205	Fluoride	U				100	ug/L	.	GE	0.1000	EPA340.2	1.00
1206	Iron, dissolved	U				44.3	ug/L	.	GE	4.0000	EPA6010	1.00
1207	Mercury, dissolved	U				0.2	ug/L	.	GE	0.2000	EPA7470	1.00
1208	Potassium, dissolved	JQ				1360	ug/L	.	GE	500.0000	EPA6010	1.00
1209	Lindane	U				0.005	ug/L	.	GE	0.0050	EPA8080	1.00
1210	Toluene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1211	Methoxychlor	JQ				0.5	ug/L	.	GE	0.5000	EPA8080	1.00
1212	Magnesium, dissolved					494	ug/L	.	GE	2.0000	EPA6010	1.00
1213	Manganese, dissolved					3.63	ug/L	.	GE	2.0000	EPA6010	1.00
1214	Sodium, dissolved					3490	ug/L	.	GE	10.0000	EPA6010	1.00

CBR-2D GROUNDWATER DATA

Well Name=CBR 2D Secondary ID= Sample Date=012892
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1215	Nitrate as nitrogen					1650	ug/L	.	GE	0.0500	EPA300.0	1.00
1216	Lead, dissolved	U				3	ug/L	.	GE	3.0000	EPA7421	1.00
1217	pH	JQ				5.16	PH	.	GE	0.0000	EPA150.1	1.00
1218	Selenium, dissolved	U				2	ug/L	.	GE	2.0000	EPA7740	1.00
1219	2,4,5-TP (Silvex)	JQ				0.09	ug/L	.	GE	0.0900	EPA0150	1.00
1220	Sulfate	U				1000	ug/L	.	GE	1.0000	EPA300.0	1.00
1221	1,1,2,2-Tetrachloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1222	Tetrachloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1223	Total dissolved solids	V				32000	ug/L	.	GE	1.0000	EPA160.1	1.00
1224	Total organic carbon	U				1000	ug/L	.	GE	1.0000	EPA9060	1.00
1225	Radium, total alpha-emitting					1	pCi/L	0.5000	GE	1.0000	EPA900.1	1.00
1226	Total organic halogens	U				5	ug/L	.	GE	5.0000	EPA9020	1.00
1227	Phenols	U				5	ug/L	.	GE	5.0000	EPA420.2	1.00
1228	Total phosphates (as P)	1				50	ug/L	.	GE	0.0500	EPA365.1	1.00
1229	Total phosphates (as P)	U				50	ug/L	.	GE	0.0500	EPA365.1	1.00
1230	Trichloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1231	Tritium					14.9	pCi/mL	0.3000	GE	0.7000	EPA906.0	1.00
1232	Toxaphene	JQ				0.24	ug/L	.	GE	0.2400	EPA8080	1.00
1233	trans-1,2-Dichloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1234	trans-1,3-Dichloropropene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1235	1,1-Dichloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1236	1,1-Dichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1237	1,1,1-Trichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1238	1,1,2-Trichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1239	1,2-Dichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1240	1,2-Dichloropropene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1241	cis-1,3-Dichloropropene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1242	2-Chloroethyl vinyl ether	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1243	2,4-Dichlorophenoxyacetic acid	JQ				0.3	ug/L	.	GE	0.3000	EPA8150	1.00

Well Name=CBR 2D Secondary ID= Sample Date=060292

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1244	Silver, dissolved	U				2	ug/L	.	GE	2.0000	EPA6010	1.00
1245	Gross alpha	U				2	pCi/L	.	GE	2.0000	EPA900.0	1.00
1246	Arsenic, dissolved	U				2	ug/L	.	GE	2.0000	EPA7060	1.00
1247	Barium, dissolved					45.6	ug/L	.	GE	3.0000	EPA6010	1.00
1248	Nonvolatile beta	U				2	pCi/L	.	GE	2.0000	EPA900.0	1.00
1249	Bromodichloromethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1250	Calcium, dissolved	U				379	ug/L	.	GE	10.0000	EPA6010	1.00
1251	Trichlorofluoromethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1252	Carbon tetrachloride	U				2	ug/L	.	GE	2.0000	EPA6010	1.00
1253	Cadmium, dissolved	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1254	Bromoform	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1255	Chloroform	U				4.25	ug/L	.	GE	1.0000	EPA8240	1.00
1256	Dichloromethane (Methylene chloride)	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1257	Bromomethane (Methyl bromide)	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1258	Chloromethane (Methyl chloride)	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1259	Chloride					4100	ug/L	.	GE	0.2500	EPA300.0	1.00
1260	Chlorobenzene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1261	Specific conductance					40	uS/cm	.	GE	1.0000	EPA120.1	1.00

Well Name=CBR 2D Secondary ID= Sample Date=072694
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1964	1,1,1-Trichloroethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1965	1,1,2-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1966	1,1,2-Trichloroethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1967	1,2-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1968	1,2-Dichloroethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1969	1,2-Dichloropropane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1970	1,2-Dichloropropane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1971	cis-1,3-Dichloropropane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1972	cis-1,3-Dichloropropane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1973	trans-1,3-Dichloropropane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1974	trans-1,3-Dichloropropane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1975	2-Chloroethyl vinyl ether		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1976	2-Chloroethyl vinyl ether		U	Y		10	ug/L	.	WA	10.0000	EPA8240	1.00
1977	2,4-Dichlorophenoxyacetic acid		U			0.0015	ug/L	.	GE	0.0015	EPA8150	1.00
1978	2,4-Dichlorophenoxyacetic acid		U	Y		1.09	ug/L	.	WA	1.0000	EPA8150	1.09

Well Name=CBR 2D Secondary ID= Sample Date=101994

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1979	alpha-Benzene hexachloride		U			0.0121	ug/L	.	GE	0.0121	EPA8080	1.00
1980	Acetone		J	Q	L	4.05	ug/L	.	GE	3.1700	EPA8260	1.00
1981	alpha-Chlordane		U			0.0243	ug/L	.	GE	0.0243	EPA8080	1.00
1982	Silver, total recoverable	1	U			0.512	ug/L	.	GE	0.5120	EPA6010	1.00
1983	Silver, total recoverable		U			0.512	ug/L	.	GE	0.5120	EPA6010	1.00
1984	Aldrin		U			0.0121	ug/L	.	GE	0.0121	EPA8080	1.00
1985	Gross alpha		UI			0.349	pci/L	0.4250	GP	0.8090	EPIA-001	1.00
1986	Aluminum, total recoverable	1		V		48.6	ug/L	.	GE	1.9300	EPA6010	1.00
1987	Aluminum, total recoverable		J	V	H	52.9	ug/L	.	GE	1.9300	EPA6010	1.00
1988	Acenaphthene		UJ	I	P	0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
1989	Acenaphthylene		UJ	V	P	0.017	ug/L	.	GE	0.0170	EPA8270	1.00
1990	Anthracene		U			0.017	ug/L	.	GE	0.0170	EPA8270	1.00
1991	Arsenic, total recoverable		U			1.5	ug/L	.	GE	1.5000	EPA7060	1.00
1992	Benzo(a)anthracene		U			0.151	ug/L	.	GE	0.1510	EPA8270	1.00
1993	Benzo(a)pyrene		U			0.076	ug/L	.	GE	0.0760	EPA8270	1.00
1994	Barium, total recoverable	1		V		32.9	ug/L	.	GE	0.0480	EPA6010	1.00
1995	Barium, total recoverable		J	V	H	33.4	ug/L	.	GE	0.0480	EPA6010	1.00
1996	Benzo(b)fluoranthene		U			0.133	ug/L	.	GE	0.1330	EPA8270	1.00
1997	beta-Benzene hexachloride		U			0.0243	ug/L	.	GE	0.0243	EPA8080	1.00
1998	Butylbenzyl phthalate		U			0.036	ug/L	.	GE	0.0360	EPA8270	1.00
1999	Bis(2-chloroisopropyl) ether		U			0.042	ug/L	.	GE	0.0420	EPA8270	1.00
2000	Benzoic acid		U			0.081	ug/L	.	GE	0.0810	EPA8270	1.00
2001	Nonvolatile beta		UI			1.25	pci/L	0.8220	GP	1.6300	EPIA-001	1.00
2002	Beryllium, total recoverable	1	J	V		0.209	ug/L	.	GE	0.0270	EPA6010	1.00
2003	Beryllium, total recoverable		J	V	H	0.186	ug/L	.	GE	0.0270	EPA6010	1.00
2004	Benzo(g,h,i)perylene		U			0.309	ug/L	.	GE	0.3090	EPA8270	1.00
2005	Benzo(k)fluoranthene		U	Q	L	0.079	ug/L	.	GE	0.0790	EPA8270	1.00
2006	Bromodichloromethane		UJ			0.012	ug/L	.	GE	0.0120	EPA8260	1.00
2007	Benzyl alcohol		U			0.025	ug/L	.	GE	0.0250	EPA8270	1.00
2008	Bis(2-chloroethoxy) methane		U			0.018	ug/L	.	GE	0.0180	EPA8270	1.00
2009	Bis(2-chloroethyl) ether		U			0.017	ug/L	.	GE	0.0170	EPA8270	1.00
2010	Bis(2-ethylhexyl) phthalate		U			0.254	ug/L	.	GE	0.2540	EPA8270	1.00

Well Name=CBR 2D Secondary ID= Sample Date=080192

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
1310	Silver, dissolved	U				0.7 ug/L		.	WA	0.7000	EPA200.7	1.00
1311	Silver, dissolved	U				2 ug/L		.	GE	2.0000	EPA6010	1.00
1312	Gross alpha					1.5 pCi/L		1.1000	TH	0.6000	EPA900.0	1.00
1313	Gross alpha	U				2 pCi/L		.	GE	2.0000	EPA900.0	1.00
1314	Arsenic, dissolved	U				2 ug/L		.	WA	2.0000	EPA206.2	1.00
1315	Arsenic, dissolved	U				2 ug/L		.	GE	2.0000	EPA7060	1.00
1316	Arsenic, dissolved	U				2 ug/L		.	GE	2.0000	EPA7060	1.00
1317	Barium, dissolved	1				2 ug/L		.	WA	6.6000	EPA200.7	1.00
1318	Barium, dissolved					51.5 ug/L		.	GE	3.0000	EPA6010	1.00
1319	Nonvolatile beta					47.4 ug/L		.	GE	0.7000	EPA900.0	1.00
1320	Nonvolatile beta	U				2.2 pCi/L		1.4000	TH	2.0000	EPA900.0	1.00
1321	Bromodichloromethane	U				2 pCi/L		.	WA	5.0000	EPA8240	1.00
1322	Bromodichloromethane	U				5 ug/L		.	GE	1.0000	EPA8240	1.00
1323	Bromodichloromethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
1324	Calcium, dissolved	1				1 ug/L		.	WA	14.4000	EPA200.7	1.00
1325	Calcium, dissolved					399 ug/L		.	GE	10.0000	EPA6010	1.00
1326	Trichlorofluoromethane	U				408 ug/L		.	WA	5.0000	EPA8240	1.00
1327	Trichlorofluoromethane	U				5 ug/L		.	GE	1.0000	EPA8240	1.00
1328	Trichlorofluoromethane	1				1 ug/L		.	GE	1.0000	EPA8240	1.00
1329	Carbon tetrachloride	U				5 ug/L		.	WA	5.0000	EPA8240	1.00
1330	Carbon tetrachloride	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
1331	Carbon tetrachloride	1				1 ug/L		.	GE	1.0000	EPA8240	1.00
1332	Cadmium, dissolved	U				0.35 ug/L		.	WA	0.3500	EPA200.7	1.00
1333	Cadmium, dissolved	U				2 ug/L		.	GE	2.0000	EPA6010	1.00
1334	Bromoform	U				5 ug/L		.	WA	5.0000	EPA8240	1.00
1335	Bromoform	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
1336	Bromoform	1				1 ug/L		.	GE	1.0000	EPA8240	1.00
1337	Chloroform	U				5 ug/L		.	WA	5.0000	EPA8240	1.00
1338	Chloroform	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
1339	Chloroform	1				1 ug/L		.	GE	1.0000	EPA8240	1.00
1340	Dichloromethane (Methylene chloride)	JV				4.01 ug/L		.	WA	5.0000	EPA8240	1.00
1341	Dichloromethane (Methylene chloride)	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
1342	Dichloromethane (Methylene chloride)	1				1.8 ug/L		.	GE	1.0000	EPA8240	1.00
1343	Bromomethane (Methyl bromide)	U				10 ug/L		.	WA	10.0000	EPA8240	1.00
1344	Bromomethane (Methyl bromide)	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
1345	Bromomethane (Methyl bromide)	1				1 ug/L		.	GE	1.0000	EPA8240	1.00
1346	Chloromethane (Methyl chloride)	U				10 ug/L		.	WA	10.0000	EPA8240	1.00
1347	Chloromethane (Methyl chloride)	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
1348	Chloromethane (Methyl chloride)	1				1 ug/L		.	GE	1.0000	EPA8240	1.00
1349	Chloride					4600 ug/L		.	WA	0.2500	EPA325.2	1.00
1350	Chloride	1				4660 ug/L		.	GE	0.2500	EPA300.0	1.00
1351	Chloride					4680 ug/L		.	WA	0.2500	EPA300.0	1.00
1352	Chlorobenzene	U				5 ug/L		.	GE	5.0000	EPA8240	1.00
1353	Chlorobenzene	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
1354	Chlorobenzene	1				1 ug/L		.	GE	1.0000	EPA8240	1.00
1355	Specific conductance	JQ				41.1 uS/cm		.	WA	1.0000	EPA120.1	1.00
1356	Specific conductance					42 uS/cm		.	GE	1.0000	EPA120.1	1.00
1357	Chromium, dissolved	U				1.1 ug/L		.	WA	1.1000	EPA200.7	1.00
1358	Chromium, dissolved	U				4 ug/L		.	GE	4.0000	EPA6010	1.00
1359	Chloroethene (Vinyl chloride)	U				10 ug/L		.	WA	10.0000	EPA8240	1.00
1360	Chloroethene (Vinyl chloride)	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
1361	Chloroethene (Vinyl chloride)	1				1 ug/L		.	GE	1.0000	EPA8240	1.00
1362	Chloroethene	U				10 ug/L		.	WA	10.0000	EPA8240	1.00
1363	Chloroethene	U				1 ug/L		.	GE	1.0000	EPA8240	1.00

Roll Name=CBR 2D Secondary ID= Sample Data=080192
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
1364	Chloroethane	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1365	Benzene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1366	Benzene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1367	Benzene	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1368	Dibromochloromethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1369	Dibromochloromethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1370	Dibromochloromethane	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1371	Silica, dissolved					15400	ug/L	.	WA	53.5000	EPA200.7	2.10
1372	Silica, dissolved	V				15900	ug/L	.	GE	100.0000	EPA6010	1.00
1373	Endrin	U				0.11	ug/L	.	WA	0.1000	EPA8080	1.10
1374	Endrin	U				0.006	ug/L	.	GE	0.0060	EPA8080	1.00
1375	Ethylbenzene	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
1376	Ethylbenzene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1377	Ethylbenzene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1378	Fluoride	1	U			100	ug/L	.	WA	0.1000	EPA340.2	1.00
1379	Fluoride	U				100	ug/L	.	GE	0.1000	EPA340.2	1.00
1380	Iron, dissolved					35.1	ug/L	.	WA	1.9000	EPA200.7	1.00
1381	Iron, dissolved					31.5	ug/L	.	GE	4.0000	EPA6010	1.00
1382	Mercury, dissolved	U				0.2	ug/L	.	WA	0.2000	EPA245.1	1.00
1383	Mercury, dissolved	U				0.2	ug/L	.	GE	0.2000	EPA7470	1.00
1384	Potassium, dissolved					1420	ug/L	.	WA	83.5000	EPA200.7	1.00
1385	Potassium, dissolved					1640	ug/L	.	GE	500.0000	EPA6010	1.00
1386	Lindane	U				0.055	ug/L	.	WA	0.0500	EPA8080	1.10
1387	Lindane	U				0.005	ug/L	.	GE	0.0050	EPA8080	1.00
1388	Toluene	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
1389	Toluene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1390	Toluene	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1391	Methoxychlor		U			0.55	ug/L	.	WA	0.5000	EPA8080	1.10
1392	Methoxychlor		U			0.5	ug/L	.	GE	0.5000	EPA8080	1.00
1393	Magnesium, dissolved					511	ug/L	.	WA	8.9000	EPA200.7	1.00
1394	Magnesium, dissolved					527	ug/L	.	GE	2.0000	EPA6010	1.00
1395	Manganese, dissolved					3	ug/L	.	WA	0.3500	EPA200.7	1.00
1396	Manganese, dissolved					3.27	ug/L	.	GE	2.0000	EPA6010	1.00
1397	Sodium, dissolved					4060	ug/L	.	WA	111.0000	EPA200.7	1.00
1398	Sodium, dissolved					4010	ug/L	.	GE	10.0000	EPA6010	1.00
1399	Nitrate as nitrogen					2360	ug/L	.	WA	0.0100	EPA353.2	2.00
1400	Nitrate-nitrite as nitrogen					2010	ug/L	.	GE	0.0500	EPA353.3	1.00
1401	Lead, dissolved	J3				3.6	ug/L	.	WA	2.0000	EPA239.2	1.00
1402	Lead, dissolved	U				3	ug/L	.	GE	3.0000	EPA7421	1.00
1403	Lead, dissolved	1	U			3	ug/L	.	GE	3.0000	EPA7421	1.00
1404	pH		U			5.38	PH	.	WA	0.1000	EPA150.1	1.00
1405	pH	1	JQ			5.38	PH	.	WA	0.1000	EPA150.1	1.00
1406	pH		JQ			5.51	PH	.	GE	0.0000	EPA150.1	1.00
1407	Radium-226					1.5	PC1/L	0.5100	TH	0.1100	EHLRA05	1.00
1408	Radium-226	1				2.27	PC1/L	0.8600	TH	0.4100	EHLRA05	1.00
1409	Radium-226	1	U			0.2	PC1/L	.	TH	0.2000	EPA904.0	3.00
1410	Radium-228	U				0.8	PC1/L	.	TH	0.8000	EPA904.0	3.00
1411	Selenium, dissolved	U				2	ug/L	.	WA	2.0000	EPA270.2	1.00
1412	Selenium, dissolved	U				2	ug/L	.	GE	2.0000	EPA7740	1.00
1413	Selenium, dissolved	U				2	ug/L	.	GE	2.0000	EPA7740	1.00
1414	2,4,5-TP (Silvex)	U				0.56	ug/L	.	WA	0.5000	EPA8150	1.12
1415	2,4,5-TP (Silvex)	U				0.09	ug/L	.	GE	0.0900	EPA8150	1.00
1416	Sulfate					705	ug/L	.	WA	0.2500	EPA500.0	1.00

OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLN	METHOD	DILFACT
1417	Sulfate		U			1000	ug/L	.	GE	1.0000	EPA300.0	1.00
1418	Sulfate	1	U			1000	ug/L	.	GE	1.0000	EPA300.0	1.00
1419	1,1,2,2-Tetrachloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1420	1,1,2,2-Tetrachloroethane					1	ug/L	.	GE	1.0000	EPA8240	1.00
1421	1,1,2,2-Tetrachloroethane	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1422	Tetrachloroethylene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1423	Tetrachloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1424	Tetrachloroethylene	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1425	Total dissolved solids		JQ			29000	ug/L	.	WA	1.0000	EPA160.2	1.00
1426	Total dissolved solids		JQ			47000	ug/L	.	GE	1.0000	EPA160.1	1.00
1427	Total organic carbon		U			500	ug/L	.	WA	0.5000	EPA415.1	1.00
1428	Total organic carbon		U			1000	ug/L	.	GE	1.0000	EPA9060	1.00
1429	Radium, total alpha-emitting		U			1	pci/L	.	GE	1.0000	EPA900.1	1.00
1430	Total organic halogens		UJ			5	ug/L	.	WA	5.0000	EPA9020A	1.00
1431	Total organic halogens		U			5	ug/L	.	GE	5.0000	EPA9020	1.00
1432	Phenols		U			5	ug/L	.	WA	5.0000	EPA420.2	1.00
1433	Phenols		U			5	ug/L	.	GE	5.0000	EPA420.2	1.00
1434	Total phosphates (as P)					23	ug/L	.	WA	0.0200	EPA365.2	1.00
1435	Total phosphates (as P)	1	UJ			50	ug/L	.	GE	0.0500	EPA365.1	1.00
1436	Total phosphates (as P)		UJ			50	ug/L	.	GE	0.0500	EPA365.1	1.00
1437	Trichloroethylene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1438	Trichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1439	Trichloroethylene	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1440	Tritium	1				9161.44	pci/L	2163.000	TH	500.1900	EPA906.0	1.00
1441	Tritium					9381.71	pci/L	2214.000	TH	506.0300	EPA906.0	1.00
1442	Tritium	1				9.02	pci/mL	0.5000	GE	0.7000	EPA906.0	1.00
1443	Tritium					8.95	pci/mL	0.5000	GE	0.7000	EPA906.0	1.00
1444	Toxaphene		U			1.1	ug/L	.	WA	1.0000	EPA8080	1.10
1445	Toxaphene		U			0.24	ug/L	.	GE	0.2400	EPA8080	1.00
1446	trans-1,2-Dichloroethylene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1447	trans-1,2-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1448	trans-1,2-Dichloroethylene	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1449	trans-1,3-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1450	trans-1,3-Dichloropropene	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1451	1,1-Dichloroethylene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1452	1,1-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1453	1,1-Dichloroethylene	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1454	1,1-Dichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1455	1,1-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1456	1,1-Dichloroethane	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1457	1,1,1-Trichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1458	1,1,1-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1459	1,1,1-Trichloroethane	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1460	1,1,2-Trichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1461	1,1,2-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1462	1,1,2-Trichloroethane	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1463	1,2-Dichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1464	1,2-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1465	1,2-Dichloroethane	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1466	1,2-Dichloropropene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1467	1,2-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1468	1,2-Dichloropropene	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1469	cis-1,3-Dichloropropene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00

Well Name=CBR 2D Secondary ID=' Sample Data=080192
(continued)

OBS	TESTNAME	LABDUP	RESQVAL	ANQVAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1470	cis-1,3-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1471	cis-1,3-Dichloropropene	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1472	trans-1,3-Dichloropropene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1473	2-Chloroethyl vinyl ether		U			10	ug/L	.	WA	10.0000	EPA8240	1.00
1474	2-Chloroethyl vinyl ether		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1475	2-Chloroethyl vinyl ether	1	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1476	2,4-Dichlorophenoxyacetic acid		U			1.12	ug/L	.	WA	1.0000	EPA8150	1.12
1477	2,4-Dichlorophenoxyacetic acid		U			0.5	ug/L	.	GE	0.5000	EPA8150	1.00

Well Name=CBR 2D Secondary ID=' Sample Data=121092

OBS	TESTNAME	LABDUP	RESQVAL	ANQVAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1478	Silver, total recoverable		U			2	ug/L	.	GE	2.0000	EPA6010	1.00
1479	Gross alpha		U			2	pCi/L	.	GE	2.0000	EPA900.0	1.00
1480	Arsenic, total recoverable		U			2	ug/L	.	GE	2.0000	EPA7060	1.00
1481	Berium, total recoverable		U			47.1	ug/L	.	GE	3.0000	EPA6010	1.00
1482	Nonvolatile beta		U			2	pCi/L	.	GE	2.0000	EPA900.0	1.00
1483	Bromodichloromethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1484	Calcium, total recoverable		U			377	ug/L	.	GE	10.0000	EPA6010	1.00
1485	Trichlorofluoromethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1486	Carbon tetrachloride		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1487	Cadmium, total recoverable		U			2	ug/L	.	GE	2.0000	EPA6010	1.00
1488	Bromoform		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1489	Chloroform		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1490	Dichloromethane (Methylene chloride)		U			1.95	ug/L	.	GE	1.0000	EPA8240	1.00
1491	Bromoethane (Methyl bromide)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1492	Chloromethane (Methyl chloride)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1493	Chloride		U			4340	ug/L	.	GE	0.2500	EPA500.0	1.00
1494	Chlorobenzene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1495	Specific conductance		U			32	uS/cm	.	GE	1.0000	EPA120.1	1.00
1496	Chromium, total recoverable		U			4	ug/L	.	GE	4.0000	EPA6010	1.00
1497	Chloroethane (Vinyl chloride)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1498	Chloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1499	Benzene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1500	Dibromochloromethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1501	Endrin		U			0.006	ug/L	.	GE	0.0060	EPA8080	1.00
1502	Ethylbenzene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1503	Fluoride		U			100	ug/L	.	GE	0.1000	EPA340.2	1.00
1504	Iron, total recoverable		U			63.8	ug/L	.	GE	4.0000	EPA6010	1.00
1505	Mercury, total recoverable		U			0.2	ug/L	.	GE	0.2000	EPA7470	1.00
1506	Potassium, total recoverable		U			1440	ug/L	.	GE	500.0000	EPA6010	1.00
1507	Lindane		U			0.005	ug/L	.	GE	0.0050	EPA8080	1.00
1508	Toluene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1509	Methoxychlor		U			0.5	ug/L	.	GE	0.5000	EPA8080	1.00
1510	Magnesium, total recoverable		U			504	ug/L	.	GE	2.0000	EPA6010	1.00
1511	Manganese, total recoverable		U			2.76	ug/L	.	GE	2.0000	EPA6010	1.00
1512	Sodium, total recoverable		U			4060	ug/L	.	GE	10.0000	EPA6010	1.00
1513	Nitrate-nitrite as nitrogen		UJ			1670	ug/L	.	GE	0.0500	EPA353.3	1.00
1514	Lead, total recoverable		JQ			3	ug/L	.	GE	3.0000	EPA7421	1.00
1515	pH		U			5.16	pH	.	GE	0.0000	EPA150.1	1.00
1516	Selenium, total recoverable		U			2	ug/L	.	GE	2.0000	EPA7740	1.00

Well Name=CBR 2D Secondary ID=' Sample Date=121092
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1517	2,4,5-TP (Silvex)		U			0.09	ug/L	.	GE	0.0900	EPA8150	1.00
1518	Sulfate		U			1000	ug/L	.	GE	1.0000	EPA300.0	1.00
1519	1,1,2,2-Tetrachloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1520	Tetrachloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1521	Total dissolved solids		V			38000	ug/L	.	GE	1.0000	EPA160.1	1.00
1522	Total organic carbon		U			1000	ug/L	.	GE	1.0000	EPA906.0	1.00
1523	Radium, total alpha-emitting		U			1	pCi/L	0.7000	GE	1.0000	EPA900.1	1.00
1524	Total organic halogens		U			5	ug/L	.	GE	5.0000	EPA9020	1.00
1525	Phenols		U			5	ug/L	.	GE	5.0000	EPA920.2	1.00
1526	Total phosphates (as P)		U			50	ug/L	.	GE	0.0500	EPA365.1	1.00
1527	Trichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1528	Trifluor					5.98	pCi/mL	0.6000	GE	0.7000	EPA906.0	1.00
1529	Silica, total recoverable					16000	ug/L	.	GE	100.0000	EPA6010	1.00
1530	Toxaphene		U			0.24	ug/L	.	GE	0.2400	EPA8080	1.00
1531	trans-1,2-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1532	trans-1,3-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1533	1,1-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1534	1,1-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1535	1,1,1-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1536	1,1,2-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1537	1,2-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1538	1,2-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1539	cis-1,3-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1540	2-Chloroethyl vinyl ether		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1541	2,4-Dichlorophenoxyacetic acid		U			0.3	ug/L	.	GE	0.3000	EPA8150	1.00

Well Name=CBR 2D Secondary ID=' Sample Date=030393

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1542	Silver, total recoverable	0	U			2	ug/L	.	GE	2.0000	EPA6010	1.00
1543	Silver, total recoverable	0	U			2	ug/L	.	HA	2.0000	EPA200.7	1.00
1544	Silver, total recoverable	1	U			2	ug/L	.	HA	2.0000	EPA200.7	1.00
1545	Gross alpha	0	U			2	pCi/L	.	GE	2.0000	EPA900.0	1.00
1546	Gross alpha	0				1	pCi/L	1.0000	TH	0.6000	EPA900.0	1.00
1547	Aluminum, total recoverable	0				82.8	ug/L	.	GE	20.0000	EPA6010	1.00
1548	Aluminum, total recoverable	0				198	ug/L	.	HA	20.0000	EPA200.7	1.00
1549	Aluminum, total recoverable	1				232	ug/L	.	HA	20.0000	EPA200.7	1.00
1550	Arsenic, total recoverable	0	U			2	ug/L	.	GE	2.0000	EPA7060	1.00
1551	Arsenic, total recoverable	0	U			2	ug/L	.	HA	2.0000	EPA206.2	1.00
1552	Arsenic, total recoverable	1	U			2	ug/L	.	HA	2.0000	EPA206.2	1.00
1553	Barium, total recoverable	0				43.4	ug/L	.	GE	3.0000	EPA6010	1.00
1554	Barium, total recoverable	0				42.4	ug/L	.	HA	4.0000	EPA200.7	1.00
1555	Barium, total recoverable	1				43.1	ug/L	.	HA	4.0000	EPA200.7	1.00
1556	Nonvolatiles beta	0	U			2	pCi/L	.	GE	2.0000	EPA900.0	1.00
1557	Nonvolatiles beta	0				2	pCi/L	1.6000	TH	0.7000	EPA900.0	1.00
1558	Bromodichloromethane	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1559	Bromodichloromethane	0	U			5	ug/L	.	HA	5.0000	EPA8240	1.00
1560	Calcium, total recoverable	0				303	ug/L	.	GE	10.0000	EPA6010	1.00
1561	Calcium, total recoverable	0				325	ug/L	.	HA	10.0000	EPA200.7	1.00
1562	Calcium, total recoverable	1				306	ug/L	.	HA	10.0000	EPA200.7	1.00
1563	Trichlorofluoromethane	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00

Holl Home-CBR 2D Secondary ID'' Sample Date=030393
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1564	Trichlorofluoromethane	0	U			5 ug/L			WA	5.0000	EPA8240	1.00
1565	Carbon tetrachloride	0	U			1 ug/L			GE	5.0000	EPA8240	1.00
1566	Carbon tetrachloride	0	U			5 ug/L			WA	5.0000	EPA8240	1.00
1567	Cadulm, total recoverable	0	U			2 ug/L			GE	2.0000	EPA6010	1.00
1568	Cadulm, total recoverable	0	U			2 ug/L			WA	2.0000	EPA200.7	1.00
1569	Cadulm, total recoverable	1	U			2 ug/L			WA	2.0000	EPA200.7	1.00
1570	Bromoform	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
1571	Bromoform	0	U			5 ug/L			WA	5.0000	EPA8240	1.00
1572	Chloroform	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
1573	Chloroform	0	U			5 ug/L			WA	5.0000	EPA8240	1.00
1574	Dichloromethane (Methylene chloride)	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
1575	Dichloromethane (Methylene chloride)	0	U			5 ug/L			WA	5.0000	EPA8240	1.00
1576	Bromomethane (Methyl bromide)	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
1577	Bromomethane (Methyl bromide)	0	U			10 ug/L			WA	10.0000	EPA8240	1.00
1578	Chloromethane (Methyl chloride)	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
1579	Chloromethane (Methyl chloride)	0	U			10 ug/L			WA	10.0000	EPA8240	1.00
1580	Chloride	0				3720 ug/L			GE	0.2500	EPA300.0	1.00
1582	Chlorobenzene	0	U			4320 ug/L			WA	0.2500	EPA325.2	1.00
1583	Chlorobenzene	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
1584	Specific conductance	0				5 ug/L			WA	5.0000	EPA8240	1.00
1585	Specific conductance	0				32 uS/cm			GE	1.0000	EPA120.1	1.00
1586	Specific conductance	1	JQ			35.5 uS/cm			WA	1.0000	EPA120.1	1.00
1587	Chromium, total recoverable	0	U			4 ug/L			GE	4.0000	EPA6010	1.00
1588	Chromium, total recoverable	0	U			4 ug/L			WA	4.0000	EPA200.7	1.00
1589	Chromium, total recoverable	1	U			4 ug/L			GE	4.0000	EPA200.7	1.00
1590	Chloroethane (Vinyl chloride)	0	U			1 ug/L			WA	1.0000	EPA8240	1.00
1591	Chloroethane (Vinyl chloride)	0	U			10 ug/L			GE	1.0000	EPA8240	1.00
1592	Chloroethane	0	U			1 ug/L			WA	1.0000	EPA8240	1.00
1593	Chloroethane	0	U			10 ug/L			GE	1.0000	EPA8240	1.00
1594	Benzene	0	U			1 ug/L			WA	1.0000	EPA8240	1.00
1595	Benzene	0	U			5 ug/L			GE	5.0000	EPA8240	1.00
1596	Dibromochloromethane	0	U			1 ug/L			WA	1.0000	EPA8240	1.00
1597	Dibromochloromethane	0	U			5 ug/L			GE	5.0000	EPA8240	1.00
1598	Endrin	0	U			0.006 ug/L			WA	0.0060	EPA8080	1.00
1599	Endrin	0	U			0.109 ug/L			GE	0.1000	EPA8080	1.00
1600	Ethylbenzene	0	U			1 ug/L			WA	1.0000	EPA8240	1.00
1601	Ethylbenzene	0	U			5 ug/L			GE	5.0000	EPA8240	1.00
1602	Fluoride	0	U			100 ug/L			WA	0.1000	EPA340.2	1.00
1603	Fluoride	0	U			100 ug/L			GE	0.1000	EPA340.2	1.00
1604	Iron, total recoverable	0				32.1 ug/L			WA	4.0000	EPA6010	1.00
1605	Iron, total recoverable	0	J3			130 ug/L			WA	4.0000	EPA200.7	1.00
1606	Iron, total recoverable	1	J3			166 ug/L			WA	4.0000	EPA200.7	1.00
1607	Mercury, total recoverable	0	U			0.2 ug/L			GE	0.2000	EPA7470	1.00
1608	Mercury, total recoverable	0	U			0.2 ug/L			WA	0.2000	EPA245.1	1.00
1609	Potassium, total recoverable	0				1390 ug/L			GE	500.0000	EPA6010	1.00
1610	Potassium, total recoverable	0				1510 ug/L			WA	500.0000	EPA200.7	1.00
1611	Potassium, total recoverable	1				1540 ug/L			WA	500.0000	EPA200.7	1.00
1612	Lindane	0	U			0.005 ug/L			GE	0.0050	EPA8080	1.00
1613	Lindane	0	U			0.0545 ug/L			WA	0.0500	EPA8080	1.00
1614	Toluene	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
1615	Toluene	0	U			5 ug/L			WA	5.0000	EPA8240	1.00
1616	Methoxychlor	0	U			0.5 ug/L			GE	0.5000	EPA8080	1.00

Well Name=CBR 2D Secondary ID= ' Sample Date=030593
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
1617	Methoxychlor	0	U			0.545	ug/L	.	WA	0.5000	EPA8080	1.09
1618	Magnesium, total recoverable	0				447	ug/L	.	GE	2.0000	EPA6010	1.00
1619	Magnesium, total recoverable	0				443	ug/L	.	WA	11.0000	EPA200.7	1.00
1620	Magnesium, total recoverable	1				435	ug/L	.	WA	11.0000	EPA200.7	1.00
1621	Manganese, total recoverable	0				2.09	ug/L	.	GE	2.0000	EPA6010	1.00
1622	Manganese, total recoverable	0				2.6	ug/L	.	WA	2.0000	EPA200.7	1.00
1623	Manganese, total recoverable	1				2.6	ug/L	.	WA	2.0000	EPA200.7	1.00
1624	Sodium, total recoverable	0				3570	ug/L	.	GE	10.0000	EPA6010	1.00
1625	Sodium, total recoverable	0	V			3540	ug/L	.	WA	23.7000	EPA200.7	1.00
1626	Sodium, total recoverable	1	V			3450	ug/L	.	WA	23.7000	EPA200.7	1.00
1627	Nitrate as nitrogen	0				1470	ug/L	.	WA	0.0200	EPA353.2	1.00
1628	Nitrate-nitrite as nitrogen	0				3	ug/L	.	GE	0.0500	EPA353.3	1.00
1629	Lead, total recoverable	0	U			3	ug/L	.	GE	3.0000	EPA7421	1.00
1630	Lead, total recoverable	0	U			3	ug/L	.	WA	3.0000	EPA239.2	1.00
1631	Lead, total recoverable	1	U			3	ug/L	.	WA	3.0000	EPA239.2	1.00
1632	pH	0	JQ			4.99	PH	.	GE	0.0000	EPA150.1	1.00
1633	pH	0	JQ			4.74	PH	.	WA	0.1000	EPA150.1	1.00
1634	pH	1	JQ			4.76	PH	.	WA	0.1000	EPA150.1	1.00
1635	Radium-226	0	U			0.23	pCi/L	.	TH	0.2300	EMLRA05	1.00
1636	Radium-226	0				2.6	pCi/L	1.0000	TH	0.4000	EPA904.0	3.00
1637	Selenium, total recoverable	0	U			2	ug/L	.	GE	2.0000	EPA7740	1.00
1638	Selenium, total recoverable	0	U			2	ug/L	.	WA	2.0000	EPA270.2	1.00
1639	Selenium, total recoverable	1	U			0.09	ug/L	.	GE	0.0900	EPA8150	1.00
1640	2,4,5-TP (Silvex)	0	U			0.55	ug/L	.	WA	0.5000	EPA8150	1.10
1641	2,4,5-TP (Silvex)	0	U			1000	ug/L	.	GE	1.0000	EPA300.0	1.00
1642	Sulfate	0	U			1000	ug/L	.	WA	1.0000	EPA300.0	1.00
1643	Sulfate	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1644	1,1,2,2-Tetrachloroethane	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1645	1,1,2,2-Tetrachloroethane	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1646	Tetrachloroethylene	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1647	Tetrachloroethylene	0	U			41000	ug/L	.	GE	1.0000	EPA160.1	1.00
1648	Total dissolved solids	0	V			36000	ug/L	.	WA	1.0000	EPA160.2	1.00
1649	Total dissolved solids	0				1000	ug/L	.	GE	1.0000	EPA9060	1.00
1650	Total organic carbon	0	U			1000	ug/L	.	WA	1.0000	EPA415.1	1.00
1651	Total organic carbon	0	U			1	pCi/L	.	GE	1.0000	EPA900.1	1.00
1652	Radium, total alpha-emitting	0	U			5	ug/L	.	GE	5.0000	EPA9020	1.00
1653	Total organic halogens	0	U			5	ug/L	.	WA	5.0000	EPA9020A	1.00
1654	Total organic halogens	0	U			5	ug/L	.	GE	5.0000	EPA920.2	1.00
1655	Phenols	0	U			50	ug/L	.	WA	5.0000	EPA420.2	1.00
1656	Phenols	0	U			50	ug/L	.	GE	0.0500	EPA365.1	1.00
1657	Total phosphates (as P)	0	U			50	ug/L	.	WA	0.0500	EPA365.2	1.00
1658	Total phosphates (as P)	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1659	Trichloroethylene	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1660	Trichloroethylene	0	U			5.55	pCi/mL	0.4000	GE	0.7000	EPA906.0	1.00
1661	Tritium	0				6.7	pCi/mL	2.5000	TH	0.5100	EPA906.0	1.00
1662	Tritium	0				15800	ug/L	.	GE	100.0000	EPA6010	1.00
1663	Silica, total recoverable	0				14300	ug/L	.	WA	100.0000	EPA200.7	2.10
1664	Silica, total recoverable	0				14000	ug/L	.	WA	100.0000	EPA200.7	2.10
1665	Silica, total recoverable	1				0.24	ug/L	.	GE	0.2400	EPA8080	1.00
1666	Toxaphene	0	U			1.09	ug/L	.	WA	1.0000	EPA8080	1.09
1667	Toxaphene	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1668	trans-1,2-Dichloroethylene	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1669	trans-1,2-Dichloroethylene	0	U					.				

Well Name=CBR 2D Secondary ID= Sample Date=030393
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
1670	trans-1,3-Dichloropropene	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1671	1,1-Dichloroethylene	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1672	1,1-Dichloroethylene	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1673	1,1-Dichloroethane	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1674	1,1-Dichloroethane	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1675	1,1,1-Trichloroethane	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1676	1,1,1-Trichloroethane	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1677	1,1,2-Trichloroethane	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1678	1,1,2-Trichloroethane	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1679	1,2-Dichloroethane	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1680	1,2-Dichloroethane	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1681	1,2-Dichloropropene	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1682	1,2-Dichloropropene	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1683	cis-1,3-Dichloropropene	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1684	cis-1,3-Dichloropropene	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1685	trans-1,3-Dichloropropene	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1686	2-Chloroethyl vinyl ether	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1687	2-Chloroethyl vinyl ether	0	U			10	ug/L	.	WA	10.0000	EPA8240	1.00
1688	2,4-Dichlorophenoxyacetic acid	0	U			0.3	ug/L	.	GE	0.5000	EPA8150	1.00
1689	2,4-Dichlorophenoxyacetic acid	0	U			1.1	ug/L	.	WA	1.0000	EPA8150	1.10

Well Name=CBR 2D Secondary ID= Sample Date=081493

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
1690	Aluminum, total recoverable	0				38.4	ug/L	.	GE	20.0000	EPA6010	1.00
1691	Aluminum, total recoverable	4				43.7	ug/L	.	GE	20.0000	EPA6010	1.00
1692	Iron, total recoverable	0				25.2	ug/L	.	GE	4.0000	EPA6010	1.00

Well Name=CBR 2D Secondary ID= Sample Date=022294

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
1693	Silver, total recoverable		U			2	ug/L	.	GE	2.0000	EPA6010	1.00
1694	Aldrin		U			0.0505	ug/L	.	GE	0.0001	EPA8080	1.00
1695	Gross alpha		J			0.614	pc1/L	0.1790	GP	1.5000	EPIA-001	1.00
1696	Aluminum, total recoverable					40.4	ug/L	.	GE	20.0000	EPA6010	1.00
1697	Arsenic, total recoverable		U			2	ug/L	.	GE	2.0000	EPA7060	1.00
1698	Barium, total recoverable					38.2	ug/L	.	GE	3.0000	EPA6010	1.00
1699	Nonvolatile beta		J			0.766	pc1/L	0.3620	GP	2.0000	EPIA-001	1.00
1700	Bromodichloromethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1701	Boron, total recoverable		U			30	ug/L	.	GE	30.0000	EPA6010	1.00
1702	Calcium, total recoverable		U			295	ug/L	.	GE	10.0000	EPA6010	1.00
1703	Trichlorofluoromethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1704	Carbon tetrachloride		U			2	ug/L	.	GE	1.0000	EPA8240	1.00
1705	Cadmium, total recoverable		U			1	ug/L	.	GE	1.0000	EPA6010	1.00
1706	Bromoform		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1707	Chloroform		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1708	Dichloromethane (Methylene chloride)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1709	Bromoethane (Methyl bromide)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1710	Chloromethane (Methyl chloride)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00

Well Name=CER 2D Secondary ID= Sample Date=022294
(continued)

OBS	TESTNAME	LABDUP	RESQVAL	ANQVAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLM	METHOD	DILFACT
1711	Chloride					4590	ug/L	.	GE	0.2500	EPA300.0	1.00
1712	Chlorobenzene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1713	Specific conductance					31.4	US/cm	.	GE	1.0000	EPA120.1	1.00
1714	Chromium, total recoverable		U			4	ug/L	.	GE	4.0000	EPA6010	1.00
1715	Chloroethane (Vinyl chloride)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1716	Chloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1717	Benzene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1718	Dibromochloromethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1719	Dieldrin		U			0.505	ug/L	.	GE	0.0005	EPA8080	1.00
1720	Endrin		U			0.0061	ug/L	.	GE	0.0000	EPA8080	1.00
1721	Ethylbenzene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1722	Fluoride		U			100	ug/L	.	GE	0.1000	EPA340.2	1.00
1723	Iron, total recoverable		U			90.4	ug/L	.	GE	4.0000	EPA6010	1.00
1724	Mercury, total recoverable		U			0.2	ug/L	.	GE	0.2000	EPA7470	1.00
1725	Heptachlor		U			0.0505	ug/L	.	GE	0.0001	EPA8080	1.00
1726	Potassium, total recoverable		U			1420	ug/L	.	GE	500.0000	EPA6010	1.00
1727	Lindane		U			0.0051	ug/L	.	GE	0.0000	EPA8080	1.00
1728	Lithium, total recoverable		U			5	ug/L	.	GE	5.0000	EPA6010	1.00
1729	Toluene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1730	Methoxychlor		U			0.505	ug/L	.	GE	0.0005	EPA8080	1.00
1731	Magnesium, total recoverable		U			389	ug/L	.	GE	2.0000	EPA6010	1.00
1732	Manganese, total recoverable		J			2.28	ug/L	.	GE	2.0000	EPA6010	1.00
1733	Sodium, total recoverable		U			3110	ug/L	.	GE	10.0000	EPA6010	1.00
1734	Nitrate-nitrite as nitrogen		U			1220	ug/L	.	GE	0.0500	EPA355.1	1.00
1735	Lead, total recoverable		U			3	ug/L	.	GE	3.0000	EPA7421	1.00
1736	pH		J	Q	L	5.23	PH	.	GE	0.0100	EPA150.1	1.00
1737	P,p'-DDT		U			0.101	ug/L	.	GE	0.0001	EPA8080	1.00
1738	Selenium, total recoverable		U			2	ug/L	.	GE	2.0000	EPA7740	1.00
1739	2,4,5-Tp (Silvex)		U			0.000455	ug/L	.	GE	0.0005	EPA8150	1.00
1740	Sulfate		U			1000	ug/L	.	GE	1.0000	EPA300.0	1.00
1741	1,1,2,2-Tetrachloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1742	Tetrachloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1743	Total dissolved solids		U	V	H	35000	ug/L	.	GE	1.0000	EPA160.1	1.00
1744	Total organic carbon		U			1000	ug/L	.	GE	1.0000	EPA9060	1.00
1745	Radium, total alpha-emitting		J			0.8	pCi/L	0.3000	GP	0.5000	EPIA-010	1.00
1746	Total organic halogens	1	U			5	ug/L	.	GE	5.0000	EPA9020	1.00
1747	Total organic halogens		U			5	ug/L	.	GE	5.0000	EPA9020	1.00
1748	Phenols		U			50	ug/L	.	GE	0.0500	EPA420.2	1.00
1749	Total phosphates (as P)		U			1	ug/L	.	GE	1.0000	EPA365.1	1.00
1750	Trichloroethylene		U			3.61	pCi/mL	0.4130	GP	0.7000	EPIA-002	1.00
1751	Trifluoromethane		U			15100	ug/L	.	GE	100.0000	EPA6010	1.00
1752	Silica, total recoverable		U			0.242	ug/L	.	GE	0.0002	EPA8080	1.00
1753	Toxaphene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1754	trans-1,2-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1755	1,1-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1756	1,1-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1757	1,1,1-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1758	1,1,2-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1759	1,2-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1760	1,2-Dichloropropane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1761	cis-1,3-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1762	trans-1,3-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1763	2-Chloroethyl vinyl ether		U			1	ug/L	.	GE	1.0000	EPA8240	1.00

Well Name=CBR 2D Secondary ID= ' Sample Date=022294
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1764	2,4-Dichlorophenoxyacetic acid		U			0.00152	ug/L	.	GE	0.0015	EPA8150	1.00

Well Name=CBR 2D Secondary ID= ' Sample Date=052494

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1765	Silver, total recoverable	U				2	ug/L	.	GE	2.0000	EPA6010	1.00
1766	Gross alpha	U				0.274	pci/L	0.4750	GP	1.5000	EPA900.0	1.00
1767	Aluminum, total recoverable	U				20	ug/L	.	GE	20.0000	EPA6010	1.00
1768	Arsenic, total recoverable	U				2	ug/L	.	GE	2.0000	EPA7060	1.00
1769	Barium, total recoverable	U				36.3	ug/L	.	GE	3.0000	EPA6010	1.00
1770	Nonvolatiles beta	J				2.09	pci/L	0.8580	GP	2.0000	EPA900.0	1.00
1771	Bromodichloromethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1772	Boron, total recoverable	U				52.1	ug/L	.	GE	0.0521	EPA6010	1.00
1773	Calcium, total recoverable	U				231	ug/L	.	GE	10.0000	EPA6010	1.00
1774	Trichlorofluoromethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1775	Carbon tetrachloride	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1776	Cadmium, total recoverable	U				2	ug/L	.	GE	2.0000	EPA6010	1.00
1777	Bromoform	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1778	Chloroform	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1779	Dichloromethane (Methylene chloride)	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1780	Bromomethane (Methyl bromide)	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1781	Chloromethane (Methyl chloride)	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1782	Chloride	1				3220	ug/L	.	GE	0.2500	EPA300.0	1.00
1783	Chloride					3180	ug/L	.	GE	0.2500	EPA300.0	1.00
1784	Chlorobenzene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1785	Specific conductance					30.2	us/cm	.	GE	1.0000	EPA120.1	1.00
1786	Chromium, total recoverable	U				4	ug/L	.	GE	4.0000	EPA6010	1.00
1787	Chloroethane (Vinyl chloride)	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1788	Chloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1789	Benzene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1790	Dibromochloromethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1791	Endrin	U				0.006	ug/L	.	GE	0.0000	EPA8080	1.00
1792	Ethylbenzene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1793	Fluoride	U				100	ug/L	.	GE	0.1000	EPA300.0	1.00
1794	Fluoride	U				100	ug/L	.	GE	0.1000	EPA340.2	1.00
1795	Iron, total recoverable					21.7	ug/L	.	GE	4.0000	EPA6010	1.00
1796	Mercury, total recoverable	1				0.2	ug/L	.	GE	0.2000	EPA7470	1.00
1797	Mercury, total recoverable	U				0.2	ug/L	.	GE	0.2000	EPA7470	1.00
1798	Potassium, total recoverable	U				1370	ug/L	.	GE	500.0000	EPA6010	1.00
1799	Lindane	U				0.005	ug/L	.	GE	0.0000	EPA8080	1.00
1800	Lithium, total recoverable	U				5	ug/L	.	GE	1.0000	EPA8240	1.00
1801	Toluene	U				0.5	ug/L	.	GE	0.0005	EPA8080	1.00
1802	Methoxychlor	U				390	ug/L	.	GE	2.0000	EPA6010	1.00
1803	Magnesium, total recoverable					2	ug/L	.	GE	2.0000	EPA6010	1.00
1804	Manganese, total recoverable	U				2950	ug/L	.	GE	10.0000	EPA6010	1.00
1805	Sodium, total recoverable					1260	ug/L	.	GE	0.0500	EPA553.1	1.00
1806	Nitrate-nitrite as nitrogen	U				3	ug/L	.	GE	3.0000	EPA7421	1.00
1807	Lead, total recoverable	J				5.22	PH	.	GE	0.0100	EPA150.1	1.00
1808	pH	U				2	ug/L	.	GE	2.0000	EPA7740	1.00
1809	Selenium, total recoverable	U				0.000437	ug/L	.	GE	0.0004	EPA8150	1.00
1810	2,4,5-TP (Silvex)	1						.	GE			

Well Name=CBR 2D Secondary ID= Sample Date=052494
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1811	2,4,5-TP (Silvex)		U			0.000452	ug/L	.	GE	0.0005	EPA8150	1.00
1812	Sulfate	1				2050	ug/L	.	GE	1.0000	EPA300.0	1.00
1813	Sulfate					2220	ug/L	.	GE	1.0000	EPA300.0	1.00
1814	1,1,2,2-Tetrachloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1815	Tetrachloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1816	Total dissolved solids					34000	ug/L	.	GE	1.0000	EPA160.1	1.00
1817	Total organic carbon		U			1000	ug/L	.	GE	1.0000	EPA9060	1.00
1818	Radium, total alpha-emitting		J			0.4	pci/L	0.3000	GP	0.5000	EPA900.1	1.00
1819	Total organic halogens		U			5	ug/L	.	GE	5.0000	EPA9020	1.00
1820	Phenols		U			5	ug/L	.	GE	5.0000	EPA420.2	1.00
1821	Total phosphates (as P)		U			50	ug/L	.	GE	0.0500	EPA365.1	1.00
1822	Trichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1823	Trifluoromethane					5250	pci/L	494.0000	GP	700.0000	EPA906.0	1.00
1824	Silica, total recoverable					15700	ug/L	.	GE	100.0000	EPA6010	1.00
1825	Toxaphene		U			0.24	ug/L	.	GE	0.0002	EPA8080	1.00
1826	trans-1,2-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1827	1,1-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1828	1,1-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1829	1,1,1-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1830	1,1,2-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1831	1,2-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1832	1,2-Dichloropropane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1833	cis-1,3-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1834	trans-1,3-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1835	2-Chloroethyl vinyl ether		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1836	2,4-Dichlorophenoxyacetic acid	1	U			0.00146	ug/L	.	GE	0.0015	EPA8150	1.00
1837	2,4-Dichlorophenoxyacetic acid		U			0.00151	ug/L	.	GE	0.0015	EPA8150	1.00

Well Name=CBR 2D Secondary ID= Sample Date=072694

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1838	Silver, total recoverable		U			2	ug/L	.	GE	2.0000	EPA6010	1.00
1839	Silver, total recoverable		U	Y		2	ug/L	.	WA	2.0000	EPA200.7	1.00
1840	Gross alpha		UI			0.522	pci/L	0.5050	GP	0.8550	EPIA-001	1.00
1841	Gross alpha	1	J		L	2.8	pci/L	0.9000	TH	1.9500	EPA900.0	1.00
1842	Gross alpha					3.5	pci/L	1.0000	TH	1.9900	EPA900.0	1.00
1843	Aluminum, total recoverable		J		P	22.4	ug/L	.	GE	20.0000	EPA6010	1.00
1844	Aluminum, total recoverable			Y		86.8	ug/L	.	WA	20.0000	EPA200.7	1.00
1845	Arsenic, total recoverable		U			2	ug/L	.	GE	2.0000	EPA7060	1.00
1846	Arsenic, total recoverable		U	Y		33.4	ug/L	.	WA	2.0000	EPA206.2	1.00
1847	Barium, total recoverable		U			32.2	ug/L	.	GE	3.0000	EPA6010	1.00
1848	Barium, total recoverable			Y		1.11	pci/L	0.8650	GP	4.0000	EPA200.7	1.00
1849	Nonvolatile beta		UI			7.2	pci/L	1.5000	TH	2.4600	EPIA-001	1.00
1850	Nonvolatile beta	1				8	pci/L	1.5000	TH	2.4800	EPA900.0	1.00
1851	Nonvolatile beta					3	ug/L	.	GE	3.0000	EPA6010	1.00
1852	Beryllium, total recoverable		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1853	Bromodichloromethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
1854	Bromodichloromethane		U	Y		30	ug/L	.	GE	30.0000	EPA6010	1.00
1855	Boron, total recoverable		UI	L		257	ug/L	.	GE	10.0000	EPA6010	1.00
1856	Calcium, total recoverable					253	ug/L	.	WA	10.0000	EPA200.7	1.00
1857	Calcium, total recoverable			VY								

Well Name=CBR 2D Secondary ID= Sample Date=072694
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFAC
1858	Trichlorofluoromethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
1859	Trichlorofluoromethane	U		Y		5 ug/L			WA	5.0000	EPA8240	1.00
1860	Carbon tetrachloride	U				1 ug/L			GE	1.0000	EPA8240	1.00
1861	Carbon tetrachloride	U		Y		5 ug/L			WA	5.0000	EPA8240	1.00
1862	Cadmiun, total recoverable	U				2 ug/L			GE	2.0000	EPA6010	1.00
1863	Cadmiun, total recoverable	U		Y		2 ug/L			WA	2.0000	EPA200.7	1.00
1864	Bromoform	U				1 ug/L			GE	1.0000	EPA8240	1.00
1865	Bromoform	U		Y		5 ug/L			WA	5.0000	EPA8240	1.00
1866	Chloroform	U				1 ug/L			GE	1.0000	EPA8240	1.00
1867	Chloroform	U		Y		5 ug/L			WA	5.0000	EPA8240	1.00
1868	Dichloromethane (Methylene chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
1869	Dichloromethane (Methylene chloride)	UJ		VY	H	61.5 ug/L			WA	5.0000	EPA8240	1.00
1870	Bromomethane (Methyl bromide)	U				1 ug/L			GE	1.0000	EPA8240	1.00
1871	Bromomethane (Methyl bromide)	U		Y		10 ug/L			WA	10.0000	EPA8240	1.00
1872	Chloromethane (Methyl chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
1873	Chloromethane (Methyl chloride)	U		Y		10 ug/L			WA	10.0000	EPA8240	1.00
1874	Chloride					3160 ug/L			GE	0.2500	EPA300.0	1.00
1875	Chloride	U		Y		3260 ug/L			WA	0.2500	EPA325.1	1.00
1876	Chlorobenzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
1877	Chlorobenzene	U		Y		5 ug/L			WA	5.0000	EPA8240	1.00
1878	Specific conductance					28.9 uS/cm			GE	1.0000	EPA120.1	1.00
1879	Specific conductance			Y		27.8 uS/cm			WA	1.0000	EPA120.1	1.00
1880	Chromium, total recoverable	U				4 ug/L			GE	4.0000	EPA6010	1.00
1881	Chromium, total recoverable	U		Y		4 ug/L			WA	4.0000	EPA200.7	1.00
1882	Chloroethene (Vinyl chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
1883	Chloroethene (Vinyl chloride)	U		Y		10 ug/L			WA	10.0000	EPA8240	1.00
1884	Chloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
1885	Chloroethane	U		Y		10 ug/L			WA	10.0000	EPA8240	1.00
1886	Benzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
1887	Benzene	U		Y		5 ug/L			WA	5.0000	EPA8240	1.00
1888	Dibromochloromethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
1889	Dibromochloromethane	U		Y		5 ug/L			WA	5.0000	EPA8240	1.00
1890	Endrin	U				50 ug/L			GE	0.0500	EPA8080	1.00
1891	Endrin	U		Y		0.101 ug/L			WA	0.1000	EPA8080	1.01
1892	Ethylbenzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
1893	Ethylbenzene	U		Y		5 ug/L			WA	5.0000	EPA8240	1.00
1894	Fluoride	U				20 ug/L			GE	0.0200	EPA300.0	1.00
1895	Fluoride	U		Y		100 ug/L			WA	0.1000	EPA300.0	1.00
1896	Iron, total recoverable					15 ug/L			GE	4.0000	EPA6010	1.00
1897	Iron, total recoverable	UJ		VY	H	30 ug/L			WA	4.0000	EPA200.7	1.00
1898	Mercury, total recoverable	UJ		Q		0.2 ug/L			GE	0.2000	EPA7470	1.00
1899	Mercury, total recoverable	UJ		Q		0.2 ug/L			GE	0.2000	EPA7470	1.00
1900	Mercury, total recoverable	U				0.2 ug/L			WA	0.2000	EPA245.1	1.00
1901	Potassium, total recoverable					1200 ug/L			GE	500.0000	EPA6010	1.00
1902	Potassium, total recoverable			Y		1080 ug/L			WA	500.0000	EPA200.7	1.00
1903	Lindane	U				1250 ug/L			GE	1.2500	EPA8080	1.00
1904	Lindane	U		Y		0.0505 ug/L			WA	0.0500	EPA8080	1.01
1905	Lithium, total recoverable	U				5 ug/L			GE	5.0000	EPA6010	1.00
1906	Lithium, total recoverable	U		VY		5 ug/L			WA	5.0000	EPA200.7	1.00
1907	Toluene	U				1 ug/L			GE	1.0000	EPA8240	1.00
1908	Toluene	U		Y		5 ug/L			WA	5.0000	EPA8240	1.00
1909	Methoxychlor	U				0.5 ug/L			GE	0.0005	EPA8080	1.00
1910	Methoxychlor	U		Y		0.505 ug/L			WA	0.5000	EPA8080	1.01

The SAS System

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(continued)

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OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFAC
1911	Magnesium, total recoverable					358	ug/L	.	GE	2.0000	EPA6010	1.00
1912	Magnesium, total recoverable			Y		323	ug/L	.	WA	7.5000	EPA200.7	1.00
1913	Manganese, total recoverable	U				2	ug/L	.	GE	2.0000	EPA6010	1.00
1914	Manganese, total recoverable	U		Y		2	ug/L	.	WA	2.0000	EPA200.7	1.00
1915	Sodium, total recoverable					2650	ug/L	.	GE	10.0000	EPA6010	1.00
1916	Sodium, total recoverable			Y		2670	ug/L	.	WA	11.5000	EPA200.7	1.00
1917	Nitrate as nitrogen			Y		1160	ug/L	.	WA	0.0200	EPA353.2	5.00
1918	Nitrate-nitrite as nitrogen					1320	ug/L	.	GE	0.0500	EPA353.1	1.00
1919	Lead, total recoverable	U				3	ug/L	.	GE	3.0000	EPA7421	1.00
1920	Lead, total recoverable	U		Y		3	ug/L	.	WA	3.0000	EPA259.2	1.00
1921	pH	J		Q	L	5.39	PH	.	GE	0.0100	EPA150.1	1.00
1922	pH	J		QY	P	5.17	PH	.	WA	0.1000	EPA150.1	1.00
1923	Radium-226	1				0.36	pci/L	0.1900	TH	0.1600	EPA903.1	1.00
1924	Radium-226				L	0.22	pci/L	0.1500	TH	0.1600	EPA903.1	1.00
1925	Radium-228	1				0.5	pci/L	0.7000	TH	1.3300	EPA904.0	1.00
1926	Radium-228	UX				-0.1	pci/L	0.9000	TH	1.2600	EPA904.0	1.00
1927	Selenium, total recoverable	U				2	ug/L	.	GE	2.0000	EPA7740	1.00
1928	Selenium, total recoverable	U		Y		2	ug/L	.	WA	2.0000	EPA270.2	1.00
1929	2,4,5-TP (Silvex)	U				0.0045	ug/L	.	GE	0.0005	EPA8150	1.00
1930	2,4,5-TP (Silvex)	U		Y		0.545	ug/L	.	WA	0.5000	EPA8150	1.09
1931	Sulfate	J			P	1390	ug/L	.	GE	1.0000	EPA300.0	1.00
1932	Sulfate	U		Y		1000	ug/L	.	WA	1.0000	EPA300.0	1.00
1933	1,1,2,2-Tetrachloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1934	1,1,2,2-Tetrachloroethane	U		Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1935	Tetrachloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1936	Tetrachloroethylene	U		Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1937	Total dissolved solids					32000	ug/L	.	GE	1.0000	EPA160.1	1.00
1938	Total dissolved solids					26000	ug/L	.	WA	1.0000	EPA160.2	1.00
1939	Total organic carbon				P	1520	ug/L	.	GE	1.0000	EPA9060	1.00
1940	Total organic carbon	J		Y		1000	ug/L	.	WA	1.0000	EPA415.1	1.00
1941	Radium, total alpha-emitting	UX				0.1	pci/L	0.2000	GP	0.1930	EPIA-010	1.00
1942	Total organic halogens	U				5	ug/L	.	GE	5.0000	EPA9020	1.00
1943	Total organic halogens	U		Y		8.68	ug/L	.	WA	5.0000	SH9020A	1.00
1944	Phenols	U				5	ug/L	.	GE	5.0000	EPA420.2	1.00
1945	Phenols	U		IY		5	ug/L	.	WA	5.0000	EPA420.2	1.00
1946	Total phosphates (as P)					50	ug/L	.	GE	0.0500	EPA365.1	1.00
1947	Total phosphates (as P)	U		Y		65	ug/L	.	WA	0.0500	EPA365.2	1.00
1948	Trichloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1949	Trichloroethylene	U		Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1950	Trifluoromethane					5.49	pci/mL	0.4920	GP	0.5960	EPIA-002	1.00
1951	Trifluoromethane					4.41	pci/mL	0.5200	TH	0.1500	EPA906.0	1.00
1952	Trifluoromethane					4.81	pci/mL	0.5400	TH	0.1500	EPA906.0	1.00
1953	Silica, total recoverable					15300	ug/L	.	GE	100.0000	EPA6010	1.00
1954	Silica, total recoverable			Y		13400	ug/L	.	WA	100.0000	EPA200.7	2.10
1955	Toxaphene	U				0.24	ug/L	.	GE	0.0002	EPA8080	1.00
1956	Toxaphene	U		Y		1.01	ug/L	.	WA	1.0000	EPA8080	1.01
1957	trans-1,2-Dichloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1958	trans-1,2-Dichloroethylene	U		Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1959	1,1-Dichloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1960	1,1-Dichloroethylene	U		Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1961	1,1-Dichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
1962	1,1-Dichloroethane	U		Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1963	1,1,1-Trichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00

Well Name=CBR 2D Secondary ID=' Sample Date=072694
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1964	1,1,1-Trichloroethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1965	1,1,2-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1966	1,1,2-Trichloroethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1967	1,2-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1968	1,2-Dichloroethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1969	1,2-Dichloropropane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1970	1,2-Dichloropropane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1971	cis-1,3-Dichloropropane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1972	cis-1,3-Dichloropropane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1973	trans-1,3-Dichloropropane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1974	trans-1,3-Dichloropropane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
1975	2-Chloroethyl vinyl ether		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
1976	2-Chloroethyl vinyl ether		U	Y		10	ug/L	.	WA	10.0000	EPA8240	1.00
1977	2,4-Dichlorophenoxyacetic acid		U			0.0015	ug/L	.	GE	0.0015	EPA8150	1.00
1978	2,4-Dichlorophenoxyacetic acid		U	Y		1.09	ug/L	.	WA	1.0000	EPA8150	1.09

Well Name=CBR 2D Secondary ID=' Sample Date=101994

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
1979	alpha-Benzene hexachloride		U			0.0121	ug/L	.	GE	0.0121	EPA8080	1.00
1980	Acetone		J	Q	L	4.05	ug/L	.	GE	3.1700	EPA8260	1.00
1981	alpha-Chlordane		U			0.0243	ug/L	.	GE	0.0243	EPA8080	1.00
1982	Silver, total recoverable	1	U			0.512	ug/L	.	GE	0.5120	EPA6010	1.00
1983	Silver, total recoverable		U			0.512	ug/L	.	GE	0.5120	EPA6010	1.00
1984	Aldrin		U			0.0121	ug/L	.	GE	0.0121	EPA8080	1.00
1985	Gross alpha		UI			0.349	PC1/L	0.4250	GP	0.8090	EPIA-001	1.00
1986	Aluminum, total recoverable	1		V		48.6	ug/L	.	GE	1.9300	EPA6010	1.00
1987	Aluminum, total recoverable		J	V	H	52.9	ug/L	.	GE	1.9300	EPA6010	1.00
1988	Acenaphthene		UJ	I	P	0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
1989	Acenaphthylene		UJ	V	P	0.017	ug/L	.	GE	0.0170	EPA8270	1.00
1990	Anthracene		U			0.017	ug/L	.	GE	0.0170	EPA8270	1.00
1991	Arsenic, total recoverable		U			1.5	ug/L	.	GE	1.5000	EPA7060	1.00
1992	Benzo(a)anthracene		U			0.151	ug/L	.	GE	0.1510	EPA8270	1.00
1993	Benzo(a)pyrene		U			0.076	ug/L	.	GE	0.0760	EPA8270	1.00
1994	Barium, total recoverable	1		V		32.9	ug/L	.	GE	0.0480	EPA6010	1.00
1995	Barium, total recoverable		J	V	H	33.4	ug/L	.	GE	0.0480	EPA6010	1.00
1996	Benzo(b)fluoranthene		U			0.133	ug/L	.	GE	0.1330	EPA8270	1.00
1997	beta-Benzene-hexachloride		U			0.0243	ug/L	.	GE	0.0243	EPA8080	1.00
1998	Butylbenzyl phthalate		U			0.036	ug/L	.	GE	0.0360	EPA8270	1.00
1999	Bis(2-chloroisopropyl) ether		U			0.042	ug/L	.	GE	0.0420	EPA8270	1.00
2000	Benzoic acid		U			0.081	ug/L	.	GE	0.0810	EPA8270	1.00
2001	Nonvolatile beta		UI			1.25	PC1/L	0.8220	GP	1.6300	EPIA-001	1.00
2002	Beryllium, total recoverable	1	J	V		0.209	ug/L	.	GE	0.0270	EPA6010	1.00
2003	Beryllium, total recoverable		J	V	H	0.186	ug/L	.	GE	0.0270	EPA6010	1.00
2004	Benzo(g,h,i)perylene		U			0.309	ug/L	.	GE	0.3090	EPA8270	1.00
2005	Benzo(k)fluoranthene		U			0.079	ug/L	.	GE	0.0790	EPA8270	1.00
2006	Bromodichloromethane		UJ	Q	L	0.012	ug/L	.	GE	0.0120	EPA8260	1.00
2007	Benzyl alcohol		U			0.025	ug/L	.	GE	0.0250	EPA8270	1.00
2008	Bis(2-chloroethoxy) methane		U			0.018	ug/L	.	GE	0.0180	EPA8270	1.00
2009	Bis(2-chloroethyl) ether		U			0.017	ug/L	.	GE	0.0170	EPA8270	1.00
2010	Bis(2-ethylhexyl) phthalate		U			0.254	ug/L	.	GE	0.2540	EPA8270	1.00

Well Name=CBR 2D Secondary ID= Sample Data=101994
(continued)

OBS	TESTNAME	LABDUP	RESQVAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2011	Calcium, total recoverable	1				239 ug/L		.	GE	12.0000	EPA6010	1.00
2012	Calcium, total recoverable					245 ug/L		.	GE	12.0000	EPA6010	1.00
2013	Carbon tetrachloride		UJ	Q	L	0.012 ug/L		.	GE	0.0120	EPA8260	1.00
2014	Cadmium, total recoverable	1	U			0.48 ug/L		.	GE	0.4800	EPA6010	1.00
2015	Cadmium, total recoverable					4.07 ug/L		.	GE	0.4800	EPA6010	1.00
2016	Bromoform		UJ	Q	L	0.012 ug/L		.	GE	0.0120	EPA8260	1.00
2017	Chloroform		J	Q	L	0.46 ug/L		.	GE	0.0170	EPA8260	1.00
2018	Chrysene		U			0.012 ug/L		.	GE	0.0120	EPA8270	1.00
2019	Dichloromethane (Methylene chloride)		J	QV	H	0.41 ug/L		.	GE	0.2940	EPA8260	1.00
2020	Bromomethane (Methyl bromide)		UJ	Q	L	0.026 ug/L		.	GE	0.0260	EPA8260	1.00
2021	Chloromethane (Methyl chloride)		UJ	Q	L	0.024 ug/L		.	GE	0.0240	EPA8260	1.00
2022	Chloride					2640 ug/L		.	GE	64.0000	EPA300.0	1.00
2023	Chlorobenzene		UJ	Q	L	0.012 ug/L		.	GE	0.0120	EPA8260	1.00
2024	Hexachlorobenzene		U			0.028 ug/L		.	GE	0.0280	EPA8270	1.00
2025	Hexachlorocyclopentadiene		U			0.042 ug/L		.	GE	0.0420	EPA8270	1.00
2026	Hexachloroethane		U			0.022 ug/L		.	GE	0.0220	EPA8270	1.00
2027	Specific conductance					28.8 us/cm		.	GE	0.3000	EPA120.1	1.00
2028	Cobalt, total recoverable	1	J			1.53 ug/L		.	GE	0.5980	EPA6010	1.00
2029	Cobalt, total recoverable		J			1.31 ug/L		.	GE	0.5980	EPA6010	1.00
2030	Chromium, total recoverable	1	U			2.28 ug/L		.	GE	2.2800	EPA6010	1.00
2031	Chromium, total recoverable		U			2.28 ug/L		.	GE	2.2800	EPA6010	1.00
2032	Carbon disulfide		UJ	Q	L	0.129 ug/L		.	GE	0.1290	EPA8260	1.00
2033	Copper, total recoverable		J			0.727 ug/L		.	GE	0.4580	EPA6010	1.00
2034	Copper, total recoverable	1	J			1.16 ug/L		.	GE	0.4580	EPA6010	1.00
2035	Cyanide		UJ	Q	L	0.7 ug/L		.	GE	0.7000	EPA335.2	1.00
2036	Chloroethene (Vinyl chloride)		UJ	Q	L	0.015 ug/L		.	GE	0.0150	EPA8260	1.00
2037	Chloroethane		UJ	Q	L	0.025 ug/L		.	GE	0.0250	EPA8260	1.00
2038	Benzene		UJ	Q	L	0.017 ug/L		.	GE	0.0170	EPA8260	1.00
2039	Dibenz(a,h)anthracene		U			0.09 ug/L		.	GE	0.0900	EPA8270	1.00
2040	delta-Benzene hexachloride		U			0.0243 ug/L		.	GE	0.0243	EPA8080	1.00
2041	Dibromochloromethane		UJ	Q	L	0.017 ug/L		.	GE	0.0170	EPA8260	1.00
2042	Diethyl phthalate		U			0.015 ug/L		.	GE	0.0150	EPA8270	1.00
2043	Dibenzofuran		UJ	V	P	0.017 ug/L		.	GE	0.0170	EPA8270	1.00
2044	Dieldrin		U			0.0243 ug/L		.	GE	0.0243	EPA8080	1.00
2045	Dimethyl phthalate		U			0.017 ug/L		.	GE	0.0170	EPA8270	1.00
2046	DI-n-butyl phthalate		UJ	V	P	0.443 ug/L		.	GE	0.4430	EPA8270	1.00
2047	DI-n-octyl phthalate		U			0.07 ug/L		.	GE	0.0700	EPA8270	1.00
2048	Endrin ketone		U			0.0485 ug/L		.	GE	0.0485	EPA8080	1.00
2049	Endrin		U			0.0243 ug/L		.	GE	0.0243	EPA8080	1.00
2050	Endosulfan I		U			0.0243 ug/L		.	GE	0.0243	EPA8080	1.00
2051	Endosulfan II		U			0.0243 ug/L		.	GE	0.0243	EPA8080	1.00
2052	Endosulfan sulfate		U			0.0485 ug/L		.	GE	0.0485	EPA8080	1.00
2053	Ethylbenzene		UJ	Q	L	0.015 ug/L		.	GE	0.0150	EPA8260	1.00
2054	Fluoranthene		U			0.024 ug/L		.	GE	0.0240	EPA8270	1.00
2055	Iron, total recoverable	1				44 ug/L		.	GE	18.2000	EPA6010	1.00
2056	Iron, total recoverable		U			59.6 ug/L		.	GE	18.2000	EPA6010	1.00
2057	Fluorene		U			0.012 ug/L		.	GE	0.0120	EPA8270	1.00
2058	gamma-Chlordane		U			0.0243 ug/L		.	GE	0.0243	EPA8080	1.00
2059	Hexachlorobutadiene		U			0.067 ug/L		.	GE	0.0670	EPA8270	1.00
2060	Mercury, total recoverable	1	U			0.04 ug/L		.	GE	0.0400	EPA7470	1.00
2061	Mercury, total recoverable		U			0.04 ug/L		.	GE	0.0400	EPA7470	1.00
2062	Heptachlor		U			0.0243 ug/L		.	GE	0.0243	EPA8080	1.00
2063	Heptachlor epoxide		U			0.0243 ug/L		.	GE	0.0243	EPA8080	1.00

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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLM	METHOD	DILFACT
2064	Indeno(1,2,3-c,d)pyrene		U			0.035	ug/L	.	GE	0.0350	EPA8270	1.00
2065	Isophorone		U			0.099	ug/L	.	GE	0.0990	EPA8270	1.00
2066	Potassium, total recoverable	1				1070	ug/L	.	GE	91.6000	EPA6010	1.00
2067	Potassium, total recoverable					1140	ug/L	.	GE	91.6000	EPA6010	1.00
2068	Lindane		U			0.0121	ug/L	.	GE	0.0121	EPA8080	1.00
2069	Toluene		J	QV	H	0.12	ug/L	.	GE	0.0400	EPA8260	1.00
2070	Methyl ethyl ketone		UJ	QV	H	0.14	ug/L	.	GE	0.1400	EPA8260	1.00
2071	Methoxychlor		U			0.243	ug/L	.	GE	0.2430	EPA8080	1.00
2072	Magnesium, total recoverable	1		V		321	ug/L	.	GE	2.6800	EPA6010	1.00
2073	Magnesium, total recoverable		J	V	H	330	ug/L	.	GE	2.6800	EPA6010	1.00
2074	Methyl isobutyl ketone		UJ	Q	L	0.204	ug/L	.	GE	0.2040	EPA8260	1.00
2075	Manganese, total recoverable	1	J			1.66	ug/L	.	GE	0.2390	EPA6010	1.00
2076	Manganese, total recoverable		J			1.79	ug/L	.	GE	0.2390	EPA6010	1.00
2077	Naphthalene		U			0.017	ug/L	.	GE	0.0170	EPA8270	1.00
2078	Sodium, total recoverable	1				2480	ug/L	.	GE	37.8000	EPA6010	1.00
2079	Sodium, total recoverable		U			2540	ug/L	.	GE	37.8000	EPA6010	1.00
2080	Nitrobenzene		U			0.031	ug/L	.	GE	0.0310	EPA8270	1.00
2081	N-Nitrosodipropylamine		U			0.036	ug/L	.	GE	0.0360	EPA8270	1.00
2082	Ammonia nitrogen		U			30	ug/L	.	GE	30.0000	EPA350.1	1.00
2083	Nickel, total recoverable	1	U			1.84	ug/L	.	GE	1.8400	EPA6010	1.00
2084	Nickel, total recoverable		U			1.84	ug/L	.	GE	1.8400	EPA6010	1.00
2085	N-Nitrosodiphenylamine		UJ	V	P	0.018	ug/L	.	GE	0.0180	EPA8270	1.00
2086	Nitrate-nitrite as nitrogen		UJ	I		1490	ug/L	.	GE	30.0000	EPA353.1	1.00
2087	Lead, total recoverable		J	V	H	6	ug/L	.	GE	0.6900	EPA7421	1.00
2088	PCB 1016		U			0.0553	ug/L	.	GE	0.0553	EPA8080	1.00
2089	PCB 1221		U			0.0717	ug/L	.	GE	0.0717	EPA8080	1.00
2090	PCB 1232		U			0.06	ug/L	.	GE	0.0600	EPA8080	1.00
2091	PCB 1242		U			0.0399	ug/L	.	GE	0.0399	EPA8080	1.00
2092	PCB 1248		U			0.0583	ug/L	.	GE	0.0583	EPA8080	1.00
2093	PCB 1254		U			0.0757	ug/L	.	GE	0.0757	EPA8080	1.00
2094	PCB 1260		U			0.0689	ug/L	.	GE	0.0689	EPA8080	1.00
2095	Pentachlorophenol		U			0.192	ug/L	.	GE	0.1920	EPA8270	1.00
2096	pH		J	Q	L	5.09	PH	.	GE	0.0100	EPA150.1	1.00
2097	Phenanthrene		U			0.017	ug/L	.	GE	0.0170	EPA8270	1.00
2098	Phenol		U			0.043	ug/L	.	GE	0.0430	EPA8270	1.00
2099	p,p'-DDD		U			0.0485	ug/L	.	GE	0.0485	EPA8080	1.00
2100	p,p'-DDE		U			0.0283	ug/L	.	GE	0.0243	EPA8080	1.00
2101	p,p'-DDT		U			0.0485	ug/L	.	GE	0.0485	EPA8080	1.00
2102	Pyrene		J	V	P	0.29	ug/L	.	GE	0.0220	EPA8270	1.00
2103	Antimony, total recoverable		U			1.94	ug/L	.	GE	1.9400	EPA7041	1.00
2104	Selenium, total recoverable		U			1.25	ug/L	.	GE	1.2500	EPA7740	1.00
2105	Sulfate		J			377	ug/L	.	GE	90.0000	EPA300.0	1.00
2106	Styrene		UJ	Q	L	0.017	ug/L	.	GE	0.0170	EPA8260	1.00
2107	1,1,2,2-Tetrachloroethane		UJ	Q	L	0.012	ug/L	.	GE	0.0120	EPA8260	1.00
2108	Tetrachloroethylene		UJ	Q	L	0.026	ug/L	.	GE	0.0260	EPA8260	1.00
2109	Total dissolved solids					2700	ug/L	.	GE	6300.000	EPA160.1	1.00
2110	Thallium, total recoverable		U			0.66	ug/L	.	GE	0.6600	EPA7841	1.00
2111	Trichloroethylene		UJ	Q	L	0.017	ug/L	.	GE	0.0170	EPA8260	1.00
2112	Tritium					5580	pci/L	500.0000	GP	607.0000	EPIA-002	1.00
2113	Toxaphene		U			0.728	ug/L	.	GE	0.7280	EPA8080	1.00
2114	Vinyl acetate		UJ	Q	L	0.142	ug/L	.	GE	0.1420	EPA8260	1.00
2115	Vanadium, total recoverable	1	U			0.314	ug/L	.	GE	0.3140	EPA6010	1.00
2116	Vanadium, total recoverable		U			0.314	ug/L	.	GE	0.3140	EPA6010	1.00

Well Name=CBR 2D Secondary ID= Sample Date=101994
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2117	Xylenes	UJ		Q	L	0.06	ug/L	.	GE	0.0600	EPA8260	1.00
2118	1,1-Dichloroethylene	UJ		Q	L	0.018	ug/L	.	GE	0.0180	EPA8260	1.00
2119	1,1-Dichloroethane	UJ		Q	L	0.017	ug/L	.	GE	0.0170	EPA8260	1.00
2120	1,1,1-Trichloroethane	UJ		Q	L	0.022	ug/L	.	GE	0.0220	EPA8260	1.00
2121	1,1,2-Trichloroethane	UJ		Q	L	0.017	ug/L	.	GE	0.0170	EPA8260	1.00
2122	1,2-Dichloroethylene	UJ		Q	L	0.03	ug/L	.	GE	0.0300	EPA8260	1.00
2123	1,2-Dichlorobenzene	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
2124	1,2-Dichloroethane	UJ		Q	L	0.015	ug/L	.	GE	0.0150	EPA8260	1.00
2125	1,2-Dichloropropane	UJ		Q	L	0.015	ug/L	.	GE	0.0150	EPA8260	1.00
2126	1,2,4-Trichlorobenzene	U				0.075	ug/L	.	GE	0.0750	EPA8270	1.00
2127	1,3-Dichlorobenzene	U				0.117	ug/L	.	GE	0.1170	EPA8270	1.00
2128	cis-1,3-Dichloropropene	UJ		Q	L	0.012	ug/L	.	GE	0.0120	EPA8260	1.00
2129	trans-1,3-Dichloropropene	UJ		Q	L	0.015	ug/L	.	GE	0.0150	EPA8260	1.00
2130	1,4-Dichlorobenzene	U				0.024	ug/L	.	GE	0.0240	EPA8270	1.00
2131	2-Chlorophenol	U				0.031	ug/L	.	GE	0.0310	EPA8270	1.00
2132	2-Chloronaphthalene	U				0.117	ug/L	.	GE	0.1170	EPA8270	1.00
2133	2-Hexanone	UJ		QV	H	0.194	ug/L	.	GE	0.1940	EPA8260	1.00
2134	2-Methylnaphthalene	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
2135	o-Cresol (2-Methylphenol)	U				0.048	ug/L	.	GE	0.0480	EPA8270	1.00
2136	o-Nitroaniline	U				0.031	ug/L	.	GE	0.0310	EPA8270	1.00
2137	2-Nitrophenol	U				0.012	ug/L	.	GE	0.0120	EPA8270	1.00
2138	2,4-Dichlorophenol	U				0.022	ug/L	.	GE	0.0220	EPA8270	1.00
2139	2,4-Dimethyl phenol	U				0.104	ug/L	.	GE	0.1040	EPA8270	1.00
2140	2,4-Dinitrophenol	U				0.332	ug/L	.	GE	0.3320	EPA8270	1.00
2141	2,4-Dinitrotoluene	U				0.092	ug/L	.	GE	0.0920	EPA8270	1.00
2142	2,4,5-Trichlorophenol	U				0.051	ug/L	.	GE	0.0510	EPA8270	1.00
2143	2,4,6-Trichlorophenol	U				0.012	ug/L	.	GE	0.0120	EPA8270	1.00
2144	2,6-Dinitrotoluene	U				0.11	ug/L	.	GE	0.1100	EPA8270	1.00
2145	m-Nitroaniline	U				0.142	ug/L	.	GE	0.1420	EPA8270	1.00
2146	3,3'-Dichlorobenzidine	U				0.113	ug/L	.	GE	0.1130	EPA8270	1.00
2147	m,p-Cresol	U				0.49	ug/L	.	GE	0.4900	EPA8270	1.00
2148	4-Bromophenyl phenyl ether	U				0.057	ug/L	.	GE	0.0570	EPA8270	1.00
2149	4-Chloroaniline	U				0.015	ug/L	.	GE	0.0150	EPA8270	1.00
2150	4-Chlorophenyl phenyl ether	UJ		V	P	0.015	ug/L	.	GE	0.0150	EPA8270	1.00
2151	4-Chloro-m-cresol	U				0.026	ug/L	.	GE	0.0260	EPA8270	1.00
2152	p-Nitroaniline	U				0.102	ug/L	.	GE	0.1020	EPA8270	1.00
2153	4-Nitrophenol	U				0.191	ug/L	.	GE	0.1910	EPA8270	1.00
2154	2-Methyl-4,6-dinitrophenol	U				0.28	ug/L	.	GE	0.2800	EPA8270	1.00
2155	Zinc, total recoverable	1				5.71	ug/L	.	GE	2.2200	EPA6010	1.00
2156	Zinc, total recoverable					5.9	ug/L	.	GE	2.2200	EPA6010	1.00

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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2157	alpha-Benzene hexachloride	U				0.0124	ug/L	.	GE	0.0124	EPA8080	1.00
2158	Acetone	U				3.17	ug/L	.	GE	3.1700	EPA8260	1.00
2159	alpha-Chlordane	U				0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
2160	Silver, total recoverable	U				0.512	ug/L	.	GE	0.5120	EPA6010	1.00
2161	Aldrin	U				0.0124	ug/L	.	GE	0.0124	EPA8080	1.00
2162	Gross alpha	UI				0.475	pc1/L	0.5000	GP	0.9220	EPIA-001	1.00
2163	Aluminum, total recoverable	J		V	H	37.6	ug/L	.	GE	1.9300	EPA6010	1.00

Wall Name=CBR 2D Secondary ID=' Sample Date=111594
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OBS	TESTNAME	LADDUP	RESQUAL	ANNUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2164	Acenaphthene	U		I		0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
2165	Acenaphthylene	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
2166	Anthracene	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
2167	Arsenic, total recoverable	U				1.5	ug/L	.	GE	1.5000	EPA7060	1.00
2168	Benzo(a)anthracene	U				0.151	ug/L	.	GE	0.1510	EPA8270	1.00
2169	Benzo(a)pyrene	U				0.076	ug/L	.	GE	0.0760	EPA8270	1.00
2170	Barium, total recoverable	U				33.6	ug/L	.	GE	0.0480	EPA6010	1.00
2171	Benzo(b)fluoranthene	U				0.133	ug/L	.	GE	0.1330	EPA8270	1.00
2172	Beta-Benzene hexachloride	U				0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
2173	Butylbenzyl phthalate	J				0.33	ug/L	.	GE	0.0360	EPA8270	1.00
2174	Bis(2-chloroisopropyl) ether	U				0.042	ug/L	.	GE	0.0420	EPA8270	1.00
2175	Benzoic acid	U				0.081	ug/L	.	GE	0.0810	EPA8270	1.00
2176	Nonvolatile beta	UI				1.52	pci/L	0.8930	GP	1.7700	EPIA-001	1.00
2177	Beryllium, total recoverable	J		V	H	0.26	ug/L	.	GE	0.0270	EPA6010	1.00
2178	Benzo(g,h,i)perylene	U				0.309	ug/L	.	GE	0.3090	EPA8270	1.00
2179	Benzo(k)fluoranthene	U				0.079	ug/L	.	GE	0.0790	EPA8270	1.00
2180	Bromodichloromethane	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
2181	Benzyl alcohol	U				0.025	ug/L	.	GE	0.0250	EPA8270	1.00
2182	Bis(2-chloroethoxy) methane	U				0.018	ug/L	.	GE	0.0180	EPA8270	1.00
2183	Bis(2-chloroethyl) ether	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
2184	Bis(2-ethylhexyl) phthalate	J				0.58	ug/L	.	GE	0.2540	EPA8270	1.00
2185	Calcium, total recoverable	J		V	H	256	ug/L	.	GE	12.0000	EPA6010	1.00
2186	Carbon tetrachloride	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
2187	Cadmium, total recoverable	U				0.48	ug/L	.	GE	0.4800	EPA6010	1.00
2188	Bromoform	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
2189	Chloroform	U				0.12	ug/L	.	GE	0.0170	EPA8260	1.00
2190	Chrysene	U				0.012	ug/L	.	GE	0.0120	EPA8270	1.00
2191	Dichloromethane (Methylene chloride)	UJ		V	H	0.294	ug/L	.	GE	0.2940	EPA8260	1.00
2192	Bromomethane (Methyl bromide)	U				0.026	ug/L	.	GE	0.0260	EPA8260	1.00
2193	Chloromethane (Methyl chloride)	U				0.024	ug/L	.	GE	0.0240	EPA8260	1.00
2194	Chloride	U				2500	ug/L	.	GE	64.0000	EPA500.0	1.00
2195	Chlorobenzene	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
2196	Hexachlorobenzene	U				0.028	ug/L	.	GE	0.0280	EPA8270	1.00
2197	Hexachlorocyclopentadiene	U				0.042	ug/L	.	GE	0.0420	EPA8270	1.00
2198	Hexachloroethane	U				0.022	ug/L	.	GE	0.0220	EPA8270	1.00
2199	Specific conductance	U				28.6	us/cm	.	GE	0.3000	EPA120.1	1.00
2200	Cobalt, total recoverable	J				1.53	ug/L	.	GE	0.5980	EPA6010	1.00
2201	Chromium, total recoverable	U				2.28	ug/L	.	GE	2.2800	EPA6010	1.00
2202	Carbon disulfide	U				0.129	ug/L	.	GE	0.1290	EPA8260	1.00
2203	Copper, total recoverable	J				1.06	ug/L	.	GE	0.4580	EPA6010	1.00
2204	Cyanide	U				0.7	ug/L	.	GE	0.7000	EPA335.2	1.00
2205	Chloroethane (Vinyl chloride)	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
2206	Chloroethane	U				0.025	ug/L	.	GE	0.0250	EPA8260	1.00
2207	Benzene	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
2208	Dibenz(a,h)anthracene	U				0.09	ug/L	.	GE	0.0900	EPA8270	1.00
2209	Delta-Benzene hexachloride	U				0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
2210	Dibromochloromethane	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
2211	Diethyl phthalate	U				0.015	ug/L	.	GE	0.0150	EPA8270	1.00
2212	Dibenzofuran	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
2213	Dieldrin	U				0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
2214	Dimethyl phthalate	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
2215	Di-n-butyl phthalate	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
2216	Di-n-octyl phthalate	J		V	H	0.51	ug/L	.	GE	0.4430	EPA8270	1.00
		U				0.07	ug/L	.	GE	0.0700	EPA8270	1.00

Wall Name=CBR 2D Secondary ID=" Sample Date=111594
(continued)

OBS	TESTNAME	LADDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
2217	Endrin ketone		U			0.0495	ug/L	.	GE	0.0495	EPA8080	1.00
2218	Endrin		U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
2219	Endosulfan I		U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
2220	Endosulfan II		U			0.0495	ug/L	.	GE	0.0495	EPA8080	1.00
2221	Endosulfan sulfate		U			0.0495	ug/L	.	GE	0.0495	EPA8080	1.00
2222	Ethylbenzene		U			0.015	ug/L	.	GE	0.0150	EPA8260	1.00
2223	Fluoranthene		U			0.024	ug/L	.	GE	0.0240	EPA8270	1.00
2224	Iron, total recoverable					19.7	ug/L	.	GE	18.2000	EPA6010	1.00
2225	Fluorene	J				0.91	ug/L	.	GE	0.0120	EPA8270	1.00
2226	Gamma-Chlordane		U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
2227	Hexachlorobutadiene		U			0.067	ug/L	.	GE	0.0670	EPA8270	1.00
2228	Mercury, total recoverable		U			0.04	ug/L	.	GE	0.0400	EPA7470	1.00
2229	Heptachlor		U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
2230	Heptachlor epoxide		U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
2231	Indeno(1,2,3-c,d)pyrene		U			0.035	ug/L	.	GE	0.0350	EPA8270	1.00
2232	Isochlorone		U			0.099	ug/L	.	GE	0.0990	EPA8270	1.00
2233	Potassium, total recoverable					1100	ug/L	.	GE	91.6000	EPA6010	1.00
2234	Lindene		U			0.0124	ug/L	.	GE	0.0124	EPA8080	1.00
2235	Toluene	J		V	H	0.17	ug/L	.	GE	0.0440	EPA8260	1.00
2236	Methyl ethyl ketone	UJ		V	H	0.14	ug/L	.	GE	0.1400	EPA8260	1.00
2237	Methoxychlor		U			0.248	ug/L	.	GE	0.2480	EPA8080	1.00
2238	Magnesium, total recoverable					348	ug/L	.	GE	2.6800	EPA6010	1.00
2239	Methyl isobutyl ketone		U			0.204	ug/L	.	GE	0.2040	EPA8260	1.00
2240	Hexanone, total recoverable	J				1.49	ug/L	.	GE	0.2390	EPA6010	1.00
2241	Naphthalene	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
2242	Sodium, total recoverable					2590	ug/L	.	GE	37.8000	EPA6010	1.00
2243	Nitrobenzene	U				0.031	ug/L	.	GE	0.0310	EPA8270	1.00
2244	N-Nitrosodipropylamine	U				0.036	ug/L	.	GE	0.0360	EPA8270	1.00
2245	Amonia nitrogen	U		I		30	ug/L	.	GE	30.0000	EPA350.1	1.00
2246	Nickel, total recoverable		U			1.84	ug/L	.	GE	1.8400	EPA6010	1.00
2247	N-Nitrosodiphenylamine	U				0.018	ug/L	.	GE	0.0180	EPA8270	1.00
2248	Nitrate-nitrite as nitrogen		U			1200	ug/L	.	GE	30.0000	EPA353.1	1.00
2249	Lead, total recoverable	J		V	H	6.19	ug/L	.	GE	0.6900	EPA7421	1.00
2250	PCB 1016	U				0.0564	ug/L	.	GE	0.0564	EPA8080	1.00
2251	PCB 1221	U				0.0732	ug/L	.	GE	0.0732	EPA8080	1.00
2252	PCB 1232	U				0.0612	ug/L	.	GE	0.0612	EPA8080	1.00
2253	PCB 1242	U				0.0407	ug/L	.	GE	0.0407	EPA8080	1.00
2254	PCB 1248	U				0.0594	ug/L	.	GE	0.0594	EPA8080	1.00
2255	PCB 1254	U				0.0772	ug/L	.	GE	0.0772	EPA8080	1.00
2256	PCB 1260	U				0.0703	ug/L	.	GE	0.0703	EPA8080	1.00
2257	Pentachlorophenol	U				0.192	ug/L	.	GE	0.1920	EPA8270	1.00
2258	pH	J		Q	L	5.03	PH	.	GE	0.0100	EPA150.1	1.00
2259	Phenanthrene	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
2260	Phenol	U		I		0.043	ug/L	.	GE	0.0430	EPA8270	1.00
2261	p,p'-DDD	U				0.0495	ug/L	.	GE	0.0495	EPA8080	1.00
2262	p,p'-DDE	U				0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
2263	p,p'-DDT	U				0.0495	ug/L	.	GE	0.0495	EPA8080	1.00
2264	Pyrene	U		I		0.022	ug/L	.	GE	0.0220	EPA8270	1.00
2265	Antimony, total recoverable	U				1.94	ug/L	.	GE	1.9400	EPA7041	1.00
2266	Selenium, total recoverable	U				1.25	ug/L	.	GE	1.2500	EPA7740	1.00
2267	Sulfate	J				309	ug/L	.	GE	90.0000	EPA500.0	1.00
2268	Styrene	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
2269	1,1,2,2-Tetrachloroethane	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00

Well Name=CBR 2D Secondary ID=' ' Sample Date=111594
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DIFACT
2270	Tetrachloroethylene	U				0.026	ug/L	.	GE	0.0260	EPA8260	1.00
2271	Total dissolved solids					35000	ug/L	.	GE	6300.000	EPA160.1	1.00
2272	Thallium, total recoverable	U				0.66	ug/L	.	GE	0.6600	EPA7841	1.00
2273	Trichloroethylene	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
2274	Trifluoromethane	U				5200	pc/L	561.0000	GP	632.0000	EPA-002	1.00
2275	Toxaphene	U				0.743	ug/L	.	GE	0.7430	EPA8080	1.00
2276	Vinyl acetate	U				0.142	ug/L	.	GE	0.1420	EPA8260	1.00
2277	Vanadium, total recoverable	J				0.402	ug/L	.	GE	0.3140	EPA6010	1.00
2278	Xylenes	U				0.06	ug/L	.	GE	0.0600	EPA8260	1.00
2279	1,1-Dichloroethylene	U				0.018	ug/L	.	GE	0.0180	EPA8260	1.00
2280	1,1-Dichloroethane	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
2281	1,1,1-Trichloroethane	U				0.022	ug/L	.	GE	0.0220	EPA8260	1.00
2282	1,1,2-Trichloroethane	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
2283	1,2-Dichloroethylene	U				0.03	ug/L	.	GE	0.0300	EPA8260	1.00
2284	1,2-Dichlorobenzene	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
2285	1,2-Dichloroethane	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
2286	1,2-Dichloropropane	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
2287	1,2,4-Trichlorobenzene	U				0.075	ug/L	.	GE	0.0750	EPA8270	1.00
2288	1,3-Dichlorobenzene	U				0.117	ug/L	.	GE	0.1170	EPA8270	1.00
2289	cis-1,3-Dichloropropene	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
2290	trans-1,3-Dichloropropene	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
2291	1,4-Dichlorobenzene	U				0.024	ug/L	.	GE	0.0240	EPA8270	1.00
2292	2-Chlorophenol	U				0.031	ug/L	.	GE	0.0310	EPA8270	1.00
2293	2-Chloronaphthalene	U				0.117	ug/L	.	GE	0.1170	EPA8270	1.00
2294	2-Hexanone	UJ	V		H	0.194	ug/L	.	GE	0.1940	EPA8260	1.00
2295	2-Methylnaphthalene	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
2296	o-Cresol (2-Methylphenol)	U				0.048	ug/L	.	GE	0.0480	EPA8270	1.00
2297	o-Nitroaniline	U				0.031	ug/L	.	GE	0.0310	EPA8270	1.00
2298	2-Nitrophenol	U				0.012	ug/L	.	GE	0.0120	EPA8270	1.00
2299	2,4-Dichlorophenol	U				0.022	ug/L	.	GE	0.0220	EPA8270	1.00
2300	2,4-Dimethyl phenol	U				0.104	ug/L	.	GE	0.1040	EPA8270	1.00
2301	2,4-Dinitrophenol	U				0.332	ug/L	.	GE	0.3320	EPA8270	1.00
2302	2,4-Dinitrotoluene	U				0.092	ug/L	.	GE	0.0920	EPA8270	1.00
2303	2,4,5-Trichlorophenol	U				0.051	ug/L	.	GE	0.0510	EPA8270	1.00
2304	2,4,6-Trichlorophenol	U				0.012	ug/L	.	GE	0.0120	EPA8270	1.00
2305	2,6-Dinitrotoluene	U				0.11	ug/L	.	GE	0.1100	EPA8270	1.00
2306	m-Nitroaniline	U				0.142	ug/L	.	GE	0.1420	EPA8270	1.00
2307	3,3'-Dichlorobenzidine	U				0.115	ug/L	.	GE	0.1150	EPA8270	1.00
2308	m,p-Cresol	U				0.49	ug/L	.	GE	0.4900	EPA8270	1.00
2309	4-Bromophenyl phenyl ether	U				0.057	ug/L	.	GE	0.0570	EPA8270	1.00
2310	4-Chloroaniline	U				0.015	ug/L	.	GE	0.0150	EPA8270	1.00
2311	4-Chlorophenyl phenyl ether	U				0.015	ug/L	.	GE	0.0150	EPA8270	1.00
2312	4-Chloro-m-cresol	U				0.026	ug/L	.	GE	0.0260	EPA8270	1.00
2313	p-Nitroaniline	U				0.102	ug/L	.	GE	0.1020	EPA8270	1.00
2314	4-Nitrophenol	U				0.191	ug/L	.	GE	0.1910	EPA8270	1.00
2315	2-Methyl-4,6-dinitrophenol	J				1.34	ug/L	.	GE	0.2800	EPA8270	1.00
2316	Zinc, total recoverable	J	V		H	5.58	ug/L	.	GE	2.2200	EPA6010	1.00

Well Name=CBR 2D Secondary ID=' ' Sample Data=030195

OBS	TESTNAME	LABDUP	RESQUAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2317	alpha-Benzene hexachloride	UJ	0	H		0.025 ug/L			GE	0.0250	EPA8080	1.00
2318	Acetone	UJ	0	L		5 ug/L			GE	5.0000	EPA8260	1.00
2319	alpha-Chlordene	UJ	0	H		0.05 ug/L			GE	0.0500	EPA8080	1.00
2320	Silver, total recoverable	U				0.65 ug/L			GE	0.6500	EPA6010	1.00
2321	Aldrin	UJ	0	H		0.025 ug/L			GE	0.0250	EPA8080	1.00
2322	Gross alpha					1.16 pCi/L		0.5740	GP	0.7970	EPIA-001	1.00
2323	Aluminum, total recoverable		V			51.3 ug/L			GE	20.0000	EPA6010	1.00
2324	Acenaphthene	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
2325	Acenaphthylene	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
2326	Anthracene	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
2327	Arsenic, total recoverable	U				5 ug/L			GE	5.0000	EPA7060	1.00
2328	Benzo(a)anthracene	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8270	1.00
2329	Benzo(a)pyrene	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8270	1.00
2330	Barium, total recoverable					41.3 ug/L			GE	3.0000	EPA6010	1.00
2331	Benzo(b)fluoranthene	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8270	1.00
2332	beta-Benzene hexachloride	UJ	0	H		0.05 ug/L			GE	0.0500	EPA8080	1.00
2333	Butylbenzyl phthalate	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
2334	Bis(2-chloroisopropyl) ether	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
2335	Benzoic acid	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
2336	Nonvolatile beta	UI				0.244 pCi/L		0.6900	GP	1.5400	EPIA-001	1.00
2337	Beryllium, total recoverable	J	E			0.183 ug/L			GE	3.0000	EPA6010	1.00
2338	Benzo(g,h,i)perylene	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
2339	Benzo(k)fluoranthene	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8270	1.00
2340	Bromodichloromethane	UJ	0	L		0.05 ug/L			GE	0.0500	EPA8260	1.00
2341	Benzyl alcohol	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
2342	Bis(2-chloroethoxy) methane	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
2343	Bis(2-chloroethyl) ether	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
2344	Bis(2-ethylhexyl) phthalate	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
2345	Calcium, total recoverable					395 ug/L			GE	20.0000	EPA6010	1.00
2346	Carbon tetrachloride	UJ	0	L		0.05 ug/L			GE	0.0500	EPA8260	1.00
2347	Cedalum, total recoverable	U				2 ug/L			GE	2.0000	EPA6010	1.00
2348	Bromoform	UJ	0	L		0.05 ug/L			GE	0.0500	EPA8260	1.00
2349	Chloroform	UJ	0	L		0.05 ug/L			GE	0.0500	EPA8260	1.00
2350	Chrysene	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8270	1.00
2351	Dichloromethane (Methylene chloride)	UJ	0V	L		0.5 ug/L			GE	0.5000	EPA8260	1.00
2352	Bromomethane (Methyl bromide)	UJ	0	L		0.1 ug/L			GE	0.1000	EPA8260	1.00
2353	Chloromethane (Methyl chloride)	UJ	0	L		0.1 ug/L			GE	0.1000	EPA8260	1.00
2354	Chloride					2940 ug/L			GE	250.0000	EPA300.0	1.00
2355	Chloride					2960 ug/L			GE	250.0000	EPA300.0	1.00
2356	Chlorobenzene	UJ	0	L		0.05 ug/L			GE	0.0500	EPA8260	1.00
2357	Hexachlorobenzene	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8270	1.00
2358	Hexachlorocyclopentadiene	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
2359	Hexachlorosthene	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8270	1.00
2360	Specific conductance					27.4 uS/cm			GE	0.3000	EPA120.1	1.00
2361	Cobalt, total recoverable	J	E			2.25 ug/L			GE	4.0000	EPA6010	1.00
2362	Chromium, total recoverable	U				4 ug/L			GE	4.0000	EPA8260	1.00
2363	Carbon disulfide	UJ	0	L		1 ug/L			GE	1.0000	EPA8260	1.00
2364	Copper, total recoverable	J	E			2.56 ug/L			GE	4.0000	EPA6010	1.00
2365	Cyanide	U				20 ug/L			GE	20.0000	EPA335.3	1.00
2366	Cyanide	U				20 ug/L			GE	20.0000	EPA335.3	1.00
2367	Chloroethene (Vinyl chloride)	UJ	0	L		0.1 ug/L			GE	0.1000	EPA8260	1.00
2368	Chloroethane	UJ	0	L		0.1 ug/L			GE	0.1000	EPA8260	1.00
2369	Benzene	UJ	0	L		0.5 ug/L			GE	0.5000	EPA8260	1.00
2370	Dibenz(a,h)anthracene	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8270	1.00

Well Name=CDR 2D Secondary ID= ' Sample Date=030195
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2371	delta-Benzene hexachloride	UJ	0	H	0.05	ug/L	.	GE	0.0500	EPA8080	1.00	
2372	Dibromochloromethane	UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00	
2373	Diethyl phthalate	UJ	QV	L	1	ug/L	.	GE	1.0000	EPA8270	1.00	
2374	Dibenzofuran	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00	
2375	Dieldrin	UJ	0	H	0.05	ug/L	.	GE	0.0500	EPA8080	1.00	
2376	Dimethyl phthalate	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00	
2377	Di-n-butyl phthalate	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00	
2378	Di-n-octyl phthalate	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00	
2379	Endrin ketone	UJ	0	H	0.1	ug/L	.	GE	0.1000	EPA8080	1.00	
2380	Endrin	UJ	0	H	0.05	ug/L	.	GE	0.0500	EPA8080	1.00	
2381	Endosulfan I	UJ	0	H	0.05	ug/L	.	GE	0.0500	EPA8080	1.00	
2382	Endosulfan II	UJ	0	H	0.1	ug/L	.	GE	0.1000	EPA8080	1.00	
2383	Endosulfan sulfate	UJ	0	H	0.1	ug/L	.	GE	0.1000	EPA8080	1.00	
2384	Ethylbenzene	UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00	
2385	Fluoranthene	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00	
2386	Iron, total recoverable	UJ	I	.	22.1	ug/L	.	GE	10.0000	EPA6010	1.00	
2387	Fluorene	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00	
2388	gamma-Chlordane	UJ	0	H	0.05	ug/L	.	GE	0.0500	EPA8080	1.00	
2389	Hexachlorobutadiene	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00	
2390	Mercury, total recoverable	U	.	.	0.2	ug/L	.	GE	0.2000	EPA7470	1.00	
2391	Heptachlor	UJ	0	H	0.05	ug/L	.	GE	0.0500	EPA8080	1.00	
2392	Heptachlor epoxide	UJ	0	H	0.05	ug/L	.	GE	0.0500	EPA8080	1.00	
2393	Indeno(1,2,3-c,d)pyrene	UJ	Q	L	0.1	ug/L	.	GE	0.1000	EPA8270	1.00	
2394	Isophorone	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00	
2395	Potassium, total recoverable	UJ	.	.	1850	ug/L	.	GE	500.0000	EPA6010	1.00	
2396	Lindane	UJ	0	H	0.025	ug/L	.	GE	0.0250	EPA8080	1.00	
2397	Toluene	JV	IVU	L	0.06	ug/L	.	GE	0.5000	EPA8260	1.00	
2398	Methyl ethyl ketone	UJ	0	L	1	ug/L	.	GE	1.0000	EPA8260	1.00	
2399	Methoxychlor	UJ	0	H	0.5	ug/L	.	GE	0.5000	EPA8080	1.00	
2400	Magnesium, total recoverable	UJ	Q	.	951	ug/L	.	GE	20.0000	EPA6010	1.00	
2401	Methyl isobutyl ketone	UJ	0	L	1	ug/L	.	GE	1.0000	EPA8260	1.00	
2402	Manganese, total recoverable	UJ	Q	L	2.41	ug/L	.	GE	2.0000	EPA6010	1.00	
2403	Naphthalene	UJ	Q	L	3150	ug/L	.	GE	100.0000	EPA6010	1.00	
2404	Sodium, total recoverable	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00	
2405	Nitrobenzene	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00	
2406	N-Nitrosodipropylamine	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00	
2407	Ammonia nitrogen	U	.	.	100	ug/L	.	GE	100.0000	EPA350.1	1.00	
2408	Nickel, total recoverable	J	E	.	3.08	ug/L	.	GE	10.0000	EPA6010	1.00	
2409	N-Nitrosodiphenylamine	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00	
2410	Nitrate-nitrite as nitrogen	UJ	Q	.	1200	ug/L	.	GE	100.0000	EPA353.1	1.00	
2411	Lead, total recoverable	J	E	.	2.02	ug/L	.	GE	5.0000	EPA7421	1.00	
2412	PCB 1016	UJ	0	H	0.1	ug/L	.	GE	0.1000	EPA8080	1.00	
2413	PCB 1221	UJ	0	H	0.1	ug/L	.	GE	0.1000	EPA8080	1.00	
2414	PCB 1232	UJ	0	H	0.1	ug/L	.	GE	0.1000	EPA8080	1.00	
2415	PCB 1242	UJ	0	H	0.1	ug/L	.	GE	0.1000	EPA8080	1.00	
2416	PCB 1248	UJ	0	H	0.1	ug/L	.	GE	0.1000	EPA8080	1.00	
2417	PCB 1254	UJ	0	H	0.1	ug/L	.	GE	0.1000	EPA8080	1.00	
2418	PCB 1260	UJ	0	H	0.1	ug/L	.	GE	0.1000	EPA8080	1.00	
2419	Pentachlorophenol	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00	
2420	pH	J	Q	L	5.29	PH	.	GE	0.0100	EPA150.1	1.00	
2421	Phenanthrene	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00	
2422	Phenol	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00	
2423	P,p'-DDD	UJ	Q	H	0.1	ug/L	.	GE	0.1000	EPA8080	1.00	

Well Name=CBR 2D Secondary ID=' ' Sample Date=030195
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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2424	P,p'-DDE		UJ	0	H	0.05	ug/L	.	GE	0.0500	EPA8080	1.00
2425	P,p'-DDT		UJ	0	H	0.1	ug/L	.	GE	0.1000	EPA8080	1.00
2426	Pyrene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2427	Antimony, total recoverable		U			5	ug/L	.	GE	5.0000	EPA7041	1.00
2428	Selenium, total recoverable		U			5	ug/L	.	GE	5.0000	EPA7740	1.00
2429	Sulfate		J	E		622	ug/L	.	GE	1000.000	EPA300.0	1.00
2430	Sulfate	1	J	E		639	ug/L	.	GE	1000.000	EPA300.0	1.00
2431	Styrene		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
2432	1,1,2,2-Tetrachloroethane		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
2433	Tetrachloroethene		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
2434	Total dissolved solids		UJ	0	L	34000	ug/L	.	GE	5000.000	EPA160.1	1.00
2435	Thallium, total recoverable		U			5	ug/L	.	GE	5.0000	EPA7841	1.00
2436	Trichloroethylene		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
2437	Iridium		UJ			5040	pg/L	560.0000	GP	638.0000	EPIA-802	1.00
2438	Toxaphene		UJ	0	H	1	ug/L	.	GE	1.0000	EPA8080	1.00
2439	Vinyl acetate		UJ	0	L	1	ug/L	.	GE	1.0000	EPA8260	1.00
2440	Vanadium, total recoverable		U			10	ug/L	.	GE	10.0000	EPA6010	1.00
2441	Xylenes		UJ	0	L	0.15	ug/L	.	GE	0.1500	EPA8260	1.00
2442	1,1-Dichloroethylene		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
2443	1,1-Dichloroethane		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
2444	1,1,1-Trichloroethane		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
2445	1,1,2-Trichloroethane		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
2446	1,2-Dichloroethylene		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
2447	1,2-Dichlorobenzene		UJ	Q	L	0.1	ug/L	.	GE	0.1000	EPA8260	1.00
2448	1,2-Dichloroethane		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2449	1,2-Dichloropropane		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
2450	1,2,4-Trichlorobenzene		UJ	Q	L	0.1	ug/L	.	GE	0.1000	EPA8260	1.00
2451	1,3-Dichlorobenzene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2452	cis-1,3-Dichloropropene		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
2453	trans-1,3-Dichloropropene		UJ	Q	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
2454	1,4-Dichlorobenzene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2455	2-Chlorophenol		J	QE	L	0.12	ug/L	.	GE	1.0000	EPA8270	1.00
2456	2-Chloronaphthalene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2457	2-Hexanone		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8260	1.00
2458	2-Methylnaphthalene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2459	o-Cresol (2-Methylphenol)		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2460	o-Nitroaniline		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2461	2-Nitrophenol		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2462	2,4-Dichlorophenol		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2463	2,4-Dimethyl phenol		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2464	2,4-Dinitrophenol		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2465	2,4-Dinitrotoluene		UJ	Q	L	10	ug/L	.	GE	10.0000	EPA8270	1.00
2466	2,4,5-Trichlorophenol		UJ	Q	L	0.1	ug/L	.	GE	0.1000	EPA8270	1.00
2467	2,4,6-Trichlorophenol		UJ	Q	L	0.1	ug/L	.	GE	0.1000	EPA8270	1.00
2468	2,6-Dinitrotoluene		UJ	Q	L	0.1	ug/L	.	GE	0.1000	EPA8270	1.00
2469	m-Nitroaniline		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2470	3,3'-Dichlorobenzidine		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2471	m,p-Cresol		UJ	Q	L	0.01	ug/L	.	GE	0.0100	EPA8270	1.00
2472	4-Bromophenyl phenyl ether		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2473	4-Chloroaniline		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2474	4-Chlorophenyl phenyl ether		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2475	4-Chloro-m-cresol		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
2476	p-Nitroaniline		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00

Well Name=CBR 2D Secondary ID= Sample Date=030195
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OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2477	4-Nitrophenol	UJ	Q	1		1	ug/L		GE	1.0000	EPA8270	1.00
2478	2-Methyl-4,6-dinitrophenol	UJ	Q	1		10	ug/L		GE	10.0000	EPA8270	1.00
2479	Zinc, total recoverable					13.5	ug/L		GE	5.0000	EPA6010	1.00

Well Name=CBR 2D Secondary ID=R Sample Date=080192

OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2480	Silver, dissolved	U				0.7	ug/L		WA	0.7000	EPA200.7	1.00
2481	Silver, dissolved	U				2	ug/L		GE	2.0000	EPA6010	1.00
2482	Gross alpha					1.3	pci/L	1.0000	TH	0.6000	EPA900.0	1.00
2483	Gross alpha	1				1.8	pci/L	1.1000	TH	0.6000	EPA900.0	1.00
2484	Gross alpha	U				2	pci/L		GE	2.0000	EPA900.0	1.00
2485	Arsenic, dissolved	U				2	ug/L		WA	2.0000	EPA206.2	1.00
2486	Arsenic, dissolved	U				2	ug/L		GE	2.0000	EPA7060	1.00
2487	Barium, dissolved					50.3	ug/L		WA	6.6000	EPA200.7	1.00
2488	Barium, dissolved					50.5	ug/L		GE	3.0000	EPA6010	1.00
2489	Nonvolatile beta	1				3	pci/L	1.5000	TH	0.7000	EPA900.0	1.00
2490	Nonvolatile beta					4.4	pci/L	1.7000	TH	0.7000	EPA900.0	1.00
2491	Nonvolatile beta					2.11	pci/L	0.3400	GE	2.0000	EPA900.0	1.00
2492	Bromodichloromethane	U				5	ug/L		WA	5.0000	EPA8240	1.00
2493	Bromodichloromethane	U				1	ug/L		GE	1.0000	EPA8240	1.00
2494	Calcium, dissolved					440	ug/L		WA	16.4000	EPA200.7	1.00
2495	Calcium, dissolved					398	ug/L		GE	10.0000	EPA6010	1.00
2496	Trichlorofluoromethane	U				5	ug/L		WA	5.0000	EPA8240	1.00
2497	Trichlorofluoromethane	U				1	ug/L		GE	1.0000	EPA8240	1.00
2498	Carbon tetrachloride	U				5	ug/L		WA	5.0000	EPA8240	1.00
2499	Carbon tetrachloride	U				1	ug/L		GE	1.0000	EPA8240	1.00
2500	Cadmium, dissolved	U				0.35	ug/L		WA	0.3500	EPA200.7	1.00
2501	Cadmium, dissolved	U				2	ug/L		GE	2.0000	EPA6010	1.00
2502	Bromoform	U				5	ug/L		WA	5.0000	EPA8240	1.00
2503	Bromoform	U				1	ug/L		GE	1.0000	EPA8240	1.00
2504	Chloroform	U				5	ug/L		WA	5.0000	EPA8240	1.00
2505	Chloroform	U				1	ug/L		GE	1.0000	EPA8240	1.00
2506	Dichloromethane (Methylene chloride)	U				5	ug/L		WA	5.0000	EPA8240	1.00
2507	Dichloromethane (Methylene chloride)					1.4	ug/L		GE	1.0000	EPA8240	1.00
2508	Bromoethane (Methyl bromide)	U				10	ug/L		WA	10.0000	EPA8240	1.00
2509	Bromoethane (Methyl bromide)	U				1	ug/L		GE	1.0000	EPA8240	1.00
2510	Chloroethane (Methyl chloride)	U				10	ug/L		WA	10.0000	EPA8240	1.00
2511	Chloroethane (Methyl chloride)	U				1	ug/L		GE	1.0000	EPA8240	1.00
2512	Chloride					4440	ug/L		WA	0.2500	EPA325.2	1.00
2513	Chloride					1120	ug/L		GE	0.2500	EPA300.0	1.00
2514	Chlorobenzene	U				5	ug/L		WA	5.0000	EPA8240	1.00
2515	Chlorobenzene	U				1	ug/L		GE	1.0000	EPA8240	1.00
2516	Specific conductance	JQ				43.6	us/cm		WA	1.0000	EPA120.1	1.00
2517	Specific conductance	1				43.6	us/cm		WA	1.0000	EPA120.1	1.00
2518	Specific conductance	JQ				50	us/cm		GE	1.0000	EPA120.1	1.00
2519	Chromium, dissolved	J3				2.6	ug/L		WA	1.1000	EPA200.7	1.00
2520	Chromium, dissolved	U				4	ug/L		GE	4.0000	EPA6010	1.00
2521	Chloroethane (Vinyl chloride)	U				10	ug/L		WA	10.0000	EPA8240	1.00
2522	Chloroethane (Vinyl chloride)	U				1	ug/L		GE	1.0000	EPA8240	1.00
2523	Chloroethane	U				10	ug/L		WA	10.0000	EPA8240	1.00

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Wall Name=CBR 2D Secondary ID=R Sample Date=080192
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OBS	TESTNAME	LABDUP	RESQUAL	ANQ/L	BIAS	RESULT	UNITS	ACCURACY	LAB	DET/LIN	METHOD	DIL/FACT
2524	Chloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
2525	Benzene	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
2526	Benzene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
2527	Dibromochloroethane	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
2528	Dibromochloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
2529	Silica, dissolved					14300	ug/L	.	WA	53.5000	EPA200.7	2.10
2530	Silica, dissolved					16700	ug/L	.	GE	100.0000	EPA6010	1.00
2531	Endrin	U				0.108	ug/L	.	WA	0.1000	EPA8080	1.08
2532	Endrin	U				0.056	ug/L	.	GE	0.0060	EPA8080	1.00
2533	Ethylbenzene	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
2534	Ethylbenzene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
2535	Fluoride	U				100	ug/L	.	WA	0.1000	EPA340.2	1.00
2536	Fluoride	U				100	ug/L	.	GE	0.1000	EPA340.2	1.00
2537	Iron, dissolved					38.9	ug/L	.	WA	1.9000	EPA200.7	1.00
2538	Iron, dissolved	J2				31	ug/L	.	GE	4.0000	EPA6010	1.00
2539	Mercury, dissolved	U				0.2	ug/L	.	WA	0.2000	EPA245.1	1.00
2540	Mercury, dissolved	U				0.2	ug/L	.	GE	0.2000	EPA7470	1.00
2541	Mercury, dissolved	U				0.2	ug/L	.	GE	0.2000	EPA7470	1.00
2542	Potassium, dissolved					1440	ug/L	.	WA	83.5000	EPA200.7	1.00
2543	Potassium, dissolved					1700	ug/L	.	GE	500.0000	EPA6010	1.00
2544	Lindane	U				0.054	ug/L	.	WA	0.0500	EPA8080	1.08
2545	Lindane	U				0.005	ug/L	.	GE	0.0050	EPA8080	1.00
2546	Toluene	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
2547	Toluene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
2548	Methoxychlor					0.54	ug/L	.	WA	0.5000	EPA8080	1.08
2549	Methoxychlor	U				0.5	ug/L	.	GE	0.5000	EPA8080	1.00
2550	Magnesium, dissolved					508	ug/L	.	WA	8.9000	EPA200.7	1.00
2551	Magnesium, dissolved					549	ug/L	.	GE	2.0000	EPA6010	1.00
2552	Manganese, dissolved					3	ug/L	.	WA	0.3500	EPA200.7	1.00
2553	Manganese, dissolved					3.56	ug/L	.	GE	2.0000	EPA6010	1.00
2554	Sodium, dissolved					3930	ug/L	.	WA	111.0000	EPA200.7	1.00
2555	Sodium, dissolved					4270	ug/L	.	GE	10.0000	EPA6010	1.00
2556	Nitrate as nitrogen					2270	ug/L	.	WA	0.0100	EPA353.2	2.00
2557	Nitrate-nitrite as nitrogen					1990	ug/L	.	GE	0.0500	EPA353.3	1.00
2558	Lead, dissolved	J5				5	ug/L	.	GE	2.0000	EPA239.2	1.00
2559	Lead, dissolved	U				3	ug/L	.	GE	3.0000	EPA7421	1.00
2560	pH	JQ				5.21	PH	.	WA	0.1000	EPA150.1	1.00
2561	pH	JQ				5.49	PH	.	GE	0.0000	EPA150.1	1.00
2562	Radium-226	JQ				0.81	pci/L	0.3700	TH	0.2400	EHLRA05	1.00
2563	Radium-228	U				0.3	pci/L	.	TH	0.3000	EPA904.0	3.00
2564	Selenium, dissolved	U				2	ug/L	.	WA	2.0000	EPA7740	1.00
2565	Selenium, dissolved	U				2	ug/L	.	GE	0.5000	EPA8150	1.09
2566	2,4,5-TP (Silvex)	U				0.545	ug/L	.	WA	0.0900	EPA8150	1.00
2567	2,4,5-TP (Silvex)	U				0.09	ug/L	.	GE	0.0900	EPA8150	1.00
2568	Sulfate	U				532	ug/L	.	WA	0.2500	EPA300.0	1.00
2569	Sulfate	U				1000	ug/L	.	GE	1.0000	EPA300.0	1.00
2570	1,1,2,2-Tetrachloroethane	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
2571	1,1,2,2-Tetrachloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
2572	Tetrachloroethylene	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
2573	Tetrachloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
2574	Total dissolved solids	JQ				23000	ug/L	.	WA	1.0000	EPA160.2	1.00
2575	Total dissolved solids	JQ				49000	ug/L	.	GE	1.0000	EPA160.1	1.00
2576	Total organic carbon	U				500	ug/L	.	WA	0.5000	EPA415.1	1.00

Well Name=CBR 2D Secondary ID=R Sample Date=080192
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2577	Total organic carbon					1000	ug/L	.	GE	1.0000	EPA9060	1.00
2578	Radium, total alpha-emitting	1	U			1	pci/L	.	GE	1.0000	EPA900.1	1.00
2579	Radium, total alpha-emitting		U			1	pci/L	.	GE	1.0000	EPA900.1	1.00
2580	Total organic halogens		JQ			10.9	ug/L	.	WA	5.0000	EPA9020A	1.00
2581	Total organic halogens		U			5	ug/L	.	GE	5.0000	EPA9020	1.00
2582	Phenols		U			5	ug/L	.	WA	5.0000	EPA420.2	1.00
2583	Phenols		U			5	ug/L	.	GE	5.0000	EPA420.2	1.00
2584	Total phosphates (as P)					23	ug/L	.	WA	0.0200	EPA365.2	1.00
2585	Total phosphates (as P)					160	ug/L	.	GE	0.0500	EPA365.1	1.00
2586	Trichloroethylene		U			5	ug/L	.	GE	5.0000	EPA8240	1.00
2587	Trichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2588	Tritium					10513	pci/L	7603.130	TH	527.0900	EPA906.0	1.00
2589	Tritium					9.27	pci/ml	0.5000	GE	0.7000	EPA906.0	1.00
2590	Toxaphene		U			1.08	ug/L	.	WA	1.0000	EPA8080	1.00
2591	Toxaphene		U			0.24	ug/L	.	GE	0.2400	EPA8080	1.00
2592	trans-1,2-Dichloroethylene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2593	trans-1,2-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2594	trans-1,3-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2595	1,1-Dichloroethylene		U			5	ug/L	.	GE	5.0000	EPA8240	1.00
2596	1,1-Dichloroethylene		U			1	ug/L	.	WA	5.0000	EPA8240	1.00
2597	1,1-Dichloroethane		U			5	ug/L	.	GE	1.0000	EPA8240	1.00
2598	1,1-Dichloroethane		U			5	ug/L	.	GE	5.0000	EPA8240	1.00
2599	1,1,1-Trichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2600	1,1,1-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2601	1,1,2-Trichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2602	1,1,2-Trichloroethane		U			5	ug/L	.	GE	5.0000	EPA8240	1.00
2603	1,2-Dichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2604	1,2-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2605	1,2-Dichloropropene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2606	1,2-Dichloropropene		U			5	ug/L	.	GE	1.0000	EPA8240	1.00
2607	cis-1,3-Dichloropropene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2608	cis-1,3-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2609	trans-1,3-Dichloropropene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2610	2-Chloroethyl vinyl ether		U			10	ug/L	.	WA	10.0000	EPA8240	1.00
2611	2-Chloroethyl vinyl ether		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2612	2,4-Dichlorophenoxyacetic acid		U			1.09	ug/L	.	WA	1.0000	EPA8150	1.09
2613	2,4-Dichlorophenoxyacetic acid		U			0.3	ug/L	.	GE	0.3000	EPA8150	1.00

Well Name=CBR 2D Secondary ID=R Sample Date=030393

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	DIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2614	Silver, total recoverable	0	U			2	ug/L	.	GE	2.0000	EPA6010	1.00
2615	Silver, total recoverable	0	U			2	ug/L	.	WA	2.0000	EPA200.7	1.00
2616	Gross alpha	1	U			2	pci/L	.	GE	2.0000	EPA900.0	1.00
2617	Gross alpha	0	U			2	pci/L	.	GE	2.0000	EPA900.0	1.00
2618	Gross alpha	0				0.8	pci/L	1.0000	TH	0.6000	EPA900.0	1.00
2619	Aluminum, total recoverable	0				72.4	ug/L	.	GE	20.0000	EPA6010	1.00
2620	Aluminum, total recoverable	0				317	ug/L	.	WA	20.0000	EPA200.7	1.00
2621	Arsenic, total recoverable	0	U			2	ug/L	.	GE	2.0000	EPA7060	1.00
2622	Arsenic, total recoverable	0	U			2	ug/L	.	WA	2.0000	EPA206.2	1.00
2623	Barium, total recoverable	0				43.1	ug/L	.	GE	3.0000	EPA6010	1.00

Well Name=CBR 2D Secondary ID-R Sample Date=030393
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANNUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
2624	Barium, total recoverable	0				41.3 ug/L			WA	4.0000	EPA200.7	1.00
2625	Nonvolatile beta	1	U			2 pCi/L			GE	2.0000	EPA900.0	1.00
2626	Nonvolatile beta	0				2.66 pCi/L		1.4000	GE	2.0000	EPA900.0	1.00
2627	Nonvolatile beta	0				2.6 pCi/L		1.7000	TH	0.8000	EPA900.0	1.00
2628	Bromodichloromethane	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
2629	Bromodichloromethane	0	U			5 ug/L			WA	5.0000	EPA8240	1.00
2630	Calcium, total recoverable	0				299 ug/L			GE	10.0000	EPA6010	1.00
2631	Calcium, total recoverable	0				323 ug/L			WA	10.0000	EPA200.7	1.00
2632	Trichlorofluoromethane	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
2633	Trichlorofluoromethane	0	U			5 ug/L			WA	5.0000	EPA8240	1.00
2634	Carbon tetrachloride	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
2635	Carbon tetrachloride	0	U			5 ug/L			WA	5.0000	EPA8240	1.00
2636	Cadadium, total recoverable	0	U			2 ug/L			GE	2.0000	EPA6010	1.00
2637	Cadadium, total recoverable	0	U			2 ug/L			WA	2.0000	EPA200.7	1.00
2638	Bromoform	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
2639	Bromoform	0	U			5 ug/L			WA	5.0000	EPA8240	1.00
2640	Chloroform	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
2641	Chloroform	0	U			5 ug/L			WA	5.0000	EPA8240	1.00
2642	Dichloromethane (Methylene chloride)	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
2643	Dichloromethane (Methylene chloride)	0	U			5 ug/L			WA	5.0000	EPA8240	1.00
2644	Bromomethane (Methyl bromide)	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
2645	Bromomethane (Methyl bromide)	0	U			10 ug/L			WA	10.0000	EPA8240	1.00
2646	Chloromethane (Methyl chloride)	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
2647	Chloromethane (Methyl chloride)	0	U			10 ug/L			WA	10.0000	EPA8240	1.00
2648	Chloride	0				3880 ug/L			GE	0.2500	EPA300.0	1.00
2649	Chloride	0				4300 ug/L			WA	0.2500	EPA325.2	1.00
2650	Chlorobenzene	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
2651	Chlorobenzene	0	U			5 ug/L			WA	5.0000	EPA8240	1.00
2652	Specific conductance	0				31 uS/cm			GE	1.0000	EPA120.1	1.00
2653	Specific conductance	0	JQ			34.8 uS/cm			WA	1.0000	EPA120.1	1.00
2654	Chromium, total recoverable	0	U			4 ug/L			GE	4.0000	EPA6010	1.00
2655	Chromium, total recoverable	0	U			4 ug/L			WA	4.0000	EPA200.7	1.00
2656	Chloroethane (Vinyl chloride)	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
2657	Chloroethane (Vinyl chloride)	0	U			10 ug/L			WA	10.0000	EPA8240	1.00
2658	Chloroethane	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
2659	Chloroethane	0	U			10 ug/L			WA	10.0000	EPA8240	1.00
2660	Benzene	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
2661	Benzene	0	U			5 ug/L			WA	5.0000	EPA8240	1.00
2662	Dibromochloromethane	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
2663	Dibromochloromethane	0	U			5 ug/L			WA	5.0000	EPA8240	1.00
2664	Endrin	0	U			0.006 ug/L			GE	0.0060	EPA8080	1.00
2665	Endrin	0	U			0.108 ug/L			WA	0.1000	EPA8080	1.08
2666	Ethylbenzene	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
2667	Ethylbenzene	0	U			5 ug/L			WA	5.0000	EPA8240	1.00
2668	Fluoride	0	U			100 ug/L			GE	0.1000	EPA340.2	1.00
2669	Fluoride	0	U			100 ug/L			WA	0.1000	EPA340.2	1.00
2670	Iron, total recoverable	0				30 ug/L			GE	4.0000	EPA6010	1.00
2671	Iron, total recoverable	0				186 ug/L			WA	4.0000	EPA200.7	1.00
2672	Mercury, total recoverable	0	U			0.2 ug/L			GE	0.2000	EPA7470	1.00
2673	Mercury, total recoverable	0	U			0.2 ug/L			WA	0.2000	EPA245.1	1.00
2674	Potassium, total recoverable	0				1390 ug/L			GE	500.0000	EPA6010	1.00
2675	Potassium, total recoverable	0				1430 ug/L			WA	500.0000	EPA200.7	1.00
2676	Lindane	0	U			0.005 ug/L			GE	0.0050	EPA8080	1.00

Well Name=CDR 2D Secondary ID=R Sample Date=030393
(continued)

ODS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2677	Lindane	0	U			0.054	ug/L	.	WA	0.0500	EPA8080	1.08
2678	Toluene	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2679	Toluene	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2680	Hexachlorocyclopentadiene	0	U			0.5	ug/L	.	GE	0.5000	EPA8080	1.00
2681	Hexachlorocyclopentadiene	0	U			0.54	ug/L	.	WA	0.5000	EPA8080	1.08
2682	Magnesium, total recoverable	0				443	ug/L	.	GE	2.0000	EPA6010	1.00
2683	Magnesium, total recoverable	0				434	ug/L	.	WA	11.0000	EPA200.7	1.00
2684	Hexachlorocyclopentadiene, total recoverable	0				2.18	ug/L	.	GE	2.0000	EPA6010	1.00
2685	Hexachlorocyclopentadiene, total recoverable	0				2.6	ug/L	.	WA	2.0000	EPA200.7	1.00
2686	Sodium, total recoverable	0				3500	ug/L	.	GE	10.0000	EPA6010	1.00
2687	Sodium, total recoverable	0	V			3400	ug/L	.	WA	23.7000	EPA200.7	1.00
2688	Nitrate as nitrogen	0				1470	ug/L	.	WA	0.0200	EPA553.2	1.00
2689	Nitrate-nitrite as nitrogen	0				1610	ug/L	.	GE	0.0500	EPA553.3	1.00
2690	Lead, total recoverable	0	U			3	ug/L	.	GE	3.0000	EPA7421	1.00
2691	Lead, total recoverable	0	U			3	ug/L	.	WA	3.0000	EPA239.2	1.00
2692	pH	0	JQ			5.08	pH	.	GE	0.0000	EPA150.1	1.00
2693	pH	0	JQ			4.75	pH	.	WA	0.1000	EPA150.1	1.00
2694	Radium-226	0	U			0.21	pCi/L	.	TH	0.2100	EHLRA05	1.00
2695	Radium-228	0	U			4.7	pCi/L	1.2000	TH	0.4000	EPA904.0	3.00
2696	Selenium, total recoverable	0	U			2	ug/L	.	GE	2.0000	EPA7740	1.00
2697	Selenium, total recoverable	0	U			2	ug/L	.	WA	2.0000	EPA270.2	1.00
2698	2,4,5-TP (Silvex)	0	U			0.09	ug/L	.	GE	0.0900	EPA8150	1.00
2699	2,4,5-TP (Silvex)	0	U			0.55	ug/L	.	WA	0.5000	EPA8150	1.10
2700	Sulfate	0	U			1000	ug/L	.	GE	1.0000	EPA300.0	1.00
2701	Sulfate	0	U			1000	ug/L	.	WA	1.0000	EPA300.0	1.00
2702	1,1,2,2-Tetrachloroethane	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2703	1,1,2,2-Tetrachloroethane	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2704	Tetrachloroethylene	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2705	Tetrachloroethylene	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2706	Total dissolved solids	0	V			40000	ug/L	.	GE	1.0000	EPA160.1	1.00
2707	Total dissolved solids	0	U			36000	ug/L	.	WA	1.0000	EPA160.2	1.00
2708	Total organic carbon	0	U			1000	ug/L	.	GE	1.0000	EPA9060	1.00
2709	Total organic carbon	0	U			1000	ug/L	.	WA	1.0000	EPA415.1	1.00
2710	Radium, total alpha-emitting	0				1.3	pCi/L	0.6000	GE	1.0000	EPA900.1	1.00
2711	Total organic halogens	0	U			5	ug/L	.	GE	5.0000	EPA9020	1.00
2712	Total organic halogens	0	U			5	ug/L	.	WA	5.0000	EPA9020A	1.00
2713	Total organic halogens	1	U			5	ug/L	.	WA	5.0000	EPA9020A	1.00
2714	Phenols	0	U			5	ug/L	.	GE	5.0000	EPA420.2	1.00
2715	Phenols	0	U			5	ug/L	.	WA	5.0000	EPA420.2	1.00
2716	Total phosphates (as P)	0	U			50	ug/L	.	GE	0.0500	EPA365.1	1.00
2717	Total phosphates (as P)	0	U			50	ug/L	.	WA	0.0500	EPA365.2	1.00
2718	Trichloroethylene	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2719	Trichloroethylene	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2720	Tritium	0				5.76	pCi/mL	0.4000	GE	0.7000	EPA906.0	1.00
2721	Tritium	0				6.9	pCi/mL	2.7000	TH	0.5100	EPA906.0	1.00
2722	Silica, total recoverable	0				15700	ug/L	.	GE	100.0000	EPA6010	1.00
2723	Silica, total recoverable	0				14400	ug/L	.	WA	100.0000	EPA200.7	2.10
2724	Toxaphene	0	U			0.24	ug/L	.	GE	0.2400	EPA8080	1.00
2725	Toxaphene	0	U			1.08	ug/L	.	WA	1.0000	EPA8080	1.08
2726	trans-1,2-Dichloroethylene	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2727	trans-1,2-Dichloroethylene	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2728	trans-1,3-Dichloropropene	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2729	1,1-Dichloroethylene	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00

Well Name=CBR 2D Secondary ID=R Sample Date=050393
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2730	1,1-Dichloroethylene	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2731	1,1-Dichloroethane	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2732	1,1-Dichloroethane	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2733	1,1,1-Trichloroethane	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2734	1,1,1-Trichloroethane	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2735	1,1,2-Trichloroethane	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2736	1,1,2-Trichloroethane	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2737	1,2-Dichloroethane	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2738	1,2-Dichloroethane	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2739	1,2-Dichloropropane	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2740	1,2-Dichloropropane	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2741	cis-1,3-Dichloropropane	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2742	cis-1,3-Dichloropropane	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2743	trans-1,3-Dichloropropane	0	U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2744	2-Chloroethyl vinyl ether	0	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2745	2-Chloroethyl vinyl ether	0	U			10	ug/L	.	WA	10.0000	EPA8240	1.00
2746	2,4-Dichlorophenoxyacetic acid	0	U			0.3	ug/L	.	GE	0.3000	EPA8150	1.00
2747	2,4-Dichlorophenoxyacetic acid	0	U			1.1	ug/L	.	WA	1.0000	EPA8150	1.10

Well Name=CBR 2D Secondary ID=R Sample Date=072694

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2748	Silver, total recoverable	U		Y		2	ug/L	.	GE	2.0000	EPA6010	1.00
2749	Silver, total recoverable	U		Y		2	ug/L	.	WA	2.0000	EPA200.7	1.00
2750	Gross alpha	J		Y	P	0.822	pci/L	0.5820	GP	0.7910	EP1A-001	1.00
2751	Gross alpha	J		Y	P	6.1	pci/L	1.2000	TH	2.0700	EPA900.0	1.00
2752	Aluminum, total recoverable	J		Y		21	ug/L	.	GE	20.0000	EPA6010	1.00
2753	Aluminum, total recoverable	U		Y		23.4	ug/L	.	WA	20.0000	EPA200.7	1.00
2754	Arsenic, total recoverable	U		Y		2	ug/L	.	GE	2.0000	EPA7060	1.00
2755	Arsenic, total recoverable	U		Y		2	ug/L	.	WA	2.0000	EPA206.2	1.00
2756	Barium, total recoverable	U		Y		33.4	ug/L	.	GE	3.0000	EPA6010	1.00
2757	Barium, total recoverable	U		Y		32.6	ug/L	.	WA	4.0000	EPA200.7	1.00
2758	Nonvolatile beta	UI		Y		12.2	pci/L	0.8770	GP	1.7600	EP1A-001	1.00
2759	Nonvolatile beta	U		Y		1	ug/L	1.7000	TH	2.5200	EPA900.0	1.00
2760	Bromodichloromethane	U		Y		5	ug/L	.	GE	1.0000	EPA8240	1.00
2761	Bromodichloromethane	U		Y		30	ug/L	.	WA	5.0000	EPA8240	1.00
2762	Boron, total recoverable	UJ		L		257	ug/L	.	GE	30.0000	EPA6010	1.00
2763	Calcium, total recoverable	U		Y		247	ug/L	.	GE	10.0000	EPA6010	1.00
2764	Calcium, total recoverable	U		Y		1	ug/L	.	WA	10.0000	EPA200.7	1.00
2765	Trichlorofluoromethane	U		Y		5	ug/L	.	GE	1.0000	EPA8240	1.00
2766	Trichlorofluoromethane	U		Y		1	ug/L	.	WA	5.0000	EPA8240	1.00
2767	Carbon tetrachloride	U		Y		1	ug/L	.	GE	1.0000	EPA8240	1.00
2768	Carbon tetrachloride	U		Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
2769	Cedrium, total recoverable	U		Y		2	ug/L	.	GE	2.0000	EPA6010	1.00
2770	Cedrium, total recoverable	U		Y		2	ug/L	.	WA	2.0000	EPA200.7	1.00
2771	Bromoform	U		Y		1	ug/L	.	GE	1.0000	EPA8240	1.00
2772	Bromoform	U		Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
2773	Chloroform	U		Y		1	ug/L	.	GE	1.0000	EPA8240	1.00
2774	Chloroform	U		Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
2775	Dichloromethane (Methylene chloride)	U		Y		1	ug/L	.	GE	1.0000	EPA8240	1.00
2776	Dichloromethane (Methylene chloride)	UJ		Y	H	61.5	ug/L	.	WA	5.0000	EPA8240	1.00

W011 Name=CUR 2D Secondary ID=R Sample Date=072694
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2777	Bromomethane (Methyl bromide)		U	Y		1	ug/L	.	GE	1.0000	EPA8240	1.00
2778	Bromomethane (Methyl bromide)		U	Y		10	ug/L	.	WA	10.0000	EPA8240	1.00
2779	Chloromethane (Methyl chloride)		U	Y		1	ug/L	.	GE	1.0000	EPA8240	1.00
2780	Chloromethane (Methyl chloride)		U	Y		10	ug/L	.	WA	10.0000	EPA8240	1.00
2781	Chloride			Y		3210	ug/L	.	GE	0.2500	EPA300.0	1.00
2782	Chloride			Y		3300	ug/L	.	WA	0.2500	EPA325.1	1.00
2783	Chloride			Y		3280	ug/L	.	GE	0.2500	EPA325.1	1.00
2784	Chlorobenzene	1	U	Y		1	ug/L	.	GE	1.0000	EPA8240	1.00
2785	Chlorobenzene		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
2786	Specific conductance			Y		36	uS/cm	.	GE	1.0000	EPA120.1	1.00
2787	Specific conductance			Y		28.4	uS/cm	.	WA	1.0000	EPA120.1	1.00
2788	Chromium, total recoverable		U	Y		4	ug/L	.	GE	4.0000	EPA6010	1.00
2789	Chromium, total recoverable		U	Y		4	ug/L	.	WA	4.0000	EPA200.7	1.00
2790	Chloroethene (Vinyl chloride)		U	Y		1	ug/L	.	GE	1.0000	EPA8240	1.00
2791	Chloroethene (Vinyl chloride)		U	Y		10	ug/L	.	WA	10.0000	EPA8240	1.00
2792	Chloroethane		U	Y		1	ug/L	.	GE	1.0000	EPA8240	1.00
2793	Chloroethane		U	Y		10	ug/L	.	WA	10.0000	EPA8240	1.00
2794	Benzene		U	Y		1	ug/L	.	GE	1.0000	EPA8240	1.00
2795	Benzene		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
2796	Dibromochloromethane		U	Y		1	ug/L	.	GE	1.0000	EPA8240	1.00
2797	Dibromochloromethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
2798	Endrin		U	Y		50	ug/L	.	GE	0.0500	EPA8080	1.00
2799	Endrin		U	Y		0.101	ug/L	.	WA	0.1000	EPA8080	1.01
2800	Ethylbenzene		U	Y		1	ug/L	.	GE	1.0000	EPA8240	1.00
2801	Ethylbenzene		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
2802	Fluoride		U	Y		20	ug/L	.	GE	0.0200	EPA300.0	1.00
2803	Fluoride		U	Y		100	ug/L	.	WA	0.1000	EPA340.2	1.00
2804	Fluoride	1	U	Y		100	ug/L	.	GE	0.1000	EPA340.2	1.00
2805	Iron, total recoverable			Y		16	ug/L	.	WA	4.0000	EPA6010	1.00
2806	Iron, total recoverable		UJ	Y	H	50	ug/L	.	GE	0.2000	EPA200.7	1.00
2807	Mercury, total recoverable		U	Y		0.2	ug/L	.	GE	0.2000	EPA7470	1.00
2808	Mercury, total recoverable		U	Y		0.2	ug/L	.	WA	0.2000	EPA245.1	1.00
2809	Potassium, total recoverable			Y		1200	ug/L	.	GE	500.0000	EPA6010	1.00
2810	Potassium, total recoverable			Y		1130	ug/L	.	WA	500.0000	EPA200.7	1.00
2811	Lindane		U	Y		1250	ug/L	.	GE	1.2500	EPA8080	1.00
2812	Lindane		U	Y		0.0505	ug/L	.	WA	0.0500	EPA8080	1.01
2813	Lithium, total recoverable		U	Y		5	ug/L	.	GE	5.0000	EPA6010	1.00
2814	Lithium, total recoverable		UJ	Y	H	37.5	ug/L	.	WA	5.0000	EPA200.7	1.00
2815	Toluene		U	Y		1	ug/L	.	GE	1.0000	EPA8240	1.00
2816	Toluene		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
2817	Methoxychlor		U	Y		0.5	ug/L	.	GE	0.0005	EPA8080	1.00
2818	Methoxychlor		U	Y		0.505	ug/L	.	WA	0.5000	EPA8080	1.01
2819	Magnesium, total recoverable			Y		358	ug/L	.	GE	2.0000	EPA6010	1.00
2820	Magnesium, total recoverable			Y		333	ug/L	.	WA	7.5000	EPA200.7	1.00
2821	Manganese, total recoverable			Y		2	ug/L	.	GE	2.0000	EPA6010	1.00
2822	Manganese, total recoverable		U	Y		2	ug/L	.	WA	2.0000	EPA200.7	1.00
2823	Sodium, total recoverable			Y		2640	ug/L	.	GE	10.0000	EPA6010	1.00
2824	Sodium, total recoverable			Y		2610	ug/L	.	WA	11.5000	EPA200.7	1.00
2825	Nitrate as nitrogen			Y		1120	ug/L	.	WA	0.0200	EPA355.2	5.00
2826	Nitrate-nitrite as nitrogen			Y		1340	ug/L	.	GE	0.0500	EPA355.1	1.00
2827	Nitrate-nitrite as nitrogen			Y		1300	ug/L	.	GE	0.0500	EPA355.1	1.00
2828	Lead, total recoverable		U	Y		3	ug/L	.	GE	3.0000	EPA7421	1.00
2829	Lead, total recoverable		U	Y		3	ug/L	.	WA	3.0000	EPA259.2	1.00

Well Name=C8R 2D Secondary ID=R Sample Date=072694
(continued)

OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
2830	pH	J	J	QV	L	5.12	PH	.	GE	0.0100	EPA150.1	1.00
2831	pH	J	J	QV	P	5.14	PH	.	WA	0.1000	EPA150.1	1.00
2832	Radium-226	J	J	QV	L	0.14	PC1/L	0.1200	TH	0.1300	EPA903.1	1.00
2833	Radium-228	UI	UI	Y	Y	0.4	PC1/L	0.7000	TH	1.4300	EPA904.0	1.00
2834	Selenium, total recoverable	U	U	Y	Y	2	ug/L	.	GE	2.0000	EPA7740	1.00
2835	Selenium, total recoverable	U	U	Y	Y	0.000455	ug/L	.	WA	2.0000	EPA270.2	1.00
2836	2,4,5-TP (Silvex)	U	U	Y	Y	0.54	ug/L	.	GE	0.0005	EPA8150	1.00
2837	2,4,5-TP (Silvex)	U	U	Y	Y	1360	ug/L	.	WA	0.5000	EPA8150	1.08
2838	Sulfate	J	J	Y	P	1000	ug/L	.	GE	1.0000	EPA300.0	1.00
2839	Sulfate	U	U	Y	Y	1	ug/L	.	WA	1.0000	EPA300.0	1.00
2840	1,1,2,2-Tetrachloroethane	U	U	Y	Y	5	ug/L	.	GE	1.0000	EPA8240	1.00
2841	1,1,2,2-Tetrachloroethane	U	U	Y	Y	1	ug/L	.	WA	5.0000	EPA8240	1.00
2842	Tetrachloroethylene	U	U	Y	Y	5	ug/L	.	GE	1.0000	EPA8240	1.00
2843	Tetrachloroethylene	U	U	Y	Y	1	ug/L	.	WA	1.0000	EPA8240	1.00
2844	Total dissolved solids	U	U	Y	Y	31000	ug/L	.	GE	5.0000	EPA8240	1.00
2845	Total dissolved solids	J	J	Y	P	23000	ug/L	.	GE	1.0000	EPA160.1	1.00
2846	Total organic carbon	U	U	Y	Y	1360	ug/L	.	WA	1.0000	EPA160.2	1.00
2847	Total organic carbon	U	U	Y	Y	1000	ug/L	.	GE	1.0000	EPA9060	1.00
2848	Radium, total alpha-emitting	UI	UI	Y	Y	0.3	PC1/L	0.4000	GP	0.4520	EPA415.1	1.00
2849	Total organic halogens	U	U	Y	Y	5	ug/L	.	GE	5.0000	EPA9020	1.00
2850	Total organic halogens	U	U	Y	Y	5.36	ug/L	.	WA	5.0000	SH9020A	1.00
2851	Phenols	U	U	Y	Y	5	ug/L	.	GE	5.0000	EPA420.2	1.00
2852	Phenols	U	U	Y	Y	5	ug/L	.	WA	5.0000	EPA420.2	1.00
2853	Total phosphates (as P)	U	U	Y	Y	50	ug/L	.	GE	0.0500	EPA365.1	1.00
2854	Total phosphates (as P)	U	U	Y	Y	80	ug/L	.	WA	0.0500	EPA365.2	1.00
2855	Trichloroethylene	U	U	Y	Y	1	ug/L	.	GE	1.0000	EPA8240	1.00
2856	Trichloroethylene	U	U	Y	Y	5	ug/L	.	WA	5.0000	EPA8240	1.00
2857	Tritium	U	U	Y	Y	5.39	PC1/mL	0.4900	GP	0.5970	EDIA-002	1.00
2858	Tritium	U	U	Y	Y	4.99	PC1/mL	0.5500	TH	0.1600	EPA906.0	1.00
2859	Silica, total recoverable	U	U	Y	Y	15300	ug/L	.	GE	100.0000	EPA6010	1.00
2860	Silica, total recoverable	U	U	Y	Y	15800	ug/L	.	WA	100.0000	EPA200.7	2.10
2861	Toxaphene	U	U	Y	Y	0.24	ug/L	.	GE	0.0002	EPA8080	1.00
2862	Toxaphene	U	U	Y	Y	1.01	ug/L	.	WA	1.0000	EPA8080	1.01
2863	trans-1,2-Dichloroethylene	U	U	Y	Y	1	ug/L	.	GE	1.0000	EPA8240	1.00
2864	trans-1,2-Dichloroethylene	U	U	Y	Y	5	ug/L	.	WA	5.0000	EPA8240	1.00
2865	1,1-Dichloroethylene	U	U	Y	Y	1	ug/L	.	GE	1.0000	EPA8240	1.00
2866	1,1-Dichloroethylene	U	U	Y	Y	5	ug/L	.	WA	5.0000	EPA8240	1.00
2867	1,1-Dichloroethane	U	U	Y	Y	1	ug/L	.	GE	1.0000	EPA8240	1.00
2868	1,1-Dichloroethane	U	U	Y	Y	5	ug/L	.	WA	5.0000	EPA8240	1.00
2869	1,1,1-Trichloroethane	U	U	Y	Y	1	ug/L	.	GE	1.0000	EPA8240	1.00
2870	1,1,1-Trichloroethane	U	U	Y	Y	5	ug/L	.	WA	5.0000	EPA8240	1.00
2871	1,1,2-Trichloroethane	U	U	Y	Y	1	ug/L	.	GE	1.0000	EPA8240	1.00
2872	1,1,2-Trichloroethane	U	U	Y	Y	5	ug/L	.	WA	5.0000	EPA8240	1.00
2873	1,2-Dichloroethane	U	U	Y	Y	1	ug/L	.	GE	1.0000	EPA8240	1.00
2874	1,2-Dichloroethane	U	U	Y	Y	5	ug/L	.	WA	5.0000	EPA8240	1.00
2875	1,2-Dichloropropane	U	U	Y	Y	1	ug/L	.	GE	1.0000	EPA8240	1.00
2876	1,2-Dichloropropane	U	U	Y	Y	5	ug/L	.	WA	5.0000	EPA8240	1.00
2877	cis-1,3-Dichloropropene	U	U	Y	Y	1	ug/L	.	GE	1.0000	EPA8240	1.00
2878	cis-1,3-Dichloropropene	U	U	Y	Y	5	ug/L	.	WA	5.0000	EPA8240	1.00
2879	trans-1,3-Dichloropropene	U	U	Y	Y	1	ug/L	.	GE	1.0000	EPA8240	1.00
2880	trans-1,3-Dichloropropene	U	U	Y	Y	5	ug/L	.	WA	5.0000	EPA8240	1.00
2881	2-Chloroethyl vinyl ether	U	U	Y	Y	1	ug/L	.	GE	1.0000	EPA8240	1.00
2882	2-Chloroethyl vinyl ether	U	U	Y	Y	10	ug/L	.	WA	10.0000	EPA8240	1.00

Well Name=CBR 2D Secondary ID=R Sample Date=072694
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2883	2,4-Dichlorophenoxyacetic acid		U	Y		0.00152	ug/L	.	GE	0.0015	EPA8150	1.00
2884	2,4-Dichlorophenoxyacetic acid		U	Y		1.08	ug/L	.	WA	1.0000	EPA8150	1.08

Well Name=CBR 3D Secondary ID= Sample Date=021092

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2885	Silver, dissolved		U			2	ug/L	.	GE	2.0000	EPA6010	1.00
2886	Silver, dissolved		U			0.7	ug/L	.	HA	0.7000	EPA200.7	1.00
2887	Gross alpha		U			2	pci/L	.	GE	2.0000	EPA900.0	1.00
2888	Gross alpha		U			1.1	pci/L	.	BA	2.0000	EPA900.0	1.00
2889	Arsenic, dissolved		U			2	ug/L	.	GE	2.0000	EPA7060	1.00
2890	Arsenic, dissolved		U			2	ug/L	.	HA	2.0000	EPA206.2	1.00
2891	Barium, dissolved					35.8	ug/L	.	GE	3.0000	EPA6010	1.00
2892	Barium, dissolved					36.1	ug/L	.	HA	6.6000	EPA200.7	1.00
2893	Nonvolatile beta		U			2	pci/L	.	GE	2.0000	EPA900.0	1.00
2894	Nonvolatile beta					4.8	pci/L	1.8000	BA	4.0000	EPA900.0	1.00
2895	Bromodichloromethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2896	Bromodichloromethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2897	Calcium, dissolved					574	ug/L	.	GE	10.0000	EPA6010	1.00
2898	Calcium, dissolved					543	ug/L	.	WA	14.4000	EPA200.7	1.00
2899	Trichlorofluoromethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2900	Trichlorofluoromethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2901	Carbon tetrachloride		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2902	Carbon tetrachloride		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2903	Cadmium, dissolved		U			2	ug/L	.	GE	2.0000	EPA6010	1.00
2904	Cadmium, dissolved		U			0.35	ug/L	.	WA	0.3500	EPA200.7	1.00
2905	Bromoform		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2906	Bromoform		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2907	Chloroform		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2908	Chloroform		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2909	Dichloromethane (Methylene chloride)		UJ			1	ug/L	.	GE	1.0000	EPA8240	1.00
2910	Dichloromethane (Methylene chloride)		UJ			1.78	ug/L	.	WA	5.0000	EPA8240	1.00
2911	Bromomethane (Methyl bromide)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2912	Bromomethane (Methyl bromide)		U			10	ug/L	.	WA	10.0000	EPA8240	1.00
2913	Chloromethane (Methyl chloride)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2914	Chloromethane (Methyl chloride)		U			10	ug/L	.	WA	10.0000	EPA8240	1.00
2915	Chloride					3340	ug/L	.	GE	0.2500	EPA300.0	2.00
2916	Chloride	1				3280	ug/L	.	GE	0.2500	EPA300.0	2.00
2917	Chloride					3850	ug/L	.	WA	0.2500	EPA325.2	1.00
2918	Chlorobenzene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2919	Chlorobenzene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2920	Specific conductance					32	us/cm	.	GE	1.0000	EPA120.1	1.00
2921	Specific conductance					30.3	us/cm	.	WA	1.0000	EPA120.1	1.00
2922	Specific conductance					30.3	us/cm	.	WA	1.0000	EPA120.1	1.00
2923	Chromium, dissolved	1	U			4	ug/L	.	GE	4.0000	EPA6010	1.00
2924	Chromium, dissolved		J3			1.3	ug/L	.	WA	1.1000	EPA200.7	1.00
2925	Chloroethane (Vinyl chloride)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2926	Chloroethane (Vinyl chloride)		U			10	ug/L	.	WA	10.0000	EPA8240	1.00
2927	Chloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2928	Chloroethane		U			10	ug/L	.	WA	10.0000	EPA8240	1.00
2929	Benzene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00

CBR-3D GROUNDWATER DATA

Well Name=CBR 3D Secondary ID=' ' Sample Date=021092
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2930	Benzene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2931	Dibromochloromethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
2932	Dibromochloromethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
2933	Silica, dissolved					13600	ug/L	.	GE	100.0000	EPA6010	1.00
2934	Endrin	JQ				0.006	ug/L	.	GE	0.0060	EPA8080	1.00
2935	Endrin	U				0.11	ug/L	.	WA	0.1000	EPA8080	1.10
2936	Ethylbenzene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
2937	Ethylbenzene	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
2938	Fluoride	U				100	ug/L	.	GE	0.1000	EPA340.2	1.00
2939	Fluoride	U				100	ug/L	.	WA	0.1000	EPA340.2	1.00
2940	Iron, dissolved					44.7	ug/L	.	GE	4.0000	EPA6010	1.00
2941	Iron, dissolved					49.7	ug/L	.	WA	1.9000	EPA200.7	1.00
2942	Mercury, dissolved	U				0.2	ug/L	.	GE	0.2000	EPA7470	1.00
2943	Mercury, dissolved	U				0.2	ug/L	.	WA	0.2000	EPA245.1	1.00
2944	Potassium, dissolved					1740	ug/L	.	GE	500.0000	EPA6010	1.00
2945	Potassium, dissolved					1620	ug/L	.	WA	83.5000	EPA200.7	1.00
2946	Lindane	JQ				0.005	ug/L	.	GE	0.0050	EPA8080	1.00
2947	Lindane	U				0.055	ug/L	.	WA	0.0500	EPA8080	1.10
2948	Toluene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
2949	Toluene	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
2950	Methoxychlor					0.5	ug/L	.	GE	0.5000	EPA8080	1.00
2951	Methoxychlor	JQ				0.55	ug/L	.	WA	0.5000	EPA8080	1.10
2952	Magnesium, dissolved					875	ug/L	.	GE	2.0000	EPA6010	1.00
2953	Magnesium, dissolved					842	ug/L	.	WA	8.9000	EPA200.7	1.00
2954	Magnesium, dissolved					5.23	ug/L	.	GE	2.0000	EPA6010	1.00
2955	Manganese, dissolved					4.9	ug/L	.	WA	0.3500	EPA200.7	1.00
2956	Sodium, dissolved					3380	ug/L	.	GE	10.0000	EPA6010	1.00
2957	Sodium, dissolved					3140	ug/L	.	WA	106.0000	EPA200.7	1.00
2958	Nitrate as nitrogen	JQ				2120	ug/L	.	GE	0.0500	EPA300.0	2.00
2959	Nitrate as nitrogen	JQ				2080	ug/L	.	GE	0.0500	EPA300.0	2.00
2960	Nitrate as nitrogen					2480	ug/L	.	WA	0.0200	EPA353.2	10.00
2961	Lead, dissolved					4.1	ug/L	.	GE	3.0000	EPA7421	1.00
2962	Lead, dissolved	J3				5	ug/L	.	WA	2.0000	EPA239.2	1.00
2963	pH	JQ				4.13	PH	.	GE	0.0000	EPA150.1	1.00
2964	pH	JQ				5.15	PH	.	WA	0.0100	EPA150.1	1.00
2965	Radium-226					0.5	PC1/L	0.4000	BA	0.3000	SH-705	1.00
2966	Radium-228					1.8	PC1/L	.	BA	1.0000	PERC/BRO	1.00
2967	Selenium, dissolved	U				2	ug/L	.	GE	2.0000	EPA7740	1.00
2968	Selenium, dissolved	U				2	ug/L	.	WA	2.0000	EPA270.2	1.00
2969	Silicon					5670	ug/L	.	WA	25.0000	EPA200.7	1.00
2970	2,4,5-TP (Silvex)	JQ				0.09	ug/L	.	GE	0.0900	EPA8150	1.00
2971	2,4,5-TP (Silvex)	U				0.545	ug/L	.	WA	0.5000	EPA8150	1.09
2972	Sulfate	U				1000	ug/L	.	GE	1.0000	EPA300.0	1.00
2973	Sulfate					459	ug/L	.	WA	0.1000	EPA300.0	1.00
2974	1,1,2,2-Tetrachloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
2975	1,1,2,2-Tetrachloroethane	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
2976	Tetrachloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
2977	Tetrachloroethylene	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
2978	Total dissolved solids					33000	ug/L	.	GE	1.0000	EPA160.1	1.00
2979	Total dissolved solids					34000	ug/L	.	WA	1.0000	EPA160.2	1.00
2980	Total organic carbon	U				1000	ug/L	.	GE	1.0000	EPA9060	1.00
2981	Total organic carbon					577	ug/L	.	WA	0.5000	EPA415.1	1.00
2982	Total organic carbon	1				577	ug/L	.	WA	0.5000	EPA415.1	1.00

Well Name=CBR 3D Secondary ID=' ' Sample Date=021092
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
2983	Radium, total alpha-emitting					1	pCi/L	0.4000	GE	1.0000	EPA900.1	1.00
2984	Total organic halogens	U				5	ug/L	.	GE	5.0000	EPA9020	1.00
2985	Total organic halogens					43.5	ug/L	.	WA	5.0000	EPA9020A	1.00
2986	Phenols	U				5	ug/L	.	GE	5.0000	EPA420.2	1.00
2987	Phenols	U				50	ug/L	.	WA	5.0000	EPA420.1	1.00
2988	Total phosphates (as P)	U				50	ug/L	.	GE	0.0500	EPA365.1	1.00
2989	Total phosphates (as P)	U				20	ug/L	.	WA	0.0200	EPA365.2	1.00
2990	Total phosphates (as P)	1				20	ug/L	.	WA	0.0200	EPA365.2	1.00
2991	Trichloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
2992	Trichloroethylene	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
2993	Tritium					13	pCi/mL	0.3000	GE	0.7000	EPA906.0	1.00
2994	Tritium					13000	pCi/L	600.0000	BA	460.0000	EPA906.0	1.00
2995	Tritium					13000	pCi/L	600.0000	BA	460.0000	EPA906.0	1.00
2996	Toxaphene					0.24	ug/L	.	GE	0.2400	EPA8080	1.00
2997	Toxaphene	JQ				1.1	ug/L	.	WA	1.0000	EPA8080	1.10
2998	trans-1,2-Dichloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
2999	trans-1,2-Dichloroethylene	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
3000	trans-1,3-Dichloropropene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3001	1,1-Dichloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3002	1,1-Dichloroethylene	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
3003	1,1-Dichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3004	1,1-Dichloroethane	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
3005	1,1,1-Trichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3006	1,1,1-Trichloroethane	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
3007	1,1,2-Trichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3008	1,1,2-Trichloroethane	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
3009	1,2-Dichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3010	1,2-Dichloroethane	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
3011	1,2-Dichloropropene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3012	1,2-Dichloropropene	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
3013	cis-1,3-Dichloropropene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3014	cis-1,3-Dichloropropene	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
3015	trans-1,3-Dichloropropene	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
3016	2-Chloroethyl vinyl ether	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3017	2-Chloroethyl vinyl ether	U				10	ug/L	.	WA	10.0000	EPA8240	1.00
3018	2,4-Dichlorophenoxyacetic acid	JQ				0.3	ug/L	.	GE	0.3000	EPA8150	1.00
3019	2,4-Dichlorophenoxyacetic acid	U				1.09	ug/L	.	WA	1.0000	EPA8150	1.09

Well Name=CBR 3D Secondary ID=' ' Sample Date=060292

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3020	Silver, dissolved	U				2	ug/L	.	GE	2.0000	EPA6010	1.00
3021	Gross alpha	U				2	pCi/L	.	GE	2.0000	EPA900.0	1.00
3022	Arsenic, dissolved	U				2	ug/L	.	GE	2.0000	EPA7060	1.00
3023	Barium, dissolved					30.1	ug/L	.	GE	3.0000	EPA6010	1.00
3024	Nonvolatile beta	U				2	pCi/L	.	GE	2.0000	EPA900.0	1.00
3025	Bromodichloromethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3026	Calcium, dissolved	U				309	ug/L	.	GE	10.0000	EPA6010	1.00
3027	Trichlorofluoromethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3028	Carbon tetrachloride	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3029	Cadmium, dissolved	U				2	ug/L	.	GE	2.0000	EPA6010	1.00

Well Home-CBR 3D Secondary ID=" Sample Data=060292
(continued)

OBS	TESTNAME	LABDUP	RESQVAL	ANNUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
3030	Bromoform	U				1 ug/L			GE	1.0000	EPA8240	1.00
3031	Chloroform	U				1 ug/L			GE	1.0000	EPA8240	1.00
3032	Dichloromethane (Methylene chloride)	U				2.2 ug/L			GE	1.0000	EPA8240	1.00
3033	Bromomethane (Methyl bromide)	U				1 ug/L			GE	1.0000	EPA8240	1.00
3034	Chloromethane (Methyl chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
3035	Chloride					3080 ug/L			GE	0.2500	EPA300.0	1.00
3036	Chloride	1				3060 ug/L			GE	0.2500	EPA300.0	1.00
3037	Chlorobenzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
3038	Specific conductance	1				40 uS/cm			GE	1.0000	EPA120.1	1.00
3039	Specific conductance					40 uS/cm			GE	1.0000	EPA120.1	1.00
3040	Chromium, dissolved	U				4 ug/L			GE	4.0000	EPA6010	1.00
3041	Chloroethane (Vinyl chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
3042	Chloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
3043	Benzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
3044	Dibromochloromethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
3045	Silica, dissolved	U				13300 ug/L			GE	100.0000	EPA6010	1.00
3046	Endrin	U				0.006 ug/L			GE	0.0060	EPA8080	1.00
3047	Ethylbenzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
3048	Fluoride	U				100 ug/L			GE	0.1000	EPA340.2	1.00
3049	Iron, dissolved	U				27.9 ug/L			GE	4.0000	EPA6010	1.00
3050	Mercury, dissolved	U				0.2 ug/L			GE	0.2000	EPA7470	1.00
3051	Potassium, dissolved	U				1660 ug/L			GE	500.0000	EPA6010	1.00
3052	Lindane	U				0.005 ug/L			GE	0.0050	EPA8080	1.00
3053	Toluene	U				1 ug/L			GE	1.0000	EPA8240	1.00
3054	Methoxychlor	U				0.5 ug/L			GE	0.5000	EPA8080	1.00
3055	Magnesium, dissolved	U				724 ug/L			GE	2.0000	EPA6010	1.00
3056	Manganese, dissolved	U				2.85 ug/L			GE	2.0000	EPA6010	1.00
3057	Sodium, dissolved	U				2860 ug/L			GE	10.0000	EPA6010	1.00
3058	Nitrate-nitrite as nitrogen	1				1900 ug/L			GE	0.0500	EPA353.3	2.00
3059	Nitrate-nitrite as nitrogen	U				1920 ug/L			GE	0.0500	EPA353.3	2.00
3060	Lead, dissolved	U				3 ug/L			GE	3.0000	EPA7421	1.00
3061	pH	JQ				4.98 pH			GE	0.0000	EPA150.1	1.00
3062	pH	1				5 pH			GE	0.0000	EPA150.1	1.00
3063	Selenium, dissolved	U				2 ug/L			GE	2.0000	EPA7740	1.00
3064	2,4,5-TP (Silvex)	U				0.09 ug/L			GE	0.0900	EPA8150	1.00
3065	Sulfate	U				1000 ug/L			GE	1.0000	EPA300.0	1.00
3066	Sulfate	1				1000 ug/L			GE	1.0000	EPA300.0	1.00
3067	1,1,2,2-Tetrachloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
3068	Tetrachloroethylene	U				1 ug/L			GE	1.0000	EPA8240	1.00
3069	Total dissolved solids	1				24000 ug/L			GE	1.0000	EPA160.1	1.00
3070	Total dissolved solids	U				26000 ug/L			GE	1.0000	EPA160.1	1.00
3071	Total organic carbon	1				1000 ug/L			GE	1.0000	EPA9060	1.00
3072	Total organic carbon	U				1000 ug/L			GE	1.0000	EPA9060	1.00
3073	Radium, total alpha-emitting	U				1 pCi/L			GE	1.0000	EPA900.1	1.00
3074	Total organic halogens	1				30.1 ug/L			GE	5.0000	EPA9020	1.00
3075	Total organic halogens	U				33.9 ug/L			GE	5.0000	EPA9020	1.00
3076	Phenols	U				5 ug/L			GE	5.0000	EPA420.2	1.00
3077	Total phosphates (as P)	U				50 ug/L			GE	0.0500	EPA365.1	1.00
3078	Trichloroethylene	U				1 ug/L			GE	1.0000	EPA8240	1.00
3079	Tritium	U				13 pCi/mL			GE	0.7000	EPA906.0	1.00
3080	Toxaphene	U				0.24 ug/L			GE	0.2400	EPA8080	1.00
3081	trans-1,2-Dichloroethylene	U				1 ug/L			GE	1.0000	EPA8240	1.00
3082	trans-1,3-Dichloropropane	U				1 ug/L			GE	1.0000	EPA8240	1.00

Well Name=CBR 3D Secondary ID= Sample Date=060292
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3083	1,1-Dichloroethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3084	1,1-Dichloroethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3085	1,1,1-Trichloroethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3086	1,1,2-Trichloroethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3087	1,2-Dichloroethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3088	1,2-Dichloropropane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3089	cis-1,3-Dichloropropene	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3090	2-Chloroethyl vinyl ether	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3091	2,4-Dichlorophenoxyacetic acid	U				0.3 ug/L		.	GE	0.3000	EPA8150	1.00

Well Name=CBR 3D Secondary ID= Sample Date=072992

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3092	Silver, dissolved	U				2 ug/L		.	GE	2.0000	EPA6010	1.00
3093	Gross alpha	U				2 pCi/L		.	GE	2.0000	EPA900.0	1.00
3094	Arsenic, dissolved	U				2 ug/L		.	GE	2.0000	EPA7060	1.00
3095	Barium, dissolved					35.7 ug/L		.	GE	3.0000	EPA6010	1.00
3096	Nonvolatile beta					8.5 pCi/L		1.9000	GE	2.0000	EPA900.0	1.00
3097	Bromodichloromethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3098	Calcium, dissolved					349 ug/L		.	GE	10.0000	EPA6010	1.00
3099	Trichlorofluoromethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3100	Carbon tetrachloride	U				2 ug/L		.	GE	1.0000	EPA8240	1.00
3101	Cadmium, dissolved	U				2 ug/L		.	GE	2.0000	EPA6010	1.00
3102	Bromoform	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3103	Chloroform	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3104	Dichloromethane (Methylene chloride)	J2				1.18 ug/L		.	GE	1.0000	EPA8240	1.00
3105	Bromomethane (Methyl bromide)	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3106	Chloromethane (Methyl chloride)	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3107	Chloride					2580 ug/L		.	GE	0.2500	EPA300.0	1.00
3108	Chlorobenzene	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3109	Specific conductance					40 uS/cm		.	GE	1.0000	EPA120.1	1.00
3110	Chromium, dissolved	U				.4 ug/L		.	GE	4.0000	EPA6010	1.00
3111	Chloroethane (Vinyl chloride)	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3112	Chloroethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3113	Benzene	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3114	Dibromochloromethane	U				13200 ug/L		.	GE	100.0000	EPA6010	1.00
3115	Silica, dissolved					0.006 ug/L		.	GE	0.0060	EPA8080	1.00
3116	Endrin	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3117	Ethylbenzene	U				100 ug/L		.	GE	0.1000	EPA340.2	1.00
3118	Fluoride	U				100 ug/L		.	GE	0.1000	EPA340.2	1.00
3119	Fluoride	U				100 ug/L		.	GE	0.1000	EPA340.2	1.00
3120	Iron, dissolved					48.9 ug/L		.	GE	4.0000	EPA6010	1.00
3121	Mercury, dissolved	U				0.2 ug/L		.	GE	0.2000	EPA7470	1.00
3122	Potassium, dissolved					1910 ug/L		.	GE	500.0000	EPA6010	1.00
3123	Lindane	U				0.005 ug/L		.	GE	0.0050	EPA8080	1.00
3124	Toluene	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3125	Methoxychlor	U				0.5 ug/L		.	GE	0.5000	EPA8080	1.00
3126	Magnesium, dissolved					853 ug/L		.	GE	2.0000	EPA6010	1.00
3127	Manganese, dissolved					3.34 ug/L		.	GE	2.0000	EPA6010	1.00
3128	Sodium, dissolved					3000 ug/L		.	GE	10.0000	EPA6010	1.00
3129	Nitrate-nitrite as nitrogen					2520 ug/L		.	GE	0.0500	EPA553.3	2.00

Well Name=CBR 3D Secondary ID=' ' Sample Date=072992
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3130	Lead, dissolved	U				3 ug/L		.	GE	3.0000	EPA7421	1.00
3131	pH	JQ				5.15	PH	.	GE	0.0000	EPA150.1	1.00
3132	Selenium, dissolved	U				2 ug/L		.	GE	2.0000	EPA7740	1.00
3133	2,4,5-Tp (Silvex)	U				0.09 ug/L		.	GE	0.0900	EPA8150	1.00
3134	Sulfate	U				1000 ug/L		.	GE	1.0000	EPA300.0	1.00
3135	1,1,2,2-Tetrachloroethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3136	Tetrachloroethylene	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3137	Total dissolved solids	V				36000 ug/L		.	GE	1.0000	EPA160.1	1.00
3138	Total organic solids	U				1000 ug/L		.	GE	1.0000	EPA9060	1.00
3139	Radium, total alpha-emitting	U				1 pCi/L		.	GE	1.0000	EPA900.1	1.00
3140	Total organic halogens	U				5 ug/L		.	GE	5.0000	EPA9020	1.00
3141	Phenols	U				5 ug/L		.	GE	5.0000	EPA420.2	1.00
3142	Total phosphates (as P)	U				50 ug/L		.	GE	0.0500	EPA365.1	1.00
3143	Trichloroethylene	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3144	Tritium	U				10.8 pCi/mL		0.6000	GE	0.7000	EPA906.0	1.00
3145	Toxaphene	U				0.24 ug/L		.	GE	0.2400	EPA8080	1.00
3146	trans-1,2-Dichloroethylene	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3147	trans-1,3-Dichloropropene	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3148	1,1-Dichloroethylene	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3149	1,1-Dichloroethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3150	1,1,1-Trichloroethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3151	1,1,2-Trichloroethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3152	1,2-Dichloroethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3153	1,2-Dichloropropene	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3154	cis-1,3-Dichloropropene	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3155	2-Chloroethyl vinyl ether	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3156	2,4-Dichlorophenoxyacetic acid	U				0.3 ug/L		.	GE	0.3000	EPA8150	1.00

Well Name=CBR 3D Secondary ID=' ' Sample Date=121092

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3157	Silver, total recoverable	U				2 ug/L		.	GE	2.0000	EPA6010	1.00
3158	Gross alpha	U				2 pCi/L		.	GE	2.0000	EPA900.0	1.00
3159	Arsenic, total recoverable	U				2 ug/L		.	GE	2.0000	EPA7060	1.00
3160	Berium, total recoverable	U				39.7 ug/L		.	GE	3.0000	EPA6010	1.00
3161	Nonvolatile beta	U				2 pCi/L		.	GE	2.0000	EPA900.0	1.00
3162	Bromodichloromethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3163	Calcium, total recoverable	U				380 ug/L		.	GE	10.0000	EPA6010	1.00
3164	Trichlorofluoromethane	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3165	Carbon tetrachloride	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3166	Cadadium, total recoverable	U				2 ug/L		.	GE	2.0000	EPA6010	1.00
3167	Bromoform	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3168	Chloroform	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3169	Dichloromethane (Methylene chloride)	U				1.4 ug/L		.	GE	1.0000	EPA8240	1.00
3170	Bromomethane (Methyl bromide)	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3171	Chloromethane (Methyl chloride)	U				1 ug/L		.	GE	1.0000	EPA8240	1.00
3172	Chloride	1				2720 ug/L		.	GE	0.2500	EPA300.0	1.00
3173	Chloride					2690 ug/L		.	GE	0.2500	EPA300.0	1.00
3174	Chlorobenzene					1 ug/L		.	GE	1.0000	EPA8240	1.00
3175	Specific conductance					52 uS/cm		.	GE	1.0000	EPA120.1	1.00
3176	Chromium, total recoverable	U				4 ug/L		.	GE	4.0000	EPA6010	1.00

Well Name=CBR 3D Secondary ID= ' Sample Date=121092
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLM	METHOD	DILFACT
3177	Chloroethane (Vinyl chloride)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3178	Chloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3179	Benzene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3180	Dibromochloromethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3181	Endrin		U			0.006	ug/L	.	GE	0.0060	EPA8080	1.00
3182	Ethylbenzene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3183	Fluoride		U			100	ug/L	.	GE	0.1000	EPA340.2	1.00
3184	Iron, total recoverable					26.5	ug/L	.	GE	4.0000	EPA6010	1.00
3185	Mercury, total recoverable		U			0.2	ug/L	.	GE	0.2000	EPA7470	1.00
3186	Potassium, total recoverable					1860	ug/L	.	GE	500.0000	EPA6010	1.00
3187	Lindane		U			0.005	ug/L	.	GE	0.0050	EPA8080	1.00
3188	Toluene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3189	Methoxychlor		U			0.5	ug/L	.	GE	0.5000	EPA8080	1.00
3190	Magnesium, total recoverable					941	ug/L	.	GE	2.0000	EPA6010	1.00
3191	Manganese, total recoverable					3.69	ug/L	.	GE	2.0000	EPA6010	1.00
3192	Sodium, total recoverable					3320	ug/L	.	GE	10.0000	EPA6010	1.00
3193	Nitrate-nitrite as nitrogen					2460	ug/L	.	GE	0.0500	EPA353.3	2.00
3194	Nitrate-nitrite as nitrogen					2380	ug/L	.	GE	0.0500	EPA353.3	2.00
3195	Lead, total recoverable		UJ			3	ug/L	.	GE	3.0000	EPA7421	1.00
3196	pH		JQ			5.19	PH	.	GE	0.0000	EPA150.1	1.00
3197	Selenium, total recoverable		U			2	ug/L	.	GE	2.0000	EPA7740	1.00
3198	2,4,5-TP (Silvex)		U			0.09	ug/L	.	GE	0.0900	EPA8150	1.00
3199	Sulfate		U			1000	ug/L	.	GE	1.0000	EPA300.0	1.00
3200	Sulfate		U			1000	ug/L	.	GE	1.0000	EPA300.0	1.00
3201	1,1,2,2-Tetrachloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3202	Tetrachloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3203	Total dissolved solids		U			28000	ug/L	.	GE	1.0000	EPA160.1	1.00
3204	Total organic carbon		U			1000	ug/L	.	GE	1.0000	EPA9060	1.00
3205	Radium, total alpha-emitting					1.2	pCi/L	0.8000	GE	1.0000	EPA900.1	1.00
3206	Total organic halogens		U			5	ug/L	.	GE	5.0000	EPA9020	1.00
3207	Total organic halogens		U			5	ug/L	.	GE	5.0000	EPA9020	1.00
3208	Phenols		U			5	ug/L	.	GE	5.0000	EPA420.2	1.00
3209	Total phosphates (as P)		U			50	ug/L	.	GE	0.0500	EPA365.1	1.00
3210	Total phosphates (as P)		U			50	ug/L	.	GE	0.0500	EPA365.1	1.00
3211	Trichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3212	Tritium		U			7.2	pCi/mL	0.6000	GE	0.7000	EPA906.0	1.00
3213	Silica, total recoverable					14400	ug/L	.	GE	100.0000	EPA6010	1.00
3214	Toxaphene		U			0.24	ug/L	.	GE	0.2400	EPA8080	1.00
3215	trans-1,2-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3216	trans-1,3-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3217	1,1-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3218	1,1-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3219	1,1,1-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3220	1,1,2-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3221	1,2-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3222	1,2-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3223	cis-1,3-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3224	2-Chloroethyl vinyl ether		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3225	2,4-Dichlorophenoxyacetic acid		U			0.3	ug/L	.	GE	0.3000	EPA8150	1.00

Well Name=CBR 3D Secondary ID= Sample Date=030393

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFAC
3226	Silver, total recoverable	0	U			2 ug/L			GE	2.0000	EPA6010	1.00
3227	Gross alpha	0	U			2 pCi/L			GE	2.0000	EPA900.0	1.00
3228	Aluminum, total recoverable	0	U			34.4 ug/L			GE	20.0000	EPA6010	1.00
3229	Arsenic, total recoverable	0	U			2 ug/L			GE	5.0000	EPA7060	1.00
3230	Barium, total recoverable	0	U			39.3 ug/L			GE	5.0000	EPA6010	1.00
3231	Nonvolatile beta	0	U			2 pCi/L			GE	2.0000	EPA900.0	1.00
3232	Bromochloromethane	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
3233	Calcium, total recoverable	0	U			363 ug/L			GE	10.0000	EPA6010	1.00
3234	Trichlorofluoromethane	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
3235	Carbon tetrachloride	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
3236	Cadmium, total recoverable	0	U			2 ug/L			GE	2.0000	EPA6010	1.00
3237	Bromoform	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
3238	Chloroform	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
3239	Dichloromethane (Methylene chloride)	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
3240	Bromomethane (Methyl bromide)	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
3241	Chloromethane (Methyl chloride)	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
3242	Chloride	0	U			2430 ug/L			GE	0.2500	EPA300.0	1.00
3243	Chlorobenzene	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
3244	Specific conductance	1				35 uS/cm			GE	1.0000	EPA120.1	1.00
3245	Specific conductance	0				35 uS/cm			GE	1.0000	EPA120.1	1.00
3246	Chromium, total recoverable	0	U			4 ug/L			GE	4.0000	EPA6010	1.00
3247	Chloroethane (Vinyl chloride)	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
3248	Chloroethane	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
3249	Benzene	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
3250	Dibromochloromethane	0	U			0.006 ug/L			GE	0.0060	EPA8080	1.00
3251	Endrin	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
3252	Ethylbenzene	0	U			100 ug/L			GE	0.1000	EPA340.2	1.00
3253	Fluoride	0	U			20.7 ug/L			GE	4.0000	EPA6010	1.00
3254	Iron, total recoverable	0				0.2 ug/L			GE	0.2000	EPA7470	1.00
3255	Mercury, total recoverable	1	U			0.2 ug/L			GE	0.2000	EPA7470	1.00
3256	Mercury, total recoverable	0	U			0.2 ug/L			GE	0.2000	EPA7470	1.00
3257	Potassium, total recoverable	0	U			1880 ug/L			GE	500.0000	EPA6010	1.00
3258	Lindane	0	U			0.005 ug/L			GE	0.0050	EPA8080	1.00
3259	Toluene	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
3260	Methoxychlor	0	U			0.5 ug/L			GE	0.5000	EPA8080	1.00
3261	Heptachlor, total recoverable	0				932 ug/L			GE	2.0000	EPA6010	1.00
3262	Manganese, total recoverable	0				3.11 ug/L			GE	2.0000	EPA6010	1.00
3263	Sodium, total recoverable	0				3210 ug/L			GE	10.0000	EPA6010	1.00
3264	Nitrate-nitrite as nitrogen	0				2400 ug/L			GE	0.0500	EPA353.3	1.00
3265	Lead, total recoverable	0	U			3 ug/L			GE	3.0000	EPA7421	1.00
3266	pH	0	JQ			5.17 PH			GE	0.0000	EPA150.1	1.00
3267	Selenium, total recoverable	0	U			2 ug/L			GE	2.0000	EPA7740	1.00
3268	2,4,5-TP (Silvex)	0	U			0.09 ug/L			GE	0.0900	EPA8150	1.00
3269	Sulfate	0	U			1000 ug/L			GE	1.0000	EPA300.0	1.00
3270	1,1,2,2-Tetrachloroethane	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
3271	Tetrachloroethylene	0	U			1 ug/L			GE	1.0000	EPA8240	1.00
3272	Total dissolved solids	0	V			43000 ug/L			GE	1.0000	EPA160.1	1.00
3273	Total organic carbon	1	U			1000 ug/L			GE	1.0000	EPA9060	1.00
3274	Total organic carbon	0	U			1000 ug/L			GE	1.0000	EPA9060	1.00
3275	Radium, total alpha-emitting	0	U			1.1 pCi/L		0.5000	GE	1.0000	EPA900.1	1.00
3276	Total organic halogens	0	U			5 ug/L			GE	5.0000	EPA9020	1.00
3277	Phenols	0	U			50 ug/L			GE	5.0000	EPA420.2	1.00
3278	Total phosphates (as P)	0	U			1 ug/L			GE	0.0500	EPA365.1	1.00
3279	Trichloroethylene	0	U			1 ug/L			GE	1.0000	EPA8240	1.00

Well Name=CBR 3D Secondary ID=' ' Sample Date=030593
(continued)

OBS	TESTNAME	LABDUP	RESQVAL	ANQVAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3280	Tritium	0				7.63	pCi/mL	0.5000	GE	0.7000	EPA906.0	1.00
3281	Silica, total recoverable	0				14100	ug/L	.	GE	100.0000	EPA6010	1.00
3282	Toxephene	0			U	0.24	ug/L	.	GE	0.2400	EPA8080	1.00
3283	trans-1,2-Dichloroethylene	0			U	1	ug/L	.	GE	1.0000	EPA8240	1.00
3284	trans-1,3-Dichloropropene	0			U	1	ug/L	.	GE	1.0000	EPA8240	1.00
3285	1,1-Dichloroethylene	0			U	1	ug/L	.	GE	1.0000	EPA8240	1.00
3286	1,1-Dichloroethane	0			U	1	ug/L	.	GE	1.0000	EPA8240	1.00
3287	1,1,1-Trichloroethane	0			U	1	ug/L	.	GE	1.0000	EPA8240	1.00
3288	1,1,2-Trichloroethane	0			U	1	ug/L	.	GE	1.0000	EPA8240	1.00
3289	1,2-Dichloroethane	0			U	1	ug/L	.	GE	1.0000	EPA8240	1.00
3290	1,2-Dichloropropene	0			U	1	ug/L	.	GE	1.0000	EPA8240	1.00
3291	cis-1,3-Dichloropropene	0			U	1	ug/L	.	GE	1.0000	EPA8240	1.00
3292	2-Chloroethyl vinyl ether	0			U	1	ug/L	.	GE	1.0000	EPA8240	1.00
3293	2,4-Dichlorophenoxyacetic acid	0			U	0.3	ug/L	.	GE	0.3000	EPA8150	1.00

Well Name=CBR 3D Secondary ID=' ' Sample Date=081493

OBS	TESTNAME	LABDUP	RESQVAL	ANQVAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3294	Aluminum, total recoverable	0				36	ug/L	.	GE	20.0000	EPA6010	1.00
3295	Aluminum, total recoverable	1				41.7	ug/L	.	WA	20.0000	EPA200.7	1.00
3296	Iron, total recoverable	0				21.6	ug/L	.	GE	4.0000	EPA6010	1.00
3297	Iron, total recoverable	0				24.1	ug/L	.	WA	4.0000	EPA200.7	1.00

Well Name=CBR 3D Secondary ID=' ' Sample Date=022294

OBS	TESTNAME	LABDUP	RESQVAL	ANQVAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3298	Silver, total recoverable	U				2	ug/L	.	WA	2.0000	EPA200.7	1.00
3299	Silver, total recoverable	U				2	ug/L	.	GE	2.0000	EPA6010	1.00
3300	Aldrin	U		I	P	0.05	ug/L	.	GE	0.0001	EPA8080	1.00
3301	Gross alpha	1				0.44	pCi/L	.	TH	0.4400	EPA900.0	1.00
3302	Gross alpha	U				0.44	pCi/L	.	TH	0.4400	EPA900.0	1.00
3303	Gross alpha	J				0.497	pCi/L	0.2330	GP	1.5000	EPIA-001	1.00
3304	Gross alpha	U				0.0998	pCi/L	0.4330	GP	1.5000	EPIA-001	1.00
3305	Aluminum, total recoverable	.				34.8	ug/L	.	WA	20.0000	EPA200.7	1.00
3306	Aluminum, total recoverable	.				34.6	ug/L	.	GE	20.0000	EPA6010	1.00
3307	Arsenic, total recoverable	U				2	ug/L	.	WA	2.0000	EPA206.2	1.00
3308	Arsenic, total recoverable	U				2	ug/L	.	GE	2.0000	EPA7060	1.00
3309	Barium, total recoverable	U				29.9	ug/L	.	WA	4.0000	EPA200.7	1.00
3310	Barium, total recoverable	.				30.2	ug/L	.	GE	3.0000	EPA6010	1.00
3311	Nonvolatile beta	1				3.2	pCi/L	1.4000	TH	0.4800	EPA900.0	1.00
3312	Nonvolatile beta	.				5.3	pCi/L	1.4000	TH	0.4800	EPA900.0	1.00
3313	Nonvolatile beta	J				1.93	pCi/L	0.3610	GP	2.0000	EPIA-001	1.00
3314	Nonvolatile beta	U				0.706	pCi/L	0.7130	GP	2.0000	EPIA-001	1.00
3315	Bromodichloromethane	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
3316	Bromodichloromethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3317	Boron, total recoverable	U				30	ug/L	.	GE	30.0000	EPA6010	1.00
3318	Calcium, total recoverable	U				300	ug/L	.	WA	10.0000	EPA200.7	1.00
3319	Calcium, total recoverable	.				281	ug/L	.	GE	10.0000	EPA6010	1.00
3320	Trichlorofluoromethane	U				5	ug/L	.	WA	5.0000	EPA8240	1.00

Well Name=CBR 3D Secondary ID=' ' Sample Date=022294
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3321	Trichlorofluoromethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
3322	Carbon tetrachloride	U				5 ug/L			WA	5.0000	EPA8240	1.00
3323	Carbon tetrachloride	U				1 ug/L			GE	1.0000	EPA8240	1.00
3324	Cadmium, total recoverable	U				2 ug/L			WA	2.0000	EPA200.7	1.00
3325	Cadmium, total recoverable	U				2 ug/L			GE	2.0000	EPA6010	1.00
3326	Bromoform	U				5 ug/L			WA	5.0000	EPA8240	1.00
3327	Bromoform	U				1 ug/L			GE	1.0000	EPA8240	1.00
3328	Chloroform	U				5 ug/L			WA	5.0000	EPA8240	1.00
3329	Chloroform	U				1 ug/L			GE	1.0000	EPA8240	1.00
3330	Dichloromethane (Methylene chloride)	UJ		B		1.51 ug/L			WA	5.0000	EPA8240	1.00
3331	Dichloromethane (Methylene chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
3332	Bromomethane (Methyl bromide)	U				10 ug/L			WA	10.0000	EPA8240	1.00
3333	Bromomethane (Methyl bromide)	U				1 ug/L			GE	1.0000	EPA8240	1.00
3334	Chloromethane (Methyl chloride)	U				10 ug/L			WA	10.0000	EPA8240	1.00
3335	Chloromethane (Methyl chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
3336	Chloride					2950 ug/L			WA	0.2500	EPA325.2	1.00
3337	Chloride					2720 ug/L			GE	0.2500	EPA300.0	1.00
3338	Chlorobenzene	U				5 ug/L			WA	5.0000	EPA8240	1.00
3339	Chlorobenzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
3340	Specific conductance					31.2 uS/cm			WA	1.0000	EPA120.1	1.00
3341	Specific conductance					36.4 uS/cm			GE	1.0000	EPA120.1	1.00
3342	Chromium, total recoverable					4.4 ug/L			WA	4.0000	EPA200.7	1.00
3343	Chromium, total recoverable	U				4 ug/L			GE	4.0000	EPA6010	1.00
3344	Chloroethane (Vinyl chloride)	U				10 ug/L			WA	10.0000	EPA8240	1.00
3345	Chloroethane (Vinyl chloride)	U				1 ug/L			GE	1.0000	EPA8240	1.00
3346	Chloroethane	U				10 ug/L			WA	10.0000	EPA8240	1.00
3347	Chloroethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
3348	Benzene	U				5 ug/L			WA	5.0000	EPA8240	1.00
3349	Benzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
3350	Dibromochloromethane	U				5 ug/L			WA	5.0000	EPA8240	1.00
3351	Dibromochloromethane	U				1 ug/L			GE	1.0000	EPA8240	1.00
3352	Dieldrin	UJ		I	P	0.5 ug/L			GE	0.0005	EPA8080	1.00
3353	Endrin	U				0.109 ug/L			WA	0.1000	EPA8080	1.09
3354	Endrin	U				0.222 ug/L			WA	0.1000	EPA8080	2.22
3355	Endrin	UJ		I	P	0.006 ug/L			GE	0.0000	EPA8080	1.00
3356	Ethylbenzene	U				5 ug/L			WA	5.0000	EPA8240	1.00
3357	Ethylbenzene	U				1 ug/L			GE	1.0000	EPA8240	1.00
3358	Fluoride	U				100 ug/L			WA	0.1000	EPA340.2	1.00
3359	Fluoride	U				47.9 ug/L			WA	4.0000	EPA200.7	1.00
3360	Iron, total recoverable					42.1 ug/L			GE	4.0000	EPA6010	1.00
3361	Iron, total recoverable	U				0.2 ug/L			WA	0.2000	EPA245.1	1.00
3362	Mercury, total recoverable	U				0.2 ug/L			WA	0.2000	EPA245.1	1.00
3363	Mercury, total recoverable	U				0.2 ug/L			GE	0.2000	EPA245.1	1.00
3364	Mercury, total recoverable	U				0.05 ug/L			GE	0.0001	EPA8080	1.00
3365	Heptachlor	UJ		I	P	0.05 ug/L			WA	500.0000	EPA200.7	1.00
3366	Potassium, total recoverable					1570 ug/L			GE	500.0000	EPA6010	1.00
3367	Potassium, total recoverable	U				1640 ug/L			WA	0.0500	EPA8080	1.09
3368	Lindane	U				0.0545 ug/L			WA	0.0500	EPA8080	2.22
3369	Lindane	UJ		I	P	0.111 ug/L			GE	0.0000	EPA8080	1.00
3370	Lindane	U				0.005 ug/L			WA	5.0000	EPA200.7	1.00
3371	Lithium, total recoverable	U				5 ug/L			GE	5.0000	EPA6010	1.00
3372	Lithium, total recoverable	U				5 ug/L			WA	5.0000	EPA8240	1.00
3373	Toluene	U				5 ug/L			WA	5.0000	EPA8240	1.00

Well Name=QBR 3D Secondary ID=' Sample Date=022294
(continued)

OBS	TESTNAME	LADDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLH	METHOD	DILFACT
3374	Toluene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3375	Methoxychlor		U			0.545	ug/L	.	HA	0.5000	EPA8080	1.09
3376	Methoxychlor	1	U			1.11	ug/L	.	HA	0.5000	EPA8080	2.22
3377	Methoxychlor	1	U			1.06	ug/L	.	HA	0.5000	EPA8080	2.13
3378	Methoxychlor		UJ	I	P	0.5	ug/L	.	GE	0.0005	EPA8080	1.00
3379	Magnesium, total recoverable					707	ug/L	.	HA	8.8000	EPA200.7	1.00
3380	Magnesium, total recoverable					701	ug/L	.	GE	2.0000	EPA6010	1.00
3381	Manganese, total recoverable		J			5.3	ug/L	.	HA	2.0000	EPA200.7	1.00
3382	Manganese, total recoverable					2.76	ug/L	.	GE	2.0000	EPA6010	1.00
3383	Sodium, total recoverable					3030	ug/L	.	HA	12.3000	EPA200.7	1.00
3384	Sodium, total recoverable					3020	ug/L	.	GE	10.0000	EPA6010	1.00
3385	Nitrate as nitrogen					1600	ug/L	.	HA	0.0200	EPA353.2	5.00
3386	Nitrate-nitrite as nitrogen					1880	ug/L	.	GE	0.0500	EPA353.1	2.00
3387	Lead, total recoverable					6.4	ug/L	.	HA	3.0000	EPA239.2	1.00
3388	Lead, total recoverable		U			3	ug/L	.	GE	3.0000	EPA7421	1.00
3389	pH		J	Q		5.32	PH	.	HA	0.1000	EPA150.1	1.00
3390	pH		J	Q	L	5.23	PH	.	GE	0.0001	EPA8080	1.00
3391	P,p'-DDT		UJ	I	P	0.1	ug/L	.	GE	0.0001	EPA150.1	1.00
3392	Radium-226	1	U			0.35	pci/L	.	TH	0.3500	EPA903.0	1.00
3393	Radium-226					0.42	pci/L	0.2300	TH	0.2000	EPA903.0	1.00
3394	Radium-228	1	U			0.07	pci/L	.	TH	0.0700	EPA904.0	1.00
3395	Radium-228		U			0.07	pci/L	.	TH	0.0700	EPA904.0	1.00
3396	Selenium, total recoverable		U			2	ug/L	.	HA	2.0000	EPA270.2	1.00
3397	Selenium, total recoverable		U			2	ug/L	.	GE	2.0000	EPA7740	1.00
3398	2,4,5-TP (Silvex)		U			0.54	ug/L	.	HA	0.5000	EPA8150	1.08
3399	2,4,5-TP (Silvex)		U			0.000437	ug/L	.	GE	0.0004	EPA8150	1.00
3400	Sulfate		U			1000	ug/L	.	HA	1.0000	EPA300.0	1.00
3401	Sulfate		U			1000	ug/L	.	HA	1.0000	EPA300.0	1.00
3402	1,1,2,2-Tetrachloroethane		U			5	ug/L	.	HA	5.0000	EPA8240	1.00
3403	1,1,2,2-Tetrachloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3404	Tetrachloroethylene		U			5	ug/L	.	HA	5.0000	EPA8240	1.00
3405	Tetrachloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3406	Total dissolved solids		U			18000	ug/L	.	HA	1.0000	EPA160.2	1.00
3407	Total dissolved solids		J	V	H	37000	ug/L	.	GE	1.0000	EPA160.1	1.00
3408	Total organic carbon		U			1000	ug/L	.	HA	1.0000	EPA415.1	1.00
3409	Total organic carbon	1	U			1030	ug/L	.	HA	1.0000	EPA415.1	1.00
3410	Total organic carbon		U			1000	ug/L	.	GE	1.0000	EPA9060	1.00
3411	Radium, total alpha-emitting		J			0.8	pci/L	0.4000	GP	0.5000	EP1A-010	1.00
3412	Radium, total alpha-emitting		U			0.1	pci/L	0.4000	GP	0.5000	EP1A-010	1.00
3413	Total organic halogens					5.25	ug/L	.	HA	5.0000	SN9020A	1.00
3414	Total organic halogens					8.8	ug/L	.	GE	5.0000	EPA9020	1.00
3415	Phenols		U			5	ug/L	.	HA	5.0000	EPA420.2	1.00
3416	Phenols	1	U			5	ug/L	.	HA	5.0000	EPA420.2	1.00
3417	Phenols		J			6.6	ug/L	.	GE	5.0000	EPA420.2	1.00
3418	Total phosphates (as P)		U			50	ug/L	.	HA	0.0500	EPA365.2	1.00
3419	Total phosphates (as P)	1	U			50	ug/L	.	HA	0.0500	EPA365.2	1.00
3420	Total phosphates (as P)		U			50	ug/L	.	GE	0.0500	EPA365.1	1.00
3421	Trichloroethylene		U			5	ug/L	.	HA	5.0000	EPA8240	1.00
3422	Trichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3423	Tritium	1				7.2	pci/mL	0.7000	TH	0.1900	EPA906.0	1.00
3424	Tritium					6.9	pci/mL	0.6800	TH	0.1900	EPA906.0	1.00
3425	Tritium					5.98	pci/mL	0.4640	GP	0.7000	EP1A-002	1.00
3426	Tritium					7.21	pci/mL	0.5450	GP	0.7000	EP1A-002	1.00

Well Name=CBR 3D Secondary ID= Sample Date=022294
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3427	Silica, total recoverable					12800	ug/L	.	WA	100.0000	EPA200.7	2.10
3428	Silica, total recoverable					13500	ug/L	.	GE	100.0000	EPA6010	1.00
3429	Toxaphene		U			1.09	ug/L	.	WA	1.0000	EPA8080	1.09
3430	Toxaphene	1	U			2.22	ug/L	.	WA	1.0000	EPA8080	2.22
3431	Toxaphene	1	U			2.13	ug/L	.	WA	1.0000	EPA8080	2.13
3432	Toxaphene		UJ	I	P	0.24	ug/L	.	GE	0.0002	EPA8080	1.00
3433	trans-1,2-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3434	1,1-Dichloroethylene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
3435	1,1-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3436	1,1-Dichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
3437	1,1-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3438	1,1,1-Trichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
3439	1,1,1-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3440	1,1,2-Trichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
3441	1,1,2-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3442	1,2-Dichloroethylene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
3443	1,2-Dichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
3444	1,2-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3445	1,2-Dichloropropane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
3446	1,2-Dichloropropane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3447	cis-1,3-Dichloropropane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
3448	cis-1,3-Dichloropropane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3449	trans-1,3-Dichloropropane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
3450	trans-1,3-Dichloropropane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3451	2-Chloroethyl vinyl ether		U			10	ug/L	.	WA	10.0000	EPA8240	1.00
3452	2-Chloroethyl vinyl ether		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3453	2,4-Dichlorophenoxyacetic acid		U			1.08	ug/L	.	WA	1.0000	EPA8150	1.08
3454	2,4-Dichlorophenoxyacetic acid		U			0.00146	ug/L	.	GE	0.0015	EPA8150	1.00

Well Name=CBR 3D Secondary ID= Sample Date=052494

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3455	Silver, total recoverable		U			2	ug/L	.	GE	2.0000	EPA6010	1.00
3456	Gross alpha	1	J			0.941	pci/L	0.6270	GP	1.5000	EPA900.0	1.00
3457	Gross alpha		U			0.98	pci/L	0.6160	GP	1.5000	EPA900.0	1.00
3458	Aluminum, total recoverable		U			20	ug/L	.	GE	20.0000	EPA6010	1.00
3459	Arsenic, total recoverable		U			2	ug/L	.	GE	2.0000	EPA7060	1.00
3460	Barium, total recoverable		U			29.7	ug/L	.	GE	3.0000	EPA6010	1.00
3461	Nonvolatile beta	1	J			4.62	pci/L	1.2800	GP	2.0000	EPA900.0	1.00
3462	Nonvolatile beta		U			3.05	pci/L	1.1600	GP	2.0600	EPA900.0	1.00
3463	Bromodichloromethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3464	Boron, total recoverable		U			52.1	ug/L	.	GE	0.0521	EPA6010	1.00
3465	Calcium, total recoverable		U			247	ug/L	.	GE	10.0000	EPA6010	1.00
3466	Trichlorofluoromethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3467	Carbon tetrachloride		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3468	Cadatum, total recoverable		U			2	ug/L	.	GE	2.0000	EPA6010	1.00
3469	Bromoform		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3470	Chloroform		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3471	Dichloromethane (Methylene chloride)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3472	Bromoethane (Methyl bromide)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
3473	Chloromethane (Methyl chloride)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3474	Chloride					2720	ug/L	.	GE	0.2500	EPA300.0	1.00
3475	Chlorobenzene					1	ug/L	.	GE	1.0000	EPA8240	1.00
3476	Specific conductance	U				33.9	us/cm	.	GE	1.0000	EPA120.1	1.00
3477	Chromium, total recoverable	U				4	ug/L	.	GE	4.0000	EPA6010	1.00
3478	Chloroethane (Vinyl chloride)	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3479	Chloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3480	Benzene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3481	Dibromochloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3482	Endrin	U				0.0059	ug/L	.	GE	0.0000	EPA8080	1.00
3483	Ethylbenzene	U				1	ug/L	.	GE	0.0000	EPA8080	1.00
3484	Fluoride	U				100	ug/L	.	GE	0.1000	EPA300.0	1.00
3485	Fluoride	U				100	ug/L	.	GE	0.1000	EPA300.0	1.00
3486	Iron, total recoverable	U				13.7	ug/L	.	GE	0.1000	EPA340.2	1.00
3487	Mercury, total recoverable	U				0.2	ug/L	.	GE	0.2000	EPA7470	1.00
3488	Potassium, total recoverable	U				1640	ug/L	.	GE	500.0000	EPA6010	1.00
3489	Lindane	U				0.0049	ug/L	.	GE	0.0000	EPA8080	1.00
3490	Lithium, total recoverable	U				5	ug/L	.	GE	5.0000	EPA6010	1.00
3491	Toluene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3492	Methoxychlor	U				0.49	ug/L	.	GE	0.0005	EPA8080	1.00
3493	Magnesium, total recoverable	U				733	ug/L	.	GE	2.0000	EPA6010	1.00
3494	Manganese, total recoverable	U				2.4	ug/L	.	GE	2.0000	EPA6010	1.00
3495	Sodium, total recoverable	J				3010	ug/L	.	GE	10.0000	EPA6010	1.00
3496	Nitrate-nitrite as nitrogen	1				1880	ug/L	.	GE	0.0500	EPA353.1	2.00
3497	Nitrate-nitrite as nitrogen	U				1900	ug/L	.	GE	0.0500	EPA353.1	2.00
3498	Lead, total recoverable	U				3	ug/L	.	GE	3.0000	EPA7421	1.00
3499	pH	J		Q	L	5.13	PH	.	GE	0.0100	EPA150.1	1.00
3500	Selenium, total recoverable	U				2	ug/L	.	GE	2.0000	EPA7740	1.00
3501	2,4,5-Tp (Silvex)	U				0.000439	ug/L	.	GE	0.0004	EPA8150	1.00
3502	Sulfate	J				1030	ug/L	.	GE	1.0000	EPA300.0	1.00
3503	1,1,2,2-Tetrachloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3504	Tetrachloroethylene	U				1	ug/L	.	GE	1.0000	EPA160.1	1.00
3505	Total dissolved solids	1				35000	ug/L	.	GE	1.0000	EPA160.1	1.00
3506	Total dissolved solids	U				36000	ug/L	.	GE	1.0000	EPA160.1	1.00
3507	Total organic carbon	U				1000	ug/L	.	GE	1.0000	EPA9060	1.00
3508	Radium, total alpha-emitting	U				-0.2	pci/L	0.2000	GP	0.5000	EPA900.1	1.00
3509	Total organic halogens	U				5	ug/L	.	GE	5.0000	EPA9020	1.00
3510	Phenols	U				5	ug/L	.	GE	5.0000	EPA420.2	1.00
3511	Total phosphates (as P)	U				50	ug/L	.	GE	0.0500	EPA365.1	1.00
3512	Trichloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3513	Tritium					7460	pci/L	540.0000	GP	700.0000	EPA906.0	1.00
3514	Silica, total recoverable					13700	ug/L	.	GE	100.0000	EPA6010	1.00
3515	Toxaphene	U				0.235	ug/L	.	GE	0.0002	EPA8080	1.00
3516	trans-1,2-Dichloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3517	1,1-Dichloroethylene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3518	1,1-Dichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3519	1,1,1-Trichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3520	1,1,2-Trichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3521	1,2-Dichloroethane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3522	1,2-Dichloropropane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3523	cis-1,3-Dichloropropene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3524	trans-1,3-Dichloropropene	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3525	2-Chloroethyl vinyl ether	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
3526	2,4-Dichlorophenoxyacetic acid	U				0.00146	ug/L	.	GE	0.0015	EPA8150	1.00

Well Name=CBR 3D Secondary 10- Sample Date=072694

OBS	TESTNAME	LABDUP	RESQVAL	ANQVAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
3527	Silver, total recoverable	U		Y		0.331	ug/L		WA	2.0000	EPA200.7	1.00
3528	Gross alpha	UI				27	ug/L	0.4060	GP	0.7800	EPA-001	1.00
3529	Aluminum, total recoverable	U		Y					WA	20.0000	EPA200.7	1.00
3530	Arsenic, total recoverable	U		Y					WA	2.0000	EPA206.2	1.00
3531	Barium, total recoverable	U		Y		27.9	ug/L		WA	4.0000	EPA200.7	1.00
3532	Nonvolatiles beta	UI				1.57	ug/L	0.8750	GP	1.7100	EPA-001	1.00
3533	Bromodichloromethane	U		Y					WA	5.0000	EPA8240	1.00
3534	Boron, total recoverable	UJ		L		30	ug/L		GE	30.0000	EPA6010	1.00
3535	Calcium, total recoverable	U		Y		277	ug/L		WA	10.0000	EPA200.7	1.00
3536	Trichlorofluoromethane	U		Y					WA	5.0000	EPA8240	1.00
3537	Carbon tetrachloride	U		Y					WA	5.0000	EPA8240	1.00
3538	Cesium, total recoverable	U		Y					WA	2.0000	EPA200.7	1.00
3539	Chloroform	U		Y					WA	5.0000	EPA8240	1.00
3540	Chloroform	U		Y					WA	5.0000	EPA8240	1.00
3541	Dichloromethane (Methylene chloride)	U		Y					WA	5.0000	EPA8240	1.00
3542	Bromomethane (Methyl bromide)	U		Y					WA	10.0000	EPA8240	1.00
3543	Chloromethane (Methyl chloride)	U		Y					WA	10.0000	EPA8240	1.00
3544	Chloride	U		Y		2670	ug/L		WA	0.2500	EPA325.1	1.00
3545	Chlorobenzene	U		Y					WA	5.0000	EPA8240	1.00
3546	Specific conductance	U		Y		31.8	uS/cm		WA	1.0000	EPA120.1	1.00
3547	Chromium, total recoverable	U		Y					WA	4.0000	EPA200.7	1.00
3548	Chloroethene (Vinyl chloride)	U		Y		10	ug/L		WA	10.0000	EPA8240	1.00
3549	Chloroethane	U		Y		10	ug/L		WA	10.0000	EPA8240	1.00
3550	Benzene	U		Y					WA	5.0000	EPA8240	1.00
3551	Dibromochloromethane	U		Y					WA	5.0000	EPA8240	1.00
3552	Endrin	U		Y		0.101	ug/L		WA	0.1000	EPA8080	1.01
3553	Ethylbenzene	U		Y					WA	5.0000	EPA8240	1.00
3554	Fluoride	U		Y		100	ug/L		WA	0.1000	EPA340.2	1.00
3555	Iron, total recoverable	J		Y	H				WA	4.0000	EPA200.7	1.00
3556	Mercury, total recoverable	U		Y		0.2	ug/L		WA	0.2000	EPA245.1	1.00
3557	Potassium, total recoverable	U		Y		1570	ug/L		WA	500.0000	EPA200.7	1.00
3558	Lindane	U		Y		0.0505	ug/L		WA	0.0500	EPA8080	1.01
3559	Lithium, total recoverable	UJ		Y	H	53.5	ug/L		WA	5.0000	EPA200.7	1.00
3560	Toluene	U		Y					WA	5.0000	EPA8240	1.00
3561	Methoxychlor	U		Y		0.505	ug/L		WA	0.5000	EPA8080	1.01
3562	Magnesium, total recoverable	U		Y		659	ug/L		WA	7.5000	EPA200.7	1.00
3563	Manganese, total recoverable	U		Y		2.1	ug/L		WA	2.0000	EPA200.7	1.00
3564	Sodium, total recoverable	U		Y		2660	ug/L		WA	11.5000	EPA200.7	1.00
3565	Nitrate as nitrogen	U		Y		1810	ug/L		WA	0.0200	EPA353.2	5.00
3566	Lead, total recoverable	U		Y		3	ug/L		WA	3.0000	EPA239.2	1.00
3567	pH	J		QV	P	5.24	PH		WA	0.1000	EPA150.1	1.00
3568	Selenium, total recoverable	U		Y					WA	2.0000	EPA270.2	1.00
3569	2,4,5-TP (Silvex)	U		Y		0.545	ug/L		WA	0.5000	EPA8150	1.09
3570	2,4,5-TP (Silvex)	1		Y		1.06	ug/L		WA	0.5000	EPA8150	2.13
3571	Sulfate	U		Y		1000	ug/L		WA	1.0000	EPA300.0	1.00
3572	1,1,2,2-Tetrachloroethane	U		Y					WA	5.0000	EPA8240	1.00
3573	Tetrachloroethylene	U		Y					WA	5.0000	EPA8240	1.00
3574	Total dissolved solids	U		Y		28000	ug/L		WA	1.0000	EPA160.2	1.00
3575	Total organic carbon	U		Y		1000	ug/L		WA	1.0000	EPA415.1	1.00
3576	Radium, total alpha-emitting	J		Y	P	0.4	ug/L	0.3000	GP	0.3340	EPA-010	1.00
3577	Total organic halogens	U		Y		5.43	ug/L		WA	5.0000	SH9020A	1.00
3578	Total organic halogens	1		Y		5	ug/L		WA	5.0000	SH9020A	1.00
3579	Phenols	U		IV		5	ug/L		WA	5.0000	EPA420.2	1.00
3580	Phenols	1		IV		5	ug/L		WA	5.0000	EPA420.2	1.00

Well Name=CBR 3D Secondary ID= Sample Date=072694
(continued)

OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3581	Total phosphates (as P)		U	Y		50	ug/L	.	WA	0.0500	EPA365.2	1.00
3582	Trichloroethylene		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
3583	Trifluoromethane		U			7.18	ug/L	0.5300	GP	0.5980	EPIA-002	1.00
3584	Silica, total recoverable			Y		12000	ug/L	.	WA	100.0000	EPA200.7	2.10
3585	Toxaphene		U	Y		1.01	ug/L	.	WA	1.0000	EPA8080	1.01
3586	trans-1,2-Dichloroethylene		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
3587	1,1-Dichloroethylene		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
3588	1,1-Dichloroethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
3589	1,1,1-Trichloroethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
3590	1,1,2-Trichloroethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
3591	1,2-Dichloroethane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
3592	1,2-Dichloropropane		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
3593	cis-1,3-Dichloropropene		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
3594	trans-1,3-Dichloropropene		U	Y		5	ug/L	.	WA	5.0000	EPA8240	1.00
3595	2-Chloroethyl vinyl ether		U	Y		10	ug/L	.	WA	10.0000	EPA8240	1.00
3596	2,4-Dichlorophenoxyacetic acid		U	Y		1.09	ug/L	.	WA	1.0000	EPA8150	1.09
3597	2,4-Dichlorophenoxyacetic acid	1	U	Y		2.13	ug/L	.	WA	1.0000	EPA8150	2.13

Well Name=CBR 3D Secondary ID= Sample Date=102094

OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3598	alpha-Benzene hexachloride		U			0.0125	ug/L	.	GE	0.0125	EPA8080	1.00
3599	Acetone		U			3.17	ug/L	.	GE	3.1700	EPA8260	1.00
3600	alpha-Chlordane		U			0.025	ug/L	.	GE	0.0250	EPA8080	1.00
3601	Silver, total recoverable		U			0.512	ug/L	.	GE	0.5120	EPA6010	1.00
3602	Aldrin		U			0.0125	ug/L	.	GE	0.0125	EPA8080	1.00
3603	Gross alpha		UI			0.652	ug/L	0.5270	GP	0.8240	EPIA-001	1.00
3604	Aluminum, total recoverable		J	V	H	38.2	ug/L	.	GE	1.9300	EPA6010	1.00
3605	Acenaphthene		U	I		0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
3606	Acenaphthylene		U	V	H	0.017	ug/L	.	GE	0.0170	EPA8270	1.00
3607	Anthracene		U			0.017	ug/L	.	GE	0.0170	EPA8270	1.00
3608	Arsenic, total recoverable		U			1.5	ug/L	.	GE	1.5000	EPA7060	1.00
3609	Benzo(a)anthracene		U			0.151	ug/L	.	GE	0.1510	EPA8270	1.00
3610	Benzo(a)pyrene		U			0.076	ug/L	.	GE	0.0760	EPA8270	1.00
3611	Barium, total recoverable		J	V	H	32.2	ug/L	.	GE	0.0480	EPA6010	1.00
3612	Benzo(b)fluoranthene		U			0.133	ug/L	.	GE	0.1330	EPA8270	1.00
3613	beta-Benzene hexachloride		U			0.025	ug/L	.	GE	0.0250	EPA8080	1.00
3614	Butylbenzyl phthalate		U			0.036	ug/L	.	GE	0.0360	EPA8270	1.00
3615	Bis(2-chloroisopropyl) ether		U			0.042	ug/L	.	GE	0.0420	EPA8270	1.00
3616	Benzole acid		U			0.081	ug/L	.	GE	0.0810	EPA8270	1.00
3617	Nonvolatile beta		J			1.71	ug/L	0.8900	GP	1.7100	EPIA-001	1.00
3618	Beryllium, total recoverable		J	V	H	0.189	ug/L	.	GE	0.0270	EPA6010	1.00
3619	Benzo(g,h,i)perylene		U			0.309	ug/L	.	GE	0.3090	EPA8270	1.00
3620	Benzo(k)fluoranthene		U			0.079	ug/L	.	GE	0.0790	EPA8270	1.00
3621	Bromodichloromethane		U			0.012	ug/L	.	GE	0.0120	EPA8260	1.00
3622	Benzyl alcohol		U			0.025	ug/L	.	GE	0.0250	EPA8270	1.00
3623	Bis(2-chloroethoxy) methane		U			0.018	ug/L	.	GE	0.0180	EPA8270	1.00
3624	Bis(2-chloroethyl) ether		U			0.017	ug/L	.	GE	0.0170	EPA8270	1.00
3625	Bis(2-ethylhexyl) phthalate		U			0.254	ug/L	.	GE	0.2540	EPA8270	1.00
3626	Calcium, total recoverable		U			295	ug/L	.	GE	12.0000	EPA6010	1.00
3627	Carbon tetrachloride		U			0.012	ug/L	.	GE	0.0120	EPA8260	1.00

Hell Name=CBR 3D Secondary ID= Sample Date=102094
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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
3628	Cadalm, total recoverable	U				0.48 ug/L		.	GE	0.4800	EPA6910	1.00
3629	Bromoform	U				0.012 ug/L		.	GE	0.0120	EPA8260	1.00
3630	Chloroform	U				0.34 ug/L		.	GE	0.0170	EPA8260	1.00
3631	Chrysene	U				0.012 ug/L		.	GE	0.0120	EPA8270	1.00
3632	Dichloromethane (Methylene chloride)	J		V	H	0.36 ug/L		.	GE	0.2940	EPA8260	1.00
3633	Bromomethane (Methyl bromide)	U				0.026 ug/L		.	GE	0.0260	EPA8260	1.00
3634	Chloromethane (Methyl chloride)	U				0.024 ug/L		.	GE	0.0240	EPA8260	1.00
3635	Chloride	U				2060 ug/L		.	GE	64.0000	EPA300.0	1.00
3636	Chlorobenzene	U				0.012 ug/L		.	GE	0.0120	EPA8260	1.00
3637	Hexachlorobenzene	U				0.028 ug/L		.	GE	0.0280	EPA8270	1.00
3638	Hexachlorocyclopentadiene	U				0.042 ug/L		.	GE	0.0420	EPA8270	1.00
3639	Hexachloroethane	U				0.022 ug/L		.	GE	0.0220	EPA8270	1.00
3640	Specific conductance	U				35 uS/cm		.	GE	0.3000	EPA120.1	1.00
3641	Cobalt, total recoverable	J				1.85 ug/L		.	GE	0.5900	EPA6010	1.00
3642	Chromium, total recoverable	U				2.28 ug/L		.	GE	2.2800	EPA6010	1.00
3643	Carbon disulfide	U				0.129 ug/L		.	GE	0.1290	EPA8260	1.00
3644	Copper, total recoverable	J				2 ug/L		.	GE	0.4580	EPA6010	1.00
3645	Cyanide	J		V	H	0.81 ug/L		.	GE	0.7000	EPA335.2	1.00
3646	Chloroethane (Vinyl chloride)	U				0.015 ug/L		.	GE	0.0150	EPA8260	1.00
3647	Chloroethane	U				0.025 ug/L		.	GE	0.0250	EPA8260	1.00
3648	Benzene	U				0.017 ug/L		.	GE	0.0170	EPA8260	1.00
3649	Dibenz(a,h)anthracene	U				0.09 ug/L		.	GE	0.0900	EPA8270	1.00
3650	delta-Benzene hexachloride	U				0.025 ug/L		.	GE	0.0250	EPA8080	1.00
3651	Dibromochloromethane	U				0.017 ug/L		.	GE	0.0170	EPA8260	1.00
3652	Diethyl phthalate	U				0.015 ug/L		.	GE	0.0150	EPA8270	1.00
3653	Dibenzofuran	UJ		V	H	0.017 ug/L		.	GE	0.0170	EPA8270	1.00
3654	Dieldrin	U				0.025 ug/L		.	GE	0.0250	EPA8080	1.00
3655	Dimethyl phthalate	U				0.017 ug/L		.	GE	0.0170	EPA8270	1.00
3656	Di-n-butyl phthalate	UJ		V	H	0.443 ug/L		.	GE	0.4430	EPA8270	1.00
3657	Di-n-octyl phthalate	U				0.07 ug/L		.	GE	0.0700	EPA8270	1.00
3658	Endrin ketone	U				0.05 ug/L		.	GE	0.0500	EPA8080	1.00
3659	Endrin	U				0.025 ug/L		.	GE	0.0250	EPA8080	1.00
3660	Endosulfan I	U				0.025 ug/L		.	GE	0.0250	EPA8080	1.00
3661	Endosulfan II	U				0.05 ug/L		.	GE	0.0500	EPA8080	1.00
3662	Endosulfan sulfate	U				0.05 ug/L		.	GE	0.0500	EPA8080	1.00
3663	Ethylbenzene	U				0.015 ug/L		.	GE	0.0150	EPA8260	1.00
3664	Fluoranthene	U				0.024 ug/L		.	GE	0.0240	EPA8270	1.00
3665	Iron, total recoverable	U				18.2 ug/L		.	GE	18.2000	EPA6010	1.00
3666	Fluorene	U				0.012 ug/L		.	GE	0.0120	EPA8270	1.00
3667	gamma-Chlordane	U				0.025 ug/L		.	GE	0.0250	EPA8080	1.00
3668	Hexachlorobutadiene	U				0.067 ug/L		.	GE	0.0670	EPA8270	1.00
3669	Mercury, total recoverable	U				0.04 ug/L		.	GE	0.0400	EPA7470	1.00
3670	Heptachlor	U				0.025 ug/L		.	GE	0.0250	EPA8080	1.00
3671	Heptachlor epoxide	U				0.025 ug/L		.	GE	0.0250	EPA8080	1.00
3672	Indenol(1,2,3-c,d)pyrene	U				0.035 ug/L		.	GE	0.0350	EPA8270	1.00
3673	Isophorone	U				0.099 ug/L		.	GE	0.0990	EPA8270	1.00
3674	Potassium, total recoverable	U				1570 ug/L		.	GE	91.6000	EPA6010	1.00
3675	Lindane	U				0.0125 ug/L		.	GE	0.0125	EPA8080	1.00
3676	Toluene	J		V	H	0.12 ug/L		.	GE	0.0440	EPA8260	1.00
3677	Methyl ethyl ketone	UJ		V	H	0.14 ug/L		.	GE	0.1400	EPA8260	1.00
3678	Methoxychlor	U				0.25 ug/L		.	GE	0.2500	EPA8080	1.00
3679	Magnesium, total recoverable	U				735 ug/L		.	GE	2.6800	EPA6010	1.00
3680	Methyl isobutyl ketone	J		V	H	0.204 ug/L		.	GE	0.2040	EPA8260	1.00

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OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLH	METHOD	DILFACT
3681	Manganese, total recoverable					2.05	ug/L	.	GE	0.2390	EPA6010	1.00
3682	Naphthalene					0.017	ug/L	.	GE	0.0170	EPA8270	1.00
3683	Sodium, total recoverable	U				2610	ug/L	.	GE	37.8000	EPA6010	1.00
3684	Nitrobenzene	U				0.031	ug/L	.	GE	0.0310	EPA8270	1.00
3685	N-Nitrosodipropylamine	U				0.036	ug/L	.	GE	0.0360	EPA8270	1.00
3686	Ammonia nitrogen	J				69.6	ug/L	.	GE	30.0000	EPA350.1	1.00
3687	Nickel, total recoverable	J				2.23	ug/L	.	GE	1.8400	EPA6010	1.00
3688	N-Nitrosodiphenylamine			V	H	0.018	ug/L	.	GE	0.0180	EPA8270	1.00
3689	Nitrate-nitrite as nitrogen	UJ				1990	ug/L	.	GE	30.0000	EPA353.1	2.00
3690	Lead, total recoverable	J		V	H	5.89	ug/L	.	GE	0.6900	EPA7421	1.00
3691	PCB 1016	U				0.057	ug/L	.	GE	0.0570	EPA8080	1.00
3692	PCB 1221	U				0.0739	ug/L	.	GE	0.0739	EPA8080	1.00
3693	PCB 1232	U				0.0618	ug/L	.	GE	0.0618	EPA8080	1.00
3694	PCB 1242	U				0.0411	ug/L	.	GE	0.0411	EPA8080	1.00
3695	PCB 1248	U				0.06	ug/L	.	GE	0.0600	EPA8080	1.00
3696	PCB 1254	U				0.078	ug/L	.	GE	0.0780	EPA8080	1.00
3697	PCB 1260	U				0.071	ug/L	.	GE	0.0710	EPA8080	1.00
3698	Pentachlorophenol	U				0.192	ug/L	.	GE	0.1920	EPA8270	1.00
3699	pH	J		Q	L	5.69	PH	.	GE	0.0100	EPA150.1	1.00
3700	Phenanthrene	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
3701	Phenol	U				0.043	ug/L	.	GE	0.0430	EPA8270	1.00
3702	P,p'-DDD	U				0.05	ug/L	.	GE	0.0500	EPA8080	1.00
3703	P,p'-DDE	U				0.025	ug/L	.	GE	0.0250	EPA8080	1.00
3704	P,p'-DDT	U				0.05	ug/L	.	GE	0.0500	EPA8080	1.00
3705	Pyrene	UJ		V	H	0.022	ug/L	.	GE	0.0220	EPA8270	1.00
3706	Antimony, total recoverable	U				1.94	ug/L	.	GE	1.9400	EPA7041	1.00
3707	Selenium, total recoverable	J				1.31	ug/L	.	GE	1.2500	EPA7740	1.00
3708	Sulfate	J				229	ug/L	.	GE	90.0000	EPA300.0	1.00
3709	Styrene	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
3710	1,1,2,2-Tetrachloroethane	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
3711	Tetrachloroethylene	U				0.026	ug/L	.	GE	0.0260	EPA8260	1.00
3712	Total dissolved solids	U				31000	ug/L	.	GE	6300.000	EPA140.1	1.00
3713	Thallium, total recoverable	U				0.66	ug/L	.	GE	0.6600	EPA7841	1.00
3714	Trichloroethylene	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
3715	Tritium	U				4650	PCI/L	480.0000	GP	609.0000	EPIA-002	1.00
3716	Toxaphene	U				0.75	ug/L	.	GE	0.7500	EPA8080	1.00
3717	Vinyl acetate	U				0.142	ug/L	.	GE	0.1420	EPA8260	1.00
3718	Vanadium, total recoverable	U				0.314	ug/L	.	GE	0.3140	EPA6010	1.00
3719	Xylenes	U				0.06	ug/L	.	GE	0.0600	EPA8260	1.00
3720	1,1-Dichloroethylene	U				0.018	ug/L	.	GE	0.0180	EPA8260	1.00
3721	1,1-Dichloroethane	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
3722	1,1,1-Trichloroethane	U				0.022	ug/L	.	GE	0.0220	EPA8260	1.00
3723	1,1,2-Trichloroethane	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
3724	1,2-Dichloroethylene	U				0.03	ug/L	.	GE	0.0300	EPA8260	1.00
3725	1,2-Dichlorobenzene	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
3726	1,2-Dichloroethane	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
3727	1,2-Dichloropropane	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
3728	1,2,4-Trichlorobenzene	U				0.075	ug/L	.	GE	0.0750	EPA8270	1.00
3729	1,3-Dichlorobenzene	U				0.117	ug/L	.	GE	0.1170	EPA8270	1.00
3730	cis-1,3-Dichloropropene	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
3731	trans-1,3-Dichloropropene	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
3732	1,4-Dichlorobenzene	U				0.024	ug/L	.	GE	0.0240	EPA8270	1.00
3733	2-Chlorophenol	U				0.031	ug/L	.	GE	0.0310	EPA8270	1.00

Well Name=CBR 3D Secondary ID=' ' Sample Date=102094
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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3734	2-Chloronaphthalene	U		V	H	0.117	ug/L	.	GE	0.1170	EPA8270	1.00
3735	2-Hexanone	UJ				0.194	ug/L	.	GE	0.1940	EPA8260	1.00
3736	2-Methylnaphthalene	U				0.017	ug/L	.	GE	0.0170	EPA8270	1.00
3737	o-Cresol (2-Methylphenol)	U				0.048	ug/L	.	GE	0.0480	EPA8270	1.00
3738	o-Nitroaniline	U				0.031	ug/L	.	GE	0.0310	EPA8270	1.00
3739	2-Nitrophenol	U				0.012	ug/L	.	GE	0.0120	EPA8270	1.00
3740	2,4-Dichlorophenol	U				0.022	ug/L	.	GE	0.0220	EPA8270	1.00
3741	2,4-Dimethyl phenol	U				0.104	ug/L	.	GE	0.1040	EPA8270	1.00
3742	2,4-Dinitrophenol	U				0.332	ug/L	.	GE	0.3320	EPA8270	1.00
3743	2,4-Dinitrotoluene	U				0.092	ug/L	.	GE	0.0920	EPA8270	1.00
3744	2,4,5-Trichlorophenol	U				0.051	ug/L	.	GE	0.0510	EPA8270	1.00
3745	2,4,6-Trichlorophenol	U				0.012	ug/L	.	GE	0.0120	EPA8270	1.00
3746	2,6-Dinitrotoluene	U				0.142	ug/L	.	GE	0.1420	EPA8270	1.00
3747	m-Nitroaniline	U				0.113	ug/L	.	GE	0.1130	EPA8270	1.00
3748	3,3'-Dichlorobenzidine	U				0.49	ug/L	.	GE	0.4900	EPA8270	1.00
3749	m,p-Cresol	U				0.057	ug/L	.	GE	0.0570	EPA8270	1.00
3750	4-Bromophenyl phenyl ether	U				0.015	ug/L	.	GE	0.0150	EPA8270	1.00
3751	4-Chloroaniline	U				0.015	ug/L	.	GE	0.0150	EPA8270	1.00
3752	4-Chlorophenyl phenyl ether	UJ		V	H	0.026	ug/L	.	GE	0.0260	EPA8270	1.00
3753	4-Chloro-m-cresol	U				0.102	ug/L	.	GE	0.1020	EPA8270	1.00
3754	p-Nitroaniline	U				0.191	ug/L	.	GE	0.1910	EPA8270	1.00
3755	4-Nitrophenol	U				0.28	ug/L	.	GE	0.2800	EPA8270	1.00
3756	2-Methyl-4,6-dinitrophenol	U				10.1	ug/L	.	GE	2.2200	EPA6010	1.00
3757	Zinc, total recoverable											

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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3758	alpha-Benzene hexachloride	UJ			L	0.0525	ug/L	.	WA	0.0200	CLP	1.00
3759	alpha-Benzene hexachloride	U				0.0125	ug/L	.	GE	0.0125	EPA8080	1.00
3760	Acetone	U				10	ug/L	.	WA	3.0000	EPA8260H	1.00
3761	Acetone	U				3.17	ug/L	.	GE	3.1700	EPA8260	1.00
3762	alpha-Chlordane	UJ			L	0.0525	ug/L	.	WA	0.0200	CLP	1.00
3763	alpha-Chlordane	U				0.025	ug/L	.	GE	0.0250	EPA8080	1.00
3764	Silver, total recoverable	U				1.4	ug/L	.	WA	0.6700	CLP-MOD	1.00
3765	Silver, total recoverable	1				1.4	ug/L	.	WA	0.6700	CLP-MOD	1.00
3766	Silver, total recoverable	U				0.512	ug/L	.	GE	0.5120	EPA6010	1.00
3767	Aldrin	UJ			L	0.0525	ug/L	.	WA	0.0200	CLP	1.00
3768	Aldrin	U				0.0125	ug/L	.	GE	0.0125	EPA8080	1.00
3769	Gross alpha	1	UI			-0.7	pci/L	.	TH	0.9900	EPA900.0	1.00
3770	Gross alpha	UI				0.1	pci/L	1.1000	TH	0.9900	EPA900.0	1.00
3771	Gross alpha	1	UI			-0.7	pci/L	0.9000	TH	0.9900	EPA900.0	1.00
3772	Gross alpha	UI				0.1	pci/L	1.1000	TH	0.9900	EPA900.0	1.00
3773	Gross alpha	UI				0.7	pci/L	0.5250	GP	0.7590	EPIA-001	1.00
3774	Aluminum, total recoverable	U				53.3	ug/L	.	WA	53.0000	CLP-MOD	1.00
3775	Aluminum, total recoverable	1	U			53.3	ug/L	.	WA	53.0000	CLP-MOD	1.00
3776	Aluminum, total recoverable	J		V	H	45.1	ug/L	.	GE	1.9300	EPA6010	1.00
3777	Acenaphthene	U		0		1.1	ug/L	.	WA	0.5000	EPA8270H	1.00
3778	Acenaphthene	U		0		1	ug/L	.	WA	0.5000	EPA8270H	1.00
3779	Acenaphthene	UJ		I	P	0.0175	ug/L	.	GE	0.0175	EPA8270	1.00
3780	Acenaphthylene	U		0		1.1	ug/L	.	WA	1.0000	EPA8270H	1.00

W011 Name=CBR 3D Secondary ID= Sample Date=111594
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3781	Acenaphthylene	1	U	0		1	ug/L	.	WA	1.0000	EPA8270H	1.00
3782	Acenaphthylene		U			0.0177	ug/L	.	GE	0.0177	EPA8270	1.00
3783	Anthracene		U	0		1.1	ug/L	.	WA	0.4000	EPA8270H	1.00
3784	Anthracene	1	U	0		1	ug/L	.	WA	0.4000	EPA8270H	1.00
3785	Anthracene		U			0.0177	ug/L	.	GE	0.0177	EPA8270	1.00
3786	Arsenic, total recoverable		U			1.7	ug/L	.	WA	1.7000	CLP-HOD	1.00
3787	Arsenic, total recoverable	1	U			1.7	ug/L	.	WA	1.7000	CLP-HOD	1.00
3788	Arsenic, total recoverable		U			1.5	ug/L	.	GE	1.5000	EPA7060	1.00
3789	Benzo(a)anthracene		U	0		1.1	ug/L	.	WA	0.5000	EPA8270H	1.00
3790	Benzo(a)anthracene	1	U	0		1	ug/L	.	WA	0.5000	EPA8270H	1.00
3791	Benzo(a)anthracene		U			0.157	ug/L	.	GE	0.1570	EPA8270	1.00
3792	Benzo(a)pyrene		U	0		1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
3793	Benzo(a)pyrene	1	U	0		1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
3794	Benzo(a)pyrene		U			0.0792	ug/L	.	GE	0.0792	EPA8270	1.00
3795	Barium, total recoverable		U			32.5	ug/L	.	WA	6.7000	CLP-HOD	1.00
3796	Barium, total recoverable	1				31.4	ug/L	.	WA	6.7000	CLP-HOD	1.00
3797	Barium, total recoverable					32.2	ug/L	.	GE	0.0480	EPA6010	1.00
3798	Benzo(b)fluoranthene		U	0		1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
3799	Benzo(b)fluoranthene	1	U	0		1	ug/L	.	WA	1.0000	EPA8270H	1.00
3800	Benzo(b)fluoranthene		U			0.139	ug/L	.	GE	0.1390	EPA8270	1.00
3801	beta-Benzene hexachlorido		UJ		L	0.0525	ug/L	.	WA	0.0200	CLP	1.00
3802	beta-Benzene hexachlorido		U			0.025	ug/L	.	GE	0.0250	EPA8080	1.00
3803	Butylbenzyl phthalate		U	OV		1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
3804	Butylbenzyl phthalate	1	U	OV		1	ug/L	.	WA	1.0000	EPA8270H	1.00
3805	Butylbenzyl phthalate		U			0.0375	ug/L	.	GE	0.0375	EPA8270	1.00
3806	Bis(2-chloroisopropyl) ether		U	0		1.1	ug/L	.	WA	0.9000	EPA8270H	1.00
3807	Bis(2-chloroisopropyl) ether	1	U	0		1	ug/L	.	WA	0.9000	EPA8270H	1.00
3808	Bis(2-chloroisopropyl) ether		U			0.0438	ug/L	.	GE	0.0438	EPA8270	1.00
3809	Benzoic acid		U	VO		1.1	ug/L	.	WA	6.0000	EPA8270H	1.00
3810	Benzoic acid	1	U	OV		5	ug/L	.	WA	6.0000	EPA8270H	1.00
3811	Benzoic acid		U			0.0844	ug/L	.	GE	0.0844	EPA8270	1.00
3812	Nonvolatile beta	1	J		L	1.9	pci/L	1.7000	TH	0.7900	EPA900.0	1.00
3813	Nonvolatile beta		J		L	2	pci/L	1.7000	TH	0.7900	EPA900.0	1.00
3814	Nonvolatile beta	1	J		L	1.9	pci/L	1.7000	TH	0.7900	EPA900.0	1.00
3815	Nonvolatile beta		J		L	2	pci/L	1.7000	TH	0.7900	EPA900.0	1.00
3816	Nonvolatile beta		J			1.83	pci/L	0.8480	GP	1.5600	EPIA-001	1.00
3817	Beryllium, total recoverable		U			0.3	ug/L	.	WA	0.3500	CLP-HOD	1.00
3818	Beryllium, total recoverable	1	U			0.3	ug/L	.	WA	0.3500	CLP-HOD	1.00
3819	Beryllium, total recoverable		U	V	H	0.227	ug/L	.	GE	0.0270	EPA6010	1.00
3820	Benzo(g,h,i)perylene		U	0		1.1	ug/L	.	WA	0.8000	EPA8270H	1.00
3821	Benzo(g,h,i)perylene	1	U	0		1	ug/L	.	WA	0.8000	EPA8270H	1.00
3822	Benzo(g,h,i)perylene		U			0.322	ug/L	.	GE	0.3220	EPA8270	1.00
3823	Benzo(k)fluoranthene		U	0		1.1	ug/L	.	WA	0.8000	EPA8270H	1.00
3824	Benzo(k)fluoranthene	1	U	0		1	ug/L	.	WA	0.8000	EPA8270H	1.00
3825	Benzo(k)fluoranthene		U			0.0823	ug/L	.	GE	0.0823	EPA8270	1.00
3826	Bromodichloromethane		U			0.2	ug/L	.	WA	0.0700	EPA8260H	1.00
3827	Bromodichloromethane		U			0.012	ug/L	.	GE	0.0120	EPA8260	1.00
3828	Benzyl alcohol		J	BO	P	0.184	ug/L	.	WA	1.0000	EPA8270H	1.00
3829	Benzyl alcohol	1	J	BO	P	0.184	ug/L	.	WA	1.0000	EPA8270H	1.00
3830	Benzyl alcohol		U			0.026	ug/L	.	GE	0.0260	EPA8270	1.00
3831	Bis(2-chloroethoxy) methane		U	0		1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
3832	Bis(2-chloroethoxy) methane	1	U	0		1	ug/L	.	WA	1.0000	EPA8270H	1.00
3833	Bis(2-chloroethoxy) methane		U			0.0188	ug/L	.	GE	0.0188	EPA8270	1.00

The SAS System

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OBS	TESTNAME	LABDUP	RESQVAL	ANQVAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3834	Bis(2-chloroethyl) ether	U	0	0	0	1.1 ug/L			WA	0.8000	EPA8270H	1.00
3835	Bis(2-chloroethyl) ether	1	U	0	0	1 ug/L			WA	0.8000	EPA8270H	1.00
3836	Bis(2-chloroethyl) ether	U	U	0	0	0.0177 ug/L			GE	0.0177	EPA8270	1.00
3837	Bis(2-ethylhexyl) phthalate	UJ	UJ	VO	H	20 ug/L			WA	1.0000	EPA8270H	1.00
3838	Bis(2-ethylhexyl) phthalate	1	UJ	VO	H	20 ug/L			WA	1.0000	EPA8270H	1.00
3839	Bis(2-ethylhexyl) phthalate	U	U			0.265 ug/L			GE	0.2650	EPA8270	1.00
3840	Calcium, total recoverable	U	U			1670 ug/L			WA	1667.000	CLP-MOD	1.00
3841	Calcium, total recoverable	1	U			1670 ug/L			WA	1667.000	CLP-MOD	1.00
3842	Calcium, total recoverable	J	J	V	H	361 ug/L			GE	12.0000	EPA6010	1.00
3843	Carbon tetrachloride	U	U			0.11 ug/L			WA	0.0300	EPA8021	1.00
3844	Carbon tetrachloride	U	U			0.012 ug/L			GE	0.0120	EPA8260	1.00
3845	Cadmium, total recoverable	UJ	UJ	V	H	3.5 ug/L			WA	0.5000	CLP-MOD	1.00
3846	Cadmium, total recoverable	1	UJ	V	H	3.5 ug/L			WA	0.5000	CLP-MOD	1.00
3847	Cadmium, total recoverable	U	U			0.48 ug/L			GE	0.4800	EPA6010	1.00
3848	Bromoform	U	U			2 ug/L			WA	0.7000	EPA8260H	1.00
3849	Bromoform	U	U			0.012 ug/L			GE	0.0120	EPA8260	1.00
3850	Chloroform	U	U			0.2 ug/L			WA	0.0700	EPA8260H	1.00
3851	Chloroform	U	U			0.09 ug/L			GE	0.0170	EPA8260	1.00
3852	Chrysene	U	U	0	0	1.1 ug/L			WA	0.5000	EPA8270H	1.00
3853	Chrysene	1	U	0	0	1 ug/L			WA	0.5000	EPA8270H	1.00
3854	Chrysene	U	U			0.0125 ug/L			GE	0.0125	EPA8270	1.00
3855	Dichloromethane (Methylene chloride)	U	U	V		0.2 ug/L			WA	0.0700	EPA8021	1.00
3856	Dichloromethane (Methylene chloride)	UJ	UJ	V	H	0.294 ug/L			GE	0.2940	EPA8260	1.00
3857	Bromomethane (Methyl bromide)	U	U			0.6 ug/L			WA	0.2000	EPA8260H	1.00
3858	Bromomethane (Methyl bromide)	U	U			0.026 ug/L			GE	0.0260	EPA8260	1.00
3859	Chloromethane (Methyl chloride)	U	U			5.31 ug/L			WA	0.1000	EPA8260H	1.00
3860	Chloromethane (Methyl chloride)	U	U			0.024 ug/L			GE	0.0240	EPA8260	1.00
3861	Chloride	J	J	Q	P	2620 ug/L			WA	660.0000	EPA300.0	1.00
3862	Chloride	U	U			2150 ug/L			GE	64.0000	EPA300.0	1.00
3863	Chlorobenzene	U	U			0.3 ug/L			WA	0.1000	EPA8260H	1.00
3864	Chlorobenzene	U	U			0.012 ug/L			GE	0.0120	EPA8260	1.00
3865	Hexachlorobenzene	U	U	0	0	1.1 ug/L			WA	0.4000	EPA8270H	1.00
3866	Hexachlorobenzene	1	U	0	0	1 ug/L			WA	0.4000	EPA8270H	1.00
3867	Hexachlorobenzene	U	U			0.0292 ug/L			GE	0.0292	EPA8270	1.00
3868	Hexachlorocyclopentadiene	U	U	0	0	1.1 ug/L			WA	0.2000	EPA8270H	1.00
3869	Hexachlorocyclopentadiene	1	U	0	0	1 ug/L			WA	0.2000	EPA8270H	1.00
3870	Hexachlorocyclopentadiene	U	U			0.0438 ug/L			GE	0.0438	EPA8270	1.00
3871	Hexachloroethane	U	U	0	0	1.1 ug/L			WA	0.6000	EPA8270H	1.00
3872	Hexachloroethane	1	U	0	0	1 ug/L			WA	0.6000	EPA8270H	1.00
3873	Hexachloroethane	U	U			0.0229 ug/L			GE	0.0229	EPA8270	1.00
3874	Specific conductance	J	J	Q		30.9 uS/cm			WA	1.0000	EPA120.1	1.00
3875	Specific conductance	U	U			34.1 uS/cm			GE	0.5000	EPA120.1	1.00
3876	Cobalt, total recoverable	U	U			11.7 ug/L			WA	12.0000	CLP-MOD	1.00
3877	Cobalt, total recoverable	1	U			11.7 ug/L			WA	12.0000	CLP-MOD	1.00
3878	Cobalt, total recoverable	J	J			1.99 ug/L			GE	0.5980	EPA6010	1.00
3879	Chromium, total recoverable	U	U			11.7 ug/L			WA	12.0000	CLP-MOD	1.00
3880	Chromium, total recoverable	1	U			11.7 ug/L			WA	12.0000	CLP-MOD	1.00
3881	Chromium, total recoverable	U	U			2.28 ug/L			GE	2.2800	EPA6010	1.00
3882	Carbon disulfide	U	U			2 ug/L			WA	2.0000	EPA8260H	1.00
3883	Carbon disulfide	U	U			0.129 ug/L			GE	0.1290	EPA8260	1.00
3884	Copper, total recoverable	U	U			3.3 ug/L			WA	3.3000	CLP-MOD	1.00
3885	Copper, total recoverable	1	U			3.3 ug/L			WA	3.3000	CLP-MOD	1.00
3886	Copper, total recoverable	J	J			2.17 ug/L			GE	0.4580	EPA6010	1.00

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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLH	METHOD	DILFACT
3887	Cyanide		UJ	I		6.7	ug/L	.	WA	6.7000	CLP-HOD	1.00
3888	Cyanide		U			0.7	ug/L	.	GE	0.7000	EPA335.2	1.00
3889	Chloroethane (Vinyl chloride)		U	C		0.2	ug/L	.	WA	0.0700	EPA8021	1.00
3890	Chloroethane (Vinyl chloride)		U			0.015	ug/L	.	GE	0.0150	EPA8260	1.00
3891	Chloroethane		U			0.2	ug/L	.	WA	0.0800	EPA8260H	1.00
3892	Chloroethane		U			0.025	ug/L	.	GE	0.0250	EPA8260	1.00
3893	Benzene		U			0.09	ug/L	.	WA	0.0300	EPA8010	1.00
3894	Benzene		U			0.017	ug/L	.	GE	0.0170	EPA8260	1.00
3895	Dibenz(a,h)anthracene		U	O		1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
3896	Dibenz(a,h)anthracene	1	U	O		0.0938	ug/L	.	GE	0.0938	EPA8270	1.00
3897	Dibenz(a,h)anthracene		U			0.0525	ug/L	.	GE	0.0200	CLP	1.00
3898	delta-Benzene hexachloride		UJ		L	0.025	ug/L	.	GE	0.0250	EPA8080	1.00
3899	delta-Benzene hexachloride		U			0.7	ug/L	.	WA	0.2300	EPA8260H	1.00
3900	Dibromochloromethane		U			0.017	ug/L	.	GE	0.0170	EPA8260	1.00
3901	Dibromochloromethane		U			1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
3902	Diethyl phthalate		U	OV		1	ug/L	.	WA	0.6000	EPA8270H	1.00
3903	Diethyl phthalate		U	OV		0.0156	ug/L	.	GE	0.0156	EPA8270	1.00
3904	Diethyl phthalate	1	U			1.1	ug/L	.	WA	0.5000	EPA8270H	1.00
3905	Dibenzofuran		U	O		1	ug/L	.	WA	0.5000	EPA8270H	1.00
3906	Dibenzofuran	1	U	O		0.0177	ug/L	.	GE	0.0177	EPA8270	1.00
3907	Dibenzofuran		U			0.105	ug/L	.	WA	0.6000	EPA8270H	1.00
3908	Dieldrin		UJ		L	0.825	ug/L	.	GE	0.0300	CLP	1.00
3909	Dieldrin		U			1.1	ug/L	.	GE	0.0250	EPA8080	1.00
3910	Dimethyl phthalate		U	O		20	ug/L	.	WA	0.9000	EPA8270H	1.00
3911	Dimethyl phthalate	1	U	O		20	ug/L	.	WA	0.9000	EPA8270H	1.00
3912	Dimethyl phthalate		U			0.0177	ug/L	.	GE	0.0177	EPA8270	1.00
3913	Di-n-butyl phthalate		UJ	OV	H	1	ug/L	.	WA	0.9000	EPA8270H	1.00
3914	Di-n-butyl phthalate	1	UJ	OV	H	0.461	ug/L	.	GE	0.4610	EPA8270H	1.00
3915	Di-n-butyl phthalate		U	V		1.1	ug/L	.	WA	0.9000	EPA8270H	1.00
3916	Di-n-octyl phthalate		U	O		1	ug/L	.	WA	0.9000	EPA8270H	1.00
3917	Di-n-octyl phthalate	1	U	O		0.0729	ug/L	.	GE	0.0729	EPA8270	1.00
3918	Di-n-octyl phthalate		U			0.105	ug/L	.	WA	0.0670	CLP	1.00
3919	Endrin aldehyde		UJ		L	0.05	ug/L	.	GE	0.0500	EPA8080	1.00
3920	Endrin ketone		UJ		L	0.025	ug/L	.	GE	0.0250	EPA8080	1.00
3921	Endrin ketone		U			0.042	ug/L	.	WA	0.0100	CLP	1.00
3922	Endrin		UJ		L	0.05	ug/L	.	GE	0.0500	EPA8080	1.00
3923	Endrin		U			0.105	ug/L	.	WA	0.0300	CLP	1.00
3924	Endosulfan I		UJ		L	0.025	ug/L	.	GE	0.0250	EPA8080	1.00
3925	Endosulfan I		U			0.025	ug/L	.	WA	0.0200	CLP	1.00
3926	Endosulfan II		UJ		L	0.042	ug/L	.	GE	0.0250	EPA8080	1.00
3927	Endosulfan II		U			0.05	ug/L	.	WA	0.0100	CLP	1.00
3928	Endosulfan sulfate		UJ		L	0.105	ug/L	.	GE	0.0500	EPA8080	1.00
3929	Endosulfan sulfate		U			0.05	ug/L	.	WA	0.0300	CLP	1.00
3930	Ethylbenzene		U			0.05	ug/L	.	GE	0.0500	EPA8080	1.00
3931	Ethylbenzene		U			0.015	ug/L	.	WA	0.0150	EPA8260	1.00
3932	Fluoranthene		U	O		1.1	ug/L	.	WA	0.4000	EPA8270H	1.00
3933	Fluoranthene	1	U	O		1	ug/L	.	WA	0.4000	EPA8270H	1.00
3934	Fluoranthene		U			0.025	ug/L	.	GE	0.0250	EPA8270	1.00
3935	Iron, total recoverable					16.3	ug/L	.	WA	3.3000	CLP-HOD	1.00
3936	Iron, total recoverable	1				15.6	ug/L	.	WA	3.3000	CLP-HOD	1.00
3937	Iron, total recoverable					24.2	ug/L	.	GE	18.2000	EPA6010	1.00
3938	Fluorene		U	O		1.1	ug/L	.	WA	0.4000	EPA8270H	1.00
3939	Fluorene	1	U	O		1	ug/L	.	WA	0.4000	EPA8270H	1.00

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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
3940	Fluorene		U			0.0125	ug/L	.	GE	0.0125	EPA8270	1.00
3941	gamma-Chlordane		UJ		L	0.0525	ug/L	.	WA	0.0200	CLP	1.00
3942	gamma-Chlordane		U			0.025	ug/L	.	GE	0.0250	EPA6080	1.00
3943	Hexachlorobutadiene		U	0		1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
3944	Hexachlorobutadiene	1	U	0		1	ug/L	.	WA	0.6000	EPA8270H	1.00
3945	Hexachlorobutadiene		U			0.0698	ug/L	.	GE	0.0698	EPA8270	1.00
3946	Mercury, total recoverable		U			0.067	ug/L	.	WA	0.0700	CLP-HOD	1.00
3947	Mercury, total recoverable		U			0.04	ug/L	.	GE	0.0400	EPA7470	1.00
3948	Heptachlor		UJ		L	0.0525	ug/L	.	WA	0.0200	CLP	1.00
3949	Heptachlor		U			0.025	ug/L	.	GE	0.0250	EPA8080	1.00
3950	Heptachlor epoxide		UJ		L	0.0525	ug/L	.	WA	0.0200	CLP	1.00
3951	Heptachlor epoxide		U			0.025	ug/L	.	GE	0.0250	EPA8080	1.00
3952	Indeno(1,2,3-c,d)pyrene		U	0		1.1	ug/L	.	WA	0.9000	EPA8270H	1.00
3953	Indeno(1,2,3-c,d)pyrene		U	0		1	ug/L	.	WA	0.9000	EPA8270H	1.00
3954	Indeno(1,2,3-c,d)pyrene	1	U			0.0365	ug/L	.	GE	0.0365	EPA8270	1.00
3955	Isophorone		U	0		1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
3956	Isophorone	1	U	0		1	ug/L	.	WA	1.0000	EPA8270H	1.00
3957	Isophorone		U			0.103	ug/L	.	GE	0.1030	EPA8270	1.00
3958	Potassium, total recoverable		U			1670	ug/L	.	WA	1667.000	CLP-HOD	1.00
3959	Potassium, total recoverable		U			1670	ug/L	.	WA	1667.000	CLP-HOD	1.00
3960	Potassium, total recoverable	1	U			1570	ug/L	.	GE	91.6000	EPA6010	1.00
3961	Lindane		UJ		L	0.0525	ug/L	.	WA	0.0200	CLP	1.00
3962	Lindane		U			0.0125	ug/L	.	GE	0.0125	EPA8080	1.00
3963	Toluene		U			0.1	ug/L	.	WA	0.0300	EPA8021	1.00
3964	Toluene		J	V	H	0.15	ug/L	.	GE	0.0440	EPA8260	1.00
3965	Methyl ethyl ketone		U			10	ug/L	.	WA	3.0000	EPA8260H	1.00
3966	Methyl ethyl ketone		UJ	V	H	0.14	ug/L	.	GE	0.1400	EPA8260	1.00
3967	Methoxychlor		UJ		L	0.525	ug/L	.	WA	0.1700	CLP	1.00
3968	Methoxychlor		U			0.25	ug/L	.	GE	0.2500	EPA8080	1.00
3969	Hgnesium, total recoverable		U			1670	ug/L	.	WA	1667.000	CLP-HOD	1.00
3970	Hgnesium, total recoverable		U			1670	ug/L	.	WA	1667.000	CLP-HOD	1.00
3971	Hgnesium, total recoverable	1	U			767	ug/L	.	GE	2.6800	EPA6010	1.00
3972	Methyl isobutyl ketone		U			10	ug/L	.	WA	2.0000	EPA8260H	1.00
3973	Methyl isobutyl ketone		U			0.204	ug/L	.	GE	0.2040	EPA8260	1.00
3974	Hanganese, total recoverable					2.2	ug/L	.	WA	0.6700	CLP-HOD	1.00
3975	Hanganese, total recoverable					2.3	ug/L	.	WA	0.6700	CLP-HOD	1.00
3976	Hanganese, total recoverable	1				2.05	ug/L	.	GE	0.2390	EPA6010	1.00
3977	Naphthalene		U	0		1.1	ug/L	.	WA	0.7000	EPA8270H	1.00
3978	Naphthalene		U	0		1	ug/L	.	WA	0.7000	EPA8270H	1.00
3979	Naphthalene	1	U			0.0177	ug/L	.	GE	0.0177	EPA8270	1.00
3980	Sodium, total recoverable		U			2790	ug/L	.	WA	1667.000	CLP-HOD	1.00
3981	Sodium, total recoverable					2670	ug/L	.	WA	1667.000	CLP-HOD	1.00
3982	Sodium, total recoverable	1				2670	ug/L	.	GE	37.8000	EPA6010	1.00
3983	Nitrobenzene		U	0		1.1	ug/L	.	WA	0.8000	EPA8270H	1.00
3984	Nitrobenzene	1	U	0		1	ug/L	.	WA	0.8000	EPA8270H	1.00
3985	Nitrobenzene		U			0.0325	ug/L	.	GE	0.0325	EPA8270	1.00
3986	N-Nitrosodipropylamine		U	0		1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
3987	N-Nitrosodipropylamine		U	0		1	ug/L	.	WA	1.0000	EPA8270H	1.00
3988	N-Nitrosodipropylamine	1	U			0.0375	ug/L	.	GE	0.0375	EPA8270	1.00
3989	Anomila nitrogen		U	I		.50	ug/L	.	GE	30.0000	EPA550.1	1.00
3990	Nickel, total recoverable		U			11.7	ug/L	.	WA	12.0000	CLP-HOD	1.00
3991	Nickel, total recoverable		U			11.7	ug/L	.	WA	12.0000	CLP-HOD	1.00
3992	Nickel, total recoverable	1	J			2.02	ug/L	.	GE	1.8400	EPA6010	1.00

Well Name=CBR 3D Secondary ID=' ' Sample Date=111594
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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLN	METHOD	DILFACT
3993	N-Nitrosodiphenylamine		U	0		1.1	ug/L	.	WA	0.9000	EPA8270H	1.00
3994	N-Nitrosodiphenylamine	1	U	0		1	ug/L	.	WA	0.9000	EPA8270H	1.00
3995	N-Nitrosodiphenylamine		U			0.0188	ug/L	.	GE	0.0188	EPA8270	1.00
3996	Nitrate as nitrogen		J	Q	P	2360	ug/L	.	WA	83.3000	EPA353.2	5.00
3997	Nitrate-nitrite as nitrogen	1				2210	ug/L	.	GE	30.0000	EPA353.1	2.00
3998	Nitrate-nitrite as nitrogen					2130	ug/L	.	GE	30.0000	EPA353.1	2.00
3999	Lead, total recoverable		U			2.5	ug/L	.	WA	2.4000	CLP-HOD	1.00
4000	Lead, total recoverable	1	U			2.5	ug/L	.	WA	2.4000	CLP-HOD	1.00
4001	Lead, total recoverable		J	V	H	5.2	ug/L	.	GE	0.6900	EPA7421	1.00
4002	PCB 1016		UJ		L	1.05	ug/L	.	WA	0.3500	CLP	1.00
4003	PCB 1016		U			0.057	ug/L	.	GE	0.0570	EPA8080	1.00
4004	PCB 1221		UJ		L	2.1	ug/L	.	WA	0.6700	CLP	1.00
4005	PCB 1221		U			0.0739	ug/L	.	GE	0.0739	EPA8080	1.00
4006	PCB 1232		UJ		L	1.05	ug/L	.	WA	0.3500	CLP	1.00
4007	PCB 1232		U			0.0618	ug/L	.	GE	0.0618	EPA8080	1.00
4008	PCB 1242		UJ	V	L	1.05	ug/L	.	WA	0.3500	CLP	1.00
4009	PCB 1242		U			0.0411	ug/L	.	GE	0.0411	EPA8080	1.00
4010	PCB 1248		UJ		L	1.05	ug/L	.	WA	0.3500	CLP	1.00
4011	PCB 1248		U			0.06	ug/L	.	GE	0.0600	EPA8080	1.00
4012	PCB 1254		UJ		L	1.05	ug/L	.	WA	0.3500	CLP	1.00
4013	PCB 1254		U			0.078	ug/L	.	GE	0.0780	EPA8080	1.00
4014	PCB 1260		UJ		L	1.05	ug/L	.	WA	0.3500	CLP	1.00
4015	PCB 1260		U			0.071	ug/L	.	GE	0.0710	EPA8080	1.00
4016	Pentachlorophenol		U	0		5.5	ug/L	.	WA	1.0000	EPA8270H	1.00
4017	Pentachlorophenol	1	U	0		5	ug/L	.	WA	1.0000	EPA8270H	1.00
4018	Pentachlorophenol		U			0.2	ug/L	.	GE	0.2000	EPA8270	1.00
4019	pH		J	Q	P	5.73	PH	.	WA	0.1000	EPA150.1	1.00
4020	pH		J	Q	L	5.66	PH	.	GE	0.0100	EPA150.1	1.00
4021	Phenanthrene		U	0		1.1	ug/L	.	WA	0.4000	EPA8270H	1.00
4022	Phenanthrene	1	U	0		1	ug/L	.	WA	0.4000	EPA8270H	1.00
4023	Phenanthrene		U			0.0177	ug/L	.	GE	0.0177	EPA8270	1.00
4024	Phenol		UJ	OV	H	4	ug/L	.	WA	0.8000	EPA8270H	1.00
4025	Phenol	1	U	OV	I	1	ug/L	.	GE	0.0448	EPA8270	1.00
4026	Phenol		UJ	I	P	0.0448	ug/L	.	WA	0.0500	CLP	1.00
4027	P,p'-DDD		UJ		L	0.105	ug/L	.	GE	0.0500	EPA8080	1.00
4028	P,p'-DDD		UJ			0.05	ug/L	.	WA	0.0500	CLP	1.00
4029	P,p'-DDE		UJ		L	0.105	ug/L	.	GE	0.0250	EPA8080	1.00
4030	P,p'-DDE		U		L	0.025	ug/L	.	WA	0.0500	CLP	1.00
4031	P,p'-DDT		UJ			0.105	ug/L	.	GE	0.0500	EPA8080	1.00
4032	P,p'-DDT		U			0.05	ug/L	.	WA	0.0500	EPA8080	1.00
4033	Pyrene		U	0		1.1	ug/L	.	WA	0.4000	EPA8270H	1.00
4034	Pyrene	1	U	0		1	ug/L	.	WA	0.4000	EPA8270H	1.00
4035	Pyrene		UJ	I	P	0.0229	ug/L	.	GE	0.0229	EPA8270	1.00
4036	Antimony, total recoverable		U			1.7	ug/L	.	WA	2.0000	CLP-HOD	1.00
4037	Antimony, total recoverable	1	U			1.7	ug/L	.	WA	2.0000	CLP-HOD	1.00
4038	Antimony, total recoverable		U			1.94	ug/L	.	GE	1.9400	EPA7041	1.00
4039	Selenium, total recoverable		UJ	IH	P	1.7	ug/L	.	WA	1.7000	CLP-HOD	1.00
4040	Selenium, total recoverable	1	UJ	IH	P	1.7	ug/L	.	WA	1.7000	CLP-HOD	1.00
4041	Selenium, total recoverable		U			1.25	ug/L	.	GE	1.2500	EPA7740	1.00
4042	Sulfate		J	Q	P	310	ug/L	.	WA	250.0000	EPA375.4	1.00
4043	Sulfate		J			178	ug/L	.	GE	90.0000	EPA300.0	1.00
4044	Styrene		U			0.1	ug/L	.	WA	0.0300	EPA8021	1.00
4045	Styrene		U			0.017	ug/L	.	GE	0.0170	EPA8260	1.00

Well Name=CBR 3D Secondary ID= Sample Date=111594
(continued)

OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
4046	1,1,2,2-Tetrachloroethane	U				0.1	ug/L	.	WA	0.0300	EPA8021	1.00
4047	1,1,2,2-Tetrachloroethane	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
4048	Tetrachloroethylene	J		B	P	0.06	ug/L	.	WA	0.1000	EPA8260H	1.00
4049	Tetrachloroethylene	U				0.026	ug/L	.	GE	0.0260	EPA8260	1.00
4050	Total dissolved solids	J		Q	P	34000	ug/L	.	WA	1.0000	EPA160.2	1.00
4051	Total dissolved solids					48000	ug/L	.	GE	6300.000	EPA160.1	1.00
4052	Thallium, total recoverable	UJ		IW	P	3.3	ug/L	.	WA	3.3000	CLP-NOD	1.00
4053	Thallium, total recoverable	UJ		IW	P	3.3	ug/L	.	WA	3.3000	CLP-NOD	1.00
4054	Thallium, total recoverable	U				0.66	ug/L	.	GE	0.6600	EPA7841	1.00
4055	Trichloroethylene	U		C		0.1	ug/L	.	WA	0.0300	EPA8020	1.00
4056	Trichloroethylene	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
4057	Tritium					4.5	pci/ml	0.5600	TH	0.5000	EPA906.0	1.00
4058	Tritium					3.6	pci/ml	0.5700	TH	0.6200	EPA906.0	1.00
4059	Tritium	4				4450	pci/L	535.0000	GP	629.0000	EPIA-002	1.00
4060	Toxaphene	UJ			L	5.25	ug/L	.	WA	1.7000	CLP	1.00
4061	Toxaphene	U				0.75	ug/L	.	GE	0.7500	EPA8080	1.00
4062	Vinyl acetate	U				10	ug/L	.	WA	2.0000	EPA8260H	1.00
4063	Vinyl acetate	U				0.142	ug/L	.	GE	0.1420	EPA8260	1.00
4064	Vanadium, total recoverable	U				10	ug/L	.	WA	10.0000	CLP-NOD	1.00
4065	Vanadium, total recoverable	U				10	ug/L	.	WA	10.0000	CLP-NOD	1.00
4066	Vanadium, total recoverable	J				0.323	ug/L	.	GE	0.3140	EPA6010	1.00
4067	Xylenes	U				0.4	ug/L	.	WA	0.1000	EPA8260H	1.00
4068	Xylenes	U				0.06	ug/L	.	GE	0.0600	EPA8260	1.00
4069	1,1-Dichloroethylene	U				0.5	ug/L	.	WA	0.2000	EPA8260H	1.00
4070	1,1-Dichloroethylene	U				0.018	ug/L	.	GE	0.0180	EPA8260	1.00
4071	1,1-Dichloroethylene	U				0.1	ug/L	.	WA	0.1000	EPA8260H	1.00
4072	1,1-Dichloroethane	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
4073	1,1,1-Trichloroethane	U				0.3	ug/L	.	WA	0.1000	EPA8260H	1.00
4074	1,1,1-Trichloroethane	U				0.022	ug/L	.	GE	0.0220	EPA8260	1.00
4075	1,1,2-Trichloroethane	U				0.2	ug/L	.	WA	0.0700	EPA8260H	1.00
4076	1,1,2-Trichloroethane	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
4077	1,2-Dichloroethylene	J		B	P	2	ug/L	.	WA	6.0000	EPA8260H	1.00
4078	1,2-Dichloroethylene	U				0.03	ug/L	.	GE	0.0300	EPA8260	1.00
4079	1,2-Dichlorobenzene	U		0		1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4080	1,2-Dichlorobenzene	U		0		1	ug/L	.	WA	0.6000	EPA8270H	1.00
4081	1,2-Dichlorobenzene	U				0.0177	ug/L	.	GE	0.0177	EPA8270	1.00
4082	1,2-Dichloroethane	U				0.2	ug/L	.	WA	0.0700	EPA8260H	1.00
4083	1,2-Dichloroethane	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
4084	1,2-Dichloropropane	U				0.06	ug/L	.	WA	0.0200	EPA8021	1.00
4085	1,2-Dichloropropane	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
4086	1,2,4-Trichlorobenzene	U		0		1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4087	1,2,4-Trichlorobenzene	U		0		1	ug/L	.	WA	0.6000	EPA8270H	1.00
4088	1,2,4-Trichlorobenzene	U				0.0781	ug/L	.	GE	0.0781	EPA8270	1.00
4089	1,3-Dichlorobenzene	U		0		1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4090	1,3-Dichlorobenzene	U		0		1	ug/L	.	WA	0.6000	EPA8270H	1.00
4091	1,3-Dichlorobenzene	U				0.122	ug/L	.	GE	0.1220	EPA8270	1.00
4092	cis-1,3-Dichloropropene	U				5	ug/L	.	WA	2.0000	EPA8260H	1.00
4093	cis-1,3-Dichloropropene	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
4094	trans-1,3-Dichloropropene	U				5	ug/L	.	WA	2.0000	EPA8260H	1.00
4095	trans-1,3-Dichloropropene	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
4096	1,4-Dichlorobenzene	U		0		1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4097	1,4-Dichlorobenzene	U		0		1	ug/L	.	WA	0.6000	EPA8270H	1.00
4098	1,4-Dichlorobenzene	1				0.025	ug/L	.	GE	0.0250	EPA8270	1.00

W011 Name=CBR 3D Secondary ID= Sample Date=111594
(continued)

OBS	TESTNAME	LADDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
4099	2-Chlorophenol		U	0		1.1	ug/L	.	WA	0.7000	EPA8270H	1.00
4100	2-Chlorophenol	1	U	0		1	ug/L	.	WA	0.7000	EPA8270H	1.00
4101	2-Chlorophenol		U			0.0323	ug/L	.	GE	0.0323	EPA8270	1.00
4102	2-Chloronaphthalene		U	0		1.1	ug/L	.	WA	0.5000	EPA8270H	1.00
4103	2-Chloronaphthalene	1	U	0		1	ug/L	.	WA	0.5000	EPA8270H	1.00
4104	2-Chloronaphthalene		U			0.122	ug/L	.	GE	0.1220	EPA8270	1.00
4105	2-Hexanone		U			10	ug/L	.	WA	3.0000	EPA8260H	1.00
4106	2-Hexanone		UJ	V	H	0.194	ug/L	.	GE	0.1940	EPA8260	1.00
4107	2-Methylnaphthalene		U	0		1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4108	2-Methylnaphthalene	1	U	0		1	ug/L	.	WA	0.6000	EPA8270H	1.00
4109	2-Methylnaphthalene		U			0.0177	ug/L	.	GE	0.0177	EPA8270	1.00
4110	o-Cresol (2-Methylphenol)		U	0		1.1	ug/L	.	WA	0.7000	EPA8270H	1.00
4111	o-Cresol (2-Methylphenol)	1	U	0		1	ug/L	.	WA	0.7000	EPA8270H	1.00
4112	o-Cresol (2-Methylphenol)		U			0.05	ug/L	.	GE	0.0500	EPA8270	1.00
4113	o-Nitroaniline		U	0		5.5	ug/L	.	WA	1.0000	EPA8270H	1.00
4114	o-Nitroaniline	1	U	0		5	ug/L	.	WA	1.0000	EPA8270H	1.00
4115	o-Nitroaniline		U			0.0323	ug/L	.	GE	0.0323	EPA8270	1.00
4116	2-Nitrophenol		U	0		1.1	ug/L	.	WA	0.7000	EPA8270H	1.00
4117	2-Nitrophenol	1	U	0		1	ug/L	.	WA	0.7000	EPA8270H	1.00
4118	2-Nitrophenol		U			0.0125	ug/L	.	GE	0.0125	EPA8270	1.00
4119	2,4-Dichlorophenol		U	0		1.1	ug/L	.	WA	0.5000	EPA8270H	1.00
4120	2,4-Dichlorophenol	1	U	0		1	ug/L	.	WA	0.5000	EPA8270H	1.00
4121	2,4-Dichlorophenol		U			0.0229	ug/L	.	GE	0.0229	EPA8270	1.00
4122	2,4-Dimethyl phenol		U	0		1.1	ug/L	.	WA	0.8000	EPA8270H	1.00
4123	2,4-Dimethyl phenol	1	U	0		1	ug/L	.	WA	0.8000	EPA8270H	1.00
4124	2,4-Dimethyl phenol		U			0.108	ug/L	.	GE	0.1080	EPA8270	1.00
4125	2,4-Dinitrophenol		U	0		5.5	ug/L	.	WA	3.0000	EPA8270H	1.00
4126	2,4-Dinitrophenol	1	U	0		5	ug/L	.	WA	3.0000	EPA8270H	1.00
4127	2,4-Dinitrophenol		U			0.346	ug/L	.	GE	0.3460	EPA8270	1.00
4128	2,4-Dinitrotoluene		U	0		1.1	ug/L	.	WA	0.5000	EPA8270H	1.00
4129	2,4-Dinitrotoluene	1	U	0		1	ug/L	.	WA	0.5000	EPA8270H	1.00
4130	2,4-Dinitrotoluene		U			0.0950	ug/L	.	GE	0.0950	EPA8270	1.00
4131	2,4,5-Trichlorophenol		U	0		5.5	ug/L	.	WA	0.4000	EPA8270H	1.00
4132	2,4,5-Trichlorophenol	1	U	0		5	ug/L	.	WA	0.4000	EPA8270H	1.00
4133	2,4,5-Trichlorophenol		U			0.0531	ug/L	.	GE	0.0531	EPA8270	1.00
4134	2,4,6-Trichlorophenol		U	0		1.1	ug/L	.	WA	0.3000	EPA8270H	1.00
4135	2,4,6-Trichlorophenol	1	U	0		1	ug/L	.	WA	0.3000	EPA8270H	1.00
4136	2,4,6-Trichlorophenol		U			0.0125	ug/L	.	GE	0.0125	EPA8270	1.00
4137	2,6-Dinitrotoluene		U	0		1.1	ug/L	.	WA	0.5000	EPA8270H	1.00
4138	2,6-Dinitrotoluene	1	U	0		1	ug/L	.	WA	0.5000	EPA8270H	1.00
4139	2,6-Dinitrotoluene		U			0.115	ug/L	.	GE	0.1150	EPA8270	1.00
4140	m-Nitroaniline		U	0		5.5	ug/L	.	WA	0.6000	EPA8270H	1.00
4141	m-Nitroaniline	1	U	0		5	ug/L	.	WA	0.6000	EPA8270H	1.00
4142	m-Nitroaniline		U			0.148	ug/L	.	GE	0.1480	EPA8270	1.00
4143	3,3'-Dichlorobenzidine		U	0		2.2	ug/L	.	WA	10.0000	EPA8270H	1.00
4144	3,3'-Dichlorobenzidine	1	U	0		2	ug/L	.	WA	10.0000	EPA8270H	1.00
4145	3,3'-Dichlorobenzidine		U			0.118	ug/L	.	GE	0.1180	EPA8270	1.00
4146	m,p-Cresol		U			0.51	ug/L	.	GE	0.5100	EPA8270	1.00
4147	4-Bromophenyl phenyl ether		U	0		1.1	ug/L	.	WA	0.4000	EPA8270H	1.00
4148	4-Bromophenyl phenyl ether	1	U	0		1	ug/L	.	WA	0.4000	EPA8270H	1.00
4149	4-Bromophenyl phenyl ether		U			0.0594	ug/L	.	GE	0.0594	EPA8270	1.00
4150	4-Chloroaniline		U	0		1.1	ug/L	.	WA	3.0000	EPA8270H	1.00
4151	4-Chloroaniline	1	U	0		1	ug/L	.	WA	3.0000	EPA8270H	1.00

Well Name=CBR 3D Secondary ID= ' Sample Date=111594
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
4152	4-Chloroaniline		U			0.0156	ug/L	.	GE	0.0156	EPA8270	1.00
4153	4-Chlorophenyl phenyl ether		U	0		1.1	ug/L	.	WA	0.5000	EPA8270H	1.00
4154	4-Chlorophenyl phenyl ether	1	U	0		1	ug/L	.	WA	0.5000	EPA8270H	1.00
4155	4-Chlorophenyl phenyl ether		U			0.0156	ug/L	.	GE	0.0156	EPA8270	1.00
4156	4-Chloro-m-cresol		U	VO		1.1	ug/L	.	WA	0.4000	EPA8270H	1.00
4157	4-Chloro-m-cresol	1	U	VO		1	ug/L	.	WA	0.4000	EPA8270H	1.00
4158	4-Chloro-m-cresol		U			0.0271	ug/L	.	GE	0.0271	EPA8270	1.00
4159	p-Cresol (4-Methylphenol)		U	0		1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4160	p-Cresol (4-Methylphenol)	1	U	0		1	ug/L	.	WA	0.6000	EPA8270H	1.00
4161	p-Nitroaniline		U	0		5.5	ug/L	.	WA	1.0000	EPA8270H	1.00
4162	p-Nitroaniline	1	U	0		5	ug/L	.	WA	1.0000	EPA8270H	1.00
4163	p-Nitroaniline		U			0.106	ug/L	.	GE	0.1060	EPA8270	1.00
4164	4-Nitrophenol		U	IO		5.5	ug/L	.	WA	1.0000	EPA8270H	1.00
4165	4-Nitrophenol	1	U	IO		5	ug/L	.	WA	1.0000	EPA8270H	1.00
4166	4-Nitrophenol		U			0.199	ug/L	.	GE	0.1990	EPA8270	1.00
4167	2-Methyl-4,6-dinitrophenol		U	0		5.5	ug/L	.	WA	0.7000	EPA8270H	1.00
4168	2-Methyl-4,6-dinitrophenol	1	U	0		5	ug/L	.	WA	0.7000	EPA8270H	1.00
4169	2-Methyl-4,6-dinitrophenol		U			0.292	ug/L	.	GE	0.2920	EPA8270	1.00
4170	Zinc, total recoverable					11.6	ug/L	.	WA	6.3000	CLP-MOD	1.00
4171	Zinc, total recoverable	1				12.8	ug/L	.	WA	6.3000	CLP-MOD	1.00
4172	Zinc, total recoverable		J	V	H	12.6	ug/L	.	GE	2.2200	EPA6010	1.00

Well Name=CBR 3D Secondary ID= ' Sample Date=030195

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
4173	alpha-Benzene hexachloride		U			0.0255	ug/L	.	GE	0.0255	EPA8080	1.00
4174	Acetone		UJ	0	L	5	ug/L	.	GE	5.0000	EPA8260	1.00
4175	alpha-Chlordane		U			0.051	ug/L	.	GE	0.0510	EPA8080	1.00
4176	Silver, total recoverable		U			0.65	ug/L	.	GE	0.6500	EPA6010	1.00
4177	Aldrin		U			0.0255	ug/L	.	GE	0.0255	EPA8080	1.00
4178	Gross alpha					0.892	pc1/L	0.5370	GP	0.8350	EPIA-001	1.00
4179	Aluminum, total recoverable			V		55.6	ug/L	.	GE	20.0000	EPA6010	1.00
4180	Acenaphthene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4181	Acenaphthylene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4182	Anthracene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4183	Arsenic, total recoverable		U			5	ug/L	.	GE	5.0000	EPA7060	1.00
4184	Benzo(a)anthracene		UJ	Q	L	0.1	ug/L	.	GE	0.1000	EPA8270	1.00
4185	Benzo(a)pyrene		UJ	Q	L	0.1	ug/L	.	GE	0.1000	EPA8270	1.00
4186	Barium, total recoverable					35.8	ug/L	.	GE	3.0000	EPA6010	1.00
4187	Benzo(b)fluoranthene		UJ	Q	L	0.1	ug/L	.	GE	0.1000	EPA8270	1.00
4188	Beta-Benzene hexachloride		U			0.051	ug/L	.	GE	0.0510	EPA8080	1.00
4189	Butylbenzyl phthalate		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4190	Bis(2-chloroisopropyl) ether		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4191	Benzoic acid		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4192	Nonvolatile beta					2.38	pc1/L	0.7540	GP	1.3000	EPIA-001	1.00
4193	Beryllium, total recoverable		J	E		0.196	ug/L	.	GE	3.0000	EPA6010	1.00
4194	Benzo(g,h,i)perylene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4195	Benzo(k)fluoranthene		UJ	Q	L	0.1	ug/L	.	GE	0.1000	EPA8270	1.00
4196	Bromodichloromethane		UJ	Q	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
4197	Benzyl alcohol		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4198	Bis(2-chloroethoxy) methane		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00

Well Name=CBR 3D Secondary ID= Sample Date=030195

(continued)

OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DIFACT
4199	Bis(2-chloroethyl) ether	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
4200	Bis(2-ethylhexyl) phthalate	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
4201	Calcium, total recoverable					277 ug/L			GE	20.0000	EPA6010	1.00
4202	Carbon tetrachloride	UJ	Q	L		0.05 ug/L			GE	0.0500	EPA8260	1.00
4203	Cadmium, total recoverable	U				2 ug/L			GE	2.0000	EPA6010	1.00
4204	Bromoform	UJ	Q	L		0.05 ug/L			GE	0.0500	EPA8260	1.00
4205	Chloroform	UJ	Q	L		0.05 ug/L			GE	0.0500	EPA8260	1.00
4206	Chrysene	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8270	1.00
4207	Dichloromethane (Methylene chloride)	UJ	QV	L		0.5 ug/L			GE	0.5000	EPA8260	1.00
4208	Bromomethane (Methyl bromide)	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8260	1.00
4209	Chloromethane (Methyl chloride)	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8260	1.00
4210	Chloride					4450 ug/L			GE	250.0000	EPA300.0	1.00
4211	Chlorobenzene	UJ	Q	L		0.05 ug/L			GE	0.0500	EPA8260	1.00
4212	Hexachlorobenzene	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8270	1.00
4213	Hexachlorocyclopentadiene	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
4214	Hexachloroethane	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8270	1.00
4215	Specific conductance					27.4 uS/cm			GE	0.3000	EPA120.1	1.00
4216	Cobalt, total recoverable	J	E			1.51 ug/L			GE	4.0000	EPA6010	1.00
4217	Chromium, total recoverable	U				4 ug/L			GE	4.0000	EPA6010	1.00
4218	Carbon disulfide	UJ	Q	L		1 ug/L			GE	1.0000	EPA8260	1.00
4219	Copper, total recoverable	J	E			0.971 ug/L			GE	4.0000	EPA6010	1.00
4220	Cyanide	U	V			20 ug/L			GE	20.0000	EPA335.3	1.00
4221	Chloroethane (Vinyl chloride)	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8260	1.00
4222	Chloroethane	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8260	1.00
4223	Benzene	UJ	Q	L		0.5 ug/L			GE	0.5000	EPA8260	1.00
4224	Dibenz(a,h)anthracene	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8270	1.00
4225	delta-Benzene hexachloride	U				0.051 ug/L			GE	0.0510	EPA8080	1.00
4226	Dibromochloromethane	UJ	Q	L		0.05 ug/L			GE	0.0500	EPA8260	1.00
4227	Diethyl phthalate	UJ	QV	L		1 ug/L			GE	1.0000	EPA8270	1.00
4228	Dibenzofuran	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
4229	Dieldrin	U				0.051 ug/L			GE	0.0510	EPA8080	1.00
4230	Diethyl phthalate	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
4231	Di-n-butyl phthalate	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
4232	Di-n-octyl phthalate	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
4233	Endrin ketone	U				0.102 ug/L			GE	0.1020	EPA8080	1.00
4234	Endrin	U				0.051 ug/L			GE	0.0510	EPA8080	1.00
4235	Endosulfan I	U				0.051 ug/L			GE	0.0510	EPA8080	1.00
4236	Endosulfan II	U				0.102 ug/L			GE	0.1020	EPA8080	1.00
4237	Endosulfan sulfate	U				0.102 ug/L			GE	0.1020	EPA8080	1.00
4238	Ethylbenzene	UJ	Q	L		0.05 ug/L			GE	0.0500	EPA8260	1.00
4239	Fluoranthene	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
4240	Iron, total recoverable					74.3 ug/L			GE	18.0000	EPA6010	1.00
4241	Fluorene	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
4242	gamma-Chlordane	U				0.051 ug/L			GE	0.0510	EPA8080	1.00
4243	Hexachlorobutadiene	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
4244	Mercury, total recoverable	U				0.2 ug/L			GE	0.2000	EPA7470	1.00
4245	Heptachlor	U				0.051 ug/L			GE	0.0510	EPA8080	1.00
4246	Heptachlor epoxide	U				0.051 ug/L			GE	0.0510	EPA8080	1.00
4247	Indeno(1,2,3-c,d)pyrene	UJ	Q	L		0.1 ug/L			GE	0.1000	EPA8270	1.00
4248	Isophorone	UJ	Q	L		1 ug/L			GE	1.0000	EPA8270	1.00
4249	Potassium, total recoverable	U				190 ug/L			GE	500.0000	EPA6010	1.00
4250	Lindane	JV	YVO	L		0.0255 ug/L			GE	0.0255	EPA8080	1.00
4251	Toluene					0.06 ug/L			GE	0.5000	EPA8260	1.00

Wall Name=CBR 3D Secondary ID=' ' Sample Date=030195
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
4252	Methyl ethyl ketone		UJ	0	L	1	ug/L	.	GE	1.0000	EPA8260	1.00
4253	Methoxychlor		U			0.51	ug/L	.	GE	0.5100	EPA8080	1.00
4254	Magnesium, total recoverable					363	ug/L	.	GE	20.0000	EPA6010	1.00
4255	Methyl isobutyl ketone		UJ	0	L	1	ug/L	.	GE	1.0000	EPA8260	1.00
4256	Manganese, total recoverable		J	E		1.94	ug/L	.	GE	2.0000	EPA6010	1.00
4257	Naphthalene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4258	Sodium, total recoverable					2660	ug/L	.	GE	100.0000	EPA6010	1.00
4259	Nitrobenzene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4260	N-Nitrosodipropylamine		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4261	Ammonia nitrogen	1	U			100	ug/L	.	GE	100.0000	EPA350.1	1.00
4262	Ammonia nitrogen		U			100	ug/L	.	GE	100.0000	EPA350.1	1.00
4263	Nickel, total recoverable		J	E		1.96	ug/L	.	GE	10.0000	EPA6010	1.00
4264	N-Nitrosodiphenylamine		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4265	Nitrate-nitrite as nitrogen					2640	ug/L	.	GE	200.0000	EPA353.1	2.00
4266	Lead, total recoverable		J	E		1.4	ug/L	.	GE	5.0000	EPA7421	1.00
4267	PCB 1016		U			0.102	ug/L	.	GE	0.1020	EPA8080	1.00
4268	PCB 1221		U			0.102	ug/L	.	GE	0.1020	EPA8080	1.00
4269	PCB 1232		U			0.102	ug/L	.	GE	0.1020	EPA8080	1.00
4270	PCB 1242		U			0.102	ug/L	.	GE	0.1020	EPA8080	1.00
4271	PCB 1248		U			0.102	ug/L	.	GE	0.1020	EPA8080	1.00
4272	PCB 1254		U			0.102	ug/L	.	GE	0.1020	EPA8080	1.00
4273	PCB 1260		U			0.102	ug/L	.	GE	0.1020	EPA8080	1.00
4274	Pentachlorophenol		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4275	PH		J	Q	L	5.09	PH	.	GE	0.0100	EPA150.1	1.00
4276	PH	1	J	Q	L	5.13	PH	.	GE	0.0100	EPA150.1	1.00
4277	Phenanthrene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4278	Phenol		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4279	P,p'-DDD		U			0.102	ug/L	.	GE	0.1020	EPA8080	1.00
4280	P,p'-DDE		U			0.051	ug/L	.	GE	0.0510	EPA8080	1.00
4281	P,p'-DDT		U			0.102	ug/L	.	GE	0.1020	EPA8080	1.00
4282	Pyrene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4283	Antimony, total recoverable		U			5	ug/L	.	GE	5.0000	EPA7041	1.00
4284	Selenium, total recoverable		U			5	ug/L	.	GE	5.0000	EPA7740	1.00
4285	Sulfate					9800	ug/L	.	GE	1000.000	EPA300.0	1.00
4286	Styrene		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
4287	1,1,2,2-Tetrachloroethane		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
4288	Tetrachloroethylene		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
4289	Total dissolved solids	1				38000	ug/L	.	GE	5000.000	EPA160.1	1.00
4290	Total dissolved solids					36000	ug/L	.	GE	5000.000	EPA160.1	1.00
4291	Thallium, total recoverable		U			5	ug/L	.	GE	5.0000	EPA7841	1.00
4292	Trichloroethylene		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
4293	Trilium					4750	PC1/L	553.0000	GP	642.0000	EPIA-002	1.00
4294	Toxaphene		U			1.02	ug/L	.	GE	1.0200	EPA8080	1.00
4295	Vinyl acetate		UJ	0	L	1	ug/L	.	GE	1.0000	EPA8260	1.00
4296	Vanadium, total recoverable		J	E		0.372	ug/L	.	GE	10.0000	EPA6010	1.00
4297	Xylenes		UJ	0	L	0.15	ug/L	.	GE	0.1500	EPA8260	1.00
4298	1,1-Dichloroethylene		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
4299	1,1-Dichloroethane		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
4300	1,1,1-Trichloroethane		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
4301	1,1,2-Trichloroethane		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
4302	1,2-Dichloroethylene		UJ	0	L	0.1	ug/L	.	GE	0.1000	EPA8260	1.00
4303	1,2-Dichlorobenzene		UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4304	1,2-Dichloroethane		UJ	0	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00

Hall Name=CBR 3D Secondary ID= Sample Date=030195
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
4305	1,2-Dichloropropane	UJ	UJ	Q	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
4306	1,2,4-Trichlorobenzene	UJ	UJ	Q	L	0.1	ug/L	.	GE	0.1000	EPA8270	1.00
4307	1,3-Dichlorobenzene	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4308	cis-1,3-Dichloropropane	UJ	UJ	Q	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
4309	trans-1,3-Dichloropropane	UJ	UJ	Q	L	0.05	ug/L	.	GE	0.0500	EPA8260	1.00
4310	1,4-Dichlorobenzene	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4311	2-Chlorophenol	J	UJ	QE	L	0.13	ug/L	.	GE	1.0000	EPA8270	1.00
4312	2-Chloronaphthalene	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4313	2-Hexanone	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8260	1.00
4314	2-Nethylnaphthalene	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4315	o-Cresol (2-Methylphenol)	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4316	o-Nitroaniline	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4317	2-Nitrophenol	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4318	2,4-Dichlorophenol	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4319	2,4-Dimethyl phenol	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4320	2,4-Dinitrophenol	UJ	UJ	Q	L	10	ug/L	.	GE	10.0000	EPA8270	1.00
4321	2,4-Dinitrotoluene	UJ	UJ	Q	L	0.1	ug/L	.	GE	0.1000	EPA8270	1.00
4322	2,4,5-Trichlorophenol	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4323	2,4,6-Trichlorophenol	UJ	UJ	Q	L	0.1	ug/L	.	GE	0.1000	EPA8270	1.00
4324	2,6-Dinitrotoluene	UJ	UJ	Q	L	1	ug/L	.	GE	0.1000	EPA8270	1.00
4325	m-Nitroaniline	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4326	3,3'-Dichlorobenzidine	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4327	m,p-Cresol	UJ	UJ	Q	L	0.01	ug/L	.	GE	0.0100	EPA8270	1.00
4328	4-Bromophenyl phenyl ether	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4329	4-Chloroaniline	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4330	4-Chlorophenyl phenyl ether	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4331	4-Chloro-m-cresol	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4332	p-Nitroaniline	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4333	4-Nitrophenol	UJ	UJ	Q	L	1	ug/L	.	GE	1.0000	EPA8270	1.00
4334	2-Methyl-4,6-dinitrophenol	UJ	UJ	Q	L	10	ug/L	.	GE	10.0000	EPA8270	1.00
4335	Zinc, total recoverable					6.4	ug/L	.	GE	5.0000	EPA6010	1.00

Hall Name=CBR 3D Secondary ID=R Sample Date=021092

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
4336	Silver, dissolved	U	U			2	ug/L	.	GE	2.0000	EPA6010	1.00
4337	Silver, dissolved	U	U			0.7	ug/L	.	HA	0.7000	EPA200.7	1.00
4338	Cross alpha	U	U			2	pci/L	.	GE	2.0000	EPA900.0	1.00
4339	Cross alpha	U	U			1.1	pci/L	.	BA	2.0000	EPA900.0	1.00
4340	Arsenic, dissolved	U	U			2	ug/L	.	GE	2.0000	EPA7060	1.00
4341	Arsenic, dissolved	U	U			2	ug/L	.	HA	2.0000	EPA206.2	1.00
4342	Barium, dissolved					37.6	ug/L	.	GE	3.0000	EPA6010	1.00
4343	Barium, dissolved					32.2	ug/L	.	HA	6.6000	EPA200.7	1.00
4344	Nonvolatile beta					3.16	pci/L	0.5100	GE	2.0000	EPA900.0	1.00
4345	Nonvolatile beta					4.4	pci/L	1.8000	BA	4.0000	EPA900.0	1.00
4346	Bromodichloromethane	U	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4347	Bromodichloromethane	U	U			5	ug/L	.	HA	5.0000	EPA8240	1.00
4348	Calcium, dissolved					526	ug/L	.	GE	10.0000	EPA6010	1.00
4349	Calcium, dissolved					558	ug/L	.	HA	14.6000	EPA200.7	1.00
4350	Trichlorofluoromethane	U	U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4351	Trichlorofluoromethane	U	U			5	ug/L	.	HA	5.0000	EPA8240	1.00

Well Name=CBR 3D Secondary ID=R Sample Date=021092
(continued)

OBS TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
4352 Carbon tetrachloride	U				1 ug/L	.	GE	1.0000	EPA8240	1.00	
4353 Carbon tetrachloride	U				5 ug/L	.	WA	5.0000	EPA8240	1.00	
4354 Cadmium, dissolved	U				2 ug/L	.	GE	2.0000	EPA6010	1.00	
4355 Cadmium, dissolved	U				0.35 ug/L	.	WA	0.3500	EPA200.7	1.00	
4356 Bromoform	U				1 ug/L	.	GE	1.0000	EPA8240	1.00	
4357 Bromoform	U				5 ug/L	.	WA	5.0000	EPA8240	1.00	
4358 Chloroform	U				1 ug/L	.	GE	1.0000	EPA8240	1.00	
4359 Chloroform	U				5 ug/L	.	WA	5.0000	EPA8240	1.00	
4360 Dichloromethane (Methylene chloride)	UJ				1 ug/L	.	GE	1.0000	EPA8240	1.00	
4361 Dichloromethane (Methylene chloride)	JV				1.48 ug/L	.	WA	5.0000	EPA8240	1.00	
4362 Bromomethane (Methyl bromide)	U				1 ug/L	.	GE	1.0000	EPA8240	1.00	
4363 Bromomethane (Methyl bromide)	U				10 ug/L	.	WA	10.0000	EPA8240	1.00	
4364 Chloromethane (Methyl chloride)	U				1 ug/L	.	GE	1.0000	EPA8240	1.00	
4365 Chloromethane (Methyl chloride)	U				10 ug/L	.	WA	10.0000	EPA8240	1.00	
4366 Chloride					3340 ug/L	.	GE	0.2500	EPA300.0	2.00	
4367 Chloride	U				3480 ug/L	.	WA	0.2500	EPA325.2	1.00	
4368 Chlorobenzene	U				1 ug/L	.	GE	1.0000	EPA8240	1.00	
4369 Chlorobenzene	U				5 ug/L	.	WA	5.0000	EPA8240	1.00	
4370 Specific conductance					35 uS/cm	.	GE	1.0000	EPA120.1	1.00	
4371 Specific conductance					29.9 uS/cm	.	WA	1.0000	EPA120.1	1.00	
4372 Chromium, dissolved	U				4 ug/L	.	GE	4.0000	EPA6010	1.00	
4373 Chromium, dissolved	U				1.1 ug/L	.	WA	1.1000	EPA200.7	1.00	
4374 Chloroethene (Vinyl chloride)	U				1 ug/L	.	GE	1.0000	EPA8240	1.00	
4375 Chloroethene (Vinyl chloride)	U				10 ug/L	.	WA	10.0000	EPA8240	1.00	
4376 Chloroethene	U				1 ug/L	.	GE	1.0000	EPA8240	1.00	
4377 Chloroethene	U				10 ug/L	.	WA	10.0000	EPA8240	1.00	
4378 Benzene	U				1 ug/L	.	GE	1.0000	EPA8240	1.00	
4379 Benzene	U				5 ug/L	.	WA	5.0000	EPA8240	1.00	
4380 Dibromochloromethane	U				1 ug/L	.	GE	1.0000	EPA8240	1.00	
4381 Dibromochloromethane	U				5 ug/L	.	WA	5.0000	EPA8240	1.00	
4382 Silica, dissolved	U				5 ug/L	.	WA	5.0000	EPA8240	1.00	
4383 Endrin	JQ				13600 ug/L	.	GE	100.0000	EPA6010	1.00	
4384 Endrin	U				0.006 ug/L	.	GE	0.0060	EPA8080	1.00	
4385 Ethylbenzene	U				0.109 ug/L	.	WA	0.1000	EPA8080	1.09	
4386 Ethylbenzene	U				1 ug/L	.	GE	1.0000	EPA8240	1.00	
4387 Fluoride	U				5 ug/L	.	WA	5.0000	EPA8240	1.00	
4388 Fluoride	U				100 ug/L	.	GE	0.1000	EPA340.2	1.00	
4389 Iron, dissolved	U				100 ug/L	.	WA	0.1000	EPA340.2	1.00	
4390 Iron, dissolved					46.1 ug/L	.	GE	4.0000	EPA6010	1.00	
4391 Mercury, dissolved	U				49.7 ug/L	.	WA	1.9000	EPA200.7	1.00	
4392 Mercury, dissolved	U				0.2 ug/L	.	GE	0.2000	EPA7470	1.00	
4393 Potassium, dissolved					0.2 ug/L	.	WA	0.2000	EPA245.1	1.00	
4394 Potassium, dissolved	JQ				1680 ug/L	.	GE	500.0000	EPA6010	1.00	
4395 Lindane	U				1470 ug/L	.	WA	85.5000	EPA200.7	1.00	
4396 Lindane	U				0.005 ug/L	.	GE	0.0050	EPA8080	1.00	
4397 Toluene	U				0.0545 ug/L	.	WA	0.0500	EPA8080	1.09	
4398 Toluene	U				1 ug/L	.	GE	1.0000	EPA8240	1.00	
4399 Methoxychlor	JQ				5 ug/L	.	WA	5.0000	EPA8240	1.00	
4400 Methoxychlor	U				0.5 ug/L	.	GE	0.5000	EPA8080	1.09	
4401 Magnesium, dissolved					0.545 ug/L	.	WA	0.5000	EPA8080	1.09	
4402 Magnesium, dissolved					877 ug/L	.	GE	2.0000	EPA6010	1.00	
4403 Manganese, dissolved					827 ug/L	.	WA	8.9000	EPA200.7	1.00	
4404 Manganese, dissolved					4.95 ug/L	.	GE	2.0000	EPA6010	1.00	
					4.6 ug/L	.	WA	0.3500	EPA200.7	1.00	

Heil Name=CBR 3D Secondary ID=R Sample Date=021092
(continued)

ODS TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
4405 Sodium, dissolved					3360	ug/L	.	GE	10.0000	EPA6010	1.00
4406 Sodium, dissolved					2980	ug/L	.	WA	106.0000	EPA200.7	1.00
4407 Nitrate as nitrogen		JQ			2120	ug/L	.	GE	0.0500	EPA300.0	2.00
4408 Nitrate as nitrogen					2570	ug/L	.	WA	0.0200	EPA353.2	10.00
4409 Lead, dissolved					4.92	ug/L	.	GE	3.0000	EPA7421	1.00
4410 Lead, dissolved					7.5	ug/L	.	WA	2.0000	EPA239.2	1.00
4411 pH		JQ			5.45	PH	.	GE	0.0000	EPA150.1	1.00
4412 pH		JQ			4.96	PH	.	WA	0.0100	EPA150.1	1.00
4413 Radium-226					0.6	pCi/L	0.8000	BA	0.5000	SH-705	1.00
4414 Radium-228					2	ug/L	1.8000	BA	1.0000	PERC/BR0	1.00
4415 Selenium, dissolved		U			2	ug/L	.	GE	2.0000	EPA7740	1.00
4416 Selenium, dissolved		U			2	ug/L	.	WA	2.0000	EPA270.2	1.00
4417 Silicon					5550	ug/L	.	WA	25.0000	EPA200.7	1.00
4418 2,4,5-TP (Silvex)		JQ			0.09	ug/L	.	GE	0.0900	EPA8150	1.00
4419 2,4,5-TP (Silvex)		U			0.54	ug/L	.	WA	0.5000	EPA8150	1.08
4420 Sulfate		U			1000	ug/L	.	GE	1.0000	EPA300.0	1.00
4421 Sulfate					398	ug/L	.	WA	0.1000	EPA300.0	1.00
4422 1,1,2,2-Tetrachloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4423 1,1,2,2-Tetrachloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4424 Tetrachloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4425 Tetrachloroethylene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4426 Total dissolved solids	1				36000	ug/L	.	GE	1.0000	EPA160.1	1.00
4427 Total dissolved solids					35000	ug/L	.	GE	1.0000	EPA160.1	1.00
4428 Total dissolved solids					36000	ug/L	.	WA	1.0000	EPA160.2	1.00
4429 Total organic carbon		U			1000	ug/L	.	GE	1.0000	EPA9060	1.00
4430 Total organic carbon					577	ug/L	.	WA	0.5000	EPA415.1	1.00
4431 Radium, total alpha-emitting					1.1	pCi/L	0.4000	GE	1.0000	EPA900.1	1.00
4432 Total organic halogens					15.6	ug/L	.	GE	5.0000	EPA9020	1.00
4433 Total organic halogens					21.8	ug/L	.	WA	5.0000	EPA9020A	1.00
4434 Phenols		U			5	ug/L	.	GE	5.0000	EPA420.2	1.00
4435 Phenols		U			5	ug/L	.	WA	5.0000	EPA420.1	1.00
4436 Total phosphates (as P)		U			50	ug/L	.	GE	0.0500	EPA365.1	1.00
4437 Total phosphates (as P)		U			33	ug/L	.	WA	0.0200	EPA365.2	1.00
4438 Trichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4439 Trichloroethylene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4440 Tritium					12.8	pCi/mL	0.3000	GE	0.7000	EPA906.0	1.00
4441 Tritium					12800	pCi/L	600.0000	BA	460.0000	EPA906.0	1.00
4442 Tritium					12800	pCi/L	600.0000	BA	460.0000	EPA906.0	1.00
4443 Toxaphene		JQ			0.24	ug/L	.	GE	0.2400	EPA8080	1.00
4444 Toxaphene		U			1.09	ug/L	.	WA	1.0000	EPA8080	1.09
4445 trans-1,2-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4446 trans-1,2-Dichloroethylene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4447 trans-1,3-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4448 1,1-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4449 1,1-Dichloroethylene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4450 1,1-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4451 1,1-Dichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4452 1,1,1-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4453 1,1,1-Trichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4454 1,1,2-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4455 1,1,2-Trichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4456 1,2-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4457 1,2-Dichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00

Well Name=CBR 3D Secondary ID=R Sample Date=021092
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
4458	1,2-Dichloropropane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
4459	1,2-Dichloropropane	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
4460	cis-1,3-Dichloropropane	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
4461	cis-1,3-Dichloropropane	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
4462	trans-1,3-Dichloropropane	U				5	ug/L	.	WA	5.0000	EPA8240	1.00
4463	2-Chloroethyl vinyl ether	U				1	ug/L	.	GE	1.0000	EPA8240	1.00
4464	2-Chloroethyl vinyl ether	U				10	ug/L	.	WA	10.0000	EPA8240	1.00
4465	2,4-Dichlorophenoxyacetic acid	JQ				0.3	ug/L	.	GE	0.3000	EPA8150	1.00
4466	2,4-Dichlorophenoxyacetic acid	U				1.08	ug/L	.	WA	1.0000	EPA8150	1.08

Well Name=CBR 3D Secondary ID=R Sample Date=081493

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
4467	Aluminum, total recoverable	0				36.2	ug/L	.	GE	20.0000	EPA6010	1.00
4468	Aluminum, total recoverable	0				42.5	ug/L	.	WA	20.0000	EPA200.7	1.00
4469	Iron, total recoverable	0				19.3	ug/L	.	GE	4.0000	EPA6010	1.00
4470	Iron, total recoverable	0				31.1	ug/L	.	WA	4.0000	EPA200.7	1.00

Well Name=CBR 3D Secondary ID=R Sample Date=022294

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
4471	Silver, total recoverable		U			2	ug/L	.	WA	2.0000	EPA200.7	1.00
4472	Silver, total recoverable		U			2	ug/L	.	GE	2.0000	EPA6010	1.00
4473	Aldrin		U			0.0495	ug/L	.	GE	0.0000	EPA8080	1.00
4474	Gross alpha					0.5	pci/L	0.9000	TH	0.4400	EPA900.0	1.00
4475	Aluminum, total recoverable					40.8	ug/L	.	WA	20.0000	EPA200.7	1.00
4476	Aluminum, total recoverable					36.5	ug/L	.	GE	20.0000	EPA6010	1.00
4477	Arsenic, total recoverable		U			2	ug/L	.	WA	2.0000	EPA206.2	1.00
4478	Arsenic, total recoverable		U			2	ug/L	.	GE	2.0000	EPA7060	1.00
4479	Barium, total recoverable					30.9	ug/L	.	WA	4.0000	EPA200.7	1.00
4480	Barium, total recoverable					31	ug/L	.	GE	3.0000	EPA6010	1.00
4481	Nonvolatile beta					5.8	pci/L	1.6000	TH	0.4800	EPA900.0	1.00
4482	Bromodichloromethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4483	Bromodichloromethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4484	Boron, total recoverable		U			30	ug/L	.	GE	30.0000	EPA6010	1.00
4485	Calcium, total recoverable					312	ug/L	.	WA	10.0000	EPA200.7	1.00
4486	Calcium, total recoverable					297	ug/L	.	GE	10.0000	EPA6010	1.00
4487	Trichlorofluoromethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4488	Trichlorofluoromethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4489	Carbon tetrachloride		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4490	Carbon tetrachloride		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4491	Cadmium, total recoverable		U			2	ug/L	.	WA	2.0000	EPA200.7	1.00
4492	Cadmium, total recoverable		U			2	ug/L	.	GE	2.0000	EPA6010	1.00
4493	Bromoform		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4494	Bromoform		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4495	Chloroform		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4496	Chloroform		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4497	Dichloromethane (Methylene chloride)		U	V		60	ug/L	.	WA	5.0000	EPA8240	1.00
4498	Dichloromethane (Methylene chloride)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00

ODS	TESTNAME	-LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLH	METHOD	DILFACT
4499	Bromomethane (Methyl bromide)		U			10	ug/L	.	WA	10.0000	EPA8240	1.00
4500	Bromomethane (Methyl bromide)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4501	Chloromethane (Methyl chloride)		U			10	ug/L	.	WA	10.0000	EPA8240	1.00
4502	Chloromethane (Methyl chloride)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4503	Chloride					2910	ug/L	.	WA	0.2500	EPA325.2	1.00
4504	Chloride					2960	ug/L	.	WA	0.2500	EPA325.2	1.00
4505	Chloride	1				2840	ug/L	.	GE	0.2500	EPA500.0	1.00
4506	Chlorobenzene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4507	Chlorobenzene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4508	Specific conductance					30.4	uS/cm	.	WA	1.0000	EPA120.1	1.00
4509	Specific conductance					34.2	uS/cm	.	GE	1.0000	EPA120.1	1.00
4510	Chromium, total recoverable		U			4	ug/L	.	WA	4.0000	EPA200.7	1.00
4511	Chromium, total recoverable		U			4	ug/L	.	GE	4.0000	EPA6010	1.00
4512	Chloroethane (Vinyl chloride)		U			10	ug/L	.	WA	10.0000	EPA8240	1.00
4513	Chloroethane (Vinyl chloride)		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4514	Chloroethane		U			10	ug/L	.	WA	10.0000	EPA8240	1.00
4515	Chloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4516	Benzene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4517	Benzene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4518	Dibromochloromethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4519	Dibromochloromethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4520	Dieldrin		U			0.495	ug/L	.	GE	0.0005	EPA8080	1.00
4521	Endrin		U			0.11	ug/L	.	WA	0.1000	EPA8080	1.10
4522	Endrin		U			0.0059	ug/L	.	GE	0.0000	EPA8080	1.00
4523	Ethylbenzene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4524	Ethylbenzene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4525	Fluoride		U			100	ug/L	.	WA	0.1000	EPA340.2	1.00
4526	Fluoride		U			100	ug/L	.	GE	0.1000	EPA340.2	1.00
4527	Iron, total recoverable		U			49.8	ug/L	.	WA	4.0000	EPA200.7	1.00
4528	Iron, total recoverable					46.5	ug/L	.	GE	4.0000	EPA6010	1.00
4529	Mercury, total recoverable		U			0.2	ug/L	.	WA	0.2000	EPA245.1	1.00
4530	Mercury, total recoverable		U			0.2	ug/L	.	GE	0.2000	EPA7470	1.00
4531	Heptachlor		U			0.0495	ug/L	.	GE	0.0000	EPA8080	1.00
4532	Potassium, total recoverable					1490	ug/L	.	WA	500.0000	EPA200.7	1.00
4533	Potassium, total recoverable					1740	ug/L	.	GE	500.0000	EPA6010	1.00
4534	Lindane		U			0.055	ug/L	.	WA	0.0500	EPA8080	1.10
4535	Lindane		U			0.005	ug/L	.	GE	0.0000	EPA8080	1.00
4536	Lithium, total recoverable		U			5	ug/L	.	WA	5.0000	EPA200.7	1.00
4537	Lithium, total recoverable		U			5	ug/L	.	GE	5.0000	EPA6010	1.00
4538	Toluene		U			1	ug/L	.	WA	1.0000	EPA8240	1.00
4539	Toluene		U			0.55	ug/L	.	WA	0.5000	EPA8080	1.10
4540	Methoxychlor		U			0.495	ug/L	.	GE	0.0005	EPA8080	1.00
4541	Methoxychlor		U			741	ug/L	.	WA	8.8000	EPA200.7	1.00
4542	Magnesium, total recoverable					721	ug/L	.	GE	2.0000	EPA6010	1.00
4543	Magnesium, total recoverable					3.9	ug/L	.	WA	2.0000	EPA200.7	1.00
4544	Manganese, total recoverable					3.24	ug/L	.	GE	2.0000	EPA6010	1.00
4545	Manganese, total recoverable					3100	ug/L	.	WA	12.3000	EPA200.7	1.00
4546	Sodium, total recoverable					3040	ug/L	.	GE	10.0000	EPA6010	1.00
4547	Sodium, total recoverable					1580	ug/L	.	WA	0.0200	EPA353.2	5.00
4548	Nitrate as nitrogen					1760	ug/L	.	GE	0.0500	EPA353.1	2.00
4549	Nitrate-nitrite as nitrogen					3	ug/L	.	WA	3.0000	EPA239.2	1.00
4550	Lead, total recoverable		U			3	ug/L	.	GE	3.0000	EPA7421	1.00
4551	Lead, total recoverable		U					.				

Wall Name=CBR 3D Secondary ID=R Sample Date=022294
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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLM	METHOD	DILFACT
4552	pH		J	Q		5.14	PH	.	WA	0.1000	EPA150.1	1.00
4553	pH		J	Q	L	5.31	PH	.	GE	0.0100	EPA150.1	1.00
4554	P,p'-DDT		U			0.099	ug/L	.	GE	0.0001	EPA8080	1.00
4555	Radium-226					0.32	pCi/L	0.2000	TH	0.1800	EPA903.0	1.00
4556	Radium-228					0.3	pCi/L	0.5000	TH	0.0700	EPA904.0	1.00
4557	Selenium, total recoverable		U			2	ug/L	.	WA	2.0000	EPA270.2	1.00
4558	Selenium, total recoverable		U			2	ug/L	.	GE	2.0000	EPA7740	1.00
4559	2,4,5-TP (Silvex)		U			0.545	ug/L	.	WA	0.5000	EPA8150	1.09
4560	2,4,5-TP (Silvex)		U			0.00045	ug/L	.	GE	0.0005	EPA8150	1.00
4561	Sulfate		U			1000	ug/L	.	WA	1.0000	EPA300.0	1.00
4562	Sulfate		U			1000	ug/L	.	GE	1.0000	EPA300.0	1.00
4563	1,1,2,2-Tetrachloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4564	1,1,2,2-Tetrachloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4565	Tetrachloroethylene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4566	Tetrachloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4567	Total dissolved solids					25000	ug/L	.	WA	1.0000	EPA160.2	1.00
4568	Total dissolved solids		J	V	H	46000	ug/L	.	GE	1.0000	EPA160.1	1.00
4569	Total organic carbon		U			1000	ug/L	.	WA	1.0000	EPA415.1	1.00
4570	Total organic carbon		U			1000	ug/L	.	GE	1.0000	EPA9060	1.00
4571	Total organic carbon		U			1000	ug/L	.	GE	1.0000	EPA9060	1.00
4572	Total organic carbon		U			5	ug/L	.	WA	5.0000	SH9020A	1.00
4573	Total organic halogens		U			5	ug/L	.	WA	5.0000	SH9020A	1.00
4574	Total organic halogens		U			5	ug/L	.	GE	5.0000	EPA9020	1.00
4575	Phenols		U			5	ug/L	.	WA	5.0000	EPA420.2	1.00
4576	Phenols		U			5	ug/L	.	GE	5.0000	EPA420.2	1.00
4577	Total phosphates (as P)		U			50	ug/L	.	WA	0.0500	EPA365.2	1.00
4578	Total phosphates (as P)		U			50	ug/L	.	GE	0.0500	EPA365.1	1.00
4579	Trichloroethylene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4580	Trichloroethylene		U			5	ug/L	.	GE	1.0000	EPA8240	1.00
4581	Trifluoromethane		U			7.4	pCi/mL	0.7100	TH	0.1900	EPA906.0	1.00
4582	Silica, total recoverable					12400	ug/L	.	WA	100.0000	EPA200.7	2.10
4583	Silica, total recoverable		U			13400	ug/L	.	GE	100.0000	EPA6010	1.00
4584	Toxaphene		U			1.1	ug/L	.	WA	1.0000	EPA8080	1.10
4585	Toxaphene		U			0.238	ug/L	.	GE	0.0002	EPA8080	1.00
4586	trans-1,2-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4587	1,1-Dichloroethylene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4588	1,1-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4589	1,1-Dichloroethylene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4590	1,1-Dichloroethylene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4591	1,1,1-Trichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4592	1,1,1-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4593	1,1,2-Trichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4594	1,1,2-Trichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4595	1,2-Dichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4596	1,2-Dichloroethane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4597	1,2-Dichloroethane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4598	1,2-Dichloropropane		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4599	1,2-Dichloropropane		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4600	cis-1,3-Dichloropropene		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4601	cis-1,3-Dichloropropene		U			5	ug/L	.	WA	5.0000	EPA8240	1.00
4602	trans-1,3-Dichloropropene		U			5	ug/L	.	GE	1.0000	EPA8240	1.00
4603	trans-1,3-Dichloropropene		U			1	ug/L	.	WA	5.0000	EPA8240	1.00
4604	2-Chloroethyl vinyl ether		U			10	ug/L	.	WA	10.0000	EPA8240	1.00

Hall Name=CBR 3D Secondary ID=R Sample Date=022294
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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
4605	2-Chloroethyl vinyl ether		U			1	ug/L	.	GE	1.0000	EPA8240	1.00
4606	2,4-Dichlorophenoxyacetic acid		U			1.09	ug/L	.	WA	1.0000	EPA8150	1.09
4607	2,4-Dichlorophenoxyacetic acid		U			0.0015	ug/L	.	GE	0.0015	EPA8150	1.00

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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
4608	alpha-Benzene hexachloride	UJ			L	0.0525	ug/L	.	WA	0.0200	CLP	1.00
4609	alpha-Benzene hexachloride	U				0.0124	ug/L	.	GE	0.0124	EPA8080	1.00
4610	Acetone	U				1.10	ug/L	.	WA	3.0000	EPA8260H	1.00
4611	Acetone	U				3.17	ug/L	.	GE	3.1700	EPA8260	1.00
4612	alpha-Chlordane	UJ			L	0.0525	ug/L	.	WA	0.0200	CLP	1.00
4613	alpha-Chlordane	U				0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
4614	Silver, total recoverable	U				1.4	ug/L	.	WA	0.6700	CLP-HOD	1.00
4615	Silver, total recoverable	U				0.512	ug/L	.	GE	0.5120	EPA6010	1.00
4616	Aldrin	UJ			I	0.0525	ug/L	.	WA	0.0200	CLP	1.00
4617	Aldrin	U				0.0124	ug/L	.	GE	0.0124	EPA8080	1.00
4618	Gross alpha	UI				0.9	pci/L	1.3000	TH	0.9700	EPA900.0	1.00
4619	Gross alpha	UI				0.573	pci/L	0.5000	GP	0.8160	EPIA-001	1.00
4620	Aluminum, total recoverable	U				53.3	ug/L	.	WA	53.0000	CLP-HOD	1.00
4621	Aluminum, total recoverable	J			V	46.7	ug/L	.	GE	1.9300	EPA6010	1.00
4622	Acenaphthene	U			I	1.1	ug/L	.	WA	0.5000	EPA8270H	1.00
4623	Acenaphthene	U				0.0166	ug/L	.	GE	0.0166	EPA8270	1.00
4624	Acenaphthylene	U				1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
4625	Acenaphthylene	U				1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
4626	Acenaphthylene	U				0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
4627	Anthracene	U				1.1	ug/L	.	WA	0.4000	EPA8270H	1.00
4628	Anthracene	U				1.1	ug/L	.	WA	0.4000	EPA8270H	1.00
4629	Anthracene	U				0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
4630	Arsenic, total recoverable	U				1.7	ug/L	.	WA	1.7000	CLP-HOD	1.00
4631	Arsenic, total recoverable	U				1.5	ug/L	.	GE	1.5000	EPA7060	1.00
4632	Benzo(a)anthracene	U				1.1	ug/L	.	WA	0.5000	EPA8270H	1.00
4633	Benzo(a)anthracene	U				1.1	ug/L	.	WA	0.5000	EPA8270H	1.00
4634	Benzo(a)anthracene	U				0.15	ug/L	.	GE	0.1500	EPA8270	1.00
4635	Benzo(a)pyrene	U				1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4636	Benzo(a)pyrene	U				1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4637	Benzo(a)pyrene	U				0.0752	ug/L	.	GE	0.0752	EPA8270	1.00
4638	Barium, total recoverable	U				33.4	ug/L	.	WA	6.7000	CLP-HOD	1.00
4639	Barium, total recoverable	U				32.4	ug/L	.	GE	0.0480	EPA6010	1.00
4640	Benzo(b)fluoranthene	U				1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
4641	Benzo(b)fluoranthene	U				1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
4642	Benzo(b)fluoranthene	U				0.132	ug/L	.	GE	0.1320	EPA8270	1.00
4643	Beta-Benzene hexachloride	UJ			L	0.0525	ug/L	.	WA	0.0200	CLP	1.00
4644	Beta-Benzene hexachloride	U				0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
4645	Butylbenzyl phthalate	U			V	1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
4646	Butylbenzyl phthalate	U			V	1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
4647	Butylbenzyl phthalate	U				0.0356	ug/L	.	GE	0.0356	EPA8270	1.00
4648	Bis(2-chloroisopropyl) ether	U				1.1	ug/L	.	WA	0.9000	EPA8270H	1.00
4649	Bis(2-chloroisopropyl) ether	U				1.1	ug/L	.	WA	0.9000	EPA8270H	1.00
4650	Bis(2-chloroisopropyl) ether	U				0.0416	ug/L	.	GE	0.0416	EPA8270	1.00
4651	Benzoic acid	U			V	1.1	ug/L	.	WA	6.0000	EPA8270H	1.00

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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	DIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
4652	Benzoic acid	1	U	U	V	5.5 ug/L			WA	6.0000	EPA8270H	1.00
4653	Benzoic acid		U	U		0.0802 ug/L			GE	0.0802	EPA8270	1.00
4654	Nonvolatiles beta					7 PC1/L		2.1000	TH	0.7900	EPA900.0	1.00
4655	Nonvolatiles beta		J	J		1.74 PC1/L		0.8100	GP	1.4900	EPIA-001	1.00
4656	Beryllium, total recoverable		U	U		0.3 ug/L			WA	0.3500	CLP-HOD	1.00
4657	Beryllium, total recoverable		J	J	V	0.216 ug/L			GE	0.0270	EPA6010	1.00
4658	Benzo(g,h,i)perylene		U	U		1.1 ug/L			WA	0.8000	EPA8270H	1.00
4659	Benzo(g,h,i)perylene	1	U	U		1.1 ug/L			WA	0.8000	EPA8270H	1.00
4660	Benzo(g,h,i)perylene		U	U		0.306 ug/L			GE	0.3060	EPA8270	1.00
4661	Benzo(k)fluoranthene		U	U		1.1 ug/L			WA	0.8000	EPA8270H	1.00
4662	Benzo(k)fluoranthene	1	U	U		1.1 ug/L			WA	0.8000	EPA8270H	1.00
4663	Benzo(k)fluoranthene		U	U		0.0782 ug/L			GE	0.0782	EPA8270	1.00
4664	Bromodichloromethane		U	U		0.2 ug/L			WA	0.0700	EPA8260H	1.00
4665	Bromodichloromethane		U	U		0.012 ug/L			GE	0.0120	EPA8260	1.00
4666	Benzyl alcohol		J	J	B	0.362 ug/L			WA	1.0000	EPA8270H	1.00
4667	Benzyl alcohol	1	J	J	B	0.341 ug/L			WA	1.0000	EPA8270H	1.00
4668	Benzyl alcohol		U	U		0.0248 ug/L			GE	0.0248	EPA8270	1.00
4669	Bis(2-chloroethoxy) methane		U	U		1.1 ug/L			WA	1.0000	EPA8270H	1.00
4670	Bis(2-chloroethoxy) methane	1	U	U		1.1 ug/L			WA	1.0000	EPA8270H	1.00
4671	Bis(2-chloroethoxy) methane		U	U		0.0178 ug/L			GE	0.0178	EPA8270	1.00
4672	Bis(2-chloroethoxy) ether		U	U		1.1 ug/L			WA	0.8000	EPA8270H	1.00
4673	Bis(2-chloroethoxy) ether		U	U		1.1 ug/L			WA	0.8000	EPA8270H	1.00
4674	Bis(2-chloroethoxy) ether	1	U	U		0.0168 ug/L			GE	0.0168	EPA8270	1.00
4675	Bis(2-ethylhexyl) phthalate		UJ	U	V	20 ug/L			WA	1.0000	EPA8270H	1.00
4676	Bis(2-ethylhexyl) phthalate	1	UJ	U	V	20 ug/L			WA	1.0000	EPA8270H	1.00
4677	Bis(2-ethylhexyl) phthalate		U	U		0.2510 ug/L			GE	0.2510	EPA8270	1.00
4678	Calcium, total recoverable		U	U		1667.000 CLP-HOD			WA	1667.000	CLP-HOD	1.00
4679	Calcium, total recoverable		J	J	V	12.0000			GE	12.0000	EPA6010	1.00
4680	Carbon tetrachloride		U	U		0.1 ug/L			WA	0.0300	EPA8021	1.00
4681	Carbon tetrachloride		U	U		0.012 ug/L			GE	0.0120	EPA8260	1.00
4682	Cadmium, total recoverable		U	U	V	0.3 ug/L			WA	0.5000	CLP-HOD	1.00
4683	Cadmium, total recoverable		U	U		0.48 ug/L			GE	0.4800	EPA6010	1.00
4684	Bromoform		U	U		2 ug/L			WA	0.7000	EPA8260H	1.00
4685	Bromoform		U	U		0.012 ug/L			GE	0.0120	EPA8260	1.00
4686	Chloroform		U	U		0.09 ug/L			WA	0.0700	EPA8260H	1.00
4687	Chloroform		U	U		1.1 ug/L			GE	0.0170	EPA8260	1.00
4688	Chrysene		U	U		1.1 ug/L			WA	0.5000	EPA8270H	1.00
4689	Chrysene	1	U	U		0.0119 ug/L			GE	0.0119	EPA8270	1.00
4690	Chrysene		U	U		14 ug/L			WA	0.0700	EPA8021	1.00
4691	Dichloromethane (Methylene chloride)		UJ	U	V	0.294 ug/L			GE	0.2940	EPA8260	1.00
4692	Dichloromethane (Methylene chloride)	1	UJ	U	V	0.6 ug/L			WA	0.2000	EPA8260H	1.00
4693	Bromomethane (Methyl bromide)		U	U		5.84 ug/L			GE	0.0260	EPA8260	1.00
4694	Bromomethane (Methyl bromide)		U	U		0.024 ug/L			WA	0.1000	EPA8260H	1.00
4695	Chloromethane (Methyl chloride)		U	U		3190 ug/L			GE	0.0240	EPA8260	1.00
4696	Chloromethane (Methyl chloride)		U	U		2040 ug/L			WA	660.0000	EPA300.0	1.00
4697	Chloride		J	J	Q	0.3 ug/L			GE	64.0000	EPA300.0	1.00
4698	Chloride		U	U		0.012 ug/L			WA	0.1000	EPA8260H	1.00
4699	Chlorobenzene		U	U		1.1 ug/L			GE	0.0120	EPA8260	1.00
4700	Chlorobenzene		U	U		0.0277 ug/L			WA	0.4000	EPA8270H	1.00
4701	Hexachlorobenzene	1	U	U		1.1 ug/L			GE	0.0277	EPA8270	1.00
4702	Hexachlorobenzene		U	U		1.1 ug/L			WA	0.2000	EPA8270H	1.00
4703	Hexachlorobenzene		U	U		1.1 ug/L			WA	0.2000	EPA8270H	1.00
4704	Hexachlorocyclopentadecene		U	U		1.1 ug/L			WA	0.2000	EPA8270H	1.00

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OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAD	DETLIN	METHOD	DILFACT
4705	Hexachlorocyclopentadiene	1	U			1.1	ug/L	.	WA	0.2000	EPA8270H	1.00
4706	Hexachlorocyclopentadiene		U			0.0416	ug/L	.	GE	0.0416	EPA8270	1.00
4707	Hexachloroethane		U			1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4708	Hexachloroethane	1	U			1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4709	Hexachloroethane		U			0.0218	ug/L	.	GE	0.0218	EPA8270	1.00
4710	Specific conductance		J	Q		30	uS/cm	.	WA	1.0000	EPA120.1	1.00
4711	Specific conductance					34.2	uS/cm	.	GE	0.3000	EPA120.1	1.00
4712	Cobalt, total recoverable		U			11.7	ug/L	.	WA	12.0000	CLP-HOD	1.00
4713	Cobalt, total recoverable		J			1.95	ug/L	.	GE	0.5980	EPA6010	1.00
4714	Chromium, total recoverable		U			11.7	ug/L	.	WA	12.0000	CLP-HOD	1.00
4715	Chromium, total recoverable		U			2.28	ug/L	.	GE	2.2800	EPA6010	1.00
4716	Carbon disulfide		U			2	ug/L	.	WA	2.0000	EPA8260H	1.00
4717	Carbon disulfide		U			0.129	ug/L	.	GE	0.1290	EPA8260	1.00
4718	Copper, total recoverable					3.5	ug/L	.	WA	3.5000	CLP-HOD	1.00
4719	Copper, total recoverable		J			2.2	ug/L	.	GE	0.4580	EPA6010	1.00
4720	Cyanide		UJ	I		6.7	ug/L	.	WA	6.7000	CLP-HOD	1.00
4721	Cyanide		U			0.7	ug/L	.	GE	0.7000	EPA335.2	1.00
4722	Chloroethane (Vinyl chloride)		U	C		0.2	ug/L	.	WA	0.0700	EPA8021	1.00
4723	Chloroethane (Vinyl chloride)		U			0.015	ug/L	.	GE	0.0150	EPA8260	1.00
4724	Chloroethane		U			0.2	ug/L	.	WA	0.0800	EPA8260H	1.00
4725	Chloroethane		U			0.025	ug/L	.	GE	0.0250	EPA8260	1.00
4726	Benzene		U			0.09	ug/L	.	WA	0.0300	EPA8010	1.00
4727	Benzene		U			0.017	ug/L	.	GE	0.0170	EPA8260	1.00
4728	Dibenz(a,h)anthracene		U			1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
4729	Dibenz(a,h)anthracene	1	U			1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
4730	Dibenz(a,h)anthracene		U			0.0891	ug/L	.	GE	0.0891	EPA8270	1.00
4731	delta-Benzene hexachloride		UJ		L	0.0525	ug/L	.	WA	0.0200	CLP	1.00
4732	delta-Benzene hexachloride		U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
4733	Dibromochloromethane		U			0.7	ug/L	.	WA	0.2500	EPA8260H	1.00
4734	Dibromochloromethane		U			0.017	ug/L	.	GE	0.0170	EPA8260	1.00
4735	Diethyl phthalate		U	V		1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4736	Diethyl phthalate	1	U	V		1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4737	Diethyl phthalate		U			0.0149	ug/L	.	GE	0.0149	EPA8270	1.00
4738	Dibenzofuran		U			1.1	ug/L	.	WA	0.5000	EPA8270H	1.00
4739	Dibenzofuran	1	U			1.1	ug/L	.	WA	0.5000	EPA8270H	1.00
4740	Dibenzofuran		U			0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
4741	Dieldrin		UJ		L	0.105	ug/L	.	WA	0.0300	CLP	1.00
4742	Dieldrin		U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
4743	Dimethyl phthalate		U			1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4744	Dimethyl phthalate	1	U			1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4745	Dimethyl phthalate		U			0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
4746	Di-n-butyl phthalate		UJ	V	H	20	ug/L	.	WA	0.9000	EPA8270H	1.00
4747	Di-n-butyl phthalate	1	UJ	V	H	20	ug/L	.	WA	0.9000	EPA8270H	1.00
4748	Di-n-butyl phthalate		UJ	V	H	0.439	ug/L	.	GE	0.4390	EPA8270	1.00
4749	Di-n-octyl phthalate		U			1.1	ug/L	.	WA	0.9000	EPA8270H	1.00
4750	Di-n-octyl phthalate	1	U			1.1	ug/L	.	WA	0.9000	EPA8270H	1.00
4751	Di-n-octyl phthalate		U			0.0693	ug/L	.	GE	0.0693	EPA8270	1.00
4752	Endrin aldehyde		UJ		L	0.105	ug/L	.	WA	0.0670	CLP	1.00
4753	Endrin ketone		UJ		L	0.105	ug/L	.	WA	0.0300	CLP	1.00
4754	Endrin ketone		UJ			0.0495	ug/L	.	GE	0.0495	EPA8080	1.00
4755	Endrin		UJ		L	0.105	ug/L	.	WA	0.0300	CLP	1.00
4756	Endrin		U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
4757	Endosulfan I		UJ		L	0.0525	ug/L	.	WA	0.0200	CLP	1.00

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OBS	TESTNAME	LADDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETAIL	METHOD	DILFACT
4758	Endosulfan I		U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
4759	Endosulfan II		UJ		L	0.042	ug/L	.	WA	0.0100	CLP	1.00
4760	Endosulfan II		U			0.0495	ug/L	.	GE	0.0495	EPA8080	1.00
4761	Endosulfan sulfate		UJ		L	0.105	ug/L	.	WA	0.0300	CLP	1.00
4762	Endosulfan sulfate		U			0.0495	ug/L	.	GE	0.0495	EPA8080	1.00
4763	Ethylbenzene		U			0.082	ug/L	.	WA	0.0200	EPA8021	1.00
4764	Ethylbenzene		U			0.015	ug/L	.	GE	0.0150	EPA8260	1.00
4765	Fluoranthene		U			1.1	ug/L	.	WA	0.4000	EPA8270H	1.00
4766	Fluoranthene	1	U			1.1	ug/L	.	WA	0.4000	EPA8270H	1.00
4767	Fluoranthene		U			0.0238	ug/L	.	GE	0.0238	EPA8270	1.00
4768	Iron, total recoverable		U			25.5	ug/L	.	WA	3.3000	CLP-HOD	1.00
4769	Iron, total recoverable		U			21.7	ug/L	.	GE	18.2000	EPA6010	1.00
4770	Fluorene		U			1.1	ug/L	.	WA	0.4000	EPA8270H	1.00
4771	Fluorene	1	U			1.1	ug/L	.	WA	0.4000	EPA8270H	1.00
4772	Fluorene		U			0.0119	ug/L	.	GE	0.0119	EPA8270	1.00
4773	gamma-Chlordane		UJ			0.0525	ug/L	.	WA	0.0200	CLP	1.00
4774	gamma-Chlordane		U		L	0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
4775	Hexachlorobutadiene		U			1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4776	Hexachlorobutadiene	1	U			1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4777	Hexachlorobutadiene		U			0.0663	ug/L	.	GE	0.0663	EPA8270	1.00
4778	Mercury, total recoverable		U			0.067	ug/L	.	WA	0.0700	CLP-HOD	1.00
4779	Mercury, total recoverable		U			0.04	ug/L	.	GE	0.0400	EPA7470	1.00
4780	Heptachlor		UJ		L	0.0525	ug/L	.	WA	0.0200	CLP	1.00
4781	Heptachlor		U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
4782	Heptachlor epoxide		UJ		L	0.0525	ug/L	.	WA	0.0200	CLP	1.00
4783	Heptachlor epoxide		U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
4784	Indeno(1,2,3-c,d)pyrene		U			1.1	ug/L	.	WA	0.9000	EPA8270H	1.00
4785	Indeno(1,2,3-c,d)pyrene	1	U			1.1	ug/L	.	WA	0.9000	EPA8270H	1.00
4786	Indeno(1,2,3-c,d)pyrene		U			0.0347	ug/L	.	GE	0.0347	EPA8270	1.00
4787	Isophorone		U			1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
4788	Isophorone	1	U			1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
4789	Isophorone		U			0.098	ug/L	.	GE	0.0980	EPA8270	1.00
4790	Potassium, total recoverable		U			1670	ug/L	.	WA	1667.000	CLP-HOD	1.00
4791	Potassium, total recoverable		U			1580	ug/L	.	GE	91.6000	EPA6010	1.00
4792	Lindane		UJ		L	0.0525	ug/L	.	WA	0.0200	CLP	1.00
4793	Lindane		U			0.0124	ug/L	.	GE	0.0124	EPA8080	1.00
4794	Toluene		U			0.107	ug/L	.	WA	0.0300	EPA8021	1.00
4795	Toluene		J	V	H	0.16	ug/L	.	GE	0.0440	EPA8260	1.00
4796	Methyl ethyl ketone		U			10	ug/L	.	WA	3.0000	EPA8260H	1.00
4797	Methyl ethyl ketone		UJ	V	H	0.14	ug/L	.	GE	0.1400	EPA8260	1.00
4798	Methoxychlor		UJ		L	0.525	ug/L	.	WA	0.1700	CLP	1.00
4799	Methoxychlor		U			0.248	ug/L	.	GE	0.2480	EPA8080	1.00
4800	Magnesium, total recoverable		U			1670	ug/L	.	WA	1667.000	CLP-HOD	1.00
4801	Magnesium, total recoverable		U			776	ug/L	.	GE	2.6800	EPA6010	1.00
4802	Methyl isobutyl ketone		U			10	ug/L	.	WA	2.0000	EPA8260H	1.00
4803	Methyl isobutyl ketone		U			0.204	ug/L	.	GE	0.2040	EPA8260	1.00
4804	Manganese, total recoverable		U			2.3	ug/L	.	WA	0.6700	CLP-HOD	1.00
4805	Manganese, total recoverable		U			2.06	ug/L	.	GE	0.2390	EPA6010	1.00
4806	Naphthalene		U			1.1	ug/L	.	WA	0.7000	EPA8270H	1.00
4807	Naphthalene	1	U			1.1	ug/L	.	WA	0.7000	EPA8270H	1.00
4808	Naphthalene		U			0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
4809	Sodium, total recoverable		U			2880	ug/L	.	WA	1667.000	CLP-HOD	1.00
4810	Sodium, total recoverable		U			2670	ug/L	.	GE	37.8000	EPA6010	1.00

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OBS	TESTNAME	LABDUP	RESQAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
4811	Nitrobenzene		U			1.1	ug/L	.	WA	0.8000	EPA8270H	1.00
4812	Nitrobenzene	1	U			1.1	ug/L	.	WA	0.8000	EPA8270H	1.00
4813	Nitrobenzene		U			0.0307	ug/L	.	GE	0.0307	EPA8270H	1.00
4814	N-Nitrosodipropylamine		U			1.1	ug/L	.	WA	1.0000	EPA8270H	1.00
4815	N-Nitrosodipropylamine		U			0.0356	ug/L	.	GE	0.0356	EPA8270H	1.00
4816	Ammonia nitrogen		U	I		30	ug/L	.	GE	30.0000	EPA350.1	1.00
4817	Nickel, total recoverable		U			11.7	ug/L	.	WA	12.0000	CLP-MOD	1.00
4818	Nickel, total recoverable	J	U			3.06	ug/L	.	GE	1.8400	EPA6010	1.00
4819	N-Nitrosodiphenylamine		U			1.1	ug/L	.	WA	0.9000	EPA8270H	1.00
4820	N-Nitrosodiphenylamine	1	U			1.1	ug/L	.	WA	0.9000	EPA8270H	1.00
4821	N-Nitrosodiphenylamine		U			0.0178	ug/L	.	GE	0.0178	EPA8270H	1.00
4822	Nitrate as nitrogen		J	Q		2350	ug/L	.	WA	83.3000	EPA353.2	10.00
4823	Nitrate as nitrogen	1	J	Q		2230	ug/L	.	WA	83.3000	EPA353.2	10.00
4824	Nitrate-nitrite as nitrogen		U			2160	ug/L	.	GE	30.0000	EPA353.1	2.00
4825	Lead, total recoverable		U	I		2.5	ug/L	.	WA	2.4000	CLP-MOD	1.00
4826	Lead, total recoverable	J	U	V		4.76	ug/L	.	GE	0.6900	EPA7421	1.00
4827	PCB 1016		U			1.05	ug/L	.	WA	0.3300	CLP	1.00
4828	PCB 1016		U			0.0564	ug/L	.	GE	0.0564	EPA8080	1.00
4829	PCB 1221		U			2.1	ug/L	.	WA	0.6700	CLP	1.00
4830	PCB 1221		U			0.0732	ug/L	.	GE	0.0732	EPA8080	1.00
4831	PCB 1232		U			1.05	ug/L	.	WA	0.3300	CLP	1.00
4832	PCB 1232		U			0.0612	ug/L	.	GE	0.0612	EPA8080	1.00
4833	PCB 1242		U	V		1.05	ug/L	.	HA	0.3300	CLP	1.00
4834	PCB 1242		U			0.0407	ug/L	.	GE	0.0407	EPA8080	1.00
4835	PCB 1248		U			1.05	ug/L	.	WA	0.3300	CLP	1.00
4836	PCB 1248		U			0.0594	ug/L	.	GE	0.0594	EPA8080	1.00
4837	PCB 1254		U			1.05	ug/L	.	WA	0.3300	CLP	1.00
4838	PCB 1254		U			0.0772	ug/L	.	GE	0.0772	EPA8080	1.00
4839	PCB 1260		U			1.05	ug/L	.	WA	0.3300	CLP	1.00
4840	PCB 1260		U			0.0703	ug/L	.	GE	0.0703	EPA8080	1.00
4841	Pentachlorophenol		U			5.5	ug/L	.	WA	1.0000	EPA8270H	1.00
4842	Pentachlorophenol		U			0.19	ug/L	.	GE	0.1900	EPA8270H	1.00
4843	pH	J	J	Q		5.3	PH	.	WA	0.1000	EPA150.1	1.00
4844	pH		J	Q		5.49	PH	.	GE	0.0100	EPA150.1	1.00
4845	Phenanthrene		U			1.1	ug/L	.	WA	0.4000	EPA8270H	1.00
4846	Phenanthrene	1	U			1.1	ug/L	.	WA	0.4000	EPA8270H	1.00
4847	Phenanthrene		U			0.0168	ug/L	.	GE	0.0168	EPA8270H	1.00
4848	Phenol		U	V		4	ug/L	.	WA	0.0426	EPA8270H	1.00
4849	Phenol		U	I		0.0426	ug/L	.	GE	0.0426	EPA8270H	1.00
4850	P,p'-DDD		U			0.105	ug/L	.	HA	0.0300	CLP	1.00
4851	P,p'-DDD		U			0.0495	ug/L	.	GE	0.0495	EPA8080	1.00
4852	P,p'-DDE		U			0.105	ug/L	.	WA	0.0300	CLP	1.00
4853	P,p'-DDE		U			0.0248	ug/L	.	GE	0.0248	EPA8080	1.00
4854	P,p'-DDT		U			0.105	ug/L	.	WA	0.0300	CLP	1.00
4855	P,p'-DDT		U			0.0495	ug/L	.	GE	0.0495	EPA8080	1.00
4856	Pyrene		U			1.1	ug/L	.	WA	0.4000	EPA8270H	1.00
4857	Pyrene		U	I		0.0218	ug/L	.	GE	0.0218	EPA8270H	1.00
4858	Antimony, total recoverable		U			1.7	ug/L	.	HA	2.0000	CLP-MOD	1.00
4859	Antimony, total recoverable		U			1.94	ug/L	.	GE	1.9400	EPA7041	1.00
4860	Selenium, total recoverable		U	IH		1.7	ug/L	.	WA	1.7000	CLP-MOD	1.00
4861	Selenium, total recoverable		U			1.25	ug/L	.	GE	1.2500	EPA7740	1.00
4862	Sulfate		U	Q		167	ug/L	.	HA	250.0000	EPA375.4	1.00
4863	Sulfate	J	J			175	ug/L	.	GE	90.0000	EPA300.0	1.00

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OBS	TESTNAME	LABDUP	RESQAL	ANQAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
4864	Styrene	U				0.1	ug/L	.	WA	0.0300	EPA8021	1.00
4865	Styrene	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
4866	1,1,2,2-Tetrachloroethane	U				0.1	ug/L	.	WA	0.0300	EPA8021	1.00
4867	1,1,2,2-Tetrachloroethane	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
4868	Tetrachloroethylene	U				0.4	ug/L	.	WA	0.1000	EPA8260H	1.00
4869	Tetrachloroethylene	U				0.026	ug/L	.	GE	0.0260	EPA8260	1.00
4870	Total dissolved solids	J		Q	P	35000	ug/L	.	WA	1.0000	EPA160.2	1.00
4871	Total dissolved solids	J		Q	P	33000	ug/L	.	WA	1.0000	EPA160.2	1.00
4872	Total dissolved solids					40000	ug/L	.	GE	6300.000	EPA160.1	1.00
4873	Thallium, total recoverable	UJ		IH	P	3.3	ug/L	.	WA	3.3000	CLP-HOD	1.00
4874	Thallium, total recoverable	U				0.66	ug/L	.	GE	0.6600	EPA7841	1.00
4875	Trichloroethylene	U		C		0.1	ug/L	.	WA	0.0300	EPA8010	1.00
4876	Trichloroethylene	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
4877	Tritium					5	pci/ml	0.6000	TH	0.5000	EPA906.0	1.00
4878	Tritium					4210	pci/L	527.0000	GP	628.0000	EPIA-002	1.00
4879	Toxaphene	UJ				5.25	ug/L	.	WA	1.7000	CLP	1.00
4880	Toxaphene	U			L	0.743	ug/L	.	GE	0.7430	EPA8080	1.00
4881	Vinyl acetate	U				10	ug/L	.	WA	2.0000	EPA8260H	1.00
4882	Vinyl acetate	U				0.142	ug/L	.	GE	0.1420	EPA8260	1.00
4883	Vanadium, total recoverable	U				10	ug/L	.	WA	10.0000	CLP-HOD	1.00
4884	Vanadium, total recoverable	J				0.316	ug/L	.	GE	0.3140	EPA6010	1.00
4885	Xylenes	U				0.4	ug/L	.	WA	0.1000	EPA8260H	1.00
4886	Xylenes	U				0.06	ug/L	.	GE	0.0600	EPA8260	1.00
4887	1,1-Dichloroethylene	U				0.5	ug/L	.	WA	0.2000	EPA8260H	1.00
4888	1,1-Dichloroethylene	U				0.018	ug/L	.	GE	0.0180	EPA8260	1.00
4889	1,1-Dichloroethylene	U				0.1	ug/L	.	WA	0.1000	EPA8260H	1.00
4890	1,1-Dichloroethylene	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
4891	1,1,1-Trichloroethylene	U				0.3	ug/L	.	WA	0.1000	EPA8260H	1.00
4892	1,1,1-Trichloroethylene	U				0.022	ug/L	.	GE	0.0220	EPA8260	1.00
4893	1,1,2-Trichloroethylene	U				0.2	ug/L	.	WA	0.0700	EPA8260H	1.00
4894	1,1,2-Trichloroethylene	U				0.017	ug/L	.	GE	0.0170	EPA8260	1.00
4895	1,2-Dichloroethylene	J		B	P	2	ug/L	.	WA	6.0000	EPA8260H	1.00
4896	1,2-Dichloroethylene	U				0.03	ug/L	.	GE	0.0300	EPA8260	1.00
4897	1,2-Dichloroethylene	U				1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4898	1,2-Dichlorobenzene	U				1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4899	1,2-Dichlorobenzene	U				0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
4900	1,2-Dichlorobenzene	U				0.2	ug/L	.	WA	0.0700	EPA8260H	1.00
4901	1,2-Dichlorobenzene	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
4902	1,2-Dichlorobenzene	U				0.06	ug/L	.	WA	0.0200	EPA8021	1.00
4903	1,2-Dichlorobenzene	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
4904	1,2,4-Trichlorobenzene	U				1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4905	1,2,4-Trichlorobenzene	U				0.0743	ug/L	.	GE	0.0743	EPA8270H	1.00
4906	1,3-Dichlorobenzene	U				1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4907	1,3-Dichlorobenzene	U				1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4908	1,3-Dichlorobenzene	U				0.116	ug/L	.	GE	0.1160	EPA8270	1.00
4909	cis-1,3-Dichloropropene	U				5	ug/L	.	WA	2.0000	EPA8260H	1.00
4910	cis-1,3-Dichloropropene	U				0.012	ug/L	.	GE	0.0120	EPA8260	1.00
4911	trans-1,3-Dichloropropene	U				5	ug/L	.	WA	2.0000	EPA8260H	1.00
4912	trans-1,3-Dichloropropene	U				0.015	ug/L	.	GE	0.0150	EPA8260	1.00
4913	1,4-Dichlorobenzene	U				1.1	ug/L	.	WA	0.6000	EPA8270H	1.00
4914	1,4-Dichlorobenzene	U				0.0238	ug/L	.	GE	0.0238	EPA8270	1.00
4915	2-Chlorophenol	U				1.1	ug/L	.	WA	0.7000	EPA8270H	1.00
4916	2-Chlorophenol	U				0.0307	ug/L	.	GE	0.0307	EPA8270	1.00

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ODS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIM	METHOD	DILFACT
4917	2-Chloronaphthalene		U			1.1	ug/L	.	HA	0.5000	EPA8270H	1.00
4918	2-Chloronaphthalene	1	U			1.1	ug/L	.	HA	0.5000	EPA8270H	1.00
4919	2-Chloronaphthalene		U			0.116	ug/L	.	GE	0.1160	EPA8270	1.00
4920	2-Hexanone		U			10	ug/L	.	HA	3.0000	EPA8260H	1.00
4921	2-Hexanone		UJ	V	H	0.194	ug/L	.	GE	0.1940	EPA8260	1.00
4922	2-Hexylmaphthalene		U			1.1	ug/L	.	HA	0.6000	EPA8270H	1.00
4923	2-Hexylmaphthalene		U			1.1	ug/L	.	HA	0.6000	EPA8270H	1.00
4924	2-Hexylmaphthalene	1	U			0.0168	ug/L	.	GE	0.0168	EPA8270	1.00
4925	o-Cresol (2-Methylphenol)		U			1.1	ug/L	.	HA	0.7000	EPA8270H	1.00
4926	o-Cresol (2-Methylphenol)	1	U			1.1	ug/L	.	HA	0.7000	EPA8270H	1.00
4927	o-Cresol (2-Methylphenol)		U			0.0475	ug/L	.	GE	0.0475	EPA8270	1.00
4928	o-Nitroaniline		U			5.5	ug/L	.	HA	1.0000	EPA8270H	1.00
4929	o-Nitroaniline	1	U			5.5	ug/L	.	HA	1.0000	EPA8270H	1.00
4930	o-Nitroaniline		U			0.0307	ug/L	.	GE	0.0307	EPA8270	1.00
4931	2-Nitrophenol		U			1.1	ug/L	.	HA	0.7000	EPA8270H	1.00
4932	2-Nitrophenol	1	U			1.1	ug/L	.	HA	0.7000	EPA8270H	1.00
4933	2-Nitrophenol		U			0.0119	ug/L	.	GE	0.0119	EPA8270	1.00
4934	2,4-Dichlorophenol		U			1.1	ug/L	.	HA	0.5000	EPA8270H	1.00
4935	2,4-Dichlorophenol	1	U			1.1	ug/L	.	HA	0.5000	EPA8270H	1.00
4936	2,4-Dichlorophenol		U			0.0218	ug/L	.	GE	0.0218	EPA8270	1.00
4937	2,4-Dimethyl phenol		U			1.1	ug/L	.	HA	0.8000	EPA8270H	1.00
4938	2,4-Dimethyl phenol	1	U			1.1	ug/L	.	HA	0.8000	EPA8270H	1.00
4939	2,4-Dimethyl phenol		U			0.103	ug/L	.	GE	0.1030	EPA8270	1.00
4940	2,4-Dinitrophenol		U			5.5	ug/L	.	HA	3.0000	EPA8270H	1.00
4941	2,4-Dinitrophenol	1	U			5.5	ug/L	.	HA	3.0000	EPA8270H	1.00
4942	2,4-Dinitrophenol		U			0.329	ug/L	.	GE	0.3290	EPA8270	1.00
4943	2,4-Dinitrotoluene		U			1.1	ug/L	.	HA	0.5000	EPA8270H	1.00
4944	2,4-Dinitrotoluene		U			0.0911	ug/L	.	GE	0.0911	EPA8270	1.00
4945	2,4,5-Trichlorophenol		U			5.5	ug/L	.	HA	0.4000	EPA8270H	1.00
4946	2,4,5-Trichlorophenol	1	U			5.5	ug/L	.	HA	0.4000	EPA8270H	1.00
4947	2,4,5-Trichlorophenol		U			0.0505	ug/L	.	GE	0.0505	EPA8270	1.00
4948	2,4,6-Trichlorophenol		U			1.1	ug/L	.	HA	0.3000	EPA8270H	1.00
4949	2,4,6-Trichlorophenol	1	U			1.1	ug/L	.	HA	0.3000	EPA8270H	1.00
4950	2,4,6-Trichlorophenol		U			0.0119	ug/L	.	GE	0.0119	EPA8270	1.00
4951	2,6-Dinitrotoluene		U			1.1	ug/L	.	HA	0.5000	EPA8270H	1.00
4952	2,6-Dinitrotoluene	1	U			1.1	ug/L	.	HA	0.5000	EPA8270H	1.00
4953	2,6-Dinitrotoluene		U			0.109	ug/L	.	GE	0.1090	EPA8270	1.00
4954	m-Nitroaniline		U			5.5	ug/L	.	HA	0.6000	EPA8270H	1.00
4955	m-Nitroaniline	1	U			5.5	ug/L	.	HA	0.6000	EPA8270H	1.00
4956	m-Nitroaniline		U			0.141	ug/L	.	GE	0.1410	EPA8270	1.00
4957	3,3'-Dichlorobenzidine		U			2.2	ug/L	.	HA	10.0000	EPA8270H	1.00
4958	3,3'-Dichlorobenzidine	1	U			2.2	ug/L	.	HA	10.0000	EPA8270H	1.00
4959	3,3'-Dichlorobenzidine		U			0.112	ug/L	.	GE	0.1120	EPA8270	1.00
4960	m,p-Cresol		U			0.485	ug/L	.	GE	0.4850	EPA8270	1.00
4961	4-Bromophenyl phenyl ether		U			1.1	ug/L	.	HA	0.4000	EPA8270H	1.00
4962	4-Bromophenyl phenyl ether	1	U			1.1	ug/L	.	HA	0.4000	EPA8270H	1.00
4963	4-Bromophenyl phenyl ether		U			0.0564	ug/L	.	GE	0.0564	EPA8270	1.00
4964	4-Chloroaniline		U			1.1	ug/L	.	HA	3.0000	EPA8270H	1.00
4965	4-Chloroaniline	1	U			1.1	ug/L	.	HA	3.0000	EPA8270H	1.00
4966	4-Chloroaniline		U			0.0149	ug/L	.	GE	0.0149	EPA8270	1.00
4967	4-Chlorophenyl phenyl ether		U			1.1	ug/L	.	HA	0.5000	EPA8270H	1.00
4968	4-Chlorophenyl phenyl ether	1	U			1.1	ug/L	.	HA	0.5000	EPA8270H	1.00
4969	4-Chlorophenyl phenyl ether		U			0.0149	ug/L	.	GE	0.0149	EPA8270	1.00

Well Name=CBR 3D Secondary ID=R Sample Date=111594
(continued)

OBS	TESTNAME	LABDUP	RESQUAL	ANQUAL	BIAS	RESULT	UNITS	ACCURACY	LAB	DETLIN	METHOD	DILFACT
4970	4-Chloro-m-cresol		U	V		1.1	ug/L	.	HA	0.4000	EPA8270H	1.00
4971	4-Chloro-m-cresol		U			0.0257	ug/L	.	GE	0.0257	EPA8270	1.00
4972	p-Cresol (4-Methylphenol)		U			1.1	ug/L	.	HA	0.6000	EPA8270H	1.00
4973	p-Cresol (4-Methylphenol)	1	U			1.1	ug/L	.	HA	0.6000	EPA8270H	1.00
4974	p-Nitroaniline		U			5.5	ug/L	.	HA	1.0000	EPA8270H	1.00
4975	p-Nitroaniline	1	U			5.5	ug/L	.	HA	1.0000	EPA8270H	1.00
4976	p-Nitroaniline		U			0.101	ug/L	.	GE	0.1010	EPA8270	1.00
4977	4-Nitrophenol		U	I		5.5	ug/L	.	HA	1.0000	EPA8270H	1.00
4978	4-Nitrophenol		U			0.189	ug/L	.	GE	0.1890	EPA8270	1.00
4979	2-Nitro-4,6-dinitrophenol		U			5.5	ug/L	.	HA	0.7000	EPA8270H	1.00
4980	2-Nitro-4,6-dinitrophenol	1	U			5.5	ug/L	.	HA	0.7000	EPA8270H	1.00
4981	2-Nitro-4,6-dinitrophenol		U			0.277	ug/L	.	GE	0.2770	EPA8270	1.00
4982	Zinc, total recoverable		J	V	H	19.1	ug/L	.	HA	6.3000	CLP-HQD	1.00
4983	Zinc, total recoverable		J			11.2	ug/L	.	GE	2.2200	EPA6010	1.00

Final Groundwater Data
 For Wells CBR-4, CBR-5, And
 CBR-6
 Date: Sept. 21, 1995

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 4	12/28/94	1,1,1-Trichloroethane	0.022	W	OY	0.022	UGL
CBR 4	12/3/94	1,1,1-Trichloroethane	0.022	U		0.022	UGL
CBR 4	12/28/94	1,1,2,2-tetrachloroethane	0.012	W	OY	0.012	UGL
CBR 4	12/3/94	1,1,2,2-tetrachloroethane	0.012	U		0.012	UGL
CBR 4	12/28/94	1,1,2-Trichloroethane	0.017	W	OY	0.017	UGL
CBR 4	12/3/94	1,1,2-Trichloroethane	0.017	U		0.017	UGL
CBR 4	12/28/94	1,1-Dichloroethane	0.017	W	OY	0.017	UGL
CBR 4	12/3/94	1,1-Dichloroethane	0.017	U		0.017	UGL
CBR 4	12/28/94	1,1-Dichloroethylene	0.018	W	OY	0.018	UGL
CBR 4	12/3/94	1,1-Dichloroethylene	0.018	U		0.018	UGL
CBR 4	12/28/94	1,2,4-Trichlorobenzene	0.075		Y	0.12	UGL
CBR 4	12/3/94	1,2,4-Trichlorobenzene	0.0735	U		0.0735	UGL
CBR 4	12/28/94	1,2-Dichlorobenzene	0.017	U	Y	0.017	UGL
CBR 4	12/3/94	1,2-Dichlorobenzene	0.0167	U		0.0167	UGL
CBR 4	12/28/94	1,2-Dichloroethane	0.015	W	OY	0.015	UGL
CBR 4	12/3/94	1,2-Dichloroethane	0.015	U		0.015	UGL
CBR 4	12/28/94	1,2-Dichloroethylene	0.03	W	OY	0.03	UGL
CBR 4	12/3/94	1,2-Dichloroethylene	0.03	U		0.03	UGL
CBR 4	12/28/94	1,2-Dichloropropane	0.015	W	OY	0.015	UGL
CBR 4	12/3/94	1,2-Dichloropropane	0.015	U		0.015	UGL
CBR 4	12/28/94	1,3-Dichlorobenzene	0.117	U	Y	0.117	UGL
CBR 4	12/3/94	1,3-Dichlorobenzene	0.115	U		0.115	UGL
CBR 4	12/28/94	1,4-Dichlorobenzene	0.024	U	Y	0.024	UGL
CBR 4	12/3/94	1,4-Dichlorobenzene	0.0235	U		0.0235	UGL
CBR 4	12/28/94	2,2-bis(4-chlorophenyl)-1,1,1-TCE	0.05	W	Y	0.05	UGL
CBR 4	12/3/94	2,2-bis(4-chlorophenyl)-1,1,1-TCE	0.05	U		0.05	UGL
CBR 4	12/28/94	2,2-bis(4-chlorophenyl)-1,1-DCE	0.025	W	Y	0.025	UGL
CBR 4	12/3/94	2,2-bis(4-chlorophenyl)-1,1-DCE	0.025	U		0.025	UGL
CBR 4	12/28/94	2,2-bis(4-chlorophenyl)-1,1-DCLE	0.05	W	Y	0.05	UGL
CBR 4	12/3/94	2,2-bis(4-chlorophenyl)-1,1-DCLE	0.05	U		0.05	UGL
CBR 4	12/28/94	2,4,5-Trichlorophenol	0.051	U	Y	0.051	UGL
CBR 4	12/3/94	2,4,5-Trichlorophenol	0.05	U		0.05	UGL
CBR 4	12/28/94	2,4,6-Trichlorophenol	0.012	U	Y	0.012	UGL
CBR 4	12/3/94	2,4,6-Trichlorophenol	0.0118	U		0.0118	UGL
CBR 4	12/28/94	2,4-Dichlorophenol	0.022	U	Y	0.022	UGL
CBR 4	12/3/94	2,4-Dichlorophenol	0.0216	U		0.0216	UGL
CBR 4	12/28/94	2,4-Dimethyl phenol	0.104	U	Y	0.104	UGL
CBR 4	12/3/94	2,4-Dimethyl phenol	0.102	U		0.102	UGL
CBR 4	12/28/94	2,4-Dinitrophenol	0.332	U	Y	0.332	UGL
CBR 4	12/3/94	2,4-Dinitrophenol	0.325	U		0.325	UGL
CBR 4	12/28/94	2,4-Dinitrotoluene	0.092	U	Y	0.092	UGL
CBR 4	12/3/94	2,4-Dinitrotoluene	0.0902	U		0.0902	UGL
CBR 4	12/28/94	2,6-Dinitrotoluene	0.11	U	Y	0.11	UGL
CBR 4	12/3/94	2,6-Dinitrotoluene	0.108	U		0.108	UGL
CBR 4	12/28/94	2-Chloronaphthalene	0.117	U	Y	0.117	UGL
CBR 4	12/3/94	2-Chloronaphthalene	0.115	U		0.115	UGL
CBR 4	12/28/94	2-Chlorophenol	0.031	U	Y	0.031	UGL
CBR 4	12/3/94	2-Chlorophenol	0.0304	U		0.0304	UGL
CBR 4	12/28/94	2-Hexanone	0.194	W	OY	0.194	UGL
CBR 4	12/3/94	2-Hexanone	0.194	U		0.194	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 4	12/28/94	2-Methyl phenol	0.048	U	Y	0.048	UGL
CBR 4	12/3/94	2-Methyl phenol	0.0471	U		0.0471	UGL
CBR 4	12/28/94	2-Methyl-4,6-Dinitrophenol	0.28	U	Y	0.28	UGL
CBR 4	12/3/94	2-Methyl-4,6-Dinitrophenol	0.275	U		0.275	UGL
CBR 4	12/28/94	2-Methylnaphthalene	0.017	U	Y	0.017	UGL
CBR 4	12/3/94	2-Methylnaphthalene	0.0167	U		0.0167	UGL
CBR 4	12/28/94	2-Nitroaniline	0.031	U	Y	0.031	UGL
CBR 4	12/3/94	2-Nitroaniline	0.0304	U		0.0304	UGL
CBR 4	12/28/94	2-Nitrophenol	0.012	U	Y	0.012	UGL
CBR 4	12/3/94	2-Nitrophenol	0.0118	U		0.0118	UGL
CBR 4	12/28/94	3,3-Dichlorobenzidene	0.113	U	Y	0.113	UGL
CBR 4	12/3/94	3,3-Dichlorobenzidene	0.111	U		0.111	UGL
CBR 4	12/28/94	3-Nitroaniline	0.142	U	Y	0.142	UGL
CBR 4	12/3/94	3-Nitroaniline	0.139	U		0.139	UGL
CBR 4	12/28/94	34MP	0.49	U	Y	0.49	UGL
CBR 4	12/3/94	34MP	0.48	U		0.48	UGL
CBR 4	12/28/94	4-Bromophenylphenyl ether	0.057	U	Y	0.057	UGL
CBR 4	12/3/94	4-Bromophenylphenyl ether	0.0559	U		0.0559	UGL
CBR 4	12/28/94	4-Chloroaniline	0.015	U	Y	0.015	UGL
CBR 4	12/3/94	4-Chloroaniline	0.0147	U		0.0147	UGL
CBR 4	12/28/94	4-Chlorophenylphenyl ether	0.015	U	Y	0.015	UGL
CBR 4	12/3/94	4-Chlorophenylphenyl ether	0.0147	U		0.0147	UGL
CBR 4	12/28/94	4-nitroaniline	0.102	U	Y	0.102	UGL
CBR 4	12/3/94	4-nitroaniline	0.1	U		0.1	UGL
CBR 4	12/28/94	4-Nitrophenol	0.191	U	Y	0.191	UGL
CBR 4	12/3/94	4-Nitrophenol	0.187	U		0.187	UGL
CBR 4	12/3/94	44BMP		J	N	18	UGL
CBR 4	12/28/94	4CL3MP	0.026	U	Y	0.026	UGL
CBR 4	12/3/94	4CL3MP	0.0255	U		0.0255	UGL
CBR 4	12/28/94	Acenaphthene	0.0168	U	Y	0.0168	UGL
CBR 4	12/3/94	Acenaphthene	0.0165	U		0.0165	UGL
CBR 4	12/28/94	Acenaphthylene	0.017	U	Y	0.017	UGL
CBR 4	12/3/94	Acenaphthylene	0.0167	U		0.0167	UGL
CBR 4	12/28/94	Acetone	3.17	U	OY	3.17	UGL
CBR 4	12/3/94	Acetone	3.17	U		3.17	UGL
CBR 4	12/28/94	ACLDAN	0.025	U	Y	0.025	UGL
CBR 4	12/3/94	ACLDAN	0.025	U		0.025	UGL
CBR 4	12/28/94	Aldrin	0.0125	U	Y	0.0125	UGL
CBR 4	12/3/94	Aldrin	0.0125	U		0.0125	UGL
CBR 4	12/28/94	Alpha-benzenehexachloride	0.0125	U	Y	0.0125	UGL
CBR 4	12/3/94	Alpha-benzenehexachloride	0.0125	U		0.0125	UGL
CBR 4	12/3/94	Aluminum total	1.93		V	41400	UGL
CBR 4	12/28/94	Aluminum total	1.93		VYX	7990	UGL
CBR 4	12/28/94	Anthracene	0.017	U	Y	0.017	UGL
CBR 4	12/3/94	Anthracene	0.0167	U		0.0167	UGL
CBR 4	12/28/94	Antimony total	1.94	U	Y	1.94	UGL
CBR 4	12/3/94	Antimony total	1.94	U		1.94	UGL
CBR 4	12/3/94	Arsenic total	1.5			5.1	UGL
CBR 4	12/28/94	Arsenic total	1.5	U	Y	1.5	UGL
CBR 4	12/3/94	Barium total	0.048		V	40	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 4	12/28/94	Barium total	0.048		VY	13.1	UGL
CBR 4	12/28/94	BBFANT	0.133	U	Y	0.133	UGL
CBR 4	12/3/94	BBFANT	0.13	U		0.13	UGL
CBR 4	12/28/94	BCLMEE	0.042	U	Y	0.042	UGL
CBR 4	12/3/94	BCLMEE	0.0412	U		0.0412	UGL
CBR 4	12/28/94	Benzene	0.017	J	OY	0.07	UGL
CBR 4	12/3/94	Benzene	0.017	U		0.017	UGL
CBR 4	12/28/94	Benzo(a)anthracene	0.151	U	Y	0.151	UGL
CBR 4	12/3/94	Benzo(a)anthracene	0.148	U		0.148	UGL
CBR 4	12/28/94	Benzo(a)pyrene	0.076	U	Y	0.076	UGL
CBR 4	12/3/94	Benzo(a)pyrene	0.0745	U		0.0745	UGL
CBR 4	12/28/94	Benzo(g,h,i)perylene	0.309	U	Y	0.309	UGL
CBR 4	12/3/94	Benzo(g,h,i)perylene	0.303	U		0.303	UGL
CBR 4	12/28/94	Benzo(k)fluoranthene	0.079	U	Y	0.079	UGL
CBR 4	12/3/94	Benzo(k)fluoranthene	0.0775	U		0.0775	UGL
CBR 4	12/28/94	Benzoic acid	0.081	U	Y	0.081	UGL
CBR 4	12/3/94	Benzoic acid	0.0794	U		0.0794	UGL
CBR 4	12/28/94	Benzyl alcohol	0.025	U	Y	0.025	UGL
CBR 4	12/3/94	Benzyl alcohol	0.0245	U		0.0245	UGL
CBR 4	12/28/94	Benzyl alcohol	0.015	U	OY	0.015	UGL
CBR 4	12/3/94	Benzyl alcohol	0.015	U		0.015	UGL
CBR 4	12/3/94	Beryllium total	0.027	JV	VB	0.739	UGL
CBR 4	12/28/94	Beryllium total	0.027	J	VY	0.409	UGL
CBR 4	12/28/94	Beta-benzenehexachloride	0.025	U	Y	0.025	UGL
CBR 4	12/3/94	Beta-benzenehexachloride	0.025	U		0.025	UGL
CBR 4	12/28/94	Bis(2-chloroethoxy) methane	0.018	U	Y	0.018	UGL
CBR 4	12/3/94	Bis(2-chloroethoxy) methane	0.0176	U		0.0176	UGL
CBR 4	12/28/94	Bis(2-chloroethyl) ether	0.017	U	Y	0.017	UGL
CBR 4	12/3/94	Bis(2-chloroethyl) ether	0.0167	U		0.0167	UGL
CBR 4	12/3/94	Bis(2-ethylhexyl) phthalate	0.249			6.11	UGL
CBR 4	12/28/94	Bis(2-ethylhexyl) phthalate	0.254	U	Y	0.254	UGL
CBR 4	12/3/94	Bromodichloromethane	0.012			0.3	UGL
CBR 4	12/28/94	Bromodichloromethane	0.012	J	OY	0.23	UGL
CBR 4	12/28/94	Bromoform	0.012	U	OY	0.012	UGL
CBR 4	12/3/94	Bromoform	0.012	U		0.012	UGL
CBR 4	12/28/94	Bromomethane	0.026	U	OY	0.026	UGL
CBR 4	12/3/94	Bromomethane	0.026	U		0.026	UGL
CBR 4	12/28/94	Butylbenzyl phthalate	0.036	U	Y	0.036	UGL
CBR 4	12/3/94	Butylbenzyl phthalate	0.0353	U		0.0353	UGL
CBR 4	12/3/94	Cadmium total	0.48	U		9.6	UGL
CBR 4	12/28/94	Cadmium total	0.48	U	Y	0.48	UGL
CBR 4	12/3/94	Calcium total	12	✓		4090	UGL
CBR 4	12/28/94	Calcium total	12		Y	1490	UGL
CBR 4	12/28/94	Carbon disulfide	0.129	J	OY	2.8	UGL
CBR 4	12/3/94	Carbon disulfide	0.129	U		0.129	UGL
CBR 4	12/28/94	Carbon tetrachloride	0.012	U	OY	0.012	UGL
CBR 4	12/3/94	Carbon tetrachloride	0.012	U		0.012	UGL
CBR 4	12/28/94	Chlorobenzene	0.012	U	OY	0.012	UGL
CBR 4	12/3/94	Chlorobenzene	0.012	U		0.012	UGL
CBR 4	12/28/94	Chloroethane	0.025	U	OY	0.025	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 4	12/3/94	Chloroethane	0.025	U		0.025	UGL
CBR 4	12/3/94	Chloroform	0.017			1.15	UGL
CBR 4	12/28/94	Chloroform	0.017	J	OY	0.88	UGL
CBR 4	12/28/94	Chloromethane	0.024	W	OY	0.024	UGL
CBR 4	12/3/94	Chloromethane	0.024	U		0.024	UGL
CBR 4	12/3/94	Chromium total	2.28			67	UGL
CBR 4	12/28/94	Chromium total	2.28		Y	26.9	UGL
CBR 4	12/28/94	Chrysene	0.012	U	Y	0.012	UGL
CBR 4	12/3/94	Chrysene	0.0118	U		0.0118	UGL
CBR 4	12/28/94	Cis-1,3-Dichloropropene	0.012	W	OY	0.012	UGL
CBR 4	12/3/94	Cis-1,3-Dichloropropene	0.012	U		0.012	UGL
CBR 4	12/3/94	Cobalt total	0.598	U		12	UGL
CBR 4	12/28/94	Cobalt total	0.598	J	Y	1.8	UGL
CBR 4	12/3/94	Copper total	0.458			26.3	UGL
CBR 4	12/28/94	Copper total	0.458		Y	7.46	UGL
CBR 4	12/28/94	Cyanide	0.7	JV	VY	1.26	UGL
CBR 4	12/3/94	Cyanide	0.7	U		0.7	UGL
CBR 4	12/28/94	Delta-benzenehexachloride	0.025	W	Y	0.025	UGL
CBR 4	12/3/94	Delta-benzenehexachloride	0.025	U		0.025	UGL
CBR 4	12/3/94	Di-n-butyl phthalate	0.434	JV	VB	0.529	UGL
CBR 4	12/28/94	Di-n-butyl phthalate	0.443	JV	VY	0.51	UGL
CBR 4	12/28/94	Di-n-octyl phthalate	0.07	U	Y	0.07	UGL
CBR 4	12/3/94	Di-n-octyl phthalate	0.0686	U		0.0686	UGL
CBR 4	12/28/94	Dibenz(a,h)anthracene	0.09	U	Y	0.09	UGL
CBR 4	12/3/94	Dibenz(a,h)anthracene	0.0882	U		0.0882	UGL
CBR 4	12/28/94	Dibenzofuran	0.017	U	Y	0.017	UGL
CBR 4	12/3/94	Dibenzofuran	0.0167	U		0.0167	UGL
CBR 4	12/3/94	Dibromochloromethane	0.017			0.18	UGL
CBR 4	12/28/94	Dibromochloromethane	0.017	J	OY	0.12	UGL
CBR 4	12/28/94	Dieldrin	0.025	W	Y	0.025	UGL
CBR 4	12/3/94	Dieldrin	0.025	U		0.025	UGL
CBR 4	12/3/94	Diethyl phthalate	0.0147	JV	VB	0.147	UGL
CBR 4	12/28/94	Diethyl phthalate	0.015	U	Y	0.015	UGL
CBR 4	12/28/94	Dimethyl phthalate	0.017	U	Y	0.017	UGL
CBR 4	12/3/94	Dimethyl phthalate	0.0167	U		0.0167	UGL
CBR 4	12/28/94	Endosulfan I	0.025	W	Y	0.025	UGL
CBR 4	12/3/94	Endosulfan I	0.025	U		0.025	UGL
CBR 4	12/28/94	Endosulfan II	0.05	W	Y	0.05	UGL
CBR 4	12/3/94	Endosulfan II	0.05	U		0.05	UGL
CBR 4	12/28/94	Endosulfan Sulfate	0.05	W	Y	0.05	UGL
CBR 4	12/3/94	Endosulfan Sulfate	0.05	U		0.05	UGL
CBR 4	12/28/94	Endrin	0.025	W	Y	0.025	UGL
CBR 4	12/3/94	Endrin	0.025	U		0.025	UGL
CBR 4	12/28/94	Endrin Ketone	0.05	W	Y	0.05	UGL
CBR 4	12/3/94	Endrin Ketone	0.05	U		0.05	UGL
CBR 4	12/28/94	Ethylbenzene	0.015	W	OY	0.015	UGL
CBR 4	12/3/94	Ethylbenzene	0.015	U		0.015	UGL
CBR 4	12/28/94	Fluoranthene	0.024	U	Y	0.024	UGL
CBR 4	12/3/94	Fluoranthene	0.0235	U		0.0235	UGL
CBR 4	12/28/94	Fluorene	0.012	U	Y	0.012	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 4	12/3/94	Fluorene	0.0118	U		0.0118	UGL
CBR 4	12/28/94	GCLDAN	0.025	U	Y	0.025	UGL
CBR 4	12/3/94	GCLDAN	0.025	U		0.025	UGL
CBR 4	12/28/94	Heptachlor	0.025	U	Y	0.025	UGL
CBR 4	12/3/94	Heptachlor	0.025	U		0.025	UGL
CBR 4	12/28/94	Heptachlor epoxide	0.025	U	Y	0.025	UGL
CBR 4	12/3/94	Heptachlor epoxide	0.025	U		0.025	UGL
CBR 4	12/28/94	Hexachlorobenzene	0.028	U	Y	0.028	UGL
CBR 4	12/3/94	Hexachlorobenzene	0.0275	U		0.0275	UGL
CBR 4	12/28/94	Hexachlorobutadiene	0.067	U	Y	0.067	UGL
CBR 4	12/3/94	Hexachlorobutadiene	0.0657	U		0.0657	UGL
CBR 4	12/28/94	Hexachlorocyclopentadiene	0.042	U	Y	0.042	UGL
CBR 4	12/3/94	Hexachlorocyclopentadiene	0.0412	U		0.0412	UGL
CBR 4	12/28/94	Hexachloroethane	0.022	U	Y	0.022	UGL
CBR 4	12/3/94	Hexachloroethane	0.0216	U		0.0216	UGL
CBR 4	12/28/94	Indeno(1,2,3-C,D) pyrene	0.035	U	Y	0.035	UGL
CBR 4	12/3/94	Indeno(1,2,3-C,D) pyrene	0.0343	U		0.0343	UGL
CBR 4	12/3/94	Iron Total	18.2			94900	UGL
CBR 4	12/28/94	Iron Total	18.2		Y	24200	UGL
CBR 4	12/28/94	Isophorone	0.099	U	Y	0.099	UGL
CBR 4	12/3/94	Isophorone	0.0971	U		0.0971	UGL
CBR 4	12/3/94	Lead total	0.69		V	89.1	UGL
CBR 4	12/28/94	Lead total	0.69		Y	11.8	UGL
CBR 4	12/28/94	Lindane	0.0125	U	Y	0.0125	UGL
CBR 4	12/3/94	Lindane	0.0125	U		0.0125	UGL
CBR 4	12/3/94	Magnesium total	2.68		V	771	UGL
CBR 4	12/28/94	Magnesium total	2.68		Y	239	UGL
CBR 4	12/3/94	Manganese total	0.239			297	UGL
CBR 4	12/28/94	Manganese total	0.239		Y	88.9	UGL
CBR 4	12/28/94	Mercury Total	0.04	U	Y	0.04	UGL
CBR 4	12/3/94	Mercury Total	0.04	U		0.04	UGL
CBR 4	12/28/94	Methoxychlor	0.25	U	Y	0.25	UGL
CBR 4	12/3/94	Methoxychlor	0.25	U		0.25	UGL
CBR 4	12/28/94	Methylene chloride	0.294	U	OY8	0.53	UGL
CBR 4	12/3/94	Methylene chloride	0.294	V	V	0.52	UGL
CBR 4	12/28/94	Methylethyl ketone	0.14	U	OY	0.14	UGL
CBR 4	12/3/94	Methylethyl ketone	0.14	U	V	0.14	UGL
CBR 4	12/28/94	Methylisobutyl ketone	0.204	U	OY	0.204	UGL
CBR 4	12/3/94	Methylisobutyl ketone	0.204	U		0.204	UGL
CBR 4	12/28/94	N-nitrosodi-propylamine	0.036	U	Y	0.036	UGL
CBR 4	12/3/94	N-nitrosodi-propylamine	0.0353	U		0.0353	UGL
CBR 4	12/28/94	N-nitrosodiphenylamine	0.018	U	Y	0.018	UGL
CBR 4	12/3/94	N-nitrosodiphenylamine	0.0176	U		0.0176	UGL
CBR 4	12/28/94	Napthalene	0.017	U	Y	0.017	UGL
CBR 4	12/3/94	Napthalene	0.0167	U		0.0167	UGL
CBR 4	12/3/94	Nickel total	1.84	U		36.8	UGL
CBR 4	12/28/94	Nickel total	1.84	J	Y	2.64	UGL
CBR 4	12/28/94	Nitrobenzene	0.031	U	Y	0.031	UGL
CBR 4	12/3/94	Nitrobenzene	0.0304	U		0.0304	UGL
CBR 4	12/28/94	PCB 1016	0.057	U	Y	0.057	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 4	12/3/94	PCB 1016	0.057	U		0.057	UGL
CBR 4	12/28/94	PCB 1221	0.0739	W	Y	0.0739	UGL
CBR 4	12/3/94	PCB 1221	0.0739	U		0.0739	UGL
CBR 4	12/28/94	PCB 1232	0.0618	W	Y	0.0618	UGL
CBR 4	12/3/94	PCB 1232	0.0618	U		0.0618	UGL
CBR 4	12/28/94	PCB 1242	0.0411	W	Y	0.0411	UGL
CBR 4	12/3/94	PCB 1242	0.0411	U		0.0411	UGL
CBR 4	12/28/94	PCB 1248	0.06	W	Y	0.06	UGL
CBR 4	12/3/94	PCB 1248	0.06	U		0.06	UGL
CBR 4	12/28/94	PCB 1254	0.078	W	Y	0.078	UGL
CBR 4	12/3/94	PCB 1254	0.078	U		0.078	UGL
CBR 4	12/28/94	PCB 1260	0.071	W	Y	0.071	UGL
CBR 4	12/3/94	PCB 1260	0.071	U		0.071	UGL
CBR 4	12/28/94	Pentachlorophenol	0.192	U	Y	0.192	UGL
CBR 4	12/3/94	Pentachlorophenol	0.188	U		0.188	UGL
CBR 4	12/28/94	Phenanthrene	0.017	U	Y	0.017	UGL
CBR 4	12/3/94	Phenanthrene	0.0167	U		0.0167	UGL
CBR 4	12/28/94	Phenols	0.043	W	OY	0.043	UGL
CBR 4	12/3/94	Phenols	0.0422	U		0.0422	UGL
CBR 4	12/3/94	Potassium total	91.6	U		1830	UGL
CBR 4	12/28/94	Potassium total	91.6	Y		661	UGL
CBR 4	12/28/94	Pyrene	0.022	J	Y	0.16	UGL
CBR 4	12/3/94	Pyrene	0.0216	U		0.0216	UGL
CBR 4	12/28/94	Selenium total	1.25	U	Y	1.25	UGL
CBR 4	12/3/94	Selenium total	1.25	U	V	1.25	UGL
CBR 4	12/3/94	Silver total	0.512	U		10.2	UGL
CBR 4	12/28/94	Silver total	0.512	U	Y	0.512	UGL
CBR 4	12/3/94	Sodium total	37.8			9740	UGL
CBR 4	12/28/94	Sodium total	37.8		Y	9040	UGL
CBR 4	12/28/94	Styrene	0.017	W	OY	0.017	UGL
CBR 4	12/3/94	Styrene	0.017	U		0.017	UGL
CBR 4	12/28/94	Tetrachloroethylene	0.026	W	OY	0.026	UGL
CBR 4	12/3/94	Tetrachloroethylene	0.026	U		0.026	UGL
CBR 4	12/28/94	Thallium total	0.66	U	Y	0.66	UGL
CBR 4	12/3/94	Thallium total	0.66	U		0.66	UGL
CBR 4	12/28/94	Toluene	0.044	W	OY8	0.22	UGL
CBR 4	12/3/94	Toluene	0.044	JV	VB	0.2	UGL
CBR 4	12/28/94	Toxaphene	0.75	W	Y	0.75	UGL
CBR 4	12/3/94	Toxaphene	0.75	U		0.75	UGL
CBR 4	12/28/94	Trans-1,3-Dichloropropene	0.015	W	OY	0.015	UGL
CBR 4	12/3/94	Trans-1,3-Dichloropropene	0.015	U		0.015	UGL
CBR 4	12/28/94	Trichloroethylene	0.017	W	OY8	0.07	UGL
CBR 4	12/3/94	Trichloroethylene	0.017	U		0.017	UGL
CBR 4	12/28/94	Tritium	594		Y	8190	PCL
CBR 4	12/3/94	Tritium	507			7590	PCL
CBR 4	12/28/94	UNKALKA		J	YN	5	UGL
CBR 4	12/28/94	UPHEN		J	YN	5	UGL
CBR 4	12/3/94	Vanadium total	0.314		V	224	UGL
CBR 4	12/28/94	Vanadium total	0.314		Y	58.8	UGL
CBR 4	12/28/94	Vinyl acetate	0.142	W	OY	0.142	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 4	12/3/94	Vinyl acetate	0.142	U		0.142	UGL
CBR 4	12/28/94	Xylenes	0.06	W	OY8	0.06	UGL
CBR 4	12/3/94	Xylenes	0.06	U		0.06	UGL
CBR 4	12/3/94	Zinc total	2.22			51.2	UGL
CBR 4	12/28/94	Zinc total	2.22	J	OY	22.5	UGL
CBR 5	12/28/94	1,1,1-Trichloroethane	0.022	W	OY	0.022	UGL
CBR 5	12/5/94	1,1,1-Trichloroethane	0.022	U		0.022	UGL
CBR 5	12/28/94	1,1,2,2-tetrachloroethane	0.012	W	OY	0.012	UGL
CBR 5	12/5/94	1,1,2,2-tetrachloroethane	0.012	U		0.012	UGL
CBR 5	12/28/94	1,1,2-Trichloroethane	0.017	W	OY	0.017	UGL
CBR 5	12/5/94	1,1,2-Trichloroethane	0.017	U		0.017	UGL
CBR 5	12/28/94	1,1-Dichloroethane	0.017	W	OY	0.017	UGL
CBR 5	12/5/94	1,1-Dichloroethane	0.017	U		0.017	UGL
CBR 5	12/28/94	1,1-Dichloroethylene	0.018	W	OY	0.018	UGL
CBR 5	12/5/94	1,1-Dichloroethylene	0.018	U		0.018	UGL
CBR 5	12/28/94	1,2,4-Trichlorobenzene	0.075	W	NY	0.075	UGL
CBR 5	12/5/94	1,2,4-Trichlorobenzene	0.0743	U		0.0743	UGL
CBR 5	12/28/94	1,2-Dichlorobenzene	0.017	W	NY	0.017	UGL
CBR 5	12/5/94	1,2-Dichlorobenzene	0.0168	U		0.0168	UGL
CBR 5	12/28/94	1,2-Dichloroethane	0.015	W	OY	0.015	UGL
CBR 5	12/5/94	1,2-Dichloroethane	0.015	U		0.015	UGL
CBR 5	12/28/94	1,2-Dichloroethylene	0.03	W	OY	0.03	UGL
CBR 5	12/5/94	1,2-Dichloroethylene	0.03	U		0.03	UGL
CBR 5	12/28/94	1,2-Dichloropropane	0.015	W	OY	0.015	UGL
CBR 5	12/5/94	1,2-Dichloropropane	0.015	U		0.015	UGL
CBR 5	12/28/94	1,3-Dichlorobenzene	0.117	W	NY	0.117	UGL
CBR 5	12/5/94	1,3-Dichlorobenzene	0.116	U		0.116	UGL
CBR 5	12/28/94	1,4-Dichlorobenzene	0.024	W	NY	0.024	UGL
CBR 5	12/5/94	1,4-Dichlorobenzene	0.0238	U		0.0238	UGL
CBR 5	12/5/94	2,2-bis(4-chlorophenyl)-1,1,1-TCE	0.0515	U		0.0515	UGL
CBR 5	12/28/94	2,2-bis(4-chlorophenyl)-1,1,1-TCE	0.05	U	Y	0.05	UGL
CBR 5	12/5/94	2,2-bis(4-chlorophenyl)-1,1-DCE	0.0258	U		0.0258	UGL
CBR 5	12/28/94	2,2-bis(4-chlorophenyl)-1,1-DCE	0.025	U	Y	0.025	UGL
CBR 5	12/5/94	2,2-bis(4-chlorophenyl)-1,1-DCLE	0.0515	U		0.0515	UGL
CBR 5	12/28/94	2,2-bis(4-chlorophenyl)-1,1-DCLE	0.05	U	Y	0.05	UGL
CBR 5	12/28/94	2,4,5-Trichlorophenol	0.051	W	NY	0.051	UGL
CBR 5	12/5/94	2,4,5-Trichlorophenol	0.0505	U		0.0505	UGL
CBR 5	12/28/94	2,4,6-Trichlorophenol	0.012	W	NY	0.012	UGL
CBR 5	12/5/94	2,4,6-Trichlorophenol	0.0119	U		0.0119	UGL
CBR 5	12/28/94	2,4-Dichlorophenol	0.022	W	NY	0.022	UGL
CBR 5	12/5/94	2,4-Dichlorophenol	0.0218	U		0.0218	UGL
CBR 5	12/28/94	2,4-Dimethyl phenol	0.104	W	NY	0.104	UGL
CBR 5	12/5/94	2,4-Dimethyl phenol	0.103	U		0.103	UGL
CBR 5	12/28/94	2,4-Dinitrophenol	0.332	W	NY	0.332	UGL
CBR 5	12/5/94	2,4-Dinitrophenol	0.329	U		0.329	UGL
CBR 5	12/28/94	2,4-Dinitrotoluene	0.092	W	NY	0.092	UGL
CBR 5	12/5/94	2,4-Dinitrotoluene	0.0911	W	I	0.0911	UGL
CBR 5	12/28/94	2,6-Dinitrotoluene	0.11	W	NY	0.11	UGL
CBR 5	12/5/94	2,6-Dinitrotoluene	0.109	U		0.109	UGL
CBR 5	12/28/94	2-Chloronaphthalene	0.117	W	NY	0.117	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 5	12/5/94	2-Chloronaphthalene	0.116	U		0.116	UGL
CBR 5	12/28/94	2-Chlorophenol	0.031	W	Y	0.031	UGL
CBR 5	12/5/94	2-Chlorophenol	0.0307	U		0.0307	UGL
CBR 5	12/28/94	2-Hexanone	0.194	W	OY	0.194	UGL
CBR 5	12/5/94	2-Hexanone	0.194	U		0.194	UGL
CBR 5	12/28/94	2-Methyl phenol	0.048	W	Y	0.048	UGL
CBR 5	12/5/94	2-Methyl phenol	0.0475	U		0.0475	UGL
CBR 5	12/28/94	2-Methyl-4,6-Dinitrophenol	0.28	W	Y	0.28	UGL
CBR 5	12/5/94	2-Methyl-4,6-Dinitrophenol	0.277	U		0.277	UGL
CBR 5	12/28/94	2-Methylnaphthalene	0.017	W	Y	0.017	UGL
CBR 5	12/5/94	2-Methylnaphthalene	0.0168	U		0.0168	UGL
CBR 5	12/28/94	2-Nitroaniline	0.031	W	Y	0.031	UGL
CBR 5	12/5/94	2-Nitroaniline	0.0307	U		0.0307	UGL
CBR 5	12/28/94	2-Nitrophenol	0.012	W	Y	0.012	UGL
CBR 5	12/5/94	2-Nitrophenol	0.0119	U		0.0119	UGL
CBR 5	12/28/94	3,3-Dichlorobenzidene	0.113	W	Y	0.113	UGL
CBR 5	12/5/94	3,3-Dichlorobenzidene	0.112	U		0.112	UGL
CBR 5	12/28/94	3-Nitroaniline	0.142	W	Y	0.142	UGL
CBR 5	12/5/94	3-Nitroaniline	0.141	U		0.141	UGL
CBR 5	12/28/94	34MP	0.49	W	Y	0.49	UGL
CBR 5	12/5/94	34MP	0.485	U		0.485	UGL
CBR 5	12/28/94	4-Bromophenylphenyl ether	0.057	W	Y	0.057	UGL
CBR 5	12/5/94	4-Bromophenylphenyl ether	0.0564	U		0.0564	UGL
CBR 5	12/28/94	4-Chloroaniline	0.015	W	Y	0.015	UGL
CBR 5	12/5/94	4-Chloroaniline	0.0149	U		0.0149	UGL
CBR 5	12/28/94	4-Chlorophenylphenyl ether	0.015	W	Y	0.015	UGL
CBR 5	12/5/94	4-Chlorophenylphenyl ether	0.0149	U		0.0149	UGL
CBR 5	12/28/94	4-Nitroaniline	0.102	W	Y	0.102	UGL
CBR 5	12/5/94	4-Nitroaniline	0.101	U		0.101	UGL
CBR 5	12/28/94	4-Nitrophenol	0.191	W	Y	0.191	UGL
CBR 5	12/5/94	4-Nitrophenol	0.189	U		0.189	UGL
CBR 5	12/5/94	44BMP		J	N	11	UGL
CBR 5	12/28/94	4CL3MP	0.026	W	Y	0.026	UGL
CBR 5	12/5/94	4CL3MP	0.0257	U		0.0257	UGL
CBR 5	12/28/94	Acenaphthene	0.0168	W	Y	0.0168	UGL
CBR 5	12/5/94	Acenaphthene	0.0166	U		0.0166	UGL
CBR 5	12/28/94	Acenaphthylene	0.017	W	Y	0.017	UGL
CBR 5	12/5/94	Acenaphthylene	0.0168	U		0.0168	UGL
CBR 5	12/28/94	Acetone	3.17	W	OY	3.17	UGL
CBR 5	12/5/94	Acetone	3.17	U		3.17	UGL
CBR 5	12/5/94	ACLDAN	0.0258	U		0.0258	UGL
CBR 5	12/28/94	ACLDAN	0.025	U	Y	0.025	UGL
CBR 5	12/5/94	Aldrin	0.0129	U		0.0129	UGL
CBR 5	12/28/94	Aldrin	0.0125	U	Y	0.0125	UGL
CBR 5	12/5/94	Alpha-benzenhexachloride	0.0129	U		0.0129	UGL
CBR 5	12/28/94	Alpha-benzenhexachloride	0.0125	U	Y	0.0125	UGL
CBR 5	12/5/94	Aluminum total	1.93		V	3530	UGL /
CBR 5	12/28/94	Aluminum total	1.93		VY	695	UGL
CBR 5	12/28/94	Anthracene	0.017	W	Y	0.017	UGL
CBR 5	12/5/94	Anthracene	0.0168	U		0.0168	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 5	12/28/94	Antimony total	1.94	U	Y	1.94	UGL
CBR 5	12/5/94	Antimony total	1.94	U		1.94	UGL
CBR 5	12/28/94	Arsenic total	1.5	U	Y	1.5	UGL
CBR 5	12/5/94	Arsenic total	1.5	U		1.5	UGL
CBR 5	12/28/94	Barium total	0.048		VY	27.7	UGL
CBR 5	12/5/94	Barium total	0.048		V	25.6	UGL
CBR 5	12/28/94	BBFANT	0.133	W	Y	0.133	UGL
CBR 5	12/5/94	BBFANT	0.132	U		0.132	UGL
CBR 5	12/28/94	BCLMEE	0.042	W	Y	0.042	UGL
CBR 5	12/5/94	BCLMEE	0.0416	U		0.0416	UGL
CBR 5	12/28/94	Benzene	0.017	W	OY	0.017	UGL
CBR 5	12/5/94	Benzene	0.017	U		0.017	UGL
CBR 5	12/28/94	Benzo(a)anthracene	0.151	W	Y	0.151	UGL
CBR 5	12/5/94	Benzo(a)anthracene	0.15	U		0.15	UGL
CBR 5	12/28/94	Benzo(a)pyrene	0.076	W	Y	0.076	UGL
CBR 5	12/5/94	Benzo(a)pyrene	0.0752	U		0.0752	UGL
CBR 5	12/28/94	Benzo(g,h,i)perylene	0.309	W	Y	0.309	UGL
CBR 5	12/5/94	Benzo(g,h,i)perylene	0.306	U		0.306	UGL
CBR 5	12/28/94	Benzo(k)fluoranthene	0.079	W	Y	0.079	UGL
CBR 5	12/5/94	Benzo(k)fluoranthene	0.0782	U		0.0782	UGL
CBR 5	12/28/94	Benzoic acid	0.081	W	Y	0.081	UGL
CBR 5	12/5/94	Benzoic acid	0.0802	U		0.0802	UGL
CBR 5	12/28/94	Benzyl alcohol	0.025	W	Y	0.025	UGL
CBR 5	12/5/94	Benzyl alcohol	0.0248	U		0.0248	UGL
CBR 5	12/5/94	Beryllium total ^p	0.027	JV	VB	0.213	UGL
CBR 5	12/28/94	Beryllium total	0.027	JV	VY	0.153	UGL
CBR 5	12/5/94	Beta-benzenehexachloride	0.0258	U		0.0258	UGL
CBR 5	12/28/94	Beta-benzenehexachloride	0.025	U	Y	0.025	UGL
CBR 5	12/28/94	Bis(2-chloroethoxy) methane	0.018	W	Y	0.018	UGL
CBR 5	12/5/94	Bis(2-chloroethoxy) methane	0.0178	U		0.0178	UGL
CBR 5	12/28/94	Bis(2-chloroethyl) ether	0.017	W	Y	0.017	UGL
CBR 5	12/5/94	Bis(2-chloroethyl) ether	0.0168	U		0.0168	UGL
CBR 5	12/28/94	Bis(2-ethylhexyl) phthalate	0.254	W	Y	0.254	UGL
CBR 5	12/5/94	Bis(2-ethylhexyl) phthalate	0.251	U		0.251	UGL
CBR 5	12/5/94	Bromodichloromethane	0.012			0.2	UGL ^g
CBR 5	12/28/94	Bromodichloromethane	0.012	J	OY	0.07	UGL
CBR 5	12/28/94	Bromoform	0.012	W	OY	0.012	UGL
CBR 5	12/5/94	Bromoform	0.012	U		0.012	UGL
CBR 5	12/28/94	Bromomethane	0.026	W	OY	0.026	UGL
CBR 5	12/5/94	Bromomethane	0.026	U		0.026	UGL
CBR 5	12/28/94	Butylbenzyl phthalate	0.036	W	Y	0.036	UGL
CBR 5	12/5/94	Butylbenzyl phthalate	0.0356	U		0.0356	UGL
CBR 5	12/28/94	Cadmium total	0.48	U	Y	0.48	UGL
CBR 5	12/5/94	Cadmium total	0.48	U		0.48	UGL
CBR 5	12/5/94	Calcium total	12			3280	UGL ^g
CBR 5	12/28/94	Calcium total	12		Y	2820	UGL
CBR 5	12/28/94	Carbon disulfide	0.129	J	OY	3.93	UGL ^f
CBR 5	12/5/94	Carbon disulfide	0.129	U		0.129	UGL
CBR 5	12/28/94	Carbon tetrachloride	0.012	W	OY	0.012	UGL
CBR 5	12/5/94	Carbon tetrachloride	0.012	U		0.012	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 5	12/28/94	Chlorobenzene	0.012	W	OY	0.012	UGL
CBR 5	12/5/94	Chlorobenzene	0.012	U		0.012	UGL
CBR 5	12/28/94	Chloroethane	0.025	W	OY	0.025	UGL
CBR 5	12/5/94	Chloroethane	0.025	U		0.025	UGL
CBR 5	12/28/94	Chloroethene	0.015	W	OY	0.015	UGL
CBR 5	12/5/94	Chloroethene	0.015	U		0.015	UGL
CBR 5	12/5/94	Chloroform	0.017			0.6	UGL
CBR 5	12/28/94	Chloroform	0.017	J	OY	0.21	UGL
CBR 5	12/28/94	Chloromethane	0.024	W	OY	0.024	UGL
CBR 5	12/5/94	Chloromethane	0.024	U		0.024	UGL
CBR 5	12/28/94	Chromium total	2.28	U	Y	2.28	UGL
CBR 5	12/5/94	Chromium total	2.28	U		2.28	UGL
CBR 5	12/28/94	Chrysene	0.012	W	Y	0.012	UGL
CBR 5	12/5/94	Chrysene	0.0119	U		0.0119	UGL
CBR 5	12/28/94	cis-1,3-Dichloropropene	0.012	W	OY	0.012	UGL
CBR 5	12/5/94	cis-1,3-Dichloropropene	0.012	U		0.012	UGL
CBR 5	12/5/94	Cobalt total	0.598	J	B	1.19	UGL
CBR 5	12/28/94	Cobalt total	0.598	J	Y	1.11	UGL
CBR 5	12/5/94	Copper total	0.458	J	B	1.6	UGL
CBR 5	12/28/94	Copper total	0.458	J	Y	1.26	UGL
CBR 5	12/28/94	Cyanide	0.7	JV	VY	1.26	UGL
CBR 5	12/5/94	Cyanide	0.7	U		0.7	UGL
CBR 5	12/5/94	Delta-benzenehexachloride	0.0258	U		0.0258	UGL
CBR 5	12/28/94	Delta-benzenehexachloride	0.025	U	Y	0.025	UGL
CBR 5	12/5/94	Di-n-butyl phthalate	0.439	JV	VB	0.891	UGL
CBR 5	12/28/94	Di-n-butyl phthalate	0.443	W	VY	0.443	UGL
CBR 5	12/28/94	Di-n-octyl phthalate	0.07	W	Y	0.07	UGL
CBR 5	12/5/94	Di-n-octyl phthalate	0.0693	U		0.0693	UGL
CBR 5	12/28/94	Dibenz(a,h)anthracene	0.09	W	Y	0.09	UGL
CBR 5	12/5/94	Dibenz(a,h)anthracene	0.0891	U		0.0891	UGL
CBR 5	12/28/94	Dibenzofuran	0.017	W	Y	0.017	UGL
CBR 5	12/5/94	Dibenzofuran	0.0168	U		0.0168	UGL
CBR 5	12/5/94	Dibromochloromethane	0.017			0.16	UGL
CBR 5	12/28/94	Dibromochloromethane	0.017	W	OY	0.017	UGL
CBR 5	12/5/94	Dieldrin	0.0258	U		0.0258	UGL
CBR 5	12/28/94	Dieldrin	0.025	U	Y	0.025	UGL
CBR 5	12/5/94	Diethyl phthalate	0.0149	JV	VB	0.228	UGL
CBR 5	12/28/94	Diethyl phthalate	0.015	W	Y	0.015	UGL
CBR 5	12/28/94	Dimethyl phthalate	0.017	W	Y	0.017	UGL
CBR 5	12/5/94	Dimethyl phthalate	0.0168	U		0.0168	UGL
CBR 5	12/5/94	Endosulfan I	0.0258	U		0.0258	UGL
CBR 5	12/28/94	Endosulfan I	0.025	U	Y	0.025	UGL
CBR 5	12/5/94	Endosulfan II	0.0515	U		0.0515	UGL
CBR 5	12/28/94	Endosulfan II	0.05	U	Y	0.05	UGL
CBR 5	12/5/94	Endosulfan Sulfate	0.0515	U		0.0515	UGL
CBR 5	12/28/94	Endosulfan Sulfate	0.05	U	Y	0.05	UGL
CBR 5	12/5/94	Endrin	0.0258	U		0.0258	UGL
CBR 5	12/28/94	Endrin	0.025	U	Y	0.025	UGL
CBR 5	12/5/94	Endrin Ketone	0.0515	U		0.0515	UGL
CBR 5	12/28/94	Endrin Ketone	0.05	U	Y	0.05	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 5	12/28/94	Ethylbenzene	0.015	W	OY	0.015	UGL
CBR 5	12/5/94	Ethylbenzene	0.015	U		0.015	UGL
CBR 5	12/28/94	Fluoranthene	0.024	W	Y	0.024	UGL
CBR 5	12/5/94	Fluoranthene	0.0238	U		0.0238	UGL
CBR 5	12/28/94	Fluorene	0.012	W	Y	0.012	UGL
CBR 5	12/5/94	Fluorene	0.0119	U		0.0119	UGL
CBR 5	12/5/94	GCLDAN	0.0258	U		0.0258	UGL
CBR 5	12/28/94	GCLDAN	0.025	U	Y	0.025	UGL
CBR 5	12/5/94	Heptachlor	0.0258	U		0.0258	UGL
CBR 5	12/28/94	Heptachlor	0.025	U	Y	0.025	UGL
CBR 5	12/5/94	Heptachlor epoxide	0.0258	U		0.0258	UGL
CBR 5	12/28/94	Heptachlor epoxide	0.025	U	Y	0.025	UGL
CBR 5	12/28/94	Hexachlorobenzene	0.028	W	Y	0.028	UGL
CBR 5	12/5/94	Hexachlorobenzene	0.0277	U		0.0277	UGL
CBR 5	12/28/94	Hexachlorobutadiene	0.067	W	Y	0.067	UGL
CBR 5	12/5/94	Hexachlorobutadiene	0.0663	U		0.0663	UGL
CBR 5	12/28/94	Hexachlorocyclopentadiene	0.042	W	Y	0.042	UGL
CBR 5	12/5/94	Hexachlorocyclopentadiene	0.0416	U		0.0416	UGL
CBR 5	12/28/94	Hexachloroethane	0.022	W	Y	0.022	UGL
CBR 5	12/5/94	Hexachloroethane	0.0218	U		0.0218	UGL
CBR 5	12/28/94	Indeno(1,2,3-C,D) pyrene	0.035	W	Y	0.035	UGL
CBR 5	12/5/94	Indeno(1,2,3-C,D) pyrene	0.0347	U		0.0347	UGL
CBR 5	12/5/94	Iron Total	18.2			3060	UGL
CBR 5	12/28/94	Iron Total	18.2		Y	496	UGL
CBR 5	12/28/94	Isophorone	0.099	W	Y	0.099	UGL
CBR 5	12/5/94	Isophorone	0.098	U		0.098	UGL
CBR 5	12/5/94	Lead total ?	0.69	JV	VB	5.15	UGL
CBR 5	12/28/94	Lead total	0.69	J	Y	1.13	UGL
CBR 5	12/5/94	Lindane	0.0129	U		0.0129	UGL
CBR 5	12/28/94	Lindane	0.0125	U	Y	0.0125	UGL
CBR 5	12/28/94	Magnesium total	2.68		Y	1280	UGL
CBR 5	12/5/94	Magnesium total	2.68		V	1160	UGL
CBR 5	12/5/94	Manganese total	0.239			28.6	UGL
CBR 5	12/28/94	Manganese total	0.239		Y	16.6	UGL
CBR 5	12/5/94	Mercury Total	0.04	J	B	0.181	UGL
CBR 5	12/28/94	Mercury Total	0.04	U	Y	0.04	UGL
CBR 5	12/5/94	Methoxychlor	0.258	U		0.258	UGL
CBR 5	12/28/94	Methoxychlor	0.25	U	Y	0.25	UGL
CBR 5	12/5/94	Methylene chloride	0.294	V	V	0.53	UGL
CBR 5	12/28/94	Methylene chloride	0.294	J	OY	0.39	UGL
CBR 5	12/28/94	Methylethyl ketone	0.14	W	OY	0.14	UGL
CBR 5	12/5/94	Methylethyl ketone	0.14	U	V	0.14	UGL
CBR 5	12/28/94	Methylisobutyl ketone	0.204	W	OY	0.204	UGL
CBR 5	12/5/94	Methylisobutyl ketone	0.204	U		0.204	UGL
CBR 5	12/28/94	N-nitrosodi-propylamine	0.036	W	Y	0.036	UGL
CBR 5	12/5/94	N-nitrosodi-propylamine	0.0356	U		0.0356	UGL
CBR 5	12/28/94	N-nitrosodiphenylamine	0.018	W	Y	0.018	UGL
CBR 5	12/5/94	N-nitrosodiphenylamine	0.0178	U		0.0178	UGL
CBR 5	12/28/94	Napthalene	0.017	W	Y	0.017	UGL
CBR 5	12/5/94	Napthalene	0.0168	U		0.0168	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 5	12/28/94	Nickel total	1.84	U	Y	1.84	UGL
CBR 5	12/5/94	Nickel total	1.84	U		1.84	UGL
CBR 5	12/28/94	Nitrobenzene	0.031	W	Y	0.031	UGL
CBR 5	12/5/94	Nitrobenzene	0.0307	U		0.0307	UGL
CBR 5	12/5/94	PCB 1016	0.0588	U		0.0588	UGL
CBR 5	12/28/94	PCB 1016	0.057	U	Y	0.057	UGL
CBR 5	12/5/94	PCB 1221	0.0762	U		0.0762	UGL
CBR 5	12/28/94	PCB 1221	0.0739	U	Y	0.0739	UGL
CBR 5	12/5/94	PCB 1232	0.0637	U		0.0637	UGL
CBR 5	12/28/94	PCB 1232	0.0618	U	Y	0.0618	UGL
CBR 5	12/5/94	PCB 1242	0.0424	U		0.0424	UGL
CBR 5	12/28/94	PCB 1242	0.0411	U	Y	0.0411	UGL
CBR 5	12/5/94	PCB 1248	0.0619	U		0.0619	UGL
CBR 5	12/28/94	PCB 1248	0.06	U	Y	0.06	UGL
CBR 5	12/5/94	PCB 1254	0.0804	U		0.0804	UGL
CBR 5	12/28/94	PCB 1254	0.078	U	Y	0.078	UGL
CBR 5	12/5/94	PCB 1260	0.0732	U		0.0732	UGL
CBR 5	12/28/94	PCB 1260	0.071	U	Y	0.071	UGL
CBR 5	12/28/94	Pentachlorophenol	0.192	W	Y	0.192	UGL
CBR 5	12/5/94	Pentachlorophenol	0.19	W	I	0.19	UGL
CBR 5	12/28/94	Phenanthrene	0.017	W	Y	0.017	UGL
CBR 5	12/5/94	Phenanthrene	0.0168	U		0.0168	UGL
CBR 5	12/28/94	Phenols	0.043	W	ICY	0.043	UGL
CBR 5	12/5/94	Phenols	0.0426	U		0.0426	UGL
CBR 5	12/28/94	Potassium total	91.6		Y	952	UGL
CBR 5	12/5/94	Potassium total	91.6			906	UGL
CBR 5	12/28/94	Pyrene	0.022	W	Y	0.022	UGL
CBR 5	12/5/94	Pyrene	0.0218	U		0.0218	UGL
CBR 5	12/28/94	Selenium total	1.25	U	Y	1.25	UGL
CBR 5	12/5/94	Selenium total	1.25	U	V	1.25	UGL
CBR 5	12/28/94	Silver total	0.512	U	Y	0.512	UGL
CBR 5	12/5/94	Silver total	0.512	U		0.512	UGL
CBR 5	12/5/94	Sodium total	37.8			6610	UGL
CBR 5	12/28/94	Sodium total	37.8		Y	5890	UGL
CBR 5	12/28/94	Styrene	0.017	W	OY	0.017	UGL
CBR 5	12/5/94	Styrene	0.017	U		0.017	UGL
CBR 5	12/28/94	Tetrachloroethylene	0.026	W	OY	0.026	UGL
CBR 5	12/5/94	Tetrachloroethylene	0.026	U		0.026	UGL
CBR 5	12/28/94	Thallium total	0.66	U	Y	0.66	UGL
CBR 5	12/5/94	Thallium total	0.66	U		0.66	UGL
CBR 5	12/5/94	Toluene	0.044	JV	VB	0.12	UGL
CBR 5	12/28/94	Toluene	0.044	J	OY	0.07	UGL
CBR 5	12/5/94	Toxaphene	0.773	U		0.773	UGL
CBR 5	12/28/94	Toxaphene	0.75	U	Y	0.75	UGL
CBR 5	12/28/94	Trans-1,3-Dichloropropene	0.015	W	OY	0.015	UGL
CBR 5	12/5/94	Trans-1,3-Dichloropropene	0.015	U		0.015	UGL
CBR 5	12/28/94	Trichloroethylene	0.017	J	OY	0.06	UGL
CBR 5	12/5/94	Trichloroethylene	0.017	U		0.017	UGL
CBR 5	12/28/94	Tritium ³	595		Y	12100	PCL
CBR 5	12/5/94	Tritium	493			10600	PCL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 5	12/5/94	UNAMINE		J	N	50	UGL
CBR 5	12/5/94	UNKACID		J	N	8	UGL
CBR 5	12/5/94	UNKET		J	N	7	UGL
CBR 5	12/5/94	UOH		J	N	8	UGL
CBR 5	12/5/94	Vanadium total	0.314	JV	VB	8.63	UGL
CBR 5	12/28/94	Vanadium total	0.314	J	Y	1.52	UGL
CBR 5	12/28/94	Vinyl acetate	0.142	W	OY	0.142	UGL
CBR 5	12/5/94	Vinyl acetate	0.142	U		0.142	UGL
CBR 5	12/28/94	Xylenes	0.06	W	OY	0.06	UGL
CBR 5	12/5/94	Xylenes	0.06	U		0.06	UGL
CBR 5	12/5/94	Zinc total	2.22			26.3	UGL
CBR 5	12/28/94	Zinc total	2.22	J	OY	19.5	UGL
CBR 6	12/28/94	1,1,1-Trichloroethane	0.022	W	OY	0.022	UGL
CBR 6	12/5/94	1,1,1-Trichloroethane	0.022	U		0.022	UGL
CBR 6	12/28/94	1,1,2,2-tetrachloroethane	0.012	W	OY	0.012	UGL
CBR 6	12/5/94	1,1,2,2-tetrachloroethane	0.012	U		0.012	UGL
CBR 6	12/28/94	1,1,2-Trichloroethane	0.017	W	OY	0.017	UGL
CBR 6	12/5/94	1,1,2-Trichloroethane	0.017	U		0.017	UGL
CBR 6	12/28/94	1,1-Dichloroethane	0.017	W	OY	0.017	UGL
CBR 6	12/5/94	1,1-Dichloroethane	0.017	U		0.017	UGL
CBR 6	12/28/94	1,1-Dichloroethylene	0.018	W	OY	0.018	UGL
CBR 6	12/5/94	1,1-Dichloroethylene	0.018	U		0.018	UGL
CBR 6	12/28/94	1,2,4-Trichlorobenzene	0.075	U	Y	0.075	UGL
CBR 6	12/5/94	1,2,4-Trichlorobenzene	0.0735	U		0.0735	UGL
CBR 6	12/28/94	1,2-Dichlorobenzene	0.017	U	Y	0.017	UGL
CBR 6	12/5/94	1,2-Dichlorobenzene	0.0167	U		0.0167	UGL
CBR 6	12/28/94	1,2-Dichloroethane	0.015	W	OY	0.015	UGL
CBR 6	12/5/94	1,2-Dichloroethane	0.015	U		0.015	UGL
CBR 6	12/28/94	1,2-Dichloroethylene	0.03	W	OY	0.03	UGL
CBR 6	12/5/94	1,2-Dichloroethylene	0.03	U		0.03	UGL
CBR 6	12/28/94	1,2-Dichloropropane	0.015	W	OY	0.015	UGL
CBR 6	12/5/94	1,2-Dichloropropane	0.015	U		0.015	UGL
CBR 6	12/28/94	1,3-Dichlorobenzene	0.117	U	Y	0.117	UGL
CBR 6	12/5/94	1,3-Dichlorobenzene	0.115	U		0.115	UGL
CBR 6	12/28/94	1,4-Dichlorobenzene	0.024	U	Y	0.024	UGL
CBR 6	12/5/94	1,4-Dichlorobenzene	0.0235	U		0.0235	UGL
CBR 6	12/5/94	2,2-bis(4-chlorophenyl)-1,1,1-TCE	0.051	U		0.051	UGL
CBR 6	12/28/94	2,2-bis(4-chlorophenyl)-1,1,1-TCE	0.0505	W	OY	0.0505	UGL
CBR 6	12/5/94	2,2-bis(4-chlorophenyl)-1,1-DCE	0.0255	U		0.0255	UGL
CBR 6	12/28/94	2,2-bis(4-chlorophenyl)-1,1-DCE	0.0253	W	OY	0.0253	UGL
CBR 6	12/5/94	2,2-bis(4-chlorophenyl)-1,1-DCLE	0.051	U		0.051	UGL
CBR 6	12/28/94	2,2-bis(4-chlorophenyl)-1,1-DCLE	0.0505	W	OY	0.0505	UGL
CBR 6	12/28/94	2,4,5-Trichlorophenol	0.051	U	Y	0.051	UGL
CBR 6	12/5/94	2,4,5-Trichlorophenol	0.05	U		0.05	UGL
CBR 6	12/28/94	2,4,6-Trichlorophenol	0.012	U	Y	0.012	UGL
CBR 6	12/5/94	2,4,6-Trichlorophenol	0.0118	U		0.0118	UGL
CBR 6	12/28/94	2,4-Dichlorophenol	0.022	U	Y	0.022	UGL
CBR 6	12/5/94	2,4-Dichlorophenol	0.0216	U		0.0216	UGL
CBR 6	12/28/94	2,4-Dimethyl phenol	0.104	U	Y	0.104	UGL
CBR 6	12/5/94	2,4-Dimethyl phenol	0.102	U		0.102	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 6	12/28/94	2,4-Dinitrophenol	0.332	U	Y	0.332	UGL
CBR 6	12/5/94	2,4-Dinitrophenol	0.325	U		0.325	UGL
CBR 6	12/28/94	2,4-Dinitrotoluene	0.092	U	Y	0.092	UGL
CBR 6	12/5/94	2,4-Dinitrotoluene	0.0902	U	I	0.0902	UGL
CBR 6	12/28/94	2,6-Dinitrotoluene	0.11	U	Y	0.11	UGL
CBR 6	12/5/94	2,6-Dinitrotoluene	0.108	U		0.108	UGL
CBR 6	12/28/94	2-Chloronaphthalene	0.117	U	Y	0.117	UGL
CBR 6	12/5/94	2-Chloronaphthalene	0.115	U		0.115	UGL
CBR 6	12/28/94	2-Chlorophenol	0.031	U	Y	0.031	UGL
CBR 6	12/5/94	2-Chlorophenol	0.0304	U		0.0304	UGL
CBR 6	12/28/94	2-Hexanone	0.194	U	OY	0.194	UGL
CBR 6	12/5/94	2-Hexanone	0.194	U		0.194	UGL
CBR 6	12/28/94	2-Methyl phenol	0.048	U	Y	0.048	UGL
CBR 6	12/5/94	2-Methyl phenol	0.0471	U		0.0471	UGL
CBR 6	12/28/94	2-Methyl-4,6-Dinitrophenol	0.28	U	Y	0.28	UGL
CBR 6	12/5/94	2-Methyl-4,6-Dinitrophenol	0.275	U		0.275	UGL
CBR 6	12/28/94	2-Methylnaphthalene	0.017	U	Y	0.017	UGL
CBR 6	12/5/94	2-Methylnaphthalene	0.0167	U		0.0167	UGL
CBR 6	12/28/94	2-Nitroaniline	0.031	U	Y	0.031	UGL
CBR 6	12/5/94	2-Nitroaniline	0.0304	U		0.0304	UGL
CBR 6	12/28/94	2-Nitrophenol	0.012	U	Y	0.012	UGL
CBR 6	12/5/94	2-Nitrophenol	0.0118	U		0.0118	UGL
CBR 6	12/28/94	3,3-Dichlorobenzidene	0.113	U	Y	0.113	UGL
CBR 6	12/5/94	3,3-Dichlorobenzidene	0.111	U		0.111	UGL
CBR 6	12/28/94	3-Nitroaniline	0.142	U	Y	0.142	UGL
CBR 6	12/5/94	3-Nitroaniline	0.139	U		0.139	UGL
CBR 6	12/28/94	34MP	0.49	U	Y	0.49	UGL
CBR 6	12/5/94	34MP	0.48	U		0.48	UGL
CBR 6	12/28/94	4-Bromophenylphenyl ether	0.057	U	Y	0.057	UGL
CBR 6	12/5/94	4-Bromophenylphenyl ether	0.0559	U		0.0559	UGL
CBR 6	12/28/94	4-Chloroaniline	0.015	U	Y	0.015	UGL
CBR 6	12/5/94	4-Chloroaniline	0.0147	U		0.0147	UGL
CBR 6	12/28/94	4-Chlorophenylphenyl ether	0.015	U	Y	0.015	UGL
CBR 6	12/5/94	4-Chlorophenylphenyl ether	0.0147	U		0.0147	UGL
CBR 6	12/28/94	4-Nitroaniline	0.102	U	Y	0.102	UGL
CBR 6	12/5/94	4-Nitroaniline	0.1	U		0.1	UGL
CBR 6	12/28/94	4-Nitrophenol	0.191	U	CY	0.191	UGL
CBR 6	12/5/94	4-Nitrophenol	0.187	U		0.187	UGL
CBR 6	12/5/94	44BMP		J	N	15	UGL
CBR 6	12/28/94	4CL3MP	0.026	U	Y	0.026	UGL
CBR 6	12/5/94	4CL3MP	0.0255	U		0.0255	UGL
CBR 6	12/28/94	Acenaphthene	0.0168	U	Y	0.0168	UGL
CBR 6	12/5/94	Acenaphthene	0.0165	U		0.0165	UGL
CBR 6	12/28/94	Acenaphthylene	0.017	U	Y	0.017	UGL
CBR 6	12/5/94	Acenaphthylene	0.0167	U		0.0167	UGL
CBR 6	12/28/94	Acetone	3.17	U	OY	3.17	UGL
CBR 6	12/5/94	Acetone	3.17	U		3.17	UGL
CBR 6	12/5/94	ACLDAN	0.0255	U		0.0255	UGL
CBR 6	12/28/94	ACLDAN	0.0253	U	OY	0.0253	UGL
CBR 6	12/5/94	Aldrin	0.0128	U		0.0128	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 6	12/28/94	Aldrin	0.0126	U	OY	0.0126	UGL
CBR 6	12/5/94	Alpha-benzenehexachloride	0.0128	U		0.0128	UGL
CBR 6	12/28/94	Alpha-benzenehexachloride	0.0126	U	OY	0.0126	UGL
CBR 6	12/28/94	Aluminum total	1.93		VY	1160	UGL
CBR 6	12/5/94	Aluminum total	1.93		V	552	UGL
CBR 6	12/28/94	Anthracene	0.017	U	Y	0.017	UGL
CBR 6	12/5/94	Anthracene	0.0167	U		0.0167	UGL
CBR 6	12/28/94	Antimony total	1.94	U	Y	1.94	UGL
CBR 6	12/5/94	Antimony total	1.94	U		1.94	UGL
CBR 6	12/28/94	Arsenic total	1.5	U	Y	1.5	UGL
CBR 6	12/5/94	Arsenic total	1.5	U		1.5	UGL
CBR 6	12/28/94	Barium total	0.048		VY	53.1	UGL
CBR 6	12/5/94	Barium total	0.048		V	48.3	UGL
CBR 6	12/28/94	BBFANT	0.133	U	Y	0.133	UGL
CBR 6	12/5/94	BBFANT	0.13	U		0.13	UGL
CBR 6	12/28/94	BCLMEE	0.042	U	Y	0.042	UGL
CBR 6	12/5/94	BCLMEE	0.0412	U		0.0412	UGL
CBR 6	12/28/94	Benzene	0.017	U	OY	0.017	UGL
CBR 6	12/5/94	Benzene	0.017	U		0.017	UGL
CBR 6	12/28/94	Benzo(a)anthracene	0.151	U	Y	0.151	UGL
CBR 6	12/5/94	Benzo(a)anthracene	0.148	U		0.148	UGL
CBR 6	12/28/94	Benzo(a)pyrene	0.076	U	Y	0.076	UGL
CBR 6	12/5/94	Benzo(a)pyrene	0.0745	U		0.0745	UGL
CBR 6	12/28/94	Benzo(g,h,i)perylene	0.309	U	Y	0.309	UGL
CBR 6	12/5/94	Benzo(g,h,i)perylene	0.303	U		0.303	UGL
CBR 6	12/28/94	Benzo(k)fluoranthene	0.079	U	Y	0.079	UGL
CBR 6	12/5/94	Benzo(k)fluoranthene	0.0775	U		0.0775	UGL
CBR 6	12/28/94	Benzoic acid	0.081	U	Y	0.081	UGL
CBR 6	12/5/94	Benzoic acid	0.0794	U		0.0794	UGL
CBR 6	12/28/94	Benzyl alcohol	0.025	U	Y	0.025	UGL
CBR 6	12/5/94	Benzyl alcohol	0.0245	U		0.0245	UGL
CBR 6	12/28/94	Beryllium total	0.027	J	VY	0.191	UGL
CBR 6	12/5/94	Beryllium total	0.027	JV	VB	0.106	UGL
CBR 6	12/5/94	Beta-benzenehexachloride	0.0255	U		0.0255	UGL
CBR 6	12/28/94	Beta-benzenehexachloride	0.0253	U	OY	0.0253	UGL
CBR 6	12/28/94	Bis(2-chloroethoxy) methane	0.018	U	Y	0.018	UGL
CBR 6	12/5/94	Bis(2-chloroethoxy) methane	0.0176	U		0.0176	UGL
CBR 6	12/28/94	Bis(2-chloroethyl) ether	0.017	U	Y	0.017	UGL
CBR 6	12/5/94	Bis(2-chloroethyl) ether	0.0167	U		0.0167	UGL
CBR 6	12/5/94	Bis(2-ethylhexyl) phthalate	0.249			3.87	UGL
CBR 6	12/28/94	Bis(2-ethylhexyl) phthalate	0.254		Y	2.71	UGL
CBR 6	12/28/94	Bromodichloromethane	0.012	U	OY	0.012	UGL
CBR 6	12/5/94	Bromodichloromethane	0.012	U		0.012	UGL
CBR 6	12/28/94	Bromoform	0.012	U	OY	0.012	UGL
CBR 6	12/5/94	Bromoform	0.012	U		0.012	UGL
CBR 6	12/28/94	Bromomethane	0.026	U	OY	0.026	UGL
CBR 6	12/5/94	Bromomethane	0.026	U		0.026	UGL
CBR 6	12/28/94	Butylbenzyl phthalate	0.036	U	Y	0.036	UGL
CBR 6	12/5/94	Butylbenzyl phthalate	0.0353	U		0.0353	UGL
CBR 6	12/28/94	Cadmium total	0.48	U	Y	0.48	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 6	12/5/94	Cadmium total	0.48	U		0.48	UGL
CBR 6	12/5/94	Calcium total	12			2980	UGL
CBR 6	12/28/94	Calcium total	12		Y	2500	UGL
CBR 6	12/28/94	Carbon disulfide	0.129	J	OY	11.8	UGL
CBR 6	12/5/94	Carbon disulfide	0.129			1.17	UGL
CBR 6	12/28/94	Carbon tetrachloride	0.012	W	OY	0.012	UGL
CBR 6	12/5/94	Carbon tetrachloride	0.012	U		0.012	UGL
CBR 6	12/28/94	Chlorobenzene	0.012	W	OY	0.012	UGL
CBR 6	12/5/94	Chlorobenzene	0.012	U		0.012	UGL
CBR 6	12/28/94	Chloroethane	0.025	W	OY	0.025	UGL
CBR 6	12/5/94	Chloroethane	0.025	U		0.025	UGL
CBR 6	12/28/94	Chloroethene	0.015	W	OY	0.015	UGL
CBR 6	12/5/94	Chloroethene	0.015	U		0.015	UGL
CBR 6	12/28/94	Chloroform	0.017	W	OY	0.017	UGL
CBR 6	12/5/94	Chloroform	0.017	U		0.017	UGL
CBR 6	12/28/94	Chloromethane	0.024	W	OY	0.024	UGL
CBR 6	12/5/94	Chloromethane	0.024	U		0.024	UGL
CBR 6	12/28/94	Chromium total	2.28	U	Y	2.28	UGL
CBR 6	12/5/94	Chromium total	2.28	U		2.28	UGL
CBR 6	12/28/94	Chrysene	0.012	U	Y	0.012	UGL
CBR 6	12/5/94	Chrysene	0.0118	U		0.0118	UGL
CBR 6	12/28/94	cis-1,3-Dichloropropene	0.012	W	OY	0.012	UGL
CBR 6	12/5/94	cis-1,3-Dichloropropene	0.012	U		0.012	UGL
CBR 6	12/28/94	Cobalt total	0.598	J	Y	1.05	UGL
CBR 6	12/5/94	Cobalt total	0.598	J	B	0.813	UGL
CBR 6	12/5/94	Copper total	0.458	J	B	3.9	UGL
CBR 6	12/28/94	Copper total	0.458	J	Y	2.23	UGL
CBR 6	12/28/94	Cyanide	0.7	JV	VY	1.26	UGL
CBR 6	12/5/94	Cyanide	0.7	U		0.7	UGL
CBR 6	12/5/94	Delta-benzenehexachloride	0.0255	U		0.0255	UGL
CBR 6	12/28/94	Delta-benzenehexachloride	0.0253	W	OY	0.0253	UGL
CBR 6	12/5/94	Di-n-butyl phthalate	0.434	JV	VB	0.598	UGL
CBR 6	12/28/94	Di-n-butyl phthalate	0.443	U	VY	0.443	UGL
CBR 6	12/28/94	Di-n-octyl phthalate	0.07	U	Y	0.07	UGL
CBR 6	12/5/94	Di-n-octyl phthalate	0.0686	U		0.0686	UGL
CBR 6	12/28/94	Dibenz(a,h)anthracene	0.09	U	Y	0.09	UGL
CBR 6	12/5/94	Dibenz(a,h)anthracene	0.0882	U		0.0882	UGL
CBR 6	12/28/94	Dibenzofuran	0.017	U	Y	0.017	UGL
CBR 6	12/5/94	Dibenzofuran	0.0167	U		0.0167	UGL
CBR 6	12/28/94	Dibromochloromethane	0.017	W	OY	0.017	UGL
CBR 6	12/5/94	Dibromochloromethane	0.017	U		0.017	UGL
CBR 6	12/5/94	Dieldrin	0.0255	U		0.0255	UGL
CBR 6	12/28/94	Dieldrin	0.0253	W	OY	0.0253	UGL
CBR 6	12/5/94	Diethyl phthalate	0.0147	JV	VB	0.176	UGL
CBR 6	12/28/94	Diethyl phthalate	0.015	U	Y	0.015	UGL
CBR 6	12/28/94	Dimethyl phthalate	0.017	U	Y	0.017	UGL
CBR 6	12/5/94	Dimethyl phthalate	0.0167	U		0.0167	UGL
CBR 6	12/5/94	Endosulfan I	0.0255	U		0.0255	UGL
CBR 6	12/28/94	Endosulfan I	0.0253	W	OY	0.0253	UGL
CBR 6	12/5/94	Endosulfan II	0.051	U		0.051	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 6	12/28/94	Endosulfan II	0.0505	W	OY	0.0505	UGL
CBR 6	12/5/94	Endosulfan Sulfate	0.051	U		0.051	UGL
CBR 6	12/28/94	Endosulfan Sulfate	0.0505	W	OY	0.0505	UGL
CBR 6	12/5/94	Endrin	0.0255	U		0.0255	UGL
CBR 6	12/28/94	Endrin	0.0253	W	OY	0.0253	UGL
CBR 6	12/5/94	Endrin Ketone	0.051	U		0.051	UGL
CBR 6	12/28/94	Endrin Ketone	0.0505	W	OY	0.0505	UGL
CBR 6	12/28/94	Ethylbenzene	0.015	W	OY	0.015	UGL
CBR 6	12/5/94	Ethylbenzene	0.015	U		0.015	UGL
CBR 6	12/28/94	Fluoranthene	0.024	U	Y	0.024	UGL
CBR 6	12/5/94	Fluoranthene	0.0235	U		0.0235	UGL
CBR 6	12/28/94	Fluorene	0.012	U	Y	0.012	UGL
CBR 6	12/5/94	Fluorene	0.0118	U		0.0118	UGL
CBR 6	12/5/94	GCLDAN	0.0255	U		0.0255	UGL
CBR 6	12/28/94	GCLDAN	0.0253	W	OY	0.0253	UGL
CBR 6	12/5/94	Heptachlor	0.0255	U		0.0255	UGL
CBR 6	12/28/94	Heptachlor	0.0253	W	OY	0.0253	UGL
CBR 6	12/5/94	Heptachlor epoxide	0.0255	U		0.0255	UGL
CBR 6	12/28/94	Heptachlor epoxide	0.0253	W	OY	0.0253	UGL
CBR 6	12/28/94	Hexachlorobenzene	0.028	U	Y	0.028	UGL
CBR 6	12/5/94	Hexachlorobenzene	0.0275	U		0.0275	UGL
CBR 6	12/28/94	Hexachlorobutadiene	0.067	U	Y	0.067	UGL
CBR 6	12/5/94	Hexachlorobutadiene	0.0657	U		0.0657	UGL
CBR 6	12/28/94	Hexachlorocyclopentadiene	0.042	U	Y	0.042	UGL
CBR 6	12/5/94	Hexachlorocyclopentadiene	0.0412	U		0.0412	UGL
CBR 6	12/28/94	Hexachloroethane	0.022	U	Y	0.022	UGL
CBR 6	12/5/94	Hexachloroethane	0.0216	U		0.0216	UGL
CBR 6	12/28/94	Indeno(1,2,3-C,D) pyrene	0.035	U	Y	0.035	UGL
CBR 6	12/5/94	Indeno(1,2,3-C,D) pyrene	0.0343	U		0.0343	UGL
CBR 6	12/28/94	Iron Total	18.2		Y	15800	UGL
CBR 6	12/5/94	Iron Total	18.2			12300	UGL
CBR 6	12/28/94	Isophorone	0.099	U	Y	0.099	UGL
CBR 6	12/5/94	Isophorone	0.0971	U		0.0971	UGL
CBR 6	12/28/94	Lead total	0.69	J	Y	3.24	UGL
CBR 6	12/5/94	Lead total	0.69	JV	VB	1.89	UGL
CBR 6	12/5/94	Lindane	0.0128	U		0.0128	UGL
CBR 6	12/28/94	Lindane	0.0126	W	OY	0.0126	UGL
CBR 6	12/28/94	Magnesium total	2.68		Y	851	UGL
CBR 6	12/5/94	Magnesium total	2.68		V	759	UGL
CBR 6	12/28/94	Manganese total	0.239		Y	62.6	UGL
CBR 6	12/5/94	Manganese total	0.239			54.5	UGL
CBR 6	12/28/94	Mercury Total	0.04	U	Y	0.04	UGL
CBR 6	12/5/94	Mercury Total	0.04	U		0.04	UGL
CBR 6	12/5/94	Methoxychlor	0.255	U		0.255	UGL
CBR 6	12/28/94	Methoxychlor	0.253	W	OY	0.253	UGL
CBR 6	12/5/94	Methylene chloride	0.294	V	V	0.52	UGL
CBR 6	12/28/94	Methylene chloride	0.294	J	OY	0.36	UGL
CBR 6	12/28/94	Methylethyl ketone	0.14	W	OY	0.14	UGL
CBR 6	12/5/94	Methylethyl ketone	0.14	U	V	0.14	UGL
CBR 6	12/28/94	Methylisobutyl ketone	0.204	W	OY	0.204	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 6	12/5/94	Methylisobutyl ketone	0.204	U		0.204	UGL
CBR 6	12/28/94	N-nitrosodi-propylamine	0.036	U	Y	0.036	UGL
CBR 6	12/5/94	N-nitrosodi-propylamine	0.0353	U		0.0353	UGL
CBR 6	12/28/94	N-nitrosodiphenylamine	0.018	U	Y	0.018	UGL
CBR 6	12/5/94	N-nitrosodiphenylamine	0.0176	U		0.0176	UGL
CBR 6	12/28/94	Napthalene	0.017	U	Y	0.017	UGL
CBR 6	12/5/94	Napthalene	0.0167	U		0.0167	UGL
CBR 6	12/28/94	Nickel total	1.84	J	Y	2.22	UGL
CBR 6	12/5/94	Nickel total	1.84	J	B	2.12	UGL
CBR 6	12/28/94	Nitrobenzene	0.031	U	Y	0.031	UGL
CBR 6	12/5/94	Nitrobenzene	0.0304	U		0.0304	UGL
CBR 6	12/5/94	PCB 1016	0.0582	U		0.0582	UGL
CBR 6	12/28/94	PCB 1016	0.0576	W	OY	0.0576	UGL
CBR 6	12/5/94	PCB 1221	0.0754	U		0.0754	UGL
CBR 6	12/28/94	PCB 1221	0.0746	W	OY	0.0746	UGL
CBR 6	12/5/94	PCB 1232	0.0631	U		0.0631	UGL
CBR 6	12/28/94	PCB 1232	0.0624	W	OY	0.0624	UGL
CBR 6	12/5/94	PCB 1242	0.0419	U		0.0419	UGL
CBR 6	12/28/94	PCB 1242	0.0415	W	OY	0.0415	UGL
CBR 6	12/5/94	PCB 1248	0.0612	U		0.0612	UGL
CBR 6	12/28/94	PCB 1248	0.0606	W	OY	0.0606	UGL
CBR 6	12/5/94	PCB 1254	0.0796	U		0.0796	UGL
CBR 6	12/28/94	PCB 1254	0.0788	W	OY	0.0788	UGL
CBR 6	12/5/94	PCB 1260	0.0724	U		0.0724	UGL
CBR 6	12/28/94	PCB 1260	0.0717	W	OY	0.0717	UGL
CBR 6	12/28/94	Pentachlorophenol	0.192	U	Y	0.192	UGL
CBR 6	12/5/94	Pentachlorophenol	0.188	W	I	0.188	UGL
CBR 6	12/28/94	Phenanthrene	0.017	U	Y	0.017	UGL
CBR 6	12/5/94	Phenanthrene	0.0167	U		0.0167	UGL
CBR 6	12/28/94	Phenols	0.043	W	OY	0.043	UGL
CBR 6	12/5/94	Phenols	0.0422	U		0.0422	UGL
CBR 6	12/28/94	Potassium total	91.6		Y	1040	UGL
CBR 6	12/5/94	Potassium total	91.6			1020	UGL
CBR 6	12/5/94	Pyrene	0.0216	J	B	0.167	UGL
CBR 6	12/28/94	Pyrene	0.022	U	Y	0.022	UGL
CBR 6	12/28/94	Selenium total	1.25	U	Y	1.25	UGL
CBR 6	12/5/94	Selenium total	1.25	U	V	1.25	UGL
CBR 6	12/28/94	Silver total	0.512	U	Y	0.512	UGL
CBR 6	12/5/94	Silver total	0.512	U		0.512	UGL
CBR 6	12/28/94	Sodium total	37.8		Y	2300	UGL
CBR 6	12/5/94	Sodium total	37.8			2200	UGL
CBR 6	12/28/94	Styrene	0.017	W	OY	0.017	UGL
CBR 6	12/5/94	Styrene	0.017	U		0.017	UGL
CBR 6	12/5/94	TD		J	N	5	UGL
CBR 6	12/28/94	Tetrachloroethylene	0.026	W	OY	0.026	UGL
CBR 6	12/5/94	Tetrachloroethylene	0.026	U		0.026	UGL
CBR 6	12/28/94	Thallium total	0.66	U	Y	0.66	UGL
CBR 6	12/5/94	Thallium total	0.66	U		0.66	UGL
CBR 6	12/5/94	Toluene	0.044	JV	VB	0.12	UGL
CBR 6	12/28/94	Toluene	0.044	W	OY	0.044	UGL

WELL #	SAMPLE DATE	ANALYTE	DET	RQ	AQ	RESULT	UNIT
CBR 6	12/5/94	Toxaphene	0.765	U		0.765	UGL
CBR 6	12/28/94	Toxaphene	0.758	W	OY	0.758	UGL
CBR 6	12/28/94	Trans-1,3-Dichloropropene	0.015	W	OY	0.015	UGL
CBR 6	12/5/94	Trans-1,3-Dichloropropene	0.015	U		0.015	UGL
CBR 6	12/28/94	Trichloroethylene	0.017	W	OY	0.017	UGL
CBR 6	12/5/94	Trichloroethylene	0.017	U		0.017	UGL
CBR 6	12/28/94	Tritium	654		Y	1150	PCL
CBR 6	12/5/94	Tritium	499			711	PCL
CBR 6	12/5/94	UNAMIDE		J	N	5	UGL
CBR 6	12/5/94	UNKACID		J	N	5	UGL
CBR 6	12/5/94	UNKET		J	N	4	UGL
CBR 6	12/28/94	Vanadium total	0.314	J	Y	6.81	UGL
CBR 6	12/5/94	Vanadium total	0.314	JV	VB	3.35	UGL
CBR 6	12/28/94	Vinyl acetate	0.142	W	OY	0.142	UGL
CBR 6	12/5/94	Vinyl acetate	0.142	U		0.142	UGL
CBR 6	12/28/94	Xylenes	0.06	W	OY	0.06	UGL
CBR 6	12/5/94	Xylenes	0.06	U		0.06	UGL
CBR 6	12/28/94	Zinc total	2.22	J	CY	31.3	UGL
CBR 6	12/5/94	Zinc total	2.22			14.9	UGL

Appendix K

Unit Reconnaissance

BRP6G UNIT RECONNAISSANCE FIELD DATA

RFI Site Name¹: BRP6G
RFI Site Location: CS Area
(Bldg. No. 631-6G)

Completed by: J.R. Monrad
SRS Representative Name: T. Gaughan
T. Killian
Date: November 2, 1988

I. ENVIRONMENTAL SETTING

Site Arrival Time: 3:00 p.m.
Health/Safety Recommendation Initiated: N/A

1. Meteorological Conditions

- a. Temperature: 75°F Sky Cover: sunny
- b. Precipitation: N/A
- c. Wind Conditions: light

2. Topographical/Biological Description

- a. Description of corresponding natural features (hills, valleys, depressions, etc.): Nearly flat meadow elevated approximately 5 feet above railroad tracks to south. Gentle southward slope.
- b. Description of corresponding surface water bodies (stream, river, lake, leachate): Three-foot deep dry drainage swale trends to southeast across east margin of site; railroad drainage ditch (dry) parallel to south margin of site.
- c. Description of corresponding vegetation (weeds/grass, underbrush, small/mature trees): Most of site covered by weeds/grass. Center of site and western one-quarter contains 10 to 15 foot high deciduous trees.
- d. Description of animal presence/habitat (tracks, nests, dens, etc.): Deer tracks adjacent to railroad tracks in ditch.

3. Man-Made Features

- a. Description of corresponding features (buildings, roads, powerlines, wells): Single-lane dirt road parallel to north margin of site; wire fence crosses site, separates western one-third from eastern two-thirds of site.

II. SOURCE CHARACTERIZATION

1. Site Area Characteristics

- a. Description of waste management activities (landfill, surface impoundment, etc.): No current activities. Site used to burn and dispose of solvents and other burnable wastes, and inert solid materials, in excavated pit.
- b. Estimation of waste management area size: Roughly rectangular, approximately 8400 square feet (30 feet by 280 feet).
- c. Construction of Waste management area (earthen, liners, cement, above grade, etc.): Unlined pit in soils, filled and graded.
- d. Is the site in current use/operation? No.

Comment: N/A

2. Waste Characteristics
 - a. Description of any visible waste: None
 - b. Quantity of waste (number of drums, pile size, % S.I./basin filled): N/A.

III WASTE RELEASE POTENTIAL

1. To Soil/Groundwater/Surface Water
 - a. Description of waste run-off/leachate (soil discoloration, dead vegetation or no growth, erosion, etc.): None visible
 - b. Estimate of impacted area (size of area, distance from the source, etc.): Unknown at present, no impact apparent at surface.
2. To Atmosphere/Subsurface Gas
 - a. Description of gas release to atmosphere (odors, dead vegetation, visible odor, etc.): None.
 - b. Estimate of impacted area: N/A.

IV. FINAL CHARACTERIZATION

1. Additional comments: Site boundaries may extend beyond present limits as a result of recent geophysical surveys.
2. Follow-up questions: Request for additional information on buried cables, pipelines. Determine if fence can be temporarily dismantled to provide easier access for site investigations.
3. Health/Safety concerns: None Apparent. Potential for buried drums, wildlife. Subsurface probing will require monitoring for organic vapors. Occasional rail traffic south of site.
4. Site Departure Time: 3:45 p.m.

V. PHOTOGRAPHS

1. Photographs Taken: No.
2. Quantity of Photographs Taken: N/A.

¹ Building number and SRS coordinates shall be used to identify the site location.

APPENDIX L

Soil Leachability Analysis for Five Analytes at the Central Shops Burning/Rubble Pit

1.0 INTRODUCTION

As part of the RFI/RI/BRA for the Central Shops Burning/Rubble Pit (CSBRP), analysis of leachability to groundwater of soil contaminants was requested for five chemicals of potential concern (COPC). The chemicals were identified by WSRC and are analytes that reportedly failed a generic soil screening process (Attachment A). The five chemicals consist of two metals and three organic compounds. The metals of concern are chromium and barium, and the organic compounds of concern are benzo(a)pyrene, benzo(b)-fluoranthrene, and dieldrin.

Fairly simple spreadsheet calculations were made to estimate groundwater concentrations for the chemicals of concern. This calculation method allows for short-term attenuation of the contaminants vadose zone and is used in combination with a dilution factor. That is, the metals concentrations are reduced because adsorption is considered in the vadose zone. Organic concentrations are reduced because adsorption and biological decay are considered. The dilution factor of EPA (1994) is chemical independent and only considers dilution that results when soil water in the vadose zone mixes with groundwater in the water table. Nonetheless, the dilution factor approach is sufficient for estimating the dilution of vadose zone soil water contaminants as they enter the water table. That is, soil water concentrations determined with the simple spreadsheet calculations are divided by the dilution factor to estimate groundwater concentrations.

With this method, all of the organic contaminants are predicted to enter the water table at negligible concentration. Metals concentrations were reduced because of adsorption but they can potentially migrate at appreciable levels. Hazard indexes were therefore calculated by WSRC for the metals. A discussion and interpretation of the results is provided below, along with the method used to obtain the estimates.

2.0 SOIL LEACHABILITY APPROACH

The soil leachability analysis consisted of several steps. These steps included: 1) selection of the modeling approach, 2) review of reports to estimate physical setting parameters (hydrogeologic data, Pit descriptions, etc.), 3) review of literature to obtain chemical and biological properties of COPCs, 4) review and analysis of measured soil contaminant data to understand the contaminant distributions, 5) estimation of groundwater concentrations, 6) estimation of noncarcinogenic risk, and 6) uncertainty analysis and review of estimates versus observed data.

2.1 Modeling Approach

The soil leachability analysis consisted of two distinct calculations. The first calculation estimated the leachability of contaminants from the source area. The leachability analysis provides an estimate of the soil water contaminant concentration at the water table surface. Secondly, the soil water concentration is divided by a groundwater dilution factor (or DAF, as expressed in Attachment A) to calculate a groundwater concentration. The groundwater dilution factor accounts for mixing that occurs when the leached contaminants are transported into the "clean" groundwater. It is termed a DAF in EPA (1994), but in actuality the calculation does not consider attenuation.

2.2 Soil Leachability Modeling

The soil leachability estimate was performed using an analytical equation that is programmed into an Excel® spreadsheet. Steady one-dimensional flow in the vadose zone is assumed to represent average flow over the period of interest. Reversible, equilibrium adsorption of contaminants was incorporated through a distribution coefficient (K_d). First-order decay of contaminants was incorporated by utilizing published half-lives. For radionuclides, the half-life is due to radioactive decay, and for organic contaminants the half-life is due to biological reaction. Dispersion is not incorporated into the vadose zone estimate because it will not affect the maximum groundwater concentration or the time that it occurs, assuming that the contamination is not a "point source." Volatilization of potentially volatile organic compounds is not incorporated into the estimate because the bulk of potential volatilization has already occurred at the CSBRP and not incorporating volatilization is slightly more conservative.

The equation that describes the soil water concentration is given by:

$$C_w(z=L, t=T_{\max}) = C_w(z=0, t=0) \exp(-0.693 \cdot T_{\max}/t_{1/2})$$

where C_w is the soil water concentration

L is the distance between the bottom of the Pit and the water table surface

$T_{\max}$ is the time that the maximum soil water concentration occurs at the water table surface

$t_{1/2}$ is the biological or radiological half-life

z is the vertical axis with the origin at the bottom of the Pits

T_{max} is estimated by dividing the distance between the bottom of the Pit and the top of

the water table surface (L) by the retarded soil water velocity. That is,

$$T_{\max} = (L * R / V)$$

where V is the soil water velocity in the vadose zone, and R is the retardation coefficient. V is estimated from the recharge rate, effective porosity, and average percent saturation (Flach et al., 1996) as follows:

$$V = I / (\theta_e * S_w)$$

where I is the average recharge rate, θ_e is the effective porosity, and S_w is the average percent water saturation. The retardation coefficient is calculated as:

$$R = 1 + (K_d \rho_b / \theta_T)$$

where K_d is the distribution coefficient, θ_T is the total porosity, and ρ_b is the bulk soil density. The input soil concentration at the source is calculated from the total soil concentration as follows (EPA, 1994, page 2-23):

$$C_w = \frac{C_T}{K_D}$$

where C_T is the average concentration at the source. Any potential contamination in the air phase of the sample has been ignored (i.e., we have consistently assumed no volatilization).

The following summarizes the major assumptions for the soil leachability analysis performed to support the RFI/RI/BRA.

1. One-dimensional, steady flow with uniform average soil properties.
2. Reversible, equilibrium, linear soil-water distribution of contaminants.
3. Biological decay is aerobic and is described by a first-order rate constant.
4. No volatilization of contaminants.
5. Dilution factor (EPA, 1994) calculation method is reasonable.
6. The maximum concentration is not affected by dispersion.
7. The pH of the soil water is approximately five units.
8. Infinite source term is applied.

2.3. Hydrogeological Parameters

The water table is approximately 45 feet below land surface and the reported depth of the basin is approximately 10 feet below surface (WSRC, 1996). Therefore, the maximum thickness of the vadose zone was taken to be 35 feet, even though the organic contaminants of interest are generally less than 10 feet below land surface (bls). The maximum recharge rate to the vadose zone is estimated as 17 inches per year (Flach et al., 1996). The effective porosity is estimated as 0.20 and the bulk soil density as 1.65 gm/ml (Looney et al., 1987), and the average percent water saturation is estimated as 0.50 (Flach et al., 1996).

The dilution factor (DF) based on EPA (1994) was provided by WSRC, and is included in Attachment A. The calculation was reviewed and the DF of 1.57 appears to be a reasonable estimate.

All of these data are provided again in Tables 1 and 2.

2.4 Contaminant Specific Data

For the COPCs, chemical specific information are required such as biological half-lives for the organic contaminants and distribution coefficients for all contaminants. Metals were assumed not to undergo any non-adsorptive type reactions, which is reasonable and slightly conservative. The distribution coefficients are used to calculate retardation coefficients by the equation presented previously.

Distribution coefficients can vary widely depending upon soil chemistry (cation exchange capacity, organic carbon, etc.) and soil water chemistry (pH, total dissolved ions, etc.). The value selected for the distribution coefficient significantly affects the estimated groundwater concentrations and thus the risk assessment. Initial conservative, yet reasonable, estimates of distribution coefficients of the COPCs are provided in Tables 1 and 2. A discussion will be provided for contaminants that are estimated to create unacceptable risk, which will likely be a result of uncertainty with the distribution coefficients.

The biological half-lives are reported in Table 2 along with their associated reference. Aerobic biological half-lives in soil are provided because they are typically two to twenty times greater than those in groundwater because oxygen is much more readily available in soil.

3.0 DISCUSSION OF RESULTS

The soil leachability results for the metals are provided in Table 1. Based on the soil data, these contaminants appear to be distributed at multiple depths in the soil column in and about the CSBRP. However, because the metal compounds are not biologically attenuated, hazard quotients were calculated by WSRC for barium and chromium (Attachment B).

The hazard index for chromium and barium for the adult/child is 0.04 for the ingestion of groundwater while it is 0.002 for dermal exposure to groundwater while showering. For the future industrial worker, the hazard index is 0.006 while ingesting one liter of water per day for chromium and barium. If it is assumed that the chromium is in the VI or hexavalent state, which is the most toxic form of chromium, the hazard for each receptor would be more conservative. For the adult/child, the hazard index is 2 for the ingestion of groundwater and 0.2 for dermal exposure to groundwater while showering. For the future industrial worker, the hazard index is 0.3 while ingesting one liter of water per day.

Obviously, a discussion of the risks associated with chromium is warranted. The oxidation state of chromium is believed to be III rather than VI because reducing conditions are evident by the observed methane from the soil gas survey (WSRC, 1996) and the pH is approximately five. An Eh-pH diagram for chromium is provided in Figure 1. For these conditions, chromium is most likely in the form of Cr_2O_3 , which is a poorly soluble precipitated solid. The subsurface system would need to become extremely oxic (positive Eh) at a pH of five for a mobile form of chromium VI to be formed. Data from background soil samples (Looney, 1990) in essentially natural environments at the SRS suggest that chromium III would be the preferred oxidation state. That is, chromium has been identified in several soil horizons in the SRS that are thousands of years old. For chromium to remain after that much weathering, it most likely existed as a precipitated, insoluble solid (Cr_2O_3), rather than a fairly mobile dissolved ionic form (either HCrO_4^- or CrO_4^{2-}).

The monitoring well data in and about the CSBRP essentially support the chromium as a precipitated, insoluble form. Chromium was detected in monitoring well CBR-3D one time at 4.4 $\mu\text{g/L}$, and a duplicate at that time with another lab was reported below detection. Monitoring well CBR-4 has shown chromium at 26.9 and 67 $\mu\text{g/L}$ in two separate sampling events in December, 1994. However, in both those sampling events iron and aluminum were detected at levels indicative of high total suspended solids (TSS). Therefore, the elevated chromium was most likely the result of suspension of precipitated chromium during sampling.

In summary regarding chromium at the CSBRP, it is most likely in a +3 valence state and precipitated as a solid oxide. Therefore, the K_d used is most likely highly conservative, because as a precipitated solid, the chromium availability would be driven by its solubility in water, and not by its water-soil distribution. Chromium is highly insoluble at conditions pervasive at the SRS and for groundwater in and about the CSBRP. Therefore, expected chromium concentrations in groundwater are most likely to be less than typical detection limits of 4 $\mu\text{g/L}$. Correspondingly, the estimated risks for chromium are highly conservative.

The soil leachability results for the organic compounds are provided in Table 2. The former two compounds are polynuclear aromatic hydrocarbons (PAHs), benzo(a) pyrene and benzo(b)fluoranthene. The latter is a pesticide, dieldrin. Even though there are two different classes of compounds, they behave similarly in the subsurface environment. That is, they have high octanol-water partition coefficients (K_{ow}). The organic carbon distribution (K_{oc}) is typically proportional to the K_{ow} . Therefore, these compounds also have high distribution coefficient (K_d). This means that they will preferentially adsorb to soil. These compounds also are moderately susceptible to natural biodegradation. Reported biological half-lives are approximately two years. Therefore, when one considers the strong adsorption and the biological degradation, these compounds pose negligible threat to groundwater, as exemplified by the negligible estimated future groundwater concentrations (Table 2). This is because as these organic compounds become mobilized and are transported downward, they are biodegraded at a rate greater than they are mobilized downward. There is approximately 35 feet of vadose zone beneath the bottom of the CSBRP that provides more than sufficient "attenuation" capacity. This conceptualization is also consistent with the observed data. The data show that these three organic compounds of interest are only observed at appreciable levels at less than six feet depth and are never observed at depths greater than 10 feet, even though the basins have not been used for approximately 40 years. These organic compounds have also never been observed in groundwater associated with the CSBRP.

The modeled groundwater concentration for dieldrin is $2.2\text{E-}15$ mg/L. In comparing the dieldrin concentration to the Risk-Based Concentration (RBC) value, $4.2\text{E-}06$ mg/L, the RBC value is several orders of magnitude higher than the modeled dieldrin concentration. The RBC value for the tap water is based on a risk of $1.0\text{E-}06$ which means the calculated risk for dieldrin will be much less than $1.0\text{E-}06$. The modeled concentration for the two PAHs are negligible and they will not reach the groundwater.

4.0 REFERENCES

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Sheppard, M.I. and D.H. Thibault, 1990. Default Soil Solid/Liquid Partition Coefficients, K_{ds} for Four Major Soil Types: A Compendium, Health Physics, 59(4), 471-482.

WSRC, 1996. RCRA Facility Investigation/Remedial Investigation Report with Baseline Risk Assessment for the Central Shops Burning/Rubble Pit (631-6G), Volumes I and II, WSRC-RP-95-1539, Rev. 1, April, 1996.

Table 1. Estimated Concentrations of Metals in Groundwater from Soil Leachability at the Central Shops Burning Rubble Pit.

[illegible]

[illegible]

FIGURE 1. Eh-pH diagrams for Pb, Cd, Cr, and As for 25°C and 1 atm [from Longmire *et al.* (1962) except for Cd]. a. Pb-C-S-O-H system. Activity of dissolved Pb and S at 10^{-6} m and 10^{-3} m, respectively. b. Cd-C-S-Si system. Activity of dissolved Cd at 10^{-7} m, C = $10^{-2.5}$ m, S = $10^{-3.5}$ m, Si = $10^{-3.5}$ m. c. Cr-O-H system. Activity of dissolved Cr = 10^{-6} m. d. As-S-O-H system. Activity of dissolved As and S at 10^{-6} m and 10^{-3} m, respectively.

ATTACHMENT A
WSRC PROVIDED SOIL SCREENING
AND DILUTION FACTOR CALCULATIONS

[illegible]

- N/A in this column means that an average concentration was not calculated since the maximum concentration was below the EPA SSL concentration

Note: Values bolded in column C where average is above EPA SSL concentration.

SSL EQUATIONS

SOIL SCREENING LEVEL PARTITIONING EQUATION FOR MIGRATION TO GROUNDWATER									
Screening Level in Soil =		$C_w(K_d + (O_w + O_{nl})/P_b)$							
Variable	Default	Units	Parameter	Source					
O_w	0.005	mg/L	Chemical specific - MCL, MCLG, HBL x DAF	SDWA, USEPA Region III					
K_d	0.252	L/kg	Soil-water partition coefficient	Calculated					
K_{oc}	126	L/kg	Soil organic carbon-water partition coefficient	Various Sources					
f_{oc}	0.002	g/g	Fraction organic carbon in soil	USEPA default value					
O_w	0.2	(Lwater/Lsoil)	Water-filled soil porosity	Looney et al. 1987					
θ_w	0.2	(KGwater/KGsoil or Lwater/KGsoil)	Average soil moisture content	USEPA default value					
ρ_b	1.6	kg/L	Dry soil bulk density (1-n)/ ρ_s	Looney et al. 1987					
ρ_s	0.4	(Lpore/Lsoil)	Soil porosity (loam)	Looney et al. 1987					
ρ_a	2.65	kg/L	Soil particle density	USEPA default value					
O_a	0.2	(Lair/Lsoil)	Air-filled soil porosity (n-Ow)	Calculated					
H_a	0.3648	Unitless	Henry's Law Constant (H x 41)	Calculated					
H_a	0.0089	atm-m ³ /mol	Henry's Law Constant (Chemical-specific)	Various Sources					
SSL	0.003	mg/kg							
DILUTION ATTENUATION FACTOR									
DAF=		$1 + K_d/\rho_b$							
Variable	Default	Units	Parameter	Source					
K_a	58.96	m/yr	Aquifer hydraulic conductivity	WSRC-RP-95-1539, CSBRP RF/RI Report					
α	0.007	m/m	hydraulic gradient	WSRC-RP-95-1539, CSBRP RF/RI Report					
d	8.03	m	mixing zone depth	Calculated					
λ	0.361	m/yr	Infiltration rate	Hubbard et al. 1988					
L	15.24	m	Source length parallel to groundwater flow	WSRC-RP-95-1539, CSBRP RF/RI Report					
DAF=	1.67								
For Soil Screening Levels (SSLs):									
1. Determine Dilution Attenuation Factor first if possible, otherwise use DAF of 10.									
2. Input SSL variables.									
ESTIMATION OF MIXING ZONE DEPTH									
$d = [(0.112L^2)^{0.5} + d_a(1 - \exp(-(L)/(K_{da}))]$									
Variable	Default	Units	Parameter	Source					
L	0.0112	m	Source length parallel to groundwater flow	WSRC-RP-95-1539, CSBRP RF/RI Report					
λ	15.24	m	Infiltration rate	Hubbard et al. 1988					
K	0.361	m/yr	Aquifer hydraulic conductivity	WSRC-RP-95-1539, CSBRP RF/RI Report					
d_a	58.96	m	Aquifer thickness	Well CSD-13 (well log)					
λ	7.62	m	Hydraulic gradient	WSRC-RP-95-1539, CSBRP RF/RI Report					
λ	0.007	m/m							
d	8.03	m							

ATTACHMENT B
WSRC PROVIDED RISK CALCULATIONS
FOR BARIUM AND CHROMIUM

Savannah River Site
CSBRP 631-6G
Combined Adult / Child Resident
Ingestion of Groundwater
Carcinogenic and Noncarcinogenic Risk

Chemical	CAS ⁽¹⁾ Number	EP Conc ⁽²⁾ RME ⁽³⁾ (mg/L)	OSF ⁽⁴⁾ (kg-d/mg)	ORFD ⁽⁵⁾ (mg/kg-d)	Cancer Risk ⁽⁶⁾		Hazard Quotient ⁽⁷⁾	
					RME	% of Total	RME	% of Total
Metals								
Barium	7440-39-3	2.90E-02	--	7.00E-02	--	--	2.6E-02	71%
Chromium (Cr III)	16065-83-1	1.70E-01	--	1.00E+00	--	--	1.1E-02	29%
					Cancer Risk RME		Hazard Index RME	
					0E+00		4E-02	
					PATHWAY SUMS:			

Notes:

1. Chemical Abstract Service.
2. Exposure point concentration.
3. Reasonable maximum exposure; "m" indicates modeled concentration.
4. Slope factor, oral.
5. Reference dose, oral.
6. Cancer Risk = (Chemical Concentration, mg/L • Carcinogenic Intake Factor, L/kg-day • Slope Factor, kg-day/mg), where

$$\text{RME carcinogenic intake factor} = 1.01\text{E-}02$$
7. Hazard Quotient = (Chemical Concentration, mg/L • Noncarcinogenic Intake Factor, L/kg-day) / (Reference Dose, mg/kg-day), where

$$\text{RME noncarcinogenic intake factor} = 6.39\text{E-}02$$

(Child value)

Noncarcinogenic intake factors are calculated for both adult and child, with the maximum of these used for risk calculations.

Savannah River Site
CSBRP 631-6G
Combined Adult / Child Resident
Ingestion of Groundwater
Carcinogenic and Noncarcinogenic Risk

EXPOSURE ASSUMPTIONS:				INTAKE FACTOR CALCULATIONS ⁽⁶⁾	
Receptor Exposure	Adult Resident	Child Resident	Combined Adult / Child Resident		
Intake Rate (IR), L/day	RME ⁽¹⁾	RME	RME		Carcinogenic Intake Factor (CIF), L/kg-day = (IR * EF * ED) / (BW * ATC) RME CIF = 1.01E-02
Exposure Frequency (EF), days/yr	2 (4)	1 (4)	1.8 (5)		
Exposure Duration (ED), yrs	350 (4)	350 (4)	283 (5)		
Body Weight (BW), kg	24 (4)	6 (4)	30 (5)		Noncarcinogenic Intake Factor (NIF), L/kg-day = (IR * EF * ED) / (BW * ATN) RME NIF = 6.39E-02 (Child value)
Avging Time, Car ⁽²⁾ (ATC), days	70 (4)	15 (4)	59.0 (5)		
Avging Time, Noncar ⁽³⁾ (ATN), days	25,550	NA	25,550		
	8,760	2,190	10,950		

Notes:

1. Reasonable maximum exposure.
2. Averaging time, carcinogen,; calculated as 70 years (average lifetime) times 365 days per year (not applicable to child resident).
3. Averaging time, noncarcinogen,; calculated as exposure duration (in years) times 365 days per year
4. See Table 6.11
5. Combined values are calculated by weighting adult and child exposure assumptions over the noted exposure duration (e.g., 24 yrs as an adult plus 6 yrs as a child for a total duration of 30 yrs).
6. Carcinogenic intake factor for residents calculated using weighted (combined) exposure assumptions; noncarcinogenic intake factors are calculated for both adult and child, with the maximum of these used for risk calculations.

Savannah River Site
CSBRP 631-6G

Child Resident

Dermal Exposure to Ground Water while Showering (Non-Volatiles)
Carcinogenic and Noncarcinogenic Risk

Chemical	EP Conc ⁽¹⁾		DSF ⁽⁴⁾ (kg-d/mg)	DRID ⁽⁵⁾ (mg/kg-d)	PC ⁽⁶⁾	Cancer Risk ⁽⁷⁾		Hazard Quotient ⁽⁸⁾	
	CAS ⁽¹⁾ Number	RME ⁽³⁾ (mg/L)				% of RME	% of Total	RME	Total
Metals									
Barium	7440-39-3	2.90E-02	--	3.50E-03	1.00E-03	--	--	7.7E-04	49%
Chromium (Cr III)	16065-83-1	1.70E-01	--	2.00E-02	1.00E-03	--	--	7.9E-04	51%
						Cancer Risk	Hazard Index		
						RME	RME		
						0E+00	2E-03		
						PATHWAY SUMS:			

Notes:

Notes:

1. Chemical Abstract Service.
2. Exposure point concentration.
3. Reasonable maximum exposure; "m" indicates modeled concentration.
4. Slope factor, dermal.
5. Reference dose, dermal.
6. Permeability constant.
7. Cancer Risk = (Chemical Concentration, mg/L * Carcinogenic Intake Factor, L-hr/cm/kg-day * Permeability Constant, cm/hr * Slope Factor, kg-day/mg), where RME carcinogenic intake factor = 2.43E-02

(Note: Carcinogenic intake factor calculated using weighted (combined) exposure assumptions.)

8. Hazard Quotient = (Chemical Concentration, mg/L * Noncarcinogenic Intake Factor, L-hr/cm/kg-day * Permeability Constant, cm/hr) / (Reference Dose, mg/kg-day), where RME noncarcinogenic intake factor = 9.33E-02 (Child Value)

(Note: Noncarcinogenic intake factors are calculated for both adult and child, with the maximum of these used for risk calculations.)

Carcinogenic and noncarcinogenic risks for dermal exposure to volatile groundwater contaminants included in showering exposure (see Table D.46).

Savannah River Site
CSBRP 631-6G

Combined Adult / Child Resident
Dermal Exposure to Ground Water while Showering
Carcinogenic and Noncarcinogenic Risk

EXPOSURE ASSUMPTIONS:				INTAKE FACTOR CALCULATIONS ⁽⁶⁾	
Receptor Exposure	Adult Resident RME ⁽¹⁾	Child Resident RME	Combined Adult / Child Resident RME		
Skin Surface Area (SA), cm ² /event	20,000 (4)	7,300 (4)	17,460 (5)	Carcinogenic Intake Factor (CIF), L-hr/cm/kg-day =	
Exposure Time (ET), hrs/day	0.2 (4)	0.2 (4)	0.20 (5)	(SA * ET * EF * ED * CF) / (BW * ATC)	
Exposure Frequency (EF), events/yr	350 (4)	350 (4)	350 (5)	RME CIF = 2.43E-02	
Exposure Duration (ED), yrs	24 (4)	6 (4)	30 (5)	Noncarcinogenic Intake Factor (NIF), L-hr/cm/kg-day =	
Body Weight (BW), kg	70 (4)	15 (4)	59.0 (5)	(SA * ET * EF * ED * CF) / (BW * ATN)	
Avging Time, Carc ⁽²⁾ (ATC), days	25,550	NA	25,550	RME NIF = 9.33E-02 (Child Value)	
Avging Time, Noncarc ⁽³⁾ (ATN), days	8,760	2,190	10,950		
Conversion Factor (CF), L/cm ³	1.00E-03	1.00E-03	1.00E-03		

Notes:

1. Reasonable maximum exposure.
2. Averaging time, carcinogen.; calculated as 70 years (average lifetime) times 365 days per year (not applicable to child resident).
3. Averaging time, noncarcinogen.; calculated as exposure duration (in years) times 365 days per year
4. See Table 6.11
5. Combined values are calculated by weighting adult and child exposure assumptions over the noted exposure duration (e.g., 24 yrs as an adult plus 6 yrs as a child for a total duration of 30 yrs).
6. Carcinogenic intake factor calculated using weighted (combined) exposure assumptions; noncarcinogenic intake factors are calculated for both adult and child, with the maximum of these used for risk calculations.

Savannah River Site
CSBRP 631-6G
Future Worker
Ingestion of Ground Water
Carcinogenic and Noncarcinogenic Risk

Chemical	CAS ⁽¹⁾ Number	EP Conc ⁽⁴⁾ RME ⁽³⁾ (mg/L)	OSF ⁽⁴⁾ · ORFD ⁽⁵⁾ (kg-d/mg) (mg/kg-d)	Cancer Risk ⁽⁶⁾ RME % of Total	Hazard Quotient ⁽⁷⁾ RME % of Total
Metals					
Barium	7440-39-3	2.90E-02	7.00E-02	-	4.1E-03 71%
Chromium (Cr III)	16065-83-1	1.70E-01	1.00E+00	-	1.7E-03 29%
PATHWAY SUMS:				Cancer Risk RME 0E+00	Hazard Index RME 6E-03

2. Exposure point concentration.
3. Reasonable maximum exposure; "m" indicates modeled concentration.
4. Slope factor, oral.
5. Reference dose, oral.
6. Cancer Risk = (Chemical Concentration, mg/L · Carcinogenic Intake Factor, L/kg-day · Slope Factor, kg-day/mg), where
RME carcinogenic intake factor = 3.49E-03
7. Hazard Quotient = (Chemical Concentration, mg/L · Noncarcinogenic Intake Factor, L/kg-day) / (Reference Dose, mg/kg-day), where
RME noncarcinogenic intake factor = 9.78E-03

Savannah River Site
CSBRP 631-6G
Future Worker

Ingestion of Ground Water
Carcinogenic and Noncarcinogenic Risk

EXPOSURE ASSUMPTIONS:

Receptor	Future Worker
Exposure	RME ⁽¹⁾
Intake Rate (IR), L/day	1 (4)
Exposure Frequency (EF), days/yr	250 (4)
Exposure Duration (ED), yrs	25 (4)
Body Weight (BW), kg	70 (4)
Avging Time, Car ⁽²⁾ (ATC), days	25,550
Avging Time, Noncarc ⁽³⁾ (ATN), days	9,125

INTAKE FACTOR CALCULATIONS

Carcinogenic Intake Factor (CIF), L/kg-day =
 $(IR * EF * ED) / (BW * ATC)$
 RME CIF = 3.49E-03

Noncarcinogenic Intake Factor (NIF), L/kg-day =
 $(IR * EF * ED) / (BW * ATN)$
 RME NIF = 9.78E-03

Notes:

1. Reasonable maximum exposure.
2. Averaging time, carcinogen.; calculated as 70 years (average lifetime) times 365 days per year (not applicable to child resident).
3. Averaging time, noncarcinogen.; calculated as exposure duration (in years) times 365 days per year
4. See Table 6.11

Savannah River Site
CSBRP 631-6G
Combined Adult / Child Resident
Ingestion of Groundwater
Carcinogenic and Noncarcinogenic Risk

Chemical	CAS ⁽¹⁾ Number	EP Conc ⁽²⁾		OSF ⁽⁴⁾ (kg-d/mg)	ORD ⁽⁵⁾ (mg/kg-d)	Cancer Risk ⁽⁶⁾		Hazard Quotient ⁽⁷⁾	
		RME ⁽³⁾	(mg/L)			RME	% of Total	RME	% of Total
Metals									
Barium	7440-39-3	2.90E-02		--	7.00E-02	--	--	2.6E-02	01%
Chromium (Cr VI)	1854029-9	1.70E-01		--	5.00E-03	--	--	2.2E+00	99%
						Cancer Risk RME		Hazard Index RME	
						0E+00		2E+00	
PATHWAY SUMS:									

Notes:

1. Chemical Abstract Service.
2. Exposure point concentration.
3. Reasonable maximum exposure; "m" indicates modeled concentration.
4. Slope factor, oral.
5. Reference dose, oral.
6. Cancer Risk = (Chemical Concentration, mg/L * Carcinogenic Intake Factor, L/kg-day * Slope Factor, kg-day/mg), where
RME carcinogenic intake factor = 1.01E-02
7. Carcinogenic intake factor for residents calculated using weighted (combined) exposure assumptions.
Hazard Quotient = (Chemical Concentration, mg/L * Noncarcinogenic Intake Factor, L/kg-day) / (Reference Dose, mg/kg-day), where
RME noncarcinogenic intake factor = 6.39E-02 (Child value)
Noncarcinogenic intake factors are calculated for both adult and child, with the maximum of these used for risk calculations.

Savannah River Site

CSBRP 631-6G

Child Resident

Dermal Exposure to Ground Water while Showering (Non-Volatiles)
Carcinogenic and Noncarcinogenic Risk

Chemical	CAS ⁽¹⁾ Number	EP Conc ⁽²⁾ RME ⁽³⁾ (mg/L)	DSF ⁽⁴⁾ (kg-d/mg)	DRFD ⁽⁵⁾ (mg/kg-d)	PC ⁽⁶⁾	Cancer Risk ⁽⁷⁾ % of		Hazard Quotient ⁽⁸⁾ % of	
						RME	Total	RME	Total
Metals									
Barium	7440-39-3	2.90E-02	--	3.50E-03	1.00E-03	--	--	7.7E-04	<1%
Chromium (Cr VI)	1854029-9	1.70E-01	--	1.00E-04	1.00E-03	--	--	1.6E-01	100%
PATHWAY SUMS:						Cancer Risk RME 0E+00		Hazard Index RME 2E-01	

Notes:

1. Chemical Abstract Service.
2. Exposure point concentration.
3. Reasonable maximum exposure; "m" indicates modeled concentration.
4. Slope factor, dermal.
5. Reference dose, dermal.
6. Permeability constant.
7. Cancer Risk = (Chemical Concentration, mg/L * Carcinogenic Intake Factor, L-hr/cm/kg-day * Permeability Constant, cm/hr * Slope Factor, kg-day/mg), where RME carcinogenic intake factor = 2.43E-02

(Note: Carcinogenic intake factor calculated using weighted (combined) exposure assumptions.)

8. Hazard Quotient = (Chemical Concentration, mg/L * Noncarcinogenic Intake Factor, L-hr/cm/kg-day * Permeability Constant, cm/hr) / (Reference Dose, mg/kg-day), where RME noncarcinogenic intake factor = 9.33E-02 (Child Value)

(Note: Noncarcinogenic intake factors are calculated for both adult and child, with the maximum of these used for risk calculations.)

Carcinogenic and noncarcinogenic risks for dermal exposure to volatile groundwater contaminants included in showering exposure (see Table D.46).