**CLOSURE REPORT FOR
CORRECTIVE ACTION UNIT 92:
AREA 6 DECONTAMINATION POND
NEVADA TEST SITE, NEVADA**

Controlled Copy No.: ____

Revision: 0

April 1999

Prepared for the
U. S. Department of Energy
Nevada Operations Office
Work Performed Under Contract No. DE-AC08-96NV11718

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NEVADA TEST SITE, NEVADA**

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Date: 4/13/99

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TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS	vii
EXECUTIVE SUMMARY	ix
1.0 INTRODUCTION	1
1.1 Purpose	4
1.2 Scope	4
1.3 Contents	5
2.0 CLOSURE ACTIVITIES	7
2.1 Description of Corrective Action Activities	7
2.1.1 Decontamination Pad Oil/Water Separator - CAS 06-04-01 Corrective Action	7
2.1.1.1 Excavation and Pipe Removal	8
2.1.1.2 Soil Sampling	8
2.1.1.3 Grouting and Backfilling	10
2.1.1.4 Waste Disposal	10
2.1.2 Decontamination Pond - CAS 06-05-02 Corrective Action	10
2.1.2.1 Berm Removal and Placement	11
2.1.2.2 Shaping Fill Placement	11
2.1.2.3 Bedding/GCL/Buffer Layer Placement	11
2.1.2.4 Erosion Control Layer Placement	12
2.1.3 Certification of Closure	12
2.2 Deviations from Closure Plan as Approved	12
2.3 Corrective Action Schedule as Completed	13
2.4 Site Plan/Survey Plat	13
3.0 WASTE DISPOSITION	17
4.0 CLOSURE VERIFICATION RESULTS	19
4.1 Decontamination Pad Oil/Water Separator - CAS 06-04-01 Verification Results	19
4.2 Decontamination Pond - CAS 06-05-02 Verification Results	27
4.3 Land-Use Restrictions	27
5.0 CONCLUSIONS AND RECOMMENDATIONS	39
5.1 Conclusions	39
5.1.1 Decontamination Pad Oil/Water Separator - CAS 06-04-01	39
5.1.2 Decontamination Pond - CAS 06-05-02	39
5.2 Post-Closure Monitoring	39
5.3 Closure Petition	41
6.0 REFERENCES	43

TABLE OF CONTENTS (continued)

APPENDIX A - PROJECT PHOTOGRAPHS

APPENDIX B - SAMPLE ANALYTICAL RESULTS

APPENDIX C - CLOSURE CERTIFICATION

APPENDIX D - DESIGN CHANGE NOTICE

APPENDIX E - AS-BUILT DRAWINGS FOR THE DECONTAMINATION POND COVER

APPENDIX F - APPROVAL MATRIX AND CHECKLIST

APPENDIX G - COMMENT RESPONSE DOCUMENTATION

DISTRIBUTION LIST

FIGURES

Figure 1 - CAU 92 Site Location Map	2
Figure 2 - CAU 92 Site Vicinity Map	3
Figure 3 - Oil/Water Separator and Pipeline Verification Sampling Locations	9
Figure 4 - RCRA Cover Design	16
Figure 5 - Land use Restrictions	36
Figure 6 - Locations for the RCRA Cover Nuclear Density Tests	37

TABLES

Table 1 - CAU 92 Closure Schedule as Completed	14
Table 2 - Decontamination Oil/Water Separator and Pipeline Verification Sample Results ...	20
Table 3 - Nuclear Density Test Results	28

ACRONYMS AND ABBREVIATIONS

ASTM	American Standard Testing Methods
BN	Bechtel Nevada
CAP	Corrective Action Plan
CAS	Corrective Action Site
CAU	Corrective Action Unit
CFR	Code of Federal Regulations
cm	centimeter
CMS	Corrective Measures Study
COC	Constituent of Concern
CR	Closure Report
CQA	Construction Quality Assurance
DOE	U.S. Department of Energy, Nevada Operations Office
EPA	U.S. Environmental Protection Agency
FFACO	Federal Facility Agreement and Consent Order
ft	feet
GCL	Geosynthetic Clay Liner
IDW	Investigation Derived Waste
m	meter
mg/kg	milligrams per kilograms
mg/L	milligrams per liter
NAC	Nevada Administrative Code

ACRONYMS AND ABBREVIATIONS (CONTINUED)

NDEP	Nevada Division of Environmental Protection
PCB	Polychlorinated biphenyls
pCi/g	picocuries per gram
RCRA	Resource Conservation and Recovery Act
SVOC	Semivolatile Organic Compounds
TCLP	Toxicity Characteristic Leaching Potential
TPH	Total Petroleum Hydrocarbons
ug/kg	micrograms per kilogram
VOC	Volatile Organic Compounds

EXECUTIVE SUMMARY

The Area 6 Decontamination Pond, Corrective Action Unit (CAU) 92, was closed in accordance with the Resource Conservation and Recovery Act (RCRA) Part B operational permit (Nevada Division of Environmental Protection [NDEP], 1995) and the Federal Facility Agreement and Consent Order (NDEP et al, 1996). The Decontamination Pond CAU consists of two Corrective Action Sites (CASs): the Decontamination Pond (CAS 06-05-02) and the Decontamination Pad Oil/Water Separator (separator #3) (CAS 06-04-01). The two CASs were connected by approximately 180 meters (m) (600 feet [ft]) of clay pipe. Historically the Decontamination Pond was used for the disposal of partially treated liquid effluent discharged from the Decontamination Facility (Building 6-05) and the Industrial Laundry (Building 6-07) (U.S. Department of Energy [DOE], 1996a).

Heavy equipment and critical tolerance equipment used in weapons testing were processed in Building 6-605 to remove radioactive contamination. The equipment was taken into the decontamination bay and treated using degreasers, caustic or acid solutions, and detergents, and then spray washed with pressurized hot water (DOE, 1996a). The laundry process used standard industrial water softeners and laundry detergents to decontaminate personnel protective equipment (DOE, 1996a).

The Decontamination Pond was constructed and became operational in 1979. Releases of RCRA-regulated hazardous waste or hazardous waste constituents have not been discharged to the Decontamination Pond since 1988 (DOE, 1996a). The pipe connecting the Decontamination Pond and Decontamination Facility and Laundry were cut and sealed at the Decontamination Pad Oil/Water Separator in 1992.

The Decontamination Pond characterization activities detected the following RCRA-regulated hazardous waste constituents: chlorobenzene, 1,1,1-trichloroethane, and lead. Xylene isomers as petroleum hydrocarbons were also identified (DOE, 1997a). In addition, the following radionuclides were detected: cobalt-60, cesium-137, plutonium-238, and tritium (DOE, 1997a).

Closure of CAU 92 was completed using a NDEP-approved Closure Plan, Revision 2, dated November 1998 (DOE, 1998a). The closure plan was based on the recommendations presented in a Corrective Measures Study (CMS) (DOE, 1997b). The CMS was developed from the analytical results of three separate characterization studies (DOE, 1997a). The Area 6 Decontamination Pond, CAU 92 was closed in the following manner:

- Decontamination Pad Oil/Water Separator, CAS 06-04-01 was closed in place by sealing the separator with expanding cement. The excavation exposing the separator was backfilled with clean fill material.
- The clay pipe from 6.1 m (20 ft) north of the Decontamination Facility fence line to the CAS 06-04-01 was closed in place by sealing the pipe with cement grout.

- The clay pipe from 6.1 m (20 ft) north of the Decontamination Facility fence line to the Decontamination Pond was removed and placed on the base of the Decontamination Pond prior to construction of the cover. After the pipe and impacted soil were excavated, verification soil samples were collected. Analytical data from one verification sample (DECON-P3) indicated that Americium-241 was slightly above the minimal detectable activity. The soil surrounding this verification sample location was over excavated and the soil disposed in the base of the Decontamination Pond. One additional verification sample was collected to confirm that all impacted soil had been excavated.
- Impacted soils, clay pipe, and characterization investigation waste was removed and placed on the base of the decontamination pond prior to the start of the RCRA cover closure activities.
- The Decontamination Pond, CAS 06-05-02 was closed in place by installing a RCRA cover. Following cover construction, a fence was constructed around the cover to prevent accidental damage to the cover.

Closure activities were certified by an independent registered professional. Post-closure monitoring at the site will consist of quarterly inspections of the RCRA cover. Inspections will also be conducted if:

- Precipitation occurs in excess of 1.28 centimeters (cm) (0.50 inches [in]) in a 24 hour period, or
- Earthquake occurs with a magnitude exceeding 4.5 on the Richter scale within 100 kilometers (62 miles).

1.0 INTRODUCTION

This closure report (CR) provides documentation for the closure of Corrective Action Unit (CAU) 92 identified in the Federal Facility Agreement and Consent Order (FFACO) (NDEP, 1996). The site is located at the Nevada Test Site Area 6, adjacent to the Decontamination Facility in the southern portion of Yucca Flat (Figure 1). The CAU consists of two Corrective Action Sites (CAS) 06-05-02 and CAS 06-04-01 and the clay pipe which connects the two CASs. The locations of the various parts of the unit are found in Figure 2.

The Decontamination Pond was used for the disposal of partially treated liquid effluent discharged from Buildings 6-605 (Decontamination Facility) and 6-607 (Industrial Laundry). Effluent from Buildings 6-605 and 6-607 was piped into the Decontamination Pad Oil/Water Separator which is the boundary between the Decontamination Facility (CAU 244) and the Decontamination Pond (CAU 92). Waste was piped from the separator northeast to the Decontamination Pond, a distance of approximately 180 meters (m) (600 feet [ft]) (U.S. Department of Energy [DOE], 1996a).

Radioactively contaminated site worker clothing (i.e., coveralls, gloves, and boot covers) are processed in the laundry in Building 6-607. The laundry process used standard industrial water softeners and laundry detergents to decontaminate the personnel protective equipment. The waste water from this operation discharged into the Oil/Water Separator (Sump No. 3) which is the first component of the Decontamination Pond CAU (DOE, 1996a).

Heavy equipment and critical tolerance equipment used in weapons testing were processed in Building 6-605 to remove radioactive contamination. The equipment was taken into the decontamination bay and treated using degreasers, caustic or acid solutions, and detergents and then spray washed with pressurized hot water. The wash water was collected in floor drains, and the water was piped through a sand filter/separator. This partially treated water also fed into the Oil/Water Separator (Sump No. 3), which is the first component of the Decontamination Pond CAU. The Decontamination Facility and associated pipe upgradient of Sump 3, will be addressed after the Decontamination Facility is closed (DOE, 1996a).

The Decontamination Pond was constructed and became operational in 1979. It is a square unit, approximately 60 m (200 ft) long on each interior side with perimeter berms 1.5 m (5 ft) above surrounding grade. A discharge pipe from the Decontamination Pad oil/water separator enters the pond on the southwest side approximately 0.3 m (1 ft) above the base of the pond. The pond is unlined and is surrounded by an earth berm on all four sides with a two-to-one grade (DOE, 1996a).

Limited documentation on the volume of waste water entering the Decontamination Pond is available. During a typical year approximately 14,000 cubic meters (3.6 million gallons) of effluent was discharged into the Decontamination Pond (DOE, 1996a). The volume of water discharged into the Decontamination Pond was dependent on the amount of nuclear testing conducted each year. Three previous characterization activities were done at the Area 6

FIGURE 1 CAU 92 SITE LOCATION MAP.

FIGURE 2 - ÇAU 92 SITE VICINITY MAP

Decontamination Pond and the results are documented in the Resource Conservation and Recovery Act, Industrial Site Environmental Restoration Site Characterization Report, Area 6 Decontamination Pond Facility (DOE, 1997a). Characterization data indicates that the native soils in the floor of the Decontamination Pond are primarily impacted to a depth of 0.3 m (1 ft) below grade.

Suspected Resource Conservation and Recovery Act (RCRA) regulated hazardous waste or hazardous waste constituents released into the Decontamination Pond were degreasing solvents associated with equipment decontamination activities (chlorobenzene and 1,1,1-trichloroethane), petroleum hydrocarbon constituents (xylenes), and heavy metals (lead and arsenic). Releases of RCRA-regulated hazardous waste or hazardous waste constituents have not been discharged to the Decontamination Pond since 1988 (DOE, 1996a). The following radionuclides were detected: cobalt-60, cesium-137, plutonium-238, and tritium. A detailed discussion of the unit activities and analytical results can be found in the Characterization Report (DOE, 1997a).

1.1 PURPOSE

The purpose of this CR is to:

- Document the closure activities as proposed in the Closure Plan (DOE, 1998a).
- Obtain a Notice of Completion from the Nevada Division of Environmental Protection (NDEP).
- Recommend the movement of CAU 92 from Appendix III to Appendix IV of the FFACO.

1.2 SCOPE

The following is the scope of the closure actions implemented for CAU 92:

- The clay pipe that connected the Decontamination Pad oil/water separator and the Decontamination Pond was excavated up to within 6.1 m (20 ft) of the Decontamination Facility fence line (Figure 2). This pipe was disposed of in the Decontamination Pond. The associated impacted soil was excavated and disposed along with the pipe. Prior to disposal, waste characterization samples were collected from the pipe and associated soil (Section 4.0). The clay pipe between 20 ft of the Decontamination Facility fence line and the separator was closed in place using an expandable cement grout installed under pressure.
- Excavations were backfilled with clean fill and compacted following accepted construction practices.

- The Decontamination Pad oil/water separator (CAS 06-04-01) was closed in place. The soil around the separator was sampled (Section 4.0), and the separator filled with expanding cement grout.
- The Decontamination Pond (CAS 06-05-02) was closed by constructing an engineered cover. First the pipe, excavated soil from around the pipe (previously stored in a B-25 container), and characterization investigation derived waste (IDW) were added to the base of the pond. The berm walls were then pushed into the pond and compacted to meet the Construction Quality Assurance (CQA) Plan. Additional materials were imported to form subsequent layers following the CQA Plan (DOE, 1998a). This cover was designed to meet or exceed all requirements stated in 40 Code of Federal Regulations (CFR) §265.228(a)(2).

Closure of CAU 92 was completed using an NDEP-approved Closure Plan, Revision 2, dated November 1998 (DOE, 1998a).

1.3 CONTENTS

This CR is divided into the following sections:

- Section 1.0 - Introduction
- Section 2.0 - Closure Activities
- Section 3.0 - Waste Disposition
- Section 4.0 - Closure Verification Results
- Section 5.0 - Conclusions and Recommendations
- Section 6.0 - References

This report was developed using information and guidance from the following documents:

- Bechtel Nevada Performance Management Plan, B-A20/96.01, BN, 1997.
- Resource Conservation and Recovery Act, Industrial Sites, Environmental Restoration Site Characterization Plan, Area 6 Decontamination Pond Facility, Rev. 1, DOE, 1996a.
- Resource Conservation and Recovery Act, Industrial Sites Environmental Restoration Site Characterization Report, Area 6 Decontamination Pond Facility, Corrective Action Unit No. 92 Rev. 1, DOE, 1997a.

- Resource Conservation and Recovery Act, Corrective Measures Study: Area 6 Decontamination Pond Facility, Corrective Action Unit No. 92, Rev. 0, DOE, 1997b.
- Closure Plan for Corrective Action Unit 92: Area 6 Decontamination Pond Nevada Test Site, Nevada, Revision 2, DOE, 1998a.
- Report of Activities and Geotechnical/Hydrological Results May and June 1997 Characterization Sampling Area 6 Decontamination Pond, CAU 92, DOE, 1997c.
- Nevada Environmental Restoration Project, Industrial Sites, Quality Assurance Project Plan, Nevada Test Site, Nevada, Revision 1, DOE, 1996b.
- Nevada Environmental Restoration Project, Health and Safety Plan, Revision 3, DOE, 1998b.

2.0 CLOSURE ACTIVITIES

The closure activities associated with the Decontamination Pad oil/water separator were initiated on March 10, 1998, with a health and safety kickoff meeting and mobilization. Excavation of the effluent pipe and soil sampling around the separator and pipe were performed in multiple phases. Final closure was completed on October 12, 1998, after the 19.8 m (65 ft) of pipe closest to the Decontamination Facility was grouted in place and the excavation backfilled. The specific activities associated with the Decontamination Pad oil/water separator and pipeline closure are described below. Appendix A includes digital images of selected activities throughout the duration of the project.

The closure activities associated with the Decontamination Pond were initiated on July 30, 1998, with a health and safety kickoff meeting and mobilization. Final closure was completed on February 16, 1999, after the fencing around the cover was installed. The specific activities associated with the Decontamination Pond closure are described below. Appendix A includes digital images of selected activities throughout the duration of the project.

2.1 DESCRIPTION OF CORRECTIVE ACTION ACTIVITIES

Closure of CAU 92 was completed using the approved Closure Plan for Corrective Action Unit 92: Area 6 Decontamination Pond, Nevada Test Site, Nevada, Revision 2, dated November 1998 (DOE, 1998a). The closure plan was based on the recommendations presented in a Corrective Measures Study (CMS) (DOE, 1997b). The CMS was developed from the analytical results of three separate characterization studies (DOE, 1997a). Before the closure field activities began, the following prefield activities were completed:

- Preparation of National Environmental Protection Act documentation.
- Preparation of the Site-Specific Health & Safety Plan.
- Preparation of the Field Management Plan.
- An As Low As Reasonably Achievable Committee review of the proposed activities.

The following is the scope of the closure actions implemented for CAU 92, separated by CAS number.

2.1.1 Decontamination Pad Oil/Water Separator - CAS 06-04-01 Corrective Action

The closure activities associated with the Decontamination Pad oil/water separator and effluent pipe were initiated on March 10, 1998, and carried out in multiple phases. These phases included excavation and pipe removal, verification sampling, and grouting and backfilling.

2.1.1.1 Excavation and Pipe Removal

Before pipe excavation and removal activities began, an approved Excavating and Trenching Permit was obtained and the exclusion zone and hotline were established in the vicinity of Sump 3. The effluent pipeline connecting Sump 3 to the Decontamination Pond was excavated using a backhoe. The effluent pipeline was located at a depth of 1.8 m (6 ft) at Sump 3. The first 19.8 m (65 ft) of pipeline was cast iron and encased in concrete. The remainder of the pipe was made of clay. The pipeline was excavated in stages and the 145-m (475-ft) portion which was not encased in concrete was completely removed. Each pipe section was separated at the joint. After the pipe joints were disconnected, a Radiological Control Technician surveyed the exterior and interior of the pipe using a NE Technology Model Electra for radiological activity levels. A MSA Photon Gas Detector was subsequently used to detect for the presence of Volatile Organic Compounds (VOCs) within the pipe. The pipe sections were removed using a sling connected to the backhoe. Once out of the excavation, the pipe sections were wrapped in plastic and stored on site in a SEALAND® container.

Soils excavated from along the pipeline were stockpiled adjacent to the trench. During pipe excavation, soils that showed discoloration were separated and put into a B-25 container. Verification sampling indicated that the soils in one location along the pipeline contained Americium-241 activity levels above background. The soils from this sample location were over excavated and stored in the B-25 container.

2.1.1.2 Soil Sampling

Soil samples were collected from the soils surrounding Sump 3 and along the pipeline excavation. Three additional sludge samples were taken from the interior of the clay pipe. All sample locations were analyzed for VOCs, Semivolatile Organic Compounds (SVOCs), Toxicity Characteristic Leaching Potential (TCLP) metals, Polychlorinated biphenyls (PCBs), Total Petroleum Hydrocarbon (TPH), gamma scan, and gross alpha/beta. Unique sample identifications were given to each sample to distinguish sample locations. In addition, quality assurance samples were also collected. Blind duplicates and equipment blanks were collected for at least 20 percent of the samples, trip blanks were sent with every sample batch for VOC analysis, and matrix spike/matrix spike duplicate samples were designated in every sample batch.

Undisturbed grab samples from the vicinity of Sump 3 (Appendix B, Samples A6-SMP-E1 through A6-SMP-E4 and A6-SMP-W1 through A6-SMP-W4) were collected using a Geoprobe®. All other samples were collected directly from the excavation adjacent to a pipe joint or within the pipe directly. Samples were placed in clean, glass or nalgene laboratory jars. All samples were labeled with a sample identification, date and time sampled, sampler's initials, and analysis to be preformed. A custody seal was placed across the lid of each sample container. Samples were placed in an ice chest and cooled to approximately 4 degrees Centigrade (39 degrees Fahrenheit). Samples were controlled under strict chain of custody until relinquished to the laboratory. Figure 3 provides the sample locations from which they were taken.

FIGURE 3 - OIL/WATER SEPARATOR AND PIPELINE VERIFICATION
SAMPLING LOCATIONS

2.1.1.3 Grouting and Backfilling

During the closure of Sump 3 and the effluent pipeline, several different components were grouted closed. Sump 3 was filled in place with an expanding cement grout using a boom pump truck. Sump 3 was inspected visually to confirm that it had been completely sealed. Prior to placement on the base of the Decontamination Pond, each end of the clay pipe sections were grouted closed. This was accomplished by first closing off each end of the pipe with plugs made up of rags. The grout was then injected into the space between the rag plug and the end of the pipe and allowed to set. Finally, the portion of pipe encased in concrete, which extended 6.1 m (20 ft) north of the Decontamination Facility fence line, was grouted in place following NDEP approval. An expanding cement grout was tremmied into the pipe from the north end back to Sump 3.

The pipe excavations were backfilled with clean fill which had been stockpiled during the pipe removal. Excess clean fill was brought in to bring the pipe excavation to grade and compacted following accepted construction practices.

2.1.1.4 Waste Disposal

Waste generated during the closure of Sump 3 and the effluent pipeline connecting Sump 3 to the Decontamination Pond was placed on the base of the Decontamination Pond prior to cover construction. Waste included the pipe removed and grouted closed, the excavated soils placed into the B-25 container, and IDW.

2.1.2 Decontamination Pond-CAS 06-05-02 Corrective Action

The Decontamination Pond was closed by constructing an engineered cover. First, the pipe, excavated soil from around the pipe, and characterization IDW were added to the base of the pond. The berm walls were then pushed into the pond and compacted. Additional materials were imported to form subsequent layers following the CQA Plan (DOE, 1998a). The final layers include a bedding layer, Geosynthetic Clay Liner (GCL), buffer layer, and erosion control layer. This cover was designed to meet or exceed all requirements stated in 40 CFR §265.228(a)(2). Following cover construction, monuments were placed on the cover to monitor subsidence. Finally, a chainlink security fence was built to limit access to the cover. Two-foot fiberglass screening strips were added to the chainlink fence to mitigate wave action on the cover should Yucca Playa become submerged. Specific details regarding the cover construction are discussed below.

2.1.2.1 Berm Removal and Placement

Characterization data previously collected from the Decontamination Pond indicated that the pond floor and berms were impacted with both radiological and hazardous constituents. The first phase of the Decontamination Pond cover construction was to push the berms into the pond. Before this was done the area was designated an exclusion zone and a hotline was set up. Access was limited to personnel with Radiological Worker II and Occupational Safety and Health Administration 40-hour training. The berms were then pushed in to establish the first lift using a front end loader. Once the original Decontamination Pond floor was completely covered and compacted a radiologic demarcation crew surveyed the new surface. The swipes were analyzed using a one-minute alpha/beta count and a 20-minute gamma count for radiological constituents. Results indicated that radiation levels were not above background (1260 disintegrations per minute, beta) and work proceeded without the requirement of a Radiological Work Permit.

The remaining berm materials were compacted in approximately 0.15-m (0.5-ft) thick lifts to at or above 90 percent of maximum compaction with a moisture content dry of optimum as required by the CQA Plan. Each lift underwent density tests using Campbell MC-2/MC-3 Troxler nuclear density gage to confirm the specified compaction. Densities were confirmed at the 16 CQA Plan-specified test locations. Once the density measurements indicated that the lift was compacted to CQA Plan specifications, the surface was surveyed to establish the elevation of the new pond surface. This process was verified by both a BN verification inspector and an independent registered professional engineer. The final layer of berm material was not sufficient to cover the entire pond surface. In order to complete the lift, fill materials, as designated for the shaping fill type, were used.

2.1.2.2 Shaping Fill Placement

Prior to placement, shaping fill materials were stockpiled at the site. Shaping fill materials were compacted in approximately 0.15-m (0.5-ft) thick lifts to at or above 90 percent of maximum compaction with a moisture content dry of optimum as required by the CQA Plan. Each lift underwent density tests using Campbell MC-2/MC-3 Troxler nuclear density gage to confirm the specified compaction. Densities were confirmed at the 16 CQA Plan-specified test locations. Once the density measurements indicated that the lift was compacted to CQA Plan specifications, the surface was surveyed to establish the elevation of the new pond surface. This process was verified by both a BN verification inspector and an independent registered professional engineer. A total of 7 lifts were required to finish this portion of the cover. The final lift was verified using 5 density test locations because it was much smaller than the preceding layers.

2.1.2.3 Bedding/GCL/Buffer Layer Placement

Prior to placement, the bedding layer material was manufactured to CQA Plan specifications at the Area 3 shaker plant. This layer provided a low permeable surface free of material that might puncture the GCL. After the bedding layer was placed, the GCL was installed. The GCL was placed under the guidance of the manufacturer's representative and verified by an independent subcontractor specialist from Knight Piesold. The buffer layer was placed on top of the GCL as

it was being laid. This layer was of the same type used for the bedding layer. The bedding and buffer layers both consisted of a single 0.15-m (0.5-ft) thick lift. The bedding and buffer layers were compacted to at or above 90 percent of maximum compaction with a moisture content dry of optimum as required by the CQA Plan. Densities were confirmed at the 16 CQA Plan-specified test locations using a Campbell MC-2/MC-3 Troxler nuclear density gage to confirm the specified compaction. Five additional density estimates using Sand Cone Density Method D1556-90 (ASTM, 1997) were acquired. Once the density measurements indicated that the lift was compacted to CQA Plan specifications, the surface was surveyed to establish the elevation of the new pond surface. This process was verified by both a BN verification inspector and an independent registered professional engineer.

2.1.2.4 Erosion Control Layer Placement

The final cover layer consisted of two 0.15-m (0.5-ft) thick lifts of type II material. This material was placed to prevent cover erosion. This layer was compacted to at or above 90 percent of maximum compaction with a moisture content dry of optimum as required by the CQA Plan. Densities were confirmed at the 16 CQA Plan-specified test locations using a Campbell MC-2/MC-3 Troxler nuclear density gage to confirm the specified compaction. Once the density measurements indicated that the lift was compacted to CQA Plan specifications, the surface was surveyed to establish that the CQA Plan-specified slope of 3.5 percent was achieved on the final grade of the cover. Once this was confirmed, five survey monuments were placed on the cover to monitor subsidence. This process was verified by both a BN verification inspector and an independent registered professional engineer.

2.1.3 Certification of Closure

As required under 40 CFR 264.115, closure must be certified by an independent professional engineer. Dean Nelson of PEER Consultants P.C. acted as the Professional Engineer for this closure. He reviewed the Closure Plan (DOE, 1998a) and all aspects of the closure activities to reach the conclusion that closure was accomplished according to the Closure Plan (DOE, 1998a). The Certification of Closure is provided in Appendix C.

2.2 DEVIATIONS FROM CLOSURE PLAN AS APPROVED

The Final Corrective Action Plan (CAP) was approved by NDEP (NDEP, 1998) in November of 1998. One deviation from the Final CAP was approved on December 29, 1998. This change reduced the size of the area to be enclosed by chain-link fencing to more accurately fit the size of the cover as constructed. Appendix D contains a copy of the signed Design Change Notice.

Survey data collected from lift #9 (Drawing # CAU-006-92-C9) indicates that two density tests were acquired from the same grid (points 216 and 217). The locations of each point which were tested for density were verified by five individuals in the field (Site Supervisor, Bechtel Nevada Inspector, Independent Verifier, Laboratory Technician and the Surveyor). All five individuals concur that the density measurements for points 216 and 217 were taken in the proper grid

location. However, after extensive review of the survey log book, no direct evidence can be found to support this. The survey log, therefore, remains in error.

2.3 CORRECTIVE ACTION SCHEDULE AS COMPLETED

A detailed schedule as completed for the corrective action is provided in Table 1.

2.4 SITE PLAN/SURVEY PLAT

A composite of all of the layers which make up the cover is located in Figure 4. The as-built drawings for the engineered cover are located in Appendix E.

TABLE 2 - CAU 92 CLOSURE SCHEDULE AS COMPLETED.

TABLE 2 - CAU 92 CLOSURE SCHEDULE AS COMPLETED (CONTINUED).

FIGURE 4 - RCRA COVER DESIGN

3.0 WASTE DISPOSITION

Waste generated from CAU 92 closure activities consisted of radiologically impacted soil and pipe, personal protective equipment, and sanitary trash. All waste (excluding sanitary trash) was placed into the pond prior to building the engineered cover. All sanitary trash was bagged and disposed of in the Decontamination Facility dumpster.

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4.0 CLOSURE VERIFICATION RESULTS

Closure verification for the Decontamination Pad oil/water separator and the influent pipe line connecting the separator to the Decontamination Pond was accomplished with confirmatory sampling for clean closure. The sampling was conducted following Section 2.4 of the approved Closure Plan (DOE, 1998a).

The Decontamination Pond was closed in place by constructing an engineered cover. Closure verification consists of nuclear density compaction measurements for each lift following the approved CQA Plan (Appendix F, DOE, 1998a). Detailed verification results are provided by CAS numbers below.

4.1 DECONTAMINATION PAD OIL/WATER SEPARATOR- CAS 06-04-01 VERIFICATION RESULTS

Site characterization data from the Area 6 Decontamination Pond indicated that radiological constituents (plutonium, strontium, cobalt, cesium, and americium), petroleum hydrocarbons, bis(2-ethylhexyl)phthalate, methylene chloride, xylene, PCBs, and lead are the constituents detected in the pond sediment and inner berm surfaces (DOE, 1997a). The Constituents of Concern (COC) identified during site characterization activities were used to establish verification sampling parameters.

Six soil samples were collected from the vicinity of the oil/water separator. This sample set is identified as A6-SMP-W1, A6-SMP-W2, A6-SMP-E1, A6-SMP-E2, A6-SMP-W4, and A6-SMP-E4. Sample analytical results are found in Table 2 and Appendix B. Sample locations are shown in Figure 3. All RCRA-regulated VOCs and SVOCs were at or below the contract required detection limit. The TCLP metal analytical data were below the concentrations provided in Table 1 of 40 CFR §261.24. All PCB isomers were reported at or below the contract required detection limit. The TPH concentrations did not exceed the Nevada Administrative Code Action Level of 100 milligram per kilogram (mg/kg). Radioactive isotopes were not detected above the minimal detectable activity.

Twelve soil samples (DECON-P1 through DECON-P11 and DECON-P3-7) were collected at various locations along the clay pipeline (Figure 3). Analytical results from sample DECON-P3 indicated that Americium-241 was present. The soils in the vicinity of this sample location were over excavated and resampled (DECON-P3-7). This reverification sample did not detect any radioisotopes above the minimal detectable activity. Sample analytical results for the other 11 soil verification samples did not detect any COCs. Table 2 summarizes the analytical results for the 12 verification samples collected from the soil surrounding the pipe.

TABLE 2 - DECONTAMINATION OIL/WATER SEPARATOR AND PIPELINE VERIFICATION RESULTS

SAMPLE LOCATION ID	DATE	A TOTAL TPH (mg/kg)	B VOCs I (ug/kg)	C SVOCs (ug/kg)	D PCBs (ug/kg)	E TCLP METALS I (mg/l)	F RADIOLOGICAL ISOTOPES K (pCi/g)
A6-SMP-E1 (Sump 3)	4/10/1998	ND	ND	ND	ND	NA	NA
A6-SMP-E2 (Sump 3)	4/10/1998	ND	ND	ND	ND	NA	NA
A6-SMP-E3 (Sump 3)	4/10/1998	NA	NA	NA	NA	NA	⁴⁰ K 21.6 ²²⁶ R 1.20 ²²⁸ Th 2.19 ²³² Th 1.79 Gross A 9.57 Gross B 8.38
A6-SMP-W1 (Sump 3)	4/10/1998	ND	ND	ND	ND	NA	NA
A6-SMP-W2 (Sump 3)	4/10/1998	ND	ND	ND	ND	NA	NA
A6-SMP-W3 (Sump 3)	4/10/1998	NA	NA	NA	NA	NA	⁴⁰ K 18.2 ²²⁶ R 1.19 ²²⁸ Th 2.19 ²³² Th 1.53 Gross A 8.49 Gross B 7.49
A6-SMP-E4 (Sump 3)	5/6/1998	NA	NA	NA	NA	ND	NA

TABLE 2 - DECONTAMINATION OIL/WATER SEPARATOR AND PIPELINE VERIFICATION RESULTS (CONTINUED)

SAMPLE LOCATION ID	DATE	^ATOTAL TPH (mg/kg)	^BVOCs (ug/kg)	^CSVOCs (ug/kg)	^DPCBs (ug/kg)	^ETCLP METALS (mg/l)	^FRADIOLOGICAL ISOTOPES (pCi/g)
A6-SMP-W4 (Sump 3)	5/6/1998	NA	NA	NA	NA	ND	NA
DECON P1 (Soil sample collected along the pipeline)	6/1/1998	ND	ND	ND	ND	ND	⁴⁰ K 23.500 ²²⁶ Ra 1.060 ²²⁸ Th 2.440 ²³² Th 2.320 Gross A 12.600 Gross B 9.690
DECON P2 (Soil sample collected along the pipeline)	6/1/1998	ND	ND	ND	ND	ND	¹³⁷ Cs 0.210 ⁴⁰ K 22.600 ²²⁶ Ra 1.300 ²²⁸ Th 2.750 ²³² Th 1.910 Gross A 18.200 Gross B 12.100

TABLE 2 - DECONTAMINATION OIL/WATER SEPARATOR AND PIPELINE VERIFICATION RESULTS (CONTINUED).

SAMPLE LOCATION ID	DATE	^ATOTAL TPH (mg/kg)	^BVOCs (ug/kg)	^CSVOCs (ug/kg)	^DPCBs (ug/kg)	^ETCLP METALS (mg/l)	^FRADIOLOGICAL ISOTOPES (pCi/g)
DECON P3 (Soil sample collected along the pipeline)	6/2/1998	ND	ND	ND	ND	ND	²⁴¹ AM 1.730 ⁴⁰ K 22.700 ²²⁶ R 1.300 ²²⁸ TH 2.140 ²³² TH 2.360 Gross A 15.200 Gross B 9.030
DECON P3-7 (Verification sample collected within the overexcavation)	7/28/1998	NA	NA	NA	NA	NA	⁴⁰ K 23.500 ²²⁸ TH 2.650 Gross A 11.500 Gross B 10.400
DECON P4 (Soil sample collected along the pipeline)	6/2/1998	ND	ND	ND	ND	ND	⁴⁰ K 24.8 ²²⁶ RA 1.44 ²²⁸ TH 2.64 ²³² TH 2.42 Gross A 13.9 Gross B 10.5
DECON P5 (Soil sample collected along the pipeline)	6/2/1998	ND	ND	ND	ND	ND	⁴⁰ K 23.9 ²²⁶ Ra 1.39 ²²⁸ Th 2.71 ²³² Th 1.98 Gross A 13.0 Gross B 10.5

TABLE 2 - DECONTAMINATION OIL/WATER SEPARATOR AND PIPELINE VERIFICATION RESULTS (CONTINUED).

SAMPLE LOCATION ID	DATE	^A TOTAL TPH (mg/kg)	^B VOCs (ug/kg)	^C SVOCs (ug/kg)	^D PCBs (ug/kg)	^E TCLP METALS (mg/l)	^F RADIOLOGICAL ISOTOPES (pCi/g)
DECON P6 (Soil sample collected along the pipeline)	6/3/1998	94	ND	ND	ND	ND	⁴⁰ K 20.0 ²²⁶ Ra 1.08 ²²⁸ Th 2.38 ²³² Th 1.81 Gross A 20.0 Gross B 18.0
DECON P7 (Duplicate soil sample collected in same location as DECON P6)	6/3/1998	ND	ND	ND	ND	ND	⁴⁰ K 24.1 ²²⁶ Ra 1.30 ²²⁸ Th 2.58 ²³² Th 1.78 Gross A 18.3 Gross B 14.6
DECON P8 (Soil sample collected along the pipeline)	6/3/1998	ND	ND	ND	ND	ND	⁴⁰ K 21.4 ²²⁶ Ra 1.22 ²²⁸ Th 2.44 ²³² Th 2.02 Gross A 22.4 Gross B 19.9

TABLE 2 - DECONTAMINATION OIL/WATER SEPARATOR AND PIPELINE VERIFICATION RESULTS (CONTINUED)

SAMPLE LOCATION ID	DATE	^ATOTAL TPH (mg/kg)	^BVOCs (ug/kg)	^CSVOCs (ug/kg)	^DPCBs (ug/kg)	^ETCLP METALS (mg/l)	^FRADIOLOGICAL ISOTOPES (pCi/g)
DECON P9 (Soil sample collected along the pipeline)	6/4/1998	ND	ND	ND	ND	ND	⁴⁰ K 18.1 ²²⁶ RA 1.46 ²²⁸ TH 2.07 ²³² TH 2.03 Gross A 18.0 Gross B 14.1
DECON P10 (Soil sample collected along the pipeline)	6/4/1998	ND	ND	ND	ND	ND	⁴⁰ K 20.3 ²²⁶ RA 1.2 ²²⁸ TH 2.38 ²³² TH 2.13 Gross A 19.6 Gross B 14.3
DECON P11 (Soil sample collected along the pipeline)	6/8/1998	ND	ND	ND	ND	ND	⁴⁰ K 23.4 ²²⁶ Ra 1.07 ²²⁸ Th 2.55 ²³² Th 1.35 Gross A 13.9 Gross B 12.0

TABLE 2 - DECONTAMINATION OIL/WATER SEPARATOR AND PIPELINE VERIFICATION RESULTS (CONTINUED)

SAMPLE LOCATION ID	DATE	^A TOTAL TPH (mg/kg)	^B VOCs (ug/kg)	^C SVOCs (ug/kg)	^D PCBs (ug/kg)	^E TCLP METALS (mg/l)	^F RADIOLOGICAL ISOTOPES (pCi/g)
DECON W1 (Sludge sample from inside pipe)	6/1/1998	2400	ND	Bis(2-ethylhexyl)phthalate 1600	Arochlor-1254 29	Cadmium . . . 0.014 Lead 0.20	⁶⁰ Co 1.74 ¹³⁷ Cs 16.4 ⁴⁰ K 7.37 ²²⁶ Ra 0.796 ²²⁸ Th 0.792 ²³² Th 0.646 Gross A 16.4 Gross B 49.0
DECON W2 (Sludge sample from inside pipe)	6/3/1998	5500	ND	ND	Arochlor-1254 450	Cadmium . . . 0.014	⁶⁰ Co 79.5 ¹³⁷ Cs 88.0 ¹⁵² Eu 4.08 ¹⁵⁴ Eu 2.62 ⁴⁰ K 20.7 ⁹⁴ Nb 2.12 ²²⁶ Ra 1.79 ²²⁸ Th 1.45 ²³² Th 2.5 Gross A 64.2 Gross B 48.2

TABLE 2 - DECONTAMINATION OIL/WATER SEPARATOR AND PIPELINE VERIFICATION RESULTS (CONTINUED)

SAMPLE LOCATION ID	DATE	^A TOTAL TPH (mg/kg)	^B VOCs (ug/kg)	^C SVOCs (ug/kg)	^D PCBs (ug/kg)	^E TCLP METALS (mg/l)	^F RADIOLOGICAL ISOTOPES (pCi/g)
DECON W3 (Sludge sample from inside pipe)	6/8/1998	1100	Chloroform 8	ND	Arochlor-1254 140 Arochlor-1260 . 74	ND	²⁴¹ AM 1.64 ⁶⁰ CO 1.53 ¹³⁷ CS 9.40 ¹⁵² EU 1.35 ¹⁵⁴ EU 0.805 ¹⁵⁵ EU 0.769 ⁴⁰ K 18.7 ²²⁶ RA 1.15 ¹²⁵ SB 2.53 ²²⁸ TH 1.66 ²³² TH 1.26 Gross A 7.13 Gross B 1.95
DECON R1 (Rinsate)	6/8/1998	ND	ND	ND	ND	ND	NA

A- TPH - Total Petroleum Hydrocarbons analyzed using SW846 US Environmental Protection Agency (EPA) Method 8015 Modified (EPA, 1996b).

B- VOCs - Volatile Organic Compounds analyzed using SW846 US EPA Method 8260B (EPA, 1996c).

C- SVOCs - Semivolatile Organic Compounds analyzed using SW846 US EPA Method 8270 (EPA, 1996d).

D- PCBs - Polychlorinated biphenyls analyzed using SW846 US EPA Method 8080A Modified (EPA, 1996a).

E- TCLP metals - Toxicity Characteristic Leaching Potential metals analyzed using EPA 1311/6010 (EPA, 1996e).

F- Radioactive Constituents (Gamma Scan and Gross Alpha/Beta) analyzed using L-E10.602.PC and L-E10.612.PL.

G- ND- Not detected above reportable quantities (Appendix B).

H- NA- Not tested.

I- ug/kg - micrograms per kilograms

J- mg/l - milligrams per liter

K- pCi/g - picocuries per gram

In addition to the 12 verification samples, 3 sludge samples were collected from the interior of the pipes for waste characterization purposes. Sludge sample locations are shown in Figure 3. Table 2 summarizes the analytical results for the sludge samples (DECON W1, DECON W2 and DECON W3). The sludge sample waste characterization analytical results were consistent with previous waste characterization efforts for the Area 6 Decontamination Pond.

In addition, quality assurance samples were also collected. Blind duplicates and equipment blanks were collected for at least 20 percent of the samples, trip blanks were sent with every sample batch for VOC analysis, and matrix spike/matrix spike duplicate samples were designated in every sample batch.

4.2 DECONTAMINATION POND - CAS 06-05-02 VERIFICATION RESULTS

The CQA Plan outlines the inspection methods and testing requirements for the Decontamination Pond closure cover (Appendix F). Inspection procedures outlined in the CQA Plan were performed by both a BN verification inspector and an independent registered professional engineer to certify that all closure activities were completed in accordance with the Closure Plan. Table 3 summarizes the nuclear density test results for each lift.

4.3 LAND-USE RESTRICTIONS

The oil/water separator and buried grouted pipe lies within the Decontamination Facility boundaries and have restricted access according to Decontamination Facility requirements. This area has been posted with signs reading "Subsurface Radiologic Contamination."

The remainder of the pipe line was completely removed. Following overexcavation, all hazardous COCs were below detection and radiological COCs were below the minimal detectable activity. Therefore, based upon the analytical results, this site is considered clean and available for unrestricted use.

Hazardous and radiological constituents within the Decontamination Pond were closed in place with an engineered cover. The engineered cover is fenced from general entry. Only authorized personnel may enter for post-closure monitoring requirements and repair. Post-closure monitoring will consist of quarterly inspections of the RCRA cover. Figure 5 summarizes the restricted access areas.

TABLE 3 - NUCLEAR DENSITY TEST RESULTS.

LIFT DESCRIPTION	^A GRID LOCATION #	PERCENT COMPACTION	MOISTURE CONTENT %	DRY DENSITY lb/ft ³
Berm material Lift 1	1	91.2	11.5	103.0
Tested 9-21-1998 at a depth of 0.15 m	2	94.0	12.1	106.2
(0.5 ft)	3	91.2	11.9	103.0
Average lift thickness = 0.366 m	4	94.9	11.1	107.2
(1.2 ft)	5	95.3	10.7	107.7
	6	95.6	11.5	108.0
	7	91.5	9.9	103.4
Modified Proctor Specs.	8	93.7	9.2	105.9
<i>Optimum moisture content = 14.0 %</i>	9	94.8	9.4	107.1
<i>Maximum density lb/ft³ = 113.0</i>	10	91.9	9.0	103.9
	11	97.7	12.3	110.4
CQA Specs.	12	96.4	13.0	108.9
<i>Required compaction = 90</i>	13	92.1	10.7	104.1
	14	95.9	7.3	108.4
Appendix E	15	93.5	9.9	105.6
Drawing # SK-CAU-006-92-C1	16	90.5	9.7	102.3
Berm material Lift 1	1	93.0	9.1	105.1
Tested 9-25-1998 at a depth of 0.30 m	2	92.8	9.3	104.9
(1.0 ft)	3	95.3	8.2	107.7
Average lift thickness = 0.366 m	4	98.5	8.9	111.3
(1.2 ft)	5	97.6	13.7	110.3
	6	96.2	11.5	108.7
	7	93.7	11.6	105.9
Modified Proctor Specs.	8	90.9	7.5	102.1
<i>Optimum moisture content = 14.0 %</i>	9	91.8	9.6	103.7
<i>Maximum density lb/ft³ = 113.0</i>	10	95.7	9.9	108.1
	11	93.7	11.1	105.9
CQA Specs.	12	98.1	9.4	110.9
<i>Required compaction = 90</i>	13	90.0	15.7	101.7
	14	93.0	7.9	105.1
Appendix E	15	91.3	11.1	103.2
Drawing # SK-CAU-006-92-C1	16	89.6	8.6	101.3
Berm material Lift 2	1	93.9	12.6	106.1
Tested 9-29-1998	2	90.2	10.3	101.9
Ave. lift thickness = 0.159 m (0.52 ft)	3	92.0	10.1	104.0
	4	95.0	10.3	107.4
	5	99.3	13.2	112.2
Modified Proctor Specs.	6	93.8	12.0	106.0
<i>Optimum moisture content = 14.0 %</i>	7	91.9	10.9	103.9
<i>Maximum density lb/ft³ = 113.0</i>	8	91.9	11.0	103.9
	9	95.7	13.4	108.1
CQA Specs.	10	91.1	10.1	102.9
<i>Required compaction = 90</i>	11	92.5	10.1	104.5
	12	92.5	11.1	104.5
Appendix E	13	96.2	12.7	108.7
Drawing # SK-CAU-006-92-C2	14	94.2	12.6	106.4
	15	94.9	12.6	107.2
	16	93.8	10.4	106.0

TABLE 3 - NUCLEAR DENSITY TEST RESULTS (CONTINUED).

LIFT DESCRIPTION	^A GRID LOCATION #	PERCENT COMPACTION	MOISTURE CONTENT %	DRY DENSITY lb/ft ³
Berm material Lift 3	1	93.9	11.7	106.1
Tested 9-30-1998	2	90.0	11.0	101.8
Ave. lift thickness = 0.107 m (0.35 ft)	3	92.1	11.5	104.1
	4	91.5	10.4	103.4
	5	95.3	12.8	107.7
Modified Proctor Specs.	6	94.7	13.7	107.0
Optimum moisture content = 14.0 %	7	94.9	12.3	107.3
Maximum density lb/ft ³ = 113.0	8	89.9	11.9	101.5
	9	97.3	11.8	109.9
CQA Specs.	10	97.6	12.8	110.3
Required compaction = 90	11	95.6	11.7	108.0
	12	94.8	12.4	107.1
Appendix E	13	98.3	12.5	111.1
Drawing # SK-CAU-006-92-C3	14	96.8	12.4	109.4
	15	90.1	12.9	101.8
	16	92.0	11.2	104.0
Berm material Lift 4	1	94.8	8.2	98.1
(Composite layer)	2	96.5	9.0	109.1
Tested 10-12-1998	3	96.3	10.5	99.7
Ave. lift thickness = 0.165 m (0.54 ft)	4	92.7	13.1	104.7
	5	93.5	13.9	105.7
	6	95.8	13.9	108.3
Modified Proctor Specs.	7	97.8	14.2	110.5
Optimum moisture content	8	94.9	5.3	130.1
Grid #'s 8, 12, 13, 14, 15, 16 = 7.9%	9	95.1	11.8	107.5
Grid #'s 2, 4, 5, 6, 7, 9 = 14.0%	10	99.9	13.0	103.4
Grid #'s 1, 3, 10, 11 = 20.0%	11	100.0	11.9	103.5
Maximum density lb/ft ³	12	93.2	5.3	127.8
Grid #'s 8, 12, 13, 14, 15, 16 = 137.1	13	91.0	7.3	124.8
Grid #'s 2, 4, 5, 6, 7, 9 = 113.0	14	96.6	5.3	132.4
Grid #'s 1, 3, 10, 11 = 103.5	15	97.5	5.5	133.7
	16	96.8	5.3	132.7
CQA Specs.				
Required compaction = 90				
Appendix E				
Drawing # SK-CAU-006-92-C4				

TABLE 3 - NUCLEAR DENSITY TEST RESULTS (CONTINUED).

LIFT DESCRIPTION	GRID LOCATION #	PERCENT COMPACTION	MOISTURE CONTENT %	DRY DENSITY lb/ft ³
Perimeter Over Excavation	1	92.7	19.1	95.7
Tested 10-14-1998	2	93.4	13.5	96.4
Ave. lift thickness = 0.173 m (0.57 ft)	3	91.9	19.8	94.8
	4	94.3	17.5	97.3
Modified Proctor Specs.	5	90.5	12.6	93.4
<i>Optimum moisture content = 21.5 %</i>	6	90.2	13.1	93.1
<i>Maximum density lb/ft³ = 103.2</i>	7	92.3	8.5	95.3
	8	94.9	13.8	97.9
	9	95.3	10.8	98.4
CQA Specs	10	95.7	7.3	98.8
<i>Required compaction = 90</i>	11	99.6	6.7	102.8
	12	95.4	6.1	98.5
Appendix E	13	98.0	6.2	101.1
Drawing # SK-CAU-006-92-COV	14	94.9	8.7	97.9
	15	92.9	19.0	95.9
	16	96.3	19.0	99.4
Shaping Fill Lift 1	1	98.4	5.6	132.0
Tested 10-20-98	2	95.2	5.5	127.7
Ave. lift thickness = 0.176 m (0.58 ft)	3	99.6	5.4	133.6
	4	99.6	5.1	133.7
Modified Proctor Specs.	5	98.6	5.8	132.3
<i>Optimum moisture content = 8.0 %</i>	6	95.1	5.3	127.6
<i>Maximum density lb/ft³ = 134.2</i>	7	93.4	4.6	125.4
	8	100.9	5.3	135.4
CQA Specs	9	92.5	6.0	124.1
<i>Required compaction = 90</i>	10	97.1	4.6	130.3
	11	98.7	5.3	132.5
Appendix E	12	102.5	4.7	137.6
Drawing # SK-CAU-006-92-C5	13	95.2	5.5	127.8
	14	95.7	5.1	128.4
	15	97.5	4.8	130.9
	16	101.4	4.5	136.1
Shaping Fill Lift 2	1	99.7	6.8	133.8
Tested 10-22-1998	2	99.9	7.0	134.0
Ave. lift thickness = 0.18 m (0.59 ft)	3	99.9	7.4	134.1
	4	96.9	7.0	130.0
Modified Proctor Specs.	5	99.9	6.7	134.1
<i>Optimum moisture content = 8.0 %</i>	6	93.3	6.6	125.2
<i>Maximum density lb/ft³ = 134.2</i>	7	93.7	7.1	125.8
	8	97.5	6.9	130.8
	9	97.5	7.6	130.8
CQA Specs	10	96.8	6.5	129.9
<i>Required compaction = 90</i>	11	97.3	7.2	130.6
	12	97.2	8.2	130.4
Appendix E	13	97.0	7.5	130.2
Drawing # SK-CAU-006-92-C6	14	95.5	6.9	128.1
	15	93.2	7.5	125.1
	16	97.6	6.1	131.0

TABLE 3 - NUCLEAR DENSITY TEST RESULTS (CONTINUED).

LIFT DESCRIPTION	^A GRID LOCATION #	PERCENT COMPACTION	MOISTURE CONTENT %	DRY DENSITY lb/ft ³
Shaping Fill Lift 3 Tested 10-27-1998 Ave. lift thickness = 0.16 m (0.52 ft) Modified Proctor Specs. <i>Optimum moisture content = 8.0 %</i> <i>Maximum density lb/ft³ = 134.2</i> CQA Specs <i>Required compaction = 90</i> Appendix E Drawing # SK-CAU-006-92-C7	1	96.9	6.5	130.0
	2	96.5	6.9	129.5
	3	95.8	5.7	128.5
	4	100.0	6.2	134.2
	5	99.8	6.3	133.9
	6	94.9	6.7	127.3
	7	97.8	5.8	131.2
	8	97.8	6.2	131.2
	9	96.0	6.5	128.8
	10	95.2	6.5	127.8
	11	95.6	6.9	128.3
	12	95.9	6.4	128.7
	13	97.4	7.1	130.7
	14	97.5	6.9	130.9
	15	96.3	6.6	129.3
	16	95.0	5.7	127.5
Shaping Fill Lift 4 Tested 10-29-1998 Ave. lift thickness = 0.17 m (0.56 ft) Modified Proctor Specs. <i>Optimum moisture content = 8.0 %</i> <i>Maximum density lb/ft³ = 134.2</i> CQA Specs <i>Required compaction = 90</i> Appendix E Drawing # SK-CAU-006-92-C8	1	97.9	6.3	131.3
	2	98.3	6.1	131.9
	3	99.5	5.7	133.5
	4	98.7	6.1	132.4
	5	97.3	6.0	130.6
	6	97.2	6.4	130.4
	7	93.7	6.2	125.7
	8	95.8	5.7	128.6
	9	96.6	5.6	129.7
	10	100.0	6.3	134.2
	11	94.8	6.8	127.2
	12	98.7	6.3	132.5
	13	96.9	6.0	130.1
	14	98.8	6.5	132.6
	15	96.0	6.7	128.8
	16	92.6	6.8	124.3
Shaping Fill Lift 5 Tested 11-2-1998 Ave. lift thickness = 0.16 m (0.52 ft) Modified Proctor Specs. <i>Optimum moisture content = 8.0 %</i> <i>Maximum density lb/ft³ = 134.2</i> CQA Specs <i>Required compaction = 90</i> Appendix E Drawing # SK-CAU-006-92-C9	1	97.0	6.3	130.2
	2	95.5	5.7	128.2
	3	96.8	5.4	129.9
	4	99.0	5.3	132.9
	5	95.2	5.8	127.7
	6	95.4	5.9	128.0
	7	96.0	5.6	128.8
	8	94.1	5.8	126.3
	9	100.0	5.8	134.2
	10	95.1	5.4	127.6
	11	95.2	5.9	127.8
	12	98.1	5.5	131.6
	13	95.2	5.9	127.8
	14	96.2	5.8	129.1
	15	98.9	5.5	132.7
	16	94.0	5.7	126.1

TABLE 3 - NUCLEAR DENSITY TEST RESULTS (CONTINUED).

LIFT DESCRIPTION	^A GRID LOCATION #	PERCENT COMPACTION	MOISTURE CONTENT %	DRY DENSITY lb/ft ³
Shaping Fill Lift 6	1	97.0	6.3	130.2
Tested 11-4-1998	2	95.5	5.7	128.2
Ave. lift thickness = 0.18 m (0.59 ft)	3	96.8	5.4	129.9
	4	99.0	5.3	132.9
	5	95.2	5.8	127.7
Modified Proctor Specs.	6	95.4	5.9	128.0
<i>Optimum moisture content = 8.0 %</i>	7	96.0	5.6	128.8
<i>Maximum density lb/ft³ = 134.2</i>	8	94.1	5.8	126.3
	9	100.0	5.8	131.1
CQA Specs	10	95.1	5.4	127.6
<i>Required compaction = 90</i>	11	95.2	5.9	127.8
	12	98.1	5.5	131.6
Appendix E	13	97.7	5.8	131.1
Drawing # SK-CAU-006-92-C10	14	96.2	5.8	129.1
	15	98.9	5.5	132.7
	16	94.0	5.7	126.1
Shaping Fill Lift 7	1	97.2	5.4	130.5
Tested 11-4-1998	2	95.2	5.4	127.8
Ave. lift thickness = 0.18 m (0.59 ft)	3	93.4	6.2	125.4
	4	92.3	6.0	123.9
	5	93.3	6.2	125.2
Modified Proctor Specs.				
<i>Optimum moisture content = 8.0 %</i>				
<i>Maximum density lb/ft³ = 134.2</i>				
CQA Spec.				
<i>Required compaction = 90</i>				
Appendix E				
Drawing # SK-CAU-006-92-C11				
Shaping Fill Lift 7 (after reshaping)	1	96.2	10.5	99.6
Tested 11-4-1998	2	95.8	5.6	128.5
Ave. lift thickness = 0.18 m (0.59 ft)	3	98.1	5.4	131.6
	4	96.1	5.5	128.9
	5	99.2	4.8	133.1
Modified Proctor Specs.	6	99.8	6.3	133.9
<i>Optimum moisture content = 8.0 %</i>	7	99.7	6.4	133.8
<i>Maximum density lb/ft³ = 134.2</i>	8	94.0	5.8	126.2
	9	95.7	5.5	128.4
CQA Spec.	10	96.5	6.7	129.5
<i>Required compaction = 90</i>	11	96.8	6.8	129.9
	12	95.8	5.7	128.5
Appendix E	13	91.6	6.3	122.9
Drawing # SK-CAU-006-92-C11	14	97.3	6.7	130.6
	15	97.7	5.4	131.1
	16	99.1	4.1	133.0

TABLE 3 - NUCLEAR DENSITY TEST RESULTS (CONTINUED)

LIFT DESCRIPTION	^A GRID LOCATION #	PERCENT COMPACTION	MOISTURE CONTENT %	DRY DENSITY lb/ft ³
Bedding Layer Lift	1	99.7	10.6	110.0
Tested 11-16-1998	2	95.1	10.4	104.9
Ave. lift thickness = 0.20 m (0.66 ft)	3	98.1	10.3	108.2
	4	95.6	10.4	105.5
Modified Proctor Spec.	5	95.8	11.2	105.7
<i>Optimum moisture content = 15.7 %</i>	6	90.1	10.3	99.4
<i>Maximum density lb/ft³ = 110.3</i>	7	93.9	10.2	103.6
	8	94.4	10.5	104.1
	9	94.9	11.9	104.7
CQA Spec.	10	91.3	12.2	100.7
<i>Required compaction = 90</i>	11	95.4	13.5	105.2
	12	95.6	10.8	105.4
Appendix E	13	98.7	11.2	108.9
Drawing # SK-CAU-006-92-C12	14	99.9	10.5	110.2
	15	97.4	11.9	107.4
	16	98.3	11.1	108.4
	A-1	^B 99.5	10.6	NA
	B-1	^B 91.8	11.6	NA
	C-1	^B 97.4	11.1	NA
	D-1	^B 97.5	10.8	NA
Buffer Layer Lift	1	93.5	11.4	103.1
Tested 12-1-1998	2	95.2	12.3	105.0
Ave. lift thickness = 0.195 m (0.64 ft)	3	94.8	12.8	104.6
	4	95.4	12.0	105.2
Modified Proctor Spec.	5	91.1	12.6	100.5
<i>Optimum moisture content = 15.7 %</i>	6	94.1	10.5	103.8
<i>Maximum density lb/ft³ = 110.3</i>	7	93.8	11.1	103.5
	8	95.5	12.7	105.3
	9	92.7	10.5	102.3
CQA Spec.	10	92.7	12.1	102.2
<i>Required compaction = 90</i>	11	94.5	11.4	104.2
	12	96.0	11.5	105.9
Appendix E	13	91.5	11.5	100.9
Drawing # SK-CAU-006-92-C13	14	91.2	10.5	100.6
	15	93.3	10.5	102.9
	16	98.5	11.5	108.6
	A-2	^B 95.0	10.3	NA
	B-2	^B 98.4	10.7	NA
	C-2	^B 90.7	9.5	NA
	D-2	^B 95.9	8.8	NA

TABLE 3 - NUCLEAR DENSITY TEST RESULTS (CONTINUED).

LIFT DESCRIPTION	^A GRID LOCATION #	PERCENT COMPACTION	MOISTURE CONTENT %	DRY DENSITY lb/ft ³
Perimeter Backfill Lift 1 Tested 12-7-1998 Modified Proctor Spec. <i>Optimum moisture content = 8.0 %</i> <i>Maximum density lb/ft³ = 134.2</i> CQA Spec. <i>Required compaction = 90</i> Appendix E Drawing # SK-CAU-006-92-C14	1	97.7	5.4	131.1
	2	96.6	5.3	129.7
	3	95.7	5.8	128.4
	4	97.1	6.2	130.3
	5	99.6	5.0	133.7
	6	97.7	6.4	131.1
	7	99.0	6.9	132.9
	8	96.9	6.1	130.0
	9	99.6	5.4	133.6
	10	94.6	5.4	126.9
	11	96.9	5.2	130.0
	12	95.3	5.6	127.9
	13	97.5	5.7	130.8
	14	93.2	5.1	125.1
	15	98.5	7.6	132.2
	16	90.1	5.8	120.9
Erosion Control Layer Lift 1 Tested 12-7-1998 Ave. lift thickness = 0.198 m (0.65 ft) Modified Proctor Spec. <i>Optimum moisture content = 12.8 %</i> <i>Maximum density lb/ft³ = 120.0</i> CQA Spec. <i>Required compaction = 90</i> Appendix E Drawing # SK-CAU-006-92-C14	1	92.3	9.4	110.7
	2	90.5	8.0	108.6
	3	93.2	8.2	111.8
	4	90.0	8.0	108.0
	5	90.1	8.0	108.1
	6	91.2	7.4	109.4
	7	90.6	11.7	108.7
	8	93.0	7.6	111.6
	9	90.8	7.2	109.0
	10	90.5	8.0	108.6
	11	90.1	7.4	108.1
	12	90.0	7.5	107.9
	13	91.9	8.0	110.3
	14	92.2	7.6	110.6
	15	91.1	7.9	109.3
	16	91.3	9.9	109.6
Perimeter Backfill Lift 2 Tested 12-15-1998 Modified Proctor Spec. <i>Optimum moisture content = 8.0 %</i> <i>Maximum density lb/ft³ = 134.2</i> CQA Spec. <i>Required compaction = 90</i> Appendix E Drawing # SK-CAU-006-92-C15	1	94.7	7.9	127.1
	2	99.6	7.0	133.6
	3	97.0	6.6	130.2
	4	100.0	6.9	134.2
	5	100.0	6.6	134.2
	6	99.7	7.1	133.8
	7	100.0	6.9	134.2
	8	98.4	7.3	132.1
	9	96.3	7.6	129.2
	10	97.0	6.6	130.2
	11	98.7	6.6	132.5
	12	98.2	7.6	131.8
	13	97.8	7.9	131.2
	14	95.9	6.8	128.7
	15	94.3	7.2	126.5
	16	99.8	6.5	133.9

TABLE 3 - NUCLEAR DENSITY TEST RESULTS (CONTINUED).

LIFT DESCRIPTION	^A GRID LOCATION #	PERCENT COMPACTION	MOISTURE CONTENT %	DRY DENSITY lb/ft ³
Erosion Control Layer Lift 2	1	93.0	9.4	109.2
Tested 12-15-1998	2	92.6	8.0	111.1
Ave. lift thickness = 0.188 m (0.62 ft)	3	91.4	8.8	109.7
	4	90.8	7.4	109.0
Modified Proctor Spec.	5	91.3	8.8	109.5
<i>Optimum moisture content = 12.8 %</i>	6	91.0	8.8	109.2
<i>Maximum density lb/ft³ = 120.0</i>	7	93.6	9.6	112.3
	8	93.8	8.9	112.5
	9	93.7	8.7	112.4
CQA Spec.	10	91.7	7.9	110.0
<i>Required compaction = 90</i>	11	90.3	8.4	108.3
	12	91.8	8.8	110.2
Appendix E	13	91.8	9.4	110.2
Drawing # SK-CAU-006-92-C15	14	91.5	9.3	109.8
	15	90.3	8.6	108.4
	16	90.7	9.1	108.8

- A: Grid locations are identified in Figure 6. Tests were taken near the center of the grid.
B: Density estimates are from Sand Cone Density ASTM D1556-90 (ASTM, 1997a). All other density measurements were estimated using ASTM D2922-96 (ASTM, 1997b) (Campbell MC-2/MC-3 Troxler).
C: NA=Not applicable.

A-1 THROUGH D-1
ARE THE LOCATIONS
FOR THE SANDCONE
DENSITY TESTS FOR THE
BEDDING LAYER

A-2 THROUGH D-2
ARE THE LOCATIONS
FOR THE SANDCONE
DENSITY TESTS FOR THE
BUFFER LAYER

FIGURE 6 - LOCATIONS FOR RCRA COVER NUCLEAR DENSITY TESTS

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5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

Closure for this site was completed by the following:

5.1.1 Decontamination Pad Oil/Water Separator - CAS 06-04-01

- The Decontamination Pad oil/water separator was closed in place. The soil around the separator was sampled (Section 4.0), and the separator filled with expanding cement grout.
- The clay pipe that connected the Decontamination Pad oil/water separator and the Decontamination Pond was excavated up to 6.1 m (20 ft) north of the Decontamination Facility fence line. This pipe was disposed of in the Decontamination Pond. The associated impacted soil was excavated and disposed with the pipe. Prior to disposal, waste characterization samples were collected from the pipe and associated soil (Section 4.0). The clay pipe between the Decontamination Facility fence line and the separator were closed in place using an expandable cement grout installed under pressure.
- Excavations were backfilled with clean fill and compacted following accepted construction practices.

5.1.2 Decontamination Pond - CAS 06-05-02

- The Decontamination Pond (CAS 06-05-02) was closed by constructing an engineered cover. First the pipe, excavated soil from around the pipe, and characterization IDW were added to the base of the pond. The berm walls were then pushed into the pond and compacted following the CQA Plan. Additional materials were imported to form subsequent layers as per the CQA Plan (DOE, 1998a). The final layers included a GCL, buffer layer and erosion control layer. This cover was designed to meet or exceed all requirements stated in 40 CFR §265.228(a)(2).

5.2 POST-CLOSURE MONITORING

Closure of the clay pipe extending from the pond to within 6.1 m (20 ft) north of the Decontamination Facility fence line was completed by removal of all impacted material. Therefore, under the conditions of 40 CFR 270.1(c)(5) and (6), post-closure monitoring is not required for this portion of CAU 92.

The Decontamination Pad oil/water separator and the concrete encased pipe extending from the separator to 6.1 m (20 ft) north of the Decontamination Facility fence line were closed in place. Verification sampling indicated that no historic releases occurred from these components.

Therefore, under agreement with NDEP by approval of the Closure Plan these components of CAU 92 require no post-closure monitoring.

Post-closure monitoring of the Area 6 Decontamination Pond unit is required under 40 CFR 265.310 (b). Post-closure groundwater monitoring requirements specified in 40 CFR 265.310 have been waived based on 40 CFR 265.90. The post-closure monitoring will be confined to the Decontamination Pond RCRA Cover. Inspections will be conducted quarterly or if:

- Precipitation occurs in excess of 1.28 centimeters (cm) (0.50 inches [in]) in a 24-hour period, or
- Earthquake occurs with a magnitude exceeding 4.5 on the Richter scale within 100 kilometers (62 miles).

A post-closure inspection will consist of the following elements:

- A detailed inspection of the RCRA Cover fencing. The perimeter of the fencing will be walked by the inspector and the condition of the wave barrier (fiber glass slats laced through the bottom of the chain-link fencing), warning signs, entrance gate, and lock will be documented.
- The condition of the five survey subsidence monuments will be inspected. In addition, on an annual basis, all five survey monuments will be resurveyed to determine if the RCRA Cover has subsided.
- During each inspection, any changes in the condition of the cover or fenced area will be documented. In addition, the reason for the inspection (quarterly, excess precipitation, or earthquake) will be noted on the inspection report. Specific changes noted on the current condition of the cover include, but are not limited to, trash/debris within the fenced area, vegetation growing on the cover, animal burrows/nesting activity, or erosion of the cover.
- Small cracks or settling imperfections (<5 cm [2 in] deep) on the cover will be documented and will be scheduled for repair on an annual basis. Larger disruptions of the cover (vegetation, animal borings, or erosion) will be immediately evaluated and repaired within 60 days.
- All repair work should preserve the original RCRA Cover "as built" design. If the cover repair requires the modification of the RCRA Cover design, DOE will present a formal design modification request to the NDEP prior to making the design modification.

5.3 CLOSURE PETITION

Based upon the completion of site activities in accordance with the approved Closure Plan (DOE, 1998a), it is requested that a notice of completion be provided by the NDEP for CAU 92. Upon closure approval, CAU 92 will be promoted from Appendix III to Appendix IV of the FFACO, "Closed Corrective Action Units."

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6.0 REFERENCES

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- U.S. Department of Energy, Nevada Operations Office, November 1998a, Closure Plan for Corrective Action Unit 92: Area 6 Decontamination Pond Nevada Test Site, Nevada, Rev 2, DOE/NV-11718-205 UC-700.
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- U.S. Environmental Protection Agency, 1996g, 40 Code of Federal Regulations 264.115, Status Standards for Owners and Operators of Hazardous Waste Treatment, Certification of Closure, Washington, DC.
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APPENDIX A
PROJECT PHOTOGRAPHS

6/1/1998

6/1/1998

AREA 6 DECONTAMINATION POND INFLUENT PIPE CLOSURE
EXCAVATION AND VERIFICATION SAMPLING

AREA 6 DECONTAMINATION POND COVER CONSTRUCTION
ACHIEVING GRADE AND COMPACTION ON FIRST BERM LAYER

7/8/1998

7/8/1998

11/24/1998

11/24/1998

AREA 6 DECONTAMINATION POND CLOSURE GCL PLACEMENT

12/15/1998

12/16/1998

AREA 6 DECONTAMINATION POND CLOSURE COMPLETED COVER
AND MONUMENT

2/24/1999

2/24/1999

AREA 6 DECONTAMINATION POND STAMPED MONUMENT AND
FINISHED COVER WITH FENCING

APPENDIX B

SAMPLE ANALYTICAL RESULTS

1D
LBH ANALYSIS DATA SHEET

EPA SAMPLE NO.

AG-SMP3-E1

Lab Name: Quanterra, MO Contract: 625.01
Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368
Matrix: (soil/water) SOIL Lab Sample ID: 17161-001
Sample wt/vol: 1.0 (g/ml) G Lab File ID: _____
Level: (low/med) LOW Date Sampled: 03-10-98
Moisture: not dec. _____ Date Analyzed: 03-13-98
Dilution Factor: 1.0

CAS NO.	Compound	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	<u>UG/Kg</u>	
	<u>LBH (1)</u>	<u>500</u>	<u>U</u>	

U: Concentration of analyte is less than the value given.
X: Pattern reasonably matches gasoline
Y: Pattern appears to be multi-peaks, but does not match gasoline
Z: Concentration is primarily from a single peak
(1): Low Boiling Hydrocarbon (LBH) is quantitated as if it is Gasoline.

FORM I LBH

000006

1D
LBH ANALYSIS DATA SHEET

EPA SAMPLE NO.
AG-SMP3-E2

Lab Name: Quanterra,MO Contract: 625.01
 Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368
 Matrix : (soil/water) SOIL Lab Sample ID: 17161-003
 Sample wt/vol: 1.0 (g/ml) G Lab File ID: _____
 Level: (low/med) LOW Date Sampled: 03-10-98
 % Moisture: not dec. _____ Date Analyzed: 03-13-98
 Dilution Factor: 1.0

CAS NO.	Compound	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/Kg</u>	Q
	<u>LBH (1)</u>	<u>500</u>	<u>U</u>

U: Concentration of analyte is less than the value given.
 X: Pattern reasonably matches gasoline
 Y: Pattern appears to be multi-peaks, but does not match gasoline
 Z: Concentration is primarily from a single peak

(1): Low Boiling Hydrocarbon (LBH) is quantitated as if it is Gasoline.

1D
LBH ANALYSIS DATA SHEET

EPA SAMPLE NO. AG-SMP3-W1

Lab Name: <u>Quanterra, MO</u>	Contract: <u>625.01</u>
Lab Code: <u>ITMO</u> Case No.: _____	SAS No.: _____ SDG No.: <u>V368</u>
Matrix : (soil/water) <u>SOIL</u>	Lab Sample ID: <u>17161-002</u>
Sample wt/vol: <u>1.0</u> (g/ml) <u>G</u>	Lab File ID: _____
Level: (low/med) <u>LOW</u>	Date Sampled: <u>03-10-98</u>
Moisture: not dec. _____	Date Analyzed: <u>03-13-98</u>
	Dilution Factor: <u>1.0</u>

CAS NO.	Compound	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/Kg</u>	Q
	<u>LBH (1)</u>	<u>500</u>	<u>U</u>

U: Concentration of analyte is less than the value given.
 K: Pattern reasonably matches gasoline
 Y: Pattern appears to be multi-peaks, but does not match gasoline
 Z: Concentration is primarily from a single peak

(1): Low Boiling Hydrocarbon (LBH) is quantitated as if it is Gasoline.

1D
LBH ANALYSIS DATA SHEET

EPA SAMPLE NO.

AG-SMP3-W2

Lab Name: Quanterra, MO Contract: 625.01
Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368
Matrix : (soil/water) SOIL Lab Sample ID: 17161-004
Sample wt/vol: 1.0 (g/ml) G Lab File ID: _____
Level: (low/med) LOW Date Sampled: 03-10-98
% Moisture: not dec. _____ Date Analyzed: 03-13-98
Dilution Factor: 1.0

CAS NO.	Compound	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/Kg
			Q
	LBH (1)	500	U

- U: Concentration of analyte is less than the value given.
X: Pattern reasonably matches gasoline
Y: Pattern appears to be multi-peaks, but does not match gasoline
Z: Concentration is primarily from a single peak

(1): Low Boiling Hydrocarbon (LBH) is quantitated as if it is Gasoline.

FORM I LBH

000018

1D
LBH ANALYSIS DATA SHEET

EPA SAMPLE NO.

LBHBLK01

Lab Name: Quanterra, MO Contract: 625.01
Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368
Matrix: (soil/water) SOIL Lab Sample ID: QCBLK167322
Sample wt/vol: 1.0 (g/ml) G Lab File ID: _____
Level: (low/med) LOW Date Sampled: _____
Moisture: not dec. _____ Date Analyzed: 03-13-98
Dilution Factor: 1.0

CAS NO. Compound CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/Kg Q

LBH (1)

500

U

U: Concentration of analyte is less than the value given.
X: Pattern reasonably matches gasoline
Y: Pattern appears to be multi-peaks, but does not match gasoline
Z: Concentration is primarily from a single peak

(1): Low Boiling Hydrocarbon (LBH) is quantitated as if it is Gasoline.

1D
LBH ANALYSIS DATA SHEET

EPA SAMPLE NO.

LBHLCS01

Lab Name: Quanterra, MO

Contract: 625.01

Lab Code: ITMO Case No.: SAS No.: SDG No.: V368

Matrix : (soil/water) SOIL

Lab Sample ID: OCLCS167322

Sample wt/vol: 1.0 (g/ml) G

Lab File ID:

Level: (low/med) LOW

Date Sampled:

% Moisture: not dec.

Date Analyzed: 03-13-98

Dilution Factor: 1.0

CAS NO. Compound CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/Kg Q

<u> </u> LBH (1) <u> </u>	<u> </u> 5400 <u> </u>	<u> </u>
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- U: Concentration of analyte is less than the value given.
X: Pattern reasonably matches gasoline
Y: Pattern appears to be multi-peaks, but does not match gasoline
Z: Concentration is primarily from a single peak

(1): Low Boiling Hydrocarbon (LBH) is quantitated as if it is Gasoline.

2E
LBH SOIL SURROGATE RECOVERY

Lab Name: Quanterra, MO

Contract: 625.01

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368

	EPA SAMPLE NO.	S1 TFT #	S2 OTHER #
	=====	=====	=====
01	LBHBLK01	87	
02	LBHLCS01	103	
03	AG-SMP3-E1	88	
05	AG-SMP3-W1	79	
06	AG-SMPD-E2	83	
07	AG-SMP3-W2	79	

ADVISORY
QC LIMITS
29 - 133%

S1 (TFT) = α, α, α -Trifluorotoluene

Column to be used to flag recovery values

* Values outside of QC limits

D Surrogates diluted out

3Q
LBH SPIKE BLANK (LCS) RECOVERY

Lab Name: Quanterra, MO

Contract: 625.01

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368

Spike Blank No.: LBHLCS01

COMPOUND	SPIKE ADDED (UG/Kg)	SPIKE CONCENTRATION (UG/Kg)	SPK % REC #	QC LIMITS REC.
=====	=====	=====	=====	=====
Gasoline _____	<u>5000</u>	<u>5400</u>	<u>108</u>	76-118
_____	_____	_____	_____	_____

Column to be used to flag recovery values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

COMMENTS: ND: NOT DETERMINED AT THIS TIME

4C
LBH METHOD BLANK SUMMARY

Lab Name: Quanterra, MO Contract: 625.01
Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368
Lab Sample ID: QCBLK167322 Lab File ID: _____
Matrix: (soil/water) SOIL Level (low/med) LOW
Date Analyzed : 03-13-98 Instrument ID: GCH
Time Analyzed : 08:20 GC Column ID: DB-5

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	LBHLCS01	QCLCS167322	03-13-98
02	AG-SMP3-E1	17161-001	03-13-98
03	AG-SMPE-W1	17161-002	03-13-98
04	AG-SMP3-E2	17161-003	03-13-98
05	AG-SMP3-W2	17161-004	03-13-98

COMMENTS: _____

6F
LBH INITIAL CALIBRATION DATA

Lab Name: Quanterra, MO Contract: 625.01
 Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368
 Instrument ID: GCH GC Column ID: DB-5
 Calibration Date(s): 03-12-98 to 03-12-98

COMPOUND	Conc. Gasoline (PPB)	Cal.Fact. Gasoline		Conc. TFT (PPB)	Cal.Fact. TFT
Level #1	50	98.38		3	142.72
Level #2	500	81.36		25	135.38
Level #3	1000	82.63		50	133.07
Level #4	2000	86.18		100	141.49
Level #5	6000	81.73		300	136.47
Level #6					
Level #7					
Avg. Cal. Fact.		86.05			137.83
% RSD		8			3

In AVERAGE CALIBRATION FACTOR, enter the average of the all calibration factors.

The %RSD must be less than 20% for the average calibration factor to be used. If the %RSD is $\geq 20\%$, a point-to-point calibration must be used. In this case, enter "Pt-to-Pt" in AVERAGE CALIBRATION FACTOR instead of the average calibration factor.

8E
LBH EVALUATION STANDARDS SUMMARY

Lab Name: Quanterra, MO Contract: 625.01
Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368
Instrument ID: GCH GC Column ID: DB-5
Dates of Analyses: 03-13-98 to 03-13-98

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED
01	RT MARKER	RT MARKER	03-13-98	07:11
02	LBHSTD1000	LBHSTD1000	03-13-98	07:43
03	QCBLK167322	LBHBLK01	03-13-98	08:20
04	QCLCS167322	LBHLCS01	03-13-98	09:00
05	AG-SMP3-E1	17161-001	03-13-98	09:34
06	AG-SMP3-W1	17161-002	03-13-98	10:06
07	AG-SMP3-E2	17161-003	03-13-98	10:36
08	AG-SMP3-W2	17161-004	03-13-98	11:08
09	LBHSTD1000	LBHSTD1000	03-13-98	15:18

9
LBH STANDARDS SUMMARY

Lab Name: Quanterra, MO Contract: 625.01
 Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368
 Instrument ID: GCH GC Column ID: DB-5

DATE(S) OF FROM: <u>03-12-98</u> ANALYSIS TO: <u>03-12-98</u> TIME(S) OF FROM: <u>07:42</u> ANALYSIS TO: <u>10:53</u>					DATE OF ANALYSIS <u>03-13-98</u> TIME OF ANALYSIS <u>07:43</u> EPA SAMPLE NO. (STANDARD) <u>LBHSTD1000</u>			
COMPOUND	RT	RT WINDOW FROM TO		CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
-----	-----	-----	-----	-----	-----	-----	---	-----
Gasoline	2.11	11.98	86.05	90.72	Y	5		
TFT	3.04	2.90	3.18	137.83	3.04	133.33	Y	3

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
 %D must be less than or equal to 15% for quantitation.

Note: Determining that no compounds were found above the CRDL is a form of quantitation, and therefore at least one column must meet the 15% criteria.

9
LBH STANDARDS SUMMARY

Lab Name: Quanterra, MO

Contract: 625.01

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368

Instrument ID: GCH

GC Column ID: DB-5

DATE(S) OF FROM: <u>03-12-98</u> ANALYSIS TO: <u>03-12-98</u> TIME(S) OF FROM: <u>07:42</u> ANALYSIS TO: <u>10:53</u>					DATE OF ANALYSIS <u>03-13-98</u> TIME OF ANALYSIS <u>15:18</u> EPA SAMPLE NO. (STANDARD) <u>LBHSTD1000</u>			
COMPOUND	RT	RT WINDOW FROM TO		CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
=====	=====	=====	=====	=====	=====	=====	=====	=====
Gasoline	2.11	11.98	86.05	80.41	N	6		
TFT	3.04	2.90 3.18	137.83	134.97	N	2		

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.

must be less than or equal to 15% for quantitation.

Note: Determining that no compounds were found above the CRDL is a form of quantitation, and therefore at least one column must meet the 15% criteria.

PROJECT/CLIENT INFORMATION			REPORT INFORMATION			SAMPLE INFORMATION		
Project: <u>A6 DECON POND CHARACTERIZATION - SMP#3</u> BN Org#: <u>2152</u>			Send Report to: <u>JEFF SMITH</u>			Sampling Site: <u>A-6 DECON FACILITY</u>		
Charge Number: <u>C4USAODE</u>		ASL Prog:	Phone: <u>5-7775</u>		Fax: <u>5-7761</u>	M/S: <u>NIS-306</u>		
Project Manager: <u>JEFF SMITH</u>			Turnaround: ☐ Standard [30 days Non-rad, 60 days (or negotiated) Rad] ☒ RUSH Preliminary by: _____ Final by: _____			The samples submitted contain (check); ☐ Hazardous ☐ Radioactive ☐ Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.		
Phone: <u>5-7775</u>		Fax: <u>5-7761</u>	M/S: <u>NIS-306</u>					
Final report format: ☐ Standard ☐ NTS-WAC ☒ Other: <u>Electron IT Report</u>								

LAB USE ONLY				ANALYSES & METHOD										SAMPLE RECEIPT INFORMATION		
Rad SDG:		Non-rad SDG:		<u>8260 FOR VOC'S, 8260</u> <u>8270 FOR SVOC'S, 8270</u> <u>8015 MOD-TPH, GAS & DIESEL</u> <u>8080 FOR PCB'S</u> <u>GAMMA SPEC (20 MIN)</u> <u>GROSS ALPHA/BETA/TPH</u> <u>8260 FOR VOC'S, 8260</u>										Are all sample containers received intact? ☐ Y ☐ N		
Rad Packet:		Non-rad Packet:												Explain Discrepancies: _____		
Client Services Representative:														Do the labels agree with this form? ☐ Y ☐ N		
Will these analyses be performed under a signed SOW? ☒ YES ☐ NO														Explain Discrepancies: _____		
If so, do analyses entered here agree with the SOW? ☐ YES ☐ NO ☐ N/A														Was a Material Clearance Tag submitted? ☐ Y ☐ N		
If not, identify the variation: _____														Explain Discrepancies: _____		
CSR initials indicating review and approval: _____ Date: _____																
I T E M	ID/DESCRIPTION	SAMPLING		MATRIX											COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)	
		DATE	TIME													
0	A6-SMP3-E1	10MAR98	0935	SOIL	✓		✓									ICE, 125ml
1	A6-SMP3-E2	10MAR98	0935	SOIL		✓	✓	✓								ICE, 250ml
2	A6-SMP3-E3	10MAR98	0935	SOIL					✓	✓						ICE, 500ml
3	A6-SMP3-W1	10MAR98	1130	SOIL	✓		✓									ICE, 125ml
4	A6-SMP3-W2	10MAR98	1130	SOIL		✓	✓	✓								ICE, 250ml
5	A6-SMP3-W3	10MAR98	1220	SOIL					✓	✓						ICE, 500ml
6	A6-SMP3-AA	10MAR98	1300	WATER								✓				ICE, 40ml (HCL)
7	A6-SMP3-BB	10MAR98	1300	WATER								✓				ICE, 40ml (HCL)
8																
9																

Transfer of samples submitted for analyses			Complete if samples will be shipped to an OFF-SITE Subcontract Laboratory		
Sampled/Relinquished (Signature)	DATE / TIME	Received by (Signature)	Relinquished (BN Representative Signature)	DATE / TIME	Received (Courier & Tracking Info.)
			Relinquished (Courier & Tracking Info.)	DATE / TIME	Received (1st tier Subcontractor Rep)
			Relinquished (1st tier Subcontractor Rep)	DATE / TIME	Received (2nd tier Subcontractor Rep)

SAMPLE DELIVERY GROUP: V368CLIENT: RP - JEFF SMITHLABORATORY: QUANTERRAFINAL REPORT RECEIVED: 4/7/98DATE REVIEWED: 5/5/98REVIEWED BY:

TPH - DIESEL / OIL:

MATRIX: SOILARE TPH DIESEL/OIL DATA ACCEPTABLE: YESARE CRITERIA MET

1. QC SAMPLES ACCEPTABLE	<u>YES</u>
2. MATRIX SPIKE ACCEPTABLE	<u>N/A</u>
3. METHOD BLANK ACCEPTABLE	<u>YES</u>
4. HOLDING TIMES ACCEPTABLE	<u>YES</u>

		<u># DAYS</u>	<u>ACCEPTABLE</u>
a. Date Sampled:	<u>3/10/98</u>	<u>0</u>	<u>0</u>
b. Date ASL Received:	<u>3/10/98</u>	<u>0</u>	<u>1</u>
c. Date Contract Lab Received:	<u>3/12/98</u>	<u>2</u>	<u>5</u>
d. Date Extracted:	<u>3/17/98</u>	<u>7</u>	<u>14</u>
e. Date Analyzed:	<u>3/17/98</u>	<u>0</u>	<u>40</u>
5. CALCULATIONS ACCEPTABLE:	<u>YES</u>		
6. CORRECT CONC. UNITS USED:	<u>YES</u>		
7. FORMS ACCEPTABLE:	<u>YES</u>		
8. CHAIN-OF-CUSTODY AGREES:	<u>YES</u>		

COMMENTS: Method associated quality assurance and control criteria were met.

1D
HBH ANALYSIS DATA SHEET

EPA SAMPLE NO.

A6-SMP3-E1

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO Case No.: SAS No.: SDG No.: V368

Matrix : (soil/water) SOIL

Lab Sample ID: 17161-001

Sample wt/vol: 20.1 (g/ml) G

Lab File ID:

Level: (low/med) LOW

Date Sampled: 03-10-98

% Moisture: not dec. dec.

Date Extracted: 03-17-98

Extraction: (SepF/Cont/Sonc/Shak) Sonc

Date Analyzed: 03-17-98

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1

CAS NO.	Compound	CONCENTRATION UNITS: (mg/L or mg/Kg) <u>mg/Kg</u>
---------	----------	--

WASTE OIL	25	U
FUEL OIL #2	25	U

U: Concentration of analyte is less than the value given.

1D
HBH ANALYSIS DATA SHEET

EPA SAMPLE NO.

A6-SMP3-E2

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368

Matrix : (soil/water) SOIL

Lab Sample ID: 17161-003

Sample wt/vol: 20.2 (g/ml) G

Lab File ID: _____

Level: (low/med) LOW

Date Sampled: 03-10-98

% Moisture: not dec. _____ dec. _____

Date Extracted: 03-17-98

Extraction: (SepF/Cont/Sonc/Shak) Sonc

Date Analyzed: 03-17-98

GPC Cleanup: (Y/N) N pH: _____

Dilution Factor: 1

CAS NO.

Compound

CONCENTRATION UNITS:
(mg/L or mg/Kg) mg/Kg

<u>WASTE OIL</u>	<u>25</u>	<u>U</u>
<u>FUEL OIL #2</u>	<u>25</u>	<u>U</u>

U: Concentration of analyte is less than the value given.

1D
HBH ANALYSIS DATA SHEET

EPA SAMPLE NO.
A6-SMP3-W1

Lab Name: QUANTERRA MO Contract: 625.01

Lab Code: ITMO Case No.: SAS No.: SDG No.: V368

Matrix : (soil/water) SOIL Lab Sample ID: 17161-002

Sample wt/vol: 20.1 (g/ml) G Lab File ID:

Level: (low/med) LOW Date Sampled: 03-10-98

% Moisture: not dec. dec. Date Extracted: 03-17-98

Extraction: (SepF/Cont/Sonc/Shak) Sonc Date Analyzed: 03-17-98

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1

CAS NO. Compound CONCENTRATION UNITS:
(mg/L or mg/Kg) mg/Kg

<u>WASTE OIL</u>	<u>25</u>	<u>U</u>
<u>FUEL OIL #2</u>	<u>25</u>	<u>U</u>

U: Concentration of analyte is less than the value given.

1D
HBH ANALYSIS DATA SHEET

EPA SAMPLE NO.

A6-SMP3-W2

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO Case No.: SAS No.: SDG No.: V368

Matrix : (soil/water) SOIL

Lab Sample ID: 17161-004

Sample wt/vol: 20.1 (g/ml) G

Lab File ID:

Level: (low/med) LOW

Date Sampled: 03-10-98

% Moisture: not dec. dec.

Date Extracted: 03-17-98

Extraction: (SepF/Cont/Sonc/Shak) Sonc

Date Analyzed: 03-17-98

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1

CAS NO.

Compound

CONCENTRATION UNITS:
(mg/L or mg/Kg) mg/Kg

<u>WASTE OIL</u>	<u>25</u>	<u>U</u>
<u>FUEL OIL #2</u>	<u>25</u>	<u>U</u>

U: Concentration of analyte is less than the value given.

1D
HBH ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPHBLK01

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO Case No.: SAS No.: SDG No.: V368

Matrix : (soil/water) SOIL

Lab Sample ID: BLK 167396

Sample wt/vol: 20.0 (g/ml) G

Lab File ID:

Level: (low/med) LOW

Date Sampled:

% Moisture: not dec. dec.

Date Extracted: 03-17-98

Extraction: (SepF/Cont/Sonc/Shak) Sonc

Date Analyzed: 03-17-98

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1

CAS NO. Compound CONCENTRATION UNITS:
(mg/L or mg/Kg) mg/Kg

<u>WASTE OIL</u>	<u>25</u>	<u>U</u>
<u>FUEL OIL #2</u>	<u>25</u>	<u>U</u>

U: Concentration of analyte is less than the value given.

EPA SAMPLE NO.
TPHSPK01A

Contract: 625.01

Lab Sample ID: SPK 167396-1

Lab File ID: _____

Date Sampled: _____

Date Extracted: 03-17-98

Date Analyzed: 03-17-98

Dilution Factor: 1

CONCENTRATION UNITS:
(mg/L or mg/Kg) mg/Kg

WASTE OIL	25	U
FUEL OIL #2	89	

FORM I HBH

000063

1D
HBH ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPHSPK01B

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO Case No.: SAS No.: SDG No.: V368

Matrix : (soil/water) SOIL

Lab Sample ID: SPK 167396-2

Sample wt/vol: 20.0 (g/ml) G

Lab File ID:

Level: (low/med) LOW

Date Sampled:

% Moisture: not dec. dec.

Date Extracted: 03-17-98

Extraction: (SepF/Cont/Sonc/Shak) Sonc

Date Analyzed: 03-17-98

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1

CAS NO.

Compound

CONCENTRATION UNITS:
(mg/L or mg/Kg) mg/Kg

<u>WASTE OIL</u>	<u>200</u>	
<u>FUEL OIL #2</u>	<u>25</u>	<u>U</u>

U: Concentration of analyte is less than the value given.

2E
SOIL HBH SURROGATE RECOVERY

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368

	EPA SAMPLE NO.	S1 C 40 #	S2 OTHER #
	=====	=====	=====
01	TPHBLK01	57	
02	TPHSPK01A	55	
03	TPHSPK01B	60	
04	A6-SMP-E1	57	
05	A6-SMP-W1	56	
06	A6-SMP-E2	63	
07	A6-SMP-W2	57	
08			
09			
10			
11			
12			
13			
14			
15			

ADVISORY

S1 (C 40) = N-Tetracontane

QC LIMITS
(37-105)

Column to be used to flag recovery values

* Values outside of QC limits due to matrix interference

D Surrogates diluted out

3Q
SOIL HBH SPIKE BLANK (LCS) RECOVERY

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368

Spike Blank No.: SPK 167396-1

COMPOUND	SPIKE ADDED (mg/Kg)	SPIKE CONCENTRATION (mg/Kg)	SPK % REC #	QC LIMITS REC.
=====	=====	=====	=====	=====
<u>FUEL OIL #2</u>	<u>120</u>	<u>89</u>	<u>75</u>	<u>47-148</u>

Column to be used to flag recovery values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

COMMENTS: _____

30

Contract: 625.01

Lab Code: ITMO Case No.: _____ SAS N^o.: _____ SDG No.: _____ V368

Spike Blank No.: SPK 167396-2

COMPOUND	SPIKE ADDED (mg/Kg)	SPIKE CONCENTRATION (mg/Kg)	SPK % REC #	QC LIMITS REC.
=====	=====	=====	=====	=====
WASTE OIL	250	200	77	47-148

```
# Column to be used to flag recovery values with an asterisk
```

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

COMMENTS: _____

4C
HBH METHOD BLANK SUMMARY

Lab Name: QUANTERRA MO Contract: 625.01
 Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368
 Lab Sample ID: BLK 167396 Lab File ID: _____
 Matrix: (soil/water) SOIL . Level (low/med) LOW
 Date Extracted : 03-17-98 Extraction: (SepF/Cont/Sonc) Sonc
 Date Analyzed : 03-17-98 Instrument ID : GC F
 Time Analyzed : 19:05 G C Column ID : DB-5MS

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	TPHSPK01A	SPK 167396-1	03-17-98
02	TPHSPK01B	SPK 167396-2	03-17-98
03	A6-SMP3-E1	17161-001	03-17-98
04	A6-SMP3-W1	17161-002	03-17-98
05	A6-SMP3-E2	17161-003	03-17-98
06	A6-SMP3-W2	17161-004	03-17-98
07			
08			
09			
10			
11			

COMMENTS: _____

6F
HBH INITIAL CALIBRATION DATA

Lab Name: QUANTERRA MO Contract: 625.01

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368

Instrument ID: GC F GC Column ID: DB-5MS Injection Vol: 1.0ul

Calibration Date(s): 09-27-97 to 09-28-97

COMPOUND	Conc. FuelOil#2 (ug/ml)	Cal.Fact. FuelOil#2	Conc. Waste Oil (ug/ml)	Cal.Fact. Waste Oil	Conc. C 40 (ug/ml)	Cal.Fact. C 40
Level #1	102	4875461	101	3620931	2.0	5598990
Level #2	256	4109051	253	3667719	4.9	4873279
Level #3	512	4365406	506	3483966	9.9	5358806
Level #4	1023	4829838	1013	3589382	29.8	5758485
Level #5	2559	4731846	2532	4152224	49.4	5148583
Level #6	5118	4502770	5065	3985846	98.8	5576275
Level #7						
Avg. Cal. Fact.		4569062		3750011		5385736
% RSD		6		7		6

In AVERAGE CALIBRATION FACTOR, enter the average of the all calibration factors.

The %RSD must be less than 20% for the average calibration factor to be used. If the %RSD is $\geq 20\%$, a calibration curve must be used. The R-squared value must be ≥ 0.990 for the curve to be used. In this case, enter "Curve" in AVERAGE CALIBRATION FACTOR instead of the average calibration factor and the R-squared value instead of the % RSD.

000020

8E
HBH SEQUENCE SUMMARY

Lab Name: QUANTERRA MO Contract: 625.01
 Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368
 Instrument ID: GC F GC Column ID: DB-5MS
 Dates of Analyses: 03-17-98 to 03-17-98

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED
01	N-PARAFFIN	N-PARAFFIN	03-17-98	18:00
02	WASTE OIL 5	WASTE OIL 5	03-17-98	18:22
02	FUEL OIL #2-4	FUEL OIL #2-4	03-17-98	18:43
03	TPHBLK01	BLK167396	03-17-98	19:05
04	TPHSPK01A	SPK167396-1	03-17-98	19:26
05	TPHSPK01B	SPK167396-2	03-17-98	19:48
06	A6-SMP3-E1	17161-001	03-17-98	20:09
07	ZZZZZ	ZZZZZ	03-17-98	20:31
08	ZZZZZ	ZZZZZ	03-17-98	20:52
09	A6-SMP3-W1	17161-002	03-17-98	21:14
10	A6-SMP3-E2	17161-003	03-17-98	21:35
11	A6-SMP3-W2	17161-004	03-17-98	21:56
12	ZZZZZ	ZZZZZ	03-17-98	22:18
13	FUEL OIL #2-4	FUEL OIL #2-4	03-17-98	23:01
14				
15				
16				
17				
18				

9
HBH STANDARDS SUMMARY

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368

Instrument ID: GC F

GC Column ID: DB-5MS

DATE(S) OF FROM: <u>09-27-97</u>	DATE OF ANALYSIS <u>03-17-98</u>
ANALYSIS TO: <u>09-28-97</u>	TIME OF ANALYSIS <u>1800/1843</u>
TIME(S) OF FROM: <u>23:47</u>	EPA SAMPLE NO.
ANALYSIS TO: <u>04:12</u>	(STANDARD) <u>DAILY STDS</u>

COMPOUND	RT	RT WINDOW		CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
		FROM	TO					
=====	=====	=====	=====	=====	=====	=====	=====	=====
WASTE OIL		0.93	9.13	3750011	5.03	4096830	Y	9
FUEL OIL #2		0.93	9.13	4569062	5.03	3826272	Y	2

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.

%D must be less than or equal to 15% for quantitation.

9
HBH STANDARDS SUMMARY

Lab Name: QUANTERRA MO Contract: 625.01

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368

Instrument ID: GC F GC Column ID: DB-5MS

DATE(S) OF FROM: <u>09-27-97</u> ANALYSIS TO: <u>09-28-97</u> TIME(S) OF FROM: <u>23:47</u> ANALYSIS TO: <u>04:12</u>				DATE OF ANALYSIS <u>03-17-98</u> TIME OF ANALYSIS <u>23:01</u> EPA SAMPLE NO. _____ (STANDARD) <u>DAILY STDS</u>				
COMPOUND	RT	RT WINDOW FROM TO		CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
=====	=====	=====	=====	=====	=====	=====	=====	=====
WASTE OIL _____		_0.93_	_9.13_	_3750011_				
FUEL OIL #2 _____		_0.93_	_9.13_	_4569062_	_5.03_	_3944711_	_Y_	_14_

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.

%D must be less than or equal to 15% for quantitation.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A6-SMP3-E2

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Matrix: (soil/water) SOIL

Lab Sample ID: 17161-003

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: H6312

Level: (low/med) LOW

Date Received: 03/12/98

Moisture: decanted: (Y/N) N

Date Extracted: 03/23/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 03/31/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

PC Cleanup: (Y/N) N

pH:

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

108-95-2-----	Phenol	330	U
111-44-4-----	bis(2-Chloroethyl) Ether	330	U
95-57-8-----	2-Chlorophenol	330	U
541-73-1-----	1,3-Dichlorobenzene	330	U
106-46-7-----	1,4-Dichlorobenzene	330	U
95-50-1-----	1,2-Dichlorobenzene	330	U
95-48-7-----	2-Methylphenol	330	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5-----	4-Methylphenol	330	U
621-64-7-----	N-Nitroso-Di-n-Propylamine	330	U
67-72-1-----	Hexachloroethane	330	U
98-95-3-----	Nitrobenzene	330	U
78-59-1-----	Isophorone	330	U
88-75-5-----	2-Nitrophenol	330	U
105-67-9-----	2,4-Dimethylphenol	330	U
111-91-1-----	bis(2-Chloroethoxy) Methane	330	U
120-83-2-----	2,4-Dichlorophenol	330	U
120-82-1-----	1,2,4-Trichlorobenzene	330	U
91-20-3-----	Naphthalene	330	U
106-47-8-----	4-Chloroaniline	330	U
87-68-3-----	Hexachlorobutadiene	330	U
59-50-7-----	4-Chloro-3-Methylphenol	330	U
91-57-6-----	2-Methylnaphthalene	330	U
77-47-4-----	Hexachlorocyclopentadiene	1600	U
88-06-2-----	2,4,6-Trichlorophenol	330	U
95-95-4-----	2,4,5-Trichlorophenol	330	U
91-58-7-----	2-Chloronaphthalene	330	U
88-74-4-----	2-Nitroaniline	1600	U
131-11-3-----	Dimethyl Phthalate	330	U
208-96-8-----	Acenaphthylene	330	U
606-20-2-----	2,6-Dinitrotoluene	330	U
99-09-2-----	3-Nitroaniline	1600	U
83-32-9-----	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

A6-SMP3-E2

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Matrix: (soil/water) SOIL

Lab Sample ID: 17161-003

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: H6312

Level: (low/med) LOW

Date Received: 03/12/98

% Moisture: decanted: (Y/N) N

Date Extracted: 03/23/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 03/31/98

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

51-28-5-----	2,4-Dinitrophenol	1600	U
100-02-7-----	4-Nitrophenol	1600	U
132-64-9-----	Dibenzofuran	330	U
121-14-2-----	2,4-Dinitrotoluene	330	U
84-66-2-----	Diethylphthalate	130	J
7005-72-3-----	4-Chlorophenyl-phenylether	330	U
86-73-7-----	Fluorene	330	U
100-01-6-----	4-Nitroaniline	1600	U
534-52-1-----	4,6-Dinitro-2-Methylphenol	1600	U
86-30-6-----	N-Nitrosodiphenylamine (1)	330	U
101-55-3-----	4-Bromophenyl-phenylether	330	U
118-74-1-----	Hexachlorobenzene	330	U
87-86-5-----	Pentachlorophenol	1600	U
85-01-8-----	Phenanthrene	330	U
120-12-7-----	Anthracene	330	U
86-74-8-----	Carbazole	330	U
84-74-2-----	Di-n-Butylphthalate	330	U
206-44-0-----	Fluoranthene	330	U
129-00-0-----	Pyrene	330	U
85-68-7-----	Butylbenzylphthalate	540	
91-94-1-----	3,3'-Dichlorobenzidine	1600	U
56-55-3-----	Benzo(a)Anthracene	330	U
218-01-9-----	Chrysene	330	U
117-81-7-----	bis(2-Ethylhexyl) Phthalate	390	
117-84-0-----	Di-n-Octyl Phthalate	150	J
205-99-2-----	Benzo(b) Fluoranthene	330	U
207-08-9-----	Benzo(k) Fluoranthene	330	U
50-32-8-----	Benzo(a) Pyrene	330	U
193-39-5-----	Indeno(1,2,3-cd) Pyrene	330	U
53-70-3-----	Dibenz(a,h) Anthracene	330	U
191-24-2-----	Benzo(g,h,i) Perylene	330	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A6-SMP3-W2

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Matrix: (soil/water) SOIL

Lab Sample ID: 17161-004

Sample wt/vol: 30.10 (g/mL) G

Lab File ID: H6313

Level: (low/med) LOW

Date Received: 03/12/98

Moisture: decanted: (Y/N) N

Date Extracted: 03/23/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 03/31/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

PC Cleanup: (Y/N) N

pH:

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

108-95-2-----	Phenol	330	U
111-44-4-----	bis(2-Chloroethyl) Ether	330	U
95-57-8-----	2-Chlorophenol	330	U
541-73-1-----	1,3-Dichlorobenzene	330	U
106-46-7-----	1,4-Dichlorobenzene	330	U
95-50-1-----	1,2-Dichlorobenzene	330	U
95-48-7-----	2-Methylphenol	330	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5-----	4-Methylphenol	330	U
621-64-7-----	N-Nitroso-Di-n-Propylamine	330	U
67-72-1-----	Hexachloroethane	330	U
98-95-3-----	Nitrobenzene	330	U
78-59-1-----	Isophorone	330	U
88-75-5-----	2-Nitrophenol	330	U
105-67-9-----	2,4-Dimethylphenol	330	U
111-91-1-----	bis(2-Chloroethoxy) Methane	330	U
120-83-2-----	2,4-Dichlorophenol	330	U
120-82-1-----	1,2,4-Trichlorobenzene	330	U
91-20-3-----	Naphthalene	330	U
106-47-8-----	4-Chloroaniline	330	U
87-68-3-----	Hexachlorobutadiene	330	U
59-50-7-----	4-Chloro-3-Methylphenol	330	U
91-57-6-----	2-Methylnaphthalene	330	U
77-47-4-----	Hexachlorocyclopentadiene	1600	U
88-06-2-----	2,4,6-Trichlorophenol	330	U
95-95-4-----	2,4,5-Trichlorophenol	330	U
91-58-7-----	2-Chloronaphthalene	330	U
88-74-4-----	2-Nitroaniline	1600	U
131-11-3-----	Dimethyl Phthalate	330	U
208-96-8-----	Acenaphthylene	330	U
606-20-2-----	2,6-Dinitrotoluene	330	U
99-09-2-----	3-Nitroaniline	1600	U
83-32-9-----	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A6-SMP3-W2

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Matrix: (soil/water) SOIL

Lab Sample ID: 17161-004

Sample wt/vol: 30.10 (g/mL) G

Lab File ID: H6313

Level: (low/med) LOW

Date Received: 03/12/98

% Moisture: decanted: (Y/N) N

Date Extracted: 03/23/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 03/31/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH:

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) UG/KG

Q

51-28-5-----	2,4-Dinitrophenol	1600	U
100-02-7-----	4-Nitrophenol	1600	U
132-64-9-----	Dibenzofuran	330	U
121-14-2-----	2,4-Dinitrotoluene	330	U
84-66-2-----	Diethylphthalate	99	J
7005-72-3-----	4-Chlorophenyl-phenylether	330	U
86-73-7-----	Fluorene	330	U
100-01-6-----	4-Nitroaniline	1600	U
534-52-1-----	4,6-Dinitro-2-Methylphenol	1600	U
86-30-6-----	N-Nitrosodiphenylamine (1)	330	U
101-55-3-----	4-Bromophenyl-phenylether	330	U
118-74-1-----	Hexachlorobenzene	330	U
87-86-5-----	Pentachlorophenol	1600	U
85-01-8-----	Phenanthrene	330	U
120-12-7-----	Anthracene	330	U
86-74-8-----	Carbazole	330	U
84-74-2-----	Di-n-Butylphthalate	330	U
206-44-0-----	Fluoranthene	330	U
129-00-0-----	Pyrene	330	U
85-68-7-----	Butylbenzylphthalate	430	
91-94-1-----	3,3'-Dichlorobenzidine	1600	U
56-55-3-----	Benzo(a)Anthracene	330	U
218-01-9-----	Chrysene	330	U
117-81-7-----	bis(2-Ethylhexyl)Phthalate	390	
117-84-0-----	Di-n-Octyl Phthalate	130	J
205-99-2-----	Benzo(b)Fluoranthene	330	U
207-08-9-----	Benzo(k)Fluoranthene	330	U
50-32-8-----	Benzo(a)Pyrene	330	U
193-39-5-----	Indeno(1,2,3-cd)Pyrene	330	U
53-70-3-----	Dibenz(a,h)Anthracene	330	U
191-24-2-----	Benzo(g,h,i)Perylene	330	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK01

Name: QUANTERRA MO Contract: 625-01

Code: ITMO Case No.: S16103 SAS No.: SDG No.: V368

Matrix: (soil/water) SOIL Lab Sample ID: QCBLK167889

Sample wt/vol: 30.00 (g/mL) G Lab File ID: H6315

Level: (low/med) LOW Date Received:

Disturbance: decanted: (Y/N) N Date Extracted: 03/23/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 03/31/98

Extraction Volume: 2.0 (uL) Dilution Factor: 1.0

Cleanup: (Y/N) N pH:

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

108-95-2-----	Phenol	330	U
111-44-4-----	bis(2-Chloroethyl) Ether	330	U
95-57-8-----	2-Chlorophenol	330	U
541-73-1-----	1,3-Dichlorobenzene	330	U
106-46-7-----	1,4-Dichlorobenzene	330	U
95-50-1-----	1,2-Dichlorobenzene	330	U
95-48-7-----	2-Methylphenol	330	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5-----	4-Methylphenol	330	U
621-64-7-----	N-Nitroso-Di-n-Propylamine	330	U
67-72-1-----	Hexachloroethane	330	U
98-95-3-----	Nitrobenzene	330	U
78-59-1-----	Isophorone	330	U
88-75-5-----	2-Nitrophenol	330	U
105-67-9-----	2,4-Dimethylphenol	330	U
111-91-1-----	bis(2-Chloroethoxy) Methane	330	U
120-83-2-----	2,4-Dichlorophenol	330	U
120-82-1-----	1,2,4-Trichlorobenzene	330	U
91-20-3-----	Naphthalene	330	U
106-47-8-----	4-Chloroaniline	330	U
87-68-3-----	Hexachlorobutadiene	330	U
59-50-7-----	4-Chloro-3-Methylphenol	330	U
91-57-6-----	2-Methylnaphthalene	330	U
77-47-4-----	Hexachlorocyclopentadiene	1600	U
88-06-2-----	2,4,6-Trichlorophenol	330	U
95-95-4-----	2,4,5-Trichlorophenol	330	U
91-58-7-----	2-Chloronaphthalene	330	U
88-74-4-----	2-Nitroaniline	1600	U
131-11-3-----	Dimethyl Phthalate	330	U
208-96-8-----	Acenaphthylene	330	U
606-20-2-----	2,6-Dinitrotoluene	330	U
99-09-2-----	3-Nitroaniline	1600	U
83-32-9-----	Acenaphthene	330	U

FORM I SV-1

3/90

000072

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK01

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Matrix: (soil/water) SOIL

Lab Sample ID: QCBLK167889

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: H6315

Level: (low/med) LOW

Date Received:

% Moisture: decanted: (Y/N) N

Date Extracted: 03/23/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 03/31/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH:

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) UG/KG

Q

51-28-5-----	2,4-Dinitrophenol	1600	U
100-02-7-----	4-Nitrophenol	1600	U
132-64-9-----	Dibenzofuran	330	U
121-14-2-----	2,4-Dinitrotoluene	330	U
84-66-2-----	Diethylphthalate	330	U
7005-72-3-----	4-Chlorophenyl-phenylether	330	U
86-73-7-----	Fluorene	330	U
100-01-6-----	4-Nitroaniline	1600	U
534-52-1-----	4,6-Dinitro-2-Methylphenol	1600	U
86-30-6-----	N-Nitrosodiphenylamine (1)	330	U
101-55-3-----	4-Bromophenyl-phenylether	330	U
118-74-1-----	Hexachlorobenzene	330	U
87-86-5-----	Pentachlorophenol	1600	U
85-01-8-----	Phenanthrene	330	U
120-12-7-----	Anthracene	330	U
86-74-8-----	Carbazole	330	U
84-74-2-----	Di-n-Butylphthalate	330	U
206-44-0-----	Fluoranthene	330	U
129-00-0-----	Pyrene	330	U
85-68-7-----	Butylbenzylphthalate	330	U
91-94-1-----	3,3'-Dichlorobenzidine	1600	U
56-55-3-----	Benzo(a)Anthracene	330	U
218-01-9-----	Chrysene	330	U
117-81-7-----	bis(2-Ethylhexyl)Phthalate	330	U
117-84-0-----	Di-n-Octyl Phthalate	330	U
205-99-2-----	Benzo(b)Fluoranthene	330	U
207-08-9-----	Benzo(k)Fluoranthene	330	U
50-32-8-----	Benzo(a)Pyrene	330	U
193-39-5-----	Indeno(1,2,3-cd)Pyrene	330	U
53-70-3-----	Dibenz(a,h)Anthracene	330	U
191-24-2-----	Benzo(g,h,i)Perylene	330	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

3/90

000073

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SSPK01A

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103.

SAS No.:

SDG No.: V368

Matrix: (soil/water) SOIL

Lab Sample ID: QCSPK167889-1

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: H6310

Level: (low/med) LOW

Date Received:

Moisture: decanted: (Y/N) N

Date Extracted: 03/23/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 03/31/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

PC Cleanup: (Y/N) N

pH:

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

108-95-2-----	Phenol	1400	
111-44-4-----	bis(2-Chloroethyl) Ether	330	U
95-57-8-----	2-Chlorophenol	1500	
541-73-1-----	1,3-Dichlorobenzene	330	U
106-46-7-----	1,4-Dichlorobenzene	1100	
95-50-1-----	1,2-Dichlorobenzene	330	U
95-48-7-----	2-Methylphenol	330	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5-----	4-Methylphenol	330	U
621-64-7-----	N-Nitroso-Di-n-Propylamine	1400	
67-72-1-----	Hexachloroethane	330	U
98-95-3-----	Nitrobenzene	330	U
78-59-1-----	Isophorone	330	U
88-75-5-----	2-Nitrophenol	330	U
105-67-9-----	2,4-Dimethylphenol	330	U
111-91-1-----	bis(2-Chloroethoxy) Methane	330	U
120-83-2-----	2,4-Dichlorophenol	330	U
120-82-1-----	1,2,4-Trichlorobenzene	1100	
91-20-3-----	Naphthalene	330	U
106-47-8-----	4-Chloroaniline	330	U
87-68-3-----	Hexachlorobutadiene	330	U
59-50-7-----	4-Chloro-3-Methylphenol	1700	
91-57-6-----	2-Methylnaphthalene	330	U
77-47-4-----	Hexachlorocyclopentadiene	1600	U
88-06-2-----	2,4,6-Trichlorophenol	330	U
95-95-4-----	2,4,5-Trichlorophenol	330	U
91-58-7-----	2-Chloronaphthalene	330	U
88-74-4-----	2-Nitroaniline	1600	U
131-11-3-----	Dimethyl Phthalate	330	U
208-96-8-----	Acenaphthylene	330	U
606-20-2-----	2,6-Dinitrotoluene	330	U
99-09-2-----	3-Nitroaniline	1600	U
83-32-9-----	Acenaphthene	1100	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

SSPK01A

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Matrix: (soil/water) SOIL

Lab Sample ID: QCSPK167889-1

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: H6310

Level: (low/med) LOW

Date Received:

% Moisture: decanted: (Y/N) N

Date Extracted: 03/23/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 03/31/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

51-28-5-----	2,4-Dinitrophenol	1600	U
100-02-7-----	4-Nitrophenol	1600	
132-64-9-----	Dibenzofuran	330	U
121-14-2-----	2,4-Dinitrotoluene	650	
84-66-2-----	Diethylphthalate	330	U
7005-72-3-----	4-Chlorophenyl-phenylether	330	U
86-73-7-----	Fluorene	330	U
100-01-6-----	4-Nitroaniline	1600	U
534-52-1-----	4,6-Dinitro-2-Methylphenol	1600	U
86-30-6-----	N-Nitrosodiphenylamine (1)	330	U
101-55-3-----	4-Bromophenyl-phenylether	330	U
118-74-1-----	Hexachlorobenzene	330	U
87-86-5-----	Pentachlorophenol	1300	J
85-01-8-----	Phenanthrene	330	U
120-12-7-----	Anthracene	330	U
86-74-8-----	Carbazole	330	U
84-74-2-----	Di-n-Butylphthalate	330	U
206-44-0-----	Fluoranthene	330	U
129-00-0-----	Pyrene	1000	
85-68-7-----	Butylbenzylphthalate	330	U
91-94-1-----	3,3'-Dichlorobenzidine	1600	U
56-55-3-----	Benzo(a)Anthracene	330	U
218-01-9-----	Chrysene	330	U
117-81-7-----	bis(2-Ethylhexyl)Phthalate	320	J
117-84-0-----	Di-n-Octyl Phthalate	330	U
205-99-2-----	Benzo(b)Fluoranthene	330	U
207-08-9-----	Benzo(k)Fluoranthene	330	U
50-32-8-----	Benzo(a)Pyrene	330	U
193-39-5-----	Indeno(1,2,3-cd)Pyrene	330	U
53-70-3-----	Dibenz(a,h)Anthracene	330	U
191-24-2-----	Benzo(g,h,i)Perylene	330	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SSPK01B

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Matrix: (soil/water) SOIL

Lab Sample ID: QCSPK167889-2

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: H6311

Level: (low/med) LOW

Date Received:

Moisture: decanted: (Y/N) N

Date Extracted: 03/23/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 03/31/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

PC Cleanup: (Y/N) N

pH:

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) UG/KG

Q

108-95-2-----	Phenol	1700	
111-44-4-----	bis(2-Chloroethyl) Ether	330	U
95-57-8-----	2-Chlorophenol	1800	
541-73-1-----	1,3-Dichlorobenzene	330	U
106-46-7-----	1,4-Dichlorobenzene	1300	
95-50-1-----	1,2-Dichlorobenzene	330	U
95-48-7-----	2-Methylphenol	330	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5-----	4-Methylphenol	330	U
621-64-7-----	N-Nitroso-Di-n-Propylamine	1600	
67-72-1-----	Hexachloroethane	330	U
98-95-3-----	Nitrobenzene	330	U
78-59-1-----	Isophorone	330	U
88-75-5-----	2-Nitrophenol	330	U
105-67-9-----	2,4-Dimethylphenol	330	U
111-91-1-----	bis(2-Chloroethoxy) Methane	330	U
120-83-2-----	2,4-Dichlorophenol	330	U
120-82-1-----	1,2,4-Trichlorobenzene	1300	
91-20-3-----	Naphthalene	330	U
106-47-8-----	4-Chloroaniline	330	U
87-68-3-----	Hexachlorobutadiene	330	U
59-50-7-----	4-Chloro-3-Methylphenol	2100	
91-57-6-----	2-Methylnaphthalene	330	U
77-47-4-----	Hexachlorocyclopentadiene	1600	U
88-06-2-----	2,4,6-Trichlorophenol	330	U
95-95-4-----	2,4,5-Trichlorophenol	330	U
91-58-7-----	2-Chloronaphthalene	330	U
88-74-4-----	2-Nitroaniline	1600	U
131-11-3-----	Dimethyl Phthalate	330	U
208-96-8-----	Acenaphthylene	330	U
606-20-2-----	2,6-Dinitrotoluene	330	U
99-09-2-----	3-Nitroaniline	1600	U
83-32-9-----	Acenaphthene	1400	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

SSPK01B

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103. SAS No.:

SDG No.: V368

Matrix: (soil/water) SOIL

Lab Sample ID: QCSPK167889-2

Sample wt/vol: 30.00 (g/mL) G

Lab File ID: H6311

Level: (low/med) LOW

Date Received:

% Moisture: decanted: (Y/N) N

Date Extracted: 03/23/98

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 03/31/98

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

51-28-5-----	2,4-Dinitrophenol	1600	U
100-02-7-----	4-Nitrophenol	1900	
132-64-9-----	Dibenzofuran	330	U
121-14-2-----	2,4-Dinitrotoluene	850	
84-66-2-----	Diethylphthalate	330	U
7005-72-3-----	4-Chlorophenyl-phenylether	330	U
86-73-7-----	Fluorene	330	U
100-01-6-----	4-Nitroaniline	1600	U
534-52-1-----	4,6-Dinitro-2-Methylphenol	1600	U
86-30-6-----	N-Nitrosodiphenylamine (1)	330	U
101-55-3-----	4-Bromophenyl-phenylether	330	U
118-74-1-----	Hexachlorobenzene	330	U
87-86-5-----	Pentachlorophenol	1700	
85-01-8-----	Phenanthrene	330	U
120-12-7-----	Anthracene	330	U
86-74-8-----	Carbazole	330	U
84-74-2-----	Di-n-Butylphthalate	330	U
206-44-0-----	Fluoranthene	330	U
129-00-0-----	Pyrene	1200	
85-68-7-----	Butylbenzylphthalate	330	U
91-94-1-----	3,3'-Dichlorobenzidine	1600	U
56-55-3-----	Benzo(a)Anthracene	330	U
218-01-9-----	Chrysene	330	U
117-81-7-----	bis(2-Ethylhexyl)Phthalate	330	U
117-84-0-----	Di-n-Octyl Phthalate	330	U
205-99-2-----	Benzo(b)Fluoranthene	330	U
207-08-9-----	Benzo(k)Fluoranthene	330	U
50-32-8-----	Benzo(a)Pyrene	330	U
193-39-5-----	Indeno(1,2,3-cd)Pyrene	330	U
53-70-3-----	Dibenz(a,h)Anthracene	330	U
191-24-2-----	Benzo(g,h,i)Perylene	330	U

(1) - Cannot be separated from Diphenylamine

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHER	TOT OUT
	=====	=====	=====	=====	=====	=====	=====	=====	=====
01	A6-SMP3-E2	78	75	74	73	66	89	0	0
02	A6-SMP3-W2	70	68	70	68	63	80	0	0
03	SSPK01A	64	61	61	61	56	69	0	0
04	SSPK01B	78	74	70	71	68	84	0	0
05	SBLK01	76	70	72	72	64	78	0	0

QC LIMITS

S1 (NBZ) = Nitrobenzene-d5 (23-120)
 S2 (FBP) = 2-Fluorobiphenyl (30-115)
 S3 (TPH) = Terphenyl (18-137)
 S4 (PHL) = Phenol-d5 (24-113)
 S5 (2FP) = 2-Fluorophenol (25-121)
 S6 (TBP) = 2,4,6-Tribromophenol (19-122)

Column to be used to flag recovery values
 * Values outside of contract required QC limits
 D Surrogates diluted out

4B
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO

SBLK01

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Lab File ID: H6315

Lab Sample ID: QCBLK167889

Instrument ID: MSH

Date Extracted: 03/23/98

Matrix: (soil/water) SOIL

Date Analyzed: 03/31/98

Level: (low/med) LOW

Time Analyzed: 1401

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	A6-SMP3-E2	17161-003	H6312	03/31/98
02	A6-SMP3-W2	17161-004	H6313	03/31/98
03	SSPK01A	QCSPK167889-1	H6310	03/31/98
04	SSPK01B	QCSPK167889-2	H6311	03/31/98

COMMENTS: BLK 167889
INST#MSH;JJB;550.260

5B
SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Lab File ID: HH097

DFTPP Injection Date: 03/26/98

Instrument ID: MSH

DFTPP Injection Time: 1613

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	38.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	55.6
70	Less than 2.0% of mass 69	0.1 (0.2)1
127	40.0 - 60.0% of mass 198	50.8
197	Less than 1.0% of mass 198	0.3
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.2
275	10.0 - 30.0% of mass 198	19.6
365	Greater than 1.00% of mass 198	1.49
441	Present, but less than mass 443	13.3
442	Greater than 40.0% of mass 198	89.2
443	17.0 - 23.0% of mass 442	16.7 (18.7)2

1-Value is % mass 69

2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD050	H6274	03/26/98	1642
02	SSTD020	SSTD020	H6275	03/26/98	1728
03	SSTD080	SSTD080	H6276	03/26/98	1808
04	SSTD120	SSTD120	H6277	03/26/98	1847
05	SSTD160	SSTD160	H6278	03/26/98	1927

5B
SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Lab File ID: HH100

DFTPP Injection Date: 03/31/98

Instrument ID: MSH

DFTPP Injection Time: 0815

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	42.7
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	63.5
70	Less than 2.0% of mass 69	0.7 (1.1)1
127	40.0 - 60.0% of mass 198	49.6
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.2
275	10.0 - 30.0% of mass 198	18.9
365	Greater than 1.00% of mass 198	1.66
441	Present, but less than mass 443	12.1
442	Greater than 40.0% of mass 198	86.9
443	17.0 - 23.0% of mass 442	15.9 (18.3)2

1-Value is % mass 69

2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD050	H6307	03/31/98	0829
02	SSPK01A	QCSPK167889-1	H6310	03/31/98	1035
03	SSPK01B	QCSPK167889-2	H6311	03/31/98	1115
04	A6-SMP3-E2	17161-003	H6312	03/31/98	1154
05	A6-SMP3-W2	17161-004	H6313	03/31/98	1234
06	SBLK01	QCBLK167889	H6315	03/31/98	1401

6B
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Instrument ID: MSH

Calibration Date(s): 03/26/98

03/26/98

Calibration Times: 1642

1927

LAB FILE ID:
RRF80 = H6276

RRF20 = H6275
RRF120 = H6277

RRF50 = H6274
RRF160 = H6278

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	RRF	% RSD
Phenol	1.682	1.649	1.720	1.662	1.650	1.673	1.8*
bis(2-Chloroethyl)Ether	1.306	1.319	1.478	1.425	1.432	1.392	5.4
2-Chlorophenol	1.467	1.370	1.430	1.392	1.362	1.404	3.1
1,3-Dichlorobenzene	1.437	1.442	1.377	1.308	1.261	1.365	5.8
1,4-Dichlorobenzene	1.402	1.433	1.339	1.274	1.268	1.343	5.5*
1,2-Dichlorobenzene	1.362	1.367	1.296	1.258	1.206	1.298	5.3
2-Methylphenol	1.137	1.123	1.143	1.130	1.159	1.138	1.2
2,2'-oxybis(1-Chloropropane	0.908	0.856	1.007	1.009	0.981	0.952	7.1
4-Methylphenol	1.252	1.177	1.251	1.259	1.214	1.231	2.8
N-Nitroso-Di-n-Propylamine	0.703	0.714	0.725	0.642	0.523	0.661	12.7#
Hexachloroethane	0.581	0.593	0.561	0.549	0.517	0.560	5.3
Nitrobenzene	0.315	0.310	0.284	0.309	0.307	0.305	4.0
sophorone	0.640	0.613	0.602	0.632	0.620	0.621	2.4
4-Nitrophenol	0.241	0.243	0.234	0.247	0.251	0.243	2.6*
1,4-Dimethylphenol	0.327	0.311	0.304	0.318	0.309	0.314	2.8
bis(2-Chloroethoxy)Methane	0.459	0.433	0.422	0.439	0.444	0.439	3.1
1,4-Dichlorophenol	0.338	0.325	0.310	0.324	0.324	0.324	3.1*
1,2,4-Trichlorobenzene	0.341	0.332	0.303	0.311	0.304	0.318	5.4
Naphthalene	1.071	1.033	0.942	0.989	0.950	0.997	5.5
4-Chloroaniline	0.352	0.475	0.310	0.410	0.425	0.394	16.4
Hexachlorobutadiene	0.143	0.153	0.135	0.135	0.129	0.139	6.7*
4-Chloro-3-Methylphenol	0.279	0.294	0.280	0.284	0.286	0.285	2.1*
1-Methylnaphthalene	0.661	0.658	0.624	0.640	0.645	0.646	2.3
Hexachlorocyclopentadiene	0.268	0.312	0.291	0.294	0.287	0.290	5.4#
1,4,6-Trichlorophenol	0.425	0.418	0.406	0.427	0.408	0.417	2.3*
1,4,5-Trichlorophenol	0.466	0.454	0.450	0.474	0.444	0.458	2.7
1-Chloronaphthalene	1.194	1.175	1.123	1.164	1.116	1.154	2.9
4-Nitroaniline	0.298	0.330	0.300	0.321	0.308	0.311	4.4
Dimethyl Phthalate	1.326	1.287	1.260	1.284	1.246	1.281	2.4
1-Cenaphthylene	1.824	1.786	1.719	1.735	1.665	1.746	3.5
1,6-Dinitrotoluene	0.332	0.342	0.327	0.341	0.339	0.336	1.9
4-Nitroaniline	0.336	0.420	0.329	0.334	0.340	0.352	10.9
1-Cenaphthene	1.171	1.092	1.080	1.074	1.029	1.089	4.7*
1,4-Dinitrophenol	0.077	0.161	0.196	0.222	0.234	0.178	35.4#
4-Nitrophenol	0.218	0.204	0.204	0.208	0.213	0.209	2.9#
1-Benzofuran	1.729	1.642	1.612	1.622	1.543	1.630	4.1
1,4-Dinitrotoluene	0.452	0.453	0.437	0.445	0.409	0.439	4.1

Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

000030

6C
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Instrument ID: MSH

Calibration Date(s): 03/26/98

03/26/98

Calibration Times: 1642

1927

LAB FILE ID:
RRF80 = H6276

RRF20 = H6275
RRF120 = H6277

RRF50 = H6274
RRF160 = H6278

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	RRF	% RSD
Diethylphthalate	1.414	1.314	1.251	1.306	1.220	1.301	5.7
4-Chlorophenyl-phenylether	0.629	0.606	0.565	0.578	0.545	0.585	5.7
Fluorene	1.308	1.257	1.181	1.198	1.112	1.211	6.2
4-Nitroaniline	0.335	0.434	0.380	0.387	0.362	0.380	9.6
4,6-Dinitro-2-Methylphenol	0.126	0.155	0.164	0.168	0.179	0.158	12.7
N-Nitrosodiphenylamine (1)	0.470	0.474	0.456	0.443	0.432	0.455	3.9*
4-Bromophenyl-phenylether	0.178	0.184	0.181	0.186	0.178	0.181	2.0
Hexachlorobenzene	0.248	0.252	0.238	0.238	0.226	0.240	4.2
Pentachlorophenol	0.047	0.080	0.096	0.102	0.116	0.088	30.0*
Phenanthrene	1.084	1.074	1.029	1.041	1.018	1.049	2.7
Anthracene	1.110	1.094	1.015	1.029	0.978	1.045	5.3
Carbazole	0.894	1.051	0.721	0.741	0.758	0.833	10.8
Di-n-Butylphthalate	1.403	1.388	1.317	1.353	1.343	1.361	6
Fluoranthene	1.102	1.109	1.041	1.051	1.034	1.067	3.3*
Pyrene	1.205	1.250	1.477	1.251	1.786	1.394	17.5
Butylbenzylphthalate	0.681	0.711	0.854	0.740	1.108	0.819	21.3
3,3'-Dichlorobenzidine	0.278	0.408	0.293	0.275	0.415	0.334	21.4
Benzo(a)Anthracene	1.190	1.123	1.365	1.175	1.656	1.302	16.7
Chrysene	0.944	1.025	1.051	0.939	1.303	1.052	14.1
bis(2-Ethylhexyl)Phthalate	0.970	0.994	1.124	0.985	1.418	1.098	17.2
Di-n-Octyl Phthalate	1.890	1.953	2.013	2.074	2.124	2.011	4.6*
Benzo(b)Fluoranthene	1.229	1.198	1.306	1.458	1.524	1.343	10.6
Benzo(k)Fluoranthene	1.084	1.029	0.937	0.822	0.717	0.918	16.3
Benzo(a)Pyrene	1.005	1.021	1.001	1.020	1.013	1.012	0.9*
Indeno(1,2,3-cd)Pyrene	0.933	0.913	0.958	0.989	1.116	0.982	8.2
Dibenz(a,h)Anthracene	0.924	0.903	0.915	0.922	0.892	0.911	1.5
Benzo(g,h,i)Perylene	0.912	0.911	0.928	0.921	0.920	0.918	0.8
Nitrobenzene-d5	0.339	0.334	0.316	0.332	0.336	0.331	2.7
2-Fluorobiphenyl	1.348	1.320	1.226	1.254	1.177	1.265	5.5
Terphenyl-d14	0.838	0.875	1.023	0.857	1.206	0.960	16.2
Phenol-d5	1.489	1.408	1.499	1.446	1.496	1.468	2.7
2-Fluorophenol	1.318	1.257	1.308	1.256	1.266	1.281	2.3
2,4,6-Tribromophenol	0.221	0.228	0.210	0.211	0.199	0.214	5.2

(1) Cannot be separated from Diphenylamine

* Compounds with required minimum RRF and maximum %RSD values.

All other compounds must meet a minimum RRF of 0.010.

000031

6B
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Instrument ID: MSH

Calibration Date(s): 03/26/98

03/26/98

Calibration Times: 1642

1927

LAB FILE ID:
RRF80 = H6276

RRF20 = H6275
RRF120= H6277

RRF50 = H6274
RRF160= H6278

COMPOUND	x^2 Coefficient	x^1 Coefficient	Intercept
Phenol		0.60650949	-0.025*
bis(2-Chloroethyl) Ether		0.68512219	0.059
2-Chlorophenol		0.73633290	-0.049
1,3-Dichlorobenzene		0.81322157	-0.167
1,4-Dichlorobenzene		0.81230097	-0.135*
1,2-Dichlorobenzene		0.84576527	-0.148
2-Methylphenol		0.86365006	0.028
2,2'-oxybis(1-Chloropropane		0.98150065	0.091
4-Methylphenol		0.81258113	-0.001
N-Nitroso-Di-n-Propylamine #		1.86296099	-0.350#
Hexachloroethane		1.96155120	-0.152
Nitrobenzene		3.24876542	0.027
Isophorone		1.60142482	0.014
2-Nitrophenol *		3.94734843	0.067*
2,4-Dimethylphenol		3.22168341	-0.009
bis(2-Chloroethoxy)Methane		2.25273702	0.029
2,4-Dichlorophenol *		3.09007223	0.010*
1,2,4-Trichlorobenzene		3.34815361	-0.088
Naphthalene		1.06385930	-0.079
4-Chloroaniline		2.27627627	0.184
Hexachlorobutadiene *		7.93761439	-0.155*
4-Chloro-3-Methylphenol *		3.51018073	0.0 *
2-Methylnaphthalene		1.55928486	-0.002
Hexachlorocyclopentadiene #		3.47018052	-0.027#
2,4,6-Trichlorophenol *		2.42801756	-0.015*
2,4,5-Trichlorophenol		2.21462553	-0.020
8-Chloronaphthalene		0.89608730	-0.049
2-Nitroaniline		3.20828495	-0.004
Dimethyl Phthalate		0.80391943	-0.041
Acenaphthylene		0.60480805	-0.081
2,6-Dinitrotoluene		2.93912682	0.019
4-Nitroaniline		3.02033877	-0.093
Acenaphthene *		0.98177996	-0.098*
2,4-Dinitrophenol #		3.85341694	0.429#
2-Nitrophenol #		4.70187044	0.037#
Benzofuran		0.65154913	-0.089
2,4-Dinitrotoluene		2.43663394	-0.109

6C
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: QUAN TERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Instrument ID: MSH

Calibration Date(s): 03/26/98

03/26/98

Calibration Times: 1642

1927

LAB FILE ID:		RRF20 = H6275	RRF50 = H6274
RRF80 = H6276		RRF120 = H6277	RRF160 = H6278
COMPOUND	x ² Coefficient	x ¹ Coefficient	Intercept
Diethylphthalate		0.82183612	-0.094
4-Chlorophenyl-phenylether		1.85737778	-0.122
Fluorene		0.90906400	-0.146
4-Nitroaniline		2.73990161	-0.086
4,6-Dinitro-2-Methylphenol		5.39536402	0.202
N-Nitrosodiphenylamine (1)	*	2.35451460	-0.108*
4-Bromophenyl-phenylether		5.55523153	-0.020
Hexachlorobenzene		4.45917457	-0.111
Pentachlorophenol	*	7.99719951	0.418*
Phenanthrene		0.98964634	-0.054
Anthracene		1.03680362	-0.121
Carbazole		1.39829821	-0.216
Di-n-Butylphthalate		0.74910265	-0.023
Fluoranthene	*	0.97927991	-0.064*
Pyrene		0.53514898	0.436
Butylbenzylphthalate		0.84666250	0.527
3,3'-Dichlorobenzidine		2.32046156	0.424
Benzo(a)Anthracene		0.57753597	0.432
Chrysene		0.74508030	0.379
bis(2-Ethylhexyl) Phthalate		0.67307367	0.454
Di-n-Octyl Phthalate	*	0.46230539	0.104*
Benzo(b) Fluoranthene		0.62599099	0.248
Benzo(k) Fluoranthene		1.47558223	-0.516
Benzo(a) Pyrene	*	0.98426957	0.005*
Indeno(1,2,3-cd) Pyrene		0.87663119	0.229
Dibenz(a,h) Anthracene		1.11521021	-0.025
Benzo(g,h,i) Perylene		1.08497534	0.004
=====			
Nitrobenzene-d5		2.97606862	0.031
2-Fluorobiphenyl		0.85843953	-0.124
Terphenyl-d14		0.79726898	0.403
Phenol-d5		0.66912547	0.032
2-Fluorophenol		0.79562169	-0.026
2,4,6-Tribromophenol		5.09441080	-0.136

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Instrument ID: MSH

Calibration date: 03/31/98 Time: 0829

Lab File ID: H6307

Init. Calib. Date(s): 03/26/98

03/26/98

Init. Calib. Times: 1642

1927

COMPOUND	RRF	MIN RRF	TRUE CONC	ANALYZ CONC	%D	MAX %D
Phenol	1.646		25.0	24.5	2.1	20.0
bis(2-Chloroethyl) Ether	1.284		25.0	23.2	7.3	
2-Chlorophenol	1.406		25.0	24.9	.3	
1,3-Dichlorobenzene	1.461		25.0	26.4	5.5	
1,4-Dichlorobenzene	1.453		25.0	26.8	7.2	20.0
1,2-Dichlorobenzene	1.394		25.0	26.5	6.1	
2-Methylphenol	1.176		25.0	26.0	3.8	
2,2'-oxybis(1-Chloropropane	1.080		25.0	28.3	13.3	
4-Methylphenol	1.261		25.0	25.6	2.4	
N-Nitroso-Di-n-Propylamine	0.795	0.050	25.0	30.0	20.1	
Hexachloroethane	0.615		25.0	27.1	8.5	
Nitrobenzene	0.344		25.0	28.5	14.1	
Isophorone	0.679		25.0	27.5	9.9	
2-Nitrophenol	0.244		25.0	25.5	1.9	20.0
2,4-Dimethylphenol	0.333		25.0	26.7	6.6	
bis(2-Chloroethoxy)Methane	0.462		25.0	26.6	6.4	
2,4-Dichlorophenol	0.333		25.0	25.9	3.6	20.0
1,2,4-Trichlorobenzene	0.335		25.0	26.3	5.0	
Naphthalene	1.083		25.0	27.2	8.8	
4-Chloroaniline	0.495		25.0	31.8	27.3	
Hexachlorobutadiene	0.156		25.0	27.8	11.3	20.0
4-Chloro-3-Methylphenol	0.310		25.0	27.2	8.7	20.0
2-Methylnaphthalene	0.665		25.0	25.9	3.5	
Hexachlorocyclopentadiene	0.310	0.050	25.0	26.3	5.4	
2,4,6-Trichlorophenol	0.418		25.0	25.1	.3	20.0
2,4,5-Trichlorophenol	0.443		25.0	24.1	3.4	
2-Chloronaphthalene	1.209		25.0	26.1	4.5	
2-Nitroaniline	0.349		25.0	27.9	11.5	
Dimethyl Phthalate	1.227		25.0	23.8	4.6	
Acenaphthylene	1.833		25.0	26.1	4.4	
2,6-Dinitrotoluene	0.328		25.0	24.5	2.2	
3-Nitroaniline	0.415		25.0	29.5	17.8	
Acenaphthene	1.117		25.0	25.5	1.8	20.0
2,4-Dinitrophenol	0.158	0.050	25.0	23.8	4.7	
4-Nitrophenol	0.214	0.050	25.0	25.9	3.5	
Dibenzofuran	1.688		25.0	25.7	2.9	
2,4-Dinitrotoluene	0.439		25.0	24.6	1.6	

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: QUANterra MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Instrument ID: MSH

Calibration date: 03/31/98 Time: 0829

Lab File ID: H6307

Init. Calib. Date(s): 03/26/98 03/26/98

Init. Calib. Times: 1642 1927

COMPOUND	RRF	MIN RRF	TRUE CONC	ANALYZ CONC	%D	MAX %D
Diethylphthalate	1.326		25.0	25.4	1.4	
4-Chlorophenyl-phenylether	0.597		25.0	25.3	1.1	
Fluorene	1.264		25.0	25.8	3.2	
4-Nitroaniline	0.416		25.0	26.8	7.1	
4,6-Dinitro-2-Methylphenol	0.166		25.0	26.4	5.5	
N-Nitrosodiphenylamine (1)	0.520		25.0	28.5	13.8	20.0
4-Bromophenyl-phenylether	0.196		25.0	26.8	7.2	
Hexachlorobenzene	0.255		25.0	26.3	5.0	
Pentachlorophenol	0.077		25.0	23.7	5.3	20.0
Phenanthrene	1.129		25.0	26.9	7.4	
Anthracene	1.142		25.0	27.2	8.6	
Carbazole	1.004		25.0	30.8	23.2	
Di-n-Butylphthalate	1.365		25.0	25.1	.4	
Fluoranthene	1.118		25.0	26.1	4.4	20.0
Pyrene	1.276		25.0	25.8	3.2	
Butylbenzylphthalate	0.760		25.0	26.6	6.5	
3,3'-Dichlorobenzidine	0.403		25.0	31.9	27.5	
Benzo(a)Anthracene	1.156		25.0	25.3	1.3	
Chrysene	1.074		25.0	27.6	10.3	
bis(2-Ethylhexyl)Phthalate	1.030		25.0	26.4	5.6	
Di-n-Octyl Phthalate	2.157		25.0	27.0	8.0	20.0
Benzo(b)Fluoranthene	1.268		25.0	24.8	.8	
Benzo(k)Fluoranthene	1.118		25.0	30.9	23.7	
Benzo(a)Pyrene	1.075		25.0	26.6	6.2	20.0
Indeno(1,2,3-cd)Pyrene	0.932		25.0	25.0	0.0	
Dibenz(a,h)Anthracene	0.896		25.0	24.5	2.0	
Benzo(g,h,i)Perylene	0.892		25.0	24.3	2.9	
Nitrobenzene-d5	0.378		25.0	28.7	14.9	
2-Fluorobiphenyl	1.294		25.0	25.3	1.2	
Terphenyl-d14	0.872		25.0	25.5	1.8	
Phenol-d5	1.482		25.0	25.4	1.8	
2-Fluorophenol	1.228		25.0	23.9	4.3	
2,4,6-Tribromophenol	0.217		25.0	24.9	.2	

000059

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Lab File ID (Standard): H6307

Date Analyzed: 03/31/98

Instrument ID: MSH

Time Analyzed: 0829

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	44125	6.83	158252	9.79	90341	14.20
UPPER LIMIT	88250	7.33	316504	10.29	180682	14.70
LOWER LIMIT	22062	6.33	79126	9.29	45170	13.70
=====	=====	=====	=====	=====	=====	=====
EPA SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 A6-SMP3-E2	33903	6.89	116055	9.83	69178	14.24
02 A6-SMP3-W2	33771	6.88	124643	9.83	68722	14.25
03 SSPK01A	35844	6.89	128446	9.84	75002	14.26
04 SSPK01B	32797	6.89	115319	9.84	68423	14.26
05 SBLK01	25862	6.88	93039	9.83	57208	14.24

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = + 100% of internal standard area.

AREA LOWER LIMIT = - 50% of internal standard area.

RT UPPER LIMIT = +0.50 minutes of internal standard RT.

RT LOWER LIMIT = -0.50 minutes of internal standard RT.

Column used to flag internal standard area values with an asterisk.

* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: QUANTERRA MO

Contract: 625-01

Lab Code: ITMO

Case No.: S16103

SAS No.:

SDG No.: V368

Lab File ID (Standard): H6307

Date Analyzed: 03/31/98

Instrument ID: MSH

Time Analyzed: 0829

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	142367	17.99	128786	24.78	112512	28.16
UPPER LIMIT	284734	18.49	257572	25.29	225024	28.66
LOWER LIMIT	71184	17.49	64393	24.28	56256	27.66
=====	=====	=====	=====	=====	=====	=====
EPA SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 A6-SMP3-E2	118393	18.04	104739	24.83	82309	28.22
02 A6-SMP3-W2	117175	18.04	101381	24.82	81114	28.22
03 SSPK01A	130604	18.06	113501	24.84	85693	28.23
04 SSPK01B	115400	18.05	101569	24.83	80268	28.22
05 SBLK01	101898	18.03	89720	24.82	73389	28.21

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = + 100% of internal standard area.

AREA LOWER LIMIT = - 50% of internal standard area.

RT UPPER LIMIT = +0.50 minutes of internal standard RT.

RT LOWER LIMIT = -0.50 minutes of internal standard RT.

Column used to flag internal standard area values with an asterisk.

* Values outside of QC limits.

9C-LCS
SOIL SEMIVOLATILE LCS RECOVERY

Lab Name: ITAS-ST.LOUIS

Contract: 625-01

Lab Code: ITSL

Case No.: S16103

SAS No.:

SDG No.: V368

EPA Sample No.: SSPK01A

Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC #	QC LIMITS REC.
=====	=====	=====	=====	=====
Phenol	2500	1400	55	5-112
2-Chlorophenol	2500	1500	60	23-134
1,4-Dichlorobenzene	1700	1100	64	19-121
N-Nitroso-Di-n-Propylamine	1700	1400	84	1-209
1,2,4-Trichlorobenzene	1700	1100	66	43-142
4-Chloro-3-Methylphenol	2500	1700	67	22-147
Acenaphthene	1700	1100	66	50-142
4-Nitrophenol	2500	1600	62	1-132
2,4-Dinitrotoluene	1700	650	39	33-132
Pentachlorophenol	2500	1300	54	14-176
Pyrene	1700	1000	62	52-116

Column to be used to flag recovery values with an asterisk.

* Values outside of QC limits.

D Detected.

9C-LCS
SOIL SEMIVOLATILE LCS RECOVERY

Lab Name: ITAS-ST.LOUIS

Contract: 625-01

Lab Code: ITSL

Case No.: S16103

SAS No.:

SDG No.: V368

EPA Sample No.: SSPK01B

Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC #	QC LIMITS REC.
=====	=====	=====	=====	=====
Phenol	2500	1700	67	5-112
2-Chlorophenol	2500	1800	72	23-134
1,4-Dichlorobenzene	1700	1300	77	19-121
N-Nitroso-Di-n-Propylamine	1700	1600	98	1-209
1,2,4-Trichlorobenzene	1700	1300	80	43-142
4-Chloro-3-Methylphenol	2500	2100	84	22-147
Acenaphthene	1700	1400	81	50-142
4-Nitrophenol	2500	1900	75	1-132
2,4-Dinitrotoluene	1700	850	51	33-132
Pentachlorophenol	2500	1700	66	14-176
Pyrene	1700	1200	73	52-116

- # Column to be used to flag recovery values with an asterisk.
- Values outside of QC limits.
- D Detected.

1D
PCB ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A6-SMP3-E2

Lab Name: QUANTERRA, MO Contract: 625.01

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368

Matrix: (soil/water) SOIL Lab Sample ID: 17161-003

Sample wt/vol: 30.1 (g/ml) G Lab File ID: _____

Level: (low/med) LOW Date Sampled: 03-10-98

Moisture: not dec. _____ dec. _____ Date Extracted: 03-17-98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03-20-98

PC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. Compound Q

12674-11-2-----Aroclor-1016	33	U
11104-28-2-----Aroclor-1221	33	U
11141-16-5-----Aroclor-1232	33	U
53469-21-9-----Aroclor-1242	33	U
12672-29-6-----Aroclor-1248	33	U
11097-69-1-----Aroclor-1254	33	U
11096-82-5-----Aroclor-1260	33	U

Concentration of analyte is less than the value given.

FORM I PEST

000007

1D
PCB ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A6-SMP3-W2

Lab Name: QUANTERRA, MO Contract: 625.01

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368

Matrix: (soil/water) SOIL Lab Sample ID: 17161-004

Sample wt/vol: 30.2 (g/ml) G Lab File ID: _____

Level: (low/med) LOW Date Sampled: 03-10-98

% Moisture: not dec. _____ dec. _____ Date Extracted: 03-17-98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03-20-98

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

Compound

Q

12674-11-2-----Aroclor-1016	33	U
11104-28-2-----Aroclor-1221	33	U
11141-16-5-----Aroclor-1232	33	U
53469-21-9-----Aroclor-1242	33	U
12672-29-6-----Aroclor-1248	33	U
11097-69-1-----Aroclor-1254	33	U
11096-82-5-----Aroclor-1260	33	U

U: Concentration of analyte is less than the value given.

FORM 1 PEST

000011

1D
PCB ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK01

Lab Name: QUANTERRA, MO Contract: 625.01

Lab Code: ITMO Case No.: SAS No.: SDG No.: V368

Matrix: (soil/water) SOIL Lab Sample ID: BLK 167391

Sample wt/vol: 30.0 (g/ml) G Lab File ID:

Level: (low/med) LOW Date Sampled:

Moisture: not dec. dec. Date Extracted: 03-17-98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03-20-98

PC Cleanup: (Y/N) N pH: Dilution Factor: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Q

CAS NO.	Compound		
12674-11-2-----	Aroclor-1016	33	U
11104-28-2-----	Aroclor-1221	33	U
11141-16-5-----	Aroclor-1232	33	U
53469-21-9-----	Aroclor-1242	33	U
12672-29-6-----	Aroclor-1248	33	U
11097-69-1-----	Aroclor-1254	33	U
11096-82-5-----	Aroclor-1260	33	U

Concentration of analyte is less than the value given.

FORM I PEST

000054

1D
PCB ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: QUANTERRA, MO Contract: 625.01 PSPK01A

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368

Matrix: (soil/water) SOIL Lab Sample ID: SPK 167391-1

Sample wt/vol: 30.0 (g/ml) G Lab File ID: _____

Level: (low/med) LOW Date Sampled: _____

% Moisture: not dec. _____ dec. _____ Date Extracted: 03-17-98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03-20-98

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1

CAS NO. Compound CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

12674-11-2-----Aroclor-1016	140	
11104-28-2-----Aroclor-1221	33	U
11141-16-5-----Aroclor-1232	33	U
53469-21-9-----Aroclor-1242	33	U
12672-29-6-----Aroclor-1248	33	U
11097-69-1-----Aroclor-1254	33	U
11096-82-5-----Aroclor-1260	140	

U: - Concentration of analyte is less than the value given.

FORM I PEST

000059

1D
PCB ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PSPK01B

Lab Name: QUANTERRA, MO Contract: 625.01

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368

Matrix: (soil/water) SOIL Lab Sample ID: SPK 167391-2

Sample wt/vol: 30.0 (g/ml) G Lab File ID: _____

Level: (low/med) LOW Date Sampled: _____

Moisture: not dec. _____ dec. _____ Date Extracted: 03-17-98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03-20-98

PC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1

CAS NO. Compound CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

12674-11-2-----Aroclor-1016	140	
11104-28-2-----Aroclor-1221	33	U
11141-16-5-----Aroclor-1232	33	U
53469-21-9-----Aroclor-1242	33	U
12672-29-6-----Aroclor-1248	33	U
11097-69-1-----Aroclor-1254	33	U
11096-82-5-----Aroclor-1260	150	

Concentration of analyte is less than the value given.

FORM I PEST

000063

2F
SOIL PCB SURROGATE RECOVERY

Lab Name: QUANTERRA, MO

Contract: 625.01

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (DCB)#	S2 (TCMX)#
	=====	=====	=====
01	PBLK01	90	110
02	PSPK01A	86	109
03	PSPK01B	86	112
04	A6-SMP3-E2	83	109
05	A6-SMP3-W2	86	108
06			
07			
08			
09			

ADVISORY
QC LIMITS

S1 (DCB) = Decachlorobiphenyl (61-135)
S2 (TCMX) = Tetrachlorom-m-xylene (61-153)

Column to be used to flag recovery values

* Values outside of QC limits

D Surrogates diluted out

M Matrix interference

3F
SOIL PCB SPIKE BLANK(LCS) RECOVERY

Lab Name: QUANTERRA, MO Contract: 625.01
 Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368
 Spike Blank No.: SPK 167391-1

COMPOUND	SPIKE ADDED (ug/Kg)	SPIKE CONCENTRATION (ug/Kg)	SPK % REC #	QC LIMITS REC.
=====	=====	=====	=====	=====
Aroclor-1016	170	140	86	80-139
Aroclor-1260	170	140	84	59-142
=====	=====	=====	=====	=====

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

ND: not determined

Spike Recovery: 0 out of 2 outside limits

COMMENTS: _____

FORM III PEST-2

000003

3F

Lab Name: OUAN TERRA, MO

Contract: 625.01

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368

Spike Blank No.: SPK 167391-2

COMPOUND	SPIKE ADDED (ug/Kg)	SPIKE CONCENTRATION (ug/Kg)	SPK % REC #	QC LIMITS REC.
Aroclor-1016	170	140	85	80-139
Aroclor-1260	170	150	93	59-142

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

ND: not determined

-Spike Recovery: 0 out of 2 outside limits

COMMENTS: _____

4C
PCB METHOD BLANK SUMMARY

Lab Name: QUANTERRA, MO Contract: 625.01
 Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368
 Lab Sample ID: BLK 167391 Lab File ID: _____
 Matrix: (soil/water) SOIL Level (low/med) LOW
 Date Extracted: 03-17-98 Extraction: (SepF/Cont/Sonc) SONC
 Date Analyzed (1): 03-20-98 Date Analyzed (2): _____
 Time Analyzed (1): 02:52 Time Analyzed (2): _____
 Instrument ID (1): GCE Instrument ID (2): _____
 GC Column ID (1): DB-5MS GC Column ID (2): _____

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PSPK01A	SPK 167391-1	03-20-98	
02	PSPK01B	SPK 167391-2	03-20-98	
03	A6-SMP3-E2	17161-003	03-20-98	
04	A6-SMP3-W2	17161-004	03-20-98	
05				
06				
07				
08				

COMMENTS: _____

6F
PCB ORGANICS INITIAL CALIBRATION DATA

Lab Name: QUANTERRA, MO Contract: 625.01

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368

Instrument ID: GCE GC Column ID: DB-5MS

Calibration Date(s): 02-05-98 to 02-06-98
to _____

COMPOUND	CALIBRAT. FACTOR LEVEL #1	CALIBRAT. FACTOR LEVEL #2	CALIBRAT. FACTOR LEVEL #3	CALIBRAT. FACTOR LEVEL #4	CALIBRAT. FACTOR LEVEL #5	CALIBRAT. FACTOR LEVEL #6
AR 1221	563120	588260	492152	434461	383662	
AR 1232						
AR 1248	1526460	1457295	1300234	1193467	1295264	966789
AR 1254	1676160	1689425	1393066	1256121	1110093	
AR 1260	1130860	1094980	909842	850514	782664	670099
AR1016/AR1242	2470050	2187500	1797960	1654048	1478504	
TCMX	11732400	11046600	10503480	9182220		6966145
DCB	9610000	9458300	8404520	7630280		5850890

COMPOUND	CALIBRAT. FACTOR LEVEL #7	CALIBRAT. FACTOR LEVEL #8	CALIBRAT. FACTOR LEVEL #9	CALIBRAT. FACTOR LEVEL #10	AVERAGE CALIBRAT. FACTOR	%RSD ($<20\%$)
AR 1221					492331	17
AR 1232						
AR 1248					1289918	15
AR 1254					1424973	18
AR 1260					906493	20
AR1016/AR1242					CURVE	0.998941
TGMX					8190798	19
DCB					9886169	19

Under AVERAGE CALIBRATION FACTOR, enter the average of the calibration factors.

The %RSD must be less than 20% for the average calibration factor to be used. If the %RSD is $\geq 20\%$, a curve calibration must be used. In this case, enter "CURVE" under AVERAGE CALIBRATION FACTOR instead of the average calibration factor.

* Only low level was analyzed.

FORM VI PCB-1

000016

8E
PCB ANALYTICAL SEQUENCE SUMMARY

Lab Name: QUANTERRA, MO Contract: 625.01
 Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368
 Instrument ID: GCE GC Column ID: DB-5MS
 Dates of Analyses: 03-20-98 to 03-20-98

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED
	=====	=====	=====	=====
01	AR1660-4	AR 1660-4	03-20-98	01:55
02	AR1248-4	AR 1248-4	03-20-98	02:14
03	AR2154-4	AR 2154-4	03-20-98	02:33
04	PBLK01	BLK 167391	03-20-98	02:52
05	PSPK01A	SPK 167391-1	03-20-98	03:11
06	PSPK01B	SPK 167391-2	03-20-98	03:30
07	ZZZZZ	ZZZZZ	03-20-98	03:49
08	ZZZZZ	ZZZZZ	03-20-98	04:08
09	ZZZZZ	ZZZZZ	03-20-98	04:27
10	A6-SMP3-E2	17161-003	03-20-98	04:46
11	A6-SMP3-W2	17161-004	03-20-98	05:05
12	ZZZZZ	ZZZZZ	03-20-98	05:24
13	ZZZZZ	ZZZZZ	03-20-98	05:43
14	AR1660-5	AR1660-4	03-20-98	06:21
15				
16				
17				
18				
19				
20				
21				
22				

9
PCB STANDARDS SUMMARY

Lab Name: QUANTERRA, MO

Contract: 625.01

Lab Code: ITMO Case No.: _____

SAS No.: _____

SDG No.: V368

Instrument ID: GCE

GC Column ID: DB-5MS

DATE(S) OF FROM: <u>02-05-98</u>	DATE OF ANALYSIS <u>03-20-98</u>
ANALYSIS TO: <u>02-06-98</u>	TIME OF ANALYSIS <u>0155-0233</u>
TIME(S) OF FROM: <u>19:26</u>	EPA SAMPLE NO.
ANALYSIS TO: <u>03:00</u>	(STANDARD) <u>DAILY STDS</u>

COMPOUND	RT	RT WINDOW		AVERAGE CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
		FROM	TO					
AR 1221	3.63	3.58	3.68	492331	3.63	498927	Y	1
AR 1248	5.72	5.67	5.77	1289918	5.72	1304415	Y	1
AR 1254	9.79	9.74	9.84	1424973	9.79	1300403	Y	9
AR 1016/1242	4.45	4.40	4.40	CURVE	4.45	CURVE	Y	7
AR 1260	13.03	12.98	13.08	906493	13.03	849635	Y	6
TCMX	2.98	2.93	3.03	9886169	2.98	9331260	Y	6
DCB	14.93	14.88	14.98	8190798	14.93	5868360	Y	28

Under AVERAGE CALIBRATION FACTOR, enter the average calibration factor from the multi-point calibration curve (FORM VI) if the average calibration factor was used for calculations. If curve calculations were performed, enter "CURVE".

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.

%D must be less than or equal to 15% for quantitation.

For multicomponent analytes, a single peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

9
PCB STANDARDS SUMMARY

Lab Name: QUANTERRA, MO Contract: 625.01
 Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368
 Instrument ID: GCE GC Column ID: DB-5MS

DATE(S) OF FROM: <u>02-05-98</u>					DATE OF ANALYSIS <u>03-20-98</u>			
ANALYSIS TO: <u>02-06-98</u>					TIME OF ANALYSIS <u>06:21</u>			
TIME(S) OF FROM: <u>19:26</u>					EPA SAMPLE NO.			
ANALYSIS TO: <u>03:00</u>					(STANDARD) <u>AR 1660-4</u>			
COMPOUND	RT	RT WINDOW FROM TO		AVERAGE CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
AR 1221	3.63	3.58	3.68	492331				
AR 1248	5.72	5.67	5.77	1289918				
AR 1254	9.79	9.74	9.84	1424973				
AR 1016/1242	4.45	4.40	4.40	CURVE	4.44	CURVE	Y	14
AR 1260	13.03	12.98	13.08	906493	13.02	789470	Y	13
TCMX	2.98	2.93	3.03	9886169	2.98	10007880	Y	1
DCB	14.93	14.88	14.98	8190798	14.91	6384440	Y	22

Under AVERAGE CALIBRATION FACTOR, enter the average calibration factor from the multi-point calibration curve (FORM VI) if the average calibration factor is used for calculations. If curve calculations were performed, enter "CURVE".

Under QNT Y/N: enter Y if quantitation was performed, N if not performed. %D must be less than or equal to 15% for quantitation.

For multicomponent analytes, a single peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

PCB CALIBRATION STANDARD CONCENTRATIONS

Lab Name: QUANTERRA, MOContract: 625.01Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: V368Instrument ID: GCEGC Column ID: DB-5MSCalibration Date(s): 02-05-98 to 02-06-98

COMPOUND	CONCENTRATION (ng/ml) LEVEL #1	CONCENTRATION (ng/ml) LEVEL #2	CONCENTRATION (ng/ml) LEVEL #3	CONCENTRATION (ng/ml) LEVEL #4	CONCENTRATION (ng/ml) LEVEL #5
AR 1221	100	200	500	1000	2000
AR 1232	100	200	500	1000	2000
AR 1242	100	200	500	1000	2000
AR 1248	100	200	500	1000	2000
AR 1254	100	200	500	1000	2000
AR 1016	100	200	500	1000	2000
AR 1260	100	200	500	1000	2000
TCMX	5	10	25	50	100
DCB	5	10	25	50	100

COMPOUND	CONCENTRATION (ng/ml) LEVEL #6	CONCENTRATION (ng/ml) LEVEL #7	CONCENTRATION (ng/ml) LEVEL #8	CONCENTRATION (ng/ml) LEVEL #9	CONCENTRATION (ng/ml) LEVEL #10
AR 1221	4000				
AR 1232	4000				
AR 1242	4000				
AR 1016	5000	10000			
AR 1248	4000				
AR 1254	4000				
AR 1260	5000	10000			
TCMX	250	500			
DCB	250	500			

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A6SMP3E1

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Matrix: (soil/water) SOIL

Lab Sample ID: 17161-001

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: BSMP1918

Level: (low/med) LOW

Date Received: 03/12/98

% Moisture: not dec. _____

Date Analyzed: 03/24/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	2	JB
67-64-1-----	Acetone	12	JB
75-15-0-----	Carbon Disulfide	5	U
75-35-4-----	1,1-Dichloroethene	5	U
75-34-3-----	1,1-Dichloroethane	5	U
540-59-0-----	1,2-Dichloroethene (total)	5	U
67-66-3-----	Chloroform	5	U
107-06-2-----	1,2-Dichloroethane	5	U
78-93-3-----	2-Butanone	4	J
71-55-6-----	1,1,1-Trichloroethane	5	U
56-23-5-----	Carbon Tetrachloride	5	U
75-27-4-----	Bromodichloromethane	5	U
78-87-5-----	1,2-Dichloropropane	5	U
10061-01-5-----	cis-1,3-Dichloropropene	5	U
79-01-6-----	Trichloroethene	5	U
124-48-1-----	Chlorodibromomethane	5	U
79-00-5-----	1,1,2-Trichloroethane	5	U
71-43-2-----	Benzene	5	U
10061-02-6-----	trans-1,3-Dichloropropene	5	U
75-25-2-----	Bromoform	5	U
108-10-1-----	4-Methyl-2-pentanone	20	U
591-78-6-----	2-Hexanone	20	U
127-18-4-----	Tetrachloroethene	5	U
108-88-3-----	Toluene	5	U
79-34-5-----	1,1,2,2-Tetrachloroethane	5	U
108-90-7-----	Chlorobenzene	5	U
100-41-4-----	Ethylbenzene	5	U
100-42-5-----	Styrene	5	U
1330-20-7-----	Xylenes (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A6SMP3W1

Lab Name: QUANTERRA MO Contract: 625.01

Lab Code: ITMO Case No.: SAS No.: SDG No.: V368

Matrix: (soil/water) SOIL Lab Sample ID: 17161-002

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BSMP1893

Level: (low/med) LOW Date Received: 03/12/98

% Moisture: not dec. Date Analyzed: 03/20/98

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	6	B
67-64-1	Acetone	31	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	3	J
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Chlorodibromomethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	20	U
591-78-6	2-Hexanone	20	U
127-18-4	Tetrachloroethene	5	U
108-88-3	Toluene	1	J
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylenes (total)	5	U

9A
VOLATILE SPIKE RECOVERY

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

EPA Sample No.: VLCSB079A

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
11 1,1-Dichloroethene	50.00	61.12	122.25	1-234
42 Trichloroethene	50.00	47.79	95.59	71-157
40 Benzene	50.00	48.49	96.98	37-151
52 Toluene	50.00	48.94	97.89	47-150
62 Chlorobenzene	50.00	46.52	93.05	37-160

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
\$ 32 Dibromofluorometha	50.00	50.09	100.19	80-120
\$ 37 1,2-Dichloroethane	50.00	48.35	96.69	80-120
\$ 51 Toluene-d8	50.00	49.28	98.56	80-120
\$ 73 4-Bromofluorobenze	50.00	48.94	97.89	80-120

000011

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBCLKB079A

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Matrix: (soil/water) WATER

Lab Sample ID: QCBLK167948

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: BBLK1889

Level: (low/med) LOW

Date Received:

% Moisture: not dec. _____

Date Analyzed: 03/20/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	14	J
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	20	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Chlorodibromomethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	20	U
591-78-6	2-Hexanone	20	U
127-18-4	Tetrachloroethene	5	U
108-88-3	Toluene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylenes (total)	5	U

8A
VOLATI INTERNAL STANDARD AREA SUM Y

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Lab File ID (Standard): BCAL1888

Date Analyzed: 03/20/98

Instrument ID: MSB

Time Analyzed: 0551

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

	IS1 (FLB) AREA #	RT	IS2 (CBZ) AREA #	RT	IS3 AREA #	RT
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	2759179	7.11	2418910	14.86	1577284	22.27
=====	=====	=====	=====	=====	=====	=====
UPPER LIMIT	5518358	7.61	4837820	15.36	3154568	22.77
=====	=====	=====	=====	=====	=====	=====
LOWER LIMIT	689795	6.61	604728	14.36	394321	21.77
=====	=====	=====	=====	=====	=====	=====
EPA SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 VBLKB079A	2542216	7.11	2201709	14.82	1424727	22.28
02 VLCSB079A	2479910	7.12	2155964	14.85	1365128	22.28
03 A6SMP3W1	2012635	7.11	1785562	14.84	1155039	22.28
04 A6SMP3AA	2122691	7.11	1839230	14.84	1191097	22.28
05 A6SMP3BB	1719150	7.11	1513906	14.84	982383	22.27
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (FLB) = Fluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 = 1,4 Dichlorobenzene-d4

UPPER LIMIT = +100%

of internal standard area.

LOWER LIMIT = - 75%

of internal standard area.

Column used to flag internal standard area values with an asterisk.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VLCSB079A

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Matrix: (soil/water) WATER

Lab Sample ID: QCLCS167948

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: BLCS1890

Level: (low/med) LOW

Date Received:

% Moisture: not dec. _____

Date Analyzed: 03/20/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	56	
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	3	BJ
67-64-1-----	Acetone	15	BJ
75-15-0-----	Carbon Disulfide	5	U
75-35-4-----	1,1-Dichloroethene	61	
75-34-3-----	1,1-Dichloroethane	5	U
540-59-0-----	1,2-Dichloroethene (total)	5	U
67-66-3-----	Chloroform	48	
107-06-2-----	1,2-Dichloroethane	47	
78-93-3-----	2-Butanone	52	
71-55-6-----	1,1,1-Trichloroethane	5	U
56-23-5-----	Carbon Tetrachloride	50	
75-27-4-----	Bromodichloromethane	5	U
78-87-5-----	1,2-Dichloropropane	5	U
10061-01-5-----	cis-1,3-Dichloropropene	5	U
79-01-6-----	Trichloroethene	48	
124-48-1-----	Chlorodibromomethane	5	U
79-00-5-----	1,1,2-Trichloroethane	5	U
71-43-2-----	Benzene	48	
10061-02-6-----	trans-1,3-Dichloropropene	5	U
75-25-2-----	Bromoform	5	U
108-10-1-----	4-Methyl-2-pentanone	20	U
591-78-6-----	2-Hexanone	20	U
127-18-4-----	Tetrachloroethene	45	
108-88-3-----	Toluene	49	
79-34-5-----	1,1,2,2-Tetrachloroethane	5	U
108-90-7-----	Chlorobenzene	46	
100-41-4-----	Ethylbenzene	5	U
100-42-5-----	Styrene	5	U
1330-20-7-----	Xylenes (total)	5	U

6A
VOLAT E ORGANICS INITIAL CALIBRATION DATA

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Instrument ID: MSB

Calibration Date(s): 03/24/98

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

LAB FILE ID:		RRF1	=BCAL1915.D	RRF2	=BCAL1914.D		
RRF3		=BCAL1913.D	RRF4	=BCAL1912.D	RRF5	=BCAL1911.D	
COMPOUND		RRF1	RRF2	RRF3	RRF4	RRF5	% RSD
Chloromethane		0.256	0.245	0.221	0.231	0.221	6.6
Bromomethane		0.315	0.291	0.279	0.284	0.276	5.4
Vinyl Chloride	*	0.191	0.181	0.168	0.178	0.171	5.0*
Chloroethane		0.160	0.149	0.143	0.147	0.146	4.4
Methylene Chloride		0.340	0.294	0.266	0.260	0.242	13.6
Acetone		0.062	0.051	0.040	0.036	0.030	29.6
Carbon Disulfide		0.709	0.670	0.636	0.648	0.619	5.3
1,1-Dichloroethene	*	0.227	0.220	0.207	0.215	0.202	4.7*
1,1-Dichloroethane	#	0.578	0.542	0.525	0.524	0.505	5.1
1,2-Dichloroethene (total)		0.328	0.305	0.293	0.293	0.290	5.2
Chloroform	*	0.720	0.667	0.650	0.637	0.615	6.0*
1,2-Dichloroethane		0.354	0.339	0.318	0.302	0.280	9.2
2-Butanone		0.076	0.080	0.068	0.061	0.049	18.5
1,1,1-Trichloroethane		0.524	0.504	0.484	0.490	0.480	3.6
Carbon Tetrachloride		0.554	0.526	0.508	0.510	0.503	4.0
Bromodichloromethane		0.880	0.796	0.768	0.745	0.713	8.1
1,2-Dichloropropane	*	0.407	0.382	0.370	0.367	0.345	6.0*
cis-1,3-Dichloropropene		0.505	0.478	0.467	0.466	0.451	4.2
Trichloroethene		0.488	0.460	0.427	0.425	0.404	7.5
Chlorodibromomethane		0.843	0.784	0.743	0.725	0.647	9.7
1,1,2-Trichloroethane		0.408	0.383	0.361	0.349	0.295	11.8
Benzene		0.925	0.869	0.843	0.827	0.792	5.8
trans-1,3-Dichloropropene		0.403	0.402	0.403	0.406	0.382	2.5
Bromoform	#	0.627	0.583	0.556	0.540	0.440	12.6
4-Methyl-2-pentanone		0.210	0.236	0.216	0.202	0.159	13.8
2-Hexanone		0.154	0.157	0.153	0.143	0.098	17.4
Tetrachloroethene		0.680	0.658	0.574	0.541	0.475	14.4
Toluene	*	1.155	1.072	1.036	1.036	0.980	6.1*
1,1,2,2-Tetrachloroethane	#	0.807	0.746	0.692	0.657	0.492	17.5#
Chlorobenzene	#	1.036	0.950	0.897	0.882	0.832	8.4#
Ethylbenzene	*	0.424	0.401	0.400	0.378	0.379	4.8*
Styrene		0.928	0.846	0.836	0.831	0.789	6.0
Xylenes (total)		0.523	0.494	0.471	0.479	0.454	5.4
4-Bromofluorobenzene		1.616	1.513	1.342	1.335	1.163	12.6
Dibromofluoromethane		0.819	0.782	0.724	0.712	0.649	8.9
Toluene-d8		1.097	1.064	0.995	1.005	0.904	7.3

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2A
WA: VOLATILE SURROGATE RECOVER

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

	EPA SAMPLE NO.	S1 (BFB) #	S2 (DFM) #	S3 (TOL) #	OTHER	TOT OUT
01	VELKB079A	101	104	103		0
02	VLCSB079A	98	100	98		0
03	A6SMP3AA	108	114	110		0
04	A6SMP3BB	101	108	102		0
05	VELKB083B	101	109	105		0
06	VLCSB083B	100	111	103		0
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QC LIMITS

S1 (BFB) = 4-Bromofluorobenzene (80-120)
 S2 (DFM) = Dibromofluoromethane (80-120)
 S3 (TOL) = Toluene-d8 (80-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Lab File ID: BBFB1910

BFB Injection Date: 03/24/98

Instrument ID: MSB

BFB Injection Time: 0932

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.9
75	30.0 - 60.0% of mass 95	51.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.4 (0.6)1
174	Greater than 50.0% of mass 95	54.6
175	4.0 - 9.0% of mass 174	4.3 (7.9)1
176	Greater than 95.0%, but less than 101.0% of mass 174	53.0 (97.0)1
177	5.0 - 9.0% of mass 176	3.8 (7.1)2

1-Value is % of mass 174 2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD200	VSTD200	BCAL1911	03/24/98	0946
02	VSTD100	VSTD100	BCAL1912	03/24/98	1017
03	VSTD050	VSTD050	BCAL1913	03/24/98	1048
04	VSTD020	VSTD020	BCAL1914	03/24/98	1119
05	VSTD010	VSTD010	BCAL1915	03/24/98	1150
06	VLKB083B	QCBLK168259	BBLK1916	03/24/98	1235
07	VLCSB083B	QCLCS168259	BLCS1917	03/24/98	1322
08	A6SMP3E1	17161-001	BSMP1918	03/24/98	1354
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4A
VOL/ LE METHOD BLANK SUMMARY

Lab Name: QUANTERRA MO Contract: 625.01
 Lab Code: ITMO Case No.: SAS No.: SDG No.: V368
 Lab File ID: BBLK1889 Lab Sample ID: QCBLK167948
 Date Analyzed: 03/20/98 Time Analyzed: 0635
 Matrix: (soil/water) WATER Level: (low/med) LOW
 Instrument ID: MSB

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSB079A	QCLCS167948	BLCS1890	0724
02	A6SMP3W1	17161-002	BSMP1893	0857
03	A6SMP3AA	17161-005	BSMP1894	0928
04	A6SMP3BB	17161-006	BSMP1895	0959
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COMMENTS:

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Lab File ID: BBFB1842

BFB Injection Date: 03/18/98

Instrument ID: MSB

BFB Injection Time: 0558

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.7
75	30.0 - 60.0% of mass 95	54.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.3 (0.5)1
174	Greater than 50.0% of mass 95	56.3
175	4.0 - 9.0% of mass 174	4.6 (8.2)1
176	Greater than 95.0%, but less than 101.0% of mass 174	55.6 (98.9)1
177	5.0 - 9.0% of mass 176	4.2 (7.6)2

1-Value is % of mass 174 2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	BCAL1844	03/18/98	0717
02	VSTD200	VSTD200	BCAL1846	03/18/98	0848
03	VSTD100	VSTD100	BCAL1847	03/18/98	0919
04	VSTD020	VSTD020	BCAL1848	03/18/98	0950
05	VSTD010	VSTD010	BCAL1849	03/18/98	1021
06					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A6SMP3AA

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Matrix: (soil/water) WATER

Lab Sample ID: 17161-005

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: BSMP1894

Level: (low/med) LOW

Date Received: 03/12/98

% Moisture: not dec. _____

Date Analyzed: 03/20/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
---------	----------	--	---

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	4	JB
67-64-1-----	Acetone	11	JB
75-15-0-----	Carbon Disulfide	5	U
75-35-4-----	1,1-Dichloroethene	5	U
75-34-3-----	1,1-Dichloroethane	5	U
540-59-0-----	1,2-Dichloroethene (total)	5	U
67-66-3-----	Chloroform	5	U
107-06-2-----	1,2-Dichloroethane	5	U
78-93-3-----	2-Butanone	5	J
71-55-6-----	1,1,1-Trichloroethane	5	U
56-23-5-----	Carbon Tetrachloride	5	U
75-27-4-----	Bromodichloromethane	5	U
78-87-5-----	1,2-Dichloropropane	5	U
10061-01-5-----	cis-1,3-Dichloropropene	5	U
79-01-6-----	Trichloroethene	5	U
124-48-1-----	Chlorodibromomethane	5	U
79-00-5-----	1,1,2-Trichloroethane	5	U
71-43-2-----	Benzene	5	U
10061-02-6-----	trans-1,3-Dichloropropene	5	U
75-25-2-----	Bromoform	5	U
108-10-1-----	4-Methyl-2-pentanone	20	U
591-78-6-----	2-Hexanone	20	U
127-18-4-----	Tetrachloroethene	5	U
108-88-3-----	Toluene	5	U
79-34-5-----	1,1,2,2-Tetrachloroethane	5	U
108-90-7-----	Chlorobenzene	5	U
100-41-4-----	Ethylbenzene	5	U
100-42-5-----	Styrene	5	U
1330-20-7-----	Xylenes (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A6SMP3BB

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Matrix: (soil/water) WATER

Lab Sample ID: 17161-006

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: BSMP1895

Level: (low/med) LOW

Date Received: 03/12/98

% Moisture: not dec. _____

Date Analyzed: 03/20/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
---------	----------	--	---

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	4	JB
67-64-1-----	Acetone	13	JB
75-15-0-----	Carbon Disulfide	5	U
75-35-4-----	1,1-Dichloroethene	5	U
75-34-3-----	1,1-Dichloroethane	5	U
540-59-0-----	1,2-Dichloroethene (total)	5	U
67-66-3-----	Chloroform	5	U
107-06-2-----	1,2-Dichloroethane	5	U
78-93-3-----	2-Butanone	5	J
71-55-6-----	1,1,1-Trichloroethane	5	U
56-23-5-----	Carbon Tetrachloride	5	U
75-27-4-----	Bromodichloromethane	5	U
78-87-5-----	1,2-Dichloropropane	5	U
10061-01-5-----	cis-1,3-Dichloropropene	5	U
79-01-6-----	Trichloroethene	5	U
124-48-1-----	Chlorodibromomethane	5	U
79-00-5-----	1,1,2-Trichloroethane	5	U
71-43-2-----	Benzene	5	U
10061-02-6-----	trans-1,3-Dichloropropene	5	U
75-25-2-----	Bromoform	5	U
108-10-1-----	4-Methyl-2-pentanone	20	U
591-78-6-----	2-Hexanone	20	U
127-18-4-----	Tetrachloroethene	5	U
108-88-3-----	Toluene	5	U
79-34-5-----	1,1,2,2-Tetrachloroethane	5	U
108-90-7-----	Chlorobenzene	5	U
100-41-4-----	Ethylbenzene	5	U
100-42-5-----	Styrene	5	U
1330-20-7-----	Xylenes (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VELKB079A

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Matrix: (soil/water) WATER

Lab Sample ID: QCBLK167948

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: BBLK1889

Level: (low/med) LOW

Date Received:

% Moisture: not dec. _____

Date Analyzed: 03/20/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	14	J
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	20	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Chlorodibromomethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	20	U
591-78-6	2-Hexanone	20	U
127-18-4	Tetrachloroethene	5	U
108-88-3	Toluene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylenes (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VELKB083B

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Matrix: (soil/water) WATER

Lab Sample ID: QCBLK168259

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: BBLK1916

Level: (low/med) LOW

Date Received:

% Moisture: not dec. _____

Date Analyzed: 03/24/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	12	J
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	20	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Chlorodibromomethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	20	U
591-78-6	2-Hexanone	20	U
127-18-4	Tetrachloroethene	5	U
108-88-3	Toluene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylenes (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VLCSB079A

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Matrix: (soil/water) WATER

Lab Sample ID: QCLCS167948

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: BLCS1890

Level: (low/med) LOW

Date Received:

% Moisture: not dec. _____

Date Analyzed: 03/20/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	56	
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	BJ
67-64-1	Acetone	15	BJ
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	61	
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	48	
107-06-2	1,2-Dichloroethane	47	
78-93-3	2-Butanone	52	
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	50	
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	48	
124-48-1	Chlorodibromomethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	48	
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	20	U
591-78-6	2-Hexanone	20	U
127-18-4	Tetrachloroethene	45	
108-88-3	Toluene	49	
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-90-7	Chlorobenzene	46	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylenes (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VLCSB083B

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Matrix: (soil/water) WATER

Lab Sample ID: QCLCS168259

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: BLCS1917

Level: (low/med) LOW

Date Received:

% Moisture: not dec. _____

Date Analyzed: 03/24/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	53	
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	14	JB
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	68	
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	56	
107-06-2	1,2-Dichloroethane	61	
78-93-3	2-Butanone	67	
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	56	
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	55	
124-48-1	Chlorodibromomethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	55	
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	20	U
591-78-6	2-Hexanone	20	U
127-18-4	Tetrachloroethene	47	
108-88-3	Toluene	55	
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-90-7	Chlorobenzene	55	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylenes (total)	5	U

2A
WA: VOLATILE SURROGATE RECOVER:

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

	EPA SAMPLE NO.	S1 (BFB) #	S2 (DFM) #	S3 (TOL) #	OTHER	TOT OUT
01	VELKB079A	101	104	103		0
02	VLCSB079A	98	100	98		0
03	A6SMP3AA	108	114	110		0
04	A6SMP3BB	101	108	102		0
05	VELKB083B	101	109	105		0
06	VLCSB083B	100	111	103		0
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QC LIMITS

S1 (BFB) = 4-Bromofluorobenzene (80-120)
 S2 (DFM) = Dibromofluoromethane (80-120)
 S3 (TOL) = Toluene-d8 (80-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2B
SC VOLATILE SURROGATE RECOVERY

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (BFB) #	S2 (DFM) #	S3 (TOL) #	OTHER	TOT OUT
01	A6SMP3W1	100	107	100		0
02	A6SMP3E1	100	107	103		0
03						
04						
05						
06						
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QC LIMITS

S1 (BFB) = 4-Bromofluorobenzene (74-121)
 S2 (DFM) = Dibromofluoromethane (80-120)
 S3 (TOL) = Toluene-d8 (80-120)

Column to be used to flag recovery values

• Values outside of contract required QC limits

D Surrogates diluted out

4A
VOL/ LE METHOD BLANK SUMMARY

Lab Name: QUANTERRA MO Contract: 625.01
 Lab Code: ITMO Case No.: SAS No.: SDG No.: V368
 Lab File ID: BBLK1889 Lab Sample ID: QCBLK167948
 Date Analyzed: 03/20/98 Time Analyzed: 0635
 Matrix: (soil/water) WATER Level: (low/med) LOW
 Instrument ID: MSB

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
	=====	=====	=====	=====
01	VLCSB079A	QCLCS167948	BLCS1890	0724
02	A6SMP3W1	17161-002	BSMP1893	0857
03	A6SMP3AA	17161-005	BSMP1894	0928
04	A6SMP3BB	17161-006	BSMP1895	0959
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COMMENTS:

4A
VOL: LE METHOD BLANK SUMMARY

Lab Name: QUANTERRA MO Contract: 625.01
 Lab Code: ITMO Case No.: SAS No.: SDG No.: V368
 Lab File ID: BBLK1916 Lab Sample ID: QCBLK168259
 Date Analyzed: 03/24/98 Time Analyzed: 1235
 Matrix: (soil/water) WATER Level: (low/med) LOW
 Instrument ID: MSB

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSB083B	QCLCS168259	BLCS1917	1322
02	A6SMP3E1	17161-001	BSMP1918	1354
03				
04				
05				
06				
07				
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COMMENTS:

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Lab File ID: BBFB1842

BFB Injection Date: 03/18/98

Instrument ID: MSB

BFB Injection Time: 0558

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.7
75	30.0 - 60.0% of mass 95	54.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.3 (0.5)1
174	Greater than 50.0% of mass 95	56.3
175	4.0 - 9.0% of mass 174	4.6 (8.2)1
176	Greater than 95.0%, but less than 101.0% of mass 174	55.6 (98.9)1
177	5.0 - 9.0% of mass 176	4.2 (7.6)2

1-Value is % of mass 174 2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	BCAL1844	03/18/98	0717
02	VSTD200	VSTD200	BCAL1846	03/18/98	0848
03	VSTD100	VSTD100	BCAL1847	03/18/98	0919
04	VSTD020	VSTD020	BCAL1848	03/18/98	0950
05	VSTD010	VSTD010	BCAL1849	03/18/98	1021
06					
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5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Lab File ID: BBFB1886

BFB Injection Date: 03/20/98

Instrument ID: MSB

BFB Injection Time: 0444

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.0
75	30.0 - 60.0% of mass 95	51.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.5
173	Less than 2.0% of mass 174	0.4 (0.6)1
174	Greater than 50.0% of mass 95	63.8
175	4.0 - 9.0% of mass 174	4.9 (7.7)1
176	Greater than 95.0%, but less than 101.0% of mass 174	64.3 (100.8)1
177	5.0 - 9.0% of mass 176	4.7 (7.4)2

1-Value is % of mass 174

2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	BCAL1888	03/20/98	0551
02	VBLKB079A	QCBLK167948	BELK1889	03/20/98	0635
03	VLCBS079A	QCLCS167948	BLCS1890	03/20/98	0724
04	A6SMP3W1	17161-002	BSMP1893	03/20/98	0857
05	A6SMP3AA	17161-005	BSMP1894	03/20/98	0928
06	A6SMP3BB	17161-006	BSMP1895	03/20/98	0959
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5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: IIMO

Case No.:

SAS No.:

SDG No.: V368

Lab File ID: BBFB1910

BFB Injection Date: 03/24/98

Instrument ID: MSB

BFB Injection Time: 0932

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.9
75	30.0 - 60.0% of mass 95	51.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.4 (0.6)1
174	Greater than 50.0% of mass 95	54.6
175	4.0 - 9.0% of mass 174	4.3 (7.9)1
176	Greater than 95.0%, but less than 101.0% of mass 174	53.0 (97.0)1
177	5.0 - 9.0% of mass 176	3.8 (7.1)2

1-Value is % of mass 174

2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD200	VSTD200	BCAL1911	03/24/98	0946
02	VSTD100	VSTD100	BCAL1912	03/24/98	1017
03	VSTD050	VSTD050	BCAL1913	03/24/98	1048
04	VSTD020	VSTD020	BCAL1914	03/24/98	1119
05	VSTD010	VSTD010	BCAL1915	03/24/98	1150
06	VELKB083B	QCBLK168259	BBLK1916	03/24/98	1235
07	VLCSB083B	QCLCS168259	BLCS1917	03/24/98	1322
08	A6SMP3E1	17161-001	BSMP1918	03/24/98	1354
09					
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6A
VOLAT E ORGANICS INITIAL CALIBRATION DATA

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Instrument ID: MSB

Calibration Date(s): 03/18/98

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

LAB FILE ID:		RRF1	=BCAL1849.D	RRF2	=BCAL1848.D			
RRF3		=BCAL1844.D	RRF4	=BCAL1847.D	RRF5	=BCAL1846.D		
COMPOUND		RRF1	RRF2	RRF3	RRF4	RRF5	RRF	% RSD
Chloromethane	#	0.245	0.295	0.240	0.250	0.241	0.254	9.1
Bromomethane		0.288	0.354	0.293	0.292	0.276	0.301	10.2
Vinyl Chloride	*	0.180	0.223	0.198	0.197	0.192	0.198	7.9*
Chloroethane		0.151	0.181	0.158	0.150	0.147	0.157	8.7
Methylene Chloride		0.420	0.388	0.278	0.279	0.269	0.327	21.8
Acetone		0.069	0.066	0.037	0.044	0.044	0.052	28.0
Carbon Disulfide		0.732	0.884	0.752	0.757	0.742	0.773	8.1
1,1-Dichloroethene	•	0.247	0.288	0.242	0.247	0.241	0.253	7.9*
1,1-Dichloroethane	#	0.587	0.691	0.560	0.579	0.563	0.596	9.1
1,2-Dichloroethene (total)		0.336	0.400	0.319	0.328	0.322	0.341	9.9
Chloroform	*	0.738	0.863	0.672	0.699	0.674	0.729	10.9*
1,2-Dichloroethane		0.364	0.414	0.298	0.338	0.328	0.348	12.4
2-Butanone		0.079	0.076	0.051	0.075	0.072	0.071	16.1
1,1,1-Trichloroethane		0.533	0.628	0.522	0.532	0.533	0.550	8.0
Carbon Tetrachloride		0.542	0.658	0.551	0.561	0.567	0.576	8.
Bromodichloromethane		0.855	1.006	0.753	0.810	0.775	0.840	12.0
1,2-Dichloropropane	*	0.417	0.486	0.369	0.403	0.378	0.411	11.2*
cis-1,3-Dichloropropene		0.494	0.583	0.456	0.497	0.497	0.505	9.3
Trichloroethene		0.494	0.601	0.449	0.480	0.449	0.495	12.7
Chlorodibromomethane		0.763	1.009	0.696	0.812	0.760	0.808	14.8
1,1,2-Trichloroethane		0.385	0.524	0.333	0.404	0.362	0.402	18.3
Benzene		0.931	1.127	0.870	0.918	0.880	0.945	11.1
trans-1,3-Dichloropropene		0.371	0.512	0.395	0.448	0.453	0.436	12.6
Bromoform	#	0.543	0.762	0.458	0.601	0.546	0.582	19.3
4-Methyl-2-pentanone		0.213	0.312	0.144	0.234	0.219	0.224	26.6
2-Hexanone		0.143	0.230	0.100	0.173	0.151	0.159	29.8
Tetrachloroethene		0.503	0.688	0.541	0.568	0.529	0.566	12.8
Toluene	*	1.128	1.495	1.166	1.225	1.161	1.235	12.1*
1,1,2,2-Tetrachloroethane	#	0.765	1.070	0.551	0.782	0.666	0.767	25.1#
Chlorobenzene	#	1.017	1.336	0.969	1.052	0.960	1.067	14.5#
Ethylbenzene	*	0.436	0.539	0.422	0.438	0.428	0.453	10.8*
Styrene		0.860	1.208	0.873	0.985	0.907	0.967	14.8
Xylenes (total)		0.504	0.701	0.527	0.572	0.533	0.567	13.9
4-Bromofluorobenzene		1.587	1.837	1.320	1.365	1.193	1.460	17.4
Dibromofluoromethane		0.538	0.601	0.480	0.477	0.451	0.509	11.8
1,2-Dichloroethane-d4		0.317	0.357	0.261	0.281	0.262	0.296	13.9
Toluene-d8		0.986	1.248	1.009	1.012	0.946	1.040	11.4

FORM VI VOA

1/87 Rev.

000049

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Instrument ID: MSB

Calibration Date(s): 03/24/98

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

LAB FILE ID:		RRF1	=BCAL1915.D	RRF2	=BCAL1914.D		
RRF3		=BCAL1913.D	RRF4	=BCAL1912.D	RRF5	=BCAL1911.D	
COMPOUND		RRF1	RRF2	RRF3	RRF4	RRF5	% RSD
Chloromethane		0.256	0.245	0.221	0.231	0.221	6.6
Bromomethane		0.315	0.291	0.279	0.284	0.276	5.4
Vinyl Chloride	*	0.191	0.181	0.168	0.178	0.171	5.0*
Chloroethane		0.160	0.149	0.143	0.147	0.146	4.4
Methylene Chloride		0.340	0.294	0.266	0.260	0.242	13.6
Acetone		0.062	0.051	0.040	0.036	0.030	29.6
Carbon Disulfide		0.709	0.670	0.636	0.648	0.619	5.3
1,1-Dichloroethene	*	0.227	0.220	0.207	0.215	0.202	4.7*
1,1-Dichloroethane	#	0.578	0.542	0.525	0.524	0.505	5.1
1,2-Dichloroethene (total)		0.328	0.305	0.293	0.293	0.290	5.2
Chloroform	*	0.720	0.667	0.650	0.637	0.615	6.0*
1,2-Dichloroethane		0.354	0.339	0.318	0.302	0.280	9.2
2-Butanone		0.076	0.080	0.068	0.061	0.049	18.5
1,1,1-Trichloroethane		0.524	0.504	0.484	0.490	0.480	3.6
Carbon Tetrachloride		0.554	0.526	0.508	0.510	0.503	4.0
Bromodichloromethane		0.880	0.796	0.768	0.745	0.713	8.1
1,2-Dichloropropane	•	0.407	0.382	0.370	0.367	0.345	6.0*
cis-1,3-Dichloropropene		0.505	0.478	0.467	0.466	0.451	4.2
Trichloroethene		0.488	0.460	0.427	0.425	0.404	7.5
Chlorodibromomethane		0.843	0.784	0.743	0.725	0.647	9.7
1,1,2-Trichloroethane		0.408	0.383	0.361	0.349	0.295	11.8
Benzene		0.925	0.869	0.843	0.827	0.792	5.8
trans-1,3-Dichloropropene		0.403	0.402	0.403	0.406	0.382	2.5
Bromoform	#	0.627	0.583	0.556	0.540	0.440	12.6
4-Methyl-2-pentanone		0.210	0.236	0.216	0.202	0.159	13.8
2-Hexanone		0.154	0.157	0.153	0.143	0.098	17.4
Tetrachloroethene		0.680	0.658	0.574	0.541	0.475	14.4
Toluene	*	1.155	1.072	1.036	1.036	0.980	6.1*
1,1,2,2-Tetrachloroethane	#	0.807	0.746	0.692	0.657	0.492	17.5#
Chlorobenzene	#	1.036	0.950	0.897	0.882	0.832	8.4#
Ethylbenzene	*	0.424	0.401	0.400	0.378	0.379	4.8*
Styrene		0.928	0.846	0.836	0.831	0.789	6.0
Xylenes (total)		0.523	0.494	0.471	0.479	0.454	5.4
4-Bromofluorobenzene		1.616	1.513	1.342	1.335	1.163	12.6
Dibromofluoromethane		0.819	0.782	0.724	0.712	0.649	8.9
Toluene-d8		1.097	1.064	0.995	1.005	0.904	7.3

FORM VI VOA

1/87 Rev.

000096

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Instrument ID: MSB

Calibration Date: 03/20/98

Time: 0551

Lab File ID: BCAL1888

Init. Calib. Date(s): 03/18/98

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

Min RRF50 for SPCC(#) = 0.300 (0.250 for Bromoform) Max %D for CCC(*) = 20.0%

COMPOUND	SAMPLE AMOUNT	CAL50 AMOUNT	CURVE	%D
Chloromethane	#42.387	50.000	LINR	15.226#
Bromomethane	46.314	50.000	LINR	7.3720
Vinyl Chloride	*42.519	50.000	LINR	14.962*
Chloroethane	46.910	50.000	LINR	6.1800
Methylene Chloride	47.229	50.000	LINR	5.5420
Acetone	42.015	50.000	LINR	15.970
Carbon Disulfide	46.198	50.000	LINR	7.6040
1,1-Dichloroethene	*46.553	50.000	LINR	6.8940*
1,1-Dichloroethane	#42.361	50.000	LINR	15.278#
1,2-Dichloroethene (total)	91.474	100.00	LINR	8.5260
Chloroform	*45.799	50.000	LINR	8.4020*
1,2-Dichloroethane	42.745	50.000	LINR	14.510
2-Butanone	34.703	50.000	LINR	30.594
1,1,1-Trichloroethane	44.881	50.000	LINR	10.238
Carbon Tetrachloride	44.425	50.000	LINR	11.150
Bromodichloromethane	44.780	50.000	LINR	10.440
1,2-Dichloropropane	*44.659	50.000	LINR	10.682*
cis-1,3-Dichloropropene	42.790	50.000	LINR	14.420
Trichloroethene	45.743	50.000	LINR	8.5140
Chlorodibromomethane	42.444	50.000	LINR	15.112
1,1,2-Trichloroethane	41.863	50.000	LINR	16.274
Benzene	45.552	50.000	LINR	8.8960
trans-1,3-Dichloropropene	40.075	50.000	LINR	19.850
Bromoform	#39.297	50.000	LINR	21.406#
4-Methyl-2-pentanone	33.331	50.000	LINR	33.338
2-Hexanone	32.992	50.000	LINR	34.016
Tetrachloroethene	44.973	50.000	LINR	10.054
Toluene	*44.307	50.000	LINR	11.386*
1,1,2,2-Tetrachloroethane	#38.840	50.000	LINR	22.320#
Chlorobenzene	#44.991	50.000	LINR	10.018#
Ethylbenzene	*44.254	50.000	LINR	11.492*
Styrene	43.706	50.000	LINR	12.588
Xylenes (total)	133.01	150.00	LINR	11.327
4-Bromofluorobenzene	54.667	50.000	LINR	-9.334
Dibromofluoromethane	52.875	50.000	LINR	-5.750
Toluene-d8	51.387	50.000	LINR	-2.774

RRF

0.206 #

0.481

0.437

0.537

0.885

FORM VII VOA

1/87 Rev

000087

8A
VOLATI INTERNAL STANDARD AREA SUM Y

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Lab File ID (Standard): BCAL1888

Date Analyzed: 03/20/98

Instrument ID: MSB

Time Analyzed: 0551

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

	IS1 (FLB) AREA #	RT	IS2 (CBZ) AREA #	RT	IS3 AREA #	RT
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	2759179	7.11	2418910	14.86	1577284	22.27
=====	=====	=====	=====	=====	=====	=====
UPPER LIMIT	5518358	7.61	4837820	15.36	3154568	22.77
=====	=====	=====	=====	=====	=====	=====
LOWER LIMIT	689795	6.61	604728	14.36	394321	21.77
=====	=====	=====	=====	=====	=====	=====
EPA SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 VBLKB079A	2542216	7.11	2201709	14.82	1424727	22.28
02 VLCSB079A	2479910	7.12	2155964	14.85	1365128	22.28
03 A6SMP3W1	2012635	7.11	1785562	14.84	1155039	22.28
04 A6SMP3AA	2122691	7.11	1839230	14.84	1191097	22.28
05 A6SMP3BB	1719150	7.11	1513906	14.84	982383	22.27
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IS1 (FLB) = Fluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 = 1,4 Dichlorobenzene-d4

UPPER LIMIT = +100%

of internal standard area.

LOWER LIMIT = - 75%

of internal standard area.

Column used to flag internal standard area values with an asterisk.

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

Lab File ID (Standard): BCAL1915

Date Analyzed: 03/24/98

Instrument ID: MSB

Time Analyzed: 1150

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

	IS1 (FLB) AREA #	RT	IS2 (CBZ) AREA #	RT	IS3 AREA #	RT
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	2649614	7.05	2461099	14.76	1683788	22.23
=====	=====	=====	=====	=====	=====	=====
UPPER LIMIT	5299228	7.55	4922198	15.26	3367576	22.73
=====	=====	=====	=====	=====	=====	=====
LOWER LIMIT	662404	6.55	615275	14.26	420947	21.73
=====	=====	=====	=====	=====	=====	=====
EPA SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 VBLKB083B	2711811	7.06	2529279	14.76	1686383	22.22
02 VLCSE083B	1305043	7.06	1223614	14.76	828918	22.23
03 A6SMP3E1	2067845	7.06	1931503	14.75	1307598	22.22
04						
05						
06						
07						
08						
09						
10						
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17						
18						
19						
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21						
22						

IS1 (FLB) = Fluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 = 1,4 Dichlorobenzene-d4

UPPER LIMIT = +100%

of internal standard area.

LOWER LIMIT = - 75%

of internal standard area.

Column used to flag internal standard area values with an asterisk.

9A
VOLATILE SPIKE RECOVERY

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

EPA Sample No.: VLCSB079A

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
11 1,1-Dichloroethene	50.00	61.12	122.25	1-234
42 Trichloroethene	50.00	47.79	95.59	71-157
40 Benzene	50.00	48.49	96.98	37-151
52 Toluene	50.00	48.94	97.89	47-150
62 Chlorobenzene	50.00	46.52	93.05	37-160

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
\$ 32 Dibromofluorometha	50.00	50.09	100.19	80-120
\$ 37 1,2-Dichloroethane	50.00	48.35	96.69	80-120
\$ 51 Toluene-d8	50.00	49.28	98.56	80-120
\$ 73 4-Bromofluorobenze	50.00	48.94	97.89	80-120

000011

9A
VOLATILE SPIKE RECOVERY

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO

Case No.:

SAS No.:

SDG No.: V368

EPA Sample No.: VLCSB083B

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
11 1,1-Dichloroethene	50.00	67.71	135.42	1-234
42 Trichloroethene	50.00	54.92	109.84	71-157
40 Benzene	50.00	54.65	109.30	37-151
52 Toluene	50.00	55.05	110.10	47-150
62 Chlorobenzene	50.00	54.90	109.80	37-160

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
\$ 32 Dibromofluorometha	50.00	55.32	110.64	80-120
\$ 37 1,2-Dichloroethane	50.00	59.02	118.04	80-120
\$ 51 Toluene-d8	50.00	51.70	103.40	80-120
\$ 73 4-Bromofluorobenze	50.00	50.11	100.22	74-121

000012

SAMPLE DELIVERY GROUP: V368CLIENT: RP - JEFF SMITHLABORATORY: QUANTERRAFINAL REPORT RECEIVED: 4/7/98DATE REVIEWED: 5/5/98REVIEWED BY: **VOLATILES:**MATRIX: SOILARE VOA DATA ACCEPTABLE: YES

	<u>SAMPLE ID</u>	<u>INSTRUMENT ID</u>	<u>DATE</u>	<u>TIME</u>	<u>ACCEPTABLE?</u>
1. TUNE	<u>BFB</u>	<u>MSB</u>	<u>3/18/98</u>	<u>0558</u>	<u>YES</u>
	<u>BFB</u>	<u>MSB</u>	<u>3/20/98</u>	<u>0444</u>	<u>YES</u>
	<u>BFB</u>	<u>MSB</u>	<u>3/24/98</u>	<u>0932</u>	<u>YES</u>
2. CALIBRATION	<u>INITIAL</u>	<u>MSB</u>	<u>3/18/98</u>		<u>YES</u>
	<u>VSTD050</u>	<u>MSB</u>	<u>3/20/98</u>	<u>0551</u>	<u>YES</u>
	<u>INITIAL</u>	<u>MSB</u>	<u>3/24/98</u>		<u>YES</u>
3. METHOD BLANK	<u>QCBLK167948</u>	<u>MSB</u>	<u>3/20/98</u>	<u>0635</u>	<u>YES</u>
	<u>QCBLK168259</u>	<u>MSB</u>	<u>3/24/98</u>	<u>1235</u>	<u>YES</u>
4. EXT. BLANK	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
5. LAB CONTROL	<u>QCLCS167948</u>	<u>MSB</u>	<u>3/20/98</u>	<u>0724</u>	<u>YES</u>
	<u>QCLCS168259</u>	<u>MSB</u>	<u>3/24/98</u>	<u>1322</u>	<u>YES</u>
6. TRIP BLANK	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
7. SAMPLES	<u>A6-SMP3-W1</u>	<u>MSB</u>	<u>3/20/98</u>	<u>0857</u>	<u>YES</u>
	<u>A6-SMP3-AA</u>	<u>MSB</u>	<u>3/20/98</u>	<u>0928</u>	<u>YES</u>
	<u>A6-SMP3-BB</u>	<u>MSB</u>	<u>3/20/98</u>	<u>0959</u>	<u>YES</u>
	<u>A6-SMP3-E1</u>	<u>MSB</u>	<u>3/24/98</u>	<u>1354</u>	<u>YES</u>

8. SURROGATE RECOVERY ACCEPTABLE: YES9. MS/MSD RECOVERY ACCEPTABLE: N/A10. METHOD BLANK ACCEPTABLE: YES11. HOLDING TIMES ACCEPTABLE: YES

		<u># DAYS</u>	<u>ACCEPTABLE</u>
a. Date Sampled	<u>3/10/98</u>	<u>0</u>	<u>0</u>
b. Date ASL Received:	<u>3/10/98</u>	<u>0</u>	<u>1</u>
c. Date Contract Lab Received:	<u>3/12/98</u>	<u>2</u>	<u>5</u>
d. Date Extracted:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
e. Date Analyzed:	<u>3/24/98</u>	<u>14</u>	<u>14</u>

12. Correct Conc units used: YES13. CALCULATIONS ACCEPTABLE: YES14. ARE AREAS ACCEPTABLE: YES15. RRT IS ACCEPTABLE: YES16. FORMS ACCEPTABLE: YES17. Chain-of-Custody agrees: YESSAMPLE: Continuing Calibration (VSTD050)Analyzed: 3/20/98 @ 0551

<u>PCC</u>	<u>AREA</u>	<u>IS AREA</u>	<u>RRF</u>	<u>Minimum RRF</u>	<u>ACCEPTABLE?</u>
Chloromethane	569556	2759179	0.206	0.100	<u>YES</u>
1,1-Dichloroethane	1326048	2759179	0.481	0.100	<u>YES</u>

SPCC	AREA	IS AREA	RRF	Minimum RRF	ACCEPTABLE?
Bromoform	1057704	2418910	0.437	0.100	<u>YES</u>
1,1,2,2-Tetrachloroethane	1299177	2418910	0.537	0.300	<u>YES</u>
Chlorobenzene	2139740	2418910	0.885	0.300	<u>YES</u>
CCC	True Conc.	Analyzed Conc.	% Difference	ACCEPTABLE? (w/in $\pm 20\%$)	
Vinyl chloride	50.0	42.5	-15.0	<u>YES</u>	
1,1-Dichloroethene	50.0	46.6	-6.9	<u>YES</u>	
Chloroform	50.0	45.8	-8.4	<u>YES</u>	
1,2-Dichloropropane	50.0	44.7	-10.7	<u>YES</u>	
Toluene	50.0	44.3	-11.4	<u>YES</u>	
Ethylbenzene	50.0	44.3	-11.5	<u>YES</u>	

COMMENTS: Method associated quality assurance and control criteria were met. Data qualified with:
1) a "J" indicates the component was detected below the method detection limit, and 2) a "B" indicates
the component was detected in the sample's associated method blank. Amounts of acetone and
methylene chloride were found in the samples and associated method blanks. The data have been
flagged accordingly.

SAMPLE DELIVERY GROUP: V368CLIENT: RP - JEFF SMITHLABORATORY: QUANTERRAFINAL REPORT RECEIVED: 4/7/98DATE REVIEWED: 5/5/98REVIEWED BY: **SEMIVOLATILES:**MATRIX: SOILARE BNA DATA ACCEPTABLE: YES

	<u>SAMPLE ID</u>	<u>INSTRUMENT ID</u>	<u>DATE</u>	<u>TIME</u>	<u>ACCEPTABLE?</u>
1. TUNE	<u>DFTPP</u>	<u>MSH</u>	<u>3/26/98</u>	<u>1613</u>	<u>YES</u>
	<u>DFTPP</u>	<u>MSH</u>	<u>3/31/98</u>	<u>0815</u>	<u>YES</u>
2. CALIBRATION	<u>INITIAL</u>	<u>MSH</u>	<u>3/26/98</u>		<u>YES</u>
	<u>SSTD050</u>	<u>MSH</u>	<u>3/31/98</u>	<u>0829</u>	<u>YES</u>
3. METHOD BLANK	<u>QCBLK167889</u>	<u>MSH</u>	<u>3/31/98</u>	<u>1401</u>	<u>YES</u>
4. LAB CONTROL	<u>QCSPK167889-1</u>	<u>MSH</u>	<u>3/31/98</u>	<u>1035</u>	<u>YES</u>
	<u>QCSPK167889-2</u>	<u>MSH</u>	<u>3/31/98</u>	<u>1115</u>	<u>YES</u>
5. SAMPLES	<u>A6-SMP3-E2</u>	<u>MSH</u>	<u>3/31/98</u>	<u>1154</u>	<u>YES</u>
	<u>A6-SMP3-W2</u>	<u>MSH</u>	<u>3/31/98</u>	<u>1234</u>	<u>YES</u>

6. SURROGATE RECOVERY ACCEPTABLE: YES
7. MS/MSD RECOVERY ACCEPTABLE: N/A
8. METHOD BLANK ACCEPTABLE: YES
9. HOLDING TIMES ACCEPTABLE: YES

		<u># DAYS</u>	<u>ACCEPTABLE</u>
a. Date Sampled:	<u>3/10/98</u>	<u>0</u>	<u>0</u>
b. Date ASL Received:	<u>3/10/98</u>	<u>0</u>	<u>1</u>
c. Date Contract Lab Received:	<u>3/12/98</u>	<u>2</u>	<u>5</u>
d. Date TCLP Extraction:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
e. Date Preparative Extraction:	<u>3/23/98</u>	<u>13</u>	<u>7 (WATER, TCLP); 14 (SOIL)</u>
f. Date Analyzed:	<u>3/31/98</u>	<u>8</u>	<u>40</u>

10. Correct conc units used: YES
11. CALCULATIONS ACCEPTABLE: YES
12. ARE AREAS ACCEPTABLE: YES
13. RRT IS ACCEPTABLE: YES
14. FORMS ACCEPTABLE: YES
15. Chain-of-Custody agrees: YES

SAMPLE: Continuing Calibration (SSTD050)Analyzed: 3/31/98 @ 0829

<u>SPCC</u>	<u>AREA</u>	<u>IS AREA</u>	<u>RRF</u>	<u>Minimum RRF</u>	<u>ACCEPTABLE?</u>
<u>N-nitroso-di-n-propylamine</u>	<u>43853</u>	<u>44125</u>	<u>0.795</u>	<u>0.050</u>	<u>YES</u>
<u>Hexachlorocyclopentadiene</u>	<u>34981</u>	<u>90341</u>	<u>0.310</u>	<u>0.050</u>	<u>YES</u>
<u>4-Dinitrophenol</u>	<u>17876</u>	<u>90341</u>	<u>0.158</u>	<u>0.050</u>	<u>YES</u>
<u>4-Nitrophenol</u>	<u>24146</u>	<u>90341</u>	<u>0.214</u>	<u>0.050</u>	<u>YES</u>

CCC	True Conc.	Analyzed Conc.	% Difference	ACCEPTABLE? (w/in $\pm 20\%$)
Phenol	25.0	24.5	-2.1	<u>YES</u>
1,4-Dichlorobenzene	25.0	26.8	7.2	<u>YES</u>
2-Nitrophenol	25.0	25.5	1.9	<u>YES</u>
2,4-Dichlorophenol	25.0	25.9	3.6	<u>YES</u>
Hexachlorobutadiene	25.0	27.8	11.3	<u>YES</u>
4-Chloro-3-methylphenol	25.0	27.2	8.7	<u>YES</u>
2,4,6-Trichlorophenol	25.0	25.1	0.3	<u>YES</u>
Acenaphthene	25.0	25.5	1.8	<u>YES</u>
N-Nitrosodiphenylamine	25.0	28.5	13.8	<u>YES</u>
Pentachlorophenol	25.0	23.7	-5.3	<u>YES</u>
Fluoranthene	25.0	26.1	4.4	<u>YES</u>
Di-n-octyl phthalate	25.0	27.0	8.0	<u>YES</u>
Benzo (a) pyrene	25.0	26.6	6.2	<u>YES</u>

COMMENTS: Method associated quality assurance and control criteria were met. Data qualified with
a "J" indicates the component was detected below the method detection limit.

SAMPLE DELIVERY GROUP: V368CLIENT: RP - JEFF SMITHLABORATORY: QUANTERRAFINAL REPORT RECEIVED: 4/7/98DATE REVIEWED: 5/5/98REVIEWED BY:

PCB:

MATRIX: SOILARE PCB DATA ACCEPTABLE: YESARE CRITERIA MET

1. ANALYSIS SEQUENCE
2. METHOD BLANK
3. MS/MSD RESULTS
4. SURROGATE RECOVERY
5. HOLDING TIMES

YESYESN/AYESYES# DAYSACCEPTABLEa. Date Sampled: 3/10/9800b. Date ASL Received: 3/10/9801c. Date Contract Lab Received: 3/12/9825d. Date Extracted: 3/17/987WATER(7), SOIL/OIL(14)e. Date Analyzed: 3/20/98340

6. CONFIRMED BY SECOND COLUMN:

NO

CONFIRMED BY GC/MS:

NO

7. CALCULATIONS:

YES

8. Correct Conc. units used:

YES

9. FORMS ACCEPTABLE:

YES

10. Chain-of-Custody agrees:

YESCOMMENTS: Method associated quality assurance and control criteria were met.

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 1

Reported to: Remediation Projects
J. L. Smith
M/S NTS306

Report Date: 29-APR-98
Sample Delivery Group: B228
Batch: 0789
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
A6-SMP3-E3	K 40	GAM20	2.16E+01	2.1E+01		1.6E+00	pCi/g	03-11-98	03-10-98	4.57E+02	gm	SOIL G			05-01	G8692-0-75026
A6-SMP3-E3	RA228	GAM20	1.20E+00	2.8E+01		1.8E-01	pCi/g	03-11-98	03-10-98	4.57E+02	gm	SOIL G			05-01	G8692-0-75026
A6-SMP3-E3	TH228	GAM20	2.19E+00	1.9E+01		1.4E-01	pCi/g	03-11-98	03-10-98	4.57E+02	gm	SOIL G			05-01	G8692-0-75026
A6-SMP3-E3	TH232	GAM20	1.79E+00	3.6E+01		2.9E-01	pCi/g	03-11-98	03-10-98	4.57E+02	gm	SOIL G			05-01	G8692-0-75026
A6-SMP3-W3	K 40	GAM20	1.82E+01	2.2E+01		1.6E+00	pCi/g	03-11-98	03-10-98	4.40E+02	gm	SOIL G			05-01	G8692-1-75027
A6-SMP3-W3	RA226	GAM20	1.19E+00	2.6E+01		1.4E-01	pCi/g	03-11-98	03-10-98	4.40E+02	gm	SOIL G			05-01	G8692-1-75027
A6-SMP3-W3	TH228	GAM20	2.19E+00	1.9E+01		1.4E-01	pCi/g	03-11-98	03-10-98	4.40E+02	gm	SOIL G			05-01	G8692-1-75027
A6-SMP3-W3	TH232	GAM20	1.53E+00	3.8E+01		2.9E-01	pCi/g	03-11-98	03-10-98	4.40E+02	gm	SOIL G			05-01	G8692-1-75027
QA BKG EMPTY BTL U05	No Nucl Det	GAM20	0.00E+00	0.0E+00	U	0.0E+00	NA	03-11-98	07-01-95	1.00E+00	gm	QUAL			05-01	Q0539-0-00125
QA BKG EMPTY BTL U05	AM241	GAM20	0.00E+00	0.0E+00	U	1.8E+00	pCi	03-11-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00125

Comment:

A small portion of the sample was used for the gross alpha and gross beta determinations. Accordingly, the data may not be representative of the sample as a whole.

Prepared by:

Date: 4-29-98

Approved by:

Date: 4/29/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 2

Reported to: Remediation Projects
J. L. Smith
M/S NTS306

Report Date: 29-APR-98
Sample Delivery Group: B228
Batch: 0789
Program: 500

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA BKG EMPTY BTL U05	CO60	GAM20	0.00E+00	0.0E+00	U	2.7E-01	pCi	03-11-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00125
QA BKG EMPTY BTL U05	CS137	GAM20	0.00E+00	0.0E+00	U	3.2E-01	pCi	03-11-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00125
QA SP:NAS-A0271	AM241	GAM20	1.79E+05	8.8E+00		3.1E+02	pCi	03-11-98	04-01-92	1.00E+00	sm	QUAL		110.3	05-01	Q0534-3-12681
QA SP:NAS-A0271	CO60	GAM20	3.01E+05	8.5E+00		2.2E+02	pCi	03-11-98	04-01-92	1.00E+00	sm	QUAL		101.0	05-01	Q0534-3-12681
QA SP:NAS-A0271	CS137	GAM20	2.07E+05	8.1E+00		7.4E+01	pCi	03-11-98	04-01-92	1.00E+00	sm	QUAL		101.8	05-01	Q0534-3-12681

Comment:

A small portion of the sample was used for the gross alpha and gross beta determinations. Accordingly, the data may not be representative of the sample as a whole.

Prepared by:

Date: 4-29-98

Approved by:

Date: 4/29/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 3

Reported to: Remediation Projects
J. L. Smith
M/S NTS306

Report Date: 29-APR-98
Sample Delivery Group: B228
Batch: M459
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
A6-SMP3-E3	Gross Alpha	Gross A	9.57E+00	1.7E+01		1.4E+00	pCi/g	03-27-98	03-10-98	1.00E+00	gm	SOIL G			14-01	G8692-0-75028
A6-SMP3-W3	Gross Alpha	Gross A	8.49E+00	1.9E+01		1.4E+00	pCi/g	03-27-98	03-10-98	1.00E+00	gm	SOIL G			14-01	G8692-1-75029
QA REA	Gross Alpha	Gross A	1.65E-02	1.4E+03	U	4.2E-01	pCi	03-27-98	03-11-98	1.00E+00	sm	QUAL			14-01	G8693-0-06772
QA SP:GROSSAB 04	Gross Alpha	Gross A	3.46E+00	1.5E+01		4.2E-01	pCi	03-27-98	02-07-92	1.00E+00	sm	QUAL		101.1	14-01	G8693-1-06773
A6-SMP3-E3	Gross Beta	Gross B	8.38E+00	1.0E+01		1.1E+00	pCi/g	03-27-98	03-10-98	1.00E+00	gm	SOIL G			14-01	G8692-0-75028
A6-SMP3-W3	Gross Beta	Gross B	7.49E+00	1.1E+01		1.1E+00	pCi/g	03-27-98	03-10-98	1.00E+00	gm	SOIL G			14-01	G8692-1-75029
QA REA	Gross Beta	Gross B	1.94E-01	2.9E+02	U	9.7E-01	pCi	03-27-98	03-11-98	1.00E+00	sm	QUAL			14-01	G8693-0-06772
QA SP:GROSSAB 04	Gross Beta	Gross B	4.82E+00	1.6E+01		9.7E-01	pCi	03-27-98	02-07-92	1.00E+00	sm	QUAL		94.5	14-01	G8693-1-06773

Comment:

A small portion of the sample was used for the gross alpha and gross beta determinations. Accordingly, the data may not be representative of the sample as a whole.

Prepared by:

Date: 4-28-98

Approved by:

Date: 4/29/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

***** End of Report *****

(Level 1)

SAMPLE DELIVERY GROUP: V368CLIENT: RP - JEFF SMITHLABORATORY: QUANTERRAFINAL REPORT RECEIVED: 4/7/98DATE REVIEWED: 5/6/98REVIEWED BY: **TPH - GASOLINE:**MATRIX: SOILARE TPH GASOLINE DATA ACCEPTABLE: YES**ARE CRITERIA MET**

1. QC SAMPLES ACCEPTABLE	<u>YES</u>
2. MATRIX SPIKE ACCEPTABLE	<u>N/A</u>
3. METHOD BLANK ACCEPTABLE	<u>YES</u>
4. HOLDING TIMES ACCEPTABLE	<u>YES</u>

		<u># DAYS</u>	<u>ACCEPTABLE</u>
a. Date Sampled:	<u>3/10/98</u>	<u>0</u>	<u>0</u>
b. Date ASL Received:	<u>3/10/98</u>	<u>0</u>	<u>1</u>
c. Date Contract Lab Received:	<u>3/12/98</u>	<u>2</u>	<u>5</u>
d. Date Analyzed:	<u>3/13/98</u>	<u>3</u>	<u>14</u>
5. CALCULATIONS ACCEPTABLE:	<u>YES</u>		
6. CORRECT CONC. UNITS USED:	<u>YES</u>		
7. FORMS ACCEPTABLE:	<u>YES</u>		
8. CHAIN-OF-CUSTODY AGREES:	<u>YES</u>		

COMMENTS: Method associated quality assurance and control criteria were met.

Quanterra Incorporated
13715 Rider Trail North
Earth City, Missouri 63045

314 298-8566 Telephone
314 298-8757 Fax

CASE NARRATIVE

Bechtel Nevada Corporation
MAIL STOP NTS273
2621 Losee Road
Building A-2, Receiving
North Las Vegas, NV 89030-4129

May 27, 1998

Attention: Ted Redding

Quanterra Project Number	: 625.01
Date Received	: May 8, 1998
Number of Samples	: Two (2)
SDG Name	: V411
Bechtel Report No.	: W1441
Sample type	: Soil

INTRODUCTION

Two (2) soil samples from Bechtel Nevada were received at Quanterra Environmental Services, Earth City, MO for TCLP Metals analyses. The analytical test performed, as well as date of receipt and analysis, can be found in the enclosed data package and corresponding summary report.

The results were transmitted by fax on May 27, 1998.

SDG V411 was transmitted previously.

Reviewed and Approved

Allen M. Field
Quanterra Project Manager

PAGE 2 of 3
May 27, 1998
Quanterra Project Number: 625.01

The sample was labeled as follows:

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>MATRIX</u>
AG-SMP3-E4	17767-001	Soil
AG-SMP3-W4	17767-002	Soil

ANALYTICAL RESULTS/METHODOLOGY

The analytical results are presented by analytical test in the attached data packages. This report includes information on client identification numbers, lab identification numbers, preparation date, analysis date, results, units, and results for quality control samples.

The following table is a list of the analyses and the methods used for the above samples:

<u>Analysis</u>	<u>Method</u>
TCLP Metals	EPA 1311/6010/7470

QUALITY CONTROL

A method blank and a laboratory control sample was analyzed with the samples listed above per parameter.

NONCONFORMANCES

No nonconformances were observed with the analysis of these samples.

COMMENTS

TCLP Metals

Both the ICP and Mercury digestions were prepped 25 mls to 100 mls for all samples including the extraction blank.

Receipt

Login 17767 was received in one (1) cooler at a temperature of 4°C.

PAGE 3 of 3
May 27, 1998
Quanterra Project Number: 625.01

Analytical Notes

QUALIFIERS/DEFINITIONS

*	= Reported value outside the QC limits
NC	= No criteria at this time
NA	= Not applicable
ND	= Non - detect
MG/L	= Milligrams per liter
UG/L	= Micrograms per liter
%REC	= Percent Recovery
QCBLK	= Method Blank
QCLCS	= Laboratory Control Sample
CRDL	= Customer Required Detection Limit
RPD	= Relative Percent Difference
IDL	= Instrument detection limit
DL	= PQL
J	= Estimated Value (Organics only)
D	= Diluted
U	= Non - Detect
B	= Value greater than IDL but less than CRDL (Metals only)
B	= Analyte found in the blank (Organics only)
E	= Exceeds calibration

TCLP
METALS
DATA

Bechtel Nevada
NTS273, 2621 Losee Road
Building A-2, Receiving
North Las Vegas, NV 89030-4129

Project: 625.01

Sample Date : 05/06/98
Receipt Date : 05/08/98
Report Date : 05/27/98

Category : TCLP Metals
Matrix : Soil

Client ID: AG-SMP3-E4

Quanterra ID : 17767-001

Analyte	Method	Extract Date	Prep Date	Analyses Date	Result	Units	Qual.	Detection Limit	Regulatory Level	Dilution
Mercury	EPA 7470	05/18/98	05/20/98	05/20/98	0.0004	MG/L	U	0.0008	0.20	4
Arsenic	EPA 6010 -	05/18/98	05/20/98	05/20/98	0.020	MG/L	B	1.2	5.0	4
Barium	EPA 6010 -	05/18/98	05/20/98	05/20/98	0.37	MG/L	B	0.80	100	4
Cadmium	EPA 6010 -	05/18/98	05/20/98	05/20/98	0.0024	MG/L	U	0.020	1.0	4
Chromium	EPA 6010 -	05/18/98	05/20/98	05/20/98	0.012	MG/L	B	0.040	5.0	4
Lead	EPA 6010 -	05/18/98	05/20/98	05/20/98	0.0080	MG/L	B	0.40	5.0	4
Selenium	EPA 6010 -	05/18/98	05/20/98	05/20/98	0.012	MG/L	U	1.0	1.0	4
Silver	EPA 6010 -	05/18/98	05/20/98	05/20/98	0.0041	MG/L	B	0.040	5.0	4

Environmental
Services

Bechtel Nevada
NTS273, 2621 Losee Road
Building A-2, Receiving
North Las Vegas, NV 89030-4129

Project: 625.01

Sample Date : 05/06/98
Receipt Date : 05/08/98
Report Date : 05/27/98

Category : TCLP Metals
Matrix : Soil

Client ID: AG-SMP3-W4

Quanterra ID : 17767-002

Analyte	Method	Extract Date	Prep Date	Analyses Date	Result	Units	Qual.	Detection Limit	Regulatory Level	Dilution
Mercury	EPA 7470	05/18/98	05/20/98	05/20/98	0.0004	MG/L	U	0.0008	0.20	4
Arsenic	EPA 6010 -	05/18/98	05/20/98	05/20/98	0.024	MG/L	B	1.2	5.0	4
Barium	EPA 6010 -	05/18/98	05/20/98	05/20/98	0.18	MG/L	B	0.80	100	4
Cadmium	EPA 6010 -	05/18/98	05/20/98	05/20/98	0.0024	MG/L	U	0.020	1.0	4
Chromium	EPA 6010 -	05/18/98	05/20/98	05/20/98	0.0051	MG/L	B	0.040	5.0	4
Lead	EPA 6010 -	05/18/98	05/20/98	05/20/98	0.0044	MG/L	U	0.40	5.0	4
Selenium	EPA 6010 -	05/18/98	05/20/98	05/20/98	0.012	MG/L	U	1.0	1.0	4
Silver	EPA 6010 -	05/18/98	05/20/98	05/20/98	0.0028	MG/L	U	0.040	5.0	4

Environmental
Services

Bechtel Nevada
NTS273, 2621 Losee Road
Building A-2, Receiving
North Las Vegas, NV 89030-4129

Project: 625.01

Category : TCLP Metals
Matrix : Soil

Sample Date : NA
Receipt Date : NA
Report Date : 05/27/98

Client ID: NA

Quanterra ID : EXTBLK172739-1

Analyte	Method	Extract Date	Prep Date	Analyses Date	Result	Units	Qual.	Detection Limit	Regulatory Level	Dilution
Mercury	EPA 7470	05/18/98	05/20/98	05/20/98	0.0004	MG/L	U	0.0008	0.20	4
Arsenic	EPA 6010	05/18/98	05/20/98	05/20/98	0.0076	MG/L	U	1.2	5.0	4
Barium	EPA 6010	05/18/98	05/20/98	05/20/98	0.0040	MG/L	U	0.80	100	4
Cadmium	EPA 6010	05/18/98	05/20/98	05/20/98	0.0024	MG/L	U	0.020	1.0	4
Chromium	EPA 6010	05/18/98	05/20/98	05/20/98	0.0076	MG/L	B	0.040	5.0	4
Lead	EPA 6010	05/18/98	05/20/98	05/20/98	0.0044	MG/L	U	0.40	5.0	4
Selenium	EPA 6010	05/18/98	05/20/98	05/20/98	0.012	MG/L	U	1.0	1.0	4
Silver	EPA 6010	05/18/98	05/20/98	05/20/98	0.0028	MG/L	U	0.040	5.0	4

Bechtel Nevada
NTS273, 2621 Losee Road
Building A-2, Receiving
North Las Vegas, NV 89030-4129

Project: 625.01

Sample Date : NA
Receipt Date : NA
Report Date : 05/27/98

Category : TCLP ICAP
Matrix : Soil

Client ID: NA

Quanterra ID : QCBK172958-1

Analyte	Method	Extract Date	Prep Date	Analyses Date	Result	Units	Qual.	Detection Limit	Regulatory Level	Dilution
Arsenic	EPA 6010	NA	05/20/98	05/20/98	0.0019	MG/L	U	0.30	5.0	1
Barium	EPA 6010	NA	05/20/98	05/20/98	0.0010	MG/L	U	0.20	100	1
Cadmium	EPA 6010	NA	05/20/98	05/20/98	0.0006	MG/L	B	0.005	1.0	1
Chromium	EPA 6010	NA	05/20/98	05/20/98	0.0008	MG/L	U	0.010	5.0	1
Lead	EPA 6010	NA	05/20/98	05/20/98	0.0028	MG/L	B	0.10	5.0	1
Selenium	EPA 6010	NA	05/20/98	05/20/98	0.0031	MG/L	U	0.25	1.0	1
Silver	EPA 6010	NA	05/20/98	05/20/98	0.0007	MG/L	U	0.010	5.0	1

Environmental
Services

Bechtel Nevada
NTS273, 2621 Losee Road
Building A-2, Receiving
North Las Vegas, NV 89030-4129

Project: 625.01

Sample Date : NA
Receipt Date : NA
Report Date : 05/27/98

Category : TCLP Metals
Matrix : Soil

Client ID: NA

Quanterra ID : DCBLK172908-1

Analyte	Method	Extract Date	Prep Date	Analyses Date	Result	Units	Qual.	Detection Limit	Regulatory Level	Dilution
Mercury	EPA 7470	NA	05/20/98	05/20/98	0.0001	MG/L	U	0.0002	0.20	1

Environmental
Services

Bechtel Nevada
NTS273, 2621 Losee Road
Building A-2, Receiving
North Las Vegas, NV 89030-4129

Project: 625.01

Sample Date : NA
Receipt Date : NA
Report Date : 05/27/98

Quanterra ID : QCLCS172908-1

Category : TCLP Metals
Matrix : Soil

Client ID: NA

Analyte	Method	Extract Date	Prep Date	Analyses Date	Result	Units	Qual.	Detection Limit	Regulatory Level	Dilution
Mercury	EPA 7470	NA	05/20/98	05/20/98	105	%REC				1

Bechtel Nevada
NTS273, 2621 Losee Road
Building A-2, Receiving
North Las Vegas, NV 89030-4129

Project: 625.01

Sample Date : NA
Receipt Date : NA
Report Date : 05/27/98

Category : TCLP ICAP
Matrix : Soil

Client ID: NA

Quanterra ID : QCLCS172958-1

Analyte	Method	Extract Date	Prep Date	Analyses Date	Result	Units	Qual.	Detection Limit	Regulatory Level	Dilution
Arsenic	EPA 6010	NA	05/20/98	05/20/98	100	%REC				1
Barium	EPA 6010	NA	05/20/98	05/20/98	97	%REC				1
Cadmium	EPA 6010	NA	05/20/98	05/20/98	98	%REC				1
Chromium	EPA 6010	NA	05/20/98	05/20/98	98	%REC				1
Lead	EPA 6010	NA	05/20/98	05/20/98	97	%REC				1
Selenium	EPA 6010	NA	05/20/98	05/20/98	99	%REC				1

Bechtel Nevada
NTS273, 2621 Losee Road
Building A-2, Receiving
North Las Vegas, NV 89030-4129

Project: 625.01

Sample Date : NA
Receipt Date : NA
Report Date : 05/27/98

Category : TCLP ICAP
Matrix : Soil

Client ID: NA

Quanterra ID : QCLCS172958-2

Analyte	Method	Extract Date	Prep Date	Analyses Date	Result	Units	Qual.	Detection Limit	Regulatory Level	Dilution
Silver	EPA 6010	NA	05/20/98	05/20/98	101	%REC				1

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: QUANTERRA_MO Contract: 625.01
Lab Code: ITMO Case No.: SAS No.: SDG No.: V411
SOW No.: SW846

[illegible]

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____
Date: _____ Title: _____

TCLP

009002

AG-SMP3-E4

Lab Name: QUANTERRA MO Contract: 625.01

Lab Code: ITMO Case No.: SAS No.: SDG No.: V411

Matrix (soil/water): WATER Lab Sample ID: P17767-001

Level (low/med): LOW Date Received: 05/08/98

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

[illegible]

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments :

FORM I - IN

TCLP

000003

AG-SMP3-W4

Lab Name: QUANTERRA_MO_____ Contract: 625.01_____|_____
Lab Code: ITMO__ Case No.:_____ SAS No.:_____ SDG No.: V411_____
Matrix (soil/water): WATER Lab Sample ID: P17767-002
Level (low/med): LOW__ Date Received: 05/08/98
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

[illegible]

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____
Comments: _____

FORM I - IN

TCLP

000004

Lab Name: QUANTERRA MO Contract: 625.01

PBT172739

Lab Code: ITMO Case No.: SAS No.: SDG No.: V411

Matrix (soil/water): WATER Lab Sample ID: PBT172739

Level (low/med): LOW Date Received: 05/08/98

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

[illegible]

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: Clarity After: Artifacts:

Comments:

FORM I - IN

TCLP

000005

Lab Name: QUANTERRA_MO_____ Contract: 625.01_____
Lab Code: ITMO__ Case No.: _____ SAS No.: _____ SDG No.: V411_____
Initial Calibration Source: SOL/L/SPX/IC
Continuing Calibration Source: SOL+/LL/SPX

[illegible]

000006

000007

CRDL STANDARD FOR AA AND ICP

Contract: 625.01

AA CRDL Standard Source: SPX/SOL+/LL

ICP CRDL Standard Source: SOL+/SPX

Concentration Units: ug/L

[illegible]

FORM II (PART 2) - IN

TCLP

000008

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

[illegible]

ICP INTERFERENCE CHECK SAMPLE

Lab Name: QUANTERRA MO Contract: 625.01

Lab Code: ITMO Case No.: SAS No: SDG No.: V411

ICP ID Number: TJA61E ICS Source: SOL+/SPX

Concentration Units: ug/L

[illegible]

FORM IV - IN

TCLP

000010

LABORATORY CONTROL SAMPLE

Contract: 625.01

Solid LCS Source: _____

Aqueous LCS Source: SOL+/CHEMPUR

000011

LABORATORY CONTROL SAMPLE

Lab Name: QUANTERRA_MO

Contract: 625.01

Lab Code: ITMO_ Case No.: _____

SAS No. : _____

SDG No.: V411_____

Solid LCS Source: _____

Aqueous LCS Source: SOL+/CHEMPUR

[illegible]

FORM VII - IN

TCLP

000012

Lab Name: QUANTERRA_MO_____ Contract: 625.01_____
Lab Code: ITMO_ Case No.: _____ SAS No.: _____ SDG No.: V411_____
Solid LCS Source: _____
Aqueous LCS Source: SOL+/CHEMPUR

[illegible]

Lab Name: QUANTERRA_MO Contract: 625.01
Lab Code: ITMO Case No.: SAS No.: SDG No.: V411
ICP ID Number: TJA61E Date: 10/01/97

[illegible]

Comments:

000016

Lab Name: QUANTERRA_MO Contract: 625.01
Lab Code: ITMO Case No.: SAS No.: SDG No.: V411
ICP ID Number: TJA61E Date: 10/01/97

[illegible]

Comments:

11B

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Name: QUANTERRA MO Contract: 625.01

Lab Code: ITMO Case No.: SAS No.: SDG No.: V411

ICP ID Number: TJA61E Date: 10/01/97

[illegible]

Comments:

FORM XI. (Part 2) - IN

TCLP

000018

Lab Name: QUANTERRA_MO_____ Contract: 625.01_____
Lab Code: ITMO_ Case No.: _____ SAS No.: _____ SDG No.: V411_____
ICP ID Number: TJA61E_____ Date: 04/01/98

[illegible]

Comments:

FORM XII - IN

TCLP

000019

Contract: 625.01

Lab Code: ITMO Case No.: SAS No.: SDG No.: V411

Method: P

[illegible]

FORM XIII - IN

TCLP

000020

Method: CV

[illegible]

TCLP

000021

PROJECT/CLIENT INFORMATION					REPORT INFORMATION					SAMPLE INFORMATION													
Project: <u>A6 DECON FOND CHARACTERIZATION</u> Charge No.: <u>C4USAODE</u> Project Manager: <u>JEFF SMITH</u> Phone: <u>5-7775</u> Fax: <u>5-7761</u> M/S: <u>NTS-306</u>					Send Report to: <u>JEFF SMITH</u> Phone: <u>5-7775</u> Fax: <u>5-7761</u> M/S: <u>NTS-306</u> Turnaround: () Standard - 30 days Non-rad, 60 Days Rad, Other: <u>X</u> Rush Preliminary by: <u>20 MAY 18</u> Final by: <u>06 JUN 18</u> Final report format: () Standard () NTS-WAC <u>X</u> Other: <u>ELECTRONIC IT FORMAT</u>					Sampling Site: <u>A-6 DECON FACILITY</u> The samples submitted contain (check): () Hazardous () Radioactive <u>X</u> Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.													
LAB USE ONLY					ANALYSES & METHOD																		
Rad SGD: Non-Rad SGD: <u>V411</u> Rad Packet: Non-Rad Packet: <u>W1441</u> Client Services Representative: Will these analyses be performed under a signed SOW? () YES () NO If so, do analyses entered here agree with the SOW? () YES () NO () N/A If not, identify the variation _____ CSR initials indicating review and approval: _____ Date: _____					<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TCLP METALS 1311/6010</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">100% Full</div> </div>																		
ITEM		ID / DESCRIPTION		SAMPLING DATE TIME		MATRIX																	
0		AG-SMP3-E4		06 MAY 18 1001		SOIL		X															
1		AG-SMP3-W4		06 MAY 18 1053		SOIL		X															
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
Transfer of samples submitted for analyses										Complete for samples shipped to an OFF-SITE Subcontract Laboratory													
Sampled/Relinquished (Signature/Organization)					DATE / TIME		Received by (Signature/Organization)					Relinquished (BN Representative Signature)					DATE / TIME		Received (Courier & Tracking Info.)				
<u>Daniel R. Cox BN</u>					<u>06 MAY 18 1512</u>		<u>CD Castaneda</u> <u>J. Turner - QA/Spec</u>					<u>CD Castaneda</u>					<u>5/14/18 1300</u>		<u>FADEX #800143075197</u>				
												Relinquished (Courier & Tracking Info.)					DATE / TIME		Received (1st tier Subcontractor Rep)				
												Relinquished (1st tier Subcontractor Rep)					DATE / TIME		Received (2nd tier Subcontractor Rep)				

Distribution: Original - To be retained by laboratory performing final analysis
Copy 1 - To be retained by laboratory performing intermediate analysis
Copy 2 - To be retained by Analytical Services Laboratory
Copy 3 - To be retained by sampler

VOLATILE
ORGANICS
DATA

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Decon W1-1 TB
DATE SAMPLED: 6/1/98
NEL SAMPLE ID: L9806040-01

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous
DILUTION: 1

EXTRACTED: 6/4/98
ANALYZED: 6/4/98

ANALYST: Suzanne

PARAMETER	Result μg/L	Reporting Limit	PARAMETER	Result μg/L	Reporting Limit
Acetone	ND	25. μg/L			
Benzene	ND	5. μg/L			
Bromodichloromethane	ND	5. μg/L			
Bromoform	ND	5. μg/L			
Bromomethane	ND	5. μg/L			
2-Butanone	ND	25. μg/L			
Carbon disulfide	ND	5. μg/L			
Carbon tetrachloride	ND	5. μg/L			
Chlorobenzene	ND	5. μg/L			
Chloroethane	ND	5. μg/L			
Chloroform	ND	5. μg/L			
Chloromethane	ND	5. μg/L			
Dibromochloromethane	ND	5. μg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5. μg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5. μg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5. μg/L			
cis-1,2-Dichloroethene	ND	5. μg/L			
trans-1,2-Dichloroethene	ND	5. μg/L			
1,2-Dichloropropane	ND	5. μg/L			
cis-1,3-Dichloropropene	ND	5. μg/L			
trans-1,3-Dichloropropene	ND	5. μg/L			
Ethylbenzene	ND	5. μg/L			
2-Hexanone	ND	25. μg/L			
Methylene chloride (Dichloromethane)	ND	5. μg/L			
4-Methyl-2-pentanone	ND	25. μg/L			
Styrene	ND	5. μg/L			
1,1,2,2-Tetrachloroethane	ND	5. μg/L			
Tetrachloroethene (PCE)	ND	5. μg/L			
Toluene	ND	5. μg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. μg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. μg/L			
Trichloroethene (TCE)	ND	5. μg/L			
Vinyl chloride	ND	5. μg/L			
o-Xylene	ND	5. μg/L			
m,p-Xylene	ND	5. μg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	103	70 - 130
Dibromofluoromethane	104	70 - 130
Tri-n-butylbenzene-d8	105	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Decon W1-1 A&B
DATE SAMPLED: 6/1/98
NEL SAMPLE ID: L9806040-02

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/4/98
ANALYZED: 6/4/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25. µg/kg			
Benzene	ND Js	5. µg/kg			
Bromodichloromethane	ND Js	5. µg/kg			
Bromoform	ND Js	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	25. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	6 Js	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND Js	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND Js	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND Js	5. µg/kg			
cis-1,3-Dichloropropene	ND Js	5. µg/kg			
trans-1,3-Dichloropropene	ND Js	5. µg/kg			
Ethylbenzene	ND Js	5. µg/kg			
2-Hexanone	ND Js	25. µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND Js	25. µg/kg			
Styrene	ND Js	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND Js	5. µg/kg			
Tetrachloroethene (PCE)	ND Js	5. µg/kg			
Toluene	ND Js	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND Js	5. µg/kg			
Trichloroethene (TCE)	ND Js	5. µg/kg			
Vinyl chloride	ND Js	5. µg/kg			
o-Xylene	ND Js	5. µg/kg			
m,p-Xylene	ND Js	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate

% Recovery

Acceptable Range

4-Bromofluorobenzene
Dibromofluoromethane
Toluene-d8

67
110
80

74 - 121
80 - 120
81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Decon P1-1 A&B
DATE SAMPLED: 6/1/98
NEL SAMPLE ID: L9806040-07

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/4/98
ANALYZED: 6/4/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25. µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	25. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	25. µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	25. µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	5. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	96	74 - 121
Dibromofluoromethane	85	80 - 120
Trichloroethene-d8	97	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Decon P2-1 A&B
DATE SAMPLED: 6/1/98
NEL SAMPLE ID: L9806040-12

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/4/98
ANALYZED: 6/4/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25. µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	25. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	25. µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	25. µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	5. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	100	74 - 121
Dibromofluoromethane	94	80 - 120
Toluene-d8	101	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9806042W60-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996
MATRIX: Aqueous

EXTRACTED: 6/4/98
ANALYZED: 6/4/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25 µg/L			
Benzene	ND	5 µg/L			
Bromodichloromethane	ND	5 µg/L			
Bromoform	ND	5 µg/L			
Bromomethane	ND	5 µg/L			
2-Butanone	ND	25 µg/L			
Carbon disulfide	ND	5 µg/L			
Carbon tetrachloride	ND	5 µg/L			
Chlorobenzene	ND	5 µg/L			
Chloroethane	ND	5 µg/L			
Chloroform	ND	5 µg/L			
Chloromethane	ND	5 µg/L			
Dibromochloromethane	ND	5 µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L			
cis-1,2-Dichloroethene	ND	5 µg/L			
trans-1,2-Dichloroethene	ND	5 µg/L			
1,1-Dichloropropane	ND	5 µg/L			
cis-1,3-Dichloropropene	ND	5 µg/L			
trans-1,3-Dichloropropene	ND	5 µg/L			
Ethylbenzene	ND	5 µg/L			
2-Hexanone	ND	25 µg/L			
Methylene chloride (Dichloromethane)	ND	5 µg/L			
4-Methyl-2-pentanone	ND	25 µg/L			
Styrene	ND	5 µg/L			
1,1,2,2-Tetrachloroethane	ND	5 µg/L			
Tetrachloroethene (PCE)	ND	5 µg/L			
Toluene	ND	5 µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L			
Trichloroethene (TCE)	ND	5 µg/L			
Vinyl chloride	ND	5 µg/L			
o-Xylene	ND	5 µg/L			
m,p-Xylene	ND	5 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	95	70 - 130
Dibromofluoromethane	101	70 - 130
Toluene-d8	102	70 - 130

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 980604S160B-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996
MATRIX: Solid

EXTRACTED: 6/4/98
ANALYZED: 6/4/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25 µg/kg			
Benzene	ND	5 µg/kg			
Bromodichloromethane	ND	5 µg/kg			
Bromoform	ND	5 µg/kg			
Bromomethane	ND	5 µg/kg			
2-Butanone	ND	25 µg/kg			
Carbon disulfide	ND	5 µg/kg			
Carbon tetrachloride	ND	5 µg/kg			
Chlorobenzene	ND	5 µg/kg			
Chloroethane	ND	5 µg/kg			
Chloroform	ND	5 µg/kg			
Chloromethane	ND	5 µg/kg			
Dibromochloromethane	ND	5 µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg			
cis-1,2-Dichloroethene	ND	5 µg/kg			
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
cis-1,3-Dichloropropene	ND	5 µg/kg			
trans-1,3-Dichloropropene	ND	5 µg/kg			
Ethylbenzene	ND	5 µg/kg			
2-Hexanone	ND	25 µg/kg			
Methylene chloride (Dichloromethane)	ND	5 µg/kg			
4-Methyl-2-pentanone	ND	25 µg/kg			
Styrene	ND	5 µg/kg			
1,1,2,2-Tetrachloroethane	ND	5 µg/kg			
Tetrachloroethene (PCE)	ND	5 µg/kg			
Toluene	ND	5 µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg			
Trichloroethene (TCE)	ND	5 µg/kg			
Vinyl chloride	ND	5 µg/kg			
o-Xylene	ND	5 µg/kg			
m,p-Xylene	ND	5 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	100	74 - 121
Dibromofluoromethane	93	80 - 120
Toluene-d8	91	81 - 117

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**SEMI-VOLATILE
ORGANICS
DATA**

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Decon W1-2
DATE SAMPLED: 6/1/98
NEL SAMPLE ID: L9806040-03

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid
DILUTION: 10

EXTRACTED: 6/8/98
ANALYZED: 6/9/98

ANALYST: JDG

PARAMETER	Result µg/Kg	Reporting Limit	PARAMETER	Result µg/Kg	Reporting Limit
Acenaphthene	ND	5000. µg/Kg	4,6-Dinitro-2-methyl phenol	ND	25000. µg/Kg
Acenaphthylene	ND	5000. µg/Kg	2,4-Dinitrotoluene (DNT)	ND	5000. µg/Kg
Anthracene	ND	5000. µg/Kg	2,6-Dinitrotoluene (DNT)	ND	5000. µg/Kg
Benzo (a) anthracene	ND	5000. µg/Kg	2,4-Dinitrophenol	ND	25000. µg/Kg
Benzo (b&k) fluoranthene	ND	5000. µg/Kg	Di-n-octyl phthalate	ND	5000. µg/Kg
Benzo (b) fluoranthene	ND	500. µg/kg	Fluoranthene	ND	5000. µg/Kg
Benzo (k) fluoranthene	ND	500. µg/kg	Fluorene	ND	5000. µg/Kg
Benzoic Acid	ND	2500. µg/kg	Hexachlorobenzene	ND	5000. µg/Kg
Benzo (g,h,i) perylene	ND	5000. µg/Kg	Hexachlorobutadiene	ND	5000. µg/Kg
Benzo (a) pyrene	ND	5000. µg/Kg	Hexachlorocyclopentadiene	ND	5000. µg/Kg
Benzyl alcohol	ND	1000. µg/kg	Hexachloroethane	ND	5000. µg/Kg
bis (2-Chloroethyl) ether	ND	5000. µg/Kg	Indeno (1,2,3-c,d) pyrene	ND	5000. µg/Kg
bis (2-Chloroethoxy) methane	ND	5000. µg/Kg	Isophorone	ND	5000. µg/Kg
bis (2-chloroisopropyl) ether	ND	5000. µg/Kg	2-Methylnaphthalene	ND	5000. µg/Kg
bis (2-Ethylhexyl)phthalate	1600	5000. µg/Kg	2-Methylphenol	ND	5000. µg/Kg
Butylbenzylphthalate	ND	5000. µg/Kg	4-Methylphenol	ND	5000. µg/Kg
4-Bromophenyl phenyl ether	ND	5000. µg/Kg	Naphthalene	ND	5000. µg/Kg
Carbazole	ND	5000. µg/Kg	2-Nitroaniline	ND	25000. µg/Kg
4-Chloroaniline	ND	10000. µg/Kg	3-Nitroaniline	ND	25000. µg/Kg
4-Chloro-3-methyl phenol	ND	10000. µg/Kg	4-Nitroaniline	ND	10000. µg/Kg
2-Chloronaphthalene	ND	5000. µg/Kg	Nitrobenzene	ND	5000. µg/Kg
2-Chlorophenol	ND	5000. µg/Kg	2-Nitrophenol	ND	5000. µg/Kg
4-Chlorophenyl phenyl ether	ND	5000. µg/Kg	4-Nitrophenol	ND	25000. µg/Kg
Chrysene	ND	5000. µg/Kg	N-Nitrosodi-n-propylamine	ND	5000. µg/Kg
Dibenzo (a,h) anthracene	ND	5000. µg/Kg	N-Nitroso-Diethylamine	ND	5000. µg/Kg
Dibenzofuran	ND	5000. µg/Kg	N-Nitrosodiphenylamine	ND	5000. µg/Kg
Di-n-butyl phthalate	ND	5000. µg/Kg	Pentachlorophenol	ND	25000. µg/Kg
1,2-Dichlorobenzene (o-DCB)	ND	5000. µg/Kg	Phenol	ND	5000. µg/Kg
1,3-Dichlorobenzene (m-DCB)	ND	5000. µg/Kg	Phenanthrene	ND	5000. µg/Kg
1,4-Dichlorobenzene (p-DCB)	ND	5000. µg/Kg	Pyrene	ND	5000. µg/Kg
2,4-Dichlorophenol	ND	5000. µg/Kg	1,2,4-Trichlorobenzene	ND	5000. µg/Kg
3,3'-Dichlorobenzidine	ND	10000. µg/Kg	2,4,5-Trichlorophenol	ND	5000. µg/Kg
Diethylphthalate	ND	5000. µg/Kg	2,4,6-Trichlorophenol	ND	5000. µg/Kg
2,4-Dimethylphenol	ND	5000. µg/Kg			
Dimethylphthalate	ND	5000. µg/Kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	89	19 - 122
2-Fluorobiphenyl	77	30 - 115
2-Fluorophenol	70	25 - 121
Nitrobenzene-d5	85	23 - 120
p-Terphenyl-d14	63	18 - 137
Phenol-d5	87	24 - 113

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Decon P1-2
DATE SAMPLED: 6/1/98
NEL SAMPLE ID: L9806040-08

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/8/98
ANALYZED: 6/9/98

ANALYST: JDG

PARAMETER	Result µg/Kg	Reporting Limit	PARAMETER	Result µg/Kg	Reporting Limit
Acenaphthene	ND	500. µg/Kg	4,6-Dinitro-2-methyl phenol	ND	2500. µg/Kg
Acenaphthylene	ND	500. µg/Kg	2,4-Dinitrotoluene (DNT)	ND	500. µg/Kg
Anthracene	ND	500. µg/Kg	2,6-Dinitrotoluene (DNT)	ND	500. µg/Kg
Benzo (a) anthracene	ND	500. µg/Kg	2,4-Dinitrophenol	ND	2500. µg/Kg
Benzo (b&k) fluoranthene	ND	500. µg/Kg	Di-n-octyl phthalate	ND	500. µg/Kg
Benzo (b) fluoranthene	ND	500. µg/kg	Fluoranthene	ND	500. µg/Kg
Benzo (k) fluoranthene	ND	500. µg/kg	Fluorene	ND	500. µg/Kg
Benzoic Acid	ND	2500. µg/kg	Hexachlorobenzene	ND	500. µg/Kg
Benzo (g,h,i) perylene	ND	500. µg/Kg	Hexachlorobutadiene	ND	500. µg/Kg
Benzo (a) pyrene	ND	500. µg/Kg	Hexachlorocyclopentadiene	ND	500. µg/Kg
Benzyl alcohol	ND	1000. µg/kg	Hexachloroethane	ND	500. µg/Kg
bis (2-Chloroethyl) ether	ND	500. µg/Kg	Indeno (1,2,3-c,d) pyrene	ND	500. µg/Kg
bis (2-Chloroethoxy) methane	ND	500. µg/Kg	Isophorone	ND	500. µg/Kg
bis (2-chloroisopropyl) ether	ND	500. µg/Kg	2-Methylnaphthalene	ND	500. µg/Kg
bis (2-Ethylhexyl)phthalate	ND	500. µg/Kg	2-Methylphenol	ND	500. µg/Kg
Butylbenzylphthalate	ND	500. µg/Kg	4-Methylphenol	ND	500. µg/Kg
4-Bromophenyl phenyl ether	ND	500. µg/Kg	Naphthalene	ND	500. µg/Kg
Carbazole	ND	500. µg/Kg	2-Nitroaniline	ND	2500. µg/Kg
4-Chloroaniline	ND	1000. µg/Kg	3-Nitroaniline	ND	2500. µg/Kg
4-Chloro-3-methyl phenol	ND	1000. µg/Kg	4-Nitroaniline	ND	1000. µg/Kg
2-Chloronaphthalene	ND	500. µg/Kg	Nitrobenzene	ND	500. µg/Kg
2-Chlorophenol	ND	500. µg/Kg	2-Nitrophenol	ND	500. µg/Kg
4-Chlorophenyl phenyl ether	ND	500. µg/Kg	4-Nitrophenol	ND	2500. µg/Kg
Chrysene	ND	500. µg/Kg	N-Nitrosodi-n-propylamine	ND	500. µg/Kg
Dibenzo (a,h) anthracene	ND	500. µg/Kg	N-Nitroso-Diethylamine	ND	500. µg/Kg
Dibenzofuran	ND	500. µg/Kg	N-Nitrosodiphenylamine	ND	500. µg/Kg
Di-n-butyl phthalate	ND	500. µg/Kg	Pentachlorophenol	ND	2500. µg/Kg
1,2-Dichlorobenzene (o-DCB)	ND	500. µg/Kg	Phenol	ND	500. µg/Kg
1,3-Dichlorobenzene (m-DCB)	ND	500. µg/Kg	Phenanthrene	ND	500. µg/Kg
1,4-Dichlorobenzene (p-DCB)	ND	500. µg/Kg	Pyrene	ND	500. µg/Kg
2,4-Dichlorophenol	ND	500. µg/Kg	1,2,4-Trichlorobenzene	ND	500. µg/Kg
3,3'-Dichlorobenzidine	ND	1000. µg/Kg	2,4,5-Trichlorophenol	ND	500. µg/Kg
Diethylphthalate	ND	500. µg/Kg	2,4,6-Trichlorophenol	ND	500. µg/Kg
2,4-Dimethylphenol	ND	500. µg/Kg			
Dimethylphthalate	ND	500. µg/Kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	72	19 - 122
2-Fluorobiphenyl	64	30 - 115
2-Fluorophenol	62	25 - 121
Nitrobenzene-d5	66	23 - 120
p-Terphenyl-d14	80	18 - 137
Phenol-d5	71	24 - 113

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Decon P2-2
DATE SAMPLED: 6/1/98
NEL SAMPLE ID: L9806040-13

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/8/98
ANALYZED: 6/9/98

ANALYST: JDG

PARAMETER	Result µg/Kg	Reporting Limit	PARAMETER	Result µg/Kg	Reporting Limit
Acenaphthene	ND	500. µg/Kg	4,6-Dinitro-2-methyl phenol	ND	2500. µg/Kg
Acenaphthylene	ND	500. µg/Kg	2,4-Dinitrotoluene (DNT)	ND	500. µg/Kg
Anthracene	ND	500. µg/Kg	2,6-Dinitrotoluene (DNT)	ND	500. µg/Kg
Benzo (a) anthracene	ND	500. µg/Kg	2,4-Dinitrophenol	ND	2500. µg/Kg
Benzo (b&k) fluoranthene	ND	500. µg/Kg	Di-n-octyl phthalate	ND	500. µg/Kg
Benzo (b) fluoranthene	ND	500. µg/Kg	Fluoranthene	ND	500. µg/Kg
Benzo (k) fluoranthene	ND	500. µg/Kg	Fluorene	ND	500. µg/Kg
Benzoic Acid	ND	2500. µg/Kg	Hexachlorobenzene	ND	500. µg/Kg
Benzo (g,h,i) perylene	ND	500. µg/Kg	Hexachlorobutadiene	ND	500. µg/Kg
Benzo (a) pyrene	ND	500. µg/Kg	Hexachlorocyclopentadiene	ND	500. µg/Kg
Benzyl alcohol	ND	1000. µg/Kg	Hexachloroethane	ND	500. µg/Kg
bis (2-Chloroethyl) ether	ND	500. µg/Kg	Indeno (1,2,3-c,d) pyrene	ND	500. µg/Kg
bis (2-Chloroethoxy) methane	ND	500. µg/Kg	Isophorone	ND	500. µg/Kg
bis (2-chloroisopropyl) ether	ND	500. µg/Kg	2-Methylnaphthalene	ND	500. µg/Kg
bis (2-Ethylhexyl)phthalate	ND	500. µg/Kg	2-Methylphenol	ND	500. µg/Kg
Butylbenzylphthalate	ND	500. µg/Kg	4-Methylphenol	ND	500. µg/Kg
4-Bromophenyl phenyl ether	ND	500. µg/Kg	Naphthalene	ND	500. µg/Kg
Carbazole	ND	500. µg/Kg	2-Nitroaniline	ND	2500. µg/Kg
4-Chloroaniline	ND	1000. µg/Kg	3-Nitroaniline	ND	2500. µg/Kg
4-Chloro-3-methyl phenol	ND	1000. µg/Kg	4-Nitroaniline	ND	1000. µg/Kg
2-Chloronaphthalene	ND	500. µg/Kg	Nitrobenzene	ND	500. µg/Kg
2-Chlorophenol	ND	500. µg/Kg	2-Nitrophenol	ND	500. µg/Kg
4-Chlorophenyl phenyl ether	ND	500. µg/Kg	4-Nitrophenol	ND	2500. µg/Kg
Chrysene	ND	500. µg/Kg	N-Nitrosodi-n-propylamine	ND	500. µg/Kg
Dibenzo (a,h) anthracene	ND	500. µg/Kg	N-Nitroso-Diethylamine	ND	500. µg/Kg
Dibenzofuran	ND	500. µg/Kg	N-Nitrosodiphenylamine	ND	500. µg/Kg
Di-n-butyl phthalate	ND	500. µg/Kg	Pentachlorophenol	ND	2500. µg/Kg
1,2-Dichlorobenzene (o-DCB)	ND	500. µg/Kg	Phenol	ND	500. µg/Kg
1,3-Dichlorobenzene (m-DCB)	ND	500. µg/Kg	Phenanthrene	ND	500. µg/Kg
1,4-Dichlorobenzene (p-DCB)	ND	500. µg/Kg	Pyrene	ND	500. µg/Kg
2,4-Dichlorophenol	ND	500. µg/Kg	1,2,4-Trichlorobenzene	ND	500. µg/Kg
3,3'-Dichlorobenzidine	ND	1000. µg/Kg	2,4,5-Trichlorophenol	ND	500. µg/Kg
Diethylphthalate	ND	500. µg/Kg	2,4,6-Trichlorophenol	ND	500. µg/Kg
2,4-Dimethylphenol	ND	500. µg/Kg			
Dimethylphthalate	ND	500. µg/Kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	86	19 - 122
2-Fluorobiphenyl	78	30 - 115
2-Fluorophenol	68	25 - 121
Nitrobenzene-d5	75	23 - 120
p-Terphenyl-d14	93	18 - 137
Phenol-d5	78	24 - 113

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 060898-8270-BLK

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/8/98

ANALYZED: 6/9/98

PARAMETER	Result µg/Kg	Reporting Limit	PARAMETER	Result µg/Kg	Reporting Limit
Acenaphthene	ND	500 µg/Kg	Di-n-octyl phthalate	ND	500 µg/Kg
Acenaphthylene	ND	500 µg/Kg	Fluoranthene	ND	500 µg/Kg
Anthracene	ND	500 µg/Kg	Fluorene	ND	500 µg/Kg
Benzo (a) anthracene	ND	500 µg/Kg	Hexachlorobenzene	ND	500 µg/Kg
Benzo (b&k) fluoranthene	ND	500 µg/Kg	Hexachlorobutadiene	ND	500 µg/Kg
Benzo (g,h,i) perylene	ND	500 µg/Kg	Hexachlorocyclopentadiene	ND	500 µg/Kg
Benzo (a) pyrene	ND	500 µg/Kg	Hexachloroethane	ND	500 µg/Kg
bis (2-Chloroethyl) ether	ND	500 µg/Kg	Indeno (1,2,3-c,d) pyrene	ND	500 µg/Kg
bis (2-Chloroethoxy) methane	ND	500 µg/Kg	Isophorone	ND	500 µg/Kg
bis (2-chloroisopropyl) ether	ND	500 µg/Kg	2-Methylnaphthalene	ND	500 µg/Kg
bis (2-Ethylhexyl)phthalate	ND	500 µg/Kg	2-Methylphenol	ND	500 µg/Kg
Butylbenzylphthalate	ND	500 µg/Kg	4-Methylphenol	ND	500 µg/Kg
4-Bromophenyl phenyl ether	ND	500 µg/Kg	Naphthalene	ND	500 µg/Kg
Carbazole	ND	500 µg/Kg	2-Nitroaniline	ND	2500 µg/Kg
4-Chloroaniline	ND	1000 µg/Kg	3-Nitroaniline	ND	2500 µg/Kg
4-Chloro-3-methyl phenol	ND	1000 µg/Kg	4-Nitroaniline	ND	1000 µg/Kg
2-Chloronaphthalene	ND	500 µg/Kg	Nitrobenzene	ND	500 µg/Kg
2-Chlorophenol	ND	500 µg/Kg	2-Nitrophenol	ND	500 µg/Kg
4-Chlorophenyl phenyl ether	ND	500 µg/Kg	4-Nitrophenol	ND	2500 µg/Kg
Chrysene	ND	500 µg/Kg	N-Nitrosodi-n-propylamine	ND	500 µg/Kg
Dibenzo (a,h) anthracene	ND	500 µg/Kg	N-Nitroso-Diethylamine	ND	500 µg/Kg
Dibenzofuran	ND	500 µg/Kg	N-Nitrosodiphenylamine	ND	500 µg/Kg
Di-n-butyl phthalate	ND	500 µg/Kg	Pentachlorophenol	ND	2500 µg/Kg
1,2-Dichlorobenzene (o-DCB)	ND	500 µg/Kg	Phenol	ND	500 µg/Kg
1,3-Dichlorobenzene (m-DCB)	ND	500 µg/Kg	Phenanthrene	ND	500 µg/Kg
1,4-Dichlorobenzene (p-DCB)	ND	500 µg/Kg	Pyrene	ND	500 µg/Kg
2,4-Dichlorophenol	ND	500 µg/Kg	1,2,4-Trichlorobenzene	ND	500 µg/Kg
3,3'-Dichlorobenzidine	ND	1000 µg/Kg	2,4,5-Trichlorophenol	ND	500 µg/Kg
Diethylphthalate	ND	500 µg/Kg	2,4,6-Trichlorophenol	ND	500 µg/Kg
2,4-Dimethylphenol	ND	500 µg/Kg			
Dimethylphthalate	ND	500 µg/Kg			
4,6-Dinitro-2-methyl phenol	ND	2500 µg/Kg			
2,4-Dinitrotoluene (DNT)	ND	500 µg/Kg			
2,6-Dinitrotoluene (DNT)	ND	500 µg/Kg			
2,4-Dinitrophenol	ND	2500 µg/Kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	85	19 - 122
2-Fluorobiphenyl	67	30 - 115
2-Fluorophenol	60	25 - 121
Nitrobenzene-d5	66	23 - 120
p-Terphenyl-d14	85	18 - 137
Phenol-d5	70	24 - 113

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**POLYCHLORINATED
BIPHENYLS
DATA**

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Decon W1-3
DATE SAMPLED: 6/1/98
NEL SAMPLE ID: L9806040-04

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/10/98

DILUTION: 1

ANALYZED: 6/12/98

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1016	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1242	ND	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1254	29 µg/kg	20. µg/kg
Arochlor-1260	ND	20. µg/kg

ND - Not Detected

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	102	70 - 130
Tetrachloro-m-xylene	91	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Decon P1-3
DATE SAMPLED: 6/1/98
NEL SAMPLE ID: L9806040-09

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/10/98
ANALYZED: 6/12/98

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1016	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1242	ND	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1254	ND	20. µg/kg
Arochlor-1260	ND	20. µg/kg

ND - Not Detected

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	112	70 - 130
Tetrachloro-m-xylene	104	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Decon P2-3
DATE SAMPLED: 6/1/98
NEL SAMPLE ID: L9806040-14

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/10/98

DILUTION: 1

ANALYZED: 6/12/98

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1016	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1242	ND	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1254	ND	20. µg/kg
Arochlor-1260	ND	20. µg/kg

ND - Not Detected

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	113	70 - 130
Tetrachloro-m-xylene	106	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 980610s8082-BK

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/10/98

ANALYZED: 6/12/98

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1016	ND	20 µg/kg
Arochlor-1221	ND	20 µg/kg
Arochlor-1232	ND	20 µg/kg
Arochlor-1242	ND	20 µg/kg
Arochlor-1248	ND	20 µg/kg
Arochlor-1254	ND	20 µg/kg
Arochlor-1260	ND	20 µg/kg

ND - Not Detected

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	107	70 - 130
Tetrachloro-m-xylene	92	70 - 130

**TOTAL
PETROLEUM
HYDROCARBON
DATA**

NEL LABORATORIES

CLIENT: Bechtel Nevada

PROJECT NAME: V427

PROJECT NUMBER: 17777

TEST: Total Extractable Petroleum Hydrocarbons by EPA Method 8015M, July 1992

METHOD: EPA 8015M

MATRIX: Solid

ANALYST: Suzanne

CLIENT	SAMPLE	NEL	RESULT		Reporting	Surrogate		
<u>SAMPLE ID</u>	<u>DATE</u>	<u>SAMPLE ID</u>	<u>mg/kg</u>	<u>C.R.</u>	<u>Limit</u>	<u>Recovery*</u>	<u>EXTRACTED</u>	<u>ANALYZED</u>
Decon W1-4 A&B	6/1/98	L9806040-05	2400	O	30. mg/kg	90 %	6/10/98	6/11/98

CR: Carbon Range

O Oil Range Organics (C12 to C38).

Note: The reporting limit for Oil Range Organics in soil is 50 mg/kg.

QUALITY CONTROL DATA (Total for Gas and Diesel Range):

<u>Sample ID</u>	<u>Result</u>	<u>Acceptable Range</u>	<u>Surrogate Recovery*</u>	<u>Sample Number</u>
Blank, 980610TPH-BLK	ND	< 10. mg/kg	109 %	NA
L 980610TP - LCS	82 %	55 - 102 %	104 %	NA

ND - Not Detected

*Surrogate used was Octacosane, acceptance limits 54-130% for solids, 60-121% for aqueous samples

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

TEST: Total Extractable Petroleum Hydrocarbons by EPA Method 8015M, July 1992
METHOD: EPA 8015M
MATRIX: Solid

ANALYST: Suzanne

CLIENT SAMPLE ID	SAMPLE DATE	NEL SAMPLE ID	RESULT mg/kg	C.R.	Reporting Limit	Surrogate Recovery*	EXTRACTED	ANALYZED
Decon P1-4 A&B	6/1/98	L9806040-10	ND		10. mg/kg	70 %	6/9/98	6/10/98 6/11/98
Decon P2-4 A&B	6/1/98	L9806040-15	ND		10. mg/kg	80 %	6/9/98	6/10/98 6/11/98 <i>re</i>

CR: Carbon Range

O Oil Range Organics (C12 to C38).

Note: The reporting limit for Oil Range Organics in soil is 50 mg/kg.

QUALITY CONTROL DATA (Total for Gas and Diesel Range):

Sample ID	Result	Acceptable Range	Surrogate Recovery*	Sample Number
Blank, 980609TPH-BLK	ND	< 10. mg/kg	67 %	NA
LCS, 980609TP - LCS	57 %	55 - 102 %	69 %	NA

ND - Not Detected

*Surrogate used was Octacosane, acceptance limits 54-130% for solids, 60-121% for aqueous samples

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TCLP
METALS
(minus Mercury)
DATA

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Decon W1-5
DATE SAMPLED: 6/1/98
NEL SAMPLE ID: L9806040-06

TEST: TCLP by EPA 1311, July 1992 & 7 Metals by EPA 6010A, July 1992
MATRIX: Solid

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	TCLP/STLC EXTRACTION		
					DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Barium	ND	1. mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Cadmium	0.014	0.01 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Chromium	ND	0.01 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Lead	0.20	0.05 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Selenium	ND	0.1 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Silver	ND	0.02 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Decon P1-5
DATE SAMPLED: 6/1/98
NEL SAMPLE ID: L9806040-11

TEST: TCLP by EPA 1311, July 1992 & 7 Metals by EPA 6010A, July 1992
MATRIX: Solid

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	TCLP/STLC EXTRACTION		
					DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Barium	ND	1. mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Cadmium	ND	0.01 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Chromium	ND	0.01 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Lead	ND	0.05 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Selenium	ND	0.1 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Silver	ND	0.02 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Decon P2-5
DATE SAMPLED: 6/1/98
NEL SAMPLE ID: L9806040-16

TEST: TCLP by EPA 1311, July 1992 & 7 Metals by EPA 6010A, July 1992
MATRIX: Solid

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	TCLP/STLC EXTRACTION		
					DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Barium	ND	1. mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Cadmium	ND	0.01 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Chromium	ND	0.01 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Lead	ND	0.05 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Selenium	ND	0.1 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98
Silver	ND	0.02 mg/L	1	EPA 6010A	6/4/98	6/5/98	6/5/98

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V427
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: L060401-BLK

TEST: TCLP by EPA 1311, July 1992 & 7 Metals by EPA 6010A, July 1992
MATRIX: TCLP Extract

PARAMETER	RESULT	REPORTING		D. F.	TCLP/STLC EXTRACTION		
		LIMIT			METHOD	DATE	DIGESTED ANALYZED
Arsenic	ND	0.1mg/L	1		EPA 6010A	6/4/98	6/5/98
Barium	ND	1mg/L	1		EPA 6010A	6/4/98	6/5/98
Cadmium	ND	0.01mg/L	1		EPA 6010A	6/4/98	6/5/98
Chromium	ND	0.01mg/L	1		EPA 6010A	6/4/98	6/5/98
Lead	ND	0.05mg/L	1		EPA 6010A	6/4/98	6/5/98
Selenium	ND	0.1mg/L	1		EPA 6010A	6/4/98	6/5/98
Silver	ND	0.02mg/L	1		EPA 6010A	6/4/98	6/5/98

D.F. - Dilution Factor

ND - Not Detected

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SDG B429

RADIOANALYTICAL

RESULTS

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 1

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B429
Batch: 0816
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON P1-6	K 40	GAM20	2.35E+01	2.0E+01		8.5E-01	pCi/g	06-02-98	06-01-98	5.95E+02	gm	SOIL G			05-01	G9099-1-75071
DECON P1-6	RA226	GAM20	1.06E+00	3.2E+01		1.5E-01	pCi/g	06-02-98	06-01-98	5.95E+02	gm	SOIL G			05-01	G9099-1-75071
DECON P1-6	TH228	GAM20	2.44E+00	1.9E+01		1.7E-01	pCi/g	06-02-98	06-01-98	5.95E+02	gm	SOIL G			05-01	G9099-1-75071
DECON P1-6	TH232	GAM20	2.32E+00	3.0E+01		3.2E-01	pCi/g	06-02-98	06-01-98	5.95E+02	gm	SOIL G			05-01	G9099-1-75071
DECON P2-6	CS137	GAM20	2.10E-01	4.9E+01		8.4E-02	pCi/g	06-02-98	06-01-98	6.70E+02	gm	SOIL G			05-01	G9099-2-75073
DECON P2-6	K 40	GAM20	2.26E+01	2.0E+01		8.3E-01	pCi/g	06-02-98	06-01-98	6.70E+02	gm	SOIL G			05-01	G9099-2-75073
DECON P2-6	RA226	GAM20	1.30E+00	2.8E+01		1.7E-01	pCi/g	06-02-98	06-01-98	6.70E+02	gm	SOIL G			05-01	G9099-2-75073
DECON P2-6	TH228	GAM20	2.75E+00	1.7E+01		1.6E-01	pCi/g	06-02-98	06-01-98	6.70E+02	gm	SOIL G			05-01	G9099-2-75073
DECON P2-6	TH232	GAM20	1.91E+00	3.4E+01		3.1E-01	pCi/g	06-02-98	06-01-98	6.70E+02	gm	SOIL G			05-01	G9099-2-75073
DECON W1-6	CO60	GAM20	1.74E+00	2.2E+01		9.9E-02	pCi/g	06-02-98	06-01-98	3.80E+02	gm	SOIL G			05-01	G9099-0-75069

Comment:

Data generated from analyses of samples submitted on 6/2/98.
Gross alpha and gross beta determinations are performed on
small aliquots. Data may not represent the sample as a whole.

Prepared by:

Date: 7-6-98

Approved by:

Date: 7/6/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 2

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B429
Batch: 0816
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON W1-6	CS137	GAM20	1.64E+01	1.1E+01		9.0E-02	pCi/g	06-02-98	06-01-98	3.80E+02	gm	SOIL G			05-01	G9099-0-75069
DECON W1-6	K 40	GAM20	7.37E+00	3.2E+01		9.2E-01	pCi/g	06-02-98	06-01-98	3.80E+02	gm	SOIL G			05-01	G9099-0-75069
DECON W1-6	RA226	GAM20	7.96E-01	3.4E+01		1.8E-01	pCi/g	06-02-98	06-01-98	3.80E+02	gm	SOIL G			05-01	G9099-0-75069
DECON W1-6	TH228	GAM20	7.92E-01	4.3E+01		1.4E-01	pCi/g	06-02-98	06-01-98	3.80E+02	gm	SOIL G			05-01	G9099-0-75069
DECON W1-6	TH232	GAM20	6.46E-01	7.7E+01		2.6E-01	pCi/g	06-02-98	06-01-98	3.80E+02	gm	SOIL G			05-01	G9099-0-75069
QA BKG EMPTY BTL U05	No Nucl Det	GAM20	0.00E+00	0.0E+00	U	0.0E+00	NA	06-02-98	07-01-95	1.00E+00	544 gm P2	QUAL			05-01	Q0539-0-00200
QA BKG EMPTY BTL U05	AM241	GAM20	0.00E+00	0.0E+00	U	2.4E+01	pCi	06-02-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00200
QA BKG EMPTY BTL U05	CO60	GAM20	0.00E+00	0.0E+00	U	9.9E+00	pCi	06-02-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00200
QA BKG EMPTY BTL U05	CS137	GAM20	0.00E+00	0.0E+00	U	8.0E+00	pCi	06-02-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00200
QA SP:NAS-A0271	AM241	GAM20	1.82E+05	8.8E+00		3.0E+02	pCi	06-02-98	04-01-92	1.00E+00	sm	QUAL		112.1	05-01	Q0534-3-14370

Comment:

Data generated from analyses of samples submitted on 6/2/98.
Gross alpha and gross beta determinations are performed on
small aliquots. Data may not represent the sample as a whole.

Prepared by:

[Signature]

Date:

7-6-98

Approved by:

[Signature]

Date:

7/6/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Becntel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 3

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B429
Batch: 0816
Program: 117

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA SP:NAS-A0271	CO60	GAM20	3.03E+05	8.5E+00		1.8E+02	pCi	06-02-98	04-01-92	1.00E+00	sm	QUAL		101.6	05-01	Q0534-3-14370
QA SP:NAS-A0271	CS137	GAM20	2.06E+05	8.1E+00		8.7E+01	pCi	06-02-98	04-01-92	1.00E+00	sm	QUAL		101.5	05-01	Q0534-3-14370

Comment:

Data generated from analyses of samples submitted on 6/2/98.
Gross alpha and gross beta determinations are performed on
small aliquots. Data may not represent the sample as a whole.

Prepared by:

Date:

7-6-98

Approved by:

Date:

7/6/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 4

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B429
Batch: M559
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON P1-6	Gross Alpha	Gross A	1.26E+01	1.9E+01		2.3E+00	pCi/g	07-03-98	06-01-98	5.00E-01	gm	SOIL G			14-01	G9099-1-75070
DECON P2-6	Gross Alpha	Gross A	1.82E+01	1.6E+01		2.5E+00	pCi/g	07-03-98	06-01-98	5.00E-01	gm	SOIL G			14-01	G9099-2-75072
DECON W1-6	Gross Alpha	Gross A	1.64E+01	1.6E+01		2.2E+00	pCi/g	07-02-98	06-01-98	5.00E-01	gm	SOIL G			14-01	G9099-0-75068
QA REA	Gross Alpha	Gross A	1.65E-02	1.4E+03	U	4.2E-01	pCi	07-02-98	06-02-98	1.00E+00	sm	QUAL			14-01	G9100-0-06776
QA SP:GROSSAB 05	Gross Alpha	Gross A	3.38E+00	1.6E+01		4.2E-01	pCi	07-02-98	01-06-98	1.00E+00	sm	QUAL		98.6	14-01	G9100-1-06777
DECON P1-6	Gross Beta	Gross B	9.69E+00	1.6E+01		2.2E+00	pCi/g	07-03-98	06-01-98	5.00E-01	gm	SOIL G			14-01	G9099-1-75070
DECON P2-6	Gross Beta	Gross B	1.21E+01	1.3E+01		2.2E+00	pCi/g	07-03-98	06-01-98	5.00E-01	gm	SOIL G			14-01	G9099-2-75072
DECON W1-6	Gross Beta	Gross B	4.90E+01	4.7E+00		2.2E+00	pCi/g	07-02-98	06-01-98	5.00E-01	gm	SOIL G			14-01	G9099-0-75068
QA REA	Gross Beta	Gross B	2.67E-01	2.1E+02	U	9.8E-01	pCi	07-02-98	06-02-98	1.00E+00	sm	QUAL			14-01	G9100-0-06776
QA SP:GROSSAB 05	Gross Beta	Gross B	4.65E+00	1.5E+01		9.8E-01	pCi	07-02-98	01-06-98	1.00E+00	sm	QUAL		89.0	14-01	G9100-1-06777

Comment:

Data generated from analyses of samples submitted on 6/2/98.
Gross alpha and gross beta determinations are performed on
small aliquots. Data may not represent the sample as a whole.

Prepared by:

Date: 7-6-98

Approved by:

Date: 7/6/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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Note: % Error is the 2.0 Sigma Error

***** End of Report *****

(Level 1)

SDG B435

RADIOANALYTICAL

RESULTS

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 1

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B435
Batch: 0818
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON P3-6	AM241	GAM20	1.73E+00	3.6E+01		2.9E-01	pCi/g	06-03-98	06-02-98	6.42E+02	gm	SOIL G			05-01	G9115-0-75077
DECON P3-6	K 40	GAM20	2.27E+01	2.0E+01		1.3E+00	pCi/g	06-03-98	06-02-98	6.42E+02	gm	SOIL G			05-01	G9115-0-75077
DECON P3-6	RA228	GAM20	1.30E+00	2.7E+01		1.8E-01	pCi/g	06-03-98	06-02-98	6.42E+02	gm	SOIL G			05-01	G9115-0-75077
DECON P3-6	TH228	GAM20	2.14E+00	2.0E+01		1.5E-01	pCi/g	06-03-98	06-02-98	6.42E+02	gm	SOIL G			05-01	G9115-0-75077
DECON P3-6	TH232	GAM20	2.36E+00	3.0E+01		2.4E-01	pCi/g	06-03-98	06-02-98	6.42E+02	gm	SOIL G			05-01	G9115-0-75077
DECON P4-6	K 40	GAM20	2.48E+01	1.9E+01		1.2E+00	pCi/g	06-03-98	06-02-98	6.61E+02	gm	SOIL G			05-01	G9115-1-75079
DECON P4-6	RA228	GAM20	1.44E+00	2.7E+01		1.6E-01	pCi/g	06-03-98	06-02-98	6.61E+02	gm	SOIL G			05-01	G9115-1-75079
DECON P4-6	TH228	GAM20	2.64E+00	1.8E+01		1.5E-01	pCi/g	06-03-98	06-02-98	6.61E+02	gm	SOIL G			05-01	G9115-1-75079
DECON P4-6	TH232	GAM20	2.42E+00	3.0E+01		2.8E-01	pCi/g	06-03-98	06-02-98	6.61E+02	gm	SOIL G			05-01	G9115-1-75079
DECON P4-6 MS/MSD	K 40	GAM20	2.13E+01	2.0E+01		1.2E+00	pCi/g	06-03-98	06-02-98	6.61E+02	gm	SOIL G			05-01	G9115-2-75081

Comment:

Data generated from analyses of samples submitted on 6/3/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent the sample as a whole.

Prepared by:

Date:

7/4/98

Approved by:

Date:

7/4/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 2

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B435
Batch: 0818
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON P4-6 MS/MSD	RA226	GAM20	1.29E+00	2.8E+01		1.6E-01	pCi/g	06-03-98	06-02-98	6.61E+02	gm	SOIL G			05-01	G9115-2-75081
DECON P4-6 MS/MSD	TH228	GAM20	2.09E+00	2.0E+01		1.5E-01	pCi/g	06-03-98	06-02-98	6.61E+02	gm	SOIL G			05-01	G9115-2-75081
DECON P4-6 MS/MSD	TH232	GAM20	1.59E+00	3.7E+01		2.4E-01	pCi/g	06-03-98	06-02-98	6.61E+02	gm	SOIL G			05-01	G9115-2-75081
DECON P5-6	K 40	GAM20	2.39E+01	1.9E+01		1.2E+00	pCi/g	06-03-98	06-02-98	6.73E+02	gm	SOIL G			05-01	G9115-3-75083
DECON P5-6	RA226	GAM20	1.39E+00	2.6E+01		1.6E-01	pCi/g	06-03-98	06-02-98	6.73E+02	gm	SOIL G			05-01	G9115-3-75083
DECON P5-6	TH228	GAM20	2.71E+00	1.8E+01		1.5E-01	pCi/g	06-03-98	06-02-98	6.73E+02	gm	SOIL G			05-01	G9115-3-75083
DECON P5-6	TH232	GAM20	1.98E+00	3.3E+01		2.8E-01	pCi/g	06-03-98	06-02-98	6.73E+02	gm	SOIL G			05-01	G9115-3-75083
QA BKG EMPTY BTL U05	No Nucl Det	GAM20	0.00E+00	0.0E+00	U	0.0E+00	NA	06-03-98	07-01-95	1.00E+00	gm sm	QUAL			05-01	Q0539-0-00201
QA BKG EMPTY BTL U05	AM241	GAM20	0.00E+00	0.0E+00	U	2.2E+01	pCi	06-03-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00201
QA BKG EMPTY BTL U05	CO60	GAM20	0.00E+00	0.0E+00	U	1.3E+01	pCi	06-03-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00201

Comment:

Data generated from analyses of samples submitted on 6/3/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent the sample as a whole.

Prepared by:

Date: 7/6/98

Approved by:

Date: 7/6/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 3

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B435
Batch: 0818
Program: 500

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA BKG EMPTY BTL U05	CS137	GAM20	0.00E+00	0.0E+00	U	1.0E+01	pCi	06-03-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00201
QA SP:NAS-A0271	AM241	GAM20	1.71E+05	8.8E+00		2.7E+02	pCi	06-03-98	04-01-92	1.00E+00	sm	QUAL		105.4	05-01	Q0534-3-14425
QA SP:NAS-A0271	CO60	GAM20	3.04E+05	8.5E+00		2.0E+02	pCi	06-03-98	04-01-92	1.00E+00	sm	QUAL		102.0	05-01	Q0534-3-14425
QA SP:NAS-A0271	CS137	GAM20	2.07E+05	8.1E+00		9.2E+01	pCi	06-03-98	04-01-92	1.00E+00	sm	QUAL		102.1	05-01	Q0534-3-14425

Comment:

Data generated from analyses of samples submitted on 6/3/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent the sample as a whole.

Prepared by:

Date: 7/6/98

Approved by:

Date: 7/6/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 4

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B435
Batch: M559
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON P3-6	Gross Alpha	Gross A	1.52E+01	1.6E+01		1.9E+00	pCi/g	07-03-98	06-02-98	5.00E-01	gm	SOIL G			14-01	G9115-0-75076
DECON P4-6	Gross Alpha	Gross A	1.39E+01	1.8E+01		2.2E+00	pCi/g	07-03-98	06-02-98	5.00E-01	gm	SOIL G			14-01	G9115-1-75078
DECON P4-6 MS/MSD	Gross Alpha	Gross A	1.60E+01	1.8E+01		2.6E+00	pCi/g	07-03-98	06-02-98	5.00E-01	gm	SOIL G			14-01	G9115-2-75080
DECON P5-6	Gross Alpha	Gross A	1.30E+01	1.8E+01		2.0E+00	pCi/g	07-03-98	06-02-98	5.00E-01	gm	SOIL G			14-01	G9115-3-75082
QA REA	Gross Alpha	Gross A	1.65E-02	1.4E+03	U	4.2E-01	pCi	07-02-98	06-02-98	1.00E+00	sm	QUAL			14-01	G9100-0-06776
QA SP:GROSSAB 05	Gross Alpha	Gross A	3.38E+00	1.8E+01		4.2E-01	pCi	07-02-98	01-06-98	1.00E+00	sm	QUAL		98.6	14-01	G9100-1-06777
DECON P3-6	Gross Beta	Gross B	9.03E+00	1.7E+01		2.2E+00	pCi/g	07-03-98	06-02-98	5.00E-01	gm	SOIL G			14-01	G9115-0-75076
DECON P4-6	Gross Beta	Gross B	1.05E+01	1.5E+01		2.2E+00	pCi/g	07-03-98	06-02-98	5.00E-01	gm	SOIL G			14-01	G9115-1-75078
DECON P4-6 MS/MSD	Gross Beta	Gross B	1.06E+01	1.5E+01		2.2E+00	pCi/g	07-03-98	06-02-98	5.00E-01	gm	SOIL G			14-01	G9115-2-75080
DECON P5-6	Gross Beta	Gross B	1.05E+01	1.5E+01		2.2E+00	pCi/g	07-03-98	06-02-98	5.00E-01	gm	SOIL G			14-01	G9115-3-75082

Comment:

Data generated from analyses of samples submitted on 6/3/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent the sample as a whole.

Prepared by:

Date:

7/6/98

Approved by:

Date:

7-6-98

Qualification Flags:

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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 5

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B435
Batch: M559
Program: 888

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA REA	Gross Beta	Gross B	-2.67E-01	2.1E+02	U	9.8E-01	pCi	07-02-98	06-02-98	1.00E+00	sm	QUAL			14-01	G9100-0-06776
QA SP:GROSSAB 05	Gross Beta	Gross B	4.65E+00	1.5E+01		9.8E-01	pCi	07-02-98	01-06-98	1.00E+00	sm	QUAL		89.0	14-01	G9100-1-06777

Comment:

Data generated from analyses of samples submitted on 6/3/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent the sample as a whole.

Prepared by:

Date: 7/6/98

Approved by:

Date: 7-6-98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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Note: % Error is the 2.0 Sigma Error

***** End of Report *****

(Level 1)

ANALYTICAL SERVICES LABORATORY SERVICES REQUEST & CHAIN OF CUSTODY RECORD

Page 1 of 3

PROJECT/CLIENT INFORMATION			REPORT INFORMATION			SAMPLE INFORMATION		
Project: DECON POND CLOSURE BN Org#: 2152 Charge No.: 040-580DE ASL Prog.: 340			Send Report to: JEFF SMITH Phone: 5-7775 Fax: 5-7761 M/S: NTS-306			Sampling Site: DECON POND FACILITY 6 The samples submitted contain (check): ☐ Hazardous ☒ Radioactive ☒ Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.		
Project Manager: JEFF SMITH Phone: 5-7775 Fax: 5-7761 M/S: NTS-306			Turnaround: () Standard - 30 days Non-rad, 60 Days Rad, Other: <u>2 WEEKS</u> Rush Preliminary by: 4 WEEKS Final by: 4 WEEKS			SAMPLE RECEIPT INFORMATION Are all sample containers received intact ☒ Yes () No Comments:		
Final report format: ☒ Standard () NTS-WAC () Other:			ANALYSES & METHOD			Do the labels agree with this form? ☒ Yes () No Comments:		
LAB USE ONLY Rad SGD: B429 Non-Rad SGD: V427 Rad Packet: G9099-0 Non-Rad Packet: W1458 Client Services Representative: TED KEDDING			Will these analyses be performed under a signed SOW? ☒ YES () NO If so, do analyses entered here agree with the SOW? ☒ YES () NO () N/A If not, identify the variation CSR initials indicating review and approval: TR Date: 6/2/98			Was a Material Clearance Tag submitted? ☒ Yes () No Comments:		
ID	DESCRIPTION	SAMPLING DATE	TIME	MATRIX	COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)			
0	DECON W1-1TB	6/01	1115	WATER	ICE, 40ml			
1	DECON W1-1 A+B	6/01	1115	SLUDGE	ICE, 120ml (2)			
2	DECON W1-2	6/01	1115	SLUDGE	ICE, 500ml			
3	DECON W1-3	6/01	1115	SLUDGE	ICE, 250ml AMBER			
4	DECON W1-4 A+B	6/01	1115	SLUDGE	ICE, 250ml, 120ml			
5	DECON W1-5	6/01	1115	SLUDGE	ICE, 250ml			
6	DECON W1-6	6/01	1115	SLUDGE	ICE, 250ml			
7	DECON P1-1TB				X Did not receive 6/1/98 ICE, 500ml 380g 6/1/98			
8	DECON P1-1 A+B	6/01	1320	SOIL	ICE, 120ml (2)			
9	DECON P1-2	6/01	1320	SOIL	ICE, 500ml			

Transfer of samples submitted for analyses			Complete for samples shipped to an OFF-SITE Subcontract Laboratory (NEL)		
Sampled/Relinquished (Signature/Organization)	DATE / TIME	Received by (Signature/Organization)	Relinquished (BN Representative Signature)	DATE / TIME	Received (Courier & Tracking Info.)
<i>[Signature]</i>	6/02/98 0755	<i>[Signature]</i> CO Contractor	<i>[Signature]</i>	6/30/98	BN Courier
<i>[Signature]</i>	6/02/98 0755	<i>[Signature]</i> BN Contractor			Received (1st tier Subcontractor Rep)
					Received (2nd tier Subcontractor Rep)

PROJECT/CLIENT INFORMATION			REPORT INFORMATION			SAMPLE INFORMATION		
Project: <u>DECON POND CLOSURE</u> BN Org#: <u>2152</u>			Send Report to: <u>JEFF SMITH</u>			Sampling Site: <u>DECON POND FACILITY 6</u>		
Charge No.: <u>C4U-5B0DE</u>		ASL Prog.: <u>340</u>	Phone: <u>5-7775</u>		Fax: <u>5-7761</u>	M/S: <u>NIS306</u>		The samples submitted contain (check): () Hazardous () Radioactive (X) Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.
Project Manager: <u>JEFF SMITH</u>			Turnaround: () Standard - 30 days Non-rad, 60 Days Rad, Other: _____ (X) Rush Preliminary by: <u>2 WEEKS</u> Final by: _____					
Phone: <u>5-7775</u>		Fax: <u>5-7761</u>	M/S: <u>NIS306</u>		Final report format: (X) Standard () NTS-WAC () Other: _____			

LAB USE ONLY			ANALYSES & METHOD										SAMPLE RECEIPT INFORMATION	
Rad SGD: <u>8429</u> Non-Rad SGD: <u>V427</u>													Are all sample containers received intact? (X) Yes () No	
Rad Packet: <u>G9099-1</u> Non-Rad Packet: <u>W1458</u>													Comments: _____	
Client Services Representative: <u>TED REDDING</u>													Do the labels agree with this form? (X) Yes () No	
Will these analyses be performed under a signed SOW? (X) YES () NO													Comments: _____	
If so, do analyses entered here agree with the SOW? (X) YES () NO () N/A													Was a Material Clearance Tag submitted? (X) Yes () No	
If not, identify the variation _____													Comments: _____	
CSR initials indicating review and approval: <u>TR</u> Date: <u>6/2/98</u>														

ITEM	ID / DESCRIPTION	SAMPLING		MATRIX											COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)
		DATE	TIME		SW846	EPA 8260	SW846	EPA 8270	SW846	EPA 8080A MOD.	SW846	EPA 8015 MOD.	SW846	EPA 1314/6010 per SW	
10	DECON P1-3	6/01	1320	SOIL											ICE, 250 ml - AMBER
11	DECON P1-4 A&B	6/01	1320	SOIL											ICE, 250 ml, 120 ml
12	DECON P1-5	6/01	1320	SOIL											ICE, 250 ml
13	DECON P1-6	6/01	1320	SOIL											ICE, 500 ml 595g
14	DECON P2-1 TB														
15	DECON P2-1 A&B	6/01	1340	SOIL	X										ICE, 120 ml (2)
16	DECON P2-2	6/01	1340	SOIL		X									ICE, 500 ml
17	DECON P2-3	6/01	1340	SOIL											ICE, 250 ml - AMBER
18	DECON P2-4 A&B	6/01	1340	SOIL											ICE, 250 ml, 120 ml
19	DECON P2-5	6/01	1340	SOIL											ICE, 250 ml

Transfer of samples submitted for analyses			Complete for samples shipped to an OFF-SITE Subcontract Laboratory <u>(NEL)</u>		
Sampled/Relinquished (Signature/Organization)	DATE / TIME	Received by (Signature/Organization)	Relinquished (BN Representative Signature)	DATE / TIME	Received (Courier & Tracking Info.)
<u>BN COURIER</u>	<u>6/2/98/1055</u>	<u>CD Castaneda</u>	<u>CD Castaneda</u>	<u>6/3/98/1300</u>	<u>BN Courier</u>
			Relinquished (Courier & Tracking Info.)	DATE / TIME	Received (1st tier Subcontractor Rep)
			Relinquished (1st tier Subcontractor Rep)	DATE / TIME	Received (2nd tier Subcontractor Rep)

[illegible]

COMMENTS: All Sludge Samples were 2400-3300 dpm, Soil samples were less than 2 times Background or the Electra. All surveys verified the containers were less than Limits.

PROJECT/CLIENT INFORMATION				REPORT INFORMATION				SAMPLE INFORMATION																																																																																																																			
Project: DECON POND CLOSURE BN Org# 2152				Send Report to: JEFF SMITH				Sampling Site: DECON POND FACILITY																																																																																																																			
Charge No. C4U-SB0DE				Phone: 5-7775 Fax: 5-7761 MS: MS 306				The samples submitted contain (check): ☐ Hazardous ☐ Radioactive ☒ Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.																																																																																																																			
Project Manager: JEFF SMITH				Turnaround: ☒ Standard - 30 days Non-rad, 60 Days Rad, Other: 2 WEEKS Final by: 2 WEEKS																																																																																																																							
Phone: 5-7775 Fax: 5-7761 MS: MS 306				Final report format: ☒ Standard ☐ NTS-WAC ☐ Other: NTS-WAC																																																																																																																							
Rad SGD: B435				LAB USE ONLY				ANALYSES & METHOD																																																																																																																			
Rad Packet: G9115				Non-Rad SDG: V429																																																																																																																							
Client Services Representative:				Non-Rad Packet: W1460																																																																																																																							
Will these analyses be performed under a signed SOW? ☐ YES ☐ NO If so, do analyses entered here agree with the SOW? ☐ YES ☐ NO ☐ N/A If not, identify the variation _____ Date: _____ CSR initials indicating review and approval: _____				<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">ITEM</th> <th rowspan="2">ID / DESCRIPTION</th> <th colspan="2">SAMPLING</th> <th rowspan="2">MATRIX</th> <th rowspan="2">DATE</th> <th rowspan="2">TIME</th> <th rowspan="2">RESULTS</th> <th rowspan="2">ANALYSES & METHOD</th> <th rowspan="2">COMMENTS</th> </tr> <tr> <th>DATE</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>DECON P3-1 TB 3/27/02</td> <td>6/02</td> <td>1015</td> <td>WATER</td> <td></td> <td></td> <td></td> <td>L-E10.612 PL</td> <td>ICE, 40ml NOTE: HOLD TIME</td> </tr> <tr> <td>1</td> <td>DECON P3-1 A+B</td> <td>6/02</td> <td>1015</td> <td>SOIL</td> <td></td> <td></td> <td></td> <td>L-E10.602 PC</td> <td>ICE, 120ml (2)</td> </tr> <tr> <td>2</td> <td>DECON P3-2</td> <td>6/02</td> <td>1015</td> <td>SOIL</td> <td></td> <td></td> <td></td> <td>EPA 846 SW 846 EPA 8016 MOD.</td> <td>ICE, 500ml</td> </tr> <tr> <td>3</td> <td>DECON P3-3</td> <td>6/02</td> <td>1015</td> <td>SOIL</td> <td></td> <td></td> <td></td> <td>EPA 846 SW 846 EPA 8082</td> <td>ICE, 250ml AMBER</td> </tr> <tr> <td>4</td> <td>DECON P3-4 A+B</td> <td>6/02</td> <td>1015</td> <td>SOIL</td> <td></td> <td></td> <td></td> <td>EPA 846 SW 846 EPA 8270</td> <td>ICE, 250ml, 120ml</td> </tr> <tr> <td>5</td> <td>DECON P3-5</td> <td>6/02</td> <td>1015</td> <td>SOIL</td> <td></td> <td></td> <td></td> <td>EPA 846 SW 846 EPA 8270</td> <td>ICE, 250ml</td> </tr> <tr> <td>6</td> <td>DECON P3-6</td> <td>6/02</td> <td>1015</td> <td>SOIL</td> <td></td> <td></td> <td></td> <td>EPA 846 SW 846 EPA 8270</td> <td>ICE, 500ml 642g</td> </tr> <tr> <td>7</td> <td>DECON P4-1 A+B</td> <td>6/02</td> <td>1030</td> <td>SOIL</td> <td></td> <td></td> <td></td> <td>EPA 846 SW 846 EPA 8270</td> <td>ICE, 120ml (2)</td> </tr> <tr> <td>8</td> <td>DECON P4-2</td> <td>6/02</td> <td>1030</td> <td>SOIL</td> <td></td> <td></td> <td></td> <td>EPA 846 SW 846 EPA 8270</td> <td>ICE, 500ml</td> </tr> <tr> <td>9</td> <td>DECON P4-3</td> <td>6/02</td> <td>1030</td> <td>SOIL</td> <td></td> <td></td> <td></td> <td>EPA 846 SW 846 EPA 8270</td> <td>ICE, 250ml AMBER</td> </tr> </tbody> </table>								ITEM	ID / DESCRIPTION	SAMPLING		MATRIX	DATE	TIME	RESULTS	ANALYSES & METHOD	COMMENTS	DATE	TIME	0	DECON P3-1 TB 3/27/02	6/02	1015	WATER				L-E10.612 PL	ICE, 40ml NOTE: HOLD TIME	1	DECON P3-1 A+B	6/02	1015	SOIL				L-E10.602 PC	ICE, 120ml (2)	2	DECON P3-2	6/02	1015	SOIL				EPA 846 SW 846 EPA 8016 MOD.	ICE, 500ml	3	DECON P3-3	6/02	1015	SOIL				EPA 846 SW 846 EPA 8082	ICE, 250ml AMBER	4	DECON P3-4 A+B	6/02	1015	SOIL				EPA 846 SW 846 EPA 8270	ICE, 250ml, 120ml	5	DECON P3-5	6/02	1015	SOIL				EPA 846 SW 846 EPA 8270	ICE, 250ml	6	DECON P3-6	6/02	1015	SOIL				EPA 846 SW 846 EPA 8270	ICE, 500ml 642g	7	DECON P4-1 A+B	6/02	1030	SOIL				EPA 846 SW 846 EPA 8270	ICE, 120ml (2)	8	DECON P4-2	6/02	1030	SOIL				EPA 846 SW 846 EPA 8270	ICE, 500ml	9	DECON P4-3	6/02	1030	SOIL				EPA 846 SW 846 EPA 8270	ICE, 250ml AMBER
ITEM	ID / DESCRIPTION	SAMPLING		MATRIX	DATE	TIME	RESULTS	ANALYSES & METHOD	COMMENTS																																																																																																																		
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D. J. Smith / BN				6/02/02 1015				D. J. Smith / BN																																																																																																																			
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D. J. Smith / BN				6/02/02 1030				D. J. Smith / BN																																																																																																																			
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D. J. Smith / BN				6/02/02 1030				D. J. Smith / BN																																																																																																																			

PROJECT/CLIENT INFORMATION				REPORT INFORMATION				SAMPLE INFORMATION			
Project: DECON RAD CLOSURE BN Org#: 2152				Send Report to: JEFF SMITH				Sampling Site: DECON FACILITY			
Charge No.: C4U-SR00DE				Phone: 5-7775				Fax: 5-7761			
Project Manager: JEFF SMITH				Turnaround: () Standard - 30 days Non-rad, 60 Days Rad, Other: 2 WEEKS				☐ Hazardous () Radioactive ☒ Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.			
Phone: 5-7775				Fax: 5-7761				M/S: MTS 306			
Final report format: ☒ Standard () NTS-WAC () Other:								Are all sample containers received intact? ☒ Yes () No Comments:			
LAB USE ONLY				ANALYSES & METHOD				Do the labels agree with this form? ☒ Yes () No Comments:			
Rad SGD: B435				Non-Rad SDG: V4129				Was a Material Clearance Tag submitted? ☒ Yes () No Comments:			
Rad Packet: G9115				Non-Rad Packet: W1460				COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)			
Client Services Representative:								ICE, 250ml, 120ml ICE, 250ml ICE, 500ml 661g ICE, 120ml (2), MS/MSD ICE, 500ml, MS/MSD ICE, 250ml AMBER, MS/MSD ICE, 250ml, 120ml, MS/MSD ICE, 250ml, MS/MSD ICE, 500ml, MS/MSD 661g ICE, 120ml (2)			
Will these analyses be performed under a signed SOW? () YES () NO				MATRIX							
If so, do analyses entered here agree with the SOW? () YES () NO				DATE							
If not, identify the variation				TIME							
CSR Initials Indicating review and approval:				SAMPLING							
				DATE							
				TIME							
10 DECON P4-4 A+B				6/02 1030				SOIL			
11 DECON P4-5				6/02 1030				SOIL			
12 DECON P4-6				6/02 1030				SOIL			
13 DECON P4-1 A+B				6/02 1030				SOIL			
14 DECON P4-2				6/02 1030				SOIL			
15 DECON P4-3				6/02 1030				SOIL			
16 DECON P4-4 A+B				6/02 1030				SOIL			
17 DECON P4-5				6/02 1030				SOIL			
18 DECON P4-6				6/02 1030				SOIL			
19 DECON PS-1 A+B				6/02 1120				SOIL			
Transfer of samples submitted for analyses								Complete for samples shipped to an OFF-SITE Subcontract Laboratory			
Sampled/Relinquished (Signature/Organization)				DATE / TIME				Received (Courier & Tracking Info.)			
Relinquished H. Co. / BN				06/03/02 1030				BN Courier			
Relinquished (Signature/Organization)				DATE / TIME				Received (1st tier Subcontractor Rep)			
Relinquished (1st tier Subcontractor Rep)				DATE / TIME				Received (2nd tier Subcontractor Rep)			

PROJECT/CLIENT INFORMATION				REPORT INFORMATION				SAMPLE INFORMATION						
Project: <u>DECON POND CLOSURE</u> BN Org#: <u>2152</u>				Send Report to: <u>JEFF SMITH</u>				Sampling Site: <u>DECON FACILITY</u>						
Charge No.: <u>C4U-SBODE</u>		ASL Prog.:		Phone: <u>5-7775</u>		Fax: <u>5-7761</u>		M/S: <u>NTS 306</u>		The samples submitted contain (check): ☐ Hazardous ☐ Radioactive ☒ Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.				
Project Manager: <u>JEFF SMITH</u>				Turnaround: ☐ Standard - 30 days Non-rad, 60 Days Rad, Other: ☒ Rush Preliminary by: <u>2 WEEKS</u> Final by:										
Phone: <u>5-7775</u>		Fax: <u>5-7761</u>		M/S: <u>NTS 306</u>		Final report format: ☒ Standard ☐ NTS-WAC ☐ Other:								
LAB USE ONLY				ANALYSES & METHOD										
Rad SGD: <u>B435</u> Non-Rad SGD: <u>V429</u>				<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> SW 846 EPA 8260 SW 846 EPA 8270 SW 846 EPA 8082 SW 846 EPA 8015 MOD. SW 846 EPA 1311/6010 L-EIO-602PC L-EIO-612PL </div> <div style="width: 45%; border-left: 1px solid black; padding-left: 5px;"> Are all sample containers received intact? ☒ Yes ☐ No Comments: _____ Do the labels agree with this form? ☒ Yes ☐ No Comments: _____ Was a Material Clearance Tag submitted? ☒ Yes ☐ No Comments: _____ </div> </div>										
Rad Packet: <u>G9115</u> Non-Rad Packet: <u>W1460</u>														
Client Services Representative:														
Will these analyses be performed under a signed SOW? ☐ YES ☐ NO If so, do analyses entered here agree with the SOW? ☐ YES ☐ NO ☐ N/A If not, identify the variation: _____ CSR initials indicating review and approval: _____ Date: _____														
ITEM	ID / DESCRIPTION	SAMPLING		MATRIX									COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)	
		DATE	TIME											
20	DECON PS-2	6/02	1120	SOIL										ICE, 500ml
21	DECON PS-3	6/02	1120	SOIL		X								ICE, 250ml AMBER
22	DECON PS-4 A+B	6/02	1120	SOIL			X							ICE, 250ml, 120ml
23	DECON PS-5	6/02	1120	SOIL				X						ICE, 250ml
24	DECON PS-6	6/02	1120	SOIL					X	X				ICE, 500ml 673g
25														
6														
7														
8														
9														
Transfer of samples submitted for analyses					Complete for samples shipped to an OFF-SITE Subcontract Laboratory									
Sampled/Relinquished (Signature/Organization)		DATE / TIME		Received by (Signature/Organization)		Relinquished (BN Representative Signature)		DATE / TIME		Received (Courier & Tracking Info.)				
<u>Donald J. Carr/BN</u>		<u>6/03/78/6725</u>		<u>CD Castaneda</u>		<u>CD Castaneda</u>		<u>6/4/98/1300</u>		<u>BAL Courier</u>				
						Relinquished (Courier & Tracking Info.)		DATE / TIME		Received (1st tier Subcontractor Rep)				
						Relinquished (1st tier Subcontractor Rep)		DATE / TIME		Received (2nd tier Subcontractor Rep)				

**VOLATILE
ORGANICS
DATA**

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Decon W2-1 A&B
DATE SAMPLED: 6/3/98
NEL SAMPLE ID: L9806093-01

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/11/98
ANALYZED: 6/11/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25. µg/kg			
Benzene	ND Js	5. µg/kg			
Bromodichloromethane	ND Js	5. µg/kg			
Bromoform	ND Js	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	25. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	5 Js	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND Js	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND Js	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND Js	5. µg/kg			
cis-1,3-Dichloropropene	ND Js	5. µg/kg			
trans-1,3-Dichloropropene	ND Js	5. µg/kg			
Ethylbenzene	ND Js	5. µg/kg			
2-Hexanone	ND Js	25. µg/kg			
Methylene chloride (Dichloromethane)	ND B	5. µg/kg			
4-Methyl-2-pentanone	ND Js	25. µg/kg			
Styrene	ND Js	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND Js	5. µg/kg			
Tetrachloroethene (PCE)	ND Js	5. µg/kg			
Toluene	ND Js	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND Js	5. µg/kg			
Trichloroethene (TCE)	ND Js	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND Js	5. µg/kg			
m,p-Xylene	ND Js	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	50	74 - 121
Dibromofluoromethane	107	80 - 120
1,2-Dichlorobenzene-d8	78	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Decon P6-1 TB
DATE SAMPLED: 6/3/98
NEL SAMPLE ID: L9806093-06

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous
DILUTION: 1

EXTRACTED: 6/9/98
ANALYZED: 6/9/98

ANALYST: Suzanne

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25. µg/L			
Benzene	ND	5. µg/L			
Bromodichloromethane	ND	5. µg/L			
Bromoform	ND	5. µg/L			
Bromomethane	ND	5. µg/L			
2-Butanone	ND	25. µg/L			
Carbon disulfide	ND	5. µg/L			
Carbon tetrachloride	ND	5. µg/L			
Chlorobenzene	ND	5. µg/L			
Chloroethane	ND	5. µg/L			
Chloroform	ND	5. µg/L			
Chloromethane	ND	5. µg/L			
Dibromochloromethane	ND	5. µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L			
cis-1,2-Dichloroethene	ND	5. µg/L			
trans-1,2-Dichloroethene	ND	5. µg/L			
1,2-Dichloropropane	ND	5. µg/L			
cis-1,3-Dichloropropene	ND	5. µg/L			
trans-1,3-Dichloropropene	ND	5. µg/L			
Ethylbenzene	ND	5. µg/L			
2-Hexanone	ND	25. µg/L			
Methylene chloride (Dichloromethane)	ND	5. µg/L			
4-Methyl-2-pentanone	ND	25. µg/L			
Styrene	ND	5. µg/L			
1,1,2,2-Tetrachloroethane	ND	5. µg/L			
Tetrachloroethene (PCE)	ND	5. µg/L			
Toluene	ND	5. µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L			
Trichloroethene (TCE)	ND	5. µg/L			
Vinyl chloride	ND	5. µg/L			
o-Xylene	ND	5. µg/L			
m,p-Xylene	ND	5. µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	98	70 - 130
Dibromofluoromethane	82	70 - 130
Toluene-d8	104	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
 PROJECT NAME: V431
 PROJECT NUMBER: 17777

CLIENT ID: Decon P6-1 A&B
 DATE SAMPLED: 6/3/98
 NEL SAMPLE ID: L9806093-07

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
 DILUTION: 1

EXTRACTED: 6/11/98
 ANALYZED: 6/11/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25. µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	25. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	25. µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	25. µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	90	74 - 121
Dibromofluoromethane	92	80 - 120
Toluene-d8	96	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Decon P7-1 A&B
DATE SAMPLED: 6/3/98
NEL SAMPLE ID: L9806093-12

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/11/98
ANALYZED: 6/11/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25. µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	25. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	25. µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	25. µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	87	74 - 121
Dibromofluoromethane	92	80 - 120
Toluene-d8	98	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
 PROJECT NAME: V431
 PROJECT NUMBER: 17777

CLIENT ID: Decon P8-1 A&B
 DATE SAMPLED: 6/3/98
 NEL SAMPLE ID: L9806093-17

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
 DILUTION: 1

EXTRACTED: 6/11/98
 ANALYZED: 6/11/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25. µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	25. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	25. µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	25. µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	87	74 - 121
Dibromofluoromethane	92	80 - 120
Toluene-d8	97	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V431/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-17-MS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/11/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	94	66 - 142
Chlorobenzene	100	60 - 133
1,1-Dichloroethene (1,1-DCE)	142	59 - 172
Toluene	96	59 - 139
Trichloroethene (TCE)	98	62 - 137

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	85	74 - 121
Dibromofluoromethane	93	80 - 120
Toluene-d8	97	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V431/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-17-MSD

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/11/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Benzene	96	66 - 142	2.1
Chlorobenzene	98	60 - 133	2.
1,1-Dichloroethene (1,1-DCE)	156	59 - 172	9.4
Toluene	94	59 - 139	2.1
Trichloroethene (TCE)	98	62 - 137	0.

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	86	74 - 121
Dibromofluoromethane	93	80 - 120
Toluene-d8	97	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9806092W60B-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996
MATRIX: Aqueous

EXTRACTED: 6/9/98
ANALYZED: 6/9/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25 µg/L			
Benzene	ND	5 µg/L			
Bromodichloromethane	ND	5 µg/L			
Bromoform	ND	5 µg/L			
Bromomethane	ND	5 µg/L			
2-Butanone	ND	25 µg/L			
Carbon disulfide	ND	5 µg/L			
Carbon tetrachloride	ND	5 µg/L			
Chlorobenzene	ND	5 µg/L			
Chloroethane	ND	5 µg/L			
Chloroform	ND	5 µg/L			
Chloromethane	ND	5 µg/L			
Dibromochloromethane	ND	5 µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L			
cis-1,2-Dichloroethene	ND	5 µg/L			
trans-1,2-Dichloroethene	ND	5 µg/L			
1,2-Dichloropropane	ND	5 µg/L			
cis-1,3-Dichloropropene	ND	5 µg/L			
trans-1,3-Dichloropropene	ND	5 µg/L			
Ethylbenzene	ND	5 µg/L			
2-Hexanone	ND	25 µg/L			
Methylene chloride (Dichloromethane)	ND	5 µg/L			
4-Methyl-2-pentanone	ND	25 µg/L			
Styrene	ND	5 µg/L			
1,1,2,2-Tetrachloroethane	ND	5 µg/L			
Tetrachloroethene (PCE)	ND	5 µg/L			
Toluene	ND	5 µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L			
Trichloroethene (TCE)	ND	5 µg/L			
Vinyl chloride	ND	5 µg/L			
o-Xylene	ND	5 µg/L			
m,p-Xylene	ND	5 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	93	70 - 130
Dibromofluoromethane	103	70 - 130
Toluene-d8	105	70 - 130

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V431/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: 9806092W60B-LCS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 6/9/98

ANALYZED: 6/9/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	97	70 - 130
Chlorobenzene	93	70 - 130
1,1-Dichloroethene (1,1-DCE)	93	70 - 130
Toluene	96	70 - 130
Trichloroethene (TCE)	92	70 - 130

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	109	70 - 130
Dibromofluoromethane	103	70 - 130
Toluene-d8	113	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9806111260B2-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/11/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25 µg/kg			
Benzene	ND	5 µg/kg			
Bromodichloromethane	ND	5 µg/kg			
Bromoform	ND	5 µg/kg			
Bromomethane	ND	5 µg/kg			
2-Butanone	ND	25 µg/kg			
Carbon disulfide	ND	5 µg/kg			
Carbon tetrachloride	ND	5 µg/kg			
Chlorobenzene	ND	5 µg/kg			
Chloroethane	ND	5 µg/kg			
Chloroform	ND	5 µg/kg			
Chloromethane	ND	5 µg/kg			
Dibromochloromethane	ND	5 µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg			
cis-1,2-Dichloroethene	ND	5 µg/kg			
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
cis-1,3-Dichloropropene	ND	5 µg/kg			
trans-1,3-Dichloropropene	ND	5 µg/kg			
Ethylbenzene	ND	5 µg/kg			
2-Hexanone	ND	25 µg/kg			
Methylene chloride (Dichloromethane)	7	5 µg/kg			
4-Methyl-2-pentanone	ND	25 µg/kg			
Styrene	ND	5 µg/kg			
1,1,2,2-Tetrachloroethane	ND	5 µg/kg			
Tetrachloroethene (PCE)	ND	5 µg/kg			
Toluene	ND	5 µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg			
Trichloroethene (TCE)	ND	5 µg/kg			
Vinyl chloride	ND	6 µg/kg			
o-Xylene	ND	5 µg/kg			
m,p-Xylene	ND	5 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	92	74 - 121
Dibromofluoromethane	93	80 - 120
Toluene-d8	98	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V431/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: 9806111260B2-LCS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/11/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	99	80 - 120
Chlorobenzene	102	80 - 120
1,1-Dichloroethene (1,1-DCE)	89	80 - 120
Toluene	104	80 - 120
Trichloroethene (TCE)	100	80 - 120

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	91	74 - 121
Dibromofluoromethane	91	80 - 120
Toluene-d8	99	81 - 117

SEMI-VOLATILE
ORGANICS
DATA

NEL LABORATORIES

CLIENT: Bechtel Nevada
 OBJECT NAME: V431
 PROJECT NUMBER: 17777

CLIENT ID: Decon W2-2
 DATE SAMPLED: 6/3/98
 NEL SAMPLE ID: L9806093-02

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid
 DILUTION: 10

EXTRACTED: 6/11/98
 ANALYZED: 6/12/98

ANALYST: CCJ

PARAMETER	Result µg/Kg	Reporting Limit	PARAMETER	Result µg/Kg	Reporting Limit
Acenaphthene	ND	5000. µg/Kg	Di-n-octyl phthalate	ND	5000. µg/Kg
Acenaphthylene	ND	5000. µg/Kg	Fluoranthene	ND	5000. µg/Kg
Anthracene	ND	5000. µg/Kg	Fluorene	ND	5000. µg/Kg
Benzo (a) anthracene	ND	5000. µg/Kg	Hexachlorobenzene	ND	5000. µg/Kg
Benzo (b&k) fluoranthene	ND	5000. µg/Kg	Hexachlorobutadiene	ND	5000. µg/Kg
Benzo (g,h,i) perylene	ND	5000. µg/Kg	Hexachlorocyclopentadiene	ND	5000. µg/Kg
Benzo (a) pyrene	ND	5000. µg/Kg	Hexachloroethane	ND	5000. µg/Kg
bis (2-Chloroethyl) ether	ND	5000. µg/Kg	Indeno (1,2,3-c,d) pyrene	ND	5000. µg/Kg
bis (2-Chloroethoxy) methane	ND	5000. µg/Kg	Isophorone	ND	5000. µg/Kg
bis (2-chloroisopropyl) ether	ND	5000. µg/Kg	2-Methylnaphthalene	ND	5000. µg/Kg
bis (2-Ethylhexyl)phthalate	ND	5000. µg/Kg	2-Methylphenol	ND	5000. µg/Kg
Butylbenzylphthalate	ND	5000. µg/Kg	4-Methylphenol	ND	5000. µg/Kg
4-Bromophenyl phenyl ether	ND	5000. µg/Kg	Naphthalene	ND	5000. µg/Kg
Carbazole	ND	5000. µg/Kg	2-Nitroaniline	ND	25000. µg/Kg
4-Chloroaniline	ND	10000. µg/Kg	3-Nitroaniline	ND	25000. µg/Kg
4-Chloro-3-methyl phenol	ND	10000. µg/Kg	4-Nitroaniline	ND	10000. µg/Kg
Chloronaphthalene	ND	5000. µg/Kg	Nitrobenzene	ND	5000. µg/Kg
2-Chlorophenol	ND	5000. µg/Kg	2-Nitrophenol	ND	5000. µg/Kg
4-Chlorophenyl phenyl ether	ND	5000. µg/Kg	4-Nitrophenol	ND	25000. µg/Kg
Chrysene	ND	5000. µg/Kg	N-Nitrosodi-n-propylamine	ND	5000. µg/Kg
Dibenzo (a,h) anthracene	ND	5000. µg/Kg	N-Nitrosodiphenylamine	ND	5000. µg/Kg
Dibenzofuran	ND	5000. µg/Kg	Pentachlorophenol	ND	25000. µg/Kg
Di-n-butyl phthalate	ND	5000. µg/Kg	Phenol	ND	5000. µg/Kg
1,2-Dichlorobenzene (o-DCB)	ND	5000. µg/Kg	Phenanthrene	ND	5000. µg/Kg
1,3-Dichlorobenzene (m-DCB)	ND	5000. µg/Kg	Pyrene	ND	5000. µg/Kg
1,4-Dichlorobenzene (p-DCB)	ND	5000. µg/Kg	1,2,4-Trichlorobenzene	ND	5000. µg/Kg
2,4-Dichlorophenol	ND	5000. µg/Kg	2,4,5-Trichlorophenol	ND	5000. µg/Kg
3,3'-Dichlorobenzidine	ND	10000. µg/Kg	2,4,6-Trichlorophenol	ND	5000. µg/Kg
Diethylphthalate	ND	5000. µg/Kg			
2,4-Dimethylphenol	ND	5000. µg/Kg			
Dimethylphthalate	ND	5000. µg/Kg			
4,6-Dinitro-2-methyl phenol	ND	25000. µg/Kg			
2,4-Dinitrotoluene (DNT)	ND	5000. µg/Kg			
2,6-Dinitrotoluene (DNT)	ND	5000. µg/Kg			
2,4-Dinitrophenol	ND	25000. µg/Kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	78	19 - 122
2-Fluorobiphenyl	64	30 - 115
2-Fluorophenol	D	25 - 121
Nitrobenzene-d5	81	23 - 120
p-Terphenyl-d14	D	18 - 137
Phenol-d5	74	24 - 113

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Decon P6-2
DATE SAMPLED: 6/3/98
NEL SAMPLE ID: L9806093-08

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/11/98
ANALYZED: 6/12/98

ANALYST: CCJ

PARAMETER	Result µg/Kg	Reporting Limit	PARAMETER	Result µg/Kg	Reporting Limit
Acenaphthene	ND	500. µg/Kg	Di-n-octyl phthalate	ND	500. µg/Kg
Acenaphthylene	ND	500. µg/Kg	Fluoranthene	ND	500. µg/Kg
Anthracene	ND	500. µg/Kg	Fluorene	ND	500. µg/Kg
Benzo (a) anthracene	ND	500. µg/Kg	Hexachlorobenzene	ND	500. µg/Kg
Benzo (b&k) fluoranthene	ND	500. µg/Kg	Hexachlorobutadiene	ND	500. µg/Kg
Benzo (g,h,i) perylene	ND	500. µg/Kg	Hexachlorocyclopentadiene	ND	500. µg/Kg
Benzo (a) pyrene	ND	500. µg/Kg	Hexachloroethane	ND	500. µg/Kg
bis (2-Chloroethyl) ether	ND	500. µg/Kg	Indeno (1,2,3-c,d) pyrene	ND	500. µg/Kg
bis (2-Chloroethoxy) methane	ND	500. µg/Kg	Isophorone	ND	500. µg/Kg
bis (2-chloroisopropyl) ether	ND	500. µg/Kg	2-Methylnaphthalene	ND	500. µg/Kg
bis (2-Ethylhexyl)phthalate	ND	500. µg/Kg	2-Methylphenol	ND	500. µg/Kg
Butylbenzylphthalate	ND	500. µg/Kg	4-Methylphenol	ND	500. µg/Kg
4-Bromophenyl phenyl ether	ND	500. µg/Kg	Naphthalene	ND	500. µg/Kg
Carbazole	ND	500. µg/Kg	2-Nitroaniline	ND	2500. µg/Kg
4-Chloroaniline	ND	1000. µg/Kg	3-Nitroaniline	ND	2500. µg/Kg
4-Chloro-3-methyl phenol	ND	1000. µg/Kg	4-Nitroaniline	ND	1000. µg/Kg
2-Chloronaphthalene	ND	500. µg/Kg	Nitrobenzene	ND	500. µg/Kg
2-Chlorophenol	ND	500. µg/Kg	2-Nitrophenol	ND	500. µg/Kg
4-Chlorophenyl phenyl ether	ND	500. µg/Kg	4-Nitrophenol	ND	2500. µg/Kg
Chrysene	ND	500. µg/Kg	N-Nitrosodi-n-propylamine	ND	500. µg/Kg
Dibenzo (a,h) anthracene	ND	500. µg/Kg	N-Nitrosodiphenylamine	ND	500. µg/Kg
Dibenzofuran	ND	500. µg/Kg	Pentachlorophenol	ND	2500. µg/Kg
Di-n-butyl phthalate	ND	500. µg/Kg	Phenol	ND	500. µg/Kg
1,2-Dichlorobenzene (o-DCB)	ND	500. µg/Kg	Phenanthrene	ND	500. µg/Kg
1,3-Dichlorobenzene (m-DCB)	ND	500. µg/Kg	Pyrene	ND	500. µg/Kg
1,4-Dichlorobenzene (p-DCB)	ND	500. µg/Kg	1,2,4-Trichlorobenzene	ND	500. µg/Kg
2,4-Dichlorophenol	ND	500. µg/Kg	2,4,5-Trichlorophenol	ND	500. µg/Kg
3,3'-Dichlorobenzidine	ND	1000. µg/Kg	2,4,6-Trichlorophenol	ND	500. µg/Kg
Diethylphthalate	ND	500. µg/Kg			
2,4-Dimethylphenol	ND	500. µg/Kg			
Dimethylphthalate	ND	500. µg/Kg			
4,6-Dinitro-2-methyl phenol	ND	2500. µg/Kg			
2,4-Dinitrotoluene (DNT)	ND	500. µg/Kg			
2,6-Dinitrotoluene (DNT)	ND	500. µg/Kg			
2,4-Dinitrophenol	ND	2500. µg/Kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	67	19 - 122
2-Fluorobiphenyl	64	30 - 115
2-Fluorophenol	55	25 - 121
Nitrobenzene-d5	63	23 - 120
p-Terphenyl-d14	70	18 - 137
Phenol-d5	66	24 - 113

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Decon P7-2
DATE SAMPLED: 6/3/98
NEL SAMPLE ID: L9806093-13

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/11/98
ANALYZED: 6/12/98

ANALYST: CCJ

PARAMETER	Result µg/Kg	Reporting Limit	PARAMETER	Result µg/Kg	Reporting Limit
Acenaphthene	ND	500. µg/Kg	Di-n-octyl phthalate	ND	500. µg/Kg
Acenaphthylene	ND	500. µg/Kg	Fluoranthene	ND	500. µg/Kg
Anthracene	ND	500. µg/Kg	Fluorene	ND	500. µg/Kg
Benzo (a) anthracene	ND	500. µg/Kg	Hexachlorobenzene	ND	500. µg/Kg
Benzo (b&k) fluoranthene	ND	500. µg/Kg	Hexachlorobutadiene	ND	500. µg/Kg
Benzo (g,h,i) perylene	ND	500. µg/Kg	Hexachlorocyclopentadiene	ND	500. µg/Kg
Benzo (a) pyrene	ND	500. µg/Kg	Hexachloroethane	ND	500. µg/Kg
bis (2-Chloroethyl) ether	ND	500. µg/Kg	Indeno (1,2,3-c,d) pyrene	ND	500. µg/Kg
bis (2-Chloroethoxy) methane	ND	500. µg/Kg	Isophorone	ND	500. µg/Kg
bis (2-chloroisopropyl) ether	ND	500. µg/Kg	2-Methylnaphthalene	ND	500. µg/Kg
bis (2-Ethylhexyl)phthalate	ND	500. µg/Kg	2-Methylphenol	ND	500. µg/Kg
Butylbenzylphthalate	ND	500. µg/Kg	4-Methylphenol	ND	500. µg/Kg
4-Bromophenyl phenyl ether	ND	500. µg/Kg	Naphthalene	ND	500. µg/Kg
Carbazole	ND	500. µg/Kg	2-Nitroaniline	ND	2500. µg/Kg
4-Chloroaniline	ND	1000. µg/Kg	3-Nitroaniline	ND	2500. µg/Kg
4-Chloro-3-methyl phenol	ND	1000. µg/Kg	4-Nitroaniline	ND	1000. µg/Kg
2-Chloronaphthalene	ND	500. µg/Kg	Nitrobenzene	ND	500. µg/Kg
Chlorophenol	ND	500. µg/Kg	2-Nitrophenol	ND	500. µg/Kg
4-Chlorophenyl phenyl ether	ND	500. µg/Kg	4-Nitrophenol	ND	2500. µg/Kg
Chrysene	ND	500. µg/Kg	N-Nitrosodi-n-propylamine	ND	500. µg/Kg
Dibenzó (a,h) anthracene	ND	500. µg/Kg	N-Nitrosodiphenylamine	ND	500. µg/Kg
Dibenzofuran	ND	500. µg/Kg	Pentachlorophenol	ND	2500. µg/Kg
Di-n-butyl phthalate	ND	500. µg/Kg	Phenol	ND	500. µg/Kg
1,2-Dichlorobenzene (o-DCB)	ND	500. µg/Kg	Phenanthrene	ND	500. µg/Kg
1,3-Dichlorobenzene (m-DCB)	ND	500. µg/Kg	Pyrene	ND	500. µg/Kg
1,4-Dichlorobenzene (p-DCB)	ND	500. µg/Kg	1,2,4-Trichlorobenzene	ND	500. µg/Kg
2,4-Dichlorophenol	ND	500. µg/Kg	2,4,5-Trichlorophenol	ND	500. µg/Kg
3,3'-Dichlorobenzidine	ND	1000. µg/Kg	2,4,6-Trichlorophenol	ND	500. µg/Kg
Diethylphthalate	ND	500. µg/Kg			
2,4-Dimethylphenol	ND	500. µg/Kg			
Dimethylphthalate	ND	500. µg/Kg			
4,6-Dinitro-2-methyl phenol	ND	2500. µg/Kg			
2,4-Dinitrotoluene (DNT)	ND	500. µg/Kg			
2,6-Dinitrotoluene (DNT)	ND	500. µg/Kg			
2,4-Dinitrophenol	ND	2500. µg/Kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	71	19 - 122
2-Fluorobiphenyl	62	30 - 115
Chlorophenol	52	25 - 121
Nitrobenzene-d5	61	23 - 120
p-Terphenyl-d14	73	18 - 137
Phenol-d5	61	24 - 113

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Decon P8-2
DATE SAMPLED: 6/3/98
NEL SAMPLE ID: L9806093-18

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/11/98
ANALYZED: 6/12/98

ANALYST: CCI

PARAMETER	Result µg/Kg	Reporting Limit	PARAMETER	Result µg/Kg	Reporting Limit
Acenaphthene	ND	500. µg/Kg	Di-n-octyl phthalate	ND	500. µg/Kg
Acenaphthylene	ND	500. µg/Kg	Fluoranthene	ND	500. µg/Kg
Anthracene	ND	500. µg/Kg	Fluorene	ND	500. µg/Kg
Benzo (a) anthracene	ND	500. µg/Kg	Hexachlorobenzene	ND	500. µg/Kg
Benzo (b&k) fluoranthene	ND	500. µg/Kg	Hexachlorobutadiene	ND	500. µg/Kg
Benzo (g,h,i) perylene	ND	500. µg/Kg	Hexachlorocyclopentadiene	ND	500. µg/Kg
Benzo (a) pyrene	ND	500. µg/Kg	Hexachloroethane	ND	500. µg/Kg
bis (2-Chloroethyl) ether	ND	500. µg/Kg	Indeno (1,2,3-c,d) pyrene	ND	500. µg/Kg
bis (2-Chloroethoxy) methane	ND	500. µg/Kg	Isophorone	ND	500. µg/Kg
bis (2-chloroisopropyl) ether	ND	500. µg/Kg	2-Methylnaphthalene	ND	500. µg/Kg
bis (2-Ethylhexyl)phthalate	ND	500. µg/Kg	2-Methylphenol	ND	500. µg/Kg
Butylbenzylphthalate	ND	500. µg/Kg	4-Methylphenol	ND	500. µg/Kg
4-Bromophenyl phenyl ether	ND	500. µg/Kg	Naphthalene	ND	500. µg/Kg
Carbazole	ND	500. µg/Kg	2-Nitroaniline	ND	2500. µg/Kg
4-Chloroaniline	ND	1000. µg/Kg	3-Nitroaniline	ND	2500. µg/Kg
4-Chloro-3-methyl phenol	ND	1000. µg/Kg	4-Nitroaniline	ND	1000. µg/Kg
2-Chloronaphthalene	ND	500. µg/Kg	Nitrobenzene	ND	500. µg/Kg
2-Chlorophenol	ND	500. µg/Kg	2-Nitrophenol	ND	500. µg/Kg
4-Chlorophenyl phenyl ether	ND	500. µg/Kg	4-Nitrophenol	ND	2500. µg/Kg
Chrysene	ND	500. µg/Kg	N-Nitrosodi-n-propylamine	ND	500. µg/Kg
Dibenzo (a,h) anthracene	ND	500. µg/Kg	N-Nitrosodiphenylamine	ND	500. µg/Kg
Dibenzofuran	ND	500. µg/Kg	Pentachlorophenol	ND	2500. µg/Kg
Di-n-butyl phthalate	ND	500. µg/Kg	Phenol	ND	500. µg/Kg
1,2-Dichlorobenzene (o-DCB)	ND	500. µg/Kg	Phenanthrene	ND	500. µg/Kg
1,3-Dichlorobenzene (m-DCB)	ND	500. µg/Kg	Pyrene	ND	500. µg/Kg
1,4-Dichlorobenzene (p-DCB)	ND	500. µg/Kg	1,2,4-Trichlorobenzene	ND	500. µg/Kg
2,4-Dichlorophenol	ND	500. µg/Kg	2,4,5-Trichlorophenol	ND	500. µg/Kg
3,3'-Dichlorobenzidine	ND	1000. µg/Kg	2,4,6-Trichlorophenol	ND	500. µg/Kg
Diethylphthalate	ND	500. µg/Kg			
2,4-Dimethylphenol	ND	500. µg/Kg			
Dimethylphthalate	ND	500. µg/Kg			
4,6-Dinitro-2-methyl phenol	ND	2500. µg/Kg			
2,4-Dinitrotoluene (DNT)	ND	500. µg/Kg			
2,6-Dinitrotoluene (DNT)	ND	500. µg/Kg			
2,4-Dinitrophenol	ND	2500. µg/Kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	68	19 - 122
2-Fluorobiphenyl	59	30 - 115
2-Fluorophenol	52	25 - 121
Nitrobenzene-d5	60	23 - 120
p-Terphenyl-d14	71	18 - 137
Phenol-d5	59	24 - 113

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V431/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-18-MS

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: CCJ

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Acenaphthene	50	31 - 137
4-Chloro-3-methyl phenol	54	26 - 103
2-Chlorophenol	56	25 - 102
1,4-Dichlorobenzene (p-DCB)	49	28 - 104
2,4-Dinitrotoluene (DNT)	54	28 - 89
4-Nitrophenol	53	11 - 114
N-Nitrosodi-n-propylamine	65	41 - 126
Pentachlorophenol	49	17 - 109
Phenol	50	26 - 90
1,2,4-Trichlorobenzene	53	28 - 104

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
2,4,6-Tribromophenol	56	19 - 122
2-Fluorobiphenyl	54	30 - 115
2-Fluorophenol	50	25 - 121
Nitrobenzene-d5	56	23 - 120
Terphenyl-d14	63	18 - 137
Phenol-d5	60	24 - 113

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V431/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-18-MSD

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: CCJ

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Acenaphthene	55	31 - 137	2.8
4-Chloro-3-methyl phenol	62	26 - 103	14.7
2-Chlorophenol	54	25 - 102	1.6
1,4-Dichlorobenzene (p-DCB)	49	28 - 104	9.3
2,4-Dinitrotoluene (DNT)	62	28 - 89	13.9
4-Nitrophenol	64	11 - 114	17.8
N-Nitrosodi-n-propylamine	63	41 - 126	2.7
Pentachlorophenol	58	17 - 109	16.6
Phenol	49	26 - 90	0.3
1,2,4-Trichlorobenzene	54	38 - 107	2.4

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
2,4,6-Tribromophenol	61	19 - 122
2-Fluorobiphenyl	78	30 - 115
2-Fluorophenol	63	25 - 121
Nitrobenzene-d5	76	23 - 120
p-Terphenyl-d14	85	18 - 137
Phenol-d5	80	24 - 113

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 061098-E1-BLK

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

PARAMETER	Result µg/Kg	Reporting Limit	PARAMETER	Result µg/Kg	Reporting Limit
Acenaphthene	ND	500 µg/Kg	Di-n-octyl phthalate	ND	500 µg/Kg
Acenaphthylene	ND	500 µg/Kg	Fluoranthene	ND	500 µg/Kg
Anthracene	ND	500 µg/Kg	Fluorene	ND	500 µg/Kg
Benzo (a) anthracene	ND	500 µg/Kg	Hexachlorobenzene	ND	500 µg/Kg
Benzo (b&k) fluoranthene	ND	500 µg/Kg	Hexachlorobutadiene	ND	500 µg/Kg
Benzo (g,h,i) perylene	ND	500 µg/Kg	Hexachlorocyclopentadiene	ND	500 µg/Kg
Benzo (a) pyrene	ND	500 µg/Kg	Hexachloroethane	ND	500 µg/Kg
bis (2-Chloroethyl) ether	ND	500 µg/Kg	Indeno (1,2,3-c,d) pyrene	ND	500 µg/Kg
bis (2-Chloroethoxy) methane	ND	500 µg/Kg	Isophorone	ND	500 µg/Kg
bis (2-chloroisopropyl) ether	ND	500 µg/Kg	2-Methylnaphthalene	ND	500 µg/Kg
bis (2-Ethylhexyl)phthalate	ND	500 µg/Kg	2-Methylphenol	ND	500 µg/Kg
Butylbenzylphthalate	ND	500 µg/Kg	4-Methylphenol	ND	500 µg/Kg
4-Bromophenyl phenyl ether	ND	500 µg/Kg	Naphthalene	ND	500 µg/Kg
Carbazole	ND	500 µg/Kg	2-Nitroaniline	ND	2500 µg/Kg
4-Chloroaniline	ND	1000 µg/Kg	3-Nitroaniline	ND	2500 µg/Kg
4-Chloro-3-methyl phenol	ND	1000 µg/Kg	4-Nitroaniline	ND	1000 µg/Kg
2-Chloronaphthalene	ND	500 µg/Kg	Nitrobenzene	ND	500 µg/Kg
4-Chlorophenol	ND	500 µg/Kg	2-Nitrophenol	ND	500 µg/Kg
4-Chlorophenyl phenyl ether	ND	500 µg/Kg	4-Nitrophenol	ND	2500 µg/Kg
Chrysene	ND	500 µg/Kg	N-Nitrosodi-n-propylamine	ND	500 µg/Kg
Dibenzo (a,h) anthracene	ND	500 µg/Kg	N-Nitrosodiphenylamine	ND	500 µg/Kg
Dibenzofuran	ND	500 µg/Kg	Pentachlorophenol	ND	2500 µg/Kg
Di-n-butyl phthalate	ND	500 µg/Kg	Phenol	ND	500 µg/Kg
1,2-Dichlorobenzene (o-DCB)	ND	500 µg/Kg	Phenanthrene	ND	500 µg/Kg
1,3-Dichlorobenzene (m-DCB)	ND	500 µg/Kg	Pyrene	ND	500 µg/Kg
1,4-Dichlorobenzene (p-DCB)	ND	500 µg/Kg	1,2,4-Trichlorobenzene	ND	500 µg/Kg
2,4-Dichlorophenol	ND	500 µg/Kg	2,4,5-Trichlorophenol	ND	500 µg/Kg
3,3'-Dichlorobenzidine	ND	1000 µg/Kg	2,4,6-Trichlorophenol	ND	500 µg/Kg
Diethylphthalate	ND	500 µg/Kg			
2,4-Dimethylphenol	ND	500 µg/Kg			
Dimethylphthalate	ND	500 µg/Kg			
4,6-Dinitro-2-methyl phenol	ND	2500 µg/Kg			
2,4-Dinitrotoluene (DNT)	ND	500 µg/Kg			
2,6-Dinitrotoluene (DNT)	ND	500 µg/Kg			
2,4-Dinitrophenol	ND	2500 µg/Kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	88	19 - 122
2-Fluorobiphenyl	78	30 - 115
2-Fluorophenol	66	25 - 121
1-Benzene-d5	75	23 - 120
p-Terphenyl-d14	83	18 - 137
Phenol-d5	77	24 - 113

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V431/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: 061098-E1-LCS

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: CCJ

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Acenaphthene	79	31 - 137
4-Chloro-3-methyl phenol	85	26 - 103
2-Chlorophenol	83	25 - 102
1,4-Dichlorobenzene (p-DCB)	80	28 - 104
2,4-Dinitrotoluene (DNT)	90	28 - 89
4-Nitrophenol	89	11 - 114
N-Nitrosodi-n-propylamine	108	41 - 126
Pentachlorophenol	89	17 - 109
Phenol	79	26 - 90
1,2,4-Trichlorobenzene	87	38 - 107

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
2,4,6-Tribromophenol	69	19 - 122
2-Fluorobiphenyl	91	30 - 115
2-Fluorophenol	73	25 - 121
Nitrobenzene-d5	90	23 - 120
p-Terphenyl-d14	105	18 - 137
Phenol-d5	94	24 - 113

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V431/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: 061098-E1-LCSD

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: CCJ

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Acenaphthene	69	31 - 137	14.2
4-Chloro-3-methyl phenol	75	26 - 103	12.3
2-Chlorophenol	71	25 - 102	15.4
1,4-Dichlorobenzene (p-DCB)	66	28 - 104	19.9
2,4-Dinitrotoluene (DNT)	75	28 - 89	17.9
4-Nitrophenol	74	11 - 114	18.7
N-Nitrosodi-n-propylamine	89	41 - 126	18.8
Pentachlorophenol	73	17 - 109	19.8
Phenol	66	26 - 90	18.5
1,2,4-Trichlorobenzene	73	38 - 107	17.3

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
2,4,6-Tribromophenol	61	19 - 122
2-Fluorobiphenyl	78	30 - 115
2-Fluorophenol	63	25 - 121
Nitrobenzene-d5	76	23 - 120
Terphenyl-d14	85	18 - 137
Phenol-d5	80	24 - 113

**POLYCHLORINATED
BIPHENYLS
DATA**

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Decon W2-3
DATE SAMPLED: 6/3/98
NEL SAMPLE ID: L9806093-03

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

DILUTION: 1

ANALYZED: 6/13/98

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1016	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1242	ND	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1254	450 µg/kg	20. µg/kg
Arochlor-1260	ND	20. µg/kg

ND - Not Detected

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	103	70 - 130
Tetrachloro-m-xylene	95	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Decon P6-3
DATE SAMPLED: 6/3/98
NEL SAMPLE ID: L9806093-09

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

DILUTION: 1

ANALYZED: 6/13/98

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1016	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1242	ND	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1254	ND	20. µg/kg
Arochlor-1260	ND	20. µg/kg

ND - Not Detected

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	102	70 - 130
Tetrachloro-m-xylene	98	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Decon P7-3
DATE SAMPLED: 6/3/98
NEL SAMPLE ID: L9806093-14

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

DILUTION: 1

ANALYZED: 6/12/98

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1016	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1242	ND	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1254	ND	20. µg/kg
Arochlor-1260	ND	20. µg/kg

ND - Not Detected

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	92	70 - 130
Tetrachloro-m-xylene	83	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Decon P8-3
DATE SAMPLED: 6/3/98
NEL SAMPLE ID: L9806093-19

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

DILUTION: 1

ANALYZED: 6/13/98

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1016	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1242	ND	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1254	ND	20. µg/kg
Arochlor-1260	ND	20. µg/kg

ND - Not Detected

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	87	70 - 130
Tetrachloro-m-xylene	83	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V431/17777
OBJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-19-MS

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: John

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Arochlor-1260	85	48 - 129

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	97	70 - 130
Tetrachloro-m-xylene	94	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V431/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-19-MSD

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: John

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Arochlor-1260	69	48 - 129	20.7

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	86	70 - 130
Tetrachloro-m-xylene	90	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 980611s8082-BK

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: John

PARAMETER	Result	Reporting Limit
Arochlor-1016	ND	20 µg/kg
Arochlor-1221	ND	20 µg/kg
Arochlor-1232	ND	20 µg/kg
Arochlor-1242	ND	20 µg/kg
Arochlor-1248	ND	20 µg/kg
Arochlor-1254	ND	20 µg/kg
Arochlor-1260	ND	20 µg/kg

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	84	70 - 130
Tetrachloro-m-xylene	68	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V431/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: 980611s8082-LCS

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: John

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Arochlor-1016	86	80 - 120
Arochlor-1260	82	80 - 120

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	101	70 - 130
Tetrachloro-m-xylene	100	70 - 130

**TOTAL
PETROLEUM
HYDROCARBON
DATA**

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

TEST: Total Extractable Petroleum Hydrocarbons by EPA Method 8015M, July 1992

METHOD: EPA 8015M

MATRIX: Solid

ANALYST: John

CLIENT SAMPLE ID	SAMPLE DATE	NEL SAMPLE ID	RESULT mg/kg	C.R.	Reporting Limit	Surrogate Recovery*	EXTRACTED	ANALYZED
Decon W2-4 A&B	6/3/98	L9806093-04	5500	GO	100. mg/kg	70 %	6/10/98	6/10/98
Decon P6-4 A&B	6/3/98	L9806093-10	94	O	10. mg/kg	101 %	6/10/98	6/10/98
Decon P7-4 A&B	6/3/98	L9806093-15	ND		10. mg/kg	116 %	6/10/98	6/10/98
Decon P8-4 A&B	6/3/98	L9806093-20	ND		10. mg/kg	103 %	6/10/98	6/10/98

CR: Carbon Range

- GO Gas Range Organics (C8 to C12) and Oil Range Organics (C12 to C38).
- O Oil Range Organics (C12 to C38).

Note: The reporting limit for Oil Range Organics in soil is 50 mg/kg.

QUALITY CONTROL DATA (Total for Gas and Diesel Range):

Sample ID	Result	Acceptable Range	Surrogate Recovery*	Sample Number
Blank, 980610TPH-BLK	ND	< 10. mg/kg	99 %	NA
L 980610TP - LCS	69 %	55 - 102 %	99 %	NA
MS, 980610TP - MS	67 %	38 - 107 %	94 %	L9806093-20
MSD, 980610TP - MSD	57 %	38 - 107 %	78 %	L9806093-20

ND - Not Detected

*Surrogate used was Octacosane, acceptance limits 54-130% for solids, 60-121% for aqueous samples

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TCLP
METALS
DATA

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Decon W2-5
DATE SAMPLED: 6/3/98
NEL SAMPLE ID: L9806093-05

TEST: TCLP-8 Metals
MATRIX: Solid

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	TCLP/STLC EXTRACTION		
					DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Barium	ND	1. mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Cadmium	0.011	0.01 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Chromium	ND	0.01 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Lead	ND	0.05 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Mercury	ND	0.002 mg/L	10	EPA 7470A	6/11/98	6/12/98	6/14/98
Selenium	ND	0.1 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Silver	ND	0.02 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Decon P6-5
DATE SAMPLED: 6/3/98
NEL SAMPLE ID: L9806093-11

TEST: TCLP-8 Metals
MATRIX: Solid

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	TCLP/STLC EXTRACTION		
					DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Barium	ND	1. mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Cadmium	ND	0.01 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Chromium	ND	0.01 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Lead	ND	0.05 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Mercury	ND	0.002 mg/L	10	EPA 7470A	6/11/98	6/12/98	6/14/98
Selenium	ND	0.1 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Silver	ND	0.02 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Decon P7-5
DATE SAMPLED: 6/3/98
NEL SAMPLE ID: L9806093-16

TEST: TCLP-8 Metals
MATRIX: Solid

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	TCLP/STLC EXTRACTION		
					DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Barium	ND	1. mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Cadmium	ND	0.01 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Chromium	ND	0.01 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Lead	ND	0.05 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Mercury	ND	0.002 mg/L	10	EPA 7470A	6/11/98	6/12/98	6/14/98
Selenium	ND	0.1 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Silver	ND	0.02 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Decon P8-5
DATE SAMPLED: 6/3/98
NEL SAMPLE ID: L9806093-21

TEST: TCLP-8 Metals
MATRIX: Solid

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	TCLP/STLC EXTRACTION		
					DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Barium	ND	1. mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Cadmium	ND	0.01 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Chromium	ND	0.01 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Lead	ND	0.05 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Mercury	ND	0.002 mg/L	10	EPA 7470A	6/11/98	6/12/98	6/14/98
Selenium	ND	0.1 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Silver	ND	0.02 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V431/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-21-MS

TEST: TCLP by EPA 1311, July 1992 & 7 Metals by EPA 6010A, July 1992

MATRIX: Solid

EXTRACTED: 6/12/98

ANALYZED: 6/14/98

ANALYST: EMF

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Arsenic	106	85 - 115
Silver	100	85 - 115
Barium	91	85 - 115
Cadmium	105	85 - 115
Chromium	98	85 - 115
Lead	101	85 - 115
Selenium	111	85 - 115

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V431/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-21-MSD

TEST: TCLP by EPA 1311, July 1992 & 7 Metals by EPA 6010A, July 1992

MATRIX: Solid

EXTRACTED: 6/12/98

ANALYZED: 6/14/98

ANALYST: EMF

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Silver	100	85 - 115	0.4
Arsenic	105	85 - 115	0.2
Barium	90	85 - 115	11.1
Cadmium	104	85 - 115	3.9
Chromium	97	85 - 115	3.
Lead	101	85 - 115	
Selenium	111	85 - 115	

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V431/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-21-MSD

TEST: TCLP by EPA 1311, July 1992 & Mercury by EPA 7470A, July 1992

MATRIX: Solid

EXTRACTED: 6/12/98

ANALYZED: 6/14/98

ANALYST: EMF

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Mercury	99	85 - 115	

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: L060931-BLK

TEST: TCLP by EPA 1311, July 1992 & 7 Metals by EPA 6010A, July 1992
MATRIX: TCLP Extract

PARAMETER	RESULT	REPORTING LIMIT	D. F.	TCLP/STLC EXTRACTION			
				METHOD	DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Barium	ND	1mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Cadmium	ND	0.01mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Chromium	ND	0.01mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Lead	ND	0.05mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Selenium	ND	0.1mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Silver	ND	0.02mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V431
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: L06093HG-BLK

TEST: TCLP by EPA 1311, July 1992 & Mercury by EPA 7470A, July 1992
MATRIX: TCLP Extract

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>TCLP/STLC EXTRACTION</u>			
				<u>METHOD</u>	<u>DATE</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Mercury	ND	0.002mg/L	10	EPA 7470A	6/11/98	6/12/98	6/14/98

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V431/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L060931-LCS

TEST: TCLP by EPA 1311, July 1992 & 7 Metals by EPA 6010A, July 1992

MATRIX: Solid

EXTRACTED: 6/12/98

ANALYZED: 6/14/98

ANALYST: EMF

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Silver	99	85 - 115
Arsenic	104	88 - 118.5
Barium	95	86 - 128.2
Cadmium	105	85 - 115
Chromium	102	85 - 115
Lead	104	85 - 115
Selenium	107	85 - 115

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V431/1777
PROJECT #: 1777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L06093HG-LCS

TEST: TCLP by EPA 1311, July 1992 & Mercury by EPA 7470A, July 1992

MATRIX: Solid

EXTRACTED: 6/12/98

ANALYZED: 6/14/98

ANALYST: JML

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Mercury	97	85 - 115

SDG B437

RADIOANALYTICAL

RESULTS

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 1

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B437
Batch: 0820
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON P6-6	K 40	GAM20	2.00E+01	2.1E+01		8.6E-01	pCi/g	06-04-98	06-03-98	5.86E+02	gm	SOIL G			05-01	G9118-1-75087
DECON P6-6	RA226	GAM20	1.08E+00	3.1E+01		1.7E-01	pCi/g	06-04-98	06-03-98	5.86E+02	gm	SOIL G			05-01	G9118-1-75087
DECON P6-6	TH228	GAM20	2.36E+00	1.9E+01		1.5E-01	pCi/g	06-04-98	06-03-98	5.86E+02	gm	SOIL G			05-01	G9118-1-75087
DECON P6-6	TH232	GAM20	1.81E+00	3.4E+01		4.0E-01	pCi/g	06-04-98	06-03-98	5.86E+02	gm	SOIL G			05-01	G9118-1-75087
DECON P7-6	K 40	GAM20	2.41E+01	1.9E+01		8.4E-01	pCi/g	06-04-98	06-03-98	6.26E+02	gm	SOIL G			05-01	G9118-2-75089
DECON P7-6	RA226	GAM20	1.30E+00	2.7E+01		1.7E-01	pCi/g	06-04-98	06-03-98	6.26E+02	gm	SOIL G			05-01	G9118-2-75089
DECON P7-6	TH228	GAM20	2.58E+00	1.8E+01		1.5E-01	pCi/g	06-04-98	06-03-98	6.26E+02	gm	SOIL G			05-01	G9118-2-75089
DECON P7-6	TH232	GAM20	1.78E+00	3.5E+01		3.9E-01	pCi/g	06-04-98	06-03-98	6.26E+02	gm	SOIL G			05-01	G9118-2-75089
DECON P8-6	K 40	GAM20	2.14E+01	2.1E+01		8.8E-01	pCi/g	06-04-98	06-03-98	5.41E+02	gm	SOIL G			05-01	G9118-3-75091
DECON P8-6	RA226	GAM20	1.22E+00	3.1E+01		1.7E-01	pCi/g	06-04-98	06-03-98	5.41E+02	gm	SOIL G			05-01	G9118-3-75091

Comment:

Data generated from analyses of samples submitted on 6/4/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent the sample as a whole.

Prepared by:

Date: 7/6/98

Approved by:

Date: 7/6/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
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Page 2

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B437
Batch: 0820
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON P8-6	TH228	GAM20	2.44E+00	1.9E+01		1.6E-01	pCi/g	06-04-98	06-03-98	5.41E+02	gm	SOIL G			05-01	G9118-3-75091
DECON P8-6	TH232	GAM20	2.02E+00	3.3E+01		3.6E-01	pCi/g	06-04-98	06-03-98	5.41E+02	gm	SOIL G			05-01	G9118-3-75091
DECON P8-6 MS&MSD	K 40	GAM20	2.32E+01	2.0E+01		8.5E-01	pCi/g	06-04-98	06-03-98	6.06E+02	gm	SOIL G			05-01	G9118-4-75093
DECON P8-6 MS&MSD	RA226	GAM20	1.27E+00	2.7E+01		1.7E-01	pCi/g	06-04-98	06-03-98	6.06E+02	gm	SOIL G			05-01	G9118-4-75093
DECON P8-6 MS&MSD	TH228	GAM20	2.67E+00	1.8E+01		1.5E-01	pCi/g	06-04-98	06-03-98	6.06E+02	gm	SOIL G			05-01	G9118-4-75093
DECON P8-6 MS&MSD	TH232	GAM20	2.16E+00	3.2E+01		3.9E-01	pCi/g	06-04-98	06-03-98	6.06E+02	gm	SOIL G			05-01	G9118-4-75093
DECON W2-6	CO60	GAM20	7.95E+01	9.1E+00		8.0E-02	pCi/g	06-04-98	06-03-98	6.03E+02	gm	SOIL G			05-01	G9118-0-75085
DECON W2-6	CS137	GAM20	8.80E+01	8.7E+00		9.1E-02	pCi/g	06-04-98	06-03-98	6.03E+02	gm	SOIL G			05-01	G9118-0-75085
DECON W2-6	EU152	GAM20	2.92E+00	4.0E+01		5.9E-01	pCi/g	06-04-98	06-03-98	6.03E+02	gm	SOIL G			05-01	G9118-0-75085
DECON W2-6	EU154	GAM20	4.08E+00	8.1E+01		5.5E-01	pCi/g	06-04-98	06-03-98	6.03E+02	gm	SOIL G			05-01	G9118-0-75085

Comment:

Data generated from analyses of samples submitted on 6/4/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent the sample as a whole.

Prepared by:

Date: 7/6/98

Approved by:

Date: 7/6/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

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Page 3

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B437
Batch: 0820
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON W2-6	EU155	GAM20	2.62E+00	5.6E+01		3.5E-01	pCi/g	06-04-98	06-03-98	6.03E+02	gm	SOIL G			05-01	G9118-0-75085
DECON W2-6	K 40	GAM20	2.07E+01	2.2E+01		8.5E-01	pCi/g	06-04-98	06-03-98	6.03E+02	gm	SOIL G			05-01	G9118-0-75085
DECON W2-6	NB94	GAM20	2.12E+00	2.6E+01		6.5E-02	pCi/g	06-04-98	06-03-98	6.03E+02	gm	SOIL G			05-01	G9118-0-75085
DECON W2-6	RA226	GAM20	1.79E+00	5.3E+01		2.1E-01	pCi/g	06-04-98	06-03-98	6.03E+02	gm	SOIL G			05-01	G9118-0-75085
DECON W2-6	TH228	GAM20	1.45E+00	5.5E+01		1.3E-01	pCi/g	06-04-98	06-03-98	6.03E+02	gm	SOIL G			05-01	G9118-0-75085
DECON W2-6	TH232	GAM20	2.50E+00	9.3E+01		3.4E-01	pCi/g	06-04-98	06-03-98	6.03E+02	gm	SOIL G			05-01	G9118-0-75085
QA BKG EMPTY BTL U05	No Nucl Det	GAM20	0.00E+00	0.0E+00	U	0.0E+00	NA	06-04-98	07-01-95	1.00E+00	5mc gm R	QUAL			05-01	Q0539-0-00208
QA BKG EMPTY BTL U05	AM241	GAM20	0.00E+00	0.0E+00	U	2.6E+01	pCi	06-04-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00208
QA BKG EMPTY BTL U05	CO60	GAM20	0.00E+00	0.0E+00	U	7.9E+00	pCi	06-04-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00208
QA BKG EMPTY BTL U05	CS137	GAM20	0.00E+00	0.0E+00	U	9.4E+00	pCi	06-04-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00208

Comment:

Data generated from analyses of samples submitted on 6/4/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent the sample as a whole.

Prepared by:

Date:

7/6/98

Approved by:

Date:

7/6/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 4

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B437
Batch: 0820
Program: 117

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA SP:NAS-A0271	AM241	GAM20	1.81E+05	8.8E+00		3.3E+02	pCi	06-04-98	04-01-92	1.00E+00	sm	QUAL		111.8	05-01	Q0534-3-14463
QA SP:NAS-A0271	CO60	GAM20	3.00E+05	8.5E+00		1.5E+02	pCi	06-04-98	04-01-92	1.00E+00	sm	QUAL		100.7	05-01	Q0534-3-14463
QA SP:NAS-A0271	CS137	GAM20	2.08E+05	8.1E+00		9.2E+01	pCi	06-04-98	04-01-92	1.00E+00	sm	QUAL		102.5	05-01	Q0534-3-14463

Comment:

Data generated from analyses of samples submitted on 6/4/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent the sample as a whole.

Prepared by:

Date: 7/6/98

Approved by:

Date: 7/6/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 5

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B437
Batch: M559
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON P6-6	Gross Alpha	Gross A	2.00E+01	1.6E+01		2.7E+00	pCi/g	07-03-98	06-03-98	5.00E-01	gm	SOIL G			14-01	G9118-1-75086
DECON P7-6	Gross Alpha	Gross A	1.83E+01	1.7E+01		2.6E+00	pCi/g	07-03-98	06-03-98	5.00E-01	gm	SOIL G			14-01	G9118-2-75088
DECON P8-6	Gross Alpha	Gross A	2.24E+01	1.6E+01		2.9E+00	pCi/g	07-03-98	06-03-98	5.00E-01	gm	SOIL G			14-01	G9118-3-75090
DECON P8-6 MS&MSD	Gross Alpha	Gross A	2.11E+01	1.6E+01		2.8E+00	pCi/g	07-03-98	06-03-98	5.00E-01	gm	SOIL G			14-01	G9118-4-75092
DECON W2-6	Gross Alpha	Gross A	6.42E+01	6.4E+00		1.6E+00	pCi/g	07-03-98	06-03-98	5.00E-01	gm	SOIL G			14-01	G9118-0-75084
QA REA	Gross Alpha	Gross A	1.65E-02	1.4E+03	U	4.2E-01	pCi	07-02-98	06-02-98	1.00E+00	sm	QUAL			14-01	G9100-0-06776
QA SP:GROSSAB 05	Gross Alpha	Gross A	3.38E+00	1.6E+01		4.2E-01	pCi	07-02-98	01-06-98	1.00E+00	sm	QUAL		98.6	14-01	G9100-1-06777
DECON P6-6	Gross Beta	Gross B	1.80E+01	9.7E+00		2.2E+00	pCi/g	07-03-98	06-03-98	5.00E-01	gm	SOIL G			14-01	G9118-1-75086
DECON P7-6	Gross Beta	Gross B	1.46E+01	1.1E+01		2.2E+00	pCi/g	07-03-98	06-03-98	5.00E-01	gm	SOIL G			14-01	G9118-2-75088
DECON P8-6	Gross Beta	Gross B	1.99E+01	8.9E+00		2.2E+00	pCi/g	07-03-98	06-03-98	5.00E-01	gm	SOIL G			14-01	G9118-3-75090

Comment:

Data generated from analyses of samples submitted on 6/4/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent the sample as a whole.

Prepared by:

Date: 7/6/98

Approved by:

Date: 7-6-98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 6

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B437
Batch: M559
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON P8-6 MS&MSD	Gross Beta	Gross B	1.67E+01	1.0E+01		2.2E+00	pCi/g	07-03-98	06-03-98	5.00E-01	gm	SOIL G			14-01	G9118-4-75092
DECON W2-8	Gross Beta	Gross B	4.82E+01	4.7E+00		2.2E+00	pCi/g	07-03-98	06-03-98	5.00E-01	gm	SOIL G			14-01	G9118-0-75084
QA REA	Gross Beta	Gross B	-2.67E-01	2.1E+02	U	9.8E-01	pCi	07-02-98	06-02-98	1.00E+00	sm	QUAL			14-01	G9100-0-06776
QA SP:GROSSAB 05	Gross Beta	Gross B	4.65E+00	1.5E+01		9.8E-01	pCi	07-02-98	01-06-98	1.00E+00	sm	QUAL		89.0	14-01	G9100-1-06777

Comment:

Data generated from analyses of samples submitted on 6/4/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent the sample as a whole.

Prepared by:

Date: 7/6/98

Approved by:

Date: 7-6-98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

***** End of Report *****

(Level 1)

14806093

6/15

Custody Seal Intact? ☒ N None
Condition when received ☒ good

Temp. 62

PROJECT/CLIENT INFORMATION					REPORT INFORMATION					SAMPLE INFORMATION					
Project: <u>DECON POND CLOSURE</u> BN Org#: <u>2152</u>					Send Report to: <u>JEFF SMITH</u>					Sampling Site: <u>DECON. FACILITY</u>					
Charge No.: <u>CHL-SBODE</u> ASL Prog.:					Phone: <u>5-7775</u> Fax: <u>5-7761</u> M/S: <u>NTS-306</u>					The samples submitted contain (check): ☐ Hazardous ☒ Radioactive ☒ Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.					
Project Manager: <u>JEFF SMITH</u>					Turnaround: ☐ Standard - 30 days Non-rad, 60 Days Rad, Other: ☒ Rush Preliminary by: <u>2 WEEKS</u> Final by:										
Phone: <u>57775</u> Fax: <u>5-7761</u> M/S: <u>NTS306</u>					Final report format: ☒ Standard ☐ NTS-WAC ☐ Other:										
LAB USE ONLY					ANALYSES & METHOD					SAMPLE RECEIPT INFORMATION					
Rad SGD: <u>B437</u> Non-Rad SGD: <u>V431</u>					<div style="display: flex; flex-direction: row-reverse;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW846 EPA 8260</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW846 EPA 8270</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW846 EPA 8082</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW846 EPA 8015 MOD.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW846 EPA 1311/6010</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">L-EIO.602 PL</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">L-EIO.612 PL</div> </div>					Are all sample containers received intact ☐ Yes ☐ No Comments:					
Rad Packet: <u>G9118</u> Non-Rad Packet: <u>W1462</u>										Do the labels agree with this form? ☐ Yes ☐ No Comments:					
Client Services Representative:										Was a Material Clearance Tag submitted? ☐ Yes ☐ No Comments:					
Will these analyses be performed under a signed SOW? ☐ YES ☐ NO If so, do analyses entered here agree with the SOW? ☐ YES ☐ NO ☐ N/A If not, identify the variation _____ CSR initials indicating review and approval: _____ Date: _____										COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)					
ITEM	ID / DESCRIPTION	DATE	TIME	MATRIX											
0	DECON W2-1 A+B	6/03	1115	SLUDGE	X										ICE, 120ml (2)
1	DECON W2-2	6/03	1115	SLUDGE		X									ICE, 500ml
2	DECON W2-3	6/03	1115	SLUDGE			X								ICE, 250ml - AMBER
3	DECON W2-4 A+B	6/03	1115	SLUDGE				X							ICE, 250ml, 120ml
4	DECON W2-5	6/03	1115	SLUDGE					X						ICE, 250ml
5	DECON W2-6	6/03	1115	SLUDGE						X	X				ICE, 500ml 603g
6	DECON PG-1 TB ^{2%}	6/03	1130	WATER	X										ICE, 40ml NOTE - Hold time
7	DECON PG-1 A+B	6/03	1130	SOIL	X										ICE, 120ml (2)
8	DECON PG-2	6/03	1130	SOIL		X									ICE, 500ml
9	DECON PG-3	6/03	1130	SOIL			X								ICE, 250ml - AMBER
Transfer of samples submitted for analyses										Complete for samples shipped to an OFF-SITE Subcontract Laboratory					
Sampled/Relinquished (Signature/Organization)					Received by (Signature/Organization)					Relinquished (BN Representative Signature)					
<u>[Signature]</u> BN					<u>[Signature]</u> CD					<u>[Signature]</u> CD					
<u>UVA COURIER</u>					<u>[Signature]</u>					<u>6/8/98/1300</u>					
										Received (Courier & Tracking Info.)					
										Relinquished (Courier & Tracking Info.)					
										Received (1st tier Subcontractor Rep)					
										Relinquished (1st tier Subcontractor Rep)					
										Received (2nd tier Subcontractor Rep)					

ANALYTICAL SERVICES LABORATORY SERVICES REQUEST & CHAIN OF CUSTODY RECORD

PROJECT / CLIENT INFORMATION

Project: DECON. PEND. CLOSURE BN Org# 2152

Charge No: 04U-SBODE ASI Prog:

Project Manager: JEFF SMITH

Phone: 5-7775 Fax: 5-7761 M/S: NTS 346

Send Report to: JEFF SMITH Phone: 5-7775 Fax: 5-7761 M/S: NTS 306

Turnaround: () Standard - 30 days Non-rad. 60 Days Rad. Other: 2 WEEKS

Final report format: ☒ Standard () NTS-WAC () Other:

LAB USE ONLY

Rad SGD: B437 Non-Rad SDG: V431

Rad Packet: G9118 Non-Rad Packet: W1462

Client Services Representative:

Will these analyses be performed under a signed SOW? () YES () NO

If so, do analyses entered here agree with the SOW? () YES () NO () N/A

If not, identify the variation _____

CSR initials indicating review and approval: _____ Date: _____

ITEM	ID / DESCRIPTION	SAMPLING		MATRIX
		DATE	TIME	
0	DECON P6-4 A+B	6/03	1130	SOIL
1	DECON P6-S	6/03	1130	SOIL
2	DECON P6-6	6/03	1130	SOIL
3	DECON P7-1 A+B	6/03	1130	SOIL
4	DECON P7-2	6/03	1130	SOIL
5	DECON P7-3	6/03	1130	SOIL
6	DECON P7-4 A+B	6/03	1130	SOIL
7	DECON P7-5	6/03	1130	SOIL
8	DECON P7-6	6/03	1130	SOIL
9	DECON P8-1 A+B	6/03	1330	SOIL

Transfer of samples submitted for analyses

Sampled/Relinquished (Signature/Organization) DATE / TIME Received by (Signature/Organization)

David Cox / BN 6/04/08 10140 CPD Constroy da

Vita Court 6/12/12 120447/1500 Jeff MRL

SAMPLE INFORMATION

Sampling Site: DECON. FACILITY

The samples submitted contain (check):

() Hazardous () Radioactive (X) Unknown contamination If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.

SAMPLE RECEIPT INFORMATION

Are all sample containers received intact () Yes () No

Comments:

Do the labels agree with this form? () Yes () No

Comments:

Was a Material Clearance Tag submitted? () Yes () No

Comments:

COMMENTS

(Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)

ICE, 250ml, 120ml

ICE, 250ml

ICE, 500ml

ICE, 120ml (2)

ICE, 500ml

ICE, 250ml-AMBER

ICE, 250ml, 120ml

ICE, 250ml

ICE, 500ml

ICE, 120ml (2)

Complete for samples shipped to an OFF-SITE Subcontract Laboratory

Relinquished (BN Representative Signature) DATE / TIME Received (Courier & Tracking Info.)

CD Castorena 6/8/08/1300 BN Courier

Relinquished (Courier & Tracking Info.) DATE / TIME Received (1st tier Subcontractor Rep)

Relinquished (1st tier Subcontractor Rep) DATE / TIME Received (2nd tier Subcontractor Rep)

PROJECT/CLIENT INFORMATION		REPORT INFORMATION		SAMPLE INFORMATION
Project: <u>DECON POND CLOSURE</u>	BN Org#: <u>2152</u>	Send Report to: <u>JEFF SMITH</u>	Sampling Site: <u>DECON. FACILITY</u>	
Charge No.: <u>C4U-5B0DE</u>	ASL Prog.:	Phone: <u>5-7775</u>	Fax: <u>5-7761</u>	M/S: <u>NTS-306</u>
Project Manager: <u>JEFF SMITH</u>		Turnaround: ☐ Standard - 30 days Non-rad, 60 Days Rad, Other ☒ Rush Preliminary by: <u>2 WEEKS</u>		The samples submitted contain (check); ☐ Hazardous ☐ Radioactive ☒ Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.
Phone: <u>5-7775</u>	Fax: <u>5-7761</u>	M/S: <u>NTS-306</u>	Final report format: ☒ Standard ☐ NTS-WAC ☐ Other:	

LAB USE ONLY		ANALYSES & METHOD										SAMPLE RECEIPT INFORMATION																									
Rad SGD: <u>B437</u>	Non-Rad SGD: <u>V431</u>	<table border="1"> <tr> <td>SW 846</td> <td>EPA 8260</td> <td>SW 846</td> <td>EPA 8270</td> <td>SW 846</td> <td>EPA 8082</td> <td>SW 846</td> <td>EPA 8015 MOD.</td> <td>SW 846</td> <td>EPA 1311/6010</td> <td>L-EIC 602 PC</td> <td>L-EIC 612 PL</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>										SW 846	EPA 8260	SW 846	EPA 8270	SW 846	EPA 8082	SW 846	EPA 8015 MOD.	SW 846	EPA 1311/6010	L-EIC 602 PC	L-EIC 612 PL													Are all sample containers received intact ☐ Yes ☐ No	
SW 846	EPA 8260											SW 846	EPA 8270	SW 846	EPA 8082	SW 846	EPA 8015 MOD.	SW 846	EPA 1311/6010	L-EIC 602 PC	L-EIC 612 PL																
Rad Packet: <u>G9118</u>	Non-Rad Packet: <u>W1462</u>	Comments:																																			
Client Services Representative:		Do the labels agree with this form? ☐ Yes ☐ No																																			
Will these analyses be performed under a signed SOW? ☐ YES ☐ NO		Comments:																																			
If so, do analyses entered here agree with the SOW? ☐ YES ☐ NO ☐ N/A		Was a Material Clearance Tag submitted? ☐ Yes ☐ No																																			
If not, identify the variation _____		Comments:																																			
CSR initials indicating review and approval: _____ Date: _____		Comments:																																			

ITEM	ID / DESCRIPTION	SAMPLING		MATRIX	COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)											
		DATE	TIME		SW 846	EPA 8260	SW 846	EPA 8270	SW 846	EPA 8082	SW 846	EPA 8015 MOD.	SW 846	EPA 1311/6010	L-EIC 602 PC	L-EIC 612 PL
0	DECON P8-2	6/03	1330	SOIL			X									
1	DECON P8-3	6/03	1330	SOIL				X								
2	DECON P8-4 A&B	6/03	1330	SOIL					X							
3	DECON P8-5	6/03	1330	SOIL							X					
4	DECON P8-6	6/03	1330	SOIL							X	X	Disrupt Rec.			
5	DECON P8-1 A&B	6/03	1330	SOIL	X											
6	DECON P8-2	6/03	1330	SOIL		X										
7	DECON P8-3	6/03	1330	SOIL			X									
8	DECON P8-4 A&B	6/03	1330	SOIL					X							
9	DECON P8-5	6/03	1330	SOIL							X	Hg-MS				

Transfer of samples submitted for analyses			Complete for samples shipped to an OFF-SITE Subcontract Laboratory		
Sampled/Relinquished (Signature/Organization)	DATE / TIME	Received by (Signature/Organization)	Relinquished (BN Representative Signature)	DATE / TIME	Received (Courier & Tracking Info.)
<u>Donna Cox/BN</u>	<u>6/4/98/1040</u>	<u>CD Contreras</u>	<u>CD Contreras</u>	<u>6/4/98/1300</u>	<u>BAI Courier</u>
<u>VIA</u>	<u>COMMON 6-8-98/1040</u>	<u>for Mail</u>	Relinquished (Courier & Tracking Info.)	DATE / TIME	Received (1st tier Subcontractor Rep)
			Relinquished (1st tier Subcontractor Rep)	DATE / TIME	Received (2nd tier Subcontractor Rep)

PROJECT/ CLIENT INFORMATION					REPORT INFORMATION					SAMPLE INFORMATION																																								
Project: <u>DECON POND CLOSURE</u> BN Org#: <u>2152</u>					Send Report to: <u>JEFF SMITH</u>					Sampling Site: <u>DECON FACILITY</u>																																								
Charge No.: <u>C44-SB0DE</u> ASL Prog.:					Phone: <u>5-7775</u>		Fax: <u>5-7761</u>		M/S: <u>NTS-306</u>		The samples submitted contain (check): ☐ Hazardous ☒ Radioactive ☒ Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.																																							
Project Manager: <u>JEFF SMITH</u>					Turnaround: ☐ Standard - 30 days Non-rad, 60 Days Rad, Other: <u>2 WEEKS</u> ☒ Rush Preliminary by: <u>2 WEEKS</u> Final by:																																													
Phone: <u>57775</u>		Fax: <u>5-7761</u>		M/S: <u>NTS306</u>		Final report format: ☒ Standard ☐ NTS-WAC ☐ Other:																																												
LAB USE ONLY					ANALYSES & METHOD																																													
Rad SGD: <u>B437</u> Non-Rad SGD: <u>V431</u>					<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:5%;">SW846</td> <td style="width:10%;">EPA 8260</td> <td style="width:5%;">SW846</td> <td style="width:10%;">EPA 8210</td> <td style="width:5%;">SW846</td> <td style="width:10%;">EPA 8062</td> <td style="width:5%;">SW846</td> <td style="width:10%;">EPA 8015 MOD</td> <td style="width:5%;">SW846</td> <td style="width:10%;">EPA 1311/6010</td> <td style="width:5%;">L-EIO.602 PC</td> <td style="width:5%;">L-EIO.612 PL</td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>										SW846	EPA 8260	SW846	EPA 8210	SW846	EPA 8062	SW846	EPA 8015 MOD	SW846	EPA 1311/6010	L-EIO.602 PC	L-EIO.612 PL																								
SW846	EPA 8260	SW846	EPA 8210	SW846											EPA 8062	SW846	EPA 8015 MOD	SW846	EPA 1311/6010	L-EIO.602 PC	L-EIO.612 PL																													
Rad Packet: <u>G9118</u> Non-Rad Packet: <u>W1462</u>																																																		
Client Services Representative:																																																		
Will these analyses be performed under a signed SOW? ☐ YES ☐ NO If so, do analyses entered here agree with the SOW? ☐ YES ☐ NO ☐ N/A If not, identify the variation _____ CSR initials indicating review and approval: _____ Date: _____																																																		
ITEM	ID / DESCRIPTION	SAMPLING		MATRIX											COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)																																			
		DATE	TIME																																															
0	DECON W2-1 A+B	6/03	1115	SLUDGE	X										ICE, 120ml (2)																																			
1	DECON W2-2	6/03	1115	SLUDGE	X										ICE, 500ml																																			
2	DECON W2-3	6/03	1115	SLUDGE	X										ICE, 250ml - AMBER																																			
3	DECON W2-4 A+B	6/03	1115	SLUDGE	X										ICE, 250ml, 120ml																																			
4	DECON W2-5	6/03	1115	SLUDGE	X										ICE, 250ml																																			
5	DECON W2-6	6/03	1115	SLUDGE	X X										ICE, 500ml 603g																																			
6	DECON PG-1 TB ^{3/4}	6/03	1130	WATER	X										ICE, 40ml NOTE - Hold time																																			
7	DECON PG-1 A+B	6/03	1130	SOIL	X										ICE, 120ml (2)																																			
8	DECON PG-2	6/03	1130	SOIL	X										ICE, 500ml																																			
9	DECON PG-3	6/03	1130	SOIL	X										ICE, 250ml - AMBER																																			
Transfer of samples submitted for analyses					Complete for samples shipped to an OFF-SITE Subcontract Laboratory																																													
Sampled/Relinquished (Signature/Organization)		DATE / TIME		Received by (Signature/Organization)		Relinquished (BN Representative Signature)		DATE / TIME		Received (Courier & Tracking Info.)																																								
<u>[Signature] Cox / BN</u>		<u>06/04/98 1040</u>		<u>[Signature] Castaneda</u>		<u>[Signature] Castaneda</u>		<u>6/8/98/1300</u>		<u>BN Courier</u>																																								
						Relinquished (Courier & Tracking Info.)		DATE / TIME		Received (1st tier Subcontractor Rep)																																								
						Relinquished (1st tier Subcontractor Rep)		DATE / TIME		Received (2nd tier Subcontractor Rep)																																								

PROJECT/CLIENT INFORMATION				REPORT INFORMATION				SAMPLE INFORMATION															
Project: <u>DECON. Pond Closure</u> BN Org# <u>2152</u>				Send Report to: <u>JEFF SMITH</u>				Sampling Site: <u>DECON. FACILITY</u>															
Charge No: <u>C4U-SBØDE</u>		ASL Prog.:		Phone: <u>5-7775</u>		Fax: <u>5-7761</u>		M/S: <u>NTS 306</u>		The samples submitted contain (check); ☐ Hazardous ☐ Radioactive ☒ Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.													
Project Manager: <u>JEFF SMITH</u>				Turnaround: ☐ Standard - 30 days Non-rad, 60 Days Rad, Other: _____ ☒ Rush Preliminary by: <u>2 WEEKS</u> Final by: _____																			
Phone: <u>5-7775</u>		Fax: <u>5-7761</u>		M/S: <u>NTS 306</u>		Final report format: ☒ Standard ☐ NTS-WAC ☐ Other: _____																	
LAB USE ONLY				ANALYSES & METHOD																			
Rad SGD: <u>B437</u> Non-Rad SGD: <u>V431</u>				<div style="display: flex; flex-direction: column; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW 846 EPA 8260</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW 846 EPA 8270</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW 846 EPA 8082</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW 846 EPA 8015 MOD.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW 846 EPA 1311/6010</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">L-EIO. 602 PC</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">L-EIO. 612 PL</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">DTC 06/03/98</div> </div>																			
Rad Packet: <u>G9118</u> Non-Rad Packet: <u>W1462</u>																							
Client Services Representative:																							
Will these analyses be performed under a signed SOW? ☐ YES ☐ NO If so, do analyses entered here agree with the SOW? ☐ YES ☐ NO ☐ N/A If not, identify the variation _____ CSR initials indicating review and approval: _____ Date: _____																							
ID / DESCRIPTION		SAMPLING		MATRIX																			
		DATE	TIME																				
0	DECON P6-4 A&B	6/03	1130	SOIL																			
1	DECON P6-5	6/03	1130	SOIL																			
2	DECON P6-6	6/03	1130	SOIL																			
3	DECON P7-1 A&B	6/03	1130	SOIL	X																		
4	DECON P7-2	6/03	1130	SOIL		X																	
5	DECON P7-3	6/03	1130	SOIL			X																
6	DECON P7-4 A&B	6/03	1130	SOIL				X															
7	DECON P7-5	6/03	1130	SOIL					X														
8	DECON P7-6	6/03	1130	SOIL						X	X												
9	DECON P8-1 A&B	6/03	1330	SOIL	X																		
Transfer of samples submitted for analyses				Complete for samples shipped to an OFF-SITE Subcontract Laboratory																			
Sampled/Relinquished (Signature/Organization)				DATE / TIME				Received by (Signature/Organization)				Relinquished (BN Representative Signature)				DATE / TIME				Received (Courier & Tracking Info.)			
<u>Shane Cox / BN</u>				<u>6/04/98/0740</u>				<u>CD Contreras</u>				<u>CD Contreras</u>				<u>6/8/98/1300</u>				<u>BN Courier</u>			
												Relinquished (Courier & Tracking Info.)				DATE / TIME				Received (1st tier Subcontractor Rep)			
												Relinquished (1st tier Subcontractor Rep)				DATE / TIME				Received (2nd tier Subcontractor Rep)			

PROJECT/CLIENT INFORMATION			REPORT INFORMATION			SAMPLE INFORMATION		
Project: <u>DECON POND CLOSURE</u> BN Org#: <u>2152</u>			Send Report to: <u>JEFF SMITH</u>			Sampling Site: <u>DECON. FACILITY</u>		
Charge No.: <u>C4U-5B0DE</u>		ASL Prog.:	Phone: <u>5-7775</u>	Fax: <u>5-7761</u>	M/S: <u>NTS-306</u>	The samples submitted contain (check): ☐ Hazardous ☐ Radioactive ☒ Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.		
Project Manager: <u>JEFF SMITH</u>			Turnaround: ☐ Standard - 30 days Non-rad, 60 Days Rad, Other: <u>2 WEEKS</u>			Final by: _____		
Phone: <u>5-7775</u>		Fax: <u>5-7761</u>	M/S: <u>NTS 306</u>		Final report format: ☒ Standard ☐ NTS-WAC ☐ Other: _____			

LAB USE ONLY		ANALYSES & METHOD										SAMPLE RECEIPT INFORMATION																						
Rad SGD: <u>B437</u>	Non-Rad SGD: <u>V431</u>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>SW846 EPA 8260</td><td>SW846 EPA 8270</td><td>SW846 EPA 8082</td><td>SW846 EPA 8015 MOD.</td><td>SW846 EPA 1311/6010</td><td>L-EIO. 602 PC</td><td>L-EIO. 612 PL</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										SW846 EPA 8260	SW846 EPA 8270	SW846 EPA 8082	SW846 EPA 8015 MOD.	SW846 EPA 1311/6010	L-EIO. 602 PC	L-EIO. 612 PL															Are all sample containers received intact ☐ Yes ☐ No Comments: _____	
SW846 EPA 8260	SW846 EPA 8270											SW846 EPA 8082	SW846 EPA 8015 MOD.	SW846 EPA 1311/6010	L-EIO. 602 PC	L-EIO. 612 PL																		
Rad Packet: <u>G9118</u>	Non-Rad Packet: <u>W1462</u>	Do the labels agree with this form? ☐ Yes ☐ No Comments: _____																																
Client Services Representative: _____		Will these analyses be performed under a signed SOW? ☐ YES ☐ NO If so, do analyses entered here agree with the SOW? ☐ YES ☐ NO ☐ N/A If not, identify the variation _____ CSR Initials indicating review and approval: _____ Date: _____										Was a Material Clearance Tag submitted? ☐ Yes ☐ No Comments: _____																						

ITEM	ID / DESCRIPTION	SAMPLING		MATRIX	SW846 EPA 8260	SW846 EPA 8270	SW846 EPA 8082	SW846 EPA 1311/6010	SW846 EPA 1311/6010	L-EIO. 602 PC	L-EIO. 612 PL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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Transfer of samples submitted for analyses			Complete for samples shipped to an OFF-SITE Subcontract Laboratory		
Sampled/Relinquished (Signature/Organization)	DATE / TIME	Received by (Signature/Organization)	Relinquished (BN Representative Signature)	DATE / TIME	Received (Courier & Tracking Info.)
<u>Donat Cox/BN</u>	<u>6/4/98/0740</u>	<u>CD Cantorunda</u>	<u>CD Cantorunda</u>	<u>6/4/98/1300</u>	<u>BAI Courier</u>
			Relinquished (Courier & Tracking Info.)	DATE / TIME	Received (1st tier Subcontractor Rep)
			Relinquished (1st tier Subcontractor Rep)	DATE / TIME	Received (2nd tier Subcontractor Rep)

PROJECT/CLIENT INFORMATION Project: DEON RAD CLOSURE BN Org# 2152 Charge No: C4U-SR00E Project Manager: JEFF SMITH Phone: 5-7775 Fax: 5-7761 M/S: NIS 306		REPORT INFORMATION Send Report to: JEFF SMITH Phone: 5-7775 Fax: 5-7761 M/S: NIS 306 Turnaround: () Standard - 30 days Non-rad 60 Days Rad, Other: Rush Preliminary by: 2 WEEKS Final report format: (X) Standard () NIS-WAC () Other:		SAMPLE INFORMATION Sampling Site: DEON FACILITY The samples submitted contain (check): () Hazardous () Radioactive (X) Unknown identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.	
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SAMPLE RECEIPT INFORMATION Are all sample containers received intact () Yes () No Comments: _____ Do the labels agree with this form? () Yes () No Comments: _____ Was a Material Clearance Tag submitted? () Yes () No Comments: _____		LAB USE ONLY Rad SGD: B437 Rad Packet: G9118 Non-Rad SDG: _____ Non-Rad Packet: _____ Client Services Representative: _____ Will these analyses be performed under a signed SOW? () YES () NO If so, do analyses entered here agree with the SOW? () YES () NO () N/A If not, identify the variation: _____ CSR initials indicating review and approval: _____ Date: _____	
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ITEM	ID / DESCRIPTION	SAMPLING DATE	TIME	MATRIX	ANALYSES & METHOD	1	2	3	4	5	6	7	8	9
0	DEON P8-6	6/03	1330	SOIL	L-EO, 602 PC L-EO, 612 PL	X	X							
1														
2														
3														
4														
5														
6														
7														
8														
9														

Transfer of samples submitted for analyses Complete for samples shipped to an OFF-SITE Subcontract Laboratory					Sampled/Relinquished (Signature/Organization) DATE / TIME Received by (Signature/Organization) Relinquished (BN Representative Signature) DATE / TIME Received (Counter & Tracking Info.)	Relinquished (1st tier Subcontractor Rep) DATE / TIME Received (1st tier Subcontractor Rep)	Relinquished (2nd tier Subcontractor Rep) DATE / TIME Received (2nd tier Subcontractor Rep)
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Distribution: Original - To be retained by laboratory performing final analysis
 Copy 1 - To be retained by laboratory performing intermediate analysis
 Copy 2 - To be retained by Analytical Services Laboratory
 Copy 3 - To be retained by sampler

**VOLATILE
ORGANICS
DATA**

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V432
PROJECT NUMBER: 17777

CLIENT ID: Decon P9-1 TB
DATE SAMPLED: 5/27/98
NEL SAMPLE ID: L9806094-01

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous
DILUTION: 1

EXTRACTED: 6/9/98
ANALYZED: 6/9/98

ANALYST: Suzanne

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25. µg/L			
Benzene	ND	5. µg/L			
Bromodichloromethane	ND	5. µg/L			
Bromoform	ND	5. µg/L			
Bromomethane	ND	5. µg/L			
2-Butanone	ND	25. µg/L			
Carbon disulfide	ND	5. µg/L			
Carbon tetrachloride	ND	5. µg/L			
Chlorobenzene	ND	5. µg/L			
Chloroethane	ND	5. µg/L			
Chloroform	ND	5. µg/L			
Chloromethane	ND	5. µg/L			
Dibromochloromethane	ND	5. µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L			
cis-1,2-Dichloroethene	ND	5. µg/L			
trans-1,2-Dichloroethene	ND	5. µg/L			
1,2-Dichloropropane	ND	5. µg/L			
cis-1,3-Dichloropropene	ND	5. µg/L			
trans-1,3-Dichloropropene	ND	5. µg/L			
Ethylbenzene	ND	5. µg/L			
2-Hexanone	ND	25. µg/L			
Methylene chloride (Dichloromethane)	ND	5. µg/L			
4-Methyl-2-pentanone	ND	25. µg/L			
Styrene	ND	5. µg/L			
1,1,2,2-Tetrachloroethane	ND	5. µg/L			
Tetrachloroethene (PCE)	ND	5. µg/L			
Toluene	ND	5. µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L			
Trichloroethene (TCE)	ND	5. µg/L			
Vinyl chloride	ND	5. µg/L			
o-Xylene	ND	5. µg/L			
m,p-Xylene	ND	5. µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	103	70 - 130
Dibromofluoromethane	103	70 - 130
ene-d8	108	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V432
PROJECT NUMBER: 17777

CLIENT ID: Decon P9-1 A&B
DATE SAMPLED: 6/4/98
NEL SAMPLE ID: L9806094-02

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/11/98
ANALYZED: 6/11/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25. µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	25. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	25. µg/kg			
Methylene chloride (Dichloromethane)	5	5. µg/kg			
4-Methyl-2-pentanone	ND	25. µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	89	74 - 121
Dibromofluoromethane	93	80 - 120
Toluene-d8	98	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V432
PROJECT NUMBER: 17777

CLIENT ID: Decon P10-1 A&B
DATE SAMPLED: 6/4/98
NEL SAMPLE ID: L9806094-07

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid EXTRACTED: 6/11/98 ANALYST: Suzanne
DILUTION: 1 ANALYZED: 6/11/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25. µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	25. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
is-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	25. µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	25. µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	87	74 - 121
Dibromofluoromethane	92	80 - 120
Toluene-d8	98	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V432
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9806092W60B-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 6/9/98

ANALYZED: 6/9/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25 µg/L			
Benzene	ND	5 µg/L			
Bromodichloromethane	ND	5 µg/L			
Bromoform	ND	5 µg/L			
Bromomethane	ND	5 µg/L			
2-Butanone	ND	25 µg/L			
Carbon disulfide	ND	5 µg/L			
Carbon tetrachloride	ND	5 µg/L			
Chlorobenzene	ND	5 µg/L			
Chloroethane	ND	5 µg/L			
Chloroform	ND	5 µg/L			
Chloromethane	ND	5 µg/L			
Dibromochloromethane	ND	5 µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L			
cis-1,2-Dichloroethene	ND	5 µg/L			
trans-1,2-Dichloroethene	ND	5 µg/L			
1,2-Dichloropropane	ND	5 µg/L			
cis-1,3-Dichloropropene	ND	5 µg/L			
trans-1,3-Dichloropropene	ND	5 µg/L			
Ethylbenzene	ND	5 µg/L			
2-Hexanone	ND	25 µg/L			
Methylene chloride (Dichloromethane)	ND	5 µg/L			
4-Methyl-2-pentanone	ND	25 µg/L			
Styrene	ND	5 µg/L			
1,1,2,2-Tetrachloroethane	ND	5 µg/L			
Tetrachloroethene (PCE)	ND	5 µg/L			
Toluene	ND	5 µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L			
Trichloroethene (TCE)	ND	5 µg/L			
Vinyl chloride	ND	5 µg/L			
o-Xylene	ND	5 µg/L			
m,p-Xylene	ND	5 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	93	70 - 130
Dibromofluoromethane	103	70 - 130
Toluene-d8	105	70 - 130

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V432/1777
PROJECT #: 1777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-17-MSD

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/11/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Benzene	96	66 - 142	2.1
Chlorobenzene	98	60 - 133	2.
1,1-Dichloroethene (1,1-DCE)	156	59 - 172	9.4
Toluene	94	59 - 139	2.1
Trichloroethene (TCE)	98	62 - 137	0.

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	86	74 - 121
Dibromofluoromethane	93	80 - 120
Toluene-d8	97	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V432/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: 9806092W60B-LCS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 6/9/98

ANALYZED: 6/9/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	97	70 - 130
Chlorobenzene	93	70 - 130
1,1-Dichloroethene (1,1-DCE)	93	70 - 130
Toluene	96	70 - 130
Trichloroethene (TCE)	92	70 - 130

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	109	70 - 130
Dibromofluoromethane	103	70 - 130
Toluene-d8	113	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
 PROJECT NAME: V432
 PROJECT NUMBER: 17777

CLIENT ID: Method Blank
 DATE SAMPLED: NA
 NEL SAMPLE ID: 9806111260B2-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994
 MATRIX: Solid

EXTRACTED: 6/11/98
 ANALYZED: 6/11/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25 µg/kg			
Benzene	ND	5 µg/kg			
Bromodichloromethane	ND	5 µg/kg			
Bromoform	ND	5 µg/kg			
Bromomethane	ND	5 µg/kg			
2-Butanone	ND	25 µg/kg			
Carbon disulfide	ND	5 µg/kg			
Carbon tetrachloride	ND	5 µg/kg			
Chlorobenzene	ND	5 µg/kg			
Chloroethane	ND	5 µg/kg			
Chloroform	ND	5 µg/kg			
Chloromethane	ND	5 µg/kg			
Dibromochloromethane	ND	5 µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg			
cis-1,2-Dichloroethene	ND	5 µg/kg			
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
cis-1,3-Dichloropropene	ND	5 µg/kg			
trans-1,3-Dichloropropene	ND	5 µg/kg			
Ethylbenzene	ND	5 µg/kg			
2-Hexanone	ND	25 µg/kg			
Methylene chloride (Dichloromethane)	7	5 µg/kg			
4-Methyl-2-pentanone	ND	25 µg/kg			
Styrene	ND	5 µg/kg			
1,1,2,2-Tetrachloroethane	ND	5 µg/kg			
Tetrachloroethene (PCE)	ND	5 µg/kg			
Toluene	ND	5 µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg			
Trichloroethene (TCE)	ND	5 µg/kg			
Vinyl chloride	ND	6 µg/kg			
o-Xylene	ND	5 µg/kg			
m,p-Xylene	ND	5 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	92	74 - 121
Dibromofluoromethane	93	80 - 120
Toluene-d8	98	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V432/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: 9806111260B2-LCS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/11/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	99	80 - 120
Chlorobenzene	102	80 - 120
1,1-Dichloroethene (1,1-DCE)	89	80 - 120
Toluene	104	80 - 120
Trichloroethene (TCE)	100	80 - 120

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	91	74 - 121
Dibromofluoromethane	91	80 - 120
Toluene-d8	99	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V432/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-17-MS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/11/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	94	66 - 142
Chlorobenzene	100	60 - 133
1,1-Dichloroethene (1,1-DCE)	142	59 - 172
Toluene	96	59 - 139
Trichloroethene (TCE)	98	62 - 137

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	85	74 - 121
Dibromofluoromethane	93	80 - 120
Toluene-d8	97	81 - 117

**SEMI-VOLATILE
ORGANICS
DATA**

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V432
PROJECT NUMBER: 17777

CLIENT ID: Decon P9-2
DATE SAMPLED: 6/4/98
NEL SAMPLE ID: L9806094-03

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/11/98
ANALYZED: 6/15/98

ANALYST: CCJ

PARAMETER	Result µg/Kg	Reporting Limit	PARAMETER	Result µg/Kg	Reporting Limit
Acenaphthene	ND	500. µg/Kg	Di-n-octyl phthalate	ND	500. µg/Kg
Acenaphthylene	ND	500. µg/Kg	Fluoranthene	ND	500. µg/Kg
Anthracene	ND	500. µg/Kg	Fluorene	ND	500. µg/Kg
Benzo (a) anthracene	ND	500. µg/Kg	Hexachlorobenzene	ND	500. µg/Kg
Benzo (b&k) fluoranthene	ND	500. µg/Kg	Hexachlorobutadiene	ND	500. µg/Kg
Benzo (g,h,i) perylene	ND	500. µg/Kg	Hexachlorocyclopentadiene	ND	500. µg/Kg
Benzo (a) pyrene	ND	500. µg/Kg	Hexachloroethane	ND	500. µg/Kg
bis (2-Chloroethyl) ether	ND	500. µg/Kg	Indeno (1,2,3-c,d) pyrene	ND	500. µg/Kg
bis (2-Chloroethoxy) methane	ND	500. µg/Kg	Isophorone	ND	500. µg/Kg
bis (2-chloroisopropyl) ether	ND	500. µg/Kg	2-Methylnaphthalene	ND	500. µg/Kg
bis (2-Ethylhexyl)phthalate	ND	500. µg/Kg	2-Methylphenol	ND	500. µg/Kg
Butylbenzylphthalate	ND	500. µg/Kg	4-Methylphenol	ND	500. µg/Kg
4-Bromophenyl phenyl ether	ND	500. µg/Kg	Naphthalene	ND	500. µg/Kg
Carbazole	ND	500. µg/Kg	2-Nitroaniline	ND	2500. µg/Kg
4-Chloroaniline	ND	1000. µg/Kg	3-Nitroaniline	ND	2500. µg/Kg
4-Chloro-3-methyl phenol	ND	1000. µg/Kg	4-Nitroaniline	ND	1000. µg/Kg
Chloronaphthalene	ND	500. µg/Kg	Nitrobenzene	ND	500. µg/Kg
o-Chlorophenol	ND	500. µg/Kg	2-Nitrophenol	ND	500. µg/Kg
4-Chlorophenyl phenyl ether	ND	500. µg/Kg	4-Nitrophenol	ND	2500. µg/Kg
Chrysene	ND	500. µg/Kg	N-Nitrosodi-n-propylamine	ND	500. µg/Kg
Dibenzo (a,h) anthracene	ND	500. µg/Kg	N-Nitrosodiphenylamine	ND	500. µg/Kg
Dibenzofuran	ND	500. µg/Kg	Pentachlorophenol	ND	2500. µg/Kg
Di-n-butyl phthalate	ND	500. µg/Kg	Phenol	ND	500. µg/Kg
1,2-Dichlorobenzene (o-DCB)	ND	500. µg/Kg	Phenanthrene	ND	500. µg/Kg
1,3-Dichlorobenzene (m-DCB)	ND	500. µg/Kg	Pyrene	ND	500. µg/Kg
1,4-Dichlorobenzene (p-DCB)	ND	500. µg/Kg	1,2,4-Trichlorobenzene	ND	500. µg/Kg
2,4-Dichlorophenol	ND	500. µg/Kg	2,4,5-Trichlorophenol	ND	500. µg/Kg
3,3'-Dichlorobenzidine	ND	1000. µg/Kg	2,4,6-Trichlorophenol	ND	500. µg/Kg
Diethylphthalate	ND	500. µg/Kg			
2,4-Dimethylphenol	ND	500. µg/Kg			
Dimethylphthalate	ND	500. µg/Kg			
4,6-Dinitro-2-methyl phenol	ND	2500. µg/Kg			
2,4-Dinitrotoluene (DNT)	ND	500. µg/Kg			
2,6-Dinitrotoluene (DNT)	ND	500. µg/Kg			
2,4-Dinitrophenol	ND	2500. µg/Kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	61	19 - 122
m-Fluorobiphenyl	51	30 - 115
m-Fluorophenol	43	25 - 121
Nitrobenzene-d5	50	23 - 120
p-Terphenyl-d14	65	18 - 137
Phenol-d5	49	24 - 113

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V432
PROJECT NUMBER: 17777

CLIENT ID: Decon P10-2
DATE SAMPLED: 6/4/98
NEL SAMPLE ID: L9806094-08

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/11/98
ANALYZED: 6/15/98

ANALYST: CCI

PARAMETER	Result µg/Kg	Reporting Limit	PARAMETER	Result µg/Kg	Reporting Limit
Acenaphthene	ND	500. µg/Kg	Di-n-octyl phthalate	ND	500. µg/Kg
Acenaphthylene	ND	500. µg/Kg	Fluoranthene	ND	500. µg/Kg
Anthracene	ND	500. µg/Kg	Fluorene	ND	500. µg/Kg
Benzo (a) anthracene	ND	500. µg/Kg	Hexachlorobenzene	ND	500. µg/Kg
Benzo (b&k) fluoranthene	ND	500. µg/Kg	Hexachlorobutadiene	ND	500. µg/Kg
Benzo (g,h,i) perylene	ND	500. µg/Kg	Hexachlorocyclopentadiene	ND	500. µg/Kg
Benzo (a) pyrene	ND	500. µg/Kg	Hexachloroethane	ND	500. µg/Kg
bis (2-Chloroethyl) ether	ND	500. µg/Kg	Indeno (1,2,3-c,d) pyrene	ND	500. µg/Kg
bis (2-Chloroethoxy) methane	ND	500. µg/Kg	Isophorone	ND	500. µg/Kg
bis (2-chloroisopropyl) ether	ND	500. µg/Kg	2-Methylnaphthalene	ND	500. µg/Kg
bis (2-Ethylhexyl)phthalate	ND	500. µg/Kg	2-Methylphenol	ND	500. µg/Kg
Butylbenzylphthalate	ND	500. µg/Kg	4-Methylphenol	ND	500. µg/Kg
4-Bromophenyl phenyl ether	ND	500. µg/Kg	Naphthalene	ND	500. µg/Kg
Carbazole	ND	500. µg/Kg	2-Nitroaniline	ND	2500. µg/Kg
4-Chloroaniline	ND	1000. µg/Kg	3-Nitroaniline	ND	2500. µg/Kg
4-Chloro-3-methyl phenol	ND	1000. µg/Kg	4-Nitroaniline	ND	1000. µg/Kg
2-Chloronaphthalene	ND	500. µg/Kg	Nitrobenzene	ND	500. µg/Kg
2-Chlorophenol	ND	500. µg/Kg	2-Nitrophenol	ND	500. µg/Kg
4-Chlorophenyl phenyl ether	ND	500. µg/Kg	4-Nitrophenol	ND	2500. µg/Kg
Chrysene	ND	500. µg/Kg	N-Nitrosodi-n-propylamine	ND	500. µg/Kg
Dibenzo (a,h) anthracene	ND	500. µg/Kg	N-Nitrosodiphenylamine	ND	500. µg/Kg
Dibenzofuran	ND	500. µg/Kg	Pentachlorophenol	ND	2500. µg/Kg
Di-n-butyl phthalate	ND	500. µg/Kg	Phenol	ND	500. µg/Kg
1,2-Dichlorobenzene (o-DCB)	ND	500. µg/Kg	Phenanthrene	ND	500. µg/Kg
1,3-Dichlorobenzene (m-DCB)	ND	500. µg/Kg	Pyrene	ND	500. µg/Kg
1,4-Dichlorobenzene (p-DCB)	ND	500. µg/Kg	1,2,4-Trichlorobenzene	ND	500. µg/Kg
2,4-Dichlorophenol	ND	500. µg/Kg	2,4,5-Trichlorophenol	ND	500. µg/Kg
3,3'-Dichlorobenzidine	ND	1000. µg/Kg	2,4,6-Trichlorophenol	ND	500. µg/Kg
Diethylphthalate	ND	500. µg/Kg			
2,4-Dimethylphenol	ND	500. µg/Kg			
Dimethylphthalate	ND	500. µg/Kg			
4,6-Dinitro-2-methyl phenol	ND	2500. µg/Kg			
2,4-Dinitrotoluene (DNT)	ND	500. µg/Kg			
2,6-Dinitrotoluene (DNT)	ND	500. µg/Kg			
2,4-Dinitrophenol	ND	2500. µg/Kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	63	19 - 122
2-Fluorobiphenyl	55	30 - 115
2-Fluorophenol	47	25 - 121
Nitrobenzene-d5	53	23 - 120
p-Terphenyl-d14	70	18 - 137
Phenol-d5	56	24 - 113

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V432/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-18-MS

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: CCJ

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Acenaphthene	50	31 - 137
4-Chloro-3-methyl phenol	54	26 - 103
2-Chlorophenol	56	25 - 102
1,4-Dichlorobenzene (p-DCB)	49	28 - 104
2,4-Dinitrotoluene (DNT)	54	28 - 89
4-Nitrophenol	53	11 - 114
N-Nitrosodi-n-propylamine	65	41 - 126
Pentachlorophenol	49	17 - 109
Phenol	50	26 - 90
1,2,4-Trichlorobenzene	53	28 - 104

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
2,4,6-Tribromophenol	56	19 - 122
2-Fluorobiphenyl	54	30 - 115
2-Fluorophenol	50	25 - 121
Nitrobenzene-d5	56	23 - 120
Terphenyl-d14	63	18 - 137
Phenol-d5	60	24 - 113

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V432/1777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-18-MSD

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: CCJ

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Acenaphthene	55	31 - 137	2.8
4-Chloro-3-methyl phenol	62	26 - 103	14.7
2-Chlorophenol	54	25 - 102	1.6
1,4-Dichlorobenzene (p-DCB)	49	28 - 104	9.3
2,4-Dinitrotoluene (DNT)	62	28 - 89	13.9
4-Nitrophenol	64	11 - 114	17.8
N-Nitrosodi-n-propylamine	63	41 - 126	2.7
Pentachlorophenol	58	17 - 109	16.6
Phenol	49	26 - 90	0.3
1,2,4-Trichlorobenzene	54	38 - 107	2.4

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
2,4,6-Tribromophenol	61	19 - 122
2-Fluorobiphenyl	78	30 - 115
2-Fluorophenol	63	25 - 121
Nitrobenzene-d5	76	23 - 120
p-Terphenyl-d14	85	18 - 137
Phenol-d5	80	24 - 113

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V432
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 061098-E1-BLK

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

PARAMETER	Result µg/Kg	Reporting Limit	PARAMETER	Result µg/Kg	Reporting Limit
Acenaphthene	ND	500 µg/Kg	Di-n-octyl phthalate	ND	500 µg/Kg
Acenaphthylene	ND	500 µg/Kg	Fluoranthene	ND	500 µg/Kg
Anthracene	ND	500 µg/Kg	Fluorene	ND	500 µg/Kg
Benzo (a) anthracene	ND	500 µg/Kg	Hexachlorobenzene	ND	500 µg/Kg
Benzo (b&k) fluoranthene	ND	500 µg/Kg	Hexachlorobutadiene	ND	500 µg/Kg
Benzo (g,h,i) perylene	ND	500 µg/Kg	Hexachlorocyclopentadiene	ND	500 µg/Kg
Benzo (a) pyrene	ND	500 µg/Kg	Hexachloroethane	ND	500 µg/Kg
bis (2-Chloroethyl) ether	ND	500 µg/Kg	Indeno (1,2,3-c,d) pyrene	ND	500 µg/Kg
bis (2-Chloroethoxy) methane	ND	500 µg/Kg	Isophorone	ND	500 µg/Kg
bis (2-chloroisopropyl) ether	ND	500 µg/Kg	2-Methylnaphthalene	ND	500 µg/Kg
bis (2-Ethylhexyl)phthalate	ND	500 µg/Kg	2-Methylphenol	ND	500 µg/Kg
Butylbenzylphthalate	ND	500 µg/Kg	4-Methylphenol	ND	500 µg/Kg
4-Bromophenyl phenyl ether	ND	500 µg/Kg	Naphthalene	ND	500 µg/Kg
Carbazole	ND	500 µg/Kg	2-Nitroaniline	ND	2500 µg/Kg
4-Chloroaniline	ND	1000 µg/Kg	3-Nitroaniline	ND	2500 µg/Kg
4-Chloro-3-methyl phenol	ND	1000 µg/Kg	4-Nitroaniline	ND	1000 µg/Kg
1-Chloronaphthalene	ND	500 µg/Kg	Nitrobenzene	ND	500 µg/Kg
2-Chlorophenol	ND	500 µg/Kg	2-Nitrophenol	ND	500 µg/Kg
4-Chlorophenyl phenyl ether	ND	500 µg/Kg	4-Nitrophenol	ND	2500 µg/Kg
Chrysene	ND	500 µg/Kg	N-Nitrosodi-n-propylamine	ND	500 µg/Kg
Dibenzo (a,h) anthracene	ND	500 µg/Kg	N-Nitrosodiphenylamine	ND	500 µg/Kg
Dibenzofuran	ND	500 µg/Kg	Pentachlorophenol	ND	2500 µg/Kg
Di-n-butyl phthalate	ND	500 µg/Kg	Phenol	ND	500 µg/Kg
1,2-Dichlorobenzene (o-DCB)	ND	500 µg/Kg	Phenanthrene	ND	500 µg/Kg
1,3-Dichlorobenzene (m-DCB)	ND	500 µg/Kg	Pyrene	ND	500 µg/Kg
1,4-Dichlorobenzene (p-DCB)	ND	500 µg/Kg	1,2,4-Trichlorobenzene	ND	500 µg/Kg
2,4-Dichlorophenol	ND	500 µg/Kg	2,4,5-Trichlorophenol	ND	500 µg/Kg
3,3'-Dichlorobenzidine	ND	1000 µg/Kg	2,4,6-Trichlorophenol	ND	500 µg/Kg
Diethylphthalate	ND	500 µg/Kg			
2,4-Dimethylphenol	ND	500 µg/Kg			
Dimethylphthalate	ND	500 µg/Kg			
4,6-Dinitro-2-methyl phenol	ND	2500 µg/Kg			
2,4-Dinitrotoluene (DNT)	ND	500 µg/Kg			
2,6-Dinitrotoluene (DNT)	ND	500 µg/Kg			
2,4-Dinitrophenol	ND	2500 µg/Kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	88	19 - 122
2-Fluorobiphenyl	78	30 - 115
2-Fluorophenol	66	25 - 121
Nitrobenzene-d5	75	23 - 120
p-Terphenyl-d14	83	18 - 137
Phenol-d5	77	24 - 113

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V432/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: 061098-E1-LCS

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: CCJ

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Acenaphthene	79	31 - 137
4-Chloro-3-methyl phenol	85	26 - 103
2-Chlorophenol	83	25 - 102
1,4-Dichlorobenzene (p-DCB)	80	28 - 104
2,4-Dinitrotoluene (DNT)	90	28 - 89
4-Nitrophenol	89	11 - 114
N-Nitrosodi-n-propylamine	108	41 - 126
Pentachlorophenol	89	17 - 109
Phenol	79	26 - 90
1,2,4-Trichlorobenzene	87	38 - 107

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
2,4,6-Tribromophenol	69	19 - 122
2-Fluorobiphenyl	91	30 - 115
2-Fluorophenol	73	25 - 121
Nitrobenzene-d5	90	23 - 120
p-Terphenyl-d14	105	18 - 137
Phenol-d5	94	24 - 113

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V432/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: 061098-E1-LCSD

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: CCJ

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Acenaphthene	69	31 - 137	14.2
4-Chloro-3-methyl phenol	75	26 - 103	12.3
2-Chlorophenol	71	25 - 102	15.4
1,4-Dichlorobenzene (p-DCB)	66	28 - 104	19.9
2,4-Dinitrotoluene (DNT)	75	28 - 89	17.9
4-Nitrophenol	74	11 - 114	18.7
N-Nitrosodi-n-propylamine	89	41 - 126	18.8
Pentachlorophenol	73	17 - 109	19.8
Phenol	66	26 - 90	18.5
1,2,4-Trichlorobenzene	73	38 - 107	17.3

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
2,4,6-Tribromophenol	61	19 - 122
2-Fluorobiphenyl	78	30 - 115
2-Fluorophenol	63	25 - 121
Nitrobenzene-d5	76	23 - 120
Terphenyl-d14	85	18 - 137
Phenol-d5	80	24 - 113

**POLYCHLORINATED
BIPHENYLS
DATA**

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V432
PROJECT NUMBER: 17777

CLIENT ID: Decon P9-3
DATE SAMPLED: 6/4/98
NEL SAMPLE ID: L9806094-04

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/11/98
ANALYZED: 6/13/98

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1016	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1242	ND	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1254	ND	20. µg/kg
Arochlor-1260	ND	20. µg/kg

ND - Not Detected

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	74	70 - 130
Tetrachloro-m-xylene	71	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V432
PROJECT NUMBER: 17777

CLIENT ID: Decon P10-3
DATE SAMPLED: 6/4/98
NEL SAMPLE ID: L9806094-09

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

DILUTION: 1

ANALYZED: 6/12/98

ANALYST: John

PARAMETER	Result	Reporting Limit
Arochlor-1016	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1242	ND	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1254	ND	20. µg/kg
Arochlor-1260	ND	20. µg/kg

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	70	70 - 130
Tetrachloro-m-xylene	64	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V432/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-19-MS

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: John

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Arochlor-1260	85	48 - 129

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	97	70 - 130
Tetrachloro-m-xylene	94	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V432/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-19-MSD

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: John

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Arochlor-1260	69	48 - 129	20.7

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	86	70 - 130
Tetrachloro-m-xylene	90	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V432
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 980611s8082-BK

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1016	ND	20 µg/kg
Arochlor-1221	ND	20 µg/kg
Arochlor-1232	ND	20 µg/kg
Arochlor-1242	ND	20 µg/kg
Arochlor-1248	ND	20 µg/kg
Arochlor-1254	ND	20 µg/kg
Arochlor-1260	ND	20 µg/kg

ND - Not Detected

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	84	70 - 130
Tetrachloro-m-xylene	68	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V432/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: 980611s8082-LCS

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: John

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Arochlor-1016	86	80 - 120
Arochlor-1260	82	80 - 120

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	101	70 - 130
Tetrachloro-m-xylene	100	70 - 130

**TOTAL
PETROLEUM
HYDROCARBON
DATA**

NEL LABORATORIES

CLIENT: Bechtel Nevada

PROJECT NAME: V432

PROJECT NUMBER: 17777

TEST: Total Extractable Petroleum Hydrocarbons by EPA Method 8015M, July 1992

METHOD: EPA 8015M

MATRIX: Solid

ANALYST: John

CLIENT SAMPLE ID	SAMPLE DATE	NEL SAMPLE ID	RESULT mg/kg	C.R.	Reporting Limit	Surrogate Recovery*	EXTRACTED	ANALYZED
Decon P9-4 A&B	6/4/98	L9806094-05	ND		10. mg/kg	101 %	6/10/98	6/10/98
Decon P10-4 A&B	6/4/98	L9806094-10	ND		10. mg/kg	110 %	6/10/98	6/10/98

Note: The reporting limit for Oil Range Organics in soil is 50 mg/kg.

QUALITY CONTROL DATA (Total for Gas and Diesel Range):

Sample ID	Result	Acceptable Range	Surrogate Recovery*	Sample Number
Blank, 980610TPH-BLK	ND	< 10. mg/kg	99 %	NA
LCS, 980610TP - LCS	69 %	55 - 102 %	99 %	NA
MS, 980610TP - MS	67 %	38 - 107 %	94 %	L9806093-20
MSD, 980610TP - MSD	57 %	38 - 107 %	78 %	L9806093-20

ND - Not Detected

*Surrogate used was Octacosane, acceptance limits 54-130% for solids, 60-121% for aqueous samples

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TCLP
METALS
DATA

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V432
PROJECT NUMBER: 17777

CLIENT ID: Decon P9-5
DATE SAMPLED: 6/4/98
NEL SAMPLE ID: L9806094-06

TEST: TCLP-8 Metals
MATRIX: Solid

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	TCLP/STLC EXTRACTION		
					DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Barium	ND	1. mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Cadmium	ND	0.01 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Chromium	ND	0.01 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Lead	ND	0.05 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Mercury	ND	0.002 mg/L	10	EPA 7470A	6/11/98	6/12/98	6/14/98
Selenium	ND	0.1 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Silver	ND	0.02 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V432
PROJECT NUMBER: 17777

CLIENT ID: Decon P10-5
DATE SAMPLED: 6/4/98
NEL SAMPLE ID: L9806094-11

TEST: TCLP-8 Metals
MATRIX: Solid

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	TCLP/STLC EXTRACTION		
					DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Barium	ND	1. mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Cadmium	ND	0.01 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Chromium	ND	0.01 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Lead	ND	0.05 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Mercury	ND	0.002 mg/L	10	EPA 7470A	6/11/98	6/12/98	6/14/98
Selenium	ND	0.1 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98
Silver	ND	0.02 mg/L	1	EPA 6010A	6/11/98	6/12/98	6/14/98

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V432/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-21-MS

TEST: TCLP by EPA 1311, July 1992 & 7 Metals by EPA 6010A, July 1992

MATRIX: Solid

EXTRACTED: 6/12/98

ANALYZED: 6/14/98

ANALYST: EMF

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Arsenic	106	85 - 115
Silver	100	85 - 115
Barium	91	85 - 115
Cadmium	105	85 - 115
Chromium	98	85 - 115
Lead	101	85 - 115
Selenium	111	85 - 115

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V432/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-21-MSD

TEST: TCLP by EPA 1311, July 1992 & 7 Metals by EPA 6010A, July 1992

MATRIX: Solid

EXTRACTED: 6/12/98

ANALYZED: 6/14/98

ANALYST: EMF

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Silver	100	85 - 115	0.4
Arsenic	105	85 - 115	0.2
Barium	90	85 - 115	11.1
Cadmium	104	85 - 115	3.9
Chromium	97	85 - 115	3.
Lead	101	85 - 115	
Selenium	111	85 - 115	

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V432/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9806093-21-MSD

TEST: TCLP by EPA 1311, July 1992 & Mercury by EPA 7470A, July 1992

MATRIX: Solid

EXTRACTED: 6/12/98

ANALYZED: 6/14/98

ANALYST: EMF

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Mercury	99	85 - 115	

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V432/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L060931-LCS

TEST: TCLP by EPA 1311, July 1992 & 7 Metals by EPA 6010A, July 1992

MATRIX: Solid

EXTRACTED: 6/12/98

ANALYZED: 6/14/98

ANALYST: EMF

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Silver	99	85 - 115
Arsenic	104	88 - 118.5
Barium	95	86 - 128.2
Cadmium	105	85 - 115
Chromium	102	85 - 115
Lead	104	85 - 115
Selenium	107	85 - 115

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V432/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L06093HG-LCS

TEST: TCLP by EPA 1311, July 1992 & Mercury by EPA 7470A, July 1992

MATRIX: Solid

EXTRACTED: 6/12/98

ANALYZED: 6/14/98

ANALYST: JML

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Mercury	97	85 - 115

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V432
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: L06093HG-BLK

TEST: TCLP by EPA 1311, July 1992 & Mercury by EPA 7470A, July 1992
MATRIX: TCLP Extract

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>TCLP/STLC EXTRACTION</u>			
				<u>METHOD</u>	<u>DATE</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Mercury	ND	0.002mg/L	10	EPA 7470A	6/11/98	6/12/98	6/14/98

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V432
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: L06093I-BLK

TEST: TCLP by EPA 1311, July 1992 & 7 Metals by EPA 6010A, July 1992
MATRIX: TCLP Extract

PARAMETER	RESULT	REPORTING		D. F.	TCLP/STLC EXTRACTION		
		LIMIT			METHOD	DATE	DIGESTED ANALYZED
Arsenic	ND	0.1 mg/L	1		EPA 6010A	6/11/98	6/12/98 6/14/98
Barium	ND	1 mg/L	1		EPA 6010A	6/11/98	6/12/98 6/14/98
Cadmium	ND	0.01 mg/L	1		EPA 6010A	6/11/98	6/12/98 6/14/98
Chromium	ND	0.01 mg/L	1		EPA 6010A	6/11/98	6/12/98 6/14/98
Lead	ND	0.05 mg/L	1		EPA 6010A	6/11/98	6/12/98 6/14/98
Selenium	ND	0.1 mg/L	1		EPA 6010A	6/11/98	6/12/98 6/14/98
Silver	ND	0.02 mg/L	1		EPA 6010A	6/11/98	6/12/98 6/14/98

D.F. - Dilution Factor

ND - Not Detected

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SDG B438

RADIOANALYTICAL

RESULTS

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 1

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith
M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B438
Batch: 0820
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON P10-6	K 40	GAM20	2.03E+01	2.1E+01		8.4E-01	pCi/g	06-04-98	06-04-98	6.40E+02	gm	SOIL G			05-01	G9121-1-75097
DECON P10-6	RA226	GAM20	1.20E+00	2.7E+01		1.7E-01	pCi/g	06-04-98	06-04-98	6.40E+02	gm	SOIL G			05-01	G9121-1-75097
DECON P10-6	TH228	GAM20	2.38E+00	1.9E+01		1.5E-01	pCi/g	06-04-98	06-04-98	6.40E+02	gm	SOIL G			05-01	G9121-1-75097
DECON P10-6	TH232	GAM20	2.13E+00	3.1E+01		3.9E-01	pCi/g	06-04-98	06-04-98	6.40E+02	gm	SOIL G			05-01	G9121-1-75097
DECON P9-6	K 40	GAM20	1.81E+01	2.2E+01		8.5E-01	pCi/g	06-04-98	06-04-98	6.04E+02	gm	SOIL G			05-01	G9121-0-75095
DECON P9-6	RA226	GAM20	1.46E+00	2.4E+01		1.7E-01	pCi/g	06-04-98	06-04-98	6.04E+02	gm	SOIL G			05-01	G9121-0-75095
DECON P9-6	TH228	GAM20	2.07E+00	2.0E+01		1.5E-01	pCi/g	06-04-98	06-04-98	6.04E+02	gm	SOIL G			05-01	G9121-0-75095
DECON P9-6	TH232	GAM20	2.03E+00	3.2E+01		3.9E-01	pCi/g	06-04-98	06-04-98	6.04E+02	gm	SOIL G			05-01	G9121-0-75095
QA BKG EMPTY BTL U05	No Nucl Det	GAM20	0.00E+00	0.0E+00	U	0.0E+00	NA	06-04-98	07-01-95	1.00E+00	3M gm	QUAL			05-01	Q0539-0-00208
QA BKG EMPTY BTL U05	AM241	GAM20	0.00E+00	0.0E+00	U	2.6E+01	pCi	06-04-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00208

Comment:

Data generated from analyses of samples submitted on 6/4/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent sample activity as a whole.

Prepared by:

Date: 7/6/98

Approved by:

Date: 7/6/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 2

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith
M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B438
Batch: 0820
Program: 500

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA BKG EMPTY BTL U05	CO60	GAM20	0.00E+00	0.0E+00	U	7.9E+00	pCi	06-04-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00208
QA BKG EMPTY BTL U05	CS137	GAM20	0.00E+00	0.0E+00	U	9.4E+00	pCi	06-04-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00208
QA SP:NAS-A0271	AM241	GAM20	1.81E+05	8.8E+00		3.3E+02	pCi	06-04-98	04-01-92	1.00E+00	sm	QUAL		111.8	05-01	Q0534-3-14463
QA SP:NAS-A0271	CO60	GAM20	3.00E+05	8.5E+00		1.5E+02	pCi	06-04-98	04-01-92	1.00E+00	sm	QUAL		100.7	05-01	Q0534-3-14463
QA SP:NAS-A0271	CS137	GAM20	2.08E+05	8.1E+00		9.2E+01	pCi	06-04-98	04-01-92	1.00E+00	sm	QUAL		102.5	05-01	Q0534-3-14463

Comment:

Data generated from analyses of samples submitted on 6/4/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent sample activity as a whole.

Prepared by:

Date:

7/6/98

Approved by:

Date:

7/6/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 3

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith
M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B438
Batch: M559
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON P10-6	Gross Alpha	Gross A	1.96E+01	1.7E+01		2.9E+00	pCi/g	07-03-98	06-04-98	5.00E-01	gm	SOIL G			14-01	G9121-1-75096
DECON P9-6	Gross Alpha	Gross A	1.80E+01	1.8E+01		2.9E+00	pCi/g	07-03-98	06-04-98	5.00E-01	gm	SOIL G			14-01	G9121-0-75094
QA REA	Gross Alpha	Gross A	1.65E-02	1.4E+03	U	4.2E-01	pCi	07-02-98	06-02-98	1.00E+00	sm	QUAL			14-01	G9100-0-06776
QA SP:GROSSAB 05	Gross Alpha	Gross A	3.38E+00	1.6E+01		4.2E-01	pCi	07-02-98	01-06-98	1.00E+00	sm	QUAL		98.6	14-01	G9100-1-06777
DECON P10-6	Gross Beta	Gross B	1.43E+01	1.2E+01		2.2E+00	pCi/g	07-03-98	06-04-98	5.00E-01	gm	SOIL G			14-01	G9121-1-75096
DECON P9-6	Gross Beta	Gross B	1.41E+01	1.2E+01		2.2E+00	pCi/g	07-03-98	06-04-98	5.00E-01	gm	SOIL G			14-01	G9121-0-75094
QA REA	Gross Beta	Gross B	2.67E-01	2.1E+02	U	9.8E-01	pCi	07-02-98	06-02-98	1.00E+00	sm	QUAL			14-01	G9100-0-06776
QA SP:GROSSAB 05	Gross Beta	Gross B	4.65E+00	1.5E+01		9.8E-01	pCi	07-02-98	01-06-98	1.00E+00	sm	QUAL		89.0	14-01	G9100-1-06777

Comment:

Data generated from analyses of samples submitted on 6/4/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent sample activity as a whole.

Prepared by:

Date: 7/6/98

Approved by:

Date: 7-6-98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

***** End of Report *****

(Level 1)

ANALYTICAL SERVICES LABORATORY SERVICES REQUEST & CHAIN OF CUSTODY RECORD

PROJECT/CLIENT INFORMATION		REPORT INFORMATION		SAMPLE INFORMATION	
Project: DECON POND CLOSURE BN Org# 2152-		Send Report to: JEFF SMITH		Sampling Site: DECON FACILITY	
Charge No.: 04U-SB0DE		Phone: 5-7775		The samples submitted contain (check):	
Project Manager: JEFF SMITH		Fax: 5-7761		☐ Hazardous ☐ Radioactive ☒ Unknown	
Phone: 5-7775		M/S: NTS 306		If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.	
Fax: 5-7761		Turnaround: () Standard - 30 days Non-rad, 60 Days Rad, Other: Final by: 2 WEEKS			
M/S: NTS 306		Final report format: ☒ Standard () NTS-WAC () Other:			

LAB USE ONLY		ANALYSES & METHOD	
Rad SGD: B438	Non-Rad SDG: V432		
Rad Packet: G9121	Non-Rad Packet: W14163		
Client Services Representative:			

Will these analyses be performed under a signed SOW? () YES () NO
 If so, do analyses entered here agree with the SOW? () YES () NO () N/A
 If not, identify the variation
 CSR Initials Indicating review and approval: _____ Date: _____

ITEM	ID / DESCRIPTION	SAMPLING DATE	TIME	MATRIX	ANALYSES & METHOD	COMMENTS
0	DECON P9-1 TB	5/17/04	0745	WATER	X	ICE, 40ml NOTE: Hold time
1	DECON P9-1 AAB	6/4/04	0730	SOIL	X	ICE, 120ml (2)
2	DECON P9-2	6/04	0730	SOIL	X	ICE, 500ml
3	DECON P9-3	6/04	0730	SOIL	X	ICE, 250ml - AMBER
4	DECON P9-4 AAB	6/04	0730	SOIL	X	ICE, 250ml, 120ml
5	DECON P9-5	6/04	0730	SOIL	X	ICE, 250ml
6	DECON P9-6	6/04	0730	SOIL	X	ICE, 500ml 604g
7	DECON P10-1 AAB	6/04	1015	SOIL	X	ICE, 120ml (2)
8	DECON P10-2	6/04	1015	SOIL	X	ICE, 500ml
9	DECON P10-3	6/04	1015	SOIL	X	ICE, 250ml - AMBER

Transfer of samples submitted for analyses		Complete for samples shipped to an OFF-SITE Subcontract Laboratory	
Sampled/Relinquished (Signature/Organization)	DATE / TIME	Received (Signature/Organization)	DATE / TIME
David Cox / BN	6/4/04 1347	CD Castaneda	6/9/04 1700
Via Courier	6/8/04 1800	Relinquished (Courier & Tracking Info.)	Received (1st tier Subcontractor Rep)
		Relinquished (1st tier Subcontractor Rep)	Received (2nd tier Subcontractor Rep)

PROJECT/CLIENT INFORMATION				REPORT INFORMATION				SAMPLE INFORMATION								
Project: DECON POND CLOSURE BN Org#: 2152				Send Report to: JEFF SMITH				Sampling Site: DECON FACILITY								
Charge No.: C4U-SBODE		ASL Prog.:		Phone: 5-7775		Fax: 5-7761		M/S: NTS 306		The samples submitted contain (check): ☐ Hazardous ☐ Radioactive ☒ Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.						
Project Manager: JEFF SMITH				Turnaround: ☐ Standard - 30 days Non-rad, 60 Days Rad, Other: _____ ☒ Rush Preliminary by: 2 WEEKS Final by: _____												
Phone: 5-7775		Fax: 5-7761		M/S: NTS 306		Final report format: ☒ Standard ☐ NTS-WAC ☐ Other: _____										
LAB USE ONLY				ANALYSES & METHOD				SAMPLE RECEIPT INFORMATION								
Rad SGD: B438		Non-Rad SGD: V432		<div style="display: flex; flex-direction: column; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW846 EPA 8260</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW846 EPA 8210</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW846 EPA 8082</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW846 EPA 8015 MOD.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW846 EPA 1311/6010</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">L-EIO.602 PL</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">L-ED.612 PL</div> </div>				Are all sample containers received intact? ☒ Yes ☐ No Comments: _____								
Rad Packet: G9121		Non-Rad Packet: W1463						Do the labels agree with this form? ☒ Yes ☐ No Comments: _____								
Client Services Representative: _____								Was a Material Clearance Tag submitted? ☒ Yes ☐ No Comments: _____								
Will these analyses be performed under a signed SOW? ☐ YES ☐ NO If so, do analyses entered here agree with the SOW? ☐ YES ☐ NO ☐ N/A If not, identify the variation: _____ CSR initials indicating review and approval: _____ Date: _____																
ITEM	ID / DESCRIPTION	SAMPLING		MATRIX											COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)	
		DATE	TIME													
0	DECON P9-1 TB	5/27/98	0745	WATER	X											ICE, 40ml NOTE: Hold-time
1	DECON P9-1 A+B	6/4/98	0730	SOIL	X											ICE, 120ml (2)
2	DECON P9-2	6/04	0730	SOIL		X										ICE, 500ml
3	DECON P9-3	6/04	0730	SOIL			X									ICE, 250ml - AMBER
4	DECON P9-4 A+B	6/04	0730	SOIL				X								ICE, 250ml, 120ml
5	DECON P9-5	6/04	0730	SOIL					X							ICE, 250ml
6	DECON P9-6	6/04	0730	SOIL						X	X					ICE, 500ml 604g
7	DECON P10-1 A+B	6/04	1015	SOIL	X											ICE, 120ml (2)
8	DECON P10-2	6/04	1015	SOIL		X										ICE, 500ml
9	DECON P10-3	6/04	1015	SOIL			X									ICE, 250ml - AMBER
Transfer of samples submitted for analyses					Complete for samples shipped to an OFF-SITE Subcontract Laboratory											
Sampled/Relinquished (Signature/Organization)		DATE / TIME		Received by (Signature/Organization)		Relinquished (BN Representative Signature)		DATE / TIME		Received (Courier & Tracking Info.)						
<i>[Signature]</i> BN		6/4/98/1342		<i>[Signature]</i> Castaneda		<i>[Signature]</i> Castaneda		6/8/98/1700		<i>[Signature]</i> BN Courier						
						Relinquished (Courier & Tracking Info.)		DATE / TIME		Received (1st tier Subcontractor Rep)						
						Relinquished (1st tier Subcontractor Rep)		DATE / TIME		Received (2nd tier Subcontractor Rep)						

PROJECT/CLIENT INFORMATION				REPORT INFORMATION				SAMPLE INFORMATION									
Project: DECON POND CLOSURE BN Org#: 2152				Send Report to: JEFF SMITH				Sampling Site: DECON FACILITY									
Charge No.: C4U-SBØDE		ASL Prog.: _____		Phone: 5-7775		Fax: 5-7761		M/S: NTS-306		The samples submitted contain (check): ☐ Hazardous ☐ Radioactive ☒ Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.							
Project Manager: JEFF SMITH				Turnaround: ☒ Standard - 30 days Non-rad, 60 Days Rad, Other: _____ ☒ Rush Preliminary by: 2 WEEKS Final by: _____													
Phone: 5-7775		Fax: 5-7761		M/S: NTS-306		Final report format: ☒ Standard ☐ NTS-WAC ☐ Other: _____											
LAB USE ONLY				ANALYSES & METHOD				SAMPLE RECEIPT INFORMATION									
Rad SGD: B438		Non-Rad SDG: V432		<div style="display: flex; flex-direction: column; align-items: center;"> <div>SW 846 EPA 8260</div> <div>SW 846 EPA 8270</div> <div>SW 846 EPA 8082</div> <div>SW 846 EPA 8015 MOD.</div> <div>SW 846 EPA 1311/6010</div> <div>L-EIO.602 PL</div> <div>L-EIO.612 PL</div> </div>				Are all sample containers received intact? ☒ Yes ☐ No Comments: _____									
Rad Packet: G9121		Non-Rad Packet: W1463						Do the labels agree with this form? ☒ Yes ☐ No Comments: _____									
Client Services Representative: _____								Was a Material Clearance Tag submitted? ☒ Yes ☐ No Comments: _____									
Will these analyses be performed under a signed SOW? ☐ YES ☐ NO If so, do analyses entered here agree with the SOW? ☐ YES ☐ NO ☐ N/A If not, identify the variation: _____ CSR initials indicating review and approval: _____ Date: _____								COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)									
ITEM	ID / DESCRIPTION	SAMPLING		MATRIX													
		DATE	TIME														
10	DECON P10-4 A&B	6/04	1015	SOIL												ICE, 250ml, 120ml	
11	DECON P10-5	6/04	1015	SOIL						X							ICE, 250ml
12	DECON P10-6	6/04	1015	SOIL								X	X				ICE, 500ml 640g
3																	
4																	
5																	
6																	
7																	
8																	
9																	
Transfer of samples submitted for analyses					Complete for samples shipped to an OFF-SITE Subcontract Laboratory												
Sampled/Relinquished (Signature/Organization)		DATE / TIME		Received by (Signature/Organization)		Relinquished (BN Representative Signature)		DATE / TIME		Received (Courier & Tracking Info.)							
<i>[Signature]</i> / BN		6/4/98/1342		CD Castaneda		<i>[Signature]</i>		6/4/98/1300		BAL Courier							
						Relinquished (Courier & Tracking Info.)		DATE / TIME		Received (1st tier Subcontractor Rep)							
						Relinquished (1st tier Subcontractor Rep)		DATE / TIME		Received (2nd tier Subcontractor Rep)							

**VOLATILE
ORGANICS
DATA**

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V435
PROJECT NUMBER: 17777

CLIENT ID: Decon P11-1 TB
DATE SAMPLED: 6/4/98
NEL SAMPLE ID: L9806156-06

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous
DILUTION: 1

EXTRACTED: 6/15/98
ANALYZED: 6/15/98

ANALYST: Scott

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25. µg/L			
Benzene	ND	5. µg/L			
Bromodichloromethane	ND	5. µg/L			
Bromoform	ND	5. µg/L			
Bromomethane	ND	5. µg/L			
2-Butanone	ND	25. µg/L			
Carbon disulfide	ND	5. µg/L			
Carbon tetrachloride	ND	5. µg/L			
Chlorobenzene	ND	5. µg/L			
Chloroethane	ND	5. µg/L			
Chloroform	ND	5. µg/L			
Chloromethane	ND	5. µg/L			
Dibromochloromethane	ND	5. µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L			
cis-1,2-Dichloroethene	ND	5. µg/L			
trans-1,2-Dichloroethene	ND	5. µg/L			
cis-1,3-Dichloropropene	ND	5. µg/L			
trans-1,3-Dichloropropene	ND	5. µg/L			
Ethylbenzene	ND	5. µg/L			
2-Hexanone	ND	25. µg/L			
Methylene chloride (Dichloromethane)	ND	5. µg/L			
4-Methyl-2-pentanone	ND	25. µg/L			
Styrene	ND	5. µg/L			
1,1,2,2-Tetrachloroethane	ND	5. µg/L			
Tetrachloroethene (PCE)	ND	5. µg/L			
Toluene	ND	5. µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L			
Trichloroethene (TCE)	ND	5. µg/L			
Vinyl chloride	ND	5. µg/L			
o-Xylene	ND	5. µg/L			
m,p-Xylene	ND	5. µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	94	86 - 115
Dibromofluoromethane	93	86 - 118
Trichloroethene-d8	99	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V435
PROJECT NUMBER: 17777

CLIENT ID: Decon W3-1 A&B
DATE SAMPLED: 6/8/98
NEL SAMPLE ID: L9806156-01

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/11/98
ANALYZED: 6/11/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25. µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND Js	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	25. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND Js	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND Js	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND Js	5. µg/kg			
Ethylbenzene	ND Js	5. µg/kg			
2-Hexanone	ND Js	25. µg/kg			
Methylene chloride (Dichloromethane)	7 B	5. µg/kg			
4-Methyl-2-pentanone	ND	25. µg/kg			
Styrene	ND Js	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND Js	5. µg/kg			
Tetrachloroethene (PCE)	ND Js	5. µg/kg			
Toluene	ND Js	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND Js	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND Js	5. µg/kg			
m,p-Xylene	ND Js	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	57	74 - 121
Dibromofluoromethane	94	80 - 120
Toluene-d8	84	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V435
PROJECT NUMBER: 17777

CLIENT ID: Decon P11-1 A&B
DATE SAMPLED: 6/8/98
NEL SAMPLE ID: L9806156-07

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/11/98
ANALYZED: 6/11/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25. µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	25. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	25. µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	25. µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	84	74 - 121
Dibromofluoromethane	91	80 - 120
1,2-Dichloroethane-d8	96	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V435
PROJECT NUMBER: 17777

CLIENT ID: Decon R 1-1
DATE SAMPLED: 6/9/98
NEL SAMPLE ID: L9806155-01

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous
DILUTION: 1

EXTRACTED: 6/15/98
ANALYZED: 6/15/98

ANALYST: Scott

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25. µg/L			
Benzene	ND	5. µg/L			
Bromodichloromethane	7	5. µg/L			
Bromoform	ND	5. µg/L			
Bromomethane	ND	5. µg/L			
2-Butanone	ND	25. µg/L			
Carbon disulfide	ND	5. µg/L			
Carbon tetrachloride	ND	5. µg/L			
Chlorobenzene	ND	5. µg/L			
Chloroethane	ND	5. µg/L			
Chloroform	8	5. µg/L			
Chloromethane	ND	5. µg/L			
Dibromochloromethane	ND	5. µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L			
cis-1,2-Dichloroethene	ND	5. µg/L			
trans-1,2-Dichloroethene	ND	5. µg/L			
1,2-Dichloropropane	ND	5. µg/L			
cis-1,3-Dichloropropene	ND	5. µg/L			
trans-1,3-Dichloropropene	ND	5. µg/L			
Ethylbenzene	ND	5. µg/L			
2-Hexanone	ND	25. µg/L			
Methylene chloride (Dichloromethane)	ND	5. µg/L			
4-Methyl-2-pentanone	ND	25. µg/L			
Styrene	ND	5. µg/L			
1,1,2,2-Tetrachloroethane	ND	5. µg/L			
Tetrachloroethene (PCE)	ND	5. µg/L			
Toluene	ND	5. µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L			
Trichloroethene (TCE)	ND	5. µg/L			
Vinyl chloride	ND	5. µg/L			
o-Xylene	ND	5. µg/L			
m,p-Xylene	ND	5. µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	93	86 - 115
Dibromofluoromethane	93	86 - 118
Toluene-d8	99	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V435
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9806111260B2-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/11/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25 µg/kg			
Benzene	ND	5 µg/kg			
Bromodichloromethane	ND	5 µg/kg			
Bromoform	ND	5 µg/kg			
Bromomethane	ND	5 µg/kg			
2-Butanone	ND	25 µg/kg			
Carbon disulfide	ND	5 µg/kg			
Carbon tetrachloride	ND	5 µg/kg			
Chlorobenzene	ND	5 µg/kg			
Chloroethane	ND	5 µg/kg			
Chloroform	ND	5 µg/kg			
Chloromethane	ND	5 µg/kg			
Dibromochloromethane	ND	5 µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg			
cis-1,2-Dichloroethene	ND	5 µg/kg			
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,1-Dichloropropane	ND	5 µg/kg			
cis-1,3-Dichloropropene	ND	5 µg/kg			
trans-1,3-Dichloropropene	ND	5 µg/kg			
Ethylbenzene	ND	5 µg/kg			
2-Hexanone	ND	25 µg/kg			
Methylene chloride (Dichloromethane)	7	5 µg/kg			
4-Methyl-2-pentanone	ND	25 µg/kg			
Styrene	ND	5 µg/kg			
1,1,2,2-Tetrachloroethane	ND	5 µg/kg			
Tetrachloroethene (PCE)	ND	5 µg/kg			
Toluene	ND	5 µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg			
Trichloroethene (TCE)	ND	5 µg/kg			
Vinyl chloride	ND	6 µg/kg			
o-Xylene	ND	5 µg/kg			
m,p-Xylene	ND	5 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	92	74 - 121
Dibromofluoromethane	93	80 - 120
Toluene-d8	98	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V435
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9806151W60M-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 6/15/98

ANALYZED: 6/15/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25 µg/L			
Benzene	ND	5 µg/L			
Bromodichloromethane	ND	5 µg/L			
Bromoform	ND	5 µg/L			
Bromomethane	ND	5 µg/L			
2-Butanone	ND	25 µg/L			
Carbon disulfide	ND	5 µg/L			
Carbon tetrachloride	ND	5 µg/L			
Chlorobenzene	ND	5 µg/L			
Chloroethane	ND	5 µg/L			
Chloroform	ND	5 µg/L			
Chloromethane	ND	5 µg/L			
Dibromochloromethane	ND	5 µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L			
cis-1,2-Dichloroethene	ND	5 µg/L			
trans-1,2-Dichloroethene	ND	5 µg/L			
1,2-Dichloropropane	ND	5 µg/L			
cis-1,3-Dichloropropene	ND	5 µg/L			
trans-1,3-Dichloropropene	ND	5 µg/L			
Ethylbenzene	ND	5 µg/L			
2-Hexanone	ND	25 µg/L			
Methylene chloride (Dichloromethane)	ND	5 µg/L			
4-Methyl-2-pentanone	ND	25 µg/L			
Styrene	ND	5 µg/L			
1,1,2,2-Tetrachloroethane	ND	5 µg/L			
Tetrachloroethene (PCE)	ND	5 µg/L			
Toluene	ND	5 µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L			
Trichloroethene (TCE)	ND	5 µg/L			
Vinyl chloride	ND	5 µg/L			
o-Xylene	ND	5 µg/L			
m,p-Xylene	ND	5 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	94	86 - 115
Dibromofluoromethane	100	86 - 118
Toluene-d8	95	88 - 110

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**SEMI-VOLATILE
ORGANICS
DATA**

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V435
PROJECT NUMBER: 17777

CLIENT ID: Decon R1-2
DATE SAMPLED: 6/8/98
NEL SAMPLE ID: L9806156-13

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996

MATRIX: Aqueous
DILUTION: 1

EXTRACTED: 6/17/98
ANALYZED: 6/18/98

ANALYST: CCJ

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acenaphthene	ND	10. µg/L	2,4-Dinitrophenol	ND	50. µg/L
Acenaphthylene	ND	10. µg/L	Di-n-octyl phthalate	ND	10. µg/L
Anthracene	ND	10. µg/L	Fluoranthene	ND	10. µg/L
Benzo (a) anthracene	ND	10. µg/L	Fluorene	ND	10. µg/L
Benzo (b&k) fluoranthene	ND	10. µg/L	Hexachlorobenzene	ND	10. µg/L
Benzoic Acid	ND	50. µg/L	Hexachlorobutadiene	ND	10. µg/L
Benzo (g,h,i) perylene	ND	10. µg/L	Hexachlorocyclopentadiene	ND	10. µg/L
Benzo (a) pyrene	ND	10. µg/L	Hexachloroethane	ND	10. µg/L
Benzyl alcohol	ND	20. µg/L	Indeno (1,2,3-c,d) pyrene	ND	10. µg/L
bis (2-Chloroethyl) ether	ND	10. µg/L	Isophorone	ND	10. µg/L
bis (2-Chloroethoxy) methane	ND	10. µg/L	2-Methylnaphthalene	ND	10. µg/L
bis (2-Ethylhexyl)phthalate	ND	10. µg/L	2-Methylphenol	ND	10. µg/L
Butylbenzylphthalate	ND	10. µg/L	4-Methylphenol	ND	10. µg/L
4-Bromophenyl phenyl ether	ND	10. µg/L	Naphthalene	ND	10. µg/L
Carbazole	ND	10. µg/L	2-Nitroaniline	ND	50. µg/L
4-Chloroaniline	ND	20. µg/L	3-Nitroaniline	ND	50. µg/L
4-Chloro-3-methyl phenol	ND	20. µg/L	4-Nitroaniline	ND	20. µg/L
Chloronaphthalene	ND	10. µg/L	Nitrobenzene	ND	10. µg/L
2-Chlorophenol	ND	10. µg/L	2-Nitrophenol	ND	10. µg/L
4-Chlorophenyl phenyl ether	ND	10. µg/L	4-Nitrophenol	ND	50. µg/L
Chrysene	ND	10. µg/L	N-Nitrosodi-n-propylamine	ND	10. µg/L
Dibenzo (a,h) anthracene	ND	10. µg/L	N-Nitroso-Diethylamine	ND	10. µg/L
Dibenzofuran	ND	10. µg/L	N-Nitrosodiphenylamine	ND	10. µg/L
Di-n-butyl phthalate	ND	10. µg/L	Pentachlorophenol	ND	50. µg/L
1,2-Dichlorobenzene (o-DCB)	ND	10. µg/L	Phenol	ND	10. µg/L
1,3-Dichlorobenzene (m-DCB)	ND	10. µg/L	Phenanthrene	ND	10. µg/L
1,4-Dichlorobenzene (p-DCB)	ND	10. µg/L	Pyrene	ND	10. µg/L
2,4-Dichlorophenol	ND	10. µg/L	1,2,4-Trichlorobenzene	ND	10. µg/L
3,3'-Dichlorobenzidine	ND	20. µg/L	2,4,5-Trichlorophenol	ND	10. µg/L
Diethylphthalate	ND	10. µg/L	2,4,6-Trichlorophenol	ND	10. µg/L
2,4-Dimethylphenol	ND	10. µg/L			
Dimethylphthalate	ND	10. µg/L			
4,6-Dinitro-2-methyl phenol	ND	50. µg/L			
2,4-Dinitrotoluene (DNT)	ND	10. µg/L			
2,6-Dinitrotoluene (DNT)	ND	10. µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	32	10 - 123
2-Fluorobiphenyl	69	43 - 116
Chlorophenol	18	21 - 100
Nitrobenzene-d5	73	35 - 114
p-Terphenyl-d14	74	33 - 141
Phenol-d5	20	10 - 94

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V435
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 061798-E1-BLK

TEST: Semi-Volatile Organic Compounds by EPA 8270C, Dec. 1996
MATRIX: Aqueous

EXTRACTED: 6/17/98
ANALYZED: 6/18/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acenaphthene	ND	10 µg/L	2,4-Dinitrophenol	ND	50 µg/L
Acenaphthylene	ND	10 µg/L	Di-n-octyl phthalate	ND	10 µg/L
Anthracene	ND	10 µg/L	Fluoranthene	ND	10 µg/L
Benzo (a) anthracene	ND	10 µg/L	Fluorene	ND	10 µg/L
Benzo (b&k) fluoranthene	ND	10 µg/L	Hexachlorobenzene	ND	10 µg/L
Benzoic Acid	ND	50 µg/L	Hexachlorobutadiene	ND	10 µg/L
Benzo (g,h,i) perylene	ND	10 µg/L	Hexachlorocyclopentadiene	ND	10 µg/L
Benzo (a) pyrene	ND	10 µg/L	Hexachloroethane	ND	10 µg/L
Benzyl alcohol	ND	20 µg/L	Indeno (1,2,3-c,d) pyrene	ND	10 µg/L
bis (2-Chloroethyl) ether	ND	10 µg/L	Isophorone	ND	10 µg/L
bis (2-Chloroethoxy) methane	ND	10 µg/L	2-Methylnaphthalene	ND	10 µg/L
bis (2-Ethylhexyl)phthalate	ND	10 µg/L	2-Methylphenol	ND	10 µg/L
Butylbenzylphthalate	ND	10 µg/L	4-Methylphenol	ND	10 µg/L
4-Bromophenyl phenyl ether	ND	10 µg/L	Naphthalene	ND	10 µg/L
Carbazole	ND	10 µg/L	2-Nitroaniline	ND	50 µg/L
4-Chloroaniline	ND	20 µg/L	3-Nitroaniline	ND	50 µg/L
4-Chloro-3-methyl phenol	ND	20 µg/L	4-Nitroaniline	ND	20 µg/L
2-Chloronaphthalene	ND	10 µg/L	Nitrobenzene	ND	10 µg/L
2-Chlorophenol	ND	10 µg/L	2-Nitrophenol	ND	10 µg/L
4-Chlorophenyl phenyl ether	ND	10 µg/L	4-Nitrophenol	ND	50 µg/L
Chrysene	ND	10 µg/L	N-Nitrosodi-n-propylamine	ND	10 µg/L
Dibenzo (a,h) anthracene	ND	10 µg/L	N-Nitroso-Diethylamine	ND	10 µg/L
Dibenzofuran	ND	10 µg/L	N-Nitrosodiphenylamine	ND	10 µg/L
Di-n-butyl phthalate	ND	10 µg/L	Pentachlorophenol	ND	50 µg/L
1,2-Dichlorobenzene (o-DCB)	ND	10 µg/L	Phenol	ND	10 µg/L
1,3-Dichlorobenzene (m-DCB)	ND	10 µg/L	Phenanthrene	ND	10 µg/L
1,4-Dichlorobenzene (p-DCB)	ND	10 µg/L	Pyrene	ND	10 µg/L
2,4-Dichlorophenol	ND	10 µg/L	1,2,4-Trichlorobenzene	ND	10 µg/L
3,3'-Dichlorobenzidine	ND	20 µg/L	2,4,5-Trichlorophenol	ND	10 µg/L
Diethylphthalate	ND	10 µg/L	2,4,6-Trichlorophenol	ND	10 µg/L
2,4-Dimethylphenol	ND	10 µg/L			
Dimethylphthalate	ND	10 µg/L			
4,6-Dinitro-2-methyl phenol	ND	50 µg/L			
2,4-Dinitrotoluene (DNT)	ND	10 µg/L			
2,6-Dinitrotoluene (DNT)	ND	10 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	65	10 - 123
2-Fluorobiphenyl	62	43 - 116
2-Fluorophenol	40	21 - 100
Nitrobenzene-d5	65	35 - 114
p-Terphenyl-d14	76	33 - 141
Phenol-d5	25	10 - 94

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**POLYCHLORINATED
BIPHENYLS
DATA**

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V435
PROJECT NUMBER: 17777

CLIENT ID: Decon W3-3
DATE SAMPLED: 6/8/98
NEL SAMPLE ID: L9806156-03

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

DILUTION: 1

ANALYZED: 6/12/98

ANALYST: John

PARAMETER	Result	Reporting Limit
Arochlor-1254	140 µg/kg	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1242	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg
Arochlor-1016	ND	20. µg/kg
Arochlor-1260	74 µg/kg	20. µg/kg

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	85	70 - 130
Tetrachloro-m-xylene	74	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V435
PROJECT NUMBER: 17777

CLIENT ID: Decon P11-3
DATE SAMPLED: 6/8/98
NEL SAMPLE ID: L9806156-09

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/11/98
ANALYZED: 6/12/98

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1242	ND	20. µg/kg
Arochlor-1016	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1254	ND	20. µg/kg
Arochlor-1260	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg

ND - Not Detected

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	95	70 - 130
Tetrachloro-m-xylene	88	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V435
PROJECT NUMBER: 17777

CLIENT ID: Decon R1-3
DATE SAMPLED: 6/8/98
NEL SAMPLE ID: L9806156-14

TEST: Polychlorinated Biphenyls (PCB's) by EPA 8082, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 6/11/98

DILUTION: 1

ANALYZED: 6/14/98

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1016	ND	0.5 µg/L
Arochlor-1221	ND	0.5 µg/L
Arochlor-1232	ND	0.5 µg/L
Arochlor-1242	ND	0.5 µg/L
Arochlor-1248	ND	0.5 µg/L
Arochlor-1254	ND	0.5 µg/L
Arochlor-1260	ND	0.5 µg/L

ND - Not Detected

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	95	70 - 130
Tetrachloro-m-xylene	81	70 - 130

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V435
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 980611s8082-BK

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8082, Dec. 1996

MATRIX: Solid

EXTRACTED: 6/11/98

ANALYZED: 6/12/98

ANALYST: John

PARAMETER	Result	Reporting Limit
Arochlor-1016	ND	20 µg/kg
Arochlor-1221	ND	20 µg/kg
Arochlor-1232	ND	20 µg/kg
Arochlor-1242	ND	20 µg/kg
Arochlor-1248	ND	20 µg/kg
Arochlor-1254	ND	20 µg/kg
Arochlor-1260	ND	20 µg/kg

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	84	70 - 130
Tetrachloro-m-xylene	68	70 - 130

CLIENT: Bechtel Nevada
PROJECT NAME: V435
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 980611w8082-BK

TEST: Polychlorinated Biphenyls (PCB's) by EPA 8082, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 6/11/98

ANALYZED: 6/14/98

ANALYST: John

PARAMETER	Result	Reporting Limit
Arochlor-1016	ND	0.5 µg/L
Arochlor-1221	ND	0.5 µg/L
Arochlor-1232	ND	0.5 µg/L
Arochlor-1242	ND	0.5 µg/L
Arochlor-1248	ND	0.5 µg/L
Arochlor-1254	ND	0.5 µg/L
Arochlor-1260	ND	0.5 µg/L

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	115	70 - 130
Tetrachloro-m-xylene	99	70 - 130

**TOTAL
PETROLEUM
HYDROCARBON
DATA**

NEL LABORATORIES

CLIENT: Bechtel Nevada

PROJECT NAME: V435

PROJECT NUMBER: 17777

TEST: Total Extractable Petroleum Hydrocarbons by EPA Method 8015M, July 1992

METHOD: EPA 8015M

MATRIX: Aqueous

ANALYST: Suzanne

CLIENT SAMPLE ID	SAMPLE DATE	NEL SAMPLE ID	RESULT mg/L	C.R.	Reporting Limit	Surrogate Recovery*	EXTRACTED	ANALYZED
Decon R1-4	6/8/98	L9806156-15	ND		0.5 mg/L	119 %	6/15/98	6/17/98

CR: Carbon Range

GDO Gas Range Organics (C8 to C12), Diesel Range Organics (C12 to C24) and Oil Range Organics (C12 to C38).

Note: The reporting limit for Oil Range Organics in soil is 50 mg/kg.

QUALITY CONTROL DATA (Total for Gas and Diesel Range):

Sample ID	Result	Acceptable Range	Surrogate Recovery*	Sample Number
Blank, 980615TPH-BLK	ND	< 0.5 mg/L	117 %	NA
I 980615TP - LCS	72 %	61 - 104 %	115 %	NA
LCSD 980615TP - LCSD	82 %	61 - 104 %	111 %	NA

ND - Not Detected

*Surrogate used was Octacosane, acceptance limits 54-130% for solids, 60-121% for aqueous samples

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V435
PROJECT NUMBER: 17777

TEST: Total Extractable Petroleum Hydrocarbons by EPA Method 8015M, July 1992

METHOD: EPA 8015M

MATRIX: Solid

ANALYST: Suzanne

<u>CLIENT</u> <u>SAMPLE ID</u>	<u>SAMPLE</u> <u>DATE</u>	<u>NEL</u> <u>SAMPLE ID</u>	<u>RESULT</u> <u>mg/kg</u>	<u>C.R.</u>	<u>Reporting</u> <u>Limit</u>	<u>Surrogate</u> <u>Recovery*</u>	<u>EXTRACTED</u>	<u>ANALYZED</u>
Decon W3-4 A&B	6/8/98	L9806156-04	1100	GDO	10. mg/kg	122 %	6/16/98	6/19/98
Decon P11-4 A&B	6/8/98	L9806156-10	ND		10. mg/kg	87 %	6/16/98	6/18/98

CR: Carbon Range

GDO Gas Range Organics (C8 to C12), Diesel Range Organics (C12 to C24) and Oil Range Organics (C12 to C38).

Note: The reporting limit for Oil Range Organics in soil is 50 mg/kg.

QUALITY CONTROL DATA (Total for Gas and Diesel Range):

<u>Sample ID</u>	<u>Result</u>	<u>Acceptable Range</u>	<u>Surrogate Recovery*</u>	<u>Sample Number</u>
Blank, 980616TPH-BLK	ND	< 10. mg/kg	70 %	NA
LCS, 980616TP - LCS	68 %	55 - 102 %	88 %	NA

ND - Not Detected

*Surrogate used was Octacosane, acceptance limits 54-130% for solids, 60-121% for aqueous samples

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SDG B447

RADIOANALYTICAL

RESULTS

BCHTEL Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 1

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B447
Batch: 0821
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON P11-6	K 40	GAM20	2.34E+01	2.0E+01		1.1E+00	pCi/g	06-09-98	06-08-98	6.94E+02	gm	SOIL G			05-01	G9135-1-75101
DECON P11-6	RA226	GAM20	1.07E+00	3.0E+01		1.5E-01	pCi/g	06-09-98	06-08-98	6.94E+02	gm	SOIL G			05-01	G9135-1-75101
DECON P11-6	TH228	GAM20	2.55E+00	1.8E+01		1.4E-01	pCi/g	06-09-98	06-08-98	6.94E+02	gm	SOIL G			05-01	G9135-1-75101
DECON P11-6	TH232	GAM20	1.35E+00	4.0E+01		3.6E-01	pCi/g	06-09-98	06-08-98	6.94E+02	gm	SOIL G			05-01	G9135-1-75101
DECON W3-6	AM241	GAM20	1.64E+00	4.8E+01		3.1E-01	pCi/g	06-09-98	06-08-98	8.39E+02	gm	SOIL G			05-01	G9135-0-75099
DECON W3-6	CO60	GAM20	1.53E+00	2.3E+01		8.4E-02	pCi/g	06-09-98	06-08-98	8.39E+02	gm	SOIL G			05-01	G9135-0-75099
DECON W3-6	CS137	GAM20	9.40E+00	1.2E+01		7.1E-02	pCi/g	06-09-98	06-08-98	8.39E+02	gm	SOIL G			05-01	G9135-0-75099
DECON W3-6	EU152	GAM20	1.35E+00	4.2E+01		2.8E-01	pCi/g	06-09-98	06-08-98	8.39E+02	gm	SOIL G			05-01	G9135-0-75099
DECON W3-6	EU154	GAM20	8.05E-01	5.0E+01		3.2E-01	pCi/g	06-09-98	06-08-98	8.39E+02	gm	SOIL G			05-01	G9135-0-75099
DECON W3-6	EU155	GAM20	7.69E-01	8.8E+01		2.4E-01	pCi/g	06-09-98	06-08-98	8.39E+02	gm	SOIL G			05-01	G9135-0-75099

Comment:

Data generated from analyses of samples submitted on 6/9/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent sample activity as a whole.

Prepared by: [Signature] Date: 7/6/98

Approved by: [Signature] Date: 7/6/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 2

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B447
Batch: 0821
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON W3-6	K 40	GAM20	1.87E+01	2.1E+01		1.1E+00	pCi/g	06-09-98	06-08-98	8.39E+02	gm	SOIL G			05-01	G9135-0-75099
DECON W3-6	RA228	GAM20	1.15E+00	3.1E+01		1.5E-01	pCi/g	06-09-98	06-08-98	8.39E+02	gm	SOIL G			05-01	G9135-0-75099
DECON W3-6	SB125	GAM20	2.53E+00	4.2E+01		6.3E-01	pCi/g	06-09-98	06-08-98	8.39E+02	gm	SOIL G			05-01	G9135-0-75099
DECON W3-6	TH228	GAM20	1.66E+00	2.6E+01		1.6E-01	pCi/g	06-09-98	06-08-98	8.39E+02	gm	SOIL G			05-01	G9135-0-75099
DECON W3-6	TH232	GAM20	1.26E+00	4.3E+01		4.0E-01	pCi/g	06-09-98	06-08-98	8.39E+02	gm	SOIL G			05-01	G9135-0-75099
QA BKG EMPTY BTL U05	No Nucl Det	GAM20	0.00E+00	0.0E+00	U	0.0E+00	NA	06-09-98	07-01-95	1.00E+00	SM gm TR	QUAL			05-01	Q0539-0-00213
QA BKG EMPTY BTL U05	AM241	GAM20	0.00E+00	0.0E+00	U	2.2E+01	pCi	06-09-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00213
QA BKG EMPTY BTL U05	CO60	GAM20	0.00E+00	0.0E+00	U	1.3E+01	pCi	06-09-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00213
QA BKG EMPTY BTL U05	CS137	GAM20	0.00E+00	0.0E+00	U	8.0E+00	pCi	06-09-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00213
QA SP:NAS-A0271	AM241	GAM20	1.80E+05	8.8E+00		2.9E+02	pCi	06-09-98	04-01-92	1.00E+00	sm	QUAL		111.4	05-01	Q0534-3-14536

Comment:

Data generated from analyses of samples submitted on 6/9/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent sample activity as a whole.

Prepared by:

Date: 7/6/98

Approved by:

Date: 7/6/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 3

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B447
Batch: 0821
Program: 117

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA SP:NAS-A0271	CO60	GAM20	3.06E+05	8.5E+00		2.2E+02	pCi	06-09-98	04-01-92	1.00E+00	sm	QUAL		102.4	05-01	Q0534-3-14536
QA SP:NAS-A0271	CS137	GAM20	2.06E+05	8.1E+00		7.4E+01	pCi	06-09-98	04-01-92	1.00E+00	sm	QUAL		101.4	05-01	Q0534-3-14536

Comment:

Data generated from analyses of samples submitted on 6/9/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent sample activity as a whole.

Prepared by: [Signature] Date: 7/6/98

Approved by: [Signature] Date: 7/6/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 4

Reported to: Area 6 Decon Pond Closure
Remediation Projects
J. L. Smith, M/S NTS306

Report Date: 6-JUL-98
Sample Delivery Group: B447
Batch: M559
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON P11-6	Gross Alpha	Gross A	1.39E+01	1.8E+01		2.2E+00	pCi/g	07-04-98	06-08-98	5.00E-01	gm	SOIL G			14-01	G9135-1-75100
DECON W3-6	Gross Alpha	Gross A	7.13E+00	2.4E+01		1.8E+00	pCi/g	07-03-98	06-08-98	5.00E-01	gm	SOIL G			14-01	G9135-0-75098
QA REA	Gross Alpha	Gross A	1.65E-02	1.4E+03	U	4.2E-01	pCi	07-02-98	06-02-98	1.00E+00	sm	QUAL			14-01	G9100-0-06776
QA SP:GROSSAB 05	Gross Alpha	Gross A	3.38E+00	1.6E+01		4.2E-01	pCi	07-02-98	01-06-98	1.00E+00	sm	QUAL		98.6	14-01	G9100-1-06777
DECON P11-6	Gross Beta	Gross B	1.20E+01	1.3E+01		2.2E+00	pCi/g	07-04-98	06-08-98	5.00E-01	gm	SOIL G			14-01	G9135-1-75100
DECON W3-6	Gross Beta	Gross B	1.95E+01	9.0E+00		2.2E+00	pCi/g	07-03-98	06-08-98	5.00E-01	gm	SOIL G			14-01	G9135-0-75098
QA REA	Gross Beta	Gross B	-2.67E-01	2.1E+02	U	9.8E-01	pCi	07-02-98	06-02-98	1.00E+00	sm	QUAL			14-01	G9100-0-06776
QA SP:GROSSAB 05	Gross Beta	Gross B	4.65E+00	1.5E+01		9.8E-01	pCi	07-02-98	01-06-98	1.00E+00	sm	QUAL		89.0	14-01	G9100-1-06777

Comment:

Data generated from analyses of samples submitted on 6/9/98.
Gross alpha/beta determinations are performed on small sample aliquots. Data may not represent sample activity as a whole.

Prepared by:

Date: 7/6/98

Approved by:

Date: 7-6-98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

***** End Report *****

(level 1)

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 1

Reported to: Remediation Projects
Area 6 Decon Pond Closure
J. L. Smith
M/S NTS306

Report Date: 8-SEP-98
Sample Delivery Group: B649
Batch: 0841
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON P3-7	K 40	GAM20	2.35E+01	1.9E+01		1.2E+00	pCi/g	08-04-98	07-28-98	6.74E+02	gm	SOIL G			05-01	G9511-0-75230
DECON P3-7	TH228	GAM20	2.65E+00	1.8E+01		1.7E-01	pCi/g	08-04-98	07-28-98	6.74E+02	gm	SOIL G			05-01	G9511-0-75230
QA BKG EMPTY BTL U05	No Nucl Det	GAM20	0.00E+00	0.0E+00	U	0.0E+00	NA	08-04-98	07-01-95	1.00E+00	gm	QUAL			05-01	Q0539-0-00264
QA BKG EMPTY BTL U05	AM241	GAM20	0.00E+00	0.0E+00	U	2.2E+01	pCi	08-04-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00264
QA BKG EMPTY BTL U05	CO60	GAM20	0.00E+00	0.0E+00	U	7.9E+00	pCi	08-04-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00264
QA BKG EMPTY BTL U05	CS137	GAM20	0.00E+00	0.0E+00	U	1.0E+01	pCi	08-04-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00264
QA SP:NAS-A0271	AM241	GAM20	1.80E+05	8.8E+00		2.9E+02	pCi	08-04-98	04-01-92	1.00E+00	sm	QUAL		110.8	05-01	Q0534-3-15214
QA SP:NAS-A0271	CO60	GAM20	3.04E+05	8.5E+00		1.3E+02	pCi	08-04-98	04-01-92	1.00E+00	sm	QUAL		101.9	05-01	Q0534-3-15214
QA SP:NAS-A0271	CS137	GAM20	2.07E+05	8.1E+00		9.8E+01	pCi	08-04-98	04-01-92	1.00E+00	sm	QUAL		101.9	05-01	Q0534-3-15214

Comment:

Data generated from analyses of a sample submitted 7/29/98.
The gross alpha/beta determination was performed on a small aliquot. The data reflect strictly that portion analyzed.

Prepared by:

Date:

9/8/98

Approved by:

Date:

9/9/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
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Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 2

Reported to: Remediation Projects
Area 6 Decon Pond Closure
J. L. Smith
M/S NTS306

Report Date: 8-SEP-98
Sample Delivery Group: B649
Batch: M668
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
DECON P3-7	Gross Alpha	Gross A	1.15E+01	1.6E+01		1.5E+00	pCi/g	09-03-98	07-28-98	1.00E+00	gm	SOIL G			14-01	G9511-0-75229
QA REA	Gross Alpha	Gross A	1.32E-01	1.7E+02	U	4.5E-01	pCi	09-02-98	07-31-98	1.00E+00	sm	QUAL			14-01	G9512-0-06794
QA SP:GROSSAB 05	Gross Alpha	Gross A	4.07E+00	1.4E+01		4.5E-01	pCi	09-02-98	05-12-94	1.00E+00	sm	QUAL		118.8	14-01	G9512-1-06795
DECON P3-7	Gross Beta	Gross B	1.04E+01	8.7E+00		1.1E+00	pCi/g	09-03-98	07-28-98	1.00E+00	gm	SOIL G			14-01	G9511-0-75229
QA REA	Gross Beta	Gross B	1.54E-01	3.7E+02	U	9.7E-01	pCi	09-02-98	07-31-98	1.00E+00	sm	QUAL			14-01	G9512-0-06794
QA SP:GROSSAB 05	Gross Beta	Gross B	5.54E+00	1.4E+01		9.7E-01	pCi	09-02-98	05-12-94	1.00E+00	sm	QUAL		106.0	14-01	G9512-1-06795

Comment:

Data generated from analyses of a sample submitted 7/29/98.
The gross alpha/beta determination was performed on a small aliquot. The data reflect strictly that portion analyzed.

Prepared by: Date: 9/8/98

Approved by: Date: 9/9/98

Qualification Flags:

E = Estimated Quantity
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Note: % Error is the 2.0 Sigma Error

***** End Report *****

11

Distribution: Original - To be retained by laboratory performing final analysis
Copy 1 - To be retained by laboratory performing intermediate analysis
Copy 2 - To be retained by Analytical Services Laboratory
Copy 3 - To be retained by sampler

PROJECT/CLIENT INFORMATION		REPORT INFORMATION			SAMPLE INFORMATION
Project: <u>DECON POND CLOSURE</u> BN Org# <u>2152</u>		Send Report to: <u>JEFF SMITH</u>			Sampling Site: <u>DECON. FACILITY</u> The samples submitted contain (check): () Hazardous () Radioactive (X) Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.
Charge No: <u>C4U-SB04E</u>	ASL Prog.: _____	Phone: <u>5-7775</u>	Fax: <u>5-7761</u>	M/S: <u>NTS-306</u>	
Project Manager: <u>JEFF SMITH</u>		Turnaround: () Standard - 30 days Non-rad, 60 Days Rad, Other: _____ (X) Rush Preliminary by: <u>2 WEEKS</u> Final by: _____			
Phone: <u>5-7775</u>	Fax: <u>5-7761</u>	M/S: <u>NTS-306</u>			
		Final report format: (X) Standard () NTS-WAC () Other: _____			

LAB USE ONLY					ANALYSES & METHOD										SAMPLE RECEIPT INFORMATION		
Rad SGD: <u>B447</u> Non-Rad SGD: <u>V435</u>					<div style="display: flex; flex-direction: row-reverse;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW 846 8015-GAS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 8260</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW 846</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 8270</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW 846</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 8002</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW 846</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 8015 MOD</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SW 846</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 1311/6010</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">L-EIO. 602 PL</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">L-EIO. 612 PL</div> </div>										Are all sample containers received intact (X) Yes () No Comments: _____		
Rad Packet: <u>69135-1</u> Non-Rad Packet: <u>W1466</u>															Do the labels agree with this form? (X) Yes () No Comments: _____		
Client Services Representative: _____															Was a Material Clearance Tag submitted? (X) Yes () No Comments: _____		
Will these analyses be performed under a signed SOW? () YES () NO If so, do analyses entered here agree with the SOW? () YES () NO () N/A If not, identify the variation _____ CSR initials indicating review and approval: _____ Date: _____																	
ITEM	ID / DESCRIPTION	DATE	TIME	MATRIX													
10	DECON P11-4 A+B	6/8/98	1415	SOIL												10	ICE, 250ml, 120ml
11	DECON P11-5	6/8	1415	SOIL												11	ICE, 250ml
12	DECON P11-6	6/8	1415	SOIL												12	ICE, 500ml 694g
13	DECON R1-1	6/8	1500	WATER	X											13	ICE, 1 LITER 2.0A
14	DECON R1-2	6/8	1500	WATER		X										14	ICE, 1 LITER
15	DECON R1-3	6/8	1500	WATER			X									15	ICE, 1 LITER
16	DECON R1-4	6/8	1500	WATER				X								16	ICE, 1 LITER
17	DECON R1-5	6/8	1500	WATER					X							17	ICE, 1 LITER
8																	
9																	

Transfer of samples submitted for analyses			Complete for samples shipped to an OFF-SITE Subcontract Laboratory		
Sampled/Relinquished (Signature/Organization)	DATE / TIME	Received by (Signature/Organization)	Relinquished (BN Representative Signature)	DATE / TIME	Received (Courier & Tracking Info.)
<u>David H Cox / BN</u>	<u>6/10/98/1725</u>	<u>CD Castaneda</u>	<u>CD Castaneda</u>	<u>6/10/98/1720</u>	<u>BN COURIER</u>
			Relinquished (Courier & Tracking Info.)	DATE / TIME	Received (1st tier Subcontractor Rep)
			<u>BN Courier</u>	<u>6/10/98/1725</u>	<u>Mark [Signature]</u>
			Relinquished (1st tier Subcontractor Rep)	DATE / TIME	Received (2nd tier Subcontractor Rep)

Distribution: Original - To be retained by laboratory performing final analysis
Copy 1 - To be retained by laboratory performing intermediate analysis
Copy 2 - To be retained by Analytical Services Laboratory
Copy 3 - To be retained by sampler

PROJECT/ CLIENT INFORMATION					REPORT INFORMATION					SAMPLE INFORMATION																																																																				
Project: DECON POND CLOSURE BN Org# 2152					Send Report to: JEFF SMITH					Sampling Site: DECON FACILITY																																																																				
Charge No.: C4U-SB0DE		ASL Prog.:			Phone: 5-7775		Fax: 5-7761		MS: NTS 306		The samples submitted contain (check); ☐ Hazardous ☒ Radioactive ☒ Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.																																																																			
Project Manager: JEFF SMITH					Turnaround: ☐ Standard - 30 days Non-rad, 60 Days Rad, Other: ☒ Rush Preliminary by: 2 WEEKS Final by:																																																																									
Phone: 5-7775		Fax: 5-7761		MS: NTS 306		Final report format: ☒ Standard ☐ NTS-WAC ☐ Other:																																																																								
LAB USE ONLY					ANALYSES & METHOD																																																																									
Rad SGD: B447 Non-Rad SGD: V435					<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>SWB46</td> <td>EPA 8260</td> <td>SWB46</td> <td>EPA 8270</td> <td>SWB46</td> <td>EPA 8015 MOD</td> <td>SWB46</td> <td>EPA 1311/6010</td> <td>L-ED. 602 PC</td> <td>L-ED. 612 PC</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>										SWB46	EPA 8260	SWB46	EPA 8270	SWB46	EPA 8015 MOD	SWB46	EPA 1311/6010	L-ED. 602 PC	L-ED. 612 PC																																																						
SWB46	EPA 8260	SWB46	EPA 8270	SWB46											EPA 8015 MOD	SWB46	EPA 1311/6010	L-ED. 602 PC	L-ED. 612 PC																																																											
Rad Packet: 69135-D Non-Rad Packet: W1466																																																																														
Client Services Representative:																																																																														
Will these analyses be performed under a signed SOW? ☐ YES ☐ NO If so, do analyses entered here agree with the SOW? ☐ YES ☐ NO ☐ N/A If not, identify the variation _____ CSR initials indicating review and approval: _____ Date: _____																																																																														
					SAMPLE RECEIPT INFORMATION																																																																									
					Are all sample containers received intact ☒ Yes ☐ No Comments: _____																																																																									
					Do the labels agree with this form? ☒ Yes ☐ No Comments: _____																																																																									
					Was a Material Clearance Tag submitted? ☒ Yes ☐ No Comments: _____																																																																									
					COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)																																																																									
ITEM	ID / DESCRIPTION	SAMPLING DATE	TIME	MATRIX	SWB46	EPA 8260	SWB46	EPA 8270	SWB46	EPA 8015 MOD	SWB46	EPA 1311/6010	L-ED. 602 PC	L-ED. 612 PC																																																																
0	DECON W3-1 A+B	6/8/13	1115	SLUDGE	X												ICE, 120M / (2)																																																													
1	DECON W3-2	6/8	1115	SLUDGE			X										ICE, 500M																																																													
2	DECON W3-3	6/8	1115	SLUDGE				X									ICE, 250M - AMBER																																																													
3	DECON W3-4 A+B	6/8	1115	SLUDGE					X								ICE, 250M / 120M																																																													
4	DECON W3-5	6/8	1115	SLUDGE						X							ICE, 250M																																																													
5	DECON W3-6	6/8	1115	SLUDGE							X	X					ICE, 500M 239,																																																													
6	DECON P11-1 TB	6/8/13	1400	WATER	X												40M																																																													
7	DECON P11-1A+B	6/8	1415	SOIL	X												ICE, 120M / (2)																																																													
8	DECON P11-2	6/8	1415	SOIL			X										ICE, 500M																																																													
9	DECON P11-3	6/8	1415	SOIL				X									ICE, 250M																																																													
Transfer of samples submitted for analyses DJH					Complete for samples shipped to an OFF-SITE Subcontract Laboratory																																																																									
Sampled/Relinquished (Signature/Organization)					DATE / TIME					Received by (Signature/Organization)					Relinquished (BN Representative Signature)					DATE / TIME					Received (Courier & Tracking Info.)																																																					
Louise H Cox / BN					6/10/13 0725					CD Castaneda																																																																				
															Relinquished (Courier & Tracking Info.)					DATE / TIME					Received (1st tier Subcontractor Rep)																																																					
															Relinquished (1st tier Subcontractor Rep)					DATE / TIME					Received (2nd tier Subcontractor Rep)																																																					

PROJECT/CLIENT INFORMATION				REPORT INFORMATION				SAMPLE INFORMATION						
Project: <u>DECON POND CLOSURE</u> BN Org#: <u>2152</u>				Send Report to: <u>JEFF SMITH</u>				Sampling Site: <u>DECON. FACILITY</u>						
Change No: <u>C4U-SB00E</u>		ASL Prog.:		Phone: <u>5-7775</u>		Fax: <u>5-7761</u>		MS: <u>MS-306</u>		The samples submitted contain (check): ☐ Hazardous ☐ Radioactive ☒ Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.				
Project Manager: <u>JEFF SMITH</u>				Turnaround: ☐ Standard - 30 days Non-rad, 60 Days Rad, Other: <u>2 WEEKS</u>				Final report format: ☒ Standard ☐ NTS-WAC ☐ Other:						
Phone: <u>5-7775</u>		Fax: <u>5-7761</u>		MS: <u>MS306</u>		Final report format: ☒ Standard ☐ NTS-WAC ☐ Other:								
LAB USE ONLY				ANALYSES & METHOD										
Rad SGD: <u>B447</u>		Non-Rad SGD: <u>V435</u>		<div style="display: flex; flex-direction: row-reverse; justify-content: space-between; padding: 5px;"> <div>SW846 EPA 8260</div> <div>SW846 EPA 8270</div> <div>SW846 EPA 8082</div> <div>SW846 EPA 8085 MOD.</div> <div>SW846 EPA 1311/6010</div> <div>L-EIO.602.PL</div> <div>L-EIO.612.PL</div> </div>										
Rad Packet: <u>G9135-1</u>		Non-Rad Packet: <u>W1466</u>												
Client Services Representative:														
Will these analyses be performed under a signed SOW? ☐ YES ☐ NO If so, do analyses entered here agree with the SOW? ☐ YES ☐ NO ☐ N/A If not, identify the variation _____ CSR initials indicating review and approval: _____ Date: _____														
ITEM	ID / DESCRIPTION	SAMPLING		MATRIX									COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)	
		DATE	TIME											
10	DECON P11-4 A/B	6/8/78	1415	SOIL										Ice, 250ml, 120ml
11	DECON P11-5	6/8	1415	SOIL										Ice, 250ml
12	DECON P11-6	6/8	1415	SOIL										Ice, 500ml 694g
13	DECON R1-1	6/8	1500	WATER	X									Ice, 1 LITER
14	DECON R1-2	6/8	1500	WATER		X								Ice, 1 LITER
15	DECON R1-3	6/8	1500	WATER			X							Ice, 1 LITER
16	DECON R1-4	6/8	1500	WATER				X						Ice, 1 LITER
17	DECON R1-5	6/8	1500	WATER					X					Ice, 1 LITER
8														
9														
Transfer of samples submitted for analyses					Complete for samples shipped to an OFF-SITE Subcontract Laboratory									
Sampled/Relinquished (Signature/Organization)		DATE / TIME		Received by (Signature/Organization)		Relinquished (BN Representative Signature)		DATE / TIME		Received (Courier & Tracking Info.)				
<u>Wendy Cox / BN</u>		<u>6/17/86 1725</u>		<u>CA Castaneda</u>										
						Relinquished (Courier & Tracking Info.)		DATE / TIME		Received (1st tier Subcontractor Rep)				
						Relinquished (1st tier Subcontractor Rep)		DATE / TIME		Received (2nd tier Subcontractor Rep)				

V-0732 (02/98)

PROJECT/CLIENT INFORMATION				REPORT INFORMATION				SAMPLE INFORMATION											
Project: <u>DECON POND CLOSURE</u>		BN Org#: <u>2152</u>		Send Report to: <u>JEFF SMITH</u>				Sampling Site: <u>DECON FACILITY</u>											
Charge No.: <u>CHL-534DE</u>		ASL Prog.:		Phone: <u>5-7775</u>		Fax: <u>5-7761</u>		M/S: <u>NTS-306</u>		The samples submitted contain (check): ☐ Hazardous ☐ Radioactive ☒ Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.									
Project Manager: <u>JEFF SMITH</u>				Turnaround: ☐ Standard - 30 days Non-rad, 60 Days Rad, Other: <u>HT Rush Preliminary by: 2 WEEKS</u> Final by:															
Phone: <u>5-7775</u>		Fax: <u>5-7761</u>		M/S: <u>NTS-306</u>		Final report format: ☒ Standard ☐ NTS-WAC ☐ Other:													
LAB USE ONLY				ANALYSES & METHOD															
Rad SGD:		Non-Rad SGD:		<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">L-EID, 602 PL</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">L-EID, 612 PL</div> </div>															
Rad Packet:		Non-Rad Packet:																	
Client Services Representative:																			
Will these analyses be performed under a signed SOW? ☐ YES ☐ NO If so, do analyses entered here agree with the SOW? ☐ YES ☐ NO ☐ N/A If not, identify the variation _____ CSR initials indicating review and approval: _____ Date: _____																			
ITEM	ID / DESCRIPTION	SAMPLING		MATRIX	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">L-EID, 602 PL</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">L-EID, 612 PL</div> </div>														
		DATE	TIME																
0	DECON P3-7	11/21/14	1315	SOIL	X	X													
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
Transfer of samples submitted for analyses					Complete for samples shipped to an OFF-SITE Subcontract Laboratory														
Sampled/Relinquished (Signature/Organization)		DATE / TIME		Received by (Signature/Organization)		Relinquished (BN Representative Signature)					DATE / TIME		Received (Courier & Tracking Info.)						
<u>[Signature]</u> <u>BN</u>		<u>11/21/14</u>		<u>[Signature]</u> <u>BN</u>		<u>[Signature]</u>					<u>11/21/14</u>		<u>[Signature]</u>						
						Relinquished (Courier & Tracking Info.)					DATE / TIME		Received (1st tier Subcontractor Rep)						
						Relinquished (1st tier Subcontractor Rep)					DATE / TIME		Received (2nd tier Subcontractor Rep)						

APPENDIX C
CLOSURE CERTIFICATION

**CERTIFICATION OF CLOSURE BY THE
DOE NEVADA OPERATIONS OFFICE**

I certify under penalty of law that the Area 6 Decontamination Pond and Oil/Water Separator, Corrective Action Unit 92, located in Area 6 at the Nevada Test site has been closed in accordance with the approved Closure Plan for CAU No. 92 Area 6 Decontamination Pond Nevada Test Site dated November 1998 and the Permit for a Hazardous Waste Management Facility Number NEV HW009, U. S. Department of Energy, Nevada Operations Office, Nevada Test Site, dated March 27, 1995. All measures required in the Closure Plan and applicable Resource Conservation and Recovery Act 42 U.S.C. 6901-6991i and Title 40 CFR 260-268 have been fully implemented and that, to the best of my knowledge, no violations exist.

G.W. Johnson, Manager
DOE Nevada Operations Office

4/14/99

Date

DOE Nevada Operations Office
P.O. Box 98518
Las Vegas, NV 89193-8518

**CERTIFICATION OF CLOSURE BY THE
INDEPENDENT PROFESSIONAL ENGINEER**

I, Dean D. Nelson, a registered Professional Engineer, hereby state that I have reviewed the Closure Plan for the Closure of the Area 6 Decontamination Pond and Oil/Water Separator, Corrective Action Unit 92, located in Area 6 at the Nevada Test site and am familiar with the rules and regulations of Title 40 CRF §264.280(e) and §270.1(c)(5) and (6) pertaining to the clean closure of this Corrective Action Unit has been performed with the exception of that stated in Section 2.2, in accordance with the approved Closure Plan for CAU No. 92 Area 6 Decontamination Pond Nevada Test Site dated November 1998, and the Permit for a Hazardous Waste Management Facility Number NEV HW009, United States Department of Energy, Nevada Operations Office, Nevada Test Site, dated March 27, 1995.

Dean D. Nelson, P.E.
Nevada Professional Engineer (Civil)
License Number 12733

CIVIL

3/8/99

Date

PEER Consultants, P.C.
2439 Losee Road, Suite 1C
N. Las Vegas, Nevada 89109

APPENDIX D
DESIGN CHANGE NOTICE

DCN NO. 99/12-182PROJ NO. 96052.A06Sheet 1 of 2

DESIGN CHANGE NOTICE

☒ Design Drawing	☐ Design Specification	Change No. <u>①</u> 2 3 4	Formal Revision YES <u>NO</u>
--	---	---------------------------	-------------------------------

Document No.: CAU-006-92-C3Revision No.: 1Title: Grading Plan

Description of Change:

1. Revise fence corner locations per e-mail from Jeff Smith dated 12/21/98. See sheet 2 for new corner/ sign location information.

Prepared By:

Date:

Checked By:

Date:

12/28/98

12/29/98

APPROVALS

Lead Engineer:

Date:

Other BN Org's: (PA, ESS&H, etc.)

Date:

Project Engineer/Functional Manager:

Date:

Date:

Date:

Date:

DESIGN CHANGE NOTICE (Continuation sheet)

DCN NO. 99/12-182
PROJ NO. 96052.A06
Sheet 2 of 2

Description of Change:

APPENDIX E

AS-BUILT DRAWINGS FOR THE DECONTAMINATION POND COVER

APPENDIX E

AS-BUILT DRAWINGS FOR THE DECONTAMINATION POND COVER

NOTES

- 0.3% S&B BEDDING AND BUFFER LAYERS SHALL BE A MIX OF 2 PARTS SAND AND 3 PARTS WASH FINES FROM EXISTING STOCKPILES LOCATED AT THE AREA 1 SHAKER PLANT AND SHALL MEET THE FOLLOWING GRADATION:
- NATIVE MATERIALS GENERAL AND SHAPING FILL SHALL BE PLACED AND COMPACTED 14M SPEC SECTION 02223.
- THE SOIL BEDDING & BUFFER LAYERS SHALL BE PLACED AND COMPACTED 14M SPEC SECTION 02224.
- THE EROSION CONTROL LAYER SHALL BE PLACED AND COMPACTED 14M SPEC SECTION 02611.
- ACCEPTANCE TESTING, INCLUDING SPECIFIC TESTS, FREQUENCIES, AND HOLD POINTS, SHALL BE AS CONTAINED IN THE CLOSURE PLAN FOR CAU NO. 92, AREA 6 DECONTAMINATION POND, NEVADA TEST SITE, APPENDIX A, CONSTRUCTION QUALITY ASSURANCE PLAN. CONSTRUCTION WILL REQUIRE POST DECONTAMINATION.
- FINISH GRADE SLOPES FOR SHAPING FILL, PROCESSED BEDDING, AND BUFFER LAYERS, AND TYPE 11 EROSION CONTROL LAYER SHALL BE 10:1 LESS THAN 3.5% NOT MORE THAN 10:1.
- CLOSURE MONUMENTS: (1) CONCRETE MONUMENTS TO BE PLACED BY SURVEY AFTER POND CLOSURE IS COMPLETE. EROSION CONTROL LAYER IS INSTALLED, AND PRIOR TO POND CONSTRUCTION. (2) MONUMENTS SHALL BE PLACED IN EACH OF THE CORNERS OF THE CAP. EACH MONUMENT SHALL BE TOPPED WITH A BRASS DISC CONTAINING THE MONUMENT IDENTIFICATION AND ELEVATION DATA STAMPED ON THE SURFACE. SEE DRAWING CS-1 FOR MONUMENT PLACEMENT INFORMATION. SEE DETAIL 10 FOR MONUMENT LOCATIONS.
- SIGNALS: DO NOT ENTER POINT OF CONTACT SIGNALS SHALL BE PLACED AT ACCESS GATE AND EQUALLY SPACED ON THE FENCING. SEE DETAIL 7, DRAWING CS.
- SEE FENCE SPEC 02031 PART 3-02 FOR SPECIFIC WAVE BARRIER REQUIREMENTS.
- SLOPE ON DIAGONALS SHALL BE NOT LESS THAN 3:02 NOR MORE THAN 3:5% VERIFY GRADES AT 3 LOCATIONS ALONG DIAGONALS.
- FENCE CORNERS ARE ORIENTED SUCH THAT OPPOSITE CORNERS ARE ALIGNED PARALLEL TO THE DIAGONALS OF THE CLOSURE CAP.

MATERIAL QUANTITY TABLE

MATERIAL	QTY
PROCESSED MATERIAL	4653M ³
TYPE 11 EROSION CONTROL MATERIAL	2332M ³
SHAPING FILL MATERIAL (TYPICAL)	4860M ³
NATIVE FILL (TYPICAL/EXCAVATE)	2494M ³
DYER EXCAVATION	1335M ³
GCL	6070M ²

* QTY'S ARE BANKED M³
CF = 1.35
FT = 1.35

AS-BUILT

UNLESS NOTED BY MARKED CHANGES, ALL DIMENSIONS, NOTES, REFERENCES AND CONSTRUCTION FEATURES ARE CORRECTED, AND WERE CONSTRUCTED AS SHOWN ON THIS DRAWING.

REFERENCES

TITLE SHEET
RSN DESIGN DRAWING STANDARDS

CAU-006-92-T1
STD 1113 SH7 162

GRADING PLAN

SCALE: 1" = 125'0"
NOTE: CONTOUR INTERVAL IS 0.25 METERS

SUPERCEDES DCN 99/12-182
SUPERCEDES DWG JS-006-133-C3
SUPERCEDES DCN 98/7-162

AREA 6
CAU 92 DECONTAMINATION POND
RCRA CLOSURE

GRADING PLAN

U.S. DEPARTMENT OF ENERGY
Bechtel Nevada
CAU-006-92-C3

SIGN DETAIL

③

- ISSN 0013-792X/12/14

6. How many copies of the report are being distributed?

-- OBJECT B - SHOWS CORRELATED DIMENSIONS F D
BATCH/MODE INT.

- PROCUREMENT TO THE BUREAU'S SHARE.

NEVADA TEST SITE
CAU 92 DECONTAMINATION POND
RCRA CLOSURE

DETAILS

DELIVERED	SUBJECT'S NAME: JAMES	
-R/S		
NAME	R. W. SCHNEIDER	7/20/68
PMU	DATE	
CHECKED		
2 PD	DAVID R. CONSER	7/21/68
CPER		
K/R	DEPT OF CORRECTION PRODUCTS	
REF. FILE NO.	J. APPENZELER-WING	7/21/68
N/A	PROJECT NUMBER	ACTIVITY CODE

AS-BUILT. DATED 03/24/99	10	11	12	13	14	15
AS-BUILT. DATED 03/24/99						
REVISED PER NOE COMMENTS DATED 5/14/99. CHANGED DWG NUMBER TO 2 TO INDICATE DUPLICATE.						
ISSUED FOR CONSTRUCTION 7/20/99.						
DATE	DESCRIPTION	DATE	DATE	DATE	DATE	DATE

NEVADA TEST SITE
 CAU 92 DECONTAMINATION POND
 RCRA CLOSURE
 GEOSYNTHETIC CLAY LINER
 PANEL LAYOUT
 AREA 5

NO.	DATE	REVISION
1	11/2/95	AS-BUILT, DATED 1/29/93
2	11/2/95	AS-BUILT, DATED 1/29/93
3	11/2/95	AS-BUILT, DATED 1/29/93
4	11/2/95	AS-BUILT, DATED 1/29/93
5	11/2/95	AS-BUILT, DATED 1/29/93
6	11/2/95	AS-BUILT, DATED 1/29/93
7	11/2/95	AS-BUILT, DATED 1/29/93
8	11/2/95	AS-BUILT, DATED 1/29/93
9	11/2/95	AS-BUILT, DATED 1/29/93
10	11/2/95	AS-BUILT, DATED 1/29/93
11	11/2/95	AS-BUILT, DATED 1/29/93
12	11/2/95	AS-BUILT, DATED 1/29/93
13	11/2/95	AS-BUILT, DATED 1/29/93
14	11/2/95	AS-BUILT, DATED 1/29/93
15	11/2/95	AS-BUILT, DATED 1/29/93
16	11/2/95	AS-BUILT, DATED 1/29/93
17	11/2/95	AS-BUILT, DATED 1/29/93
18	11/2/95	AS-BUILT, DATED 1/29/93
19	11/2/95	AS-BUILT, DATED 1/29/93
20	11/2/95	AS-BUILT, DATED 1/29/93
21	11/2/95	AS-BUILT, DATED 1/29/93
22	11/2/95	AS-BUILT, DATED 1/29/93
23	11/2/95	AS-BUILT, DATED 1/29/93
24	11/2/95	AS-BUILT, DATED 1/29/93
25	11/2/95	AS-BUILT, DATED 1/29/93
26	11/2/95	AS-BUILT, DATED 1/29/93
27	11/2/95	AS-BUILT, DATED 1/29/93

GCL NOTES

HULL #	LOT #	SERIAL #	AREA (SQ M)
1	98022623	048165	211.23
2	8041905	052453	211.23
3	98031203	049116	149.46
4	8081533	057161	211.23
5	98050005	048278	162.67
6	98050305	047910	211.23
7	94856603	048186	211.23
8	98042401	047147	211.23
9	8051903	052465	211.23
10	05518003	052464	211.23
11	98041003	046391	171.07
12	98022403	054008	211.23
13	98050605	048185	191.14
14	97111023	047257	211.23
15	8061903	052454	211.23
16	8061903	052454	211.23
17	98295003	048182	211.23
18	97121585	048180	211.23
19	97120405	048180	211.23
20	8061903	052453	211.23
21	8061903	052453	211.23
22	98041633	048463	211.23
23	8061903	052458	194.59
24	8061903	048337	211.23
25	8061903	048337	211.23
26	8061903	048337	211.23
27	8061903	048337	211.23

AS-BUILT

GEOSYNTHETIC CLAY LINER
 (GCL) PLACEMENT
 SCALE: 1" = 100'

NOTES

SECTIONS ARE TYPICAL ON SHEETS 1-17, AND ARE
DETAILED ON DRAWING 36-CAL-DXH-82-16.

PLAN LIFT 1
BERM MATERIAL

2016 11 03

AS-BUILT		DATE		NO.	
Revised Remarks		DATE		NO.	
REVISION		DATE		NO.	
1		1-1-77		1	
2		1-1-77		2	
3		1-1-77		3	
4		1-1-77		4	
5		1-1-77		5	
6		1-1-77		6	
7		1-1-77		7	
8		1-1-77		8	
9		1-1-77		9	
10		1-1-77		10	
11		1-1-77		11	
12		1-1-77		12	
13		1-1-77		13	
14		1-1-77		14	
15		1-1-77		15	
16		1-1-77		16	
17		1-1-77		17	
18		1-1-77		18	
19		1-1-77		19	
20		1-1-77		20	
21		1-1-77		21	
22		1-1-77		22	
23		1-1-77		23	
24		1-1-77		24	
25		1-1-77		25	
26		1-1-77		26	
27		1-1-77		27	
28		1-1-77		28	
29		1-1-77		29	
30		1-1-77		30	
31		1-1-77		31	
32		1-1-77		32	
33		1-1-77		33	
34		1-1-77		34	
35		1-1-77		35	
36		1-1-77		36	
37		1-1-77		37	
38		1-1-77		38	
39		1-1-77		39	
40		1-1-77		40	
41		1-1-77		41	
42		1-1-77		42	
43		1-1-77		43	
44		1-1-77		44	
45		1-1-77		45	
46		1-1-77		46	
47		1-1-77		47	
48		1-1-77		48	
49		1-1-77		49	
50		1-1-77		50	
51		1-1-77		51	
52		1-1-77		52	
53		1-1-77		53	
54		1-1-77		54	
55		1-1-77		55	
56		1-1-77		56	
57		1-1-77		57	
58		1-1-77		58	
59		1-1-77		59	
60		1-1-77		60	
61		1-1-77		61	
62		1-1-77		62	
63		1-1-77		63	
64		1-1-77		64	
65		1-1-77		65	
66		1-1-77		66	
67		1-1-77		67	
68		1-1-77		68	
69		1-1-77		69	
70		1-1-77		70	
71		1-1-77		71	
72		1-1-77		72	
73		1-1-77		73	
74		1-1-77		74	
75		1-1-77		75	
76		1-1-77		76	
77		1-1-77		77	
78		1-1-77		78	
79		1-1-77		79	
80		1-1-77		80	
81		1-1-77		81	
82		1-1-77		82	
83		1-1-77		83	
84		1-1-77		84	
85		1-1-77		85	
86		1-1-77		86	
87		1-1-77		87	
88		1-1-77		88	
89		1-1-77		89	
90		1-1-77		90	
91		1-1-77		91	
92		1-1-77		92	
93		1-1-77		93	
94		1-1-77		94	
95		1-1-77		95	
96		1-1-77		96	
97		1-1-77		97	
98		1-1-77		98	
99		1-1-77		99	
100		1-1-77		100	

UNLESS NOTED BY MARKED CHANGES ALL DIMENSIONS, NOTES, REFERENCES AND CONSTRUCTION FEATURES ARE CORRECTED, AND WERE CONSTRUCTED AS SHOWN ON THIS DRAWING.

UNLESS NOTED BY MARKED CHANGES, ALL DIMENSIONS, NOTES, REFERENCES AND CONSTRUCTION FEATURES ARE CORRECTED, AND WERE CONSTRUCTED AS SHOWN ON THIS DRAWING.

GRAPHIC SCALE

0 10 20 30 40 50 60 70 80

0 20 40 60 80 100 120

SCALE IN KILOMETERS

U.S. DEPARTMENT OF ENERGY BECHTEL Nevada 2215 R STREET, N.W. WASHINGTON, D.C. 20540		AREA 6 CAU 92 DECONTAMINATION POND RCRA CLOSURE PLAN LIFT 1 BERM MATERIAL	
DATE 12/29/99	TIME 4:45	NAME J. A. T. C. S.	SIGNATURE
NO. 0	DATE 12/29/99	NAME J. A. T. C. S.	SIGNATURE

[illegible]

AND WERE CASHIENCED AS SHOWN ON THIS DRAWING

U.S. DEPARTMENT OF ENERGY NEVADA OPERATIONS OFFICE Bochtel Nevada <small>714 ONE FRONT STREET, SUITE 200, LAS VEGAS, NV 89101</small>	NEVADA TEST SITE CAU 92 DECONTAMINATION POND RCRA CLOSURE PLAN LIFT 2 BERM MATERIAL	AREA 6 NTS-200 NAME: <u>70</u> CHARGE: <u>John Ward</u> DATE: <u>4/14/99</u> BY: <u>John T. Galt</u> NTS-200 NAME: <u>70</u> CHARGE: <u>John Ward</u> DATE: <u>4/14/99</u> BY: <u>John T. Galt</u>	RESULT: <u>1/25/99</u> METHOD: <u>RESPIRATION</u>
---	---	--	--

PT #	NORTHING	EASTING	ELEVATION
979	6242906.50	556113.28	1933.36
980	6242907.41	556112.63	1933.36
981	6242908.31	556111.98	1933.36
982	6242909.21	556111.33	1933.36
983	6242910.11	556110.68	1933.36
984	6242911.01	556110.03	1933.36
985	6242911.91	556109.38	1933.36
986	6242912.81	556108.73	1933.36
987	6242913.71	556108.08	1933.36
988	6242914.61	556107.43	1933.36
989	6242915.51	556106.78	1933.36
990	6242916.41	556106.13	1933.36
991	6242917.31	556105.48	1933.36
992	6242918.21	556104.83	1933.36
993	6242919.11	556104.18	1933.36
994	6242920.01	556103.53	1933.36
995	6242920.91	556102.88	1933.36
996	6242921.81	556102.23	1933.36
997	6242922.71	556101.58	1933.36
998	6242923.61	556100.93	1933.36
999	6242924.51	556100.28	1933.36

PLAN LIFT 3
BERM MATERIAL

Days: 1 - 1833

GRAPHIC SCALE

[illegible]

UNLESS NOTED BY MARKED CHANGES, ALL DIMENSIONS, NOTES, REFERENCES AND CONSTRUCTION FEATURES ARE CORRELATED, AND WERE CONSTRUCTED AS SHOWN ON THIS DRAWING.

AS-BUILT

Rechtel Merada

100

4-8-17

[illegible]LESS NOTED BY MARKED
REFERENCES AND CONSTRUCT

WE WERE CONSTRUCTED A

92

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SCALE 1-500

10

MOISTURE DENSITY TESTING LOCATIONS

PT #	NORTHING	EASTING	ELEVATION
1004	6242806.96	55513.51	1194.08
1005	6242807.21	55513.27	1194.07
1006	6242807.46	55513.03	1194.06
1007	6242807.71	55512.79	1194.05
1008	6242807.96	55512.55	1194.04
1009	6242808.21	55512.31	1194.03
1010	6242808.46	55512.07	1194.02
1011	6242808.71	55511.83	1194.01
1012	6242808.96	55511.59	1193.99
1013	6242809.21	55511.35	1193.98
1014	6242809.46	55511.11	1193.97
1015	6242809.71	55510.87	1193.96
1016	6242809.96	55510.63	1193.95

NOTES

LIFT 4 RETAINS THE ELEVATION CONTROL
BETWEEN LIFT 3 AND LIFT 4.

PLAN LIFT 4
BERM MATERIAL
SCALE: 1:1500

AS-BUILT

UNLESS NOTED BY MARKED CHANGES, ALL DIMENSIONS, NOTES, AND ELEVATIONS SHOWN ON THIS DRAWING WERE OBTAINED FROM THE FIELD AND WERE CONSIDERED AS SHOWN ON THE DRAWING.

NEVADA TEST SITE
CAU 92 DECONTAMINATION POND
RCRA CLOSURE
PLAN LIFT 4
BERM MATERIAL

U.S. DEPARTMENT OF ENERGY
Bechtel Nevada
PROJECT: CAU 92 DECONTAMINATION POND
DRAWING: PLAN LIFT 4
DATE: 11/17/99
BY: [Signature]
CHECKED: [Signature]
APPROVED: [Signature]

PT	NORTHING	EASTING	ELEVATION
1034	6242415.61	556112.06	1184.27
1035	6242405.59	556121.42	1184.10
1036	6242405.36	556145.08	1184.06
1037	6242403.96	556155.14	1184.06
1038	6242403.96	556155.14	1184.06
1039	6242403.96	556155.14	1184.06
1040	6242403.96	556155.14	1184.06
1041	6242403.96	556155.14	1184.06
1042	6242403.96	556155.14	1184.06
1043	6242403.96	556155.14	1184.06
1044	6242403.96	556155.14	1184.06
1045	6242403.96	556155.14	1184.06
1046	6242403.96	556155.14	1184.06
1047	6242403.96	556155.14	1184.06
1048	6242403.96	556155.14	1184.06

LIFT 4b DETAILS THE ELEVATION CONTROL BETWEEN LIFT 4 AND LIFT 5.

PLAN LIFT 4A
BERM MATERIAL

TABLE 1. 4-2-2008

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

GRAPHIC SCALE

SCALE 1:500

0 10 20 30 40 METERS

[illegible]

MOISTURE DENSITY TESTING LOCATIONS

PT #	NORTHING	EASTING	ELEVATION
1049	6242933.05	556116.95	1194.01
1050	6242933.05	556116.95	1194.01
1051	6242933.05	556116.95	1194.01
1052	6242933.05	556116.95	1194.01
1053	6242933.05	556116.95	1194.01
1054	6242933.05	556116.95	1194.01
1055	6242933.05	556116.95	1194.01
1056	6242933.05	556116.95	1194.01
1057	6242933.05	556116.95	1194.01
1058	6242933.05	556116.95	1194.01
1059	6242933.05	556116.95	1194.01
1060	6242933.05	556116.95	1194.01
1061	6242933.05	556116.95	1194.01
1062	6242933.05	556116.95	1194.01
1063	6242933.05	556116.95	1194.01
1064	6242933.05	556116.95	1194.01
1065	6242933.05	556116.95	1194.01
1066	6242933.05	556116.95	1194.01

PLAN OVER EXCAVATION
SCALE 1:1200

U.S. DEPARTMENT OF ENERGY Bechtel Nevada 12000 S. RAYMOND AVE. LAS VEGAS, NEVADA 89143		PROJECT NO. 12000 DRAWING NO. 12000-1 DATE 12/15/99	
AREA 6 CAU 92 DECONTAMINATION POND RCRA CLOSURE		PLAN OVER EXCAVATION	
NEVADA TEST SITE AREA 6 CAU 92 DECONTAMINATION POND RCRA CLOSURE		PROJECT NO. 12000 DRAWING NO. 12000-1 DATE 12/15/99	
U.S. DEPARTMENT OF ENERGY Bechtel Nevada 12000 S. RAYMOND AVE. LAS VEGAS, NEVADA 89143		PROJECT NO. 12000 DRAWING NO. 12000-1 DATE 12/15/99	

MOISTURE DENSITY TESTING LOCATIONS

PI #	MOISTURE	EASTING	ELEVATION
31	6242801.40	556125.80	1194.25
32	6242802.40	556125.80	1194.25
33	6242803.40	556125.80	1194.25
34	6242804.40	556125.80	1194.25
35	6242805.40	556125.80	1194.25
36	6242806.40	556125.80	1194.25
37	6242807.40	556125.80	1194.25
38	6242808.40	556125.80	1194.25
39	6242809.40	556125.80	1194.25
40	6242810.40	556125.80	1194.25
41	6242811.40	556125.80	1194.25
42	6242812.40	556125.80	1194.25
43	6242813.40	556125.80	1194.25
44	6242814.40	556125.80	1194.25
45	6242815.40	556125.80	1194.25
46	6242816.40	556125.80	1194.25
47	6242817.40	556125.80	1194.25
48	6242818.40	556125.80	1194.25
49	6242819.40	556125.80	1194.25
50	6242820.40	556125.80	1194.25
51	6242821.40	556125.80	1194.25
52	6242822.40	556125.80	1194.25

PLAN LIFT 5
SHAPING FILL
SCALE 1:1500

AS-BUILT

Bochtel Nevada

UNLESS NOTED BY MARKED CHANGES ALL DIMENSIONS, NOTES, REFERENCES AND CONSTRUCTION FEATURES ARE CORRECTED AND WERE CONSTRUCTED AS SHOWN ON THIS DRAWING.

NEVADA TEST SITE
CAU 92 DECONTAMINATION POND
AREA 6
RCRA CLOSURE
PLAN LIFT 5
SHAPING FILL

Bochtel Nevada

U.S. DEPARTMENT OF ENERGY

40101-00-00-00-00-00

DATE	10/1/88
BY	W. J. BOCHTEL
CHECKED BY	W. J. BOCHTEL
APPROVED BY	W. J. BOCHTEL
REVISION	1.0
DESCRIPTION	MOISTURE DENSITY TESTING LOCATIONS

POINT	NORTHING	EASTING	ELEVATION
54	624990.94	356173.76	1194.43
55	624990.92	356175.25	1194.43
56	624991.41	356136.46	1194.42
57	624991.41	356136.46	1194.42
58	624991.41	356136.46	1194.42
59	624991.41	356136.46	1194.42
60	624991.41	356136.46	1194.42
61	624991.41	356136.46	1194.42
62	624991.41	356136.46	1194.42
63	624991.41	356136.46	1194.42
64	624991.41	356136.46	1194.42
65	624991.41	356136.46	1194.42
66	624991.41	356136.46	1194.42
67	624991.41	356136.46	1194.42
68	624991.41	356136.46	1194.42
69	624991.41	356136.46	1194.42
70	624991.41	356136.46	1194.42

PLAN LIFT 6
SHAPING FILL

AS-BUILT		INK IS NOTED BY ARMED CIRCLES ALL DIMENSIONAL NOTES HYPHENATED CONSIDER FEATHERS OR CRACKS. AND WERE CONSTRUCTED AS SHOWN ON THE DRAWING	
DATE 4/27/1	TIME 1:00 PM	DRAWN BY J. J. J.	CHECKED BY J. J. J.
PROJECT NO. 1000	SHEET NO. 1000	SCALE 1" = 10'	DATE 4/27/1
PROJECT NAME Bechtel Nevada	PROJECT LOCATION Bechtel Nevada	PROJECT DESCRIPTION Bechtel Nevada	PROJECT STATUS Bechtel Nevada

UNLESS NOTED BY MARKED CHANGES, ALL DIMENSIONS, NOTES, REFERENCES AND CONSTRUCTION FEATURES ARE CORRECTED, AND WERE CONSTRUCTED AS SHOWN ON THIS DRAWING

GRAPHIC SCALE

0 10 20 30 40 50 60 METERS

SCALE 1:500

NEVADA TEST SITE		AREA 6		CAU 92 DECONTAMINATION POND		ACRA CLOSURE		PLAN LIFT 6		SHAFTING FILL	
U.S. DEPARTMENT OF ENERGY		U.S. DEPARTMENT OF ENERGY		U.S. DEPARTMENT OF ENERGY		U.S. DEPARTMENT OF ENERGY		U.S. DEPARTMENT OF ENERGY		U.S. DEPARTMENT OF ENERGY

PT	BURNING	EASTING	ELEVATION
111	62-2302	55611.72	1194.59
112	62-2303	55612.95	1194.59
113	62-2304	55614.28	1194.57
114	62-2305	55615.37	1194.57
115	62-2306	55616.41	1194.58
116	62-2307	55617.41	1194.58
117	62-2308	55618.43	1194.59
118	62-2309	55619.43	1194.59
119	62-2310	55620.43	1194.57
120	62-2311	55621.43	1194.58
121	62-2312	55622.43	1194.58
122	62-2313	55623.43	1194.58
123	62-2314	55624.43	1194.58
124	62-2315	55625.43	1194.58
125	62-2316	55626.43	1194.58
126	62-2317	55627.43	1194.58
127	62-2318	55628.43	1194.58
128	62-2319	55629.43	1194.58
129	62-2320	55630.43	1194.58
130	62-2321	55631.43	1194.58
131	62-2322	55632.43	1194.58
132	62-2323	55633.43	1194.58
133	62-2324	55634.43	1194.58
134	62-2325	55635.43	1194.58
135	62-2326	55636.43	1194.58
136	62-2327	55637.43	1194.58
137	62-2328	55638.43	1194.58
138	62-2329	55639.43	1194.58
139	62-2330	55640.43	1194.58
140	62-2331	55641.43	1194.58
141	62-2332	55642.43	1194.58
142	62-2333	55643.43	1194.58
143	62-2334	55644.43	1194.58
144	62-2335	55645.43	1194.58
145	62-2336	55646.43	1194.58
146	62-2337	55647.43	1194.58
147	62-2338	55648.43	1194.58
148	62-2339	55649.43	1194.58
149	62-2340	55650.43	1194.58
150	62-2341	55651.43	1194.58
151	62-2342	55652.43	1194.58
152	62-2343	55653.43	1194.58
153	62-2344	55654.43	1194.58
154	62-2345	55655.43	1194.58
155	62-2346	55656.43	1194.58
156	62-2347	55657.43	1194.58
157	62-2348	55658.43	1194.58
158	62-2349	55659.43	1194.58
159	62-2350	55660.43	1194.58
160	62-2351	55661.43	1194.58
161	62-2352	55662.43	1194.58
162	62-2353	55663.43	1194.58
163	62-2354	55664.43	1194.58
164	62-2355	55665.43	1194.58
165	62-2356	55666.43	1194.58
166	62-2357	55667.43	1194.58
167	62-2358	55668.43	1194.58
168	62-2359	55669.43	1194.58
169	62-2360	55670.43	1194.58
170	62-2361	55671.43	1194.58
171	62-2362	55672.43	1194.58
172	62-2363	55673.43	1194.58
173	62-2364	55674.43	1194.58
174	62-2365	55675.43	1194.58
175	62-2366	55676.43	1194.58
176	62-2367	55677.43	1194.58
177	62-2368	55678.43	1194.58
178	62-2369	55679.43	1194.58
179	62-2370	55680.43	1194.58
180	62-2371	55681.43	1194.58
181	62-2372	55682.43	1194.58
182	62-2373	55683.43	1194.58
183	62-2374	55684.43	1194.58
184	62-2375	55685.43	1194.58
185	62-2376	55686.43	1194.58
186	62-2377	55687.43	1194.58
187	62-2378	55688.43	1194.58
188	62-2379	55689.43	1194.58
189	62-2380	55690.43	1194.58
190	62-2381	55691.43	1194.58
191	62-2382	55692.43	1194.

PLAN LIFT 7
SHAPING FILL

AS-BUILT Bochtel Kanada <small>INCORPORATED</small>		Date: 4.1.92 By: W. J. J.	Date: 4.1.92 By: W. J. J.
Project Name: Bochtel Kanada Drawing No.: 01-001 Revision: 01-001	Date: 4.1.92 By: W. J. J.	Date: 4.1.92 By: W. J. J.	Date: 4.1.92 By: W. J. J.

UNLESS NOTED BY MARKED CHANGES, ALL DIMENSIONS, NOTES, REFERENCES AND CONSTRUCTION SHALL BE AS SHOWN ON THIS AS-BUILT AND WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT.

UNLESS NOTED BY JAWIED CHANGES, ALL DIMENSIONS, NOTES, REFERENCES AND CONSTRUCTION FEATURES ARE CORRECTED, AND WERE CONSTRUCTED AS SHOWN ON THIS DRAWING.

[illegible]

MOISTURE DENSITY TESTING LOCATIONS

PT #	NORTHING	EASTING	ELEVATION
147	6242807.89	556115.64	1194.71
148	6242808.51	556121.35	1194.71
149	6242809.13	556127.06	1194.75
150	6242809.75	556132.77	1194.75
151	6242810.37	556138.48	1194.75
152	6242811.00	556144.19	1194.75
153	6242811.62	556149.90	1194.75
154	6242812.24	556155.61	1194.75
155	6242812.87	556161.32	1194.75
156	6242813.49	556167.03	1194.75
157	6242814.11	556172.74	1194.75
158	6242814.74	556178.45	1194.75
159	6242815.36	556184.16	1194.75
160	6242815.99	556189.87	1194.75
161	6242816.61	556195.58	1194.75
162	6242817.24	556201.29	1194.75

PLAN LIFT 8 SHAPING FILL

SCALE 1:1500

ORIGINAL AS-BUILT SIGNED BY

AS-BUILT	
Bochtel Nevada	DATE: 4/1/97
BY: [Signature]	CHECKED: [Signature]
DATE: 4/1/97	DATE: 4/1/97

UNLESS NOTED, ALL DIMENSIONS, MATERIALS, AND CONSTRUCTION FEATURES ARE CORRECTED TO THE ORIGINAL AS-BUILT DRAWING.

NEVADA TEST SITE AREA 6
CAU 92 DECONTAMINATION POND
RCRA CLOSURE
PLAN LIFT 8
SHAPING FILL

REVISION	DATE	BY
1	4/1/97	[Signature]
2	4/1/97	[Signature]
3	4/1/97	[Signature]

PROJECT: CAU 92 DECONTAMINATION POND
SHEET: 1 OF 1

NO.	DATE	BY	REVISION
1	4/1/97	[Signature]	1
2	4/1/97	[Signature]	2
3	4/1/97	[Signature]	3

PLAN LIFT 9
SHAPING FILL
SCALE 1:12500

MOISTURE DENSITY TESTING LOCATIONS

PT. #	NORTHING	EASTING	ELEVATION
210	6242853.47	556116.46	1194.90
211	6242889.44	556122.32	1194.90
212	6242885.37	556128.56	1194.91
213	6242881.40	556134.57	1194.92
214	6242881.51	556142.55	1194.94
215	6242883.41	556148.35	1194.94
216	6242879.25	556124.67	1194.91
217	6242816.79	556126.15	1194.89
218	6242834.40	556108.55	1194.92
219	6242871.32	556114.54	1194.92
220	6242823.18	556120.42	1194.91
221	6242869.13	556126.45	1194.91
222	6242875.40	556104.37	1194.92
223	6242871.18	556110.48	1194.91
224	6242867.32	556116.44	1194.91
225	6242863.32	556122.32	1194.91

ORIGINAL AS-BUILT SIGNED BY

AS-BUILT			
Bechtel Nevada			
Project	Sheet	Date	Scale
CAU 92 DECONTAMINATION POND	PLAN LIFT 9	4.10.93	1:12500
Author	Checked	Drawn	Reviewed

UNLESS NOTED BY MARKED CHANGES, ALL DIMENSIONS, NOTES, REFERENCES AND CONSTRUCTION FEATURES ARE CORRECTED, AND WERE CONSTRUCTED AS SHOWN ON THIS DRAWING.

U.S. DEPARTMENT OF ENERGY		AREA 6	
CAU 92 DECONTAMINATION POND		RCRA CLOSURE	
PLAN LIFT 9		SHAPING FILL	
Bechtel Nevada		Bechtel Nevada	
SA-CAU-006-92-09		SA-CAU-006-92-09	
DATE: 11/18/93		DATE: 11/18/93	
BY: [Signature]		BY: [Signature]	
CHECKED: [Signature]		CHECKED: [Signature]	
APPROVED: [Signature]		APPROVED: [Signature]	

MOISTURE DENSITY TESTING LOCATIONS

PT. #	NORTHING	EASTING	ELEVATION
226	6242881.13	55617.22	1195.68
227	6242885.22	55617.22	1195.68
228	6242883.22	55617.22	1195.67
229	6242884.22	55617.22	1195.67
230	6242884.22	55617.22	1195.67
231	6242881.95	55617.22	1195.67
232	6242881.95	55617.22	1195.67
233	6242881.95	55617.22	1195.67
234	6242881.95	55617.22	1195.67
235	6242881.95	55617.22	1195.67
236	6242881.95	55617.22	1195.67
237	6242881.95	55617.22	1195.67
238	6242881.95	55617.22	1195.67
239	6242881.95	55617.22	1195.67
240	6242881.95	55617.22	1195.67
241	6242881.95	55617.22	1195.67

PLAN LIFT 10
SHAPING FILL
SCALE = 1:1500

AS-BUILT	
Bechtel Nevada	Bechtel Nevada
DATE: 11/1/99	DATE: 11/1/99
BY: J. J. J.	BY: J. J. J.
CHECKED: J. J. J.	CHECKED: J. J. J.
APPROVED: J. J. J.	APPROVED: J. J. J.

UNLESS NOTED BY DIMENSIONS, NOTES, REFERENCES, OR OTHERWISE INDICATED, ALL DIMENSIONS ARE TO BE CONSIDERED AS SHOWN ON THIS DRAWING.

NEVADA TEST SITE
CAU 92 DECONTAMINATION PCNO
PCRA CLOSURE
SHAPING FILL
PLAN LIFT 10

AREA 6

U.S. DEPARTMENT OF ENERGY
Bechtel Nevada

DATE: 11/1/99
BY: J. J. J.
CHECKED: J. J. J.
APPROVED: J. J. J.

U.S. DEPARTMENT OF ENERGY
Bechtel Nevada

DATE: 11/1/99
BY: J. J. J.
CHECKED: J. J. J.
APPROVED: J. J. J.

U.S. DEPARTMENT OF ENERGY
Bechtel Nevada

DATE: 11/1/99
BY: J. J. J.
CHECKED: J. J. J.
APPROVED: J. J. J.

MOISTURE DENSITY TESTING LOCATIONS

PT #	NORTHING	EASTING	ELEVATION
242	6242816.00	556112.04	1194.25
243	6242816.00	556112.04	1194.25
244	6242816.00	556112.04	1194.25
245	6242816.00	556112.04	1194.25
246	6242816.00	556112.04	1194.25
247	6242816.00	556112.04	1194.25
248	6242816.00	556112.04	1194.25
249	6242816.00	556112.04	1194.25
250	6242816.00	556112.04	1194.25
251	6242816.00	556112.04	1194.25
252	6242816.00	556112.04	1194.25
253	6242816.00	556112.04	1194.25
254	6242816.00	556112.04	1194.25
255	6242816.00	556112.04	1194.25
256	6242816.00	556112.04	1194.25
257	6242816.00	556112.04	1194.25
258	6242816.00	556112.04	1194.25
259	6242816.00	556112.04	1194.25
260	6242816.00	556112.04	1194.25
261	6242816.00	556112.04	1194.25
262	6242816.00	556112.04	1194.25

PLAN LIFT 11 SHAPING FILL

SCALE: 1/2500

AS-BUILT	
BECHTEL Nevada	BECHTEL Nevada
DATE: 11/1/79	DATE: 11/1/79
BY: [Signature]	BY: [Signature]
CHECKED: [Signature]	CHECKED: [Signature]
APPROVED: [Signature]	APPROVED: [Signature]

ALL DIMENSIONS SHOWN ON THIS DRAWING ARE BASED ON THE AS-BUILT SURVEY DATA. DIMENSIONS SHOWN ON THIS DRAWING ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES. DIMENSIONS SHOWN ON THIS DRAWING ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES.

NEVADA TEST SITE CAU 92 DECONTAMINATION POND RCRA CLOSURE PLAN LIFT 11 SHAPING FILL		 BECHTEL Nevada 1117 S. KANAWAY BLVD. LAS VEGAS, NV 89102 (702) 735-1000	
DATE: 11/1/79	BY: [Signature]	DATE: 11/1/79	BY: [Signature]
CHECKED: [Signature]	CHECKED: [Signature]	CHECKED: [Signature]	CHECKED: [Signature]
APPROVED: [Signature]	APPROVED: [Signature]	APPROVED: [Signature]	APPROVED: [Signature]

MOISTURE DENSITY TESTING LOCATIONS

PT #	NORTHING	EASTING	ELEVATION
243	6247916.35	556115.01	1194.47
244	6247916.48	556115.01	1194.47
245	6247916.65	556115.01	1194.47
246	6247916.82	556115.01	1194.47
247	6247916.99	556115.01	1194.47
248	6247917.16	556115.01	1194.47
249	6247917.33	556115.01	1194.47
250	6247917.50	556115.01	1194.47
251	6247917.67	556115.01	1194.47
252	6247917.84	556115.01	1194.47
253	6247918.01	556115.01	1194.47
254	6247918.18	556115.01	1194.47
255	6247918.35	556115.01	1194.47
256	6247918.52	556115.01	1194.47
257	6247918.69	556115.01	1194.47
258	6247918.86	556115.01	1194.47
259	6247919.03	556115.01	1194.47
260	6247919.20	556115.01	1194.47
261	6247919.37	556115.01	1194.47
262	6247919.54	556115.01	1194.47
263	6247919.71	556115.01	1194.47
264	6247919.88	556115.01	1194.47
265	6247920.05	556115.01	1194.47
266	6247920.22	556115.01	1194.47
267	6247920.39	556115.01	1194.47
268	6247920.56	556115.01	1194.47
269	6247920.73	556115.01	1194.47
270	6247920.90	556115.01	1194.47
271	6247921.07	556115.01	1194.47
272	6247921.24	556115.01	1194.47
273	6247921.41	556115.01	1194.47
274	6247921.58	556115.01	1194.47
275	6247921.75	556115.01	1194.47
276	6247921.92	556115.01	1194.47
277	6247922.09	556115.01	1194.47
278	6247922.26	556115.01	1194.47
279	6247922.43	556115.01	1194.47
280	6247922.60	556115.01	1194.47
281	6247922.77	556115.01	1194.47
282	6247922.94	556115.01	1194.47

SAND CONES
279 6247916.35 556115.01 1194.47
280 6247916.48 556115.01 1194.47
281 6247916.65 556115.01 1194.47
282 6247916.82 556115.01 1194.47

PLAN LIFT 12
BEDDING LAYER
SCALE 1:1250

UNLESS NOTED BY MARKED CHANGES ALL DIMENSIONS, NOTES, REFERENCES AND CONSTRUCTION FEATURES ARE CORRECTED, AND WERE CONSTRUCTED AS SHOWN ON THIS DRAWING.

NEVADA TEST SITE
CAU 92 DECONTAMINATION POND
RCRA CLOSURE
PLAN LIFT 12
BEDDING LAYER

NO.	DATE	DESCRIPTION	BY	CHKD	APPD
1	11/17/93	AS-BUILT	W. H. HARRIS		
2	11/17/93	AS-BUILT	W. H. HARRIS		
3	11/17/93	AS-BUILT	W. H. HARRIS		
4	11/17/93	AS-BUILT	W. H. HARRIS		
5	11/17/93	AS-BUILT	W. H. HARRIS		
6	11/17/93	AS-BUILT	W. H. HARRIS		
7	11/17/93	AS-BUILT	W. H. HARRIS		
8	11/17/93	AS-BUILT	W. H. HARRIS		
9	11/17/93	AS-BUILT	W. H. HARRIS		
10	11/17/93	AS-BUILT	W. H. HARRIS		

MOISTURE DENSITY TESTING LOCATIONS

PT. #	NORTHING	EASTING	ELEVATION
283	624900.78	558103.22	1191.71
284	624885.97	558091.30	1191.66
285	624871.15	558079.38	1191.61
286	624856.34	558067.46	1191.56
287	624841.52	558055.54	1191.51
288	624826.71	558043.62	1191.46
289	624811.89	558031.70	1191.41
290	624797.08	558019.78	1191.36
291	624782.26	558007.86	1191.31
292	624767.45	557995.94	1191.26
293	624752.63	557984.02	1191.21
294	624737.82	557972.10	1191.16
295	624723.00	557960.18	1191.11
296	624708.19	557948.26	1191.06
297	624693.37	557936.34	1191.01
298	624678.56	557924.42	1190.96
299	624663.74	557912.50	1190.91
300	624648.93	557900.58	1190.86
301	624634.11	557888.66	1190.81
302	624619.30	557876.74	1190.76
303	624604.48	557864.82	1190.71
304	624589.67	557852.90	1190.66
305	624574.85	557840.98	1190.61
306	624560.04	557829.06	1190.56
307	624545.22	557817.14	1190.51
308	624530.41	557805.22	1190.46
309	624515.59	557793.30	1190.41
310	624500.78	557781.38	1190.36
311	624485.97	557769.46	1190.31
312	624471.15	557757.54	1190.26
313	624456.34	557745.62	1190.21
314	624441.52	557733.70	1190.16
315	624426.71	557721.78	1190.11
316	624411.89	557709.86	1190.06
317	624397.08	557697.94	1190.01
318	624382.26	557686.02	1189.96
319	624367.45	557674.10	1189.91
320	624352.63	557662.18	1189.86
321	624337.82	557650.26	1189.81
322	624323.00	557638.34	1189.76
323	624308.19	557626.42	1189.71
324	624293.37	557614.50	1189.66
325	624278.56	557602.58	1189.61
326	624263.74	557590.66	1189.56
327	624248.93	557578.74	1189.51
328	624234.11	557566.82	1189.46
329	624219.30	557554.90	1189.41
330	624204.48	557542.98	1189.36
331	624189.67	557531.06	1189.31
332	624174.85	557519.14	1189.26
333	624160.04	557507.22	1189.21
334	624145.22	557495.30	1189.16
335	624130.41	557483.38	1189.11
336	624115.59	557471.46	1189.06
337	624100.78	557459.54	1189.01
338	624085.97	557447.62	1188.96
339	624071.15	557435.70	1188.91
340	624056.34	557423.78	1188.86
341	624041.52	557411.86	1188.81
342	624026.71	557400.94	1188.76
343	624011.89	557389.02	1188.71
344	623997.08	557377.10	1188.66
345	623982.26	557365.18	1188.61
346	623967.45	557353.26	1188.56
347	623952.63	557341.34	1188.51
348	623937.82	557329.42	1188.46
349	623923.00	557317.50	1188.41
350	623908.19	557305.58	1188.36
351	623893.37	557293.66	1188.31
352	623878.56	557281.74	1188.26
353	623863.74	557269.82	1188.21
354	623848.93	557257.90	1188.16
355	623834.11	557245.98	1188.11
356	623819.30	557234.06	1188.06
357	623804.48	557222.14	1188.01
358	623789.67	557210.22	1187.96
359	623774.85	557198.30	1187.91
360	623760.04	557186.38	1187.86
361	623745.22	557174.46	1187.81
362	623730.41	557162.54	1187.76
363	623715.59	557150.62	1187.71
364	623700.78	557138.70	1187.66
365	623685.97	557126.78	1187.61
366	623671.15	557114.86	1187.56
367	623656.34	557102.94	1187.51
368	623641.52	557091.02	1187.46
369	623626.71	557079.10	1187.41
370	623611.89	557067.18	1187.36
371	623597.08	557055.26	1187.31
372	623582.26	557043.34	1187.26
373	623567.45	557031.42	1187.21
374	623552.63	557019.50	1187.16
375	623537.82	557007.58	1187.11
376	623523.00	556995.66	1187.06
377	623508.19	556983.74	1187.01
378	623493.37	556971.82	1186.96
379	623478.56	556959.90	1186.91
380	623463.74	556947.98	1186.86
381	623448.93	556936.06	1186.81
382	623434.11	556924.14	1186.76
383	623419.30	556912.22	1186.71
384	623404.48	556900.30	1186.66
385	623389.67	556888.38	1186.61
386	623374.85	556876.46	1186.56
387	623360.04	556864.54	1186.51
388	623345.22	556852.62	1186.46
389	623330.41	556840.70	1186.41
390	623315.59	556828.78	1186.36
391	623300.78	556816.86	1186.31
392	623285.97	556804.94	1186.26
393	623271.15	556793.02	1186.21
394	623256.34	556781.10	1186.16
395	623241.52	556769.18	1186.11
396	623226.71	556757.26	1186.06
397	623211.89	556745.34	1186.01
398	623197.08	556733.42	1185.96
399	623182.26	556721.50	1185.91
400	623167.45	556709.58	1185.86
401	623152.63	556697.66	1185.81
402	623137.82	556685.74	1185.76
403	623123.00	556673.82	1185.71
404	623108.19	556661.90	1185.66
405	623093.37	556649.98	1185.61
406	623078.56	556638.06	1185.56
407	623063.74	556626.14	1185.51
408	623048.93	556614.22	1185.46
409	623034.11	556602.30	1185.41
410	623019.30	556590.38	1185.36
411	623004.48	556578.46	1185.31
412	622989.67	556566.54	1185.26
413	622974.85	556554.62	1185.21
414	622960.04	556542.70	1185.16
415	622945.22	556530.78	1185.11
416	622930.41	556518.86	1185.06
417	622915.59	556506.94	1185.01
418	622900.78	556495.02	1184.96
419	622885.97	556483.10	1184.91
420	622871.15	556471.18	1184.86
421	622856.34	556459.26	1184.81
422	622841.52	556447.34	1184.76
423	622826.71	556435.42	1184.71
424	622811.89	556423.50	1184.66
425	622797.08	556411.58	1184.61
426	622782.26	556400.66	1184.56
427	622767.45	556388.74	1184.51
428	622752.63	556376.82	1184.46
429	622737.82	556364.90	1184.41
430	622723.00	556352.98	1184.36
431	622708.19	556341.06	1184.31
432	622693.37	556329.14	1184.26
433	622678.56	556317.22	1184.21
434	622663.74	556305.30	1184.16
435	622648.93	556293.38	1184.11
436	622634.11	556281.46	1184.06
437	622619.30	556269.54	1184.01
438	622604.48	556257.62	1183.96
439	622589.67	556245.70	1183.91
440	622574.85	556233.78	1183.86
441	622560.04	556221.86	1183.81
442	622545.22	556209.94	1183.76
443	622530.41	556198.02	1183.71
444	622515.59	556186.10	1183.66
445	622500.78	556174.18	1183.61
446	622485.97	556162.26	1183.56
447	622471.15	556150.34	1183.51
448	622456.34	556138.42	1183.46
449	622441.52	556126.50	1183.41
450	622426.71	556114.58	1183.36
451	622411.89	556102.66	1183.31
452	622397.08	556090.74	1183.26
453	622382.26	556078.82	1183.21
454	622367.45	556066.90	1183.16
455	622352.63	556054.98	1183.11
456	622337.82	556043.06	1183.06
457	622323.00	556031.14	1183.01
458	622308.19	556019.22	1182.96
459	622293.37	556007.30	1182.91
460	622278.56	555995.38	1182.86
461	622263.74	555983.46	1182.81
462	622248.93	555971.54	1182.76
463	622234.11	555959.62	1182.71
464	622219.30	555947.70	1182.66
465	622204.48	555935.78	1182.61
466	622189.67	555923.86	1182.56
467	622174.85	555911.94	1182.51
468	622160.04	555900.02	1182.46
469	622145.22	555888.10	1182.41
470	622130.41	555876.18	1182.36
471	622115.59	555864.26	1182.31
472	622100.78	555852.34	1182.26
473	622085.97	555840.42	1182.21
474	622071.15	555828.50	1182.16
475	622056.34	555816.58	1182.11
476	622041.52	555804.66	1182.06
477	622026.71	555792.74	1182.01
478	622011.89	555780.82	1181.96
479	621997.08	555768.90	1181.91
480	621982.26	555756.98	1181.86
481	621967.45	555745.06	1181.81
482	621952.63	555733.14	1181.76
483	621937.82	555721.22	1181.71
484	621923.00	555709.30	1181.66
485	621908.19	555697.38	1181.61
486	621893.37	555685.46	1181.56
487	621878.56	555673.54	1181.51
488	621863.74	555661.62	1181.46
489	621848.93	555649.70	1181.41
490	621834.11	555637.78	1181.36
491	621819.30	555625.86	1181.31
492	621804.48	555613.94	1181.26
493	621789.67	555602.02	1181.21
494	621774.85	555590.10	1181.16
495	621760.04	555578.18	1181.11
496	621745.22	555566.26	1181.06
497	621730.41	555554.34	1181.01
498	621715.59	555542.42	1180.96
499	621700.78	555530.50	1180.91
500	621685.97	555518.58	1180.86
501	621671.15	555506.66	1180.81
502	621656.34	555494.74	1180.76
503	621641.52	555482.82	1180.71
504	621626.71	555470.90	1180.66
505	621611.89	555458.98	1180.61
506	621597.08	555447.06	1180.56
507	621582.26	555435.14	1180.51
508	621567.45	555423.22	1180.46
509	621552.63	555411.30	1180.41
510	621537.82	555399.38	1180.36
511	621523.00	555387.46	1180.31
512	621508.19	555375.54	1180.26
513	621493.37	555363.62	1180.21
514	621478		

MOISTURE DENSITY TESTING LOCATIONS

PT #	MARKING	EASTING	ELEVATION
308	6242905.58	556127.03	1194.45
309	6242905.58	556127.03	1194.45
310	6242905.58	556127.03	1194.45
311	6242905.58	556127.03	1194.45
312	6242905.58	556127.03	1194.45
313	6242905.58	556127.03	1194.45
314	6242905.58	556127.03	1194.45
315	6242905.58	556127.03	1194.45
316	6242905.58	556127.03	1194.45
317	6242905.58	556127.03	1194.45
318	6242905.58	556127.03	1194.45
319	6242905.58	556127.03	1194.45
320	6242905.58	556127.03	1194.45
321	6242905.58	556127.03	1194.45
322	6242905.58	556127.03	1194.45
323	6242905.58	556127.03	1194.45
324	6242905.58	556127.03	1194.45
325	6242905.58	556127.03	1194.45
326	6242905.58	556127.03	1194.45
327	6242905.58	556127.03	1194.45
328	6242905.58	556127.03	1194.45
329	6242905.58	556127.03	1194.45
330	6242905.58	556127.03	1194.45
331	6242905.58	556127.03	1194.45
332	6242905.58	556127.03	1194.45
333	6242905.58	556127.03	1194.45
334	6242905.58	556127.03	1194.45
335	6242905.58	556127.03	1194.45
336	6242905.58	556127.03	1194.45
337	6242905.58	556127.03	1194.45
338	6242905.58	556127.03	1194.45
339	6242905.58	556127.03	1194.45
340	6242905.58	556127.03	1194.45
341	6242905.58	556127.03	1194.45
342	6242905.58	556127.03	1194.45
343	6242905.58	556127.03	1194.45
344	6242905.58	556127.03	1194.45
345	6242905.58	556127.03	1194.45
346	6242905.58	556127.03	1194.45
347	6242905.58	556127.03	1194.45
348	6242905.58	556127.03	1194.45
349	6242905.58	556127.03	1194.45
350	6242905.58	556127.03	1194.45
351	6242905.58	556127.03	1194.45
352	6242905.58	556127.03	1194.45
353	6242905.58	556127.03	1194.45
354	6242905.58	556127.03	1194.45
355	6242905.58	556127.03	1194.45
356	6242905.58	556127.03	1194.45
357	6242905.58	556127.03	1194.45
358	6242905.58	556127.03	1194.45
359	6242905.58	556127.03	1194.45
360	6242905.58	556127.03	1194.45
361	6242905.58	556127.03	1194.45
362	6242905.58	556127.03	1194.45
363	6242905.58	556127.03	1194.45
364	6242905.58	556127.03	1194.45
365	6242905.58	556127.03	1194.45
366	6242905.58	556127.03	1194.45
367	6242905.58	556127.03	1194.45
368	6242905.58	556127.03	1194.45
369	6242905.58	556127.03	1194.45
370	6242905.58	556127.03	1194.45
371	6242905.58	556127.03	1194.45
372	6242905.58	556127.03	1194.45
373	6242905.58	556127.03	1194.45
374	6242905.58	556127.03	1194.45
375	6242905.58	556127.03	1194.45
376	6242905.58	556127.03	1194.45
377	6242905.58	556127.03	1194.45
378	6242905.58	556127.03	1194.45
379	6242905.58	556127.03	1194.45
380	6242905.58	556127.03	1194.45
381	6242905.58	556127.03	1194.45
382	6242905.58	556127.03	1194.45
383	6242905.58	556127.03	1194.45
384	6242905.58	556127.03	1194.45
385	6242905.58	556127.03	1194.45
386	6242905.58	556127.03	1194.45
387	6242905.58	556127.03	1194.45
388	6242905.58	556127.03	1194.45
389	6242905.58	556127.03	1194.45
390	6242905.58	556127.03	1194.45
391	6242905.58	556127.03	1194.45
392	6242905.58	556127.03	1194.45
393	6242905.58	556127.03	1194.45
394	6242905.58	556127.03	1194.45
395	6242905.58	556127.03	1194.45
396	6242905.58	556127.03	1194.45
397	6242905.58	556127.03	1194.45
398	6242905.58	556127.03	1194.45
399	6242905.58	556127.03	1194.45
400	6242905.58	556127.03	1194.45

PLAN LIFT 14
TYPE II
SCALE: 1:1500

ORIGINAL AS-BUILT SIGNED BY

AS-BUILT	SIGNED BY	DATE

NOTES: NOTES BY MAILED CHANGES, ALL DIMENSIONS, NOTES, REFERENCES AND CONSTRUCTION FEATURES ARE CONNECTED, AND WHEN CONSTRUCTED AS SHOWN ON THIS DRAWING.

MOISTURE DENSITY TESTING LOCATIONS

PT. #	NORTHING	EASTING	ELEVATION
341	6242054.72	558127.06	1198.08
342	6242054.72	558127.06	1198.08
343	6242054.72	558127.06	1198.08
344	6242054.72	558127.06	1198.08
345	6242054.72	558127.06	1198.08
346	6242054.72	558127.06	1198.08
347	6242054.72	558127.06	1198.08
348	6242054.72	558127.06	1198.08
349	6242054.72	558127.06	1198.08
350	6242054.72	558127.06	1198.08
351	6242054.72	558127.06	1198.08
352	6242054.72	558127.06	1198.08
353	6242054.72	558127.06	1198.08
354	6242054.72	558127.06	1198.08
355	6242054.72	558127.06	1198.08
356	6242054.72	558127.06	1198.08
357	6242054.72	558127.06	1198.08
358	6242054.72	558127.06	1198.08
359	6242054.72	558127.06	1198.08
360	6242054.72	558127.06	1198.08
361	6242054.72	558127.06	1198.08
362	6242054.72	558127.06	1198.08
363	6242054.72	558127.06	1198.08
364	6242054.72	558127.06	1198.08
365	6242054.72	558127.06	1198.08
366	6242054.72	558127.06	1198.08
367	6242054.72	558127.06	1198.08
368	6242054.72	558127.06	1198.08
369	6242054.72	558127.06	1198.08
370	6242054.72	558127.06	1198.08
371	6242054.72	558127.06	1198.08
372	6242054.72	558127.06	1198.08
373	6242054.72	558127.06	1198.08
374	6242054.72	558127.06	1198.08
375	6242054.72	558127.06	1198.08
376	6242054.72	558127.06	1198.08
377	6242054.72	558127.06	1198.08
378	6242054.72	558127.06	1198.08
379	6242054.72	558127.06	1198.08
380	6242054.72	558127.06	1198.08
381	6242054.72	558127.06	1198.08
382	6242054.72	558127.06	1198.08

PLAN LIFT 15
TYPE II
SCALE: 1:1500

UNLESS NOTED BY MARKS OR DIMENSIONS, NOTES, REFERENCES AND CONSTRUCTION SHALL BE CONSIDERED AS SHOWN ON THIS DRAWING.

NEVADA TEST SITE
CAU 92 DECONTAMINATION POND
RCRA CLOSURE
PLAN LIFT 15
TYPE II
AREA 6

U.S. DEPARTMENT OF ENERGY Bechtel Nevada PROJECT NO. 4-1-99 SHEET NO. 1-1-99 DATE: 1/29/99 DRAWN BY: [Signature] CHECKED BY: [Signature] APPROVED BY: [Signature]		NEVADA TEST SITE CAU 92 DECONTAMINATION POND RCRA CLOSURE SECTIONS
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AS-BUILT	
DATE	1/29/99
BY	[Signature]
CHECKED	[Signature]
APPROVED	[Signature]

NOTES: 1. ALL DIMENSIONS SHOWN ARE AS-BUILT. 2. ALL DIMENSIONS SHOWN ARE IN FEET AND INCHES. 3. ALL DIMENSIONS SHOWN ARE TO THE CENTERLINE OF THE ROAD. 4. ALL DIMENSIONS SHOWN ARE TO THE CENTERLINE OF THE ROAD. 5. ALL DIMENSIONS SHOWN ARE TO THE CENTERLINE OF THE ROAD.

NOTE:
FOR VERTICAL DIMENSIONS, ELEVATIONS, AND SLOPES, SEE DRAWING CA-92-01-01 AND CA-92-01-02.

LEGEND:
 MATERIAL REMOVED (ASSUMED)
 EXISTING GRADE
 ASSUMED SURFACE PROTECTION
 LIFT 1-12

GRAPHIC SCALE:
 SCALE 1:30
 0 0.4 1.2 1.6 2.4 3.2
 METERS
 SCALE 1:50
 0 8 12 16 24 32
 METERS

SECTION A
 SCALE: HORIZONTAL 1:30
 VERTICAL 1:1500

SECTION B
 SCALE: HORIZONTAL 1:30
 VERTICAL 1:1500

APPENDIX F

APPROVAL MATRIX AND CHECKLIST

DECONTAMINATION POND (CAU 92) CLOSURE COVER APPROVAL MATRIX AND CHECKLIST

MATRIX: Use for further definition of quality responsibilities and for identification of relevant procedures.

NOTE: BN organizations, in accordance with the PAMP, will provide the necessary controls during construction to verify that all design-specified hold points outlined in this plan are complied with prior to proceeding with subsequent process steps. Independent hold-point monitoring/data review will be conducted by the IVC representative.

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
1.0 GENERAL PRECONSTRUCTION ACTIVITIES						
Completion of Test Plot construction, sampling, and testing	ENG	CONSTR	SUB	MTL/INSP	HP <i>afc</i>	<i>afc</i> 7/98
Construction permits/NDEP project approval	TM				HP <i>afc</i>	<i>afc</i> 7/98
Completion of laboratory tests required to qualify all closure cover layering materials (soils)	ENG		SUB	MTL	HP <i>afc</i>	<i>afc</i> 7/98
Batch Plant to batch and stockpile closure cover materials	ENG	CONSTR		MTL/INSP	HP <i>afc</i>	<i>afc</i> 7/98-8/98
Qualified GCL materials on job site	ENG	CONSTR	SUB	INSP	HP <i>afc</i>	
2.0 TECHNICAL DOCUMENTS						
Prepared and approved engineering technical documents including design drawings/specifications/POS/CQA Plan; and material qualities have been reviewed by all involved parties	ENG/TM	CONSTR	SUB	MTL/SRVY/INSP	HP <i>afc</i>	<i>afc</i> 7/98
*Material inspection/testing: soil type, test frequency, and acceptance criteria has been developed	ENG					<i>afc</i> 7/98
3.0 SUPPLY PIPE LINE DISPOSAL						
Placement of contaminated pipe/soils in Decontamination Pond	ENG	CONSTR		INSP	HP <i>afc</i>	<i>afc</i> 7/98
Back fill over contaminated pipe/soil in Decontamination Pond	ENG	CONSTR		INSP	HP <i>afc</i>	<i>afc</i> 7/98-8/98

CONSTR = BN Construction; CQA = Construction Quality Assurance; ENG/TM = BN Engineering/Task Manager; GCL = Geosynthetic Clay Liner; HP = Hold Point; INSP = BN Inspection; IVC = Independent Verification Contractor (PEER Consultants); MTL = BN Materials Test Lab; SRVY = BN Survey; SUB-CONTR = BN Subcontractor

* See Table 3.1 of this plan

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
4.0 CONSTRUCTION SOILS MANUFACTURE / ACCEPTANCE						
4.1 Shaping Fill Materials—Borrow Pit/Stockpile:						
Material stockpile segregation control (visual monitoring)				INSP	OSU	OSU 8/98
*Testing: Particle size analysis of shaping fill material stockpile	ENG			MTL	HP OSU	Km Han 9/98
*Testing: Modified proctor for moisture/density curve	ENG			MTL	HP	Km Han 8/98
4.2 Processed Materials—Plant/Stockpile: Bedding/Buffer layer						
Material: Processing controls/clod size (visual monitoring)				INSP	OSU	OSU 7/98
*Testing: Particle size analysis of processed material stockpile	ENG			MTL	HP	Km Han 9/98
*Testing: Modified proctor for moisture/density curve	ENG			MTL	HP	Km Han 9/98
4.3 Type II Materials—Plant/Stockpile:						
Material stockpile segregation control (visual monitoring)				INSP	OSU	OSU 8/98
*Testing: Particle size analysis of Type II stockpile	ENG			MTL	HP	Km Han 9/98
*Testing: Modified proctor for moisture/density curve	ENG			MTL	HP	Km Han 9/98
All plant/stockpile testing/inspection completed	ENG			MTL/INSP	HP	Km Han 9/98
5.0 CONSTRUCTION - CLOSURE COVER						
Closure cover - survey site layout established (as-built)				SRVY/INSP	OSU	Km Han 9/98
All material delivered/stockpiled (visual verification)				INSP	OSU	Km Han 9/98
5.1 Berm Removal/Shaping Fill Placement:						
Perimeter berm leveled and spread onto pond bottom		CONSTR		INSP		
Over excavate pond perimeter playa material per Dwg C4		CONSTR		INSP		

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* See Table 3.1 of this plan

DECONTAMINATION POND (CAU 92) CLOSURE COVER APPROVAL MATRIX AND CHECKLIST

MATRIX: Use for further definition of quality responsibilities and for identification of relevant procedures.

NOTE: BN organizations, in accordance with the PAMP, will provide the necessary controls during construction to verify that all design-specified hold points outlined in this plan are complied with prior to proceeding with subsequent process steps. Independent hold-point monitoring/data review will be conducted by the IVC representative.

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
5.1 Berm Material Placement (Lift #1)						
*Lift thickness: material loose/compacted				SRVY/INSP	HP <i>OFD</i>	<i>Ken Garay</i> 9/18/98
*Maximum clot size (visual monitoring)				INSP	<i>OFD</i>	<i>Ken Garay</i> 9/15/98
8/98 Compaction - double steel drum roller / <i>Single wheel roller</i>		CONSTR		INSP	<i>OFD</i>	<i>Ken Garay</i> 9/18/98
*Testing: moisture content (D3017)	ENG			MTL	HP <i>OFD</i>	<i>Ken Garay</i> 9/18/98
*Testing: in-place density (D2922)	ENG			MTL	HP <i>OFD</i>	<i>Ken Garay</i> 9/18/98
*Verify that all tests were taken and that applicable HPs have been released by ENG, and the as-built reflects the current status	ENG			MTL/INSP	HP <i>OFD</i>	<i>Ken Garay</i> 9/22/98
5.1 Berm Material Placement (Lift #2) <i>Notice to Proceed: 9/23/98</i>						
*Lift thickness: material loose/compacted				SRVY/INSP	HP	<i>Ken Ham</i> 9/29/98
*Maximum clot size (visual monitoring)				INSP	<i>OFD</i>	<i>Ken Garay</i> 9/23/98
8/98 Compaction - double steel drum roller / <i>Single wheel roller</i>		CONSTR		INSP	<i>OFD</i>	<i>Ken Ham</i> 9/29/98
*Testing: moisture content (D3017)	ENG			MTL	HP	<i>Ken Ham</i> 9/29/98
*Testing: in-place density (D2922)	ENG			MTL	HP	<i>Ken Ham</i> 9/29/98

CONSTR = BN Construction; CQA = Construction Quality Assurance; ENG/TM = BN Engineering/Task Manager; GCL = Geosynthetic Clay Liner; HP = Hold Point; INSP = BN Inspection; IVC = Independent Verification Contractor (PEER Consultants); MTL = BN Materials Test Lab; SRVY = BN Survey; SUB-CONTR = BN Subcontractor

* See Table 3.1 of this plan

DRG. AVG POND EL. 3914.90

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
*Verify that all tests were taken and that applicable HPs have been released by ENG, and the as-built reflects the current status	ENG			MTL/INSP	HP	Ken Harn 9/29/98
5.1 Berm Material Placement (Lift #3)						
*Lift thickness: material loose/compacted				SRVY/INSP	HP	Ken Harn 9/29/98
*Maximum clot size (visual monitoring)				INSP		Ken Harn 9/29/98
Compaction - double steel drum roller <i>Single wheel roller</i>		CONSTR		INSP		Ken Harn 9/31/98
*Testing: moisture content (D3017)	ENG			MTL	HP	Ken Harn 9/30/98
*Testing: in-place density (D2922)	ENG			MTL	HP	Ken Harn 9/30/98
*Verify that all tests were taken and that applicable HPs have been released by ENG, and the as-built reflects the current status	ENG			MTL/INSP	HP	Ken Harn 9/30/98
Shaping fill material placement completed/verified per FCN	ENG	CONSTR		SRVY/INSP	HP	Ken Harn 9/30/98
*Compaction tests completed and accepted	ENG	CONSTR		MTL/INSP	HP	Ken Harn 9-30-98

SEE NEW CQA PLAN FOR LIFT #4

CONSTR = BN Construction; CQA = Construction Quality Assurance; ENG/TM = BN Engineering/Task Manager; GCL = Geosynthetic Clay Liner; HP = Hold
 Poj INSP = BN Inspection; IVC = Independent Verification Contractor (PEEP Consultants); MTL = BN Materials Test Lab; SRVY = BN Survey; SUB-CONTR
 = Subcontractor

* See Table 3.1 of this plan

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
Over excavation completion - verified				SRVY/INSP	HP	
5.1 Shaping Fill Placement (Lift #1)						
*Lift thickness: material loose/compacted				SRVY/INSP	HP	
*Maximum clot size (visual monitoring)				INSP		
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: moisture content (D3017)	ENG			MTL	HP	
*Testing: in-place density (D2922)	ENG			MTL	HP	
*Verify that all tests were taken and that applicable HPs have been released by ENG, and the as-built reflects the current status	ENG			MTL/INSP	HP	
5.1 Shaping Fill Placement (Lift #2)						
*Lift thickness: material loose/compacted				SRVY/INSP	HP	
*Maximum clot size (visual monitoring)				INSP		
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: moisture content (D3017)	ENG			MTL	HP	
*Testing: in-place density (D2922)	ENG			MTL	HP	
*Verify that all tests were taken and that applicable HPs have been released by ENG, and the as-built reflects the current status	ENG			MTL/INSP	HP	
5.1 Shaping Fill Placement (Lift #3)						
*Lift thickness: material loose/compacted				SRVY/INSP	HP	
*Maximum clot size (visual monitoring)				INSP		
Compaction - double steel drum roller		CONSTR		INSP		

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* See Table 3.1 of this plan

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
*Testing: moisture content (D3017)	ENG			MTL	HP	
*Testing: in-place density (D2922)	ENG			MTL	HP	
*Verify that all tests were taken and that applicable HPs have been released by ENG, and the as-built reflects the current status	ENG			MTL/INSP	HP	
5.1 Shaping Fill Placement (Lift #4)						
*Lift thickness: material loose/compacted				SRVY/INSP	HP	
*Maximum clot size (visual monitoring)				INSP		
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: moisture content (D3017)	ENG			MTL	HP	
*Testing: in-place density (D2922)	ENG			MTL	HP	
*Verify that all tests were taken and that applicable HPs have been released by ENG, and the as-built reflects the current status	ENG			MTL/INSP	HP	
5.1 Shaping Fill Placement (Lift #5)						
*Lift thickness: material loose/compacted				SRVY/INSP	HP	
*Maximum clot size (visual monitoring)				INSP		
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: moisture content (D3017)	ENG			MTL	HP	
*Testing: in-place density (D2922)	ENG			MTL	HP	
*Verify that all tests were taken and that applicable HPs have been released by ENG, and the as-built reflects the current status	ENG			MTL/INSP	HP	

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* See Table 3.1 of this plan

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
5.1 Shaping Fill Placement (Lift #6) – If Required						
*Lift thickness: material loose/compacted				SRVY/INSP	HP	
*Maximum clod size (visual monitoring)				INSP		
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: moisture content (D3017)	ENG			MTL	HP	
*Testing: in-place density (D2922)	ENG			MTL	HP	
*Verify that all tests were taken and that applicable HPs have been released by ENG, and the as-built reflects the current status	ENG			MTL/INSP	HP	
Shaping fill material placement completed/verified per design drawings	ENG	CONSTR		SRVY/INSP	HP	
*Compaction tests completed and accepted	ENG	CONSTR		MTL/INSP	HP	
5.2 Processed Materials - Bedding Layer (Lift 1)						
*Lift thickness: material loose/compacted				SRVY/INSP	HP	
*Maximum clod size (visual monitoring)				INSP		
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: moisture content (D2216 and D3017)	ENG			MTL	HP	
*Testing: in-place density (D1556 and D2922)	ENG			MTL	HP	
*Verify that all tests were taken and that applicable HPs have been released by ENG and the as-built reflects current status	ENG			MTL/INSP	HP	
5.2 Processed Material - Bedding Layer (Lift #2)						
*Lift thickness: material loose/compacted				SRVY/INSP	HP	

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* See Table 3.1 of this plan

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
*Maximum clod size (visual monitoring)				INSP		
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: moisture content (D2216 and D3017)	ENG			MTL	HP	
*Testing: in-place density (D1556 and D2922)	ENG			MTL	HP	
*Verify that all tests were taken and that applicable HPs have been released by ENG and the as-built reflects current status	ENG			MTL/INSP	HP	
5.2 GCL Layer (one layer)						
Inspect and verify the bedding layer surface is smooth and free of voids/debris	ENG		SUB	INSP	HP	
Verify the ready-to-place GCL is in good condition and is in a dry state			SUB	INSP	HP	
No material sampling/testing required during placement						
Place liner per manufacturer's specifications/representative's instructions			SUB	INSP		
Continuous visual inspection of liner for surface damage, smoothness, and joint overlaps			SUB	INSP		
Seal liner seams per manufacturer's specifications / representative's instructions - if required			SUB	INSP	HP	
Final approval of GCL completed installation	ENG		SUB	INSP	HP	
5.2 Processed Material - Buffer Layer (Lift 1)						
*Lift thickness: material loose/compacted				SRVY/INSP	HP	
*Maximum clod size (visual monitoring)				INSP		

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* See Table 3.1 of this plan

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE*
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: moisture content (D2216 and D3017)	ENG			MTL	HP	
*Testing: in-place density (D1556 and D2922)	ENG			MTL	HP	
*Verify that all tests were taken and that applicable HPs have been released by ENG and the as-built reflects current status	ENG			MTL/INSP	HP	
5.2 Processed material - Buffer Layer (Lift #2)						
*Lift thickness: material loose/compacted				SRVY/INSP	HP	
*Maximum clod size (visual monitoring)				INSP		
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: moisture content (D2216 and D3017)	ENG			MTL	HP	
*Testing: in-place density (D1556 and D2922)	ENG			MTL	HP	
*Verify that all tests were taken and that applicable HPs have been released by ENG and the as-built reflects current status	ENG			MTL/INSP	HP	
5.6 Type II Erosion Control Layer (Lift #1)						
Place Type II material		CONSTR		INSP		
Lift thickness verification -- loose/compacted				SRVY/INSP	HP	
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: in-place density (D2922)	ENG			MTL	HP	
*Testing: moisture content (D3017)	ENG			MTL	HP	
Engineering acceptance (initials) for lift thickness and testing	ENG				HP	

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* See Table 3.1 of this plan

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
5.6 Type II Erosion Control Layer (Lift #2)						
Place Type II material		CONSTR		INSP		
Lift thickness verification -- loose/compacted				SRVY/INSP	HP	
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: in-place density (D2922)	ENG			MTL	HP	
*Testing: moisture content (D3017)	ENG			MTL	HP	
Engineering acceptance (initials) for lift thickness and testing	ENG				HP	
FINAL ENG/IVC/INSP "WALK AROUND" COMPLETED CLOSURE COVER ACCEPTANCE AND INITIALS	ENG			INSP	HP	
5.7 Survey Monuments						
Survey monuments installed per design drawing (C3) and as shown on survey as-built	ENG			SRVY/INSP	HP	
5.8 Site Fencing / Gates / Signage						
Fence and access gates installed per design drawing (C3)		CONSTR		INSP	HP	
Signage installed and secured per design drawing (C3)		CONSTR		INSP	HP	
6.0 POST CONSTRUCTION						
All test/inspection documents (test/inspection records, as-built sketches, survey data, etc) shall be submitted to the engineering team for review/evaluation and subsequent submittal to the BN Task Manager	ENG		SUB	MTL/SRVY/INSP		
Other: to be determined from final design review of project test/inspection results	ENG/TM					

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• See Table 3.1 of this plan

DECONTAMINATION POND (CAU 92) CLOSURE COVER APPROVAL MATRIX AND CHECKLIST

MATRIX: Use for further definition of quality responsibilities and for identification of relevant procedures.

NOTE: BN organizations, in accordance with the PAMP, will provide the necessary controls during construction to verify that all design-specified hold points outlined in this plan are complied with prior to proceeding with subsequent process steps. Independent hold-point monitoring/data review will be conducted by the IVC representative.

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
5.1 Berm Material Placement (Lift #1)						
*Lift thickness: material loose/compacted				SRVY/INSP	HP	
*Maximum clot size (visual monitoring)				INSP		
8/29 Compaction - double steel drum roller / SINGLE ROLLER ALLOWABLE HP		CONSTR		INSP		
*Testing: moisture content (D3017)	ENG			MTL	HP	
*Testing: in-place density (D2922)	ENG			MTL	HP	
*Verify that all tests were taken and that applicable HPs have been released by ENG, and the as-built reflects the current status	ENG			MTL/INSP	HP	
5.1 Berm Material Placement (Lift #2)						
*Lift thickness: material loose/compacted				SRVY/INSP	HP	
*Maximum clot size (visual monitoring)				INSP		
8/29 Compaction - double steel drum roller SEE LIFT #1 HP		CONSTR		INSP		
*Testing: moisture content (D3017)	ENG			MTL	HP	
*Testing: in-place density (D2922)	ENG			MTL	HP	

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* See Table 3.1 of this plan

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
*Verify that all tests were taken and that applicable HPs have been released by ENG, and the as-built reflects the current status	ENG			MTL/INSP	HP	
5.1 Berm Material Placement (Lift #3)						
*Lift thickness: material loose/compacted				SRVY/INSP	HP	
*Maximum clot size (visual monitoring)				INSP		
Compaction - double steel drum roller <i>SEE LIFT #1 IF</i>		CONSTR		INSP		
*Testing: moisture content (D3017)	ENG			MTL	HP	
*Testing: in-place density (D2922)	ENG			MTL	HP	
*Verify that all tests were taken and that applicable HPs have been released by ENG, and the as-built reflects the current status	ENG			MTL/INSP	HP	
Shaping fill material placement completed/verified per FCN	ENG	CONSTR		SRVY/INSP	HP	
*Compaction tests completed and accepted	ENG	CONSTR		MTL/INSP	HP	

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DECONTAMINATION POND (CAU 92) CLOSURE COVER
APPROVAL MATRIX AND CHECKLIST

PROJECT RECORD

MATRIX: Use for further definition of quality responsibilities and for identification of relevant procedures.

NOTE: BN organizations, in accordance with the PAMP, will provide the necessary controls during construction to verify that all design-specified hold points outlined in this plan are complied with prior to proceeding with subsequent process steps. Independent hold-point monitoring/data review will be conducted by the IVC representative.

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
1.0 GENERAL PRECONSTRUCTION ACTIVITIES						
Completion of Test Plot Construction, sampling, and testing	ENG	CONSTR	SUB	MTL/INSP	HP	
Construction permits/NDEP project approval	TM				HP	
Completion of laboratory tests required to qualify all closure cover layering materials (soils)	ENG		SUB	MTL	HP	
Batch Plant to batch and stockpile closure cover materials	ENG	CONSTR		MTL/INSP	HP	
Certified GCL materials on job site	ENG	CONSTR	SUB	INSP	HP	
2.0 TECHNICAL DOCUMENTS						
Prepared and approved engineering technical document including design drawings/specifications/POs/CQA Plan; and material qualities have been reviewed by all involved parties.	ENG/TM	CONSTR	SUB	MTL/SRVY/INSP	HP	
*Material inspection/testing: soil types, test frequencies, and acceptance criteria has been developed per Table 3.1.1	ENG				HP	

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ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
3.0 SUPPLY PIPE LINE DISPOSAL						
Backfill borrow material (soil) over contaminated pipe/soil placement area in Decontamination Pond		CONSTR		INSP		
Placement of contaminated pipe/soils in Decontamination Pond		CONSTR		INSP		
4.0 CONSTRUCTION SOILS MANUFACTURE/ACCEPTANCE						
4.1 Shaping Fill Materials -- Borrow Pit/Stockpile:						
Material: Stockpile segregation control (visual monitoring)				INSP		
*Testing: Particle size analysis of shaping fill material stockpile	ENG			MTL	HP	
*Testing: Modified proctor for moisture/density curve	ENG			MTL	HP	
4.2 Processed Materials -- Plant/Stockpile:						
Material: Processing controls/clod size (visual monitoring)				INSP		
*Testing: Particle size analysis of processed materials stockpile	ENG			MTL	HP	
*Testing: Modified proctor for moisture/density curve	ENG			MTL	HP	
4.3 Type II Materials -- Plant/Stockpile:						
Material: Stockpile segregation control (visual monitoring)				INSP		
*Testing: Particle size analysis of Type II materials stockpile	ENG			MTL	HP	
*Testing: Modified proctor for moisture/density curve	ENG			MTL	HP	
All plant/stockpile testing/inspection completed	ENG			MTL/INSP	HP	
5.0 CONSTRUCTION -- CLOSURE COVER						
Closure cover -- survey site layout established (as-built)				SRVY/INSP		

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ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
All material delivered/stockpiled (visual verification)				INSP		
5.1 Berm Material Layer Placement (Lift #1)						
Perimeter berm leveled and spread onto the pond bottom		CONSTR		INSP		
*Lift thickness: material loose/compacted; exception: lift height (thickness) to be ±1.5 inches (mean height) for Lift #1 only				SRVY/INSP	HP	
*Maximum clod size (visual monitoring)				INSP		
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: moisture content (D3017)	ENG			MTL		
*Testing: in-place density (D2922)	ENG			MTL		
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by Engineering; and the as-built reflects the current status	ENG			MTL/INSP	HP	
5.1 Berm Material Layer Placement (Lift #2)						
*Lift thickness: material loose/compacted per Table 3.1				SRVY/INSP	HP	
*Maximum clod size (visual monitoring)				INSP		
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: moisture content (D3017)	ENG			MTL		
*Testing: in-place density (D2922)	ENG			MTL		
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP	HP	

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ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
5.1 Berm Material Layer Placement (Lift #3)						
*Lift thickness: material loose/compacted per Table 3.1				SRVY/INSP	HP	
*Maximum clod size (visual monitoring)				INSP		
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: moisture content (D3017)	ENG			MTL		
*Testing: in-place density (D2922)	ENG			MTL		
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP	HP	
5.1 Berm Material Layer Placement (Lift #4) if required 10/12/98						
*Lift thickness: material loose/compacted per Table 3.1				SRVY/INSP	HP	Ken Barry 10/12/98
*Maximum clod size (visual monitoring)				INSP		Ken Barry 10/12/98
Compaction - double steel drum roller		CONSTR		INSP		Ken Barry 10/12/98
*Testing: moisture content (D3017)	ENG			MTL		Ken Barry 10/12/98
*Testing: in-place density (D2922)	ENG			MTL		Ken Barry 10/12/98
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP	HP	Ken Barry 10/12/98
Berm material layer placement completed and verified per CQAP; "as-builts;" and engineering concurrence	ENG	CONSTR		SRVY/INSP	HP	Ken Barry 10/12/98

SEE
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START
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* See Table 3.1 of this plan

NOTE:
THIS DOCUMENT IS PART OF THE REVISED SPECIFICATIONS

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
Pond Perimeter Over Excavation Activities 10/14/98 START						
Over excavate pond perimeter; place material per Drawing C4		CONSTR		INSP <i>afu</i>		<i>Ken Samy</i> 10/14/98
Verify pond perimeter over excavation elevation control points	ENG			SRVY/INSP <i>afu</i>	HP	<i>Ken Samy</i> 10/14/98
Compaction - double steel drum roller		CONSTR		INSP <i>afu</i>		<i>Ken Samy</i> 10/14/98
*Testing: moisture content (D3017)	ENG			MTL		<i>Ken Samy</i> 10/14/98
*Testing: in-place density (D2922)	ENG			MTL		<i>Ken Samy</i> 10/14/98
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP <i>afu</i>	HP	<i>Ken Samy</i> 10/14/98
Perimeter excavation completed and verified per CQAPs, as-built, and engineering concurrence	ENG	CONSTR		SRVY/INSP <i>afu</i>	HP	<i>Ken Samy</i> 10/14/98
5.1 Shaping Fill Layer Placement (Lift #1) 10/20/98						
*Lift thickness: material loose/compacted per Table 3.1				SRVY/INSP <i>afu</i>	HP	<i>Ken Samy</i> 10/20/98
*Maximum clod size (visual monitoring)				INSP <i>afu</i>		<i>Ken Samy</i> 10/20/98
Compaction - double steel drum roller		CONSTR		INSP <i>afu</i>		<i>Ken Samy</i> 10/20/98
*Testing: moisture content (D3017)	ENG			MTL		<i>Ken Samy</i> 10/20/98
*Testing: in-place density (D2922)	ENG			MTL		<i>Ken Samy</i> 10/20/98
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP <i>afu</i>	HP	<i>Ken Samy</i> 10/20/98 @ 1515 hr

START
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ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
5.1 Shaping Fill Layer Placement (Lift #2)						
*Lift thickness: material loose/compacted per Table 3.1				SRVY/INSP	HP	Ken Harey 10/22/98
*Maximum clod size (visual monitoring)				INSP		Ken Harey 10/22/98
Compaction - double steel drum roller		CONSTR		INSP		Ken Harey 10/22/98
*Testing: moisture content (D3017)	ENG			MTL		Ken Harey 10/22/98
*Testing: in-place density (D2922)	ENG			MTL		Ken Harey 10/22/98
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP	HP	Ken Harey 10/22/98
5.1 Shaping Fill Layer Placement (Lift #3)						
*Lift thickness: material loose/compacted per Table 3.1				SRVY/INSP	HP	Ken Harey 10/22/98
*Maximum clod size (visual monitoring)				INSP		Ken Harey 10/22/98
Compaction - double steel drum roller		CONSTR		INSP		Ken Harey 10/22/98
*Testing: moisture content (D3017)	ENG			MTL		Ken Harey 10/22/98
*Testing: in-place density (D2922)	ENG			MTL		Ken Harey 10/22/98
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP	HP	Ken Harey 10/22/98
5.1 Shaping Fill Layer Placement (Lift #4)						
*Lift thickness: material loose/compacted per Table 3.1				SRVY/INSP	HP	Ken Harey 10/29/98
*Maximum clod size (visual monitoring)				INSP		Ken Harey 10/29/98

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ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
Compaction - double steel drum roller		CONSTR		INSP <i>off</i>		<i>Ken Hany</i> 10/29/98
*Testing: moisture content (D3017)	ENG			MTL		<i>Ken Hany</i> 11/2/98
*Testing: in-place density (D2922)	ENG			MTL		<i>Ken Hany</i> 11/2/98
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP <i>off</i>	HP	<i>Ken Hany</i> 11/2/98
5.1 Shaping Fill Layer Placement (Lift #5)						
*Lift thickness: material loose/compacted per Table 3.1				SRVY/INSP <i>off</i>	HP	<i>Ken Hany</i> 10/29/98
*Maximum clod size (visual monitoring)				INSP <i>off</i>		<i>Ken Hany</i> 10/29/98
Compaction - double steel drum roller		CONSTR		INSP <i>off</i>		<i>Ken Hany</i> 10/29/98
*Testing: moisture content (D3017)	ENG			MTL		<i>Ken Hany</i> 10/29/98
*Testing: in-place density (D2922)	ENG			MTL		<i>Ken Hany</i> 10/29/98
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP <i>off</i>	HP	<i>Ken Hany</i> 10/29/98
5.1 Shaping Fill Layer Placement (Lift #6) If Required						
*Lift thickness: material loose/compacted per Table 3.1				SRVY/INSP <i>off</i>	HP	<i>Ken Hany</i> 11/2/98
*Maximum clod size (visual monitoring)				INSP <i>off</i>		<i>Ken Hany</i> 11/2/98
Compaction - double steel drum roller		CONSTR		INSP <i>off</i>		<i>Ken Hany</i> 11/2/98
*Testing: moisture content (D3017)	ENG			MTL		<i>Ken Hany</i> 11/2/98
*Testing: in-place density (D2922)	ENG			MTL		<i>Ken Hany</i> 11/2/98

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ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP DFU	HP	Ken Harey 11/9/98
5.6 Slope Control Pass (Shaping Fill Placement Completed)						
Cut/Slope surface to required grade		CONSTR		INSP DFU		Ken Harey 11/9/98
Re-compaction - double steel drum roller		CONSTR		INSP DFU		Ken Harey 11/9/98
Verify grade slope conforms to the CQAP		CONSTR		SRVY/INSP DFU	HP	Ken Harey 11/9/98
*Testing: moisture content (D3017)	ENG			MTL		Ken Harey 11/9/98
*Testing: in-place density (D2922)	ENG			MTL		Ken Harey 11/9/98
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the required grade slope per the CQAP	ENG			MTL/INSP DFU	HP	Ken Harey 11/9/98
Shaping fill material layer placement completed/verified per CQAP, "as-builts," and Engineering concurrence	ENG	CONSTR		SRVY/INSP DFU	HP	Ken Harey 11/9/98
5.2 Processed Materials -- Bedding Layer (Lift #1)						
*Lift thickness: material loose/compacted per Table 3.1				SRVY/INSP DFU	HP	Ken Harey 11-16-98
*Maximum clod size (visual monitoring)				INSP DFU		Ken Harey 11-16-98
Compaction - double steel drum roller		CONSTR		INSP DFU		Ken Harey 11-16-98
*Testing: moisture content (D2216 and D3017)	ENG			MTL		Ken Harey 11-16-98
*Testing: in-place density (D1556 and D2922)	ENG			MTL		Ken Harey 11-16-98

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ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
*Verify that all tests were completed with acceptable results; that applicable IIPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP WJ	HP	Ken Hany 11-16-98
5.2 Processed Materials -- Bedding Layer (Lift #2) If Required						
NOT APPLICABLE						
*Lift thickness: material loose/compacted per Table 3.1				SRVY/INSP	HP	
*Maximum clod size (visual monitoring)				INSP		
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: moisture content (D2216 and D3017)	ENG			MTL		
*Testing: in-place density (D1556 and D2922)	ENG			MTL		
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP	HP	
Bedding layer placement completed and verified per CQAP, as-built, and engineering concurrence	ENG	CONSTR		SRVY/INSP	HP	
5.2 GCL Layer (one layer)						
Inspect and verify the bedding layer surface is smooth and free of voids/debris	ENG		SUB	INSP WJ	HP	Ken Hany 11-23-98
Verify that the GCL is ready to place, in good condition, and is in a dry state	ENG		SUB	INSP WJ	HP	Ken Hany 11-23-98
No material sampling/testing required during placement						—
Place liner per manufacturer's specifications/representative's instructions	ENG		SUB	INSP WJ		Ken Hany 11-23-98

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ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA IIP*	IVC CHECKLIST INITIALS/DATE
Continuous visual inspection of liner for surface damage, smoothness, and joint overlaps	ENG		SUB	INSP 080		Ken Sany 11-12-1998
Seal liner seams per manufacturer's specifications/representatives instructions (Bentonite)	ENG		SUB	INSP 080		Ken Sany 1-12-98 11-14-98 1-13-98
Final approval of GCL completed installation and acceptance by Engineering and manufacturer's representative	ENG		SUB	INSP 080	HP	Ken Sany 11-14-98
5.2 Processed Materials -- Buffer Layer (Lift #1)						
*Lift thickness: material loose/compacted per Table 3.1				SRVY/INSP 080	HP	Ken Sany 12-01-98
*Maximum clod size (visual monitoring)				INSP 080		Ken Sany 12-01-98
Compaction - double steel drum roller		CONSTR		INSP 080		Ken Sany
*Testing: moisture content (D2216 and D3017)	ENG			MTL		Ken Sany 12-01-98
*Testing: in-place density (D1556 and D2922)	ENG			MTL		Ken Sany 12-01-98
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP 080	HP	Ken Sany 12-03-98
5.2 Processed Materials -- Buffer Layer (Lift #2) If Required						
*Lift thickness: material loose/compacted per Table 3.1				SRVY/INSP	IIP	
*Maximum clod size (visual monitoring)				INSP		
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: moisture content (D2216 and D3017)	ENG			MTL		
*Testing: in-place density (D1556 and D2922)	ENG			MTL		

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ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP	HP	
Buffer layer placement completed and verified per CQAP, "as-built," and engineering concurrence	ENG	CONSTR		SRVY/INSP	HP	
5.1 General Fill Layer Perimeter Placement (Lift #1)						
Place pond perimeter general fill per Drawing C4		CONSTR		INSP		Ken Barry 12/07/98
*Lift thickness: material loose/compacted per Table 3.1				SRVY/INSP	HP	Ken Barry 12/07/98
Compaction: double steel drum roller		CONSTR		INSP		Ken Barry 12/07/98
*Testing: moisture content (D3017)	ENG			MTL		Ken Barry 12/07/98
*Testing: in-place density (D2922)	ENG			MTL		Ken Barry 12/07/98
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP	HP	Ken Barry 12/07/98
5.1 General Fill Layer Perimeter Placement (Lift #2)						
Place pond perimeter general fill per Drawing C4		CONSTR		INSP		Ken Barry 12/15/98
*Lift thickness: material loose/compacted per Table 3.1				SRVY/INSP	HP	Ken Barry 12/15/98
Compaction: double steel drum roller		CONSTR		INSP		Ken Barry 12/15/98
*Testing: moisture content (D3017)	ENG			MTL		Ken Barry 12/15/98
*Testing: in-place density (D2922)	ENG			MTL		Ken Barry 12/15/98

CONSTR = BN Construction; CQA = Construction Quality Assurance; ENG/TM = BN Engineering/Task Manager; GCL = Geosynthetic Clay Liner; HP = Hold Point; INSP = BN Inspection; IVC = Independent Verification Contractor Officer (PEER Consultants); MTL = BN Materials Test Lab; SRVY = BN Survey; SUB-CONTR = BN Subcontractor

* See Table 3.1 of this plan

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP	HP	<i>Kim Barry</i> 12/18/98
5.6 General Fill Layer Perimeter Placement (Lift 3) : If Required						<i>N.R.</i>
Place pond perimeter general fill per Drawing C4		CONSTR		INSP		
*Lift thickness: loose/compacted per Table 3.1				SRVY/INSP	HP	
Compaction - double steel drum roller		CONSTR		INSP		
*Testing: moisture content (D3017)	ENG			MTL		
*Testing: in-place density (D2922)	ENG			MTL		
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP	HP	
- Verify after placement of pond perimeter general fill elevation control points	ENG			SRVY/INSP	HP	
General fill layer perimeter placement completed and verified per CQAP, "as-builts," and engineering concurrence	ENG	CONSTR		SRVY/INSP	HP	
5.6 Type II Erosion Control Layer (Lift #1)						
Place Type II material		CONSTR		INSP <i>as b</i>		<i>Kim Barry</i> 12/02/98
*Lift thickness: loose/compacted per Table 3.1				INSP <i>as b</i>	HP	<i>Kim Barry</i> 12/02/98
Compaction - double steel drum roller		CONSTR		INSP <i>as b</i>		<i>Kim Barry</i> 12/02/98
*Testing: moisture content (D3017)	ENG			MTL		<i>Kim Barry</i> 12/02/98
*Testing: in-place density (D2922)	ENG			MTL		<i>Kim Barry</i> 12/02/98

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* See Table 3.1 of this plan

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP OFJ	HP	Ken Hauer 12/07/98
5.6 Type II Erosion Control Layer (Lift #2)						
Place Type II material		CONSTR		INSP OFJ		Ken Hauer 12-15-98
*Lift thickness: loose/compacted per Table 3.1				INSP OFJ	HP	Ken Hauer 12-15-98
Compaction - double steel drum roller		CONSTR		INSP OFJ		Ken Hauer 12-15-98
*Testing: moisture content (D3017)	ENG			MTL		Ken Hauer 12-15-98
*Testing: in-place density (D2922)	ENG			MTL		Ken Hauer 12-15-98
*Verify that all tests were completed with acceptable results; that applicable HPs have been released by ENG; and the as-built reflects the current status	ENG			MTL/INSP OFJ	HP	Ken Hauer 12-15-98
Type II layer placement completed and verified per CQAP, "as-builts," and engineering concurrence	ENG	CONSTR		SRVY/INSP OFJ	HP	Ken Hauer 12-15-98
Final ENG/IVC/INSP "walk around" completed closure cover acceptance and initials	ENG			INSP OFJ	HP	Ken Hauer IVCO 12-15-98
5.7 Survey Monuments Placement						
Survey monuments installed per Drawing C3 and as shown on survey "as-builts" -- five locations	ENG			SRVY/INSP OFJ	HP	Ken Hauer 12/17/98
Monuments with grout anchors have been placed and received a 24-hour cure (set) cycle -- five locations	ENG			INSP OFJ	HP	Ken Hauer 12/17/98
Baseline benchmark survey elevation recordings taken at each monument -- five location -- Engineering concurrence required	ENG			SRVY/INSP OFJ	HP	Ken Hauer 2/1/99

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* See Table 3.1 of this plan

ITEM - DECONTAMINATION POND CLOSURE COVER	ENG/TM	CONSTR	SUB-CONTR	MTL/SRVY/INSP	CQA HP*	IVC CHECKLIST INITIALS/DATE
5.8 Site Fencing/Gates/Signage						
Fence and access gates installed per Drawing C3	ENG	CONSTR		SRVY/INSP <i>HP</i>	HP	<i>Ken Hany</i> 1/20/99
Signage installed and secured per Drawing C3	ENG	CONSTR		SRVY/INSP <i>HP</i>	HP	<i>Ken Hany</i> 2/1/99
6.0 POST CONSTRUCTION						
All test/inspection document (test/inspection records, as-built sketches, survey data, etc.) shall be compiled by the Engineering team for review/evaluation and provided to the BN Task Manager	ENG/TM		SUB	MTL/SRVY/INSP <i>HP</i>	HP	<i>Ken Hany</i> 2-1-99
Final review/acceptance of all design/construction "as-built" documents and the completed closure site by the IVC Officer	ENG/TM				HP	<i>Ken Hany</i> IVCO 2-1-99
Completion of certification of closure documentation by the IVC Officer					HP	IVCO

CONSTR = BN Construction; CQA = Construction Quality Assurance; ENG/TM = BN Engineering/Task Manager; GCL = Geosynthetic Clay Liner; HP = Hold Point; INSP = BN Inspection; IVCO = Independent Verification Contractor Officer (PEER Consultants); MTL = BN Materials Test Lab; SRVY = BN Survey; SUB-CONTR = BN Subcontractor

* See Table 3.1 of this plan

APPENDIX G
COMMENT RESPONSE DOCUMENTATION

DOCUMENT REVIEW SHEET

Document Title/Number: Closure Report for Corrective Action Unit 92: Area 6 Decontamination Pond Nevada Test Site, Nevada
 DOE/NV/11718--306
 Document Date: February 1999
 Revision Number: 0
 Originator/Organization: Thomas Fitzmaurice, Bechtel Nevada Environmental Restoration
 Date Comments Due: March, 1999
 Reviewer/Organization: Matthew A. DeBurle, Staff Engineer II, Nevada Division of Environmental Protection

Comment Number/ Location	Type ^a	Comment	Comment Response	Accept
1. Executive Summary fifth paragraph	M	Change Nevada Department of Environmental Protection to Nevada Division of Environmental Protection	None	Yes
2. Section 2.0 second paragraph	M	Specify the date that the final closure was completed.	Because fence signage, and a few other minor details were not complete when the draft closure report was submitted the final closure date was left blank. However all the elements of the CAU 92 closure have been completed and the date has been included in the document.	Yes

DOCUMENT REVIEW SHEET

Comment Number/ Location	Type ^a	Comment	Comment Response	Accept
3. Section 2.1.1.3 First paragraph, last sentence	M	The meaning of this sentence is not clear to the NDEP staff. The DOE/NV should review and clarify this sentence.	The last sentence describes the method used to grout the remaining pipe closed. The words "of the pipe" have been added to the previous sentence, to help clear up the confusion. A smaller pipe was inserted into the historic pipeline until it reached sump 3. Grout was injected through the smaller (tremmie pipe) pipe. As the pipeline filled with grout the smaller pipe was pulled out.	Yes
4. Section 2.1.2	M	NDEP staff infers that the DOE/NV means to write "Following cover construction, monuments were placed..."	The word <i>construct</i> has been replaced with <i>construction</i> .	Yes
5. Section 2.1.2.3	M	NDEP staff believe the contractor's name is Knight Piesold.	The letter "d" was added to Piesol.	Yes

DOCUMENT REVIEW SHEET

Comment Number/ Location	Type ^a	Comment	Comment Response	Accept
6. Section 2.2	M	NDEP staff is unsure what the Final CAP refers to. CAP was not previously defined and is not listed in the acronym list.	CAP stands for Corrective Action Plan. This will be reflected in the text and the acronym list.	Yes
7. Table 1	M	The order of pages is reversed. Also, it appear that there is no legend on this table, as DOE/NV has previously provided.	The order of the pages has been fixed and a legend will be provided.	Yes
8. Section 4.1	M	Analytical results for sample DECON-P3-7 are not listed in Table 2. For reference, the DOE/NV needs to provide the contract required detection limits, and background radioisotope activity levels for this site. These data can be listed in an Appendix.	The analytical results for sample DECON-P3-7 will be added to table 2. The contract required detection limits are provided in the analytical data packages in Appendix B. The statement that the radioactive isotopes were not detected above background was incorrect. The sentence has been rewritten to say that the "Radioactive isotopes were not detected above the minimal detectable activity". Minimal detectable activity is reported for each isotope being analyzed in Appendix B.	Yes

DOCUMENT REVIEW SHEET

Comment Number/ Location	Type ^a	Comment	Comment Response	Accept
9. Section 4. Last paragraph	M	Table 1 is referenced for analytical results for the sludge samples. These data are listed in Table 2	The reference will be changed to Table 2.	Yes
10. Section 4.2 - Table 2	M	Table 2 is referenced for the nuclear density test results. These data are listed in Table 2.	The reference will be changed to Table 3.	Yes

DOCUMENT REVIEW SHEET

Comment Number/ Location	Type ^a	Comment	Comment Response	Accept
11. Table 3	M	Berm material Lift 1; lift thickness is shown at 1.2 ft. According to Section 2223, Part 3.02 (A)(c) of the Construction Specifications (<u>Closure Plan for Corrective Action Unit 92: Area 6 Decontamination Pond</u> , November 1998), the density testing was to be preformed at 6 and 12 inches (i.e., two lifts). Conversation with DOE/NV staff has confirmed that this testing was preformed. Please provide density data for both lift depths.	The 12 inch density data have been added to Table 3.	Yes
		Final shaping fill lift #7 only shows five nuclear density tests. According to the Plan Lift 11 shaping Fill as built drawing number SK-CAU-006-92-C11, there is the five indicated nuclear density tests, plus sixteen other tests. The DOE/NV needs to include the results from these other tests. For clarity and ease of reference, the DOE/NV should also add the corresponding drawing title and/or number from Appendix E in the Lift Description Column of Table 3.	The 16 tests shown in as built drawing number SK-CAU-006-92-C11 which were not reflected in Table 3 have been added to Table 3. A reference to the as built drawing number in Appendix E has been made in Table 3 under column 1 "Lift Description".	Yes

DOCUMENT REVIEW SHEET

Comment Number/ Location	Type^a	Comment	Comment Response	Accept
11. Table 3 (continued)	M	Appendix E has drawings for a Plan Lift 4A. Which nuclear density test data is reported under Berm Material Lift 4 in Table 3? The DOE/NV need to provide the nuclear density data from both activities (Lift 4 and lift 4A). Also, density test results for the Plan Over Excavation are not reported. The DOE/NV needs to provide these data.	Lift 4A is the same as lift 4. It was re-surveyed for elevation control only. The As Built will be changed to clarify this. The density results for the Plan Over Excavation have been added to Table 3.	Yes
12. Appendix A	M	The photos of the Area 6 Decontamination Pond Stamped Monument and Finished Cover with Fencing are missing.	Yes. At the time this draft was submitted for review these activities had not been completed. Now that they are, photos will be included.	Yes

DOCUMENT REVIEW SHEET

Comment Number/ Location	Type ^a	Comment	Comment Response	Accept
13. Appendix E	M	Details Drawing # CAU-006-92-C5; Concrete Monument Detail (Item 6), verify dimensions of plan and horizontal views. As indicated, the concrete monument height is larger than the plan view length.	Drawing # CAU-006-92-C5 has been corrected.	Yes
		Geosynthetic Clay Liner Panel Layout Drawing # CAU-006-92-C6; There is no indication of a Panel 6, however there is a large area covered by Panel 5. Also, Panel 22 seems to cover a very large area (two sites), whereas, Panel 23 covers a relatively small area (two sites). Is this correct, or have some of the labels been switched? For clarification, in addition to a lot and serial number, the area of each GCL panel should also be reported.	Some mistakes were made in the drawing regarding the placement of panel numbers. Drawing # CAU-006-92-C6 has been corrected. The panel areas will be addressed in the Clay Liner Panel Layout Drawing.	Yes

DOCUMENT REVIEW SHEET

Comment Number/ Location	Type ^a	Comment	Comment Response	Accept
13. Appendix E (continued)	M	<p>Plan Lift 9 Shaping fill Drawing # CAU-006-92-C9; The DOE/NV needs to provide the rationale for taking two density tests in one quadrant, and not taking any density test in another quadrant. Refer to points 216 and 217.</p> <p>The DOE/NV should also provide the nuclear density test data from the Perimeter Backfill area in Table 3. Plan lift 14 (& 15) Type II Drawing # CAU-006-92-C14 (& C15) indicate that nuclear density testing was conducted on the Perimeter Backfill.</p>	<p>The density tests were not taken in the same quadrant, this was a transposition error in the survey record. Each point which was tested for density was verified in the field by 5 sets of eyes (Site Supervisor, BN Inspector, Independent Verifier, Material Testing Laboratory Technician and the Surveyor). However, after extensive review of the survey data log books we are unable to provide evidence to support this. This derivation to the CQA Plan will be addressed within Section 2.2 of the Closure Report.</p> <p>The data from the Perimeter Backfill for Lift 14 and Lift 15 have been added to Table 3.</p>	Yes

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