Quarterly Report of RCRA Groundwater Monitoring Data for Period April 1 through June 30, 1995

Earth and Environmental
Technical Services
Westinghouse Hanford Company

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LIST OF TERMS

A-10 Crib	216-A-10 Crib
A-29 Ditch	216-A-29 Ditch
A-36B Crib	216-A-36B Crib
APT	(300) Area Process Trenches
Basins	183-H Solar Evaporation Basins
CBML	Columbia Biomedical Laboratories
CFR	<i>Code of Federal Regulations</i>
CIP	Contamination Indicator Parameter
CRQL	contractually required quantitation limit
DOE	U.S. Department of Energy
DWS	drinking water standard
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
ICP	inductively coupled plasma
INC	Incident (report)
ITAS	International Technology Analytical Services
LERF	Liquid Effluent Retention Facility
LLBG	Low-Level Burial Grounds
LLWMA	Low-Level Waste Management Area
LWDF	Liquid Waste Disposal Facility
MDC	minimum detectable concentration
MDL	method detection limit
NCR	Nonconformance Report
NRDWL	Nonradioactive Dangerous Waste Landfill
NTU	nephelometric turbidity unit
PNL	Pacific Northwest Laboratory
PUREX	Plutonium-Uranium Extraction (Plant)
QA	quality assurance
QC	quality control
RADE	Request for Analytical Data Evaluation
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
RCW	<i>Revised Code of Washington</i>
REDOX	Reduction-Oxidation (Plant)
RL	Richland Operations Office
RPD	relative percent difference
S-10 Facility	216-S-10 Pond and Ditch
SST	single-shell tank
TOC	total organic carbon
TOX	total organic halogen
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>
U-12 Crib	216-U-12 Crib
WAC	<i>Washington Administrative Code</i>
WHC	Westinghouse Hanford Company
WMA	waste management area
WP	Water Pollution (Program)
WS	Water Supply (Program)

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**QUARTERLY REPORT OF RCRA GROUNDWATER MONITORING DATA FOR
PERIOD APRIL 1, 1995 THROUGH JUNE 30, 1995**

1.0 INTRODUCTION

Nineteen *Resource Conservation and Recovery Act of 1976 (RCRA)* groundwater monitoring projects are conducted at the Hanford Site. These projects include treatment, storage, and disposal facilities for both solid and liquid waste. The location of each facility is shown in Figure 1-1. The groundwater monitoring programs described in this report comply with the interim-status federal (*Title 40 Code of Federal Regulation [CFR] Part 265*) and state (*Washington Administrative Code [WAC] 173-303-400*) regulations. The RCRA projects are monitored under one of three programs: background monitoring, indicator parameter evaluation, or groundwater quality assessment.

Westinghouse Hanford Company (WHC) manages the RCRA groundwater monitoring projects on the Hanford Site. Performing project management, preparing groundwater monitoring plans, well network design and installation, specifying groundwater data needs, performing quality control (QC) oversight, data management, and preparing project sampling schedules are all parts of this responsibility. Pacific Northwest Laboratory (PNL) administers the contract for analytical services to WHC for the RCRA groundwater monitoring program.

This quarterly report contains data received between April and June 1995, which are the cutoff dates for this reporting period. This report may contain not only data from the April through June quarter, but also data from earlier sampling events that were not previously reported.

1.1 LABORATORY AND SAMPLING STATUS

DataChem Laboratories of Salt Lake City, Utah, performs some of the hazardous chemicals analyses for the Hanford Site. Quanterra, St. Louis, Lockheed Environmental, and Quanterra, Richland also perform hazardous chemical analyses for the Hanford Site. Analyses for coliform bacteria are performed by Columbia Biomedical Laboratory (CBML) and Quanterra, Richland. Analyses for dioxin are performed by TMS Analytical Services, Inc. Quanterra, Richland performs the radiochemical analyses.

Figure 1-1. Locations of the RCRA Groundwater Monitoring Projects and Landmarks on the Hanford Site.

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1.2 QUALITY CONTROL PROGRAM

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Westinghouse Hanford Company

1.2.1 Introduction

The QC Program is based on guidance from the U.S. Environmental Protection Agency (EPA), the *RCRA Groundwater Monitoring Technical Enforcement Guidance Document* (EPA 1986a), and Chapter 1.0, Quality Control, from *Test Methods for Evaluating Solid Waste* (EPA 1986b).

1.2.1.1 Data Quality Measures. The QC Program uses the five measures of data quality: precision, accuracy, representativeness, completeness, and comparability, along with applicable program-specific quality parameters to evaluate the quality of the data and the analytical laboratories analyzing the samples. Target values for precision and accuracy are specified in the *Quality Assurance Project Plan for RCRA Groundwater Monitoring Activities* (WHC 1992a).

1. Precision is evaluated using data results from laboratory duplicates, matrix spike duplicates (see Section 1.2.3), field duplicates, and blind samples (see Section 1.2.2).
2. Accuracy is evaluated using data results from laboratory matrix spikes; laboratory control samples; EPA Water Pollution (WP), Water Supply (WS), and Interlaboratory Performance Evaluation Programs (see Section 1.2.3); and blind samples (see Section 1.2.2).
3. Representativeness expresses the degree to which RCRA facility groundwater monitoring data represent the real composition of the groundwater in the aquifer. Goals for data representativeness for groundwater monitoring programs are addressed qualitatively by the specification of well construction, sampling locations, sampling intervals, and sampling and analysis techniques in the groundwater monitoring plan for each RCRA facility.
4. Completeness is defined as the percentage of measurements that are judged to be valid. Completeness is determined by the number of data unflagged during validation, divided by the total number of data evaluated, and multiplied by 100. The calculated percentages used in reporting completeness are conservative figures and are based on the data flags 'P,' 'F,' 'Q,' and 'H.' Table 1-1 illustrates project completeness for the data presented in this report.
5. Comparability is used to ensure that samples analyzed by different laboratories or by the same laboratory over different time periods are comparable. For the April through June 1995 quarter, only the primary hazardous chemistry and radiochemistry laboratories were requested to analyze samples and submit data. Samples are analyzed in accordance with *Test Methods for Evaluating Solid Waste* (EPA 1986b) and other applicable approved methods.

Comparability of field measurements is determined by following approved sampling procedures that ensure consistency among sampling events.

Table 1-1. Completeness. (2 sheets)

Project	Total number of evaluated data	Number of unflagged results	Percent complete (unflagged)
100-D	19	19	100
100-N	294	289	98
183-H	837	833	100
2101-M	241	221	92
216-A-10	136	113	83
216-A-29	1,098	1,048	95
216-A-36B	134	126	94
216-B-3	1,794	1,776	99
216-B-63	446	445	100
216-S-10	126	126	100
216-U-12	327	322	98
300 APT	854	751	88
LERF	--	--	N/A
LLBG WMA-1	1,322	1,293	98
LLBG WMA-2	745	744	100
LLBG WMA-3	237	234	99
LLBG WMA-4	1,147	1,130	99
LLBG WMA-5	109	108	99
NRDWL	64	64	100
SST A/AX	--	--	N/A
SST B/BX/BY	42	42	100
SST C	--	--	N/A
SST S/SX	--	--	N/A
SST T	337	293	87

Table 1-1. Completeness. (2 sheets)

Project	Total number of evaluated data	Number of unflagged results	Percent complete (unflagged)
SST TX/TY	232	226	97
SST U	--	--	N/A

APT = Area Process Trench.
 LERF = Liquid Effluent Retention Facility.
 LLBG = Low-Level Burial Grounds.
 NRDWL = Nonradioactive Dangerous Waste Landfill.
 SST = single-shell tank.
 WMA = waste management area.

1.2.1.2 Program-Specific Validation Flags. Program-specific validation flags are assigned during the process of evaluating RCRA groundwater data. These flags include:

1. **H--**Holding time exceedances have been flagged in the quarterly reports with an H flag. This flag means that the samples were analyzed after the method-required holding times stated in the contract. The H-flagged data may be used qualitatively, but no regulatory decisions should be made based on a single-flagged data point.
2. **Q--**Data are flagged with a 'Q' flag when: results of field blanks indicate contamination and/or results of field duplicate samples have greater than 20% relative percent difference (RPD). This flag means that the field QC data associated with the sample data were outside limits established in the *Environmental Engineering and Geotechnology Function Procedures* (WNC-CN-7-8). The Q-flagged data can be used qualitatively, but no regulatory decisions should be made based on a single-flagged data point.
3. **F--**The RADE system is a process used to track and evaluate data that appear to be inconsistent with the current pattern or with historical trends. An 'F' flag indicates that the data point is submitted for data review through the RADE system.
4. **Y or R--**Nonconformance Reports (NCR) and Incident (INC) Reports are received from the laboratory and are used to document occurrences that may affect data quality. Data points affected by these reports are flagged with 'Y,' (suspected data) or 'R' (rejected data).
5. **P--**Data points related to isolated occurrences determined by the specific project scientist are flagged with a 'P,' indicating a potential problem with the data. Explanations for use of the flag will be discussed in the specific project chapter.

1.2.2 External Quality Control Program

The external QC program uses three kinds of QC samples to evaluate the quality of data generated in the field and in the laboratory. These are field duplicates, field blanks, and blind samples. (See Section 1.3 for definitions of the QC samples.)

The analytical results of QC samples are judged to be acceptable if the following evaluation criteria are met.

- **Field duplicates**--Results of field duplicate pairs must have precision as measured by RPD within $\pm 20\%$. Hazardous chemical results below the Practical Quantitation Limit (PQL) and radiological results below the Limit of Quantitation (LOQ) are not evaluated.
- **Blanks**--Three kinds of blanks are used to check for contamination resulting from field activities and/or bottle preparation. These are full trip, daily trip, and field transfer blanks.

Except for common laboratory contaminants, results above the threshold of two times the method detection limit (MDL) are identified as suspected contamination. For common laboratory contaminants, such as acetone, methylene chloride, 2-butanone, toluene, and phthalate esters, sample results less than five times the MDL are qualified as nondetects.

- **Blind samples**--Results must fall within 2.0 standard deviations from the mean recovery of the known concentration of samples submitted to the laboratory.

Table 1-2 summarizes the analytical results of QC samples available for the April through June 1995 quarter.

Samples associated with duplicate or blank analytes that exceeded the QC limits are discussed in this section and are flagged with a 'Q' in the data tables.

Table 1-2. Field Duplicates and Field Blanks Evaluation Results, Second Quarter 1995.

Quality control sample	Number of analyses	Number of results outside of criteria	Acceptable (%)
Duplicates	267	5	98.1
Blanks	1,163	21	98.2

Precision based on field duplicate analysis was determined to be 98.1% acceptable. See Table 1-3 for a complete breakdown of field duplicates that did not meet QC acceptance criteria. The criteria for determining the acceptability of duplicate data have been changed. Duplicate results are evaluated when both values are above the PQL for hazardous chemical results or

the LOQ for radiochemical results. The acceptable limit has been lowered to $\pm 20\%$.

Of the 1,163 blanks analyzed during the April through June 1995 quarter, 21 exceeded the QC limit for 98.2% acceptability. Table 1-4 shows a breakdown of the constituents detected in the blanks.

Field QC samples collected for the April through June 1995 quarter were duplicates, daily trip blanks, full trip blanks, and field transfer blanks. Duplicates were collected at approximately every 20th well. A daily trip blank was collected every day that sampling took place. Full trip blanks were collected every 20th well. Field transfer blanks were collected with 2.7% of the wells sampled.

Beginning with the July through September 1995 quarter, the only blanks collected will be full trip blanks and field trip blanks. Full trip blanks will be collected as before. The field trip blank is taken during the collection of samples. It is filled at the sampling site by pouring Type II reagent water from a cleaned container into vials prepared for volatile organic analysis. This type of sample is collected at one well on days when sampling for volatile organics occurs.

Table 1-3. Breakdown of Field Duplicates Exceeding Quality Control Limits.

Method analysis code	Method description	Number of flagged results	Total number of results	Percent of total out of limits
25	VOA (GC)	0	17	0
30	Phenols	0	16	0
34	Inductively coupled plasma metals	3	103	2.9
40	Lead	0	2	0
41	Mercury	0	2	0
65/1039	Total Dissolved Solids	0	2	0
67	Total Organic Halides	0	6	0
122	Total Organic Carbon	0	5	0
124/1083	Anions	1	70	1.4
135	Gross alpha	1	9	11.1
136/1252	Gross Beta	0	9	0
139	Iodine-129	0	1	0
140	Gamma Scan	0	7	0
142/1255	Tritium	0	8	0

Table 1-3. Breakdown of Field Duplicates Exceeding Quality Control Limits.

Method analysis code	Method description	Number of flagged results	Total number of results	Percent of total out of limits
143	Technetium-99	0	2	0
145	Uranium	0	2	0
357/1086	Alkalinity	0	6	0

Table 1-4. Breakdown of Field Blanks Exceeding Quality Control Limits.

Method analysis code	Method description	Number of flagged results	Total number of results	Percent of total out of limits
16	Volatile Organics (GC/MS 8240)	0	44	0
25	Volatile Organics (GC 8010/8020)	0	17	0
30	Phenols	0	16	0
34	Inductively coupled plasma metals	8	57	14.0
40	Lead	0	3	0
41	Mercury	0	3	0
43	Arsenic	0	2	0
48	Selenium	0	2	0
65	Total Dissolved Solids	0	1	0
67/1216	Total organic halogen	1	14	7.1
122	Total Organic Carbon	0	11	0
124/1083	Anions	2	77	2.6
135/1247	Gross Alpha	0	14	0
136/1252	Gross Beta	0	14	0
137	Radium	0	1	0
139/1249	Iodine-129	0	2	0
142/1255	Tritium	1	13	7.7
143/1283	Technetium-99	0	4	0

Table 1-4. Breakdown of Field Blanks Exceeding Quality Control Limits.

Method analysis code	Method description	Number of flagged results	Total number of results	Percent of total out of limits
145/1288	Uranium	0	5	0
182/1300	Volatile organics (GC/MS 8260)	9	857	1.1
357	Alkalinity	0	6	0

1.2.3 Internal Quality Control Program

The internal QC program uses four types of QC data to establish and monitor performance in the laboratory. These data are laboratory blanks, matrix spikes, matrix duplicates, and EPA studies (WP, WS, and radiochemical intercomparisons).

Every quarter each contracted laboratory supplies its own QC report, which includes data quality information on matrix spikes, matrix duplicates, and blanks in the form of precision and accuracy. Each contracted laboratory also supplies to WHC a report of its results of EPA's WP, WS, and radiochemical intercomparison studies on a quarterly basis. The results of EPA studies independently verify the continuation of laboratory performance and are expressed as the percentage of EPA-accepted results. In addition, every 6 months each contracted laboratory supplies an MDL/minimum detectable concentration (MDC) report. Beginning with the July through September 1995 quarter, MDL/MDC reports will be supplied once a year by the contracted laboratory. The MDLs and MDCs are required to be below the contractually required quantitation limit (CRQL). The CRQL is not associated with a quantitation limit as the name suggests; it is intended to be the lowest analyte concentration in a given matrix that a laboratory can be expected to detect consistently. The CRQL is agreed on under the contractual statement of work. A laboratory NCR is issued when the MDL is greater than the CRQL. WHC reviews each of these reports.

The hazardous chemistry laboratory provided precision and accuracy figures in the April through June 1995 quality assurance quarterly report. The hazardous chemistry laboratory reported blank contamination in 1 of 9 sample groups for zinc and 1 of 9 sample groups for iron. Quality control reports provided with the laboratory sample delivery groups showed blank contamination for several metals in more than these two sample groups. Numerous 'B' qualifiers were assigned to metal data for the LLBG WMA 1, 300 APT, and B-63 projects. Zinc and iron blank contamination was particularly widespread. WHC will request that the laboratory contractor investigate any problems with ICP metal analysis at the hazardous chemistry laboratory.

Radiochemistry precision and accuracy figures are provided in the radiochemistry laboratory's quarterly report, with percent acceptability

calculated from duplicates and spikes, respectively. These results, along with radiochemistry blank data, are summarized in Table 1-5.

Precision and accuracy results from the radiochemistry laboratory, summarized in Table 1-5, indicate the performance of all customers submitting water matrix samples. WHC samples represent only a part of the performance summary. These figures represent samples analyzed during the period of April through June 1995.

For the April through June 1995 quarter, the radiochemistry laboratory analyzed 112 duplicates, of which 112 were within control limits ($\pm 3\sigma$), for an acceptability of 100%. The radiochemistry laboratory analyzed 126 spikes, of which 125 fell within control limits, for an acceptability of 99.2%. The radiochemistry laboratory analyzed 122 blanks, of which 119 fell within control limits, for an acceptability of 97.5%.

Table 1-5. Radiochemistry Quarterly Report Summary.

Second quarter 1995	Duplicates (precision, % acceptable)	Spikes (accuracy, % acceptable)	Blanks (% acceptable)
April through June	100	99.2	97.5

EPA intercomparison samples were analyzed by the radiochemistry laboratory during April and June 1995. In April, samples were analyzed for gross alpha, radium-226, radium-228, uranium, gross beta, strontium-89, strontium-90, cobalt-60, cesium-134, and cesium-137. In June samples were analyzed for radium-226, radium-228, and uranium. All results were within the $\pm 25\%$ bias acceptability criterion.

EPA Water Supply (WS) samples were analyzed by the hazardous chemistry laboratory during April 1995. The EPA sent blind samples for the analysis of 82 analytes for performance evaluation WS035. The blind samples were analyzed for metals, nitrate, nitrite, fluoride, insecticides, herbicides, trihalomethanes, volatile organics, chlorine, turbidity, total filterable residue, calcium, pH, alkalinity, corrosivity, sodium, sulfate, and total cyanide. Of the 82 results, 80 were acceptable. Results for carbon tetrachloride and 1,3-dichloropropane were unacceptable. The laboratory indicated that it had found a problem with a detector that probably caused the unacceptable results. Maintenance was performed and the detector will undergo preventive maintenance.

Environmental Sciences sent performance evaluation (PE) samples to five laboratories during June 1995. Results are currently under evaluation and will be reported in the the July through September 1995 quarterly report.

1.2.4 Nonconformance/Incidence Reports

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NCR and INC Reports are methods of documentation by which field samplers and contract laboratories inform their customers of any problems encountered with the sample, analysis, data, and/or data deliverable. This method of documentation identifies occurrences, deficiencies, and/or issues that potentially affect the data integrity. These may include, but are not limited to, the following:

- Lost sample
- Broken bottle
- Instrument malfunction
- Calibration standard out of acceptable range
- Laboratory control standard out of acceptable range
- Matrix spike recovery out of acceptable range
- Procedural noncompliance
- Chain-of-custody discrepancies
- Shipping temperature out of acceptable range
- Misreported data.

During the April through June quarter, eight NCR/INC Reports were transmitted by the hazardous chemistry laboratory, affecting 120 data points, two of which were rejected. There were no incident reports adversely affecting any data points transmitted by the radiochemistry laboratory. Incident reports describe incidents that potentially affect the integrity of either groundwater samples or external QC samples (e.g., trip blanks, bottle blanks).

The rejected hazardous chemistry data are attributed to samples that were required to be filtered in the field and were not filtered. The samples were rejected before analysis. There are 118 data points determined to be suspect and 116 of 118 were attributed to the TOX samples arriving at the laboratory with headspace. SW-846 requires no headspace in the TOX samples. Field samplers inspect the TOX samples at the time of sampling and packaging to ensure that no headspace is present. This suggests that the headspace developed in the TOX samples during shipment. Two possible causes of the entrapped air are the lowering of water tables and the rate of purging at the time of sampling. Several tests will be conducted during the next quarter to help determine possible causes and solutions to headspace in TOX samples.

Table 1-6 presents the sample numbers affected by the NCR and incident reports, along with the associated well numbers, analytical methods, and flags assigned to these samples as a result of the MHC report evaluations. (See Section 1.4.5 for definitions of flags found in Table 1-6.)

1.2.5 Quality Assurance Occurrences

Quality Assurance (QA) occurrences are situations that potentially affect the quality of the data. These situations are discussed through summaries of inspections of laboratory services and/or system and performance audits/surveillances.

Inspection of laboratory services and/or system and performance audits/surveillances for the RCRA groundwater monitoring program are performed throughout the year by the laboratory contract administrator, WHC, and/or the U.S. Department of Energy (DOE) on various aspects of this program. QA requirements and data quality objectives are defined in the *Quality Assurance Project Plan for RCRA Groundwater Monitoring Activities* (WHC 1992a). Results of these oversight activities are documented with the audit/surveillance and/or inspecting organization(s). A surveillance was performed on the preparation for a sampling event at a RCRA well. The surveillance covered operator calibration instruments for monitoring field parameters, sample bottle certification, sample preservation, water level measurement, well purging, acquisition of field parameters, sample collection, chain of custody and well security.

Initially there was a concern about the calibration (standardization) status of the E-tape used to determine the elevation of the groundwater. Note, there is a regulatory requirement to determine the elevation of groundwater each time samples are collected. The E-tape was later determined to be in calibration. There were no findings or observations from the surveillance.

During this reporting period WHC transitioned all analytical services back to the PNL-procured analytical laboratories and analytical contracts per direction by DOE.

Table 1-6. RCRA Samples Flagged for Nonconformance Reports.
(sheet 1 of 3)

Flag Name	Flag	Method Name	Code	Well Name	Method
					Sample No
Reject	R	Nitrate		699-41-42	80F747
Suspect	Y	Arsenic TOX	67	699-43-43	80F7H2
				199-N-29	800W26
					800W27
					800W28
					800W29
				299-E17-19	80F796
					80F797
					80F798
					80F799
				299-E17-20	80F809
					80F810
					80F811
					80F812
				299-E24-16	80F7B1
					80F7B2
					80F7B3
					80F7B4
				299-E24-17	80F7C5
					80F7C6
					80F7C7
					80F7C8
				299-E24-18	80F813
					80F814
					80F815
					80F816
				299-E25-32P	80F7H5
					80F7H6
					80F7H7
					80F7H8
				299-E25-34	80F7K5
					80F7K6
					80F7K7
					80F7K8
				299-E25-36	80F817
					80F818
					80F819
					80F820
				299-E25-36	80F7Q0
				299-E25-43	80F7Q1
					80F7Q2
					80F7Q3
					80F7Q2
				299-E17-1	80F793
					80F794
					80F795
					80F7J0
				299-E17-14	80F7J1
					80F7J2
					80F7J3
					80F7L1
				299-E17-15	80F7L2
					80F7L3

Table 1-6. RCRA Samples Flagged for Nonconformance Reports.
(sheet 2 of 3)

Sample No	Flag Name	Flag	Method Name	Method	
				Code	Well Name
B0F7L4	Suspect	Y	TOX	67	299-E17-15
B0F7L6					299-E17-16
B0F7L7					
B0F7L8					
B0F7L9					
B0F7M9					299-E17-17
B0F7M0					
B0F7M1					
B0F7M2					
B0F7M8					299-E17-18
B0F7M9					
B0F7P0					
B0F7P1					
B0F7T2					299-E26-13
B0F7T3					
B0F7T4					
B0F7T5					399-1-17A
B0F8L1					
B0F8L2					
B0F8L3					
B0F8L4					699-40-40A
B0F7P2					
B0F7P3					
B0F7P4					
B0F7P5					699-42-39A
B0F7T7					
B0F7T8					
B0F7T9					
B0F7V0					699-42-39B
B0F7V1					
B0F7V2					
B0F7V3					
B0F7V4					699-42-40A
B0F7V5					
B0F7V6					
B0F7V7					
B0F7V8					699-42-40C
B0F7V9					
B0F7M0					
B0F7M1					
B0F7M2					699-43-40
B0F7X1					
B0F7X2					

Table 1-6. RCRA Samples Flagged for Nonconformance Reports.
(sheet 2 of 3)

Sample No	Flag Name	Flag	Method Name	Code	Well Name
B0F7X3					
B0F7X4					699-43-43
B0F7C8					
B0F7G9					
B0F7H0					
B0F7H1					699-43-45
B0F7J6					
B0F7J7					699-43-45
B0F7J8					
B0F7J9					699-44-39B
B0F7Z1					
B0F7Z2					
B0F7Z3					
B0F7Z4					699-44-43B
B0F7Z9					
B0F800					
B0F801					
B0F802					

1.3 QUALITY CONTROL DEFINITIONS

Accuracy—The closeness of agreement between an observed value and a true value. Accuracy is assessed by means of reference samples and percent recoveries.

Blind sample—A sample that contains a concentration of analyte that is known to the supplier but unknown to the analyzing laboratory. The analyzing laboratory is informed that the sample is a QC sample and not a field sample. The blind, double blind, and matrix-matched double blind samples are used to assess accuracy and monitor the performance of the analytical laboratory(ies) with prepared or purchased materials from EPA QC samples/concentrates or primary materials.

Contractually required quantitation limit—A value intended to be the lowest analyte concentration in a given matrix that the laboratory can be expected to achieve consistently; agreed upon under the contract statement of work.

Daily trip blank—A sample that contains only Type II reagent water. The daily trip blank is used to check for sample contamination by volatile organic compounds arising from conditions encountered during the collection of samples. The daily trip blank is not opened in the field.

Double blind sample—A sample that contains a concentration of analyte that is known to the supplier but is unknown to the analyzing laboratory. The analyzing laboratory is not informed that the sample is a QC sample. All attempts are made to make this sample appear like a field sample. For example, the double blind sample should be submitted to the laboratory within the same time period and with a sample identification number similar to that of the field samples. The double blind sample does not include matrix matching.

External quality control sample—Any QC sample prepared without the knowledge of the analytical laboratory.

Field duplicate sample—A sample used to determine repeatability of an analytical measurement on identical samples collected as close as possible to the same time at the same location. These samples are stored in separate containers and are analyzed independently by the same laboratory.

Field transfer blank—A sample that contains only Type II reagent water. The field transfer blank is used to check for sample contamination by volatile organic compounds arising from conditions encountered during the collection of samples. The field transfer blank is taken during the collection of samples. The field transfer blank is filled at the sampling site by pouring Type II reagent water from a cleaned container into a volatile organic analysis vial.

Field trip blank—A sample that contains only Type II reagent water. At the time of sample collection, the field blank is filled at the sampling site by pouring Type II reagent water from a cleaned container into volatile organic analysis (VOA) vials. After collection, the field trip blank is treated in the same manner as the other samples collected during the sampling event. Field trip blanks are collected only on days when samples are collected for VOA.

Full trip blank--A sample that contains only Type II reagent water and preservative, as required. A full trip blank is used to check for contamination in sample bottles and sample preparation. The full trip blank is analyzed for all constituents of interest on all types of sample bottles used during that sampling period. The frequency of collection for a full trip blank is 1 per 20 samples, or 1 per sampling batch. A full trip blank is filled in the analytical laboratory under the sample preparation procedures. The full trip blank is not opened in the field.

Internal quality control sample--Any QC sample prepared by the analytical laboratory and used to establish and monitor the quality of the analytical laboratory.

Limit of detection--The lowest concentration level that is statistically different from a blank. This level is calculated by the average blank signal plus three standard deviations of the blank analyses.

Limit of quantitation--The level above which quantitative results may be obtained with a specific degree of confidence. This level is calculated as the blank mean plus 10 standard deviations of the blank.

Matrix-matched double blind sample--A matrix-matched double blind sample contains a concentration of analyte that is known to the supplier but unknown to the analyzing laboratory. The sample matrix has been altered to closely match that of the field samples.

Method detection limit--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Minimum detectable concentration--Required level of analytical detection for radiochemical samples.

Practical Quantitation Limit--The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. The PQL is generally 5 to 10 times the MDL.

Precision--The agreement among a set of individual measurements of the same property, usually under prescribed similar conditions. Precision is calculated by using the RPD of the duplicate/replicate analyses. These samples should contain concentrations of analyte above the MDL and may involve the use of matrix spikes.

Reliable detection level--A detection limit set at two times the concentration of the MDL, so the risk of both false positives and false negatives falls below 1%.

Type II reagent water--Distilled or deionized water that is free of contaminants that may interfere with the analytical test in question.

1.4 DATA TABLES

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Four different formats are used to display water level measurements and groundwater sample analytical results. This section describes the meaning of each table column heading, defines the abbreviations used, explains the data qualifiers and flags, and lists analysis method codes and relevant regulatory standards.

1.4.1 Water Level Measurement Table

The water level measurement table has four columns as follows:

- Well--Well in which measurement was made.
- Date--Date of measurement.
- Depth to water--Depth, in feet, from well casing reference point to top of water in well.
- Water level--Elevation, in feet above mean sea level, of water level computed by subtracting depth to water from casing reference elevation.

Wells are grouped according to the zone that they monitor, beginning with the top of the unconfined aquifer and continuing downward to the confined aquifer.

Only measurements made during the reporting quarter are included in the tables. Measurements made during sampling are reported with an asterisk (*). Measurements are also routinely performed at other times to permit collection of data for an entire network within a 1- or 2-day time period.

Data that are judged to be suspect by the project scientist are flagged with a '+' in the table. Before data are designated as suspect, checks are conducted to determine if a transcription error occurred between the field sheet and the electronic database.

1.4.2 Constituent List and Summary of Results Table

The Constituent List and Summary of Results table ("Summary" table) is the first of three tables that present the results of groundwater sample analyses. The "Summary" table displays statistics based on the complete data set for the reporting period. The complete data set consists of all analysis results requested by the project associated with the samples collected before the end of the current reporting quarter that arrived at WHC before the cutoff date for the current quarterly report (May 22, 1995) and have not been reported in a previous quarterly report. Therefore, data collected during previous quarters may appear in this document if the laboratory did not report the data until the current reporting period.

The fields in the "Summary" table are as follows:

- Constituent Name--Name of the analyzed constituent being summarized; the Short name is an abbreviation used in the Constituents with at Least One Detected Value table (Section 1.4.3); the (Method), when present, is a code (Section 1.4.5) used to distinguish between different analytical methods for the same constituent.
- Units--Units in which the MDL and drinking water standards (DWS) are reported in this table.
- Lab MDL--The MDL computed by the laboratory for a constituent. This field is blank for radionuclides where the MDL is defined as the value of the total error reported by the laboratory for each result.
- DWS Limit/Agency--The DWS used for comparison to the reported results; see Section 1.4.5 for Agency definitions and a complete listing of standards used.
- Number of Samples--Total is the number of sample results from all wells in the project contained in the complete data set for that constituent; >MDL is the number of results that exceed the MDL; >DWS is the number of results that exceed the listed DWS.

Summarized constituents are grouped as Contamination Indicator Parameters (CIP), Drinking Water Parameters, Groundwater Quality Parameters, and Site-Specific and Other Constituents. Within groups, rows are ordered alphabetically by the full constituent name.

If a constituent has an MDL that exceeds the DWS, exceedance of the DWS cannot be determined, so an asterisk (*) is placed in the >DWS field. Some radionuclides do not have an explicit MDL; the asterisk is used if the DWS exceeds the total error associated with at least one of the results.

1.4.3 Constituents with at Least One Detected Value Table

The Constituents with at Least One Detected Value table ("Detected" table) is a subset of the complete data set. Only constituents that were detected above the MDL in at least one sample collected for the project during the current reporting period are reported in the "Detected" table.

The first three column headings are as follows:

- Well Name--Well from which sample was collected.
- Collection Date--Date on which the sample was collected.
- Sample Number--Unique number assigned to a well sample.

The remaining columns contain analytical results and qualifiers for the constituent. The structure of the column header is as follows.

constituent short name
method code/reporting units
MDL/DWS (suffix).

The "Summary" table (Section 1.4.2) shows the relationship between the full constituent name and the short name. The analytical method code is defined in Table 1-7. Abbreviations used for reporting units are listed in Section 1.4.5. On the third line, a period appears in place of the MDL or DWS if a value does not exist. The one-letter suffix that may be added to the DWS identifies the regulation associated with the standard and is described in Section 1.4.5.

Analysis results are displayed with two digits to the right of the decimal point. This is a consequence of the generating software and does not reflect the precision of the results. The laboratories normally report the result with three significant digits. Radionuclide values may be negative because the laboratory subtracts a background reading from the measured result. The letter(s) that may follow the result are data qualifiers and flags. A complete explanation of what each flag means is provided in Section 1.4.5.

1.4.4 Contamination Indicator Parameters Table

The "CIP" table has a format similar to the Detected table (see Section 1.4.3) but includes only data for pH, specific conductance, TOC, and TOX. All results for these parameters, whether detected or not, are listed in the "CIP" table. The analysis method code is not part of the column header in this report.

Because several laboratories each with their own MDL may perform some of the pH, TOC, and TOX analyses, values in a column of the "CIP" table may reflect different MDLs. In such cases, an asterisk appears in the MDL portion of the column header.

1.4.5 Codes and Abbreviations

Abbreviations—The abbreviations used in the data tables are as follows:

COL	coliform colonies per 100 milliliters
DWS	drinking water standard
ft	feet
MDL	method detection limit
msl	mean sea level
NTU	nephelometric turbidity unit
pCi/L	picocuries per liter
ppb	parts per billion
ppm	parts per million
μmho/cm	micromhos per centimeter.

Table 1-7. Analysis Method Code Definitions.
(2 sheets)

Method code	Method name
16	SW-846 8240 ^a
17	SW-846 8080 ^a
19	SW-846 8270 ^a
25	SW-846 8010/8020 ^a
29	SW-846 8140 ^a
30	SW-846 8040 ^a
34	SW-846 6010 ^a
36	ASTM D-1385 ^b
40	SW-846 7421 ^a
41	SW-846 7470 ^a
42	SW-846 7841 ^a
43	SW-846 7060 ^a
48	SW-846 7740 ^a
49	SW-846 8150 ^a
51	SW-846 8280 ^a
52	ASTM D-1067-A
54	ASTM D-1426-D
56	SW-846 9010 ^a
62	In-house ion chromatography
63	SW-846 9030 ^a
65	Standard Methods #2098 ^c
67	SW-846 9020 ^a
69	SW-846 9131 ^a
73	ASTM D-1125-A
93	Field probe, pH
94	Field probe, conductivity
122	SW-846 9060 ^a
124	ASTM D-4327-88
125	ASTM D-1293
126	Standard Methods #214A ^c
127	ASTM D-2579-A
129	ASTM D-1426-C
130	EPA Method 300.0 ^d
135	SW-846 9310, Alpha ^e
136	SW-846 9310, Beta ^e
137	SW-846 9315, Radium ^e
139	ITAS I-129 Low level
140	ITAS Gamma scan

Table 1-7. Analysis Method Code Definitions.
(2 sheets)

Method code	Method name
141	ITAS Sr-90
142	ITAS H-3
143	ITAS Tc-99
144	SM-846 9132 ^a
145	ITAS Gross U
146	ITAS Isotopic Pu
147	ITAS Am-241
148	ITAS Isotopic U
168	USEPA HACH COD ^d
357	EPA 600, 310.2
358	SM-846 9012 ^a
1023	EPA 120.1
1039	EPA 160.1
1044	EPA 180.1
1083	EPA 300.0
1086	EPA 310.1
1139	SM-846 6010A
1148	SM-846 7060
1197	SM-846 8040
1199	SM-846 8080, Pesticides/PCBs
1206	SM-846 8270A
1216	SM-846 9020
1225	SM-846 9040
1230	SM-846 9060
1247	Gross alpha, direct/proportional counting
1249	Gamma spectroscopy
1252	Gross beta, direct/proportional counting
1255	Tritium, liquid scintillation
1270	Plutonium, electroplate/alpha spectroscopy
1276	Radium, gas proportional counting
1281	Radioactive strontium, proportional counting
1283	Tc-99, chemical separation/liquid scintillation
1288	Uranium, fluorometry
1300	SM-846 8260, VOCs

^a(EPA 1986b).^b(ASTM 1991).^c(EPA 1979).^d(APHA 1989).

Agencies and suffixes--Agency codes and DWS suffixes identify the regulatory origin of the standard of the DWS. Agency codes are used in the "Summary" tables, and DWS suffixes are used in the "Detected" and "CIP" tables. The codes are defined as follows:

<u>Agency</u>	<u>Suffix</u>	<u>Regulatory basis</u>
EPA	None	Maximum contaminant levels in 40 CFR 141, "National Primary Drinking Water Regulations."
EPAS	s	Secondary maximum contaminant levels in 40 CFR 143, "National Secondary Drinking Water Regulations."
EPAI	1	EPA interim primary DWSs in 40 CFR 265, Appendix III.

Data qualifiers and flags--Data qualifiers and flags used in the "Detected" and "CIP" tables are assigned by the laboratory and WMC personnel, respectively. Qualifiers reflect conditions occurring in the laboratory relating to the analytical procedure. Flags serve a wider function of alerting the data user to the limitations of the reported value. Qualifiers and flags can be appended to each other to form a string of letters when several factors apply to a result. The qualifiers and flags used are as follows:

Laboratory qualifiers:

- B - Blank associated with analyte is contaminated
- D - Analyzed sample is diluted
- E - Concentration is out of instrument calibration range
- J - Concentration is estimated
- L - Concentration is below the contractually required quantitation limit but above the MDL
- U - Concentration is below the indicated value.

Data flags:

- F - Suspect data currently under review
- H - Laboratory holding time exceeded
- G - Reviewed data that are considered valid
- P - Potential problem; see text associated with table
- Q - Result associated with suspect QC data
- R - Reviewed data that have been rejected
- Y - Reviewed data that continue to be suspect
- + - Suspect water level data
- * - MDL is greater than DWS, so exceedance of DWS is undetermined.

More complete descriptions of some of these qualifiers and flags are presented in Section 1.2, Quality Control Program.

Analysis method codes--Analysis method codes are used as an abbreviation for the laboratory method used to perform an analysis. A complete listing of the analysis method codes used in the Summary and Detected tables is shown in Table 1-8.

DWSs--DWSs are used in all of the chemistry tables to provide a standard with which to compare sample results. The DWSs are based on standards found in 40 CFR 265, 40 CFR 141, and 40 CFR 143. Where there is overlap in constituents addressed by these regulations, 40 CFR 265 takes precedence over 40 CFR 141, which, in turn, takes precedence over 40 CFR 143. A complete listing of the DWSs used in the Summary, Detected, and CIP tables is shown in Table 1-8.

Table 1-8. Drinking Water Standards. (2 sheets)

Constituent name	Short name	DWS	Units	Agency ^a
1,1,1-Trichloroethane	1,1,1-T	200	ppb	EPA
1,1-Dichloroethene	DICETHY	7	ppb	EPA
1,2-Dibromo-3-chloropropane	DIBRCHL	0.2	ppb	EPA
1,2-Dibromoethane	DIBRETH	0.05	ppb	EPA
1,2-Dichlorobenzene	12-dben	600	ppb	EPA
1,2-Dichloroethane	1,2-DIC	5	ppb	EPA
1,2-Dichloropropane	DICPANE	5	ppb	EPA
1,4-Dichlorobenzene	14-dben	75	ppb	EPA
2,4,5-TP	2,4,5TP	50	ppb	EPA
2,4-D	2,4-D	100	ppb	EPAI
Arsenic	ARSENIC	50	ppb	EPA
Barium	BARIUM	1,000	ppb	EPAI
Benzene	BENZENE	5	ppb	EPA
Cadmium	CADMIUM	10	ppb	EPAI
Carbon tetrachloride	TETRANE	5	ppb	EPA
Cesium-137	CS-137	200	pCi/L	EPA
Chlordane	CHLDANE	2	ppb	EPA
Chloride	CHLORID	250,000	ppb	EPAS
Chlorobenzene	CHLROB	100	ppb	EPA
Chromium	CHROMIUM	50	ppb	EPAI
cis-1,2-Dichloroethylene	CIS12DE	70	ppb	EPA
Cobalt-60	CO-60	100	pCi/L	EPA
Coliforms	COLIFORM	1	COL	EPAI
Copper	COPPER	1,000	ppb	EPAS
Endrin	ENDRIN	0.2	ppb	EPA
Ethylbenzene	ETHBENZ	700	ppb	EPA
Fluoride	FLUORID	1,400	ppb	EPAI
gamma-BHC (Lindane)	g-BHC	4	ppb	EPAI
Gross alpha	ALPHA	15	pCi/L	EPA
Heptachlor	HEPTLOR	0.4	ppb	EPA
Heptachlor epoxide	HEPTIDE	0.2	ppb	EPA
Iodine-129	I-129	1	pCi/L	EPA
Iron	IRON	300	ppb	EPAS
Lead	LEAD	50	ppb	EPAI
Manganese	MANGESE	50	ppb	EPAS
Mercury	MERCURY	2	ppb	EPA
Methoxychlor	METHLOR	100	ppb	EPAI

Table I-8. Drinking Water Standards. (2 sheets)

Constituent name	Short name	DWS	Units	Agency ^a
Nitrate	NITRATE	45,000	ppb	EPA
Nitrite	NITRITE	1,000	ppb	EPA
Pentachlorophenol	PENTCHP	1	ppb	EPA
pH	PH	6.5-8.5	pH	EPAS
Radium	RADIUM	5	pCi/L	EPAI
Ruthenium-106	RU-106	30	pCi/L	EPA
Selenium	SELENIUM	10	ppb	EPAI
Silver	SILVER	50	ppb	EPAI
Strontium-90	SR-90	8	pCi/L	EPA
Styrene	STYRENE	100	ppb	EPA
Sulfate	SULFATE	250,000	ppb	EPAS
Technetium-99	TC-99	900	pCi/L	EPA
Tetrachloroethene	PERCENE	5	ppb	EPA
Toluene	TOLUENE	1,000	ppb	EPA
Total dissolved solids	TDS	500	ppm	EPAS
Toxaphene	TOXAENE	5	ppb	EPAI
trans-1,2-Dichloroethylene	TRANDE	100	ppb	EPA
Trichloroethene	TRICENE	5	ppb	EPA
Tritium	TRITIUM	20,000	pCi/L	EPA
Vinyl chloride	VINYIDE	2	ppb	EPA
Xylenes (total)	XYLENE	10,000	ppb	EPA
Zinc	ZINC	5,000	ppb	EPAS

^aSee Section 1.4.5 for agency listing.

COL = coliform colonies per 100 milliliters.

pCi/L = picocuries per liter.

ppb = parts per billion.

1.6 DATA EVALUATION

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Data evaluation is a process through which suspect data are identified and/or investigated. At present, the data evaluation process consists of the evaluating data called out in RADEs, which are submitted by data users and/or identified when performing the required statistical evaluation of CIP data. The statistical evaluations of CIP data are presented within the chapters for individual sites.

Forty-two RADEs were submitted during the April through June quarter of 1995. Of the submitted RADEs, eight are for ICP metals, seven are for field parameters (pH and conductivity), seven are for TOX, five are for anions, four are for turbidity, three are for radionuclides, three are for ammonium ion, two are for organics, one is for lab conductivity, one is for alkalinity, and one is for water level. Ten RADEs involve multiple methods indicating a potential problem with their associated sampling events.

An F flag is used to indicate that a RADE has been submitted. Suspect analytical data shall be evaluated for the following, as applicable: historical trends, site geohydrology, contaminant distribution (e.g., plumes), and internal consistency to determine if the data are acceptable. After evaluation, the F flag will be changed to 'G,' indicating acceptable data; 'Y,' indicating suspect data; or 'R,' indicating unusable data. A summary of the results will be presented in the annual report.

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2.0 100-D PONDS

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2.1 INTRODUCTION

The 100-D Ponds system is an interim-status RCRA disposal unit located in the 100-D Area of the Hanford Site (Figure 2-1). Four wells make up the 100-D Ponds sampling network (Table 2-1). The 100-D Ponds are monitored under an indicator evaluation program (40 CFR 265).

The 100-D Ponds unit was constructed in 1977 for disposal of nonradioactive effluents derived from 100-D Area operating facilities. The 100-D Ponds are located in the former 188-D ash disposal basin and consist of a settling pond and a percolation pond, separated by a dike.

Effluent to the 100-D Ponds originated from two sources: a filter plant and engineering testing laboratories. Some past discharges may have included corrosive waste or mercury (Hartman 1991). All discharges to the 100-D Ponds ceased in May 1994.

2.2 WATER LEVEL MEASUREMENTS

Water levels are measured monthly in wells in and near the 100-D Area to track changes caused by river-stage fluctuations and the cessation of effluent discharge. Water level data are listed in Table 2-2.

2.3 WATER CHEMISTRY DATA

Only well 199-D5-13 was scheduled for sampling last quarter. The samples were analyzed for indicator parameters and turbidity. Data are reported in Tables 2-3 through 2-5. Data flags are explained in Sections 1.2 and 1.4. No DWS were exceeded.

Figure 2-1. Monitoring Well Location Map for the 100-D Ponds.

RCRA-AR-030893-D

Table 2-1. Monitoring Well Purpose and Sampling Schedule in the 100-D Ponds Network.

Well no. (199-)	Relative position	Sample frequency	Sample date, 2nd Qtr 1995
D5-13	Upgradient	Quarterly	5/2/95
D8-4	Downgradient	Semiannually	not scheduled
D8-5	Downgradient	Semiannually	not scheduled
D8-6	Downgradient	Semiannually	not scheduled

Note: The hydrogeologic unit monitored is the uppermost portion of the unconfined aquifer, which comprises unconsolidated sand and gravels of the Ringold Formation.

Table 2-2. RCRA Water Level Measurement Report
 100-D Ponds, Second Quarter 1995.
 (sheet 1 of 2)

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer				
199-D2-5	5/10/95	75.60	384.70	117.26
	6/22/95	75.40	384.90	117.32
199-D2-6	5/10/95	84.97	384.31	117.14
	6/22/95	84.20	385.08	117.37
199-D5-12	5/10/95	85.87	383.74	116.96
	6/22/95	85.65	383.96	117.03
199-D5-13	5/02/95	88.56*	382.93	116.72
	5/10/95	88.33	383.16	116.79
	6/22/95	87.70	383.79	116.98
199-D5-17	5/10/95	85.12	384.37	117.16
	6/22/95	84.91	384.58	117.22
199-D5-20	5/10/95	84.81	383.29	116.83
	6/22/95	83.44	384.66	117.24
199-D8-3	5/10/95	66.89	382.07	116.45
	6/22/95	65.39	383.57	116.91
199-D8-4	5/10/95	85.68	383.05	116.75
	6/22/95	84.65	384.08	117.07
199-D8-5	5/10/95	69.77	382.72	116.65
	6/22/95	68.44	384.05	117.06
199-D8-53	5/10/95	53.93	382.10	116.46
	6/22/95	52.03	384.00	117.04
199-D8-54A	5/10/95	60.64	382.14	116.48
	6/22/95	58.73	384.05	117.06
199-D8-55	5/10/95	57.05	382.30	116.53
	6/22/95	55.21	384.14	117.09
199-D8-6	5/10/95	93.52	382.98	116.73
	6/22/95	92.45	384.05	117.06

Table 2-2. RCRA Water Level Measurement Report
 100-D Ponds, Second Quarter 1995.
 (sheet 2 of 2)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer				
699-87-55	5/10/95	72.98	386.63	117.84
	6/22/95	72.58	387.03	117.97
699-90-45	5/10/95	38.06	383.46	116.88
	6/22/95	38.08	383.44	116.87
699-92-49	5/10/95	50.17	381.69	116.34
699-96-49	5/10/95	37.85	381.36	116.24
	6/22/95	37.33	381.88	116.40
699-97-51A	5/10/95	20.98	381.27	116.21
	6/22/95	20.15	382.10	116.46
Wells Monitoring the Confined Aquifer				
199-D8-548	5/10/95	60.07	382.44	116.57
	6/22/95	58.28	384.23	117.11

- NOTES: 1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
2. Depth-to-water values are transcribed from field records.
3. Measurements marked with an '*' were taken at the time of sampling.
4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 2-3. Constituent List and Summary of Results for the
100-D Pond Data for Reporting Period
April 1 through June 30, 1995.

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
CONDUCT	94	Conductivity, field	µmhos	1			4	4	
CONDUCT	73	Conductivity, lab	µmhos				1	1	
TOC		Total Organic Carbon	ppb	140			4	4	
TOX		Total Organic Halogen	ppb	6.9			4	4	
PH	93	pH, field	pH	.01	6.5-8.5	EPAS	4	4	0
PH	125	pH, lab	pH		6.5-8.5	EPAS	1	1	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
TURBID		Turbidity	NTU				1	1	

For explanation of this table, see Section 1.4 of report.

Table 2-4. Constituents with at Least One Detected Value for the
100-D Pond Data for Reporting Period
April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	TURBID 111/NTU ./.
199-05-13	5/02/95	B0FC95	.68

For explanation of this table, see Section 1.4 of report.

Table 2-5. Contamination Indicator Parameters for the
100-D Pond Data for Reporting Period
April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	COND FIELD µmho 1/.	COND LAB µmho 1/.	pH FIELD .01/6.5-8.5s	pH LAB .01/6.5-8.5s	TOC ppb */.	TOX ppb */.
199-05-13	5/02/95	B0FC95	534	510	8.02	8.10	800 L	9.3 L
		B0FC96	533		8.03		800 L	9.5 L
		B0FC97	533		8.03		900 L	10.0
		B0FC98	532		8.03		800 L	10.0

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

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3.0 183-H SOLAR EVAPORATION BASINS

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Westinghouse Hanford Company

3.1 INTRODUCTION

The 183-H Solar Evaporation Basins (Basins) are a RCRA-regulated facility located near the Columbia River in the 100-H Area of the Hanford Site. Originally the Basins were part of the water treatment facility that prepared coolant for the 105-H Reactor. Subsequent to that mission, between 1973 and 1985, the Basins were used for storage and volume reduction (by solar evaporation) of liquid waste from nuclear fuel processing activities conducted in the 300 Area. The predominant waste consisted of nitric acid solutions that had been neutralized with sodium hydroxide before discharge into the Basins. The solutions contained various metals and radioactive constituents (e.g., chromium, uranium, and technetium). Hazardous waste has been removed from the Basins and the walls have been partially decontaminated.

Groundwater quality has been affected by leakage from the Basins. Groundwater monitoring has been conducted as an assessment-level program under 40 CFR 265 interim-status standards, as mandated by a consent agreement and compliance order (Ecology and EPA 1986). The 183-H Basins are included in the new Hanford Facility RCRA Permit and, in the future, will be monitored under final-status requirements (Ecology 1994). A final-status groundwater monitoring plan is being prepared.

The purpose of each RCRA well in the 183-H network, its sampling frequency, and the dates sampled during the quarter are summarized in Table 3-1. Well locations are shown in Figure 3-1.

3.2 WATER LEVEL MEASUREMENTS

Water levels were measured twice during the past quarter. Water levels were recorded at the time of sample collection for water quality analyses and routine measurements were made on a single day. Water levels are presented in Table 3-2.

3.3 WATER CHEMISTRY DATA

All of the wells in the 183-H network were sampled as scheduled last quarter. Results are presented in Tables 3-3 through 3-5. Data flags are discussed in Sections 1.2 and 1.4. DWSs exceeded are listed in Table 3-6. Gross alpha activity in well H4-15A was much greater than normal. Uranium, the only significant alpha-emitter in the area, was low in this well. A data evaluation determined that the gross alpha value should be rejected.

Figure 3-1. Well Location Map for the 183-H Solar Evaporation Basins Network.

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Table 3-1. Monitoring Well Position and Sampling Schedule
for the 183-H Solar Evaporation Basins Network.

Well no. (199-)	Relative position	Hydrogeologic unit ^a	Sample frequency	Sample date, 2nd Qtr 1995
H3-1	Distant ^b	Hanford: Water Table	Annually	6/19/95
H3-2A	Upgradient	Hanford: Water Table	Quarterly	6/15/95
H3-2B	Upgradient	Hanford: Bottom of aquifer	Annually	6/15/95
H3-2C	Upgradient	Ringold: Silty Sand	Quarterly	6/15/95
H4-10	Distant ^b	Hanford: Water Table	Annually	6/21/95
H4-11	Downgradient	Hanford: Water Table	Quarterly	6/21/95
H4-12A	Downgradient	Hanford: Water Table	Quarterly	6/21/95
H4-12B	Downgradient	Hanford: Bottom of aquifer	Quarterly	6/21/95
H4-12C	Downgradient	Ringold: Silty Sand	Quarterly	6/21/95
H4-13	Distant ^b	Hanford: Water Table	Annually	6/21/95
H4-14	Downgradient	Hanford: Water Table	Quarterly	6/19/95
H4-15A	Distant ^b	Hanford: Water Table	Annually	6/20/95
H4-15B	Distant ^b	Hanford: Bottom of aquifer	Annually	6/20/95
H4-16	Distant ^b	Hanford: Water Table	Annually	6/20/95
H4-17	Distant ^b	Hanford: Water Table	Annually	6/20/95
H4-18	Downgradient	Hanford: Water Table	Quarterly	6/20/95
H4-3	Downgradient	Hanford: Water Table	Monthly	6/19/95
H4-4	Downgradient	Hanford: Water Table	Monthly	6/20/95
H4-5	Downgradient	Hanford: Water Table	Quarterly	6/20/95
H4-6	Upgradient	Hanford: Water Table	Quarterly	6/20/95
H4-7	Upgradient	Hanford: Water Table	Quarterly	6/19/95
H4-8	Upgradient	Hanford: Water Table	Quarterly	6/19/95
H4-9	Downgradient	Hanford: Water Table	Monthly	6/21/95

^aHydrogeologic units include the sandy gravels of the Hanford formation and silty sands of the Ringold formation. Water levels are measured monthly in all wells.

^bWells not located directly in 183-H Basins groundwater flow.

Table 3-2. RCRA Water Level Measurement Report 183-H Solar
Evaporation Basins, Second Quarter 1995.
(sheet 1 of 2)

Well	Date	Depth to water (ft)	Water level	
			elevation above msl (ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer (Hanford Formation)				
199-H3-1	6/19/95	46.49*	374.99	114.30
	6/22/95	44.87	376.61	114.79
199-H3-2A	6/15/95	42.75*	375.57	114.47
	6/22/95	42.04	376.28	114.69
199-H3-2B	6/15/95	43.34*	375.57	114.47
	6/22/95	42.64	376.27	114.69
199-H4-10	6/21/95	28.58*	375.86	114.56
	6/22/95	27.65	376.79	114.85
199-H4-11	6/21/95	40.75*	376.09	114.63
	6/22/95	40.36	376.48	114.75
199-H4-12A	6/21/95	37.78*	375.72	114.52
	6/22/95	36.83	376.67	114.81
199-H4-12B	6/21/95	37.80*	375.72	114.52
	6/22/95	36.88	376.64	114.80
199-H4-13	6/21/95	42.30*	375.90	114.57
	6/22/95	41.97	376.23	114.67
199-H4-14	6/19/95	44.93*	376.15	114.65
	6/22/95	44.88	376.20	114.67
199-H4-15A	6/20/95	31.69*	376.02	114.61
	6/22/95	30.44	377.27	114.99
199-H4-15B	6/20/95	31.42*	375.50	114.45
	6/22/95	30.16	376.76	114.84
199-H4-16	6/20/95	49.38*	374.85	114.25
	6/22/95	48.79	375.44	114.43
199-H4-17	6/20/95	43.52*	376.07	114.63
	6/22/95	42.88	376.71	114.82
199-H4-18	6/20/95	46.75*	375.57	114.47
	6/22/95	45.97	376.35	114.71
199-H4-3	6/19/95	44.52*	375.77	114.53
	6/22/95	44.39	375.90	114.57

Table 3-2. RCRA Water Level Measurement Report
183-H Solar Evaporation Basins, Second Quarter 1995.
(sheet 2 of 2)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer (Hanford Formation)				
199-H4-4	6/20/95	37.88*	376.36	114.71
	6/22/95	37.11	377.13	114.95
199-H4-5	6/20/95	40.44*	375.77	114.53
	6/22/95	39.95	376.26	114.68
199-H4-6	6/20/95	43.81*	375.77	114.53
	6/22/95	43.76	375.82	114.55
199-H4-7	6/19/95	45.33*	375.26	114.38
	6/22/95	44.77	375.82	114.55
199-H4-8	6/19/95	44.08*	375.92	114.58
	6/22/95	44.08	375.92	114.58
199-H4-9	6/21/95	42.18*	376.40	114.73
	6/22/95	42.03	376.55	114.77
Wells Monitoring Upper Levels in the Ringold Formation				
199-H3-2C	6/15/95	42.95*	375.79	114.54
	6/22/95	42.32	376.42	114.73
199-H4-12C	6/21/95	37.82*	375.70	114.51
	6/22/95	37.06	376.46	114.75
199-H4-15CS	6/22/95	30.78	376.66	114.81
Well Monitoring Mid-Level in the Ringold Formation				
199-H4-15CR	6/22/95	32.07	375.30	114.39

- NOTES: 1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
2. Depth-to-water values are transcribed from field records.
3. Measurements marked with an '*' were taken at the time of sampling.
4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 3-3. Constituent List and Summary of Results for 183-H Solar Evaporation Basins Data for Reporting Period April 1 through June 30, 1995.
(sheet 1 of 2)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
CONDUCT		Conductivity, field	µmhos	1			23	23	
TOX		Total Organic Halogen	ppb	6.9			24	8	
PH		pH, field	pH	.01	6.5-8.5	EPAS	23	23	1

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
FBARIUM		Barium, filtered	ppb	1.4	1000	EPAI	24	24	0
FCADMIU		Cadmium, filtered	ppb	.98	10	EPAI	24	0	0
FCROMI		Chromium, filtered	ppb	3.7	50	EPAI	24	24	14
FLUORID		Fluoride	ppb	52	1400	EPAI	24	24	0
ALPHA		Gross alpha	pCi/L		15	EPA	24	18	2
NITRATE		Nitrate	ppb	120	45000	EPA	24	24	2

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
CHLORID		Chloride	ppb	110	250000	EPAS	24	24	0
FIRON		Iron, filtered	ppb	8.9	300	EPAS	24	23	0
FMANGAN		Manganese, filtered	ppb	.55	50	EPAS	24	14	1
FSDIUM		Sodium, filtered	ppb	.44			24	24	
SULFATE		Sulfate	ppb	130	250000	EPAS	24	24	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
ALKALIN		Alkalinity	ppm	3.5			24	24	
FALUMIN		Aluminum, filtered	ppb	31			24	0	
FANTIMO		Antimony, filtered	ppb	24			24	0	
FBERYLL		Beryllium, filtered	ppb	.63			24	0	
BROMIDE		Bromide	ppb	72			24	8	
FCALCIU		Calcium, filtered	ppb	41			24	24	
FCOBALT		Cobalt, filtered	ppb	5.3			24	0	
FCOPPER		Copper, filtered	ppb	2.1	1000	EPAS	24	13	

Table 3-3. Constituent List and Summary of Results for 183-H Solar Evaporation Basins Data for Reporting Period
April 1 through June 30, 1995.
(sheet 2 of 2)

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
BETA		Gross beta	pCi/L					24	23	
FMAGNES		Magnesium, filtered	ppb	26				24	24	
FNICKEL		Nickel, filtered	ppb	11				24	2	
NITRITE		Nitrite	ppb	140	1000	EPA		24	0	0
PHOSPHA		Phosphate	ppb	340				24	0	
FPOTASS		Potassium, filtered	ppb	390				24	24	
FSILVER		Silver, filtered	ppb	5.5	50	EPA1		24	0	0
TC-99		Technetium-99	pCi/L		900	EPA		24	7	1
FTIN		Tin, filtered	ppb	30				24	0	
TURBID		Turbidity	NTU					23	23	
URANIUM		Uranium	ppb					24	24	
FVANADI		Vanadium, filtered	ppb	1.9				24	24	
FZINC		Zinc, filtered	ppb	3.7	5000	EPAS		24	21	0

For explanation of this table, see Section 1.4 of report.

Table 3-4. Constituents with at Least One Detected Value for the 183-H Solar Evaporation Basins Data for Reporting Period April 1 through June 30, 1995.
(sheet 1 of 6)

Well Name	Collection Date	Sample Number	ALKALIN 357/ppm 3.5/.	FRATIUM 34/ppb 1.4/1000	BROMIDE 124/ppb 72/.	PCALCIU 34/ppb 41/.
199-H3-1	6/19/95	80FM00	120.00		72.00 U	
199-H3-1	6/19/95	80FM01	130.00		72.00 U	
199-H3-1	6/19/95	80FM02		25.00		42000.00
199-H3-1	6/19/95	80FM03		25.00		41000.00
199-H3-2A	6/15/95	80FM04	150.00		80.00 L	
199-H3-2A	6/15/95	80FM05		34.00		57000.00
199-H3-2B	6/15/95	80FM06	140.00		90.00 L	
199-H3-2B	6/15/95	80FM07		37.00		54000.00
199-H3-2C	6/15/95	80FM08	100.00		72.00 U	
199-H3-2C	6/15/95	80FM09		15.00 L		24000.00
199-H4-10	6/21/95	80FM11	80.00		72.00 U	
199-H4-10	6/21/95	80FM12		32.00		24000.00
199-H4-11	6/21/95	80FM15	100.00		72.00 U	
199-H4-11	6/21/95	80FM16		29.00		43000.00
199-H4-12A	6/21/95	80FM19	90.00		72.00 U	
199-H4-12A	6/21/95	80FM20		25.00		31000.00
199-H4-12B	6/21/95	80FM23	110.00		72.00 U	
199-H4-12B	6/21/95	80FM26		66.00		43000.00
199-H4-12C	6/21/95	80FM30	100.00		72.00 U	
199-H4-12C	6/21/95	80FM31		13.00 L		30000.00
199-H4-13	6/21/95	80FM35	90.00		72.00 U	
199-H4-13	6/21/95	80FM36		17.00 L		34000.00
199-H4-14	6/19/95	80FM38	100.00		72.00 U	
199-H4-14	6/19/95	80FM39		17.00 L		35000.00
199-H4-15A	6/20/95	80FM41	110.00		72.00 U	
199-H4-15A	6/20/95	80FM42		64.00		41000.00
199-H4-15B	6/20/95	80FM44	110.00		72.00 U	
199-H4-15B	6/20/95	80FM45		100.00		43000.00
199-H4-16	6/20/95	80FM46	100.00		72.00 U	
199-H4-16	6/20/95	80FM47		17.00 L		42000.00
199-H4-17	6/20/95	80FM48	140.00		90.00 L	
199-H4-17	6/20/95	80FM49		49.00		64000.00
199-H4-18	6/20/95	80FM50	140.00		72.00 U	
199-H4-18	6/20/95	80FM51		42.00		68000.00
199-H4-3	6/19/95	80FM52	180.00		72.00 DU	
199-H4-3	6/19/95	80FM53		63.00		68000.00
199-H4-4	6/20/95	80FM54	80.00		72.00 U	
199-H4-4	6/20/95	80FM55		21.00		27000.00
199-H4-5	6/20/95	80FM56	140.00		80.00 L	
199-H4-5	6/20/95	80FM57		60.00		62000.00
199-H4-6	6/20/95	80FM58	160.00		90.00 L	
199-H4-6	6/20/95	80FM59		44.00		59000.00
199-H4-7	6/19/95	80FM60	180.00		100.00 L	
199-H4-7	6/19/95	80FM61		52.00		75000.00
199-H4-8	6/19/95	80FM62	160.00		90.00 L	
199-H4-8	6/19/95	80FM63		41.00		67000.00
199-H4-9	6/21/95	80FM64	160.00		80.00 L	
199-H4-9	6/21/95	80FM65		46.00		66000.00

Table 3-4. Constituents with at Least One Detected Value for the 183-H Solar Evaporation Basins Data for Reporting Period April 1 through June 30, 1995.
(sheet 2 of 6)

Well Name	Collection Date	Sample Number	CHLORID 124/ppb 110/250000	CHROMI 34/ppb 3.7/50	COPPER 34/ppb 2.1/1000	FLUORID 124/ppb 52/1400
199-N3-1	6/19/95	B0FN00	7000.00			800.00
199-N3-1	6/19/95	B0FN01	7100.00			800.00
199-N3-1	6/19/95	B0FN02		9.60 L	2.10 U	
199-N3-1	6/19/95	B0FN03		12.00 L	2.10 U	
199-N3-2A	6/15/95	B0FN04	9200.00 D			700.00 Q
199-N3-2A	6/15/95	B0FN05		110.00	3.10 L	
199-N3-2B	6/15/95	B0FN06	9900.00			600.00 Q
199-N3-2B	6/15/95	B0FN07		90.00	3.10 L	
199-N3-2C	6/15/95	B0FN08	1600.00			700.00 Q
199-N3-2C	6/15/95	B0FN09		6.00 L	2.10 L	
199-N4-10	6/21/95	B0FN11	2000.00			300.00
199-N4-10	6/21/95	B0FN12		15.00 L	2.40 L	
199-N4-11	6/21/95	B0FN15	4000.00			400.00
199-N4-11	6/21/95	B0FN16		42.00	2.10 U	
199-N4-12A	6/21/95	B0FN19	2700.00			300.00
199-N4-12A	6/21/95	B0FN20		28.00	2.40 L	
199-N4-12B	6/21/95	B0FN25	5000.00			400.00
199-N4-12B	6/21/95	B0FN26		54.00	2.10 U	
199-N4-12C	6/21/95	B0FN30	2300.00			400.00
199-N4-12C	6/21/95	B0FN31		290.00	3.80 L	
199-N4-13	6/21/95	B0FN35	2700.00			300.00
199-N4-13	6/21/95	B0FN36		24.00	3.10 L	
199-N4-14	6/19/95	B0FN38	4900.00			600.00
199-N4-14	6/19/95	B0FN39		44.00	2.40 L	
199-N4-15A	6/20/95	B0FN41	5400.00			500.00
199-N4-15A	6/20/95	B0FN42		76.00	2.10 U	
199-N4-15B	6/20/95	B0FN44	6000.00			500.00
199-N4-15B	6/20/95	B0FN45		84.00	2.10 U	
199-N4-16	6/20/95	B0FN46	5000.00			400.00
199-N4-16	6/20/95	B0FN47		12.00 L	2.10 U	
199-N4-17	6/20/95	B0FN48	9400.00 D			600.00
199-N4-17	6/20/95	B0FN49		93.00	2.10 U	
199-N4-18	6/20/95	B0FN50	7100.00			600.00
199-N4-18	6/20/95	B0FN51		61.00	2.80 L	
199-N4-3	6/19/95	B0FN52	12000.00 D			1100.00
199-N4-3	6/19/95	B0FN53		100.00	5.60 L	
199-N4-4	6/20/95	B0FN54	2100.00			300.00
199-N4-4	6/20/95	B0FN55		23.00	3.50 L	
199-N4-5	6/20/95	B0FN56	8700.00			500.00
199-N4-5	6/20/95	B0FN57		97.00	3.80 L	
199-N4-6	6/20/95	B0FN58	9400.00 D			600.00
199-N4-6	6/20/95	B0FN59		58.00	2.10 U	
199-N4-7	6/19/95	B0FN60	8700.00 D			800.00
199-N4-7	6/19/95	B0FN61		83.00	2.10 U	
199-N4-8	6/19/95	B0FN62	9500.00 D			500.00
199-N4-8	6/19/95	B0FN63		97.00	2.10 U	
199-N4-9	6/21/95	B0FN64	9600.00 D			500.00
199-N4-9	6/21/95	B0FN65		81.00	3.10 L	

Table 3-4. Constituents with at Least One Detected Value for the 183-H Solar Evaporation Basins Data for Reporting Period April 1 through June 30, 1995.
(sheet 3 of 6)

Well Name	Collection Date	Sample Number	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.	FIRCON 34/ppb 8.9/300	FMAGNES 34/ppb 26/.
199-H3-1	6/19/95	B0FN00	1.12	3.55		
199-H3-1	6/19/95	B0FN01	1.92	4.45		
199-H3-1	6/19/95	B0FN02			22.00 B	10000.00
199-H3-1	6/19/95	B0FN03			21.00 B	10000.00
199-H3-2A	6/15/95	B0FN04	1.52	3.94		
199-H3-2A	6/15/95	B0FN05			58.00 B	12000.00
199-H3-2B	6/15/95	B0FN06	3.60	5.01		
199-H3-2B	6/15/95	B0FN07			12.00 BL	12000.00
199-H3-2C	6/15/95	B0FN08	4.26	4.09		
199-H3-2C	6/15/95	B0FN09			15.00 BL	8400.00
199-H4-10	6/21/95	B0FN11	.12 U	1.14 U		
199-H4-10	6/21/95	B0FN12			12.00 BL	5600.00
199-H4-11	6/21/95	B0FN15	2.23	68.00		
199-H4-11	6/21/95	B0FN16			19.00 BL	6500.00
199-H4-12A	6/21/95	B0FN19	.19 U	2.40		
199-H4-12A	6/21/95	B0FN20			11.00 BL	5500.00
199-H4-12B	6/21/95	B0FN25	1.25	3.54		
199-H4-12B	6/21/95	B0FN26			8.90 U	7400.00
199-H4-12C	6/21/95	B0FN30	.40 U	4.13		
199-H4-12C	6/21/95	B0FN31			28.00 B	11000.00
199-H4-13	6/21/95	B0FN35	.52 U	32.50		
199-H4-13	6/21/95	B0FN36			15.00 BL	5800.00
199-H4-14	6/19/95	B0FN38	1.06	2.03		
199-H4-14	6/19/95	B0FN39			13.00 BL	6700.00
199-H4-15A	6/20/95	B0FN41	16.10 R	3.58		
199-H4-15A	6/20/95	B0FN42			13.00 L	8400.00
199-H4-15B	6/20/95	B0FN44	-.28 U	4.78		
199-H4-15B	6/20/95	B0FN45			13.00 L	9700.00
199-H4-16	6/20/95	B0FN46	1.85	9.47		
199-H4-16	6/20/95	B0FN47			21.00	5300.00
199-H4-17	6/20/95	B0FN48	4.40	5.44		
199-H4-17	6/20/95	B0FN49			17.00 L	13000.00
199-H4-18	6/20/95	B0FN50	3.95	89.00		
199-H4-18	6/20/95	B0FN51			13.00 L	12000.00
199-H4-3	6/19/95	B0FN52	44.70	577.00		
199-H4-3	6/19/95	B0FN53			28.00 B	12000.00
199-H4-4	6/20/95	B0FN54	.48 U	5.84		
199-H4-4	6/20/95	B0FN55			64.00	5000.00
199-H4-5	6/20/95	B0FN56	2.78	2.49		
199-H4-5	6/20/95	B0FN57			14.00 L	11000.00
199-H4-6	6/20/95	B0FN58	4.08	4.34		
199-H4-6	6/20/95	B0FN59			260.00	14000.00
199-H4-7	6/19/95	B0FN60	5.14	7.48		
199-H4-7	6/19/95	B0FN61			24.00 B	15000.00
199-H4-8	6/19/95	B0FN62	3.57	5.25		
199-H4-8	6/19/95	B0FN63			26.00 B	12000.00
199-H4-9	6/21/95	B0FN64	4.67	16.30		
199-H4-9	6/21/95	B0FN65			33.00 B	13000.00

Table 3-4. Constituents with at Least One Detected Value for the 183-H Solar Evaporation Basins Data for Reporting Period April 1 through June 30, 1995.
(sheet 4 of 6)

Well Name	Collection Date	Sample Number	MANGANESE 34/ppb .55/50	NICKEL 34/ppb 11/.	NITRATE 124/ppb 120/45000	POTASSIUM 34/ppb 390/.
199-H3-1	6/19/95	B0FN00			17000.00 D	
199-H3-1	6/19/95	B0FN01			17000.00 D	
199-H3-1	6/19/95	B0FN02	4.40 L	11.00 U		4500.00
199-H3-1	6/19/95	B0FN03	4.60 L	11.00 U		4800.00
199-H3-2A	6/15/95	B0FN04			26000.00 D	
199-H3-2A	6/15/95	B0FN05	.87 L	11.00 U		5300.00
199-H3-2B	6/15/95	B0FN06			24000.00 D	
199-H3-2B	6/15/95	B0FN07	1.10 L	11.00 U		5600.00
199-H3-2C	6/15/95	B0FN08			2400.00	
199-H3-2C	6/15/95	B0FN09	.55 U	11.00 U		4300.00
199-H4-10	6/21/95	B0FN11			5100.00	
199-H4-10	6/21/95	B0FN12	.55 U	11.00 U		2900.00
199-H4-11	6/21/95	B0FN15			29000.00 D	
199-H4-11	6/21/95	B0FN16	.69 L	11.00 U		2800.00
199-H4-12A	6/21/95	B0FN19			8900.00	
199-H4-12A	6/21/95	B0FN20	.79 L	11.00 U		3700.00
199-H4-12B	6/21/95	B0FN25			17000.00 D	
199-H4-12B	6/21/95	B0FN26	.55 U	11.00 U		4100.00
199-H4-12C	6/21/95	B0FN30			7000.00	
199-H4-12C	6/21/95	B0FN31	.55 U	11.00 U		4600.00
199-H4-13	6/21/95	B0FN35			9800.00	
199-H4-13	6/21/95	B0FN36	.78 L	11.00 U		2000.00
199-H4-14	6/19/95	B0FN38			7300.00	
199-H4-14	6/19/95	B0FN39	.55 U	11.00 U		4000.00
199-H4-15A	6/20/95	B0FN41			15000.00 D	
199-H4-15A	6/20/95	B0FN42	.55 U	11.00 U		4800.00
199-H4-15B	6/20/95	B0FN44			16000.00 D	
199-H4-15B	6/20/95	B0FN45	.55 U	12.00 L		4700.00
199-H4-16	6/20/95	B0FN46			9200.00	
199-H4-16	6/20/95	B0FN47	2.60 L	11.00 U		2800.00
199-H4-17	6/20/95	B0FN48			35000.00 D	
199-H4-17	6/20/95	B0FN49	.61 L	11.00 U		6200.00
199-H4-18	6/20/95	B0FN50			54000.00 D	
199-H4-18	6/20/95	B0FN51	.55 U	11.00 U		4900.00
199-H4-3	6/19/95	B0FN52			31000.00 D	
199-H4-3	6/19/95	B0FN53	2.50 L	11.00 L		6900.00
199-H4-4	6/20/95	B0FN54			7400.00	
199-H4-4	6/20/95	B0FN55	.87 L	11.00 U		3100.00
199-H4-5	6/20/95	B0FN56			29000.00 D	
199-H4-5	6/20/95	B0FN57	.55 U	11.00 U		5000.00
199-H4-6	6/20/95	B0FN58			27000.00 D	
199-H4-6	6/20/95	B0FN59	89.00	11.00 U		6400.00
199-H4-7	6/19/95	B0FN60			36000.00 D	
199-H4-7	6/19/95	B0FN61	.55 U	11.00 U		6200.00
199-H4-8	6/19/95	B0FN62			32000.00 D	
199-H4-8	6/19/95	B0FN63	1.20 L	11.00 U		5400.00
199-H4-9	6/21/95	B0FN64			35000.00 D	
199-H4-9	6/21/95	B0FN65	4.10 L	11.00 U		4800.00

Table 3-4. Constituents with at Least One Detected Value for the 183-H Solar Evaporation Basins Data for Reporting Period April 1 through June 30, 1995.
(sheet 5 of 6)

Well Name	Collection Date	Sample Number	FSODIUM 34/ppb 44/.	SULFATE 124/ppb 130/250000	TC-99 143/pCi/L ./900	TURBID 111/NTU ./.
199-H3-1	6/19/95	B0FN00		40000.00 D	.28 U	1.72
199-H3-1	6/19/95	B0FN01		42000.00 D	.19 U	
199-H3-1	6/19/95	B0FN02	16000.00			
199-H3-1	6/19/95	B0FN03	15000.00			
199-H3-2A	6/15/95	B0FN04		63000.00 D	3.58	.23
199-H3-2A	6/15/95	B0FN05	20000.00			
199-H3-2B	6/15/95	B0FN06		56000.00 D	.17 U	.27
199-H3-2B	6/15/95	B0FN07	18000.00			
199-H3-2C	6/15/95	B0FN08		11000.00 D	.85 U	.38
199-H3-2C	6/15/95	B0FN09	9800.00			
199-H4-10	6/21/95	B0FN11		15000.00 D	-.79 U	.14
199-H4-10	6/21/95	B0FN12	6400.00			
199-H4-11	6/21/95	B0FN15		32000.00 D	79.00	.39
199-H4-11	6/21/95	B0FN16	12000.00			
199-H4-12A	6/21/95	B0FN19		20000.00 D	.16 U	.13
199-H4-12A	6/21/95	B0FN20	8000.00			
199-H4-12B	6/21/95	B0FN25		34000.00 D	3.13	.34
199-H4-12B	6/21/95	B0FN26	11000.00			
199-H4-12C	6/21/95	B0FN30		24000.00 D	-.86 U	.28
199-H4-12C	6/21/95	B0FN31	5000.00			
199-H4-13	6/21/95	B0FN35		23000.00 D	1.76 U	1.06
199-H4-13	6/21/95	B0FN36	5600.00			
199-H4-14	6/19/95	B0FN38		27000.00 D	.15 U	.52
199-H4-14	6/19/95	B0FN39	10000.00			
199-H4-15A	6/20/95	B0FN41		36000.00 D	-.39 U	.19
199-H4-15A	6/20/95	B0FN42	10000.00			
199-H4-15B	6/20/95	B0FN44		39000.00 D	-.75 U	.44
199-H4-15B	6/20/95	B0FN45	9600.00			
199-H4-16	6/20/95	B0FN46		25000.00 D	.00 U	.22
199-H4-16	6/20/95	B0FN47	5800.00			
199-H4-17	6/20/95	B0FN48		75000.00 D	-.30 U	2.23
199-H4-17	6/20/95	B0FN49	16000.00			
199-H4-18	6/20/95	B0FN50		59000.00 D	173.00	.21
199-H4-18	6/20/95	B0FN51	15000.00			
199-H4-3	6/19/95	B0FN52		89000.00 D	921.00	2.53
199-H4-3	6/19/95	B0FN53	130000.00			
199-H4-4	6/20/95	B0FN54		17000.00 D	6.55	1.85
199-H4-4	6/20/95	B0FN55	7800.00			
199-H4-5	6/20/95	B0FN56		58000.00 D	-.29 U	.85
199-H4-5	6/20/95	B0FN57	13000.00			
199-H4-6	6/20/95	B0FN58		71000.00 D	.11 U	22.60
199-H4-6	6/20/95	B0FN59	25000.00			
199-H4-7	6/19/95	B0FN60		88000.00 D	.44 U	.85
199-H4-7	6/19/95	B0FN61	21000.00			
199-H4-8	6/19/95	B0FN62		65000.00 D	.69 U	3.46
199-H4-8	6/19/95	B0FN63	16000.00			
199-H4-9	6/21/95	B0FN64		63000.00 D	11.50	31.40
199-H4-9	6/21/95	B0FN65	19000.00			

Table 3-4. Constituents with at Least One Detected Value for the 183-H Solar Evaporation Basins Data for Reporting Period April 1 through June 30, 1995.
(sheet 6 of 6)

Well Name	Collection Date	Sample Number	URANIUM 145/ppb ./.	FMAMADI 34/ppb 1.9/.	FZINC 34/ppb 3.7/5000
199-H3-1	6/19/95	B0FN00	2.43		
199-H3-1	6/19/95	B0FN01	2.25		
199-H3-1	6/19/95	B0FN02		8.90 L	11.00 B
199-H3-1	6/19/95	B0FN03		10.00 L	5.50 BL
199-H3-2A	6/15/95	B0FN04	3.94		
199-H3-2A	6/15/95	B0FN05		9.50 L	3.70 U
199-H3-2B	6/15/95	B0FN06	4.25		
199-H3-2B	6/15/95	B0FN07		7.60 L	8.20 BL
199-H3-2C	6/15/95	B0FN08	1.07		
199-H3-2C	6/15/95	B0FN09		36.00	17.00 B
199-H4-10	6/21/95	B0FN11	.64		
199-H4-10	6/21/95	B0FN12		4.80 L	9.90 BL
199-H4-11	6/21/95	B0FN15	4.78		
199-H4-11	6/21/95	B0FN16		2.70 L	8.90 BL
199-H4-12A	6/21/95	B0FN19	1.75		
199-H4-12A	6/21/95	B0FN20		7.80 L	7.20 BL
199-H4-12B	6/21/95	B0FN25	2.42		
199-H4-12B	6/21/95	B0FN26		6.70 L	4.60 BL
199-H4-12C	6/21/95	B0FN30	1.27		
199-H4-12C	6/21/95	B0FN31		26.00 L	3.70 U
199-H4-13	6/21/95	B0FN35	1.81		
199-H4-13	6/21/95	B0FN36		4.30 L	5.60 BL
199-H4-14	6/19/95	B0FN38	1.82		
199-H4-14	6/19/95	B0FN39		7.00 L	4.50 BL
199-H4-15A	6/20/95	B0FN41	1.83		
199-H4-15A	6/20/95	B0FN42		9.90 BL	25.00 B
199-H4-15B	6/20/95	B0FN44	2.02		
199-H4-15B	6/20/95	B0FN45		10.00 BL	11.00 B
199-H4-16	6/20/95	B0FN46	2.07		
199-H4-16	6/20/95	B0FN47		3.90 BL	16.00 B
199-H4-17	6/20/95	B0FN48	4.32		
199-H4-17	6/20/95	B0FN49		7.20 BL	5.70 BL
199-H4-18	6/20/95	B0FN50	7.07		
199-H4-18	6/20/95	B0FN51		6.90 BL	4.80 BL
199-H4-3	6/19/95	B0FN52	95.70		
199-H4-3	6/19/95	B0FN53		4.00 L	5.30 BL
199-H4-4	6/20/95	B0FN54	1.84		
199-H4-4	6/20/95	B0FN55		5.50 BL	12.00 B
199-H4-5	6/20/95	B0FN56	3.79		
199-H4-5	6/20/95	B0FN57		5.60 BL	4.60 BL
199-H4-6	6/20/95	B0FN58	6.92		
199-H4-6	6/20/95	B0FN59		6.50 BL	12.00 B
199-H4-7	6/19/95	B0FN60	6.69		
199-H4-7	6/19/95	B0FN61		6.90 L	3.70 U
199-H4-8	6/19/95	B0FN62	4.74		
199-H4-8	6/19/95	B0FN63		5.00 L	6.90 BL
199-H4-9	6/21/95	B0FN64	7.19		
199-H4-9	6/21/95	B0FN65		4.60 L	7.90 BL

For explanation of this table, see Section 1.4 of report.

Table 3-5. Contamination Indicator Parameters for the I83-H Solar Evaporation Basins Data for Reporting Period April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	COND FIELD μmho 1/.	COND LAB μmho 1/.	pH FIELD .01/6.5-8.5a	pH LAB .01/6.5-8.5a	TOC ppb */.	TOX ppb */.
199-H3-1	6/19/95	B0FN00	256		8.17			10.0
		B0FN01						10.0
199-H3-2A	6/15/95	B0FN04	466		8.13			6.9 U
199-H3-2B	6/15/95	B0FN06	471		7.88			10.0
199-H3-2C	6/15/95	B0FN08	237		7.97			6.9 U
199-H4-10	6/21/95	B0FN11	199		7.46			6.9 U
199-H4-11	6/21/95	B0FN15	329		7.34			10.0
199-H4-12A	6/21/95	B0FN19	240		8.15			6.9 U
199-H4-12B	6/21/95	B0FN25	326		8.06			6.9 U
199-H4-12C	6/21/95	B0FN30	259		8.03			6.9 U
199-H4-13	6/21/95	B0FN33	244		6.58			6.9 U
199-H4-14	6/19/95	B0FN38	291		7.62			10.0
199-H4-15A	6/20/95	B0FN41	339		7.57			6.9 U
199-H4-15B	6/20/95	B0FN44	359		7.66			6.9 U
199-H4-16	6/20/95	B0FN46	294		8.56			20.0
199-H4-17	6/20/95	B0FN48	523		7.57			6.9 U
199-H4-18	6/20/95	B0FN50	524		7.70			10.0
199-H4-3	6/19/95	B0FN52	1121		7.81			6.9 U
199-H4-4	6/20/95	B0FN54	223		8.20			6.9 U
199-H4-5	6/20/95	B0FN56	479		7.84			6.9 U
199-H4-6	6/20/95	B0FN58	534		7.82			6.9 U
199-H4-7	6/19/95	B0FN60	608		7.67			10.0
199-H4-8	6/19/95	B0FN62	516		7.43			6.9 U
199-H4-9	6/21/95	B0FN64	492		7.72			6.9 U

* Detection limits for TOC and TOX vary depending on the performing laboratory. For explanation of this table, see Section 1.4 of report.

Table 3-6. Drinking Water Standards Exceeded for the 183-H Basins,
First Quarter 1995.

Constituent (DWS)	Wells exceeding DWS (number of samples)
Field pH (6.5, 8.5)	H4-16
Chromium, filtered samples (50 ppb)	H3-2A, H3-2B, H4-12B, H4-12C, H4-15A, H4-15B, H4-17, H4-18, H4-3, H4-5, H4-6, H4-7, H4-8, H4-9
Gross alpha (15 pCi/L)	H4-3, H4-15A ^a
Manganese, filtered sample (50 ppb)	H4-6
Nitrate (45,000 ppb)	H4-3, H4-18.
Technetium-99 (900 pCi/L)	H4-3

^aData are in question. Requests for Analytical Data Evaluation were submitted.

DWS = drinking water standard.

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4.0 100-N RCRA SITES

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Westinghouse Hanford Company

4.1 INTRODUCTION

Four interim-status RCRA disposal units are located in the 100-N Area of the Hanford Site: (1) the 1301-N Liquid Waste Disposal Facility (LWDF), (2) the 1324-N Surface Impoundment, (3) the 1324-NA Percolation Pond, and (4) the 1325-N LWDF. These units and their associated well locations are shown in Figure 4-1. Sampling networks are listed in Table 4-1. The 1324-N and 1324-NA units are monitored as a single site. RCRA monitoring began in late 1987. The 1324-N/NA site is monitored under a groundwater quality assessment program because of elevated levels of TOX (40 CFR 265.93). The 1325-N LWDF is monitored under an indicator parameter evaluation program (40 CFR 265.92). Background concentrations have been reestablished for the 1301-N LWDF.

The 1301-N and 1325-N LWDFs were used for disposal of liquid effluent from the N Reactor and associated facilities. Primary waste constituents were radionuclides, including strontium-90, tritium, and cobalt-60. Minor amounts of hazardous waste also were present in the waste streams (e.g., hydrazine). The 1324-N/NA units received corrosive waste. The 100-N RCRA units are currently not in use.

4.2 WATER LEVEL MEASUREMENTS

Water levels previously have been measured monthly in most of the 100-N Area wells to track changes caused by river stage fluctuations. Many of the wells are now equipped with pressure transducers and data loggers that which record water levels hourly, and monthly measurements are no longer required. Water levels measured before sample collection are listed in Table 4-2.

4.3 WATER CHEMISTRY DATA

The wells in the 1301-N and 1325-N networks were not scheduled for sampling last quarter. Well N-29 (1325-N) was sampled in early April because sampling was delayed during the first quarter when there was an electrical problem with the pump. Well N-59 (1324-N/NA) had insufficient water to sample. All other 1324-N/NA wells were sampled as scheduled.

Groundwater chemistry data from samples collected during the second quarter of 1995 are listed in Tables 4-3 through 4-5. Data qualifiers and data flags are discussed in Sections 1.2 and 1.4, respectively. DWSs were

exceeded for the constituents listed in Table 4-6. Carbon tetrachloride was detected in well N-77, but the value is inconsistent with previous data so a data evaluation was requested. A data evaluation was also requested for filtered zinc in well N-73.

Figure 4-1. Well location map for the 1301-N, 1324-N/NA, and 1325-N facilities.

Table 4-1. Monitoring Well Purpose and Sampling Schedule for the 100-N Area.

Well no. (199-)	RCRA site	Relative position	Sample frequency	Sample date, 2nd Qtr 1995
N-2	1301-N	Downgradient	Semiannually	not scheduled
N-3	1301-N	Downgradient	Semiannually	not scheduled
N-14	1301-N	Downgradient	Semiannually	not scheduled
N-27	1325-N	Downgradient	Semiannually	not scheduled
N-29	1325-N	Downgradient	Semiannually	4/4/95 ^a
N-32	1325-N	Downgradient	Semiannually	not scheduled
N-34	1301-N	Upgradient	Semiannually	not scheduled
N-41	1325-N	Downgradient	Semiannually	not scheduled
N-43	1325-N	Downgradient	Semiannually	not scheduled
N-57	1301-N	Upgradient	Semiannually	not scheduled
N-59	1324-N/NA	Downgradient	Quarterly	not sampled ^b
N-67	1301-N	Downgradient	Semiannually	not scheduled
N-70	1325-N	Downgradient; bottom of aquifer	Semiannually	not scheduled
N-71	1324-N/NA	Upgradient	Quarterly	5/2/95
N-72	1324-N/NA	Downgradient	Quarterly	5/2/95
N-73	1324-N/NA	Downgradient	Quarterly	5/2/95
N-74	1325-N	Upgradient	Semiannually	not scheduled
N-75	1301-N	Downgradient	Semiannually	not scheduled
N-76	1301-N	Downgradient	Semiannually	not scheduled
N-77	1324-N/NA	Downgradient; bottom of aquifer	Quarterly	5/3/95
N-81	1325-N	Downgradient	Semiannually	not scheduled

Note: The hydrogeologic unit monitored is the unconfined aquifer, which comprises sands and gravels of the Ringold Formation.

^aSampling delayed from 1st quarter until April because of electrical problems in pump.

^bInsufficient water in well.

RCRA = Resource Conservation and Recovery Act of 1976.

Table 4-2. RCRA Water Level Measurement Report
Area, Second Quarter 1995.

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer				
199-N-14	6/22/95	66.72	386.94	117.94
199-N-26	6/22/95	68.72	387.52	118.12
199-N-29	4/04/95	78.20*	387.05	117.97
199-N-71	5/02/95	74.59*	388.45	118.40
199-N-72	5/02/95	71.64*	387.35	118.06
199-N-73	5/03/95	76.15*	387.13	118.00
	6/22/95	75.41	387.82	118.21
199-N-74	6/22/95	68.95	388.67	118.47
199-N-81	6/13/95	76.78*	385.93	117.63
699-81-58	6/01/95	47.73	391.76	119.41
Wells Monitoring the Bottom of the Unconfined Aquifer				
199-N-77	5/03/95	72.30*	387.14	118.00

- NOTES: 1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
2. Depth-to-water values are transcribed from field records.
3. Measurements marked with an '*' were taken at the time of sampling.
4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 4-3. Constituent List and Summary of Results for
100-N RCRA Sites Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 2)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
CONDUCT	94	Conductivity, field	umhos	1			11	11	
CONDUCT	73	Conductivity, lab	umhos				5	5	
TOC		Total Organic Carbon	ppb	140			11	11	
TOX		Total Organic Halogen	ppb	6.9			11	5	
PH	93	pH, field	pH	.01	6.5-8.5	EPAS	11	11	0
PH	125	pH, lab	pH		6.5-8.5	EPAS	5	5	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
FBARIUM		Barium, filtered	ppb	1.4	1000	EPAI	5	5	0
FCADMIU		Cadmium, filtered	ppb	.98	10	EPAI	5	0	0
FCHROMI		Chromium, filtered	ppb	3.7	50	EPAI	5	2	0
FLUORID		Fluoride	ppb	52	1400	EPAI	5	5	0
ALPHA		Gross alpha	pCi/L		15	EPA	5	1	0
NITRATE		Nitrate	ppb	120	45000	EPA	5	5	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
CHLORID		Chloride	ppb	110	250000	EPAS	5	5	0
FIROM		Iron, filtered	ppb	8.9	300	EPAS	5	5	0
FMANGAN		Manganese, filtered	ppb	.55	50	EPAS	5	4	0
LPHENOL		Phenol	ppb	.58			1	0	
FSODIUM		Sodium, filtered	ppb	44			5	5	
SULFATE		Sulfate	ppb	130	250000	EPAS	5	5	3

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
1,1,1-T		1,1,1-Trichloroethane	ppb	.061	200	EPA	4	0	0
1,1,2-T		1,1,2-Trichloroethane	ppb	.068			4	0	
1,1-DIC		1,1-Dichloroethane	ppb	.047			4	0	
1,2-DIC		1,2-Dichloroethane	ppb	.049	5	EPA	4	0	0
14-dben		1,4-Dichlorobenzene	ppb	.056	75	EPA	4	0	0
246-trp		2,4,6-Trichlorophenol	ppb	.8			1	0	
24-dchp		2,4-Dichlorophenol	ppb	.43			1	0	
DIMPHEN		2,4-Dimethylphenol	ppb	.62			1	0	
DINPHEN		2,4-Dinitrophenol	ppb	6.8			1	0	
26-dchp		2,6-Dichlorophenol	ppb	.52			1	0	
CHLPHEN		2-Chlorophenol	ppb	.6			1	0	
2NITPH		2-Nitrophenol	ppb	.6			1	0	
BUTDIMP		2-sec-Butyl-4,6-dinitrophenol (DB)	ppb	.41			1	0	
460N2NP		4,6-Dinitro-2-methylphenol	ppb	.84			1	0	
CHLCRES		4-Chloro-3-methylphenol	ppb	.52			1	0	
NITPHEN		4-Nitrophenol	ppb	.49			1	0	
ALKALIN		Alkalinity	ppm	3.5			5	5	
ALUMIN		Aluminum, filtered	ppb	31			5	0	

Table 4-3. Constituent List and Summary of Results for 100-N RCRA Sites
Data for Reporting Period April 1 through June 30, 1995.
(sheet 2 of 2)

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
PANTIMO		Antimony, filtered	ppb	24				5	0	
BENZENE		Benzene	ppb	.059	5	EPA		4	0	0
BERYLL		Beryllium, filtered	ppb	.63				5	0	
BROMIDE		Bromide	ppb	72				5	0	
CALCIU		Calcium, filtered	ppb	41				5	5	
TETRAE		Carbon tetrachloride	ppb	.042	5	EPA		4	2	1
CHLFORM		Chloroform	ppb	.029				4	4	
COBALT		Cobalt, filtered	ppb	5.3				5	0	
COOPER		Copper, filtered	ppb	2.1	1000	EPAS		5	1	0
CRESOLS		Cresols (methylphenols)	ppb	1.7				1	0	
ETHBENZ		Ethylbenzene	ppb	.034	700	EPA		4	0	0
BETA		Gross beta	pCi/L					5	5	
LEAD		Lead, filtered	ppb	.88	50	EPAI		1	1	0
MAGNES		Magnesium, filtered	ppb	26				5	5	
METHYCH		Methylene chloride	ppb	.084				4	0	
NICKEL		Nickel, filtered	ppb	11				5	0	
NITRITE		Nitrite	ppb	140	1000	EPA		5	0	0
PENTACHP		Pentachlorophenol	ppb	.48	1	EPA		1	0	0
PHOSPHA		Phosphate	ppb	340				5	0	
POTASS		Potassium, filtered	ppb	390				5	5	
SILVER		Silver, filtered	ppb	5.5	50	EPAI		5	0	0
PERCENE		Tetrachloroethene	ppb	.035	5	EPA		4	0	0
TETPHNL		Tetrachlorophenols	ppb	.52				1	0	
TIN		Tin, filtered	ppb	30				5	0	
TOLUENE		Toluene	ppb	.048	1000	EPA		4	0	0
TDS		Total Dissolved Solids	ppm	10	500	EPAS		4	4	3
TRICENE		Trichloroethene	ppb	.075	5	EPA		4	0	0
TRIPHNL		Trichlorophenols	ppb	.56				1	0	
TURBID 111		Turbidity	NTU					5	5	
TURBID 126		Turbidity	NTU	.016				1	1	
VRANADI		Vanadium, filtered	ppb	1.9				5	5	
VINYIDE		Vinyl chloride	ppb	.25	2	EPA		4	0	0
XYLENE		Xylenes (total)	ppb	.085	10000	EPA		4	0	0
ZINC		Zinc, filtered	ppb	3.7	5000	EPAS		5	2	0
CIS12DE		cis-1,2-Dichloroethylene	ppb	.049	70	EPA		4	0	0
TRANSCE		trans-1,2-Dichloroethylene	ppb	.045	100	EPA		4	0	0

For explanation of this table, see Section 1.4 of report.

Table 4-4. Constituents with at Least One Detected Value for the
100-N RCRA Sites Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 2)

Well Name	Collection Date	Sample Number	ALKALIN 357/ppm 3.5/.	PHOSPH 34/ppb 1.4/1000	FCALCIU 34/ppb 41/.	TETRAHE 25/ppb .042/5
199-N-29	4/04/95	800W26	60.00			
199-N-29	4/04/95	800X00		26.00	46000.00	
199-N-71	5/02/95	80FCB1	110.00			.04 U
199-N-71	5/02/95	80FCB5		18.00 L	17000.00	
199-N-72	5/02/95	80FCB6	90.00			.04 U
199-N-72	5/02/95	80FCB7		68.00	93000.00	
199-N-73	5/03/95	80FCB8	130.00			1.10
199-N-73	5/03/95	80FCB9		46.00	28000.00	
199-N-77	5/03/95	80FCC0	120.00			6.50 F
199-N-77	5/03/95	80FCC1		37.00	33000.00	

Well Name	Collection Date	Sample Number	CHLORID 124/ppb 110/250000	CHLFORM 25/ppb .029/.	FENIRONI 34/ppb 3.7/50	FCOPPER 34/ppb 2.1/1000
199-N-29	4/04/95	800W26	4900.00			
199-N-29	4/04/95	800X00			8.80 BL	2.10 U
199-N-71	5/02/95	80FCB1	3500.00	3.50		
199-N-71	5/02/95	80FCB5			4.90 L	2.10 U
199-N-72	5/02/95	80FCB6	7000.00	6.90		
199-N-72	5/02/95	80FCB7			3.70 U	3.20 L
199-N-73	5/03/95	80FCB8	5700.00	6.50		
199-N-73	5/03/95	80FCB9			3.70 U	2.10 U
199-N-77	5/03/95	80FCC0	5700.00	6.70		
199-N-77	5/03/95	80FCC1			3.70 U	2.10 U

Well Name	Collection Date	Sample Number	FLUORID 124/ppb 52/1400	ALPHA 135/pCi/L ./15	BETA 135/pCi/L ./.	FIROW 34/ppb 8.9/300
199-N-29	4/04/95	800W26	300.00	2.44	438.00	
199-N-29	4/04/95	800X00				18.00 L
199-N-71	5/02/95	80FCB1	600.00	.77 U	4.76	
199-N-71	5/02/95	80FCB5				32.00 B
199-N-72	5/02/95	80FCB6	1000.00	2.53 U	5.11	
199-N-72	5/02/95	80FCB7				26.00 B
199-N-73	5/03/95	80FCB8	1400.00	-.05 U	4.68	
199-N-73	5/03/95	80FCB9				17.00 BL
199-N-77	5/03/95	80FCC0	1400.00	-.39 U	4.50	
199-N-77	5/03/95	80FCC1				16.00 BL

Table 4-4. Constituents with at Least One Detected Value for the
100-N RCRA Sites Data for Reporting Period
April 1 through June 30, 1995.
(sheet 2 of 2)

Well Name	Collection Date	Sample Number	FLEAD 40/ppb .88/50	FMAGNES 34/ppb 26/.	FMANGAN 34/ppb .55/50	NITRATE 124/ppb 120/45000
199-N-29	4/04/95	B00M26				14000.00 D
199-N-29	4/04/95	B00X00	2.80 L	8100.00	1.70 L	
199-N-71	5/02/95	B0FC81				2000.00
199-N-71	5/02/95	B0FC85		4900.00	1.80 L	
199-N-72	5/02/95	B0FC86				5800.00
199-N-72	5/02/95	B0FC87		20000.00	.55 U	
199-N-73	5/03/95	B0FC88				4400.00
199-N-73	5/03/95	B0FC89		5700.00	1.90 BL	
199-N-77	5/03/95	B0FCC0				2900.00
199-N-77	5/03/95	B0FCC1		8300.00	.84 BL	

Well Name	Collection Date	Sample Number	FPOTASS 34/ppb 390/.	FSODIUM 34/ppb 44/.	SULFATE 124/ppb 130/250000	TDS 65/ppm 10/500
199-N-29	4/04/95	B00M26			70000.00 D	
199-N-29	4/04/95	B00X00	3600.00	3700.00 B		
199-N-71	5/02/95	B0FC81			26000.00 D	190.00
199-N-71	5/02/95	B0FC85	3900.00	36000.00		
199-N-72	5/02/95	B0FC86			270000.00 D	680.00
199-N-72	5/02/95	B0FC87	5900.00	69000.00		
199-N-73	5/03/95	B0FC88			410000.00 D	890.00
199-N-73	5/03/95	B0FC89	2800.00	230000.00 B		
199-N-77	5/03/95	B0FCC0			310000.00 D	750.00
199-N-77	5/03/95	B0FCC1	4600.00	180000.00 B		

Well Name	Collection Date	Sample Number	TURBID 111/NTU ./.	TURBID 126/NTU .016/.	FVANADI 34/ppb 1.9/.	FZINC 34/ppb 3.7/5000
199-N-29	4/04/95	B00M26	.57	.53		
199-N-29	4/04/95	B00X00			7.30 L	7.90 L
199-N-71	5/02/95	B0FC81	1.40			
199-N-71	5/02/95	B0FC85			28.00 L	3.70 U
199-N-72	5/02/95	B0FC86	.79			
199-N-72	5/02/95	B0FC87			3.60 L	3.70 U
199-N-73	5/03/95	B0FC88	.32			
199-N-73	5/03/95	B0FC89			9.00 L	16.00 F
199-N-77	5/03/95	B0FCC0	.41			
199-N-77	5/03/95	B0FCC1			14.00 L	3.70 U

For explanation of this table, see Section 1.4 of report.

Table 4-5. Contamination Indicator Parameters for the
100-N RCRA Sites Data for Reporting Period
April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	COND FIELD uMho 1/.	COND LAB uMho 1/.	pH FIELD .01/6.5-8.5s	pH LAB .01/6.5-8.5s	TOC ppb %/.	TOX ppb %/.
199-N-29	4/04/95	B00M26	337	330	8.06	8.10 H	300 L	8.2 Y
		B00M27	338		8.06		200 L	7.3 Y
		B00M28	338		8.05		200 L	8.3 Y
		B00M29	338		8.05		200 L	5.1 Y
199-N-71	5/02/95	B0FCB1	299	280	8.22	8.30	200 L	6.9 U
		B0FCB2	299		8.21		300 L	6.9 U
		B0FCB3	299		8.22		200 L	6.9 U
		B0FCB4	299		8.22		300 L	6.9 U
199-N-72	5/02/95	B0FCB6	935	900	7.92	8.00	400 L	8.8 L
199-N-73	5/03/95	B0FCB8	1278	1300	7.99	8.20	300 L	8.0 L
199-N-77	5/03/95	B0FCB0	1077	1100	8.07	8.20	200 L	6.9 U

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

Table 4-6. Drinking Water Standards Exceeded for 100-N Area RCRA Sites.

Constituent (DWS)	Wells exceeding DWS (number of samples)
Carbon tetrachloride (5 ppb)	1324-N/NA: N-77*
Sulfate (250,000 ppb)	1324-N/NA: N-72, N-73, N-77.
Total dissolved solids (500 ppb)	1324-N/NA: N-72, N-73, N-77.

*Data are in question. Request for Analytical Data Evaluation was submitted.

DWS = drinking water standard.

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5.0 216-B-3 POND SYSTEM

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5.1 INTRODUCTION

The 216-B-3 Pond System is located east of the 200 East Area and originally consisted of a main pond and three expansion ponds for waste water disposal. Several ditches leading to the ponds and the main pond itself are no longer in use and are backfilled (Figures 1-1 and 5-1). These surface impoundments cover approximately 41.3 hectares (102 acres). Only the 3C expansion pond now receives waste water. Table 5-1 lists the groundwater wells and their monitoring status.

The 216-B-3 Pond System groundwater monitoring well locations are shown in Figure 5-1. Detection monitoring began at the 216-B-3 Pond System in November 1988 and continued through June 1990, when assessment monitoring was scheduled to begin because of elevated levels of TOX in two downgradient monitoring wells (699-43-41E and 699-43-41F). Assessment monitoring actually began in June 1991 when groundwater sampling on the Hanford Site resumed following a hiatus, as described in the *Groundwater Quality Assessment Plan for the 216-B-3 Pond System* (Harris 1990). Thus far, no specific constituents have been demonstrably linked to the elevated TOX results.

5.2 WATER LEVEL DATA

Water levels in B Pond wells were measured monthly to quarterly, and once during sample events during the April through June 1995 period. Table 5-2 lists the results of the water level measurements. The result for well 699-42-39A is outside of the expected range of water levels for this well, and may be in error.

5.3 WATER CHEMISTRY DATA

All wells scheduled for the April through June 1995 sampling were sampled during April, except upgradient well 299-E18-1, which was sampled in June. Any results for the period that are unavailable as of the writing of this report will be reported in future quarterly reports.

The list of constituents for which data were received and the summary of results available are given in Table 5-3. The results of the available analyses, for constituents with at least one value above the MDL, are reported in Table 5-4. Results of analyses for CIPs are reported in Table 5-5. Explanations of data flags and qualifiers are given in Section 1.4.

The constituent list for this quarter includes those required by regulations and compounds under investigation for potential links to elevated

TOX results. Groundwater monitoring requirements and strategy for the 216-B-3 Pond System are described by Sweeney (1995).

As of this reporting, most analyses were unavailable for publishing or comment. Wells 699-42-40A and 699-44-39B exceeded the upper DWS limit for pH. Missing analyses will receive comment in future reports, as needed. The sampling schedule for wells 699-40-36, 699-41-35, 699-42-37 has been modified to accommodate the 200 Area Treated Effluent Disposal Facility. Analytical results from these wells will still be listed in the RCRA quarterly report, as they become available.

Figure 5-1. 216-B-3 Pond Groundwater Monitoring Network.

H0312019.1

Table 5-1. Monitoring Well Purpose and Sampling Schedule
for the 216-B-3 Pond System Network.

Well no.	Relative position	Hydrogeologic unit	Sample frequency	Sample date, 2nd Qtr 1995
299-E18-1 ^a	Upgradient	Hanford: Water Table	Quarterly	6/5/95
299-E32-4 ^b	Upgradient	Hanford: Water Table	Quarterly	4/11/95
699-40-36 ^c	Downgradient	Ringold: Top of Confined	Quarterly	--- ¹
699-40-39	Downgradient	Ringold: Upper Confined	Quarterly	4/12/95
699-40-40A	Downgradient	Ringold: Lower Confined	Quarterly	4/11/95
699-40-40B	Downgradient	Ringold: Upper Confined	Quarterly	4/12/95
699-41-35 ^c	Downgradient	Ringold: Top of Confined	Quarterly	--- ¹
699-41-40	Downgradient	Ringold: Upper Confined	Quarterly	4/12/95
699-41-42	Downgradient	Ringold: Top of Confined	Quarterly	4/13/95
699-42-37 ^c	Downgradient	Ringold: Top of Confined	Quarterly	--- ¹
699-42-39A	Downgradient	Ringold: Upper Confined	Quarterly	4/11/95
699-42-39B	Downgradient	Ringold: Lower Confined	Quarterly	4/11/95
699-42-40A	Downgradient	Ringold: Upper Confined	Quarterly	4/13/95
699-42-41	Downgradient	Ringold: Water Table	Quarterly	4/11/95
699-42-42B	Downgradient	Ringold: Lower Unconfined	Quarterly	4/13/95
699-43-40	Downgradient	Ringold: Water Table	Quarterly	4/11/95
699-43-41E	Downgradient	Ringold: Upper Confined	Quarterly	4/12/95
699-43-41F	Downgradient	Ringold: Lower Confined	Quarterly	4/12/95
699-43-41G	Downgradient	Ringold: Bottom of Confined	Quarterly	4/12/95
699-43-42J	Downgradient	Ringold: Water Table	Quarterly	4/12/95
699-43-43 ^d	Downgradient	Hanford/Ringold: Water Table	Quarterly	4/5/95
699-43-45 ^d	Downgradient	Hanford/Ringold: Water Table	Quarterly	4/5/95
699-44-39B	Downgradient	Ringold: Water Table	Quarterly	4/13/95
699-44-42	Downgradient	Ringold: Water Table	Quarterly	4/12/95
699-44-43B	Downgradient	Ringold: Water Table	Quarterly	4/11/95

^aWell shared with the 2101-M Pond network.

^bWell shared with the Low-Level Waste Burial Grounds network.

^cWells shared with the W-049H Treated Effluent Disposal Basin network.

^dWells shared with the 216-A-29 Ditch network.

¹ Analytical results unavailable as of this report.

Table 5-2. RCRA Water Level Measurement Report for the
216-B-3 Pond System, Second Quarter 1995.
(sheet 1 of 3)

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
299-E18-1	6/05/95	319.69*	400.55	122.09
	6/19/95	319.08	401.16	122.27
299-E32-4	4/11/95	285.15*	400.73	122.14
	6/07/95	284.94*	401.17	122.28
	6/28/95	285.06	401.05	122.24
699-40-36	4/17/95	118.10	410.82	125.22
	5/16/95	118.04	410.88	125.24
	6/15/95	118.12	410.80	125.21
699-40-39	4/12/95	129.47*	412.37	125.69
	4/17/95	129.38	412.46	125.72
	5/16/95	129.34	412.50	125.73
	6/15/95	129.45	412.39	125.70
699-40-40A	4/11/95	130.22*	410.99	125.27
	6/15/95	130.09	411.12	125.31
699-40-40B	4/12/95	130.80*	411.38	125.39
	6/15/95	130.76	411.42	125.40
699-41-35	4/17/95	108.45	411.93	125.56
	4/20/95	108.30*	412.08	125.60
	5/16/95	108.38	412.00	125.58
	6/15/95	108.41	411.97	125.57
699-41-40	4/12/95	130.68*	415.26	126.57
	6/15/95	130.63	415.31	126.59
699-41-42	4/13/95	232.91*	411.00	125.27
	6/15/95	232.92	410.99	125.27
699-42-37	4/17/95	104.37	415.05	126.51
	5/16/95	104.25	415.17	126.54
	6/15/95	104.35	415.05	126.51
699-42-39A	4/11/95	137.06*+	421.08	128.35
	6/15/95	139.02	419.12	127.75
699-42-39B	4/11/95	139.86*	418.46	127.55
	6/15/95	139.44	418.88	127.67

Table 5-2. RCRA Water Level Measurement Report
 216-B-3 Pond System, Second Quarter 1995.
 (sheet 2 of 3)

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
699-42-40A	4/13/95	123.70*	421.83	128.57
	6/15/95	122.99	422.54	128.79
699-42-41	4/11/95	147.00*	420.30	128.11
	6/15/95	146.42	420.88	128.28
699-42-42B	4/13/95	167.35*	415.88	126.76
	6/15/95	167.29	415.94	126.78
699-43-40	4/11/95	121.99*	420.21	128.08
	6/15/95	122.33	419.87	127.98
699-43-41E	4/12/95	130.32*	420.54	128.18
	6/15/95	130.28	420.58	128.19
699-43-41F	4/12/95	130.41*	420.60	128.20
	6/15/95	130.30	420.71	128.23
699-43-41G	4/12/95	134.74*	416.60	126.98
	6/15/95	135.09	416.25	126.87
699-43-42J	4/12/95	164.25*	417.43	127.23
	6/15/95	164.22	417.46	127.24
699-43-43	4/05/95	166.50*	412.87	125.84
	6/15/95	166.18	413.19	125.94
699-43-45	4/05/95	195.55*	402.13	122.57
	6/15/95	195.64	402.04	122.54
699-44-39B	4/13/95	92.97*	420.43	128.15
	6/15/95	93.40	420.00	128.02
699-44-42	4/12/95	159.97*	419.25	127.79
	6/15/95	160.26	418.96	127.70

Table 5-2. RCRA Water Level Measurement Report
 216-B-3 Pond System, Second Quarter 1995.
 (sheet 3 of 3)

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
699-44-438	4/11/95	166.80*	413.32	125.98
	6/15/95	167.23	412.89	125.85

- NOTES: 1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
2. Depth-to-water values are transcribed from field records.
3. Measurements marked with an '*' were taken at the time of sampling.
4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 5-3. Constituent List and Summary of Results for the
216-B-3 Pond Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 4)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
CONDUCT	94	Conductivity, field	umhos	1				96	96	
CONDUCT	1023	Specific conductance	umho/cm	100				10	10	
TGC	122	Total Organic Carbon	ppb	140				8	7	
TGC	1230	Total Organic Carbon	ppb	1000				40	0	
TOX	1216	Total Organic Halogen	ppb	5				20	16	
TOX	67	Total Organic Halogen	ppb	6.9				76	34	
PH	93	pH, field	pH	.01	6.5-8.5	EPAS		96	96	12
PH	1225	pH, lab	pH		6.5-8.5	EPAS		10	10	0
PH	125	pH, lab	pH		6.5-8.5	EPAS		2	2	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
FBARIUM		Barium, filtered	ppb	1.4	1000	EPAI		2	2	0
PCADMIU		Cadmium, filtered	ppb	.98	10	EPAI		2	1	0
FCROMI		Chromium, filtered	ppb	3.7	50	EPAI		2	2	0
FLUORID	1083	Fluoride	ppm	.1	1.4	EPAI		10	9	0
FLUORID	124	Fluoride	ppb	52	1400	EPAI		2	2	0
ALPHA	1247	Gross alpha	pCi/L		15	EPA		17	11	0
ALPHA	135	Gross alpha	pCi/L		15	EPA		2	2	0
FMERCUR		Mercury, filtered	ppb	.019	2	EPA		1	1	0
NITRATE		Nitrate	ppb	120	45000	EPA		2	2	0
NO3-N		Nitrogen in Nitrate	ppm	.2	10	EPA		10	9	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
CHLORID	1083	Chloride	ppm	.2	250	EPAS		10	10	0
CHLORID	124	Chloride	ppb	110	250000	EPAS		2	2	0
FIRON		Iron, filtered	ppb	8.9	300	EPAS		2	2	0
FMANGAN		Manganese, filtered	ppb	.55	50	EPAS		2	2	0
LPHENOL	1206	Phenol	ppb	10				10	0	
LPHENOL	19	Phenol	ppb	.21				1	0	
LPHENOL	30	Phenol	ppb	.58				1	0	
FSODIUM		Sodium, filtered	ppb	44				2	2	
SULFATE	1083	Sulfate	ppm	.5	250	EPAS		10	10	0
SULFATE	124	Sulfate	ppb	130	250000	EPAS		2	2	0

Table 5-3. Constituent List and Summary of Results for the 216-B-3 Pond
Data for Reporting Period April 1 through June 30, 1995.
(sheet 2 of 4).

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name	Full	Units	Lab CRQL	DMS Limit	Agency	Number of Samples		
								Total	>CRQL	>DMS
TETRCHB		1,2,4,5-Tetrachlorobenzene		ppb	10			10	0	
TRICHLB		1,2,4-Trichlorobenzene		ppb	10			10	0	
12-dben		1,2-Dichlorobenzene		ppb	10	600	EPA	10	0	0
13-dben		1,3-Dichlorobenzene		ppb	10			10	0	
14-dben		1,4-Dichlorobenzene		ppb	10	75	EPA	10	0	0
NAPQUIN		1,4-Naphthoquinone		ppb	10			10	0	
1-napha		1-Naphthylamine		ppb	10			10	0	
TETRCHP		2,3,4,6-Tetrachlorophenol		ppb	10			10	0	
245-trp		2,4,5-Trichlorophenol		ppb	10			10	0	
246-trp	1206	2,4,6-Trichlorophenol		ppb	10			10	0	
246-trp	30	2,4,6-Trichlorophenol		ppb	.8			1	0	
24-dchp	1206	2,4-Dichlorophenol		ppb	10			10	0	
24-dchp	19	2,4-Dichlorophenol		ppb	2.8			1	0	
24-dchp	30	2,4-Dichlorophenol		ppb	.43			1	0	
DIMPHEU	1206	2,4-Dimethylphenol		ppb	10			10	0	
DIMPHEU	30	2,4-Dimethylphenol		ppb	.62			1	0	
DIMPHEU	1206	2,4-Dinitrophenol		ppb	50			10	0	
DIMPHEU	30	2,4-Dinitrophenol		ppb	6.8			1	0	
24-dint		2,4-Dinitrotoluene		ppb	10			10	0	
26-dchp	1206	2,6-Dichlorophenol		ppb	10			10	0	
26-dchp	30	2,6-Dichlorophenol		ppb	.52			1	0	
26-dint		2,6-Dinitrotoluene		ppb	10			10	0	
ACEFENE		2-Acetylaminofluorene		ppb	20			10	0	
CHLNAPH		2-Chloronaphthalene		ppb	10			10	0	
CHLPHEU	1206	2-Chlorophenol		ppb	10			10	0	
CHLPHEU	30	2-Chlorophenol		ppb	.6			1	0	
2MCHAPH		2-Methylnaphthalene		ppb	10			10	0	
2METHPH	1206	2-Methylphenol		ppb	10			10	0	
2METHPH	19	2-Methylphenol		ppb	.29			1	0	
2-napha		2-Naphthylamine		ppb	10			10	0	
2NITANI		2-Nitroaniline		ppb	50			10	0	
2NITPH	1206	2-Nitrophenol		ppb	10			10	0	
2NITPH	19	2-Nitrophenol		ppb	4.2			1	0	
2NITPH	30	2-Nitrophenol		ppb	.6			1	0	
PICOLIN		2-Picoline		ppb	10			10	0	
BUTDINP		2-sec-Butyl-4,6-dinitrophenol (DB)		ppb	.41			1	0	
DICBEN		3,3'-Dichlorobenzidine		ppb	20			10	0	
DIMETHLB		3,3'-Dimethylbenzidine		ppb	50			10	0	
METCHAN		3-Methylcholanthrene		ppb	10			10	0	
3NITANI		3-Nitroaniline		ppb	50			10	0	
46DNZMP	1206	4,6-Dinitro-2-methylphenol		ppb	50			10	0	
46DNZMP	30	4,6-Dinitro-2-methylphenol		ppb	.84			1	0	
AMINOYL		4-Aminobiphenyl		ppb	20			10	0	
BROPHEN		4-Bromophenylphenyl ether		ppb	10			10	0	
CHLCRES	1206	4-Chloro-3-methylphenol		ppb	20			10	0	
CHLCRES	30	4-Chloro-3-methylphenol		ppb	.52			1	0	
CHLANIL		4-Chloroaniline		ppb	20			10	0	
4CPPEH		4-Chlorophenylphenyl ether		ppb	10			10	0	
4METHPH	1206	4-Methylphenol		ppb	10			10	0	
4METHPH	19	4-Methylphenol		ppb	.52			1	0	
4NITANI		4-Nitroaniline		ppb	50			10	0	
4NITPH	1206	4-Nitrophenol		ppb	50			10	0	
4NITPH	30	4-Nitrophenol		ppb	.49			1	0	
4NITQUI		4-Nitroquinoline-1-oxide		ppb	50			10	0	
5NITDOL		5-Nitro-o-toluidine		ppb	10			10	0	
7,12-DIBENZ		7,12-Dimethylbenz(a)anthracene		ppb	10			10	0	
ACENAPH		Acenaphthene		ppb	10			10	0	

Table 5-3. Constituent List and Summary of Results for the 216-B-3 Pond
Data for Reporting Period April 1 through June 30, 1995.
(sheet 3 of 4)

Short	(Method)	Constituent Name	Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
								Total	>CRQL	>DWS
ACENATL		Acenaphthylene		ppb	10			10	0	
ACETOPH		Acetophenone		ppb	10			10	0	
ALKALIN	1086	Alkalinity		ppm	50			10	10	
ALKALIN	337	Alkalinity		ppm	3.5			2	2	
DINPHAM		Alpha, alpha-Dimethylphenethylamine		ppb	50			10	0	
FALUMIN		Aluminum, filtered		ppb	31			2	0	
ANILINE		Aniline		ppb	10			10	0	
ANTHRA		Anthracene		ppb	10			10	0	
ANTIMO		Antimony, filtered		ppb	24			2	0	
ARAMITE		Aramite		ppb	20			10	0	
BENZAAN		Benzo(a)anthracene		ppb	10			10	0	
BENZOPY		Benzo(e)pyrene		ppb	10			10	0	
BENZBFL		Benzo(b)fluoranthene		ppb	10			10	0	
BGNIPER		Benzo(ghi)perylene		ppb	10			10	0	
BENZKFLU		Benzo(k)fluoranthene		ppb	10			10	0	
BENZOTK		Benzothiazole		ppb	2.1			1	0	
BENZALC		Benzyl alcohol		ppb	.20			10	0	
FBERYLL		Beryllium, filtered		ppb	.63			2	0	
BIS2CHM		Bis(2-Chloroethoxy)methane		ppb	10			10	0	
BIS2CHE		Bis(2-chloroethyl) ether		ppb	10			10	0	
BIS2ETH		Bis(2-chloroisopropyl) ether		ppb	10			10	0	
BIS2EPN	1206	Bis(2-ethylhexyl) phthalate		ppb	10			10	0	
BIS2EPN	19	Bis(2-ethylhexyl) phthalate		ppb	.37			1	0	
BROWIDE	1083	Bromide		ppm	.5			10	0	
BROWIDE	124	Bromide		ppb	72			2	2	
BUTBENP		Butylbenzylphthalate		ppb	10			10	0	
FCALCIU		Calcium, filtered		ppb	41			2	2	
CHLLATE		Chlorobenzilate		ppb	10			10	0	
CHRYSEN		Chrysene		ppb	10			10	0	
FCOBALT		Cobalt, filtered		ppb	5.3			2	0	
FCOPPER		Copper, filtered		ppb	2.1	1000	EPAS	2	1	0
CRESOLS		Cresols (methylphenols)		ppb	1.7			1	0	
DECANE		Decane		ppb	.38			1	0	
DIBPHTN		Di-n-butylphthalate		ppb	10			10	0	
DIBPHTN		Di-n-octylphthalate		ppb	10			10	0	
DIALATE		Diallate		ppb	20			10	0	
DIBAHAN		Dibenz[a,h]anthracene		ppb	10			10	0	
DIBENFR		Dibenzofuran		ppb	10			10	0	
DIEPHTH		Diethyl phthalate		ppb	10			10	0	
DIMETHO		Dimethoate		ppb	20			10	0	
DIMPHTN		Dimethyl phthalate		ppb	10			10	0	
DODECAN		Dodecane		ppb	.26			1	0	
ETHNETS		Ethyl methanesulfonate		ppb	20			10	0	
FANPHUR		Famphur		ppb	50			10	0	
FLUDRAN		Fluoranthene		ppb	10			10	0	
FLURENE		Fluorene		ppb	10			10	0	
BETA		Gross beta		pCi/L				17	17	
BETA		Gross beta		pCi/L				2	2	
HEXCBEN		Hexachlorobenzene		ppb	10			10	0	
HEXCBUT		Hexachlorobutadiene		ppb	10			10	0	
HEXCCYC		Hexachlorocyclopentadiene		ppb	10			10	0	
HEXCETH		Hexachloroethane		ppb	10			10	0	
HEXACHL		Hexachlorophene		ppb	100			10	0	
HEXAENE		Hexachloropropene		ppb	10			10	0	
INDENOP		Indeno(1,2,3-cd)pyrene		ppb	10			10	0	
ISODRIN		Isodrin		ppb	20			10	0	
ISOPHER		Isophorone		ppb	10			10	0	
ISOSOLE		Isosafrole		ppb	10			10	0	
KEPONE		Kepone		ppb	50			10	0	

Table 5-3. Constituent List and Summary of Results for the 216-B-3 Pond
Data for Reporting Period April 1 through June 30, 1995.
(sheet 4 of 4)

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DMS Limit	Agency	Number of Samples		
							Total	>CRQL	>DMS
LEAD		Lead, filtered	ppb	.88	50	EPAI	1	0	0
MAGNES		Magnesium, filtered	ppb	26			2	2	
METHAPY		Methapyrilene	ppb	100			10	0	
METHSUL		Methyl methanesulfonate	ppb	10			10	0	
METHPAR		Methyl parathion	ppb	10			5	0	
DIPANT		N-Nitroso-di-n-dipropylamine	ppb	10			10	0	
NHIBUTY		N-Nitrosodi-n-butylamine	ppb	10			10	0	
NHIDIEY		N-Nitrosodiethylamine	ppb	20			10	0	
NHIDIME		N-Nitrosodimethylamine	ppb	10			10	0	
NHIDIPMA		N-Nitrosodiphenylamine	ppb	10			10	0	
NHIMETH		N-Nitrosomethylethylamine	ppb	10			10	0	
NHIMORP		N-Nitrosomorpholine	ppb	10			10	0	
NHPIPE		N-Nitrosopiperidine	ppb	20			10	0	
NAPHTHA	1206	Naphthalene	ppb	10			10	0	
NAPHTHA	19	Naphthalene	ppb	.16			1	0	
NICKEL		Nickel, filtered	ppb	11			2	1	
NITRITE		Nitrite	ppb	140	1000	EPA	2	0	0
NITBENZ		Nitrobenzene	ppb	10			10	0	
N02-N		Nitrogen in Nitrite	ppm	.2	1	EPA	10	0	0
NITRPPYR		Nitrosopyrrolidine	ppb	40			10	0	
TRIPHOS		O,O,O-Triethyl phosphorothioate	ppb	20			10	0	
PARATHI		Parathion	ppb	10			10	0	
PENTCHS		Pentachlorobenzene	ppb	10			10	0	
PENTCHN		Pentachloronitrobenzene (PCNB)	ppb	20			10	0	
PENTCHP	1206	Pentachlorophenol	ppb	50	1	EPA	10	0	10*
PENTCHP	19	Pentachlorophenol	ppb	.87	1	EPA	1	0	0
PENTCHP	30	Pentachlorophenol	ppb	.48	1	EPA	1	0	0
PHENTIN		Phenacetin	ppb	20			10	0	
PHENANT		Phenanthrene	ppb	10			10	0	
PHOSPHA	1083	Phosphate	ppm	.5			10	0	
PHOSPHA	124	Phosphate	ppb	340			2	0	
FPOTASS		Potassium, filtered	ppb	390			2	2	
PRONIDE		Pronamide	ppb	20			10	0	
PYRENE		Pyrene	ppb	10			10	0	
PYRIDIN		Pyridine	ppb	10			10	0	
SAFROL		Safrol	ppb	10			10	0	
FSILVER		Silver, filtered	ppb	5.5	50	EPAI	2	0	0
TETPHNL		Tetrachlorophenols	ppb	.52			1	0	
TETRADE		Tetradecane	ppb	.28			1	0	
FTIN		Tin, filtered	ppb	30			2	0	
TRIBUTPH		Tributyl Phosphate	ppb	.14			1	0	
TRIPHNL		Trichlorophenols	ppb	.56			1	0	
TDICPH	1206	Tris-2-chloroethyl phosphate	ppb	10			10	0	
TDICPH	19	Tris-2-chloroethyl phosphate	ppb	6.4			1	0	
TRITIUM		Tritium	pCi/L		20000	EPA	1	1	0
TURBID	1044	Turbidity	NTU	.1			10	7	
TURBID	111	Turbidity	NTU				24	24	
URANIUM		Uranium	ppb				1	1	
FVANAD1		Vanadium, filtered	ppb	1.9			2	2	
ZINC		Zinc, filtered	ppb	3.7	5000	EPAS	2	2	0
MCRESOL		m-Cresol	ppb	.77			1	0	
DINBENZ		m-dinitrobenzene	ppb	20			10	0	
OTOLHYD		o-Toluidine	ppb	10			10	0	
DINEAMO		p-Dimethylaminoazobenzene	ppb	10			10	0	
PHENDIA		p-Phenylenediamine	ppb	100			10	0	
SYNTRIN		sym-Trinitrobenzene	ppb	50			10	0	

For explanation of this table, see Section 1.4 of report.

Table 5-4. Constituents with at Least One Detected Value for the
216-B-3 Pond Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 3)

Well Name	Collection Date	Sample Number	ALKALIN 1086/ppm 50/.	ALKALIN 357/ppm 3.5/.	FBARIUM 34/ppb 1.4/1000	BROMIDE 124/ppb 72/.
299-E18-1	6/05/95	BOFLG1			30.00	
299-E18-1	6/05/95	BOFL11		100.00		80.00 L
299-E32-4	4/11/95	BOF7K1	122.00			
299-E32-4	6/07/95	BOFLM9		130.00		100.00 L
299-E32-4	6/07/95	BOFLM3			71.00	
699-40-39	4/12/95	BOF7M5	149.00			
699-40-40A	4/11/95	BOF7P2	127.00			
699-40-40B	4/12/95	BOF7Q5	134.00			
699-41-40	4/12/95	BOF7R9	126.00			
699-42-39A	4/11/95	BOF7T7	117.00			
699-42-39B	4/11/95	BOF7V1	116.00			
699-42-41	4/11/95	BOF7W3	71.40			
699-43-40	4/11/95	BOF7X1	106.00			
699-44-43B	4/11/95	BOF7Z9	122.00			

Well Name	Collection Date	Sample Number	FCADMIU 34/ppb .98/10	FCALCIU 34/ppb 41/.	CHLORID 1083/ppm .2/250	CHLORID 124/ppb 110/250000
299-E18-1	6/05/95	BOFLG1	1.00 BL	54000.00		
299-E18-1	6/05/95	BOFL11				7500.00
299-E32-4	4/11/95	BOF7K1			8.59	
299-E32-4	6/07/95	BOFLM9				9000.00 D
299-E32-4	6/07/95	BOFLM3	.98 U	39000.00		
699-40-39	4/12/95	BOF7M5			3.12	
699-40-40A	4/11/95	BOF7P2			5.37	
699-40-40B	4/12/95	BOF7Q5			4.54	
699-41-40	4/12/95	BOF7R9			6.13	
699-42-39A	4/11/95	BOF7T7			6.84	
699-42-39B	4/11/95	BOF7V1			7.06	
699-42-41	4/11/95	BOF7W3			1.46	
699-43-40	4/11/95	BOF7X1			6.63	
699-44-43B	4/11/95	BOF7Z9			3.24	

Well Name	Collection Date	Sample Number	FCROMI 34/ppb 3.7/50	FCOPPER 34/ppb 2.1/1000	FLUORID 1083/ppm .1/1.4	FLUORID 124/ppb 52/1400
299-E18-1	6/05/95	BOFLG1	5.40 L	2.10 U		
299-E18-1	6/05/95	BO				
299-E32-4	4/11/95	BOF7K1			.53	
299-E32-4	6/07/95	BOFLM9				900.00
299-E32-4	6/07/95	BOFLM3	5.80 L	4.30 L		
699-40-39	4/12/95	BOF7M5			.55	
699-40-40A	4/11/95	BOF7P2			.55	
699-40-40B	4/12/95	BOF7Q5			.38	
699-41-40	4/12/95	BOF7R9			.43	
699-42-39A	4/11/95	BOF7T7			.44	
699-42-39B	4/11/95	BOF7V1			.49	
699-42-41	4/11/95	BOF7W3			.10 U	
699-43-40	4/11/95	BOF7X1			.38	
699-44-43B	4/11/95	BOF7Z9			.28	

Table 5-4. Constituents with at Least One Detected Value for the
216-B-3 Pond Data for Reporting Period
April 1 through June 30, 1995.
(sheet 2 of 3)

Well Name	Collection Date	Sample Number	ALPHA 1247/pCi/L ./15	ALPHA 135/pCi/L ./15	BETA 1252/pCi/L ./.	BETA 136/pCi/L ./.
299-E18-1	6/05/95	B0FL11		2.91		5.35
299-E32-4	4/11/95	B0F7K1	1.24 U		8.03	
299-E32-4	6/07/95	B0FLM9		1.40		10.80
699-40-40A	4/11/95	B0F7P2	2.71 J		9.49	
699-41-42	4/13/95	B0F7S8	1.19 J		4.38	
699-42-39A	4/11/95	B0F7T7	3.08		6.20	
699-42-39B	4/11/95	B0F7V1	1.26 U		5.28	
699-42-40A	4/13/95	B0F7V5	.80 U		4.35	
699-42-40C	4/13/95	B0F7V9	1.62 J		11.60	
699-42-41	4/11/95	B0F7W3	.83 U		4.06	
699-42-42B	4/13/95	B0F7W7	1.29 J		4.16	
699-43-40	4/11/95	B0F7X1	1.23 J		6.93	
699-43-41E	4/12/95	B0F7X5	1.11 U		4.32	
699-43-41F	4/12/95	B0F7X9	3.53		3.76 J	
699-43-41G	4/12/95	B0F7Y3	2.41 J		4.70	
699-43-42J	4/12/95	B0F7Y7	1.26 J		4.93	
699-44-39B	4/13/95	B0F7Z1	.64 U		2.97 J	
699-44-42	4/12/95	B0F7Z5	1.49 J		5.00	
699-44-43B	4/11/95	B0F7Z9	2.81 J		6.	

Well Name	Collection Date	Sample Number	IRON 34/ppb 8.9/300	MAGNES 34/ppb 26/.	MANGAN 34/ppb .55/50	MERCUR 41/ppb .019/2
299-E18-1	6/05/95	B0FLG1	26.00 BG	13000.00	.98 L	
299-E32-4	6/07/95	B0FLM3	41.00 BG	13000.00	1.30 L	.07 BL

Well Name	Collection Date	Sample Number	NICKEL 34/ppb 11/.	NITRATE 124/ppb 120/43000	RO3-W 1083/ppm .2/10	POTASS 34/ppb 390/.
299-E18-1	6/05/95	B0FLG1	11.00 U			5700.00
299-E18-1	6/05/95	B0FL11		14000.00 D		
299-E32-4	4/11/95	B0F7K1			6.97	
299-E32-4	6/07/95	B0FLM9		28000.00 D		
299-E32-4	6/07/95	B0FLM3	12.00 L			6200.00
699-40-39	4/12/95	B0F7N5			.20 U	
699-40-40A	4/11/95	B0F7P2			.81	
699-40-40B	4/12/95	B0F7Q5			.33	
699-41-40	4/12/95	B0F7R9			4.28	
699-42-39A	4/11/95	B0F7T7			2.43	
699-42-39B	4/11/95	B0F7V1			2.82	
699-42-41	4/11/95	B0F7W3			.24	
699-43-40	4/11/95	B0F7X1			1.21	
699-44-43B	4/11/95	B0F7Z9			1.11	

Table 5-4. Constituents with at Least One Detected Value for the
216-B-3 Pond Data for Reporting Period
April 1 through June 30, 1995.
(sheet 3 of 3)

Well Name	Collection Date	Sample Number	SODIUM 34/ppb 44/.	SULFATE 1083/ppm .5/250	SULFATE 124/ppb 130/250000	TRITIUM 142/pCi/L ./20000
299-E18-1	6/05/95	B0FLG1	27000.00 g			
299-E18-1	6/05/95	B0FL11			100000.00 b	
299-E32-4	4/11/95	B0F7K1		44.00		
299-E32-4	6/07/95	B0FLM9			46000.00 d	332.00
299-E32-4	6/07/95	B0FLM3	26000.00 g			
699-40-39	4/12/95	B0F7M5		3.97		
699-40-40A	4/11/95	B0F7P2		18.40		
699-40-40B	4/12/95	B0F7Q5		18.10		
699-41-40	4/12/95	B0F7R9		29.90		
699-42-39A	4/11/95	B0F7T7		32.90		
699-42-39B	4/11/95	B0F7V1		37.40		
699-42-41	4/11/95	B0F7W3		11.10		
699-43-40	4/11/95	B0F7X1		34.40		
699-44-43B	4/11/95	B0				
Well Name	Collection Date	Sample Number	TURBID 1044/NTU .1/.	TURBID 111/NTU ./.	URANIUM 145/ppb ./.	PERMANGANATE 34/ppb 1.9/.
299-E18-1	6/05/95	B0FLG1				12.00 L
299-E18-1	6/05/95	B0FL11		1.48		
299-E32-4	4/11/95	B0F7K1	1.17	3.15		
299-E32-4	6/07/95	B0FLM9		6.73	3.08	
299-E32-4	6/07/95	B0FLM3				19.00 L
699-40-39	4/12/95	B0F7M5	1.29	1.58		
699-40-40A	4/11/95	B0F7P2	.10 U	.50		
699-40-40B	4/12/95	B0F7Q5	.10 U	3.14		
699-41-40	4/12/95	B0F7R9	.48	4.70		
699-41-42	4/13/95	B0F7S8		.59		
699-42-39A	4/11/95	B0F7T7	.10 U	.80		
699-42-39B	4/11/95	B0F7V1	.19	.86		
699-42-40A	4/13/95	B0F7W3		1.10		
699-42-40C	4/13/95	B0F7W9		2.82		
699-42-41	4/11/95	B0F7M3	.12	.28		
699-42-42B	4/13/95	B0F7W7		.40		
699-43-40	4/11/95	B0F7X1	.49	1.26		
699-43-41E	4/12/95	B0F7X5		.82		
699-43-41F	4/12/95	B0F7X9		.39		
699-43-41G	4/12/95	B0F7Y3		.64		
699-43-42J	4/12/95	B0F7Y7		.46		
699-43-43	4/05/95	B0F7G8		.67		
699-43-45	4/05/95	B0F7J6		1.07		
699-44-39B	4/13/95	B0F7Z1		.42		
699-44-42	4/12/95	B0F7Z5		.46		
699-44-43B	4/11/95	B0F7Z9	1.57	1.13		
Well Name	Collection Date	Sample Number	ZINC 34/ppb 3.7/5000			
299-E18-1	6/05/95	B0FLG1	5.80 LQ			
299-E32-4	6/07/95	B0FLM3	7.			

For explanation of this table, see Section 1.4 of report.

Table 5-5. Contamination Indicator Parameters for the
215-B-3 Pond Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 2)

Well Name	Collection Date	Sample Number	COND FIELD uMho 1/.	COND LAB uMho 1/.	pH FIELD .01/6.5-8.5a	pH LAB .01/6.5-8.5a	TOC ppb %/.	TOX ppb %/.
299-E18-1	6/05/95	B0FLL1	507		8.29	8.10	200 L	6.9 U
		B0FLL2	507		8.29		200 L	6.9 U
		B0FLL3	506		8.29		150 L	6.9 U
		B0FLL4	508		8.28		140 U	6.9 U
299-E32-4	4/11/95	B0F7K1	412	413	7.98	8.00	1000 U	7.0
		B0F7K2	411		7.97		1000 U	16.1 R
		B0F7K3	410		7.98		1000 U	15.8 R
		B0F7K4	410		7.98		1000 U	6.9 U
	6/07/95	B0FLH9	418		7.44	8.00	200 L	6.9 U
		B0FLH0	418		7.42		140 L	6.9 U
		B0FLH1	418		7.41		200 L	6.9 U
		B0FLH2	419		7.41		200 L	6.9 U
699-40-39	4/12/95	B0F7H5	306	295	8.17	8.19	1000 U	11.2
		B0F7H6	306		8.16		1000 U	8.8
		B0F7H7	306		8.16		1000 U	6.4
		B0F7H8	305		8.16		1000 U	7.9
699-40-40A	4/11/95	B0F7P2	321	331	8.12	8.17	1000 U	8.5
		B0F7P3	321		8.12		1000 U	6.9 U
		B0F7P4	321		8.12		1000 U	9.0
		B0F7P5	321		8.12		1000 U	14.1
699-40-40B	4/12/95	B0F7Q5	305	298	8.06	8.06	1000 U	12.4
		B0F7Q6	305		8.05		1000 U	12.6
		B0F7Q7	304		8.05		1000 U	12.4
		B0F7Q8	304		8.05		1000 U	9.6
699-41-40	4/12/95	B0F7R9	372	352	8.17	8.24	1000 U	6.9 U
		B0F7S0	371		8.15		1000 U	13.3
		B0F7S1	370		8.15		1000 U	6.9 U
		B0F7S2	370		8.15		1000 U	6.9 U
699-41-42	4/13/95	B0F7S8	246		8.41			6.1
		B0F7S9	245		8.40			6.9 U
		B0F7T0	245		8.40			7.7
		B0F7T1	245		8.40			10.2
699-42-39A	4/11/95	B0F7T7	351	333	7.83	8.01	1000 U	5.9
		B0F7T8	350		7.83		1000 U	6.3
		B0F7T9	353		7.83		1000 U	5.8
		B0F7V0	351		7.83		1000 U	7.7
699-42-39B	4/11/95	B0F7V1	360	348	7.72	7.89	1000 U	6.0
		B0F7V2	359		7.72		1000 U	8.6
		B0F7V3	360		7.72		1000 U	6.8
		B0F7V4	360		7.72		1000 U	6.9 U
699-42-40A	4/13/95	B0F7V5	180		8.55			5.0 UY
		B0F7V6	180		8.55			6.5 Y
		B0F7V7	180		8.55			7.6 Y
		B0F7V8	180		8.55			9.3 Y
699-42-40A	4/13/95	B0F7V9	321		8.93			8.0 Y
699-42-40C	4/13/95	B0F7W0	321		8.94			6.5 Y
		B0F7W1	322		8.94			5.7 Y
		B0F7W2	322		8.98			5.0 UY
		B0F7W3	181	168	8.35	8.12	1000 U	6.9 U
699-42-41	4/11/95	B0F7W4	172		8.34		1000 U	9.7
		B0F7W5	170		8.34		1000 U	6.7
		B0F7W6	170		8.34		1000 U	10.2

Table 5-5. Contamination Indicator Parameters for the
216-B-3 Pond Data for Reporting Period
April 1 through June 30, 1995.
(sheet 2 of 2)

Well Name	Collection Date	Sample Number	COND FIELD	COND LAB	pH FIELD	pH LAB	TOC	TOX
			uMho 1/.	uMho 1/.	.01/6.5-8.5s	.01/6.5-8.5s	ppb */.	ppb */.
699-42-42B	4/13/95	B0F7M7	260		8.04			6.3
		B0F7M8	258		8.03			6.3
		B0F7M9	257		8.04			6.9 U
		B0F7X0	256		8.04			6.9 U
699-43-40	4/11/95	B0F7X1	309	305	8.08	8.10	1000 U	6.9
		B0F7X2	308		8.05		1000 U	6.1
		B0F7X3	308		8.04		1000 U	6.7
		B0F7X4	307		8.02		1000 U	6.9 U
699-43-41E	4/12/95	B0F7X5	331		8.46			10.5
		B0F7X6	331		8.46			14.3
		B0F7X7	331		8.45			11.1
		B0F7X8	330		8.46			10.2
699-43-41F	4/12/95	B0F7X9	307		8.22			6.9 U
		B0F7Y0	308		8.24			5.2
		B0F7Y1	308		8.22			8.9
		B0F7Y2	307		8.20			6.9 U
699-43-41G	4/12/95	B0F7Y3	294		8.12			10.9
		B0F7Y4	295		8.12			7.2
		B0F7Y5	295		8.11			6.3
		B0F7Y6	295		8.10			6.4
699-43-42J	4/12/95	B0F7Y7	253		8.46			6.1
		B0F7Y8	251		8.46			6.0
		B0F7Y9	250		8.46			5.8
		B0F7Z0	249		8.46			8.8
699-43-43	4/05/95	B0F7G8	184		8.24			10.5 Y
		B0F7G9	186		8.24			11.8 Y
		B0F7X0	186		8.24			11.7 Y
		B0F7X1	185		8.24			11.3 Y
699-43-45	4/05/95	B0F7J6	214		8.26			8.3 Y
		B0F7J7	214		8.27			5.0 UY
		B0F7J8	214		8.27			5.0 UY
		B0F7J9	214		8.27			8.2 Y
699-44-39B	4/13/95	B0F7Z1	189		8.75			10.6 Y
		B0F7Z2	189		8.75			14.3 Y
699-44-39B	4/13/95	B0F7Z3	189		8.76			11.5 Y
		B0F7Z4	189		8.76			12.1 Y
699-44-42	4/12/95	B0F7Z5	264		8.27			11.0
		B0F7Z6	261		8.28			6.9 U
		B0F7Z7	260		8.29			6.9 U
		B0F7Z8	260		8.29			6.9 U
699-44-43B	4/11/95	B0F7Z9	291	292	8.07	8.17	1000 U	8.4
		B0F800	292		8.06		1000 U	8.1
		B0F801	290		8.06		1000 U	10.2
		B0F802	290		8.06		1000 U	7.0

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

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6.0 216-A-29 DITCH

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6.1 INTRODUCTION

The 216-A-29 Ditch (A-29 Ditch) is located east of the 200 East Area in the central portion of the Hanford Site (Figure 6-1). From 1955 to July 1991, the unlined ditch received effluent from the Plutonium-Uranium Extraction (PUREX) Plant chemical sewer line and conducted it to the 216-B-3-3 Ditch and the B Pond System. After July 15, 1991, the effluent to the A-29 Ditch was rerouted to the PUREX cooling water line. The ditch was backfilled and the site was graded and stabilized to meet Milestone M-17-10 of the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 1994).

Groundwater beneath the A-29 Ditch has been monitored by a RCRA groundwater monitoring network since 1988 because of earlier discharges of caustic and potentially hazardous chemicals to the ditch. The A-29 Ditch is currently in an interim-status groundwater quality assessment monitoring program because of elevated specific conductance levels in one monitoring well (299-E25-35) (Chou et al. 1990).

The RCRA groundwater monitoring network consists of three upgradient and 10 downgradient wells. Eleven additional wells in the surrounding area are used to provide supplementary data for the groundwater quality assessment investigation. Figure 6-1 shows the locations of the wells used to monitor groundwater quality for the A-29 Ditch. Table 6-1 presents pertinent data about these wells.

6.2 WATER LEVEL MEASUREMENTS

Water levels are measured monthly in the 13 wells that make up the A-29 Ditch monitoring network and are measured quarterly in additional wells that provide supplemental data for the groundwater quality assessment investigation. Water level measurements are also recorded when the wells are sampled. Water level measurements obtained during this quarter are presented in Table 6-2. One inconsistency was noted when a recent measurement was compared to the water levels measured previously. The water level reported for well 299-E25-48 on April 17 fell outside the expected range. Inspection of the field report sheets does not reveal any data transcription or retrieval errors. This data item is flagged in Table 6-2.

6.3 WATER CHEMISTRY DATA

Groundwater beneath the A-29 Ditch is sampled quarterly according to the groundwater quality assessment plan (Chou et al. 1990). The constituent list and summary of results are provided in Table 6-3. Reported analytical data are included in Tables 6-4 and 6-5. Table 6-4 lists the wells and analytical results for chemical constituents with at least one detected value above the MDL. Results of analyses for CIPs are reported in Table 6-5. Because of laboratory delays, some of the data are missing and will be reported in the next quarterly report.

Eight wells in the A-29 Ditch detection network had individual constituent results that are higher than the historical trends for boron, filtered iron, filtered aluminum, filtered zinc, and zinc. RADES have been submitted for these wells. Data are flagged in Tables 6-4 and 6-5 according to the explanation found in Sections 1.2 and 1.4.

Constituents reported in concentrations that exceed the DWS for the A-29 Ditch network and supplemental wells include unfiltered chromium and unfiltered iron (Table 6-6).

A groundwater assessment report for the 216-A-29 Ditch is being prepared and will be released in October 1995. The report presents findings of the groundwater quality assessment program for the 216-A-29 Ditch. The information presented in the report is the result of a study to determine if effluents discharged to the 216-A-29 Ditch is the source of elevated specific conductance in well 299-E25-35 and that the source is nonhazardous. The report describes the current monitoring status of the 216-A-29 Ditch and groundwater chemical data interpretation, and recommends the reinstatement of an indicator-evaluation monitoring program in accordance with 40 CFR 265.93(d)(6).

Figure 6-1. Well Location Map for the 216-A-29 Ditch.

H9411010.14a

Table 6-1. Monitoring Well Purpose and Sampling Schedule
for the 216-A-29 Ditch. (2 sheets)

Well no.	Relative position	Hydrogeologic unit ^a	Sample frequency	Sample date, 2nd Qtr 1995
699-43-43 ^b	Upgradient	Hanford: Water Table	Quarterly	04/05/95
699-43-45 ^b	Upgradient	Hanford: Water Table	Quarterly	04/05/95
299-E25-32P	Downgradient	Hanford: Water Table	Quarterly	04/05/95
299-E25-26	Downgradient	Hanford: Mid-Depth	Quarterly	04/06/95
299-E25-28	Downgradient	Ringold: Deep	Quarterly	04/06/95
299-E25-34	Downgradient	Hanford: Water Table	Quarterly	04/05/95
299-E25-35	Downgradient	Hanford: Water Table	Quarterly	04/06/95
299-E25-42	Downgradient	Hanford: Water Table	Quarterly	04/10/95
299-E25-43	Downgradient	Hanford: Water Table	Quarterly	04/10/95
299-E25-47	Downgradient	Hanford: Water Table	Quarterly	04/10/95
299-E25-48	Downgradient	Hanford: Water Table	Quarterly	04/10/95
299-E26-12	Downgradient	Hanford: Water Table	Quarterly	04/10/95
299-E26-13	Downgradient	Hanford: Water Table	Quarterly	04/10/95
299-E17-20 ^{d,e}	Downgradient	Ringold: Water Table	Quarterly	04/03/95
299-E25-11 ^e	Downgradient	Undetermined: Mid-Depth	Quarterly	04/06/95
299-E25-18 ^e	Downgradient	Undetermined: Mid-Depth	Quarterly	04/06/95
299-E25-19 ^e	Downgradient	Undetermined: Mid-Depth	Quarterly	04/05/95
299-E25-20 ^e	Downgradient	Undetermined: Mid-Depth	Quarterly	04/06/95

Table 6-1. Monitoring Well Purpose and Sampling Schedule
for the 216-A-29 Ditch. (2 sheets)

Well no.	Relative position	Hydrogeologic unit ^a	Sample frequency	Sample date, 2nd Qtr 1995
299-E25-21 ^c	Downgradient	Hanford: Water Table	Quarterly	04/10/95
299-E25-31 ^c	Downgradient	Hanford: Water Table	Quarterly	04/10/95
299-E25-36 ^{c,d,e}	Downgradient	Ringold: Water Table	Quarterly	04/03/95

^aHydrogeologic units include the sandy gravels of the Hanford formation and the silty sands of the Ringold Formation.

^bWells shared with the 216-B-3 Pond monitoring network.

^cWells shared with the 216-A-36B monitoring network.

^dWells shared with the 216-A-10 monitoring network.

^eWells used for supplemental groundwater quality.

Table 6-2. RCRA Water Level Measurement Report
 216-A-29 Ditch, Second Quarter 1995.
 (sheet 1 of 3)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
Wells in the Monitoring System				
299-E25-26	4/06/95	266.80*	401.72	122.44
	4/17/95	267.15	401.37	122.34
	5/15/95	267.01	401.51	122.38
	6/15/95	267.19	401.33	122.33
299-E25-28	4/06/95	261.10*	401.34	122.33
	4/17/95	260.79	401.65	122.42
	5/15/95	260.60	401.84	122.48
	6/15/95	260.85	401.59	122.40
299-E25-32P	4/05/95	268.58*	400.61	122.11
	4/17/95	268.51	400.68	122.13
	5/15/95	268.40	400.79	122.16
	6/15/95	268.59	400.60	122.10
299-E25-34	4/05/95	261.33*	401.54	122.39
	4/17/95	261.44	401.43	122.36
	5/15/95	261.14	401.73	122.45
	6/15/95	261.72	401.15	122.27
299-E25-35	4/06/95	273.06*	401.33	122.33
	4/17/95	272.86	401.53	122.39
	5/15/95	272.83	401.56	122.40
	6/15/95	273.07	401.32	122.32
299-E25-42	4/10/95	281.73*	401.56	122.40
	4/17/95	281.74	401.55	122.39
	5/15/95	281.63	401.66	122.43
	6/15/95	281.87	401.42	122.35
299-E25-43	4/10/95	248.10*	401.79	122.47
	4/17/95	248.09	401.80	122.47
	6/15/95	248.25	401.64	122.42
299-E25-47	4/10/95	272.02*	401.75	122.45
	4/17/95	272.09	401.68	122.43
	5/15/95	271.94	401.83	122.48
	6/15/95	272.17	401.60	122.41

Table 6-2. RCRA Water Level Measurement Report
 216-A-29 Ditch, Second Quarter 1995.
 (sheet 2 of 3)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
Wells in the Monitoring System				
299-E25-48	4/10/95	280.82*	401.49	122.37
	4/17/95	279.83+	402.48	122.68
	5/15/95	280.50	401.81	122.47
	6/15/95	280.76	401.55	122.39
299-E26-12	4/10/95	228.96*	401.78	122.46
	4/17/95	228.84	401.90	122.50
	5/15/95	228.73	402.01	122.53
	6/15/95	228.96	401.78	122.46
299-E26-13	4/10/95	203.30*	401.72	122.44
	4/17/95	203.24	401.78	122.46
	5/15/95	203.09	401.93	122.51
	6/15/95	203.32	401.70	122.44
699-43-43	4/05/95	166.50*	412.87	125.84
	6/15/95	166.18	413.19	125.94
699-43-45	4/05/95	195.55*	402.13	122.57
	6/15/95	195.64	402.04	122.54
Supplemental Wells for Monitoring				
299-E17-20	4/03/95	318.08*	401.15	122.27
	6/29/95	318.50	400.73	122.14
299-E25-11	4/06/95	280.05*	401.23	122.29
	6/15/95	280.02	401.26	122.30
299-E25-18	4/06/95	278.07*	400.98	122.22
	6/15/95	277.75	401.30	122.32
299-E25-19	4/05/95	276.29*	400.91	122.20
	6/15/95	276.04	401.16	122.27
299-E25-20	4/06/95	275.49*	400.81	122.17
	6/15/95	275.19	401.11	122.26

Table 6-2. RCRA Water Level Measurement Report
 216-A-29 Ditch, Second Quarter 1995.
 (sheet 3 of 3)

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
Supplemental Wells for Monitoring				
299-E25-21	4/10/95	275.97*	401.30	122.32
	6/15/95	275.81	401.46	122.37
299-E25-31	4/10/95	273.08*	399.45	121.75
	6/15/95	273.02	399.51	121.77
299-E25-36	4/03/95	306.30*	401.09	122.25
	6/29/95	306.31	401.08	122.25
299-E25-6	6/15/95	259.68	398.63	121.50
299-E25-9	6/15/95	255.77	399.09	121.64
299-E26-2	6/15/95	234.07	401.23	122.29

- NOTES: 1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
2. Depth-to-water values are transcribed from field records.
3. Measurements marked with an '*' were taken at the time of sampling.
4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 6-3. Constituent List and Summary of Results for the
216-A-29 Ditch Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 2)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
CONDUCT	94	Conductivity, field	umhos	1			60	30	
CONDUCT	1023	Specific conductance	umho/cm	100			12	12	
TOC		Total Organic Carbon	ppb	1000			23	0	
TOX	1216	Total Organic Halogen	ppb	5			24	17	
TOX	67	Total Organic Halogen	ppb	6.9			36	15	
PH	93	pH, field	pH	.01	6.5-8.5	EPAS	66	66	0
PH	1225	pH, lab	pH		6.5-8.5	EPAS	6	6	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
ARSENIC		Arsenic, filtered	ppb	10	50	EPA	6	1	0
BARIUM		Barium	ppb	.5	1000	EPAI	12	12	0
FBARIUM		Barium, filtered	ppb	.5	1000	EPAI	12	12	0
CADMIUM		Cadmium	ppb	2.4	10	EPAI	12	2	0
FCADMIUM		Cadmium, filtered	ppb	2.4	10	EPAI	12	3	0
CHROMIUM		Chromium	ppb	4.7	50	EPAI	12	9	2
FCHROMIUM		Chromium, filtered	ppb	4.7	50	EPAI	12	3	0
FLUORIDE		Fluoride	ppm	.1	1.4	EPAI	12	12	0
ALPHA		Gross alpha	pCi/L		15	EPA	8	6	0
NO3-N		Nitrogen in Nitrate	ppm	.2	10	EPA	12	12	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
CHLORIDE		Chloride	ppm	.2	250	EPAS	12	12	0
IRON		Iron	ppb	4.3	300	EPAS	12	12	4
FIRON		Iron, filtered	ppb	4.3	300	EPAS	12	12	0
MANGANESE		Manganese	ppb	.8	50	EPAS	12	12	0
FMANGANESE		Manganese, filtered	ppb	.8	50	EPAS	12	12	0
LPHENOL		Phenol	ppb	1			6	0	
SODIUM		Sodium	ppb	26.7			12	12	
FSODIUM		Sodium, filtered	ppb	26.7			12	12	
SULFATE		Sulfate	ppm	.5	250	EPAS	12	12	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
TETRACHP		2,3,4,6-Tetrachlorophenol	ppb	10			6	0	
245-trp		2,4,5-Trichlorophenol	ppb	5			6	0	
246-trp		2,4,6-Trichlorophenol	ppb	5			6	0	
24-dchp		2,4-Dichlorophenol	ppb	5			6	0	
DIMPHEM		2,4-Dimethylphenol	ppb	5			6	0	
DIMPHEM		2,4-Dinitrophenol	ppb	150			6	0	
26-dchp		2,6-Dichlorophenol	ppb	5			6	0	
CHLPHEM		2-Chlorophenol	ppb	5			6	0	
2METHPH		2-Methylphenol	ppb	10			6	0	
2NITPH		2-Nitrophenol	ppb	5			6	0	

Table 6-3. Constituent List and Summary of Results for the
216-A-29 Ditch Data for Reporting Period
April 1 through June 30, 1995.
(sheet 2 of 2)

Short	(Method)	Constituent Name	Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples Total	>CRQL	>DWS
BUTDNP		2-sec-Butyl-4,6-dinitrophenol	DN	ppb	5			6	0	
34METBPH		3,4-Methylphenol		ppb	20			6	0	
46DN2MP		4,6-Dinitro-2-methylphenol		ppb	200			6	0	
CMCRES		4-Chloro-3-methylphenol		ppb	5			6	0	
NITPHEN		4-Nitrophenol		ppb	30			6	0	
ALKALIN		Alkalinity		ppm	50			12	12	
ALUMINUM		Aluminum		ppb	23.4			12	9	
FALUMIN		Aluminum, filtered		ppb	23.4			12	9	
ANTIMONY		Antimony		ppb	26.3			12	0	
FANTIMO		Antimony, filtered		ppb	26.3			12	1	
BERYLLIUM		Beryllium		ppb	.6			12	2	
FBERYLL		Beryllium, filtered		ppb	.6			12	1	
BORON		Boron		ppb	10.4			12	10	
FBORON		Boron, filtered		ppb	10.4			12	11	
BROMIDE		Bromide		ppm	.5			12	0	
CALCIUM		Calcium		ppb	41.5			12	12	
FCALCIU		Calcium, filtered		ppb	41.5			12	12	
COBALT		Cobalt		ppb	3.4			12	0	
FCOBALT		Cobalt, filtered		ppb	3.4			12	0	
COPPER		Copper		ppb	9.8	1000	EPAS	12	9	0
FCOPPER		Copper, filtered		ppb	9.8	1000	EPAS	12	8	0
BETA		Gross beta		pCi/L				8	8	
MAGNES		Magnesium		ppb	44.8			12	12	
FMAGNES		Magnesium, filtered		ppb	44.8			12	12	
NICKEL		Nickel		ppb	15.4			12	5	
FNICKEL		Nickel, filtered		ppb	15.4			12	2	
NO2-N		Nitrogen in Nitrite		ppm	.2	1	EPA	12	0	0
PENTCHP		Pentachlorophenol		ppb	100	1	EPA	6	0	6*
PHOSPHA		Phosphate		ppm	.5			12	0	
POTASUM		Potassium		ppb	2660			12	12	
FPOTASS		Potassium, filtered		ppb	2660			12	12	
SILICON		Silicon		ppb	12.2			12	12	
FSILICO		Silicon, filtered		ppb	12.2			12	12	
SILVER		Silver		ppb	4.1	50	EPAT	12	0	0
FSILVER		Silver, filtered		ppb	4.1	50	EPAT	12	0	0
STRONTIUM		Strontium		ppb	.3			12	12	
FSTRONIUM		Strontium, filtered		ppb	.3			12	12	
TIN		Tin		ppb	25			12	0	
FTIN		Tin, filtered		ppb	25			12	0	
TDS		Total Dissolved Solids		ppm	5	500	EPAS	12	12	0
TRITIUM		Tritium		pCi/L		20000	EPA	8	8	
TURBID 1044		Turbidity		NTU	.1			12	9	
TURBID 111		Turbidity		NTU				21	21	
VANADIUM		Vanadium		ppb	2.5			12	12	
FVANADI		Vanadium, filtered		ppb	2.5			12	12	
ZINC		Zinc		ppb	5.2	5000	EPAS	12	12	0
FZINC		Zinc, filtered		ppb	5.2	5000	EPAS	12	12	0
ZIRCONIUM		Zirconium		ppb	11.6			12	0	
FZIRCONIUM		Zirconium, filtered		ppb	11.6			12	0	

For explanation of this table, see Section 1.4 of report.

Table 6-4. Constituents with at Least One Detected Value for the
216-A-29 Ditch Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 7)

Well Name	Collection Date	Sample Number	ALKALIN 1086/ppm 50/.	ALUMINUM 1139/ppb 23.4/.	FALUNIN 1139/ppb 23.4/.	ANTIMONY 1139/ppb 26.3/.
299-E25-11	4/06/95	B0F7B5	83.40	23.40 U		26.30 U
299-E25-11	4/06/95	B0F7B6	83.40	29.10 B		26.30 U
299-E25-11	4/06/95	B0F7B7			113.00 F	
299-E25-11	4/06/95	B0F7B8			69.70 F	
299-E25-18	4/06/95	B0F7C9	84.40	35.60 B		26.30 U
299-E25-18	4/06/95	B0F7D0			27.30 B	
299-E25-20	4/06/95	B0F7G1	89.40	96.60		26.30 U
299-E25-20	4/06/95	B0F7G2			23.40 U	
299-E25-21	4/10/95	B0F7H3	85.40	23.40 U		26.30 U
299-E25-21	4/10/95	B0F7H4			23.40 U	
299-E25-31	4/10/95	B0F7J4	90.40	42.90 B		26.30 U
299-E25-31	4/10/95	B0F7J5			23.40 U	
299-E25-42	4/10/95	B0F7N3	114.00	42.20 B		26.30 U
299-E25-42	4/10/95	B0F7N7			35.70 B	
299-E25-43	4/10/95	B0F7Q0	78.40	41.80 B		26.30 U
299-E25-43	4/10/95	B0F7Q4			34.30 B	
299-E25-47	4/10/95	B0F7Q9	102.00	52.80		26.30 U
299-E25-47	4/10/95	B0F7R3			33.00 B	
299-E25-48	4/10/95	B0F7R4	83.40	74.70		26.30 U
299-E25-48	4/10/95	B0F7R8			23.70 B	
299-E26-12	4/10/95	B0F7S3	80.90	35.30 B		26.30 U
299-E26-12	4/10/95	B0F7S7			40.90 B	
299-E26-13	4/10/95	B0F7T2	87.40	23.40 U		26.30 U
299-E26-13	4/10/95	B0F7T6			33.10 B	

Well Name	Collection Date	Sample Number	FANTIMO 1139/ppb 26.3/.	FARSENIC 1148/ppb 10/50	BARIUM 1139/ppb .5/1000	FBARIUM 1139/ppb .5/1000
299-E25-11	4/06/95	B0F7B5			30.40	
299-E25-11	4/06/95	B0F7B6			25.00	
299-E25-11	4/06/95	B0F7B7	26.30 U			45.20
299-E25-11	4/06/95	B0F7B8	26.30 U			37.70
299-E25-18	4/06/95	B0F7C9			15.40 B	
299-E25-18	4/06/95	B0F7D0	26.30 U			22.20
299-E25-20	4/06/95	B0F7G1			137.00	
299-E25-20	4/06/95	B0F7G2	26.30 U			29.00
299-E25-21	4/10/95	B0F7H3			17.60 B	
299-E25-21	4/10/95	B0F7H4	26.30 U			17.60 B
299-E25-31	4/10/95	B0F7J4			26.90	
299-E25-31	4/10/95	B0F7J5	26.30 U			28.80
299-E25-42	4/10/95	B0				
299-E25-42	4/10/95	B0F7N7	31.40 B	9.60		59.30
299-E25-43	4/10/95	B0F7Q0			28.60	
299-E25-43	4/10/95	B0F7Q4	26.30 U	7.70		27.00
299-E25-47	4/10/95	B0F7Q9			32.50	
299-E25-47	4/10/95	B0F7R3	26.30 U	10.20		27.70
299-E25-48	4/10/95	B0F7R4			37.10	
299-E25-48	4/10/95	B0F7R8	26.30 U	7.00		35.80
299-E26-12	4/10/95	B0F7S3			19.50 B	
299-E26-12	4/10/95	B0F7S7	26.30 U	6.40		19.90 B
299-E26-13	4/10/95	B0F7T2			18.70 B	
299-E26-13	4/10/95	B0F7T6	26.30 U	8.20		18.00 B

Table 6-4. Constituents with at Least One Detected Value for the
216-A-29 Ditch Data for Reporting Period
April 1 through June 30, 1995.
(sheet 2 of 7)

Well Name	Collection Date	Sample Number	BERYLIUM 1139/ppb .6/.	FBERYLL 1139/ppb .6/.	BORON 1139/ppb 10.4/.	FBORON 1139/ppb 10.4/.
299-E25-11	4/06/95	80F785	.60 U		23.00 B	
299-E25-11	4/06/95	80F786	.60 U		31.70 B	
299-E25-11	4/06/95	80F787		.60 U		23.10 B
299-E25-11	4/06/95	80F788		.60 U		19.90 B
299-E25-18	4/06/95	80F7C9	.65 B		31.70 B	
299-E25-18	4/06/95	80F7D0		.65 B		46.10 B
299-E25-20	4/06/95	80F7G1	.60 U		44.50 B	
299-E25-20	4/06/95	80F7G2		.60 U		34.80 B
299-E25-21	4/10/95	80F7H3	.60 U		39.20 B	
299-E25-21	4/10/95	80F7H4		.60 U		10.40 U
299-E25-31	4/10/95	80F7J4	.60 U		23.00 B	
299-E25-31	4/10/95	80F7J5		.60 U		21.40 B
299-E25-42	4/10/95	80F7K3	.60 U		36.80 B	
299-E25-42	4/10/95	80F7N7		.60 U		37.00 B
299-E25-43	4/10/95	80F7Q0	.60 U		10.40 U	
299-E25-43	4/10/95	80F7Q4		.60 U		98.70 BF
299-E25-47	4/10/95	80F7Q9	.71 B		17.20 B	
299-E25-47	4/10/95	80F7R3		.60 U		23.00 B
299-E25-48	4/10/95	80F7R4	.60 U		31.20 B	
299-E25-48	4/10/95	80F7R8		.60 U		17.70 B
299-E26-12	4/10/95	80F7S3	.60 U		10.40 U	
299-E26-12	4/10/95	80F7S7		.60 U		45.00 BF
299-E26-13	4/10/95	80F7T2	.60 U		14.90 B	
299-E26-13	4/10/95	80F7T6		.60 U		12.30 B

Well Name	Collection Date	Sample Number	CADMIUM 1139/ppb 2.4/10	FCADMIU 1139/ppb 2.4/10	CALCIUM 1139/ppb 41.5/.	FCALCIU 1139/ppb 41.5/.
299-E25-11	4/06/95	80F785	2.40 U		22600.00	
299-E25-11	4/06/95	80F786	2.40 U		22600.00	
299-E25-11	4/06/95	80F787		2.40 U		23100.00
299-E25-11	4/06/95	80F788		2.40 U		22500.00
299-E25-18	4/06/95	80F7C9	2.40 U		25600.00	
299-E25-18	4/06/95	80F7D0		2.70 B		25700.00
299-E25-20	4/06/95	80F7G1	2.40 U		27900.00	
299-E25-20	4/06/95	80F7G2		2.50 B		27800.00
299-E25-21	4/10/95	80F7H3	3.00 B		20300.00	
299-E25-21	4/10/95	80F7H4		2.40 U		20000.00
299-E25-31	4/10/95	80F7J4	2.40 U		23900.00	
299-E25-31	4/10/95	80F7J5		2.40 U		24200.00
299-E25-42	4/10/95	80F7K3	2.40 U		33900.00	
299-E25-42	4/10/95	80F7N7		2.40 U		35600.00
299-E25-43	4/10/95	80F7Q0	2.40 U		22400.00	
299-E25-43	4/10/95	80F7Q4		2.40 U		22500.00
299-E25-47	4/10/95	80F7Q9	2.40 U		26400.00	
299-E25-47	4/10/95	80F7R3		2.80 B		26400.00
299-E25-48	4/10/95	80F7R4	3.40 B		23800.00	
299-E25-48	4/10/95	80F7R8		2.40 U		23400.00
299-E26-12	4/10/95	80F7S3	2.40 U		23000.00	
299-E26-12	4/10/95	80F7S7		2.40 U		23300.00
299-E26-13	4/10/95	80F7T2	2.40 U		24800.00	
299-E26-13	4/10/95	80F7T6		2.40 U		23600.00

Table 6-4. Constituents with at Least One Detected Value for the
216-A-29 Ditch Data for Reporting Period
April 1 through June 30, 1995.
(sheet 3 of 7)

Well Name	Collection Date	Sample Number	CHLORID 1083/ppm .2/250	CHROMIUM 1139/ppb 4.7/50	CHROMIUM 1139/ppb 4.7/50	COPPER 1139/ppb 9.8/1000
299-E25-11	4/06/95	B0F7B5	1.98	31.40 g		15.90 B
299-E25-11	4/06/95	B0F7B6	1.98	26.40 g		11.20 B
299-E25-11	4/06/95	B0F7B7			4.70 UQ	
299-E25-11	4/06/95	B0F7B8			4.70 UQ	
299-E25-18	4/06/95	B0F7C9	2.37	4.70 UQ		15.00 B
299-E25-18	4/06/95	B0F7D0			4.70 UQ	
299-E25-20	4/06/95	B0F7G1	2.98	4.70 UQ		23.30
299-E25-20	4/06/95	B0F7G2			4.70 UQ	
299-E25-21	4/10/95	B0F7H3	1.99	4.70 U		9.80 U
299-E25-21	4/10/95	B0F7H4			4.70 U	
299-E25-31	4/10/95	B0F7J4	1.73	25.90		13.50 B
299-E25-31	4/10/95	B0F7J5			10.00 B	
299-E25-42	4/10/95	B0F7K3	4.46	98.90		12.90 B
299-E25-42	4/10/95	B0F7M7			4.70 U	
299-E25-43	4/10/95	B0F7Q0	1.37	10.50 B		10.80 B
299-E25-43	4/10/95	B0F7Q4			4.70 U	
299-E25-47	4/10/95	B0F7Q9	2.56	11.60 B		9.80 U
299-E25-47	4/10/95	B0F7R3			5.20 B	
299-E25-48	4/10/95	B0F7R4	2.84	30.00		17.10 B
299-E25-48	4/10/95	B0F7R8			9.80 B	
299-E26-12	4/10/95	B0F7S3	1.53	7.70 B		9.80 U
299-E26-12	4/10/95	B0F7S7			4.70 U	
299-E26-13	4/10/95	B0F7T2	1.52	59.40		13.50 B
299-E26-13	4/10/95	B0F7T6			4.70 U	

Well Name	Collection Date	Sample Number	FCOPPER 1139/ppb 9.8/1000	FLUORID 1083/ppm .1/1.4	ALPHA 1247/pCi/L ./15	BETA 1252/pCi/L ./.
299-E17-20	4/03/95	B0F809			3.40	27.90
299-E25-11	4/06/95	B0F7B5		.23		
299-E25-11	4/06/95	B0F7B6		.24		
299-E25-11	4/06/95	B0F7B7	13.50 B			
299-E25-11	4/06/95	B0F7B8	10.40 B			
299-E25-18	4/06/95	B0F7C9		.23		
299-E25-18	4/06/95	B0F7D0	18.30 B			
299-E25-20	4/06/95	B0F7G1		.56		
299-E25-20	4/06/95	B0F7G2	15.70 B			
299-E25-21	4/10/95	B0F7H3		.24		
299-E25-21	4/10/95	B0F7H4	9.80 U			
299-E25-31	4/10/95	B0F7J4		.19		
299-E25-31	4/10/95	B0F7J5	9.80 U			
299-E25-34	4/03/95	B0F817			1.73 J	7.92
299-E25-42	4/10/95	B0F7K3		.50	2.87 J	5.69
299-E25-42	4/10/95	B0F7M7	16.80 B			
299-E25-43	4/10/95	B0F7Q0		.13	.68 U	5.14
299-E25-43	4/10/95	B0F7Q4	10.20 B			
299-E25-47	4/10/95	B0F7Q9		.28	2.86 J	6.87
299-E25-47	4/10/95	B0F7R3	14.10 B			
299-E25-48	4/10/95	B0F7R4		.20	1.47 J	5.09
299-E25-48	4/10/95	B0F7R8	9.80 U			
299-E26-12	4/10/95	B0F7S3		.13	1.13 J	4.72
299-E26-12	4/10/95	B0F7S7	11.90 B		.66 U	4.13
299-E26-13	4/10/95	B0F7T2		.13		
299-E26-13	4/10/95	B0F7T6	9.80 U			

Table 6-4. Constituents with at Least One Detected Value for the
216-A-29 Ditch Data for Reporting Period
April 1 through June 30, 1995.
(sheet 4 of 7)

Well Name	Collection Date	Sample Number	IRON 1139/ppb 4.3/300	FIRON 1139/ppb 4.3/300	MAGNES 1139/ppb 44.8/.	FMAGNES 1139/ppb 44.8/.
299-E25-11	4/06/95	B0F7B5	256.00 Q		6330.00	
299-E25-11	4/06/95	B0F7B6	196.00 Q		6310.00	
299-E25-11	4/06/95	B0F7B7		60.00 BQ		6410.00
299-E25-11	4/06/95	B0F7B8		53.90 BQ		6230.00
299-E25-18	4/06/95	B0F7C9	353.00 Q		7370.00	
299-E25-18	4/06/95	B0F7D0		160.00 QF		7380.00
299-E25-20	4/06/95	B0F7G1	270.00 Q		7630.00	
299-E25-20	4/06/95	B0F7G2		91.60 BQ		7470.00
299-E25-21	4/10/95	B0F7H3	217.00		5780.00	
299-E25-21	4/10/95	B0F7H4		35.60 B		5640.00
299-E25-31	4/10/95	B0F7J4	188.00		6660.00	
299-E25-31	4/10/95	B0F7J5		92.90 B		6760.00
299-E25-42	4/10/95	B0F7N3	437.00		8330.00	
299-E25-42	4/10/95	B0F7N7		59.90 B		8720.00
299-E25-43	4/10/95	B0F7Q0	169.00		5810.00	
299-E25-43	4/10/95	B0F7Q4		80.80 B		5780.00
299-E25-47	4/10/95	B0F7Q9	124.00		7550.00	
299-E25-47	4/10/95	B0F7R3		49.10 B		7550.00
299-E25-48	4/10/95	B0F7R4	328.00		7110.00	
299-E25-48	4/10/95	B0F7R8		49.70 B		6860.00
299-E26-12	4/10/95	B0F7S3	161.00		5740.00	
299-E26-12	4/10/95	B0F7S7		192.00 F		5800.00
299-E26-13	4/10/95	B0F7T2	385.00		6270.00	
299-E26-13	4/10/95	B0F7T6		83.20 B		5930.00

Well Name	Collection Date	Sample Number	MANGESE 1139/ppb .8/50	FMANGAN 1139/ppb .8/50	NICKEL 1139/ppb 15.4/.	FNICKEL 1139/ppb 15.4/.
299-E25-11	4/06/95	B0F7B5	8.30 B		22.10 B	
299-E25-11	4/06/95	B0F7B6	7.00 B		25.20 B	
299-E25-11	4/06/95	B0F7B7		3.00 B		15.40 U
299-E25-11	4/06/95	B0F7B8		3.20 B		15.40 U
299-E25-18	4/06/95	B0F7C9	8.90 B		15.40 U	
299-E25-18	4/06/95	B0F7D0		8.00 B		15.40 U
299-E25-20	4/06/95	B0F7G1	10.90		15.40 U	
299-E25-20	4/06/95	B0F7G2		6.50 B		15.40 U
299-E25-21	4/10/95	B0F7H3	5.80 B		15.40 U	
299-E25-21	4/10/95	B0F7H4		3.20 B		15.40 U
299-E25-31	4/10/95	B0F7J4	8.50 B		15.40 U	
299-E25-31	4/10/95	B0F7J5		4.80 B		15.40 U
299-E25-42	4/10/95	B0F7N3	11.30		51.80	
299-E25-42	4/10/95	B0F7N7		6.60 B		17.90 B
299-E25-43	4/10/95	B0F7Q0	4.70 B		15.40 U	
299-E25-43	4/10/95	B0F7Q4		4.30 B		15.40 U
299-E25-47	4/10/95	B0F7Q9	5.40 B		15.40 U	
299-E25-47	4/10/95	B0F7R3		3.70 B		15.40 U
299-E25-48	4/10/95	B0F7R4	46.20		85.50	
299-E25-48	4/10/95	B0F7R8		38.60		75.90
299-E26-12	4/10/95	B0F7S3	3.60 B		15.40 U	
299-E26-12	4/10/95	B0F7S7		4.30 B		15.40 U
299-E26-13	4/10/95	B0F7T2	7.80 B		24.60 B	
299-E26-13	4/10/95	B0F7T6		3.40 B		15.40 U

Table 6-4. Constituents with at Least One Detected Value for the
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Well Name	Collection Date	Sample Number	MO3-N 1083/ppm .2/10	POYASUM 1139/ppb 2660/.	PPOTASS 1139/ppb 2660/.	SILICON 1139/ppb 12.2/.
299-E25-11	4/06/95	80F785	1.25	4840.00 B		18400.00
299-E25-11	4/06/95	80F786	1.25	4680.00 B		18400.00
299-E25-11	4/06/95	80F787			5220.00	
299-E25-11	4/06/95	80F788			4250.00 B	
299-E25-18	4/06/95	80F7C9	3.18	4830.00 B		17400.00
299-E25-18	4/06/95	80F7D0			4850.00 B	
299-E25-20	4/06/95	80F7G1	8.01	6000.00		23100.00
299-E25-20	4/06/95	80F7G2			5610.00	
299-E25-21	4/10/95	80F7H3	.46	4060.00 B		18100.00
299-E25-21	4/10/95	80F7H4			4000.00 B	
299-E25-31	4/10/95	80F7J4	.40	3790.00 B		15100.00
299-E25-31	4/10/95	80F7J5			3500.00 B	
299-E25-42	4/10/95	80F7N3	1.55	5450.00		19600.00
299-E25-42	4/10/95	80F7N7			6120.00	
299-E25-43	4/10/95	80F7Q0	.24	4040.00 B		14700.00
299-E25-43	4/10/95	80F7Q4			3220.00 B	
299-E25-47	4/10/95	80F7Q9	1.60	4500.00 B		17100.00
299-E25-47	4/10/95	80F7R3			5220.00	
299-E25-48	4/10/95	80F7R4	.60	4300.00 B		16200.00
299-E25-48	4/10/95	80F7R8			4720.00 B	
299-E26-12	4/10/95	80F7S3	.24	4350.00 B		14100.00
299-E26-12	4/10/95	80F7S7			4130.00 B	
299-E26-13	4/10/95	80F7T2	.26	3030.00 B		14300.00
299-E26-13	4/10/95	80F7T6			3510.00 B	

Well Name	Collection Date	Sample Number	SILICON 1139/ppb 12.2/.	SODIUM 1139/ppb 26.7/.	POTASSIUM 1139/ppb 26.7/.	STRONTIUM 1139/ppb .3/.
299-E25-11	4/06/95	80F785		12600.00		114.00
299-E25-11	4/06/95	80F786		12500.00		113.00
299-E25-11	4/06/95	80F787	18600.00		12900.00	
299-E25-11	4/06/95	80F788	18100.00		12400.00	
299-E25-18	4/06/95	80F7C9		14700.00		126.00
299-E25-18	4/06/95	80F7D0	17300.00		14600.00	
299-E25-20	4/06/95	80F7G1		24600.00		141.00
299-E25-20	4/06/95	80F7G2	22700.00		23800.00	
299-E25-21	4/10/95	80F7H3		14000.00		101.00
299-E25-21	4/10/95	80F7H4	17900.00		13900.00	
299-E25-31	4/10/95	80F7J4		13300.00		108.00
299-E25-31	4/10/95	80F7J5	15600.00		13700.00	
299-E25-42	4/10/95	80F7N3		26400.00		152.00
299-E25-42	4/10/95	80F7N7	20400.00		25100.00	
299-E25-43	4/10/95	80F7Q0		8470.00		112.00
299-E25-43	4/10/95	80F7Q4	14700.00		8610.00	
299-E25-47	4/10/95	80F7Q9		21200.00		131.00
299-E25-47	4/10/95	80F7R3	17000.00		21000.00	
299-E25-48	4/10/95	80F7R4		13100.00		120.00
299-E25-48	4/10/95	80F7R8	16000.00		13100.00	
299-E26-12	4/10/95	80F7S3		7700.00		107.00
299-E26-12	4/10/95	80F7S7	14200.00		7790.00	
299-E26-13	4/10/95	80F7T2		7630.00		113.00
299-E26-13	4/10/95	80F7T6	13500.00		7230.00	

Table 6-4. Constituents with at Least One Detected Value for the
216-A-29 Ditch Data for Reporting Period
April 1 through June 30, 1995.
(sheet 6 of 7)

Well Name	Collection Date	Sample Number	FSTRONIUM 1139/ppb .3/.	SULFATE 1083/ppm .5/250	TDS 1039/ppm 5/500	TRITIUM 1255/pCi/L ./20000
299-E17-20	4/03/95	B0F809				110000.00
299-E25-11	4/06/95	B0F785		13.50	154.00	
299-E25-11	4/06/95	B0F786		13.60	154.00	
299-E25-11	4/06/95	B0F787	117.00			
299-E25-11	4/06/95	B0F788	114.00			
299-E25-18	4/06/95	B0F7C9		21.70	171.00	
299-E25-18	4/06/95	B0F7D0	124.00			
299-E25-20	4/06/95	B0F7G1		24.90	223.00	
299-E25-20	4/06/95	B0F7G2	136.00			
299-E25-21	4/10/95	B0F7H3		14.80	179.00	
299-E25-21	4/10/95	B0F7H4	99.10			
299-E25-31	4/10/95	B0F7J4		18.40	175.00	
299-E25-31	4/10/95	B0F7J5	110.00			
299-E25-36	4/03/95	B0F817				8760.00
299-E25-42	4/10/95	B0F7M3		48.40	260.00	24000.00
299-E25-42	4/10/95	B0F7M7	159.00			
299-E25-43	4/10/95	B0F7Q0		11.30	149.00	607.00
299-E25-43	4/10/95	B0F7Q4	109.00			
299-E25-47	4/10/95	B0F7Q9		36.60	223.00	24000.00
299-E25-47	4/10/95	B0F7R3	131.00			
299-E25-48	4/10/95	B0F7R4		25.20	185.00	7230.00
299-E25-48	4/10/95	B0F7R8	119.00			
299-E26-12	4/10/95	B0F7S3		10.90	145.00	583.00
299-E26-12	4/10/95	B0F7S7	107.00			
299-E26-13	4/10/95	B0F7T2		11.00	159.00	462.00
299-E26-13	4/10/95	B0F7T6	108.00			

Well Name	Collection Date	Sample Number	TURBID 1044/NTU .1/.	TURBID 111/NTU ./.	VANADIUM 1139/ppb 2.5/.	PERVANADI 1139/ppb 2.5/.
299-E17-20	4/03/95	B0F809		.52		
299-E25-11	4/06/95	B0F785	.10 U	.54	42.80	
299-E25-11	4/06/95	B0F786	.10 U		40.80	
299-E25-11	4/06/95	B0F787			39.80	39.80
299-E25-11	4/06/95	B0F788				38.20
299-E25-18	4/06/95	B0F7C9	1.14	2.34	34.30	
299-E25-18	4/06/95	B0F7D0				40.60
299-E25-19	4/05/95	B0F7F4		.65		
299-E25-20	4/06/95	B0F7G1	.10 U	.70	58.70	
299-E25-20	4/06/95	B0F7G2				54.50
299-E25-21	4/10/95	B0F7H3	1.33	1.01	29.20 B	
299-E25-21	4/10/95	B0F7H4				26.00 B
299-E25-26	4/06/95	B0F7D4		.94		
299-E25-28	4/06/95	B0F7F6		.70		
299-E25-31	4/10/95	B0F7J4	2.27	3.71	32.10	
299-E25-31	4/10/95	B0F7J5				27.80 B
299-E25-32P	4/05/95	B0F7H5		.63		
299-E25-34	4/05/95	B0F7K5		2.20		
299-E25-35	4/06/95	B0F7M0		1.43		
299-E25-36	4/03/95	B0F817		1.00		
299-E25-42	4/10/95	B0F7M3	1.29	1.41	28.90 B	
299-E25-42	4/10/95	B0F7M7				34.60
299-E25-43	4/10/95	B0F7Q0	1.84	2.66	40.20	
299-E25-43	4/10/95	B0F7Q4				39.60
299-E25-47	4/10/95	B0F7Q9	1.73	1.94	32.70	

Table 6-4. Constituents with at Least One Detected Value for the
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(sheet 7 of 7)

Well Name	Collection Date	Sample Number	TURBID 1044/NTU .1/.	TURBID 111/NTU ./.	Vanadium 1139/ppb 2.5/.	Vanadium 1139/ppb 2.5/.
299-E25-47	4/10/95	80F7R3				33.80
299-E25-48	4/10/95	80F7R4	3.43	4.64	26.70 B	
299-E25-48	4/10/95	80F7R8				13.30 B
299-E26-12	4/10/95	80F7S3	1.75	2.21	39.20	
299-E26-12	4/10/95	80F7S7				40.10
299-E26-13	4/10/95	80F7T2	1.08	.77	36.60	
299-E26-13	4/10/95	80F7T6				34.50
699-43-43	4/05/95	80F7B8		.67		
699-43-45	4/05/95	80F7J6		1.07		

Well Name	Collection Date	Sample Number	ZINC 1139/ppb 5.2/5000	ZINC 1139/ppb 5.2/5000
299-E25-11	4/06/95	80F7B5	34.70 Q	
299-E25-11	4/06/95	80F7B6	19.90 BQ	
299-E25-11	4/06/95	80F7B7		531.00 QF
299-E25-11	4/06/95	80F7B8		396.00 QF
299-E25-18	4/06/95	80F7C9	26.50 Q	
299-E25-18	4/06/95	80F7D0		23.20 Q
299-E25-20	4/06/95	80F7G1	227.00 QF	
299-E25-20	4/06/95	80F7G2		19.30 BQ
299-E25-21	4/10/95	80F7H3	27.70	
299-E25-21	4/10/95	80F7H4		28.00
299-E25-31	4/10/95	80F7J4	28.50	
299-E25-31	4/10/95	80F7J5		21.00
299-E25-42	4/10/95	80F7M3	26.60	
299-E25-42	4/10/95	80F7M7		75.90 F
299-E25-43	4/10/95	80F7Q0	31.70	
299-E25-43	4/10/95	80F7Q4		42.20
299-E25-47	4/10/95	80F7Q9	572.00 F	
299-E25-47	4/10/95	80F7R3		15.10 B
299-E25-48	4/10/95	80F7R4	19.80 B	
299-E25-48	4/10/95	80F7R8		23.20
299-E26-12	4/10/95	80F7S3	20.30	
299-E26-12	4/10/95	80F7S7		27.90
299-E26-13	4/10/95	80F7T2	20.30	
299-E26-13	4/10/95	80F7T6		42.20 F

For explanation of this table, see Section 1.4 of report.

Table 6-5. Contamination Indicator Parameters for the
216-A-29 Ditch Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 2)

Well Name	Collection Date	Sample Number	COND FIELD	COND LAB	pH FIELD		pH LAB		TOC	TOX
			u/ho 1/.	u/ho 1/.	.01/6.5-8.5s		.01/6.5-8.5s		ppb */.	ppb */.
299-E17-20	4/03/95	80F809	429		8.25					5.0 UY
		80F810	429		8.24					6.3 Y
		80F811	431		8.23					5.0 UY
		80F812	433		8.20					5.0 UY
299-E25-11	4/06/95	80F785	212	206	8.22					
		80F786		207						
299-E25-18	4/06/95	80F7C9	248	240	8.15					
299-E25-19	4/05/95	80F7F4	361		7.84					
299-E25-20	4/06/95	80F7G1	308	298	8.03					
299-E25-21	4/10/95	80F7M3	202	202	8.19					
299-E25-26	4/06/95	80F7D4	183		8.32					13.8
		80F7D5	183		8.32					7.7
		80F7D6	183		8.32					6.9
		80F7D7	183		8.32					6.9 U
299-E25-28	4/06/95	80F7F6	184		8.30					6.9 U
		80F7F7	184		8.30					5.1
		80F7F8	184		8.28					7.0
		80F7F9	185		8.28					8.6
299-E25-31	4/10/95	80F7J4	218	217	8.32					
299-E25-32P	4/03/95	80F7H5	174		8.42					8.4 Y
		80F7H6	175		8.42					9.8 Y
		80F7H7	175		8.42					9.6 Y
		80F7H8	172		8.42					8.4 Y
299-E25-34	4/05/95	80F7K5	189		8.19					13.9 Y
		80F7K6	189		8.20					7.0 QT
		80F7K7	191		8.20					12.1 QT
		80F7K8	189		8.22					5.0 UY
299-E25-35	4/06/95	80F7M0	380		8.18					6.9 U
		80F7M1	380		8.18					6.9 U
		80F7M2	378		8.19					10.0
		80F7M3	376		8.19					6.9 U
299-E25-36	4/03/95	80F817	287		8.18					5.0 UY
		80F818	287		8.16					7.8 Y
		80F819	291		8.16					10.5 Y
		80F820	291		8.17					5.9 Y
299-E25-42	4/10/95	80F7K3	316	336	6.90 F		7.73		1000 U	6.9 U
		80F7M4	317		6.92 F				1000 U	6.9 U
		80F7M5	317		6.92 F				1000 U	7.5
		80F7M6	316		6.93 F				1000 U	7.2
299-E25-43	4/10/95	80F7Q0	181	181	8.12		8.11		1000 U	6.9 U
		80F7Q1	181		8.12				1000 U	6.9 U
		80F7Q2	181		8.12				1000 U	8.6
		80F7Q3	181		8.13				1000 U	9.4
299-E25-47	4/10/95	80F7Q9	287	288	8.08		8.12		1000 U	5.1
		80F7R0	287		8.08				1000 U	10.1
		80F7R1	287		8.09				1000 U	7.2
		80F7R2	288		8.09				1000 U	6.9 U
299-E25-48	4/10/95	80F7R4	227	223	8.05		8.02		1000 U	5.0
		80F7R5	225		8.05				1000 U	6.9 U
		80F7R6	225		8.05				1000 U	5.1
		80F7R7	228		8.05				1000 U	6.4
299-E26-12	4/10/95	80F7S3	185	184	8.28		8.14		1000 U	7.4
		80F7S4	187		8.27				1000 U	6.9 U
		80F7S5	185		8.27				1000 U	9.5
		80F7S6	189		8.27				1000 U	6.9 U

Table 6-5. Contamination Indicator Parameters for the
216-A-29 Ditch Data for Reporting Period
April 1 through June 30, 1995.
(sheet 2 of 2)

Well Name	Collection Date	Sample Number	COND FIELD uMho 1/.	COND LAB uMho 1/.	pH FIELD .01/6.5-8.5s	pH LAB .01/6.5-8.5s	TOC ppb */.	TOX ppb */.
299-E26-13	4/10/95	B0F7T2	191	194	8.24	8.14	1000 U	5.6
		B0F7T3	191		8.23		1000 U	6.9
		B0F7T4	191		8.23		1000 U	6.9 U
		B0F7T5	191		8.24		1000 U	6.9 U
699-43-43	4/05/95	B0F7G8	186		8.24			10.5 Y
		B0F7G9	186		8.24			11.8 Y
		B0F7H0	186		8.24			11.7 Y
		B0F7H1	185		8.24			11.3 Y
699-43-45	4/05/95	B0F7J6	214		8.26			8.3 Y
		B0F7J7	214		8.27			5.0 UY
		B0F7J8	214		8.27			5.0 UY
		B0F7J9	214		8.27			8.2 Y

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

Table 6-6. Drinking Water Standards Exceeded in the 216-A-29 Ditch
Groundwater Monitoring Network.

Constituent (DWS)	Wells exceeding DWS
Chromium, unfiltered (50 ppb)	299-E25-42, 299-E26-13
Iron, unfiltered (300 ppb)	299-E25-18 ^a , 299-E25-42, 299-E25-48, 299-E26-13,

^aWell in supplemental network.
DWS - Drinking Water Standard.

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7.0 216-A-36B CRIB

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7.1 INTRODUCTION

The 216-A-36B Crib (A-36B Crib) is a retired liquid waste disposal facility for the PUREX Plant. The crib is located in the 200 East Area approximately 365 m (1,200 ft) south of the PUREX Plant (Figures 1-1 and 7-1). The A-36B Crib is the southernmost 152 m (500 ft) of a crib originally known as the 216-A-36 Crib. The ammonia scrubber distillate waste stream that resulted from PUREX operations was discharged to the crib to percolate through the soil column. The original crib received liquid effluent from September 1965 to March 1966. Because a substantial inventory of radionuclides was disposed of in the crib and was assumed to have infiltrated the sediments near the inlet of the crib, a grout curtain was constructed to partition the crib into two sections, known as A and B. Discharge to the A-36B Crib section resumed in March 1966 and continued until 1972 when the crib was temporarily removed from service. The crib was placed back in service in November 1982 and operated until it was retired in October 1987.

Ammonia scrubber distillate effluent disposed of in the A-36B Crib was the condensate from the fuel-rod decladding operation. In this process, the zircalloy cladding was removed from the irradiated fuel by dissolving the cladding in a boiling solution of ammonium fluoride and ammonium nitrate. Waste stream constituents are known to have included radionuclides (tritium, strontium-90, cesium-137, ruthenium-106, cobalt-60, and uranium) and hazardous substances (ammonium, fluoride, and nitrate).

In accordance with the Tri-Party Agreement (Ecology et al. 1994), Milestone M-20-33, a RCRA closure/post-closure plan for the A-36B Crib is to be submitted to Ecology and the EPA in June 1998. An interim-status detection-level RCRA groundwater monitoring network has been operating at the A-36B Crib since May 1988.

The RCRA groundwater monitoring system consists of four RCRA-compliant downgradient wells and three upgradient wells, as listed in Table 7-1. The two upgradient wells from the 216-A-10 Crib monitoring network, 299-E24-18 and 299-E25-36, were added as upgradient wells for the A-36B Crib. Well 299-E17-5 is no longer sampled and is used for water level information only.

Well locations for the A-36B Crib monitoring network are shown in Figure 7-1. CIP critical means were reestablished using four quarters of data from upgradient wells (see Table 7-1) during September 1988 to October 1989. As shown in Table 7-1, data from well 299-E25-36 are also used by the 216-A-29 Ditch groundwater quality assessment.

7.2 WATER LEVEL MEASUREMENTS

Water level measurements are made quarterly and during semiannual RCRA sample collection. Water level data collected during the April 1 through June 30, 1995, period are reported in Table 7-2. Water level measurements were not taken for well 299-E17-15.

7.3 WATER CHEMISTRY DATA

Groundwater samples are collected semiannually during the second and fourth quarters for the A-36B Crib. The constituent list and summary of results are provided in Table 7-3. Constituents with at least one value above the MDL for all available data are presented in Table 7-4. Table 7-5 lists the results of the CIPs. Data flags are discussed in Section 1.2 and 1.4. Because of laboratory delays, some of the data are missing and will be reported in the next quarterly report. Required statistical evaluations for the CIPs were performed. No exceedances of the critical means were noted.

Figure 7-1. Well Location Map
for the 216-A-36B Crib.

H9411010.12a

**Table 7-1. Well Identification and Sampling Schedule
for the 216-A-368 Crib Groundwater Monitoring Network.**

Well no. (299-)	Relative position	Hydrogeologic unit	Sample frequency	Sample date, 2nd Qtr 1995
E17-17	Upgradient	Ringold: Water Table	Semiannually	04/04/95
E24-18 ^a	Upgradient	Ringold: Water Table	Semiannually	04/03/95
E25-36 ^b	Upgradient	Ringold: Water Table	Semiannually	04/03/95
E17-5 ^c	Downgradient	Ringold: Water Table	Water Level Only	—
E17-9 ^c	Downgradient	Ringold: Water Table	Semiannually	04/05/95
E17-14	Downgradient	Ringold: Water Table	Semiannually	04/04/95
E17-15	Downgradient	Ringold: Water Table	Semiannually	04/04/95
E17-16	Downgradient	Ringold: Water Table	Semiannually	04/04/95
E17-18	Downgradient	Ringold: Water Table	Semiannually	04/04/95

^aWell shared with the 216-A-10 Crib network.

^bWell shared with the 216-A-29 Ditch network.

^cWell is not used for statistical evaluation.

Table 7-2. RCRA Water Level Measurement Report
216-A-36B Crib, Second Quarter 1995.

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
299-E17-14	4/04/95	321.15*	401.03	122.23
	6/29/95	321.16	401.02	122.23
299-E17-15	4/04/95	321.55*	400.23	121.99
	6/29/95	321.54	400.24	121.99
299-E17-16	4/04/95	319.70*	400.88	122.19
	6/29/95	319.71	400.87	122.19
299-E17-17	4/04/95	319.00*	400.92	122.20
	6/29/95	319.04	400.88	122.19
299-E17-18	4/04/95	319.66*	400.99	122.22
	6/29/95	319.78	400.87	122.19
299-E17-5	6/29/95	318.10	400.59	122.10
299-E17-9	4/05/95	317.10*	400.54	122.08
	4/25/95	317.25*	400.39	122.04
	6/29/95	316.80	400.84	122.18
299-E24-18	4/03/95	318.29*	400.99	122.22
	6/29/95	318.23	401.05	122.24
299-E25-36	4/03/95	306.30*	401.09	122.25
	6/29/95	306.31	401.08	122.25

- NOTES: 1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
2. Depth-to-water values are transcribed from field records.
3. Measurements marked with an '*' were taken at the time of sampling.
4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 7-3. Constituent List and Summary of Results for the
216-A-36B Crib Data for Reporting Period
April 1 through June 30, 1995.

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
CONDUCT		Conductivity, field	umhos		1			36	36	
TOX		Total Organic Halogen	ppb		5			32	19	
PH		PH, field	PH		.01	6.5-8.5	EPAS	36	36	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
ALPHA		Gross alpha	pCi/L			15	EPA	4	4	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
BETA		Gross beta	pCi/L					4	4	
TRITIUM		Tritium	pCi/L			20000	EPA	4	4	
TURBID	1044	Turbidity	NTU		.1			1	1	
TURBID	111	Turbidity	NTU					9	9	

For explanation of this table, see Section 1.4 of report.

Table 7-4. Constituents with at Least One Detected Value for the
216-A-36B Crib Data for Reporting Period
April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	ALPHA 1247/pCi/L ./15	BETA 1252/pCi/L ./.	TRITIUM 1255/pCi/L ./20000	TURBID 1044/NTU ./.
299-E17-14	4/04/95	B0F7J0	4.51	76.40	1130000.00	
299-E17-15	4/04/95	B0F7L1	7.72	60.90	563000.00	
299-E17-9	4/25/95	B0FC62				.27
299-E24-18	4/03/95	B0F813	13.20	22.60	164000.00	
299-E25-36	4/03/95	B0F817	1.73	7.92	8760.00	

Well Name	Collection Date	Sample Number	TURBID 111/NTU ./.
299-E17-14	4/04/95	B0F7J0	1.29
299-E17-15	4/04/95	B0F7L1	1.63
299-E17-16	4/04/95	B0F7L6	.74
299-E17-17	4/04/95	B0F7M9	1.31
299-E17-18	4/04/95	B0F7N8	.60
299-E17-9	4/05/95	B0F7P6	8.05
299-E17-9	4/25/95	B0FC62	1.17
299-E24-18	4/03/95	B0F813	.55
299-E25-36	4/03/95	B0F817	1.00

For explanation of this table, see Section 1.4 of report.

Table 7-5. Contamination Indicator Parameters for the
216-A-36B Crib Data for Reporting Period
April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	COND FIELD	COND LAB	pH FIELD	pH LAB	TOC	TOX
			uMho 1/.	uMho 1/.	.01/6.5-8.5e	.01/6.5-8.5e	ppb */.	ppb */.
299-E17-14	4/04/95	B0F7J0	469		7.80			7.8
		B0F7J1	466		7.80			6.6
		B0F7J2	471		7.78			8.1
		B0F7J3	471		7.79			6.9
299-E17-15	4/04/95	B0F7L1	430		8.05			6.4
		B0F7L2	430		8.05			5.0 U
		B0F7L3	430		8.05			5.7
		B0F7L4	430		8.05			5.0 U
299-E17-16	4/04/95	B0F7L6	326		8.11			5.0 U
		B0F7L7	326		8.11			5.7
		B0F7L8	326		8.11			5.0 U
		B0F7L9	325		8.11			7.7
299-E17-17	4/04/95	B0F7M9	302		8.16			5.0 U
		B0F7M0	302		8.16			5.0 U
		B0F7M1	302		8.16			5.0 U
		B0F7M2	302		8.16			5.0 U
299-E17-18	4/04/95	B0F7M8	277		8.17			5.0 U
		B0F7M9	277		8.17			5.0 U
		B0F7P0	277		8.17			5.0 U
		B0F7P1	277		8.17			5.0 U
299-E17-9	4/05/95	B0F7P6	630		7.93			5.5
		B0F7P7	628		7.92			6.3
		B0F7P8	625		7.92			5.8
		B0F7P9	622		7.91			5.9
	4/25/95	B0FC62	585		7.89			
		B0FJ00	585		7.89			
		B0FJ01	582		7.90			
		B0FJ02	580		7.89			
299-E24-18	4/03/95	B0FB13	384		8.05			7.9 Y
		B0FB14	385		8.05			7.1 Y
		B0FB15	385		8.05			7.1 Y
		B0FB16	385		8.05			7.9 Y
299-E25-36	4/03/95	B0FB17	287		8.18			5.0 UV
		B0FB18	287		8.16			7.8 Y
		B0FB19	291		8.16			10.5 Y
		B0FB20	291		8.17			5.9 Y

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

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8.0 216-A-10 CRIB

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8.1 INTRODUCTION

The 216-A-10 Crib (A-10 Crib) is a retired liquid waste disposal facility that was used during the operation of the Plutonium-Uranium Extraction (PUREX) Plant. The crib is located in the 200 East Area approximately 120 m (400 ft) south of the PUREX Plant (Figures 1-1 and 8-1).

Several waste streams, collectively referred to as the process distillate discharge, were disposed of in the A-10 Crib for soil-column disposal during PUREX Plant operations. Process distillate discharge waste was first disposed of in the crib for 4 months during the 1956 PUREX startup. In 1961, the A-10 Crib replaced the 216-A-5 Crib and received PUREX effluent continuously until 1973. Periodic discharges were received in 1977, 1978, and 1981. From 1982 to 1987, continuous effluent discharges to the A-10 Crib were resumed. Effluent volumes from 1981 to 1986 averaged 1×10^8 L (2.6×10^6 gal) per year. In 1987, the A-10 Crib was removed from service and replaced by the 216-A-45 Crib.

The process distillate discharge waste stream sent to the A-10 Crib was characteristically acidic and contained concentrated salts. Waste stream constituents included aliphatic hydrocarbon compounds, organic complexants, and radionuclides (plutonium, uranium, strontium-90, cobalt-60, cesium-134 and -137, ruthenium-103 and -106, and tritium).

In accordance with the Tri-Party Agreement (Ecology et al. 1994), Milestone M-20-33, a RCRA closure/post-closure plan for the A-10 Crib is to be submitted to Ecology and EPA in June 1998. An interim-status detection-level RCRA groundwater monitoring network has been operational since November 1988.

The RCRA groundwater monitoring system consists of six downgradient wells and two upgradient wells, as listed in Table 8-1. Wells 216-E17-1 and 216-E24-2 are used to provide supplemental information and are not used in the statistical evaluation. Two wells in the 216-A-10 network, 216-E17-20 and 216-E25-36, are shared with the groundwater monitoring network for the A-29 Ditch facility. Wells 216-E24-18 and 216-E25-36 are shared with the 216-A-36B Crib. Well locations are shown in Figure 8-1. Background monitoring was completed in the fourth quarter of 1989, following the first four quarters of groundwater sampling.

8.2 WATER LEVEL MEASUREMENTS

Water level measurements are made quarterly and during semiannual RCRA sample collection. Water level data collected during the April through June 1995 period are reported in Table 8-2.

8.3 WATER CHEMISTRY DATA

Groundwater samples were collected from the 216-A-10 Crib monitoring network during April 1994 as part of the semi-annual sampling. Wells 299-E17-20 and 299-E25-36 were co-sampled with the 216-A-29 Ditch network. Well 299-E24-18 was co-sampled with the 216-A-10 Crib network. Because of laboratory delays, some of the data are missing and will be reported in the next quarterly report.

The constituent list and summary of results are provided in Table 8-3. Constituents with at least one value above the MDL for all available data are presented in Table 8-4. Table 8-5 lists the results of the CIPs. Data flags are discussed in Sections 1.2 and 1.4.

Well 299-E17-19 reported turbidity at a higher level than the historical trend. A RADE has been submitted. No constituents were reported to exceed the DWS for the A-10 Crib network. Required statistical evaluations for the CIPs were performed. No exceedances of the critical means were noted.

Figure 8-1. Well Location Map for the 216-A-10 Crib.

Table 8-1. Well Identification and Sampling Schedule for the 216-A-10 Crib Groundwater Monitoring Network.

Well no. (299-)	Relative position	Hydrogeologic unit	Sample frequency	Sample date, 2nd Qtr 1995
E24-18 ^a	Upgradient	Ringold: Water Table	Semiannually	04/03/95
E25-36 ^{a,b}	Upgradient	Ringold: Water Table	Semiannually	04/03/95
E17-1 ^c	Downgradient	Ringold: Water Table	Semiannually	04/04/95
E17-19	Downgradient	Ringold: Water Table	Semiannually	04/03/95
E17-20 ^b	Downgradient	Ringold: Water Table	Semiannually	04/03/95
E24-2 ^c	Downgradient	Ringold: Water Table	Water Level Only	—
E24-16	Downgradient	Ringold: Water Table	Semiannually	04/03/95
E24-17	Downgradient	Ringold: Water Table	Semiannually	04/03/95

^aWell sampled during period for 216-A-36B Crib network.

^bWell sampled during period for 216-A-29 Ditch network.

^cWell is not used for statistical evaluation.

Table 8-2. RCRA Water Level Measurement Report
216-A-10 Crib, Second Quarter 1995.

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
299-E17-1	4/04/95	318.65*	400.52	122.08
	6/29/95	318.39	400.78	122.16
299-E17-19	4/03/95	318.79*	400.54	122.08
	6/29/95	318.99	400.34	122.02
299-E17-20	4/03/95	318.08*	401.15	122.27
	6/29/95	318.50	400.73	122.14
299-E24-16	4/03/95	317.00*	401.27	122.31
	6/29/95	317.11	401.16	122.27
299-E24-17	4/03/95	318.50*	400.19	121.98
	6/29/95	318.57	400.12	121.96
299-E24-18	4/03/95	318.29*	400.99	122.22
	6/29/95	318.23	401.05	122.24
299-E24-2	6/29/95	316.31	401.16	122.27
299-E25-36	4/03/95	306.30*	401.09	122.25
	6/29/95	306.31	401.08	122.25

- NOTES:
1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
 2. Depth-to-water values are transcribed from field records.
 3. Measurements marked with an '*' were taken at the time of sampling.
 4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 8-3. Constituent List and Summary of Results for the
216-A-10 Crib Data for Reporting Period
April 1 through June 30, 1995.

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
CONDUCT		Conductivity, field	umhos		1			28	28	
TOX		Total Organic Halogen	ppb		5			28	15	
PH		pH, field	pH		.01	6.5-8.5	EPAS	28	28	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
ALPHA		Gross alpha	pCi/L			15	EPA	7	7	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
BETA		Gross beta	pCi/L					7	7	
TRITIUM		Tritium	pCi/L			20000	EPA	7	7	
TURBID		Turbidity	NTU					7	7	

For explanation of this table, see Section 1.4 of report.

Table 8-4. Constituents with at Least One Detected Value for the
216-A-10 Crib Data for Reporting Period
April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	ALPHA	BETA	TRITIUM	TURBID
			1247/pCi/L ./15	1252/pCi/L ./.	1255/pCi/L ./20000	111/NTU ./.
299-E17-1	4/04/95	80F792	3.16	11.70	1070000.00	1.30
299-E17-19	4/03/95	80F796	4.03	8.26	821000.00	94.70 F
299-E17-20	4/03/95	80F809	3.40	27.90	1100000.00	.52
299-E24-16	4/03/95	80F781	2.45 J	18.60	948000.00	1.96
299-E24-17	4/03/95	80F705	3.33	9.05	787000.00	1.25
299-E24-18	4/03/95	80F813	13.20	22.60	164000.00	.55
299-E25-36	4/03/95	80F817	1.73 J	7.92	8760.00	1.00

For explanation of this table, see Section 1.4 of report.

Table 8-5. Contamination Indicator Parameters for the
216-A-10 Crib Data for Reporting Period
April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	COND FIELD uMho 1/.	COND LAB uMho 1/.	pH FIELD .01/6.5-8.5a	pH LAB .01/6.5-8.5a	TOC ppb */.	TOX ppb */.
299-E17-1	4/04/95	80F792	390		8.00			8.4
		80F793	390		8.03			7.1
		80F794	389		8.00			5.9
		80F795	389		8.01			5.0 U
299-E17-19	4/03/95	80F796	347		7.91			5.0 UY
		80F797	347		7.91			6.7 Y
		80F798	348		7.92			6.7 Y
		80F799	349		7.92			5.0 UY
299-E17-20	4/03/95	80F809	429		8.25			5.0 UY
		80F810	429		8.24			6.3 Y
		80F811	431		8.23			5.0 UY
		80F812	433		8.20			5.0 UY
299-E24-16	4/03/95	80F781	368		7.85			6.2 Y
		80F782	368		7.85			5.0 UY
		80F783	368		7.85			5.0 UY
		80F784	368		7.85			5.7 Y
299-E24-17	4/03/95	80F7C5	318		8.00			5.0 UY
		80F7C6	319		8.01			5.0 UY
		80F7C7	319		8.01			5.0 U
		80F7C8	319		8.00			5.0 UY
299-E24-18	4/03/95	80F813	384		8.05			7.9 Y
		80F814	385		8.05			7.1 Y
		80F815	385		8.05			7.1 Y
		80F816	385		8.05			7.9 Y
299-E25-36	4/03/95	80F817	287		8.18			5.0 UY
		80F818	287		8.16			7.8 Y
		80F819	291		8.16			10.5 Y
		80F820	291		8.17			5.9 Y

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

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9.0 216-B-63 TRENCH

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9.1 INTRODUCTION

A RCRA interim-status detection-level groundwater monitoring network has been established for the 216-B-63 Trench. The 216-B-63 Trench received wastewater containing hazardous waste and radioactive materials from the B Plant located in the 200 East Area (Figures 1-1 and 9-1). Liquid effluent discharge to the 216-B-63 Trench ceased in February 1992.

The 216-B-63 Trench was an open, unlined earthen trench that was in service from March 1970 until February 1992. The trench received 4.0×10^5 to 1.5×10^6 L/day (100,000 to 400,000 gal/day) of liquid effluent from the B Plant chemical sewer, none of which is now designated as dangerous waste. The effluent was a mixture of steam condensate and raw water. Documented hazardous discharges occurred from 1970 to October 1985 and consisted of aqueous sulfuric acid and sodium hydroxide solutions exceeding the pH limits of 2.0 and 12.5, respectively. Radioactive soils were dredged from the trench in August 1970. In 1985, physical controls, radiation monitors, and operating procedures were modified to avoid inadvertent discharge of chemicals or radioactive substances to the wastewater stream. The trench has since been backfilled and stabilized and the diversion box leading to it has been filled with concrete.

Four quarters of groundwater background sampling were completed for all the wells in the network in April 1993. Background sampling is done to establish background water quality, in accordance with the requirements outlined in 40 CFR 265 *Interim-Status Indicator-Evaluation Groundwater Monitoring Plan for the 216-B-63 Trench* (PNL 1989). The 12 wells within the network are now sampled semiannually. Based on the present groundwater flow direction, seven of the wells are downgradient and five are upgradient of the trench (see Figure 9-1). The purpose of the wells, their sampling schedule, and the dates sampled are summarized in Table 9-1. As indicated in Table 9-1, some wells in the 216-B-63 Trench network are shared with the low-level burial grounds (LLBG) and single-shell tanks (SST) groundwater monitoring networks.

9.2 WATER LEVEL MEASUREMENTS

Water level measurements obtained during the April 1 through June 30, 1995, period are presented in Table 9-2. These measurements are obtained during sampling and as part of a semi-annual water table evaluation. Water measurements in well 299-E33-36 indicate water levels lower than in nearby wells in the network. Reasons for the apparent discrepancy are still under investigation.

9.3 WATER CHEMISTRY DATA

Chemistry data received before the cutoff date for this report are reported in Tables 9-3 through 9-5. A statistical evaluation has been completed for indicator parameters for the 216-8-63 Trench. A TOX anomaly was noted during sampling in well 299-E27-9. A RADE has been filed for this value. Data for other constituents were within the historical trend. An explanation of data flags can be found in Section 1.4.

Figure 9-1. Well Location Map for the 216-B-63 Trench.

Table 9-1. Monitoring Well Purpose and Sampling Schedule
for the 216-B-63 Trench Network.

Well no. (299-)	Relative position	Hydrogeologic unit	Sample frequency	Sample date, 2nd Qtr 1995
E27-8 ^a	Upgradient	Hanford: Water Table	Semiannually	05/04/95
E27-9 ^a	Upgradient	Hanford: Water Table	Semiannually	05/03/95
E27-11 ^a	Upgradient	Hanford: Water Table	Semiannually	05/03/95
E27-16	Downgradient	Hanford: Water Table	Semiannually	05/11/95
E27-17 ^a	Upgradient	Hanford: Water Table	Semiannually	05/03/95
E27-18	Downgradient	Hanford: Water Table	Semiannually	05/11/95
E27-19	Downgradient	Hanford: Water Table	Semiannually	05/11/95
E33-33 ^b	Downgradient	Hanford: Water Table	Semiannually	05/15/95
E33-36 ^b	Downgradient	Hanford: Water Table	Semiannually	05/15/95
E33-37	Downgradient	Hanford: Water Table	Semiannually	05/15/95
E34-8	Downgradient	Hanford: Water Table	Semiannually	05/15/95
E34-10 ^b	Upgradient	Hanford: Water Table	Semiannually	05/03/95

^aWell shared with the Low-Level Burial Grounds facility network.

^bWell shared with the single-shell tanks facility network.

Table 9-2. RCRA Water Level Measurement Report
216-B-63 Trench, Second Quarter 1995.

Well	Date	Depth to water (ft)	Water level	
			elevation above msl (ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer				
299-E27-11	5/03/95	242.30*	400.99	122.22
	6/28/95	242.28	401.01	122.23
299-E27-16	5/11/95	251.14*	400.99	122.22
	6/16/95	251.18	400.95	122.21
299-E27-17	5/03/95	233.36*	401.36	122.33
	6/28/95	233.35	401.37	122.34
299-E27-18	5/11/95	248.95*	401.20	122.29
	6/16/95	248.97	401.18	122.28
299-E27-19	5/11/95	249.73*	401.15	122.27
	6/16/95	249.78	401.10	122.26
299-E27-8	5/04/95	236.63*	401.20	122.29
	6/28/95	236.69	401.14	122.27
299-E27-9	5/03/95	227.99*	401.22	122.29
	6/28/95	228.01	401.20	122.29
299-E33-33	4/21/95	239.69	400.70	122.13
	5/24/95	239.53	400.86	122.18
	6/23/95	239.53	400.86	122.18
299-E33-36	6/16/95	247.70	398.97	121.61
299-E33-37	6/16/95	251.93	401.08	122.25
299-E34-10	5/03/95	238.41*	401.36	122.33
	6/28/95	238.41	401.36	122.33
299-E34-8	6/16/95	241.20	399.32	121.71

- NOTES: 1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
2. Depth-to-water values are transcribed from field records.
3. Measurements marked with an '*' were taken at the time of sampling.
4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 9-3. Constituent List and Summary of Results for the
216-B-63 Trench Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 2)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
CONDUCT	94	Conductivity, field	µmhos	1				48	48	
CONDUCT	73	Conductivity, lab	µmhos					13	13	
TOC		Total Organic Carbon	ppb	140				52	52	
TOX		Total Organic Halogen	ppb	6.9				52	2	
PH	93	pH, field	pH	.01	6.5-8.5	EPAS		45	45	4
PH	125	pH, lab	pH		6.5-8.5	EPAS		13	13	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
FBARIUM		Barium, filtered	ppb	1.4	1000	EPAI		5	5	0
FCADMIU		Cadmium, filtered	ppb	.98	10	EPAI		5	0	0
FCHROMI		Chromium, filtered	ppb	3.7	50	EPAI		5	0	0
FLUORID		Fluoride	ppb	52	1400	EPAI		5	5	0
ALPHA		Gross alpha	pCi/L		15	EPA		13	9	0
FMECUR		Mercury, filtered	ppb	.019	2	EPA		5	3	0
NITRATE		Nitrate	ppb	120	45000	EPA		5	5	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
CHLORID		Chloride	ppb	110	250000	EPAS		5	5	0
IRON		Iron, filtered	ppb	8.9	300	EPAS		5	5	0
FMANGAN		Manganese, filtered	ppb	.55	50	EPAS		5	5	0
FSODIUM		Sodium, filtered	ppb	44				5	5	
SULFATE		Sulfate	ppb	130	250000	EPAS		5	5	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
ALKALIN		Alkalinity	ppm	3.5				5	5	
ALUMIN		Aluminum, filtered	ppb	31				5	0	
ANTIMON		Antimony, filtered	ppb	24				5	0	
AR1016		Aroclor-1016	ppb	.026				5		
AR1221		Aroclor-1221	ppb	.029				5	0	
AR1232		Aroclor-1232	ppb	.071				5	0	
AR1242		Aroclor-1242	ppb	.018				5	0	
AR1248		Aroclor-1248	ppb	.019				5	0	
AR1254		Aroclor-1254	ppb	.0035				5	0	
AR1260		Aroclor-1260	ppb	.011				5	0	

Table 9-3. Constituent List and Summary of Results for the
 216-B-63 Trench Data for Reporting Period
 April 1 through June 30, 1993.
 (sheet 2 of 2)

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS		Number of Samples		
		Full				Limit	Agency	Total	>CRQL	>DWS
FBERYLL		Beryllium, filtered	ppb	.63				5	0	
BROMIDE		Bromide	ppb	72				5	0	
FCALCIU		Calcium, filtered	ppb	41				5	5	
FCOBALT		Cobalt, filtered	ppb	5.3				5	0	
FCOPPER		Copper, filtered	ppb	2.1	1000	EPAS		5	1	0
BETA		Gross beta	pCi/L					13	13	
FLEAD		Lead, filtered	ppb	.88	50	EPAI		5	1	0
FMAGNES		Magnesium, filtered	ppb	26				5	5	
FNICKEL		Nickel, filtered	ppb	11				5	0	
NITRITE		Nitrite	ppb	140	1000	EPA		5	0	0
PHOSPHA		Phosphate	ppb	340				5	0	
FPOTASS		Potassium, filtered	ppb	390				5	5	
FSILVER		Silver, filtered	ppb	5.5	50	EPAI		5	0	0
FTIN		Tin, filtered	ppb	30				5	0	
TRITIUM		Tritium	pCi/L		20000	EPA		5	5	0
TURBID		Turbidity	NTU					12	12	
FVANADI		Vanadium, filtered	ppb	1.9				5	5	
FZINC		Zinc, filtered	ppb	3.7	5000	EPAS		5	3	0

for explanation of this table, see Section 1.4 of report.

Table 9-4. Constituents with at Least One Detected Value for the
216-B-63 Trench Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 2)

Well Name	Collection Date	Sample Number	ALKALIN 357/ppm 3.5/.	BARIIUM 34/ppb 1.4/1000	CALCIUM 34/ppb 41/.	CHLORID 124/ppb 110/250000
299-E27-11	5/03/95	80FCC2	100.00			7200.00
299-E27-11	5/03/95	80FCC6		36.00	35000.00	
299-E27-17	5/03/95	80FCC7	100.00			8100.00
299-E27-17	5/03/95	80FCD1		32.00	39000.00	
299-E27-8	5/04/95	80FCD2	110.00			6300.00
299-E27-8	5/04/95	80FCD6		23.00	34000.00	
299-E27-9	5/03/95	80FCD7	100.00			6700.00
299-E27-9	5/03/95	80FCF1		22.00	35000.00	
299-E34-10	5/03/95	80FCF2	100.00			7500.00
299-E34-10	5/03/95	80FCF6		33.00	35000.00	

Well Name	Collection Date	Sample Number	COPPER 34/ppb 2.1/1000	FLUORID 124/ppb 52/1400	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.
299-E27-11	5/03/95	80FCC2		500.00	1.24	5.69
299-E27-11	5/03/95	80FCC6	2.10 U			
299-E27-16	5/11/95	80FC63			1.77	4.93
299-E27-17	5/03/95	80FCC7		600.00	1.51	6.37
299-E27-17	5/03/95	80FCD1	3.10 L			
299-E27-18	5/11/95	80FC67			2.02	6.84
299-E27-18	5/11/95	80FC68			2.10	4.56
299-E27-19	5/11/95	80FC75			1.61	7.90
299-E27-8	5/04/95	80FCD2		500.00	.94 U	7.27
299-E27-8	5/04/95	80FCD6	2.10 U			
299-E27-9	5/03/95	80FCD7		500.00	1.32	5.02
299-E27-9	5/03/95	80FCF1	2.10 U			
299-E33-33	5/15/95	80FC79			.52 U	5.85
299-E33-36	5/15/95	80FC83			1.11 U	5.38
299-E33-37	5/15/95	80FC87			.85 U	4.80
299-E34-10	5/03/95	80FCF2		600.00	3.24	4.26
299-E34-10	5/03/95	80FCF6	2.10 U			
299-E34-8	5/15/95	80FC91			2.64	6.71

Well Name	Collection Date	Sample Number	IRON 34/ppb 8.9/500	LEAD 40/ppb .88/50	MAGNES 34/ppb 26/.	MANGAN 34/ppb .55/50
299-E27-11	5/03/95	80FCC6	110.00 B	.88 U	9400.00	2.30 BL
299-E27-17	5/03/95	80FCD1	14.00 BL	.88 U	11000.00	1.
299-E27-8	5/04/95	80FCD6	25.00 B	.88 U	9300.00	1.80 BL
299-E27-9	5/03/95	80FCF1	30.00 B	.88 U	10000.00	1.80 BL
299-E34-10	5/03/95	80FCF6	16.00 BL	2.50 LB	9200.00	3.20 BL

Table 9-4. Constituents with at Least One Detected Value for the
215-B-63 Trench Data for Reporting Period
April 1 through June 30, 1995.
(sheet 2 of 2)

Well Name	Collection Date	Sample Number	PMERCUR 41/ppb .019/2	NITRATE 124/ppb 120/45000	FPOTASS 34/ppb 390/.	FSODIUM 34/ppb 44/.
299-E27-11	5/03/95	BOFCC2		6700.00		
299-E27-11	5/03/95	BOFCC6	.02 U		6000.00	13000.00 B
299-E27-17	5/03/95	BOFCC7		7900.00		
299-E27-17	5/03/95	BOFCD1	.02 U		6700.00	16000.00 B
299-E27-8	5/04/95	BOFCD2		5200.00		
299-E27-8	5/04/95	BOFCD6	.02 L		6400.00	13000.00 B
299-E27-9	5/03/95	BOFCD7		6200.00		
299-E27-9	5/03/95	BOFCF1	.06 L		5900.00	12000.00 B
299-E34-10	5/03/95	BOFCF2		6000.00		
299-E34-10	5/03/95	BOFCF6	.03 L		6200.00	14000.00 B

Well Name	Collection Date	Sample Number	SULFATE 124/ppb 130/250000	TRITIUM 142/pCi/L ./20000	TURBID 111/NTU ./.	FSVANADY 34/ppb 1.9/.
299-E27-11	5/03/95	BOFCC2	44000.00 D	2890.00	1.00	
299-E27-11	5/03/95	BOFCC6				22.00 L
299-E27-16	5/11/95	BOFC63			.56	
299-E27-17	5/03/95	BOFCC7	53000.00 D	3160.00	.77	
299-E27-17	5/03/95	BOFCD1				21.00 L
299-E27-18	5/11/95	BOFC67			1.10	
299-E27-19	5/11/95	BOFC75			.84	
299-E27-8	5/04/95	BOFCD2	37000.00 D	3430.00	.97	
299-E27-8	5/04/95	BOFCD6				24.00 L
299-E27-9	5/03/95	BOFCD7	43000.00 D	3070.00	1.73	
299-E27-9	5/03/95	BOFCF1				27.00 L
299-E33-33	5/15/95	BOFC79			.58	
299-E33-36	5/15/95	BOFC83			.67	
299-E33-37	5/15/95	BOFC87			.53	
299-E34-10	5/03/95	BOFCF2	45000.00 D	2990.00	1.55	
299-E34-10	5/03/95	BOFCF6				23.00 L
299-E34-8	5/15/95	BO				

Well Name	Collection Date	Sample Number	FZINC 34/ppb 3.7/5000			
299-E27-11	5/03/95	BOFCC6	6.80 L			
299-E27-17	5/03/95	BOFCD1	6.00 L			
299-E27-8	5/04/95	BOFCD6	9.70 L			
299-E27-9	5/03/95	BOFCF1	3.70 U			
299-E34-10	5/03/95	BOFCF6	3.70 U			

For explanation of this table, see Section 1.4 of report.

Table 9-5. Contamination Indicator Parameters for the
216-S-63 Trench Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 2)

Well Name	Collection Date	Sample Number	COND FIELD µmho 1/.	COND LAB µmho 1/.	pH FIELD .01/6.5-8.5s	pH LAB .01/6.5-8.5s	TDC ppb */.	TOX ppb */.
299-E27-11	5/03/95	80FDC2	327	330	8.12	8.10	300 L	6.9 U
		80FDC3	327		8.13		300 L	6.9 U
		80FDC4	327		8.13		200 L	6.9 U
		80FDC5	327		8.13		200 L	6.9 U
299-E27-16	5/11/95	80FDC63	263	270	8.41	8.20	300 L	6.9 U
		80FDC64	263		8.43		300 L	6.9 U
		80FDC65	263		8.43		200 L	6.9 U
		80FDC66	263		8.44		300 L	6.9 U
299-E27-17	5/03/95	80FDC7	337	360	8.09	8.10	200 L	6.9 U
		80FDC8	337		8.09		300 L	9.5 L
		80FDC9	338		8.09		300 L	6.9 U
		80FDC0	338		8.09		400 L	6.9 U
299-E27-18	5/11/95	80FDC67	280	290	8.62	8.20	300 L	6.9 U
		80FDC68	282	290	8.65	8.20	400 L	6.9 U
		80FDC69	286		8.72		300 L	6.9 U
		80FDC70	302		8.75		300 L	6.9 U
		80FDC71					300 L	6.9 U
		80FDC72					300 L	6.9 U
		80FDC73					300 L	6.9 U
		80FDC74					300 L	6.9 U
299-E27-19	5/11/95	80FDC75	302	310	8.10	8.20	300 L	6.9 U
		80FDC76	301		8.11		300 L	6.9 U
		80FDC77	301		8.11		300 L	6.9 U
		80FDC78	301		8.11		300 L	6.9 U
299-E27-8	5/04/95	80FDC02	313	310	7.78	8.10	200 L	6.9 U
		80FDC03	313		7.79		200 L	6.9 U
		80FDC04	313		7.79		200 L	6.9 U
		80FDC05	313		7.78		300 L	6.9 U
299-E27-9	5/03/95	80FDC07	321	330	7.92	8.20	300 L	6.9 U
		80FDC08	320		7.92		300 L	6.9 U
		80FDC09	320		7.91		300 L	6.9 U
		80FDC0	320		7.92		300 L	20.0 R
299-E33-33	5/15/95	80FDC79	289	290	8.16	8.20	200 L	6.9 U
		80FDC80	288		8.18		200 L	6.9 U
		80FDC81	288		8.18		300 L	6.9 U
		80FDC82	288		8.18		200 L	6.9 U
299-E33-36	5/15/95	80FDC83	259	260	8.39	8.30	300 L	6.9 U
		80FDC84	259		8.37		300 L	6.9 U
		80FDC85	259		8.36		300 L	6.9 U
		80FDC86	259		8.36		300 L	6.9 U
299-E33-37	5/15/95	80FDC87	258	260	8.44	8.20	300 L	6.9 U
		80FDC88	258		8.45		300 L	6.9 U
		80FDC89	258		8.46		300 L	6.

Table 9-5. Contamination Indicator Parameters for the
216-B-63 Trench Data for Reporting Period
April 1 through June 30, 1995.
(sheet 2 of 2)

Well Name	Collection Date	Sample Number	COND FIELD μmho 1/.	COND LAB μmho 1/.	pH FIELD .01/6.5-8.5s	pH LAB .01/6.5-8.5s	TOC ppb %/.	TOX ppb %/.
299-E33-37	5/15/95	80FC90	258		8.48		300 L	6.9 U
299-E34-10	5/03/95	80FCF2	330	340	8.10	8.10	300 L	6.9 U
		80FCF3	330				300 L	6.9 U
		80FCF4	330				300 L	6.9 U
		80FCF5	330				300 L	6.9 U
299-E34-8	5/15/95	80FC91	299	300	8.24	8.20	300 L	6.9 U
		80FC92	300		8.24		300 L	6.9 U
		80FC93	300		8.25		300 L	6.9 U
		80FC94	300		8.25		300 L	6.9 U

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

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10.0 216-S-10 POND AND DITCH

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10.1 INTRODUCTION

The 216-S-10 Pond and Ditch (S-10 Facility) is located south-southwest of the 200 West Area, directly outside the perimeter fence. The S-10 Facility received wastewater from the Reduction-Oxidation (REDOX) Plant (202-S Building) located in the 200 West Area. In the past, wastewater disposed of at the S-10 Facility has contained hazardous waste and radioactive materials. Since 1985, physical controls and operating procedures have been modified to avoid inadvertent discharge of hazardous and radioactive substances to the wastewater stream. The facility has been monitored under interim status since August 1991. In October 1991, the effluent waste stream, including the water source, to the 216-S-10 Ditch was deactivated. Because the S-10 Facility is not expected to receive additional hazardous and radioactive substances, the facility will be closed in accordance with WAC 173-303-610 (final status). The closure/post-closure plan is due in 2003.

The S-10 Facility initially comprised an open, unlined ditch 1.8 m (6 ft) deep, 1.2 m (4 ft) wide at the bottom, and 686 m (2,250 ft) long. In addition, an open, unlined percolation pond, approximately 2 hectares (5 acres) in size, was constructed at the southwest end of the ditch, and was active during part of the time the ditch was receiving waste.

The 216-S-10 Ditch began receiving wastewater from the REDOX Plant in August 1951, and the 216-S-10 Pond was dug and placed in service in February 1954. In October 1985, the 216-S-10 Pond and portions of the 216-S-10 Ditch were decommissioned, backfilled, and stabilized. The remaining portion of the 216-S-10 Ditch (approximately 594 m [1,950 ft]) received nonhazardous, nonregulated waste from the 202-S Building chemical sewer until deactivation in October 1991. This waste stream comprised cooling water, steam condensate, water tower overflow, and drain effluent. These source streams had been routed so that they would not come into contact with hazardous materials.

Releases of hazardous materials and constituents to the S-10 Facility are poorly documented. Radioactive waste was reportedly disposed of to the S-10 Facility as a result of contaminated floor and sewer drains at the REDOX Plant. Chemical releases were documented in 1954 and 1983, and known constituents are $\text{Al}(\text{NO}_3)_3$, NaNO_3 , NaOH , Na_3PO_4 , NaF , NaCl , and $\text{K}_2\text{Cr}_2\text{O}_7$.

During 1991 the annual volume of effluent discharged to the 216-S-10 Ditch was between 1.9×10^8 and 5.7×10^8 L (5.0×10^7 and 1.5×10^8 gal). Annual discharges like this created a localized recharge mound and an associated perched water table directly below the receiving (north) end of the ditch. This recharge mound has since dissipated, and the perched water zone has been dry since shortly after the ditch was deactivated.

Groundwater beneath the S-10 Facility is sampled semiannually in accordance with the *Interim-Status Groundwater Monitoring Plan for the 216-S-10 Pond and Ditch* (WHC 1990a). The site is currently in a detection-level indicator parameters evaluation program.

The monitoring network currently consists of two upgradient wells, three downgradient wells, and one downgradient well that monitors the base of the unconfined aquifer (Figure 10-1). Table 10-1 lists the wells and their sampling status. The first four quarters of groundwater sampling and analysis in the detection-level program were completed in 1992. The results of the background statistical calculations for the upgradient monitoring wells (based on the first four quarters of analytical data) were presented in the *Annual Report for RCRA Groundwater Monitoring Projects at Hanford Site Facilities for 1993* (DOE-RL 1994).

10.2 WATER LEVEL MEASUREMENTS

Water level measurements obtained during the second quarter of calendar year 1995 are presented in Table 10-2. Water levels are measured at all wells at the time of sampling. Also, quarterly water level measurements are made at six wells at the S-10 Facility including 299-W26-7, 299-W26-8, 299-W26-9, 299-W26-10, 299-W26-12, and 299-W27-2.

10.3 WATER CHEMISTRY DATA

Groundwater sampling during the second quarter of calendar year 1995 included all six wells of the monitoring network (Figure 10-1). The wells are on a semiannual sampling schedule and were sampled June 13-15, 1995. Available data for the reporting period April 1 through June 30, 1995, are shown in Tables 10-3 through 10-5. Required statistical evaluation of the contamination indicator parameters was performed. There are no exceedances of the critical mean.

Drinking water parameters, groundwater quality parameters, and site-specific and other constituents did not exceed DWSs in the monitoring network wells except for pH in well 299-W26-8, an upgradient well (Tables 10.3 and 10.5). Although the pH results for 299-W26-8 exceed DWSs, they are within the critical range (6.74-9.04). Turbidity at this well also was high (15.3 NTU) (Table 10-4) this quarter.

The samples from downgradient well 299-W27-2, which monitors the base of the aquifer, exceed the critical mean value for specific conductance of 301.1 $\mu\text{mhos/cm}$ (Table 10-5). These results are typical of this well. However, results from this well are used for supplementary information only and are not statistically compared to results from upgradient wells that monitor the upper portion of the aquifer.

Figure 10-1. Well Location Map for the 216-S-10 Facility.

Table 10-1. Monitoring Well Purpose and Sampling Schedule for the 216-S-10 Facility.

Well no. (299-)	Relative position	Hydrogeologic unit	Sampling frequency	Last sampling date
W26-7	Upgradient	Ringold: Water Table	Semiannually	06/13/95
W26-8	Upgradient	Ringold: Water Table	Semiannually	06/14/95
W26-9	Downgradient	Ringold: Water Table	Semiannually	06/13/95
W26-10	Downgradient	Ringold: Water Table	Semiannually	06/10/95
W26-12	Downgradient	Ringold: Water Table	Semiannually	06/14/95
W27-2	Downgradient	Ringold: Base of Unconfined Aquifer	Semiannually	06/15/95

Table 10-2. RCRA Water Level Measurement Report
216-S-10 Facility, Second Quarter 1995.

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer				
299-W26-10	6/14/95	217.00*	453.87	138.34
	6/20/95	216.73	454.14	138.42
299-W26-12	6/14/95	221.57*	454.12	138.42
	6/20/95	221.21	454.48	138.53
299-W26-7	6/13/95	193.32*+	458.67+	+139.80
	6/20/95	195.87	456.12	139.03
299-W26-8	6/14/95	214.07*+	452.50+	+137.92
	6/20/95	211.42	455.15	138.73
299-W26-9	6/13/95	200.05*	454.37	138.49
	6/20/95	199.57	454.85	138.64
299-W27-2	6/15/95	222.58*	454.53	138.54

- NOTES: 1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
2. Depth-to-water values are transcribed from field records.
3. Measurements marked with an '*' were taken at the time of sampling.
4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 10-3. Constituent List and Summary of Results for the
216-S-10 Facility Data for Reporting Period
April 1 through June 30, 1995.

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab		DWS	Agency	Number of Samples		
		Full			MDL	Limit			Total	>MDL	>DWS
CONDUCT		Conductivity, field		μ hos	1				24	24	
TOC		Total Organic Carbon		ppb	140				24	24	
TOX		Total Organic Halogen		ppb	6.9				24	3	
PH	93	pH, field		pH	.01	6.5-8.5		EPAS	24	24	4
PH	125	pH, lab		pH		6.5-8.5		EPAS	6	6	1

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab		DWS	Agency	Number of Samples		
		Full			MDL	Limit			Total	>MDL	>DWS
ALPHA		Gross alpha		pCi/L		15		EPA	6	5	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab		DWS	Agency	Number of Samples		
		Full			MDL	Limit			Total	>MDL	>DWS
ALKALIN		Alkalinity		ppm	3.5				6	6	
BETA		Gross beta		pCi/L					6	6	
TURBID		Turbidity		NTU					6	6	

For explanation of this table, see Section 1.4 of report.

Table 10-4. Constituents with at Least One Detected Value for the
216-S-10 Facility Data for Reporting Period
April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	ALKALIN 357/ppm 3.5/.	ALPHA 135/pCi/L -/15	BETA 136/pCi/L ./.	TURBID 111/NTU -/.
299-W26-10	6/14/95	B0FL99	110.00	.97	5.65	3.99
299-W26-12	6/14/95	B0FL87	100.00	2.31	2.91	2.03
299-W26-7	6/13/95	B0FLC5	100.00	1.25	2.37	1.02
299-W26-8	6/14/95	B0FLC9	110.00	14.60	10.40	15.30
299-W26-9	6/13/95	B0FLD8	110.00	3.30	4.00	.92
299-W27-2	6/15/95	B0FLF7	120.00	-.23 U	2.74	3.99

For explanation of this table, see Section 1.4 of report.

Table 10-5. Contamination Indicator Parameters for the
216-S-10 Facility Data for Reporting Period
April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	COND FIELD	COND LAB	pH FIELD	pH LAB	TOC	TOX
			μmho 1/.	μmho 1/.	.01/6.5-8.5s	.01/6.5-8.5s	ppb */.	ppb */.
299-W26-10	6/14/95	BOFL99	259		7.87	7.90	200 L	6.9 U
		BOFL80	259		7.86		200 L	6.9 U
		BOFLB1	258		7.84		200 L	6.9 U
299-W26-12	6/14/95	BOFLB2	258		7.84		300 L	6.9 U
		BOFLB7	237		8.08	8.10	300 L	6.9 U
		BOFLB8	237		8.09		300 L	6.9 U
		BOFLB9	237		8.08		200 L	6.9 U
		BOFLC0	236		8.08		300 L	6.9 U
299-W26-7	6/13/95	BOFLC5	261		7.94	8.00	200 L	6.9 U
		BOFLC6	261		7.94		200 L	6.9 U
		BOFLC7	264		7.94		200 L	6.9 U
		BOFLC8	261		7.94		200 L	6.9 U
299-W26-8	6/14/95	BOFLC9	262		8.79	8.60	300 L	8.0 L
		BOFLD0	260		8.78		400 L	6.9 U
		BOFLD1	260		8.79		300 L	9.0 L
		BOFLD2	260		8.82		300 L	6.9 U
299-W26-9	6/13/95	BOFLD8	280		8.02	8.00	200 L	6.9 U
		BOFLD9	299		8.10		200 L	6.9 U
		BOFLF0	285		8.08		200 L	6.9 U
		BOFLF1	276		8.05		200 L	6.9 U
299-W27-2	6/15/95	BOFLF7	354		7.62	7.80	200 L	7.0 L
		BOFLF8	353		7.61		200 L	6.9 U
		BOFLF9	354		7.57		300 L	6.9 U
		BOFLG0	353		7.62		200 L	6.9 U

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

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11.0 216-U-12 CRIB

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11.1 INTRODUCTION

The 216-U-12 Crib (U-12 Crib) is located approximately 609 m (1,998 ft) south of the U Plant in the 200 West Area (see Figure 11-1). The crib is an unlined, gravel-bottom, percolation crib that is 3 m by 30.5 m (10 ft by 100 ft) and 4 m (13 ft) deep. The crib has a plastic barrier cover and is backfilled with the original excavated soil. A vitrified clay distribution pipe buried in the gravel was used to disperse the effluent across the bottom of the crib.

The U-12 Crib received wastewater from the U Plant in the 200 West Area from April 1960 until February 1988, when it was replaced by the 216-U-17 Crib. The closure of the U-12 Crib will be coordinated with the CERCLA Past-Practice activity (200-UP-2 Operable Unit cleanup). The 216-U-12 Crib is scheduled to be included in the Hanford RCRA Permit (Ecology 1994) as a TSD unit undergoing closure through the permit modification process in 1997.

The wastewater disposed of in the U-12 Crib consisted of effluent from the U Plant and included 291-U-1 Stack drainage and process condensate from the 224-U Building. The U-12 Crib received this waste stream from April 1960 until 1972, when it was deactivated. The U-12 Crib was reactivated in November 1981 and received U Plant waste until it was permanently retired in February 1988. An average of over 1,000,000 L (264,200 gal) of effluent was disposed of in the crib during each year of its active life. This waste contained hazardous waste and radioactive materials. The U-12 Crib received low-level radioactive waste that is known to have included chemicals such as nitric acid in addition to plutonium, strontium, ruthenium, and uranium. In 1985, physical controls and operating procedures were modified to avoid inadvertent discharge of hazardous chemicals to the wastewater stream. In 1983, hydrogeologic evaluation of the crib revealed radioactive contamination to a depth of at least 43 m (140 ft). The depth to water below the crib is approximately 72.5 m (237 ft).

The RCRA *Interim-Status Groundwater Monitoring Plan for the 216-U-12 Crib* (WHC 1990b) presents the program used to establish the background levels for the CIPs. The document summarizes the available data for the disposal facility. In accordance with the plan, four RCRA groundwater monitoring wells were installed in 1990. The monitoring network consisted of one upgradient well and three downgradient wells (Figure 11-1). A RCRA interim-status assessment-level groundwater monitoring network was established for the U-12 Crib in 1993 (WHC 1993a) because of an elevated level of specific conductivity in the downgradient well.

The sample results for the second quarter of 1995 represent the 16th quarter of RCRA data collected at the U-12 Crib. Data collected during the third quarter of 1992 from downgradient wells 299-W22-41 and 299-W22-42 showed elevated specific conductivity. Verification sampling results and data

obtained in subsequent quarters corroborated these findings. Currently, the U-12 Crib groundwater monitoring well network is sampled quarterly.

The current network consists of six wells--two upgradient wells (299-W22-23 and 299-W22-43) and four downgradient wells (299-W22-40, -41, -42, and 699-36-70A). Table 11-1 lists the network wells and their sampling status during the reporting period.

11.2 WATER LEVEL MEASUREMENTS

Water levels in each network well are measured at least quarterly and when water samples are collected. Water level measurements obtained during the quarter are presented in Table 11-2.

11.3 WATER CHEMISTRY DATA

Groundwater samples were collected on June 14-15, 1995 from all network wells. All data currently available from this and previous unreported sampling periods are shown in Tables 11-3 through 11-5. Table 11-3 includes the constituent list and a summary of results. Tables 11-4 and 11-5 show results for specific constituents. Analytical data unavailable at the time this report was prepared will be included in future quarterly reports.

Specific conductivity results in wells 699-36-70A, 299-W22-41 and 299-W22-42 continue to exceed the critical mean of 437 $\mu\text{mho}/\text{cm}$. Results for nitrate (DWS = 45,000 ppb), the principal constituent suspected of causing elevated conductivity at the crib are 150,000, 100,000, and 540,000 ppb, respectively, for the wells with elevated specific conductance. Technetium-99 (beta indicators are elevated also) and iodine-129 are also elevated above background in these same wells (consistent with previous downgradient well data). Tritium in well 699-36-70A is 332,000 pCi/L, above the 20,000 pCi/L DWS. An explanation of any data flags can be found in Sections 1.2 and 1.4.

Figure 11-1. Well Location Map for 216-U-12 Crib.

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Table 11-1. Monitoring Well Purpose and Sampling Schedule for the)
216-U-12 Crib.

Well no. (229-)	Relative position	Hydrogeologic unit	Sample frequency	Sample date, 2nd Qtr 1995
W22-43	Upgradient	Ringold: Water Table	Quarterly	06/14/95
W22-40	Downgradient	Ringold: Water Table	Quarterly	06/14/95
W22-41	Downgradient	Ringold: Water Table	Quarterly	06/15/95
W22-42	Downgradient	Ringold: Water Table	Quarterly	06/14/95
699-36-70A	Downgradient	Ringold: Water Table	Quarterly	06/15/95
W22-23	Upgradient	Ringold: Water Table	Quarterly	Not sampled

Note: Hydrogeologic units include the sandy gravel of the Hanford formation and the Ringold Formation.

Table 11-2. RCRA Water Level Measurement Report
216-U-12 Crib, Second Quarter 1995.

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer				
299-W22-40	6/14/95	238.60*	453.89	138.35
	6/20/95	239.13	453.36	138.18
299-W22-41	6/15/95	238.17*	453.83	138.33
	6/20/95	238.68	453.32	138.17
299-W22-42	6/14/95	237.67*	453.75	138.30
	6/20/95	238.65	452.77	138.00
299-W22-43	6/14/95	237.00*	454.61	138.57
	6/20/95	237.52	454.09	138.41
699-36-70A	6/15/95	257.82*	447.61	136.43
	6/20/95	258.32	447.11	136.28

- NOTES: 1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
2. Depth-to-water values are transcribed from field records.
3. Measurements marked with an '*' were taken at the time of sampling.
4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 11-3. Constituent List and Summary of Results for the
216-U-12 Crib Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 3)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
CONDUCT		Conductivity, field		umhos	1			11	11	
TOC		Total Organic Carbon		ppb	140			11	11	
TOX		Total Organic Halogen		ppb	6.9			11	5	
PH	93	pH, field		pH	.01	4.5-8.5	EPAS	11	11	0
PH	125	pH, lab		pH		4.5-8.5	EPAS	3	3	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
2,4,5TP		2,4,5-TP		ppb	.048	50	EPA	1	0	0
2,4-D		2,4-D		ppb	.12	100	EPAI	1	0	0
BARIUM		Barium		ppb	1.4	1000	EPAI	1	1	0
FBARIUM		Barium, filtered		ppb	1.4	1000	EPAI	5	5	0
CADMIUM		Cadmium		ppb	.98	10	EPAI	1	1	1
FCADMIUM		Cadmium, filtered		ppb	.98	10	EPAI	5	0	0
CHROMIUM		Chromium		ppb	3.7	50	EPAI	1	0	0
FCROMIUM		Chromium, filtered		ppb	3.7	50	EPAI	5	5	0
ENDRIN	1199	Endrin		ppb	.005	.2	EPA	1	0	0
ENDRIN	17	Endrin		ppb	.0035	.2	EPA	1	0	0
FLUORID		Fluoride		ppb	52	1400	EPAI	5	5	0
ALPHA	1247	Gross alpha		pCi/L		15	EPA	5	4	0
ALPHA	135	Gross alpha		pCi/L		15	EPA	5	5	0
FMERCURY		Mercury, filtered		ppb	.019	2	EPA	1	0	0
METHLOR	1199	Methoxychlor		ppb	.04	100	EPAI	1	0	0
METHLOR	17	Methoxychlor		ppb	.0046	100	EPAI	1	0	0
NITRATE		Nitrate		ppb	120	45000	EPA	5	5	3
RADIUM	1276	Radium		pCi/L				1	1	
RADIUM	137	Radium		pCi/L		5	EPAI	1	1	0
TOXAENE	1199	Toxaphene		ppb	1.4	5	EPAI	1	0	0
TOXAENE	17	Toxaphene		ppb	.18	5	EPAI	1	0	0
g-BHC	1199	gamma-BHC (Lindane)		ppb	.002	4	EPAI	1	0	0
g-BHC	17	gamma-BHC (Lindane)		ppb	.0013	4	EPAI	1	0	

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
CHLORID		Chloride		ppb	110	250000	EPAS	5	5	0
IRON		Iron		ppb	8.9	300	EPAS	1	1	1
FIROM		Iron, filtered		ppb	8.9	300	EPAS	5	5	0
MANGANESE		Manganese		ppb	.55	50	EPAS	1	1	1
FMANGAN		Manganese, filtered		ppb	.55	50	EPAS	5	4	0
LPHENOL		Phenol		ppb	.58			1	0	
SODIUM		Sodium		ppb	44			1	1	
FSODIUM		Sodium, filtered		ppb	44			5	5	
SULFATE		Sulfate		ppb	130	250000	EPAS	5	5	0

Table 11-3. Constituent List and Summary of Results for the
216-U-12 Crib Data for Reporting Period
April 1 through June 30, 1995.
(sheet 2 of 3)

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name	Full	Units	Lab CRCL	DWS Limit	Agency	Number of Samples		
								Total	>CRCL	>DWS
2,4,5-T			2,4,5-T	ppb	.029			1	0	
246-trp			2,4,6-Trichlorophenol	ppb	.8			1	0	
24-dchp			2,4-Dichlorophenol	ppb	.43			1	0	
DIMPHER			2,4-Dimethylphenol	ppb	.62			1	0	
DINPHEN			2,4-Dinitrophenol	ppb	6.8			1	0	
26-dchp			2,6-Dichlorophenol	ppb	.52			1	0	
CHLPHEN			2-Chlorophenol	ppb	.6			1	0	
2NITPH			2-Nitrophenol	ppb	.6			1	0	
BUTDIMP	30		2-sec-Butyl-4,6-dinitrophenol(DN)	ppb	.41			1	0	
BUTDIMP	49		2-sec-Butyl-4,6-dinitrophenol(DN)	ppb	0			1	0	
DDD	1199		4,4'-DDD	ppb	.008			1	1	
DDD	17		4,4'-DDD	ppb	.0043			1	0	
DOE	1199		4,4'-DOE	ppb	.02			1	0	
DOE	17		4,4'-DOE	ppb	.0012			1	0	
DOT	1199		4,4'-DOT	ppb	.02			1	0	
DOT	17		4,4'-DOT	ppb	.00038			1	0	
46DN2NP			4,6-Dinitro-2-methylphenol	ppb	.84			1	0	
CHLCRES			4-Chloro-3-methylphenol	ppb	.52			1	0	
NITPHEN			4-Nitrophenol	ppb	.49			1	0	
ALDRIN	1199		Aldrin	ppb	.007			1	0	
ALDRIN	17		Aldrin	ppb	.00062			1	0	
ALKALIN			Alkalinity	ppm	3.5			3	3	
a-BHC	1199		Alpha-BHC	ppb	.003			1	0	
a-BHC	17		Alpha-BHC	ppb	.0018			1	0	
ALUMINUM			Aluminum	ppb	31			1	1	
FALUMIN			Aluminum, filtered	ppb	31			5	0	
ANTIMONY			Antimony	ppb	24			1		
FANTIMO			Antimony, filtered	ppb	24			5	0	
AR1016			Aroclor-1016	ppb	.2			1	0	
AR1221			Aroclor-1221	ppb	.5			1	0	
AR1232			Aroclor-1232	ppb	.5			1	0	
AR1242			Aroclor-1242	ppb	.4			1	0	
AR1248			Aroclor-1248	ppb	.4			1	0	
AR1254			Aroclor-1254	ppb	.2			1	0	
AR1260			Aroclor-1260	ppb	.2			1	0	
BERYLLIUM			Beryllium	ppb	.63			1	0	
FBERYLL			Beryllium, filtered	ppb	.63			5	0	
b-BHC	1199		Beta-BHC	ppb	.003			1	0	
b-BHC	17		Beta-BHC	ppb	.00086			1	0	
BROMIDE			Bromide	ppb	72			5	0	
CALCIUM			Calcium	ppb	41			1	1	
FCALCIU			Calcium, filtered	ppb	41			5	5	
CHLOANE	1199		Chlordane	ppb	.4	2	EPA	1	0	0
CHLOANE	17		Chlordane	ppb	.017	2	EPA	1	0	0
COBALT			Cobalt	ppb	5.3			1	0	
FCOBALT			Cobalt, filtered	ppb	5.3			5	0	
COPPER			Copper	ppb	2.1	1000	EPAS	1	1	0
FCOPPER			Copper, filtered	ppb	2.1	1000	EPAS	5	5	0
CRESOLS			Cresols (methylphenols)	ppb	1.7			1	0	
d-BHC	1199		Delta-BHC	ppb	.006			1	0	
d-BHC	17		Delta-BHC	ppb	.0012			1	0	
DIELDRIN	1199		Dieldrin	ppb	.005			1	0	
DIELDRIN	17		Dieldrin	ppb	.00053			1	0	
ENDD1	1199		Endosulfan I	ppb	.003			1	0	
ENDD1	17		Endosulfan I	ppb	.00028			1	0	
ENDD2	1199		Endosulfan II	ppb	.02			1	0	
ENDD2	17		Endosulfan II	ppb	.0031			1	0	
ENDSFAN	1199		Endosulfan sulfate	ppb	.05			1	0	

Table 11-3. Constituent List and Summary of Results for the
216-U-12 Crib Data for Reporting Period
April 1 through June 30, 1995.
(sheet 3 of 3)

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
ENDSUFAN	17	Endosulfan sulfate	ppb	.0037				1	0	
ENDRALD	1199	Endrin Aldehyde	ppb	.04				1	0	
ENDRALD	17	Endrin Aldehyde	ppb	.00085				1	0	
BETA		Gross beta	pCi/L					5	5	
BETA		Gross beta	pCi/L					5	5	
HEPTLOR	1199	Heptachlor	ppb	.003	.4	EPA		1	0	0
HEPTLOR	17	Heptachlor	ppb	.0012	.4	EPA		1	0	0
HEPTIDE	1199	Heptachlor epoxide	ppb	.008	.2	EPA		1	0	0
HEPTIDE	17	Heptachlor epoxide	ppb	.0012	.2	EPA		1	0	0
I-129		Iodine-129	pCi/L					5	3	
I-129L		Iodine-129, Low level	pCi/L		1	EPA		5	2	2
MAGNES		Magnesium	ppb	26				1	1	
FMAGNES		Magnesium, filtered	ppb	26				5	5	
NICKEL		Nickel	ppb	11				1	0	
FNICKEL		Nickel, filtered	ppb	11				5		
NITRITE		Nitrite	ppb	140	1000	EPA		5	0	0
PENTCHP		Pentachlorophenol	ppb	.48	1	EPA		1	0	0
PROSPA		Phosphate	ppb	340				5	0	
POTASSUM		Potassium	ppb	390				1	1	
FPOTASS		Potassium, filtered	ppb	390				5	5	
SILVER		Silver	ppb	5.5	50	EPAL		1	0	0
FSILVER		Silver, filtered	ppb	5.5	50	EPAL		5	0	0
TC-99	1283	Technetium-99	pCi/L					5	5	
TC-99	143	Technetium-99	pCi/L		900	EPA		5	5	0
TETPHNL		Tetrachlorophenols	ppb	.52				1	0	
TIN		Tin	ppb	30				1	0	
FTIN		Tin, filtered	ppb	30				5	0	
TDS		Total Dissolved Solids	ppm	10	500	EPAS		3	3	1
TRIPHNL		Trichlorophenols	ppb	.56				1	0	
TRITIUM	1255	Tritium	pCi/L					5	5	
TRITIUM	142	Tritium	pCi/L		20000	EPA		5	5	1
TURBID		Turbidity	NTU					5	5	
VAHADI		Vanadium	ppb	1.9				1	0	
FVAADI		Vanadium, filtered	ppb	1.9				5	5	
ZINC		Zinc	ppb	3.7	5000	EPAS		1	1	0
FZINC		Zinc, filtered	ppb	3.7	5000	EPAS		5	2	0
		alpha-Chlordane	ppb	.04				1	0	
		gamma-Chlordane	ppb	.005				1	1	

For explanation of this table, see Section 1.4 of report.

Table 11-4. Constituents with at Least One Detected Value for the
216-U-12 Crib Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 4)

Well Name	Collection Date	Sample Number	DDO 1199/ppb .008/.	ALKALIN 357/ppm 3.5/.	ALUMINUM 34/ppb 31/.	FLUMIN 34/ppb 31/.
299-W22-22	3/29/94	B08GWP			260.00	
299-W22-40	6/14/95	B0FMY2				31.00 U
299-W22-41	6/15/95	B0FMY4				31.00 U
299-W22-42	6/14/95	B0FMZ0		100.00		
299-W22-42	6/14/95	B0FMZ1				31.00 U
299-W22-43	6/14/95	B0FMZ2		110.00		
299-W22-43	6/14/95	B0FMZ6				31.00 U
699-36-70A	3/29/95	B0F6C7	.01 J			
699-36-70A	6/15/95	B0FMY5		120.00		
699-36-70A	6/15/95	B0FMY9				31.00 U

Well Name	Collection Date	Sample Number	BARIUM 34/ppb 1.4/1000	FBARIUM 34/ppb 1.4/1000	CADMIUM 34/ppb .98/10	FCADMIU 34/ppb .98/10
299-W22-22	3/29/94	B08GWP	11.00 L		53.00	
299-W22-40	6/14/95	B0FMY2		33.00		.98 U
299-W22-41	6/15/95	B0FMY4		42.00		.98 U
299-W22-42	6/14/95	B0FMZ1		120.00		.98 U
299-W22-43	6/14/95	B0FMZ6		27.00		.98 U
699-36-70A	6/15/95	B0FMY9		95.00		.98 U

Well Name	Collection Date	Sample Number	CALCIUM 34/ppb 41/.	FCALCIU 34/ppb 41/.	CHLORID 124/ppb 110/250000	CHROMIUM 34/ppb 3.7/50
299-W22-22	3/29/94	B08GWP	21000.00			11.00 U
299-W22-40	6/14/95	B0FMY1			14000.00 D	
299-W22-40	6/14/95	B0FMY2		34000.00		
299-W22-41	6/15/95	B0FMY3			13000.00 D	
299-W22-41	6/15/95	B0FMY4		51000.00		
299-W22-42	6/14/95	B0FMZ0			13000.00 D	
299-W22-42	6/14/95	B0FMZ1		130000.00		
299-W22-43	6/14/95	B0FMZ2			12000.00 D	
299-W22-43	6/14/95	B0FMZ6		30000.00		
699-36-70A	6/15/95	B0FMY5			21000.00 D	
699-36-70A	6/15/95	B0FMY9		65		

Well Name	Collection Date	Sample Number	FCROMI 34/ppb 3.7/50	COPPER 34/ppb 2.1/1000	FCOPPER 34/ppb 2.1/1000	FLUORID 124/ppb 52/1400
299-W22-22	3/29/94	B08GWP		7.20 L		
299-W22-40	6/14/95	B0FMY1				900.00 Q
299-W22-40	6/14/95	B0FMY2	6.30 L		2.50 L	
299-W22-41	6/15/95	B0FMY3				1100.00 Q
299-W22-41	6/15/95	B0FMY4	8.40 L		2.50 L	
299-W22-42	6/14/95	B0FMZ0				1200.00
299-W22-42	6/14/95	B0FMZ1	5.80 L		2.40 L	
299-W22-43	6/14/95	B0FMZ2				900.00 Q
299-W22-43	6/14/95	B0FMZ6	4.60 L		2.50 L	
699-36-70A	6/15/95	B0FMY5				1000.00 Q
699-36-70A	6/15/95	B0FMY9	5.30 L		3.10 L	

Table 11-4. Constituents with at Least One Detected Value for the 216-U-12 Crib
Data for Reporting Period April 1 through June 30, 1995.
(sheet 2 of 4)

Well Name	Collection Date	Sample Number	ALPHA 1247/pCi/L ./15	ALPHA 135/pCi/L ./15	BETA 1252/pCi/L ./.	BETA 136/pCi/L ./.
299-U22-40	3/30/95	B0F646	2.79 J		9.44	
299-U22-40	6/14/95	B0FMY1		2.44		8.52
299-U22-41	3/30/95	B0F653	2.00 J		23.30	
299-U22-41	6/15/95	B0FMY3		1.58		17.60
299-U22-42	3/28/95	B0F644	4.57		43.00	
299-U22-42	6/14/95	B0FM20		4.84		36.40
299-U22-43	3/28/95	B0F648	1.54 U		9.16	
299-U22-43	6/14/95	B0FM22		1.60		10.60
699-36-70A	3/29/95	B0F6C7	4.13		22.90	
699-36-70A	6/15/95	B0FMY5		3.25		24.40

Well Name	Collection Date	Sample Number	1-129 1249/pCi/L ./.	1-129 139/pCi/L ./1	IRON 34/ppb 8.9/300	IRON 34/ppb 8.9/300
299-U22-22	3/29/94	B0BGM9			13000.00	
299-U22-40	3/30/95	B0F646	1.39 U			
299-U22-40	6/14/95	B0FMY1		.09 U		
299-U22-40	6/14/95	B0FMY2				22.00 B
299-U22-41	3/30/95	B0F653	.16 U			
299-U22-41	6/15/95	B0FMY3		-.35 U		
299-U22-41	6/15/95	B0FMY4				21.00 B
299-U22-42	3/28/95	B0F644	8.38			
299-U22-42	6/14/95	B0				22.00 B
299-U22-42	6/14/95	B0FM21				22.00 B
299-U22-43	3/28/95	B0F648	6.60 F			
299-U22-43	6/14/95	B0FM22		-.88 U		
299-U22-43	6/14/95	B0FM26				22.00 B
699-36-70A	3/29/95	B0F6C7	8.98			
699-36-70A	6/15/95	B0FMY5		20.80		
699-36-70A	6/15/95	B0FMY9				29.00 B

Well Name	Collection Date	Sample Number	MAGNES 34/ppb 26/.	MAGNES 34/ppb 26/.	MANGANESE 34/ppb .55/50	MANGANESE 34/ppb .55/50
299-U22-22	3/29/94	B0BGM9	9800.00		280.00	
299-U22-40	6/14/95	B0FMY2		12000.00		.70 L
299-U22-41	6/15/95	B0FMY4		17000.00		.76 L
299-U22-42	6/14/95	B0FM21		46000.00		.55 U
299-U22-43	6/14/95	B0FM26		11000.00		1.10 L
699-36-70A	6/15/95	B0FMY9		23000.00		1.40 L

Table 11-4. Constituents with at Least One Detected Value for the 216-U-12 Crib
Data for Reporting Period April 1 through June 30, 1995.
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Well Name	Collection Date	Sample Number	NICKEL 34/ppb 11/.	NICKEL 34/ppb 11/.	NITRATE 124/ppb 120/45000	POTASSIUM 34/ppb 390/.
299-U22-22	3/29/94	B080W9	16.00 U			4800.00
299-U22-40	6/14/95	B0FMY1			22000.00 D	
299-U22-40	6/14/95	B0FMY2		11.00 U		
299-U22-41	6/15/95	B0FMY3			100000.00 D	
299-U22-41	6/15/95	B0FMY4		11.00 U		
299-U22-42	6/14/95	B0FMZ0			540000.00 D	
299-U22-42	6/14/95	B0FMZ1		11.00 U		
299-U22-43	6/14/95	B0FMZ2			15000.00 D	
299-U22-43	6/14/95	B0FMZ6		14.00 L		
699-36-70A	6/15/95	B0FMY5			150000.00 D	
699-36-70A	6/15/95	B0FMY9		11.00 U		

Well Name	Collection Date	Sample Number	POTASSIUM 34/ppb 390/.	RADIUM 1276/pCi/L ./.	RADIUM 137/pCi/L ./5	SODIUM 34/ppb 44/.
299-U22-22	3/29/94	B080W9				16000.00
299-U22-40	6/14/95	B0FMY2	4200.00			
299-U22-41	6/15/95	B0FMY4	4000.00			
299-U22-42	6/14/95	B0FMZ1	7100.00			
299-U22-43	6/14/95	B0FMZ6	4000.00			
699-36-70A	3/29/95	B0F6C7		.12 J		
699-36-70A	6/15/95	B0FMY5			.48	
699-36-70A	6/15/95	B0FMY9	6000.00			

Well Name	Collection Date	Sample Number	SODIUM 34/ppb 44/.	SULFATE 124/ppb 130/250000	TC-99 1283/pCi/L ./.	TC-99 143/pCi/L ./900
299-U22-40	3/30/95	B0F646			13.40 J	
299-U22-40	6/14/95	B0FMY1		29000.00 D		20.80
299-U22-40	6/14/95	B0FMY2	22000.00			
299-U22-41	3/30/95	B0F653			101.00	
299-U22-41	6/15/95	B0FMY3		30000.00 D		59.50
299-U22-41	6/15/95	B0FMY4	22000.00			
299-U22-42	3/28/95	B0F644			218.00	
299-U22-42	6/14/95	B0FMZ0		30000.00 D		226.00
299-U22-42	6/14/95	B0FMZ1	33000.00			
299-U22-43	3/28/95	B0F648			26.00	
299-U22-43	6/14/95	B0FMZ2		27000.00 D		9.43
299-U22-43	6/14/95	B0FMZ6	22000.00			
699-36-70A	3/29/95	B0F6C7			59.90	
699-36-70A	6/15/95	B0FMY5		33000.00 D		67.80
699-36-70A	6/15/95	B0FMY9	23000.00			

Table 11-4. Constituents with at Least One Detected Value for the 216-U-12 Crib
Data for Reporting Period April 1 through June 30, 1995.
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Well Name	Collection Date	Sample Number	TDS 65/ppm 10/500	TRITIUM 1255/pCi/L ./.	TRITIUM 142/pCi/L ./20000	TURBID 111/KTU ./.
299-W22-40	3/30/95	80F646		1290.00		
299-W22-40	6/14/95	80FMY1			1530.00	.89
299-W22-41	3/30/95	80F653		1720.00		
299-W22-41	6/15/95	80FMY3			1470.00	.66
299-W22-42	3/28/95	80F644		14600.00		
299-W22-42	6/14/95	80FM20	860.00		13500.00	.65
299-W22-43	3/28/95	80				
299-W22-43	6/14/95	80FM22	300.00		1660.00	.77
699-36-70A	3/29/95	80F6C7		344000.00 g		
699-36-70A	6/15/95	80FMY5	440.00		332000.00	3.25

Well Name	Collection Date	Sample Number	VANADIUM 34/ppb 1.9/.	FWANADI 34/ppb 1.9/.	ZINC 34/ppb 3.7/5000	FZINC 34/ppb 3.7/5000
299-W22-22	3/29/94	80BGM9	6.40 U		8.70 L	
299-W22-40	6/14/95	80FMY2		31.00		6.90 BL
299-W22-41	6/13/95	80FMY4		28.00 L		3.70 U
299-W22-42	6/14/95	80FM21		18.00 L		3.70 U
299-W22-43	6/14/95	80FM26		29.00 L		3.70 U
699-36-70A	6/15/95	80FMY9		25.00 L		3.90 BL

Well Name	Collection Date	Sample Number	GAMMACH 1199/ppb .005/.
699-36-70A	3/29/95	80F6C7	.02 J

For explanation of this table, see Section 1.4 of report.

Table 11-5. Contamination Indicator Parameters for the
216-U-12 Crib Data for Reporting Period
April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	COND FIELD μmho 1/.	COND LAB μmho 1/.	pH FIELD .01/6.5-8.5s	pH LAB .01/6.5-8.5s	TOC ppb */.	TOX ppb */.
299-U22-40	6/14/95	80FMY1	378		7.80		200 L	6.9 U
299-U22-41	6/15/95	80FMY3	521		7.76		200 L	6.9 U
299-U22-42	6/14/95	80FMY20	1300		7.00	7.80	200 L	6.9 U
299-U22-43	6/14/95	80FMY22	371		7.21	8.00	300 L	9.0 L
		80FMY23	371		7.28		200 L	9.0 L
		80FMY24	364		7.14		200 L	9.0 L
		80FMY25	362		7.21		200 L	10.0
699-36-70A	6/15/95	80FMY5	673		7.68	7.80	200 L	6.9 U
		80FMY6	673		7.67		200 L	9.0 L
		80FMY7	672		7.67		200 L	6.9 U
		80FMY8	671		7.66		200 L	6.9 U

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

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12.0 LIQUID EFFLUENT RETENTION FACILITY

M. D. Sweeney
Nestinghouse Hanford Company

12.1 INTRODUCTION

The Liquid Effluent Retention Facility (LERF) was constructed to provide interim storage of 242-A Evaporator process condensate effluent suspected of containing listed and dangerous (ammonia) waste constituents. Construction of the LERF began in May 1990. The LERF, classified as a surface impoundment for mixed waste storage, will be permitted as a RCRA TSD facility. The evaporator was shut down in 1989 and restarted on April 14, 1994. The LERF basins currently serve as temporary storage for evaporator process condensate until the Effluent Treatment Facility is operational.

The facility is classified as a surface impoundment and was originally planned to have four basins arranged side by side. Four excavations were made; only three of the four basins are lined and are currently scheduled for use. The basins are located immediately east of the northeast corner of the 200 East Area. The liquid effluent may contain nonhalogenated solvents (F003 and F005, MAC 173-303-9004, "Dangerous Waste Source List"), namely acetone, methyl ethyl ketone, and methyl isobutyl ketone. The ammonia content in the liquid effluent may also justify handling the effluent as a dangerous waste.

An interim-status, detection-level groundwater monitoring network was installed around the LERF in 1990 in accordance with the *Interim Status Groundwater Monitoring Plan for the 200 East Area Liquid Effluent Retention Facility* (WHC 1991). Four quarters of background groundwater sampling and analysis were completed in April 1992. Three downgradient wells and one upgradient well constitute the monitoring network. Figure 12-1 shows the well locations. Table 12-1 provides the last sampling date and frequency and identifies the upgradient and downgradient groundwater monitoring wells. Table 12-2 shows current water table elevations for three of the four monitoring wells.

12.2 WATER LEVEL MEASUREMENTS

Water levels are measured quarterly and when groundwater samples are collected at each of the four wells in the network. Water level measurements obtained during the quarter are presented in Table 12-2.

12.3 WATER CHEMISTRY DATA

Wells in the LERF groundwater monitoring network are sampled semiannually. Samples were not taken from the wells during this quarter.

Figure 12-1. Well Location Map for the Liquid Effluent Retention Facility.

Table 12-1. Monitoring Well Purpose and Sampling Schedule
for the Liquid Effluent Retention Facility Network.

Well no. (299-)	Relative position	Hydrogeologic unit	Sample frequency	Sample date, 2nd Qtr 1995
E26-9	Downgradient	Hanford: Water Table	Semiannually	Not Sampled
E26-10	Downgradient	Hanford: Water Table	Semiannually	Not Sampled
E26-11	Upgradient	Hanford: Water Table	Semiannually	Not Sampled
E35-2	Downgradient	Hanford: Water Table	Semiannually	Not Sampled

Table 12-2. RCRA Water Level Measurement Report
for the LERF, Second Quarter 1995.

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
299-E26-10	6/16/95	199.94	401.53	122.39
299-E26-11	6/16/95	194.20	405.48	123.59
299-E26-9	6/16/95	201.35	401.54	122.39
299-E35-2	6/16/95	200.56	401.80	122.47

- NOTES:
1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
 2. Depth-to-water values are transcribed from field records.
 3. Measurements marked with an '*' were taken at the time of sampling.
 4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

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13.0 2101-M POND

E. C. Thornton
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13.1 INTRODUCTION

The 2101-M Pond is a U-shaped, unlined trench located in the 200 East Area. It has received wastewater from the 2101-M Building heating and air conditioning system since 1953. In 1981, laboratories associated with the Basalt Waste Isolation Project (2101-M laboratories) were plumbed into the discharge line from the 2101-M Building to the 2101-M Pond. From 1981 until mid-1985, these laboratories may have discharged dangerous waste into the 2101-M Pond. The most important chemicals used in the 2101-M laboratories were barium chloride and hydrochloric and nitric acids. These chemicals are assumed to have been disposed of in laboratory drains connected to the 2101-M Pond.

The groundwater monitoring network for the 2101-M Pond consists of one upgradient well (299-E18-1) and three downgradient wells (299-E18-2, 299-E18-3, and 299-E18-4) installed in the uppermost portion of the unconfined aquifer (Figure 13-1). Well 299-E18-1 is also used as a background monitoring well for the 216-B-3 Pond System.

Groundwater sampling began in August 1988 for the 2101-M Pond and was conducted quarterly until August 1989 to establish background values. Semiannual indicator parameter evaluation monitoring was initiated in November 1989 under RCRA interim-status regulations and is ongoing (Chamness et al. 1989). Groundwater analyses have indicated that groundwater quality beneath the site has not been affected by facility operations. Table 13-1 provides information on the relative position of each well in the network, the hydrogeologic unit monitored, the sampling frequency, and the latest sampling date.

The 2101-M Pond will be clean-closed by the end of 1995. The wells at this facility were last sampled in June 1995. No groundwater monitoring activities will be conducted for this facility after clean-closure is certified. However, well 299-E18-1 is also an upgradient well for the 216-B-3 Pond System and will continue to be sampled as part of B Pond monitoring activities.

13.2 WATER LEVEL DATA

Water level measurements were performed in June 1995 for all four wells. These data are presented in Table 13-2. These measurements include quarterly measurements plus measurements performed at the time of sampling. Water levels have been corrected for vertical deviations for each well based on inclinometer measurements.

13.3 WATER CHEMISTRY DATA

Semiannual samples were collected in June 1995 for the four wells at the facility. All available water chemistry data received by August 28, 1995, are reported in Tables 13-3 through 13-5. Data are flagged in Tables 13-4 and 13-5 according to the explanation provided in Sections 1.2 and 1.4.

The replicate averages for the contamination indicator parameters specific conductance, pH, TOC, and TOX did not exceed the critical means for the 2101-M Pond. Other reported constituent concentration values were all below the DWSs. As in previous quarters, the specific conductance values for upgradient well 299-E18-1 were elevated relative to the three downgradient wells. This appears to result from the dilution of groundwater in the vicinity of the downgradient wells in response to the drainage of water from the 2101-M Pond.

Figure 13-1. Well Location Map for the 2101-M Pond.

H3412002.1

Table 13-1. Monitoring Well Purpose and Sampling Schedule for the 2101-M Pond.

Well no. (299-)	Relative position	Hydrogeologic unit ^a	Sample frequency	Sample date, 2nd Qtr 1995
E18-1	Upgradient	Hanford/Ringold: Water Table	Quarterly ^b	06/05/95
E18-2	Downgradient	Hanford/Ringold: Water Table	Semiannually	06/06/95
E18-3	Downgradient	Hanford/Ringold: Water Table	Semiannually	06/06/95
E18-4	Downgradient	Hanford/Ringold: Water Table	Semiannually	06/06/95

^aThe hydrogeologic unit monitored at this site is a muddy, sandy gravel to a slightly muddy, gravelly sand over the screened interval from approximately 92 to 101 m (302 to 331 ft) below top of casing. This interval is interpreted to be near the base of the Hanford formation and the top of the Ringold Formation.

^bWell 299-E18-1 is sampled on a quarterly basis because it is also designated as an upgradient well for the 216-B-3 Pond System.

Table 13-2. RCRA Water Level Measurement Report
for the 2101-M Pond, Second Quarter 1995.

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
299-E18-1	6/05/95	319.69*+	400.61	122.11
	6/19/95	319.08	401.22	122.29
299-E18-2	6/06/95	320.90*+	400.53	122.08
	6/19/95	320.37	401.06	122.25
299-E18-3	6/06/95	321.47*+	400.60	122.10
	6/19/95	320.87	401.20	122.29
299-E18-4	6/06/95	321.00*+	400.57	122.09
	6/19/95	320.34	401.23	122.29

- NOTES: 1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well. Vertical deviation correction factors based on inclinometer measurements are: +0.06 ft (+0.018 m) for 299-E18-1, +0.22 ft (+0.067 m) for 299-E18-2, +0.03 ft (+0.009 m) for 299-E18-3, and +0.0 ft (+0.0 m) for 299-E18-4 (Chamness et al. 1990).
2. Depth-to-water values are transcribed from field records.
3. Measurements marked with an '*' were taken at the time of sampling.
4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 13-3. Constituent List and Summary of Results for the
2101-M Pond Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 2)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab		DWS	Agency	Number of Samples		
		Full			CRQL	Limit			Total	>CRQL	>DWS
CONDUCT		Conductivity, field		µmhos	1				16	16	
TOC		Total Organic Carbon		ppb	140				20	19	
TOX		Total Organic Halogen		ppb	6.9				20	7	
PH	93	pH, field		pH	.01	6.5-8.5	EPAS		16	16	0
PH	125	pH, lab		pH		6.5-8.5	EPAS		5	5	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab		DWS	Agency	Number of Samples		
		Full			CRQL	Limit			Total	>CRQL	>DWS
FBARIUM		Barium, filtered		ppb	1.4	1000	EPAL		5	5	0
FCADMIU		Cadmium, filtered		ppb	.98	10	EPAL		5	4	0
FCROMI		Chromium, filtered		ppb	3.7	50	EPAL		5	5	0
FLUORID		Fluoride		ppb	52	1400	EPAL		5	5	0
ALPHA		Gross alpha		pCi/L		15	EPA		5	4	0
NITRATE		Nitrate		ppb	120	45000	EPA		5	5	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab		DWS	Agency	Number of Samples		
		Full			CRQL	Limit			Total	>CRQL	>DWS
CHLORID		Chloride		ppb	110	250000	EPAS		5	5	0
IRON		Iron, filtered		ppb	8.9	300	EPAS		5	5	0
FMANGAN		Manganese, filtered		ppb	.55	50	EPAS		5	5	0
LPHENOL		Phenol		ppb	.21				1	0	
FSODIUM		Sodium, filtered		ppb	44				5	5	
SULFATE		Sulfate		ppb	130	250000	EPAS		5	5	0

Table 13-3. Constituent List and Summary of Results for the
2101-M Pond Data for Reporting Period
April 1 through June 30, 1995.
(sheet 2 of 2)

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DMS Limit	Agency	Number of Samples		
							Total	>CRQL	>DMS
24-dchp		2,4-Dichlorophenol	ppb	2.8			1	0	
2METHPH		2-Methylphenol	ppb	.29			1	0	
2NITPH		2-Nitrophenol	ppb	4.2			1	0	
4METHPH		4-Methylphenol	ppb	.52			1	0	
ALKALIN		Alkalinity	ppm	3.5			5		
FALUMIN		Aluminum, filtered	ppb	31			5	0	
FAUTIMO		Antimony, filtered	ppb	24			5	0	
BENZOTH		Benzothiazole	ppb	2.1			1	0	
FBERYLL		Beryllium, filtered	ppb	.63			5	0	
BISZEPH		Bis(2-ethylhexyl) phthalate	ppb	.37			1	0	
BROMIDE		Bromide	ppb	72			5	1	
FCALCIU		Calcium, filtered	ppb	41			5	5	
FCOBALT		Cobalt, filtered	ppb	5.3			5	0	
FCOPPER		Copper, filtered	ppb	2.1	1000	EPAS	5	2	0
DECANE		Decane	ppb	.38			1	0	
DODECAN		Dodecane	ppb	.26			1	0	
BETA		Gross beta	pCi/L				5	5	
FMAGNES		Magnesium, filtered	ppb	26			5	5	
MAPHTHA		Naphthalene	ppb	.16			1	0	
FNICKEL		Nickel, filtered	ppb	11			5	1	
NITRITE		Nitrite	ppb	140	1000	EPA	5	0	0
PENTCHP		Pentachlorophenol	ppb	.87	1	EPA	1	0	0
PHOSPHA		Phosphate	ppb	340			5	0	
FPOTASS		Potassium, filtered	ppb	390			5	5	
FSILVER		Silver, filtered	ppb	5.5	50	EPA1	5	3	0
TETRADE		Tetradecane	ppb	.28			1	0	
FTIN		Tin, filtered	ppb	30			5	0	
TRIBUTPH		Tributyl Phosphate	ppb	.14			1	0	
TDICHPH		Tris-2-chloroethyl phosphate	ppb	6.4			1	0	
TURBID		Turbidity	NTU				4	4	
FVANADI		Vanadium, filtered	ppb	1.9			5	5	
FZINC		Zinc, filtered	ppb	3.7	5000	EPAS	5	5	0
MCRESOL		m-Cresol	ppb	.77			1	0	

For explanation of this table, see Section 1.4 of report.

Table 13-4. Constituents with at Least One Detected Value for the
2101-M Pond Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 2)

Well Name	Collection Date	Sample Number	ALKALIN 357/ppm 3.5/.	BARIUM 34/ppb 1.4/1000	BROMIDE 124/ppb 72/.	PCADMIU 34/ppb .98/10
299-E18-1	6/05/95	BOFLG1		30.00		1.00 BL
299-E18-1	6/05/95	BOFL11	100.00		80.00 L	
299-E18-2	6/06/95	BOFLF2	100.00		72.00 U	
299-E18-2	6/06/95	BOFLF6		55.00		.98 U
299-E18-3	6/06/95	BOFLG7	90.00		72.00 U	
299-E18-3	6/06/95	BOFLH1		54.00		1.10 BL
299-E18-4	6/06/95	BOFLH9	100.00		72.00 U	
299-E18-4	6/06/95	BOFLJ0	100.00		72.00 U	
299-E18-4	6/06/95	BOFLJ7		64.00		1.10 BL
299-E18-4	6/06/95	BOFLJ8		63.00		1.50 BL

Well Name	Collection Date	Sample Number	FCALCIU 34/ppb 41/.	CHLORID 124/ppb 110/250000	FCROMI 34/ppb 3.7/50	FCOPPER 34/ppb 2.1/1000
299-E18-1	6/05/95	BOFLG1	54000.00		5.40 L	2.10 U
299-E18-1	6/05/95	BOFL11		7500.00		
299-E18-2	6/06/95	BOFLF2		9500.00 D		
299-E18-2	6/06/95	BOFLF6	30000.00		5.30 L	2.90 L
299-E18-3	6/06/95	BOFLG7		8600.00		
299-E18-3	6/06/95	BOFLH1	26000.00		5.40 L	2.10 U
299-E18-4	6/06/95	BOFLH9		19000.00 D		
299-E18-4	6/06/95	BOFLJ0		19000.00 D		
299-E18-4	6/06/95	BOFLJ7	30000.00		32.00	2.90 L
299-E18-4	6/06/95	BOFLJ8	30000.00		31.00	2.10 U

Well Name	Collection Date	Sample Number	FLUORID 124/ppb 52/1400	ALPHA 135/pCi/L .7/15	BETA 134/pCi/L ./.	FIRON 34/ppb 8.9/300
299-E18-1	6/05/95	BOFLG1				24.00 BQ
299-E18-1	6/05/95	BOFL11	600.00	2.91	5.35	
299-E18-2	6/06/95	BOFLF2	700.00	1.35	6.38	
299-E18-2	6/06/95	BOFLF6				32.00 BQ
299-E18-3	6/06/95	BOFLG7	300.00	2.01	5.08	
299-E18-3	6/06/95	BOFLH1				39.00 BQ
299-E18-4	6/06/95	BOFLH9	600.00	1.70	5.45	
299-E18-4	6/06/95	BOFLJ0	600.00	.98 U	6.87	
299-E18-4	6/06/95	BOFLJ7				24.00 BQ
299-E18-4	6/06/95	BOFLJ8				30.00 BQ

Table 13-4. Constituents with at Least One Detected Value for the
2101-M Pond Data for Reporting Period
April 1 through June 30, 1995.
(sheet 2 of 2)

Well Name	Collection Date	Sample Number	FMAGNES 34/ppb 26/.	FMANGAN 34/ppb .55/50	FNICKEL 34/ppb 11/.	NITRATE 124/ppb 120/45000
299-E18-1	6/05/95	BOFLG1	13000.00	.98 L	11.00 U	
299-E18-1	6/05/95	BOFL11				14000.00 D
299-E18-2	6/06/95	BOFLF2				400.00
299-E18-2	6/06/95	BOFLF6	8300.00	1.60 L	11.00 U	
299-E18-3	6/06/95	BOFLG7				700.00
299-E18-3	6/06/95	BOFLH1	7600.00	4.50 L	16.00 L	
299-E18-4	6/06/95	BOFLH9				1300.00
299-E18-4	6/06/95	BOFLJ0				1300.00
299-E18-4	6/06/95	BOFLJ7	8200.00	2.20 L	11.00 U	
299-E18-4	6/06/95	BOFLJ8	8200.00	2.40 L	11.00 U	

Well Name	Collection Date	Sample Number	FPOTASS 34/ppb 390/.	FSILVER 34/ppb 5.5/50	FSODIUM 34/ppb 44/.	SULFATE 124/ppb 130/250000
299-E18-1	6/05/95	BOFLG1	5700.00	5.50 Ua	27000.00 q	
299-E18-1	6/05/95	BOFL11				100000.00 D
299-E18-2	6/06/95	BOFLF2				25000.00 D
299-E18-2	6/06/95	BOFLF6	5100.00	6.20 BLQ	14000.00 q	
299-E18-3	6/06/95	BOFLG7				12000.00 D
299-E18-3	6/06/95	BOFLH1	5000.00	5.50 Ua	6700.00 q	
299-E18-4	6/06/95	BOFLH9				20000.00 D
299-E18-4	6/06/95	BOFLJ0				20000.00 D
299-E18-4	6/06/95	BOFLJ7	6200.00	7.60 BLQ	18000.00 q	
299-E18-4	6/06/95	BOFLJ8	6000.00	8.00 BLQ	17000.00 q	

Well Name	Collection Date	Sample Number	TURBID 111/NTU ./.	FVANADI 34/ppb 1.9/.	FZINC 34/ppb 3.7/5000	
299-E18-1	6/05/95	BOFLG1		12.00 L	5.80 LQ	
299-E18-1	6/05/95	BOFL11	1.48			
299-E18-2	6/06/95	BOFLF2	1.56			
299-E18-2	6/06/95	BOFLF6		19.00 L	4.80 LQ	
299-E18-3	6/06/95	BOFLG7	2.14			
299-E18-3	6/06/95	BOFLH1		28.00 L	20.00 q	
299-E18-4	6/06/95	BOFLH9	3.66			
299-E18-4	6/06/95	BOFLJ7		25.00 L	29.00 q	
299-E18-4	6/06/95	BOFLJ8		25.00 L	25.00 q	

For explanation of this table, see Section 1.4 of report.

Table 13-5. Contamination Indicator Parameters for the
2101-M Pond Data for Reporting Period
April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	COND FIELD μmho /.	COND LAB μmho /.	pH FIELD .01/6.5-8.5s	pH LAB .01/6.5-8.5s	TOC ppb */.	TOX ppb */.
299-E18-1	6/05/95	B0FL11	507		8.29	8.10	200 L	6.9 U
		B0FL12	507		8.29		200 L	6.9 U
		B0FL13	506		8.29		150 L	6.9 U
		B0FL14	508		8.28		140 U	6.9 U
299-E18-2	6/06/95	B0FLF2	294		8.17	8.20	200 L	6.9 U
		B0FLF3	294		8.17		200 L	6.9 U
		B0FLF4	294		8.18		200 L	6.9 U
		B0FLF5	294		8.16		200 L	10.0
299-E18-3	6/06/95	B0FLG7	244		8.34	8.30	300 L	6.9 U
		B0FLG8	242		8.34		300 L	6.9 U
		B0FLG9	240		8.34		300 L	6.9 U
		B0FLH0	241		8.34		300 L	6.9 U
299-E18-4	6/06/95	B0FLH9	285		8.20	8.30	400 L	8.0 L
		B0FLJ0	286		8.22	8.30	400 L	8.0 L
		B0FLJ1	286		8.23		400 L	10.0
		B0FLJ2	290		8.23		500 L	8.0 L
		B0FLJ3					400 L	20.0
		B0FLJ4					500 L	6.9 U
		B0FLJ5					400 L	6.9 U
		B0FLJ6					400 L	8.0 L

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

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14.0 LOW-LEVEL BURIAL GROUNDS

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14.1 INTRODUCTION

The 200 Areas LLBG consist of five Low-Level Waste Management Areas (LLWMA). LLWMA 1 and LLWMA 2 are located in the 200 East Area and LLWMA 3, LLWMA 4, and LLWMA 5 are located in the 200 West Area (Figures 14-1 through 14-5). A description of the waste contained in each burial ground is provided in Table 14-1.

The groundwater monitoring program for the LLBG began with the installation of 35 monitoring wells in 1987. Additional wells have been installed in subsequent years. The present monitoring networks are listed in Tables 14-2 through 14-6. Semiannual detection level sampling is being conducted at all five burial grounds. Additional samples are being collected at the upgradient LLWMA 5 water table wells to establish a critical mean for TOX.

The carbon tetrachloride pump-and-treat demonstration project is continuing near LLWMA 4. Groundwater is being extracted from well 299-W18-1 and injected into well 299-W18-4 after treatment. Groundwater levels are being monitored with transducers in the extraction and injection wells and in 299-W18-2, 299-W18-5, and 299-W18-24. Well 299-W18-24 is an upgradient monitoring well for LLWMA 4. No impacts on the LLWMA 4 monitoring network have been noted to date.

14.2 WATER LEVEL MEASUREMENTS

In addition to measurements taken at the time of sampling, water levels were measured quarterly at the LLBG. Water level measurements are presented in Tables 14-7 through 14-11. Additional water level measurements are reported for some wells if they are monitored for other projects. Suspected errors in the water level measurements occurred at several wells this quarter, as indicated in the tables. Water level measurements were not taken at well 299-W6-5 because of an obstructed casing; the casing in well 299-W6-5 was crimped during installation. Although remedial action enlarged the casing to permit the installation of a pump, the well does not have sufficient space to measure water levels, and additional well remediation may not be possible without damaging the casing. Well 299-E34-4 has been dry since it was constructed. Water levels are no longer measured in LLWMA 2 wells 299-E34-6 and 299-E35-1 because they have fallen below the bottom of the screens. All three of these wells were completed to the top of basalt. The LLWMA 2 monitoring network continues to meet the requirement of at least one upgradient and three downgradient monitoring wells.

14.3 WATER CHEMISTRY DATA

Groundwater samples were collected from all scheduled wells. Samples were collected at 299-W7-6 because pump problems precluded sampling in March as planned. Additional samples were collected at well 299-E32-4 (LLWMA 1) for the 216-3-B Pond. Samples were analyzed for CIPs, interim primary drinking water parameters, water quality parameters, and site-specific parameters. Results of analyses are listed in Tables 14-12 through 14-24. These tables also contain any previously unreported data and data that are being re-reported because of changes in the data qualifier flags.

Quadruplicate measurements for pH and specific conductivity were inadvertently not taken at well 299-E34-2 during the May sampling event. Sampling problems at well 299-E34-10 prevented quadruplicate pH measurements.

Samples were collected at some LLWMA 3 and LLWMA 5 groundwater monitoring wells for iodine-129, strontium-90, technetium-99, and total dissolved solids. These samples were collected in support of groundwater quality assessment at the T and TX-TY SST tank farms. Analytical results from these samples also are reported in Tables 14-12 through 14-24.

Indicator parameter averages did not exceed the critical means at LLWMA 1, LLWMA 2, or LLWMA 4 this quarter.

Analytical results flagged with a 'Q' are associated with suspect QC data. Data qualifiers and data flags are discussed in more detail in Sections 1.2 and 1.4, respectively. Results are flagged with an 'F' if a RADE has been issued because the results did not follow the past trends. Tables 14-26 through 14-30 list the water quality standards that were exceeded for the data reported this quarter.

Figure 14-1. Well Location Map for Low-Level
Waste Management Area 1.

Figure 14-2. Well Location Map for Low-Level Waste Management Area 2.

Figure 14-3. Well Location Map for Low-Level Waste Management Area 3.

Figure 14-4. Well Location Map for Low-Level
Waste Management Area 4.

Figure 14-5. Well Location Map for Low-Level
Waste Management Area 5.

Table 14-1. Low-Level Burial Grounds.

LLWMA	Burial ground	First use	Contents
1	218-E-10	1960	Dragoff material Failed equipment Mixed waste
2	218-E-12B	1968	Miscellaneous dry waste Transuranic waste Submarine reactor compartments
3	218-W-3A	1970	Ion exchange resins Failed equipment
	218-W-3AE	1981	Low-level waste Low-level mixed waste
	218-W-5	1986	Low-level waste Low-level mixed waste
4	218-W-4B	1968	Mixed waste Retrievable transuranic waste
	218-W-4C	1978	Transuranic waste Mixed waste Low-level waste
5	218-W-6	N/A	None to date

N/A = not applicable.

Table 14-2. Monitoring Well Purpose and Sampling Schedule
for Low-Level Waste Management Area 1.

Well no. (299-)	Relative position	Hydrologic unit	Sample interval	Sample date: 2nd Qtr 1995
E28-26 ⁸⁷	Upgradient	Hanford: Water Table	Semiannually	06/06/95
E28-27 ⁸⁷	Upgradient	Hanford: Water Table	Semiannually	06/06/95
E28-28 ⁹⁰	Upgradient	Hanford: Water Table	Semiannually	06/06/95
E32-2 ⁸⁷	Downgradient	Hanford: Water Table	Semiannually	06/08/95
E32-3 ⁸⁷	Downgradient	Hanford: Water Table	Semiannually	06/08/95
E32-4 ⁸⁷	Upgradient	Hanford: Water Table	Semiannually	04/11/95 * 06/07/95
E32-5 ⁸⁹	Downgradient	Hanford: Water Table	Semiannually	06/08/95
E32-6 ⁹¹	Downgradient	Hanford: Water Table	Semiannually	06/08/90
E32-7 ⁹¹	Downgradient	Hanford: Water Table	Semiannually	06/08/95
E32-8 ⁹¹	Downgradient	Hanford: Water Table	Semiannually	06/08/95
E32-9 ⁹¹	Downgradient	Hanford: Water Table	Semiannually	06/12/95
E32-10 ⁹²	Downgradient	Hanford: Water Table	Semiannually	06/08/95
E33-28 ⁸⁷	Upgradient	Hanford: Water Table	Semiannually	06/07/95
E33-29 ⁸⁷	Upgradient	Hanford: Water Table	Semiannually	06/07/95
E33-30 ⁸⁷	Downgradient	Hanford: Water Table	Semiannually	06/22/95
E33-34 ⁹⁰	Downgradient	Hanford: Water Table	Semiannually	06/08/95
E33-35 ⁹⁰	Upgradient	Hanford: Water Table	Semiannually	06/29/95

Notes: Superscript following well number indicates year of installation.

* Sampled for B Pond

Table 14-3. Monitoring Well Purpose and Sampling Schedule for Low-Level Waste Management Area 2.

Well no. (299-)	Relative position	Hydrologic unit	Sample interval	Sample date: 2nd Qtr 1995
E27-8 ⁸⁷	Downgradient	Hanford: Water Table	Semiannually	05/04/95
E27-9 ⁸⁷	Downgradient	Hanford: Water Table	Semiannually	05/03/95
E27-10 ⁸⁷	Upgradient	Hanford: Water Table	Semiannually	05/04/95
E27-11 ⁸⁹	Downgradient	Hanford: Water Table	Semiannually	05/03/95
E27-17 ⁹¹	Downgradient	Hanford: Water Table	Semiannually	05/03/95
E34-2 ⁸⁷	Downgradient	Hanford: Water Table	Semiannually	05/09/95
E34-3 ⁸⁷	Upgradient	Hanford: Water Table	Semiannually	05/04/95
E34-4 ⁸⁷	Upgradient	Hanford: Water Table	NA	Dry
E34-5 ⁸⁷	Upgradient	Hanford: Water Table	Semiannually	05/04/95
E34-6 ⁸⁷	Upgradient	Hanford: Water Table	NA	Dry
E34-7 ⁸⁹	Upgradient	Hanford: Water Table	Semiannually	05/04/95
E34-9 ⁹¹	Downgradient	Hanford: Water Table	Semiannually	05/08/95
E34-10 ⁹¹	Downgradient	Hanford: Water Table	Semiannually	05/03/95
E34-11 ⁹²	Downgradient	Hanford: Water Table	Semiannually	05/09/95
E34-12 ⁹²	Downgradient	Hanford: Water Table	Semiannually	05/08/95
E35-1 ⁸⁹	Upgradient	Hanford: Water Table	NA	Dry

Notes: Superscript following well number indicates year of installation.

Table 14-4. Monitoring Well Purpose and Sampling Schedule
for Low-Level Waste Management Area 3.

Well no. (299-)	Relative position	Hydrologic unit	Sample interval	Sample date: 2nd Qtr 1995
W6-2 ^{87m}	Downgradient	Ringold: Water Table	Semiannually	06/14/95 *
W7-1 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	NS
W7-2 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	NS
W7-3 ⁸⁷	Downgradient	Ringold: Deep	Semiannually	NS
W7-4 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	NS
W7-5 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	NS
W7-6 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	04/22/95 +
W7-7 ⁸⁹	Downgradient	Ringold: Water Table	Semiannually	NS
W7-8 ⁸⁹	Downgradient	Ringold: Water Table	Semiannually	NS
W7-9 ⁹⁰	Downgradient	Ringold: Water Table	Semiannually	NS
W7-10 ^{90m}	Downgradient	Ringold: Water Table	Semiannually	06/13/95 *
W7-11 ⁹¹	Downgradient	Ringold: Water Table	Semiannually	NS
W7-12 ⁹¹	Downgradient	Ringold: Water Table	Semiannually	NS
W8-1 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	NS
W9-1 ⁸⁷	Upgradient	Ringold: Water Table	Semiannually	06/12/95 *
W10-13 ⁸⁷	Upgradient	Ringold: Water Table	Semiannually	06/12/95 *
W10-14 ⁸⁷	Upgradient	Ringold: Deep	Semiannually	NS
W10-19 ⁹²	Upgradient	Ringold: Water Table	Semiannually	06/12/95 *
W10-20 ⁹³	Upgradient	Ringold: Water Table	Semiannually	06/12/95 *
W10-21 ⁹³	Upgradient	Ringold: Water Table	Semiannually	06/12/95 *

Notes: NS - Not Scheduled.

Superscript following well number indicates year of installation.

^m Well monitors multiple low-level waste management areas.

Deep indicates well monitors bottom of the unconfined aquifer.

+ Sampling delayed from previous quarter.

* Sampled to establish critical mean for Low-Level Waste Management Area 5
and/or co-sampled for T Tank Farm.

Table 14-5. Monitoring Well Purpose and Sampling Schedule
for Low-Level Waste Management Area 4.

Well no. (299-)	Relative position	Hydrologic unit	Sample interval	Sample date: 2nd Qtr 1995
W15-15 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	05/10/95
W15-16 ⁸⁷	Upgradient	Ringold: Water Table	Semiannually	05/08/95
W15-17 ⁸⁷	Upgradient	Ringold: Deep	Semiannually	05/09/95
W15-18 ⁸⁷	Upgradient	Ringold: Water Table	Semiannually	05/08/95
W15-19 ⁸⁹	Downgradient	Ringold: Water Table	Semiannually	05/11/95
W15-20 ⁸⁹	Downgradient	Ringold: Water Table	Semiannually	05/11/95
W15-23 ⁹⁰	Downgradient	Ringold: Water Table	Semiannually	05/10/95
W15-24 ⁸⁹	Downgradient	Ringold: Water Table	Semiannually	05/10/95
W18-21 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	05/09/95
W18-22 ⁸⁷	Downgradient	Ringold: Deep	Semiannually	05/11/95
W18-23 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	05/15/95
W18-24 ⁸⁷	Upgradient	Ringold: Water Table	Semiannually	05/08/95
W18-26 ⁸⁹	Downgradient	Ringold: Water Table	Semiannually	05/15/95
W18-27 ⁹¹	Downgradient	Ringold: Water Table	Semiannually	05/11/95
W18-28 ⁹¹	Downgradient	Ringold: Water Table	Semiannually	05/09/95
W18-29 ⁹¹	Upgradient	Hanford: Perched	Semiannually	Dry
W18-32 ⁹²	Upgradient	Ringold: Water Table	Semiannually	05/09/95

Notes: Superscript following well number indicates year of installation.
Deep indicates well monitors bottom of the unconfined aquifer.

**Table 14-6. Monitoring Well Purpose and Sampling Schedule
for Low-Level Waste Management Area 5.**

Well no. (299-)	Relative position	Hydrologic unit	Sample interval	Sample date: 2nd Qtr 1995
W6-2 ^{87a}	Upgradient	Ringold: Water Table	Semiannually	06/12/95 *
W6-3 ⁹¹	Upgradient	Ringold: Deep	Semiannually	NS
W6-4 ⁹¹	Upgradient	Ringold: Water Table	Semiannually	06/12/95 *
W6-5 ⁹¹	Downgradient	Ringold: Water Table	Semiannually	NS
W6-6 ⁹¹	Downgradient	Ringold: Deep	Semiannually	NS
W6-7 ⁹¹	Downgradient	Ringold: Water Table	Semiannually	NS
W6-8 ⁹¹	Downgradient	Ringold: Water Table	Semiannually	NS
W6-9 ⁹²	Upgradient	Ringold: Water Table	Semiannually	06/13/95 *
W6-10 ⁹²	Upgradient	Ringold: Water Table	Semiannually	06/13/95 *
W6-11 ⁹²	Downgradient	Ringold: Water Table	Semiannually	NS
W6-12 ⁹²	Downgradient	Ringold: Water Table	Semiannually	NS
W7-10 ^{90a}	Upgradient	Ringold: Water Table	Semiannually	06/13/95 *
W11-31 ⁹²	Upgradient	Ringold: Water Table	Semiannually	06/12/95 *

Notes: NS - Not Scheduled.

Superscript following well number indicates year of installation.

^a Well monitors multiple low-level waste management areas.

Deep indicates well monitors bottom of the unconfined aquifer.

* Sampled to establish critical mean and/or co-sampled for T Tank Farm.

Table 14-7. RCRA Water Level Measurement Report
for Low-Level Waste Management Area 1, Second Quarter 1995.
(sheet 1 of 2)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
LLWMA-1 Wells Monitoring the Top of the Unconfined Aquifer				
299-E28-26	6/06/95	286.23*	401.03	122.23
	6/28/95	286.22	401.04	122.24
299-E28-27	6/06/95	279.28*	401.30	122.32
	6/28/95	279.41	401.17	122.28
299-E28-28	6/06/95	286.45*+	400.30	122.01
	6/28/95	285.67	401.08	122.25
299-E32-10	6/08/95	237.40*+	400.48	122.07
	6/28/95	236.79	401.09	122.25
299-E32-2	6/08/95	269.90*+	400.35	122.03
	6/28/95	269.25	401.00	122.22
299-E32-3	6/08/95	275.44*	401.28	122.31
	6/28/95	275.71	401.01	122.23
299-E32-4	4/11/95	285.15*	400.73	122.14
	6/07/95	284.94*	401.17	122.28
	6/28/95	285.06	401.05	122.24
299-E32-5	6/08/95	281.03*	401.32	122.32
	6/28/95	281.24	401.11	122.26
299-E32-6	6/08/95	266.13*	401.32	122.32
	6/28/95	266.28	401.17	122.28
299-E32-7	6/08/95	257.10*	401.27	122.31
	6/28/95	257.29	401.08	122.25
299-E32-8	6/08/95	245.17*+	400.42	122.05
	6/28/95	244.54	401.05	122.24
299-E32-9	6/12/95	242.06*	401.27	122.31
	6/28/95	242.22	401.11	122.26
299-E33-28	6/07/95	263.88*+	400.57	122.09
	6/28/95	263.19	401.26	122.30

Table 14-7. RCRA Water Level Measurement Report
for Low-Level Waste Management Area 1, Second Quarter 1995.
(sheet 2 of 2)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
LLWMA 1 Wells Monitoring the Top of the Unconfined Aquifer				
299-E33-29	6/07/95	273.44*+	400.54	122.08
	6/28/95	272.77	401.21	122.29
299-E33-30	6/22/95	263.39*+	400.31	122.01
	6/28/95	262.71	400.99	122.22
299-E33-34	6/08/95	233.00*+	400.57	122.09
	6/28/95	232.44	401.13	122.26
299-E33-35	6/28/95	242.17	401.05	122.24
	6/29/95	242.69*+	400.53	122.08

- NOTES:
1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
 2. Depth-to-water values are transcribed from field records.
 3. Measurements marked with an '*' were taken at the time of sampling.
 4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 14-8. RCRA Water Level Measurement Report
for Low-Level Waste Management Area 2,
Second Quarter 1995.
(sheet 1 of 2)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
LLWMA 2 Wells Monitoring the Top of the Unconfined Aquifer				
299-E27-10	5/04/95	223.06*	401.41	122.35
	6/28/95	223.10	401.37	122.34
299-E27-11	5/03/95	242.30*	400.99	122.22
	6/28/95	242.28	401.01	122.23
299-E27-17	5/03/95	233.36*	401.36	122.33
	6/28/95	233.35	401.37	122.34
299-E27-8	5/04/95	236.63*	401.20	122.29
	6/28/95	236.69	401.14	122.27
299-E27-9	5/03/95	227.99*	401.22	122.29
	6/28/95	228.01	401.20	122.29
299-E34-10	5/03/95	238.41*	401.36	122.33
	6/28/95	238.41	401.36	122.33
299-E34-11	5/09/95	216.58*	401.37	122.34
	6/28/95	216.62	401.33	122.33
299-E34-12	5/08/95	237.67*	401.16	122.27
	6/28/95	237.68	401.15	122.27
299-E34-2	5/09/95	229.65*	401.15	122.27
	6/28/95	229.65	401.15	122.27
299-E34-3	5/04/95	210.05*	401.47	122.37
	6/28/95	210.28	401.24	122.30
299-E34-5	5/04/95	188.37*	402.42	122.66
	6/28/95	188.46	402.33	122.63
299-E34-7	5/04/95	203.02*	401.23	122.29
	6/28/95	203.52+	400.73	122.14
299-E34-9	5/08/95	227.40*	401.29	122.31
	6/28/95	227.43	401.26	122.30

Table 14-8. RCRA Water Level Measurement Report
for Low-Level Waste Management Area 2,
Second Quarter 1995.
(sheet 2 of 2)

- NOTES:
1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
 2. Depth-to-water values are transcribed from field records.
 3. Measurements marked with an '*' were taken at the time of sampling.
 4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 14-9. RCRA Water Level Measurement Report
for Low-Level Waste Management Area 3,
Second Quarter 1995.
(sheet 1 of 2)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
LLWMA 3 Wells Monitoring the Top of the Unconfined Aquifer				
299-W10-13	6/12/95	238.80*+	460.24	140.28
	6/13/95	239.19	459.85	140.16
299-W10-19	6/12/95	224.83*+	458.16	139.65
	6/13/95	224.27	458.72	139.82
299-W10-20	6/12/95	228.77*+	458.77	139.83
	6/13/95	228.21	459.33	140.00
299-W10-21	6/12/95	217.03*+	457.03	139.30
	6/13/95	216.51	457.55	139.46
299-W6-2	6/12/95	236.58	455.87	138.95
	6/14/95	236.42*	456.03	139.00
299-W7-1	6/12/95	233.94	456.77	139.22
299-W7-10	6/12/95	234.39	455.27	138.77
	6/13/95	234.35*	455.31	138.78
299-W7-11	6/12/95	225.00	456.45	139.13
299-W7-12	6/12/95	231.16	456.77	139.22
299-W7-2	6/12/95	219.93	455.66	138.89
299-W7-4	6/13/95	214.47	457.45	139.43
299-W7-5	6/12/95	217.88	455.17	138.74
299-W7-6	4/20/95	223.46*	455.18	138.74
	6/12/95	223.60	455.04	138.70
299-W7-7	6/12/95	219.74	455.20	138.74
299-W7-8	6/12/95	234.59	452.76	138.00
299-W7-9	6/12/95	234.91	457.18	139.35

Table 14-9. RCRA Water Level Measurement Report
for Low-Level Waste Management Area 3,
Second Quarter 1995.
(sheet 2 of 2)

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
LLWMA 3 Wells Monitoring the Top of the Unconfined Aquifer				
299-W8-1	6/12/95	244.09	457.24	139.37
299-W9-1	6/12/95	278.45	459.28	139.99
	6/12/95	278.30*	459.43	140.03
LLWMA 3 Wells Monitoring the Bottom of the Unconfined Aquifer				
299-W10-14	6/13/95	239.78	459.65	140.10
299-W7-3	6/12/95	221.57	454.57	138.55

- NOTES: 1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
2. Depth-to-water values are transcribed from field records.
3. Measurements marked with an '*' were taken at the time of sampling.
4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 14-10. RCRA Water Level Measurement Report
for Low-Level Waste Management Area 4,
Second Quarter 1995.
(sheet 1 of 2)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft) (m)	
LLWMA 4 Wells Monitoring the Top of the Unconfined Aquifer				
299-W15-15	5/10/95	237.01*	460.95	140.50
	6/13/95	237.57	460.39	140.33
299-W15-16	5/08/95	223.41*	461.48	140.66
299-W15-18	5/08/95	224.42*	461.29	140.60
	6/13/95	224.57	461.14	140.56
299-W15-19	5/11/95	230.32*	461.28	140.60
	6/12/95	230.52	461.08	140.54
299-W15-20	5/11/95	237.18*	461.18	140.57
	6/13/95	237.50	460.86	140.47
299-W15-23	5/10/95	238.56*	460.93	140.49
	6/13/95	238.58	460.91	140.49
299-W15-24	5/10/95	238.47*	460.90	140.48
	6/13/95	238.54	460.83	140.46
299-W18-21	5/09/95	207.79*	460.83	140.46
	6/13/95	207.84	460.78	140.45
299-W18-23	6/13/95	235.98	460.83	140.46
299-W18-24	5/08/95	223.06*	461.29	140.60
299-W18-26	6/13/95	238.16	460.89	140.48
299-W18-27	5/11/95	229.09*	461.16	140.56
	6/13/95	229.37	460.88	140.48
299-W18-28	5/09/95	218.82*	461.17	140.56
	6/13/95	218.89	461.10	140.54
299-W18-32	5/09/95	215.67*	460.98	140.51
	6/13/95	215.76	460.89	140.48

Table 14-10. RCRA Water Level Measurement Report
for Low-Level Waste Management Area 4,
Second Quarter 1995.
(sheet 2 of 2)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft) (m)	
LLWMA 4 Wells Monitoring the Bottom of the Unconfined Aquifer				
299-W15-17	5/09/95	223.45*	461.19	140.57
	6/13/95	223.57	461.07	140.53
299-W18-22	5/11/95	207.80*	460.69	140.42
	6/13/95	208.11	460.38	140.32

- NOTES: 1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
2. Depth-to-water values are transcribed from field records.
3. Measurements marked with an '*' were taken at the time of sampling.
4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 14-11. RCRA Water Level Measurement Report
for Low-Level Waste Management Area 5, Second Quarter 1995.

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
LLWMA 5 Wells Monitoring the Top of the Unconfined Aquifer				
299-W11-31	6/12/95	251.14*	455.72	138.90
	6/12/95	251.12	455.74	138.91
299-W6-10	6/12/95	259.39	453.09	138.10
	6/13/95	259.46*	453.02	138.08
299-W6-11	6/12/95	249.63	453.23	138.14
299-W6-12	6/12/95	238.22	454.29	138.47
299-W6-2	6/12/95	236.58	455.87	138.95
	6/14/95	236.42*	456.03	139.00
299-W6-4	6/12/95	246.08*+	455.17	138.74
	6/12/95	245.45	455.80	138.93
299-W6-7	6/12/95	257.86	452.42	137.90
299-W6-8	6/12/95	240.98	453.75	138.30
299-W6-9	6/12/95	240.32	455.78	138.92
	6/13/95	240.32*	455.78	138.92
299-W7-10	6/12/95	234.39	455.27	138.77
	6/13/95	234.35*	455.31	138.78
LLWMA 5 Wells Monitoring the Bottom of the Unconfined Aquifer				
299-W6-3	6/12/95	244.67	455.16	138.73
299-W6-6	6/12/95	257.64	452.35	137.88

- NOTES: 1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
2. Depth-to-water values are transcribed from field records.
3. Measurements marked with an '*' were taken at the time of sampling.
4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 14-12. Constituent List and Summary of Results for the Low-Level Waste Management Area 1 Data for Reporting Period April 1 through June 30, 1995.
(sheet 1 of 4)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRCL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRCL	>DWS
CONDUCT	94	Conductivity, field		µmho/cm	1			72	72	
CONDUCT	1023	Specific conductance		µmho/cm	100			1	1	
TOC	122	Total Organic Carbon		ppb	140			72	72	
TOC	1230	Total Organic Carbon		ppb	1000			4	0	
TOX		Total Organic Halogen		ppb	6.9			76	5	
PH	95	pH, field		pH	.01	6.5-8.5	EPAS	72	72	0
PH	1225	pH, lab		pH		6.5-8.5	EPAS	1	1	0
PH	125	pH, lab		pH		6.5-8.5	EPAS	17	17	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRCL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRCL	>DWS
FBARIUM		Barium, filtered		ppb	1.4	1000	EPAI	17	17	0
FCADMIU		Cadmium, filtered		ppb	.98	10	EPAI	17	3	0
FCHROMI		Chromium, filtered		ppb	3.7	50	EPAI	17	13	0
FLUORID	1093	Fluoride		ppm	.1	1.4	EPAI	1	1	0
FLUORID	124	Fluoride		ppb	52	1400	EPAI	18	18	0
ALPHA	1247	Gross alpha		pCi/L		15	EPA	1	0	0
ALPHA	135	Gross alpha		pCi/L		15	EPA	18	16	0
PH MERCUR		Mercury, filtered		ppb	.019	2	EPA	18	7	0
NITRATE		Nitrate		ppb	120	45000	EPA	18	18	1
NO3-N		Nitrogen in Nitrate		ppm	.2	10	EPA	1	1	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRCL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRCL	>DWS
CHLORID	1093	Chloride		ppm	.2	250	EPAS	1	1	0
CHLORID	124	Chloride		ppb	110	250000	EPAS	18	18	0
IRON		Iron, filtered		ppb	8.9	300	EPAS	17	17	0
FMANGAN		Manganese, filtered		ppb	.55	50	EPAS	17	16	0
LPHENOL	1206	Phenol		ppb	10			1	0	
LPHENOL	30	Phenol		ppb	.58			18	0	
PSODIUM		Sodium, filtered		ppb	44			17	17	
SULFATE	1093	Sulfate		ppm	.5	250	EPAS	1	1	0
SULFATE	124	Sulfate		ppb	130	250000	EPAS	18	18	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab CRCL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRCL	>DWS
TETRCHB		1,2,4,5-Tetrachlorobenzene		ppb	10			1	0	
TRICHLB		1,2,4-Trichlorobenzene		ppb	10			1	0	
12-dben		1,2-Dichlorobenzene		ppb	10	600	EPA	1	0	0
13-dben		1,3-Dichlorobenzene		ppb	10			1	0	
14-dben		1,4-Dichlorobenzene		ppb	10	75	EPA	1	0	0
NAPHQUI		1,4-Naphthoquinone		ppb	10			1	0	
1-napha		1-Naphthylamine		ppb	10			1	0	
TETRCHP		2,3,4,6-Tetrachlorophenol		ppb	10			1	0	
245-trp		2,4,5-Trichlorophenol		ppb	10			1	0	
246-trp	1206	2,4,6-Trichlorophenol		ppb	10			1	0	

Table 14-12. Constituent List and Summary of Results for the
Low-Level Waste Management Area 1 Data for Reporting Period
April 1 through June 30, 1995.
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Short	(Method)	Constituent Name	Full	Units	Lab CRQL	DWS Limit Agency	Number of Samples		
							Total	>CRQL	>DWS
246-trp	30	2,4,6-Trichlorophenol		ppb	.8		18	2	
24-dchp	1206	2,4-Dichlorophenol		ppb	10		1	0	
24-dchp	30	2,4-Dichlorophenol		ppb	.43		18	0	
DIMPHEH	1206	2,4-Dimethylphenol		ppb	10		1	0	
DIMPHEH	30	2,4-Dimethylphenol		ppb	.62		18	0	
DIMPHEH	1206	2,4-Dinitrophenol		ppb	50		1	0	
DIMPHEH	30	2,4-Dinitrophenol		ppb	6.8		18	0	
24-dint		2,4-Dinitrotoluene		ppb	10		1	0	
26-dchp	1206	2,6-Dichlorophenol		ppb	10		1	0	
26-dchp	30	2,6-Dichlorophenol		ppb	.52		18	0	
26-dint		2,6-Dinitrotoluene		ppb	10		1	0	
ACEPENE		2-Acetylanthracene		ppb	20		1	0	
CHLNAPH		2-Chloronaphthalene		ppb	10		1	0	
CHLNAPH	1206	2-Chlorophenol		ppb	10		1	0	
CHLNAPH	30	2-Chlorophenol		ppb	.6		18	0	
2METNAPH		2-Methylnaphthalene		ppb	10		1	0	
2METNAPH		2-Methylphenol		ppb	10		1	0	
2-napha		2-Naphthylamine		ppb	10		1	0	
ONITANI		2-Nitroaniline		ppb	50		1	0	
2NITPH	1206	2-Nitrophenol		ppb	10		1	0	
2NITPH	30	2-Nitrophenol		ppb	.6		18	0	
PICOLIN		2-Picoline		ppb	10		1	0	
BUTDINP		2-sec-Butyl-4,6-dinitrophenol (DN)		ppb	.41		18	0	
DICHBEN		3,3'-Dichlorobenzidine		ppb	20		1	0	
DIMEYLS		3,3'-Dimethylbenzidine		ppb	50		1	0	
NETCHAN		3-Methylcholanthrene		ppb	10		1	0	
3NITANI		3-Nitroaniline		ppb	50		1	0	
46DN2NP	1206	4,6-Dinitro-2-methylphenol		ppb	50		1	0	
46DN2NP	30	4,6-Dinitro-2-methylphenol		ppb	.84		18	0	
AMINOYL		4-Aminobiphenyl		ppb	20		1	0	
BROPHEN		4-Bromophenylphenyl ether		ppb	10		1	0	
CHLCRES	1206	4-Chloro-3-methylphenol		ppb	20		1	0	
CHLCRES	30	4-Chloro-3-methylphenol		ppb	.52		18	0	
CHLANIL		4-Chloroaniline		ppb	20		1	0	
4CPPETH		4-Chlorophenylphenyl ether		ppb	10		1	0	
4METNPH		4-Methylphenol		ppb	10		1	0	
NITRANI		4-Nitroaniline		ppb	50		1	0	
NITPHEN	1206	4-Nitrophenol		ppb	50		1	0	
NITPHEN	30	4-Nitrophenol		ppb	.49		18	1	
4NITQUI		4-Nitroquinoline-1-oxide		ppb	50		1	0	
NITRTOL		5-Nitro-o-toluidine		ppb	10		1	0	
DIMBENZ		7,12-Dimethylbenz[a]anthracene		ppb	10		1	0	
ACENAPH		Acenaphthene		ppb	10		1	0	
ACENATL		Acenaphthylene		ppb	10		1	0	
ACETOPH		Acetophenone		ppb	10		1	0	
ALKALIN	1086	Alkalinity		ppm	50		1	1	
ALKALIN	357	Alkalinity		ppm	3.5		18	18	
DIMPHEH		Alpha,alpha-Dimethylphenethylamine		ppb	50		1	0	
FALUMIN		Aluminum, filtered		ppb	31		17	1	
ANILINE		Aniline		ppb	10		1	0	
ANTHRA		Anthracene		ppb	10		1	0	
FANTIMO		Antimony, filtered		ppb	24		17	0	
ARANITE		Arsenite		ppb	20		1	0	
BENZAAN		Benzo(a)anthracene		ppb	10		1	0	
BENZOPY		Benzo(a)pyrene		ppb	10		1	0	
BENZBFL		Benzo(b)fluoranthene		ppb	10		1	0	
BGNIPER		Benzo(g,h,i)perylene		ppb	10		1	0	
BENZKFLU		Benzo(k)fluoranthene		ppb	10		1	0	
BENZALC		Benzyl alcohol		ppb	20		1	0	

Table 14-12. Constituent List and Summary of Results for the
Low-Level Waste Management Area 1 Data for Reporting Period
April 1 through June 30, 1995.
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Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
FBERYLL		Beryllium, filtered	ppb	.63			17	0	
BIS2CHN		Bis(2-Chloroethoxy)methane	ppb	10			1	0	
BIS2CHE		Bis(2-chloroethyl) ether	ppb	10			1	0	
BIS2ETH		Bis(2-chloroisopropyl) ether	ppb	10			1	0	
BIS2EPH		Bis(2-ethylhexyl) phthalate	ppb	10			1	0	
BROMIDE	1083	Bromide	ppm	.5			1	0	
BROMIDE	124	Bromide	ppb	72			18	2	
BUTBENP		Butylbenzylphthalate	ppb	10			1	0	
FCALCIU		Calcium, filtered	ppb	41			17	17	
CHLLATE		Chlorobenzilate	ppb	10			1	0	
CHRYSEN		Chrysene	ppb	10			1	0	
FCOBALT		Cobalt, filtered	ppb	5.3			17	0	
FCOPPER		Copper, filtered	ppb	2.1	1000	EPAS	17	7	0
CRESOLS		Cresols (methylphenols)	ppb	1.7			18	0	
DIBPNTH		Di-n-butylphthalate	ppb	10			1	0	
DIOPNTH		Di-n-octylphthalate	ppb	10			1	0	
DIALATE		Diallate	ppb	20			1	0	
DIBANAN		Dibenz(a,h)anthracene	ppb	10			1	0	
DIBENFR		Dibenzofuran	ppb	10			1	0	
DIEPNTH		Diethyl phthalate	ppb	10			1	0	
DIMETHO		Dimethoate	ppb	20			1	0	
DIMPTH		Dimethyl phthalate	ppb	10			1	0	
ETHEMS		Ethyl methanesulfonate	ppb	20			1	0	
FAMPHUR		Famphur	ppb	50			1	0	
FLUORAN		Fluoranthene	ppb	10			1	0	
FLARENE		Fluorene	ppb	10			1	0	
BETA		Gross beta	pCi/L				1	1	
BETA		Gross beta	pCi/L				18	18	
HEXCHBN		Hexachlorobenzene	ppb	10			1	0	
HEXCBUT		Hexachlorobutadiene	ppb	10			1	0	
HEXCCYC		Hexachlorocyclopentadiene	ppb	10			1	0	
HEXCETH		Hexachloroethane	ppb	10			1	0	
HEXACHL		Hexachlorophene	ppb	100			1	0	
HEXAENE		Hexachloropropene	ppb	10			1	0	
INDENOP		Indeno(1,2,3-cd)pyrene	ppb	10			1	0	
ISODRIN		Isodrin	ppb	20			1	0	
ISOPHER		Isophorene	ppb	10			1	0	
ISOSOLE		Isosafrole	ppb	10			1	0	
KEPONE		Kepone	ppb	50			1	0	
FLEAD		Lead, filtered	ppb	.88	50	EPA1	15	7	0
FMAGNES		Magnesium, filtered	ppb	26			17	17	
METRAPY		Methapyrene	ppb	100			1	0	
METASUL		Methyl methanesulfonate	ppb	10			1	0	
DIPRMIT		N-Nitroso-di-n-dipropylamine	ppb	10			1	0	
NNIBUTY		N-Nitrosodi-n-butylamine	ppb	10			1	0	
NNIDIEY		N-Nitrosodiethylamine	ppb	20			1	0	
NNIDINE		N-Nitrosodimethylamine	ppb	10			1	0	
NNIDIPA		N-Nitrosodiphenylamine	ppb	10			1	0	
NNIMETH		N-Nitrosomethylethylamine	ppb	10			1	0	
NNIMORP		N-Nitrosomorpholine	ppb	10			1	0	
NNIPIPE		N-Nitrosopiperidine	ppb	20			1	0	
NAPHTHA		Naphthalene	ppb	10			1	0	
FNICKEL		Nickel, filtered	ppb	11			17	1	
NITRITE		Nitrite	ppb	140	1000	EPA	18	0	0
NITBENZ		Nitrobenzene	ppb	10			1	0	
NO2-N		Nitrogen in Nitrite	ppm	.2	1	EPA	1	0	0
NITRPPYR		Nitrosopyrrolidine	ppb	40			1	0	

Table 14-12. Constituent List and Summary of Results for the Low-Level Waste Management Area 1 Data for Reporting Period April 1 through June 30, 1995.
(sheet 4 of 4)

Short	(Method)	Constituent Name		Units	Lab CROQ	DMS		Number of Samples		
		Full				Limit	Agency	Total	>CROQ	>DMS
TRIPHOS		O,O,O-Triethyl phosphorothioate	ppb	20				1	0	
PARATHI		Parathion	ppb	10				1	0	
PENTCNB		Pentachlorobenzene	ppb	10				1	0	
PENTCNH		Pentachloronitrobenzene (PCNB)	ppb	20				1	0	
PENTCHP	1206	Pentachlorophenol	ppb	50		1	EPA	1	0	1*
PENTCHP	30	Pentachlorophenol	ppb	.48		1	EPA	18	0	0
PHENTIN		Phenacetin	ppb	20				1	0	
PHENANT		Phenanthrene	ppb	10				1	0	
PHOSPRA	1083	Phosphate	ppm	.5				1	0	
PHOSPRA	124	Phosphate	ppb	340				18	0	
PFOTASS		Potassium, filtered	ppb	390				17	17	
PROMIDE		Pronamide	ppb	20				1	0	
PYRENE		Pyrene	ppb	10				1	0	
PYRIDIN		Pyridine	ppb	10				1	0	
SAFROL		Safrol	ppb	10				1	0	
FSILVER		Silver, filtered	ppb	5.5		50	EPAI	17	3	0
TETPHNL		Tetrachlorophenols	ppb	.52				18	0	
FTIN		Tin, filtered	ppb	30				17	0	
TRIPHNL		Trichlorophenols	ppb	.56				18	2	
TDICPH		Tris-2-chloroethyl phosphate	ppb	10				1	0	
TRITIUM		Tritium	pCi/L			20000	EPA	18	18	5
TURBID	1044	Turbidity	NTU	.1				1	1	
TURBID	111	Turbidity	NTU					18	18	
URANIUM		Uranium	ppb					18	18	
EVANADI		Vanadium, filtered	ppb	1.9				17	17	
FZINC		Zinc, filtered	ppb	3.7		5000	EPAS	17	15	0
DINBENZ		m-dinitrobenzene	ppb	20				1	0	
OTOLHYD		o-Toluidine	ppb	10				1	0	
DIMEANS		p-Dimethylaminoazobenzene	ppb	10				1	0	
PHENDIA		p-Phenylenediamine	ppb	100				1	0	
SYNTRIN		sym-Trinitrobenzene	ppb	50				1	0	

For explanation of this table, see Section 1.4 of report.

Table 14-13. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 1 Data for Reporting Period April 1 through June 30, 1995.
(sheet 1 of 7)

Well Name	Collection Date	Sample Number	246-trp 30/ppb .8/.	NITPHEN 30/ppb .49/.	ALKALIN 1086/ppm 50/.	ALKALIN 357/ppm 3.5/.
299-E28-26	6/06/95	BOFLD3	.80 U	.49 U		110.00
299-E28-27	6/06/95	BOFLD2	4.60 L	.49 U		110.00
299-E28-28	6/06/95	BOFLH4	1.10 L	.49 U		110.00
299-E32-10	6/08/95	BOFLJ9	.80 U	.49 U		110.00
299-E32-10	6/08/95	BOFLK0	.80 U	.49 U		110.00
299-E32-2	6/08/95	BOFLI5	.80 U	.49 U		110.00
299-E32-3	6/08/95	BOFLM2	.80 U	.49 U		120.00
299-E32-4	6/11/95	BOFLK1			122.00	
299-E32-4	6/07/95	BOFLM9	.80 U	.49 U		130.00
299-E32-5	6/08/95	BOFLN6	.80 U	.49 U		120.00
299-E32-6	6/08/95	BOFLP1	.80 U	.49 U		110.00
299-E32-7	6/08/95	BOFLP8	.80 U	.49 U		100.00
299-E32-8	6/08/95	BOFLQ8	.80 U	.49 U		100.00
299-E32-9	6/12/95	BOFLR4	.80 U	.49 U		100.00
299-E33-28	6/07/95	BOFLS0	.80 U	.49 U		100.00
299-E33-29	6/07/95	BOFLS7	.80 U	.49 U		100.00
299-E33-30	6/22/95	BOFLT4	.80 U	.70 L		100.00
299-E33-34	6/08/95	BOFLV1	.80 U	.49 U		110.00
299-E33-35	6/29/95	BOFLV6	.80 U	.49 U		110.00

Well Name	Collection Date	Sample Number	FALUTIN 34/ppb 31/.	FRARIUM 34/ppb 1.4/1000	BROMIDE 124/ppb 72/.	FCADMU 34/ppb .98/10
299-E28-26	6/06/95	BOFLD3			72.00 U	
299-E28-26	6/06/95	BOFLD7	31.00 U	32.00		1.10 BL
299-E28-27	6/06/95	BOFLG2			72.00 U	
299-E28-27	6/06/95	BOFLG6	31.00 U	45.00		1.10 BL
299-E28-28	6/06/95	BOFLH4			72.00 U	
299-E28-28	6/06/95	BOFLH8	31.00 U	46.00		1.20 BL
299-E32-10	6/08/95	BOFLJ9			72.00 U	
299-E32-10	6/08/95	BOFLK0			72.00 U	
299-E32-10	6/08/95	BOFLK7	31.00 U	25.00		.98 U
299-E32-10	6/08/95	BOFLK8	31.00 U	25.00		.98 U
299-E32-2	6/08/95	BOFLI5			72.00 U	
299-E32-2	6/08/95	BOFLI9	31.00 U	39.00		.98 U
299-E32-3	6/08/95	BOFLM2			72.00 U	
299-E32-3	6/08/95	BOFLM4	31.00 U	54.00		.98 U
299-E32-4	6/07/95	BOFLM9			100.00 L	
299-E32-4	6/07/95	BOFLN3	31.00 U	71.00		.98 U
299-E32-5	6/08/95	BOFLN6			80.00 L	
299-E32-5	6/08/95	BOFLP0	31.00 U	57.00		.98 U
299-E32-6	6/08/95	BOFLP1			72.00 U	
299-E32-6	6/08/95	BOFLP5	31.00 U	38.00		.98 U
299-E32-7	6/08/95	BOFLP8			72.00 U	
299-E32-7	6/08/95	BOFLQ2	31.00 U	34.00		.98 U
299-E32-8	6/08/95	BOFLQ8			72.00 U	
299-E32-8	6/08/95	BOFLR2	31.00 U	29.00		.98 U
299-E32-9	6/12/95	BOFLR4			72.00 U	
299-E32-9	6/12/95	BOFLR9	31.00 U	21.00		.98 U
299-E33-28	6/07/95	BOFLS0			72.00 U	
299-E33-28	6/07/95	BOFLS4	32.00 L	37.00		.98 U
299-E33-29	6/07/95	BOFLS7			72.00 U	
299-E33-29	6/07/95	BOFLT1	31.00 U	40.00		.98 U
299-E33-30	6/22/95	BOFLT4			72.00 U	

Table 14-13. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 1 Data for Reporting Period April 1 through June 30, 1995.
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Well Name	Collection Date	Sample Number	ALUMINUM 34/ppb 31/.	BARIUM 34/ppb 1.4/1000	BROMIDE 124/ppb 72/.	CHLORIDE 34/ppb .98/10
299-E33-30	6/22/95	BOFLT8	31.00 U	28.00		.98 U
299-E33-34	6/08/95	BOFLV1			72.00 U	
299-E33-34	6/08/95	BOFLV5	31.00 U	29.00		.98 U
299-E33-35	6/29/95	BOFLV6			72.00 U	

Well Name	Collection Date	Sample Number	CALCIUM 34/ppb 41/.	CHLORIDE 1083/ppm .2/250	CHLORIDE 124/ppb 110/250000	CHROMIUM 34/ppb 3.7/50
299-E28-26	6/06/95	BOFLD3			5800.00	
299-E28-26	6/06/95	BOFLD7	41000.00			4.80 L
299-E28-27	6/06/95	BOFLG2			9700.00 D	
299-E28-27	6/06/95	BOFLG6	30000.00			4.00 L
299-E28-28	6/06/95	BOFLN4			6800.00	
299-E28-28	6/06/95	BOFLN8	43000.00			4.80 L
299-E32-10	6/08/95	BOFLJ9			8900.00 D	
299-E32-10	6/08/95	BOFLK0			9000.00 D	
299-E32-10	6/08/95	BOFLK7	31000.00			4.00 L
299-E32-10	6/08/95	BOFLK8	31000.00			3.70 U
299-E32-2	6/08/95	BOFLI5			9200.00 D	
299-E32-2	6/08/95	BOFLI9	37000.00			4.30 L
299-E32-3	6/08/95	BOFLM2			10000.00	
299-E32-3	6/08/95	BOFLM6	50000.00			5.70 L
299-E32-4	6/11/95	BOFLK1		8.59		
299-E32-4	6/07/95	BOFLM9			9000.00 D	
299-E32-4	6/07/95	BOFLN3	39000.00			5.80 L
299-E32-5	6/08/95	BOFLN6			10000.00 D	
299-E32-5	6/08/95	BOFLP0	56000.00			8.60 L
299-E32-6	6/08/95	BOFLP1			10000.00 D	
299-E32-6	6/08/95	BOFLP5	35000.00			5.30 L
299-E32-7	6/08/95	BOFLP8			18000.00 D	
299-E32-7	6/08/95	BOFLQ2	31000.00			5.60 L
299-E32-8	6/08/95	BOFLQ8			18000.00 D	
299-E32-8	6/08/95	BOFLR2	30000.00			3.70 U
299-E32-9	6/12/95	BOFLR4			16000.00 D	
299-E32-9	6/12/95	BOFLR9	30000.00			3.80 L
299-E33-28	6/07/95	BOFLS0			16000.00 D	
299-E33-28	6/07/95	BOFLS4	30000.00			3.70 U
299-E33-29	6/07/95	BOFLS7			20000.00 D	
299-E33-29	6/07/95	BOFLT1	31000.00			5.10 L
299-E33-30	6/22/95	BOFLT4			20000.00 D	
299-E33-30	6/22/95	BOFLT8	30000.00			3.70 U
299-E33-34	6/08/95	BOFLV1			6300.00	
299-E33-34	6/08/95	BOFLV5	37000.00			7.00 L
299-E33-35	6/29/95	BOFLV6			5600.00	

Table 14-13. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 1 Data for Reporting Period April 1 through June 30, 1995.
(sheet 3 of 7)

Well Name	Collection Date	Sample Number	PCOPPER 36/ppb 2.1/1000	FLUORID 1083/ppm .1/1.4	FLUORID 124/ppb 52/1400	ALPHA 135/pCi/L ./15
299-E28-26	6/06/95	BOFLD3			600.00	12.08
299-E28-26	6/06/95	BOFLD7	2.10 U			
299-E28-27	6/06/95	BOFLG2			700.00	7.66
299-E28-27	6/06/95	BOFLG6	2.10 U			
299-E28-28	6/06/95	BOFLH4			700.00	9.36
299-E28-28	6/06/95	BOFLH8	2.10 U			
299-E32-10	6/08/95	BOFLJ9			400.00	2.78
299-E32-10	6/08/95	BOFLK0			400.00	1.42
299-E32-10	6/08/95	BOFLK7	2.10 U			
299-E32-10	6/08/95	BOFLK8	2.10 U			
299-E32-2	6/08/95	BOFLI5			500.00	5.49
299-E32-2	6/08/95	BOFLI9	2.10 U			
299-E32-3	6/08/95	BOFLM2			500.00	9.57
299-E32-3	6/08/95	BOFLM6	2.40 L			
299-E32-4	6/11/95	BOFLK1		.53		
299-E32-4	6/07/95	BOFLM9			900.00	1.40
299-E32-4	6/07/95	BOFLK3	4.30 L			
299-E32-5	6/08/95	BOFLM6			500.00	13.50
299-E32-5	6/08/95	BOFLP0	2.10 U			
299-E32-6	6/08/95	BOFLP1			300.00	4.70
299-E32-6	6/08/95	BOFLP5	2.10 U			
299-E32-7	6/08/95	BOFLP8			600.00	6.59
299-E32-7	6/08/95	BOFLQ2	2.80 L			
299-E32-8	6/08/95	BOFLR8			400.00	1.66
299-E32-8	6/08/95	BOFLR2	2.80 L			
299-E32-9	6/12/95	BOFLR4			300.00	.92 U
299-E32-9	6/12/95	BOFLR9	2.40 L			
299-E33-28	6/07/95	BOFLS0			600.00	.57 U
299-E33-28	6/07/95	BOFLS4	2.50 L			
299-E33-29	6/07/95	BOFLS7			700.00	1.16
299-E33-29	6/07/95	BOFLT1	2.10 U			
299-E33-30	6/22/95	BOFLT4			800.00	3.53
299-E33-30	6/22/95	BOFLT8	2.40 L			
299-E33-34	6/08/95	BOFLV1			400.00	6.01
299-E33-34	6/08/95	BOFLV5	2.10 U			
299-E33-35	6/29/95	BOFLV6			600.00	2.30

Well Name	Collection Date	Sample Number	BETA 1252/pCi/L ./.	BETA 136/pCi/L ./.	FIROW 34/ppb 8.9/300	FLEAD 40/ppb .88/50
299-E28-26	6/06/95	BOFLD3		6.27		
299-E28-26	6/06/95	BOFLD7			32.00 Bq	.88 U
299-E28-27	6/06/95	BOFLG2		14.60		
299-E28-27	6/06/95	BOFLG6			24.00 Bq	.88 U
299-E28-28	6/06/95	BOFLH4		7.17		
299-E28-28	6/06/95	BOFLH8			32.00 Bq	.93 LB
299-E32-10	6/08/95	BOFLJ9		31.50		
299-E32-10	6/08/95	BOFLK0		29.90		
299-E32-10	6/08/95	BOFLK7			30.00 B	.94 LB
299-E32-10	6/08/95	BOFLK8			29.00 B	.88 U
299-E32-2	6/08/95	BOFLI5		8.70		
299-E32-2	6/08/95	BOFLI9			15.00 Bq	.88 U
299-E32-3	6/08/95	BOFLM2		7.31		
299-E32-3	6/08/95	BOFLM6			49.00 B	.88 U

Table 14-13. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 1 Data for Reporting Period April 1 through June 30, 1995.
(sheet 4 of 7)

Well Name	Collection Date	Sample Number	BETA 1252/pCi/L ./.	BETA 136/pCi/L ./.	PIRON 34/ppb 8.9/300	LEAD 40/ppb .88/50
299-E32-4	4/11/95	80FLK1	8.03			
299-E32-4	6/07/95	80FLM9		10.80		
299-E32-4	6/07/95	80FLN3			41.00 BL	.88 U
299-E32-5	6/08/95	80FLM6		14.20		
299-E32-5	6/08/95	80FLP0			37.00 B	3.60 LB
299-E32-6	6/08/95	80FLP1		11.20		
299-E32-6	6/08/95	80FLP5			17.00 BL	.88 U
299-E32-7	6/08/95	80FLP8		14.10		
299-E32-7	6/08/95	80FLQ2			30.00 B	2.20 LB
299-E32-8	6/08/95	80FLQ8		12.90		
299-E32-8	6/08/95	80FLR2			46.00 B	1.60 LB
299-E32-9	6/12/95	80FLR4		17.00		
299-E32-9	6/12/95	80FLR9			26.00 B	
299-E33-28	6/07/95	80FLS0		13.00		
299-E33-28	6/07/95	80FLS4			12.00 BLA	1.30 LB
299-E33-29	6/07/95	80FLS7		14.80		
299-E33-29	6/07/95	80FLT1			29.00 BL	.88 U
299-E33-30	6/22/95	80FLT4		16.30		
299-E33-30	6/22/95	80FLT8			17.00 BL	
299-E33-34	6/08/95	80FLV1		160.00		
299-E33-34	6/08/95	80FLV5			26.00 B	2.30 LB
299-E33-35	6/29/95	80FLV6		61.10		

Well Name	Collection Date	Sample Number	FRAGNES 34/ppb 26./.	FRANGAM 34/ppb .55/50	FRERICUR 41/ppb .019/2	FRICKEL 34/ppb 11./.
299-E28-26	6/06/95	80FLD7	11000.00	.97 L	.13 BL	11.00 U
299-E28-27	6/06/95	80FLD6	9500.00	.94 L	.17 BL	11.00 U
299-E28-28	6/06/95	80FLH8	12000.00	2.10 L	.08 BL	11.00 U
299-E32-10	6/08/95	80FLK7	9600.00	1.10 L	.02 U	11.00 U
299-E32-10	6/08/95	80FLK8	9600.00	1.10 L	.02 U	11.00 U
299-E32-2	6/08/95	80FLI9	11000.00	.92 L	.02 U	11.00 U
299-E32-3	6/08/95	80FLM6	14000.00	2.60 L	.02 U	11.00 U
299-E32-4	6/07/95	80FLM3	13000.00	1.50 L	.07 BL	12.00 L
299-E32-5	6/08/95	80FLP0	16000.00	.99 L	.02 U	11.00 U
299-E32-6	6/08/95	80FLP5	11000.00	1.30 L	.02 U	11.00 U
299-E32-7	6/08/95	80FLQ2	9600.00	2.10 L	.02 U	11.00 U
299-E32-8	6/08/95	80FLR2	9400.00	3.10 L	.02 U	11.00 U
299-E32-9	6/12/95	80FLR9	9400.00	1.70 L	.02 U	11.00 U
299-E33-28	6/07/95	80FLS4	9100.00	.35 U	.02 BL	11.00 U
299-E33-29	6/07/95	80FLT1	9800.00	.87 L	.09 BL	11.00 U
299-E33-30	6/22/95	80FLT8	9600.00	3.00 L	.02 U	11.00 U
299-E33-34	6/08/95	80FLV5	11000.00	.98 L	.02 U	11.00 U
299-E33-35	6/29/95	80FLV0			.06 L	

Table 14-13. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 1 Data for Reporting Period April 1 through June 30, 1995.
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Well Name	Collection Date	Sample Number	NITRATE 124/ppb 120/45000	NO3-N 1083/ppm .2/10	FPOTASS 34/ppb 390/.	FSILVER 34/ppb 5.5/50
299-E28-26	6/06/95	BOFLD3	30000.00 D			
299-E28-26	6/06/95	BOFLD7			4600.00	8.60 BLQ
299-E28-27	6/06/95	BOFLG2	19000.00 D			
299-E28-27	6/06/95	BOFLG6			5300.00	5.50 UQ
299-E28-28	6/06/95	BOFLH4	31000.00 D			
299-E28-28	6/06/95	BOFLH8			5000.00	5.50 UQ
299-E32-10	6/08/95	BOFLJ9	9900.00 D			
299-E32-10	6/08/95	BOFLK0	9900.00 D			
299-E32-10	6/08/95	BOFLK7			5500.00	5.50 U
299-E32-10	6/08/95	BOFLK8			5200.00	5.50 U
299-E32-2	6/08/95	BOFLS5	24000.00 D			
299-E32-2	6/08/95	BOFLS9			5600.00	5.50 U
299-E32-3	6/08/95	BOFLM2	36000.00 D			
299-E32-3	6/08/95	BOFLM6			5600.00	5.50 U
299-E32-4	6/11/95	BOFLK1		6.97		
299-E32-4	6/07/95	BOFLM9	28000.00 D			
299-E32-4	6/07/95	BOFLM3			6200.00	5.50 UQ
299-E32-5	6/08/95	BOFLM6	55000.00 DF			
299-E32-5	6/08/95	BOFLP0			5400.00	5.50 U
299-E32-6	6/08/95	BOFLP1	20000.00 D			
299-E32-6	6/08/95	BOFLP3			5800.00	5.50 U
299-E32-7	6/08/95	BOFLP8	11000.00 D			
299-E32-7	6/08/95	BOFLQ2			5700.00	5.50 U
299-E32-8	6/08/95	BOFLQ8	4800.00			
299-E32-8	6/08/95	BOFLR2			5300.00	5.50 U
299-E32-9	6/12/95	BOFLR4	4100.00			
299-E32-9	6/12/95	BOFLR9			5400.00	5.50 U
299-E33-28	6/07/95	BOFLS0	4300.00			
299-E33-28	6/07/95	BOFLS4			5800.00	8.00 BLQ
299-E33-29	6/07/95	BOFLS7	8400.00			
299-E33-29	6/07/95	BOFLT1			5600.00	9.00 BLQ
299-E33-30	6/22/95	BOFLT4	7100.00			
299-E33-30	6/22/95	BOFLT8			5700.00	5.50 U
299-E33-34	6/08/95	BOFLV1	42000.00 D			
299-E33-34	6/08/95	BOFLV5			5600.00	5.50 U
299-E33-35	6/29/95	BOFLV6	16000.00 D			

Well Name	Collection Date	Sample Number	SODIUM 34/ppb 44/.	SULFATE 1083/ppm .5/250	SULFATE 124/ppb 130/250000	TRIPHNL 30/ppb .56/.
299-E28-26	6/06/95	BOFLD3			49000.00 D	.56 U
299-E28-26	6/06/95	BOFLD7	19000.00 Q			
299-E28-27	6/06/95	BOFLG2			47000.00 D	4.60 L
299-E28-27	6/06/95	BOFLG6	24000.00 Q			
299-E28-28	6/06/95	BOFLH4			52000.00 D	1.10 L
299-E28-28	6/06/95	BOFLH8	21000.00 Q			
299-E32-10	6/08/95	BOFLJ9			29000.00 D	.56 U
299-E32-10	6/08/95	BOFLK0			30000.00 D	.56 U
299-E32-10	6/08/95	BOFLK7	16000.00			
299-E32-10	6/08/95	BOFLK8	17000.00			
299-E32-2	6/08/95	BOFLS5			51000.00 D	.56 U
299-E32-2	6/08/95	BOFLS9	24000.00			
299-E32-3	6/08/95	BOFLM2			78000.00 D	.56 U
299-E32-3	6/08/95	BOFLM6	25000.00			

Table 14-13. Constituents with at Least One Detected Value for the
Low-Level Waste Management Area 1 Data for Reporting Period
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(sheet 6 of 7)

Well Name	Collection Date	Sample Number	FSODIUM 34/ppb 44/.	SULFATE 1083/ppm .5/250	SULFATE 124/ppb 130/250000	TRIPHOS. 30/ppb .56/.
299-E32-4	4/11/95	B0F7K1		44.00		
299-E32-4	6/07/95	B0FLM9			46000.00 D	.56 U
299-E32-4	6/07/95	B0FLN3	26000.00 Q			
299-E32-5	6/08/95	B0FLN6			88000.00 D	.56 U
299-E32-5	6/08/95	B0FLP0	27000.00			
299-E32-6	6/08/95	B0FLP1			46000.00 D	.56 U
299-E32-6	6/08/95	B0FLP5	23000.00			
299-E32-7	6/08/95	B0FLP8			34000.00 D	.56 U
299-E32-7	6/08/95	B0FLQ2	24000.00			
299-E32-8	6/08/95	B0FLQ8			30000.00 D	.56 U
299-E32-8	6/08/95	B0FLR2	20000.00			
299-E32-9	6/12/95	B0FLR4			29000.00 D	.56 U
299-E32-9	6/12/95	B0FLR9	18000.00			
299-E33-28	6/07/95	B0FLS0			29000.00 D	.56 U
299-E33-28	6/07/95	B0FLS4	20000.00 Q			
299-E33-29	6/07/95	B0FLS7			33000.00 D	.56 U
299-E33-29	6/07/95	B0FLT1	22000.00 Q			
299-E33-30	6/22/95	B0FLT4			32000.00 D	.56 U
299-E33-30	6/22/95	B0FLT8	22000.00			
299-E33-34	6/08/95	B0FLV1			31000.00 D	.56 U
299-E33-34	6/08/95	B0FLV5	21000.00			
299-E33-35	6/29/95	B0FLV6			23000.00 D	.56 U

Well Name	Collection Date	Sample Number	TRITIUM 142/pCi/L .720000	TURBID 1044/NTU .1/.	TURBID 111/NTU ./.	URANIUM 145/ppb ./.
299-E28-26	6/06/95	B0FLD3	9500.00		.43	16.30
299-E28-27	6/06/95	B0FLG2	42600.00		.72	10.10
299-E28-28	6/06/95	B0FLM4	9520.00		1.18	18.20
299-E32-10	6/08/95	B0FLJ9	1740.00		1.19	2.36
299-E32-10	6/08/95	B0FLK0	1650.00			2.43
299-E32-2	6/08/95	B0FLI3	35100.00		.60	17.30
299-E32-3	6/08/95	B0FLM2	37900.00		1.08	14.80
299-E32-4	4/11/95	B0F7K1		1.17	3.15	
299-E32-4	6/07/95	B0FLM9	332.00		6.73	3.08
299-E32-5	6/08/95	B0FLN6	42200.00		.92	23.80
299-E32-6	6/08/95	B0FLP1	34000.00		.99	9.73
299-E32-7	6/08/95	B0FLP8	14600.00		2.03	5.35
299-E32-8	6/08/95	B0FLQ8	1790.00		1.65	1.91
299-E32-9	6/12/95	B0FLR4	1730.00		.45	1.77
299-E33-28	6/07/95	B0FLS0	1690.00		.46	2.07
299-E33-29	6/07/95	B0FLS7	1740.00		.38	2.40
299-E33-30	6/22/95	B0FLT4	2490.00		.91	2.74
299-E33-34	6/08/95	B0FLV1	5390.00		.60	12.50
299-E33-35	6/29/95	B0FLV6	2170.00		1.26	2.69

Table 14-13. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 1 Data for Reporting Period April 1 through June 30, 1995.
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Well Name	Collection Date	Sample Number	PYANADJ 34/ppb 1.9/.	FZINC 34/ppb 3.7/5000
299-E28-26	6/06/95	BOFLD7	16.00 L	26.00 Q
299-E28-27	6/06/95	BOFLG6	17.00 L	14.00 Q
299-E28-28	6/06/95	BOFLH8	15.00 L	9.10 LQ
299-E32-10	6/08/95	BOFLK7	20.00 L	8.20 BL
299-E32-10	6/08/95	BOFLK8	19.00 L	9.60 BL
299-E32-2	6/08/95	BOFLI9	19.00 L	24.00 B
299-E32-3	6/08/95	BOFLM6	18.00 L	34.00 B
299-E32-4	6/07/95	BOFLN3	19.00 L	7.70 LQ
299-E32-5	6/08/95	BOFLP0	16.00 L	23.00 B
299-E32-6	6/08/95	BOFLP5	19.00 L	3.70 U
299-E32-7	6/08/95	BOFLQ2	19.00 L	5.30 BL
299-E32-8	6/08/95	BOFLR2	18.00 L	13.00 B
299-E32-9	6/12/95	BOFLR9	20.00 L	6.90 BL
299-E33-28	6/07/95	BOFLS4	22.00 L	80.00 Q
299-E33-29	6/07/95	BOFLT1	20.00 L	3.70 UQ
299-E33-30	6/22/95	BOFLT8	19.00 L	51.00 B
299-E33-34	6/08/95	BOFLV5	22.00 L	8.10 BL

For explanation of this table, see Section 1.4 of report.

Table 14-14. Contamination Indicator Parameters for the
Low-Level Waste Management Area 1 Data for Reporting Period
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(sheet 1 of 2)

Well Name	Collection Date	Sample Number	COND FIELD µmho /.	COND LAB µmho /.	pH FIELD .01/6.5-8.5s	pH LAB .01/6.5-8.5s	TOC ppb %.	TOC ppb %.
299-E28-26	6/06/95	BOFLD3	387		7.78	7.90	300 L	6.9 U
		BOFLD4	387		7.77		200 L	6.9 U
		BOFLD5	387		7.78		300 L	6.9 U
		BOFLD6	387		7.78		300 L	6.9 U
299-E28-27	6/06/95	BOFLB2	378		7.91	8.10	300 L	6.9 U
		BOFLB3	378		7.91		200 L	6.9 U
		BOFLB4	378		7.91		300 L	6.9 U
		BOFLB5	379		7.91		300 L	6.9 U
299-E28-28	6/06/95	BOFLM4	413		7.75		300 L	6.9 U
		BOFLM5	415		7.76		300 L	6.9 U
		BOFLM6	416		7.80		300 L	6.9 U
		BOFLM7	416		7.78		400 L	6.9 U
299-E32-10	6/08/95	BOFLJ9	326		8.33	8.10	400 L	6.9 U
		BOFLK0	325		8.36	8.20	400 L	6.9 U
		BOFLK1	326		8.39		400 L	6.9 U
		BOFLK2	326		8.40		400 L	6.9 U
		BOFLK3					500 L	6.9 U
		BOFLK4					500 L	6.9 U
		BOFLK5					400 L	6.9 U
		BOFLK6					400 L	6.9 U
299-E32-2	6/08/95	BOFLI5	409		8.01	8.10	300 L	6.9 U
		BOFLI6	407		8.00		200 L	6.9 U
		BOFLI7	407		8.01		200 L	6.9 U
		BOFLI8	406		8.01		300 L	6.9 U
299-E32-3	6/08/95	BOFLM2	499		7.67	7.90	300 L	6.9 U
		BOFLM3	499		7.62		300 L	6.9 U
		BOFLM4	497		7.60		300 L	6.9 U
		BOFLM5	498		7.62		300 L	6.9 U
299-E32-4	6/11/95	BOF7K1	412	413	7.98	8.00	1000 U	7.0
		BOF7K2	411		7.97		1000 U	16.1 R
		BOF7K3	410		7.98		1000 U	15.8 R
		BOF7K4	410		7.98		1000 U	6.9 U
	6/07/95	BOFLM9	418		7.44	8.00	200 L	6.9 U
		BOFLN0	418		7.42		140 L	6.9 U
		BOFLN1	418		7.41		200 L	6.9 U
		BOFLN2	419		7.41		200 L	6.9 U
299-E32-5	6/08/95	BOFLN6	534		7.68	7.90	400 L	6.9 U
		BOFLN7	532		7.68		300 L	6.9 U
		BOFLN8	532		7.68		300 L	6.9 U
		BOFLN9	532		7.68		200 L	6.9 U
299-E32-6	6/08/95	BOFLP1	397		7.95	8.10	400 L	6.9 U
		BOFLP2	395		7.96		200 L	6.9 U
		BOFLP3	394		7.96		200 L	6.9 U
299-E32-6	6/08/95	BOFLP4	394		7.95		200 L	6.9 U
299-E32-7	6/08/95	BOFLP8	351		8.03	8.10	400 L	6.9 U
		BOFLP9	352		8.05		300 L	6.9 U
		BOFLQ0	353		8.02		300 L	6.9 U
299-E32-8	6/08/95	BOFLQ1	353		8.03		300 L	6.9 U
		BOFLQ8	332		8.08	8.10	400 L	6.9 U
		BOFLQ9	331		8.07		300 L	6.9 U
		BOFLR0	333		8.08		400 L	6.9 U
		BOFLR1	331		8.07		400 L	7.0 L

Table 14-14. Contamination Indicator Parameters for the
Low-Level Waste Management Area 1 Data for Reporting Period
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(sheet 2 of 2)

Well Name	Collection Date	Sample Number	COND FIELD μmho 1/.	COND LAB μmho 1/.	pH FIELD .01/6.5-8.5s	pH LAB .01/6.5-8.5s	TOC ppb */.	TOX ppb */.
299-E32-9	6/12/95	BOFLR4	328		8.09	8.10	300 L	6.9 U
		BOFLR6	327		8.09		400 L	6.9 U
		BOFLR7	327		8.09		300 L	8.0 L
		BOFLR8	328		8.08		300 L	6.9 U
299-E33-28	6/07/95	BOFLS0	332		8.10	8.10	400 L	6.9 U
		BOFLS1	332		8.10		300 L	6.9 U
		BOFLS2	332		8.10		400 L	6.9 U
		BOFLS3	332		8.10		400 L	6.9 U
299-E33-29	6/07/95	BOFLS7	355		8.11	8.10	300 L	6.9 U
		BOFLS8	355		8.11		400 L	6.9 U
		BOFLS9	354		8.10		300 L	6.9 U
		BOFLT0	354		8.11		300 L	6.9 U
299-E33-30	6/22/95	BOFLT4	353		8.08	8.10	400 L	6.9 U
		BOFLT5	353		8.08		400 L	6.9 U
		BOFLT6	353		8.09		400 L	6.9 U
		BOFLT7	352		8.09		500 L	6.9 U
299-E33-34	6/08/95	BOFLV1	375		8.06	8.10	500 L	6.9 U
		BOFLV2	375		8.06		400 L	6.9 U
		BOFLV3	375		8.07		400 L	6.9 U
		BOFLV4	375		8.06		300 L	6.9 U
299-E33-35	6/29/95	BOFLV6	300		8.30	8.10	400 L	6.9 U
		BOFLV7	299		8.31		400 L	6.9 U
		BOFLV8	299		8.33		500 L	6.9 U
		BOFLV9	299		8.34		400 L	6.9 U

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

Table 14-15. Constituent List and Summary of Results for the
Low-Level Waste Management Area 2 Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 2)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
CONDUCT	94	Conductivity, field	µmhos	1			49	49	
CONDUCT	73	Conductivity, lab	µmhos				13	13	
TOC		Total Organic Carbon	ppb	140			52	48	
TOX		Total Organic Halogen	ppb	6.9			52	4	
PH	93	pH, field	pH	.01	6.5-8.5	EPAS	46	46	0
PH	125	pH, lab	pH		6.5-8.5	EPAS	13	13	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
FBARIUM		Barium, filtered	ppb	1.4	1000	EPAI	13	13	0
FCADMIU		Cadmium, filtered	ppb	.98	10	EPAI	13	0	0
FCHROMI		Chromium, filtered	ppb	3.7	50	EPAI	13	3	0
FLUORID		Fluoride	ppb	52	1600	EPAI	13	13	0
ALPHA		Gross alpha	pCi/L		15	EPA	13	12	0
FMERCUR		Mercury, filtered	ppb	.019	2	EPA	13	4	0
NITRATE		Nitrate	ppb	120	45000	EPA	13	13	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
CHLORID		Chloride	ppb	110	250000	EPAS	13	13	0
FIRON		Iron, filtered	ppb	8.9	300	EPAS	13	13	0
FMANGAN		Manganese, filtered	ppb	.55	50	EPAS	13	13	0
FSODIUM		Sodium, filtered	ppb	44			13	13	
SULFATE		Sulfate	ppb	130	250000	EPAS	13	13	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
ALKALIN		Alkalinity	ppm	3.5			13	13	
FALUMIN		Aluminum, filtered	ppb	31			13	0	
FANTIMO		Antimony, filtered	ppb	24			13	0	
AR1016		Aroclor-1016	ppb	.026			13	0	
AR1221		Aroclor-1221	ppb	.029			13	0	
AR1232		Aroclor-1232	ppb	.071			13	0	
AR1242		Aroclor-1242	ppb	.018			13	0	
AR1248		Aroclor-1248	ppb	.019			13	0	
AR1254		Aroclor-1254	ppb	.0035			13	0	
AR1260		Aroclor-1260	ppb	.011			13	0	
FBERYLL		Beryllium, filtered	ppb	.63			13	0	
BROMIDE		Bromide	ppb	72			13	5	
FCALCIU		Calcium, filtered	ppb	41			13	13	
FCOBALT		Cobalt, filtered	ppb	5.3			13	0	
FCOPPER		Copper, filtered	ppb	2.1	1000	EPAS	13	1	0

Table 14-15. Constituent List and Summary of Results for the Low-Level Waste Management Area 2 Data for Reporting Period April 1 through June 30, 1995.
(sheet 2 of 2)

Short	(Method)	Constituent Name		Units	Lab CRCL	DWS		Number of Samples		
		Full				Limit	Agency	Total	>CRCL	>DWS
BETA		Gross beta	pCi/L					13	13	
FLEAD		Lead, filtered	ppb		.88	50	EPAI	13	3	0
FMAGNES		Magnesium, filtered	ppb		26			13	13	
FNICKEL		Nickel, filtered	ppb		11			13	1	
HNITRITE		Nitrite	ppb		140	1000	EPA	13	0	0
PHOSPHA		Phosphate	ppb		340			13	0	
FPOTASS		Potassium, filtered	ppb		390			13	13	
FSILVER		Silver, filtered	ppb		5.5	50	EPAI	13	0	0
FTIN		Tin, filtered	ppb		30			13	0	
TRITIUM		Tritium	pCi/L			20000	EPA	13	12	0
TURBID		Turbidity	NTU					13	13	
FVANADI		Vanadium, filtered	ppb		1.9			13	13	
FZINC		Zinc, filtered	ppb		3.7	5000	EPAS	13	6	0

For explanation of this table, see Section 1.4 of report.

Table 14-16. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 2 Data for Reporting Period April 1 through June 30, 1995.
(sheet 1 of 3)

Well Name	Collection Date	Sample Number	ALKALIN 357/ppm 3.5/.	FBARIUM 34/ppb 1.4/1000	BROMIDE 124/ppb 72/.	FCALCIU 34/ppb 41/.
299-E27-10	5/04/95	B0FCG3	110.00		72.00 U	
299-E27-10	5/04/95	B0FCG7		30.00		34000.00
299-E27-11	5/03/95	B0FCC2	100.00		72.00 U	
299-E27-11	5/03/95	B0FCC6		36.00		35000.00
299-E27-17	5/03/95	B0FCC7	100.00		72.00 U	
299-E27-17	5/03/95	B0FCD1		32.00		39000.00
299-E27-8	5/04/95	B0FCD2	110.00		72.00 U	
299-E27-8	5/04/95	B0FCD6		23.00		34000.00
299-E27-9	5/03/95	B0FCD7	100.00		72.00 U	
299-E27-9	5/03/95	B0FCF1		22.00		35000.00
299-E34-10	5/03/95	B0FCF2	100.00		72.00 U	
299-E34-10	5/03/95	B0FCF6		35.00		35000.00
299-E34-11	5/09/95	B0FCG8	110.00		100.00 L	
299-E34-11	5/09/95	B0FCH2		32.00		43000.00
299-E34-12	5/08/95	B0FCH3	100.00		72.00 U	
299-E34-12	5/08/95	B0FCH7		51.00		51000.00
299-E34-2	5/09/95	B0FCH8	90.00		100.00 L	
299-E34-2	5/09/95	B0FCJ2		34.00		54000.00
299-E34-3	5/04/95	B0FCJ3	90.00		100.00 L	
299-E34-3	5/04/95	B0FCJ7		50.00		41000.00
299-E34-5	5/04/95	B0FCJ8	100.00		90.00 L	
299-E34-5	5/04/95	B0FCJ2		38.00		34000.00
299-E34-7	5/04/95	B0FCJ8	110.00		200.00 L	
299-E34-7	5/04/95	B0FCL2		23.00		48000.00
299-E34-9	5/08/95	B0FCL8	100.00		72.00 U	
299-E34-9	5/08/95	B0FCN2		43.00		37000.00

Well Name	Collection Date	Sample Number	CHLORID 124/ppb 110/250000	FCROMI 34/ppb 3.7/50	FCOPPER 34/ppb 2.1/1000	FLUORID 124/ppb 52/1400
299-E27-10	5/04/95	B0FCG3	9900.00			500.00
299-E27-10	5/04/95	B0FCG7		3.70 U	2.10 U	
299-E27-11	5/03/95	B0FCC2	7200.00			500.00
299-E27-11	5/03/95	B0FCC6		3.70 U	2.10 U	
299-E27-17	5/03/95	B0FCC7	8100.00			600.00
299-E27-17	5/03/95	B0FCD1		3.70 U	3.10 L	
299-E27-8	5/04/95	B0FCD2	6300.00			500.00
299-E27-8	5/04/95	B0FCD6		3.70 U	2.10 U	
299-E27-9	5/03/95	B0FCD7	6700.00			500.00
299-E27-9	5/03/95	B0FCF1		3.70 U	2.10 U	
299-E34-10	5/03/95	B0FCF2	7500.00			600.00
299-E34-10	5/03/95	B0FCF6		3.70 U	2.10 U	
299-E34-11	5/09/95	B0FCG8	14000.00 D			700.00
299-E34-11	5/09/95	B0FCH2		3.70 U	2.10 U	
299-E34-12	5/08/95	B0FCH3	8300.00			700.00
299-E34-12	5/08/95	B0FCH7		3.70 U	2.10 U	
299-E34-2	5/09/95	B0FCH8	13000.00 D			700.00
299-E34-2	5/09/95	B0FCJ2		3.70 U	2.10 U	
299-E34-3	5/04/95	B0FCJ3	14000.00 D			600.00
299-E34-3	5/04/95	B0FCJ7		3.90 L	2.10 U	
299-E34-5	5/04/95	B0FCJ8	13000.00 D			600.00
299-E34-5	5/04/95	B0FCJ2		5.50 L	2.10 U	
299-E34-7	5/04/95	B0FCJ8	20000.00 D			700.00
299-E34-7	5/04/95	B0FCL2		3.70 U	2.10 U	
299-E34-9	5/08/95	B0FCL8	9000.00			500.00
299-E34-9	5/08/95	B0FCN2		4.20 L	2.10 U	

Table 14-16. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 2 Data for Reporting Period April 1 through June 30, 1995.
(sheet 2 of 3)

Well Name	Collection Date	Sample Number	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.	IRON 34/ppb 8.9/300	LEAD 40/ppb .88/50
299-E27-10	5/04/95	B0FCG3	3.28	4.36		
299-E27-10	5/04/95	B0FCG7			31.00 B	3.50 LB
299-E27-11	5/03/95	B0FCC2	1.24	5.69		
299-E27-11	5/03/95	B0FCC6			110.00 B	.88 U
299-E27-17	5/03/95	B0FCC7	1.51	6.37		
299-E27-17	5/03/95	B0FCD1			14.00 BL	.88 U
299-E27-8	5/04/95	B0FCD2	.94 U	7.27		
299-E27-8	5/04/95	B0FCD6			25.00 B	.88 U
299-E27-9	5/03/95	B0FCD7	1.32	5.02		
299-E27-9	5/03/95	B0FCF1			30.00 B	.88 U
299-E34-10	5/03/95	B0FCF2	3.24	4.26		
299-E34-10	5/03/95	B0FCF6			16.00 BL	2.50 LB
299-E34-11	5/09/95	B0FCB8	2.73	4.88		
299-E34-11	5/09/95	B0FCH2			14.00 BL	.88 U
299-E34-12	5/08/95	B0FCH3	2.80	6.54		
299-E34-12	5/08/95	B0FCH7			23.00 B	.88 U
299-E34-2	5/09/95	B0FCB8	2.05	4.81		
299-E34-2	5/09/95	B0FCJ2			21.00 B	.88 U
299-E34-3	5/04/95	B0FCJ3	2.83	5.50		
299-E34-3	5/04/95	B0FCJ7			34.00 B	1.60 LB
299-E34-5	5/04/95	B0FCJ8	2.22	9.07		
299-E34-5	5/04/95	B0FCX2			54.00 B	.88 U
299-E34-7	5/04/95	B0FCX8	1.56	6.60		
299-E34-7	5/04/95	B0FCL2			67.00 B	.88 U
299-E34-9	5/08/95	B0FCL8	1.29	11.00		
299-E34-9	5/08/95	B0FCM2			21.00 B	.88 U

Well Name	Collection Date	Sample Number	FMAGNES 34/ppb 26/.	FMANGAN 34/ppb .55/50	FMERCUR 41/ppb .019/2	FMICKEL 34/ppb 11/.
299-E27-10	5/04/95	B0FCG7	9400.00	2.20 BL	.02 U	11.00 U
299-E27-11	5/03/95	B0FCC6	9400.00	2.30 BL	.02 U	11.00 U
299-E27-17	5/03/95	B0FCD1	11000.00	1.70 BL	.02 U	11.00 U
299-E27-8	5/04/95	B0FCD6	9300.00	1.80 BL	.02 L	11.00 U
299-E27-9	5/03/95	B0FCF1	10000.00	1.80 BL	.06 L	11.00 U
299-E34-10	5/03/95	B0FCF6	9200.00	3.20 BL	.03 L	11.00 U
299-E34-11	5/09/95	B0FCH2	12000.00	1.50 L	.02 U	11.00 U
299-E34-12	5/08/95	B0FCH7	14000.00	1.50 BL	.02 U	11.00 U
299-E34-2	5/09/95	B0FCJ2	15000.00	1.00 L	.03 L	11.00 U
299-E34-3	5/04/95	B0FCJ7	11000.00	1.30 BL	.02 U	11.00 U
299-E34-5	5/04/95	B0FCX2	11000.00	2.00 BL	.02 U	11.00 U
299-E34-7	5/04/95	B0FCL2	14000.00	6.30 BL	.02 U	34.00
299-E34-9	5/08/95	B0FCM2	10000.00	1.30 BL	.02 U	11.00 U

Table 14-16. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 2 Data for Reporting Period April 1 through June 30, 1995.
(sheet 3 of 3)

Well Name	Collection Date	Sample Number	NITRATE 124/ppb 120/45000	POTASS 34/ppb 390/.	SODIUM 34/ppb 44/.	SULFATE 124/ppb 130/25000
299-E27-10	5/04/95	80FCG3	5700.00			41000.00 D
299-E27-10	5/04/95	80FCB7		5800.00	14000.00 B	
299-E27-11	5/03/95	80FCC2	6700.00			44000.00 D
299-E27-11	5/03/95	80FCC6		6000.00	13000.00 B	
299-E27-17	5/03/95	80FCC7	7900.00			53000.00 D
299-E27-17	5/03/95	80FCD1		6700.00	16000.00 B	
299-E27-8	5/04/95	80FCD2	5200.00			37000.00 D
299-E27-8	5/04/95	80FCD6		6400.00	13000.00 B	
299-E27-9	5/03/95	80FCD7	6200.00			43000.00 D
299-E27-9	5/03/95	80FCF1		5900.00	12000.00 B	
299-E34-10	5/03/95	80FCF2	6000.00			45000.00 D
299-E34-10	5/03/95	80FCF6		6200.00	14000.00 B	
299-E34-11	5/09/95	80FCG8	14000.00 D			74000.00 D

Well Name	Collection Date	Sample Number	TRITIUM 142/pCi/L ./20000	TURBID 111/NTU ./.	FLUORIDE 34/ppb 1.9/.	ZINC 34/ppb 3.7/5000
299-E27-10	5/04/95	80FCG3	5520.00	.31		
299-E27-10	5/04/95	80FCG7			21.00 L	8.30 L
299-E27-11	5/03/95	80FCC2	2890.00	1.00		
299-E27-11	5/03/95	80FCC6			22.00 L	6.80 L
299-E27-17	5/03/95	80FCC7	3160.00	.77		
299-E27-17	5/03/95	80FCD1			21.00 L	6.00 L
299-E27-8	5/04/95	80FCD2	3430.00	.97		
299-E27-8	5/04/95	80FCD6			24.00 L	9.70 L
299-E27-9	5/03/95	80FCD7	3070.00	1.73		
299-E27-9	5/03/95	80FCF1			27.00 L	3.70 U
299-E34-10	5/03/95	80FCF2	2990.00	1.55		
299-E34-10	5/03/95	80FCF6			23.00 L	3.70 U
299-E34-11	5/09/95	80FCG8	729.00	.89		
299-E34-11	5/09/95	80FCM2			17.00 L	4.60 BL
299-E34-12	5/08/95	80FCM3	3560.00	.99		
299-E34-12	5/08/95	80FCM7			20.00 L	3.70 U
299-E34-2	5/09/95	80FCM8	1760.00	.82		
299-E34-2	5/09/95	80FCJ2			19.00 L	3.70 U
299-E34-3	5/04/95	80FCJ3	134.00 U	.49		
299-E34-3	5/04/95	80FCJ7			19.00 L	3.70 U
299-E34-5	5/04/95	80FCJ8	306.00	.48		
299-E34-5	5/04/95	80FCM2			19.00 L	3.70 U
299-E34-7	5/04/95	80FCM8	243.00	.67		
299-E34-7	5/04/95	80FCL2			17.00 L	3.70 U
299-E34-9	5/08/95	80FCL8	3130.00	.60		
299-E34-9	5/08/95	80FCM2			19.00 L	4.50 L

For explanation of this table, see Section 1.4 of report.

Table 14-17. Contamination Indicator Parameters for the
Low-Level Waste Management Area 2 Data for Reporting Period
April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	COND FIELD μmho 1/.	COND LAB μmho 1/.	pH FIELD .01/6.5-8.5a	pH LAB .01/6.5-8.5a	TOC ppb */.	TOX ppb */.
299-E27-10	5/04/95	80FCG3	332	340	7.96	8.20	200 L	6.9 U
		80FCG4	333		7.96		300 L	6.9 U
		80FCG5	330		7.96		300 L	6.9 U
		80FCG6	331		7.96		200 L	6.9 U
299-E27-11	5/03/95	80FCC2	327	330	8.12	8.10	300 L	6.9 U
		80FCC3	327		8.13		300 L	6.9 U
		80FCC4	327		8.13		200 L	6.9 U
		80FCC5	327		8.13		200 L	6.9 U
299-E27-17	5/03/95	80FCC7	337	360	8.09	8.10	200 L	6.9 U
		80FCC8	337		8.09		300 L	9.5 L
		80FCC9	338		8.09		300 L	6.9 U
		80FCD0	338		8.09		400 L	6.9 U
299-E27-8	5/04/95	80FCD2	313	310	7.78	8.10	200 L	6.9 U
		80FCD3	313		7.79		200 L	6.9 U
		80FCD4	313		7.79		200 L	6.9 U
		80FCD5	313		7.78		300 L	6.9 U
299-E27-9	5/03/95	80FCD7	321	330	7.92	8.20	300 L	6.9 U
		80FCD8	320		7.92		300 L	6.9 U
		80FCD9	320		7.91		300 L	6.9 U
		80FCD0	320		7.92		300 L	20.0 R
299-E34-10	5/03/95	80FCF2	330	340	8.10	8.10	300 L	6.9 U
		80FCF3	330				300 L	6.9 U
		80FCF4	330				300 L	6.9 U
		80FCF5	330				300 L	6.9 U
299-E34-11	5/09/95	80FCG8	443	440	7.96	8.00	200 L	6.9 U
		80FCG9	444		7.96		200 L	6.9 U
		80FCR0	444		7.92		200 L	6.9 U
		80FCR1	442		7.91		200 L	6.9 U
299-E34-12	5/08/95	80FCR3	480	470	7.99	8.30	700 L	6.9 U
		80FCR4	476		8.03		800 L	6.9 U
		80FCR5	477		8.03		900 L	6.9 U
		80FCR6	503		8.02		800 L	6.9 U
299-E34-2	5/09/95	80FCR8	519	520	7.95	8.00	140 U	6.9 U
		80FCR9					140 U	6.9 U
		80FCJ0					140 U	6.9 U
		80FCJ1					140 U	6.9 U
299-E34-3	5/04/95	80FCJ3	403	400	7.86	8.20	300 L	6.9 U
		80FCJ4	402		7.85		300 L	6.9 U
		80FCJ5	402		7.85		300 L	6.9 U
		80FCJ6	402		7.85		300 L	6.9 U
299-E34-5	5/04/95	80FCJ8	506	510	7.74	8.30	200 L	6.9 U
		80FCJ9	507		7.72		200 L	6.9 U
		80FCR0	507		7.72		200 L	6.9 U
		80FCR1	507		7.72		300 L	6.9 U
299-E34-5	5/04/95	80FCR2	357	370	8.18	8.10	200 L	6.9 U
		80FCR3	360		8.16		200 L	6.9 U
		80FCR4	360		8.16		300 L	6.9 U
		80FCR5	359		8.17		200 L	6.9 U
299-E34-9	5/08/95	80FCL8	371	380	7.91	8.20	200 L	8.0 L
		80FCL9	371		7.90		300 L	10.0
		80FCH0	371		7.90		300 L	6.9 U
		80FCH1	371		7.91		200 L	6.9 U

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

Table 14-18. Constituent List and Summary of Results for the
Low-Level Waste Management Area 3 Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 2)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
CONDUCT	94	Conductivity, field	µmhos	1			32	32	
CONDUCT	73	Conductivity, lab	µmhos				1	1	
TOC		Total Organic Carbon	ppb	140			25	21	
TOX		Total Organic Halogen	ppb	6.9			32	24	
PH	93	pH, field	pH	.01	6.5-8.5	EPAS	32	32	4
PH	125	pH, lab	pH		6.5-8.5	EPAS	1	1	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
FBARIUM		Serium, filtered	ppb	1.4	1000	EPAI	1	1	0
FCADMIU		Cadmium, filtered	ppb	.98	10	EPAI	1	0	0
FCHROMI		Chromium, filtered	ppb	3.7	50	EPAI	1	0	0
FLUORID		Fluoride	ppb	52	1400	EPAI	5	5	0
ALPHA		Gross alpha	pCi/L		15	EPA	1	1	0
FMECUR		Mercury, filtered	ppb	.019	2	EPA	1	1	0
NITRATE		Nitrate	ppb	120	45000	EPA	5	5	4

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
CHLORID		Chloride	ppb	110	250000	EPAS	5	5	0
IRON		Iron, filtered	ppb	8.9	300	EPAS	1	1	0
FMANGAN		Manganese, filtered	ppb	.95	50	EPAS	1	1	0
LPHENOL		Phenol	ppb	.58			1	0	
FSODIUM		Sodium, filtered	ppb	44			1	1	
SULFATE		Sulfate	ppb	130	250000	EPAS	5	5	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name Full	Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
							Total	>CRQL	>DWS
1,1,1-T		1,1,1-Trichloroethane	ppb	.061	200	EPA	1	0	0
1,1,2-T		1,1,2-Trichloroethane	ppb	.068			1	0	
1,1-DIC		1,1-Dichloroethane	ppb	.047			1	0	
1,2-DIC		1,2-Dichloroethane	ppb	.049	5	EPA	1	0	0
14-dben		1,4-Dichlorobenzene	ppb	.056	75	EPA	1	0	0
246-trp		2,4,6-Trichlorophenol	ppb	.8			1	0	
24-dchp		2,4-Dichlorophenol	ppb	.43			1	0	
DIMPEN		2,4-Dimethylphenol	ppb	.62			1	0	
DIMPEN		2,4-Dinitrophenol	ppb	6.8			1	0	
26-dchp		2,6-Dichlorophenol	ppb	.52			1	0	
CHLPHEN		2-Chlorophenol	ppb	.6			1	0	
2NITPH		2-Nitrophenol	ppb	.6			1	0	
BUTDNP		2-sec-Butyl-4,6-dinitrophenol (DN)	ppb	.41			1	0	
46DN2MP		4,6-Dinitro-2-methylphenol	ppb	.84			1	0	
CHLCRES		4-Chloro-3-methylphenol	ppb	.52			1	0	
NITPHEN		4-Nitrophenol	ppb	.49			1	0	

Table 14-18. Constituent List and Summary of Results for the
Low-Level Waste Management Area 3 Data for Reporting Period
April 1 through June 30, 1995.
(sheet 2 of 2)

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
ALKALIN		Alkalinity	ppm	3.5				1	1	
ALUMIN		Aluminum, filtered	ppb	31				1	0	
ANTIMO		Antimony, filtered	ppb	24				1	0	
BENZENE		Benzene	ppb	.059	5	EPA		1	1	0
BERYLL		Beryllium, filtered	ppb	.63				1	0	
BROMIDE		Bromide	ppb	72				5	0	
CALCIUM		Calcium, filtered	ppb	41				1	1	
TETRAHE		Carbon tetrachloride	ppb	.042	5	EPA		1	1	0
CHLFORM		Chloroform	ppb	.029				1	1	
COBALT		Cobalt, filtered	ppb	5.3				1	0	
COPPER		Copper, filtered	ppb	2.1	1000	EPAS		1	0	0
CRESOLS		Cresols (methylphenols)	ppb	1.7				1	0	
ETHBENZ		Ethylbenzene	ppb	.034	700	EPA		1	0	0
BETA		Gross beta	pCi/L					1	1	
LEAD		Lead, filtered	ppb	.88	50	EPA1		1	0	0
MAGNES		Magnesium, filtered	ppb	26				1	1	
METHYCH		Methylene chloride	ppb	.084				1	0	
NICKEL		Nickel, filtered	ppb	11				1	0	
NITRITE		Nitrite	ppb	140	1000	EPA		5	0	0
PENTACH		Pentachlorophenol	ppb	.48	1	EPA		1	0	0
PHOSPHA		Phosphate	ppb	340				5	0	
POTASS		Potassium, filtered	ppb	390				1	1	
SILVER		Silver, filtered	ppb	5.5	50	EPA1		1	0	0
TC-99		Technetium-99	pCi/L		900	EPA		4	4	0
PERCENE		Tetrachloroethene	ppb	.035	5	EPA		1	0	0
TETRAHAL		Tetrachlorophenols	ppb	.52				1	0	
TIN		Tin, filtered	ppb	30				1	0	
TOLUENE		Toluene	ppb	.048	1000	EPA		1	0	0
TDS		Total Dissolved Solids	ppm	10	500	EPAS		4	4	0
TRICENE		Trichloroethene	ppb	.075	5	EPA		1	0	0
TRIPHEN		Trichlorophenols	ppb	.56				1	0	
TRITIUM		Tritium	pCi/L		20000	EPA		5	5	0
TURBID 111		Turbidity	NTU					8	0	
TURBID 126		Turbidity	NTU	.016				1	1	
VRANADI		Vanadium, filtered	ppb	1.9				1	1	
VINYLIDE		Vinyl chloride	ppb	.25	2	EPA		1	0	0
XYLENE		Xylenes (total)	ppb	.085	10000	EPA		1	0	0
ZINC		Zinc, filtered	ppb	3.7	5000	EPAS		1	1	0
CIS12DE		cis-1,2-Dichloroethylene	ppb	.049	70	EPA		1	0	0
TRANSCE		trans-1,2-Dichloroethylene	ppb	.045	100	EPA		1	0	0

For explanation of this table, see Section 1.4 of report.

Table 14-19. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 3 Data for Reporting Period April 1 through June 30, 1995.
(sheet 1 of 2)

Well Name	Collection Date	Sample Number	ALKALIN 357/ppm 3.5/.	BARIUM 34/ppb 1.4/1000	BENZENE 25/ppb .059/5	CALCIU 34/ppb 41/.
299-W7-6	4/20/95	B00W3	100.00		.20 L	
299-W7-6	4/20/95	B00W7		31.00		24000.00

Well Name	Collection Date	Sample Number	TETRAE 25/ppb .042/5	CHLORID 124/ppb 110/250000	CHLFORM 25/ppb .029/.	FLUORID 124/ppb 52/1400
299-W10-19	6/12/95	B0FLW5		16000.00 D		300.00
299-W10-20	6/12/95	B0FLW9		16000.00 D		300.00
299-W10-21	6/12/95	B0FLX3		13000.00 D		300.00
299-W6-2	6/14/95	B0FLX9		4900.00		900.00 D
299-W7-6	4/20/95	B00W3	.08 L	3900.00	.38 L	400.00

Well Name	Collection Date	Sample Number	ALPHA 135/pCi/L .1/5	BETA 136/pCi/L ./.	IRON 34/ppb 8.9/300	MAGNES 34/ppb 26/.
299-W7-6	4/20/95	B00W3	5.26	4.69		
299-W7-6	4/20/95	B00W7			33.00 B	8400.00

Well Name	Collection Date	Sample Number	PHOSPH 34/ppb .55/30	MERCUR 41/ppb .019/2	NITRATE 124/ppb 120/45000	POTASS 34/ppb .390/.
299-W10-19	6/12/95	B0FLW5			130000.00 D	
299-W10-20	6/12/95	B0FLW9			150000.00 D	
299-W10-21	6/12/95	B0FLX3			160000.00 D	
299-W6-2	6/14/95	B0FLX9			59000.00 D	
299-W7-6	4/20/95	B00W3			4300.00	
299-W7-6	4/20/95	B00W7	5.00 L	.07 BL		3200.00

Well Name	Collection Date	Sample Number	SODIUM 34/ppb 44/.	SULFATE 124/ppb 130/250000	TC-99 143/pCi/L ./900	TDS 65/ppm 10/500
299-W10-19	6/12/95	B0FLW5		40000.00 D	48.10 F	370.00
299-W10-20	6/12/95	B0FLW9		41000.00 D	64.60	430.00
299-W10-21	6/12/95	B0FLX3		36000.00 D	74.10	420.00
299-W6-2	6/14/95	B0FLX9		24000.00 D	8.50	270.00
299-W7-6	4/20/95	B00W3		22000.00 D		
299-W7-6	4/20/95	B00W7	19000.00			

Table 14-19. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 3 Data for Reporting Period April 1 through June 30, 1995.
(sheet 2 of 2)

Well Name	Collection Date	Sample Number	TRITIUM 142/pCi/L ./20000	TURBID 111/NTU ./.	TURBID 126/NTU ./016/.	RYANIDE 34/ppb 1.9/.
299-W10-13	6/12/95	80FLB3		1.22		
299-W10-19	6/12/95	80FLW5	1510.00	.76		
299-W10-20	6/12/95	80FLW9	2480.00	5.99		
299-W10-21	6/12/95	80FLX3	1590.00	1.18		
299-W6-2	6/14/95	80FLX9	8610.00	1.25		
299-W7-10	6/13/95	80FWX5		3.73		
299-W7-6	4/20/95	800WV3	487.00	17.00	30.00	
299-W7-6	4/20/95	800WV7				18.00 L
299-W9-1	6/12/95	80FLC1		4.20		

Well Name	Collection Date	Sample Number	72INC 34/ppb 3.7/5000
299-W7-6	4/20/95	800WV7	6.60 BL

For explanation of this table, see Section 1.4 of report.

Table 14-20. Contamination Indicator Parameters for the Low-Level Waste Management Area 3 Data for Reporting Period April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	COND FIELD	COND LAB	pH FIELD	pH LAB	TOC	TOX
			$\mu\text{mho}/\text{L}$	$\mu\text{mho}/\text{L}$	.01/6.5-8.5s	.01/6.5-8.5s	ppb %	ppb %
299-W10-13	6/12/95	BOFLB3	459		8.20		140 U	9.0 L
		BOFLB4	459		8.18		200 L	9.0 L
		BOFLB5	456		8.18		140 U	8.0 L
		BOFLB6	453		8.16		140 L	7.0 L
299-W10-19	6/12/95	BOFLW5	588		8.18		300 L	620.0 D
		BOFLW6	589		8.18		300 L	620.0 D
		BOFLW7	601		8.20		300 L	750.0 D
		BOFLW8	597		8.22		300 L	590.0 D
299-W10-20	6/12/95	BOFLW9	635		7.81		300 L	1100.0 D
		BOFLX0	634		7.81		400 L	890.0 D
		BOFLX1	634		7.81		400 L	970.0 D
		BOFLX2	634		7.81		300 L	930.0 D
299-W10-21	6/12/95	BOFLX3	616		7.89		200 L	400.0 D
		BOFLX4	616		7.89		300 L	400.0 D
		BOFLX5	617		7.89		400 L	410.0 D
		BOFLX6	617		7.89		300 L	360.0 D
299-W6-2	6/14/95	BOFLX9	390		8.14		200 L	90.0 D
		BOFMC6	391		8.21			100.0
		BOFMC7	392		8.23			110.0
		BOFMC8	393		8.13			60.0 D
299-W7-10	6/13/95	BOFMC5	307		8.82			9.0 L
		BOFMC6	306		8.82			8.0 L
		BOFMC7	306		8.82			6.9 U
		BOFMC8	308		8.80			6.9 U
299-W7-6	4/20/95	BOOV3	284	270	8.31	8.30 W	300 L	5.1
		BOOV4	284		8.34		300 L	6.8
		BOOV5	284		8.34		300 L	10.1
		BOOV6	284		8.33		300 L	12.4
299-W9-1	6/12/95	BOFLC1	444		8.33		200 L	6.9 U
		BOFLC2	441		8.31		140 U	6.9 U
		BOFLC3	439		8.30		140 U	6.9 U
		BOFLC4	435		8.29		200 L	6.9 U

* Detection limits for TOC and TOX vary depending on the performing laboratory. For explanation of this table, see Section 1.4 of report.

Table 14-21. Constituent List and Summary of Results for the
Low-Level Waste Management Area 4 Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 2)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
CONDUCT	94	Conductivity, field	µmhos		1			64	64	
CONDUCT	73	Conductivity, lab	µmhos					17	17	
TOC		Total Organic Carbon	ppb		140			68	57	
TOX		Total Organic Halogen	ppb		6.9			68	62	
PH	93	pH, field	pH		.01	6.5-8.5	EPAS	64	64	0
PH	125	pH, lab	pH			6.5-8.5	EPAS	17	17	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
FBARIUM		Barium, filtered	ppb		1.4	1000	EPAI	17	17	0
FCADMIU		Cadmium, filtered	ppb		.98	10	EPAI	17	2	0
FCROMI		Chromium, filtered	ppb		3.7	50	EPAI	17	14	0
FLUORID		Fluoride	ppb		52	1400	EPAI	17	17	0
ALPHA		Gross alpha	pCi/L			15	EPA	17	11	0
FMERCUR		Mercury, filtered	ppb		.019	2	EPA	17	4	0
NITRATE		Nitrate	ppb		120	45000	EPA	17	17	7

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
CHLORID		Chloride	ppb		110	250000	EPAS	17	17	0
FIROM		Iron, filtered	ppb		8.9	300	EPAS	17	17	0
FMANGAN		Manganese, filtered	ppb		.55	50	EPAS	17	17	0
FSODIUM		Sodium, filtered	ppb		44			17	17	
SULFATE		Sulfate	ppb		130	250000	EPAS	17	17	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
1,1,1-T		1,1,1-Trichloroethane	ppb		.061	200	EPA	17	0	0
1,1,2-T		1,1,2-Trichloroethane	ppb		.068			17	0	
1,1-DIC		1,1-Dichloroethane	ppb		.047			17	0	
1,2-DIC		1,2-Dichloroethane	ppb		.049	5	EPA	17	0	0
14-dben		1,4-Dichlorobenzene	ppb		.056	75	EPA	17	0	0
ALKALIN		Alkalinity	ppm		3.5			17	17	
ALUMIN		Aluminum, filtered	ppb		31			17	0	
ANTIMO		Antimony, filtered	ppb		24			17	0	
BENZENE		Benzene	ppb		.059	5	EPA	17	1	0
BERYLL		Beryllium, filtered	ppb		.63			17	0	
BROMIDE		Bromide	ppb		72			17	2	
FCALCIU		Calcium, filtered	ppb		41			17	17	
TETRAHE		Carbon tetrachloride	ppb		.042	5	EPA	17	17	15
CHLFORM		Chloroform	ppb		.029			17	16	
FCOBALT		Cobalt, filtered	ppb		5.3			17	0	
FCOPPER		Copper, filtered	ppb		2.1	1000	EPAS	17	0	0
ETHYBENZ		Ethylbenzene	ppb		.034	700	EPA	17	1	0

Table 14-21. Constituent List and Summary of Results for the
Low-Level Waste Management Area 4 Data for Reporting Period
April 1 through June 30, 1995.
(sheet 2 of 2)

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
BETA		Gross beta	pCi/L					17	17	
LEAD		Lead, filtered	ppb	.88	50	EPAI		17	4	0
MAGNES		Magnesium, filtered	ppb	.26				17	17	
METHYCH		Methylene chloride	ppb	.084				17	0	
NICKEL		Nickel, filtered	ppb	11				17	7	
NITRITE		Nitrite	ppb	140	1000	EPA		17	1	0
PHOSPHA		Phosphate	ppb	340				17	0	
POTASS		Potassium, filtered	ppb	390				17	17	
SILVER		Silver, filtered	ppb	5.5	50	EPAI		17	0	0
PERCENE		Tetrachloroethene	ppb	.035	5	EPA		17	10	0
TIN		Tin, filtered	ppb	30				17	0	
TOLUENE		Toluene	ppb	.048	1000	EPA		17	0	0
TRICENE		Trichloroethene	ppb	.075	5	EPA		17	13	2
TRITIUM		Tritium	pCi/L		20000	EPA		17	3	0
TURBID		Turbidity	NTU					16	16	
VRANADI		Vanadium, filtered	ppb	1.9				17	17	
VINYIDE		Vinyl chloride	ppb	.25	2	EPA		17	0	0
XYLENE		Xylenes (total)	ppb	.085	10000	EPA		17	0	0
FZINC		Zinc, filtered	ppb	3.7	5000	EPAS		17	7	0
CIS12DE		cis-1,2-Dichloroethylene	ppb	.049	70	EPA		17	0	0
TRANSCE		trans-1,2-Dichloroethylene	ppb	.045	100	EPA		17	0	0

For explanation of this table, see Section 1.4 of report.

Table 14-22. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 4 Data for Reporting Period April 1 through June 30, 1995.
(sheet 1 of 6)

Well Name	Collection Date	Sample Number	ALKALIN 357/ppm 3.5/.	FEARUM 34/ppb 1.4/1000	BENZENE 25/ppb .059/5	BROMIDE 124/ppb 72/.
299-W15-15	5/10/95	B0FCX3	100.00		.06 U	72.00 U
299-W15-15	5/10/95	B0FCX7		37.00		
299-W15-16	5/08/95	B0FCL3	140.00		.06 U	400.00 L
299-W15-16	5/08/95	B0FCL7		73.00		
299-W15-17	5/09/95	B0FCX3	130.00		.12 L	72.00 U
299-W15-17	5/09/95	B0FCX7		72.00		
299-W15-18	5/08/95	B0FCX8	130.00		.06 U	72.00 U
299-W15-18	5/08/95	B0FCX2		62.00		
299-W15-19	5/11/95	B0FCX3	110.00		.06 U	72.00 U
299-W15-19	5/11/95	B0FCX7		57.00		
299-W15-20	5/11/95	B0FCX8	110.00		.06 U	72.00 U
299-W15-20	5/11/95	B0FCP2		43.00		
299-W15-23	5/10/95	B0FCP3	110.00		.06 U	72.00 U
299-W15-23	5/10/95	B0FCP7		30.00		
299-W15-24	5/10/95	B0FCP8	80.00		.06 U	72.00 U
299-W15-24	5/10/95	B0FCQ2		82.00		
299-W18-21	5/09/95	B0FCQ3	100.00		.06 U	72.00 U
299-W18-21	5/09/95	B0FCQ7		36.00		
299-W18-22	5/11/95	B0FCQ8	130.00		.06 U	90.00 L
299-W18-22	5/11/95	B0FCR2		52.00		
299-W18-23	5/15/95	B0FCR3	110.00		.06 U	72.00 U
299-W18-23	5/15/95	B0FCR7		25.00		
299-W18-24	5/08/95	B0FCR8	90.00		.06 U	72.00 U
299-W18-24	5/08/95	B0FCS2		36.00		
299-W18-26	5/15/95	B0FCS3	110.00		.06 U	72.00 U
299-W18-26	5/15/95	B0FCS7		55.00		
299-W18-27	5/11/95	B0FCS8	100.00		.06 U	72.00 U
299-W18-27	5/11/95	B0FCS9	100.00		.06 U	72.00 U
299-W18-27	5/11/95	B0FCT6		30.00		
299-W18-27	5/11/95	B0FCT7		30.00		
299-W18-28	5/09/95	B0FCT8	120.00		.06 U	72.00 U
299-W18-28	5/09/95	B0FCV2		48.00		
299-W18-32	5/09/95	B0FCV3	70.00		.06 U	72.00 U
299-W18-32	5/09/95	B0FCV7		32.00		

Well Name	Collection Date	Sample Number	FCADMIU 34/ppb .98/10	FCALCIU 34/ppb 41/.	TETRAHE 25/ppb .042/5	CHLORID 124/ppb 110/250000
299-W15-15	5/10/95	B0FCX3			770.00 D	5700.00
299-W15-15	5/10/95	B0FCX7	.98 U	37000.00		
299-W15-16	5/08/95	B0FCL3			4200.00 D	35000.00 D
299-W15-16	5/08/95	B0FCL7	.98 U	69000.00		
299-W15-17	5/09/95	B0FCX3			1.30	13000.00 D
299-W15-17	5/09/95	B0FCX7	.98 U	38000.00		
299-W15-18	5/08/95	B0FCX8			4900.00 D	13000.00 D
299-W15-18	5/08/95	B0FCX2	.98 U	57000.00		
299-W15-19	5/11/95	B0FCX3			770.00 D	13000.00 D
299-W15-19	5/11/95	B0FCX7	2.10 BL	47000.00 B		
299-W15-20	5/11/95	B0FCX8			46.00	4500.00
299-W15-20	5/11/95	B0FCP2	2.10 BL	30000.00 B		
299-W15-23	5/10/95	B0FCP3			360.00 D	5700.00
299-W15-23	5/10/95	B0FCP7	.98 U	30000.00		
299-W15-24	5/10/95	B0FCP8			42.00	6000.00
299-W15-24	5/10/95	B0FCQ2	.98 U	31000.00		

Table 14-22. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 4 Data for Reporting Period April 1 through June 30, 1995.
(sheet 2 of 6)

Well Name	Collection Date	Sample Number	PCADNIU 34/ppb .98/10	FCALCIU 34/ppb 41/.	TETRANE 25/ppb .042/5	CHLORID 124/ppb 110/250000
299-W18-21	5/09/95	80FCQ3			1800.00 D	5100.00
299-W18-21	5/09/95	80FCQ7	.98 U	35000.00		
299-W18-22	5/11/95	80FCQ8			.34 L	9400.00 D
299-W18-22	5/11/95	80FCR2	.98 U	36000.00 B		
299-W18-23	5/15/95	80FCR3			390.00 D	3800.00
299-W18-23	5/15/95	80FCR7	.98 U	26000.00		
299-W18-24	5/08/95	80FCR8			860.00 D	5700.00
299-W18-24	5/08/95	80FCR2	.98 U	32000.00		
299-W18-26	5/15/95	80FCR3			32.00	14000.00 D
299-W18-26	5/15/95	80FCR7	.98 U	36000.00		
299-W18-27	5/11/95	80FCR8			340.00 D	3100.00
299-W18-27	5/11/95	80FCR9			340.00 D	3100.00
299-W18-27	5/11/95	80FC16	.98 U	25000.00 B		
299-W18-27	5/11/95	80FC17	.98 U	25000.00 B		
299-W18-28	5/09/95	80FC18			23.00	6400.00
299-W18-28	5/09/95	80FCV2	.98 U	30000.00		
299-W18-32	5/09/95	80FCV3			7.30	5800.00
299-W18-32	5/09/95	80FCV7	.98 U	20000.00		

Well Name	Collection Date	Sample Number	CHLFORM 25/ppb .029/.	PCROMI 34/ppb 3.7/50	ETHBENZ 25/ppb .034/700	FLUORID 124/ppb 52/1400
299-W15-15	5/10/95	80FCK3	3.70		.03 U	600.00
299-W15-15	5/10/95	80FCK7		6.90 BL		
299-W15-16	5/08/95	80FCL3	26.00		.03 U	900.00
299-W15-16	5/08/95	80FCL7		13.00 L		
299-W15-17	5/09/95	80FCM3	.81		.12 L	660.00
299-W15-17	5/09/95	80FCM7		5.70 BL		
299-W15-18	5/08/95	80FCM8	38.00		.03 U	800.00
299-W15-18	5/08/95	80FCM2		6.80 L		
299-W15-19	5/11/95	80FCM3	30.00		.03 U	700.00
299-W15-19	5/11/95	80FCM7		11.00 BL		
299-W15-20	5/11/95	80FCM8	3.80		.03 U	600.00
299-W15-20	5/11/95	80FCP2		13.00 BL		
299-W15-23	5/10/95	80FCP3	2.30		.03 U	600.00
299-W15-23	5/10/95	80FCP7		3.70 U		
299-W15-24	5/10/95	80FCP8	22.00		.03 U	600.00
299-W15-24	5/10/95	80FCR2		7.10 BL		
299-W18-21	5/09/95	80FCR3	13.00		.03 U	700.00
299-W18-21	5/09/95	80FCR7		8.70 BL		
299-W18-22	5/11/95	80FCR8	.03 U		.03 U	600.00
299-W18-22	5/11/95	80FCR2		6.60 BL		
299-W18-23	5/15/95	80FCR3	1.90		.03 U	600.00
299-W18-23	5/15/95	80FCR7		5.30 L		
299-W18-24	5/08/95	80FCR8	16.00		.03 U	700.00
299-W18-24	5/08/95	80FCR2		6.40 L		
299-W18-26	5/15/95	80FCR3	6.40		.03 U	700.00
299-W18-26	5/15/95	80FCR7		3.70 U		
299-W18-27	5/11/95	80FCR8	1.20		.03 U	600.00
299-W18-27	5/11/95	80FCR9	1.30		.03 U	600.00
299-W18-27	5/11/95	80FCT6		3.80 BL		
299-W18-27	5/11/95	80FCT7		3.70 U		

Table 14-22. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 4 Data for Reporting Period April 1 through June 30, 1995.
(sheet 3 of 6)

Well Name	Collection Date	Sample Number	CHLFORM 25/ppb .029/.	PCBROMI 34/ppb 3.7/50	ETHBENZ 25/ppb .034/700	FLUORID 124/ppb 52/1400
299-W18-28	5/09/95	B0FCY8	8.70		.03 U	600.00
299-W18-28	5/09/95	B0FCV2		5.70 BL		
299-W18-32	5/09/95	B0FCV3	1.40		.03 U	600.00
299-W18-32	5/09/95	B0FCV7		5.80 BL		

Well Name	Collection Date	Sample Number	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.	FIRDM 34/ppb 8.9/300	PLEAD 40/ppb .88/50
299-W15-15	5/10/95	B0FCX3	3.77	8.89		
299-W15-15	5/10/95	B0FCX7			62.00 B	.88 U
299-W15-16	5/08/95	B0FCL3	4.49	8.68		
299-W15-16	5/08/95	B0FCL7			34.00 B	2.00 LB
299-W15-17	5/09/95	B0FCM3	1.88	5.34		
299-W15-17	5/09/95	B0FCM7			20.00 B	.88 U
299-W15-18	5/08/95	B0FCM8	1.31 U	7.81		
299-W15-18	5/08/95	B0FCN2			32.00 B	.88 U
299-W15-19	5/11/95	B0FCN3	1.56	10.50		
299-W15-19	5/11/95	B0FCN7			30.00 B	.89 LB
299-W15-20	5/11/95	B0FCN8	1.74	6.67		
299-W15-20	5/11/95	B0FCP2			46.00 B	.88 U
299-W15-23	5/10/95	B0FCP3	1.53	4.44		
299-W15-23	5/10/95	B0FCP7			23.00 B	.92 LB
299-W15-24	5/10/95	B0FCP8	.53 U	6.77		
299-W15-24	5/10/95	B0FCQ2			56.00 B	.88 U
299-W18-21	5/09/95	B0FCQ3	11.60	14.00		
299-W18-21	5/09/95	B0FCQ7			28.00 B	.88 U
299-W18-22	5/11/95	B0FCQ8	.61 U	3.67		
299-W18-22	5/11/95	B0FCR2			20.00 B	.88 U
299-W18-23	5/15/95	B0FCR3	.69 U	2.33		
299-W18-23	5/15/95	B0FCR7			26.00 B	.88 U
299-W18-24	5/08/95	B0FCR8	1.14	2.26		
299-W18-24	5/08/95	B0FCS2			44.00 B	.88 U
299-W18-26	5/15/95	B0FCS3	1.49	4.76		
299-W18-26	5/15/95	B0FCS7			21.00 B	2.30 LB
299-W18-27	5/11/95	B0FCS8	.38 U	3.12		
299-W18-27	5/11/95	B0FCS9	.92 U	4.12		
299-W18-27	5/11/95	B0FCT6			21.00 B	.88 U
299-W18-27	5/11/95	B0FCT7			57.00 B	.88 U
299-W18-28	5/09/95	B0FCT8	.96	6.87		
299-W18-28	5/09/95	B0FCV2			17.00 BL	.88 U
299-W18-32	5/09/95	B0FCV3	2.32	7.41		
299-W18-32	5/09/95	B0FCV7			48.00 B	.88 U

Table 14-22. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 4 Data for Reporting Period April 1 through June 30, 1995.
(sheet 4 of 6)

Well Name	Collection Date	Sample Number	FMAGNES 34/ppb 26/.	FMANGAN 34/ppb .55/50	FMERCUR 41/ppb .019/2	FMICKEL 34/ppb 11/.
299-W15-15	5/10/95	B0FCX7	11000.00	2.00 L	.02 U	11.00 U
299-W15-16	5/08/95	B0FCL7	19000.00	2.00 BL	.02 U	16.00 L
299-W15-17	5/09/95	B0FCN7	14000.00	4.30 L	.02 U	21.00 L
299-W15-18	5/08/95	B0FCN2	17000.00	1.30 BL	.02 U	51.00
299-W15-19	5/11/95	B0FCN7	14000.00	1.20 L	.04 BL	11.00 U
299-W15-20	5/11/95	B0FCP2	8600.00	2.20 L	.03 BL	11.00 U
299-W15-23	5/10/95	B0FCP7	8100.00	2.30 L	.02 U	11.00 U
299-W15-24	5/10/95	B0FCQ2	9900.00	9.50 L	.02 U	20.00 L
299-W18-21	5/09/95	B0FCQ7	11000.00	2.50 L	.02 U	11.00 U
299-W18-22	5/11/95	B0FCR2	12000.00	2.00 L	.02 U	11.00 U
299-W18-23	5/15/95	B0FCR7	7200.00	3.50 BL	.02 U	13.00 L
299-W18-24	5/08/95	B0FCS2	9800.00	1.40 BL	.02 U	15.00 L
299-W18-26	5/15/95	B0FCS7	9400.00	19.00 B	.06 BL	15.00 L
299-W18-27	5/11/95	B0FCT6	7600.00	1.50 L	.02 U	11.00 U
299-W18-27	5/11/95	B0FCT7	7600.00	1.40 L	.02 U	11.00 U
299-W18-28	5/09/95	B0FCV2	8800.00	6.00 L	.05 L	11.00 U
299-W18-32	5/09/95	B0FCV7	6200.00	3.10 L	.02 U	11.00 U

Well Name	Collection Date	Sample Number	NITRATE 124/ppb 120/45000	NITRITE 124/ppb 140/1000	FPOTASS 34/ppb 390/.	FSODIUM 34/ppb 44/.
299-W15-15	5/10/95	B0FCX3	65000.00 D	140.00 U		
299-W15-15	5/10/95	B0FCX7			3700.00	21000.00 B
299-W15-16	5/08/95	B0FCL3	88000.00 D	140.00 U		
299-W15-16	5/08/95	B0FCL7			5400.00	40000.00 B
299-W15-17	5/09/95	B0FCN3	16000.00 D	140.00 U		
299-W15-17	5/09/95	B0FCN7			4800.00	17000.00 B
299-W15-18	5/08/95	B0FCN8	95000.00 D	140.00 U		
299-W15-18	5/08/95	B0FCN2			4900.00	27000.00 B
299-W15-19	5/11/95	B0FCN3	66000.00 D	140.00 U		
299-W15-19	5/11/95	B0FCN7			4500.00	23000.00 B
299-W15-20	5/11/95	B0FCN8	9700.00	140.00 U		
299-W15-20	5/11/95	B0FCP2			4000.00	14000.00 B
299-W15-23	5/10/95	B0FCP3	29000.00 D	140.00 U		
299-W15-23	5/10/95	B0FCP7			3700.00	20000.00 B
299-W15-24	5/10/95	B0FCP8	77000.00 D	300.00		
299-W15-24	5/10/95	B0FCQ2			5500.00	20000.00 B
299-W18-21	5/09/95	B0FCQ3	72000.00 D	140.00 U		
299-W18-21	5/09/95	B0FCQ7			3800.00	25000.00 B
299-W18-22	5/11/95	B0FCQ8	17000.00 D	140.00 U		
299-W18-22	5/11/95	B0FCR2			4100.00	14000.00 B
299-W18-23	5/15/95	B0FCR3	5700.00	140.00 U		
299-W18-23	5/15/95	B0FCR7			3300.00	13000.00 B
299-W18-24	5/08/95	B0FCR8	62000.00 D	140.00 U		
299-W18-24	5/08/95	B0FCS2			3600.00	18000.00 B
299-W18-26	5/15/95	B0FCS3	14000.00 D	140.00 U		
299-W18-26	5/15/95	B0FCS7			4500.00	17000.00 B
299-W18-27	5/11/95	B0FCS8	3500.00	140.00 U		
299-W18-27	5/11/95	B0FCS9	3500.00	140.00 U		
299-W18-27	5/11/95	B0FCT6			3000.00	13000.00 B
299-W18-27	5/11/95	B0FCT7			2800.00	13000.00 B
299-W18-28	5/09/95	B0FCT8	1000.00	140.00 U		
299-W18-28	5/09/95	B0FCV2			4600.00	14000.00 B

Table 14-22. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 4 Data for Reporting Period April 1 through June 30, 1995.
(sheet 5 of 6)

Well Name	Collection Date	Sample Number	NITRATE 124/ppb 120/45000	NITRITE 124/ppb 140/1000	POTASS 34/ppb 390/.	SODIUM 34/ppb 44/.
299-W18-32	5/09/95	BOFCV3	1800.00	140.00 U		
299-W18-32	5/09/95	BOFCV7			3500.00	15000.00 B

Well Name	Collection Date	Sample Number	SULFATE 124/ppb 130/250000	PERCENE 25/ppb .035/5	TRICENE 25/ppb .075/5	TRITIUM 142/pCi/L ./20000
299-W15-15	5/10/95	BOFC3	19000.00 D	.19 L	.70 L	72.70 U
299-W15-16	5/08/95	BOFCL3	90000.00 D	1.40	5.50	239.00
299-W15-17	5/09/95	BOFCM3	28000.00 D	.05 L	.37 L	-45.60 U
299-W15-18	5/08/95	BOFCM8	51000.00 D	2.00	5.90	278.00
299-W15-19	5/11/95	BOFCM3	29000.00 D	.33 L	1.80	293.00
299-W15-20	5/11/95	BOFCM8	15000.00 D	.04 U	.12 L	208.00 U
299-W15-23	5/10/95	BOFCP3	16000.00 D	.04 L	.46 L	107.00 U
299-W15-24	5/10/95	BOFCP8	16000.00 D	.04 U	.08 U	45.60 U
299-W18-21	5/09/95	BOFCQ3	20000.00 D	.34	2.10	142.00 U
299-W18-22	5/11/95	BOFCQ8	18000.00 D	.04 U	.08 U	-113.00 U
299-W18-23	5/15/95	BOFCR3	16000.00 D	.16 L	.51 L	117.00 U
299-W18-24	5/08/95	BOFCR8	18000.00 D	.39 L	1.60	57.30 U
299-W18-26	5/15/95	BOFCQ3	25000.00 D	.04 U	.12 L	37.90 U
299-W18-27	5/11/95	BOFCR8	15000.00 D	.04 L	.42 L	-30.70 U
299-W18-27	5/11/95	BOFCR9	15000.00 D	.04 U	.20 L	55.80 U
299-W18-28	5/09/95	BOFCT8	16000.00 D	.04 U	.08 U	173.00 U
299-W18-32	5/09/95	BOFCV3	25000.00 D	.04 U	.08 U	184.00 U

Well Name	Collection Date	Sample Number	TURBID 111/MTU ./.	FLUORIDE 34/ppb 1.9/.	ZINC 34/ppb 3.7/5000
299-W15-15	5/10/95	BOFC3	1.71		
299-W15-15	5/10/95	BOFC7		22.00 L	3.70 U
299-W15-16	5/08/95	BOFCL3	1.99		
299-W15-16	5/08/95	BOFCL7		22.00 L	22.00
299-W15-17	5/09/95	BOFCM3	.70		
299-W15-17	5/09/95	BOFCM7		29.00 L	3.70 U
299-W15-18	5/08/95	BOFCM8	.51		
299-W15-18	5/08/95	BOFCM2		24.00 L	3.70 U
299-W15-19	5/11/95	BOFCM3	.96		
299-W15-19	5/11/95	BOFCM7		17.00 L	3.70 U
299-W15-20	5/11/95	BOFCM8	3.48		
299-W15-20	5/11/95	BOFCP2		18.00 L	3.70 U
299-W15-23	5/10/95	BOFCP3	1.30		
299-W15-23	5/10/95	BOFCP7		25.00 L	3.70 U
299-W15-24	5/10/95	BOFCP8	9.20		
299-W15-24	5/10/95	BOFCQ2		9.70 L	6.00 BL
299-W18-21	5/09/95	BOFCQ3	.78		
299-W18-21	5/09/95	BOFCQ7		24.00 L	3.70 U
299-W18-22	5/11/95	BOFCQ8	.80		
299-W18-22	5/11/95	BOFCR2		26.00 L	3.70 U
299-W18-23	5/15/95	BOFCR3	.43		
299-W18-23	5/15/95	BOFCR7		24.00 L	3.70 U
299-W18-24	5/08/95	BOFCR8	.30		
299-W18-24	5/08/95	BOFCR2		28.00 L	24.00

Table 14-22. Constituents with at Least One Detected Value for the
Low-Level Waste Management Area 4 Data for Reporting Period
April 1 through June 30, 1995.
(sheet 6 of 6)

Well Name	Collection Date	Sample Number	TURBID 111/NTU ./.	RYANADI 34/ppb 1.9/.	FZINC 34/ppb 3.7/5000
299-W18-26	5/15/95	B0FC93	55.40		
299-W18-26	5/15/95	B0FC97		5.20 L	6.90 L
299-W18-27	5/11/95	B0FC88	2.69		
299-W18-27	5/11/95	B0FC16		25.00 L	3.70 U
299-W18-27	5/11/95	B0FC17		25.00 L	6.20 BL
299-W18-28	5/09/95	B0FC18	2.25		
299-W18-28	5/09/95	B0FCV2		5.40 L	4.00 BL
299-W18-32	5/09/95	B0FCV3	3.55		
299-W18-32	5/09/95	B0FCV7		44.00	16.00 B

For explanation of this table, see Section 1.4 of report.

Table 14-23. Contamination Indicator Parameters for the
Low-Level Waste Management Area 4 Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 2)

Well Name	Collection Date	Sample Number	COND FIELD μmho 1/.	COND LAB μmho 1/.	pH FIELD .01/6.5-8.5	pH LAB .01/6.5-8.5	TOC ppb %/.	TOX ppb %/.
299-W15-15	5/10/95	B0FCX3	388	390	7.71	8.10	140 U	440.0 D
		B0FCX4	387		7.71		200 L	400.0 D
		B0FCX5	387		7.71		200 L	360.0 D
		B0FCX6	387		7.71		200 L	440.0 D
299-W15-16	5/08/95	B0FCL3	722	720	7.84	7.90	600 L	1600.0 D
		B0FCL4	721		7.84		600 L	1300.0 D
		B0FCL5	720		7.83		600 L	1700.0 D
		B0FCL6	718		7.83		500 L	1200.0 D
299-W15-17	5/09/95	B0FCM3	387	380	7.96	8.10	140 U	8.0 L
		B0FCM4	381		7.98		140 U	6.9 U
		B0FCM5	378		7.99		140 U	6.9 U
		B0FCM6	375		7.99		140 U	10.0
299-W15-18	5/08/95	B0FCM8	574	580	7.76	7.90	300 L	2600.0 D
		B0FCM9	576		7.75		400 L	2500.0 D
		B0FCM0	579		7.74		300 L	3400.0 D
		B0FCM1	580		7.72		400 L	3100.0 D
299-W15-19	5/11/95	B0FCM3	460	470	8.12	8.10	200 L	350.0
		B0FCM4	460		8.11		200 L	310.0
		B0FCM5	460		8.11		200 L	370.0
		B0FCM6	462		8.10		200 L	370.0
299-W15-20	5/11/95	B0FCM8	275	280	8.48	8.40	150 L	50.0
		B0FCM9	274		8.48		200 L	40.0
		B0FCP0	274		8.47		200 L	40.0
		B0FCP1	274		8.47		200 L	40.0
299-W15-23	5/10/95	B0FCP3	313	310	8.22	8.20	200 L	130.0 D
		B0FCP4	314		8.21		140 U	140.0 D
		B0FCP5	314		8.19		140 L	230.0 D
		B0FCP6	313		8.18		140 U	220.0 D
299-W15-24	5/10/95	B0FCP8	351	360	8.33	8.20	200 L	30.0
		B0FCP9	355		8.37		200 L	40.0
		B0FCQ0	362		8.43		300 L	40.0
		B0FCQ1	362		8.42		200 L	40.0
299-W18-21	5/09/95	B0FCQ3	391	390	7.93	7.90	140 L	560.0 D
		B0FCQ4	391		7.92		140 U	470.0 D
		B0FCQ5	392		7.91		200 L	640.0 D
		B0FCQ6	391		7.90		200 L	1100.0 D
299-W18-22	5/11/95	B0FCQ8	349	350	7.92	8.00	140 U	6.9 U
		B0FCQ9	349		7.92		140 U	6.9 U
		B0FCR0	350		7.92		200 L	6.9 U
		B0FCR1	350		7.91		140 U	6.9 U
299-W18-23	5/15/95	B0FCR3	259	260	7.76	8.10	300 L	280.0
		B0FCR4	259		7.76		200 L	270.0 D
		B0FCR5	258		7.76		200 L	260.0 D

Table 14-23. Contamination Indicator Parameters for the
Low-Level Waste Management Area 4 Data for Reporting Period
April 1 through June 30, 1995.
(sheet 2 of 2)

Well Name	Collection Date	Sample Number	COND FIELD µmho /.	COND LAB µmho /.	pH FIELD .01/6.5-8.5e	pH LAB .01/6.5-8.5e	TOC ppb */.	TOX ppb */.
299-W18-23	5/15/95	80FCR6	258		7.76		200 L	220.0 D
299-W18-24	5/08/95	80FCR8	343	350	7.96	8.10	300 L	470.0 D
		80FCR9	343		7.96		200 L	480.0 D
		80FC50	345		7.95		200 L	520.0 D
		80FC51	344		7.95		200 L	410.0 D
299-W18-26	5/15/95	80FC53	339	350	8.19	8.30	300 L	20.0
		80FC54	329		8.21		200 L	30.0
		80FC55	330		8.13		200 L	20.0
		80FC56	331		8.15		200 L	30.0
299-W18-27	5/11/95	80FC58	240	240	8.20	8.00	200 L	130.0
		80FC59	240	240	8.24	8.00	300 L	170.0
		80FCT0	240		8.27		200 L	180.0
		80FCT1	240		8.29		300 L	180.0
		80FCT2					300 L	210.0
		80FCT3					300 L	240.0
		80FCT4					200 L	180.0
		80FCT5					300 L	190.0
299-W18-28	5/09/95	80FCT8	283	280	7.99	8.10	300 L	30.0
		80FCT9	282		7.98		300 L	20.0
		80FCV0	281		7.84		400 L	30.0
		80FCV1	285		7.94		300 L	20.0
299-W18-32	5/09/95	80FCV3	210	220	8.08	8.10	300 L	9.0 L
		80FCV4	211		8.06		300 L	10.0
		80FCV5	213		8.04		200 L	9.0 L
		80FCV6	213		8.04		300 L	10.0

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

Table 14-24. Constituent List and Summary of Results for the Low-Level Waste Management Area 5 Data for Reporting Period April 1 through June 30, 1995.

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
CONDUCT		Conductivity, field		µmhos	1			20	20	
TOC		Total Organic Carbon		ppb	140			4	4	
TOX		Total Organic Halogen		ppb	6.9			20	18	
PH		pH, field		pH	.01	6.5-8.5	EPAS	20	20	4

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
FLUORID		Fluoride		ppb	52	1400	EPAL	4	4	0
NITRATE		Nitrate		ppb	120	45000	EPA	4	4	4

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
CHLORID		Chloride		ppb	110	250000	EPAS	4	4	0
SULFATE		Sulfate		ppb	130	250000	EPAS	4	4	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab CRQL	DWS Limit	Agency	Number of Samples		
		Full						Total	>CRQL	>DWS
BROMIDE		Bromide		ppb	72			4	1	
NITRITE		Nitrite		ppb	140	1000	EPA	4	0	0
PHOSPHA		Phosphate		ppb	340			4	0	
TC-99		Technetium-99		pCi/L		900	EPA	4	4	0
TDS		Total Dissolved Solids		ppm	10	500	EPAS	4	4	0
TRITIUM		Tritium		pCi/L		20000	EPA	4	4	2
TURBID		Turbidity		NTU				5	5	

For explanation of this table, see Section 1.4 of report.

Table 14-25. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 5 Data for Reporting Period April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	BROMIDE 124/ppb 72/.	CHLORIDE 124/ppb 110/250000	FLUORIDE 124/ppb 52/1400	NITRATE 124/ppb 120/45000
299-W11-31	6/12/95	BOFLX7	72.00 DU	32000.00 D	900.00	130000.00 D
299-W6-2	6/14/95	BOFLX9	72.00 U	4900.00	900.00 d	59000.00 D
299-W6-4	6/12/95	BOFLY0	100.00 L	9400.00 D	300.00	100000.00 D
299-W6-9	6/13/95	BOFLY1	72.00 U	6500.00	400.00	72000.00 D

Well Name	Collection Date	Sample Number	SULFATE 124/ppb 130/250000	TC-99 143/pCi/L ./900	TDS 65/ppm 10/500	TRITIUM 142/pCi/L ./20000
299-W11-31	6/12/95	BOFLX7	63000.00 D	367.00	490.00	73100.00
299-W6-2	6/14/95	BOFLX9	24000.00 D	8.50	270.00	8610.00
299-W6-4	6/12/95	BOFLY0	40000.00 D	81.20	340.00	31600.00
299-W6-9	6/13/95	BOFLY1	24000.00 D	35.60	300.00	10900.00

Well Name	Collection Date	Sample Number	TURBID 111/NTU ./.
299-W11-31	6/12/95	BOFLX7	4.02
299-W6-2	6/14/95	BOFLX9	1.25
299-W6-4	6/12/95	BOFLY0	14.80
299-W6-9	6/13/95	BOFLY1	4.49
299-W7-10	6/13/95	BOFMK5	3.73

For explanation of this table, see Section 1.4 of report.

Table 14-26. Contamination Indicator Parameters for the
Low-Level Waste Management Area 5 Data for Reporting Period
April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	COND FIELD μmho 1/.	COND LAB μmho 1/.	pH FIELD .01/6.5-8.5a	pH LAB .01/6.5-8.5a	TOC ppb %/.	TOX ppb %/.
299-W11-31	6/12/95	B0FLX7	742		7.81		500 L	510.0 D
		B0FMC0	740		7.83			450.0 D
		B0FMC1	735		7.82			470.0 D
		B0FMC2	746		7.82			460.0 D
299-W6-2	6/14/95	B0FLX9	390		8.14		200 L	90.0 D
		B0FMC6	391		8.21			100.0
		B0FMC7	392		8.23			110.0
		B0FMC8	393		8.13			60.0 D
299-W6-4	6/12/95	B0FLY0	506		8.39		300 L	150.0 D
		B0FMC9	509		8.35			150.0 D
		B0FMD0	509		8.33			110.0 D
		B0FMD1	510		8.32			100.0 D
299-W6-9	6/13/95	B0FLY1	444		8.38		300 L	150.0
		B0FMD2	444		8.39			110.0 D
		B0FMD3	444		8.39			100.0 D
		B0FMD4	444		8.39			150.0 D
299-W7-10	6/13/95	B0FMK5	307		8.82			9.0 L
		B0FMK6	306		8.82			8.0 L
		B0FMK7	306		8.82			6.9 U
		B0FMK8	308		8.80			6.9 U

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

Table 14-27. Water Quality Standards Exceeded at Low-Level Waste Management Area 1.

pH - Lab (>8.5)	299-E28-28 R		
Nitrate (45,000 ppb)	299-E32-5 R		
Tritium (20,000 pCi/l)	299-E28-27 299-E32-5	299-E32-2 299-E32-6	299-E32-3

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Table 14-28. Water Quality Standards Exceeded at Low-Level Waste Management Area 3.

pH - Field (>8.5)	299-W7-10		
Nitrate (45,000 ppb)	299-W6-2 299-W10-21	299-W10-19	299-W10-20

Table 14-29. Water Quality Standards Exceeded at Low-Level Waste Management Area 4.

Nitrate (45,000 ppb)	299-W15-15 299-W15-19 299-W18-24	299-W15-16 299-W15-24	299-W15-18 299-W18-21
Carbon Tetrachloride (5 ppb)	299-W15-15 299-W15-19 299-W15-24 299-W18-24 299-W18-28	299-W15-16 299-W15-20 299-W18-21 299-W18-26 299-W18-32	299-W15-18 299-W15-23 299-W18-23 299-W18-27
Trichloroethene (5 ppb)	299-W15-16	299-W15-18	

Table 14-30. Water Quality Standards Exceeded at
Low-Level Waste Management Area 5.

pH - Field (>8.5)	299-W7-10				
Nitrate (45,000 ppb)	299-W6-2	299-W6-4	299-W6-9	299-W11-31	
Tritium (20,000 pCi/l)	299-W6-4	299-W6-9	299-W11-31		

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15.0 SINGLE-SHELL TANKS

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15.1 INTRODUCTION

Although decommissioned in 1980, the SSTs are actively storing hazardous and radioactive waste and have been designated as RCRA facilities. The SSTs received metal and first-cycle waste from the chemical processing of uranium-bearing spent fuel rods. Spent fuel rods from reactors in the 100 Areas were processed using the bismuth phosphate, REDOX, or PUREX process. Metal waste was produced in the first step of the process of dissolving spent fuels, and contains about 90% of fission product radionuclides, as well as uranium and some plutonium. Other waste streams (e.g., coating, noncomplexed, and deionizing waste) also were sent to SSTs. (Anderson 1990 discusses types of waste sent to various SSTs from startup until the tanks were no longer used.) Chemical and radiological contents of the various SSTs were summarized in WHC (1993c).

The 149 SSTs are located in 7 waste management areas (WMA) each containing 1 or more tank farms (Figures 15-1 and 15-2). Three WMAs are in the 200 East Area (A-AX, B-BX-BY, and C) and four are in the 200 West Area (S-SX, T, TX-TY, and U). Each tank farm contains from 4 (AX Tank Farm) to 18 (TX Tank Farm) tanks, each of which is an underground, reinforced-concrete tank with a single liner of carbon steel. The larger tanks have a diameter of 23 m (75 ft), vary in height, and are buried at least 2 m (6 ft) below the ground surface. The capacity of these tanks varies from 2,000,000 to 3,800,000 L (530,000 to 1,000,000 gal). The sixteen 200-series tanks hold 208,000 L (55,000 gal) each. Four 200-series tanks are located in each of the original four tank farms: 241-B, 241-C, 241-T, and 241-U. The original four tank farms were built in 1944; SSTs were built from 1944 to 1964.

Interim-status, detection-level groundwater monitoring was initiated at the SSTs in 1989 with the construction of 12 RCRA-standard wells. Sampling was initiated in February 1990 at WMAs A-AX, B-BX-BY, C, and T, but was suspended until July 1991 because of the absence of analytical laboratory support. Sampling resumed in 1991 and continued quarterly through early 1993. Most wells have been sampled for more than four quarters. All WMAs, except T and TX-TY, are now in detection-level indicator-parameter-evaluation status and are sampled semiannually. WMAs T and TX-TY continue to be sampled quarterly because these sites are now in assessment-level monitoring status because of elevated specific conductance. A groundwater quality assessment monitoring plan (Caggiano and Chou 1993) for WMAs T and TX-TY was submitted to Ecology in July 1993. The SST WMA well locations are shown in Figures 15-3 and 15-4. Wells in the SST monitoring networks are listed in Table 15-1. Groundwater monitoring at the SSTs follows the groundwater monitoring plan (Jensen et al. 1989) as revised (Caggiano and Goodwin 1991).

Numerous older wells in or near tank farms are constructed of carbon steel casing that is perforated and open to different levels in the unconfined aquifer. These wells were part of an operational groundwater monitoring system at some point in their history and currently are used only for water level measurements or to collect samples for operational monitoring. Some are

used for environmental surveillance monitoring to check for conformance to DOE orders (e.g., Schmidt et al. 1992). These older wells do not comply with the construction specifications of WAC 173-160 and are not used for collection of RCRA samples. One exception is well 2-E27-7, which was constructed in 1982 and has a carbon steel casing, an annular seal, and a stainless steel screen below the carbon steel casing. No carbon steel is in contact with groundwater in well 2-E27-7. Samples are collected from this well, which is upgradient of WMA C, but data from this well are not used in statistical evaluation.

15.2 WATER LEVEL MEASUREMENTS

Water levels measured in 62 wells for this quarter are given in Table 15-2. These data include water level measurements taken when sampling, as well as monthly measurements made by Well Services personnel. Suspected errors in water level measurements this quarter are flagged in Table 15-2.

Well 2-E33-38, along with nine older carbon steel wells formerly used by the Operational Monitoring program to monitor the 216-BY cribs, will be decommissioned when a modified RCRA cover is built over the 216-BY cribs. The barrier is the preferred remedial action in the ROD for the 200-BP-1 Operable Unit. Wells 2-E33-1 and 2-E33-5, along with well 2-E33-38, have been used to monitor water levels at SST WMA B-BX-BY in this area of very low water table gradient in the 200 East Area. Contingency planning for the location and design of replacement wells has been initiated, but the project is on hold pending funding and approval.

Water levels in 200 West Area SST wells continued to decline as they have since the inception of water level monitoring in RCRA wells in 1990. Water levels in wells 2-W18-25 and 2-W18-31 continue to be lower than in wells 2-W19-31 and 2-W19-32 at WMA U. Five wells were added to the water level monitoring network in the vicinity of the 241-U Tank Farm to determine the extent of this change (see Table 15-2).

The borehole velocity flowmeter was run at three different intervals in the screens in wells 2-W19-31, 2-W19-32, and 2-W18-25 to more accurately measure the direction of groundwater flow beneath WMA U. The data from wells 2-W19-31 and 2-W19-32 indicate groundwater flow to the north-northwest (N 19° W). Data from well 2-W18-25 indicate groundwater flow to the east-northeast (N 77° E). An engineering change notice was prepared to revise the groundwater monitoring plan to include these measurements of groundwater flow direction. The original monitoring network was established in 1989 when groundwater was flowing to the northeast because of the water table mound that originated beneath the now-decommissioned 216-U-10 Pond in the southwest corner of the 200 West Area. A contingency plan to monitor groundwater flow direction periodically is being presented to Ecology before committing to construction of a new well near the northwest corner of WMA U.

15.3 WATER CHEMISTRY DATA

SST WMAs were not sampled this quarter except for WMAs T and TX-TY, which are sampled quarterly because they are in assessment monitoring status. Data received from analyses of samples collected during the second quarter of 1995 are provided in Tables 15-6 through 15-11.

Several LLBG RCRA-standard wells have been added to the expanded network for groundwater quality assessment monitoring at WMAs T and TX-TY. Wells 299-W6-2, 299-W6-4, 299-W6-6, 299-W6-9, 299-W10-19, 299-W10-20, 299-W10-21 and 299-W11-31 are shown on Figure 14-3 (for LLBG WMA 3) or Figure 14-5 (for LLBG WMA 5). Several radionuclides from the list of site-specific constituents for the SSTs have been added to the sampling schedule for these wells, all of which are located north or west of WMA T. Some data on radionuclides from these wells were received this quarter and are included in Tables 15-6 through 15-8. These two WMAs are in groundwater quality assessment status because of elevated specific conductance. A report will be prepared next quarter to document the results of assessment monitoring.

The limit of detection for pentachlorophenol is greater than the regulatory limit; consequently all results are considered to exceed the limit of 1 ppb. Pentachlorophenol is used in the manufacture of some pesticides, herbicides, and fungicides, but was not widely used on the Hanford Site.

15.3.1 Waste Management Area A-AX

None of the wells in WMA A-AX were sampled this quarter.

15.3.2 Waste Management Area B-BX-BY

Two upgradient wells in WMA B-BX-BY (299-E33-33 and 299-E33-36) were sampled this quarter. These wells were sampled for the 216-B-63 Trench sampling project.

Groundwater contaminant plumes north and south of WMA B-BX-BY arising from the 216-BY cribs (Operable Unit 200-BP-1) and 216-B-5 reverse well (Operable Unit 200-BP-5) were treated for several months. At both sites, groundwater was extracted, run through a charcoal and zeolite treatment system, and the resulting effluent was injected into the ground. No effect was observed on water levels or water quality at WMA B-BX-BY during the operation of these pump-and-treat systems. The operations concluded in May 1995 and are currently being documented by the ERC.

15.3.3 Waste Management Area C

None of the wells in WMA C were sampled this quarter.

15.3.4 Waste Management Area S-SX

None of the wells in WMA S-SX were sampled this quarter.

15.3.5 Waste Management Area T

All wells in WMA T and the expanded network were sampled this quarter. Data in Tables 15-6 through 15-8 include some from wells added to the expanded network for assessment monitoring. Additional data are obtained from wells that are part of the RCRA monitoring network for LLBG WMAs 3 and 5. One analysis of a filtered sample for chromium in well 2-W10-15 exceeded the 50-ppb limit. Fluoride continues to exceed the 4,000 ppb limit in well 2-W10-15. Fluoride exceeded the interim DWS of 1,400 ppb in several other wells (see Table 15-7). Nitrate exceeded the DWS in almost all wells, ranging up to 260,000 ppb in well 2-W10-15. The SMCL for TDS was exceeded in wells 2-W10-15, 2-W10-16, and 2-W11-28. Tritium exceeded the 20,000-pCi/L DWS in wells 2-W10-15, 2-W10-16, 2-W11-28, 2-W11-31, and 2-W6-4.

Field specific conductance continues to be elevated in downgradient well 2-W10-15 (1,088 mmhos/cm) and is the parameter that triggered this site into groundwater quality assessment monitoring under interim-status regulations. Field specific conductance was also above the SMCL of 700 mmhos/cm in wells 2-W11-28, 2-W10-16 and 2-W11-31.

All data for well 2-W11-28 are flagged with a "P" because of an NCR. An NCR was prepared because the construction of the well differs from specifications and because of the presence of a carbon steel roller bit in the bottom of the well. The well was damaged during construction and has been remediated.

15.3.6 Waste Management Area TX-TY

All wells in WMA TX-TY were sampled this quarter. Nitrate exceeded the DWS in all wells this quarter, with a maximum of 360,000 ppb in well 2-W14-12. Gross beta is elevated in well 2-W14-12 (see Table 15-9) and appears to result from technetium-99. Technetium-99, at 9,000 pCi/L in well 2-W14-12 exceeds the limit of 900 pCi/L. Samples from wells 2-W10-17 and 2-W14-12 exceed the 1,400-ppb limit for fluoride, but not the 4,000-ppb primary DWS (40 CFR 141). Filtered chromium exceeds the 50 ppb limit in well 2-W14-12. Tritium exceeds the limit of 20,000 pCi/L in all wells except 2-W10-18. A value for ^{129}I in well 2-W14-12 was 39.3 pCi/L. Total dissolved solid (at 890 ppm) exceeds the WAC limit of 500 ppm in well 2-W14-12.

Field specific conductance continues to exceed the critical mean in downgradient wells 2-W14-12 and 2-W10-17 and is the reason WMA TX-TY has been triggered into groundwater quality assessment monitoring under interim-status regulations.

15.3.7 Waste Management Area U

None of the wells in WMA U were sampled this quarter.

Figure 15-1. Single-Shell Tank Waste Management Areas in the 200 East Area.

PS-90-71

Figure 15-2. Single-Shell Tank Waste Management Areas in the 200 West Area.

PS-90-69

Figure 15-3. Well Location Map for the Single-Shell Tank Waste Management Areas in the 200 East Area.

H9411010.11

Figure 15-4. Well Location Map for the Single-Shell Tank Waste Management Areas in the 200 West Area.

H9411010.10

Table 15-1. Groundwater Monitoring Wells for the Single-Shell Tanks. (3 sheets)

Well no. (299-)	Aquifer ^a	Sample frequency	Sample date, 2nd Qtr 1995
Single-Shell Tanks Waste Management Area A-AX			
E24-19 ⁸⁹	Ringold: Water Table	Semiannually	Not Sampled
E24-20 ⁹¹	Ringold: Water Table	Semiannually	Not Sampled
E25-40 ⁸⁹	Ringold: Water Table	Semiannually	Not Sampled
E25-41 ⁸⁹	Ringold: Water Table	Semiannually	Not Sampled
E25-46 ⁹²	Ringold: Water Table	Semiannually	Not Sampled
Single-Shell Tanks Waste Management Area B-BX-BY			
E33-31 ⁸⁹	Hanford: Water Table	Semiannually	Not Sampled
E33-32 ⁸⁹	Hanford: Water Table	Semiannually	Not Sampled
E33-33 ⁸⁹	Hanford: Water Table	Semiannually	5/15/95 ^d
E33-36 ⁹⁰	Hanford: Water Table	Semiannually	5/15/95 ^d
E33-41 ^{91b}	Hanford: Water Table	Semiannually	Not Sampled
E33-38 ^{91c}	Hanford: Water Table	Semiannually	Not Sampled
E33-39 ^{91c}	Hanford: Water Table	Semiannually	Not Sampled
E33-42 ⁹¹	Hanford: Water Table	Semiannually	Not Sampled
E33-43 ⁹¹	Hanford: Water Table	Semiannually	Not Sampled
Single-Shell Tank Waste Management Area C			
E27-12 ⁸⁹	Ringold: Water Table	Semiannually	Not Sampled
E27-13 ⁸⁹	Ringold: Water Table	Semiannually	Not Sampled
E27-14 ⁸⁹	Ringold: Water Table	Semiannually	Not Sampled
E27-15 ⁸⁹	Ringold: Water Table	Semiannually	Not Sampled
E27-7 ⁸²	Ringold: Water Table	Semiannually	Not Sampled
Single-Shell Tanks Waste Management Area S-SX			
W22-39 ⁹⁰	Ringold: Water Table	Semiannually	Not Sampled
W22-44 ⁹¹	Ringold: Water Table	Semiannually	Not Sampled
W22-45 ⁹²	Ringold: Water Table	Semiannually	Not Sampled
W22-46 ⁹¹	Ringold: Water Table	Semiannually	Not Sampled
W23-13 ⁹⁰	Ringold: Water Table	Semiannually	Not Sampled
W23-14 ⁹⁰	Ringold: Water Table	Semiannually	Not Sampled

Table 15-1. Groundwater Monitoring Wells for the Single-Shell Tanks. (3 sheets)

Well no. (299-)	Aquifer*	Sample frequency	Sample date, 2nd Qtr 1995
W23-15 ⁹¹	Ringold: Water Table	Semiannually	Not Sampled
Single-Shell Tanks Waste Management Area T			
W10-15 ⁸⁹	Ringold: Water Table	Quarterly	5/18/95
W10-16 ⁸⁹	Ringold: Water Table	Quarterly	5/17/95
W10-19 ⁹²	Ringold: Water Table	Quarterly	6/12/96
W10-20 ⁹³	Ringold: Water Table	Quarterly	6/12/95
W10-21 ⁹³	Ringold: Water Table	Quarterly	6/12/95
W11-27 ⁹¹	Ringold: Water Table	Quarterly	5/17/95
W11-28 ⁹¹	Ringold: Water Table	Quarterly	5/17/95
W11-31 ⁹²	Ringold: Water Table	Quarterly	6/12/95
Single-Shell Tanks Waste Management Area TX-TY			
W10-17 ⁹⁰	Ringold: Water Table	Quarterly	5/17/95
W10-18 ⁹⁰	Ringold: Water Table	Quarterly	5/17/95
W14-12 ⁹¹	Ringold: Water Table	Quarterly	5/17/95
W15-22 ⁹⁰	Ringold: Water Table	Quarterly	5/17/95
Single-Shell Tanks Waste Management Area U			
W18-25 ⁹⁰	Ringold: Water Table	Semiannually	Not Sampled
W18-30 ⁹¹	Ringold: Water Table	Semiannually	Not Sampled
W18-31 ⁹¹	Ringold: Water Table	Semiannually	Not Sampled
W19-31 ⁹⁸	Ringold: Water Table	Semiannually	Not Sampled

Table 15-1. Groundwater Monitoring Wells for the Single-Shell Tanks. (3 sheets)

Well no. (299-)	Aquifer ^a	Sample frequency	Sample date, 2nd Qtr 1995
W19-32 ⁹⁰	Ringold: Water Table	Semiannually	Not Sampled
W19-12 ⁸³	Ringold: Water Table	Semiannually	Not sampled

Notes: Shading denotes upgradient wells. Superscript following well number denotes the year of well completion.

^aWells are screened either in sand and gravel of the Hanford formation or in matrix-supported silty sandy gravel of the Ringold Formation.

^bWell in middle of WMA B-BX-BY and not clearly upgradient or downgradient. Therefore, data from sampling/analyses in this well are not used in statistical evaluations.

^cPart of 200-BP-1 operable unit network. Not sampled regularly as RCRA wells.

^dPart of network for the 216-B-63 Trench.

Table 15-2. RCRA Water Level Measurement Report for
the Single-Shell Tanks, Second Quarter 1995.
(sheet 1 of 7)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
241-A/AX Tank Farm Wells				
299-E24-19	4/21/95	292.66	400.99	122.22
	5/24/95	292.38	401.27	122.31
	6/23/95	292.45	401.20	122.29
299-E24-20	4/21/95	287.95	401.33	122.33
	5/24/95	287.74	401.54	122.39
	6/23/95	287.94	401.34	122.33
299-E25-2	4/21/95	274.16	401.49	122.37
	5/24/95	274.00	401.65	122.42
	6/23/95	274.07	401.58	122.40
299-E25-40	4/21/95	264.79	401.12	122.26
	5/24/95	264.35	401.56	122.40
	6/23/95	264.42	401.49	122.37
299-E25-41	4/21/95	269.99	401.47	122.37
	5/24/95	269.84	401.62	122.41
	6/23/95	269.91	401.55	122.39
299-E25-46	4/21/95	293.39	401.42	122.35
	5/24/95	293.44	401.37	122.34
	6/23/95	293.30	401.51	122.38
241-B/BX/BY Tank Farm Wells				
299-E33-1	4/21/95	230.87	401.24	122.30
	5/24/95	230.73	401.38	122.34
	6/23/95	230.80	401.31	122.32
299-E33-18	4/21/95	250.55	401.31	122.32
	5/24/95	250.41	401.45	122.36
	6/23/95	250.56	401.30	122.32
299-E33-21	4/21/95	267.04	401.35	122.33
	5/24/95	266.94	401.45	122.36
	6/23/95	267.01	401.38	122.34
299-E33-31	5/24/95	246.18	401.30	122.32
	6/23/95	246.26	401.22	122.29

Table 15-2. RCRA Water Level Measurement Report for
the Single-Shell Tanks, Second Quarter 1995.
(sheet 2 of 7)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
241-B/BX/BY Tank Farm Wells				
299-E33-32	5/24/95	258.85	401.17	122.28
	6/23/95	258.87	401.15	122.27
299-E33-33	4/21/95	239.69	400.70	122.13
	5/24/95	239.53	400.86	122.18
	6/23/95	239.53	400.86	122.18
299-E33-36	6/16/95	247.70+	398.97	121.61
299-E33-38	4/21/95	230.91	401.04	122.24
	5/24/95	230.80	401.15	122.27
	6/23/95	230.87	401.08	122.25
299-E33-39	4/21/95	222.46	400.83	122.17
	5/24/95	222.32	400.97	122.22
	6/28/95	222.43	400.86	122.18
299-E33-41	4/21/95	253.78	401.17	122.28
	5/24/95	253.53	401.42	122.35
	6/23/95	253.68	401.27	122.31
299-E33-42	5/24/95	252.98	401.32	122.32
	6/23/95	253.03	401.27	122.31
299-E33-43	4/21/95	261.64	401.04	122.24
	5/24/95	261.48	401.20	122.29
	6/23/95	261.53	401.15	122.27
299-E33-5	4/21/95	233.44	401.28	122.31
	5/24/95	233.29	401.43	122.36
	6/23/95	233.34	401.38	122.34
299-E33-8	5/24/95	249.56	401.43	122.36
	6/23/95	249.62	401.37	122.34

Table 15-2. RCRA Water Level Measurement Report for
the Single-Shell Tanks, Second Quarter 1995.
(sheet 3 of 7)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
241-C Tank Farm Wells				
299-E27-12	4/21/95	259.93	401.22	122.29
	5/24/95	259.75	401.40	122.35
	6/23/95	259.81	401.34	122.33
299-E27-13	4/21/95	267.87	401.32	122.32
	5/24/95	267.61	401.58	122.40
	6/23/95	267.69	401.50	122.38
299-E27-14	4/21/95	257.34	401.20	122.29
	5/24/95	257.09	401.45	122.36
	6/23/95	257.20	401.34	122.33
299-E27-15	5/24/95	252.17+	400.70	122.13
	6/23/95	252.79+	400.08	121.94
299-E27-7	4/21/95	233.41	401.46	122.37
	5/24/95	233.32	401.55	122.39
	6/23/95	233.34	401.53	122.39
241-S/SX Tank Farm Wells				
299-W22-39	4/19/95	212.10	456.16	139.04
	5/23/95	212.37	455.89	138.96
	6/21/95	212.57	455.69	138.89
299-W22-44	4/21/95	220.83	457.30	139.39
	5/24/95	220.84	457.29	139.38
	6/23/95	221.02	457.11	139.33
299-W22-45	4/21/95	209.98	456.23	139.06
	5/24/95	209.91	456.30	139.08
	6/23/95	210.14	456.07	139.01
299-W22-46	4/19/95	215.24	455.94	138.97
	5/23/95	215.47	455.71	138.90
	6/21/95	215.59	455.59	138.86
299-W23-13	4/19/95	207.96	458.37	139.71
	5/23/95	208.25	458.08	139.62
	6/21/95	208.52	457.81	139.54

Table 15-2. RCRA Water Level Measurement Report for
the Single-Shell Tanks, Second Quarter 1995.
(sheet 4 of 7)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
241-S/SX Tank Farm Wells				
299-W23-14	4/19/95	206.04	457.96	139.59
	5/23/95	206.33	457.67	139.50
	6/21/95	206.57	457.43	139.42
299-W23-15	4/19/95	198.82	456.62	139.18
	5/23/95	198.96	456.48	139.14
	6/21/95	199.15	456.29	139.08
299-W23-6	4/19/95	210.75	456.23	139.06
	5/23/95	210.98	456.00	138.99
	6/21/95	211.18	455.80	138.93
299-W23-8	4/19/95	205.83	458.12	139.63
	5/23/95	206.12	457.83	139.55
	6/21/95	206.37	457.58	139.47
241-T Tank Farm Wells				
299-W10-10	4/18/95	215.40	459.95	140.19
	5/22/95	215.67	459.68	140.11
	6/20/95	215.93	459.42	140.03
299-W10-11	4/18/95	215.40	460.12	140.24
	5/22/95	215.53	459.99	140.20
	6/20/95	215.79	459.73	140.13
299-W10-12	4/18/95	215.10	459.91	140.18
	5/22/95	215.28	459.73	140.13
	6/20/95	215.53	459.48	140.05
299-W10-15	4/18/95	216.09	459.81	140.15
	5/22/95	216.23	459.67	140.11
	6/20/95	216.48	459.42	140.03
299-W10-16	4/19/95	212.67	460.09	140.24
	5/22/95	212.87	459.89	140.17
	6/20/95	213.47	459.29	139.99

Table 15-2. RCRA Water Level Measurement Report for
the Single-Shell Tanks, Second Quarter 1995.
(sheet 5 of 7)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
241-T Tank Farm Wells				
299-W10-8	4/18/95	220.80	459.51	140.06
	5/22/95	220.93	459.38	140.02
	6/20/95	221.19	459.12	139.94
299-W10-9	4/18/95	215.12	459.81	140.15
	5/22/95	215.16	459.77	140.14
	6/20/95	215.46	459.47	140.05
299-W11-23	4/18/95	228.91	459.24	139.98
	5/22/95	229.05	459.10	139.93
	6/20/95	229.33	458.82	139.85
299-W11-24	4/18/95	227.70	459.73	140.13
	5/22/95	227.89	459.54	140.07
	6/20/95	228.19	459.24	139.98
299-W11-27	4/18/95	225.82	459.45	140.04
	5/22/95	225.99	459.28	139.99
	6/20/95	226.26	459.01	139.91
299-W11-28	4/18/95	233.15	460.33+	140.31
	6/20/95	233.27	460.21+	140.27
241-TX/TY Tank Farm Wells				
299-W10-17	4/19/95	210.38	460.46	140.35
	5/22/95	210.68	460.16	140.26
	6/20/95	210.89	459.95	140.19
299-W10-18	4/19/95	209.67	461.26	140.59
	5/22/95	209.90	461.03	140.52
	6/20/95	210.21	460.72	140.43
299-W14-12	4/19/95	208.33	462.19	140.88
	5/22/95	208.69	461.83	140.77
	6/21/95	209.13	461.39	140.63
299-W15-12	4/19/95	208.69	461.38	140.63
	5/22/95	208.94	461.13	140.55
	6/20/95	209.28	460.79	140.45

Table 15-2. RCRA Water Level Measurement Report for
the Single-Shell Tanks, Second Quarter 1995.
(sheet 6 of 7)

Well	Date	Depth to water (ft)	Water level	
			elevation (ft)	above msl (m)
241-TX/TY Tank Farm Wells				
299-W15-13	4/19/95	208.60	461.52	140.67
	5/22/95	208.90	461.22	140.58
	6/20/95	209.21	460.91	140.49
299-W15-22	4/19/95	207.91	462.86	141.08
	5/22/95	208.23	462.54	140.98
	6/20/95	208.61	462.16	140.87
241-U Tank Farm Wells				
299-W18-25	4/19/95	204.79	461.25	140.59
	5/23/95	205.18	460.86	140.47
	6/21/95	205.60	460.44	140.34
299-W18-30	4/19/95	211.13	461.71	140.73
	5/23/95	211.48	461.36	140.62
	6/21/95	211.88	460.96	140.50
299-W18-31	4/19/95	202.77	461.39	140.63
	5/23/95	203.17	460.99	140.51
	6/21/95	203.51	460.65	140.41
299-W18-33	4/19/95	208.25	460.66	140.41
	5/23/95	208.65	460.26	140.29
	6/21/95	208.98	459.93	140.19
299-W19-1	4/19/95	212.82	460.95	140.50
	5/23/95	212.88	460.89	140.48
	6/21/95	215.90	457.87	139.56
299-W19-12	4/19/95	211.57	461.68	140.72
	5/23/95	211.95	461.30	140.60
	6/21/95	212.38	460.87	140.47
299-W19-21	4/03/95	218.25*	460.54	140.37
	4/19/95	218.00	460.79	140.45
	5/23/95	218.53	460.26	140.29
	6/21/95	218.95	459.84	140.16

Table 15-2. RCRA Water Level Measurement Report for
the Single-Shell Tanks, Second Quarter 1995.
(sheet 7 of 7)

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
241-U Tank Farm Wells				
299-W19-27	4/19/95	223.47	460.44	140.34
	5/23/95	223.51	460.40	140.33
	6/21/95	223.95	459.96	140.20
299-W19-31	4/19/95	212.49	461.70	140.73
	5/23/95	212.80	461.39	140.63
	6/21/95	213.21	460.98	140.51
299-W19-32	4/19/95	213.33	461.57	140.69
	5/23/95	213.78	461.12	140.55
	6/21/95	214.20	460.70	140.42
299-W19-6	4/19/95	228.94	457.66	139.49
	5/23/95	229.28	457.32	139.39
	6/21/95	229.59	457.01	139.30

- NOTES: 1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
2. Depth-to-water values are transcribed from field records.
3. Measurements marked with an '*' were taken at the time of sampling.
4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 15-3. Constituent List and Summary of Results for the Single-Shell Tank Waste Management Area B-BY-BX Data for Reporting Period April 1 through June 30, 1995.

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit Agency		Number of Samples		
		Full						Total	>MDL	>DWS
CONDUCT	94	Conductivity, field		µmhos	1			8	8	
CONDUCT	73	Conductivity, lab		µmhos				2	2	
TOC		Total Organic Carbon		ppb	140			8	8	
TOX		Total Organic Halogen		ppb	6.9			8	0	
PH	93	pH, field		pH	.01	6.5-8.5	EPAS	8	8	0
PH	125	pH, lab		pH		6.5-8.5	EPAS	2	2	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit Agency		Number of Samples		
		Full						Total	>MDL	>DWS
ALPHA		Gross alpha		pCi/L		15	EPA	2	0	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit Agency		Number of Samples		
		Full						Total	>MDL	>DWS
BETA		Gross beta		pCi/L				2	2	
TURBID		Turbidity		NTU				2	2	

For explanation of this table, see Section 1.4 of report.

Table 15-4. Constituents with at Least One Detected Value for the Single-Shell Tank Waste Management Area B-BY-BX Data for Reporting Period April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	BETA 136/pCi/L ./.	TURBID 111/NTU ./.
299-E33-33	5/15/95	B0FC79	5.85	.58
299-E33-36	5/15/95	B0FC83	5.38	.67

For explanation of this table, see Section 1.4 of report.

Table 15-5. Contamination Indicator Parameters for the Single-Shell Tank Waste Management Area B-BY-BX, Data for Reporting Period April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	COND FIELD µmho 1/.	COND LAB µmho 1/.	pH FIELD .01/6.5-8.5a	pH LAB .01/6.5-8.5a	TOC ppb */.	TOX ppb */.
299-E33-33	5/15/95	B0FC79	289	290	8.16	8.20	200 L	6.9 U
		B0FC80	288		8.18		200 L	6.9 U
		B0FC81	288		8.18		300 L	6.9 U
		B0FC82	288		8.18		200 L	6.9 U
299-E33-36	5/15/95	B0FC83	259	260	8.39	8.30	300 L	6.9 U
		B0FC84	259		8.37		300 L	6.9 U
		B0FC85	259		8.36		300 L	6.9 U
		B0FC86	259		8.36		300 L	6.9 U

* Detection limits for TOC and TOX vary depending on the performing laboratory.

Table 15-6. Constituent List and Summary of Results for the
Single-Shell Tank Waste Management Area T Data for
Reporting Period April 1 through June 30, 1995.
(sheet 1 of 2)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS		Number of Samples		
		Full				Limit	Agency	Total	>MDL	>DWS
CONDUCT	94	Conductivity, field	µmhos	1				32	32	
CONDUCT	73	Conductivity, lab	µmhos					4	4	
TOC		Total Organic Carbon	ppb	140				20	20	
TOX		Total Organic Halogen	ppb	6.9				32	32	
PH	93	pH, field	pH	.01	6.5-8.5	EPAS		32	32	0
PH	125	pH, lab	pH		6.5-8.5	EPAS		4	4	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS		Number of Samples		
		Full				Limit	Agency	Total	>MDL	>DWS
BARIUM		Barium, filtered	ppb	1.4	1000	EPAI		4	4	0
CADMIUM		Cadmium, filtered	ppb	.98	10	EPAI		4	0	0
CHROMIUM		Chromium, filtered	ppb	3.7	50	EPAI		4	4	1
FLUORIDE		Fluoride	ppb	52	1400	EPAI		11	11	3
ALPHA		Gross alpha	pCi/L		15	EPA		4	0	0
NITRATE		Nitrate	ppb	120	45000	EPA		11	11	10

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS		Number of Samples		
		Full				Limit	Agency	Total	>MDL	>DWS
CHLORIDE		Chloride	ppb	110	250000	EPAS		11	11	0
IRON		Iron, filtered	ppb	8.9	300	EPAS		4	4	0
MANGANESE		Manganese, filtered	ppb	.55	50	EPAS		4	4	0
SODIUM		Sodium, filtered	ppb	44				4	4	
SULFATE		Sulfate	ppb	130	250000	EPAS		11	11	0

Table 15-6. Constituent List and Summary of Results for the
Single-Shell Tank Waste Management Area T-Data for
Reporting Period April 1 through June 30, 1995.
(sheet 2 of 2)

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
ALKALIN		Alkalinity	ppm	3.5				4	4	
ALUMIN		Aluminum, filtered	ppb	31				4	3	
ANTIMO		Antimony, filtered	ppb	24				4	0	
BERYLL		Beryllium, filtered	ppb	.63				4	0	
BROMIDE		Bromide	ppb	72				11		
CALCIU		Calcium, filtered	ppb	41				4	4	
COBALT		Cobalt, filtered	ppb	5.3				4	0	
COPPER		Copper, filtered	ppb	2.1	1000	EPAS		4	0	0
BETA		Gross beta	pCi/L					4	4	
MAGNES		Magnesium, filtered	ppb	26				4	4	
NICKEL		Nickel, filtered	ppb	11				4	0	
NITRITE		Nitrite	ppb	140	1000	EPA		11	1	0
PHOSPHA		Phosphate	ppb	340				11	0	
POTASS		Potassium, filtered	ppb	390				4	4	
SILVER		Silver, filtered	ppb	5.5	50	EPAI		4	0	0
TC-99		Technetium-99	pCi/L		900	EPA		11	11	0
TIN		Tin, filtered	ppb	30				4	0	
TDS		Total Dissolved Solids	ppm	10	500	EPAS		11	11	3
TRITIUM		Tritium	pCi/L		20000	EPA		11	11	5
TURBID		Turbidity	MTU					11	11	
URANIUM		Uranium	ppb					4	4	
VANADI		Vanadium, filtered	ppb	1.9				4	4	
ZINC		Zinc, filtered	ppb	3.7	5000	EPAS		4	3	0

For explanation of this table, see Section 1.4 of report.

Table 15-7. Constituents with at Least One Detected Value for the Single-Shell Tank Waste Management Area T Data for Reporting Period April 1 through June 30, 1995. (sheet 1 of 3)

Well Name	Collection Date	Sample Number	ALKALIN 357/ppm 3.3/.	FALLUMIN 34/ppb 31/.	FBARIUM 34/ppb 1.4/1000	BROMIDE 124/ppb 72/.
299-W10-15	5/18/95	B0FJQ6	160.00			72.00 UD
299-W10-15	5/18/95	B0FJQ7		34.00 L	61.00	
299-W10-16	5/17/95	B0FJR0	150.00			72.00 UD
299-W10-16	5/17/95	B0FJR1		36.00 L	31.00	
299-W10-19	6/12/95	B0FLM5				72.00 DU
299-W10-20	6/12/95	B0FLM9				72.00 DU
299-W10-21	6/12/95	B0FLX3				72.00 DU
299-W11-27	5/17/95	B0FJR5	140.00			72.00 U
299-W11-27	5/17/95	B0FJR6		46.00 L	51.00	
299-W11-28	5/17/95	B0FJS4	160.00 P			72.00 UCP
299-W11-28	5/17/95	B0FJS5		31.00 UP	39.00 P	
299-W11-31	6/12/95	B0FLX7				72.00 DU
299-W6-2	6/14/95	B0FLX9				72.00 U
299-W6-4	6/12/95	B0FLY0				100.00 L
299-W6-9	6/13/95	B0FLY1				72.00 U

Well Name	Collection Date	Sample Number	FCALCIU 34/ppb 41/.	CHLORID 124/ppb 110/250000	FCIRONI 34/ppb 3.7/50	FLUORID 124/ppb 52/1400
299-W10-15	5/18/95	B0FJQ6		27000.00 D		5000.00
299-W10-15	5/18/95	B0FJQ7	36000.00		110.00	
299-W10-16	5/17/95	B0FJR0		28000.00 D		2500.00
299-W10-16	5/17/95	B0FJR1	26000.00		47.00	
299-W10-19	6/12/95	B0FLM5		16000.00 D		300.00
299-W10-20	6/12/95	B0FLM9		16000.00 D		300.00
299-W10-21	6/12/95	B0FLX3		13000.00 D		300.00
299-W11-27	5/17/95	B0FJR5		2500.00		1100.00
299-W11-27	5/17/95	B0FJR6	43000.00		10.00 L	
299-W11-28	5/17/95	B0FJS4		27000.00 DP		3600.00 P
299-W11-28	5/17/95	B0FJS5	33000.00 P		43.00 P	
299-W11-31	6/12/95	B0FLX7		32000.00 D		900.00
299-W6-2	6/14/95	B0FLX9		4900.00		900.00 Q
299-W6-4	6/12/95	B0FLY0		9400.00 D		300.00
299-W6-9	6/13/95	B0FLY1		6500.00		400.00

Well Name	Collection Date	Sample Number	BETA 136/pCi/L ./.	FIIRON 34/ppb 8.9/300	FMAGNES 34/ppb 26/.	FMANGAN 34/ppb .55/50
299-W10-15	5/18/95	B0FJQ6	99.30			
299-W10-15	5/18/95	B0FJQ7		13.00 L	14000.00	.67 L
299-W10-16	5/17/95	B0FJR0	28.50			
299-W10-16	5/17/95	B0FJR1		24.00	8100.00	1.60 L
299-W11-27	5/17/95	B0FJR5	18.40			
299-W11-27	5/17/95	B0FJR6		36.00	15000.00	1.00 L
299-W11-28	5/17/95	B0FJS4	62.50 P			
299-W11-28	5/17/95	B0FJS5		62.00 P	11000.00 P	31.00 P

Table 15-7. Constituents with at Least One Detected Value for the
Single-Shell Tank Waste Management Area T Data for
Reporting Period April 1 through June 30, 1995.
(sheet 2 of 3)

Well Name	Collection Date	Sample Number	NITRATE 124/ppb 120/45000	NITRITE 124/ppb 140/1000	POTASS 34/ppb 390/.	SODIUM 34/ppb 44/.
299-W10-15	5/18/95	B0FJ06	260000.00 D	140.00 U		
299-W10-15	5/18/95	B0FJ07			4300.00	170000.00 G
299-W10-16	5/17/95	B0FJR0	120000.00 D	140.00 U		
299-W10-16	5/17/95	B0FJR1			3200.00	120000.00 G
299-W10-19	6/12/95	B0FLW5	130000.00 D	140.00 U		
299-W10-20	6/12/95	B0FLW9	150000.00 D	140.00 U		
299-W10-21	6/12/95	B0FLX3	160000.00 D	140.00 U		
299-W11-27	5/17/95	B0FJR5	6600.00	140.00 U		
299-W11-27	5/17/95	B0FJR6			3600.00	21000.00 G
299-W11-28	5/17/95	B0FJ84	130000.00 DP	1000.00 P		
299-W11-28	5/17/95	B0FJ85			3800.00 P	150000.00 PG
299-W11-31	6/12/95	B0FLX7	130000.00 D	140.00 U		
299-W6-2	6/14/95	B0FLX9	59000.00 D	140.00 U		
299-W6-4	6/12/95	B0FLY0	100000.00 D	140.00 U		
299-W6-9	6/13/95	B0FLY1	72000.00 D	140.00 U		

Well Name	Collection Date	Sample Number	SULFATE 124/ppb 130/250000	TC-99 143/pCi/L ./900	TDS 65/ppm 10/500	TRITIUM 142/pCi/L ./20000
299-W10-15	5/18/95	B0FJ06	69000.00 D	503.00	760.00	35300.00
299-W10-16	5/17/95	B0FJR0	59000.00 D	139.00	520.00	47600.00
299-W10-19	6/12/95	B0FLW5	40000.00 D	48.10 F	370.00	1510.00
299-W10-20	6/12/95	B0FLW9	41000.00 D	64.60	430.00	2460.00
299-W10-21	6/12/95	B0FLX3	36000.00 D	74.10	420.00	1590.00
299-W11-27	5/17/95	B0FJR5	59000.00 D	67.20	270.00	1200.00 F
299-W11-28	5/17/95	B0FJ84	98000.00 DP	285.00 P	610.00 P	60300.00 P
299-W11-31	6/12/95	B0FLX7	63000.00 D	367.00	490.00	73100.00
299-W6-2	6/14/95	B0FLX9	24000.00 D	8.50	270.00	8610.00
299-W6-4	6/12/95	B0FLY0	40000.00 D	81.20	340.00	31600.00
299-W6-9	6/13/95	B0FLY1	24000.00 D	35.60	300.00	10900.00

Table 15-7. Constituents with at Least One Detected Value for the
Single-Shell Tank Waste Management Area T Data for
Reporting Period April 1 through June 30, 1995.
(sheet 3 of 3)

Well Name	Collection Date	Sample Number	TURBID 111/NTU ./.	URANIUM 145/ppb ./.	PYKADI 34/ppb 1.9/.	FZINC 34/ppb 3.7/5000
299-W10-15	5/18/95	BOFJQ6	.78	2.56		
299-W10-15	5/18/95	BOFJQ7			40.00	14.00
299-W10-16	5/17/95	BOFJR0	1.75	1.05		
299-W10-16	5/17/95	BOFJR1			29.00 L	8.20 L
299-W10-19	6/12/95	BOFLM5	.76			
299-W10-20	6/12/95	BOFLM9	5.99			
299-W10-21	6/12/95	BOFLX3	1.18			
299-W11-27	5/17/95	BOFJR5	3.06	1.68		
299-W11-27	5/17/95	BOFJR6			19.00 L	32.00 F
299-W11-28	5/17/95	BOFJS4	4.94 P	1.18 P		
299-W11-28	5/17/95	BOFJS5			21.00 LP	3.70 UP
299-W11-31	6/12/95	BOFLX7	4.02			
299-W6-2	6/14/95	BOFLX9	1.25			
299-W6-4	6/12/95	BOFLY0	14.80			
299-W6-9	6/13/95	BOFLY1	4.49			

For explanation of this table, see Section 1.4 of report.

Table 15-8. Contamination Indicator Parameters for the Single-Shell Tank Waste Management Area T Data for Reporting Period April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	COND FIELD	COND LAB	pH FIELD	pH LAB	TOC	TOX
			$\mu\text{mho}/\text{cm}$	$\mu\text{mho}/\text{cm}$	.01/6.5-8.5s	.01/6.5-8.5s	ppb	ppb
299-W10-15	5/18/95	80FLJ6	1088	1100	8.01	8.10	400 L	490.0 D
299-W10-16	5/17/95	80FLJ80	756	760	7.91	8.00	400 L	60.0
299-W10-19	6/12/95	80FLW5	588		8.18		300 L	620.0 D
		80FLW6	589		8.18		300 L	620.0 D
		80FLW7	601		8.20		300 L	750.0 D
		80FLW8	597		8.22		300 L	590.0 D
299-W10-20	6/12/95	80FLW9	635		7.81		300 L	1100.0 D
		80FLX0	634		7.81		400 L	890.0 D
		80FLX1	634		7.81		400 L	970.0 D
		80FLX2	634		7.81		300 L	930.0 D
299-W10-21	6/12/95	80FLX3	616		7.89		200 L	400.0 D
		80FLX4	616		7.89		300 L	400.0 D
		80FLX5	617		7.89		400 L	410.0 D
		80FLX6	617		7.89		300 L	360.0 D
299-W11-27	5/17/95	80FLJ85	407	410	7.98	8.10	400 L	10.0 L
299-W11-28	5/17/95	80FLJ84	878 P	890 P	7.74 P	8.00 P	400 LP	340.0 DP
299-W11-31	6/12/95	80FLX7	742		7.81		500 L	510.0 D
		80FNC0	740		7.83			450.0 D
		80FNC1	735		7.82			470.0 D
		80FNC2	746		7.82			460.0 D
299-W6-2	6/14/95	80FLX9	390		8.14		200 L	90.0 D
		80FNC6	391		8.21			100.0
		80FNC7	392		8.23			110.0
		80FNC8	393		8.13			60.0 D
299-W6-4	6/12/95	80FLY0	506		8.39		300 L	150.0 D
		80FNC9	509		8.35			150.0 D
		80FND0	509		8.33			110.0 D
		80FND1	510		8.32			100.0 D
299-W6-9	6/13/95	80FLY1	444		8.38		300 L	150.0
		80FND2	444		8.39			110.0 D
		80FND3	444		8.39			100.0 D
		80FND4	444		8.39			150.0 D

* Detection Limits for TOC and TOX vary depending on the performing laboratory. For explanation of this table, see Section 1.4 of report.

Table 15-9. Constituent List and Summary of Results for the
Single-Shell Tank Waste Management Area TX-TY Data for
Reporting Period April 1 through June 30, 1995.
(sheet 1 of 2)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CONDUCT	94	Conductivity, field	µmhos	1				4	4	
CONDUCT	73	Conductivity, lab	µmhos					5	5	
TOC		Total Organic Carbon	ppb	140				5	5	
TOX		Total Organic Halogen	ppb	6.9				5	5	
PH	93	ph, field	ph	.01	6.5-8.5	EPAS		4	4	0
PH	125	ph, lab	ph		6.5-8.5	EPAS		5	5	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
FBARIUM		Barium, filtered	ppb	1.4	1000	EPAI		5	5	0
FCADMII		Cadmium, filtered	ppb	.98	10	EPAI		5	0	0
FCHROMI		Chromium, filtered	ppb	3.7	50	EPAI		5	5	1
FLUORID		Fluoride	ppb	52	1400	EPAI		5	5	2
ALPHA		Gross alpha	pCi/L		15	EPA		5	1	0
NITRATE		Nitrate	ppb	120	45000	EPA		5	5	5

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORID		Chloride	ppb	110	250000	EPAS		5	5	0
FIRON		Iron, filtered	ppb	8.9	300	EPAS		5	5	0
FMANGAN		Manganese, filtered	ppb	.55	50	EPAS		5	5	0
FSODIUM		Sodium, filtered	ppb	44				5	5	
SULFATE		Sulfate	ppb	130	250000	EPAS		5	5	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
ALKALIN		Alkalinity	ppm	3.5				5	5	
FALUMIN		Aluminum, filtered	ppb	31				5	1	
FANTIMO		Antimony, filtered	ppb	24				5	0	
FBERYLL		Beryllium, filtered	ppb	.63				5	0	
BE-7		Beryllium-7	pCi/L					5		

Table 15-9. Constituent List and Summary of Results for the
Single-Shell Tank Waste Management Area TX-TY Data for
Reporting Period April 1 through June 30, 1995.
(sheet 2 of 2)

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
BROMIDE		Bromide	ppb	72				5	4	
FCALCIUM		Calcium, filtered	ppb	41				5	5	
CS-134		Cesium-134	pCi/L					5	0	
CS-137		Cesium-137	pCi/L		200	EPA		5	0	0
FCOBALT		Cobalt, filtered	ppb	5.3				5	0	
CO-60		Cobalt-60	pCi/L		100	EPA		5	4	0
FCOPPER		Copper, filtered	ppb	2.1	1000	EPAS		5	1	0
EU-154		Europium-154	pCi/L					5	0	
EU-155		Europium-155	pCi/L					5	0	
BETA		Gross beta	pCi/L					5	5	
I-129L		Iodine-129, Low level	pCi/L		1	EPA		5	1	1
MAGNESIUM		Magnesium, filtered	ppb	26				5	5	
NICKEL		Nickel, filtered	ppb	11				5	3	
NITRITE		Nitrite	ppb	140	1000	EPA		5	0	0
PHOSPHATE		Phosphate	ppb	340				5	0	
POTASSIUM		Potassium, filtered	ppb	390				5	5	
K-40		Potassium-40	pCi/L					5	4	
SILVER		Silver, filtered	ppb	5.5	50	EPAL		5	0	0
TC-99		Technetium-99	pCi/L		900	EPA		5	5	1
TIN		Tin, filtered	ppb	30				5	0	
TDS		Total Dissolved Solids	ppm	10	500	EPAS		5	5	1
TRITIUM		Tritium	pCi/L		20000	EPA		5	5	3
TURBID		Turbidity	NTU					4	4	
VRANADIUM		Vanadium, filtered	ppb	1.9				5	5	
ZINC		Zinc, filtered	ppb	3.7	5000	EPAS		5	4	0

For explanation of this table, see Section 1.4 of report.

Table 15-10. Constituents with at Least One Detected Value for the Single-Shell Tank Waste Management Area TX-TY Data for Reporting Period April 1 through June 30, 1995.
(sheet 1 of 3)

Well Name	Collection Date	Sample Number	ALKALIN 357/ppm 3.5/.	ALUMINUM 34/ppb 51/.	BARIUM 34/ppb 1.4/1000	BROMIDE 124/ppb 72/.
299-W10-17	5/17/95	BOFJR3	140.00			300.00 L
299-W10-17	5/17/95	BOFJR4		41.00 L	27.00	
299-W10-18	5/17/95	BOFJR9	120.00			100.00 L
299-W10-18	5/17/95	BOFJS0	120.00			100.00 L
299-W10-18	5/17/95	BOFJS1		31.00 U	64.00	
299-W10-18	5/17/95	BOFJS2		31.00 U	65.00	
299-W14-12	5/17/95	BOFJT1	90.00			72.00 UD
299-W14-12	5/17/95	BOFJT2		31.00 U	110.00	
299-W15-22	5/17/95	BOFJT5	100.00			400.00 L
299-W15-22	5/17/95	BOFJT6		31.00 U	64.00	

Well Name	Collection Date	Sample Number	CALCIUM 34/ppb 41/.	CHLORIDE 124/ppb 110/250000	CHROMIUM 34/ppb 3.7/50	CO-60 140/pCi/L ./100
299-W10-17	5/17/95	BOFJR3		36000.00 D		.46 U
299-W10-17	5/17/95	BOFJR4	23000.00		16.00 L	
299-W10-18	5/17/95	BOFJR9		37000.00 D		2.11
299-W10-18	5/17/95	BOFJS0		37000.00 D		1.24
299-W10-18	5/17/95	BOFJS1	52000.00		7.10 L	
299-W10-18	5/17/95	BOFJS2	53000.00		9.20 L	
299-W14-12	5/17/95	BOFJT1		80000.00 D		11.50
299-W14-12	5/17/95	BOFJT2	140000.00		360.00	
299-W15-22	5/17/95	BOFJT5		34000.00 D		1.75
299-W15-22	5/17/95	BOFJT6	66000.00		8.90 L	

Well Name	Collection Date	Sample Number	COPPER 34/ppb 2.1/1000	FLUORIDE 124/ppb 52/1400	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.
299-W10-17	5/17/95	BOFJR3		2000.00	.93 U	34.10
299-W10-17	5/17/95	BOFJR4	2.10 U			
299-W10-18	5/17/95	BOFJR9		1400.00	1.15 U	53.30 F
299-W10-18	5/17/95	BOFJS0		1400.00	3.57	52.00 F
299-W10-18	5/17/95	BOFJS1	2.10 U			
299-W10-18	5/17/95	BOFJS2	2.90 L			
299-W14-12	5/17/95	BOFJT1		3600.00 F	1.37 U	2030.00
299-W14-12	5/17/95	BOFJT2	2.10 U			
299-W15-22	5/17/95	BOFJT5		700.00	.82 U	73.70
299-W15-22	5/17/95	BOFJT6	2.			

Table 15-10. Constituents with at Least One Detected Value for the Single-Shell Tank Waste Management Area TX-TY Data for Reporting Period April 1 through June 30, 1995.
(sheet 2 of 3)

Well Name	Collection Date	Sample Number	I-129 139/pCi/L ./l	IRON 34/ppb 8.9/300	MAGNES 34/ppb 26/.	MANGANESE 34/ppb .55/50
299-W10-17	5/17/95	80FJR3	.69 U			
299-W10-17	5/17/95	80FJR4		150.00	7600.00	13.00
299-W10-18	5/17/95	80FJR9	.40 U			
299-W10-18	5/17/95	80FJS0	.79 U			
299-W10-18	5/17/95	80FJS1		46.00	19000.00	1.70 L
299-W10-18	5/17/95	80FJS2		69.00	19000.00	1.60 L
299-W14-12	5/17/95	80FJT1	39.30			
299-W14-12	5/17/95	80FJT2		17.00 L	52000.00	5.20 L
299-W15-22	5/17/95	80FJT5	.97 U			
299-W15-22	5/17/95	80FJT6		21.00	20000.00	1.40 L

Well Name	Collection Date	Sample Number	NICKEL 34/ppb 11/.	NITRATE 124/ppb 120/45000	POTASS 34/ppb 390/.	K-40 140/pCi/L ./.
299-W10-17	5/17/95	80FJR3		86000.00 D		51.20
299-W10-17	5/17/95	80FJR4	57.00		3500.00	
299-W10-18	5/17/95	80FJR9		95000.00 D		55.20
299-W10-18	5/17/95	80FJS0		94000.00 D		70.40
299-W10-18	5/17/95	80FJS1	47.00		4200.00	
299-W10-18	5/17/95	80FJS2	50.00		4200.00	
299-W14-12	5/17/95	80FJT1		360000.00 D		52.10
299-W14-12	5/17/95	80FJT2	11.00 U		6300.00	
299-W15-22	5/17/95	80FJT5		93000.00 D		8.00 U
299-W15-22	5/17/95	80FJT6	11.00 U		4700.00	

Well Name	Collection Date	Sample Number	SODIUM 34/ppb 44/.	SULFATE 124/ppb 130/250000	TC-99 143/pCi/L ./900	TDS 65/ppm 10/500
299-W10-17	5/17/95	80FJR3		59000.00 D	125.00	470.00
299-W10-17	5/17/95	80FJR4	120000.00 Q			
299-W10-18	5/17/95	80FJR9		43000.00 D	283.00	
299-W10-18	5/17/95	80FJS0		43000.00 D	302.00	370.00
299-W10-18	5/17/95	80FJS1	40000.00 Q			
299-W10-18	5/17/95	80FJS2	40000.00 Q			
299-W14-12	5/17/95	80FJT1		73000.00 D	9000.00	890.00
299-W14-12	5/17/95	80FJT2	31000.00 Q			
299-W15-22	5/17/95	80FJT5		48000.00 D	345.00	390.00
299-W15-22	5/17/95	80FJT6	23000.00 Q			

Table 15-10. Constituents with at Least One Detected Value for the Single-Shell Tank Waste Management Area TX-TY Data for Reporting Period April 1 through June 30, 1995.
(sheet 3 of 3)

Well Name	Collection Date	Sample Number	TRITIUM 142/pCi/L ./20000	TURBID 111/NTU ./.	FVANA01 34/ppb 1.9/.	FZINC. 34/ppb 3.7/5000
299-W10-17	5/17/95	B0FJR3	34200.00	.99		
299-W10-17	5/17/95	B0FJR4			53.00	3.70 U
299-W10-18	5/17/95	B0FJR9	12000.00	3.08		
299-W10-18	5/17/95	B0FJS0	12600.00			
299-W10-18	5/17/95	B0FJS1			24.00 L	11.00
299-W10-18	5/17/95	B0FJS2			25.00 L	7.30 L
299-W14-12	5/17/95	B0FJT1	319000.00	15.80		
299-W14-12	5/17/95	B0FJT2			8.60 L	11.00
299-W15-22	5/17/95	B0FJT5	30600.00	14.50		
299-W15-22	5/17/95	B0FJT6			18.00 L	16.00

For explanation of this table, see Section 1.4 of report.

Table 15-11. Contamination Indicator Parameters for the Single-Shell Tank Waste Management Area TX-TY Data for Reporting Period April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	COND FIELD μmho 1/.	COND LAB μmho 1/.	pH FIELD .01/6.5-8.5a	pH LAB .01/6.5-8.5a	TOC ppb */.	TOX ppb */.
299-W10-17	5/17/95	B0FJR3	697	710	7.98	8.10	400 L	480.0 D
299-W10-18	5/17/95	B0FJR9	589	610	7.78	8.00	300 L	300.0
		B0FJS0		610		8.00	300 L	270.0
299-W14-12	5/17/95	B0FJT1	1392	1300	7.57	7.70	400 L	150.0 D
299-W15-22	5/17/95	B0FJT5	615	630	7.59	7.90	400 L	710.0 D

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

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16.0 300 AREA PROCESS TRENCHES

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16.1 INTRODUCTION

The groundwater near the 300 Area Process Trenches (APT) (316-5) has been monitored by a RCRA well network since June 1985. The groundwater monitoring is being conducted under interim-status regulations (40 CFR 265) and is an assessment-level program (Schalla 1988). A revised groundwater monitoring plan has been prepared (Lindberg 1995). The plan will take effect later this year when the facility goes into a compliance monitoring program under final status.

The 300 APT are located in the northern portion of the 300 Area and were used for the disposal of wastewater from various 300 Area operations. Administrative isolation of the trenches has been completed and all discharges to the trenches have been terminated. Complete physical isolation of the trenches occurred in January 1995. Just before the trenches were taken out of use, the wastewater primarily consisted of cooling water, with small quantities of nonhazardous maintenance and process waste.

Monitoring wells were constructed in response to a *Consent Agreement and Compliance Order* (Ecology and EPA 1986). Locations of groundwater wells currently used to monitor the facility are shown in Figure 16-1. Table 16-1 lists the wells of the monitoring network and provides information about their relative location, the portion of the aquifer sampled, sampling frequency, and last sampling date. Nine of the 11 wells in the monitoring network are RCRA-standard wells while two are older, noncompliant wells.

16.2 WATER LEVEL MEASUREMENTS

Water levels are measured monthly and at the time of sampling in selected 300 Area wells. Water level measurements obtained during the second quarter of 1995 are presented in Table 16-2.

16.3 WATER CHEMISTRY DATA

Water chemistry samples are collected semiannually from the 300 APT monitoring wells. In addition, samples are collected four times per year from well 399-1-17A to provide near-trench monitoring of contaminants. Sampling dates are listed in Table 16-1. Results of water chemistry sampling are shown in Figures 16-3 through 16-5.

Drinking Water Standards (DWSs) were exceeded for two "drinking water parameters" (unfiltered chromium in one well and gross alpha in seven wells), two "groundwater quality parameters" (filtered and unfiltered iron in two wells and filtered and unfiltered manganese in two wells), and one "site-specific and other constituents" (Cis-1,2-Dichloroethene in one well) (Table 16-3). However, uranium (a "site-specific and other constituents") was

elevated in the same wells that had elevated levels of alpha (a "drinking water parameter"). TOX, a "contamination indicator parameter," was elevated in three wells. One of the three wells showing elevated levels of TOX also shows elevated levels of Cis-1,2-Dichloroethene.

Figure 16-1. Monitoring Well Location Map for the 300 Area Process Trenches.

○ 1-12	Well Location and Number (Wells Prefixed by 399-, Except Those Beginning with S are Prefixed with 699-)
■ 4-7	Monitoring Network Well
△ SW9-1	Surface-Water Monitoring Station
ADDITIONAL TO LIST (NOT)	Roads

Table 16-1. Monitoring Well Purpose and Sampling Schedule
for the 300 Area Process Trenches Network.

Well no. (399-)	Relative position	Hydrogeologic unit	Sample frequency	Last sampling date(s)
1-10A	Downgradient	Hanford/Ringold: Water Table	Semiannually	06/01/95
1-11	Adjacent	Hanford/Ringold: Water Table	Semiannually	06/05/95
1-12	Downgradient	Hanford/Ringold: Water Table	Semiannually	06/01/95
1-14A	Adjacent	Hanford: Water Table	Semiannually	06/01/95
1-16A	Downgradient	Ringold: Water Table	Semiannually	06/01/95
1-16B	Downgradient	Ringold: Bottom of Unconfined Aquifer	Semiannually	06/02/95
1-17A	Downgradient	Ringold: Water Table	Four Times Per Year	04/05/95 06/01/95
1-17B	Downgradient	Ringold: Bottom of Unconfined Aquifer	Semiannually	06/02/95
1-18A	Upgradient	Ringold: Water Table	Semiannually	06/01/95
2-1 ^a	Downgradient	Hanford/Ringold: Water Table	Semiannually	06/01/95
3-10 ^a	Downgradient	Hanford: Water Table	Semiannually	06/05/95

Note: Hydrogeologic units include the sandy gravels of the Hanford formation and silty sands of the Ringold Formation. Water levels are measured in all wells monthly.

^aWells 399-2-1 and 399-3-10 are not RCRA standard wells. The results are used as a supplemental source of data only.

Table 16-2. RCRA Water Level Measurement Report for the
300 Area Process Trenches, Second Quarter 1995.
(sheet 1 of 5)

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer				
399-1-1	4/26/95	33.64	343.02	104.55
	5/25/95	32.43	344.23	104.92
	6/26/95	31.00	345.66	105.36
399-1-10A	4/26/95	30.59	342.98	104.54
	5/25/95	29.32	344.25	104.93
	6/01/95	29.60*	344.05	104.87
	6/26/95	27.81	345.84	105.41
399-1-11	4/26/95	34.99	342.73	104.46
	5/25/95	33.54	344.18	104.91
	6/05/95	34.26*	343.46	104.69
	6/26/95	32.32	345.40	105.28
399-1-12	4/26/95	42.08	342.33	104.34
	5/25/95	40.53	343.88	104.81
	6/01/95	39.78*	344.63	105.04
	6/26/95	39.28	345.13	105.20
399-1-14A	4/26/95	40.46	342.77	104.48
	5/25/95	39.01	344.22	104.92
	6/01/95	38.43*	344.80	105.10
	6/26/95	37.81	345.42	105.28
399-1-15	4/26/95	36.63	342.90	104.52
	5/25/95	35.20	344.33	104.95
	6/26/95	34.02	345.51	105.31
399-1-16A	4/26/95	39.07	342.40	104.36
	5/25/95	37.58	343.89	104.82
	6/01/95	37.50*	343.97	104.84
	6/26/95	36.28	345.19	105.21
399-1-17A	4/05/95	35.65*	341.79	104.18
	4/26/95	35.13	342.31	104.34
	5/25/95	33.58	343.86	104.81
	6/01/95	32.90*	344.54	105.02
	6/26/95	32.36	345.08	105.18

Table 16-2. RCRA Water Level Measurement Report for the
300 Area Process Trenches, Second Quarter 1995.
(sheet 2 of 5)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft) (m)	
Wells Monitoring the Top of the Unconfined Aquifer				
399-1-18A	4/26/95	47.43	343.35	104.65
	5/25/95	46.08	344.70	105.06
	6/01/95	45.65*	345.18	105.21
	6/26/95	45.02	345.81	105.40
399-1-19	4/26/95	32.32	342.32	104.34
	5/25/95	30.76	343.88	104.81
	6/26/95	29.50	345.14	105.20
399-1-3	4/26/95	42.36	342.35	104.35
	5/25/95	41.11	343.60	104.73
	6/26/95	39.56	345.15	105.20
399-1-4	4/26/95	37.84	342.74	104.47
	5/25/95	36.39	344.19	104.91
	6/26/95	35.20	345.38	105.27
399-1-5	4/26/95	37.42	342.35	104.35
	5/25/95	35.85	343.92	104.83
	6/26/95	34.58	345.19	105.21
399-1-7	4/26/95	43.26	342.34	104.35
	5/25/95	41.71	343.89	104.82
	6/26/95	40.46	345.14	105.20
399-1-8	4/26/95	42.44	342.44	104.38
	5/25/95	41.00	343.88	104.81
	6/26/95	39.77	345.11	105.19
399-2-1	4/26/95	32.82	342.41	104.37
	5/25/95	31.47	343.76	104.78
	6/01/95	31.62*	343.61	104.73
	6/26/95	29.76	345.47	105.30
399-2-2	4/26/95	35.09	342.43	104.37
	5/25/95	33.66	343.86	104.81
	6/26/95	32.29	345.23	105.23
399-2-3	4/26/95	33.02	342.40	104.36
	5/25/95	31.51	343.91	104.82
	6/26/95	30.17	345.25	105.23

Table 16-2. RCRA Water Level Measurement Report for the
300 Area Process Trenches, Second Quarter 1995.
(sheet 3 of 5)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer				
399-3-1	4/26/95	42.07	342.32	104.34
	5/25/95	40.72	343.67	104.75
	6/26/95	39.19	345.20	105.22
399-3-10	4/26/95	43.09	342.26	104.32
	5/25/95	41.82	343.53	104.71
	6/05/95	42.87*	342.48	104.39
	6/26/95	40.31	345.04	105.17
399-3-12	4/26/95	45.94	342.10	104.27
	5/25/95	44.39	343.65	104.74
	6/26/95	42.77	345.27	105.24
399-3-6	4/26/95	50.66	342.14	104.28
	5/25/95	49.14	343.66	104.75
	6/26/95	47.87	344.93	105.13
399-3-9	4/26/95	45.78	342.30	104.33
	5/25/95	44.60	343.48	104.69
	6/26/95	42.94	345.14	105.20
399-4-1	4/26/95	53.49	342.11	104.28
	5/25/95	52.06	343.54	104.71
	6/26/95	50.78	344.82	105.10
399-4-10	4/26/95	36.25	342.29	104.33
	5/25/95	35.09	343.45	104.68
	6/26/95	33.49	345.05	105.17
399-4-11	4/26/95	62.26	342.19	104.30
	5/25/95	60.86	343.59	104.73
	6/26/95	59.60	344.85	105.11
399-4-7	4/26/95	36.33	342.23	104.31
	5/25/95	35.15	343.41	104.67
	6/26/95	33.58	344.98	105.15
399-4-9	4/26/95	39.85	342.31	104.34
	5/25/95	38.60	343.56	104.72
	6/26/95	37.08	345.08	105.18

Table 16-2. RCRA Water Level Measurement Report for the
300 Area Process Trenches, Second Quarter 1995.
(sheet 4 of 5)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft) (m)	
Wells Monitoring the Top of the Unconfined Aquifer				
399-5-1	4/26/95	53.47	342.06	104.26
	5/25/95	51.90	343.63	104.74
	6/26/95	50.71	344.82	105.10
399-6-1	4/26/95	46.58	342.21	104.31
	5/25/95	45.03	343.76	104.78
	6/26/95	43.83	344.96	105.14
399-8-1	4/26/95	53.92	342.21	104.31
	5/25/95	52.34	343.79	104.79
	6/26/95	51.23	344.90	105.13
399-8-2	4/26/95	55.27	342.75	104.47
	5/25/95	53.94	344.08	104.88
	6/26/95	53.90	344.12	104.89
399-8-3	4/26/95	52.29	342.46	104.38
	5/25/95	50.75	344.00	104.85
	6/26/95	49.56	345.19	105.21
699-S27-E14	4/26/95	59.67	340.01	103.64
	5/25/95	58.57	341.11	103.97
	6/26/95	57.33	342.35	104.35
Wells Monitoring the Bottom of the Unconfined Aquifer				
399-1-16B	4/26/95	38.43	342.65	104.44
	5/25/95	36.99	344.09	104.88
	6/02/95	36.27*	344.87	105.12
	6/26/95	36.08	345.06	105.17
399-1-17B	4/26/95	35.35	342.45	104.38
	5/25/95	33.83	343.97	104.84
	6/02/95	33.11*	344.69	105.06
	6/26/95	32.60	345.20	105.22

Table 16-2. RCRA Water Level Measurement Report for the
300 Area Process Trenches, Second Quarter 1995.
(sheet 5 of 5)

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
Wells Monitoring the Bottom of the Unconfined Aquifer				
399-1-18B	4/26/95	46.16	343.73	104.77
	5/25/95	44.94	344.95	105.14
	6/26/95	43.89	346.00	105.46
Wells Monitoring the Confined Aquifer				
399-1-17C	4/26/95	2.56	375.50	114.45
	5/25/95	2.88	375.18	114.35
	6/26/95	2.04	376.02	114.61
399-1-18C	4/26/95	43.82	344.19	104.91
	5/25/95	41.61	346.40	105.58
	6/26/95	41.64	346.37	105.57
399-1-9	4/26/95	26.98	357.78	109.05
	5/25/95	26.29	358.47	109.26
	6/26/95	25.48	359.28	109.51

- NOTES:
1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
 2. Depth-to-water values are transcribed from field records.
 3. Measurements marked with an '*' were taken at the time of sampling.
 4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 16-3. Constituent List and Summary of Results for the
300 Area Process Trenches Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 3)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CONDUCT		Conductivity, field		umhos	1			18	18	
TOC		Total Organic Carbon		ppb	140			14	14	
TOX	1216	Total Organic Halogen		ppb	5			4	4	
TOX	67	Total Organic Halogen		ppb	6.9			14	2	
PH	93	pH, field		pH	.01	6.5-8.5	EPAS	18	18	0
PH	125	pH, lab		pH		6.5-8.5	EPAS	11	11	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
ARSENIC		Arsenic		ppb	2	50	EPA	11	5	0
FARSENIC		Arsenic, filtered		ppb	2	50	EPA	11	7	0
BARIUM		Barium		ppb	1.4	1000	EPAT	11	11	0
FBARIUM		Barium, filtered		ppb	1.4	1000	EPAT	11	11	0
CADMIUM		Cadmium		ppb	.98	10	EPAT	11	6	0
FCADMIUM		Cadmium, filtered		ppb	.98	10	EPAT	11	7	0
CHROMIUM		Chromium		ppb	3.7	50	EPAT	11	7	1
FCHROMIUM		Chromium, filtered		ppb	3.7	50	EPAT	11	5	0
ALPHA		Gross alpha		pCi/L		15	EPA	11	9	7
MERCURY		Mercury		ppb	.019	2	EPA	11	11	0
FMERCURY		Mercury, filtered		ppb	.019	2	EPA	11	11	0
RADIUM		Radium		pCi/L		5	EPAT	11	0	0
SELENIUM		Selenium		ppb	1.2	10	EPAT	11	7	0
FSELENIUM		Selenium, filtered		ppb	1.2	10	EPAT	11	7	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
IRON		Iron		ppb	8.9	300	EPAS	11	11	2
FIRON		Iron, filtered		ppb	8.9	300	EPAS	11	11	1
MANGANESE		Manganese		ppb	.55	50	EPAS	11	10	2
FMANGANESE		Manganese, filtered		ppb	.55	50	EPAS	11	5	2
SODIUM		Sodium		ppb	44			11	11	
FSODIUM		Sodium, filtered		ppb	44			11	11	
1,1,1-T		1,1,1-Trichloroethane		ppb	.061	200	EPA	11	0	0
1,1,2-T		1,1,2-Trichloroethane		ppb	.068			11	0	
1,1-DIC		1,1-Dichloroethane		ppb	.047			11	0	
1,2-DIC		1,2-Dichloroethane		ppb	.049	5	EPA	11	0	0
1,4-dben		1,4-Dichlorobenzene		ppb	.056	75	EPA	11	0	0
ALKALIN		Alkalinity		ppm	3.5			11	11	
ALUMINUM		Aluminum		ppb	31			11	0	
FALUMINUM		Aluminum, filtered		ppb	31			11	0	
ANTIMONY		Antimony		ppb	24			11	0	
FANTIMONY		Antimony, filtered		ppb	24			11	0	
BENZENE		Benzene		ppb	.059	5	EPA	11	0	0
BERYLLIUM		Beryllium		ppb	.63			11	0	
FBERYLLIUM		Beryllium, filtered		ppb	.63			11	0	
CALCIUM		Calcium		ppb	41			11	11	
FCALCIUM		Calcium, filtered		ppb	41			11	11	
TETRANE		Carbon tetrachloride		ppb	.042	5	EPA	11	0	0
CHLFORM		Chloroform		ppb	.029			11	3	

Table 16-3. Constituent List and Summary of Results for the
300 Area Process Trenches Data for Reporting Period
April 1 through June 30, 1995.
(sheet 2 of 3)

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name	Full	Units	Lab MDL	DWS Limit	Agency	Number of Samples		
								Total	>MDL	>DWS
COBALT		Cobalt	ppb		5.3			11	0	
FCOBALT		Cobalt, filtered	ppb		5.3			11	0	
COPPER		Copper	ppb		2.1	1000	EPAS	11	4	0
FCOPPER		Copper, filtered	ppb		2.1	1000	EPAS	11	5	0
ETHBENZ		Ethylbenzene	ppb		.034	700	EPA	11	0	0
BETA		Gross beta	pCi/L					11	11	
LEAD		Lead	ppb		.88	50	EPAI	11	2	0
FLEAD		Lead, filtered	ppb		.88	50	EPAI	11	1	0
MAGNES		Magnesium	ppb		26			11	11	
FMAGNES		Magnesium, filtered	ppb		26			11	11	
METHYCH		Methylene chloride	ppb		.084			11	0	
NICKEL		Nickel	ppb		11			11	3	
FNICKEL		Nickel, filtered	ppb		11			11	2	
POTASIU		Potassium	ppb		390			11	11	
FPOTASS		Potassium, filtered	ppb		390			11	11	
SILVER		Silver	ppb		5.5	50	EPAI	11	3	0
FSILVER		Silver, filtered	ppb		5.5	50	EPAI	11	6	0
PERCENE		Tetrachloroethene	ppb		.035	5	EPA	11	4	0
TIN		Tin	ppb		30			11	0	
FTIN		Tin, filtered	ppb		30			11	0	
TOLUENE		Toluene	ppb		.048	1000	EPA	11	0	0
TRICENE		Trichloroethene	ppb		.075	5	EPA	11	6	0
TRITIUM		Tritium	pCi/L			20000	EPA	11	9	0
TURBID		Turbidity	NTU					12	12	
URANIUM		Uranium	ppb					11	10	
VANADIU		Vanadium	ppb		1.9			11	9	
FVANADI		Vanadium, filtered	ppb		1.9			11	7	
VINYIDE		Vinyl chloride	ppb		.25	2	EPA	11	0	0
XYLENE		Xylenes (total)	ppb		.085	10000	EPA	11	0	0
ZINC		Zinc	ppb		3.7	5000	EPAS	11	11	0
FZINC		Zinc, filtered	ppb		3.7	5000	EPAS	11	9	0
CIS12DE		cis-1,2-Dichloroethylene	ppb		.049	70	EPA	11	2	1
TRANSCE		trans-1,2-Dichloroethylene	ppb		.045	100	EPA	11	0	0

For explanation of this table, see Section 1.4 of report.

Table 16-4. Constituents with at Least One Detected Value for the
300 Area Process Trenches Data for Reporting Period
April 1 through June 30, 1995.
(sheet 1 of 6)

Well Name	Collection Date	Sample Number	ALKALIN 357/ppm 3.5/.	ARSENIC 43/ppb 2/50	FAHSENIC 43/ppb 2/50	BARIUM 34/ppb 1.4/1000
399-1-10A	6/01/95	B0FLH2	90.00	2.00 U		35.00
399-1-10A	6/01/95	B0FLH3			2.00 U	
399-1-11	6/05/95	B0FLK9	120.00	3.70 L		45.00
399-1-11	6/05/95	B0FLLO			2.80 L	
399-1-12	6/01/95	B0FLM0	120.00	2.70 L		41.00
399-1-12	6/01/95	B0FLM1			2.30 L	
399-1-14A	6/01/95	B0FLM7	130.00	4.30 L		47.00
399-1-14A	6/01/95	B0FLM8			6.90	
399-1-16A	6/01/95	B0FLN4	100.00	2.00 U		48.00
399-1-16A	6/01/95	B0FLN5			3.10 L	
399-1-16B	6/02/95	B0FLP6	130.00	2.00 U		48.00
399-1-16B	6/02/95	B0FLP7			2.00 U	
399-1-17A	6/01/95	B0FLQ3	110.00	2.20 L		42.00
399-1-17A	6/01/95	B0FLQ7			2.40 L	
399-1-17B	6/02/95	B0FLR3	170.00	2.00 U		62.00
399-1-17B	6/02/95	B0FLR5			2.00 U	
399-1-18A	6/01/95	B0FLS5	130.00	6.00		49.00
399-1-18A	6/01/95	B0FLS6			6.60	
399-2-1	6/01/95	B0FLT2	60.00	2.00 U		31.00
399-2-1	6/01/95	B0FLT3			2.90 L	
399-3-10	6/05/95	B0FLT9	90.00	2.00 U		57.00
399-3-10	6/05/95	B0FLV0			2.00 U	

Well Name	Collection Date	Sample Number	FBARIUM 34/ppb 1.4/1000	CADMIUM 34/ppb .98/10	PCADMIU 34/ppb .98/10	CALCIUM 34/ppb 41/.
399-1-10A	6/01/95	B0FLH2		.98 L		30000.00
399-1-10A	6/01/95	B0FLH3	35.00		1.00 L	
399-1-11	6/05/95	B0FLK9		2.60 BL		49000.00
399-1-11	6/05/95	B0FLLO	45.00		.98 U	
399-1-12	6/01/95	B0FLM0		.98 U		49000.00
399-1-12	6/01/95	B0FLM1	41.00		.98 U	
399-1-14A	6/01/95	B0FLM7		1.60 L		49000.00
399-1-14A	6/01/95	B0FLM8	45.00		2.10 L	
399-1-16A	6/01/95	B0FLN4		1.30 L		37000.00
399-1-16A	6/01/95	B0FLN5	48.00		1.10 L	
399-1-16B	6/02/95	B0FLP6		.98 U		16000.00
399-1-16B	6/02/95	B0FLP7	48.00		.98 U	
399-1-17A	6/01/95	B0FLQ3		.98 U		47000.00
399-1-17A	6/01/95	B0FLQ7	43.00		1.10 L	
399-1-17B	6/02/95	B0FLR3		.98 L		17000.00
399-1-17B	6/02/95	B0FLR5	63.00		1.80 L	
399-1-18A	6/01/95	B0FLS5		1.60 L		47000.00
399-1-18A	6/01/95	B0FLS6	49.00		1.50 L	
399-2-1	6/01/95	B0FLT2		.98 U		19000.00
399-2-1	6/01/95	B0FLT3	31.00		.98 U	
399-3-10	6/05/95	B0FLT9		.98 U		35000.00
399-3-10	6/05/95	B0FLV0	58.00		1.00 BL	

Table 16-4. Constituents with at Least One Detected Value for the
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Well Name	Collection Date	Sample Number	PCALCIN 34/ppb 41/.	CHLFORM 25/ppb .029/.	CHROMUM 34/ppb 3.7/50	FCROMI 34/ppb 3.7/50
399-1-10A	6/01/95	BOFLH2		.03 U	3.70 U	
399-1-10A	6/01/95	BOFLH3	30000.00			3.70 U
399-1-11	6/05/95	BOFLK9		.03 U	5.60 L	
399-1-11	6/05/95	BOFLLO	49000.00			5.30 L
399-1-12	6/01/95	BOFLM0		.03 L	8.50 L	
399-1-12	6/01/95	BOFLM1	30000.00			3.80 L
399-1-14A	6/01/95	BOFLM7		.03 U	58.00	
399-1-14A	6/01/95	BOFLM8	49000.00			3.70 U
399-1-16A	6/01/95	BOFLM4		.03 U	10.00 L	
399-1-16A	6/01/95	BOFLM5	37000.00			5.30 L
399-1-16B	6/02/95	BOFLP6		.03 U	3.70 U	
399-1-16B	6/02/95	BOFLP7	15000.00			3.70 U
399-1-17A	6/01/95	BOFLQ3		.04 L	9.50 L	
399-1-17A	6/01/95	BOFLQ7	47000.00			4.60 L
399-1-17B	6/02/95	BOFLR3		.03 U	3.70 U	
399-1-17B	6/02/95	BOFLR5	18000.00			3.70 U
399-1-18A	6/01/95	BOFLS3		.03 U	16.00 L	
399-1-18A	6/01/95	BOFLS6	47000.00			7.60 L
399-2-1	6/01/95	BOFLT2		.03 U	3.70 U	
399-2-1	6/01/95	BOFLT3	18000.00			3.70 U
399-3-10	6/05/95	BOFLT9		.64	9.70 L	
399-3-10	6/05/95	BOFLV0	35000.00			3.70 U

Well Name	Collection Date	Sample Number	COPPER 34/ppb 2.1/1000	FCOPPER 34/ppb 2.1/1000	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.
399-1-10A	6/01/95	BOFLH2	2.10 U		24.50	13.90
399-1-10A	6/01/95	BOFLH3		2.10 U		
399-1-11	6/05/95	BOFLK9	2.10 U		26.90	14.20
399-1-11	6/05/95	BOFLLO		3.20 L		
399-1-12	6/01/95	BOFLM0	2.10 U		24.20	22.00
399-1-12	6/01/95	BOFLM1		2.10 U		
399-1-14A	6/01/95	BOFLM7	9.30 L		5.27	12.00
399-1-14A	6/01/95	BOFLM8		2.10 U		
399-1-16A	6/01/95	BOFLM4	3.20 L		37.10	14.70
399-1-16A	6/01/95	BOFLR5		2.10 L		
399-1-16B	6/02/95	BOFLP6	2.10 U		1.04 U	6.47
399-1-16B	6/02/95	BOFLP7		2.10 U		
399-1-17A	6/01/95	BOFLQ3	2.10 U		137.00	48.20
399-1-17A	6/01/95	BOFLQ7		2.10 U		
399-1-17B	6/02/95	BOFLR3	2.10 U		.41 U	7.08
399-1-17B	6/02/95	BOFLR5		2.90 L		
399-1-18A	6/01/95	BOFLS3	2.10 U		2.40	8.88
399-1-18A	6/01/95	BOFLS6		2.10 U		
399-2-1	6/01/95	BOFLT2	2.90 L		40.40	12.10
399-2-1	6/01/95	BOFLT3		2.50 L		
399-3-10	6/05/95	BOFLT9	4.70 L		16.50	5.77
399-3-10	6/05/95	BOFLV0		2.90 L		

Table 16-4. Constituents with at Least One Detected Value for the
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Well Name	Collection Date	Sample Number	IRON 34/ppb 8.9/300	FIROM 34/ppb 8.9/300	LEAD 40/ppb .88/50	PLEAD 40/ppb .88/50
399-1-10A	6/01/95	BOFLH2	22.00 BQ		.88 U	
399-1-10A	6/01/95	BOFLH3		16.00 BLQ		.88 U
399-1-11	6/05/95	BOFLK9	21.00 BQ		.88 U	
399-1-11	6/05/95	BOFLLO		12.00 BLQ		.88 U
399-1-12	6/01/95	BOFLM0	30.00 BQ		.88 U	
399-1-12	6/01/95	BOFLM1		20.00 BQ		.88 U
399-1-14A	6/01/95	BOFLM7	200.00 BQ		1.80 BL	
399-1-14A	6/01/95	BOFLM8		15.00 BLQ		.88 U
399-1-16A	6/01/95	BOFLM4	50.00 BQ		.88 U	
399-1-16A	6/01/95	BOFLM5		19.00 BLQ		12.00 B
399-1-16B	6/02/95	BOFLP6	90.00 BQ		.88 U	
399-1-16B	6/02/95	BOFLP7		73.00 BQ		.88 U
399-1-17A	6/01/95	BOFLQ3	46.00 BQ		.88 U	
399-1-17A	6/01/95	BOFLQ7		16.00 BLQ		.88 U
399-1-17B	6/02/95	BOFLR3	490.00 BQ		.88 U	
399-1-17B	6/02/95	BOFLR5		420.00 BQ		.88 U
399-1-18A	6/01/95	BOFLS5	180.00 BQ		2.60 BL	
399-1-18A	6/01/95	BOFLS6		22.00 BQ		.88 U
399-2-1	6/01/95	BOFLT2	530.00 BQ		.88 U	
399-2-1	6/01/95	BOFLT3		33.00 BQ		.88 U
399-3-10	6/05/95	BOFLT9	160.00 BQ		.88 U	
399-3-10	6/05/95	BOFLV0		55.00 BQ		.88 U

Well Name	Collection Date	Sample Number	MAGNES 34/ppb 26/.	FMAGNES 34/ppb 26/.	MANGESE 34/ppb .55/50	FMANGAN 34/ppb .55/50
399-1-10A	6/01/95	BOFLH2	6400.00		1.00 L	
399-1-10A	6/01/95	BOFLH3		6300.00		.55 U
399-1-11	6/05/95	BOFLK9	11000.00		.55 U	
399-1-11	6/05/95	BOFLLO		11000.00		.55 U
399-1-12	6/01/95	BOFLM0	10000.00		.72 L	
399-1-12	6/01/95	BOFLM1		11000.00		.55 U
399-1-14A	6/01/95	BOFLM7	11000.00		2.40 L	
399-1-14A	6/01/95	BOFLM8		11000.00		.55 U
399-1-16A	6/01/95	BOFLM4	7300.00		1.70 L	
399-1-16A	6/01/95	BOFLM5		7300.00		1.80 L
399-1-16B	6/02/95	BOFLP6	5400.00		62.00	
399-1-16B	6/02/95	BOFLP7		5500.00		62.00
399-1-17A	6/01/95	BOFLQ3	11000.00		1.00 L	
399-1-17A	6/01/95	BOFLQ7		11000.00		.55 U
399-1-17B	6/02/95	BOFLR3	6400.00		77.00	
399-1-17B	6/02/95	BOFLR5		6500.00		77.00
399-1-18A	6/01/95	BOFLS5	13000.00		2.40 L	
399-1-18A	6/01/95	BOFLS6		13000.00		.55 U
399-2-1	6/01/95	BOFLT2	3800.00		23.00	
399-2-1	6/01/95	BOFLT3		3700.00		.83 L
399-3-10	6/05/95	BOFLT9	7600.00		3.40 L	
399-3-10	6/05/95	BOFLV0		7600.00		1.70 L

Table 16-4. Constituents with at Least One Detected Value for the
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Well Name	Collection Date	Sample Number	MERCURY 41/ppb .019/2	MERCUR 41/ppb .019/2	NICKEL 34/ppb 11/.	NICKEL 34/ppb 11/.
399-1-10A	6/01/95	BOFLH2	.11 BL		11.00 U	
399-1-10A	6/01/95	BOFLH3		.12 BL		11.00 U
399-1-11	6/05/95	BOFLK9	.09 BL		11.00 U	
399-1-11	6/05/95	BOFLLO		.14 BL		11.00 U
399-1-12	6/01/95	BOFLN0	.07 BL		11.00 L	
399-1-12	6/01/95	BOFLM1		.10 BL		16.00 L
399-1-14A	6/01/95	BOFLM7	.10 BL		30.00	
399-1-14A	6/01/95	BOFLM8		.10 BL		11.00 U
399-1-16A	6/01/95	BOFLM4	.13 BL		68.00	
399-1-16A	6/01/95	BOFLM5		.14 BL		73.00
399-1-16B	6/02/95	BOFLP6	.06 BL		11.00 U	
399-1-16B	6/02/95	BOFLP7		.09 BL		11.00 U
399-1-17A	6/01/95	BOFLQ3	.13 BL		11.00 U	
399-1-17A	6/01/95	BOFLQ7		.06 BL		11.00 U
399-1-17B	6/02/95	BOFLR3	.10 BL		11.00 U	
399-1-17B	6/02/95	BOFLR5		.07 BL		11.00 U
399-1-18A	6/01/95	BOFLS5	.09 BL		11.00 U	
399-1-18A	6/01/95	BOFLS6		.12 BL		11.00 U
399-2-1	6/01/95	BOFLT2	.08 BL		11.00 U	
399-2-1	6/01/95	BOFLT3		.05 BL		11.00 U
399-3-10	6/05/95	BOFLT9	.09 BL		11.00 U	
399-3-10	6/05/95	BOFLV0		.07 BL		11.00 U

Well Name	Collection Date	Sample Number	POTASSIUM 34/ppb 390/.	POTASS 34/ppb 390/.	SELENIUM 48/ppb 1.2/10	SELENI 48/ppb 1.2/10
399-1-10A	6/01/95	BOFLH2	2800.00		2.70 L	
399-1-10A	6/01/95	BOFLH3		3200.00		1.20 U
399-1-11	6/05/95	BOFLK9	3600.00		2.70 L	
399-1-11	6/05/95	BOFLLO		3800.00		1.60 L
399-1-12	6/01/95	BOFLN0	3000.00		1.90 L	
399-1-12	6/01/95	BOFLM1		3500.00		2.70 L
399-1-14A	6/01/95	BOFLM7	5600.00		1.90 L	
399-1-14A	6/01/95	BOFLM8		5400.00		2.10 L
399-1-16A	6/01/95	BOFLM4	3300.00		2.20 L	
399-1-16A	6/01/95	BOFLM5		3100.00		1.50 L
399-1-16B	6/02/95	BOFLP6	5300.00		1.20 U	
399-1-16B	6/02/95	BOFLP7		5400.00		1.20 U
399-1-17A	6/01/95	BOFLQ3	2400.00		2.90 L	
399-1-17A	6/01/95	BOFLQ7		2100.00		2.90 L
399-1-17B	6/02/95	BOFLR3	5800.00		1.20 U	
399-1-17B	6/02/95	BOFLR5		6200.00		1.20 U
399-1-18A	6/01/95	BOFLS5	6600.00		1.80 L	
399-1-18A	6/01/95	BOFLS6		7000.00		1.30 L
399-2-1	6/01/95	BOFLT2	2900.00		1.20 U	
399-2-1	6/01/95	BOFLT3		2900.00		1.20 L
399-3-10	6/05/95	BOFLT9	3600.00		1.20 U	
399-3-10	6/05/95	BOFLV0		3800.00		1.20 U

Table 16-4. Constituents with at Least One Detected Value for the
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Well Name	Collection Date	Sample Number	SILVER 34/ppb 5.5/50	PSILVER 34/ppb 5.5/50	SODIUM 34/ppb 44/.	FSODIUM 34/ppb 44/.
399-1-10A	6/01/95	BOFLH2	5.50 UQ		17000.00 Q	
399-1-10A	6/01/95	BOFLH3		6.10 LQ		17000.00 Q
399-1-11	6/05/95	BOFLK9	9.60 BLQ		24000.00 Q	
399-1-11	6/05/95	BOFLLO		8.90 BLQ		24000.00 Q
399-1-12	6/01/95	BOFLM0	5.50 UQ		24000.00 Q	
399-1-12	6/01/95	BOFLM1		5.50 UQ		24000.00 Q
399-1-14A	6/01/95	BOFLM7	5.80 LQ		24000.00 Q	
399-1-14A	6/01/95	BOFLM8		5.50 UQ		25000.00 Q
399-1-16A	6/01/95	BOFLN4	5.50 UQ		20000.00 Q	
399-1-16A	6/01/95	BOFLN5		5.50 UQ		20000.00 Q
399-1-16B	6/02/95	BOFLP6	5.50 UQ		49000.00 Q	
399-1-16B	6/02/95	BOFLP7		9.20 LQ		50000.00 Q
399-1-17A	6/01/95	BOFLQ3	5.50 UQ		27000.00 Q	
399-1-17A	6/01/95	BOFLQ7		5.50 UQ		27000.00 Q
399-1-17B	6/02/95	BOFLR3	5.50 UQ		51000.00 Q	
399-1-17B	6/02/95	BOFLR5		7.80 LQ		52000.00 Q
399-1-18A	6/01/95	BOFLS5	5.50 UQ		25000.00 Q	
399-1-18A	6/01/95	BOFLS6		5.50 UQ		24000.00 Q
399-2-1	6/01/95	BOFLT2	5.50 UQ		13000.00 Q	
399-2-1	6/01/95	BOFLT3		7.10 LQ		13000.00 Q
399-3-10	6/05/95	BOFLT9	11.00 BLQ		15000.00 Q	
399-3-10	6/05/95	BOFLV0		9.60 BLQ		15000.00 Q

Well Name	Collection Date	Sample Number	PERCENE 25/ppb .035/5	TRICENE 25/ppb .075/5	TRITIUM 142/pCi/L ./20000	TURBID 111/NTU ./.
399-1-10A	6/01/95	BOFLH2	.04 U	.08 U	5840.00	.31
399-1-11	6/05/95	BOFLK9	.04 U	.08 U	12700.00	.36
399-1-12	6/01/95	BOFLM0	.23 L	.11 L	12100.00	.24
399-1-14A	6/01/95	BOFLM7	.37 L	.08 U	12500.00	.19
399-1-16A	6/01/95	BOFLN4	.06 L	.30 L	7920.00	.34
399-1-16B	6/02/95	BOFLP6	.04 U	1.50	205.00 U	.32
399-1-17A	6/05/95	BOFLS1				.33
399-1-17A	6/01/95	BOFLQ3	.23 L	.13 L	11800.00	.09
399-1-17B	6/02/95	BOFLR3	.04 U	.08 U	-1.02 U	.58
399-1-18A	6/01/95	BOFLS5	.04 U	.08 U	13400.00	.42
399-2-1	6/01/95	BOFLT2	.04 U	.32 L	1650.00	.76
399-3-10	6/05/95	BOFLT9	.04 U	.57 L	2050.00	.51

Well Name	Collection Date	Sample Number	URANIUM 145/ppb ./.	VANADIUM 34/ppb 1.9/.	PVANADI 34/ppb 1.9/.	ZINC 34/ppb 3.7/5000
399-1-10A	6/01/95	BOFLH2	52.10	4.10 L		17.00 BQ
399-1-10A	6/01/95	BOFLH3			5.40 L	
399-1-11	6/05/95	BOFLK9	33.40	7.50 L		19.00 Q
399-1-11	6/05/95	BOFLLO			8.00 L	
399-1-12	6/01/95	BOFLM0	59.80	5.10 L		11.00 BQ
399-1-12	6/01/95	BOFLM1			5.40 L	
399-1-14A	6/01/95	BOFLM7	7.73	12.00 L		12.00 BQ
399-1-14A	6/01/95	BOFLM8			11.00 L	
399-1-16A	6/01/95	BOFLN4	80.30	2.50 L		31.00 BQ
399-1-16A	6/01/95	BOFLN5			1.90 U	

Table 16-4. Constituents with at Least One Detected Value for the
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Well Name	Collection Date	Sample Number	URANIUM 145/ppb ./.	VANADIUM 34/ppb 1.9/.	PVANADI 34/ppb 1.9/.	ZINC 34/ppb 3.7/5000
399-1-16B	6/02/95	B0FLP6	1.95	1.90 U		14.00 BQ
399-1-16B	6/02/95	B0FLP7			1.90 U	
399-1-17A	6/01/95	B0FLQ3	179.00	2.70 L		7.80 BLQ
399-1-17A	6/01/95	B0FLQ7			1.90 U	
399-1-17B	6/02/95	B0FLR3	.04 U	1.90 U		22.00 BQ
399-1-17B	6/02/95	B0FLR5			1.90 U	
399-1-18A	6/01/95	B0FLS5	5.40	11.00 L		4.50 BLQ
399-1-18A	6/01/95	B0FLS6			13.00 L	
399-2-1	6/01/95	B0FLT2	65.50	2.90 L		21.00 BQ
399-2-1	6/01/95	B0FLT3			3.80 L	
399-3-10	6/05/95	B0FLT9	27.80	2.20 L		12.00 Q
399-3-10	6/05/95	B0FLV0			2.00 L	

Well Name	Collection Date	Sample Number	FZINC 34/ppb 3.7/5000	CIS12DE 25/ppb .069/70
399-1-10A	6/01/95	B0FLR2		.05 U
399-1-10A	6/01/95	B0FLH3	11.00 BQ	
399-1-11	6/05/95	B0FLK9		.05 U
399-1-11	6/05/95	B0FLLO	25.00 Q	
399-1-12	6/01/95	B0FLM0		.05 U
399-1-12	6/01/95	B0FLM1	10.00 BLQ	
399-1-14A	6/01/95	B0FLM7		.05 U
399-1-14A	6/01/95	B0FLM8	5.00 BLQ	
399-1-16A	6/01/95	B0FLM4		.05 U
399-1-16A	6/01/95	B0FLN5	41.00 BQ	
399-1-16B	6/02/95	B0FLP6		100.00 D
399-1-16B	6/02/95	B0FLP7	9.40 BLQ	
399-1-17A	6/01/95	B0FLQ3		.05 U
399-1-17A	6/01/95	B0FLQ7	17.00 BQ	
399-1-17B	6/02/95	B0FLR3		.80 L
399-1-17B	6/02/95	B0FLR5	3.70 UQ	
399-1-18A	6/01/95	B0FLS5		.05 U
399-1-18A	6/01/95	B0FLS6	3.70 UQ	
399-2-1	6/01/95	B0FLT2		.05 U
399-2-1	6/01/95	B0FLT3	12.00 BQ	
399-3-10	6/05/95	B0FLT9		.05 U
399-3-10	6/05/95	B0FLV0	12.00 Q	

For explanation of this table, see Section 1.4 of report.

Table 16-5. Contamination Indicator Parameters for the
300 Area Process Trenches Data for Reporting Period
April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	COND FIELD μmho 1/.	COND LAB μmho 1/.	pH FIELD .01/6.5-8.5s	pH LAB .01/6.5-8.5s	TOC ppb */.	TOX ppb */.
399-1-10A	6/01/95	B0FLH2	276		7.46	7.60	600 L	6.9 U
399-1-11	6/05/95	B0FLK9	455		8.20	7.70	300 L	6.9 U
399-1-12	6/01/95	B0FLM0	450		7.62	7.70	500 L	6.9 U
399-1-14A	6/01/95	B0FLM7	424		7.78	7.80	300 L	40.0
399-1-16A	6/01/95	B0FLN4	328		7.56	7.60	400 L	6.9 U
399-1-16B	6/02/95	B0FLP6	339		8.00	8.00	400 L	70.0
399-1-17A	4/05/95	B0FBL1	434		7.36			19.5
		B0FBL2	434		7.36			5.8
		B0FBL3	434		7.37			11.7
		B0FBL4	434		7.36			9.4
	6/01/95	B0FLQ3	431		7.42	7.60	400 L	6.9 U
		B0FLQ4	448		7.42		300 L	6.9 U
		B0FLQ5	445		7.41		300 L	6.9 U
		B0FLQ6	446		7.41		300 L	6.9 U
399-1-17B	6/02/95	B0FLR3	362		7.85	7.60	300 L	6.9 U
399-1-18A	6/01/95	B0FLS5	477		8.00	8.00	400 L	6.9 U
399-2-1	6/01/95	B0FLT2	183		7.19	7.40	900 L	6.9 U
399-3-10	6/05/95	B0FLT9	320		7.41	7.30	600 L	6.9 U

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

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17.0 NONRADIOACTIVE DANGEROUS WASTE LANDFILL

F. N. Hodges
Westinghouse Hanford Company

17.1 INTRODUCTION

The Nonradioactive Dangerous Waste Landfill (NRDWL) is part of the Hanford Central Landfill. The NRDWL is located approximately 5.6 km (3.5 mi) southeast of the 200 East Area. The NRDWL, covered under the *Consent Agreement and Compliance Order* (Ecology and EPA 1986), is currently under an interim-status, detection-level groundwater monitoring program (WHC 1993c). The groundwater monitoring network consists of three upgradient wells and six downgradient wells (Table 17-1). Two upgradient and five downgradient wells are screened at the top of the water table. One upgradient and one downgradient well are screened at the top of a low-permeability unit, approximately 21.3 m (70 ft) below the top of the water table. Figure 17-1 shows well locations. It should be noted that well 699-26-34A on Figure 17-1 was previously named 699-26-34.

17.2 WATER LEVEL DATA

Water level measurements were carried out on a monthly schedule for nine NRDWL monitoring wells, the six monitoring wells of the adjacent Solid Waste Landfill, and in several nearby non-RCRA wells. Results of the water level measurements are reported in Table 17-2.

17.3 WATER CHEMISTRY DATA

The monitoring network for the NRDWL is on a semiannual sampling schedule. The monitoring network was sampled in February 1995 but was not sampled during the current reporting quarter. The network was sampled during August 1995 and those results will be included in the RCRA report for the third quarter. The next scheduled sampling for the NRDWL network is in February 1996. This report contains water level data for the second quarter of CY 1995 and previously unreported indicator parameter data from the first quarter of CY 1995. The results are reported in Tables 17-3 and 17-4.

Values for specific conductance, field pH, TOC, and TOX reported for this quarter do not exceed the critical means for this site.

Figure 17-1. Well Location Map for the Nonradioactive Dangerous Waste Landfill and Solid Waste Landfill.

HS-002008.24

Table 17-1. Monitoring Well Purpose and Sampling Schedule for the Nonradioactive Dangerous Waste Landfill Network.

Well no. (699-)	Relative position	Hydrogeologic unit	Sample frequency	Sample date, 2nd Qtr 1995
26-34A	Upgradient	Hanford: Water Table	Semiannually	N.S. ¹
26-35A	Upgradient	Hanford: Water Table	Semiannually ²	N.S.
26-35C	Upgradient	Top of Ringold	Semiannually	N.S.
25-33A	Downgradient	Top of Ringold	Semiannually	N.S.
25-34A	Downgradient	Hanford: Water Table	Semiannually	N.S.
25-34B	Downgradient	Hanford: Water Table	Semiannually	N.S.
25-34D	Downgradient	Hanford: Water Table	Semiannually	N.S.
26-33	Downgradient	Hanford: Water Table	Semiannually	N.S.
26-34B	Downgradient	Hanford: Water Table	Semiannually	N.S.

Note: Hydrogeologic units include the sandy gravels of the Hanford formation and silty sands of the Ringold Formation. Water levels are measured monthly in all wells.

1. Not sampled

2. Also sampled as part of the network for the Solid Waste Landfill.

Table 17-2. RCRA Water Level Measurement Report
for the NRDWL, Second Quarter 1995.
(sheet 1 of 3)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
NRDWL Wells Monitoring the Top of the Unconfined Aquifer at the Water Table				
699-25-34A	4/25/95	130.30	400.01	121.92
	5/17/95	129.61	400.70	122.13
	6/29/95	129.71	400.60	122.10
699-25-34B	4/25/95	131.00+	398.40	121.43
	5/17/95	128.61	400.79	122.16
	6/29/95	128.68	400.72	122.14
699-25-34D	4/25/95	136.11	401.80	122.47
	5/17/95	137.03	400.88	122.19
	6/29/95	137.09	400.82	122.17
699-26-33	4/25/95	136.07	399.59	121.80
	5/17/95	134.97	400.69	122.13
	6/29/95	135.94	399.72	121.83
699-26-34A	4/25/95	128.66	399.74	121.84
	5/17/95	127.61	400.79	122.16
	6/29/95	127.91	400.49	122.07
699-26-34B	4/25/95	129.47	400.80	122.16
	5/17/95	129.37	400.90	122.19
	6/29/95	129.44	400.83	122.17
699-26-35A	4/25/95	133.05	399.61	121.80
	5/17/95	132.00	400.66	122.12
	6/29/95	132.45	400.21	121.98
NRDWL Wells Monitoring the Upper Ringold				
699-25-33A	4/25/95	128.25	400.72	122.14
	5/17/95	128.17	400.80	122.16
	6/29/95	128.22	400.75	122.15
699-26-35C	4/25/95	131.89	400.79	122.16
	5/17/95	131.80	400.88	122.19
	6/29/95	131.85	400.83	122.17

Table 17-2. RCRA Water Level Measurement Report
for the NRDWL, Second Quarter 1995.
(sheet 2 of 3)

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
Other Wells Associated with NRDWL				
699-20-20	4/25/95	106.31	399.27	121.70
	5/17/95	106.29	399.29	121.70
	6/29/95	106.35	399.23	121.69
699-20-39	4/25/95	138.94	401.04	122.24
	5/17/95	138.87	401.11	122.26
	6/29/95	138.83	401.15	122.27
699-22-35	4/25/95	133.28	400.69	122.13
	5/17/95	133.16	400.81	122.17
	6/29/95	133.23	400.74	122.15
699-23-34A	4/25/95	132.09	400.77	122.15
	5/17/95	132.01	400.85	122.18
	6/29/95	132.08	400.78	122.16
699-23-34B	4/25/95	132.77	400.73	122.14
	5/17/95	132.68	400.82	122.17
	6/29/95	132.74	400.76	122.15
699-24-33	4/25/95	123.47	400.80	122.16
	5/17/95	123.43	400.84	122.18
	6/29/95	123.37	400.90	122.19
699-24-34A	4/25/95	133.13	400.75	122.15
	5/17/95	133.03	400.85	122.18
	6/29/95	132.99	400.89	122.19
699-24-34B	4/25/95	132.71	400.79	122.16
	5/17/95	132.62	400.88	122.19
	6/29/95	132.69	400.81	122.17
699-24-34C	4/25/95	131.82	400.77	122.15
	5/17/95	131.73	400.86	122.18
	6/29/95	131.81	400.78	122.16
699-24-35	4/25/95	138.03	400.78	122.16
	5/17/95	137.94	400.87	122.19
	6/29/95	138.01	400.80	122.16

Table 17-2. RCRA Water Level Measurement Report
for the NRDWL, Second Quarter 1995.
(sheet 3 of 3)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
Other Wells Associated with NRDWL				
699-25-34C	4/25/95	134.68	400.78	122.16
	5/17/95	134.60	400.86	122.18
	6/29/95	134.67	400.79	122.16
699-28-40	4/25/95	158.37	401.07	122.25
	5/17/95	158.30	401.14	122.27
	6/29/95	158.27	401.17	122.28
699-31-31	4/25/95	128.63	400.69	122.13
	5/17/95	128.55	400.77	122.15
	6/29/95	128.61	400.71	122.14
699-34-39A	4/25/95	135.90	401.17	122.28
	5/17/95	135.83	401.24	122.30
	6/29/95	135.83	401.24	122.30

- NOTES: 1. Water level elevations are calculated by subtracting the measured depth-to-water from the surveyed elevation for the well.
2. Depth-to-water values are transcribed from field records.
3. Measurements marked with an '*' were taken at the time of sampling.
4. Measurements marked with a '+' are outside of the expected range, and are suspected of error.

Table 17-3. Constituent List and Summary of Results for the
NRDW Landfill Data for Reporting Period
April 1 through June 30, 1995.

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name	Full	Units	Lab MDL	DWS Limit	Agency	Number of Samples		
								Total	>MDL	>DWS
CONDUCT		Conductivity, field		µmhos	1			15	15	
TOC		Total Organic Carbon		ppb	140			15	4	
TOX		Total Organic Halogen		ppb	6.9			19	15	
PH		pH, field		pH	.01	6.5-8.5	EPAS	15	15	0

For explanation of this table, see Section 1.4 of report.

Table 17-4. Contamination Indicator Parameters for the
NRDW Landfill Data for Reporting Period
April 1 through June 30, 1995.

Well Name	Collection Date	Sample Number	COND FIELD µmho 1/.	COND LAB µmho 1/.	pH FIELD .01/6.5-8.5a	pH LAB .01/6.5-8.5a	TOC ppb */.	TOX ppb */.
699-25-34D	2/28/95	B00P24	485		7.56		110 U	11.4
		B00P25	487		7.57		110 U	12.6
		B00P26	487		7.56		110 L	8.7
		B0F6B4						9.8
699-26-33	2/28/95	B00P29	450		7.76		130 L	9.2
		B00Q00	449		7.75		130 L	14.4
		B00Q01	450		7.74		130 L	15.0
		B0F6B5						7.0
699-26-34B	2/28/95	B00Q09	430		7.76		200 L	6.2
		B00Q10	432		7.72		200 L	7.9
		B00Q11	430		7.70		300 L	5.3
		B0F6B6						8.2
699-26-35A	2/28/95	B00QV9	454		7.56		130 L	12.5
		B00QW0	454		7.56		110 U	9.5
		B00QW1	455		7.55		110 U	9.5
		B00Q14	417		8.04		130 L	14.3
699-26-35C	2/28/95	B00Q15	417		8.03		130 L	6.3
		B00Q16	417		8.03		140 L	7.2
		B0F6B7						5.0 U

* Detection limits for TOC and TOX vary depending on the performing laboratory.
For explanation of this table, see Section 1.4 of report.

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