Quarterly Report of RCRA Groundwater Monitoring Data for Period October 1 through December 31, 1994

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	méthod 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 OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994

1.0 INTRODUCTION

Hanford Site interim-status groundwater monitoring projects are conducted as either background, indicator parameter evaluation, or groundwater quality assessment monitoring programs as defined in the *Resource Conservation and Recovery Act of 1976 (RCRA)*; and "Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities" (Title 40 *Code of Federal Regulations [CFR] Part 265*), as amended. Compliance with the 40 CFR 265 regulations is required by the *Washington Administrative Code (WAC) 173-303*. This report contains data from Hanford Site groundwater monitoring projects. The location of each facility is shown in Figure 1-1.

Westinghouse Hanford Company (WHC) manages the RCRA groundwater monitoring projects for federal facilities 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 and provides groundwater sampling services to WHC for the RCRA groundwater monitoring program.

This quarterly report contains data received between October and December 1994, which are the cutoff dates for this reporting period. This report may contain not only data from the October through December 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 the hazardous chemicals analyses for the Hanford Site. Analyses for coliform bacteria are performed by Columbia Biomedical Laboratories (CBML) and analyses for dioxin are performed by TMS Analytical Services, Inc.; both are under subcontract to DataChem Laboratories. International Technology Analytical Services (ITAS) Richland, Washington, 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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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 1992b).

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 by 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 analyses 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 October through December 1994 quarter, only the primary hazardous chemistry and radiochemistry laboratories were requested to analyze samples and submit data. Samples were 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	38	36	95
100-N	835	777	93
183-H	1112	990	89
2101-M	368	368	100
216-A-10	593	538	91
216-A-29	1869	1752	94
216-A-368	358	327	91
216-B-3	1246	1206	97
216-B-63	1299	1249	96
216-S-10	568	492	87
216-U-12	714	660	92
300 APT	973	872	90
LERF	0	0	N/A
LLBG WMA-1	1810	1661	92
LLBG WMA-2	1793	1721	96
LLBG WMA-3	339	299	88
LLBG WMA-4	1926	1729	90
LLBG WMA-5	178	166	93
NRDWL	0	0	N/A
SST A/AX	73	71	97
SST B/BX/BY	246	232	94
SST C	60	60	100
SST S/SX	124	109	88
SST T	746	683	92

Table 1-1. Completeness. (2 sheets)

Project	Total number of evaluated data	Number of unflagged results	Percent complete (unflagged)
SST TX/TY	396	368	93
SST U	73	72	99

APT = Area Process Trench.

LERF = Liquid Effluent Retention Facility.

LLBG = Low-Level Burial Grounds.

NRDWL = Nonradioactive Dangerous Waste Landfill.

SWL = Solid 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 flags for samples exceeding holding times; (2) Q flags for field blank and duplicate data exceeding quality control limits; (3) F flags for data under the Request for Analytical Data Evaluation (RADE) process; and (4) P flags for data identified as a "potential problem."

1. 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. Data associated with field blanks that indicate contamination and data associated with field duplicate samples that show greater than 25% relative percent difference (RPD) are identified in the quarterly project data tables with a Q flag. 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* (WHC-CM-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. The RADE system is 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. 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,' or 'R'.
5. 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 $\pm 25\%$.
- Blanks--Four kinds of blanks are used to check for contamination resulting from field activities and/or bottle preparation. These are full trip, daily trip, field transfer, and bottle 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 October through December 1994 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, Fourth Quarter 1994.

Quality control sample	Number of analyses	Number of results outside of criteria	Acceptable (%)
Duplicates	879	52	94.1
Blanks	2784	137	95.1

Precision based on field duplicate analysis was determined to be 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 are currently being reevaluated. Precision values for some field duplicate constituents (including both radiochemistry

and hazardous chemistry constituents) have been consistently outside the acceptable limit of 25% RPD for several quarters. However, the laboratories have not experienced similar problems with precision, based on their own limits. This led the QC team to believe that the 25% blanket RPD limit may need to be reevaluated to account more for instrument- and method-specific precision limits.

Of the 2,784 blanks analyzed during the October through December quarter, 137 exceeded the QC limit for 95.1% acceptability. Table 1-4 shows a breakdown of the constituents detected in the blanks. All the methylene chloride samples were qualified by the laboratory with a 'B,' which indicates contamination occurred at the laboratory in the laboratory blanks.

Table 1-5 shows the required and actual frequencies of the field QC samples for the October through December 1994 quarter. Sampling frequencies were slightly high this quarter for field duplicates and full trip blanks. Field transfer blank frequency came in below the required 5% at 4.1%. The frequency for daily trip blanks did not meet the requirement of one per day. In November, one daily trip blank was not taken into the field.

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	Volatile organics (gas chromatography)	3	85	3.5
34	Inductively coupled plasma metals	25	380	6.6
67	Total organic halogen	4	15	26.7
122	Total organic carbon	6	11	54.5
124	Anions	3	84	3.6
129	Ammonium ion	1	2	50.0
135	Gross alpha	1	7	14.3
136	Gross beta	3	6	50
137	Radium	1	1	100
139	Iodine-129, Low level	1	3	33.3
140	ITAS Gamma scan (Be-7, K-40, Ru-106)	3	28	10.7
145	Uranium	1	3	33.3

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)	15	330	4.5
25	Volatile organics (GC)	3	85	3.5
34	Inductively coupled plasma metals	20	551	3.6
40	Lead by graphite furnace atomic absorption	3	10	30
41	Mercury by cold vapor atomic absorption	1	9	11.1
67	Total organic halogen	12	142	8.45
122	Total organic carbon	4	48	8.3
124	Anions	20	126	15.9
126	Turbidity	15	15	100
127	Total carbon	1	1	100
140	ITAS Gamma scan (Be-7, K-40)	4	64	6.3
182	Volatile organics (GC/MS 8260)	38	792	4.8
357	Alkalinity	1	9	11.1

Table 1-5. Frequency of Quality Control Samples.

Quality control samples	Required frequencies	Number of wells sampled	Number of samples taken	Actual frequency (%)
Duplicates	5%	219	12	5.5
Daily trip blank	One each sampling day (45)	44 (45 required)	44	97.8
Full trip blank	5%	219	12	5.5
Field transfer blank	5%	219	9	4.1
Bottle blanks	Per lot of bottles	N/A	2	N/A

N/A = not applicable.

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 and WS).

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. 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 results are summarized in Table 1-6.

Radiochemistry precision and accuracy figures are gleaned from 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 1-6.

Precision and accuracy results from the radiochemistry laboratory, summarized in Table 1-6, 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 October through December 1994.

For the October through December 1994 quarter, the radiochemistry laboratory analyzed 163 duplicates, of which 160 were within control limits ($\pm 3\sigma$), for an acceptability of 98.2%. The radiochemistry laboratory analyzed 265 spikes, of which 261 fell within control limits, for an acceptability of 98.5%.

The 95% confidence interval on the mean is used to establish acceptance limits for performance evaluation sample results (see WHC-CM-7-8, Section 2.4, "Evaluation of RCRA Groundwater Performance Evaluation Sample Data"). The hazardous chemistry laboratory's mean results for 15 of the 15 performance evaluation sample values fell within the limits of the 95% confidence interval and are acceptable.

TOX results could not be evaluated at this time because raw data were not available. TOX results shall be evaluated when these data arrive. Fourteen results from phenol and ICP metal analyses could not be evaluated per WHC-CM-7-8 because of a lack of results and differing analytical methods used by the laboratories. Three ICP metal results (iron, potassium, and sodium) could not be evaluated and were rejected because the percent bias and/or the relative standard deviation exceeds 100%, per WHC-CM-7-8. Based on this

information, WHC will resend ICP metal and phenol performance evaluation samples the next time standards are sent.

Table 1-6. Radiochemistry Quarterly Report Summary.

Fourth quarter 1994	Duplicates (precision, % acceptable)	Spikes (accuracy, % acceptable)	Blanks (% acceptable)
October through December	98.2	98.5	97.1

EPA intercomparison samples were analyzed by the radiochemistry laboratory during October and November 1994. Seven samples were analyzed for gross alpha, gross beta, cobalt-60, cesium-134 and -137, barium-133, and zinc-65. All sample results were within the $\pm 25\%$ bias acceptability criterion. This translates to seven out of seven acceptable results, or 100% acceptability.

Environmental Sciences sent out performance evaluation (PE) samples to four laboratories during November 1994. The PE samples were sent out in duplicate to each laboratory and contained known amounts TOC, TOX, nitrate, and carbon tetrachloride. The laboratories that participated in the analysis of these samples are the primary hazardous chemistry laboratory (Lab 1), two comparison laboratories (Labs 2 and 3), and the primary laboratory for TOX analysis (Lab 4). The laboratories received all four sample sets, with the exception of Lab 4, which only received TOX.

The results for these analyses are shown in Table 1-7. Lab 1's results were within the limits of the 95% confidence interval for all four analytes. A 95% confidence interval is used to establish acceptance limits for the PE samples. This is in accordance with WHC-CM-7-8, Section 2.4.

Lab 4's results were outside the acceptance limits for the TOX samples. Lab 4 has been analyzing RCRA groundwater samples for Environmental Sciences since November 1994. Lab 4 received TOX PE samples in May 1994 and had results within acceptable limits at that time. The PE procedure, WHC-CM-7-8, Section 2.4, requires that another set of PE samples be sent as soon as possible to a laboratory that does not get results in acceptable limits.

Table 1-7. Summary of Performance Evaluation Samples.

Analyte	"True value" (ppb)	Lab 1 (primary hazardous chemistry lab) mean result (ppb)	Lab 2 (comparison lab) mean result (ppb)	Lab 3 (comparison lab) mean result (ppb)	Lab 4 (primary TOX lab) mean result (ppb)	95% confidence interval (ppb)
TQC	978	1,000	1,300	2,370	-	901-2,213
TOX	17.97	17	17	14.75	22.75	15.39-20.36
Nitrate	295	350	327	69	-	112-386
Carbon-tetra-chloride	10.3	7.7	6.0	8.0	-	6.0-8.5

1.2.4 Nonconformance/Incident Reports

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NCR and INC Reports are methods of documentation by which contract laboratories inform laboratory contractors and their customers of any problems encountered with the analysis, data, and/or data deliverable. This method of documentation identifies occurrences, deficiencies, and/or issues that may 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 October through December quarter, 16 NCR/INC Reports were transmitted, affecting 35 data points. Fourteen NCR/INC Reports were transmitted by the hazardous chemistry laboratory and two were transmitted by the radiochemistry laboratory. These reports describe incidents that potentially affect the integrity of either groundwater samples or external QC samples (e.g., trip blanks, bottle blanks).

The incident reports transmitted by the hazardous chemistry laboratory affect 32 data points, 18 of which were rejected. The rejected data were attributed to sample containers received broken at the laboratories. In addition, eight analytical results were evaluated as being suspect. These data should be used for trending purposes only. Ninety percent of the suspect data are attributed to TOX samples received broken at the laboratory. The sample shipping department will be informed of the problem and instructed to package samples conscientiously.

The incident reports transmitted by the radiochemistry laboratory affect three data points. The incidents documented were determined to have had no adverse effect on the data. The radiochemistry laboratory had incorrectly calculated a result using sample weight rather than sample volume, the sample was recalculated and rereported. The two remaining data points were determined to have a high beta activity and, therefore, the sample sizes were reduced to a volume less than that prescribed by the analytical procedure.

Table 1-8 presents the sample numbers adversely 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 WHC NCR and incident report evaluations (see Section 1.4.5 for definitions of flags found in Table 1-8).

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 contractor, 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 1992b). Results of these oversight activities are documented with the audit/surveillance and/or inspecting organization(s).

Table 1-8. RCRA Samples Flagged for Nonconformance Report. (2 sheets)

Flag Name	Flag	Method Name	Code	Well Name	Number
Rejected	R	TOC TOX	122 67	199-N-74	BOC9H4
				299-W11-27	BOC107
				299-W11-28	BOC122
					BOC124
				299-W22-22	BOCZK4
		TRITIUM		299-W6-3	BOC9Y4
				199-K-27	BOCYF2
Suspect	Y	ALPHA	135	199-K-109A	BO9H58
				199-N-16	BOCJ34
				199-N-17	BOCJ42
				199-N-21	BOCJ48
				199-N-25	BOCJ66
					BOCJ67
		ANIONS	124	299-W7-11	BOCB19
				299-W7-12	BOCB24
				299-W7-9	BOCB54
				299-W8-1	BOCB59
		HERBICIDES TOX	49 67	699-41-35	BOC6T9
				299-E25-46	BOCYM7
					BOCYM9
					BOCYN0
				299-E33-36	BOCYR6
				299-E33-42	BOCYS3
					BOCYS4
				299-E33-43	BOCYS5
					BOCYS6
					BOCYS7
					BOCYS8
					BOCYS5
					BOCYS6
					BOCYS7
					BOCYS8
				299-W10-17	BOCZH2
				299-W10-18	BOCZJ2
				299-W14-12	BOCZH6
				299-W15-22	BOCZJ4
				299-W18-25	BOCYT1
					BOCYT2
				299-W18-31	BOCYT9
					BOCYV0
				299-W22-23	BOCZK8
					BOCZK9
					BOCZL0
					BOCZL1

Table 1-8. RCRA Samples Flagged for Nonconformance Report. (2 sheets)

Flag Name	Flag	Method Name	Code	Well Name	Number
		TOX	67	299-W22-39	BOCYV9 BOCYW0 BOCYW1 BOCYW2 BOCYW5 BOCYW6 BOCYV9 BOCYW0 BOCYW1 BOCYW2 BOCYW3 BOCYW4 BOCYW5 BOCYW6
				299-W22-45	BOCYX1 BOCYX2 BOCYX3 BOCYX4 BOCYX1 BOCYX2 BOCYX3 BOCYX4
				299-W22-46	BOCYX5 BOCYX6 BOCYX7 BOCYX8 BOCYX5 BOCYX6 BOCYX7 BOCYX8
				299-W23-13	BOCYX9 BOCYY0 BOCYY1 BOCYY2 BOCYX9 BOCYY0 BOCYY1 BOCYY2
				299-W23-14	BOCYY3 BOCYY4 BOCYY5 BOCYY6
				299-W23-15	BOCYY8 BOCYY9 BOCYZ0
		VOA (GC)	25	299-W10-16	BOC0X5
				299-W15-16	BOC0Q0
				299-W15-22	BOC0Y6

Findings:

- The contractor failed to track and verify implementation of corrective actions, as required by the contract.
- Noncompliances were found with the laboratories procedures governing document control. Multiple instances were found of effective dates for procedures proceeding approval dates.
- Noncompliances were found with the implementation of the contractual requirement for annual review of procedures.
- Deficiencies exist in the traceability to specific procedures and standards used for the analysis of samples.
- Noncompliances were found to the laboratories procedural and contractual requirements for training.
- Deficiencies and inconsistencies exist in the control charting and tracking for both analysis and reporting purposes.

Observations:

- The contract laboratory was unable to clearly explain the responsibilities of its QA organization as applicable to WHC samples.
- It was unclear whether the laboratory has an effective program in place to control contamination.

The corrective action for the findings and observations is scheduled to be provided after the printing of this report.

The second inspection was performed at the radiochemistry laboratory on July 6-8, 1994. The official report has not been released at this time and a summary will be provided during the next reporting period.

A third inspection of services was performed at CBML on August 8-10, 1994. The purpose of the inspection was to determine compliance by CBML with the PNL contract regarding QA and QC for coliform and biological oxygen demand analyses.

The inspection team found evidence supporting two findings:

Finding #1: CBML had not followed the requirements delineated in their QA manual.

Finding #2: CBML had not met all PNL contract and CBML QA manual requirements for planning and implementing surveillances and audits.

The corrective action for the findings is scheduled to be provided after the printing of this report.

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.

Bottle blank--A sample that contains only Type II reagent water. The bottle blank contains one sample for each bottle size, with at least enough bottles to include all constituents analyzed by a specific project, except radionuclides. Bottle blanks shall be submitted to the primary laboratory per lot of bottles. Bottle blanks are filled in the analytical laboratory under the sample preparation procedures. Bottle blanks do not go into the field.

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. One daily trip blank is collected for each day that sampling occurs.

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. At least 1 field transfer blank is collected for each 20 samples, or 1 per sampling batch.

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.

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.

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, which arrived at WHC before the cutoff date for the current quarterly report (see Section 1.1 for the current cutoff date), 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.
- **Laboratory 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 1-9. 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.

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
μ mho/cm	micromhos per centimeter.

Table 1-9. Analysis Method Code Definitions. (2 sheets)

Method code	Method name
16	SW-846 8240*
17	SW-846 8080*
19	SW-846 8270*
25	SW-846 8010/8020*
29	SW-846 8140*
30	SW-846 8040*
34	SW-846 6010*
36	ASTM D-1385*
40	SW-846 7621*
41	SW-846 7670*
42	SW-846 7841*
43	SW-846 7060*
48	SW-846 7740*
49	SW-846 8150*
51	SW-846 8280*
52	ASTM D-1067-A
54	ASTM D-1626-D
56	SW-846 9010*
62	In-house ion chromatography
63	SW-846 9030*
65	Standard Methods #2098*
67	SW-846 9020*
69	SW-846 9131*
73	ASTM D-1125-A
93	Field probe, pH
94	Field probe, conductivity
122	SW-846 9060*
124	ASTM D-4327-88
125	ASTM D-1293
126	Standard Methods #214A*
127	ASTM D-2579-A
129	ASTM D-1426-C
130	EPA Method 300.0*
135	SW-846 9310, Alpha*
136	SW-846 9310, Beta*
137	SW-846 9315, Radium*
139	ITAS I-129 Low level
140	ITAS Gamma scan

Table 1-9. Analysis Method Code Definitions. (2 sheets)

Method code	Method name
141	ITAS Sr-90
142	ITAS N-3
143	ITAS Tc-99
144	SW-846 9132*
145	ITAS Gross U
146	ITAS Isotopic Pu
147	ITAS Am-241
148	ITAS Isotopic U
168	USEPA HACH 600*
357	EPA 600, 310.2
358	SW-846 9012*

*EPA 1986b).

*ASTM 1991).

*EPA 1979).

*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:

Agency	Suffix	Regulatory basis
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	i	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 1-10.

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 1-10.

1.5 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 evaluation of data called out in RADEs, submitted by data users, and the required statistical evaluation of CIP data. The statistical evaluations of CIP data are presented within the chapters for individual sites.

Eighteen RADEs were submitted during the third quarter of 1994. Of the submitted RADEs, two are for radionuclides, two are for field parameters (pH), five are for ICP metals, two are for TOC, five are for TOX, one is for turbidity, and one for ammonium ion.

Table 1-10. Drinking Water Standards. (2 sheets)

Constituent name	Short name	MMS	Units	Agency ^a
1,1,1-Trichloroethane	1,1,1-T	200	ppb	EPA
1,1-Dichloroethane	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	EPA1
Arsenic	ARSENIC	50	ppb	EPA
Barium	BARIUM	1,000	ppb	EPA1
Benzene	BENZENE	5	ppb	EPA
Cadmium	CADMIUM	10	ppb	EPA1
Carbon tetrachloride	TETRANE	5	ppb	EPA
Cesium-137	CS-137	200	pCi/L	EPA
Chlordane	CHLDAVE	2	ppb	EPA
Chloride	CHLORID	250,000	ppb	EPAS
Chlorobenzene	CHLROB	100	ppb	EPA
Chromium	CHROMIUM	50	ppb	EPA1
cis-1,2-Dichloroethylene	CIS12DE	70	ppb	EPA
Cobalt-60	CO-60	100	pCi/L	EPA
Coliforms	COLIFORM	1	COL	EPA1
Copper	COPPER	1,000	ppb	EPAS
Endrin	ENDRIN	0.2	ppb	EPA
Ethylbenzene	ETHBENZ	700	ppb	EPA
Fluoride	FLUORID	1,400	ppb	EPA1
gamma-BHC (Lindane)	g-BHC	4	ppb	EPA1
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	EPA1
Manganese	MANGESE	50	ppb	EPAS
Mercury	MERCURY	2	ppb	EPA
Methoxychlor	METHLOR	100	ppb	EPA1

Table 1-10. 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	PENTCSP	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	TRANDC2E	100	ppb	EPA
Trichloroethene	TRICENE	5	ppb	EPA
Tritium	TRITIUM	20,000	pCi/L	EPA
Vinyl chloride	VINYLIDE	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.

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

Upgradient well D5-13 was sampled for field conductivity, field pH, and TOX; no other samples were scheduled during the reporting period. Data are reported in Tables 2-3 through 2-5. Field pH, conductivity, and temperature data from August 26, 1994, are also listed in the tables because they were not included in the last quarterly report. Field parameters and laboratory pH were measured in well D5-13 on that date to verify a pH exceedance. The August 26, 1994, data did not exceed the critical range for pH, indicating that the previous value was in error. Data flags are discussed in Sections 1.2 and 1.4. No DWSs were exceeded.

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

RCRA-AR\030683-0

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

Well no. (199-)	Relative position	Sample frequency	Sample date, 4th Qtr 1994
D5-13	Upgradient	Quarterly	11/3/94
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 - Fourth Quarter 1994.
 (sheet 1 of 3)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer				
199-D2-5	10/17/94	75.56	384.74	117.27
	11/07/94	75.71	384.59	117.22
	12/06/94	75.79	384.51	117.20
199-D2-6	10/17/94	85.94	383.34	116.84
	11/07/94	86.04	383.24	116.81
	12/06/94	85.95	383.33	116.84
199-D5-12	10/17/94	85.89	383.72	116.96
	11/07/94	86.03	383.58	116.92
	12/06/94	86.05	383.56	116.91
199-D5-13	10/17/94	89.22	382.27	116.52
	11/07/94	89.21	382.28	116.52
	12/06/94	89.16	382.33	116.53
199-D5-17	10/17/94	85.15	384.34	117.15
	11/07/94	85.29	384.20	117.10
	12/06/94	85.37	384.12	117.08
199-D5-20	10/17/94	86.71	381.39	116.25
	11/07/94	86.43	381.67	116.33
	12/06/94	85.86	382.24	116.51
199-D8-3	10/17/94	69.11	379.85	115.78
	11/07/94	68.62	380.34	115.93
199-D8-4	10/17/94	87.13	381.60	116.31
	11/07/94	87.04	381.69	116.34
	12/06/94	86.79	381.94	116.42
199-D8-5	10/17/94	71.97	380.52	115.98
	11/07/94	71.52	380.97	116.12
	12/06/94	71.03	381.46	116.27
199-D8-53	10/17/94	56.42	379.61	115.71
	11/07/94	55.77	380.26	115.90
	12/06/94	54.91	381.12	116.17
199-D8-54A	10/17/94	63.09	379.69	115.73

Table 2-2. RCRA Water Level Measurement Report
 100-D Ponds - Fourth Quarter 1994.
 (sheet 2 of 3)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer				
199-D8-54A	11/07/94	62.46	380.32	115.92
	12/06/94	61.65	381.13	116.17
199-D8-55	10/17/94	59.61	379.74	115.74
	11/07/94	58.97	380.38	115.94
	12/06/94	58.19	381.16	116.18
199-D8-6	10/17/94	95.01	381.49	116.28
	11/07/94	94.92	381.58	116.31
	12/06/94	94.61	381.89	116.40
699-87-55	10/17/94	73.34	386.27	117.74
	11/07/94	73.45	386.16	117.70
	12/06/94	73.46	386.15	117.70
699-90-45	10/17/94	37.93	383.59	116.92
	11/07/94	37.91	383.61	116.92
	12/06/94	37.95	383.57	116.91
699-92-49	10/17/94	49.04	382.82	116.68
699-96-49	10/17/94	38.28	380.93	116.11
	11/07/94	38.30	380.91	116.10
	12/06/94	38.32	380.89	116.10
699-97-51A	10/17/94	22.02	380.23	115.89
	11/07/94	21.87	380.38	115.94
	12/06/94	21.77	380.48	115.97
Wells Monitoring the Confined Aquifer				
199-D8-54B	10/17/94	62.23	380.28	115.91
	11/07/94	61.75	380.76	116.06
	12/06/94	60.70	381.81	116.38

Table 2-2. RCRA Water Level Measurement Report
100-0 Ponds - Fourth Quarter 1994.
(sheet 3 of 3)

-
- 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. Elevations marked with an '*' were measured at the time of sampling.
 4. Elevations 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 October 1 through December 31, 1994.

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			12	12	
TOX		Total Organic Halogen		ppb	5			4	4	
PH	93	pH, field		pH	.01	6.5-8.5	EPAS	12	12	0
PH	125	pH, lab		pH		6.5-8.5	EPAS	2	2	0

SITE SPECIFIC AND OTHER CONSTITUENTS										
Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
TEMP_C		temperature, field	DegC		.1			8	8	

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 October 1 through December 31, 1994.

Well Name	Collection Date	Sample Number	TNP_C 170/DegC .1/.
199-05-13	8/26/94	B0C504	16.90
199-05-13	8/26/94	B0C505	16.90
199-05-13	8/26/94	B00505	16.80
199-05-13	8/26/94	B00506	16.80
199-05-13	8/26/94	B00507	16.90
199-05-13	8/26/94	B009J0	16.90
199-05-13	8/26/94	B009J1	16.90
199-05-13	8/26/94	B009J2	16.90

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 October 1 through December 31, 1994.

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	TDC ppb 110/.	TOX ppb 5/.
199-05-13	8/26/94	800804	570		8.05	8.10 H		
		800805	555		8.05	8.10 H		
		800505	542		8.07			
		800506	541		8.07			
		800507	527		8.07			
		800910	506		8.09			
		800911	526		8.07			
		800912	511		8.08			
	11/03/94	800604	473		8.02			10.8
		800605	468		8.01			14.1
		800606	469		7.98			11.0
		800607	470		8.06			13.3

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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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 facility and the basin 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, 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 monthly during the past quarter to track changes caused by river stage fluctuations. Water levels also were recorded at the time of sample collection for water quality analyses. Water levels are presented in Table 3-2.

3.3 WATER CHEMISTRY DATA

Quarterly sampling was completed as scheduled in 183-H network wells. Three wells were sampled monthly to provide enhanced monitoring of the contaminant plume. 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. Several results appear anomalous, and RADEs have been submitted. Table 3-7 lists RADEs submitted for the past quarter and the reason for the request.

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

RCRA-AR/122993J

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, 4th Qtr 1994
H3-2A	Upgradient	Hanford: Water Table	Quarterly	12/2/94
H3-2C	Upgradient	Ringold: Silty Sand	Quarterly	12/2/94
H4-11	Downgradient	Hanford: Water Table	Quarterly	12/5/94
H4-12A	Downgradient	Hanford: Water Table	Quarterly	12/14/94
H4-12C	Downgradient	Ringold: Silty Sand	Quarterly	12/5/94
H4-14	Upgradient	Hanford: Water Table	Quarterly	12/5/94
H4-18	Downgradient	Hanford: Water Table	Quarterly	12/5/94
H4-3	Downgradient	Hanford: Water Table	Monthly	10/03/94 11/22/94 12/05/94
H4-4	Downgradient	Hanford: Water Table	Monthly	10/03/94 11/16/94 12/05/94
H4-5	Downgradient	Hanford: Water Table	Quarterly	12/05/94
H4-6	Upgradient	Hanford: Water Table	Quarterly	12/2/94
H4-7	Upgradient	Hanford: Water Table	Quarterly	12/5/94
H4-8	Upgradient	Hanford: Water Table	Quarterly	12/2/94
H4-9	Downgradient	Hanford: Water Table	Monthly	10/15/94 N.S. ^b 12/12/94

^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.

^bNot sampled; pump above water. Pump was lowered before 12/94 sampling.

Table 3-2. RCRA Water Level Measurement Report
 183-H Solar Evaporation Basins, Fourth Quarter 1994.
 (sheet 1 of 4)

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	10/17/94	46.15	375.33	114.40
	11/07/94	46.39	375.09	114.33
	12/06/94	46.52	374.96	114.29
199-H3-2A	10/17/94	42.99	375.33	114.40
	11/07/94	43.20	375.12	114.34
	12/02/94	43.26	375.06*	114.32
	12/06/94	43.26	375.06	114.32
199-H3-2B	10/17/94	43.59	374.83	114.25
	11/07/94	43.78	374.64	114.19
	12/06/94	43.85	374.57	114.17
199-H4-10	10/17/94	31.96	372.48	113.53
	11/07/94	31.45	372.99	113.69
	12/06/94	30.95	373.49	113.84
199-H4-11	10/17/94	45.29	371.55	113.25
	11/07/94	44.54	372.30	113.48
	12/06/94	43.75	373.09	113.72
199-H4-12A	11/07/94	40.69	372.81	113.63
	12/06/94	40.09	373.41	113.82
199-H4-12B	10/17/94	41.29	372.23	113.46
	11/07/94	40.69	372.83	113.64
	12/06/94	40.09	373.43	113.82
199-H4-13	10/17/94	47.10	371.10	113.11
	11/07/94	46.20	372.00	113.39
	12/06/94	45.27	372.93	113.67
199-H4-14	10/17/94	46.14	374.94	114.28
	11/07/94	46.26	374.82	114.25
	12/05/94	45.15	375.93**	114.58
	12/06/94	46.30	374.78	114.23
199-H4-15A	10/17/94	34.78	372.93	113.67
	11/07/94	34.22	373.49	113.84
	12/06/94	33.74	373.97	113.99

Table 3-2. RCRA Water Level Measurement Report
 183-H Solar Evaporation Basins - Fourth Quarter 1994.
 (sheet 2 of 4)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer (Hanford Formation)				
199-H4-15B	10/17/94	34.51	372.41	113.51
	11/07/94	33.94	372.98	113.68
	12/06/94	33.44	373.48	113.84
199-H4-16	10/17/94	50.43	373.80	113.93
	11/07/94	50.49	373.74	113.92
	12/06/94	50.44	373.79	113.93
199-H4-17	10/17/94	45.95	373.64	113.89
	11/07/94	45.68	373.91	113.97
	12/06/94	45.70	373.89	113.96
199-H4-18	10/17/94	48.73	373.59	113.87
	11/07/94	48.54	373.78	113.93
	12/05/94	48.47	373.85*	113.95
	12/06/94	48.36	373.96	113.98
199-H4-3	10/03/94	47.85	372.44*	113.52
	10/17/94	47.40	372.89	113.66
	11/07/94	47.16	373.13	113.73
	11/22/94	47.00	373.29*	113.78
	12/05/94	48.45	371.84*+	113.34
	12/06/94	46.96	373.33	113.79
199-H4-4	10/03/94	42.72	371.52*	113.24
	10/17/94	41.77	372.47	113.53
	11/07/94	41.06	373.18	113.75
	11/16/94	41.02	373.22*	113.76
	12/05/94	40.92	373.32*	113.79
	12/06/94	40.38	373.86	113.95
199-H4-5	10/17/94	43.87	372.34	113.49
	11/07/94	43.37	372.84	113.64
	12/05/94	42.25	373.96*+	113.98
	12/06/94	43.01	373.20	113.75
199-H4-6	10/17/94	44.75	374.83	114.25
	11/07/94	44.95	374.63	114.19
	12/02/94	45.02	374.56*	114.17

Table 3-2. RCRA Water Level Measurement Report
 183-H Solar Evaporation Basins, Fourth Quarter 1994.
 (sheet 3 of 4)

Well	Date	Depth to water (ft)	Water Level elevation above msl (ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer (Hanford Formation)				
199-H4-6	12/06/94	45.00	374.58	114.17
199-H4-7	10/17/94	46.77	373.82	113.94
	11/07/94	46.75	373.84	113.95
	12/05/94	46.75	373.84*	113.95
	12/06/94	46.69	373.90	113.96
199-H4-8	10/17/94	46.78	373.22	113.76
	11/07/94	46.62	373.38	113.81
	12/02/94	46.55	373.45*	113.83
	12/06/94	46.45	373.55	113.86
199-H4-9	10/17/94	45.36	373.22	113.76
	11/07/94	44.97	373.61	113.88
	11/15/94	46.81	371.77*+	113.32
	12/06/94	44.78	373.80	113.93
Wells Monitoring Upper Levels in the Ringold Formation				
199-H3-2C	10/17/94	43.62	374.60	114.18
	11/07/94	43.73	374.49	114.14
	12/06/94	43.70	374.52	114.15
199-H4-12C	10/17/94	41.63	371.89	113.35
	11/07/94	40.84	372.68	113.59
	12/05/94	40.55	372.97*	113.68
	12/06/94	40.21	373.31	113.78
199-H4-15CS	10/17/94	35.39	372.05	113.40
	11/07/94	34.49	372.95	113.68
	12/06/94	34.73	372.71	113.60
Well Monitoring Mid-Level in the Ringold Formation				
199-H4-15CR	10/17/94	33.40	373.97	113.99
	11/07/94	33.46	373.91	113.97
	12/06/94	34.23	373.14	113.73

Table 3-2. RCRA Water Level Measurement Report
183-H Solar Evaporation Basins, Fourth Quarter 1994.
(sheet 4 of 4)

- 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. Elevations marked with an '*' were measured at the time of sampling.
 4. Elevations 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 October 1 through December 31, 1994.
(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	unhos		1			19	19	
CONDUCT	73	Conductivity, lab	unhos					15	15	
TOC		Total Organic Carbon	ppb		110			15	15	
TOX		Total Organic Halogen	ppb		5			15	13	
PH		pH, field	pH		.01	6.5-8.5	EPAS	19	19	1

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
BARIUM		Barium	ppb		.59	1000	EPAI	21	21	0
FBARIUM		Barium, filtered	ppb		.59	1000	EPAI	21	21	0
CADMIUM		Cadmium	ppb		3.3	10	EPAI	21	0	0
FCADMIU		Cadmium, filtered	ppb		3.3	10	EPAI	21	0	0
CHROMIUM		Chromium	ppb		4.5	50	EPAI	21	21	19
FCROMI		Chromium, filtered	ppb		4.5	50	EPAI	21	21	16
FLUORID		Fluoride	ppb		36	1600	EPAI	21	21	0
ALPHA		Gross alpha	pCi/L			15	EPA	21	16	7
NITRATE		Nitrate	ppb		11	45000	EPA	21	21	7

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORID		Chloride	ppb		14	250000	EPAS	21	21	0
IRON		Iron	ppb		5.24	300	EPAS	21	21	13
FIROM		Iron, filtered	ppb		5.24	300	EPAS	21	19	0
MANGESE		Manganese	ppb		.72	50	EPAS	21	19	3
FMANGAN		Manganese, filtered	ppb		.72	50	EPAS	21	14	0
SODIUM		Sodium	ppb		61			21	21	
FSODIUM		Sodium, filtered	ppb		61			21	21	
SULFATE		Sulfate	ppb		37	250000	EPAS	21	21	0

Table 3-3. Constituent List and Summary of Results for 183-H Solar Evaporation Basins Data for Reporting Period October 1 through December 31, 1994.
(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
ALUMINUM		Aluminum	ppb	26				21	11	
FALUMIN		Aluminum, filtered	ppb	26				21	4	
ANTIMONY		Antimony	ppb	62				21	0	
FANTIMONY		Antimony, filtered	ppb	62				21	0	
SB-125		Antimony-125	pCi/L					1	1	
BERYLLIUM		Beryllium	ppb	.17				21	3	
FBERYLLIUM		Beryllium, filtered	ppb	.17				21	3	
BROMIDE		Bromide	ppb	100				21	0	
CALCIUM		Calcium	ppb	34				21	21	
FCALCIUM		Calcium, filtered	ppb	34				21	21	
CS-137		Cesium-137	pCi/L			200	EPA	1	1	0
COBALT		Cobalt	ppb	5.9				21	0	
FCOBALT		Cobalt, filtered	ppb	5.9				21	0	
CO-60		Cobalt-60	pCi/L			100	EPA	1	1	0
COPPER		Copper	ppb	4.1		1000	EPAS	21	4	0
FCOPPER		Copper, filtered	ppb	4.1		1000	EPAS	21	1	0
BETA		Gross beta	pCi/L					21	21	
MAGNESIUM		Magnesium	ppb	23				21	21	
FMAGNESIUM		Magnesium, filtered	ppb	23				21	21	
NICKEL		Nickel	ppb	13				21	11	
FNICKEL		Nickel, filtered	ppb	13				21	1	
NITRITE		Nitrite	ppb	18		1000	EPA	21	1	0
PHOSPHATE		Phosphate	ppb	82				21	0	
POTASSIUM		Potassium	ppb	850				21	21	
FPOTASSIUM		Potassium, filtered	ppb	850				21	21	
RU-106		Ruthenium-106	pCi/L			30	EPA	1	1	0
SILVER		Silver	ppb	3.6		50	EPA1	21	0	0
FSILVER		Silver, filtered	ppb	3.6		50	EPA1	21	1	0
TC-99		Technetium-99	pCi/L			900	EPA	16	7	0
TIN		Tin	ppb	69				21	0	
FTIN		Tin, filtered	ppb	69				21	0	
TRITIUM		Tritium	pCi/L			20000	EPA	1	1	0
TURBIDITY		Turbidity	NTU	.016				21	21	
URANIUM		Uranium	ppb					16	16	
VANADIUM		Vanadium	ppb	6.6				21	6	
GVANADIUM		Vanadium, filtered	ppb	6.6				21	4	
ZINC		Zinc	ppb	6.3		5000	EPAS	21	13	0
FZINC		Zinc, filtered	ppb	6.3		5000	EPAS	21	3	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 October 1 through December 31, 1994.
(sheet 1 of 10)

Well Name	Collection Date	Sample Number	ALUMINUM 34/ppb 19/.	FALUMIN 34/ppb 19/.	SB-125 140/ppb/L ./.	BARIUM 34/ppb 1.3/10001
199-H3-2A	12/02/94	800F53	26.00 U			20.00
199-H3-2A	12/02/94	800F54		26.00 U		
199-H3-2C	12/02/94	800F55	26.00 U			14.00 L
199-H3-2C	12/02/94	800F56		26.00 U		
199-H4-11	12/05/94	800F57	30.00 L			31.00 q
199-H4-11	12/05/94	800F58		26.00 U		
199-H4-12A	12/14/94	800F59	26.00 U			62.00
199-H4-12A	12/14/94	800F60		26.00 U		
199-H4-12C	12/05/94	800F61	26.00 U			14.00 LQ
199-H4-12C	12/05/94	800F62	26.00 U			13.00 LQ
199-H4-12C	12/05/94	800F63		26.00 U		
199-H4-12C	12/05/94	800F64		26.00 U		
199-H4-14	12/05/94	800F65	42.00 L			19.00 LQ
199-H4-14	12/05/94	800F66		27.00 L		
199-H4-18	12/05/94	800F67	150.00 L			25.00 q
199-H4-18	12/05/94	800F68		26.00 U		
199-H4-3	10/03/94	8000P4	320.00			62.00
199-H4-3	10/03/94	8000P5		26.00 U		
199-H4-3	11/22/94	800754	2800.00			81.00
199-H4-3	11/22/94	800755		31.00 L		
199-H4-3	12/05/94	800F69	64.00 L			36.00 q
199-H4-3	12/05/94	800F70		30.00 L		
199-H4-4	10/03/94	8000P6	26.00 U			83.00
199-H4-4	10/03/94	8000P7	26.00 U			85.00
199-H4-4	10/03/94	8000P8		26.00 U		
199-H4-4	10/03/94	8000P9		26.00 U		
199-H4-4	11/16/94	8006T8			1.52 U	
199-H4-4	11/16/94	8006T9		26.00 U		
199-H4-4	11/16/94	800756	26.00 U			56.00
199-H4-4	12/05/94	800F71	26.00 U			46.00 q
199-H4-4	12/05/94	800F72		26.00 U		
199-H4-5	12/05/94	800F73	28.00 L			61.00 q
199-H4-5	12/05/94	800F74		26.00 U		
199-H4-6	12/02/94	800F75	26.00 U			31.00
199-H4-6	12/02/94	800F76		26.00 U		
199-H4-7	12/05/94	800F77	67.00 L			41.00 q
199-H4-7	12/05/94	800F78		26.00 U		
199-H4-8	12/02/94	800F79	590.00			51.00
199-H4-8	12/02/94	800F80		26.00 U		
199-H4-9	10/15/94	800758	320.00			56.00
199-H4-9	10/15/94	800759		26.00 U		
199-H4-9	12/14/94	800F81	1000.00			58.00
199-H4-9	12/14/94	800F82		31.00 L		

Table 3-4. Constituents with at Least One Detected Value for the 183-H Solar Evaporation Basins Data for Reporting Period October 1 through December 31, 1994.
(sheet 2 of 10)

Well Name	Collection Date	Sample Number	PHARIUM 34/ppb 1.5/1000f	BERYLLUM 34/ppb 1.5/.	FBERYLL 34/ppb 1.5/.	CALCIUM 34/ppb 47/.
199-H3-2A	12/02/94	B00F53		.17 U		37000.00
199-H3-2A	12/02/94	B00F54	20.00		.19 LB	
199-H3-2C	12/02/94	B00F55		.17 U		24000.00
199-H3-2C	12/02/94	B00F56	14.00 L		.17 U	
199-H4-11	12/05/94	B00F57		.17 U		50000.00
199-H4-11	12/05/94	B00F58	30.00 Q		.17 U	
199-H4-12A	12/14/94	B00F59		.17 U		62000.00
199-H4-12A	12/14/94	B00F60	62.00		.17 U	
199-H4-12C	12/05/94	B00F61		.17 U		30000.00
199-H4-12C	12/05/94	B00F62		.18 L		30000.00
199-H4-12C	12/05/94	B00F63	14.00 LQ		.17 U	
199-H4-12C	12/05/94	B00F64	14.00 LQ		.18 L	
199-H4-14	12/05/94	B00F65		.17 U		38000.00
199-H4-14	12/05/94	B00F66	19.00 LQ		.17 U	
199-H4-18	12/05/94	B00F67		.17 U		43000.00
199-H4-18	12/05/94	B00F68	24.00 Q		.17 U	
199-H4-3	10/03/94	B000P4		.17 U		56000.00
199-H4-3	10/03/94	B000P5	50.00		.17 U	
199-H4-3	11/22/94	B00754		.30 L		44000.00
199-H4-3	11/22/94	B00755	39.00		.17 U	
199-H4-3	12/05/94	B00F69		.17 U		40000.00
199-H4-3	12/05/94	B00F70	37.00 Q		.17 U	
199-H4-4	10/03/94	B000P6		.17 U		64000.00
199-H4-4	10/03/94	B000P7		.17 U		67000.00
199-H4-4	10/03/94	B000P8	84.00		.17 U	
199-H4-4	10/03/94	B000P9	83.00		.17 U	
199-H4-4	11/16/94	B006T9	56.00		.27 L	
199-H4-4	11/16/94	B00756		.17 U		47000.00
199-H4-4	12/05/94	B00F71		.17 U		41000.00
199-H4-4	12/05/94	B00F72	45.00 Q		.17 U	
199-H4-5	12/05/94	B00F73		.17 U		65000.00
199-H4-5	12/05/94	B00F74	58.00 Q		.17 U	
199-H4-6	12/02/94	B00F75		.21 LB		37000.00
199-H4-6	12/02/94	B00F76	30.00		.17 U	
199-H4-7	12/05/94	B00F77		.17 U		57000.00
199-H4-7	12/05/94	B00F78	40.00 Q		.17 U	
199-H4-8	12/02/94	B00F79		.17 U		63000.00
199-H4-8	12/02/94	B00F80	46.00		.17 U	
199-H4-9	10/15/94	B00758		.17 U		66000.00
199-H4-9	10/15/94	B00759	52.00		.17 U	
199-H4-9	12/14/94	B00F81		.17 U		57000.00
199-H4-9	12/14/94	B00F82	47.00		.17 U	

Table 3-4. Constituents with at Least One Detected Value for the 183-H Solar Evaporation Basins Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 10)

Well Name	Collection Date	Sample Number	CALCIUM 34/ppb 47%	CS-137 140/pCi/L ./200	CHLORIDE 124/ppb 71/250000s	CHROMIUM 34/ppb 11/50i
199-H3-2A	12/02/94	800F53			6000.00	43.00
199-H3-2A	12/02/94	800F54	33000.00			
199-H3-2C	12/02/94	800F55			2100.00	21.00
199-H3-2C	12/02/94	800F56	24000.00			
199-H4-11	12/05/94	800F57			4900.00	52.00
199-H4-11	12/05/94	800F58	50000.00			
199-H4-12A	12/14/94	800F59			8000.00 q	99.00
199-H4-12A	12/14/94	800F60	62000.00			
199-H4-12C	12/05/94	800F61			2400.00	290.00
199-H4-12C	12/05/94	800F62			2500.00	290.00
199-H4-12C	12/05/94	800F63	30000.00			
199-H4-12C	12/05/94	800F64	30000.00			
199-H4-14	12/05/94	800F65			5500.00	65.00
199-H4-14	12/05/94	800F66	38000.00			
199-H4-18	12/05/94	800F67			5000.00	66.00
199-H4-18	12/05/94	800F68	42000.00			
199-H4-3	10/03/94	8000P4			9800.00 p	190.00
199-H4-3	10/03/94	8000P5	55000.00			
199-H4-3	11/22/94	800754			9100.00 Bq	370.00
199-H4-3	11/22/94	800755	42000.00			
199-H4-3	12/05/94	800F69			9400.00	110.00
199-H4-3	12/05/94	800F70	40000.00			
199-H4-4	10/03/94	8000P6			9200.00	120.00
199-H4-4	10/03/94	8000P7			9200.00	120.00
199-H4-4	10/03/94	8000P8	66000.00			
199-H4-4	10/03/94	8000P9	64000.00			
199-H4-4	11/16/94	8006T8		-2.43 u	8200.00	
199-H4-4	11/16/94	8006T9	47000.00			
199-H4-4	11/16/94	800756				110.00
199-H4-4	12/05/94	800F71			8400.00	97.00
199-H4-4	12/05/94	800F72	41000.00			
199-H4-5	12/05/94	800F73			9300.00	140.00
199-H4-5	12/05/94	800F74	64000.00			
199-H4-6	12/02/94	800F75			9900.00	84.00
199-H4-6	12/02/94	800F76	37000.00			
199-H4-7	12/05/94	800F77			9700.00	100.00
199-H4-7	12/05/94	800F78	57000.00			
199-H4-8	12/02/94	800F79			10000.00 D	140.00
199-H4-8	12/02/94	800F80	63000.00			
199-H4-9	10/15/94	800758			7200.00 H	130.00 q
199-H4-9	10/15/94	800759	64000.00			
199-H4-9	12/14/94	800F81			6400.00 q	170.00
199-H4-9	12/14/94	800F82	57000.00			

Table 3-4. Constituents with at Least One Detected Value for the 183-H Solar Evaporation Basins Data for Reporting Period October 1 through December 31, 1994.
(sheet 4 of 10)

Well Name	Collection Date	Sample Number	CHROMI 34/ppb 11/501	CO-60 140/pCl/L ./100	COPPER 34/ppb 2.6/1000s	FCOPPER 34/ppb 2.6/1000s
199-H3-2A	12/02/94	B00F53			4.10 U	
199-H3-2A	12/02/94	B00F54	28.00			4.10 U
199-H3-2C	12/02/94	B00F55			4.10 U	
199-H3-2C	12/02/94	B00F56	13.00 L			4.10 U
199-H4-11	12/05/94	B00F57			4.10 U	
199-H4-11	12/05/94	B00F58	40.00			4.10 U
199-H4-12A	12/14/94	B00F59			4.10 U	
199-H4-12A	12/14/94	B00F60	96.00			4.10 U
199-H4-12C	12/05/94	B00F61			4.10 U	
199-H4-12C	12/05/94	B00F62			4.10 U	
199-H4-12C	12/05/94	B00F63	280.00			4.10 U
199-H4-12C	12/05/94	B00F64	280.00			4.10 U
199-H4-14	12/05/94	B00F65			4.10 U	
199-H4-14	12/05/94	B00F66	61.00			4.10 U
199-H4-18	12/05/94	B00F67			4.10 U	
199-H4-18	12/05/94	B00F68	36.00			4.10 U
199-H4-3	10/03/94	B00P64			6.90 L	
199-H4-3	10/03/94	B00P65	82.00			4.10 U
199-H4-3	11/22/94	B00754			12.00 L	
199-H4-3	11/22/94	B00755	77.00			4.30 L
199-H4-3	12/05/94	B00F69			4.10 U	
199-H4-3	12/05/94	B00F70	86.00			4.10 U
199-H4-4	10/03/94	B00P66			4.10 U	
199-H4-4	10/03/94	B00P67			4.10 U	
199-H4-4	10/03/94	B00P68	110.00			4.10 U
199-H4-4	10/03/94	B00P69	110.00			4.10 U
199-H4-4	11/16/94	B00678		.15 U		
199-H4-4	11/16/94	B00679	96.00			4.10 U
199-H4-4	11/16/94	B00756			4.10 U	
199-H4-4	12/05/94	B00F71			4.10 U	
199-H4-4	12/05/94	B00F72	88.00			4.10 U
199-H4-5	12/05/94	B00F73			4.10 U	
199-H4-5	12/05/94	B00F74	83.00			4.10 U
199-H4-6	12/02/94	B00F75			4.10 U	
199-H4-6	12/02/94	B00F76	42.00			4.10 U
199-H4-7	12/05/94	B00F77			4.10 U	
199-H4-7	12/05/94	B00F78	90.00			4.10 U
199-H4-8	12/02/94	B00F79			4.10 U	
199-H4-8	12/02/94	B00F80	100.00			4.10 U
199-H4-9	10/15/94	B00758			6.80 L	
199-H4-9	10/15/94	B00759	56.00 d			4.10 U
199-H4-9	12/14/94	B00F81			5.80 L	
199-H4-9	12/14/94	B00F82	55.00			4.10 U

Table 3-4. Constituents with at Least One Detected Value for the 183-H Solar Evaporation Basins Data for Reporting Period October 1 through December 31, 1994.
(sheet 5 of 10)

Well Name	Collection Date	Sample Number	FLUORID 124/ppb 51/14001	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.	IRON 34/ppb 18/300s
199-H3-2A	12/02/94	B00F53	400.00	3.57	8.38	57.00 BQ
199-H3-2C	12/02/94	B00F55	500.00	-.17 U	5.62	56.00 BQ
199-H4-11	12/05/94	B00F57	200.00	3.71	36.00	130.00 B
199-H4-12A	12/14/94	B00F59	500.00	2.48	13.90	40.00 BQ
199-H4-12C	12/05/94	B00F61	200.00 Q	.66 U	3.57	71.00 BQ
199-H4-12C	12/05/94	B00F62	700.00 Q	.82 U	4.15	38.00 BQ
199-H4-14	12/05/94	B00F65	300.00	1.21	5.75	150.00 B
199-H4-18	12/05/94	B00F67	300.00	1.30	8.57	300.00 B
199-H4-3	10/03/94	B00P64	1000.00	66.50	319.00	5100.00 Q
199-H4-3	11/22/94	B00754	500.00	51.50	266.00	22000.00 BQ
199-H4-3	12/05/94	B00F69	1100.00	46.10	266.00	980.00 B
199-H4-4	10/03/94	B00P66	900.00	74.40	390.00	420.00 Q
199-H4-4	10/03/94	B00P67	900.00	83.50	419.00	330.00 Q
199-H4-4	11/16/94	B00618	800.00	40.10	174.00	
199-H4-4	11/16/94	B00756				630.00 B
199-H4-4	12/05/94	B00F71	900.00	49.00	190.00	160.00 B
199-H4-5	12/05/94	B00F73	300.00	2.01	5.04	2200.00 B
199-H4-6	12/05/94	B00F75	300.00	2.01	9.00	3400.00 BQ
199-H4-7	12/05/94	B00F77	300.00	2.84 U	4.71	140.00 B
199-H4-8	12/02/94	B00F79	700.00	.98 U	6.97	950.00 BQ
199-H4-9	10/15/94	B00758	700.00 H	6.91	32.70	800.00 Q
199-H4-9	12/14/94	B00F81	600.00	10.50	39.80	1900.00 BQ

Well Name	Collection Date	Sample Number	IRON 34/ppb 18/300s	MAGNES 34/ppb 25/.	MAGNES 34/ppb 25/.	MANGESE 34/ppb 1/50s
199-H3-2A	12/02/94	B00F53		8400.00		1.70 L
199-H3-2A	12/02/94	B00F54	5.20 LBQ		7900.00	
199-H3-2C	12/02/94	B00F55		8300.00		1.50 L
199-H3-2C	12/02/94	B00F56	11.00 LBQ		8200.00	
199-H4-11	12/05/94	B00F57		7200.00		3.10 L
199-H4-11	12/05/94	B00F58	11.00 LB		7300.00	
199-H4-12A	12/14/94	B00F59		10000.00		.72 U
199-H4-12A	12/14/94	B00F60	15.00 BLQ		10000.00	
199-H4-12C	12/05/94	B00F61		11000.00		1.40 LQ
199-H4-12C	12/05/94	B00F62		11000.00		.72 UQ
199-H4-12C	12/05/94	B00F63	7.80 LBQ		11000.00	
199-H4-12C	12/05/94	B00F64	5.24 UQ		11000.00	
199-H4-14	12/05/94	B00F65		7300.00		3.40 L
199-H4-14	12/05/94	B00F66	36.00 B		7300.00	
199-H4-18	12/05/94	B00F67		7500.00		7.80 L
199-H4-18	12/05/94	B00F68	14.00 LB		7400.00	
199-H4-3	10/03/94	B00P64		11000.00		220.00
199-H4-3	10/03/94	B00P65	85.00 Q		10000.00	
199-H4-3	11/22/94	B00754		8500.00		570.00
199-H4-3	11/22/94	B00755	37.00 BQ		7700.00	
199-H4-3	12/05/94	B00F69		7300.00		36.00
199-H4-3	12/05/94	B00F70	19.00 LB		7300.00	
199-H4-4	10/03/94	B00P66		10000.00		6.10 LQ
199-H4-4	10/03/94	B00P67		11000.00		6.10 LQ
199-H4-4	10/03/94	B00P68	15.00 LQ		11000.00	
199-H4-4	10/03/94	B00P69	17.00 LQ		10000.00	
199-H4-4	11/16/94	B00619	54.00 B		7400.00	

Table 3-4. Constituents with at Least One Detected Value for the 183-H Solar Evaporation Basins Data for Reporting Period October 1 through December 31, 1994.
(sheet 6 of 10)

Well Name	Collection Date	Sample Number	IRON 34/ppb 18/300s	MAGNES 34/ppb 25/.	FMAGNES 34/ppb 25/.	MANGESE 34/ppb 1/50s
199-H4-4	11/16/94	B00756		7500.00		3.10 L
199-H4-4	12/05/94	B00F71		6500.00		1.70 L
199-H4-4	12/05/94	B00F72	7.80 LB		6500.00	
199-H4-5	12/05/94	B00F73		12000.00		17.00
199-H4-5	12/05/94	B00F74	16.00 LB		12000.00	
199-H4-6	12/02/94	B00F75		13000.00		90.00
199-H4-6	12/02/94	B00F76	17.00 LB		13000.00	
199-H4-7	12/05/94	B00F77		11000.00		3.40 L
199-H4-7	12/05/94	B00F78	6.80 LB		12000.00	
199-H4-8	12/02/94	B00F79		12000.00		16.00
199-H4-8	12/02/94	B00F80	36.00 BR		12000.00	
199-H4-9	10/15/94	B00758		12000.00		19.00
199-H4-9	10/15/94	B00759	8.70 LQ		11000.00	
199-H4-9	12/14/94	B00F81		10000.00		44.00
199-H4-9	12/14/94	B00F82	23.00 BR		10000.00	

Well Name	Collection Date	Sample Number	FMANGAN 34/ppb 1/50s	NICKEL 34/ppb 16/.	FNICKEL 34/ppb 16/.	NITRATE 124/ppb 96/45000
199-H3-2A	12/02/94	B00F53		13.00 U		11000.00 D
199-H3-2A	12/02/94	B00F54	.72 U		13.00 U	3000.00
199-H3-2C	12/02/94	B00F55		14.00 L		
199-H3-2C	12/02/94	B00F56	.72 U		13.00 U	
199-H4-11	12/05/94	B00F57		13.00 U		21000.00 D
199-H4-11	12/05/94	B00F58	1.20 L		13.00 U	
199-H4-12A	12/14/94	B00F59		13.00 U		28000.00 DQ
199-H4-12A	12/14/94	B00F60	.72 U		13.00 U	
199-H4-12C	12/05/94	B00F61		13.00 U		6300.00
199-H4-12C	12/05/94	B00F62		13.00 U		6200.00
199-H4-12C	12/05/94	B00F63	.80 L		13.00 U	
199-H4-12C	12/05/94	B00F64	.81 L		13.00 U	
199-H4-14	12/05/94	B00F65		17.00 L		11000.00 D
199-H4-14	12/05/94	B00F66	1.10 L		13.00 U	
199-H4-18	12/05/94	B00F67		14.00 L		16000.00 D
199-H4-18	12/05/94	B00F68	.72 U		13.00 U	
199-H4-3	10/03/94	B000P6		16.00 L		340000.00 D
199-H4-3	10/03/94	B000P5	25.00		13.00 U	
199-H4-3	11/22/94	B00754		52.00		170000.00 DQ
199-H4-3	11/22/94	B00755	16.00		13.00 U	
199-H4-3	12/05/94	B00F69		19.00 L		160000.00 D
199-H4-3	12/05/94	B00F70	3.30 L		13.00 U	
199-H4-4	10/03/94	B000P6		13.00 U		350000.00 D
199-H4-4	10/03/94	B000P7		13.00 U		350000.00 D
199-H4-4	10/03/94	B000P8	.72 U		13.00 U	
199-H4-4	10/03/94	B000P9	.72 U		13.00 U	
199-H4-4	11/16/94	B006T8				150000.00 D
199-H4-4	11/16/94	B006T9	2.80 L		13.00 U	
199-H4-4	11/16/94	B00756		13.00 U		
199-H4-4	12/05/94	B00F71		13.00 U		150000.00 D
199-H4-4	12/05/94	B00F72	.72 U		13.00 U	
199-H4-5	12/05/94	B00F73		14.00 L		30000.00 D
199-H4-5	12/05/94	B00F74	1.50 L		13.00 U	
199-H4-6	12/02/94	B00F75		24.00 L		18000.00 D
199-H4-6	12/02/94	B00F76	17.00		14.00 L	

Table 3-4. Constituents with at Least One Detected Value for the 183-H Solar Evaporation Basins Data for Reporting Period October 1 through December 31, 1994.
(sheet 7 of 10)

Well Name	Collection Date	Sample Number	FMANGAN 34/ppb 1/50s	NICKEL 34/ppb 16/.	FMICKEL 34/ppb 16/.	NITRATE 124/ppb 96/45000
199-H4-7	12/05/94	800F77		13.00 U		29000.00 D
199-H4-7	12/05/94	800F78	.92 L		13.00 U	
199-H4-8	12/02/94	800F79		25.00 L		30000.00 D
199-H4-8	12/02/94	800F80	1.80 L		13.00 U	
199-H4-9	10/15/94	800F58		39.00		39000.00 DH
199-H4-9	10/15/94	800F59	2.70 L		13.00 U	
199-H4-9	12/14/94	800F81		62.00		28000.00 DHK
199-H4-9	12/14/94	800F82	1.60 L		13.00 U	
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Well Name	Collection Date	Sample Number	NITRITE 124/ppb 110/1000	POTASUM 34/ppb 890/.	FPOTASS 34/ppb 890/.	RU-106 140/pCi/L ./30
199-H3-2A	12/02/94	800F53	18.00 U	4100.00		
199-H3-2A	12/02/94	800F54			4200.00	
199-H3-2C	12/02/94	800F55	18.00 U	4300.00		
199-H3-2C	12/02/94	800F56			4100.00	
199-H4-11	12/05/94	800F57	18.00 U	2600.00		
199-H4-11	12/05/94	800F58			2800.00	
199-H4-12A	12/14/94	800F59	18.00 U	5000.00		
199-H4-12A	12/14/94	800F60			5300.00	
199-H4-12C	12/05/94	800F61	18.00 U	4700.00		
199-H4-12C	12/05/94	800F62	18.00 U	4600.00		
199-H4-12C	12/05/94	800F63			4300.00	
199-H4-12C	12/05/94	800F64			4600.00	
199-H4-14	12/05/94	800F65	18.00 U	3900.00		
199-H4-14	12/05/94	800F66			4500.00	
199-H4-18	12/05/94	800F67	18.00 U	3800.00		
199-H4-18	12/05/94	800F68			3700.00	
199-H4-3	10/03/94	800P4	18.00 U	6600.00		
199-H4-3	10/03/94	800P5			6300.00	
199-H4-3	11/22/94	800F54	400.00 F	6100.00		
199-H4-3	11/22/94	800F55			5600.00	
199-H4-3	12/05/94	800F69	18.00 U	5300.00		
199-H4-3	12/05/94	800F70			5700.00	
199-H4-4	10/03/94	800P6	18.00 U	6700.00		
199-H4-4	10/03/94	800P7	18.00 U	6700.00		
199-H4-4	10/03/94	800P8			6700.00	
199-H4-4	10/03/94	800P9			6500.00	
199-H4-4	11/16/94	800F18	18.00 U			14.20 U
199-H4-4	11/16/94	800F19			5700.00	
199-H4-4	11/16/94	800F56		5300.00		
199-H4-4	12/05/94	800F71	18.00 U	5100.00		
199-H4-4	12/05/94	800F72			5300.00	
199-H4-5	12/05/94	800F73	18.00 U	5000.00		
199-H4-5	12/05/94	800F74			4800.00	
199-H4-6	12/02/94	800F75	18.00 U	4800.00		
199-H4-6	12/02/94	800F76			6900.00	
199-H4-7	12/05/94	800F77	18.00 U	5200.00		
199-H4-7	12/05/94	800F78			5400.00	
199-H4-8	12/02/94	800F79	18.00 U	5400.00		
199-H4-8	12/02/94	800F80			5600.00	

Table 3-4. Constituents with at Least One Detected Value for the 183-H Solar Evaporation Basins Data for Reporting Period October 1 through December 31, 1994.
(sheet 8 of 10)

Well Name	Collection Date	Sample Number	NITRITE 124/ppb 110/1000	POTASUM. 34/ppb 890/.	FPOTASS 34/ppb 890/.	RU-106 140/pCi/L ./30
199-H4-9	10/15/94	800758	18.00 UN	5200.00		
199-H4-9	10/15/94	800759			5100.00	
199-H4-9	12/14/94	800F81	18.00 UN	5200.00		
199-H4-9	12/14/94	800F82			5200.00	

Well Name	Collection Date	Sample Number	SILVER 34/ppb 3.4/501	FSILVER 34/ppb 3.4/501	SODIUM 34/ppb 150/.	FSODIUM 34/ppb 150/.
199-H3-2A	12/02/94	800F53	3.60 U		13000.00 BQ	
199-H3-2A	12/02/94	800F54		3.60 U		12000.00 BQ
199-H3-2C	12/02/94	800F55	3.60 U		10000.00 BQ	
199-H3-2C	12/02/94	800F56		3.60 U		10000.00 BQ
199-H4-11	12/05/94	800F57	3.60 U		9200.00 BQ	
199-H4-11	12/05/94	800F58		3.60 U		9200.00 BQ
199-H4-12A	12/14/94	800F59	3.60 U		13000.00 Q	
199-H4-12A	12/14/94	800F60		3.60 U		13000.00 Q
199-H4-12C	12/05/94	800F61	3.60 U		4100.00 BQ	
199-H4-12C	12/05/94	800F62	3.60 U		4100.00 BQ	
199-H4-12C	12/05/94	800F63		3.60 U		4300.00 BQ
199-H4-12C	12/05/94	800F64		3.60 U		4100.00 BQ
199-H4-14	12/05/94	800F65	3.60 U		11000.00 BQ	
199-H4-14	12/05/94	800F66		3.60 U		11000.00 BQ
199-H4-18	12/05/94	800F67	3.60 U		11000.00 BQ	
199-H4-18	12/05/94	800F68		3.60 U		10000.00 BQ
199-H4-3	10/03/94	8000P4	3.60 U		140000.00	
199-H4-3	10/03/94	8000P5		3.60 U		140000.00
199-H4-3	11/22/94	800754	3.60 U		120000.00 BQ	
199-H4-3	11/22/94	800755		3.60 U		120000.00 BQ
199-H4-3	12/05/94	800F69	3.60 U		110000.00 BQ	
199-H4-3	12/05/94	800F70		3.60 U		110000.00 BQ
199-H4-4	10/03/94	8000P6	3.60 U		130000.00	
199-H4-4	10/03/94	8000P7	3.60 U		130000.00	
199-H4-4	10/03/94	8000P8		3.60 U		130000.00
199-H4-4	10/03/94	8000P9		3.60 U		130000.00
199-H4-4	11/16/94	8006T9		8.30 LF		95000.00 B
199-H4-4	11/16/94	800756	3.60 U		96000.00 B	
199-H4-4	12/05/94	800F71	3.60 U		91000.00 BQ	
199-H4-4	12/05/94	800F72		3.60 U		91000.00 BQ
199-H4-5	12/05/94	800F73	3.60 U		13000.00 BQ	
199-H4-5	12/05/94	800F74		3.60 U		13000.00 BQ
199-H4-6	12/02/94	800F75	3.60 U		26000.00 BQ	
199-H4-6	12/02/94	800F76		3.60 U		26000.00 BQ
199-H4-7	12/05/94	800F77	3.60 U		17000.00 BQ	
199-H4-7	12/05/94	800F78		3.60 U		17000.00 BQ
199-H4-8	12/02/94	800F79	3.60 U		18000.00 BQ	
199-H4-8	12/02/94	800F80		3.60 U		18000.00 BQ
199-H4-9	10/15/94	800758	3.60 U		23000.00	
199-H4-9	10/15/94	800759		3.60 U		23000.00
199-H4-9	12/14/94	800F81	3.60 U		22000.00 Q	
199-H4-9	12/14/94	800F82		3.60 U		22000.00 Q

Table 3-4. Constituents with at Least One Detected Value for the 183-H Solar Evaporation Basins Data for Reporting Period October 1 through December 31, 1994.
(sheet 9 of 10)

Well Name	Collection Date	Sample Number	SULFATE 124/ppb 89/250000s	TC-99 143/pCi/L ./900	TRITIUM 142/pCi/L ./20000	TURBID 126/NTU ./016/.
199-H3-2A	12/02/94	B00F53	31000.00 D	-.33 U		.73
199-H3-2C	12/02/94	B00F55	14000.00 D	-.42 U		.36
199-H4-11	12/05/94	B00F57	38000.00 D	14.00		1.70 Q
199-H4-12A	12/14/94	B00F59	53000.00 D	6.25		.28 Q
199-H4-12C	12/05/94	B00F61	24000.00 D	-.07 U		.28 Q
199-H4-12C	12/05/94	B00F62	24000.00 D	.61 U		.29 Q
199-H4-14	12/05/94	B00F65	31000.00 D	.50 U		1.60 Q
199-H4-18	12/05/94	B00F67	35000.00 D	11.50		3.80 Q
199-H4-3	10/03/94	B000P4	75000.00 D			34.00
199-H4-3	11/22/94	B00754	67000.00 D			140.00 Q
199-H4-3	12/05/94	B00F69	65000.00 D	754.00		9.90 Q
199-H4-4	10/03/94	B000P6	78000.00 D			3.40
199-H4-4	10/03/94	B000P7	78000.00 D			1.90
199-H4-4	11/16/94	B006T8	39000.00 D	705.00	2230.00	
199-H4-4	11/16/94	B00756				4.90
199-H4-4	12/05/94	B00F71	58000.00 D	651.00		2.50 Q
199-H4-5	12/05/94	B00F73	60000.00 D	1.35 U		11.00 Q
199-H4-6	12/02/94	B00F75	61000.00 D	-.75 U		30.00
199-H4-7	12/05/94	B00F77	59000.00 D	.57 U		2.40 Q
199-H4-8	12/02/94	B00F79	64000.00 D	-.45 U		19.00
199-H4-9	10/15/94	B00758	45000.00 DH			9.50 H
199-H4-9	12/14/94	B00F81	37000.00 D	53.10		19.00 HQ

Well Name	Collection Date	Sample Number	URANIUM 145/ppb ./.	VANADIUM 34/ppb 6.4/.	RYANADI 34/ppb 6.4/.	ZINC 34/ppb 4.4/5000s
199-H3-2A	12/02/94	B00F53	2.39	6.60 U		6.30 U
199-H3-2A	12/02/94	B00F54			6.90 L	
199-H3-2C	12/02/94	B00F55	1.01	36.00		6.30 U
199-H3-2C	12/02/94	B00F56			33.00	
199-H4-11	12/05/94	B00F57	2.30	6.60 U		6.30 U
199-H4-11	12/05/94	B00F58			6.60 U	
199-H4-12A	12/14/94	B00F59	3.83	6.60 U		23.00
199-H4-12A	12/14/94	B00F60			6.60 U	
199-H4-12C	12/05/94	B00F61	1.70 Q	25.00 L		6.30 U
199-H4-12C	12/05/94	B00F62	1.18 Q	27.00 L		6.30 U
199-H4-12C	12/05/94	B00F63			26.00 L	
199-H4-12C	12/05/94	B00F64			26.00 L	
199-H4-14	12/05/94	B00F65	1.35	6.70 L		6.30 U
199-H4-14	12/05/94	B00F66			6.60 U	
199-H4-18	12/05/94	B00F67	2.27	6.60 U		8.00 L
199-H4-18	12/05/94	B00F68			6.60 U	
199-H4-3	10/03/94	B000P4		6.60 U		15.00 Q
199-H4-3	10/03/94	B000P5			6.60 U	
199-H4-3	11/22/94	B00754		15.00 L		12.00
199-H4-3	11/22/94	B00755			6.60 U	
199-H4-3	12/05/94	B00F69	59.70	6.60 U		7.40 L
199-H4-3	12/05/94	B00F70			6.60 U	

Table 3-4. Constituents with at Least One Detected Value for the 183-H Solar Evaporation Basins Data for Reporting Period October 1 through December 31, 1994.
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Well Name	Collection Date	Sample Number	URANIUM 145/ppb ./.	VANADIUM 34/ppb 6.4/.	EVANADI 34/ppb 6.4/.	ZINC 34/ppb 4.4/5000s
199-H4-4	10/03/94	B000P6		6.60 U		13.00 g
199-H4-4	10/03/94	B000P7		6.60 U		28.00 g
199-H4-4	10/03/94	B000P8			6.60 U	
199-H4-4	10/03/94	B000P9			6.60 U	
199-H4-4	11/16/94	B006T8	23.90			
199-H4-4	11/16/94	B006T9			6.60 U	
199-H4-4	11/16/94	B00756		6.60 U		13.00
199-H4-4	12/05/94	B00F71	46.60	6.60 U		9.80 L
199-H4-4	12/05/94	B00F72			6.60 U	
199-H4-5	12/05/94	B00F73	4.23	6.60 U		17.00
199-H4-5	12/05/94	B00F74			6.60 U	
199-H4-6	12/02/94	B00F75	2.95	6.60 U		18.00
199-H4-6	12/02/94	B00F76			6.60 U	
199-H4-7	12/05/94	B00F77	2.77	6.60 U		6.30 U
199-H4-7	12/05/94	B00F78			6.60 U	
199-H4-8	12/02/94	B00F79	4.07	6.60 U		6.30 U
199-H4-8	12/02/94	B00F80			6.60 U	
199-H4-9	10/15/94	B00758		6.60 U		32.00
199-H4-9	10/15/94	B00759			6.60 U	
199-H4-9	12/14/94	B00F81	6.25	7.60 L		11.00
199-H4-9	12/14/94	B00F82			6.60 U	

Well Name	Collection Date	Sample Number	FZINC 34/ppb 4.4/5000s
199-H3-2A	12/02/94	B00F54	6.30 U
199-H3-2C	12/02/94	B00F56	6.30 U
199-H4-11	12/05/94	B00F58	6.30 U
199-H4-12A	12/14/94	B00F60	6.30 U
199-H4-12C	12/05/94	B00F63	6.30 U
199-H4-12C	12/05/94	B00F64	6.30 U
199-H4-14	12/05/94	B00F66	6.30 U
199-H4-18	12/05/94	B00F68	6.30 U
199-H4-3	10/03/94	B000P5	6.30 U
199-H4-3	11/22/94	B00755	6.30 U
199-H4-3	12/05/94	B00F70	6.80 L
199-H4-4	10/03/94	B000P8	17.00 g
199-H4-4	10/03/94	B000P9	16.00 g
199-H4-4	11/16/94	B006T9	6.30 U
199-H4-4	12/05/94	B00F72	6.30 U
199-H4-5	12/05/94	B00F74	6.30 U
199-H4-6	12/02/94	B00F76	6.30 U
199-H4-7	12/05/94	B00F78	6.30 U
199-H4-8	12/02/94	B00F80	6.30 U
199-H4-9	10/15/94	B00759	6.30 U
199-H4-9	12/14/94	B00F82	6.30 U

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

Table 3-5. Contamination Indicator Parameters for the 183-H Solar Evaporation Basins Data for Reporting Period October 1 through December 31, 1994.

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 110/.	TOX ppb 5/.
199-H3-2A	12/02/94	B00F53	298	320	7.80		400 L	21.0
199-H3-2C	12/02/94	B00F55	232	230	7.86		300 L	5.0 U
199-H4-11	12/05/94	B00F57	350	360	7.94		500 L	24.7
199-H4-12A	12/14/94	B00F59	460	460	7.44		600 L	6.2
199-H4-12C	12/05/94	B00F61	273	270	7.99		200 L	10.0
		B00F62		270			140 L	8.4
199-H4-14	12/05/94	B00F65	305	310	8.09		300 L	24.7
199-H4-18	12/05/94	B00F67	351	330	8.04		500 L	24.4
199-H4-3	10/03/94	B000P4	1129		7.57			
	11/22/94	B00754	790		7.25			
	12/05/94	B00F69	814	790	8.20		600 L	12.1
199-H4-4	10/03/94	B000P6	1077		7.90			
	11/16/94	B00756	753		8.02			
	12/05/94	B00F71	722	700	8.04		500 L	7.5
199-H4-5	12/05/94	B00F73	463	480	8.04		400 L	7.9
199-H4-6	12/02/94	B00F75	319 F	420	8.85 F		500 L	5.0 U
199-H4-7	12/05/94	B00F77	474	470	7.79		400 L	11.0
199-H4-8	12/02/94	B00F79	481	490	7.04		400 L	6.5
199-H4-9	10/15/94	B00758	405		7.80			
	12/14/94	B00F81	467	460	7.63		600 L	7.8

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

Table 3-6. Drinking Water Standards Exceeded for the 183-H Basins,
Fourth Quarter 1994.

Constituent (DWS)	Wells exceeding DWS (number of samples)
Field conductivity (700 $\mu\text{mho/cm}$)	H4-3 (3); H4-4 (3)
Lab conductivity (700 $\mu\text{mho/cm}$)	H4-3 (1)
Field pH (6.5 - 8.5)	H4-6 ^a
Chromium, unfiltered samples (50 ppb)	All wells except H3-2A and H3-2C
Chromium, filtered samples (50 ppb)	All wells except H3-2A, H3-2C, H4-11, H4-18, and H4-6.
Gross alpha (15 pCi/L)	H4-3 (3), H4-4 (3)
Iron, unfiltered samples (300 ppb)	H4-3 (3), H4-4 (3), H4-5, H4-6, H4-8, H4-9 (2)
Iron, filtered sample (300 ppb)	none.
Manganese, unfiltered samples (50 ppb)	H4-3(2), H4-6
Manganese, filtered sample (50 ppb)	none.
Nitrate (45,000 ppb)	H4-3 (3), H4-4 (3)

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

DWS = drinking water standard.

Table 3-7. Requests for Analytical Data Evaluation Submitted for the 183-H Solar Evaporation Basins, Fourth Quarter 1994.

Well no.	Sample date	Constituent	Reason
H4-3	11/22/94	Nitrite	Higher than historical trend.
H4-6	12/2/94	Conductivity (field)	Lower than historical trend.
H4-6	12/2/94	pH (field)	Higher than historical trend.
H4-4	11/16/94	Silver (filtered)	First detection in this well; higher than unfiltered result.

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4.0 100-N RCRA SITES

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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 (Figure 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 are being 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.

Well locations in the 100-N Area are illustrated in Figure 4-1. Many of these wells are monitored monthly for water levels. Fewer wells are used for groundwater sampling. Sampling networks are listed in Table 4-1.

4.2 WATER LEVEL MEASUREMENTS

Water levels are measured monthly in most 100-N Area wells to track changes caused by river-stage fluctuations. Data are listed in Table 4-2.

4.3 WATER CHEMISTRY DATA

All the wells in the 1324-N/NA network were scheduled for sampling this quarter, but well N-59 had insufficient water. Only the upgradient wells for the 1301-N LWDF were scheduled for sampling. Well N-34 was sampled, but well N-57 had a broken pump. Well N-74, upgradient of the 1325-N LWDF, was sampled only for field conductivity, field pH, and TOX, as planned. Well N-43, downgradient of the 1325-N LWDF, was sampled on October 31, 1994, because it had been rescheduled the previous quarter.

Groundwater chemistry data from samples collected during the fourth quarter of 1994 are listed in Tables 4-3 through 4-5. These tables also include data from earlier quarters that were not reported previously. 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. Several analytical results appear anomalous and RADES were submitted (Table 4-7).

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, 4th Qtr 1994
N-2	1301-N	Downgradient	Quarterly	Not scheduled
N-3	1301-N	Downgradient	Quarterly	Not scheduled
N-14	1301-N	Downgradient	Quarterly	Not scheduled
N-27	1325-N	Downgradient	Semiannually	Not scheduled
N-29	1325-N	Downgradient	Semiannually	Not scheduled
N-32	1325-N	Downgradient	Semiannually	Not scheduled
N-34	1301-N	Upgradient	Quarterly	11/4/94
N-41	1325-N	Downgradient	Semiannually	Not scheduled
N-43	1325-N	Downgradient	Semiannually	10/31/94 ^a
N-57	1301-N	Upgradient	Quarterly	Not sampled ^b
N-59	1324-N/NA	Downgradient	Quarterly	Not sampled ^c
N-67	1301-N	Downgradient	Quarterly	Not scheduled
N-70	1325-N	Downgradient; bottom of aquifer	Quarterly	Not scheduled
N-71	1324-N/NA	Upgradient	Quarterly	11/4/94
N-72	1324-N/NA	Downgradient	Quarterly	11/7/94
N-73	1324-N/NA	Downgradient	Quarterly	11/7/94
N-74	1325-N	Upgradient	Quarterly	11/4/94
N-75	1301-N	Downgradient	Quarterly	Not scheduled
N-76	1301-N	Downgradient	Quarterly	Not scheduled
N-77	1324-N/NA	Downgradient; bottom of aquifer	Quarterly	11/7/94
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.

^aRescheduled because of logistical problems during 3rd quarter.

^bPump broken.

^cInsufficient water in well.

RCRA = Resource Conservation and Recovery Act of 1976.

Table 4-2. RCRA Water Level Measurement Report
 100-N Area, Fourth Quarter 1994.
 (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				
199-N-14	11/09/94	70.16	383.50	116.89
	12/07/94	69.50	384.16	117.09
199-N-16	10/17/94	72.48	384.74	117.27
	11/08/94	72.31	384.91	117.32
	12/07/94	71.99	385.23	117.42
199-N-19	10/17/94	71.87	382.55	116.60
	11/08/94	71.27	383.15	116.78
	12/07/94	69.91	384.51	117.20
199-N-2	10/18/94	76.16	383.58	116.92
	11/09/94	76.22	383.52	116.90
	12/07/94	75.56	384.18	117.10
199-N-20	10/17/94	73.21	383.12	116.77
	11/08/94	72.81	383.52	116.90
	12/07/94	71.69	384.64	117.24
199-N-21	10/17/94	74.42	383.03	116.75
	11/08/94	73.94	383.51	116.89
	12/07/94	72.94	384.51	117.20
199-N-23	10/17/94	73.93	382.84	116.69
	11/08/94	73.39	383.38	116.85
	12/07/94	72.37	384.40	117.17
199-N-25	10/17/94	44.91	381.32	116.23
	11/08/94	43.98	382.25	116.51
	12/07/94	41.66	384.57	117.22
199-N-26	10/17/94	74.20	382.04	116.45
	11/08/94	73.82	382.42	116.56
199-N-26	12/07/94	71.76	384.48	117.19
199-N-27	10/18/94	62.53	387.04	117.97
	11/08/94	62.69	386.88	117.92
	12/07/94	62.80	386.77	117.89

Table 4-2. RCRA Water Level Measurement Report
 100-N Area, Fourth Quarter 1994.
 (sheet 2 of 5)

Well	Date	Depth to water (ft)	Water level elevation above ms1 (ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer				
199-N-28	10/18/94	77.29	387.43	118.09
	11/08/94	77.07	387.65	118.16
	12/07/94	77.00	387.72	118.18
199-N-29	10/18/94	77.97	387.76	118.19
	11/08/94	78.12	387.61	118.14
	12/07/94	78.28	387.45	118.09
199-N-3	10/18/94	76.47	382.90	116.71
	11/09/94	75.90	383.47	116.88
	12/07/94	75.18	384.19	117.10
199-N-31	10/18/94	76.78	386.33	117.75
	12/07/94	76.83	386.28	117.74
199-N-32	10/18/94	76.04	386.52	117.81
	11/08/94	76.19	386.37	117.77
	12/07/94	76.23	386.33	117.75
199-N-33	10/18/94	74.71	385.64	117.54
199-N-34	10/18/94	73.45	386.68	117.86
	11/04/94	78.83	381.30*+	116.22
	11/08/94	73.55	386.58	117.83
	12/07/94	74.00	386.13	117.69
199-N-41	10/18/94	74.56	383.53	116.90
	11/08/94	74.25	383.84	116.99
	12/07/94	74.08	384.01	117.05
199-N-42	10/18/94	71.57	384.05	117.06
	11/08/94	71.52	384.10	117.07
	12/07/94	71.23	384.39	117.16
199-N-43	10/18/94	65.79	383.73	116.96
	10/31/94	61.89	387.63*+	118.15
	11/09/94	65.51	384.01	117.05
	12/07/94	65.08	384.44	117.18

Table 4-2. RCRA Water Level Measurement Report
 100-N Area, Fourth Quarter 1994.
 (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				
199-N-50	11/08/94	80.62	383.26	116.82
	12/07/94	80.20	383.68	116.95
199-N-51	10/18/94	80.38	382.31	116.53
	11/08/94	79.79	382.90	116.71
	12/07/94	79.02	383.67	116.94
199-N-52	10/18/94	76.18	388.00	118.26
	11/08/94	76.25	387.93	118.24
	12/07/94	76.38	387.80	118.20
199-N-54	10/17/94	73.55	384.43	117.17
	11/08/94	73.42	384.56	117.21
	12/07/94	73.04	384.94	117.33
199-N-55	10/17/94	73.89	384.44	117.18
	11/08/94	73.78	384.55	117.21
	12/07/94	73.76	384.57	117.22
199-N-56	10/17/94	74.57	384.00	117.04
	11/08/94	74.42	384.15	117.09
	12/07/94	74.01	384.56	117.21
199-N-57	10/17/94	72.20	386.04	117.66
	11/08/94	72.26	385.98	117.65
	12/07/94	72.14	386.10	117.68
199-N-59	10/18/94	74.79	385.26	117.43
199-N-62	10/18/94	76.31	387.78	118.20
	11/08/94	76.48	387.61	118.14
	12/07/94	76.65	387.44	118.09
199-N-63	10/18/94	79.86	387.34	118.06
	11/08/94	80.03	387.17	118.01
	12/07/94	79.94	387.26	118.04
199-N-64	10/18/94	68.38	386.75	117.88
	11/09/94	68.48	386.65	117.85
	12/07/94	68.57	386.56	117.82

Table 4-2. RCRA Water Level Measurement Report
 100-N Area, Fourth Quarter 1994.
 (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				
199-N-65	10/18/94	70.73	386.23	117.72
	11/09/94	70.82	386.14	117.70
	12/07/94	70.81	386.15	117.70
199-N-67	10/18/94	74.80	384.15	117.09
	11/09/94	74.70	384.25	117.12
	12/07/94	74.39	384.56	117.21
199-N-71	10/18/94	73.97	389.02	118.57
	11/04/94	73.79	389.20*	118.63
	11/08/94	74.17	388.82	118.51
	12/07/94	74.48	388.51	118.42
199-N-72	10/17/94	72.49	386.46	117.79
	11/07/94	72.55	386.40*	117.77
	11/08/94	72.46	386.49	117.80
	12/07/94	72.43	386.52	117.81
199-N-73	10/18/94	76.59	386.64	117.85
	11/07/94	75.60	387.63*+	118.15
	11/08/94	76.61	386.62	117.84
	12/07/94	76.67	386.56	117.82
199-N-74	10/18/94	68.65	388.97	118.56
	11/04/94	68.68	388.94*	118.55
	11/08/94	68.77	388.85	118.52
	12/07/94	68.94	388.68	118.47
199-N-75	10/18/94	74.37	382.41	116.56
	11/09/94	73.70	383.08	116.76
	12/07/94	72.93	383.85	117.00
199-N-76	10/18/94	69.74	382.38	116.55
	11/08/94	69.09	383.03	116.75
	12/07/94	68.33	383.79	116.98
199-N-81	10/18/94	77.30	385.41	117.47
	11/08/94	77.43	385.28	117.43
	12/07/94	76.54	386.17	117.70

Table 4-2. RCRA Water Level Measurement Report
 100-N Area, Fourth Quarter 1994.
 (sheet 5 of 5)

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer				
199-N-85	10/18/94	24.10	381.00	116.13
	11/09/94	23.32	381.78	116.37
	12/07/94	21.17	383.93	117.02
699-81-58	10/18/94	47.30	392.19	119.54
	11/08/94	47.31	392.18	119.54
	12/07/94	47.40	392.09	119.51
Wells Monitoring the Bottom of the Unconfined Aquifer				
199-N-69	10/18/94	75.35	383.98	117.04
	11/09/94	75.18	384.15	117.09
	12/07/94	74.85	384.48	117.19
199-N-70	10/18/94	69.44	385.24	117.42
	11/08/94	69.55	385.13	117.39
	12/07/94	69.50	385.18	117.40
199-N-77	10/17/94	72.83	386.61	117.84
	11/07/94	72.79	386.65*	117.85
	11/08/94	72.80	386.64	117.85
	12/07/94	72.80	386.64	117.85

- 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. Elevations marked with an '*' were measured at the time of sampling.
4. Elevations 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 October 1 through December 31, 1994.
(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	94	Conductivity, field	umhos		1			19	19	
CONDUCT	73	Conductivity, Lab	umhos					7	7	
TOC		Total Organic Carbon	ppb		110			16	16	
TOX		Total Organic Halogen	ppb		5			20	20	
PH	93	pH, field	pH		.01	6.5-8.5	EPAS	19	19	1
PH	125	pH, Lab	pH			6.5-8.5	EPAS	7	7	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
ARSENIC		Arsenic	ppb		2.8	50	EPA	7	2	0
FARSENIC		Arsenic, filtered	ppb		2.8	50	EPA	7	1	0
BARIUM		Barium	ppb		.59	1000	EPAI	13	13	0
FBARIUM		Barium, filtered	ppb		.59	1000	EPAI	13	13	0
CADMIUM		Cadmium	ppb		3.3	10	EPAI	13	0	0
FCADMIU		Cadmium, filtered	ppb		3.3	10	EPAI	13	1	0
CHROMIUM		Chromium	ppb		4.5	50	EPAI	13	9	2
FCHROMI		Chromium, filtered	ppb		4.5	50	EPAI	13	5	0
FLUORID		Fluoride	ppb		36	1400	EPAI	8	8	0
ALPHA		Gross alpha	pCi/L			15	EPA	4	4	0
MERCURY		Mercury	ppb		.05	2	EPA	1	0	0
FMERCUR		Mercury, filtered	ppb		.05	2	EPA	1	1	0
NITRATE		Nitrate	ppb		11	45000	EPA	8	8	0
RADIUM		Radium	pCi/L			5	EPAI	1	0	0
SELENIUM		Selenium	ppb		.65	10	EPAI	1	0	0
FSELENI		Selenium, filtered	ppb		.65	10	EPAI	1	0	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORID		Chloride	ppb		14	250000	EPAS	8	8	0
IRON		Iron	ppb		5.24	300	EPAS	13	13	6
FIRON		Iron, filtered	ppb		5.24	300	EPAS	13	7	0
MANGESE		Manganese	ppb		.72	50	EPAS	13	12	0
FMANGAN		Manganese, filtered	ppb		.72	50	EPAS	13	9	0
LPHENOL		Phenol	ppb		.31			1	0	
SODIUM		Sodium	ppb		61			13	13	
FSODIUM		Sodium, filtered	ppb		61			13	13	
SULFATE		Sulfate	ppb		37	250000	EPAS	8	8	2

Table 4-3. Constituent List and Summary of Results for 100-N RCRA Sites
Data for Reporting Period October 1 through December 31, 1994.
(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
1,1,1-T		1,1,1-Trichloroethane	ppb	.036	200	EPA	5	0	0
1,1,2-T		1,1,2-Trichloroethane	ppb	.078			5	0	
1,1-DIC		1,1-Dichloroethane	ppb	.058			5	0	
1,2-DIC		1,2-Dichloroethane	ppb	.029	5	EPA	5	0	0
14-dben		1,4-Dichlorobenzene	ppb	.055	75	EPA	5	0	0
246-trp		2,4,6-Trichlorophenol	ppb	1.3			1	0	
24-dchp		2,4-Dichlorophenol	ppb	1.3			1	0	
DIMPEN		2,4-Dimethylphenol	ppb	1.2			1	0	
DINPHEN		2,4-Dinitrophenol	ppb	3			1	0	
26-dchp		2,6-Dichlorophenol	ppb	1.4			1	0	
CHLPHEN		2-Chlorophenol	ppb	1.4			1	0	
2NITPH		2-Nitrophenol	ppb	1.3			1	0	
46DIMP		2-sec-Butyl-4,6-dinitrophenol (DM)	ppb	1.3			1	0	
46DIMP		4,6-Dinitro-2-methylphenol	ppb	1.3			1	0	
CHLCRES		4-Chloro-3-methylphenol	ppb	1.3			1	0	
NITPHEN		4-Nitrophenol	ppb	3			1	0	
ALKALIN		Alkalinity	ppm	2.8			5	5	
ALUMINUM		Aluminum	ppb	26			13	8	
FALUMIN		Aluminum, filtered	ppb	26			13	0	
ANTIMONY		Antimony	ppb	62			13	0	
FANTIMO		Antimony, filtered	ppb	62			13	0	
SB-125		Antimony-125	pCi/L				4	2	
BENZENE		Benzene	ppb	.013	5	EPA	5	0	0
BERYLLIUM		Beryllium	ppb	.17			13	4	
FBERYLL		Beryllium, filtered	ppb	.17			13	3	
BROMIDE		Bromide	ppb	100			8	0	
CALCIUM		Calcium	ppb	34			13	13	
FCALCIU		Calcium, filtered	ppb	34			13	13	
TETRANE		Carbon tetrachloride	ppb	.075	5	EPA	5	0	0
CS-137		Cesium-137	pCi/L		200	EPA	4	2	0
CHLFORM		Chloroform	ppb	.041			5	5	
COBALT		Cobalt	ppb	5.9			13	1	
FCOBALT		Cobalt, filtered	ppb	5.9			13	0	
CO-60		Cobalt-60	pCi/L		100	EPA	4	3	0
COLIFORM		Coliforms	COL	1	1	EPAI	1	0	0
COPPER		Copper	ppb	4.1	1000	EPAS	13	4	0
FCOPPER		Copper, filtered	ppb	4.1	1000	EPAS	13	0	0
CRESOLS		Cresols (methylphenols)	ppb	4.8			1	0	
ETHBENZ		Ethylbenzene	ppb	.051	700	EPA	5	0	0
BETA		Gross beta	pCi/L				4	4	
HYDRAZ		Hydrazine	ppb	1.6			2	0	
LEAD		Lead	ppb	1.5	50	EPAI	7	2	0
FLEAD		Lead, filtered	ppb	1.5	50	EPAI	7	1	0
MAGNES		Magnesium	ppb	23			13	13	
FMAGNES		Magnesium, filtered	ppb	23			13	13	
METHYCH		Methylene chloride	ppb	.09			5	0	
NICKEL		Nickel	ppb	13			13	7	
FNICKEL		Nickel, filtered	ppb	13			13	2	

Table 4-3. Constituent List and Summary of Results for 100-N RCRA Sites
 Data for Reporting Period October 1 through December 31, 1994.
 (sheet 3 of 3)

Short	(Method)	Constituent Name	Full	Units	Lab NDL	DWS Limit	Agency	Number of Samples		
								Total	>NDL	>DWS
NITRITE		Nitrite		ppb	18	1000	EPA	8	0	0
PENTCHP		Pentachlorophenol		ppb	1.3	1	EPA	1	0	1*
PHOSPHA		Phosphate		ppb	82			8	0	
POTASSUM		Potassium		ppb	850			13	13	
POTASS		Potassium, filtered		ppb	850			13	13	
RU-106		Ruthenium-106		pCi/L		30	EPA	4	2	1
SILVER		Silver		ppb	3.6	50	EPAI	13	0	0
FSILVER		Silver, filtered		ppb	3.6	50	EPAI	13	0	0
SR-90		Strontium-90		pCi/L		8	EPA	4	3	3
PERCENE		Tetrachloroethene		ppb	.22	5	EPA	5	0	0
TETPHNL		Tetrachlorophenols		ppb	1.5			1	0	
TIN		Tin		ppb	69			13	0	
FTIN		Tin, filtered		ppb	69			13	0	
TOLUENE		Toluene		ppb	.016	1000	EPA	5	0	0
TC		Total Carbon		ppb	320			5	5	
TDS		Total Dissolved Solids		ppm	10	500	EPAS	5	5	2
TRICENE		Trichloroethene		ppb	.11	5	EPA	5	0	0
TRIPHNL		Trichlorophenols		ppb	1.7			1	0	
TRITIUM		Tritium		pCi/L		20000	EPA	4	4	4
TURBID		Turbidity		NTU	.016			6	6	
URANIUM		Uranium		ppb				1	1	
VANADIUM		Vanadium		ppb	6.6			13	7	
FVANADI		Vanadium, filtered		ppb	6.6			13	6	
VINYIDE		Vinyl chloride		ppb	.13	2	EPA	5	0	0
XYLENE		Xylenes (total)		ppb	.035	10000	EPA	5	0	0
ZINC		Zinc		ppb	6.3	5000	EPAS	13	9	0
FZINC		Zinc, filtered		ppb	6.3	5000	EPAS	13	4	0
CIS12DC		cis-1,2-Dichloroethylene		ppb	.11	70	EPA	5	0	0
TRANSCE		trans-1,2-Dichloroethylene		ppb	.073	100	EPA	5	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
October 1 through December 31, 1994.
(sheet 1 of 9)

Well Name	Collection Date	Sample Number	ALKALIN 357/ppm 1.96/.	ALUMINUM 34/ppb 19/.	FALUMIN 34/ppb 19/.	SB-125 140/pci/L ./.
199-N-14	9/09/94	B0C945		29.00 L		
199-N-14	9/09/94	B0C949			19.00 U	
199-N-14	9/09/94	B0CCL7				16.90
199-N-2	9/09/94	B0C970		19.00 U		
199-N-2	9/09/94	B0C974			19.00 U	
199-N-27	9/09/94	B0C903		19.00 U		
199-N-27	9/09/94	B0C907			19.00 U	
199-N-29	9/09/94	B0C908		19.00 U		
199-N-29	9/09/94	B0C9F2			19.00 U	
199-N-3	9/09/94	B0C975		34.00 L		
199-N-3	9/09/94	B0C979			19.00 U	
199-N-3	9/09/94	B0CC02				2.47
199-N-34	11/04/94	B00624		60.00 L		6.91 U
199-N-34	11/04/94	B00628			26.00 U	
199-N-43	10/31/94	B00613		140.00 L		1.34 U
199-N-43	10/31/94	B00617			26.00 U	
199-N-70	9/09/94	B0C9G8		22.00 L		
199-N-70	9/09/94	B0C9H2			19.00 U	
199-N-71	11/04/94	B00714	110.00	31.00 L		
199-N-71	11/04/94	B00718			26.00 U	
199-N-72	11/07/94	B00719	90.00	150.00 LQ		
199-N-72	11/07/94	B00720	90.00	200.00 LQ		
199-N-72	11/07/94	B00721			26.00 U	
199-N-72	11/07/94	B00722			26.00 U	
199-N-73	11/07/94	B00723	110.00	320.00		
199-N-73	11/07/94	B00724			26.00 U	
199-N-77	11/07/94	B00725	100.00	26.00 U		
199-N-77	11/07/94	B00726			26.00 U	

Well Name	Collection Date	Sample Number	ARSENIC 43/ppb .64/50	FARSENIC 43/ppb .64/50	BARIUM 34/ppb 1.3/1000i	FBARIUM 34/ppb 1.3/1000i
199-N-14	9/09/94	B0C945			14.00 L	
199-N-14	9/09/94	B0C949				13.00 L
199-N-2	9/09/94	B0C970			26.00	
199-N-2	9/09/94	B0C974				26.00
199-N-27	9/09/94	B0C903			31.00	
199-N-27	9/09/94	B0C907				31.00
199-N-29	9/09/94	B0C908			25.00	
199-N-29	9/09/94	B0C9F2				25.00
199-N-3	9/09/94	B0C975			120.00	

Table 4-4. Constituents with at Least One Detected Value for
the 100-N RCRA Sites Data for Reporting Period
October 1 through December 31, 1994.
(sheet 2 of 9)

Well Name	Collection Date	Sample Number	ARSENIC 43/ppb .64/50	PARSENIC 43/ppb .64/50	BARIUM 34/ppb 1.3/10001	FBARIUM 34/ppb 1.3/10001
199-N-3	9/09/94	B0C979				120.00
199-N-34	11/04/94	B0D624	2.80 U		32.00	
199-N-34	11/04/94	B0D628		2.80 U		31.00
199-N-43	10/31/94	B0D613	2.90 L		31.00	
199-N-43	10/31/94	B0D617		2.80 U		27.00
199-N-70	9/09/94	B0C9GB			28.00	
199-N-70	9/09/94	B0C9H2				29.00
199-N-71	11/04/94	B0D714	4.20 L		16.00 L	
199-N-71	11/04/94	B0D718		4.10 L		16.00 L
199-N-72	11/07/94	B0D719	2.80 U		41.00	
199-N-72	11/07/94	B0D720	2.80 U		42.00	
199-N-72	11/07/94	B0D721		2.80 U		37.00
199-N-72	11/07/94	B0D722		2.80 U		37.00
199-N-73	11/07/94	B0D723	2.80 U		53.00	
199-N-73	11/07/94	B0D724		2.80 U		48.00
199-N-77	11/07/94	B0D725	2.80 U		59.00	
199-N-77	11/07/94	B0D726		2.80 U		60.00

Well Name	Collection Date	Sample Number	BERYLLIUM 34/ppb 1.5/	FBERYLLIUM 34/ppb 1.5/	CADMIUM 34/ppb 3/101	FCADMIUM 34/ppb 3/101
199-N-14	9/09/94	B0C945	1.50 U		3.00 U	
199-N-14	9/09/94	B0C949		1.50 U		3.00 U
199-N-2	9/09/94	B0C970	1.50 U		3.00 U	
199-N-2	9/09/94	B0C974		1.50 U		3.00 U
199-N-27	9/09/94	B0C9D3	1.50 U		3.00 U	
199-N-27	9/09/94	B0C9D7		1.50 U		3.00 U
199-N-29	9/09/94	B0C9D8	1.50 U		3.00 U	
199-N-29	9/09/94	B0C9F2		1.50 U		3.00 U
199-N-3	9/09/94	B0C975	1.50 U		3.00 U	
199-N-3	9/09/94	B0C979		1.50 U		3.00 U
199-N-34	11/04/94	B0D624	.26 L		3.30 U	
199-N-34	11/04/94	B0D628		.17 U		3.90 L
199-N-43	10/31/94	B0D613	.32 LB		3.30 U	
199-N-43	10/31/94	B0D617		.19 LB		3.30 U
199-N-70	9/09/94	B0C9GB	1.50 U		3.00 U	
199-N-70	9/09/94	B0C9H2		1.50 U		3.00 U
199-N-71	11/04/94	B0D714	.17 U		3.30 U	
199-N-71	11/04/94	B0D718		.17 U		3.30 U
199-N-72	11/07/94	B0D719	.18 BL		3.30 U	
199-N-72	11/07/94	B0D720	.20 BL		3.30 U	
199-N-72	11/07/94	B0D721		.40 BLQ		3.30 U
199-N-72	11/07/94	B0D722		.19 BLQ		3.30 U
199-N-73	11/07/94	B0D723	.17 U		3.30 U	
199-N-73	11/07/94	B0D724		.17 U		3.30 U
199-N-77	11/07/94	B0D725	.17 U		3.30 U	
199-N-77	11/07/94	B0D726		.17 U		3.30 U

Table 4-4. Constituents with at Least One Detected Value for
the 100-N RCRA Sites Data for Reporting Period
October 1 through December 31, 1994.
(sheet 3 of 9)

Well Name	Collection Date	Sample Number	CALCIUM 34/ppb 47/.	PCALCIU 34/ppb 47/.	CS-137 140/pCi/L ./200	CHLORID 124/ppb 71/250000s
199-N-14	9/09/94	80C945	27000.00			
199-N-14	9/09/94	80C949		27000.00		
199-N-14	9/09/94	80CCL7			6.08	1800.00
199-N-2	9/09/94	80C970	36000.00			
199-N-2	9/09/94	80C974		36000.00		
199-N-27	9/09/94	80C903	53000.00			
199-N-27	9/09/94	80C907		53000.00		
199-N-29	9/09/94	80C908	47000.00			
199-N-29	9/09/94	80C9F2		47000.00		
199-N-3	9/09/94	80C975	140000.00			
199-N-3	9/09/94	80C979		140000.00		
199-N-3	9/09/94	80CC02			-4.18	
199-N-34	11/04/94	80D624	53000.00		.43 U	4600.00
199-N-34	11/04/94	80D628		53000.00		
199-N-43	10/31/94	80D613	37000.00		.28 U	6800.00
199-N-43	10/31/94	80D617		35000.00		
199-N-70	9/09/94	80C968	33000.00			
199-N-70	9/09/94	80C9H2		33000.00		
199-N-71	11/04/94	80D714	17000.00			3100.00
199-N-71	11/04/94	80D718		17000.00		
199-N-72	11/07/94	80D719	60000.00			7100.00
199-N-72	11/07/94	80D720	61000.00			7100.00
199-N-72	11/07/94	80D721		58000.00		
199-N-72	11/07/94	80D722		58000.00		
199-N-73	11/07/94	80D723	32000.00			7100.00
199-N-73	11/07/94	80D724		32000.00		
199-N-77	11/07/94	80D725	56000.00			5600.00
199-N-77	11/07/94	80D726		58000.00		

Table 4-4. Constituents with at Least One Detected Value for
the 100-N RCRA Sites Data for Reporting Period
October 1 through December 31, 1994.
(sheet 4 of 9)

Well Name	Collection Date	Sample Number	CHLFORM 25/ppb .05/.	CHROMIUM 34/ppb 11/501	FCRHONI 34/ppb 11/501	COBALT 34/ppb 6.5/.
199-N-14	9/09/94	B0C945		11.00 U		6.50 U
199-N-14	9/09/94	B0C949			11.00 U	
199-N-2	9/09/94	B0C970		11.00 U		6.50 U
199-N-2	9/09/94	B0C974			11.00 U	
199-N-27	9/09/94	B0C903		14.00 L		6.50 U
199-N-27	9/09/94	B0C907			15.00 L	
199-N-29	9/09/94	B0C908		11.00 U		6.50 U
199-N-29	9/09/94	B0C9F2			11.00 U	
199-N-3	9/09/94	B0C975		11.00 U		6.50 U
199-N-3	9/09/94	B0C979			11.00 U	
199-N-34	11/04/94	B0D624		9.50 BL		5.90 U
199-N-34	11/04/94	B0D628			6.20 BL	
199-N-43	10/31/94	B0D613		43.00		5.90 U
199-N-43	10/31/94	B0D617			24.00	
199-N-70	9/09/94	B0C9G8		73.00		6.50 U
199-N-70	9/09/94	B0C9H2			11.00 U	
199-N-71	11/04/94	B0D714	4.10	41.00 B		5.90 U
199-N-71	11/04/94	B0D718			5.90 BL	
199-N-72	11/07/94	B0D719	23.00	37.00		8.70 LB
199-N-72	11/07/94	B0D720	22.00	39.00		5.90 UQ
199-N-72	11/07/94	B0D721			5.90 LQ	
199-N-72	11/07/94	B0D722			4.50 UQ	
199-N-73	11/07/94	B0D723	6.30	74.00		5.90 U
199-N-73	11/07/94	B0D724			4.50 U	
199-N-77	11/07/94	B0D725	8.80	6.90 L		5.90 U
199-N-77	11/07/94	B0D726			4.50 U	

Well Name	Collection Date	Sample Number	FCOBALT 34/ppb 6.5/.	CO-60 140/pCi/L ./100	COPPER 34/ppb 2.6/1000s	FCOPPER 34/ppb 2.6/1000s
199-N-14	9/09/94	B0C945			2.60 U	
199-N-14	9/09/94	B0C949	6.50 U			2.60 U
199-N-14	9/09/94	B0C9L7		-5.09		
199-N-2	9/09/94	B0C970			2.60 U	
199-N-2	9/09/94	B0C974	6.50 U			2.60 U
199-N-27	9/09/94	B0C903			2.60 U	
199-N-27	9/09/94	B0C907	6.50 U			2.60 U
199-N-29	9/09/94	B0C908			3.00 L	
199-N-29	9/09/94	B0C9F2	6.50 U			2.60 U
199-N-3	9/09/94	B0C975			2.60 U	
199-N-3	9/09/94	B0C979	6.50 U			2.60 U

Table 4-4. Constituents with at Least One Detected Value for
the 100-N RCRA Sites Data for Reporting Period
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(sheet 5 of 9)

Well Name	Collection Date	Sample Number	FCOBALT 34/ppb 6.5/.	CO-60 140/pCi/L ./100	COPPER 34/ppb 2.6/1000s	FCOPPER 34/ppb 2.6/1000s
199-N-3	9/09/94	B0C002		3.68		
199-N-34	11/04/94	B00624		10.10	4.10 U	
199-N-34	11/04/94	B00628	5.90 U			4.10 U
199-N-43	10/31/94	B00613		1.24 U	22.00	
199-N-43	10/31/94	B00617	5.90 U			4.10 U
199-N-70	9/09/94	B0C908			2.60 U	
199-N-70	9/09/94	B0C9H2	6.50 U			3.50 L
199-N-71	11/04/94	B00714			4.10 U	
199-N-71	11/04/94	B00718	5.90 U			4.10 U
199-N-72	11/07/94	B00719			4.60 L	
199-N-72	11/07/94	B00720			5.60 L	
199-N-72	11/07/94	B00721	5.90 U			4.10 U
199-N-72	11/07/94	B00722	5.90 U			4.10 U
199-N-73	11/07/94	B00723			5.70 L	
199-N-73	11/07/94	B00724	5.90 U			4.10 U
199-N-77	11/07/94	B00725			4.10 U	
199-N-77	11/07/94	B00726	5.90 U			4.10 U

Well Name	Collection Date	Sample Number	FLUORIDE 124/ppb 51/1400f	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.	IRON 34/ppb 18/300s
199-N-14	9/09/94	B0C945				510.00 Q
199-N-14	9/09/94	B0CCL7	500.00	.02	1920.00	
199-N-2	9/09/94	B0C970				99.00 Q
199-N-27	9/09/94	B0C903				120.00 Q
199-N-29	9/09/94	B0C908				33.00 Q
199-N-3	9/09/94	B0C975				280.00 Q
199-N-3	9/09/94	B0C002		7.25	1680.00	
199-N-34	11/04/94	B00624	500.00	1.94	85.10	240.00
199-N-43	10/31/94	B00613	400.00	1.63	3.74	940.00 Q
199-N-70	9/09/94	B0C908				370.00 Q
199-N-71	11/04/94	B00714	500.00			190.00
199-N-72	11/07/94	B00719	600.00			440.00 B
199-N-72	11/07/94	B00720	600.00			560.00 B
199-N-73	11/07/94	B00723	700.00			860.00 B
199-N-77	11/07/94	B00725	800.00			45.00 B

Table 4-4. Constituents with at Least One Detected Value for
the 100-N RCRA Sites Data for Reporting Period
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(sheet 6 of 9)

Well Name	Collection Date	Sample Number	FIROM 34/ppb 18/300s	LEAD 40/ppb .86/501	FLEAD 40/ppb .86/501	MAGNES 34/ppb 25/.
199-N-14	9/09/94	B0C945				4400.00
199-N-14	9/09/94	B0C949	18.00 UQ			
199-N-2	9/09/94	B0C970				6800.00
199-N-2	9/09/94	B0C974	18.00 UQ			
199-N-27	9/09/94	B0C903				10000.00
199-N-27	9/09/94	B0C907	18.00 UQ			
199-N-29	9/09/94	B0C908				7900.00
199-N-29	9/09/94	B0C9F2	18.00 UQ			
199-N-3	9/09/94	B0C975				24000.00
199-N-3	9/09/94	B0C979	18.00 UQ			
199-N-34	11/04/94	B0D624		1.50 U		9300.00
199-N-34	11/04/94	B0D628	5.24 U		1.50 U	
199-N-43	10/31/94	B0D613		2.20 L		11000.00
199-N-43	10/31/94	B0D617	18.00 LQ		1.50 U	
199-N-70	9/09/94	B0C968				9100.00
199-N-70	9/09/94	B0C9H2	57.00 Q			
199-N-71	11/04/94	B0D714		2.10 BL		4700.00
199-N-71	11/04/94	B0D718	12.00 L		1.50 U	
199-N-72	11/07/94	B0D719		1.50 U		13000.00 B
199-N-72	11/07/94	B0D720		1.50 U		13000.00 B
199-N-72	11/07/94	B0D721	23.00 S		1.50 U	
199-N-72	11/07/94	B0D722	28.00 S		1.50 BL	
199-N-73	11/07/94	B0D723		1.50 U		6400.00 B
199-N-73	11/07/94	B0D724	16.00 BL		1.50 U	
199-N-77	11/07/94	B0D725		1.50 U		14000.00 B
199-N-77	11/07/94	B0D726	14.00 BL		1.50 U	

Well Name	Collection Date	Sample Number	FMAGNES 34/ppb 25/.	FMANGSE 34/ppb 1/50s	FMANGAN 34/ppb 1/50s	MERCURY 41/ppb .095/2
199-N-14	9/09/94	B0C945		4.20 L		
199-N-14	9/09/94	B0C949	4400.00		1.00 U	
199-N-2	9/09/94	B0C970		4.00 L		
199-N-2	9/09/94	B0C974	6800.00		1.00 U	
199-N-27	9/09/94	B0C903		1.70 L		
199-N-27	9/09/94	B0C907	10000.00		1.40 L	
199-N-29	9/09/94	B0C908		1.00 U		
199-N-29	9/09/94	B0C9F2	7900.00		1.00 U	
199-N-3	9/09/94	B0C975		5.20 L		
199-N-3	9/09/94	B0C979	24000.00		1.00 U	
199-N-34	11/04/94	B0D624		7.50 L		.05 U
199-N-34	11/04/94	B0D628	9300.00		2.30 L	
199-N-43	10/31/94	B0D613		48.00		
199-N-43	10/31/94	B0D617	12000.00		3.30 L	
199-N-70	9/09/94	B0C968		6.70 L		
199-N-70	9/09/94	B0C9H2	9000.00		2.70 L	
199-N-71	11/04/94	B0D714		6.30 L		
199-N-71	11/04/94	B0D718	4700.00		2.50 L	
199-N-72	11/07/94	B0D719		11.00		
199-N-72	11/07/94	B0D720		14.00		
199-N-72	11/07/94	B0D721	12000.00 S		2.70 L	
199-N-72	11/07/94	B0D722	12000.00 S		2.80 L	
199-N-73	11/07/94	B0D723		21.00		
199-N-73	11/07/94	B0D724	6200.00 S		3.90 L	

Table 4-4. Constituents with at Least One Detected Value for
the 100-N RCRA Sites Data for Reporting Period
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Well Name	Collection Date	Sample Number	FMERCU 41/ppb .095/2	NICKEL 34/ppb 16/.	FMICKEL 34/ppb 16/.	NITRATE 124/ppb 96/45000
199-N-77	11/07/94	800725		2.50 L		
199-N-77	11/07/94	800726	14000.00 B		1.60 L	
199-N-14	9/09/94	80C945		16.00 U		
199-N-14	9/09/94	80C949			16.00 U	
199-N-14	9/09/94	80CCL7				13000.00 D
199-N-2	9/09/94	80C970		16.00 U		
199-N-2	9/09/94	80C974			16.00 U	
199-N-27	9/09/94	80C983		16.00 U		
199-N-27	9/09/94	80C907			16.00 U	
199-N-29	9/09/94	80C908		16.00 U		
199-N-29	9/09/94	80C9F2			16.00 U	
199-N-3	9/09/94	80C975		16.00 U		
199-N-3	9/09/94	80C979			16.00 U	
199-N-34	11/04/94	800624		13.00 L		14000.00 D
199-N-34	11/04/94	800628	.05 L		13.00 U	
199-N-43	10/31/94	800613		13.00 U		19000.00 D
199-N-43	10/31/94	800617			13.00 U	
199-N-70	9/09/94	80C908		27.00 L		
199-N-70	9/09/94	80C9H2			16.00 U	
199-N-71	11/04/94	800714		21.00 L		1700.00
199-N-71	11/04/94	800718			13.00 L	
199-N-72	11/07/94	800719		28.00 L		3900.00
199-N-72	11/07/94	800720		24.00 L		4000.00
199-N-72	11/07/94	800721			13.00 U	
199-N-72	11/07/94	800722			15.00 L	
199-N-73	11/07/94	800723		37.00		5600.00
199-N-73	11/07/94	800724			13.00 U	
199-N-77	11/07/94	800725		13.00 L		2700.00
199-N-77	11/07/94	800726			13.00 U	

Table 4-4. Constituents with at Least One Detected Value for
the 100-N RCRA Sites Data for Reporting Period
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(sheet 8 of 9)

Well Name	Collection Date	Sample Number	POTASUM 34/ppb 890/.	FPOTASS 34/ppb 890/.	RU-106 140/pCi/L ./30	SODIUM 34/ppb 150/.
199-N-14	9/09/94	B0C945	1200.00			3400.00
199-N-14	9/09/94	B0C949		1500.00		
199-N-14	9/09/94	B0CCL7			-10.80	
199-N-2	9/09/94	B0C970	2000.00			3000.00
199-N-2	9/09/94	B0C974		1900.00		
199-N-27	9/09/94	B0C903	3700.00			8200.00
199-N-27	9/09/94	B0C907		3800.00		
199-N-29	9/09/94	B0C908	2900.00			3600.00
199-N-29	9/09/94	B0C9F2		2600.00		
199-N-3	9/09/94	B0C975	3700.00			16000.00
199-N-3	9/09/94	B0C979		3400.00		
199-N-3	9/09/94	B0CCD2			35.50	
199-N-34	11/04/94	B00624	3700.00		-4.29 U	4200.00
199-N-34	11/04/94	B00628		3600.00		
199-N-43	10/31/94	B00613	3800.00		-18.50 U	13000.00
199-N-43	10/31/94	B00617		3700.00		
199-N-70	9/09/94	B0C9G8	3200.00			6400.00
199-N-70	9/09/94	B0C9H2		3200.00		
199-N-71	11/04/94	B00714	3800.00			35000.00
199-N-71	11/04/94	B00718		3800.00		
199-N-72	11/07/94	B00719	4900.00			30000.00 B
199-N-72	11/07/94	B00720	4800.00			30000.00 B
199-N-72	11/07/94	B00721		4700.00		
199-N-72	11/07/94	B00722		4700.00		
199-N-73	11/07/94	B00723	3500.00			240000.00 B
199-N-73	11/07/94	B00724		3100.00		
199-N-77	11/07/94	B00725	5300.00			160000.00 B
199-N-77	11/07/94	B00726		5100.00		

Well Name	Collection Date	Sample Number	F5001UM 34/ppb 150/.	SR-90 141/pCi/L ./B	SULFATE 124/ppb 89/250000s	TC 127/ppb 320/.
199-N-14	9/09/94	B0C949	3400.00			
199-N-14	9/09/94	B0CCL7		1210.00	15000.00 D	
199-N-2	9/09/94	B0C974	3100.00			
199-N-27	9/09/94	B0C907	8200.00			
199-N-29	9/09/94	B0C9F2	3500.00			
199-N-3	9/09/94	B0C979	16000.00			
199-N-3	9/09/94	B0CCD2		927.00		
199-N-34	11/04/94	B00624		48.90	82000.00 D	
199-N-34	11/04/94	B00628	4100.00			
199-N-43	10/31/94	B00613		-.06 U	35000.00 D	
199-N-43	10/31/94	B00617	13000.00			
199-N-70	9/09/94	B0C9H2	6400.00			
199-N-71	11/04/94	B00714			25000.00 D	26000.00 BQ
199-N-71	11/04/94	B00718	36000.00			
199-N-72	11/07/94	B00719			140000.00 D	20000.00 BQ
199-N-72	11/07/94	B00720			140000.00 D	20000.00 BQ
199-N-72	11/07/94	B00721	29000.00 B			
199-N-72	11/07/94	B00722	29000.00 B			
199-N-73	11/07/94	B00723			530000.00 D	24000.00 BQ
199-N-73	11/07/94	B00724	240000.00 B			
199-N-77	11/07/94	B00725			460000.00 D	22000.00 BQ
199-N-77	11/07/94	B00726	170000.00 B			

Table 4-4. Constituents with at Least One Detected Value for
the 100-N RCRA Sites Data for Reporting Period
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Well Name	Collection Date	Sample Number	TDS 65/ppm 10/500s	TRITIUM 142/pCi/L ./20000	TURBID 126/MTU .016/.	URANIUM 145/ppb ./.
199-N-14	9/09/94	B00C17		63100.00		.32
199-N-3	9/09/94	B00C02		20800.00		
199-N-34	11/04/94	B00624		23900.00	2.10	
199-N-43	10/31/94	B00613		29600.00		
199-N-71	11/04/94	B00714	190.00		2.10	
199-N-72	11/07/94	B00719	380.00		9.10 q	
199-N-72	11/07/94	B00720	370.00		9.30 q	
199-N-73	11/07/94	B00723	910.00		14.00 q	
199-N-77	11/07/94	B00725	800.00		.73 q	

Well Name	Collection Date	Sample Number	VANADIUM 34/ppb 6.4/.	FVANADI 34/ppb 6.4/.	ZINC 34/ppb 4.4/5000s	FZINC 34/ppb 4.4/5000s
199-N-14	9/09/94	B00945	6.40 U		9.70 LQ	
199-N-14	9/09/94	B00949		7.50 L		4.40 UQ
199-N-2	9/09/94	B00970	6.40 U		4.90 LQ	
199-N-2	9/09/94	B00974		6.40 U		4.40 UQ
199-N-27	9/09/94	B00903	6.40 U		4.40 UQ	
199-N-27	9/09/94	B00907		6.40 U		4.40 UQ
199-N-29	9/09/94	B00908	7.10 L		15.00 q	
199-N-29	9/09/94	B009F2		6.40 U		5.80 LQ
199-N-3	9/09/94	B00975	6.40 U		20.00 q	
199-N-3	9/09/94	B00979		6.40 U		16.00 q
199-N-34	11/04/94	B00624	6.60 U		44.00	
199-N-34	11/04/94	B00628		6.60 U		7.20 L
199-N-43	10/31/94	B00613	30.00 L		56.00	
199-N-43	10/31/94	B00617		25.00 L		12.00
199-N-70	9/09/94	B00908	14.00 L		17.00 q	
199-N-70	9/09/94	B009H2		14.00 L		4.40 UQ
199-N-71	11/04/94	B00714	28.00 L		6.30 U	
199-N-71	11/04/94	B00718		28.00 L		9.80 L
199-N-72	11/07/94	B00719	7.40 L		7.20 LQ	
199-N-72	11/07/94	B00720	6.60 U		14.00 q	
199-N-72	11/07/94	B00721		6.60 U		6.30 U
199-N-72	11/07/94	B00722		6.60 U		6.30 U
199-N-73	11/07/94	B00723	11.00 L		8.20 L	
199-N-73	11/07/94	B00724		9.80 L		6.30 U
199-N-77	11/07/94	B00725	10.00 L		6.30 U	
199-N-77	11/07/94	B00726		7.60 L		6.30 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 October 1 through December 31, 1994.
 (sheet 1 of 1)

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 110/.	TOX ppb 5/.
199-N-34	11/04/94	800624	340	370	7.89	8.20	200 LB	6.9
		800625	340		7.88		300 LB	7.3
		800626	340		7.89		200 LB	6.8
		800627	340		7.89		200 LB	9.9
199-N-43	10/31/94	800613	287	340	7.49 F	8.10 F	300 L	6.6
		800614	285		7.52 F		200 L	6.3
		800615	284		7.55 F		200 L	13.2
		800616	283		7.56 F		300 L	6.1
199-N-71	11/04/94	800714	238	280	8.16	8.30	300 LB	6.2
		800715	237		8.17		200 LB	6.9
		800716	234		8.16		200 LB	8.5
		800717	236		8.17		200 LB	8.4
199-N-72	11/07/94	800719	445	540	7.47 F	8.10	300 LBQ	28.2 Q
		800720		540		8.10	400 LBQ	26.6 Q
199-N-73	11/07/94	800723	1080	1300	6.37 F	8.20	400 LBQ	10.5 Q
199-N-74	11/04/94	800703	391		7.47			11.7
		800704	390		7.49			9.2
		800705	390		7.51			6.9
		800706	390		7.52			10.8
199-N-77	11/07/94	800725	1009	1200	7.65	8.10	300 LBQ	15.4 Q

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

Table 4-6. Drinking Water Standards Exceeded for 100-N Area RCRA Sites, Fourth Quarter 1994.

Constituent (DWS)	Wells exceeding DWS (number of samples)
Field pH (6.5 - 8.5)	N-73 ^a
Chromium, unfiltered samples (50 ppb)	1324-N/NA: N-72. 1325-N: N-70
Chromium, filtered samples (50 ppb)	none.
Iron, unfiltered samples (300 ppb)	1301-N: N-14 1324-N/NA: N-72 (2), N-73 1325-N: N-43, N-70
Iron, filtered sample (300 ppb)	none.
Ruthenium-106 (30 pCi/L)	1301-N: N-3.
Sulfate (250,000 ppb)	1324-N/NA: N-73, N-77.
Strontium-90 (8 pCi/L)	1301-N: N-14, N-3, N-34.
Tritium (20,000 pCi/L)	1301-N: N-14, N-3, N-34. 1325-N: N-43.

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

DWS = drinking water standard.

Table 4-7. Requests for Analytical Data Evaluation
for the 100-N RCRA Sites, Fourth Quarter 1994.

Well no.	Sample date	Constituent	Reason
1325-N LWDF			
N-43	10/31/94	pH (lab and field)	Lab and field values do not agree. Insufficient historical data to judge which is more representative.
1324-N/NA Facility.			
N-72	11/7/94	pH (field)	Lower than historical trend; lower than laboratory pH.
N-73	11/7/94	pH (field)	Lower than historical trend; lower than laboratory pH.

LWDF = Liquid Waste Disposal Facility.

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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 wastewater 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 wastewater. 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 were measured monthly, and once during sample events, in all wells during the October through December 1994 period. Table 5-2 lists the results of the water level measurements. Results for some wells are outside of the expected range of water levels for those wells, and may be in error. The suspected measurements are in wells 299-E32-4, 699-40-40B, 699-41-42, 699-42-37, 699-42-40A, 699-43-41G, and 699-43-42J.

5.3 WATER CHEMISTRY DATA

All wells scheduled for the October through December 1994 sampling were sampled during October, except upgradient wells 299-E18-1 and 299-E32-4, which were sampled in December. 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.

Constituents exceeding DWS during the October through December 1994 period are listed in Table 5-6. The constituent list for this quarter

includes those required by regulations and compounds under investigation for links to TOX occurrence. Groundwater monitoring requirements and strategy for the 216-B-3 Pond System are described by Sweeney (1995).

A RADE has been submitted for a result of 24 ppb diethyl phthalate in well 699-40-40B. This compound has not been previously detected in this well. This well also produced an elevated average result for TOX, but the diethyl phthalate cannot be directly correlated to TOX occurrence. A companion well, 699-40-40A, produced a result of 7.2 ppb of tris-2-chloroethyl phosphate. A RADE was also submitted for the tritium result in upgradient well 299-E18-1. This result is ten times higher than any previous tritium results from this well and may be erroneous.

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

H0312016.1

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, 4th Qtr 1994
299-E18-1 ^a	Upgradient	Hanford: Water Table	Quarterly	12/01/94
299-E32-4 ^b	Upgradient	Hanford: Water Table	Quarterly	12/13/94
699-40-36 ^c	Downgradient	Ringold: Top of Confined	Quarterly	10/27/94
699-40-39	Downgradient	Ringold: Upper Confined	Quarterly	10/25/94
699-40-40A	Downgradient	Ringold: Lower Confined	Quarterly	10/12/94
699-40-40B	Downgradient	Ringold: Upper Confined	Quarterly	10/14/94
699-41-35 ^c	Downgradient	Ringold: Top of Confined	Quarterly	10/27/94
699-41-40	Downgradient	Ringold: Upper Confined	Quarterly	10/24/94
699-41-42	Downgradient	Ringold: Top of Confined	Quarterly	10/20/94
699-42-37 ^c	Downgradient	Ringold: Top of Confined	Quarterly	10/27/94
699-42-39A	Downgradient	Ringold: Upper Confined	Quarterly	10/12/94
699-42-39B	Downgradient	Ringold: Lower Confined	Quarterly	10/12/94
699-42-40A	Downgradient	Ringold: Upper Confined	Quarterly	10/24/94
699-42-41	Downgradient	Ringold: Water Table	Quarterly	10/19/94
699-42-42B	Downgradient	Ringold: Lower Unconfined	Quarterly	10/20/94
699-43-40	Downgradient	Ringold: Water Table	Quarterly	10/19/94
699-43-41E	Downgradient	Ringold: Upper Confined	Quarterly	10/19/94
699-43-41F	Downgradient	Ringold: Lower Confined	Quarterly	10/20/94
699-43-41G	Downgradient	Ringold: Bottom of Confined	Quarterly	10/19/94
699-43-42J	Downgradient	Ringold: Water Table	Quarterly	10/20/94
699-43-43 ^d	Downgradient	Hanford/Ringold: Water Table	Quarterly	10/06/94
699-43-45 ^d	Downgradient	Hanford/Ringold: Water Table	Quarterly	10/06/94
699-44-39B	Downgradient	Ringold: Water Table	Quarterly	10/20/94
699-44-42	Downgradient	Ringold: Water Table	Quarterly	10/20/94
699-44-43B	Downgradient	Ringold: Water Table	Quarterly	10/21/94

^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.

Table 5-2. RCRA Water Level Measurement Report
 216-8-3 Pond System, Fourth Quarter 1994.
 (sheet 1 of 4)

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
299-E18-1	10/27/94	318.89	401.35	122.33
	11/28/94	318.85	401.39	122.34
	12/01/94	318.99	401.25*	122.30
	12/15/94	318.67	401.57	122.40
299-E32-4	10/11/94	284.79	401.09*	122.25
	12/13/94	284.93	400.95*+	122.21
	12/14/94	284.53	401.35	122.33
699-40-36	10/24/94	118.17	410.75	125.20
	10/27/94	117.90	411.02*	125.28
	11/17/94	117.95	410.97	125.26
	12/12/94	118.03	410.89	125.24
699-40-39	10/24/94	129.23	412.61	125.76
	10/25/94	129.14	412.70*	125.79
	11/17/94	128.96	412.88	125.85
	12/12/94	129.29	412.55	125.75
699-40-40A	10/12/94	129.87	411.34*	125.38
	10/24/94	129.70	411.51	125.43
	11/17/94	129.50	411.71	125.49
	12/12/94	129.93	411.28	125.36
699-40-40B	10/14/94	129.45	412.73*+	125.80
	10/24/94	130.35	411.83	125.53
	11/17/94	130.16	412.02	125.58
	12/12/94	130.61	411.57	125.45
699-41-35	10/24/94	108.66	411.72	125.49
	10/27/94	108.30	412.08*	125.60
	11/17/94	108.37	412.01	125.58
	12/12/94	108.44	411.94	125.56
699-41-40	10/24/94	130.17	415.77	126.73
	10/24/94	130.15	415.79*	126.73
	11/17/94	129.93	416.01	126.80
	12/12/94	130.53	415.41	126.62
699-41-42	10/20/94	231.55	412.36*+	125.69
	10/24/94	232.44	411.47	125.42
	11/17/94	232.33	411.58	125.45

Table 5-2. RCRA Water Level Measurement Report
 216-B-3 Pond System, Fourth Quarter 1994.
 (sheet 2 of 4)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
699-41-42	12/12/94	232.86	411.05	125.29
699-42-37	10/24/94	104.55	414.85	126.45
	10/27/94	204.98	314.42*+	95.84
	11/17/94	104.20	415.20	126.55
	12/12/94	104.35	415.05	126.51
699-42-39A	10/12/94	139.85	418.29*	127.49
	10/24/94	138.54	419.60	127.89
	11/17/94	138.30	419.84	127.97
	12/12/94	138.59	419.55	127.88
699-42-39B	10/12/94	139.75	418.57*	127.58
	10/24/94	138.97	419.35	127.82
	11/17/94	138.71	419.61	127.90
	12/12/94	138.93	419.39	127.83
699-42-40A	10/24/94	123.64	421.89*+	128.59
	10/24/94	123.28	422.25	128.70
	11/17/94	122.58	422.95	128.92
	12/12/94	123.91	421.62	128.51
699-42-41	10/19/94	146.38	420.92*	128.30
	10/24/94	146.67	420.63	128.21
	11/17/94	146.13	421.17	128.37
	12/12/94	147.07	420.23	128.09
699-42-42B	10/20/94	166.50	416.73*	127.02
	10/24/94	166.85	416.38	126.91
	11/17/94	166.71	416.52	126.96
	12/12/94	167.38	415.85	126.75
699-43-40	10/19/94	120.63	421.57*	128.49
	10/24/94	120.91	421.29	128.41
	11/17/94	120.98	421.22	128.39
	12/12/94	121.61	420.59	128.20
699-43-41E	10/19/94	129.25	421.61*	128.51
	10/24/94	129.90	420.96	128.31
	11/17/94	129.74	421.12	128.36
	12/12/94	130.33	420.53	128.18

Table 5-2. RCRA Water Level Measurement Report
 216-B-3 Pond System, Fourth Quarter 1994.
 (sheet 3 of 4)

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
699-43-41F	10/20/94	130.02	420.99*	128.32
	10/24/94	129.98	421.03	128.33
	11/17/94	129.77	421.24	128.39
	12/12/94	130.40	420.61	128.20
699-43-41G	10/19/94	133.67	417.67*+	127.31
	10/24/94	134.03	417.31	127.20
	11/17/94	134.02	417.32	127.20
	12/12/94	134.56	416.78	127.03
699-43-42J	10/20/94	163.21	418.47*+	127.55
	10/24/94	163.70	417.98	127.40
	11/17/94	163.58	418.10	127.44
	12/12/94	164.34	417.34	127.21
699-43-43	10/06/94	164.75	414.62*	126.38
	10/24/94	165.34	414.03	126.20
	11/17/94	165.28	414.09	126.21
	12/12/94	165.92	413.45	126.02
699-43-45	10/06/94	195.00	402.68*	122.74
	10/24/94	195.01	402.67	122.73
	11/17/94	195.04	402.64	122.72
	12/12/94	195.17	402.51	122.69
699-44-39B	10/20/94	91.46	421.94*+	128.61
	10/24/94	92.05	421.35	128.43
	11/17/94	92.01	421.39	128.44
	12/12/94	92.75	420.65	128.21
699-44-42	10/20/94	159.00	420.22*	128.08
	10/24/94	159.21	420.01	128.02
	11/17/94	159.13	420.09	128.04
	12/12/94	159.79	419.43	127.84
699-44-43B	10/21/94	165.65	414.47*	126.33
	10/24/94	165.83	414.29	126.28
	11/17/94	165.97	414.15	126.23
	12/12/94	166.20	413.92	126.16

Table 5-2. RCRA Water Level Measurement Report
216-B-3 Pond System, Fourth Quarter 1994.
(sheet 4 of 4)

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- 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. Elevations marked with an '*' were measured at the time of sampling.
 4. Elevation 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 October 1 through December 31, 1994.
(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	94	Conductivity, field	umhos		1			111	111	
CONDUCT	73	Conductivity, lab	umhos					3	3	
TOC		Total Organic Carbon	ppb		110			112	101	
TOX		Total Organic Halogen	ppb		5			111	41	
PH	93	pH, field	pH		.01	6.5-8.5	EPAS	111	111	0
PH	125	pH, lab	pH			6.5-8.5	EPAS	28	28	1

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
ARSENIC		Arsenic	ppb		2.8	50	EPA	1	0	0
FARSENIC		Arsenic, filtered	ppb		2.8	50	EPA	1	0	0
BARIUM		Barium	ppb		.59	1000	EPAI	4	4	0
FBARIUM		Barium, filtered	ppb		.59	1000	EPAI	4	4	0
CADMIUM		Cadmium	ppb		3.3	10	EPAI	4	0	0
FCADMIUM		Cadmium, filtered	ppb		3.3	10	EPAI	4	0	0
CHROMIUM		Chromium	ppb		4.5	50	EPAI	4	4	0
FCHROMIUM		Chromium, filtered	ppb		4.5	50	EPAI	4	2	0
FLUORIDE		Fluoride	ppb		36	1400	EPAI	4	4	0
ALPHA		Gross alpha	pCi/L			15	EPA	4	3	0
MERCURY		Mercury	ppb		.05	2	EPA	1	1	0
FMERCURY		Mercury, filtered	ppb		.05	2	EPA	1	1	0
NITRATE		Nitrate	ppb		11	45000	EPA	4	4	0
RADIUM		Radium	pCi/L			5	EPAI	1	0	0
SELENIUM		Selenium	ppb		.65	10	EPAI	1	1	0
FSELENIUM		Selenium, filtered	ppb		.65	10	EPAI	1	1	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORIDE		Chloride	ppb		14	250000	EPAS	4	4	0
IRON		Iron	ppb		5.24	300	EPAS	4	4	2
FIRON		Iron, filtered	ppb		5.24	300	EPAS	4	4	0
MANGANESE		Manganese	ppb		.72	50	EPAS	4	4	0
FMANGANESE		Manganese, filtered	ppb		.72	50	EPAS	4	4	0
LPHENOL	19	Phenol	ppb		.54			28	0	
LPHENOL	30	Phenol	ppb		.31			3	0	
SODIUM		Sodium	ppb		61			4	4	
FSODIUM		Sodium, filtered	ppb		61			4	4	
SULFATE		Sulfate	ppb		37	250000	EPAS	4	4	0

Table 5-3. Constituent List and Summary of Results for the 216-B-3 Pond
Data for Reporting Period October 1 through December 31, 1994.
(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
1,1,1-T		1,1,1-Trichloroethane	ppb	.036	200	EPA		1	0	0
1,1,2-T		1,1,2-Trichloroethane	ppb	.078				1	0	
1,1-DIC		1,1-Dichloroethane	ppb	.058				1	0	
1,2-DIC		1,2-Dichloroethane	ppb	.029	5	EPA		1	0	0
14-dben		1,4-Dichlorobenzene	ppb	.055	75	EPA		1	0	0
246-trp		2,4,6-Trichlorophenol	ppb	1.3				3	0	
24-dchp	19	2,4-Dichlorophenol	ppb	4				28	0	
24-dchp	30	2,4-Dichlorophenol	ppb	1.3				3	0	
DIMPEN		2,4-Dimethylphenol	ppb	1.2				3	0	
DINPHEN		2,4-Dinitrophenol	ppb	3				3	0	
26-dchp		2,6-Dichlorophenol	ppb	1.4				3	0	
CHLPEN		2-Chlorophenol	ppb	1.6				3	0	
2METPN		2-Methylphenol	ppb	5.1				28	0	
2MITPN	19	2-Nitrophenol	ppb	1.9				28	0	
2MITPN	30	2-Nitrophenol	ppb	1.3				3	0	
3UTDINP		2-sec-Butyl-4,6-dinitrophenol (DN)	ppb	1.3				3	0	
46DN2MP		4,6-Dinitro-2-methylphenol	ppb	1.3				3	0	
CHLCRES		4-Chloro-3-methylphenol	ppb	1.3				3	0	
4METHPN		4-Methylphenol	ppb	7				28	0	
NITPHEN		4-Nitrophenol	ppb	3				3	0	
ALUMNUM		Aluminum	ppb	26				4	1	
FALUMIN		Aluminum, filtered	ppb	26				4	0	
AMMONIU		Ammonium ion	ppb	37				2	0	
ANTIMONY		Antimony	ppb	62				4	0	
FANTINO		Antimony, filtered	ppb	62				4	0	
BENZENE		Benzene	ppb	.013	5	EPA		1	0	0
BENZOTH		Benzothiazole	ppb	1.3				28	0	
BERYLLUM		Beryllium	ppb	.17				4	0	
FBERYLL		Beryllium, filtered	ppb	.17				4	0	
BISZEPH		Bis(2-ethylhexyl) phthalate	ppb	5.3				28	0	
BROMIDE		Bromide	ppb	100				4	1	
CALCIUM		Calcium	ppb	34				4	4	
FCALCIU		Calcium, filtered	ppb	34				4	4	
TETRAHE		Carbon tetrachloride	ppb	.675	5	EPA		1	0	0
CHLFORM		Chloroform	ppb	.041				1	0	
COBALT		Cobalt	ppb	5.9				4	0	
FCOBALT		Cobalt, filtered	ppb	5.9				4	0	
COLIFORM		Coliforms	COL	1	1	EPAI		24	0	0
COPPER		Copper	ppb	4.1	1000	EPAS		4	1	0
FCOPPER		Copper, filtered	ppb	4.1	1000	EPAS		4	0	0
CRESOLS		Cresols (methylphenols)	ppb	4.8				3	0	
CYANIDE		Cyanide	ppb	1				1	0	
DECANE		Decane	ppb	1.9				28	0	
DIEPHTH		Diethyl phthalate	ppb	5.5				1	1	
DODECAN		Dodecane	ppb	1.1				28	0	
ETHBENZ		Ethylbenzene	ppb	.051	700	EPA		1	0	0
BETA		Gross beta	pCi/L					4	4	
HYDRAZ		Hydrazine	ppb	1.6				2	0	
LEAD		Lead	ppb	1.5	50	EPAI		1	1	0
FLEAD		Lead, filtered	ppb	1.5	50	EPAI		1	0	0
MAGNES		Magnesium	ppb	23				4	4	
FMAGNES		Magnesium, filtered	ppb	23				4	4	
METHYLCH		Methylene chloride	ppb	.09				1	0	
NAPHTHA		Naphthalene	ppb	1.2				28	0	
NICKEL		Nickel	ppb	13				4	1	
FNICKEL		Nickel, filtered	ppb	13				4	0	

Table 5-3. Constituent List and Summary of Results for the 216-B-3 Pond
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(sheet 3 of 3)

Short	(Method)	Constituent Name		Units	Lab MDL	DMS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DMS
NITRITE		Nitrite	ppb	18	1000	EPA		4	0	0
PENTCSP	19	Pentachlorophenol	ppb	8.3	1	EPA		28	0	28*
PENTCHP	30	Pentachlorophenol	ppb	1.3	1	EPA		3	0	3*
PHOSPHA		Phosphate	ppb	82				4	0	
POTASSUM		Potassium	ppb	850				4	4	
POTASS		Potassium, filtered	ppb	850				4	4	
SILVER		Silver	ppb	3.6	50	EPAI		4	0	0
FSILVER		Silver, filtered	ppb	3.6	50	EPAI		4	0	0
PERCENE		Tetrachloroethene	ppb	.22	5	EPA		1	0	0
TETPHNL		Tetrachlorophenols	ppb	1.5				3	0	
TETRADE		Tetradecane	ppb	1.6				28	0	
TIN		Tin	ppb	69				4	0	
FTIN		Tin, filtered	ppb	69				4	0	
TOLUENE		Toluene	ppb	.016	1000	EPA		1	0	0
TRIBUTPH		Tributyl Phosphate	ppb	1.1				28	0	
TRICENE		Trichloroethene	ppb	.11	5	EPA		1	0	0
TRIPHNL		Trichlorophenols	ppb	1.7				3	0	
TDICHPH		Tris-2-chloroethyl phosphate	ppb	.61				28	1	
TRITIUM		Tritium	pCi/L		20000	EPA		28	20	9
TURBID		Turbidity	NTU	.016				28	28	
URANIUM		Uranium	ppb					2	2	
VANADIUM		Vanadium	ppb	6.6				4	4	
FVANAD1		Vanadium, filtered	ppb	6.6				4	4	
VINYIDE		Vinyl chloride	ppb	.13	2	EPA		1	0	0
XYLENE		Xylenes (total)	ppb	.035	10000	EPA		1	0	0
ZINC		Zinc	ppb	6.3	5000	EPAS		4	2	0
FZINC		Zinc, filtered	ppb	6.3	5000	EPAS		4	2	0
CIS12DE		cis-1,2-Dichloroethylene	ppb	.11	70	EPA		1	0	0
MCRESOL		m-Cresol	ppb	2.2				28	0	
TRANSCE		trans-1,2-Dichloroethylene	ppb	.073	100	EPA		1	0	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 October 1 through December 31, 1994.
(sheet 1 of 4)

Well Name	Collection Date	Sample Number	ALUMINUM 34/ppb 19/.	FALUMIN 34/ppb 19/.	BARIUM 34/ppb 1.3/1000i	FBARIUM 34/ppb 1.3/1000i
299-E18-1	12/01/94	B00C27	26.00 U		26.00	
299-E18-1	12/01/94	B00D01		26.00 U		25.00
299-E32-4	12/13/94	B00G01	64.00 SL		93.00	
299-E32-4	12/13/94	B00G05		26.00 U		69.00
699-43-43	10/06/94	B002R5	26.00 U		9.30 L	
699-43-43	10/06/94	B002R9		26.00 U		9.30 L
699-43-45	10/06/94	B002S0	26.00 U		35.00	
699-43-45	10/06/94	B002S4		26.00 U		33.00

Well Name	Collection Date	Sample Number	BROMIDE 124/ppb 110/.	CALCIUM 34/ppb 47/.	FCALCIU 34/ppb 47/.	CHLORID 124/ppb 71/250000s
299-E18-1	12/01/94	B00C27	70.00 L	49000.00		7500.00
299-E18-1	12/01/94	B00D01			49000.00	
299-E32-4	12/13/94	B00G01	100.00 L	39000.00		9200.00 0
299-E32-4	12/13/94	B00G05			38000.00	
699-43-43	10/06/94	B002R5	100.00 U	22000.00		1600.00
699-43-43	10/06/94	B002R9			22000.00	
699-43-45	10/06/94	B002S0	100.00 U	30000.00		2400.00
699-43-45	10/06/94	B002S4			29000.00	

Well Name	Collection Date	Sample Number	CHROMIUM 34/ppb 11/50i	FCROMI 34/ppb 11/50i	COPPER 34/ppb 2.6/1000s	FCOPPER 34/ppb 2.6/1000s
299-E18-1	12/01/94	B00C27	46.00		4.10 U	
299-E18-1	12/01/94	B00D01		9.30 L		4.10 U
299-E32-4	12/13/94	B00G01	27.00		4.10 U	
299-E32-4	12/13/94	B00G05		4.50 U		4.10 U
699-43-43	10/06/94	B002R5	17.00 L		4.10 U	
699-43-43	10/06/94	B002R9		4.50 U		4.10 U
699-43-45	10/06/94	B002S0	24.00		8.40 L	
699-43-45	10/06/94	B002S4		5.10 L		4.10 U

Well Name	Collection Date	Sample Number	DIEPHTH 19/ppb 5/.	FLUORID 124/ppb 51/1400i	ALPHA 135/pCi/L ./15	BETA 135/pCi/L ./.
299-E18-1	12/01/94	B00C27		600.00	4.33	8.93
299-E32-4	12/13/94	B00G01		900.00	1.38	11.60
699-40-40B	10/14/94	B00380	24.00			
699-43-43	10/06/94	B002R5		500.00	.32 U	3.60
699-43-45	10/06/94	B002S0		700.00	2.11	3.41

Table 5-4. Constituents with at Least One Detected Value for the 216-B-3 Pond
Data for Reporting Period October 1 through December 31, 1994.
(sheet 2 of 4)

Well Name	Collection Date	Sample Number	IRON 34/ppb 18/300s	FIROM 34/ppb 18/300s	LEAD 40/ppb .86/501	FLBAD 40/ppb .86/501
299-E18-1	12/01/94	B00CZ7	310.00 B			
299-E18-1	12/01/94	B00D01		17.00 LB		
299-E32-4	12/13/94	B00G01	6400.00 BQ		6.00 B	
299-E32-4	12/13/94	B00G05		98.00 BQ		1.50 U
699-43-43	10/06/94	B002R5	110.00 Q			
699-43-43	10/06/94	B002R9		31.00 Q		
699-43-45	10/06/94	B002S0	130.00 Q			
699-43-45	10/06/94	B002S4		33.00 Q		

Well Name	Collection Date	Sample Number	MAGNES 34/ppb 25/.	FMAGNES 34/ppb 25/.	MANGESE 34/ppb 1/50s	FMANGAN 34/ppb 1/50s
299-E18-1	12/01/94	B00CZ7	13000.00		8.00 LB	
299-E18-1	12/01/94	B00D01		13000.00		3.20 LB
299-E32-4	12/13/94	B00G01	13000.00		17.00	
299-E32-4	12/13/94	B00G05		12000.00		2.80 L
699-43-43	10/06/94	B002R5	5200.00		2.90 L	
699-43-43	10/06/94	B002R9		5300.00		2.20 L
699-43-45	10/06/94	B002S0	7200.00		3.80 L	
699-43-45	10/06/94	B002S4		7000.00		2.50 L

Well Name	Collection Date	Sample Number	MERCURY 41/ppb .095/2	FMERCUR 41/ppb .095/2	NICKEL 34/ppb 16/.	FNICKEL 34/ppb 16/.
299-E18-1	12/01/94	B00CZ7			17.00 L	
299-E18-1	12/01/94	B00D01				13.00 U
299-E32-4	12/13/94	B00G01	.11 BLQ		13.00 U	
299-E32-4	12/13/94	B00G05		.10 BLQ		13.00 U
699-43-43	10/06/94	B002R5			13.00 U	
699-43-43	10/06/94	B002R9				13.00 U
699-43-45	10/06/94	B002S0			13.00 U	
699-43-45	10/06/94	B002S4				13.00 U

Table 5-4. Constituents with at Least One Detected Value for the 216-B-3 Pond
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(sheet 3 of 4)

Well Name	Collection Date	Sample Number	NITRATE 124/ppb 96/45000	POTASUM 34/ppb 890/.	FPOTASS 34/ppb 890/.	SELENIUM 48/ppb 1.4/101
299-E18-1	12/01/94	800C27	14000.00 D	5500.00		4.40 L
299-E18-1	12/01/94	800D01			5500.00	
299-E32-4	12/13/94	800G01	27000.00 DQ	6300.00		
299-E32-4	12/13/94	800G05			6900.00	
699-43-43	10/06/94	8002R5	700.00	4600.00		
699-43-43	10/06/94	8002R9			4700.00	
699-43-45	10/06/94	8002S0	1200.00	4300.00		
699-43-45	10/06/94	8002S4			4400.00	

Well Name	Collection Date	Sample Number	FSELENI 48/ppb 1.4/101	SODIUM 34/ppb 150/.	F500IUM 34/ppb 150/.	SULFATE 124/ppb 89/250000s
299-E18-1	12/01/94	800C27		26000.00 B		110000.00 D
299-E18-1	12/01/94	800D01	4.50 L		26000.00 B	
299-E32-4	12/13/94	800G01		26000.00 Q		45000.00 D
299-E32-4	12/13/94	800G05			25000.00 Q	
699-43-43	10/06/94	8002R5		5500.00		9900.00 D
699-43-43	10/06/94	8002R9			5500.00	
699-43-45	10/06/94	8002S0		8800.00		9700.00
699-43-45	10/06/94	8002S4			8600.00	

Well Name	Collection Date	Sample Number	TDICNPH 19/ppb 2.2/.	TRITIUM 142/pCi/L ./20000	TURBID 126/NTU .016/.	URANIUM 145/ppb ./.
299-E18-1	12/01/94	800C27			3.30	3.77
299-E18-1	12/01/94	800D07	.61 U	12800.00		
299-E32-4	10/11/94	8003B8	.61 U	582.00	91.00 Q	
299-E32-4	12/13/94	800G01	.61 U	292.00	62.00 Q	2.99
699-40-36	10/27/94	8005F4	.61 U	16.60 U	8.10 Q	
699-40-39	10/25/94	800392	.61 U	-33.00 U	2.60 Q	
699-40-40A	10/12/94	800396	7.20 L	143.00 U	1.40 Q	
699-40-40B	10/14/94	8003B0	.61 U	117.00 U	9.50 Q	
699-41-35	10/27/94	8005F8	.61 U	102.00 U	28.00 Q	
699-41-40	10/24/94	8003B4	.61 U	140000.00	2.00 Q	
699-41-40	10/24/94	8003B5	.61 U	140000.00	2.00 Q	
699-41-42	10/20/94	8003C2	.61 U	19400.00	1.10 Q	
699-42-37	10/27/94	8005G2	.61 U	31.20 U	73.00 Q	
699-42-39A	10/12/94	8003C6	.61 U	69700.00	5.10 Q	
699-42-39B	10/12/94	8003D0	.61 U	94700.00	3.60 Q	
699-42-40A	10/24/94	8003B4	.61 U	132.00 U	5.10 Q	
699-42-40C	10/21/94	8003B8	.61 U	6500.00	.31 Q	
699-42-41	10/19/94	8003F2	.61 U	611.00	4.10	
699-42-42B	10/20/94	8003F6	.61 U	43200.00	1.00 Q	
699-43-40	10/19/94	8003P5	.61 U	28800.00	.95	
699-43-41E	10/19/94	8003P9	.61 U	68400.00	1.98	
699-43-41F	10/20/94	8003Q3	.61 U	44000.00	1.10 Q	
699-43-41G	10/19/94	8003Q7	.61 U	51800.00	1.20	
699-43-42J	10/20/94	8003R1	.61 U	8160.00	1.00 Q	
699-43-43	10/06/94	8002R5		273.00	1.60	
699-43-43	10/06/94	8003B6	.61 U			
699-43-45	10/06/94	8002S0		553.00	.63	

Table 5-4. Constituents with at Least One Detected Value for the 216-B-3 Pond
Data for Reporting Period October 1 through December 31, 1994.
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Well Name	Collection Date	Sample Number	TDIC8PH 19/ppb 2.2/.	TRITIUM 142/pCi/L ./20000	TURBID 126/NTU .016/.	URANIUM 145/ppb ./.
699-43-45	10/06/94	800387	.61 U			
699-44-398	10/20/94	800385	.61 U	-196.00 U	1.70 g	
699-44-42	10/20/94	800389	.61 U	593.00	.64 g	
699-44-438	10/21/94	800383	.61 U	15500.00	4.60 g	

Well Name	Collection Date	Sample Number	VANADIN 34/ppb 6.4/.	FVANAD1 34/ppb 6.4/.	ZINC 34/ppb 4.4/5000s	FZINC 34/ppb 4.4/5000s
299-E18-1	12/01/94	800227	9.80 L		6.30 U	
299-E18-1	12/01/94	800201		11.00 L		6.30 U
299-E32-4	12/13/94	800601	39.00		6.30 U	
299-E32-4	12/13/94	800605		19.00 L		6.30 U
699-43-43	10/06/94	800285	27.00 L		21.00 BQ	
699-43-43	10/06/94	800289		26.00 L		16.00 BQ
699-43-45	10/06/94	800290	33.00		21.00 BQ	
699-43-45	10/06/94	800284		29.00 L		17.00 BQ

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

Table 5-5. Contamination Indicator Parameters for the 216-B-3 Pond
Data for Reporting Period October 1 through December 31, 1994.
(sheet 1 of 3)

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 110/.	TOX ppb 5/.
299-E18-1	12/01/94	800C27	457	470	8.23	8.30	110 U	5.1
		800C28	457		8.22		110 U	5.0 U
		800C29	459		8.21		200 L	5.0 U
		800000	459		8.20		110 U	5.0 U
299-E32-4	10/11/94	800388	413		7.52	8.00	200 LB	5.0 U
		800389	413		7.54		150 LB	5.0 U
		800390	412		7.53		200 LB	5.0 U
		800391	412		7.54		200 LB	5.8
	12/13/94	800G01	420		7.71	8.30	140 L	5.0 U
		800G02	421		7.69		110 U	5.0 U
		800G03	422		7.71		110 U	5.0 U
		800G04	423		7.72		130 L	5.0 U
699-40-36	10/27/94	8005F4	313		8.03	8.10	200 L	10.9
		8005F5	313		8.03		200 L	9.1
		8005F6	313		8.02		200 L	10.9
		8005F7	313		8.02		200 L	14.2
699-40-39	10/28/94	800392	296		7.98	8.30	140 L	5.0 U
		800393	296		7.97		300 L	5.0 U
		800394	296		7.95		110 U	5.0 U
		800395	296		7.95		110 U	5.0 U
699-40-40A	10/12/94	800396	354		8.12	8.20	140 L	5.0 U
		800397	354		8.11		200 L	5.2
		800398	355		8.11		300 L	5.2
		800399	355		8.10		200 L	6.8
699-40-40B	10/14/94	800380	318		8.07	7.80	300 L	23.9
		800381	318		8.05		200 L	18.3
		800382	316		8.08		500 L	42.1
		800383	316		8.08		200 L	27.8
699-41-35	10/27/94	8005F8	314		7.72	8.10	110 U	5.0 U
		8005F9	312		7.72		110 L	13.2
		8005G0	312		7.73		300 L	5.0 U
		8005G1	313		7.72		200 L	5.0 U
699-41-40	10/24/94	800384	348		8.39	8.30	200 L	5.0 U
		800385	350		8.40	8.30	300 L	5.0 U
		800386	352		8.41		200 L	5.0 U
		800387	354		8.41		200 L	5.0 U
		800388					200 L	5.7
		800389					200 L	5.3
		8003C0					200 L	5.7
		8003C1					300 L	5.0 U
699-41-42	10/20/94	8003C2	242		8.32	8.40	300 L	5.0 U
		8003C3	249		8.33		300 L	5.0 U
		8003C4	244		8.33		300 L	5.0 U

Table 5-5. Contamination Indicator Parameters for the 216-B-3 Pond
Data for Reporting Period October 1 through December 31, 1994.
(sheet 2 of 3)

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 110/.	TOX ppb 5/.
699-41-42	10/20/94	8003C5	246		8.33		300 L	5.0 U
699-42-37	10/27/94	8005G2	350		7.62	8.10	110 U	5.0 U
		8005G3	349		7.66		120 L	5.0 U
		8005G4	348		7.65		110 U	7.4
		8005G5	347		7.66		110 U	5.0 U
699-42-39A	10/12/94	8003C6	381		7.33	8.00	200 L	5.0 U
		8003C7	379		7.55		200 L	5.0 U
		8003C8	379		7.54		200 L	5.0 U
		8003C9	380		7.54		200 L	5.0 U
699-42-39B	10/12/94	8003D0	387		7.76	8.10	200 L	5.0 U
		8003D1	388		7.76		300 L	5.0 U
		8003D2	388		7.77		300 L	5.0 U
		8003D3	387		7.76		200 L	5.0 U
	10/15/94	8003D0	387		7.76	8.10	200 L	5.0 U
		8003D1	388		7.76		300 L	5.0 U
		8003D2	388		7.77		300 L	5.0 U
		8003D3	387		7.76		200 L	5.0 U
699-42-40A	10/24/94	8003D4	154		8.23	8.10	600 L	5.0 U
		8003D5	155		8.21		600 L	5.6
		8003D6	155		8.20		600 L	5.3
		8003D7	154		8.19		700 L	6.2
699-42-40C	10/21/94	8003D8	342		8.36	8.20	200 L	5.0 U
		8003D9	336		8.28		200 L	5.0 U
		8003F0	334		8.26		200 L	5.0 U
		8003F1	333		8.25		200 L	5.0 U
699-42-41	10/19/94	8003F2	150		7.24	8.10	600 L	8.2
		8003F3	148		7.25		800 L	8.3
		8003F4	148		7.27		600 L	5.2
		8003F5	148		7.31		1000	5.0 U
699-42-42B	10/20/94	8003F6	252		7.97	8.20	400 L	5.0 U
		8003F7	252		7.97		200 L	5.0 U
		8003F8	252		7.97		200 L	5.0 U
		8003F9	252		7.96		200 L	5.0 U
699-43-40	10/19/94	8003P5	244		8.11	8.10	600 L	8.9
		8003P6	242		8.11		500 L	
		8003P7	242		8.10		400 L	9.3
		8003P8	242		8.08		400 L	7.8
699-43-41E	10/19/94	8003P9	313		8.28	8.60	400 L	5.5
		8003Q0	312		8.26		200 L	8.9
		8003Q1	311		8.25		300 L	6.6
		8003Q2	307		8.24		400 L	11.5
699-43-41F	10/20/94	8003Q3	260		8.13	8.20	200 L	5.7
		8003Q4	254		8.11		200 L	5.0 U

Table 5-5. Contamination Indicator Parameters for the 216-B-3 Pond
Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 3)

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 110/.	TOX ppb 5/.
699-43-41F	10/20/94	800305	251		8.11		200 L	5.0 U
		800306	249		8.11		300 LB	5.0 U
699-43-41G	10/19/94	800307	270		7.82	8.20	200 L	5.0 U
		800308	269		7.80		200 L	5.0 U
		800309	269		7.77		300 L	5.0 U
		800310	268		7.76		200 L	5.0 U
699-43-42J	10/20/94	800311	273		8.20	8.40	500 LB	5.0 U
		800312	274		8.20		300 LB	5.3
		800313	274		8.20		300 LB	5.0 U
		800314	274		8.20		300 LB	5.1
699-43-43	10/06/94	800285	214	180	7.94		600 L	5.0 U
		800286	210		7.92		600 L	5.0 U
		800287	208		7.92		700 L	5.0 U
		800288	207		7.92		600 L	5.0 U
		800386				8.30		
699-43-45	10/06/94	800250	248	240	7.84		400 L	5.0 U
		800251	248		7.86		400 L	5.0 U
		800252	248		7.84		400 L	5.0 U
		800253	249		7.88		500 L	5.0 U
		800387				8.20		
699-44-39B	10/20/94	800315	181		7.61	8.30	1000 B	8.4
		800316	179		7.61		800 LB	5.0 U
		800317	178		7.61		600 LB	7.2
		800318	179		7.61		600 LB	7.1
699-44-42	9/09/94	809X64	230		8.28			
		809X65	229		8.28			
		809X66	226		8.24			
	10/20/94	800319	188		8.16	8.30	600 LB	7.0
		800350	190		8.15		500 LB	6.4
		800351	190		8.15		700 LB	6.6
		800352	190		8.15		600 LB	5.5
699-44-43B	10/21/94	800383	277		8.13	8.30	300 L	5.0 U
		800384	276		8.13		300 L	5.0 U
		800385	276		8.13		400 L	5.0 U
		800386	276		8.13		300 L	5.0 U

For explanation of this table, see Section 3.4 of report.

Table 5-6. Constituents Exceeding Drinking Water Standards for the
216-B-3 Pond System for Reporting Period
October 1 through December 31, 1994.

Constituent	DWS (units)	Wells with results exceeding DWS
Iron (unfiltered samples)	300 (ppb)	299-E18-1 ^a , 699-E32-4 ^a
Tritium	20,000 (pCi/L)	299-E18-1, 699-41-40, 699-42-39A, 699-42-39B, 699-42-42B, 699-43-40, 699-43-41E, 699-43-41F, 699-43-41G

^aA laboratory qualifier or data flag is associated with this result.
DWS = drinking water standard.

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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 immediately east of the 200 East Area in the central portion of the Hanford Site (Figure 6-1). From 1955 to July 1991, this 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. 1992).

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) (Chow et al. 1990).

The RCRA groundwater monitoring network consists of 3 upgradient and 10 downgradient wells. Nine 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 comprising the A-29 Ditch monitoring network, and are measured quarterly in the 9 additional wells that provide supplemental analytical data for the groundwater quality assessment investigation. Water level measurements are also recorded whenever the wells are sampled.

Water level measurements obtained during this quarter are presented in Table 6-2. Several inconsistencies were noted when recent data were compared to the water levels previously measured. Water levels reported for well 299-E26-13 on October 12, well 299-E26-28 on October 18, and well 299-E25-34 on October 19 fell outside of the expected ranges. Inspection of the field report sheets does not reveal any data transcription or retrieval errors. These data are flagged in Table 6-2.

6.3 WATER CHEMISTRY DATA

Groundwater beneath the A-29 Ditch is sampled quarterly in accordance with 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 provides a list of the wells and analytical results for chemical constituents with at least one detected value above the MDL. In many cases, the detected values are from wells that are monitored to provide comparative regional data for the groundwater quality assessment investigation. Results of analyses for CIPs are reported in Table 6-5. Previously nonreported and rereported analytical data for the A-29 groundwater monitoring network are included in the tables in this report.

One well (299-E25-42) had turbidity data results that were greater than 5 NTUs. RADEs have been submitted for this well. Data associated with these high-turbidity values may be affected. High turbidity is a laboratory interferant for many analytical techniques; therefore being able to separate good from suspect data results is unlikely.

Two other wells had individual constituent results that do not match the historical trends. Ammonium ion was identified at the 200-ppb level in well 299-E25-28 in the A-29 Ditch detection network. Cobalt-60 was identified in well 299-E25-36 in the A-29 Ditch supplemental network. This is the first sampling period where data results for these constituents have been above the laboratory contractual limits. RADEs have been submitted for this well.

Constituents reported in concentrations that exceed the DWS for the A-29 Ditch network wells include unfiltered chromium in wells 299-E25-32P, 299-E24-34, 299-E25-35, 299-E25-42, 299-E25-43, 299-E26-12, and 299-E256-13; unfiltered iron in wells 299-E25-32P, 299-E24-34, 299-E25-35, 299-E25-42, 299-E25-43, 299-E25-47, 299-E25-48, and 299-E256-13; and tritium in wells 299-E25-32P, 299-E25-35, 299-E25-47, and 299-E25-42.

Constituents reported in concentrations that exceed the DWS at the wells that provide regional data for the A-29 Ditch groundwater supplemental investigation include unfiltered chromium in wells 299-E17-15, 299-E17-20, 299-E25-11, 299-E25-31, and 299-E25-36; unfiltered iron in wells 299-E17-15, 299-E17-20, 299-E25-11, 299-E25-21 and 299-E25-31; and tritium in wells 299-E17-15, 299-E17-20, 299-E25-11, 299-E25-18, 299-E25-19, and 299-E25-20, and pH in well 299-E25-21.

Wells with detections of Co-60 and I-129 are cosampled with the A-36B and A-10 networks. Discussion of these detections are contained in Sections 7 and 8, respectively.

Data are flagged in Tables 6-4 and 6-5 according to the explanation found in Sections 1.2 and 1.4.

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

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, 4th Qtr 1994
699-43-43 ^b	Upgradient	Hanford: Water Table	Quarterly	10/06/94
699-43-45 ^b	Upgradient	Hanford: Water Table	Quarterly	10/06/94
299-E25-32P	Downgradient	Hanford: Water Table	Quarterly	10/11/94
299-E25-26	Downgradient	Hanford: Mid-Depth	Quarterly	10/19/94
299-E25-28	Downgradient	Ringold: Deep	Quarterly	10/18/94
299-E25-34	Downgradient	Hanford: Water Table	Quarterly	10/19/94
299-E25-35	Downgradient	Hanford: Water Table	Quarterly	10/19/94
299-E25-42	Downgradient	Hanford: Water Table	Quarterly	10/11/94
299-E25-43	Downgradient	Hanford: Water Table	Quarterly	10/11/94
299-E25-47	Downgradient	Hanford: Water Table	Quarterly	10/12/94
299-E25-48	Downgradient	Hanford: Water Table	Quarterly	10/12/94
299-E26-12	Downgradient	Hanford: Water Table	Quarterly	10/11/94
299-E26-13	Downgradient	Hanford: Water Table	Quarterly	10/12/94
299-E17-15 ^{c,e}	Downgradient	Ringold: Water Table	Quarterly	12/06/94
299-E17-20 ^{d,e}	Downgradient	Ringold: Water Table	Quarterly	10/14/94
299-E25-11 ^o	Downgradient	Undifferentiated sediments: Mid-Depth	Quarterly	10/13/94
299-E25-18 ^e	Downgradient	Undifferentiated sediments: Mid-Depth	Quarterly	10/18/94

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, 4th Qtr 1994
299-E25-19 ^c	Downgradient	Undifferentiated sediments: Mid-Depth	Quarterly	10/18/94
299-E25-20 ^c	Downgradient	Undifferentiated sediments: Mid-Depth	Quarterly	10/21/94
299-E25-21 ^c	Downgradient	Hanford: Water Table	Quarterly	10/18/94
299-E25-31 ^a	Downgradient	Hanford: Water Table	Quarterly	10/12/94
299-E25-36 ^{d,e}	Downgradient	Ringold: Water Table	Quarterly	10/13/94

^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 - Fourth Quarter 1994.
 (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	10/19/94	266.91	401.61*	122.41
	10/24/94	266.64	401.88	122.49
	11/17/94	266.66	401.86	122.49
	12/12/94	266.54	401.98	122.52
299-E25-28	10/18/94	260.85	401.59*+	122.40
	10/24/94	260.21	402.23	122.60
	11/17/94	260.17	402.27	122.61
	12/12/94	260.48	401.96	122.52
299-E25-32P	10/11/94	267.99	402.05*	122.54
	10/24/94	267.91	402.13	122.57
	11/17/94	267.80	402.24	122.60
	12/13/94	268.28	401.76	122.46
299-E25-34	10/19/94	261.72	401.15*+	122.27
	10/24/94	260.78	402.09	122.56
	11/17/94	260.68	402.19	122.59
	12/12/94	260.75	402.12	122.57
299-E25-35	10/19/94	272.77	401.62*	122.41
	10/24/94	272.65	401.74	122.45
	11/17/94	272.69	401.70	122.44
	12/12/94	272.75	401.64	122.42
299-E25-42	10/11/94	281.56	401.73*	122.45
	10/24/94	281.42	401.87	122.49
	11/17/94	281.51	401.78	122.46
	12/12/94	281.56	401.73	122.45
299-E25-43	10/11/94	247.42	402.47*	122.67
	10/24/94	247.63	402.26	122.61
299-E25-47	10/12/94	271.62	402.15*	122.58
	10/24/94	271.68	402.09	122.56
	11/17/94	271.77	402.00	122.53
299-E25-48	10/12/94	280.50	401.81*	122.47
	10/24/94	280.29	402.02	122.54
	11/17/94	280.44	401.87	122.49

Table 6-2. RCRA Water Level Measurement Report
 216-A-29 Ditch - Fourth Quarter 1994.
 (sheet 2 of 3)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
Wells in the Monitoring System				
299-E26-12	10/11/94	228.25	402.49*	122.68
	10/24/94	228.34	402.40	122.65
	11/17/94	228.20	402.54	122.69
	12/12/94	228.59	402.15	122.58
299-E26-13	10/12/94	204.15	400.87*+	122.19
	10/24/94	202.68	402.34	122.63
	11/17/94	202.57	402.45	122.67
	12/12/94	202.70	402.32	122.63
699-43-43	10/06/94	164.75	414.62*	126.38
	10/24/94	165.34	414.03	126.20
	11/17/94	165.28	414.09	126.21
	12/12/94	165.92	413.45	126.02
699-43-45	10/06/94	195.00	402.68*	122.74
	10/24/94	195.01	402.67	122.73
	11/17/94	195.04	402.64	122.72
	12/12/94	195.17	402.51	122.69
Supplemental Wells for Monitoring				
299-E17-15	12/06/94	321.65	400.13*	121.96
	12/12/94	321.24	400.54	122.08
299-E17-20	10/14/94	318.70	400.53*	122.08
	12/12/94	317.80	401.43	122.36
299-E25-11	10/13/94	279.56	401.72*	122.44
	12/21/94	279.92	401.36	122.33
299-E25-18	10/18/94	277.85	401.20*	122.29
	12/21/94	277.58	401.47	122.37
299-E25-19	10/18/94	275.95	401.25*	122.30
	12/21/94	275.88	401.32	122.32
299-E25-20	10/12/94	274.96	401.34*	122.33

Table 6-2. RCRA Water Level Measurement Report
 216-A-29 Ditch - Fourth Quarter 1994.
 (sheet 3 of 3)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
Supplemental Wells for Monitoring				
299-E25-20	12/21/94	275.01	401.29	122.31
299-E25-21	10/18/94	275.49	401.78*	122.46
299-E25-31	10/12/94	272.55	402.09*	122.56
299-E25-36	10/13/94	305.96	401.43*	122.36
	12/12/94	306.03	401.36	122.33
299-E25-6	12/21/94	259.46	398.85	121.57
299-E25-9	12/21/94	255.51	399.35	121.72
299-E26-2	12/21/94	233.64	401.66	122.43

- 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. Elevations marked with an '*' were measured at the time of sampling.
4. Elevations 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 October 1 through December 31, 1994.
(sheet 1 of 3)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DMS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DMS
CONDUCT	94	Conductivity, field	umhos		1			70	70	
CONDUCT	73	Conductivity, lab	umhos					23	23	
TOC		Total Organic Carbon	ppb		110			64	64	
TOX		Total Organic Halogen	ppb		5			61	28	
PH	93	pH, field	pH		.01	6.5-8.5	EPAS	70	70	1
PH	125	pH, lab	pH			6.5-8.5	EPAS	5	5	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DMS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DMS
BARIUM		Barium	ppb		.59	1000	EPAI	23	23	0
FBARIUM		Barium, filtered	ppb		.59	1000	EPAI	22	22	0
CADMIUM		Cadmium	ppb		3.3	10	EPAI	23	0	0
FCADMIUM		Cadmium, filtered	ppb		3.3	10	EPAI	22	0	0
CHROMIUM		Chromium	ppb		4.5	50	EPAI	23	18	10
FCHROMIUM		Chromium, filtered	ppb		4.5	50	EPAI	22	8	0
FLUORIDE		Fluoride	ppb		36	1400	EPAI	23	23	0
ALPHA		Gross alpha	pCi/L			15	EPA	23	10	0
NITRATE		Nitrate	ppb		11	45000	EPA	23	23	2

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DMS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DMS
CHLORIDE		Chloride	ppb		14	250000	EPAS	23	23	0
IRON		Iron	ppb		5.24	300	EPAS	23	23	14
FIRON		Iron, filtered	ppb		5.24	300	EPAS	22	20	0
MANGANESE		Manganese	ppb		.72	50	EPAS	23	22	0
FMANGANESE		Manganese, filtered	ppb		.72	50	EPAS	22	21	0
LPHENOL	19	Phenol	ppb		.54			2	0	
LPHENOL	30	Phenol	ppb		.31			24	1	
SODIUM		Sodium	ppb		61			23	23	
FSODIUM		sodium, filtered	ppb		61			22	22	
SULFATE		Sulfate	ppb		37	250000	EPAS	23	23	0

Table 6-3. Constituent List and Summary of Results for the 216-A-29 Ditch
Data for Reporting Period October 1 through December 31, 1994.
(sheet 2 of 3)

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab MDL	DMS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DMS
246-trp		2,4,6-Trichlorophenol	ppb	1.3				24	0	
24-dchp	19	2,4-Dichlorophenol	ppb	4				2	0	
24-dchp	30	2,4-Dichlorophenol	ppb	1.3				24	0	
01MPHEN		2,4-Dimethylphenol	ppb	1.2				24	0	
01NPHEN		2,4-Dinitrophenol	ppb	3				24	0	
26-dchp		2,6-Dichlorophenol	ppb	1.4				24	0	
CHLPHEN		2-Chlorophenol	ppb	1.6				24	0	
2NETHPH		2-Nethylphenol	ppb	5.1				2	0	
2NITPH	19	2-Nitrophenol	ppb	1.9				2	0	
2NITPH	30	2-Nitrophenol	ppb	1.3				24	0	
BUTDHP		2-sec-Butyl-4,6-dinitrophenol(DN)	ppb	1.3				24	0	
46DN2HP		4,6-Dinitro-2-methylphenol	ppb	1.3				24	0	
CHLCRES		4-Chloro-3-methylphenol	ppb	1.3				24	0	
4NETHPH		4-Methylphenol	ppb	7				2	0	
NITPHEN		4-Nitrophenol	ppb	3				24	0	
ALUMINUM		Aluminum	ppb	26				23	9	
FALUMIN		Aluminum, filtered	ppb	26				22	0	
AMMONIUM		Ammonium ion	ppb	37				23	2	
ANTIMONY		Antimony	ppb	62				23	0	
FANTIMO		Antimony, filtered	ppb	62				22	0	
SB-125		Antimony-125	pCi/L					3	0	
BENZOTH		Benzothiazole	ppb	1.3				2	0	
BERYLLIUM		Beryllium	ppb	.17				23	9	
FBERYLL		Beryllium, filtered	ppb	.17				22	9	
BIS2EPH		Bis(2-ethylhexyl) phthalate	ppb	5.3				2	0	
BROMIDE		Bromide	ppb	100				23	0	
CALCIUM		Calcium	ppb	34				23	23	
FCALCIU		Calcium, filtered	ppb	34				22	22	
CS-137		Cesium-137	pCi/L			200	EPA	3	0	0
COBALT		Cobalt	ppb	5.9				23	0	
FCOBALT		Cobalt, filtered	ppb	5.9				22	0	
CO-60		Cobalt-60	pCi/L			100	EPA	3	1	0
COLIFORM		Coliforms	COL	1		1	EPA1	2	0	0
COPPER		Copper	ppb	4.1		1000	EPAS	23	11	0
FCOPPER		Copper, filtered	ppb	4.1		1000	EPAS	22	6	0
CRESOLS		Cresols (methylphenols)	ppb	4.8				24	0	
DECANE		Decane	ppb	1.9				2	0	
DODECAN		Dodecane	ppb	1.1				2	0	
BETA		Gross beta	pCi/L					23	23	
HYDRAZ		Hydrazine	ppb	1.6				14	2	
I-129L		Iodine-129, Low level	pCi/L			1	EPA	3	3	3
MAGNES		Magnesium	ppb	23				23	23	
FMAGNES		Magnesium, filtered	ppb	23				22	22	

Table 6-3. Constituent List and Summary of Results for the 216-A-29 Ditch
Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 3)

Short	(Method)	Constituent Name Full	Units	Lab MDL	DWS Limit	Agency	Number of Samples		
							Total	>MDL	>DWS
NAPHTHA		Naphthalene	ppb	1.2			2	0	
NICKEL		Nickel	ppb	13			23	14	
FNICKEL		Nickel, filtered	ppb	13			22	6	
NITRITE		Nitrite	ppb	18	1000	EPA	23	0	0
PENTCHP	19	Pentachlorophenol	ppb	8.3	1	EPA	2	0	2*
PENTCHP	30	Pentachlorophenol	ppb	1.3	1	EPA	24	0	23*
PHOSPHA		Phosphate	ppb	82			23	0	
POTASSUM		Potassium	ppb	850			23	23	
FPOTASS		Potassium, filtered	ppb	850			22	22	
RU-106		Ruthenium-106	pCi/L		30	EPA	3	0	0
SILVER		Silver	ppb	3.6	50	EPAI	23	0	0
FSILVER		Silver, filtered	ppb	3.6	50	EPAI	22	0	0
TETPAHL		Tetrachlorophenols	ppb	1.5			24	0	
TETRADE		Tetradecane	ppb	1.6			2	0	
TIN		Tin	ppb	69			23	0	
FTIN		Tin, filtered	ppb	69			22	0	
TRIBUTPH		Tributyl Phosphate	ppb	1.1			2	0	
TRIPPAHL		Trichlorophenols	ppb	1.7			24	0	
TDICPH		Tris-2-chloroethyl phosphate	ppb	.61			2	0	
TRITIUM		Tritium	pCi/L		20000	EPA	23	23	9
TURBID		Turbidity	NTU	.016			23	23	
VANADIUM		Vanadium	ppb	6.6			23	23	
EVANADI		Vanadium, filtered	ppb	6.6			22	22	
ZINC		Zinc	ppb	6.3	5000	EPAS	23	18	0
FZINC		Zinc, filtered	ppb	6.3	5000	EPAS	22	12	0
M-CRESOL		m-Cresol	ppb	2.2			2	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
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(sheet 1 of 11)

Well Name	Collection Date	Sample Number	ALUMINUM 34/ppb 19/.	FALUNIN 34/ppb 19/.	AMMONIUM 129/ppb 38.5/.	BARIUM 34/ppb 1.3/1000f
299-E17-15	12/06/94	B00P09	26.00 U		37.00 U	47.00
299-E17-20	10/14/94	B00002			37.00 U	
299-E17-20	10/14/94	B00003		26.00 U		
299-E17-20	10/14/94	B00234	26.00 U			54.00
299-E25-11	10/13/94	B00004	26.00 UQ		37.00 U	16.00 LQ
299-E25-11	10/13/94	B00005		26.00 UQ		
299-E25-18	10/18/94	B00006	26.00 U		37.00 U	13.00 L
299-E25-18	10/18/94	B00007		26.00 U		
299-E25-19	10/18/94	B00008	26.00 L		60.00 LQ	29.00
299-E25-19	10/18/94	B00009	26.00 U		37.00 UQ	30.00
299-E25-19	10/18/94	B000R0		26.00 U		
299-E25-19	10/18/94	B000R1		26.00 U		
299-E25-20	10/12/94	B000R2	26.00 U		37.00 U	22.00
299-E25-20	10/12/94	B000R3		26.00 U		
299-E25-21	10/18/94	B000R4	26.00 L		37.00 U	13.00 L
299-E25-21	10/18/94	B000R5		26.00 U		
299-E25-26	10/19/94	B002L0	26.00 U		37.00 U	11.00 L
299-E25-26	10/19/94	B002L4		26.00 U		
299-E25-28	10/18/94	B002L5	26.00 U		200.00 F	15.00 L
299-E25-28	10/18/94	B002L9		26.00 U		
299-E25-31	10/12/94	B000R6	110.00 L		37.00 U	27.00
299-E25-31	10/12/94	B000R7		26.00 U		
299-E25-32P	10/11/94	B002M0	27.00 LQ		37.00 U	13.00 LQ
299-E25-32P	10/11/94	B002M4		26.00 UQ		
299-E25-34	10/19/94	B002M5	26.00 U		37.00 U	14.00 L
299-E25-34	10/19/94	B002M9		26.00 U		
299-E25-35	10/19/94	B002M0	26.00 U		37.00 U	25.00
299-E25-35	10/19/94	B002M4		26.00 U		
299-E25-36	10/13/94	B00254	26.00 UQ			21.00 Q
299-E25-36	10/13/94	B00356			37.00 U	
299-E25-36	10/13/94	B00357		26.00 UQ		
299-E25-42	10/11/94	B002M5	420.00 Q		37.00 U	30.00 Q
299-E25-42	10/11/94	B002M9		26.00 UQ		
299-E25-43	10/11/94	B002P0	57.00 LQ		37.00 U	18.00 LQ
299-E25-43	10/11/94	B002P4		26.00 UQ		
299-E25-47	10/12/94	B002P5	90.00 L		37.00 U	21.00
299-E25-47	10/12/94	B002P9		26.00 U		
299-E25-48	10/12/94	B002Q0	130.00 L		37.00 U	26.00
299-E25-48	10/12/94	B002Q4		26.00 U		
299-E26-12	10/11/94	B002Q5	34.00 LQ		37.00 U	13.00 LQ
299-E26-12	10/11/94	B002Q9		26.00 UQ		
299-E26-13	10/12/94	B002R0	26.00 U		37.00 U	13.00 L
299-E26-13	10/12/94	B002R4		26.00 U		
699-43-43	10/06/94	B002R5	26.00 U		37.00 U	9.30 L
699-43-43	10/06/94	B002R9		26.00 U		
699-43-45	10/06/94	B002S0	26.00 U		37.00 U	35.00
699-43-45	10/06/94	B002S4		26.00 U		

Table 6-4. Constituents with at Least One Detected Value for
the 216-A-29 Ditch Data for Reporting Period
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Well Name	Collection Date	Sample Number	BARIUM 34/ppb 1.3/1000l	BERYLLIUM 34/ppb 1.5/.	BERYLLIUM 34/ppb 1.5/.	CALCIUM 34/ppb 47/.
299-E17-15	12/06/94	800009		.17 U		52000.00
299-E17-20	10/14/94	800003	64.00		.57 BL	
299-E17-20	10/14/94	800234		.64 BL		46000.00
299-E25-11	10/13/94	800004		.17 U		21000.00
299-E25-11	10/13/94	800005	16.00 LB		.17 U	
299-E25-18	10/18/94	800006		.36 BL		24000.00
299-E25-18	10/18/94	800007	13.00 L		.55 BL	
299-E25-19	10/18/94	800008		.51 BL		26000.00
299-E25-19	10/18/94	800009		.64 BL		27000.00
299-E25-19	10/18/94	800010	30.00		.64 BL	
299-E25-19	10/18/94	800011	30.00		.58 BL	
299-E25-20	10/12/94	800012		.17 U		27000.00
299-E25-20	10/12/94	800013	21.00		.17 U	
299-E25-21	10/18/94	800014		.52 BL		20000.00
299-E25-21	10/18/94	800015	13.00 L		.52 BL	
299-E25-26	10/19/94	800210		.21 LB		20000.00
299-E25-26	10/19/94	800214	11.00 L		.21 LB	
299-E25-28	10/18/94	800215		.54 BL		20000.00
299-E25-28	10/18/94	800219	14.00 L		.54 BL	
299-E25-31	10/12/94	800016		.17 U		23000.00
299-E25-31	10/12/94	800017	24.00		.17 U	
299-E25-32P	10/11/94	800210		.17 U		21000.00
299-E25-32P	10/11/94	800214	11.00 LB		.17 U	
299-E25-34	10/19/94	800215		.30 LB		20000.00
299-E25-34	10/19/94	800219	14.00 L		.24 LB	
299-E25-35	10/19/94	800210		.17 LB		32000.00
299-E25-35	10/19/94	800214	25.00		.24 LB	
299-E25-36	10/13/94	800254		.17 U		30000.00
299-E25-36	10/13/94	800337	21.00 Q		.17 U	
299-E25-42	10/11/94	800215		.17 U		29000.00
299-E25-42	10/11/94	800219	26.00 Q		.17 U	
299-E25-43	10/11/94	800210		.17 U		22000.00
299-E25-43	10/11/94	800214	16.00 LB		.17 U	
299-E25-47	10/12/94	800215		.17 U		25000.00
299-E25-47	10/12/94	800219	21.00		.17 U	
299-E25-48	10/12/94	800210		.17 U		23000.00
299-E25-48	10/12/94	800214	24.00		.17 U	
299-E26-12	10/11/94	800215		.17 U		22000.00
299-E26-12	10/11/94	800219	13.00 LB		.17 U	
299-E26-13	10/12/94	800210		.17 U		26000.00
299-E26-13	10/12/94	800214	13.00 L		.17 U	
699-43-43	10/06/94	800215		.17 U		22000.00
699-43-43	10/06/94	800219	9.30 L		.17 U	
699-43-45	10/06/94	800210		.17 U		30000.00
699-43-45	10/06/94	800214	33.00		.17 U	

Table 6-4. Constituents with at Least One Detected Value for
the 216-A-29 Ditch Data for Reporting Period
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(sheet 3 of 11)

Well Name	Collection Date	Sample Number	FBARIUM 34/ppb 1.3/1000i	BERYLLIUM 34/ppb 1.5/.	FBERVLL 34/ppb 1.5/.	CALCIUM 34/ppb 47/.
Well Name	Collection Date	Sample Number	PCALCIU 34/ppb 47/.	CHLORID 124/ppb 71/250000a	CHROMIUM 34/ppb 11/501	PCROMI 34/ppb 11/501
299-E17-15	12/06/94	800F09		3400.00	79.00	
299-E17-20	10/14/94	800083	56000.00			9.60 L
299-E17-20	10/14/94	800234		5000.00	190.00	
299-E25-11	10/13/94	800004		2700.00	88.00 q	
299-E25-11	10/13/94	800005	21000.00			4.50 UQ
299-E25-18	10/18/94	800006		2800.00	4.50 U	
299-E25-18	10/18/94	800007	24000.00			4.50 U
299-E25-19	10/18/94	800008		2800.00	5.10 L	
299-E25-19	10/18/94	800009		2800.00	6.10 L	
299-E25-19	10/18/94	8000R0	27000.00			4.50 U
299-E25-19	10/18/94	8000R1	27000.00			4.50 U
299-E25-20	10/12/94	8000R2		3500.00	4.50 U	
299-E25-20	10/12/94	8000R3	28000.00			4.50 U
299-E25-21	10/18/94	8000R4		2700.00	4.50 U	
299-E25-21	10/18/94	8000R5	20000.00			4.50 U
299-E25-26	10/19/94	8002L0		2000.00	4.50 U	
299-E25-26	10/19/94	8002L4	20000.00			4.50 U
299-E25-28	10/18/94	8002L5		1900.00	4.50 U	
299-E25-28	10/18/94	8002L9	20000.00			4.50 U
299-E25-31	10/12/94	8000R6		2600.00	33.00 .	
299-E25-31	10/12/94	8000R7	23000.00			4.50 U
299-E25-32P	10/11/94	8002M0		2100.00 q	190.00 q	
299-E25-32P	10/11/94	8002M4	20000.00			13.00 Lq
299-E25-34	10/19/94	8002M5		1900.00	100.00	
299-E25-34	10/19/94	8002M9	20000.00			4.50 U
299-E25-35	10/19/94	8002M0		4200.00	50.00	
299-E25-35	10/19/94	8002M4	32000.00			5.00 L
299-E25-36	10/13/94	800254		4600.00	100.00 q	
299-E25-36	10/13/94	800357	29000.00			4.50 Lq
299-E25-42	10/11/94	8002M5		4600.00 q	330.00 q	
299-E25-42	10/11/94	8002M9	29000.00			15.00 Lq
299-E25-43	10/11/94	8002P0		2600.00 q	180.00 q	
299-E25-43	10/11/94	8002P4	22000.00			14.00 Lq
299-E25-47	10/12/94	8002P5		3000.00	35.00	
299-E25-47	10/12/94	8002P9	25000.00			4.50 U
299-E25-48	10/12/94	800260		3200.00	35.00	
299-E25-48	10/12/94	800264	23000.00			4.50 U
299-E26-12	10/11/94	8002R5		1800.00 q	63.00 q	
299-E26-12	10/11/94	800209	23000.00			14.00 Lq
299-E26-13	10/12/94	8002R0		2100.00	76.00	
299-E26-13	10/12/94	8002R4	26000.00			4.50 U
699-43-43	10/06/94	8002R5		1600.00	17.00 L	
699-43-43	10/06/94	8002R9	22000.00			4.50 U
699-43-45	10/06/94	8002S0		2400.00	24.00	
699-43-45	10/06/94	8002S4	29000.00			5.10 L

Table 6-4. Constituents with at Least One Detected Value for
the 216-A-29 Ditch Data for Reporting Period
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Well Name	Collection Date	Sample Number	CO-60 140/pCi/L ./100	COPPER 34/ppb 2.6/1000s	#COPPER 34/ppb 2.6/1000s	FLUORIDE 124/ppb 51/1400f
299-E17-15	12/06/94	B00F09	5.39 U	4.10 U		1000.00
299-E17-20	10/14/94	B00Q03			4.10 U	
299-E17-20	10/14/94	B00Q34	-4.85 U	11.00 L		800.00
299-E25-11	10/13/94	B00Q04		6.00 L		600.00
299-E25-11	10/13/94	B00Q05			8.10 L	
299-E25-18	10/18/94	B00Q06		4.20 L		600.00
299-E25-18	10/18/94	B00Q07			4.10 U	
299-E25-19	10/18/94	B00Q08		4.10 U		1000.00
299-E25-19	10/18/94	B00Q09		4.10 U		1000.00
299-E25-19	10/18/94	B00Q10			4.10 U	
299-E25-19	10/18/94	B00Q11			4.10 U	
299-E25-20	10/12/94	B00Q12		4.10 U		1000.00
299-E25-20	10/12/94	B00Q13			4.10 U	
299-E25-21	10/18/94	B00Q14		4.10 U		600.00
299-E25-21	10/18/94	B00Q15			4.10 U	
299-E25-26	10/19/94	B002L0		4.10 U		500.00
299-E25-26	10/19/94	B002L4			4.10 U	
299-E25-28	10/18/94	B002L5		4.10 U		600.00
299-E25-28	10/18/94	B002L9			4.10 U	
299-E25-31	10/12/94	B00Q16		4.10 U		700.00
299-E25-31	10/12/94	B00Q17			4.10 U	
299-E25-32P	10/11/94	B002H0		5.50 L		600.00 g
299-E25-32P	10/11/94	B002H4			6.00 L	
299-E25-34	10/19/94	B002H5		7.20 L		500.00
299-E25-34	10/19/94	B002H9			16.00 L	
299-E25-35	10/19/94	B002H0		4.70 L		1000.00
299-E25-35	10/19/94	B002H4			4.10 U	
299-E25-36	10/13/94	B00254	24.40 F	6.00 L		600.00
299-E25-36	10/13/94	B00357			4.10 U	
299-E25-42	10/11/94	B002H5		15.00 L		1000.00 g
299-E25-42	10/11/94	B002H9			5.00 L	
299-E25-43	10/11/94	B002P0		12.00 L		800.00 g
299-E25-43	10/11/94	B002P4			6.00 L	
299-E25-47	10/12/94	B002P5		4.10 U		800.00
299-E25-47	10/12/94	B002P9			4.10 U	
299-E25-48	10/12/94	B00260		4.10 U		600.00
299-E25-48	10/12/94	B00264			4.10 U	
299-E26-12	10/11/94	B00265		5.00 L		600.00 g
299-E26-12	10/11/94	B00269			5.00 L	
299-E26-13	10/12/94	B002R0		4.10 U		600.00
299-E26-13	10/12/94	B002R4			4.10 U	
699-43-43	10/06/94	B002R5		4.10 U		500.00
699-43-43	10/06/94	B002R9			4.10 U	
699-43-45	10/06/94	B00290		8.40 L		700.00
699-43-45	10/06/94	B00294			4.10 U	

Table 6-4. Constituents with at Least One Detected Value for
the 216-A-29 Ditch Data for Reporting Period
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Well Name	Collection Date	Sample Number	ALPHA 135/pCi/L ./13	BETA 136/pCi/L ./.	1HYDRAZ 36/ppb 2.3/.	I-129 139/pCi/L ./1
299-E17-15	12/06/94	800FD9	4.44	92.60		9.25
299-E17-20	10/14/94	800234	4.11	27.60		8.96
299-E25-11	10/13/94	800094	1.04	7.83		
299-E25-18	10/18/94	800096	.17 U	6.15		
299-E25-19	10/18/94	800098	.66 U	6.27		
299-E25-19	10/18/94	800099	.31 U	8.69		
299-E25-20	10/12/94	800082	1.01 U	4.50		
299-E25-21	10/18/94	800084	.82 U	4.06		
299-E25-26	10/19/94	800210	.74 U	3.03	1.60 U	
299-E25-28	10/18/94	800215	.95	4.17	1.60 U	
299-E25-31	10/12/94	800086	2.02	7.06		
299-E25-32P	10/11/94	800290	1.06	3.01	1.60 U	
299-E25-34	10/19/94	800295	.57 U	4.37	1.60 U	
299-E25-35	10/19/94	800290	.79 U	7.90	1.60 U	
299-E25-36	10/13/94	800254	.06 U	5.13		1.20
299-E25-36	10/13/94	800356			1.60 U	
299-E25-42	10/11/94	800295	3.57	7.24	7.00 L	
299-E25-43	10/11/94	800290	1.53	5.92	1.60 U	
299-E25-47	10/12/94	800295	.40 U	6.17	1.60 U	
299-E25-48	10/12/94	800290	1.77	4.43	1.80 L	
299-E26-12	10/11/94	800295	.19 U	3.72	1.60 U	
299-E26-13	10/12/94	800290	.82 U	3.83	1.60 U	
699-43-43	10/06/94	800295	.32 U	3.60	1.60 U	
699-43-45	10/06/94	800290	2.11	3.41	1.60 U	

Table 6-4. Constituents with at Least One Detected Value for
the 216-A-29 Ditch Data for Reporting Period
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(sheet 6 of 11)

Well Name	Collection Date	Sample Number	IRON 34/ppb 18/300s	FIROH 34/ppb 18/300s	MAGNES 34/ppb 25/.	MAGNES 34/ppb 25/.
299-E17-15	12/06/94	800009	370.00 B		13000.00	
299-E17-20	10/14/94	800003		63.00 B		16000.00
299-E17-20	10/14/94	800234	850.00 B		14000.00	
299-E25-11	10/13/94	800004	480.00 BQ		5600.00	
299-E25-11	10/13/94	800005		25.00 BQ		5700.00
299-E25-18	10/18/94	800006	230.00 B		6700.00	
299-E25-18	10/18/94	800007		11.00 BL		6700.00
299-E25-19	10/18/94	800008	78.00 B		6700.00	
299-E25-19	10/18/94	800009	89.00 B		6800.00	
299-E25-19	10/18/94	800000		25.00 B		6900.00
299-E25-19	10/18/94	800001		25.00 B		6800.00
299-E25-20	10/12/94	800002	140.00		7000.00	
299-E25-20	10/12/94	800003		5.24 U		7300.00
299-E25-21	10/18/94	800004	490.00 B		5500.00	
299-E25-21	10/18/94	800005		24.00 B		5500.00
299-E25-26	10/19/94	800210	100.00 BQ		5400.00	
299-E25-26	10/19/94	800214		13.00 LQ		5500.00
299-E25-28	10/18/94	800215	64.00 B		5900.00	
299-E25-28	10/18/94	800219		16.00 BL		6100.00
299-E25-31	10/12/94	800006	930.00		6500.00	
299-E25-31	10/12/94	800007		5.24 U		6600.00
299-E25-32P	10/11/94	800200	800.00		5700.00	
299-E25-32P	10/11/94	800204		77.00		5700.00
299-E25-34	10/19/94	800205	520.00 BQ		5500.00	
299-E25-34	10/19/94	800209		34.00 BQ		5600.00
299-E25-35	10/19/94	800200	460.00 BQ		10000.00	
299-E25-35	10/19/94	800204		26.00 BQ		10000.00
299-E25-36	10/13/94	800254	480.00 BQ		8200.00	
299-E25-36	10/13/94	800357		31.00 BQ		8100.00
299-E25-42	10/11/94	800205	2200.00		7800.00	
299-E25-42	10/11/94	800209		88.00		7700.00
299-E25-43	10/11/94	800200	800.00		5800.00	
299-E25-43	10/11/94	800204		79.00		5600.00
299-E25-47	10/12/94	800205	330.00		7100.00	
299-E25-47	10/12/94	800209		13.00 L		7000.00
299-E25-48	10/12/94	800200	500.00		7000.00	
299-E25-48	10/12/94	800204		30.00		6800.00
299-E26-12	10/11/94	800205	220.00		5500.00	
299-E26-12	10/11/94	800209		11.00 L		5600.00
299-E26-13	10/12/94	800200	320.00		6500.00	
299-E26-13	10/12/94	800204		12.00 L		6500.00
699-43-43	10/06/94	800205	110.00 Q		5200.00	
699-43-43	10/06/94	800209		31.00 Q		5300.00
699-43-45	10/06/94	800200	130.00 Q		7200.00	
699-43-45	10/06/94	800204		33.00 Q		7000.00

Table 6-4. Constituents with at Least One Detected Value for
the 216-A-29 Ditch Data for Reporting Period
October 1 through December 31, 1994.
(sheet 7 of 11)

Well Name	Collection Date	Sample Number	MANGANESE 34/ppb 1/50s	FMANGANESE 34/ppb 1/50s	NICKEL 34/ppb 16/.	FNICKEL 34/ppb 16/.
299-E17-15	12/06/94	B00FD9	7.30 L		33.00	
299-E17-20	10/14/94	B00003		2.30 L		13.00 U
299-E17-20	10/14/94	B00234	14.00		87.00	
299-E25-11	10/13/94	B00004	14.00		51.00	
299-E25-11	10/13/94	B00005		1.40 L		13.00 U
299-E25-18	10/18/94	B00006	5.80 L		13.00 U	
299-E25-18	10/18/94	B00007		3.70 L		13.00 U
299-E25-19	10/18/94	B00008	5.40 L		13.00 U	
299-E25-19	10/18/94	B00009	5.50 L		13.00 U	
299-E25-19	10/18/94	B000R0		5.30 L		13.00 U
299-E25-19	10/18/94	B000R1		5.30 L		13.00 U
299-E25-20	10/12/94	B000R2	5.70 L		13.00 U	
299-E25-20	10/12/94	B000R3		2.50 L		13.00 U
299-E25-21	10/18/94	B000R4	6.70 L		13.00 U	
299-E25-21	10/18/94	B000R5		2.80 L		13.00 U
299-E25-26	10/19/94	B002L0	1.20 LB		13.00 U	
299-E25-26	10/19/94	B002L4		.81 LB		13.00 U
299-E25-28	10/18/94	B002L5	.72 U		13.00 U	
299-E25-28	10/18/94	B002L9		.72 U		19.00 L
299-E25-31	10/12/94	B000R6	49.00		25.00 L	
299-E25-31	10/12/94	B000R7		3.00 L		13.00 U
299-E25-32P	10/11/94	B002N0	17.00		96.00	
299-E25-32P	10/11/94	B002N4		2.20 L		17.00 L
299-E25-34	10/19/94	B002N5	12.00 B		45.00	
299-E25-34	10/19/94	B002N9		2.80 LB		13.00 U
299-E25-35	10/19/94	B002N0	10.00 B		25.00 L	
299-E25-35	10/19/94	B002N4		2.30 LB		13.00 U
299-E25-36	10/13/94	B00254	10.00		61.00	
299-E25-36	10/13/94	B00357		2.30 L		13.00 L
299-E25-42	10/11/94	B002N5	37.00		160.00	
299-E25-42	10/11/94	B002N9		3.50 L		25.00 L
299-E25-43	10/11/94	B002P0	16.00		99.00	
299-E25-43	10/11/94	B002P4		2.50 L		24.00 L
299-E25-47	10/12/94	B002P5	8.30 L		17.00 L	
299-E25-47	10/12/94	B002P9		1.50 L		13.00 U
299-E25-48	10/12/94	B002Q0	15.00		30.00	
299-E25-48	10/12/94	B002Q4		3.10 L		13.00 U
299-E26-12	10/11/94	B002Q5	5.90 L		36.00	
299-E26-12	10/11/94	B002Q9		2.30 L		14.00 L
299-E26-13	10/12/94	B002R0	7.60 L		42.00	
299-E26-13	10/12/94	B002R4		2.60 L		13.00 U
699-43-43	10/06/94	B002R5	2.90 L		13.00 U	
699-43-43	10/06/94	B002R9		2.20 L		13.00 U
699-43-45	10/06/94	B002S0	3.80 L		13.00 U	
699-43-45	10/06/94	B00254		2.50 L		13.00 U

Table 6-4. Constituents with at Least One Detected Value for
the 216-A-29 Ditch Data for Reporting Period
October 1 through December 31, 1994.
(sheet 8 of 11)

Well Name	Collection Date	Sample Number	NITRATE 124/ppb 96/43000	LPNEHOL 30/ppb .57/.	POTASUM 34/ppb 890/.	FPOTASS 34/ppb 890/.
299-E17-15	12/06/94	800P09	110000.00 DB	.46 LB	5400.00	
299-E17-20	10/14/94	800003				6800.00
299-E17-20	10/14/94	800234	100000.00 DB	.31 U	6600.00	
299-E25-11	10/13/94	800044	6800.00 Q	.31 U	5000.00	
299-E25-11	10/13/94	800045				5000.00
299-E25-18	10/18/94	800006	11000.00 D	.31 U	5100.00	
299-E25-18	10/18/94	800047				4900.00
299-E25-19	10/18/94	800048	37000.00 D	.31 U	6600.00	
299-E25-19	10/18/94	800049	37000.00 D	.31 U	7100.00	
299-E25-19	10/18/94	8000R0				6800.00
299-E25-19	10/18/94	8000R1				6900.00
299-E25-20	10/12/94	8000R2	34000.00 D	.31 U	6500.00	
299-E25-20	10/12/94	8000R3				6800.00
299-E25-21	10/18/94	8000R4	1800.00	.31 U	4800.00	
299-E25-21	10/18/94	8000R5				5000.00
299-E25-26	10/19/94	8002L0	900.00	.31 U	3500.00	
299-E25-26	10/19/94	8002L4				3700.00
299-E25-28	1/07/94	8099R5		.31 U		
299-E25-28	10/18/94	8002L5	800.00	.31 U	3900.00	
299-E25-28	10/18/94	8002L9				3900.00
299-E25-31	10/12/94	8000R6	1900.00	.31 U	4400.00	
299-E25-31	10/12/94	8000R7				4300.00
299-E25-32P	10/11/94	8002M0	900.00 Q	.31 U	3600.00	
299-E25-32P	10/11/94	8002M4				3600.00
299-E25-34	10/19/94	8002M5	1000.00	.31 U	3700.00	
299-E25-34	10/19/94	8002M9				3600.00
299-E25-35	10/19/94	8002M0	3900.00	.31 U	9200.00	
299-E25-35	10/19/94	8002M4				5500.00
299-E25-36	10/13/94	800254	14000.00 DB	.31 U	5000.00	
299-E25-36	10/13/94	800357				4900.00
299-E25-42	10/11/94	8002M5	6100.00 Q	.31 U	5600.00	
299-E25-42	10/11/94	8002M9				5700.00
299-E25-43	10/11/94	8002P0	1200.00 Q	.31 U	4300.00	
299-E25-43	10/11/94	8002P4				4200.00
299-E25-47	10/12/94	8002P5	4700.00	.31 U	5100.00	
299-E25-47	10/12/94	8002P9				5100.00
299-E25-48	10/12/94	8002Q0	2200.00	.31 U	4600.00	
299-E25-48	10/12/94	8002Q4				4600.00
299-E26-12	10/11/94	8002Q5	900.00 Q	.31 U	4300.00	
299-E26-12	10/11/94	8002Q9				4100.00
299-E26-13	10/12/94	8002R0	1000.00	.31 U	4000.00	
299-E26-13	10/12/94	8002R4				4000.00
699-43-43	10/06/94	8002R5	700.00	.31 U	4600.00	
699-43-43	10/06/94	8002R9				4700.00
699-43-43	10/06/94	8002R0	1200.00	.31 U	4300.00	
699-43-45	10/06/94	8002R4				4400.00

Table 6-4. Constituents with at Least One Detected Value for
the 216-A-29 Ditch Data for Reporting Period
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(sheet 9 of 11)

Well Name	Collection Date	Sample Number	SODIUM 34/ppb 150/.	POTASSIUM 34/ppb 150/.	SULFATE 124/ppb 89/250000g	TRITIUM 142/pCi/L ./20000
299-E17-15	12/06/94	800F09	18000.00 g		28000.00 D	1000000.00
299-E17-20	10/14/94	800043		24000.00		
299-E17-20	10/14/94	800234	20000.00		33000.00 D	1180000.00
299-E25-11	10/13/94	800004	12000.00 g		15000.00 D	55800.00
299-E25-11	10/13/94	800005		12000.00 g		
299-E25-18	10/18/94	800006	14000.00		23000.00 D	60600.00
299-E25-18	10/18/94	800007		15000.00		
299-E25-19	10/18/94	800008	23000.00		24000.00 D	338000.00
299-E25-19	10/18/94	800009	23000.00		24000.00 D	346000.00
299-E25-19	10/18/94	8000R0		24000.00		
299-E25-19	10/18/94	8000R1		24000.00		
299-E25-20	10/12/94	8000R2	23000.00		27000.00 D	145000.00
299-E25-20	10/12/94	8000R3		24000.00		
299-E25-21	10/18/94	8000R4	14000.00		14000.00 D	3780.00
299-E25-21	10/18/94	8000R5		15000.00		
299-E25-26	10/19/94	8002L0	6500.00		10000.00 D	938.00
299-E25-26	10/19/94	8002L4		6700.00		
299-E25-28	10/18/94	8002L3	8700.00		10000.00 D	719.00
299-E25-28	10/18/94	8002L9		8900.00		
299-E25-31	10/12/94	8000R6	14000.00		20000.00 D	6720.00
299-E25-31	10/12/94	8000R7		15000.00		
299-E25-32P	10/11/94	8002H0	5500.00 g		11000.00 D	535.00
299-E25-32P	10/11/94	8002H4		5500.00 g		
299-E25-34	10/19/94	8002H5	7900.00		11000.00 D	685.00
299-E25-34	10/19/94	8002H9		8200.00		
299-E25-35	10/19/94	8002H0	25000.00		65000.00 D	25800.00
299-E25-35	10/19/94	8002H4		26000.00		
299-E25-36	10/13/94	800254	15000.00 g		34000.00 D	9340.00
299-E25-36	10/13/94	800357		15000.00 g		
299-E25-42	10/11/94	8002H5	25000.00 g		45000.00 D	25100.00
299-E25-42	10/11/94	8002H9		25000.00 g		
299-E25-43	10/11/94	8002P0	8800.00 g		11000.00 D	599.00
299-E25-43	10/11/94	8002P4		8500.00 g		
299-E25-47	10/12/94	8002P5	20000.00		28000.00 D	12500.00
299-E25-47	10/12/94	8002P9		20000.00		
299-E25-48	10/12/94	8002Q0	13000.00		21000.00 D	5590.00
299-E25-48	10/12/94	8002Q4		13000.00		
299-E26-12	10/11/94	8002Q5	7600.00 g		11000.00 D	873.00
299-E26-12	10/11/94	8002Q9		7700.00 g		
299-E26-13	10/12/94	8002R0	7400.00		11000.00 D	623.00
299-E26-13	10/12/94	8002R4		7400.00		
699-43-43	10/06/94	8002R5	5500.00		9900.00 D	273.00
699-43-43	10/06/94	8002R9		5500.00		
699-43-45	10/06/94	8002S0	8800.00		9700.00	553.00
699-43-45	10/06/94	8002S4		8600.00		

Table 6-4. Constituents with at Least One Detected Value for
the 216-A-29 Ditch Data for Reporting Period
October 1 through December 31, 1994.
(sheet 10 of 11)

Well Name	Collection Date	Sample Number	TURBID 126/NTU .016/.	Vanadium 34/ppb 6.4/.	Fluoride 34/ppb 6.4/.	ZINC 34/ppb 4.4/5000s
299-E17-15	12/06/94	800009	1.90	23.00 L		6.30 U
299-E17-20	10/14/94	800003			27.00 L	
299-E17-20	10/14/94	800234	2.80 H	27.00 L		6.30 L
299-E25-11	10/13/94	800004	1.30 q	37.00		24.00
299-E25-11	10/13/94	800005			36.00	
299-E25-18	10/18/94	800006	1.90	30.00		14.00
299-E25-18	10/18/94	800007			32.00	
299-E25-19	10/18/94	800008	.61	44.00		15.00 q
299-E25-19	10/18/94	800009	.62	45.00		22.00 q
299-E25-19	10/18/94	8000R0			45.00	
299-E25-19	10/18/94	8000R1			42.00	
299-E25-20	10/12/94	8000R2	1.30 q	47.00		27.00
299-E25-20	10/12/94	8000R3			47.00	
299-E25-21	10/18/94	8000R4	2.50	41.00		29.00
299-E25-21	10/18/94	8000R5			40.00	
299-E25-26	10/19/94	8002L0	.50	19.00 L		18.00
299-E25-26	10/19/94	8002L4			19.00 L	
299-E25-28	10/18/94	8002L5	.61	36.00		10.00
299-E25-28	10/18/94	8002L9			35.00	
299-E25-31	10/12/94	8000R6	14.00 q	29.00 L		47.00
299-E25-31	10/12/94	8000R7			27.00 L	
299-E25-32P	10/11/94	8002M0	2.30 q	11.00 L		6.30 U
299-E25-32P	10/11/94	8002M4			8.20 L	
299-E25-34	10/19/94	8002M5	2.60	34.00		11.00
299-E25-34	10/19/94	8002M9			31.00	
299-E25-35	10/19/94	8002M0	3.60	31.00		8.00 L
299-E25-35	10/19/94	8002M4			31.00	
299-E25-36	10/13/94	800254	1.40 q	27.00 L		6.30 U
299-E25-36	10/13/94	800357			25.00 L	
299-E25-42	10/11/94	8002M5	15.00 qf	33.00		11.00
299-E25-42	10/11/94	8002M9			27.00 L	
299-E25-43	10/11/94	8002P0	2.80 q	40.00		8.80 L
299-E25-43	10/11/94	8002P4			37.00	
299-E25-47	10/12/94	8002P5	4.10 q	30.00		13.00
299-E25-47	10/12/94	8002P9			30.00	
299-E25-48	10/12/94	800200	5.60 q	27.00 L		6.30 U
299-E25-48	10/12/94	800204			25.00 L	
299-E26-12	10/11/94	800205	1.10 q	37.00		6.30 U
299-E26-12	10/11/94	800209			35.00	
299-E26-13	10/12/94	8002R0	.95 q	29.00 L		8.00 L
299-E26-13	10/12/94	8002R4			29.00 L	
699-43-43	10/06/94	8002R5	1.60	27.00 L		21.00 Bq
699-43-43	10/06/94	8002R9			26.00 L	
699-43-45	10/06/94	800250	.63	33.00		21.00 Bq
699-43-45	10/06/94	800284			29.00 L	

Table 6-4. Constituents with at Least One Detected Value for
the 216-A-29 Ditch Data for Reporting Period
October 1 through December 31, 1994.
(sheet 11 of 11)

Well Name	Collection Date	Sample Number	FZINC 34/ppb 4.4/5000s
299-E17-20	10/16/94	800063	6.30 U
299-E25-11	10/13/94	800065	15.00
299-E25-18	10/18/94	800067	6.70 L
299-E25-19	10/18/94	800080	14.00
299-E25-19	10/18/94	800081	16.00
299-E25-20	10/12/94	800083	6.40 L
299-E25-21	10/18/94	800085	14.00
299-E25-26	10/19/94	800214	9.10 L
299-E25-28	10/18/94	800219	6.30 U
299-E25-31	10/12/94	800087	6.30 U
299-E25-32P	10/11/94	8002M4	8.20 L
299-E25-34	10/19/94	8002M9	6.30 U
299-E25-35	10/19/94	8002M4	6.30 U
299-E25-36	10/13/94	800357	6.30 U
299-E25-42	10/11/94	8002M9	9.00 L
299-E25-43	10/11/94	8002P4	8.60 L
299-E25-47	10/12/94	8002P9	6.30 U
299-E25-48	10/12/94	800204	6.30 U
299-E26-12	10/11/94	800209	6.30 U
299-E26-13	10/12/94	8002R4	6.30 U
699-43-43	10/06/94	8002R9	16.00 BQ
699-43-45	10/06/94	800254	17.00 BQ

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 October 1 through December 31, 1994.
(sheet 1 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 110/.	ppb 5/.
299-E17-15	12/06/94	80DF09	486	500	8.02	7.90 H	200 L	
		80DFF0	483		8.00		200 L	
		80DFF1	486		7.99		200 L	5.0 U
		80DFF2	483		7.98		300 L	
299-E17-20	10/14/94	80D234	481	470	8.25	8.30 H	300 L	5.8
		80D235	478		8.25		200 L	5.0 U
		80D236	484		8.25		400 L	5.0 U
		80D237	482		8.24		300 L	5.0 U
299-E25-11	10/13/94	80D004	223	220	8.01			
299-E25-18	10/18/94	80D006	254	250	8.34			
299-E25-19	10/18/94	80D008	315	310	8.44			
		80D009		310				
299-E25-20	10/12/94	80D0R2	303	310	7.39			
299-E25-21	10/18/94	80D0R4	210	210	8.94 F			
299-E25-26	10/19/94	80D2L0	182	180	8.22		500 L	5.0 U
		80D2L1	182		8.21		600 L	5.5
		80D2L2	179		8.22		600 L	5.0 U
		80D2L3	177		8.21		500 LQ	5.0 U
299-E25-28	10/18/94	80D2L5	182	190	8.39		600 L	8.9
		80D2L6	181		8.40		400 L	10.3
		80D2L7	182		8.39		600 L	6.4
		80D2L8	181		8.40		600 L	5.3
299-E25-31	10/12/94	80D0R6	224	240	7.68			
299-E25-32P	10/11/94	80D2N0	189	180	7.46		600 L	5.0 U
		80D2N1	188		7.46		700 L	5.0 U
		80D2N2	189		7.47		700 L	6.6
		80D2N3	189		7.48		700 L	5.0 U
299-E25-34	10/19/94	80D2N5	181	190	7.72		700 LQ	5.0 U
		80D2N6	180		7.72		500 LQ	5.4
		80D2N7	180		7.72		500 LQ	5.7
		80D2N8	180		7.72		500 LQ	7.8
299-E25-35	10/19/94	80D2N0	352	380	8.01		200 LQ	5.7
		80D2N1	354		8.02		200 LQ	5.5
		80D2N2	357		8.05		200 LQ	5.5
		80D2N3	357		8.05		300 LQ	5.0 U
299-E25-36	10/13/94	80D254	289	300	7.54	8.30	500 LQ	5.0 U
		80D255	288		7.54		400 LQ	6.2
		80D256	288		7.54		600 LQ	5.9
		80D257	287		7.53		400 LQ	5.1
299-E25-42	10/11/94	80D2N5	344	330	7.48		400 L	13.9
		80D2N6	344		7.46		300 L	5.0 U
		80D2N7	344		7.45		300 L	5.0 U
		80D2N8	345		7.46		300 L	5.0 U

Table 6-5. Contamination Indicator Parameters for the 216-A-29 Ditch
Data for Reporting Period October 1 through December 31, 1994.
(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 110/.	TOX ppb 5/.
299-E25-43	10/11/94	8002P0	207	190	7.85		500 L	9.3
		8002P1	208		7.84		500 L	5.0 U
		8002P2	207		7.85		600 L	5.0 U
		8002P3	208		7.82		600 L	5.0 U
299-E25-47	10/12/94	8002P5	268	270	7.78		300 L	5.1
		8002P6	267		7.78		400 L	5.8
		8002P7	266		7.80		300 L	5.0 U
		8002P8	267		7.79		300 L	5.0 U
299-E25-48	10/12/94	8002Q0	215	230	7.93		400 L	7.1
		8002Q1	214		7.94		400 L	5.4
		8002Q2	216		7.94		400 L	5.4
		8002Q3	216		7.93		500 L	10.5
299-E26-12	10/11/94	8002Q5	186	190	7.97		600 LB	6.3
		8002Q6	185		7.97		500 LB	6.0
		8002Q7	186		7.97		500 LB	5.3
		8002Q8	186		7.97		500 LB	5.0 U
299-E26-13	10/12/94	8002R0	206	220	7.85		500 L	5.0 U
		8002R1	206		7.85		600 L	5.0 U
		8002R2	205		7.85		500 L	5.0 U
		8002R3	205		7.85		500 L	8.8
699-43-43	10/06/94	8002R5	214	180	7.94		600 L	5.0 U
		8002R6	210		7.92		600 L	5.0 U
		8002R7	208		7.92		700 L	5.0 U
		8002R8	207		7.92		600 L	5.0 U
699-43-45	10/06/94	8003B6				8.30		
		8002S0	248	240	7.84		400 L	5.0 U
		8002S1	248		7.86		400 L	5.0 U
		8002S2	248		7.84		400 L	5.0 U
		8002S3	249		7.88		500 L	5.0 U
		8003B7				8.20		

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

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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 emplaced 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 *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 1994), Milestone M-20-34, RCRA closure/post-closure plans for the A-36B Crib are to be submitted to Ecology and the EPA in March 1996. An interim-status detection-level RCRA groundwater monitoring network has been in place at the A-36B Crib since May 1988.

The RCRA groundwater monitoring system consists of five downgradient wells and three upgradient wells, as listed in Table 7-1. This is a change from the previous reporting period when the monitoring network consisted of six downgradient wells and one upgradient well. The Groundwater Monitoring Plan for A-36B has been revised. The two upgradient wells from the 216-A-10 Crib monitoring network, 299-E24-18 and 299-E25-36, have been added as upgradient wells and 299-E17-5 is no longer sampled and is used for water level information only.

Well locations for the A-36B monitoring network are shown in Figure 7-1. CIP critical means were calculated using four quarters of data from September 1988 to June 1989. As shown in Table 7-1, data from well 299-E17-15 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 October through December 1994 period are reported in Table 7-2. Three wells have water level measurements that are out of the expected range. These measurements occurred at the time of sampling.

7.3 WATER CHEMISTRY DATA

Groundwater samples were collected from the 216-A-36B Crib monitoring network during October and December 1994. 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.

No CIP replicate average exceeded the calculated critical mean during the reporting period. A RADE was submitted for field pH results from well 299-E17-18. The field measurements taken in quadruplicate for this well ranged between 6.67 and 6.75, while the lab pH for one of these samples was 8.1. Past field pH measurements for this well have been between 7.5 and 8.0.

Constituents exceeding the drinking water standards during the reporting period were iodine-129, tritium, chromium, nitrate, and iron. For details on specific wells, see Table 7-6.

Samples from well 299-E17-9 were misplaced in the samplers holding area for 55 days before they were sent to the laboratory for analysis. Therefore, not all of the sample results are contained in this report and holding times were missed for laboratory pH, laboratory conductivity, turbidity, anions, and phenols. A field analysis was done of pH, conductivity, and nitrate the last week of January 1995 to use as comparison results. This will be discussed in the January-March 1995 quarterly report when the rest of the data have been reported.

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

H9411010.12

Table 7-1. Well Identification and Sampling Schedule
for the 216-A-36B Crib Groundwater Monitoring Network.

Well no. (299-)	Relative position	Hydrogeologic unit	Sample frequency	Sample date, 4th Qtr 1994
E17-17	Upgradient	Ringold: Water Table	Semiannually	12/6/94
E24-17	Upgradient	Ringold: Water Table	Semiannually	10/14/94
E25-36 ^a	Upgradient	Ringold: Water Table	Semiannually	10/13/94
E17-5	Downgradient	Ringold: Water Table	water level only	—
E17-9	Downgradient	Ringold: Water Table	Semiannually	12/7/94
E17-14	Downgradient	Ringold: Water Table	Semiannually	12/6/94
E17-15 ^a	Downgradient	Ringold: Water Table	Semiannually	12/6/94
E17-16	Downgradient	Ringold: Water Table	Semiannually	12/6/94
E17-18	Downgradient	Ringold: Water Table	Semiannually	12/7/94

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

Table 7-2. RCRA Water Level Measurement Report
216-A-36B Crib, Fourth Quarter 1994.

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
299-E17-14	12/06/94	320.88	401.30*	122.32
	12/12/94	320.80	401.38	122.34
299-E17-15	12/06/94	321.65	400.13*	121.96
	12/12/94	321.24	400.54	122.08
299-E17-16	12/06/94	319.48	401.10*	122.26
	12/12/94	319.47	401.11	122.26
299-E17-17	12/06/94	320.13	399.79*+	121.86
	12/12/94	318.64	401.28	122.31
299-E17-18	12/07/94	320.76	399.89*+	121.89
	12/12/94	319.36	401.29	122.31
299-E17-5	12/12/94	317.86	400.83	122.17
299-E17-9	12/07/94	316.87	400.77*	122.15
	12/12/94	316.52	401.12	122.26
299-E24-18	10/14/94	400.75	318.53*+	97.09
	12/12/94	317.93	401.35	122.33
299-E25-36	10/13/94	305.96	401.43*	122.36
	12/12/94	306.03	401.36	122.33

- 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. Elevations marked with an '*' were measured at the time of sampling.
4. Elevation 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 October 1 through December 31, 1994.
(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	94	Conductivity, field	unhos		1			32	32	
CONDUCT	73	Conductivity, lab	unhos					8	8	
TOC		Total Organic Carbon	ppb		110			32	32	
TOX		Total Organic Halogen	ppb		5			21	6	
PH	93	pH, field	pH		.01	6.5-8.5	EPAS	32	32	0
PH	125	pH, lab	pH			6.5-8.5	EPAS	8	8	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
BARIUM		Barium	ppb		.59	1000	EPA1	7	7	0
FBARIUM		Barium, filtered	ppb		.59	1000	EPA1	1	1	0
CADMIUM		Cadmium	ppb		3.3	10	EPA1	7	0	0
FCADMIU		Cadmium, filtered	ppb		3.3	10	EPA1	1	0	0
CHROMIUM		Chromium	ppb		4.5	50	EPA1	7	7	6
FCHROMI		Chromium, filtered	ppb		4.5	50	EPA1	1	1	0
FLUORID		Fluoride	ppb		36	1400	EPA1	7	7	0
ALPHA		Gross alpha	pCi/L			15	EPA	7	6	1
NITRATE		Nitrate	ppb		19	45000	EPA	7	7	3

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORID		Chloride	ppb		14	250000	EPAS	7	7	0
IRON		Iron	ppb		3.24	300	EPAS	7	7	5
FIRON		Iron, filtered	ppb		3.24	300	EPAS	1	1	0
MANGESE		Manganese	ppb		.72	50	EPAS	7	7	0
FMANGAN		Manganese, filtered	ppb		.72	50	EPAS	1	1	0
CPHENOL		Phenol	ppb		.31			7	3	
SODIUM		Sodium	ppb		61			7	7	
FSODIUM		Sodium, filtered	ppb		61			1	1	
SULFATE		Sulfate	ppb		37	250000	EPAS	7	7	0

Table 7-3. Constituent List and Summary of Results for the 216-A-36B Crib
Data for Reporting Period October 1 through December 31, 1994.
(sheet 2 of 3)

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name	Full	Units	Lab MDL	DMS Limit	Agency	Number of Samples		
								Total	>MDL	>DMS
246-trp		2,4,6-Trichlorophenol		ppb	1.3			7	0	
24-dcp		2,4-Dichlorophenol		ppb	1.3			7	0	
DIMPHEN		2,4-Dimethylphenol		ppb	1.2			7	0	
DINPHEN		2,4-Dinitrophenol		ppb	3			7	0	
26-dcp		2,6-Dichlorophenol		ppb	1.4			7	0	
CHLPHEN		2-Chlorophenol		ppb	1.6			7	0	
2NITPH		2-Nitrophenol		ppb	1.3			7	0	
BUTDINP		2-sec-Butyl-4,6-dinitrophenol (DN)		ppb	1.3			7	0	
46DN2NP		4,6-Dinitro-2-methylphenol		ppb	1.3			7	0	
CHLCRES		4-Chloro-3-methylphenol		ppb	1.3			7	0	
NITPHEN		4-Nitrophenol		ppb	3			7	0	
ALUMINUM		Aluminum		ppb	26			7	1	
FALLUMIN		Aluminum, filtered		ppb	26			1	0	
AMMONIU		Ammonium ion		ppb	37			6	0	
ANTIMONY		Antimony		ppb	62			7	0	
FANTIMO		Antimony, filtered		ppb	62			1	0	
SB-125		Antimony-125		pCi/L				7	0	
BERYLLIUM		Beryllium		ppb	.17			7	1	
FBERYLL		Beryllium, filtered		ppb	.17			3	0	
BROMIDE		Bromide		ppb	100			7	0	
CALCIUM		Calcium		ppb	34			7	7	
FCALCIU		Calcium, filtered		ppb	34			1	1	
CS-137		Cesium-137		pCi/L		200	EPA	7	0	0
COBALT		Cobalt		ppb	5.9			7	0	
FCOBALT		Cobalt, filtered		ppb	5.9			1	0	
CO-60		Cobalt-60		pCi/L		100	EPA	7	4	0
COPPER		Copper		ppb	4.1	1000	EPAS	7	5	0
FCOPPER		Copper, filtered		ppb	4.1	1000	EPAS	1	0	0
CRESOLS		Cresols (methylphenols)		ppb	4.8			7	0	
BETA		Gross beta		pCi/L				7	7	
LYDRAZ		Hydrazine		ppb	1.6			1	0	
I-129L		Iodine-129, Low level		pCi/L		1	EPA	7	6	7*
MAGNES		Magnesium		ppb	.23			7	7	
FMAGNES		Magnesium, filtered		ppb	.23			1	1	
NICKEL		Nickel		ppb	13			7	7	
FNICKEL		Nickel, filtered		ppb	13			1	1	
NITRITE		Nitrite		ppb	18	1000	EPA	7	0	0
PENTCHP		Pentachlorophenol		ppb	1.3	1	EPA	7	0	7*
PHOSPHA		Phosphate		ppb	82			7	0	
POTASSIUM		Potassium		ppb	850			7	7	
FPOTASS		Potassium, filtered		ppb	850			1	1	
RU-106		Ruthenium-106		pCi/L		30	EPA	7	0	0
SILVER		Silver		ppb	3.6	50	EPAI	7	1	0

Table 7-3. Constituent List and Summary of Results for the 216-A-36B Crib
Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 3)

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
FSILVER		Silver, filtered	ppb	3.6	50	EPAL		1	0	0
TETPHOL		Tetrachlorophenols	ppb	1.5				7	0	
TIN		Tin	ppb	69				7	0	
FTIN		Tin, filtered	ppb	69				1	0	
TRIPHOL		Trichlorophenols	ppb	1.7				7	0	
TRITIUM		Tritium	pCi/L		20000	EPA		7	7	6
TURBID		Turbidity	NTU	.016				8	8	
VANADIUM		Vanadium	ppb	6.6				7	7	
FVANADI		Vanadium, filtered	ppb	6.6				1	1	
ZINC		Zinc	ppb	6.3	5000	EPAS		7	2	0
FZINC		Zinc, filtered	ppb	6.3	5000	EPAS		1	0	0

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
October 1 through December 31, 1994.
(sheet 1 of 3)

Well Name	Collection Date	Sample Number	ALUMINUM 34/ppb 19/.	ALUMINUM 34/ppb 19/.	BARIUM 34/ppb 1.3/1000f	BARIUM 34/ppb 1.3/1000f
299-E17-14	12/06/94	800FD5	39.00 L		53.00	
299-E17-15	12/06/94	800FD9	26.00 U		47.00	
299-E17-16	12/06/94	800FF3	26.00 U		39.00 q	
299-E17-17	12/06/94	800FF7	26.00 U		36.00	
299-E17-18	12/07/94	800FG1	26.00 U		37.00 q	
299-E24-18	10/14/94	800246	26.00 U		51.00	
299-E25-36	10/13/94	800254	26.00 Uq		21.00 q	
299-E25-36	10/13/94	800357		26.00 Uq		21.00 q

Well Name	Collection Date	Sample Number	BERYLLIUM 34/ppb 1.5/.	BERYLLIUM 34/ppb 1.5/.	CALCIUM 34/ppb 47/.	CALCIUM 34/ppb 47/.
299-E17-14	12/06/94	800FD5	.17 U		47000.00	
299-E17-15	12/06/94	800FD9	.17 U		52000.00	
299-E17-16	12/06/94	800FF3	.17 U		38000.00	
299-E17-17	12/06/94	800FF7	.17 U		28000.00	
299-E17-18	12/07/94	800FG1	.17 U		26000.00	
299-E24-18	10/14/94	800246	.37 L		35000.00	
299-E25-36	10/13/94	800254	.17 U		30000.00	
299-E25-36	10/13/94	800357		.17 U		29000.00

Well Name	Collection Date	Sample Number	CHLORIDE 124/ppb 71/250000s	CHROMIUM 34/ppb 11/50f	CHROMIUM 34/ppb 11/50f	CO-60 140/pCi/L ./100
299-E17-14	12/06/94	800FD5	3200.00	59.00		11.10
299-E17-15	12/06/94	800FD9	3400.00	79.00		5.39 U
299-E17-16	12/06/94	800FF3	3300.00	98.00		15.30
299-E17-17	12/06/94	800FF7	3400.00	91.00		3.62 U
299-E17-18	12/07/94	800FG1	2900.00 Bq	38.00		9.67
299-E24-18	10/14/94	800246	7600.00	220.00		2.13 U
299-E25-36	10/13/94	800254	4600.00	100.00 q		24.40 F
299-E25-36	10/13/94	800357			4.50 Lq	

Well Name	Collection Date	Sample Number	COPPER 34/ppb 2.6/1000s	COPPER 34/ppb 2.6/1000s	FLUORIDE 124/ppb 51/1400f	ALPHA 135/pCi/L ./15
299-E17-14	12/06/94	800FD5	8.00 L		1000.00	4.24
299-E17-15	12/06/94	800FD9	4.10 U		1000.00	4.44
299-E17-16	12/06/94	800FF3	4.10 U		300.00	3.95
299-E17-17	12/06/94	800FF7	5.30 L		1000.00	4.45
299-E17-18	12/07/94	800FG1	6.40 L		400.00	4.92
299-E24-18	10/14/94	800246	15.00 L		900.00	16.40
299-E25-36	10/13/94	800254	6.00 L		600.00	.04 U
299-E25-36	10/13/94	800357		4.10 U		

Table 7-4. Constituents with at Least One Detected Value for
the 216-A-36B Crib Data for Reporting Period
October 1 through December 31, 1994.
(sheet 2 of 3)

Well Name	Collection Date	Sample Number	BETA 136/pci/L ./.	1-129 139/pci/L ./1	IRON 34/ppb 18/300s	FIROM 34/ppb 18/300s
299-E17-14	12/06/94	B00FD5	88.60	9.15	270.00 B	
299-E17-15	12/06/94	B00FD9	92.60	9.25	370.00 B	
299-E17-16	12/06/94	B00FF3	62.90	6.11	440.00 B	
299-E17-17	12/06/94	B00FF7	14.30	5.98 U	390.00 B	
299-E17-18	12/07/94	B00FG1	21.90	4.79	190.00 B	
299-E24-18	10/14/94	B00246	26.70	2.66	870.00 BQ	
299-E25-36	10/13/94	B00254	5.13	1.20	480.00 BQ	
299-E25-36	10/13/94	B00357				31.00 BQ

Well Name	Collection Date	Sample Number	MAGNES 34/ppb 25/.	FMAGNES 34/ppb 25/.	MANGESE 34/ppb 1/50s	FMANGAN 34/ppb 1/50s
299-E17-14	12/06/94	B00FD5	15000.00		5.80 L	
299-E17-15	12/06/94	B00FD9	13000.00		7.30 L	
299-E17-16	12/06/94	B00FF3	11000.00		8.90 L	
299-E17-17	12/06/94	B00FF7	8300.00		8.60 L	
299-E17-18	12/07/94	B00FG1	7700.00		4.30 L	
299-E24-18	10/14/94	B00246	11000.00		18.00	
299-E25-36	10/13/94	B00254	8200.00		10.00	
299-E25-36	10/13/94	B00357		8100.00		2.30 L

Well Name	Collection Date	Sample Number	NICKEL 34/ppb 16/.	FNICKEL 34/ppb 16/.	NITRATE 124/ppb 96/45000	LPNENOL 30/ppb .57/.
299-E17-14	12/06/94	B00FD5	23.00 L		110000.00 DH	.49 LB
299-E17-15	12/06/94	B00FD9	33.00		110000.00 DH	.46 LB
299-E17-16	12/06/94	B00FF3	54.00		71000.00 B	.31 U
299-E17-17	12/06/94	B00FF7	34.00		29000.00 DH	.36 LB
299-E17-18	12/07/94	B00FG1	30.00		17000.00 DQ	.31 U
299-E24-18	10/14/94	B00246	100.00		22000.00 DQ	.31 U
299-E25-36	10/13/94	B00254	61.00		14000.00 DQ	.31 U
299-E25-36	10/13/94	B00357		13.00 L		

Well Name	Collection Date	Sample Number	POTASUM 34/ppb 890/.	FPOTASS 34/ppb 890/.	SILVER 34/ppb 3.4/50i	FSILVER 34/ppb 3.4/50i
299-E17-14	12/06/94	B00FD5	5600.00		3.70 L	
299-E17-15	12/06/94	B00FD9	5400.00		3.60 U	
299-E17-16	12/06/94	B00FF3	5700.00		3.60 U	
299-E17-17	12/06/94	B00FF7	5300.00		3.60 U	
299-E17-18	12/07/94	B00FG1	4800.00		3.60 U	
299-E24-18	10/14/94	B00246	5900.00		3.60 U	
299-E25-36	10/13/94	B00254	5000.00		3.60 U	
299-E25-36	10/13/94	B00357		4900.00		3.60 U

Table 7-4. Constituents with at Least One Detected Value for
the 216-A-36B Crib Data for Reporting Period
October 1 through December 31, 1994.
(sheet 3 of 3)

Well Name	Collection Date	Sample Number	SODIUM 34/ppb 150/.	FSODIUM 34/ppb 150/.	SULFATE 124/ppb 89/250000s	TRITIUM 142/pCi/L ./20000
299-E17-14	12/06/94	B00FD5	18000.00 B		28000.00 D	918000.00
299-E17-15	12/06/94	B00FD9	18000.00 B		28000.00 D	1000000.00
299-E17-16	12/06/94	B00FF3	17000.00 BQ		32000.00 D	501000.00
299-E17-17	12/06/94	B00FF7	17000.00 B		22000.00 D	705000.00
299-E17-18	12/07/94	B00FG1	16000.00 Q		22000.00 D	301000.00
299-E24-18	10/14/94	B00246	21000.00		32000.00 D	123000.00
299-E25-36	10/13/94	B00254	15000.00 Q		34000.00 D	9340.00
299-E25-36	10/13/94	B00357		15000.00 Q		

Well Name	Collection Date	Sample Number	TURBID 126/NTU .016/.	Vanadium 34/ppb 6.4/.	Vanadium 34/ppb 6.4/.	ZINC 34/ppb 6.4/5000s
299-E17-14	12/06/94	B00FD5	1.10	24.00 L		6.30 U
299-E17-15	12/06/94	B00FD9	1.90	23.00 L		6.30 U
299-E17-16	12/06/94	B00FF3	1.50 Q	27.00 L		6.30 U
299-E17-17	12/06/94	B00FF7	1.20	25.00 L		6.30 U
299-E17-18	12/07/94	B00FG1	1.50 Q	27.00 L		7.90 L
299-E17-9	12/07/94	B00FG9	2.10 QH			
299-E24-18	10/14/94	B00246	1.40 Q	21.00 L		8.40 L
299-E25-36	10/13/94	B00254	1.40 Q	27.00 L		6.30 U
299-E25-36	10/13/94	B00357			25.00 L	

Well Name	Collection Date	Sample Number	PZINC 34/ppb 4.4/5000s
299-E25-36	10/13/94	B00357	6.30 U

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 October 1 through December 31, 1994.

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 110/.	TOX ppb 5/.
299-E17-14	12/06/94	B00FD5	450	470	8.00	7.90 H	300 L	5.0 U
		B00FD6	451		7.97		400 L	
		B00FD7	449		7.95		300 L	
		B00FD8	448		7.92		300 L	6.4
299-E17-15	12/06/94	B00FD9	486	500	8.02	7.90 H	200 L	
		B00FF0	483		8.00		200 L	
		B00FF1	486		7.99		200 L	5.0 U
		B00FF2	483		7.98		300 L	
299-E17-16	12/06/94	B00FF3	387	390	8.01	8.00	200 L	6.2
		B00FF4	381		8.00		200 L	5.0 U
		B00FF5	378		7.96		300 L	5.0 U
		B00FF6	376		7.92		200 L	5.0 U
299-E17-17	12/06/94	B00FF7	289	300	7.88	8.10 H	200 L	3.0 U
		B00FF8	291		7.84		200 L	
		B00FF9	292		7.78		200 L	
		B00FG0	290		7.77		300 L	5.0 U
299-E17-18	12/07/94	B00FG1	278	270	6.75 F	8.10	400 LB	5.0 UH
		B00FG2	263		6.72 F		500 LB	
		B00FG3	258		6.69 F		400 LB	
		B00FG4	249		6.67 F		300 LB	5.0 UH
299-E17-9	12/07/94	B00FG9	594	530 H	7.60	8.00 H	800 LH	5.5 U
		B00FH0	592		7.61		800 LH	5.0 UH
		B00FH1	592		7.61		900 LH	
		B00FH2	590		7.63		800 LH	
299-E24-18	10/14/94	B00246	371	380	7.58	8.10	200 L	5.0 U
		B00247	370		7.58		300 L	5.0 U
		B00248	370		7.57		200 L	5.0 U
		B00249	370		7.57		200 L	5.0 U
299-E25-36	10/13/94	B00254	289	300	7.54	8.30	500 LQ	5.0 U
		B00255	288		7.54		400 LQ	6.2
		B00256	288		7.54		600 LQ	5.9
		B00257	287		7.53		400 LQ	5.1

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

Table 7-6. Drinking Water Standards Exceeded in the 216-A-36B Cib
Groundwater Monitoring Network.

Constituent (DWS)	Wells exceeding DWS (299-)
Chromium, unfiltered samples (50ppb)	E17-14, E17-15, E17-16, E17-17
Iron, unfiltered samples (300 ppb)	E17-15, E17-16, E17-17
Nitrate (45,000 ppb)	E17-14, E17-15, E17-16
Tritium (20,000 pCi/L)	E17-14, E17-15, E17-16, E17-17, E17-18
Iodine-129 (1 pCi/L)	E17-14, E17-15, E17-16, E17-17, E17-18

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8.0 216-A-10 CRIB

M. H. Edrington
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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 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 1×10^6 L (2.6×10^5 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 *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 1992), Milestone M-20-33, RCRA closure/post-closure plans for the A-10 Crib are to be submitted to Ecology and EPA in March 1996. 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. Two wells in the 216-A-10 network are shared with the groundwater monitoring network for the A-29 Ditch facility. 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 October through December 1994 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 October 1994. 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.

No CIP replicate average exceeded the calculated critical mean during the reporting period. A RADE was submitted for unfiltered iron and turbidity results from well 299-E17-19. Results were several orders of magnitude higher than previous semi-annual sampling results. This well has been put on the list for remediation for this year.

Constituents exceeding the drinking water standards during the reporting period were iodine-129, tritium, unfiltered chromium, nitrate, unfiltered manganese, gross alpha, and unfiltered iron. For details on specific wells, see Table 8-6.

Ruthenium-106 was detected at 70.5 pCi/L, which exceeds the drinking water standard of 30 pCi/L. Based on the limit of detection (LOD) calculations in the 1993 RCRA Annual Report, ruthenium-106 has an LOD of approximately 130 to 150 pCi/L. Therefore, the value of 70.5 pCi/L is not a meaningful value and is undetected.

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

H9501009.2

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, 4th Qtr 1994
E24-18	Upgradient	Ringold: Water Table	Semiannually	10/14/94
E25-36 ^a	Upgradient	Ringold: Water Table	Semiannually	10/13/94
E17-1	Downgradient	Ringold: Water Table	Semiannually	10/21/94
E17-19	Downgradient	Ringold: Water Table	Semiannually	10/14/94
E17-20 ^a	Downgradient	Ringold: Water Table	Semiannually	10/14/94
E24-2	Downgradient	Ringold: Water Table	Semiannually	10/14/94
E24-16	Downgradient	Ringold: Water Table	Semiannually	10/13/94
E24-17	Downgradient	Ringold: Water Table	Semiannually	10/13/94

^aWell sampled during period for 216-A-29 Ditch groundwater quality assessment.

Table 8-2. RCRA Water Level Measurement Report
216-A-10 Crib, Fourth Quarter 1994.

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
299-E17-1	10/21/94	318.68	400.49*+	122.07
	12/12/94	318.13	401.04	122.24
299-E17-19	12/12/94	318.49	400.84	122.18
299-E17-20	10/14/94	318.70	400.53*	122.08
	12/12/94	317.80	401.43	122.36
299-E24-16	10/13/94	316.70	401.57*	122.40
	12/12/94	316.89	401.38	122.34
299-E24-17	10/13/94	318.27	400.42*	122.05
	12/12/94	318.22	400.47	122.06
299-E24-18	10/14/94	400.75	318.53*+	97.09
	12/12/94	317.93	401.35	122.33
299-E24-2	10/14/94	316.16	401.31*	122.32
	12/12/94	315.96	401.51	122.38
299-E25-36	10/13/94	305.96	401.43*	122.36
	12/12/94	306.03	401.36	122.33

- 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. Elevations marked with an '*' were measured at the time of sampling.
4. Elevation 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 October 1 through December 31, 1994.
(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	94	Conductivity, field		umhos	1			32	32	
CONDUCT	73	Conductivity, lab		umhos				8	8	
TOC		Total Organic Carbon		ppb	110			32	32	
TOC		Total Organic Halogen		ppb	5			32	10	
PH	93	PH, field		PH	.01	6.5-8.5	EPAS	32	32	0
PH	125	PH, lab		PH		6.5-8.5	EPAS	8	8	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
BARIUM		Barium		ppb	.59	1000	EPAI	8	8	0
FBARIUM		Barium, filtered		ppb	.59	1000	EPAI	2	2	0
CADMIUM		Cadmium		ppb	3.3	10	EPAI	8	0	0
FCADMIU		Cadmium, filtered		ppb	3.3	10	EPAI	2	0	0
CHROMIUM		Chromium		ppb	4.5	50	EPAI	8	6	6
FCHROMI		Chromium, filtered		ppb	4.5	50	EPAI	2	2	0
FLUORID		Fluoride		ppb	36	1400	EPAI	8	8	0
ALPHA		Gross alpha		pCi/L		15	EPA	8	7	1
NITRATE		Nitrate		ppb	11	45000	EPA	8	8	4

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORID		Chloride		ppb	14	250000	EPAS	8	8	0
IRON		Iron		ppb	5.24	300	EPAS	8	8	6
FIRON		Iron, filtered		ppb	5.24	300	EPAS	2	2	0
MANGESE		Manganese		ppb	.72	50	EPAS	8	8	1
FMANGAN		Manganese, filtered		ppb	.72	50	EPAS	2	2	0
LPHENOL		Phenol		ppb	.31			8	0	
SODIUM		Sodium		ppb	61			8	8	
FSODIUM		Sodium, filtered		ppb	61			2	2	
SULFATE		Sulfate		ppb	37	250000	EPAS	8	8	0

Table 8-3. Constituent List and Summary of Results for the 216-A-10 Crib
Data for Reporting Period October 1 through December 31, 1994.
(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
246-trp		2,4,6-Trichlorophenol		ppb	1.3			8	0	
24-dchp		2,4-Dichlorophenol		ppb	1.3			8	0	
DIMPHEM		2,4-Dimethylphenol		ppb	1.2			8	0	
DIMPHEM		2,4-Dinitrophenol		ppb	3			8	0	
26-dchp		2,6-Dichlorophenol		ppb	1.4			8	0	
CHLPHEM		2-Chlorophenol		ppb	1.6			8	0	
2NITPH		2-Nitrophenol		ppb	1.3			8	0	
BUTDIMP		2-sec-Butyl-4,6-dinitrophenol (DN)		ppb	1.3			8	0	
46DN2HP		4,6-Dinitro-2-methylphenol		ppb	1.3			8	0	
CHLCRES		4-Chloro-3-methylphenol		ppb	1.3			8	0	
NITPHEN		4-Nitrophenol		ppb	3			8	0	
ALUMINUM		Aluminum		ppb	26			8	3	
FALUMIN		Aluminum, filtered		ppb	26			2	0	
AMMONIU		Ammonium ion		ppb	37			2	0	
ANTIMONY		Antimony		ppb	62			8	0	
FANTIMO		Antimony, filtered		ppb	62			2	0	
SB-125		Antimony-125		pCi/L				8	0	
BERYLLIUM		Beryllium		ppb	.17			8	6	
FBERYLL		Beryllium, filtered		ppb	.17			2	1	
BROMIDE		Bromide		ppb	100			8	0	
CALCIUM		Calcium		ppb	34			8	8	
FCALCIU		Calcium, filtered		ppb	34			2	2	
CS-137		Cesium-137		pCi/L		200	EPA	8	0	0
COBALT		Cobalt		ppb	5.9			8	0	
FCOBALT		Cobalt, filtered		ppb	5.9			2	0	
CO-60		Cobalt-60		pCi/L		100	EPA	8	3	0
COPPER		Copper		ppb	4.1	1000	EPAS	8	7	0
FCOPPER		Copper, filtered		ppb	4.1	1000	EPAS	2	0	0
CRESOLS		Cresols (methylphenols)		ppb	4.8			8	0	
BETA		Gross beta		pCi/L				8	8	
LNHYDRAZ		Hydrazine		ppb	1.6			1	0	
I-129L		Iodine-129, Low level		pCi/L		1	EPA	8	8	8
MAGNES		Magnesium		ppb	23			8	8	
FMAGNES		Magnesium, filtered		ppb	23			2	2	
NICKEL		Nickel		ppb	13			8	6	
FNICKEL		Nickel, filtered		ppb	13			2	1	
NITRITE		Nitrite		ppb	18	1000	EPA	8	0	0
PENTCHP		Pentachlorophenol		ppb	1.3	1	EPA	8	0	8*
PHOSPHA		Phosphate		ppb	82			8	0	
POTASSIUM		Potassium		ppb	850			8	8	
FPOTASS		Potassium, filtered		ppb	850			2	2	
RU-106		Ruthenium-106		pCi/L		30	EPA	8	1	2*
SILVER		Silver		ppb	3.6	50	EPAT	8	0	0

Table 8-3. Constituent List and Summary of Results for the 215-A-10 Crib
Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 3)

Short	(Method)	Constituent Name		Units	Lab MDL	DMS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DMS
FSILVER		Silver, filtered	ppb	3.6	50	EPA1		2	0	0
TETPHNL		Tetrachlorophenols	ppb	1.5				8	0	
TIN		Tin	ppb	69				8	0	
FTIN		Tin, filtered	ppb	69				2	0	
TRIPENL		Trichlorophenols	ppb	1.7				8	0	
TRITIUM		Tritium	pCi/L		20000	EPA		8	8	7
TURBID		Turbidity	NTU	.016				8	8	
VANADIUM		Vanadium	ppb	6.6				8	8	
FVANADI		Vanadium, filtered	ppb	6.6				2	2	
ZINC		Zinc	ppb	6.3	5000	EPAS		8	7	0
FZINC		Zinc, filtered	ppb	6.3	5000	EPAS		2	0	0

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
October 1 through December 31, 1994.
(sheet 1 of 4)

Well Name	Collection Date	Sample Number	ALUMINUM 34/ppb 19/.	FALUMIN 34/ppb 19/.	BARIUM 34/ppb 1.3/1000i	FBARIUM 34/ppb 1.3/1000i
299-E17-1	10/21/94	800226	26.00 U		44.00	
299-E17-19	10/14/94	800230	100.00 L		77.00	
299-E17-20	10/14/94	800003		26.00 U		64.00
299-E17-20	10/14/94	800234	26.00 U		54.00	
299-E24-16	10/13/94	800238	65.00 L		42.00	
299-E24-17	10/13/94	800242	37.00 L		45.00	
299-E24-18	10/14/94	800246	26.00 U		51.00	
299-E24-2	10/14/94	800250	26.00 U		33.00	
299-E25-36	10/13/94	800254	26.00 UQ		21.00 Q	
299-E25-36	10/13/94	800357		26.00 UQ		21.00 Q

Well Name	Collection Date	Sample Number	BERYLLIUM 34/ppb 1.5/.	FBERYLLIUM 34/ppb 1.5/.	CALCIUM 34/ppb 47/.	FCALCIUM 34/ppb 47/.
299-E17-1	10/21/94	800226	.61 L		47000.00	
299-E17-19	10/14/94	800230	.53 BL		35000.00	
299-E17-20	10/14/94	800003		.57 BL		56000.00
299-E17-20	10/14/94	800234	.64 BL		46000.00	
299-E24-16	10/13/94	800238	.33 L		35000.00	
299-E24-17	10/13/94	800242	.17 U		33000.00	
299-E24-18	10/14/94	800246	.37 L		35000.00	
299-E24-2	10/14/94	800250	.21 L		36000.00	
299-E25-36	10/13/94	800254	.17 U		30000.00	
299-E25-36	10/13/94	800357		.17 U		29000.00

Well Name	Collection Date	Sample Number	CHLORIDE 124/ppb .71/250000s	CHROMIUM 34/ppb 11/50i	FCROMIUM 34/ppb 11/50i	CO-60 140/pCi/L ./100
299-E17-1	10/21/94	800226	4300.00 B	4.50 U		11.50
299-E17-19	10/14/94	800230	5700.00	320.00		5.32 U
299-E17-20	10/14/94	800003			9.60 L	
299-E17-20	10/14/94	800234	5000.00	190.00		-4.83 U
299-E24-16	10/13/94	800238	3400.00	210.00		7.53 U
299-E24-17	10/13/94	800242	3300.00	160.00		7.44
299-E24-18	10/14/94	800246	7600.00	220.00		2.13 U
299-E24-2	10/14/94	800250	4900.00	4.50 U		-.44 U
299-E25-36	10/13/94	800254	4600.00	100.00 Q		24.40 F
299-E25-36	10/13/94	800357			4.50 LQ	

Table 8-4. Constituents with at Least One Detected Value for
the 216-A-10 Crib Data for Reporting Period
October 1 through December 31, 1994.
(sheet 2 of 4)

Well Name	Collection Date	Sample Number	COPPER 34/ppb 2.6/1000s	FCOPPER 34/ppb 2.6/1000s	FLUORID 124/ppb 51/1400i	ALPHA 135/pCi/L ./15
299-E17-1	10/21/94	800226	4.10 U		1000.00 Q	3.18
299-E17-19	10/14/94	800230	19.00 L		800.00	7.00
299-E17-20	10/14/94	800003		4.10 U		
299-E17-20	10/14/94	800234	11.00 L		800.00	4.11
299-E24-16	10/13/94	800238	10.00 L		700.00	5.36
299-E24-17	10/13/94	800242	6.40 L		700.00	10.80
299-E24-18	10/14/94	800246	15.00 L		900.00	16.40
299-E24-2	10/14/94	800250	7.40 L		800.00	3.77
299-E25-36	10/13/94	800254	6.00 L		600.00	.06 U
299-E25-36	10/13/94	800357		4.10 U		

Well Name	Collection Date	Sample Number	BETA 135/pCi/L ./.	1-129 139/pCi/L ./1	IRON 34/ppb 18/300s	FIROM 34/ppb 18/300s
299-E17-1	10/21/94	800226	13.90	9.22	160.00 Q	
299-E17-19	10/14/94	800230	14.80	6.34	120000.00 BF	
299-E17-20	10/14/94	800003				63.00 B
299-E17-20	10/14/94	800234	27.60	8.94	850.00 B	
299-E24-16	10/13/94	800238	15.40	7.43	2000.00 BQ	
299-E24-17	10/13/94	800242	13.70	7.16	3100.00 BQ	
299-E24-18	10/14/94	800246	26.70	2.66	870.00 BQ	
299-E24-2	10/14/94	800250	3.93	3.17	80.00 BQ	
299-E25-36	10/13/94	800254	5.13	1.20	480.00 BQ	
299-E25-36	10/13/94	800357				31.00 BQ

Well Name	Collection Date	Sample Number	MAGNES 34/ppb 25/.	FMAGNES 34/ppb 25/.	MANGEESE 34/ppb 1/50s	FMANGAN 34/ppb 1/50s
299-E17-1	10/21/94	800226	14000.00 B		5.30 L	
299-E17-19	10/14/94	800230	10000.00		270.00	
299-E17-20	10/14/94	800003		16000.00		2.30 L
299-E17-20	10/14/94	800234	14000.00		14.00	
299-E24-16	10/13/94	800238	10000.00		26.00	
299-E24-17	10/13/94	800242	9500.00		28.00	
299-E24-18	10/14/94	800246	11000.00		18.00	
299-E24-2	10/14/94	800250	11000.00		2.40 L	
299-E25-36	10/13/94	800254	8200.00		10.00	
299-E25-36	10/13/94	800357		8100.00		2.30 L

Table 8-4. Constituents with at Least One Detected Value for
the 216-A-10 Crib Data for Reporting Period
October 1 through December 31, 1994.
(sheet 3 of 4)

Well Name	Collection Date	Sample Number	NICKEL 34/ppb 16/.	FMICKEL 34/ppb 16/.	NITRATE 124/ppb 96/45000	POTASUM 34/ppb 890/.
299-E17-1	10/21/94	800226	13.00 U		110000.00 DH	6700.00
299-E17-19	10/14/94	800230	160.00		47000.00 DH	5200.00
299-E17-20	10/14/94	800093		13.00 U		
299-E17-20	10/14/94	800234	87.00		100000.00 DH	6600.00
299-E24-16	10/13/94	800238	100.00		48000.00 DQ	5000.00
299-E24-17	10/13/94	800242	82.00		39000.00 DQ	4800.00
299-E24-18	10/14/94	800246	100.00		22000.00 DQ	5900.00
299-E24-2	10/14/94	800250	13.00 U		45000.00 DQ	5400.00
299-E25-36	10/13/94	800254	61.00		14000.00 DQ	5000.00
299-E25-36	10/13/94	800357		13.00 L		

Well Name	Collection Date	Sample Number	PPOTASS 34/ppb 890/.	RU-106 140/ppb/L ./30	SODIUM 34/ppb 150/.	FSODIUM 34/ppb 150/.
299-E17-1	10/21/94	800226		-38.10 U	20000.00	
299-E17-19	10/14/94	800230		10.80 U	16000.00	
299-E17-20	10/14/94	800093	6800.00			24000.00
299-E17-20	10/14/94	800234		-24.90 U	20000.00	
299-E24-16	10/13/94	800238		70.50	15000.00	
299-E24-17	10/13/94	800242		30.90 U	15000.00	
299-E24-18	10/14/94	800246		-14.00 U	21000.00	
299-E24-2	10/14/94	800250		21.80 U	17000.00	
299-E25-36	10/13/94	800254		-24.40 U	15000.00 a	
299-E25-36	10/13/94	800357	4900.00			15000.00 a

Well Name	Collection Date	Sample Number	SULFATE 124/ppb 89/250000s	TRITIUM 142/ppb/L ./20000	TURBID 126/NTU ./016/.	VANADIUM 34/ppb 6.4/.
299-E17-1	10/21/94	800226	29000.00 D	1490000.00	1.00 HQ	22.00 L
299-E17-19	10/14/94	800230	23000.00 D	755000.00	790.00 HF	110.00
299-E17-20	10/14/94	800234	33000.00 D	1180000.00	2.80 H	27.00 L
299-E24-16	10/13/94	800238	23000.00 D	738000.00	13.00 Q	29.00 L
299-E24-17	10/13/94	800242	23000.00 D	819000.00	31.00 Q	34.00
299-E24-18	10/14/94	800246	32000.00 D	123000.00	1.40 Q	21.00 L
299-E24-2	10/14/94	800250	30000.00 D	526000.00	.32 Q	24.00 L
299-E25-36	10/13/94	800254	34000.00 D	9340.00	1.40 Q	27.00 L

Table 8-4. Constituents with at Least One Detected Value for
the 216-A-10 Crib Data for Reporting Period
October 1 through December 31, 1994.
(sheet 4 of 4)

Well Name	Collection Date	Sample Number	FVANADI 34/ppb 6.4/.	ZINC 34/ppb 4.4/5000s	FZINC 34/ppb 4.4/5000s
299-E17-1	10/21/94	B00226		21.00	
299-E17-19	10/14/94	B00230		25.00	
299-E17-20	10/14/94	B00233	27.00 L		6.30 U
299-E17-20	10/14/94	B00234		6.30 L	
299-E24-16	10/13/94	B00238		16.00	
299-E24-17	10/13/94	B00242		28.00	
299-E24-18	10/14/94	B00246		8.40 L	
299-E24-2	10/14/94	B00250		30.00	
299-E25-36	10/13/94	B00254		6.30 U	
299-E25-36	10/13/94	B00357	25.00 L		6.30 U

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 October 1 through December 31, 1994.

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 110/.	ppb 5/.
299-E17-1	10/21/94	800226	427	480	7.98	8.10 H	700 L	5.0 U
		800227	429		7.99		700 L	5.0 U
		800228	432		7.99		700 L	5.0 U
		800229	435		8.00		700 L	5.0 U
299-E17-19	10/14/94	800230	328	340	7.79	8.00 H	800 L	9.2
		800231	327		7.79		700 L	9.4
		800232	327		7.79		700 L	9.6
		800233	327		7.79		800 L	7.1
299-E17-20	10/14/94	800234	481	470	8.25	8.30 H	300 L	5.8
		800235	478		8.25		200 L	5.0 U
		800236	484		8.25		400 L	5.0 U
		800237	482		8.24		300 L	5.0 U
299-E24-16	10/13/94	800238	333	350	7.80	8.10 H	300 LQ	5.0 U
		800239	334		7.80		500 LQ	5.8
		800240	333		7.82		300 LQ	5.0 U
		800241	334		7.80		300 LQ	5.0 U
299-E24-17	10/13/94	800242	322	330	8.10	8.20 H	500 LQ	5.0 U
		800243	321		8.10		300 LQ	5.0 U
		800244	318		8.09		400 LQ	5.0 U
		800245	319		8.09		300 LQ	5.0 U
299-E24-18	10/14/94	800246	371	380	7.58	8.10	200 L	5.0 U
		800247	370		7.58		300 L	5.0 U
		800248	370		7.57		200 L	5.0 U
		800249	370		7.57		200 L	5.0 U
299-E24-2	10/14/94	800250	359	370	7.97	8.10	300 L	5.0 U
		800251	360		7.96		300 L	6.8
		800252	358		7.96		300 L	5.0 U
		800253	359		7.94		300 L	5.0 U
299-E25-36	10/13/94	800254	289	300	7.54	8.30	500 LQ	5.0 U
		800255	288		7.54		400 LQ	6.2
		800256	288		7.54		600 LQ	5.9
		800257	287		7.55		400 LQ	5.1

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

Table 8-6. Drinking Water Standards Exceeded in the 216-A-36B Crib
Groundwater Monitoring Network.

Constituent (DWS)	Wells exceeding DWS (299-)
Chromium, unfiltered (50ppb)	E17-19, E17-20, E24-16, E24-17, E24-18
Iron, unfiltered (300 ppb)	E17-19, E17-20, E24-16, E24-17, E24-18, E25-36
Nitrate (45,000 ppb)	E17-19, E17-20, E24-16, E17-1
Tritium (20,000 pCi/L)	All wells in network
Gross Alpha (15 pCi/L)	E24-18
Manganese, unfiltered (50 ppb)	E17-19
Iodine-129 (1 pCi/L)	All wells in network

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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 is being 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 been subsequently backfilled and stabilized and the diversion box leading to it has been filled with concrete.

Four quarters of groundwater background sampling have been completed for all the wells in the network. 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 October 1 through December 31, 1994 period are presented in Table 9-2. 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. Concentrations of unfiltered chromium and

iron in some wells continue to fluctuate above the DWS for these constituents. Analysis of filtered samples for these parameters yields concentrations well below the DWS. Iodine-129 is also above DWS for this quarter, but the values do not exceed historical trends for these wells. A statistical evaluation has been completed for indicator parameters for the 216-B-63 Trench. A pH exceedance was noted during sampling in well 299-E33-36. The pH measurements were obtained during sampling with field-grade instrumentation. It is possible that these readings are in error because they are not consistent with the historical trend. This well has been resampled and the verification analysis will be performed by a laboratory to determine the validity of the data. An explanation of data flags can be found in Section 1.4.

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

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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, 4th Qtr 1994
E27-8 ^a	Upgradient	Hanford: Water Table	Semiannually	11-17-94
E27-9 ^a	Upgradient	Hanford: Water Table	Semiannually	11-17-94
E27-11 ^a	Upgradient	Hanford: Water Table	Semiannually	11-18-94
E27-16	Downgradient	Hanford: Water Table	Semiannually	11-21-94
E27-17 ^a	Upgradient	Hanford: Water Table	Semiannually	11-18-94
E27-18	Downgradient	Hanford: Water Table	Semiannually	11-28-94
E27-19	Downgradient	Hanford: Water Table	Semiannually	11-28-94
E33-33 ^b	Downgradient	Hanford: Water Table	Semiannually	11-21-94
E33-36 ^b	Downgradient	Hanford: Water Table	Semiannually	11-21-94
E33-37	Downgradient	Hanford: Water Table	Semiannually	11-21-94
E34-8	Downgradient	Hanford: Water Table	Semiannually	11-21-94
E34-10 ^a	Upgradient	Hanford: Water Table	Semiannually	11-21-94

^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, Fourth Quarter 1994.
 (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				
299-E27-11	11/18/94	241.89	401.40*	122.35
	12/14/94	241.88	401.41	122.35
299-E27-16	11/21/94	251.00	401.13*	122.26
	12/21/94	250.95	401.18	122.28
299-E27-17	11/18/94	233.00	401.72*	122.44
	12/14/94	232.94	401.78	122.46
299-E27-18	11/28/94	248.35	401.80*	122.47
299-E27-19	11/28/94	249.70	401.18*	122.28
299-E27-8	11/17/94	236.73	401.10*	122.26
	12/14/94	236.28	401.55	122.39
299-E27-9	11/17/94	227.66	401.55*	122.39
	12/14/94	227.50	401.71	122.44
299-E33-33	10/12/94	238.81	401.58	122.40
	11/15/94	238.65	401.74	122.45
	11/21/94	238.94	401.45*	122.36
	12/09/94	238.74	401.65	122.42
299-E33-36	11/21/94	248.25	398.42*	121.44
	12/21/94	246.76	399.91	121.89
299-E33-37	11/21/94	251.54	401.47*	122.37
	12/21/94	251.71	401.30	122.32
299-E34-10	11/21/94	238.10	401.67*	122.43
	12/14/94	238.01	401.76	122.46
299-E34-8	11/21/94	241.82	398.70*	121.52

Table 9-2. RCRA Water Level Measurement Report
216-B-63 Trench, Fourth Quarter 1994.
(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. Elevations marked with an '*' were measured at the time of sampling.
 4. Elevations 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 October 1 through December 31, 1994.
(sheet 1 of 4)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CONDUCT	94	Conductivity, field	umhos		1			48	48	
CONDUCT	73	Conductivity, lab	umhos					13	13	
TOC		Total Organic Carbon	ppb		110			52	52	
TOX		Total Organic Halogen	ppb		5			52	14	
PH	93	pH, field	pH		.01	6.3-8.5	EPAS	48	48	4
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
BARIUM		Barium	ppb		.59	1000	EPAI	13	13	0
FBARIUM		Barium, filtered	ppb		.59	1000	EPAI	5	5	0
CADMIUM		Cadmium	ppb		3.3	10	EPAI	13	0	0
FCADMIU		Cadmium, filtered	ppb		3.3	10	EPAI	5	0	0
CHROMIUM		Chromium	ppb		4.5	50	EPAI	13	13	8
FCHROMI		Chromium, filtered	ppb		4.5	50	EPAI	5	2	0
FLUORID		Fluoride	ppb		36	1400	EPAI	13	13	0
ALPHA		Gross alpha	pCi/L			15	EPA	13	9	0
MERCURY		Mercury	ppb		.05	2	EPA	5	2	0
FMERCUR		Mercury, filtered	ppb		.05	2	EPA	5	2	0
NITRATE		Nitrate	ppb		11	45000	EPA	13	13	0
RADIUM		Radium	pCi/L			5	EPAI	5	0	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORID		Chloride	ppb		14	250000	EPAS	13	13	0
IRON		Iron	ppb		5.24	300	EPAS	13	13	7
FIRON		Iron, filtered	ppb		5.24	300	EPAS	5	5	0
MANGESE		Manganese	ppb		.72	50	EPAS	13	13	0
FMANGAN		Manganese, filtered	ppb		.72	50	EPAS	5	5	0
LPHENOL	19	Phenol	ppb		.54			5	0	
LPHENOL	30	Phenol	ppb		.51			13	0	
SODIUM		Sodium	ppb		61			13	13	
FSODIUM		Sodium, filtered	ppb		61			5	5	
SULFATE		Sulfate	ppb		37	250000	EPAS	13	13	0

Table 9-3. Constituent List and Summary of Results for the 216-B-63 Trench
Data for Reporting Period October 1 through December 31, 1994.
(sheet 2 of 4)

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name Full	Units	Lab MDL	DMS Limit	Agency	Number of Samples		
							Total	>MDL	>OWS
1,1,1-T		1,1,1-Trichloroethane	ppb	.036	200	EPA	13	3	0
1,1,2-T		1,1,2-Trichloroethane	ppb	.078			13	0	
1,1-DIC		1,1-Dichloroethane	ppb	.058			13	0	
1,2-DIC		1,2-Dichloroethane	ppb	.029	5	EPA	13	0	0
14-dben		1,4-Dichlorobenzene	ppb	.055	75	EPA	13	0	0
246-trp		2,4,6-Trichlorophenol	ppb	1.3			13	0	
24-dchp	19	2,4-Dichlorophenol	ppb	4			5	0	
24-dchp	30	2,4-Dichlorophenol	ppb	1.3			13	0	
DINPHEN		2,4-Dimethylphenol	ppb	1.2			13	0	
DINPHEN		2,4-Dinitrophenol	ppb	3			13	0	
26-dchp		2,6-Dichlorophenol	ppb	1.4			13	0	
CHLPHEN		2-Chlorophenol	ppb	1.6			13	0	
2METHPH		2-Methylphenol	ppb	5.1			5	0	
2NITPH	19	2-Nitrophenol	ppb	1.9			5	0	
2NITPH	30	2-Nitrophenol	ppb	1.3			13	0	
BUTDINP		2-sec-Butyl-4,6-dinitrophenol (DM)	ppb	1.3			13	0	
46DM2NP		4,6-Dinitro-2-methylphenol	ppb	1.3			13	0	
CHLCRES		4-Chloro-3-methylphenol	ppb	1.3			13	0	
4METHPH		4-Methylphenol	ppb	7			5	0	
NITPHEN		4-Nitrophenol	ppb	3			13	0	
ALUMINUM		Aluminum	ppb	26			13	10	
FALUMIN		Aluminum, filtered	ppb	26			5	0	
ANTIMONY		Antimony	ppb	62			13	0	
FANTIMO		Antimony, filtered	ppb	62			5	0	
SB-125		Antimony-125	pCi/L				2	0	
AR1016		Aroclor-1016	ppb	.072			5	0	
AR1221		Aroclor-1221	ppb	.052			5	0	
AR1232		Aroclor-1232	ppb	.093			5	0	
AR1242		Aroclor-1242	ppb	.068			5	0	
AR1248		Aroclor-1248	ppb	.055			5	0	
AR1254		Aroclor-1254	ppb	.031			5	0	
AR1260		Aroclor-1260	ppb	.058			5	0	
BENZENE		Benzene	ppb	.013	5	EPA	13	0	0
BENZOTH		Benzothiazole	ppb	1.3			5	0	
BERYLLIUM		Beryllium	ppb	.17			13	6	
FBERYLL		Beryllium, filtered	ppb	.17			5	3	
BE-7		Beryllium-7	pCi/L				2	0	
BIS2EPH		Bis(2-ethylhexyl) phthalate	ppb	5.3			5	0	
BRONIDE		Bronide	ppb	100			13	0	
CALCIUM		Calcium	ppb	34			13	13	
FCALCIU		Calcium, filtered	ppb	34			5	5	
TETRANE		Carbon tetrachloride	ppb	.075	5	EPA	13	1	0
CEPR-144		Cerium/Praseodymium-144	pCi/L				2	0	

Table 9-3. Constituent List and Summary of Results for the 216-B-63 Trench
Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 4)

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CS-134		Cesium-134		pCi/L				2	0	
CS-137		Cesium-137		pCi/L		200	EPA	2	0	0
CHLFORM		Chloroform		ppb	.041			13	1	
COBALT		Cobalt		ppb	5.9			13	2	
FCOBALT		Cobalt, filtered		ppb	5.9			5	2	
CO-60		Cobalt-60		pCi/L		100	EPA	2	1	0
COPPER		Copper		ppb	4.1	1000	EPAS	13	8	0
FCOPPER		Copper, filtered		ppb	4.1	1000	EPAS	5	2	0
CRESOLS		Cresols (methylphenols)		ppb	4.8			13	0	
CYANIDE		Cyanide		ppb	1			5	0	
DECANE		Decane		ppb	1.9			5	0	
DODECAN		Dodecane		ppb	1.1			5	0	
ETHBENZ		Ethylbenzene		ppb	.051	700	EPA	13	0	0
EU-154		Europium-154		pCi/L				2	0	
EU-155		Europium-155		pCi/L				2	0	
BETA		Gross beta		pCi/L				5	5	
I-129L		Iodine-129, Low level		pCi/L		1	EPA	13	13	13
LEAD		Lead		ppb	1.5	50	EPAL	5	4	0
FLEAD		Lead, filtered		ppb	1.5	50	EPAL	5	2	0
MAGNES		Magnesium		ppb	23			13	13	
FMAGNES		Magnesium, filtered		ppb	23			5	5	
METHYCH		Methylene chloride		ppb	.09			13	0	
NAPHTHA		Naphthalene		ppb	1.2			5	0	
NICKEL		Nickel		ppb	13			13	10	
FNICKEL		Nickel, filtered		ppb	13			5	0	
NITRITE		Nitrite		ppb	18	1000	EPA	13	0	0
PENTCHP 19		Pentachlorophenol		ppb	8.3	1	EPA	5	0	5*
PENTCHP 30		Pentachlorophenol		ppb	1.3	1	EPA	13	0	13*
PHOSPHA		Phosphate		ppb	82			13	0	
POTASUM		Potassium		ppb	850			13	13	
FPOTASS		Potassium, filtered		ppb	850			5	5	
K-40		Potassium-40		pCi/L				2	2	
RU-106		Ruthenium-106		pCi/L		30	EPA	2	0	0
SILVER		Silver		ppb	3.6	50	EPAL	13	0	0
FSILVER		Silver, filtered		ppb	3.6	50	EPAL	5	0	0
TC-99		Technetium-99		pCi/L		900	EPA	1	0	0
PERCENE		Tetrachloroethene		ppb	.22	5	EPA	13	0	0
TETPHNL		Tetrachlorophenols		ppb	1.5			13	0	
TETRADE		Tetradecane		ppb	1.6			5	0	
TIN		Tin		ppb	69			13	0	
FTIN		Tin, filtered		ppb	69			5	0	
TOLUENE		Toluene		ppb	.016	1000	EPA	13	0	0
TRIBUTPH		Tributyl Phosphate		ppb	1.1			5	0	
TRICENE		Trichloroethene		ppb	.11	5	EPA	13	0	0
TRIPHNL		Trichlorophenols		ppb	1.7			13	0	
TDICHPH		Tris-2-chloroethyl phosphate		ppb	.61			5	0	

Table 9-3. Constituent List and Summary of Results for the 216-B-63 Trench.
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(sheet 4 of 4)

Short	Constituent Name		Units	Lab MDL	DMS Limit	Agency	Number of Samples		
	(Method)	Full					Total	>MDL	>DMS
TRITIUM		Tritium	pCi/L		20000	EPA	13	13	0
TURBID		Turbidity	NTU	.016			5	5	
URANIUM		Uranium	ppb				5	5	
VANADIUM		Vanadium	ppb	6.6			13	13	
EVANADI		Vanadium, filtered	ppb	6.6			5	5	
VINYLIDE		Vinyl chloride	ppb	.13	2	EPA	13	0	0
XYLENE		Xylenes (total)	ppb	.035	10000	EPA	13	0	0
ZINC		Zinc	ppb	6.3	5000	EPAS	13	6	0
FZINC		Zinc, filtered	ppb	6.3	5000	EPAS	5	0	0
ZN-65		Zinc-65	pCi/L				2	0	
ZRNS-95		Zirconium/Niobium-95	pCi/L				2	0	
CIS12DE		cis-1,2-Dichloroethylene	ppb	.11	70	EPA	13	0	0
MCRESOL		m-Cresol	ppb	2.2			5	0	
TRANSCE		trans-1,2-Dichloroethylene	ppb	.073	100	EPA	13	0	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
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(sheet 1 of 7)

Well Name	Collection Date	Sample Number	1,1,1-T 25/ppb .22/200	ALUMINUM 34/ppb 19/.	FALLUMIN 34/ppb 19/.	BARIUM 34/ppb 1.3/1000i
299-E27-11	11/18/94	8007Y4	.04 U	78.00 L		39.00
299-E27-11	11/18/94	8007Y8			26.00 U	
299-E27-16	11/21/94	800760	.04 U	46.00 L		29.00
299-E27-17	11/18/94	800769	.04 U	26.00 U		33.00
299-E27-17	11/18/94	8007R3			26.00 U	
299-E27-18	11/28/94	800764	.06 L	29.00 L		34.00
299-E27-18	11/28/94	800765	.05 L	26.00 U		35.00
299-E27-19	11/28/94	800772	.05 L	32.00 L		41.00
299-E27-8	11/17/94	8007R4	.04 U	26.00 U		25.00
299-E27-8	11/17/94	8007R8			26.00 U	
299-E27-9	11/17/94	8007R9	.04 U	35.00 L		23.00
299-E27-9	11/17/94	8007S3			26.00 U	
299-E33-33	11/21/94	800776	.04 U	32.00 L		31.00
299-E33-36	11/21/94	800780	.04 U	37.00 L		33.00
299-E33-37	11/21/94	800784	.04 U	51.00 L		37.00
299-E34-10	11/21/94	800784	.04 U	54.00 L		38.00
299-E34-10	11/21/94	8007S8			26.00 U	
299-E34-8	11/21/94	800788	.04 U	41.00 L		37.00

Well Name	Collection Date	Sample Number	FBARIUM 34/ppb 1.3/1000i	BERYLLIUM 34/ppb 1.5/.	FBERYLLI 34/ppb 1.5/.	CALCIUM 34/ppb 47/.
299-E27-11	11/18/94	8007Y4		.27 L		38000.00
299-E27-11	11/18/94	8007Y8	39.00		.29 L	
299-E27-16	11/21/94	800760		.28 L		30000.00
299-E27-17	11/18/94	800769		.43 L		39000.00
299-E27-17	11/18/94	8007R3	33.00		.58 L	
299-E27-18	11/28/94	800764		.17 U		31000.00
299-E27-18	11/28/94	800765		.17 U		31000.00
299-E27-19	11/28/94	800772		.17 U		33000.00
299-E27-8	11/17/94	8007R4		.17 U		35000.00
299-E27-8	11/17/94	8007R8	25.00		.17 U	
299-E27-9	11/17/94	8007R9		.17 U		36000.00
299-E27-9	11/17/94	8007S3	25.00		.34 L	
299-E33-33	11/21/94	800776		.17 U		31000.00
299-E33-36	11/21/94	800780		.28 L		29000.00
299-E33-37	11/21/94	800784		.21 L		28000.00
299-E34-10	11/21/94	800784		.21 L		38000.00
299-E34-10	11/21/94	8007S8	37.00		.17 U	
299-E34-8	11/21/94	800788		.17 U		32000.00

Table 9-4. Constituents with at Least One Detected Value for
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Well Name	Collection Date	Sample Number	PCALCIU 34/ppb 47/.	TETRAHE 25/ppb .32/5	CHLORID 124/ppb 71/250000s	CHLFORM 25/ppb .05/.
299-E27-11	11/18/94	B007Y4		.08 U	7500.00	.04 U
299-E27-11	11/18/94	B007Y8	38000.00			
299-E27-16	11/21/94	B00760		.08 U	4200.00 BQ	.04 U
299-E27-17	11/18/94	B00709		.08 U	8000.00	.04 U
299-E27-17	11/18/94	B007R3	38000.00			
299-E27-18	11/28/94	B00764		.08 U	4800.00	.06 LQ
299-E27-18	11/28/94	B00765		.08 U	4900.00	.04 UQ
299-E27-19	11/28/94	B00772		.08 U	6100.00	.04 U
299-E27-8	11/17/94	B007R4		.08 U	6800.00	.04 U
299-E27-8	11/17/94	B007R8	35000.00			
299-E27-9	11/17/94	B007R9		1.00 B	7000.00	.04 U
299-E27-9	11/17/94	B007S3	37000.00			
299-E33-33	11/21/94	B00776		.08 U	5900.00 BQ	.04 U
299-E33-36	11/21/94	B00780		.08 U	4400.00 BQ	.04 U
299-E33-37	11/21/94	B00784		.08 U	4000.00 BQ	.04 U
299-E34-10	11/21/94	B00784		.08 U	8300.00 BQ	.04 U
299-E34-10	11/21/94	B007S8	38000.00			
299-E34-8	11/21/94	B00788		.08 U	7900.00 BQ	.04 U

Well Name	Collection Date	Sample Number	CHROMIUM 34/ppb 11/50i	FCROMI 34/ppb 11/50i	COBALT 34/ppb 6.5/.	FCOBALT 34/ppb 6.5/.
299-E27-11	11/18/94	B007Y4	89.00		5.90 U	
299-E27-11	11/18/94	B007Y8		4.50 U		5.90 U
299-E27-16	11/21/94	B00760	65.00		5.90 U	
299-E27-17	11/18/94	B00709	93.00		5.90 U	
299-E27-17	11/18/94	B007R3		4.50 U		5.90 U
299-E27-18	11/28/94	B00764	20.00		5.90 U	
299-E27-18	11/28/94	B00765	22.00		5.90 U	
299-E27-19	11/28/94	B00772	17.00 L		5.90 U	
299-E27-8	11/17/94	B007R4	77.00		6.10 L	
299-E27-8	11/17/94	B007R8		8.00 L		8.20 L
299-E27-9	11/17/94	B007R9	29.00		5.90 U	
299-E27-9	11/17/94	B007S3		4.50 U		6.10 L
299-E33-33	11/21/94	B00776	85.00		5.90 U	
299-E33-36	11/21/94	B00780	120.00		8.80 L	
299-E33-37	11/21/94	B00784	51.00		5.90 U	
299-E34-10	11/21/94	B00784	30.00		5.90 U	
299-E34-10	11/21/94	B007S8		5.80 L		5.90 U
299-E34-8	11/21/94	B00788	79.00		5.90 U	

Table 9-4. Constituents with at Least One Detected Value for
the 216-B-63 Trench Data for Reporting Period
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Well Name	Collection Date	Sample Number	CO-60 140/pCi/L ./100	COPPER 34/ppb 2.6/1000s	FCOPPER 34/ppb 2.6/1000s	FLUORID 124/ppb 51/1400i
299-E27-11	11/18/94	800774		12.00 L		400.00
299-E27-11	11/18/94	800778			4.30 L	
299-E27-16	11/21/94	800760		9.60 L		400.00
299-E27-17	11/18/94	800789		7.60 L		400.00
299-E27-17	11/18/94	800783			5.40 L	
299-E27-18	11/28/94	800764		4.10 U		400.00
299-E27-18	11/28/94	800765		4.10 U		400.00
299-E27-19	11/28/94	800772		4.10 U		400.00
299-E27-8	11/17/94	800784		4.10 U		400.00
299-E27-8	11/17/94	800788			4.10 U	
299-E27-9	11/17/94	800789		4.10 U		400.00
299-E27-9	11/17/94	800783			4.10 U	
299-E33-33	9/16/94	800769	1.08			
299-E33-33	11/21/94	800776		6.90 L		400.00
299-E33-36	9/15/94	800783	1.46 U			
299-E33-36	11/21/94	800780		10.00 L		400.00
299-E33-37	11/21/94	800784		6.90 L		400.00
299-E34-10	11/21/94	800794		7.50 L		400.00
299-E34-10	11/21/94	800788			4.10 U	
299-E34-8	11/21/94	800788		8.60 L		600.00

Well Name	Collection Date	Sample Number	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.	I-129 139/pCi/L ./1	IRON 34/ppb 18/300s
299-E27-11	11/18/94	800792			2.05	
299-E27-11	11/18/94	800774	2.14	7.81		490.00 B
299-E27-16	11/21/94	800760	1.00 U		3.59	310.00 BQ
299-E27-17	11/18/94	800793			3.15	
299-E27-17	11/18/94	800749	1.07	7.25		410.00 B
299-E27-18	11/28/94	800764	1.57 U		5.22	97.00 Q
299-E27-18	11/28/94	800765	1.57		5.36	110.00 Q
299-E27-19	11/28/94	800772	3.88		4.66	150.00 Q
299-E27-8	11/17/94	800794			3.03	
299-E27-8	11/17/94	800784	2.20	6.59		330.00 B
299-E27-9	11/17/94	800795			2.67	
299-E27-9	11/17/94	800789	.69 U	5.33		180.00 B
299-E33-33	11/21/94	800776	.56 U		2.76	360.00 BQ
299-E33-36	11/21/94	800780	1.11		5.93	510.00 BQ
299-E33-37	11/21/94	800784	2.60		6.34	220.00 BQ
299-E34-10	11/21/94	800796			1.74	
299-E34-10	11/21/94	800784	2.19	5.06		160.00 BQ
299-E34-8	11/21/94	800788	1.46		3.17	350.00 BQ

Table 9-4. Constituents with at Least One Detected Value for
the 216-B-63 Trench Data for Reporting Period
October 1 through December 31, 1994.
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Well Name	Collection Date	Sample Number	IRON 34/ppb 18/300s	LEAD 40/ppb .86/501	FLEAD 40/ppb .86/501	MAGNES 34/ppb 25/.
299-E27-11	11/18/94	800714		11.00		10000.00
299-E27-11	11/18/94	800718	41.00 B		1.50 U	
299-E27-16	11/21/94	800760				8000.00
299-E27-17	11/18/94	800709		2.30 L		10000.00
299-E27-17	11/18/94	800783	27.00 B		1.70 L	
299-E27-18	11/28/94	800764				8500.00
299-E27-18	11/28/94	800765				8400.00
299-E27-19	11/28/94	800772				9100.00
299-E27-8	11/17/94	800784		1.50 U		9600.00
299-E27-8	11/17/94	800788	39.00 B		1.50 U	
299-E27-9	11/17/94	800789		7.00		10000.00
299-E27-9	11/17/94	800793	27.00 B		1.50 U	
299-E33-33	11/21/94	800776				8700.00
299-E33-36	11/21/94	800780				8000.00
299-E33-37	11/21/94	800784				7800.00
299-E34-10	11/21/94	800784		7.90		9900.00
299-E34-10	11/21/94	800788	20.00 B		2.40 L	
299-E34-8	11/21/94	800788				9100.00

Well Name	Collection Date	Sample Number	FMAGNES 34/ppb 25/.	FMANGESE 34/ppb 1/50s	FMANGAN 34/ppb 1/50s	MERCURY 41/ppb .095/2
299-E27-11	11/18/94	800714		11.00		.10 BL
299-E27-11	11/18/94	800718	10000.00		4.10 L	
299-E27-16	11/21/94	800760		8.20 L		
299-E27-17	11/18/94	800709		9.30 L		.08 BL
299-E27-17	11/18/94	800783	10000.00		2.00 L	
299-E27-18	11/28/94	800764		2.70 L		
299-E27-18	11/28/94	800765		3.00 L		
299-E27-19	11/28/94	800772		4.30 L		
299-E27-8	11/17/94	800784		6.90 L		.05 U
299-E27-8	11/17/94	800788	9700.00		1.70 L	
299-E27-9	11/17/94	800789		3.20 L		.05 U
299-E27-9	11/17/94	800793	11000.00		1.50 L	
299-E33-33	11/21/94	800776		9.00 L		
299-E33-36	11/21/94	800780		13.00		
299-E33-37	11/21/94	800784		7.00 L		
299-E34-10	11/21/94	800784		4.10 L		.05 U
299-E34-10	11/21/94	800788	9900.00		2.00 L	
299-E34-8	11/21/94	800788		11.00		

Table 9-4. Constituents with at Least One Detected Value for
the 216-B-63 Trench Data for Reporting Period
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Well Name	Collection Date	Sample Number	MERCUR .41/ppb .095/2	NICKEL 34/ppb 16/.	FMICKEL 34/ppb 16/.	NITRATE 124/ppb 96/45000
299-E27-11	11/18/94	8007Y4		34.00		7000.00
299-E27-11	11/18/94	8007Y8	.13 BL		13.00 U	
299-E27-16	11/21/94	800760		33.00		3000.00 q
299-E27-17	11/18/94	8007Q9		59.00		6600.00
299-E27-17	11/18/94	8007R3	.05 U		13.00 U	
299-E27-18	11/28/94	800764		13.00 U		3600.00
299-E27-18	11/28/94	800765		13.00 U		3700.00
299-E27-19	11/28/94	800772		13.00 U		4700.00
299-E27-8	11/17/94	8007R4		36.00		5900.00
299-E27-8	11/17/94	8007R8	.05 U		13.00 U	
299-E27-9	11/17/94	8007R9		29.00 L		6900.00
299-E27-9	11/17/94	8007S3	.05 U		13.00 U	
299-E33-33	11/21/94	800776		47.00		5100.00 q
299-E33-36	11/21/94	800780		63.00		2800.00 q
299-E33-37	11/21/94	800784		18.00 L		2500.00 q
299-E34-10	11/21/94	8007S4		24.00 L		6600.00 q
299-E34-10	11/21/94	8007S8	.06 BL		13.00 U	
299-E34-8	11/21/94	800788		34.00		5700.00 q

Well Name	Collection Date	Sample Number	POTASUM 34/ppb 890/.	FMOTASS 34/ppb 890/.	SODIUM 34/ppb 150/.
299-E27-11	11/18/94	8007Y4	6200.00		14000.00 B
299-E27-11	11/18/94	8007Y8		6400.00	
299-E27-16	11/21/94	800760	5400.00		12000.00 BQ
299-E27-17	11/18/94	8007Q9	6000.00		14000.00 B
299-E27-17	11/18/94	8007R3		6100.00	
299-E27-18	11/28/94	800764	5500.00		13000.00 q
299-E27-18	11/28/94	800765	5400.00		13000.00 q
299-E27-19	11/28/94	800772	5600.00		14000.00 q
299-E27-8	11/17/94	8007R4	6000.00		13000.00 B
299-E27-8	11/17/94	8007R8		6100.00	
299-E27-9	11/17/94	8007R9	5800.00		12000.00 B
299-E27-9	11/17/94	8007S3		5700.00	
299-E33-33	11/21/94	800776	5400.00		14000.00 BQ
299-E33-36	11/21/94	800780	5200.00		13000.00 BQ
299-E33-37	11/21/94	800784	5100.00		13000.00 BQ
299-E34-10	11/21/94	8007S4	6100.00		15000.00 BQ
299-E34-10	11/21/94	8007S8		6100.00	
299-E34-8	11/21/94	800788	5400.00		16000.00 BQ

Table 9-4. Constituents with at Least One Detected Value for
the 216-B-63 Trench Data for Reporting Period
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Well Name	Collection Date	Sample Number	SODIUM 34/ppb 150/.	SULFATE 124/ppb 89/250000s	TRITIUM 142/pCi/L ./20000	TURBID 126/NTU .016/.
299-E27-11	11/18/94	8007Y4		48000.00 D	2910.00	3.30
299-E27-11	11/18/94	8007Y8	14000.00 B			
299-E27-16	11/21/94	800760		22000.00 D	3030.00	
299-E27-17	11/18/94	800769		51000.00 D	3000.00	1.00
299-E27-17	11/18/94	8007R3	15000.00 B			
299-E27-18	11/28/94	800764		20000.00 DQ	3430.00	
299-E27-18	11/28/94	800765		26000.00 DQ	3520.00	
299-E27-19	11/28/94	800772		36000.00 D	3540.00	
299-E27-8	11/17/94	8007R4		44000.00 D	3080.00	1.00
299-E27-8	11/17/94	8007R8	13000.00 B			
299-E27-9	11/17/94	8007R9		49000.00 D	2860.00	2.50
299-E27-9	11/17/94	8007S3	13000.00 B			
299-E33-33	11/21/94	800776		33000.00 D	4040.00	
299-E33-36	11/21/94	800780		19000.00 D	2600.00	
299-E33-37	11/21/94	800784		18000.00 D	2460.00	
299-E34-10	11/21/94	8007S4		53000.00 D	3240.00	1.60 Q
299-E34-10	11/21/94	8007S8	15000.00 BQ			
299-E34-8	11/21/94	800788		40000.00 D	2960.00	

Well Name	Collection Date	Sample Number	URANIUM 145/ppb ./.	VANADIUM 34/ppb 6.4/.	EVANADI 34/ppb 6.4/.	ZINC 34/ppb 4.4/5000s
299-E27-11	11/18/94	8007Y4	2.37	26.00 L		16.00
299-E27-11	11/18/94	8007Y8			22.00 L	
299-E27-16	11/21/94	800760		21.00 L		6.30 U
299-E27-17	11/18/94	800769	2.60	23.00 L		6.30 U
299-E27-17	11/18/94	8007R3			21.00 L	
299-E27-18	11/28/94	800764		23.00 L		17.00
299-E27-18	11/28/94	800765		20.00 L		15.00
299-E27-19	11/28/94	800772		22.00 L		170.00
299-E27-8	11/17/94	8007R4	2.64	26.00 L		6.30 U
299-E27-8	11/17/94	8007R8			23.00 L	
299-E27-9	11/17/94	8007R9	2.45	27.00 L		6.30 U
299-E27-9	11/17/94	8007S3			27.00 L	
299-E33-33	11/21/94	800776		23.00 L		6.30 U
299-E33-36	11/21/94	800780		21.00 L		6.30 L
299-E33-37	11/21/94	800784		20.00 L		6.30 U
299-E34-10	11/21/94	8007S4	2.34	21.00 L		8.80 L
299-E34-10	11/21/94	8007S8			24.00 L	
299-E34-8	11/21/94	800788		20.00 L		6.30 U

**Table 9-4. Constituents with at Least One Detected Value for
the 216-B-63 Trench Data for Reporting Period
October 1 through December 31, 1994.
(sheet 7 of 7)**

Well Name	Collection Date	Sample Number	FZINC 34/ppb 4.4/5000s
299-E27-11	11/18/94	B007Y8	6.30 U
299-E27-17	11/18/94	B007R3	6.30 U
299-E27-8	11/17/94	B007R8	6.30 U
299-E27-9	11/17/94	B007S3	6.30 U
299-E34-10	11/21/94	B007S8	6.30 U

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

Table 9-5. Contamination Indicator Parameters for the 216-B-63 Trench
Data for Reporting Period October 1 through December 31, 1994.
(sheet 1 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 110/.	TOX ppb 5/.
299-E27-11	11/18/94	B00792		340				
		B00794	360		7.72	8.20	400 L	5.0 U
		B00795	359		7.73		300 L	5.0 U
		B00796	358		7.73		400 L	5.0 U
299-E27-16	11/21/94	B00797	357		7.74		400 L	5.0 U
		B00760	261	270	7.33		400 L	6.7
		B00761	264		7.34		200 L	5.9
		B00762	262		7.35		400 L	6.3
299-E27-17	11/18/94	B00763	260		7.33		300 L	8.9
		B00793		350				
		B00709	459		7.18	8.20	300 L	5.0 U
		B007R0	457		7.15		300 L	5.0 U
299-E27-18	11/28/94	B007R1	456		7.15		300 L	5.0 U
		B007R2	458		7.16		300 L	5.4
		B00764	290	290	7.49		300 L	5.0 U
		B00765	290	290	7.50		300 L	5.0 U
299-E27-19	11/28/94	B00766	288		7.51		300 L	5.0 U
		B00767	288		7.53		200 L	5.0 U
		B00768					300 L	7.1
		B00769					200 L	5.0 U
299-E27-8	11/17/94	B00770					200 L	8.6
		B00771					300 L	7.9
		B00772	301	310	7.89		200 L	6.5
		B00773	303		7.90		300 L	9.2
299-E27-9	11/17/94	B00774	304		7.91		400 L	5.0 U
		B00775	303		7.92		300 L	5.0 U
		B00794		330				
		B007R4	315		7.80	8.20	200 L	5.1
299-E27-33	11/21/94	B007R5	312		7.80		300 L	6.3
		B007R6	309		7.79		300 L	5.0 U
		B007R7	309		7.80		300 L	5.4
		B00795		340				
299-E33-36	11/21/94	B007R9	322		8.08	8.20	200 L	5.0 U
		B00790	322		8.07		200 L	5.0 U
		B00751	321		8.09		300 L	5.0 U
		B00752	321		8.10		200 L	7.3
299-E33-36	11/21/94	B00776	240	300	8.04		200 L	5.0 U
		B00777	240		8.04		300 L	5.0 U
		B00778	237		8.02		300 L	5.0 U
		B00779	236		8.02		200 L	5.0 U
299-E33-36	11/21/94	B00780	255	270	6.42 F		300 L	5.0 U
		B00781	253		6.46 F		300 L	5.0 U
		B00782	253		6.46 F		300 L	5.0 U

Table 9-5. Contamination Indicator Parameters for the 216-B-63 Trench
Data for Reporting Period October 1 through December 31, 1994.
(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 110/.	TOX ppb 5/.
299-E33-36	11/21/94	800783	295		6.48 F		500 L	5.0 U
299-E33-37	11/21/94	800784	300	260	8.07		300 L	5.0 U
		800785	303		8.07		200 L	5.0 U
		800786	303		8.06		200 L	5.0 U
		800787	302		8.07		300 L	5.0 U
299-E34-10	11/21/94	800796		350				
		800794	280		7.90	8.10	400 L	5.0 U
		800795	281		7.91		300 L	5.0 U
		800796	282		7.93		300 L	5.0 U
		800797	283		7.93		300 L	5.0 U
299-E34-8	11/21/94	800788	299	310	7.82		200 L	5.0 U
		800789	298		7.83		300 L	5.0 U
		800790	298		7.83		300 L	5.0 U
		800791	299		7.90		300 L	5.0 U

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 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 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). This volume of discharge 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. All of the wells now have at least four quarters of analytical data. 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 fourth quarter of calendar year 1994 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 fourth quarter of calendar year 1994 included the five wells of the monitoring network that are screened in the upper portion of the unconfined aquifer (299-W26-7, 8, 9, 10, and 12) (Figure 10-1). They were sampled on December 7, 1994. The sixth well (299-W27-2) (Figure 10-1) was not sampled in time to make the deadline for inclusion in the results for the fourth quarter. Results for this well will be reported in the first quarter report for 1995. Well 299-W27-2 monitors the base of the unconfined aquifer, and results are not used for statistical evaluation. Available data for the reporting period October 1 to December 31, 1994 are shown in Tables 10-3 through 10-5.

Drinking water parameters, groundwater quality parameters, and site-specific and other constituents (Table 10-3) did not exceed DWSs except for unfiltered chromium in two upgradient wells, filtered chromium in one upgradient well, unfiltered iron in four wells (two upgradient and two downgradient), and unfiltered manganese in two downgradient wells (Table 10-4). High levels of chromium, iron, and manganese have been reported in the past in Hanford wells and are assumed to be artifacts of well construction or the use of stainless steel well screens. The unusually high concentrations of aluminum in well 299-W26-10 probably indicate particulates in the sample, which suggests high well turbidity.

Indicator parameters did not exceed their critical range or mean values in the fourth quarter of 1994 except for field-measured pH values from wells 299-W26-8 (an upgradient well) and 299-W26-10 (a downgradient well) (Table 10-5). These field measurements are suspected to be in error because they are not consistent with laboratory pH measurements, and they are not

consistent with the historical trend. The wells will be resampled. A RADE has been submitted for these data.

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	12/07/94
W26-8	Upgradient	Ringold: Water Table	Semiannually	12/07/94
W26-9	Downgradient	Ringold: Water Table	Semiannually	12/07/94
W26-10	Downgradient	Ringold: Water Table	Semiannually	12/07/94
W26-12	Downgradient	Ringold: Water Table	Semiannually	12/07/94
W27-2	Downgradient	Ringold: Base of Unconfined Aquifer	Semiannually	06/20/94

Table 10-2. RCRA Water Level Measurement Report
216-S-10 Facility, Fourth Quarter 1994.

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
Wells Monitoring the Top of the Unconfined Aquifer				
299-W26-10	12/07/94	216.85	454.02*	138.39
	12/20/94	215.74	455.13	138.72
299-W26-12	12/07/94	220.48	455.21*	138.75
	12/20/94	220.22	455.47	138.83
299-W26-7	12/07/94	195.26	456.73*	139.21
	12/20/94	194.95	457.04	139.31
299-W26-8	12/07/94	210.72	455.59*	138.86
	12/20/94	210.53	455.78	138.92
299-W26-9	12/07/94	199.02	455.14*	138.73
	12/20/94	198.58	455.58	138.86
299-W27-2	12/20/94	221.99	455.12	138.72

- 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. Elevations marked with an '*' were measured at the time of sampling.
4. Elevations 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 October 1 through December 31, 1994.
(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	94	Conductivity, field	umhos	1				5	5	
CONDUCT	73	Conductivity, lab	umhos					6	6	
TDC		Total Organic Carbon	ppb	110				24	24	
TOX		Total Organic Halogen	ppb	5				24	8	
PH	93	pH, field	pH	.01	6.5-8.5	EPAS		5	5	2
PH	123	pH, lab	pH		6.5-8.5	EPAS		6	6	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
BARIUM		Barium	ppb	.59	1000	EPAL		6	6	0
FBARIUM		Barium, filtered	ppb	.59	1000	EPAL		6	6	0
CADMIUM		Cadmium	ppb	3.3	10	EPAL		6	0	0
FCADMIU		Cadmium, filtered	ppb	3.3	10	EPAL		6	0	0
CHROMIUM		Chromium	ppb	4.5	50	EPAL		6	6	6
FCHROMI		Chromium, filtered	ppb	4.5	50	EPAL		6	5	2
FLUORID		Fluoride	ppb	36	1400	EPAL		6	6	0
ALPHA		Gross alpha	pCi/L		15	EPA		6	6	0
NITRATE		Nitrate	ppb	11	45000	EPA		6	6	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORID		Chloride	ppb	14	250000	EPAS		6	6	0
IRON		Iron	ppb	5.24	300	EPAS		6	6	5
FIRON		Iron, filtered	ppb	5.24	300	EPAS		6	6	0
MANGESE		Manganese	ppb	.72	50	EPAS		6	6	2
FMANGAN		Manganese, filtered	ppb	.72	50	EPAS		6	6	0
LPHENOL		Phenol	ppb	.31				6	0	
SODIUM		Sodium	ppb	61				6	6	
FSODIUM		Sodium, filtered	ppb	61				6	6	
SULFATE		Sulfate	ppb	37	250000	EPAS		6	6	0

Table 10-3. Constituent List and Summary of Results for the 216-S-10 Facility
Data for Reporting Period October 1 through December 31, 1994.
(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
1,1,1-T		1,1,1-Trichloroethane		ppb	.036	200	EPA	6	0	0
1,1,2-T		1,1,2-Trichloroethane		ppb	.078			6	0	
1,1-DIC		1,1-Dichloroethane		ppb	.058			6	0	
1,2-DIC		1,2-Dichloroethane		ppb	.029	5	EPA	6	0	0
14-dben		1,4-Dichlorobenzene		ppb	.053	75	EPA	6	0	0
246-trp		2,4,6-Trichlorophenol		ppb	1.3			6	0	
24-dchp		2,4-Dichlorophenol		ppb	1.3			6	0	
01MPHEN		2,4-Dimethylphenol		ppb	1.2			6	0	
01NPHEN		2,4-Dinitrophenol		ppb	3			6	0	
26-dchp		2,6-Dichlorophenol		ppb	1.4			6	0	
CHLPHEN		2-Chlorophenol		ppb	1.6			6	0	
2N1TPH		2-Nitrophenol		ppb	1.3			6	0	
8UTD1NP		2-sec-Butyl-4,6-dinitrophenol (DM)		ppb	1.3			6	0	
46DN2MP		4,6-Dinitro-2-methylphenol		ppb	1.3			6	0	
CHLCRES		4-Chloro-3-methylphenol		ppb	1.3			6	0	
W1TPHEN		4-Nitrophenol		ppb	3			6	0	
ALUMINUM		Aluminum		ppb	26			6	6	
FALUMIN		Aluminum, filtered		ppb	26			6	3	
ANTIMONY		Antimony		ppb	62			6	0	
FANTIMO		Antimony, filtered		ppb	62			6	0	
BENZENE		Benzene		ppb	.013	5	EPA	6	0	0
BERYLLIUM		Beryllium		ppb	.17			6	1	
FBERYLL		Beryllium, filtered		ppb	.17			6	0	
BROMIDE		Bromide		ppb	100			6	0	
CALCIUM		Calcium		ppb	34			6	6	
FCALCIU		Calcium, filtered		ppb	34			6	6	
TETRANE		Carbon tetrachloride		ppb	.075	5	EPA	6	2	0
CHLFORM		Chloroform		ppb	.041			6	1	
COBALT		Cobalt		ppb	5.9			6	0	
FCOBALT		Cobalt, filtered		ppb	5.9			6	0	
COPPER		Copper		ppb	4.1	1000	EPAS	6	4	0
FCOPPER		Copper, filtered		ppb	4.1	1000	EPAS	6	1	0
CRESOLS		Cresols (methylphenols)		ppb	4.8			6	0	
ETHBENZ		Ethylbenzene		ppb	.051	700	EPA	6	0	0
BETA		Grass beta		pCi/L				6	5	
MAGNES		Magnesium		ppb	23			6	6	
FMAGNES		Magnesium, filtered		ppb	23			6	6	
METHYLCH		Methylene chloride		ppb	.09			6	0	
NICKEL		Nickel		ppb	13			6	6	
FNICKEL		Nickel, filtered		ppb	13			6	2	
NITRITE		Nitrite		ppb	18	1000	EPA	6	0	0
PENTCHP		Pentachlorophenol		ppb	1.3	1	EPA	6	0	6"
PHOSPHA		Phosphate		ppb	82			6	0	

Table 10-3. Constituent List and Summary of Results for the 216-S-10 Facility
Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 3)

Short	(Method)	Constituent Name	Full	Units	Lab MDL	DWS Limit	Agency	Number of Samples		
								Total	>MDL	>DWS
POTASUM		Potassium		ppb	850			6	6	
FPOTASS		Potassium, filtered		ppb	850			6	6	
SILVER		Silver		ppb	3.6	50	EPAI	6	0	0
FSILVER		Silver, filtered		ppb	3.6	50	EPAI	6	0	0
TC-99		Technetium-99		pCi/L		900	EPA	6	0	0
PERCENE		Tetrachloroethene		ppb	.22	5	EPA	6	0	0
TETPHNL		Tetrachlorophenols		ppb	1.5			6	0	
TIK		Tin		ppb	69			6	1	
FTIH		Tin, filtered		ppb	69			6	0	
TOUENE		Toluene		ppb	.016	1000	EPA	6	0	0
TRICENE		Trichloroethene		ppb	.11	5	EPA	6	0	0
TRIPHNL		Trichlorophenols		ppb	1.7			6	0	
TRITIUM		Tritium		pCi/L		20000	EPA	6	0	0
URANIUM		Uranium		ppb				6	6	
VANADIUM		Vanadium		ppb	6.6			6	6	
PVANADI		Vanadium, filtered		ppb	6.6			6	6	
VINYIDE		Vinyl chloride		ppb	.13	2	EPA	6	0	0
XYLENE		Xylenes (total)		ppb	.035	10000	EPA	6	0	0
ZINC		Zinc		ppb	6.3	5000	EPAS	6	4	0
FZINC		Zinc, filtered		ppb	6.3	5000	EPAS	6	1	0
CIS12DE		cis-1,2-Dichloroethylene		ppb	.11	70	EPA	6	0	0
TRANSCE		trans-1,2-Dichloroethylene		ppb	.073	100	EPA	6	0	0

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
October 1 through December 31, 1994.
(sheet 1 of 4)

Well Name	Collection Date	Sample Number	ALUMINUM 34/ppb 19/.	ALUMINUM 34/ppb 19/.	BARIUM 34/ppb 1.3/1000i	BARIUM 34/ppb 1.3/1000i
299-W26-10	12/07/94	B0DFH9	2600.00		54.00 q	
299-W26-10	12/07/94	B0DFJ3		37.00 L		26.00 q
299-W26-12	12/07/94	B0DFJ4	460.00		26.00 q	
299-W26-12	12/07/94	B0DFJ8		26.00 U		21.00 q
299-W26-7	12/07/94	B0DFJ9	110.00 L		24.00 q	
299-W26-7	12/07/94	B0DFK0	96.00 L		22.00 q	
299-W26-7	12/07/94	B0DFK7		26.00 U		20.00 q
299-W26-7	12/07/94	B0DFK8		26.00 L		21.00 q
299-W26-8	12/07/94	B0DFL4	71.00 L		36.00 q	
299-W26-8	12/07/94	B0DFL8		26.00 U		33.00 q
299-W26-9	12/07/94	B0DFL9	58.00 L		19.00 Lq	
299-W26-9	12/07/94	B0DFN3		32.00 L		20.00 q

Well Name	Collection Date	Sample Number	BERYLLIUM 34/ppb 1.5/.	BERYLLIUM 34/ppb 1.5/.	CALCIUM 34/ppb 47/.	CALCIUM 34/ppb 47/.
299-W26-10	12/07/94	B0DFH9	.27 L		26000.00	
299-W26-10	12/07/94	B0DFJ3		.17 U		24000.00
299-W26-12	12/07/94	B0DFJ4	.17 U		17000.00	
299-W26-12	12/07/94	B0DFJ8		.17 U		16000.00
299-W26-7	12/07/94	B0DFJ9	.17 U		23000.00	
299-W26-7	12/07/94	B0DFK0	.17 U		23000.00	
299-W26-7	12/07/94	B0DFK7		.17 U		23000.00
299-W26-7	12/07/94	B0DFK8		.17 U		23000.00
299-W26-8	12/07/94	B0DFL4	.17 U		21000.00	
299-W26-8	12/07/94	B0DFL8		.17 U		20000.00
299-W26-9	12/07/94	B0DFL9	.17 U		23000.00	
299-W26-9	12/07/94	B0DFN3		.17 U		23000.00

Well Name	Collection Date	Sample Number	TETRANE 25/ppb .32/5	CHLORIDE 124/ppb 71/250000s	CHLORIDE 25/ppb .05/.	CHROMIUM 34/ppb 11/100
299-W26-10	12/07/94	B0DFH9	.64 L	5900.00 Bq	.04 U	74.00
299-W26-12	12/07/94	B0DFJ4	.08 U	1600.00 Bq	.28 L	78.00
299-W26-7	12/07/94	B0DFJ9	.08 U	5700.00 Bq	.04 U	250.00
299-W26-7	12/07/94	B0DFK0	.08 U	5600.00 Bq	.04 U	230.00
299-W26-8	12/07/94	B0DFL4	2.50	3100.00 Bq	.04 U	340.00
299-W26-9	12/07/94	B0DFL9	.08 U	6500.00 Bq	.04 U	58.00

Table 10-4. Constituents with at Least One Detected Value for
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Well Name	Collection Date	Sample Number	CHROMI 34/ppb 11/100	COPPER 34/ppb 2.6/1000s	FCOPPER 34/ppb 2.6/1000s	FLUORID 124/ppb 51/1400i
299-W26-10	12/07/94	B00FH9		13.00 L		500.00
299-W26-10	12/07/94	B00FJ3	4.50 U		4.30 L	
299-W26-12	12/07/94	B00FJ4		4.80 L		700.00
299-W26-12	12/07/94	B00FJ8	6.60 L		4.10 U	
299-W26-7	12/07/94	B00FJ9		16.00 LB		600.00
299-W26-7	12/07/94	B00FK0		4.10 UQ		600.00
299-W26-7	12/07/94	B00FK7	170.00		4.10 U	
299-W26-7	12/07/94	B00FK8	170.00		4.10 U	
299-W26-8	12/07/94	B00FL4		16.00 L		500.00
299-W26-8	12/07/94	B00FL8	4.60 L		4.10 U	
299-W26-9	12/07/94	B00FL9		4.10 U		600.00
299-W26-9	12/07/94	B00FM3	9.50 L		4.10 U	

Well Name	Collection Date	Sample Number	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.	IRON 34/ppb 18/300s	FIROM 34/ppb 18/300s
299-W26-10	12/07/94	B00FH9	3.19	6.40	5000.00 B	
299-W26-10	12/07/94	B00FJ3				17.00 LB
299-W26-12	12/07/94	B00FJ4	2.48	6.24	1200.00 B	
299-W26-12	12/07/94	B00FJ8				14.00 LB
299-W26-7	12/07/94	B00FJ9	1.58 Q	3.69	660.00 B	
299-W26-7	12/07/94	B00FK0	.03 UQ	3.57	520.00 B	
299-W26-7	12/07/94	B00FK7				34.00 B
299-W26-7	12/07/94	B00FK8				40.00 B
299-W26-8	12/07/94	B00FL4	9.39	10.10	1500.00 B	
299-W26-8	12/07/94	B00FL8				20.00 LB
299-W26-9	12/07/94	B00FL9	.88 U	.62 U	270.00 B	
299-W26-9	12/07/94	B00FM3				8.90 LB

Well Name	Collection Date	Sample Number	MAGNES 34/ppb 25/.	FMAGNES 34/ppb 25/.	MANGESE 34/ppb 1/50s	FMANGAN 34/ppb 1/50s
299-W26-10	12/07/94	B00FH9	8000.00		100.00	
299-W26-10	12/07/94	B00FJ3		7100.00		2.40 L
299-W26-12	12/07/94	B00FJ4	5000.00		52.00	
299-W26-12	12/07/94	B00FJ8		4700.00		2.00 L
299-W26-7	12/07/94	B00FJ9	6800.00		13.00	
299-W26-7	12/07/94	B00FK0	6900.00		11.00	
299-W26-7	12/07/94	B00FK7		6900.00		5.90 L
299-W26-7	12/07/94	B00FK8		6800.00		5.30 L
299-W26-8	12/07/94	B00FL4	5400.00		32.00	
299-W26-8	12/07/94	B00FL8		5300.00		3.60 L
299-W26-9	12/07/94	B00FL9	6700.00		5.90 L	
299-W26-9	12/07/94	B00FM3		6700.00		1.10 L

Table 10-4. Constituents with at Least One Detected Value for
the 216-S-10 Facility Data for Reporting Period
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Well Name	Collection Date	Sample Number	NICKEL 34/ppb 16/.	PHICKEL 34/ppb 16/.	NITRATE 124/ppb 96/45000	POTASUM 34/ppb 890/.
299-W26-10	12/07/94	B0DFH9	44.00		2400.00 q	3800.00
299-W26-10	12/07/94	B0DFJ3		13.00 U		
299-W26-12	12/07/94	B0DFJ4	44.00		1300.00 q	3400.00
299-W26-12	12/07/94	B0DFJ8		13.00 U		
299-W26-7	12/07/94	B0DFJ9	56.00		6700.00 q	3300.00
299-W26-7	12/07/94	B0DFK0	57.00		6700.00 q	3200.00
299-W26-7	12/07/94	B0DFK7		30.00		
299-W26-7	12/07/94	B0DFK8		33.00		
299-W26-8	12/07/94	B0DFL4	180.00		700.00 q	5000.00
299-W26-8	12/07/94	B0DFL8		13.00 U		
299-W26-9	12/07/94	B0DFL9	24.00 L		5700.00 q	3200.00
299-W26-9	12/07/94	B0DFM3		13.00 U		

Well Name	Collection Date	Sample Number	FPOTASS 34/ppb 890/.	SODIUM 34/ppb 150/.	FSODIUM 34/ppb 150/.	SULFATE 124/ppb 89/250000s
299-W26-10	12/07/94	B0DFH9		18000.00 q		13000.00 D
299-W26-10	12/07/94	B0DFJ3	3700.00		17000.00 q	
299-W26-12	12/07/94	B0DFJ4		24000.00 q		13000.00 D
299-W26-12	12/07/94	B0DFJ8	3400.00		24000.00 q	
299-W26-7	12/07/94	B0DFJ9		19000.00 q		17000.00 D
299-W26-7	12/07/94	B0DFK0		19000.00 q		18000.00 D
299-W26-7	12/07/94	B0DFK7	4100.00 q		19000.00 q	
299-W26-7	12/07/94	B0DFK8	3100.00 q		19000.00 q	
299-W26-8	12/07/94	B0DFL4		23000.00 q		11000.00 D
299-W26-8	12/07/94	B0DFL8	4700.00		23000.00 q	
299-W26-9	12/07/94	B0DFL9		23000.00 q		18000.00 D
299-W26-9	12/07/94	B0DFM3	3200.00		23000.00 q	

Well Name	Collection Date	Sample Number	TIN 34/ppb 24/.	FTIN 34/ppb 24/.	URANIUM 145/ppb ./.	VANADIUM 34/ppb 6.4/.
299-W26-10	12/07/94	B0DFH9	73.00 L		1.91	41.00
299-W26-10	12/07/94	B0DFJ3		69.00 U		
299-W26-12	12/07/94	B0DFJ4	69.00 U		3.80	30.00 L
299-W26-12	12/07/94	B0DFJ8		69.00 U		
299-W26-7	12/07/94	B0DFJ9	69.00 U		1.51	34.00
299-W26-7	12/07/94	B0DFK0	69.00 U		1.39	35.00
299-W26-7	12/07/94	B0DFK7		69.00 U		
299-W26-7	12/07/94	B0DFK8		69.00 U		
299-W26-8	12/07/94	B0DFL4	69.00 U		16.20	16.00 L
299-W26-8	12/07/94	B0DFL8		69.00 U		
299-W26-9	12/07/94	B0DFL9	69.00 U		1.77	38.00
299-W26-9	12/07/94	B0DFM3		69.00 U		

Table 10-4. Constituents with at Least One Detected Value for
the 216-S-10 Facility Data for Reporting Period
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Well Name	Collection Date	Sample Number	FVANADI 34/ppb 6.4/.	ZINC 34/ppb 4.4/5000s	FZINC 34/ppb 4.4/5000s
299-W26-10	12/07/94	B0DFH9		27.00	
299-W26-10	12/07/94	B0DFJ3	34.00		6.30 U
299-W26-12	12/07/94	B0DFJ4		26.00	
299-W26-12	12/07/94	B0DFJ8	27.00 L		8.10 L
299-W26-7	12/07/94	B0DFJ9		9.60 LQ	
299-W26-7	12/07/94	B0DFK0		6.70 LQ	
299-W26-7	12/07/94	B0DFK7	37.00		6.30 U
299-W26-7	12/07/94	B0DFK8	34.00		6.30 U
299-W26-8	12/07/94	B0DFL4		6.30 U	
299-W26-8	12/07/94	B0DFL8	17.00 L		6.30 U
299-W26-9	12/07/94	B0DFL9		6.30 U	
299-W26-9	12/07/94	B0DFM3	40.00		6.30 U

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 October 1 through December 31, 1994.

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	TDC ppb 110/.	TDC ppb 5/.
299-W26-10	12/07/94	80DFH9	158	260	4.11 F	8.00	300 LB	5.0 UQ
		80DFJ0					300 LB	9.5 Q
		80DFJ1					300 LB	9.2 Q
		80DFJ2					200 LB	6.8 Q
299-W26-12	12/07/94	80DFJ4	232	230	7.84	8.10	500 LB	5.0 UQ
		80DFJ5					400 LB	5.0 UQ
		80DFJ6					400 LB	5.0 UQ
		80DFJ7					400 LB	6.1 Q
299-W26-7	12/07/94	80DFJ9	266	260	7.67	8.10	300 LB	5.0 UQ
		80DFK0					200 L	5.0 UQ
		80DFK1					300 L	5.0 UQ
		80DFK2					200 L	5.0 UQ
		80DFK3					150 L	5.0 UQ
		80DFK4					140 L	5.0 UQ
		80DFK5					140 LQ	5.0 UQ
		80DFK6					200 LQ	5.0 Q
299-W26-8	12/07/94	80DFL4	161	250	4.51 F	8.50	500 L	7.6 Q
		80DFL5					300 L	7.1 Q
		80DFL6					300 L	6.9 Q
		80DFL7					400 L	5.0 UQ
299-W26-9	12/07/94	80DFL9	280	270	7.67	8.10	150 L	5.0 UQ
		80DFM0					200 L	5.0 UQ
		80DFM1					300 L	5.0 UQ
		80DFM2					200 L	5.0 UQ

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 1-1). The crib is an unlined, gravel-bottom percolation crib that is 3 by 30.5 m (10 by 100 ft) wide 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 dispersed the effluent across the bottom of the crib.

A RCRA interim-status assessment-level groundwater monitoring network was established for the U-12 Crib in 1993 (WHC 1993a). 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. Wastewater disposed of in the U-12 Crib contained hazardous waste and radioactive materials. The DOE, Richland Operations Office (RL) has proposed that the facility be closed under RCRA interim status (40 CFR 265). This closure will be coordinated with the CERCLA Past Practice activity (200 UP-2 Operable Unit cleanup).

The waste was composed 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. The U-12 Crib has 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. Hydrogeologic evaluation of the crib in 1983 indicated radioactive contamination to a depth of at least 43 m (140 ft). The depth to water below the crib is approximately 72 m (236 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 and three downgradient wells (Figure 11-1).

The sample results for the fourth quarter of 1994 represent the fourteenth calendar 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 and analysis during that and subsequent quarters corroborated these findings. Currently the U-12 Crib groundwater monitoring well network is sampled quarterly for assessment monitoring in accordance with the *Interim-Status Groundwater Quality Assessment Plan for the 216-U-12 Crib* (WHC 1993a). Monthly sampling has been conducted since November 1993 for the field parameters pH and specific conductivity. The

data from the monthly sampling will be reported as they become available.

Two existing wells, 299-W22-22 and 299-W22-23, were remediated for inclusion in the monitoring network, but well 299-W22-22 has been dropped from the network because of sampling complications. The new assessment well, 699-36-70A, was added to the network and sampled for the first time on January 3, 1995. Table 11-1 lists the network wells and their sampling status during the reporting period; currently the network consists of six wells.

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 in December 1994 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 in downgradient wells 299-W22-41 and 299-W22-42 continues to exceed the critical mean of 437 $\mu\text{mho/cm}$. Results for nitrate (DWS = 45,000 ppb), the principal constituent suspected of causing elevated conductivity, are 130,000 and 520,000 ppb, respectively. Technetium-99 also had elevated results in these two wells, which is consistent with previous data. Filtered chromium, iron, and manganese are reported above the DWS in well 299-W22-23. These values are being investigated. Most of the network wells had values exceeding the DWS for unfiltered iron and chromium. Carbon tetrachloride will not be reported in future quarterly reports, but it should be noted that this constituent has been consistently above or at the DWS in all network wells. 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, 4th Qtr 1994
W22-43	Upgradient	Ringold: Water Table	Quarterly	12/15/94
W22-40	Downgradient	Ringold: Water Table	Quarterly	12/15/94
W22-41	Downgradient	Ringold: Water Table	Quarterly	12/15/94
W22-42	Downgradient	Ringold: Water Table	Quarterly	12/15/94
699-36-70A	Downgradient	Ringold: Water Table	Quarterly	1/03/95
W22-23	Upgradient	Ringold: Water Table	Quarterly	12/15/94

Note: Hydrogeologic units include the sandy gravels of the Hanford formation and silty sands of the Ringold Formation.

Table 11-2. RCRA Water Level Measurement Report
216-U-12 Crib, Fourth Quarter 1994.

Well	Date	Depth to water (ft)	Water level elevation above msl (ft) (m)	
Wells Monitoring the Top of the Unconfined Aquifer				
299-W22-22	11/01/94	234.22	455.83*	138.94
299-W22-23	12/15/94	236.27	454.43*	138.51
299-W22-40	12/15/94	237.75	454.48*	138.53
	12/20/94	238.04	454.19	138.44
299-W22-41	11/01/94	237.34	454.40*	138.50
	12/15/94	237.14	454.60*	138.56
	12/20/94	237.58	454.16	138.43
299-W22-42	11/01/94	236.82	454.60*	138.56
	12/15/94	236.90	454.26*	138.46
	12/20/94	237.32	454.10	138.41
299-W22-43	11/01/94	236.07	455.28*	138.77
	12/15/94	236.25	455.10*	138.71
	12/20/94	236.41	454.94	138.67
699-36-70A	10/11/94	262.10	443.33*	135.13
	10/16/94	260.95	444.58*	135.51
	10/21/94	262.00	443.43*	135.16
	11/02/94	256.00	449.43*+	136.99

- 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. Elevations marked with an '*' were measured at the time of sampling.
4. Elevations 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 October 1 through December 31, 1994.
(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	94	Conductivity, field	umhos	1				8	8	
CONDUCT	73	Conductivity, lab	umhos					5	5	
TOC		Total Organic Carbon	ppb	110				8	8	
TOX		Total Organic Halogen	ppb	5				8	8	
PH		pH, field	pH	.01	6.5-8.5	EPAS		8	8	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
BARIUM		Barium	ppb	.59	1000	EPAL		5	5	0
FBARIUM		Barium, filtered	ppb	.59	1000	EPAL		5	5	0
CADMIUM		Cadmium	ppb	3.3	10	EPAL		5	0	0
PCADMIUM		Cadmium, filtered	ppb	3.3	10	EPAL		5	1	0
CHROMIUM		Chromium	ppb	4.5	50	EPAL		5	5	2
FCHROME		Chromium, filtered	ppb	4.5	50	EPAL		5	0	0
FLUORID		Fluoride	ppb	36	1400	EPAL		5	5	0
ALPHA		Gross alpha	pCi/L		15	EPA		10	8	0
NITRATE		Nitrate	ppb	11	45000	EPA		5	5	2

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORID		Chloride	ppb	14	250000	EPAS		5	5	0
IRON		Iron	ppb	5.24	300	EPAS		5	5	2
FIRON		Iron, filtered	ppb	5.24	300	EPAS		5	5	0
MANGESE		Manganese	ppb	.72	50	EPAS		5	4	1
FMANGAN		Manganese, filtered	ppb	.72	50	EPAS		5	2	1
SODIUM		Sodium	ppb	61				5	5	
FSODIUM		Sodium, filtered	ppb	61				5	5	
SULFATE		Sulfate	ppb	37	250000	EPAS		5	5	0

Table 11-3. Constituent List and Summary of Results for the 216-U-12 Crib
Data for Reporting Period October 1 through December 31, 1994.
(sheet 2 of 3)

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name Full	Units	Lab MDL	DMS Limit	Agency	Number of Samples		
							Total	>MDL	>DMS
1,1,1-T		1,1,1-Trichloroethane	ppb	.036	200	EPA	1	0	0
1,1,2-T		1,1,2-Trichloroethane	ppb	.078			1	0	
1,1-DIC		1,1-Dichloroethane	ppb	.058			1	0	
1,2-DIC		1,2-Dichloroethane	ppb	.029	5	EPA	1	0	0
1,4-dben		1,4-Dichlorobenzene	ppb	.055	75	EPA	1	0	0
ALUMINUM		Aluminum	ppb	26			5	4	
FALUMIN		Aluminum, filtered	ppb	26			5	3	
ANTIMONY		Antimony	ppb	62			5	0	
FANTIMONY		Antimony, filtered	ppb	62			5	0	
BENZENE		Benzene	ppb	.015	5	EPA	1	0	0
BERYLLIUM		Beryllium	ppb	.17			5	1	
FBERYLLIUM		Beryllium, filtered	ppb	.17			5	1	
BROMIDE		Bromide	ppb	100			5	0	
CALCIUM		Calcium	ppb	34			5	5	
FCALCIUM		Calcium, filtered	ppb	34			5	5	
TETRANE		Carbon tetrachloride	ppb	.075	5	EPA	1	1	1
CHLORFORM		Chloroform	ppb	.041			1	1	
COBALT		Cobalt	ppb	5.9			5	1	
FCOBALT		Cobalt, filtered	ppb	5.9			5	0	
COPPER		Copper	ppb	4.1	1000	EPAS	5	3	0
FCOPPER		Copper, filtered	ppb	4.1	1000	EPAS	5	0	0
ETHYLBENZ		Ethylbenzene	ppb	.051	700	EPA	1	0	0
BETA		Gross beta	pCi/L				10	10	
I-129L		Iodine-129, Low level	pCi/L		1	EPA	12	7	7
MAGNES		Magnesium	ppb	23			5	5	
FMAGNES		Magnesium, filtered	ppb	23			5	5	
METHYLCH		Methylene chloride	ppb	.09			1	0	
NICKEL		Nickel	ppb	13			5	4	
FNICKEL		Nickel, filtered	ppb	13			5	3	
NITRITE		Nitrite	ppb	18	1000	EPA	5	0	0
PHOSPHA		Phosphate	ppb	82			5	0	
POTASSIUM		Potassium	ppb	850			5	5	
FPOTASS		Potassium, filtered	ppb	850			5	5	
SILVER		Silver	ppb	3.6	50	EPA1	5	0	0
FSILVER		Silver, filtered	ppb	3.6	50	EPA1	5	0	0
SR-90		Strontium-90	pCi/L		8	EPA	12	0	0
TC-99		Technetium-99	pCi/L		900	EPA	5	4	0
PERCENE		Tetrachloroethene	ppb	.22	5	EPA	1	0	0
TIN		Tin	ppb	69			5	0	
FTIN		Tin, filtered	ppb	69			5	0	
TOLUENE		Toluene	ppb	.016	1000	EPA	1	0	0
TRICENE		Trichloroethene	ppb	.11	5	EPA	1	1	0
TRITIUM		Tritium	pCi/L		20000	EPA	10	10	2

Table 11-3. Constituent List and Summary of Results for the 216-U-12 Crib
Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 3)

Short	(Method)	Constituent Name		Units	Lab MDL	DWS		Number of Samples		
		Full				Limit	Agency	Total	>MDL	>DWS
TURBID		Turbidity	NTU		.016			5	5	
U-234		Uranium-234	pCi/L					5	4	
U-235		Uranium-235	pCi/L					5	4	
U-238		Uranium-238	pCi/L					5	4	
VANADIUM		Vanadium	ppb		6.6			5	5	
FVANADI		Vanadium, filtered	ppb		6.6			5	4	
VINYIDE		Vinyl chloride	ppb		.13	2	EPA	1	0	0
XYLENE		Xylenes (total)	ppb		.035	10000	EPA	1	0	0
ZINC		Zinc	ppb		6.3	5000	EPAS	5	1	0
FZINC		Zinc, filtered	ppb		6.3	5000	EPAS	5	0	0
CIS12DE		cis-1,2-Dichloroethylene	ppb		.11	70	EPA	1	0	0
TRANSCE		trans-1,2-Dichloroethylene	ppb		.073	100	EPA	1	0	0

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 October 1 through December 31, 1994.
(sheet 1 of 4)

Well Name	Collection Date	Sample Number	ALUMINUM 34/ppb 19/.	ALUMINUM 34/ppb 19/.	BARIUM 34/ppb 1.3/1000i	BARIUM 34/ppb 1.3/1000i
299-U22-23	12/15/94	B00FT6	4200.00 B		62.00	
299-U22-23	12/15/94	B00FT7		38.00 BL		27.00
299-U22-40	12/15/94	B00FV7	26.00 U		35.00	
299-U22-40	12/15/94	B00FV8		35.00 BL		35.00
299-U22-41	12/15/94	B00FT8	36.00 BL		49.00	
299-U22-41	12/15/94	B00FT9		29.00 BL		49.00
299-U22-42	12/15/94	B00FV0	33.00 BL		120.00	
299-U22-42	12/15/94	B00FV1		26.00 U		120.00
299-U22-43	12/15/94	B00FV2	38.00 BL		27.00	
299-U22-43	12/15/94	B00FV6		26.00 U		27.00

Well Name	Collection Date	Sample Number	BERYLLIUM 34/ppb 1.5/.	BERYLLIUM 34/ppb 1.5/.	CADMIUM 34/ppb 3/10i	CADMIUM 34/ppb 3/10i
299-U22-23	12/15/94	B00FT6	.70 L		3.30 U	
299-U22-23	12/15/94	B00FT7		.21 L		3.30 U
299-U22-40	12/15/94	B00FV7	.17 U		3.30 U	
299-U22-40	12/15/94	B00FV8		.17 U		3.30 U
299-U22-41	12/15/94	B00FT8	.17 U		3.30 U	
299-U22-41	12/15/94	B00FT9		.17 U		3.30 U
299-U22-42	12/15/94	B00FV0	.17 U		3.30 U	
299-U22-42	12/15/94	B00FV1		.17 U		3.30 U
299-U22-43	12/15/94	B00FV2	.17 U		3.30 U	
299-U22-43	12/15/94	B00FV6		.17 U		3.90 L

Well Name	Collection Date	Sample Number	CALCIUM 34/ppb 47/.	CALCIUM 34/ppb 47/.	TETRAHE 25/ppb .32/5	CHLORIDE 124/ppb 71/250000s
299-U22-23	12/15/94	B00FT6	15000.00			17000.00 BQ
299-U22-23	12/15/94	B00FT7		14000.00		
299-U22-40	12/15/94	B00D37			10.00	17000.00 BQ
299-U22-40	12/15/94	B00FV7	35000.00			
299-U22-40	12/15/94	B00FV8		35000.00		
299-U22-41	12/15/94	B00FT8	58000.00			14000.00 BQ
299-U22-41	12/15/94	B00FT9		58000.00		
299-U22-42	12/15/94	B00FV0	130000.00			14000.00 BQ
299-U22-42	12/15/94	B00FV1		140000.00		
299-U22-43	12/15/94	B00FV2	30000.00			15000.00 BQ
299-U22-43	12/15/94	B00FV6		29000.00		

Table 11-4. Constituents with at Least One Detected Value for the 216-U-12 Crib
Data for Reporting Period October 1 through December 31, 1994.
(sheet 2 of 4)

Well Name	Collection Date	Sample Number	CHLFORM 25/ppb .05/.	CHROMIUM 34/ppb 11/50i	PCROMI 34/ppb 11/50i	COBALT 34/ppb 6.5/.
299-U22-23	12/15/94	B00FT6		2000.00		23.00
299-U22-23	12/15/94	B00FT7			4.50 U	
299-U22-40	12/15/94	B00D37	.81			
299-U22-40	12/15/94	B00FV7		16.00 L		5.90 U
299-U22-40	12/15/94	B00FV8			4.50 U	
299-U22-41	12/15/94	B00FT8		23.00		5.90 U
299-U22-41	12/15/94	B00FT9			4.50 U	
299-U22-42	12/15/94	B00FV0		22.00		5.90 U
299-U22-42	12/15/94	B00FV1			4.50 U	
299-U22-43	12/15/94	B00FV2		89.00		5.90 U
299-U22-43	12/15/94	B00FV6			4.50 U	

Well Name	Collection Date	Sample Number	PCOBALT 34/ppb 6.5/.	COPPER 34/ppb 2.6/1000s	PCOPPER 34/ppb 2.6/1000s	FLUORID 124/ppb 51/1400i
299-U22-23	12/15/94	B00FT6		120.00		700.00
299-U22-23	12/15/94	B00FT7	5.90 U		4.10 U	
299-U22-40	12/15/94	B00D37				700.00
299-U22-40	12/15/94	B00FV7		4.10 U		
299-U22-40	12/15/94	B00FV8	5.90 U		4.10 U	
299-U22-41	12/15/94	B00FT8		4.10 U		700.00
299-U22-41	12/15/94	B00FT9	5.90 U		4.10 U	
299-U22-42	12/15/94	B00FV0		4.80 L		1200.00
299-U22-42	12/15/94	B00FV1	5.90 U		4.10 U	
299-U22-43	12/15/94	B00FV2		4.80 L		600.00
299-U22-43	12/15/94	B00FV6	5.90 U		4.10 U	

Well Name	Collection Date	Sample Number	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.	I-129 139/pCi/L ./1	IRON 34/ppb 18/300s
299-U22-22	9/26/94	B0C2J8			1.93 g	
299-U22-22	9/26/94	B0C2J9			1.42 g	
299-U22-23	9/22/94	B0C2K8	5.14 U	5.18	9.37	
299-U22-23	12/15/94	B00FT6	2.34	6.66	7.37	88000.00 g
299-U22-40	9/23/94	B0C2L3	2.31 g	7.29	.19 U	
299-U22-40	12/15/94	B00D37	2.98	10.30		
299-U22-40	12/15/94	B00FV7			-.35 U	100.00 g
299-U22-41	9/23/94	B0C2L8	.38 U	21.00	.39	
299-U22-41	12/15/94	B00FT8	5.36	20.00	-.12 U	120.00 g
299-U22-42	9/23/94	B0C2M3	3.30	28.80	5.83	
299-U22-42	12/15/94	B00FV0	4.05	59.50	8.08	100.00 g
299-U22-43	9/22/94	B0C2M8	2.21 g	7.97	.11 U	
299-U22-43	12/15/94	B00FV2	1.52	9.42	1.14 U	400.00 g

Table 11-4. Constituents with at Least One Detected Value for the 216-U-12 Crib
Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 4)

Well Name	Collection Date	Sample Number	IRON 34/ppb 18/300s	MAGNES 34/ppb 25/.	FMAGNES 34/ppb 25/.	MANGESE 34/ppb 1/50s
299-W22-23	12/15/94	B00FT6		7300.00		1800.00
299-W22-23	12/15/94	B00FT7	23.00 B		6300.00	
299-W22-40	12/15/94	B00FV7		12000.00		2.20 L
299-W22-40	12/15/94	B00FV8	19.00 BL		12000.00	
299-W22-41	12/15/94	B00FT8		19000.00		2.00 L
299-W22-41	12/15/94	B00FT9	18.00 BL		19000.00	
299-W22-42	12/15/94	B00FV0		47000.00		.72 U
299-W22-42	12/15/94	B00FV1	22.00 B		48000.00	
299-W22-43	12/15/94	B00FV2		11000.00		11.00
299-W22-43	12/15/94	B00FV6	16.00 BL		11000.00	

Well Name	Collection Date	Sample Number	FMANGAN 34/ppb 1/50s	NICKEL 34/ppb 16/.	FNICKEL 34/ppb 16/.	NITRATE 124/ppb 96/45000
299-W22-23	12/15/94	B00FT6		950.00		300.00 a
299-W22-23	12/15/94	B00FT7	480.00		22.00 L	
299-W22-40	12/15/94	B00037				25000.00 DA
299-W22-40	12/15/94	B00FV7		13.00 U		
299-W22-40	12/15/94	B00FV8	.72 U		22.00 L	
299-W22-41	12/15/94	B00FT8		14.00 L		130000.00 DA
299-W22-41	12/15/94	B00FT9	.72 U		13.00 U	
299-W22-42	12/15/94	B00FV0		17.00 L		520000.00 DA
299-W22-42	12/15/94	B00FV1	.72 U		13.00 U	
299-W22-43	12/15/94	B00FV2		60.00		16000.00 DA
299-W22-43	12/15/94	B00FV6	.85 L		16.00 L	

Well Name	Collection Date	Sample Number	POTASUM 34/ppb 890/.	FPOTASS 34/ppb 890/.	SODIUM 34/ppb 150/.	FSODIUM 34/ppb 150/.
299-W22-23	12/15/94	B00FT6	3800.00		28000.00 BA	
299-W22-23	12/15/94	B00FT7		3000.00		26000.00 BA
299-W22-40	12/15/94	B00FV7	4200.00		22000.00 BA	
299-W22-40	12/15/94	B00FV8		4200.00		22000.00 BA
299-W22-41	12/15/94	B00FT8	4100.00		23000.00 BA	
299-W22-41	12/15/94	B00FT9		4200.00		24000.00 BA
299-W22-42	12/15/94	B00FV0	7500.00		33000.00 BA	
299-W22-42	12/15/94	B00FV1		7600.00		34000.00 BA
299-W22-43	12/15/94	B00FV2	4100.00		23000.00 BA	
299-W22-43	12/15/94	B00FV6		4000.00		23000.00 BA

Table 11-4. Constituents with at Least One Detected Value for the 216-U-12 Crib
Data for Reporting Period October 1 through December 31, 1994.
(sheet 4 of 4)

Well Name	Collection Date	Sample Number	SULFATE 124/ppb 89/250000s	TC-99 143/pCi/L ./900	TRICENE 25/ppb .043/5	TRITIUM 142/pCi/L ./20000
299-W22-23	9/22/94	B0C2K8				28900.00
299-W22-23	12/15/94	B00FT6	7300.00	-.34 U		27900.00
299-W22-40	9/23/94	B0C2L3				1030.00
299-W22-40	12/15/94	B00037	32000.00 D		.16 L	1630.00
299-W22-40	12/15/94	B00FV7		20.40		
299-W22-41	9/23/94	B0C2L8				1250.00
299-W22-41	12/15/94	B00FT8	32000.00 D	102.00		1620.00
299-W22-42	9/23/94	B0C2H3				15500.00
299-W22-42	12/15/94	B00FV0	31000.00 D	219.00		15900.00
299-W22-43	9/22/94	B0C2H8				1460.00
299-W22-43	12/15/94	B00FV2	29000.00 D	19.10		2030.00

Well Name	Collection Date	Sample Number	TURBID 126/NTU .016/.	U-234 148/pCi/L ./.	U-235 148/pCi/L ./.	U-238 148/pCi/L ./.
299-W22-23	12/15/94	B00FT6	290.00 Q	.31	.08	.13
299-W22-40	12/15/94	B00FV7	1.10 Q	1.98	.07	1.46
299-W22-41	12/15/94	B00FT8	1.20 Q	-.02 U	-.01 U	-.00 U
299-W22-42	12/15/94	B00FV0	1.10 Q	2.13	.05	1.54
299-W22-43	12/15/94	B00FV2	1.20 Q	1.10	.04	.85

Well Name	Collection Date	Sample Number	VANADIUM 34/ppb 6.4/.	FVANADI 34/ppb 6.4/.	ZINC 34/ppb 4.4/5000s	FZINC 34/ppb 4.4/5000s
299-W22-23	12/15/94	B00FT6	9.10 L		20.00	
299-W22-23	12/15/94	B00FT7		6.60 U		6.30 U
299-W22-40	12/15/94	B00FV7	30.00		6.30 U	
299-W22-40	12/15/94	B00FV8		29.00 L		6.30 U
299-W22-41	12/15/94	B00FT8	23.00 L		6.30 U	
299-W22-41	12/15/94	B00FT9		25.00 L		6.30 U
299-W22-42	12/15/94	B00FV0	17.00 L		6.30 U	
299-W22-42	12/15/94	B00FV1		17.00 L		6.30 U
299-W22-43	12/15/94	B00FV2	27.00 L		6.30 U	
299-W22-43	12/15/94	B00FV6		29.00 L		6.30 U

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 October 1 through December 31, 1994.
(sheet 1 of 1)

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 110/.	TOX ppb 5/.
299-W22-23	12/15/94	B00FT6	261	240	7.64		600 LB	8.8
299-W22-40	12/15/94	B00037		390				
		B00FV7	595		7.16		300 LB	10.4
299-W22-41	12/15/94	B00FT8	626	590	7.57		400 LB	10.3
299-W22-42	12/15/94	B00FV0	1308	1300	6.51		300 LB	7.5
299-W22-43	12/15/94	B00FV2	367	360	7.48		300 LB	15.2
		B00FV3	366		7.48		300 LB	11.9
		B00FV4	367		7.49		200 LB	10.1
		B00FV5	366		7.49		300 LB	13.1

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

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12.0 LIQUID EFFLUENT RETENTION FACILITY

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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 spent nonhalogenated solvents (F003 and F005, WAC 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. 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. Well 299-E26-11 was inadvertently skipped during the fourth quarter. Water level measurements for this well will be taken during the next scheduled sampling event. The water level in well 299-E26-9 has been below the level where conventional equipment could operate properly. However, recently, a slight rise in water level has been sufficient to allow for conventional sampling.

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, 4th Qtr 1994
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
LERF, Fourth Quarter 1994.

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
299-E26-10	12/14/94	199.51	401.96	122.52
299-E26-9	12/14/94	200.91	401.98	122.52
299-E35-2	12/14/94	200.11	402.25	122.61

- 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. Elevations marked with an '*' were measured at the time of sampling.
 4. Elevation marked with a '+' are outside of the expected range, and are suspected of error.

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13.0 2101-M POND

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Westinghouse Hanford Company

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, Basalt Waste Isolation Project 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; they 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 (299-E18-1) and three downgradient (299-E18-2, 299-E18-3, and 299-E18-4) wells 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). 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 the year. It is anticipated that no further groundwater monitoring activities will be conducted at this location after clean-closure is certified, except for sampling of well 299-E18-1 in support of the 216-B-3 Pond System.

13.2 WATER LEVEL DATA

Water level measurements were performed in the October through December 1994 period for all four wells. The data are presented in Table 13-2. These measurements include routine monthly 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 groundwater sampling was conducted for the fourth quarter of 1994 on December 1, 1994, for the monitoring wells at 2101-M Pond. All available water chemistry data for this quarter 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. Well 299-E18-4 was also sampled on October 19, 1994, for verification of a TOX exceedance associated with sampling conducted in December 1993. Laboratory results associated with the verification samples were below the critical mean, indicating that the previous exceedance probably does not reflect an impact of 2101-M Pond on groundwater quality. 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 (Thornton 1995).

Unfiltered chromium concentrations for well 299-E18-4 and unfiltered iron concentrations for 299-E18-1 and 299-E18-4 were above the DWSs, but unfiltered values for these metals were much lower and below the DWSs. Turbidity values slightly higher than 3 NTUs were also reported for these wells. This suggests that the higher metal concentrations associated with the unfiltered samples are related to the presence of solid debris incorporated into the samples (e.g., sediment particles or corrosion products).

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

H9412002.1

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, 4th Qtr 1994
E18-1	Upgradient	Hanford/Ringold: Water Table	Quarterly ^b	12/01/94
E18-2	Downgradient	Hanford/Ringold: Water Table	Semiannually	12/01/94
E18-3	Downgradient	Hanford/Ringold: Water Table	Semiannually	12/01/94
E18-4	Downgradient	Hanford/Ringold: Water Table	Semiannually	12/01/94

^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
2101-M Pond - Fourth Quarter 1994.

Well	Date	Depth to water (ft)	Water level elevation above ms1	
			(ft)	(m)
299-E18-1	10/27/94	318.89	401.41	122.35
	11/28/94	318.85	401.45	122.36
	12/01/94	318.99	401.31*	122.32
	12/15/94	318.67	401.63	122.42
299-E18-2	10/27/94	319.96	401.47	122.37
	11/28/94	320.07	401.36	122.33
	12/01/94	320.06	401.37*	122.34
	12/15/94	319.94	401.49	122.37
299-E18-3	10/27/94	320.59	401.48	122.37
	11/28/94	320.56	401.51	122.38
	12/01/94	320.81	401.26*	122.30
	12/15/94	320.54	401.53	122.39
299-E18-4	10/19/94	319.65	401.92*	122.51
	10/27/94	320.09	401.48	122.37
	11/28/94	320.03	401.54	122.39
	12/01/94	320.00	401.57*	122.40
	12/15/94	320.04	401.53	122.39

- 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 for 299-E18-1, +0.22 ft for 299-E18-2, +0.03 ft for 299-E18-3, and +0.0 ft for 299-E18-4 (Chamness et al. 1990).
2. Depth-to-water values are transcribed from field records.
3. Elevations marked with an '*' were measured at the time of sampling.
4. Elevation 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 October 1 through December 31, 1994.
(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	94	Conductivity, field	umhos		1			20	20	
CONDUCT	73	Conductivity, lab	umhos					4	4	
TOC		Total Organic Carbon	ppb		110			16	13	
TOX		Total Organic Halogen	ppb		5			19	14	
PH	93	pH, field	pH		.01	6.5-8.5	EPAS	20	20	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 Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
ARSENIC		Arsenic	ppb		2.8	50	EPA	4	3	0
FARSENIC		Arsenic, filtered	ppb		2.8	50	EPA	4	3	0
BARIUM		Barium	ppb		.59	1000	EPAI	4	4	0
FBARIUM		Barium, filtered	ppb		.59	1000	EPAI	4	4	0
CADMIUM		Cadmium	ppb		3.3	10	EPAI	4	0	0
FCADMIUM		Cadmium, filtered	ppb		3.3	10	EPAI	4	0	0
CHROMIUM		Chromium	ppb		4.5	50	EPAI	4	4	1
FCHROMIUM		Chromium, filtered	ppb		4.5	50	EPAI	4	2	0
FLUORIDE		Fluoride	ppb		36	1400	EPAI	4	4	0
ALPHA		Gross alpha	pCi/L			15	EPA	4	3	0
NITRATE		Nitrate	ppb		11	45000	EPA	4	4	0
SELENIUM		Selenium	ppb		.65	10	EPAI	4	1	0
FSELENIUM		Selenium, filtered	ppb		.65	10	EPAI	4	1	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORIDE		Chloride	ppb		14	250000	EPAS	4	4	0
IRON		Iron	ppb		5.24	300	EPAS	4	4	2
FIRON		Iron, filtered	ppb		5.24	300	EPAS	4	4	0
MANGANESE		Manganese	ppb		.72	50	EPAS	4	4	0
FMANGANESE		Manganese, filtered	ppb		.72	50	EPAS	4	4	0
LPHENOL	19	Phenol	ppb		.54			1	0	
LPHENOL	30	Phenol	ppb		.31			4	0	
SODIUM		Sodium	ppb		61			4	4	
FSODIUM		Sodium, filtered	ppb		61			4	4	
SULFATE		Sulfate	ppb		37	250000	EPAS	4	4	0

Table 13-3. Constituent List and Summary of Results for the 2101-M Pond
Data for Reporting Period October 1 through December 31, 1994.
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SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name	Full	Units	Lab MDL	DMS Limit	Agency	Number of Samples		
								Total	>MDL	>DMS
246-trp		2,4,6-Trichlorophenol		ppb	1.3			4	0	
24-dchp	19	2,4-Dichlorophenol		ppb	4			1	0	
24-dchp	30	2,4-Dichlorophenol		ppb	1.3			4	0	
DIMPHEH		2,4-Dimethylphenol		ppb	1.2			4	0	
DIMPHEH		2,4-Dinitrophenol		ppb	3			4	0	
26-dchp		2,6-Dichlorophenol		ppb	1.4			4	0	
CHLPHEN		2-Chlorophenol		ppb	1.6			4	0	
2METHPH		2-Methylphenol		ppb	5.1			1	0	
2NITPH	19	2-Nitrophenol		ppb	1.9			1	0	
2NITPH	30	2-Nitrophenol		ppb	1.3			4	0	
BUTDINP		2-sec-Butyl-4,6-dinitrophenol (DN)		ppb	1.3			4	0	
46DNZMP		4,6-Dinitro-2-methylphenol		ppb	1.3			4	0	
CHLCRES		4-Chloro-3-methylphenol		ppb	1.3			4	0	
4METHPH		4-Methylphenol		ppb	7			1	0	
4NITPHEN		4-Nitrophenol		ppb	3			4	0	
ALUMINUM		Aluminum		ppb	26			4	0	
FALUMIN		Aluminum, filtered		ppb	26			4	0	
ANTIMONY		Antimony		ppb	62			4	0	
FANTIMO		Antimony, filtered		ppb	62			4	0	
BENZOTN		Benzothiazole		ppb	1.3			1	0	
BERYLUM		Beryllium		ppb	.17			4	0	
FBERYLL		Beryllium, filtered		ppb	.17			4	0	
BISZEPH		Bis(2-ethylhexyl) phthalate		ppb	5.3			1	0	
BRONIDE		Bronide		ppb	100			4	0	
CALCIUM		Calcium		ppb	34			4	4	
FCALCIU		Calcium, filtered		ppb	34			4	4	
COBALT		Cobalt		ppb	5.9			4	0	
FCOBALT		Cobalt, filtered		ppb	5.9			4	0	
COLIFORM		Coliforms		COL	1	1	EPAI	4	0	0
COPPER		Copper		ppb	4.1	1000	EPAS	4	1	0
FCOPPER		Copper, filtered		ppb	4.1	1000	EPAS	4	2	0
CRESOLS		Cresols (methylphenols)		ppb	4.8			4	0	
DECANE		Decane		ppb	1.9			1	0	
DODECAN		Dodecane		ppb	1.1			1	0	
BETA		Gross beta		pCi/L				4	4	
MAGNES		Magnesium		ppb	23			4	4	
FMAGNES		Magnesium, filtered		ppb	23			4	4	
NAPHTHA		Naphthalene		ppb	1.2			1	0	
NICKEL		Nickel		ppb	13			4	3	
FNICKEL		Nickel, filtered		ppb	13			4	0	
NITRITE		Nitrite		ppb	18	1000	EPA	4	0	0
PENTCHP	19	Pentachlorophenol		ppb	8.3	1	EPA	1	0	1*
PENTCHP	30	Pentachlorophenol		ppb	1.3	1	EPA	4	0	4*
PHOSPHA		Phosphate		ppb	82			4	0	
POTASUM		Potassium		ppb	850			4	4	
FPOTASS		Potassium, filtered		ppb	850			4	4	
SILVER		Silver		ppb	3.6	50	EPAI	4	0	0
FSILVER		Silver, filtered		ppb	3.6	50	EPAI	4	0	0
TETPHNL		Tetrachlorophenols		ppb	1.5			4	0	
TETRADE		Tetradecane		ppb	1.4			1	0	
TIN		Tin		ppb	69			4	0	
FTIN		Tin, filtered		ppb	69			4	0	
TRIBUTPH		Tributyl Phosphate		ppb	1.1			1	0	
TRIPHNL		Trichlorophenols		ppb	1.7			4	0	
TDICHPH		Tris-2-chloroethyl phosphate		ppb	.61			1	0	
TRITIUM		Tritium		pCi/L		20000	EPA	1	1	0

Table 13-3. Constituent List and Summary of Results for the 2101-M Pond
Data for Reporting Period October 1 through December 31, 1994.
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Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
TURBID		Turbidity	NTU		.016			4	4	
URANIUM		Uranium	ppb					4	4	
VANADIUM		Vanadium	ppb		6.6			4	4	
FVANADI		Vanadium, filtered	ppb		6.6			4	4	
ZINC		Zinc	ppb		6.3	5000	EPAS	4	0	0
FZINC		Zinc, filtered	ppb		6.3	5000	EPAS	4	0	0
MCRESOL		m-Cresol	ppb		2.2			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 October 1 through December 31, 1994.
(sheet 1 of 3)

Well Name	Collection Date	Sample Number	ARSENIC 43/ppb .64/50	PARSENIC 43/ppb .64/50	BARIUM 34/ppb 1.3/1000i	FBARIUM 34/ppb 1.3/1000i
299-E18-1	12/01/94	B00C27	2.80 U		26.00	
299-E18-1	12/01/94	B00D01		2.80 U		25.00
299-E18-2	12/01/94	B00D02	5.40		53.00	
299-E18-2	12/01/94	B00D06		5.30		52.00
299-E18-3	12/01/94	B00D08	11.00		53.00	
299-E18-3	12/01/94	B00D12		10.00		52.00
299-E18-4	12/01/94	B00D13	12.00		56.00	
299-E18-4	12/01/94	B00D17		11.00		56.00

Well Name	Collection Date	Sample Number	CALCIUM 34/ppb 47/.	FCALCIU 34/ppb 47/.	CHLORID 124/ppb 71/250000s	CHROMIUM 34/ppb 11/501
299-E18-1	12/01/94	B00C27	49000.00		7500.00	46.00
299-E18-1	12/01/94	B00D01		49000.00		
299-E18-2	12/01/94	B00D02	29000.00		9200.00	42.00
299-E18-2	12/01/94	B00D06		29000.00		
299-E18-3	12/01/94	B00D08	27000.00		10000.00 D	32.00
299-E18-3	12/01/94	B00D12		26000.00		
299-E18-4	12/01/94	B00D13	29000.00		8800.00	52.00
299-E18-4	12/01/94	B00D17		29000.00		

Well Name	Collection Date	Sample Number	FCROMI 34/ppb 11/501	COPPER 34/ppb 2.6/1000s	FCOPPER 34/ppb 2.6/1000s	FLUORID 124/ppb 51/1400i
299-E18-1	12/01/94	B00C27		4.10 U		600.00
299-E18-1	12/01/94	B00D01	9.30 L		4.10 U	
299-E18-2	12/01/94	B00D02		4.30 LB		700.00
299-E18-2	12/01/94	B00D06	4.50 U		7.40 LB	
299-E18-3	12/01/94	B00D08		4.10 U		400.00
299-E18-3	12/01/94	B00D12	4.50 U		4.10 U	
299-E18-4	12/01/94	B00D13		4.10 U		500.00
299-E18-4	12/01/94	B00D17	5.20 L		4.80 LB	

Well Name	Collection Date	Sample Number	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.	IRON 34/ppb 18/300s	FIIRON 34/ppb 18/300s
299-E18-1	12/01/94	B00C27	4.33	8.93	310.00 B	
299-E18-1	12/01/94	B00D01				17.00 LB
299-E18-2	12/01/94	B00D02	.65 U	3.21	200.00 B	
299-E18-2	12/01/94	B00D06				18.00 LB
299-E18-3	12/01/94	B00D08	1.09	4.14	170.00 B	
299-E18-3	12/01/94	B00D12				24.00 B
299-E18-4	12/01/94	B00D13	2.79	7.74	330.00 B	
299-E18-4	12/01/94	B00D17				42.00 B

Table 13-4. Constituents with at Least One Detected Value for the 2101-M Pond
Data for Reporting Period October 1 through December 31, 1994.
(sheet 2 of 3)

Well Name	Collection Date	Sample Number	MAGNES 34/ppb 25/.	FMAGNES 34/ppb 25/.	MANGESE 34/ppb 1/50s	FMANGAN 34/ppb 1/50s
299-E18-1	12/01/94	B00C27	13000.00		8.00 LB	
299-E18-1	12/01/94	B00D01		13000.00		3.20 LB
299-E18-2	12/01/94	B00D02	8000.00		4.70 LB	
299-E18-2	12/01/94	B00D06		8000.00		1.60 LB
299-E18-3	12/01/94	B00D08	7700.00		4.40 LB	
299-E18-3	12/01/94	B00D12		7600.00		2.30 LB
299-E18-4	12/01/94	B00D13	7600.00		7.00 LB	
299-E18-4	12/01/94	B00D17		7500.00		2.60 LB

Well Name	Collection Date	Sample Number	NICKEL 34/ppb 16/.	FNICKEL 34/ppb 16/.	NITRATE 124/ppb 96/45000	POTASUM 34/ppb 890/.
299-E18-1	12/01/94	B00C27	17.00 L		14000.00 D	5500.00
299-E18-1	12/01/94	B00D01		13.00 U		
299-E18-2	12/01/94	B00D02	13.00 U		400.00	4700.00
299-E18-2	12/01/94	B00D06		13.00 U		
299-E18-3	12/01/94	B00D08	20.00 L		600.00	4800.00
299-E18-3	12/01/94	B00D12		13.00 U		
299-E18-4	12/01/94	B00D13	23.00 L		500.00	5200.00
299-E18-4	12/01/94	B00D17		13.00 U		

Well Name	Collection Date	Sample Number	FPOTASS 34/ppb 890/.	SELENIUM 48/ppb 1.4/101	FSELENI 48/ppb 1.4/101	SODIUM 34/ppb 150/.
299-E18-1	12/01/94	B00C27		4.40 L		26000.00 B
299-E18-1	12/01/94	B00D01	5500.00		4.50 L	
299-E18-2	12/01/94	B00D02		.65 U		14000.00 B
299-E18-2	12/01/94	B00D06	4700.00		.65 U	
299-E18-3	12/01/94	B00D08		.65 U		6100.00 B
299-E18-3	12/01/94	B00D12	4900.00		.65 U	
299-E18-4	12/01/94	B00D13		.65 U		11000.00 B
299-E18-4	12/01/94	B00D17	5200.00		.65 U	

Well Name	Collection Date	Sample Number	FSODIUM 34/ppb 150/.	SULFATE 124/ppb 89/250000s	TRITIUM 142/pCi/L ./20000	TURBID 126/NTU .016/.
299-E18-1	12/01/94	B00C27		110000.00 D		3.30
299-E18-1	12/01/94	B00D01	26000.00 B			
299-E18-1	12/01/94	B00D07			12800.00	
299-E18-2	12/01/94	B00D02		25000.00 D		1.50
299-E18-2	12/01/94	B00D06	14000.00 B			
299-E18-3	12/01/94	B00D08		11000.00 D		1.60
299-E18-3	12/01/94	B00D12	5900.00 B			
299-E18-4	12/01/94	B00D13		13000.00 D		3.10
299-E18-4	12/01/94	B00D17	11000.00 B			

Table 13-4. Constituents with at Least One Detected Value for the 2101-M Pond
Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 3)

Well Name	Collection Date	Sample Number	URANIUM 145/ppb -/.	VANADIUM 34/ppb 6.4/.	FLUORIDE 34/ppb 6.4/.
299-E18-1	12/01/94	B00C27	3.77	9.80 L	
299-E18-1	12/01/94	B00D01			11.00 L
299-E18-2	12/01/94	B00D02	2.61	20.00 L	
299-E18-2	12/01/94	B00D06			19.00 L
299-E18-3	12/01/94	B00D08	2.09	30.00	
299-E18-3	12/01/94	B00D12			27.00 L
299-E18-4	12/01/94	B00D13	3.15	29.00 L	
299-E18-4	12/01/94	B00D17			26.00 L

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 October 1 through December 31, 1994.

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 110/.	TOX ppb 5/.
299-E18-1	12/01/94	B00C27	457	470	8.23	8.30	110 U	5.1
		B00C28	457		8.22		110 U	5.0 U
		B00C29	459		8.21		200 L	5.0 U
		B00C00	459		8.20		110 U	5.0 U
299-E18-2	12/01/94	B00C02	291	280	8.31	8.10	110 L	12.2
		B00C03	293		8.41		200 L	5.0 U
		B00C04	291		8.31		130 L	22.3
		B00C05	291		8.25		120 L	19.8
299-E18-3	12/01/94	B00C08	236	230	8.04	8.30	200 L	9.2
		B00C09	233		8.07		200 L	8.3
		B00C10	232		8.06		300 L	14.8
		B00C11	233		8.07		200 L	9.4
299-E18-4	10/19/94	B00C15	267		8.11			
		B00C16	264		8.10			
		B00C17	263		8.10			
		B00C18	266		8.10			
		B00C19						8.1
		B00C20						7.5
		B00C21						5.0 U
		B00C13	267	250	8.05	8.20	150 L	18.6
	12/01/94	B00C14	261		8.05		200 L	7.9
		B00C15	261		8.05		300 L	14.2
		B00C16	260		8.05		200 L	21.9

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 LLWMA-1, LLWMA-2, LLWMA-4, and LLWMA-5. Background values are being reestablished for LLWMA-3 because recently installed upgradient wells have significantly changed the monitoring network. Semiannual sampling is being conducted at LLWMA-3 with additional quarterly sampling for CIPs at the shallow upgradient wells.

A carbon tetrachloride pump-and-treat demonstration project is continuing this quarter 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 the 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 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 as scheduled at the LLBG. 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 14-26. These tables also contain any previously unreported data and data that are being rereported because of changes in the data qualifier flags.

Additional 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 are in support of groundwater quality assessment at the T and TX-TY SST farms. Iodine-129 samples were also collected at some wells in LLWMA-2 for the B-63 Trench RCRA program. Results for these analyses are reported in the data tables in this section.

The replicate averages for field pH were below the critical range established for LLWMA-4 in upgradient well 299-W15-16. Resampling was not scheduled because the laboratory value was within the critical range. RADEs have been initiated on the field results. The replicate averages of other indicator parameters did not exceed the critical means at LLWMA-1, LLWMA-2, or LLWMA-4.

Analytical results flagged with a 'Q' are associated with suspect QC data. Data qualifier 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 14-27 through 14-30 list the water quality standards that were exceeded for the data reported this quarter. Unfiltered metals accounted for most of the entries in these tables. Standards were not exceeded for the related filtered samples.

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.

RBM\122093-H

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

RBM\122093-J

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	Hydrogeologic unit	Sample interval	Sample date, 4th Qtr 1994
E28-26 ⁸⁷	Upgradient	Hanford: Water Table	Semiannually	12/12/94
E28-27 ⁸⁷	Upgradient	Hanford: Water Table	Semiannually	12/12/94
E28-28 ⁹⁰	Upgradient	Hanford: Water Table	Semiannually	12/12/94
E32-2 ⁸⁷	Downgradient	Hanford: Water Table	Semiannually	12/13/94
E32-3 ⁸⁷	Downgradient	Hanford: Water Table	Semiannually	12/13/94
E32-4 ⁸⁷	Upgradient	Hanford: Water Table	Semiannually	10/11/94 ^a 12/13/94
E32-5 ⁸⁹	Downgradient	Hanford: Water Table	Semiannually	12/13/94
E32-6 ⁹¹	Downgradient	Hanford: Water Table	Semiannually	12/12/94
E32-7 ⁹¹	Downgradient	Hanford: Water Table	Semiannually	12/12/94
E32-8 ⁹¹	Downgradient	Hanford: Water Table	Semiannually	12/12/94
E32-9 ⁹¹	Downgradient	Hanford: Water Table	Semiannually	12/13/94
E32-10 ⁹²	Downgradient	Hanford: Water Table	Semiannually	12/13/94
E33-28 ⁸⁷	Upgradient	Hanford: Water Table	Semiannually	12/12/94
E33-29 ⁸⁷	Upgradient	Hanford: Water Table	Semiannually	12/12/94
E33-30 ⁸⁷	Downgradient	Hanford: Water Table	Semiannually	12/14/94
E33-34 ⁹⁰	Downgradient	Hanford: Water Table	Semiannually	12/14/94
E33-35 ⁹⁰	Upgradient	Hanford: Water Table	Semiannually	12/12/94

Note: Superscript following well number indicates year of installation.
^a 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	Hydrogeologic unit	Sample interval	Sample date, 4th Qtr 1994
E27-8 ⁸⁷	Downgradient	Hanford: Water Table	Semiannually	11/17/94
E27-9 ⁸⁷	Downgradient	Hanford: Water Table	Semiannually	11/17/94
E27-10 ⁸⁷	Upgradient	Hanford: Water Table	Semiannually	12/13/94
E27-11 ⁸⁹	Downgradient	Hanford: Water Table	Semiannually	11/18/94
E27-17 ⁹¹	Downgradient	Hanford: Water Table	Semiannually	11/17/94
E34-2 ⁸⁷	Downgradient	Hanford: Water Table	Semiannually	11/21/94
E34-3 ⁸⁷	Upgradient	Hanford: Water Table	Semiannually	11/21/94
E34-4 ⁸⁷	Upgradient	Hanford: Water Table	NA	Dry
E34-5 ⁸⁷	Upgradient	Hanford: Water Table	Semiannually	11/18/94
E34-6 ⁸⁷	Upgradient	Hanford: Water Table	NA	Dry
E34-7 ⁸⁹	Upgradient	Hanford: Water Table	Semiannually	11/18/94
E34-9 ⁹¹	Downgradient	Hanford: Water Table	Semiannually	11/28/94
E34-10 ⁹¹	Downgradient	Hanford: Water Table	Semiannually	11/21/94
E34-11 ⁹²	Downgradient	Hanford: Water Table	Semiannually	11/28/94
E34-12 ⁹²	Downgradient	Hanford: Water Table	Semiannually	11/28/94
E35-1 ⁸⁹	Upgradient	Hanford: Water Table	NA	Dry

Notes: Superscript following well number indicates year of installation.
NA = not available.

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

Well no. (299-)	Relative position	Hydrogeologic unit	Sample interval	Sample date, 4th Qtr 1994
W6-2 ^{87m}	Downgradient	Ringold: Water Table	Semiannually	11/30/94 ^b 12/14/94 ^c
W7-1 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	Not Sampled
W7-2 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	Not Sampled
W7-3 ⁸⁷	Downgradient	Ringold: Deep	Semiannually	Not Sampled
W7-4 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	Not Sampled
W7-5 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	Not Sampled
W7-6 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	Not Sampled
W7-7 ⁸⁹	Downgradient	Ringold: Water Table	Semiannually	Not Sampled
W7-8 ⁸⁹	Downgradient	Ringold: Water Table	Semiannually	Not Sampled
W7-9 ⁹⁰	Downgradient	Ringold: Water Table	Semiannually	Not Sampled
W7-10 ^{90m}	Downgradient	Ringold: Water Table	Semiannually	Not Sampled
W7-11 ⁹¹	Downgradient	Ringold: Water Table	Semiannually	Not Sampled
W7-12 ⁹¹	Downgradient	Ringold: Water Table	Semiannually	Not Sampled
W8-1 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	11/30/94 ^b
W9-1 ⁸⁷	Upgradient	Ringold: Water Table	Quarterly ^a	12/14/94
W10-13 ⁸⁷	Upgradient	Ringold: Water Table	Quarterly ^a	12/14/94
W10-14 ⁸⁷	Upgradient	Ringold: Deep	Semiannually	Not Sampled
W10-19 ⁹²	Upgradient	Ringold: Water Table	Quarterly ^a	12/14/94
W10-20 ⁹³	Upgradient	Ringold: Water Table	Quarterly ^a	12/15/94
W10-21 ⁹³	Upgradient	Ringold: Water Table	Quarterly	12/14/94

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

^a Semiannual sampling with additional CIP sampling quarterly.

^m Well monitors multiple LLWMA's.

^b Resampling for field indicator parameters.

^c Sampled for Single Shell Tanks.

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

Well no. (299-)	Relative position	Hydrogeologic unit	Sample interval	Sample date, 4th Qtr 1994
W15-15 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	11/10/94
W15-16 ⁸⁷	Upgradient	Ringold: Water Table	Semiannually	11/08/94
W15-17 ⁸⁷	Upgradient	Ringold: Deep	Semiannually	11/09/94
W15-18 ⁸⁷	Upgradient	Ringold: Water Table	Semiannually	11/08/94
W15-19 ⁸⁹	Downgradient	Ringold: Water Table	Semiannually	11/30/94
W15-20 ⁸⁹	Downgradient	Ringold: Water Table	Semiannually	11/11/94
W15-23 ⁹⁰	Downgradient	Ringold: Water Table	Semiannually	11/11/94
W15-24 ⁸⁹	Downgradient	Ringold: Water Table	Semiannually	11/10/94
W18-21 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	11/28/94
W18-22 ⁸⁷	Downgradient	Ringold: Deep	Semiannually	11/29/94
W18-23 ⁸⁷	Downgradient	Ringold: Water Table	Semiannually	11/11/94
W18-24 ⁸⁷	Upgradient	Ringold: Water Table	Semiannually	11/08/94
W18-26 ⁸⁹	Downgradient	Ringold: Water Table	Semiannually	11/28/94
W18-27 ⁹¹	Downgradient	Ringold: Water Table	Semiannually	11/28/94
W18-28 ⁹¹	Downgradient	Ringold: Water Table	Semiannually	11/28/94
W18-29 ⁹¹	Upgradient	Hanford: Perched	Semiannually	Dry
W18-32 ⁹²	Upgradient	Ringold: Water Table	Semiannually	11/09/94

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	Hydrogeologic unit	Sample interval	Sample date, 4th Qtr 1994
W6-2 ^{87m}	Upgradient	Ringold: Water Table	Semiannually	11/30/94 ^b 12/14/94 ^c
W6-3 ⁹¹	Upgradient	Ringold: Deep	Semiannually	Not Sampled
W6-4 ⁹¹	Upgradient	Ringold: Water Table	Semiannually	12/14/94 ^c
W6-5 ⁹¹	Downgradient	Ringold: Water Table	Semiannually	Not Sampled
W6-6 ⁹¹	Downgradient	Ringold: Deep	Semiannually	Not Sampled
W6-7 ⁹¹	Downgradient	Ringold: Water Table	Semiannually	Not Sampled
W6-8 ⁹¹	Downgradient	Ringold: Water Table	Semiannually	Not Sampled
W6-9 ⁹²	Upgradient	Ringold: Water Table	Semiannually	12/13/94 ^c
W6-10 ⁹²	Upgradient	Ringold: Water Table	Semiannually	12/14/94 ^c
W6-11 ⁹²	Downgradient	Ringold: Water Table	Semiannually	Not Sampled
W6-12 ⁹²	Downgradient	Ringold: Water Table	Semiannually	Not Sampled
W7-10 ^{90m}	Upgradient	Ringold: Water Table	Semiannually	Not Sampled
W11-31 ⁹²	Upgradient	Ringold: Water Table	Semiannually	12/14/94 ^c

Notes: Superscript following well number indicates year of installation.

Deep indicates well monitors bottom of the unconfined aquifer.

^m Well monitors multiple LLWMAs.

^b Resampling for field indicator parameters.

^c Sampled for Single Shell Tanks.

Table 14-7. RCRA Water Level Measurement Report
 LLWMA 1, Fourth Quarter 1994.
 (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	12/12/94	285.95	401.31*	122.32
	12/14/94	285.78	401.48	122.37
299-E28-27	12/12/94	279.08	401.50*	122.38
	12/14/94	278.93	401.65	122.42
299-E28-28	12/12/94	285.50	401.05*	122.24
	12/14/94	285.25	401.30	122.32
299-E32-10	12/13/94	236.70	401.18*	122.28
	12/14/94	236.36	401.52	122.38
299-E32-2	12/13/94	269.15	400.91*	122.20
	12/14/94	268.82	401.24	122.30
299-E32-3	12/13/94	275.31	401.20*	122.29
	12/14/94	275.22	401.29	122.31
299-E32-4	10/11/94	284.79	401.09*	122.25
	12/13/94	284.93	400.95*	122.21
	12/14/94	284.53	401.35+	122.33
299-E32-5	12/13/94	281.22	400.92*+	122.20
	12/14/94	280.50	401.64	122.42
299-E32-6	12/12/94	265.95	401.50*	122.38
	12/14/94	265.90	401.55	122.39
299-E32-7	12/12/94	256.99	401.38*	122.34
	12/14/94	256.91	401.46	122.37
299-E32-8	12/12/94	244.18	401.36*	122.33
	12/14/94	244.15	401.39	122.34
299-E32-9	12/13/94	241.96	401.37*	122.34
	12/14/94	241.33	402.00+	122.53
299-E33-28	12/12/94	262.98	401.25*	122.30
	12/14/94	262.85	401.38	122.34

Table 14-7. RCRA Water Level Measurement Report
 LLWMA 1, Fourth Quarter 1994.
 (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	12/12/94	272.46	401.31*	122.32
	12/14/94	272.38	401.39	122.34
299-E33-30	12/14/94	262.35	401.35*	122.33
	12/14/94	262.31	401.39	122.34
299-E33-34	12/14/94	231.80	401.77*	122.46
	12/14/94	231.45	402.12+	122.57
299-E33-35	12/12/94	242.01	401.00*	122.22
	12/14/94	241.68	401.33+	122.33

- 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. Elevations marked with an '*' were measured at the time of sampling.
4. Elevations marked with a '+' are outside of the expected range, and are suspected of error.

Table 14-8. RCRA Water Level Measurement Report
 LLNMA 2, Fourth Quarter 1994.
 (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	12/13/94	223.00	401.47*	122.37
	12/14/94	225.50	398.97+	121.61
299-E27-11	11/18/94	241.89	401.40*	122.35
	12/14/94	241.88	401.41	122.35
299-E27-17	11/18/94	233.00	401.72*	122.44
	12/14/94	232.94	401.78	122.46
299-E27-8	11/17/94	236.73	401.10*	122.26
	12/14/94	236.28	401.55	122.39
299-E27-9	11/17/94	227.66	401.55*	122.39
	12/14/94	227.50	401.71	122.44
299-E34-10	11/21/94	238.10	401.67*	122.43
	12/14/94	238.01	401.76	122.46
299-E34-11	11/28/94	216.27	401.68*	122.43
	12/14/94	216.21	401.74	122.45
299-E34-12	11/28/94	237.28	401.55*	122.39
	12/14/94	237.24	401.59	122.40
299-E34-2	11/21/94	229.30	401.50*	122.38
	12/13/94	229.25	401.55	122.39
299-E34-3	11/21/94	209.75	401.77*	122.46
	12/14/94	209.81	401.71	122.44
299-E34-5	11/18/94	190.02	400.77*+	122.15
	12/13/94	188.13	402.66	122.73
299-E34-9	11/28/94	227.08	401.61*	122.41
	12/14/94	226.98	401.71	122.44

Table 14-8. RCRA Water Level Measurement Report
LLWMA 2, Fourth Quarter 1994.
(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. Elevations marked with an '*' were measured at the time of sampling.
 4. Elevations marked with a '+' are outside of the expected range, and are suspected of error.

Table 14-9. RCRA Water Level Measurement Report
 LLWMA 3, Fourth Quarter 1994.
 (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	12/14/94	237.77	461.27*+	140.60
299-W10-19	12/14/94	223.74	459.25+	139.98
	12/14/94	223.46	459.53*	140.06
299-W6-2	11/30/94	235.86	456.59*	139.17
	12/14/94	236.02	456.43	139.12
	12/14/94	235.77	456.68*	139.20
299-W7-1	12/14/94	233.49	457.22	139.36
299-W7-10	12/14/94	233.85	455.81	138.93
299-W7-11	12/14/94	224.54	456.91	139.27
299-W7-12	12/14/94	230.74	457.19	139.35
299-W7-2	12/14/94	219.47	456.12	139.03
299-W7-4	12/14/94	213.87	458.05	139.61
299-W7-5	12/14/94	217.41	455.64	138.88
299-W7-6	12/14/94	223.14	455.50	138.84
299-W7-7	12/14/94	219.26	455.68	138.89
299-W7-9	12/14/94	234.38	457.71	139.51
299-W8-1	11/30/94	243.48	457.85*	139.55
	12/14/94	243.62	457.71	139.51
299-W9-1	12/14/94	277.41	460.32*	140.31
299-W10-20	12/14/94	227.56	459.98	140.20
	12/15/94	222.43	465.11*+	141.77
299-W10-21	12/14/94	215.69	458.37*	139.71

Table 14-9. RCRA Water Level Measurement Report
 LLWMA 3, Fourth Quarter 1994.
 (sheet 2 of 2)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
LLWMA-3 Wells Monitoring the Bottom of the Unconfined Aquifer				
299-W10-14	12/14/94	239.04	460.39	140.33
299-W7-3	12/14/94	221.03	455.11	138.72

- 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. Elevations marked with an '*' were measured at the time of sampling.
 4. Elevations marked with a '+' are outside of the expected range, and are suspected of error.

Table 14-10. RCRA Water Level Measurement Report
 LLWMA 4, Fourth Quarter 1994.
 (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	11/10/94	236.53	461.43*	140.64
299-W15-16	11/08/94	222.24	462.65*	141.02
	12/14/94	222.63	462.26	140.90
299-W15-18	11/08/94	223.40	462.31*	140.91
	12/14/94	223.57	462.14	140.86
299-W15-19	11/30/94	229.62	461.98*	140.81
	12/14/94	229.31	462.29+	140.91
299-W15-20	11/11/94	237.30	461.06*+	140.53
	12/14/94	236.57	461.79	140.75
299-W15-23	11/11/94	237.89	461.60*	140.70
	12/14/94	237.74	461.75	140.74
299-W15-24	11/10/94	237.63	461.74*	140.74
	12/14/94	237.67	461.70	140.73
299-W18-21	11/28/94	207.22	461.40*	140.63
	12/14/94	206.90	461.72	140.73
299-W18-23	11/11/94	234.96	461.85*	140.77
	12/14/94	235.05	461.76	140.74
299-W18-26	11/28/94	237.49	461.56*	140.68
	12/14/94	237.26	461.79	140.75
299-W18-27	11/28/94	228.61	461.64*	140.71
	12/14/94	228.45	461.80	140.76
299-W18-28	11/28/94	218.25	461.74*	140.74
	12/14/94	217.98	462.01	140.82
299-W18-32	11/09/94	139.18	537.47*+	163.82
	12/14/94	214.57	462.08	140.84

Table 14-10. RCRA Water Level Measurement Report
 LLWMA 4, Fourth Quarter 1994.
 (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	11/09/94	221.86	462.78*+	141.06
	12/14/94	222.58	462.06	140.84
299-W18-22	11/29/94	207.16	461.33*	140.61
	12/14/94	207.20	461.29	140.60

- 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. Elevations marked with an '*' were measured at the time of sampling.
 4. Elevations marked with a '+' are outside of the expected range, and are suspected of error.

Table 14-11. RCRA Water Level Measurement Report
LLWMA 5, Fourth Quarter 1994.

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	12/13/94	250.56	456.30	139.08
	12/14/94	250.09	456.77*+	139.22
299-W6-10	12/14/94	258.92	453.56	138.25
	12/14/94	258.92	453.56*	138.25
299-W6-11	12/14/94	249.13	453.73	138.30
299-W6-12	12/14/94	237.71	454.80	138.62
299-W6-2	11/30/94	235.86	456.59*	139.17
	12/14/94	236.02	456.43	139.12
	12/14/94	235.77	456.68*	139.20
299-W6-4	12/14/94	245.16	456.09*	139.02
	12/14/94	245.15	456.10	139.02
299-W6-7	12/14/94	257.37	452.91	138.05
299-W6-9	12/13/94	240.85	455.25*+	138.76
299-W7-10	12/14/94	233.85	455.81	138.93
LLWMA-5 Wells Monitoring the Bottom of the Unconfined Aquifer				
299-W6-3	12/14/94	244.07	455.76	138.92
299-W6-6	12/14/94	257.17	452.82	138.02

- 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. Elevations marked with an '*' were measured at the time of sampling.
4. Elevations 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 October 1 through December 31, 1994.
(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			72	72	
TOC		Total Organic Carbon	ppb		110			72	70	
TOX		Total Organic Halogen	ppb		5			71	24	
FTOX		Total Organic Halogen, filtered	ppb		5			1	0	
PH	93	pH, field	pH		.01	6.5-8.5	EPAS	72	72	2
PH	125	pH, lab	pH			6.5-8.5	EPAS	18	18	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
BARIUM		Barium	ppb		.59	1000	EPAI	17	17	0
FBARIUM		Barium, filtered	ppb		.59	1000	EPAI	17	17	0
CADMIUM		Cadmium	ppb		3.3	10	EPAI	17	0	0
FCADMIUM		Cadmium, filtered	ppb		3.3	10	EPAI	17	0	0
CHROMIUM		Chromium	ppb		4.5	50	EPAI	17	17	4
FCROMIUM		Chromium, filtered	ppb		4.5	50	EPAI	17	11	0
FLUORIDE		Fluoride	ppb		36	1400	EPAI	16	16	0
ALPHA		Gross alpha	pCi/L			15	EPA	16	12	0
MERCURY		Mercury	ppb		.05	2	EPA	17	8	0
FMERCURY		Mercury, filtered	ppb		.05	2	EPA	17	9	0
NITRATE		Nitrate	ppb		11	45000	EPA	16	16	0
RADIUM		Radium	pCi/L			5	EPAI	17	2	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORIDE		Chloride	ppb		14	250000	EPAS	16	16	0
IRON		Iron	ppb		5.24	300	EPAS	17	17	5
FIRON		Iron, filtered	ppb		5.24	300	EPAS	17	17	0
MANGANESE		Manganese	ppb		.72	50	EPAS	17	17	0
FMANGANESE		Manganese, filtered	ppb		.72	50	EPAS	17	17	0
PHENOL		Phenol	ppb		.54			18	0	
SODIUM		Sodium	ppb		61			17	17	
FSODIUM		Sodium, filtered	ppb		61			17	17	
SULFATE		Sulfate	ppb		37	250000	EPAS	16	16	0

Table 14-12. Constituent List and Summary of Results for the Low-Level
Waste Management Area 1 Data for Reporting Period
October 1 through December 31, 1994.
(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
1,1,1-T		1,1,1-Trichloroethane	ppb	.036	200	EPA	17	0	0
1,1,2-T		1,1,2-Trichloroethane	ppb	.078			17	0	
1,1-DIC		1,1-Dichloroethane	ppb	.058			17	0	
1,2-DIC		1,2-Dichloroethane	ppb	.029	5	EPA	17	0	0
1,4-dben		1,4-Dichlorobenzene	ppb	.055	75	EPA	17	0	0
2,4-dcbp		2,4-Dichlorophenol	ppb	4			18	0	
2HETPH		2-Methylphenol	ppb	5.1			18	0	
2NITPH		2-Nitrophenol	ppb	1.9			18	0	
4NETHPH		4-Methylphenol	ppb	7			18	0	
ALUMINUM		Aluminum	ppb	26			17	10	
FALUMIN		Aluminum, filtered	ppb	26			17	3	
ANTIMONY		Antimony	ppb	62			17	0	
FANTIMO		Antimony, filtered	ppb	62			17	0	
BENZENE		Benzene	ppb	.013	5	EPA	17	0	0
BENZOTH		Benzothiazole	ppb	1.3			18	0	
BERYLLIUM		Beryllium	ppb	.17			17	0	
FBERYLL		Beryllium, filtered	ppb	.17			17	0	
BIS2EPH		Bis(2-ethylhexyl) phthalate	ppb	5.3			18	0	
BROMIDE		Bromide	ppb	100			16	1	
CALCIUM		Calcium	ppb	34			17	17	
FCALCIU		Calcium, filtered	ppb	34			17	17	
TETRAHE		Carbon tetrachloride	ppb	.075	5	EPA	17	0	0
CHLFORM		Chloroform	ppb	.041			17	8	
COBALT		Cobalt	ppb	5.9			17	0	
FCOBALT		Cobalt, filtered	ppb	5.9			17	1	
COLIFORM		Coliforms	COL	1	1	EPAL	1	0	0
COPPER		Copper	ppb	4.1	1000	EPAS	17	9	0
FCOPPER		Copper, filtered	ppb	4.1	1000	EPAS	17	4	0
CYANIDE		Cyanide	ppb	1			17	3	
DECANE		Decane	ppb	1.9			18	0	
DODECAN		Dodecane	ppb	1.1			18	0	
ETHBENZ		Ethylbenzene	ppb	.051	700	EPA	17	0	0
BETA		Gross beta	pCi/L				16	16	
LEAD		Lead	ppb	1.5	50	EPAL	17	11	0
FLEAD		Lead, filtered	ppb	1.5	50	EPAL	17	5	0
MAGNES		Magnesium	ppb	23			17	17	
FMAGNES		Magnesium, filtered	ppb	23			17	17	
METHYCH		Methylene chloride	ppb	.09			17	0	
NAPHTHA		Naphthalene	ppb	1.2			18	0	
NICKEL		Nickel	ppb	13			17	10	
FNICKEL		Nickel, filtered	ppb	13			17	1	
NITRITE		Nitrite	ppb	18	1000	EPA	16	0	0
PENTACHP		Pentachlorophenol	ppb	8.3	1	EPA	18	0	18*

Table 14-12. Constituent List and Summary of Results for the Low-Level Waste Management Area 1 Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 3)

Short	(Method)	Constituent Name Full	Units	Lab MDL	DWS		Number of Samples		
					Limit	Agency	Total	>MDL	>DWS
PHOSPHA		Phosphate	ppb	82			16	0	
POTASSUM		Potassium	ppb	850			17	17	
FPOTASS		Potassium, filtered	ppb	850			17	16	
SILVER		Silver	ppb	3.6	50	EPAI	17	0	0
FSILVER		Silver, filtered	ppb	3.6	50	EPAI	17	0	0
PERCENE		Tetrachloroethene	ppb	.22	5	EPA	17	0	0
TETRADE		Tetradecane	ppb	1.6			18	0	
TIN		Tin	ppb	69			17	0	
FTIN		Tin, filtered	ppb	69			17	0	
TOLUENE		Toluene	ppb	.016	1000	EPA	17	0	0
TRIBUTPH		Tributyl Phosphate	ppb	1.1			18	0	
TRICENE		Trichloroethene	ppb	.11	5	EPA	17	0	0
TDICHPH		Tris-2-chloroethyl phosphate	ppb	.61			18	0	
TRITIUM		Tritium	pCi/L		20000	EPA	17	17	4
TURBID		Turbidity	NTU	.016			18	18	
URANIUM		Uranium	ppb				17	17	
VANADIUM		Vanadium	ppb	6.6			17	17	
PVANADI		Vanadium, filtered	ppb	6.6			17	17	
VINYLIDE		Vinyl chloride	ppb	.13	2	EPA	17	0	0
XYLENE		Xylenes (total)	ppb	.035	10000	EPA	17	0	0
ZINC		Zinc	ppb	6.3	5000	EPAS	17	3	0
FZINC		Zinc, filtered	ppb	6.3	5000	EPAS	17	0	0
CIS12DE		cis-1,2-Dichloroethylene	ppb	.11	70	EPA	17	0	0
MCRESOL		m-Cresol	ppb	2.2			18	0	
TRANSCE		trans-1,2-Dichloroethylene	ppb	.073	100	EPA	17	0	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 October 1 through December 31, 1994.
(sheet 1 of 9)

Well Name	Collection Date	Sample Number	ALUMINUM 34/ppb 19/.	ALUMINUM 34/ppb 19/.	BARIUM 34/ppb 1.3/1000i	BARIUM 34/ppb 1.3/1000i
299-E28-26	12/12/94	B00FX1	170.00 BL		33.00	
299-E28-26	12/12/94	B00FX5		26.00 U		32.00
299-E28-27	12/12/94	B00FX6	26.00 U		50.00	
299-E28-27	12/12/94	B00FY0		26.00 U		51.00
299-E28-28	12/12/94	B00FY1	26.00 U		43.00	
299-E28-28	12/12/94	B00FY5		26.00 U		42.00
299-E32-10	12/13/94	B00FY6	180.00 BL		26.00	
299-E32-10	12/13/94	B00FZ0		26.00 U		24.00
299-E32-2	12/13/94	B00FZ1	43.00 BL		42.00	
299-E32-2	12/13/94	B00FZ5		26.00 U		41.00
299-E32-3	12/13/94	B00FZ6	35.00 BL		53.00	
299-E32-3	12/13/94	B00G00		26.00 U		53.00
299-E32-4	12/13/94	B00G01	64.00 BL		93.00	
299-E32-4	12/13/94	B00G05		26.00 U		69.00
299-E32-5	12/13/94	B00FX6	39.00 BL		53.00	
299-E32-5	12/13/94	B00FX0		29.00 BL		55.00
299-E32-6	12/12/94	B00G06	26.00 U		38.00	
299-E32-6	12/12/94	B00G10		26.00 U		38.00
299-E32-7	12/12/94	B00G11	26.00 U		34.00	
299-E32-7	12/12/94	B00G15		26.00 U		34.00
299-E32-8	12/12/94	B00G16	30.00 BL		32.00	
299-E32-8	12/12/94	B00G20		26.00 U		30.00
299-E32-9	12/13/94	B00G21	38.00 BL		22.00	
299-E32-9	12/13/94	B00G25		26.00 U		21.00
299-E33-28	12/12/94	B00G26	56.00 BL		37.00	
299-E33-28	12/12/94	B00G30		26.00 U		37.00
299-E33-29	12/12/94	B00G31	26.00 U		40.00	
299-E33-29	12/12/94	B00G35		26.00 U		40.00
299-E33-30	12/14/94	B00G36	34.00 L		29.00	
299-E33-30	12/14/94	B00G40		27.00 L		29.00
299-E33-34	12/14/94	B00G41	26.00 U		29.00	
299-E33-34	12/14/94	B00G45		32.00 L		27.00
299-E33-35	12/12/94	B00G46	26.00 U		35.00	
299-E33-35	12/12/94	B00G50		26.00 U		35.00

Well Name	Collection Date	Sample Number	BROMIDE 124/ppb 110/.	CALCIUM 34/ppb 47/.	CALCIUM 34/ppb 47/.	CHLORIDE 124/ppb 71/250000s
299-E28-26	12/12/94	B00FX1	50.00 L	44000.00		6000.00
299-E28-26	12/12/94	B00FX5			43000.00	
299-E28-27	12/12/94	B00FX6	30.00 L	34000.00		11000.00 D
299-E28-27	12/12/94	B00FY0			35000.00	
299-E28-28	12/12/94	B00FY1	60.00 L	44000.00		6500.00
299-E28-28	12/12/94	B00FY5			43000.00	
299-E32-10	12/13/94	B00FY6	20.00 L	31000.00		9800.00 Dd
299-E32-10	12/13/94	B00FZ0			30000.00	
299-E32-2	12/13/94	B00FZ1	40.00 L	39000.00		11000.00 Dd
299-E32-2	12/13/94	B00FZ5			39000.00	
299-E32-3	12/13/94	B00FZ6	60.00 L	50000.00		9700.00 a
299-E32-3	12/13/94	B00G00			50000.00	
299-E32-4	12/13/94	B00G01	100.00 L	39000.00		9200.00 a
299-E32-4	12/13/94	B00G05			38000.00	
299-E32-5	12/13/94	B00FX6		54000.00		
299-E32-5	12/13/94	B00FX0			55000.00	

Table 14-13. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 1 Data for Reporting Period October 1 through December 31, 1994.
(sheet 2 of 9)

Well Name	Collection Date	Sample Number	BROMIDE 124/ppb 110/.	CALCIUM 34/ppb 47/.	FLUORIDE 34/ppb 47/.	CHLORIDE 124/ppb 71/250000s
299-E32-6	12/12/94	B00G06	30.00 L	36000.00		12000.00 D
299-E32-6	12/12/94	B00G10			36000.00	
299-E32-7	12/12/94	B00G11	14.00 L	30000.00		19000.00 D
299-E32-7	12/12/94	B00G15			30000.00	
299-E32-8	12/12/94	B00G16	14.00 L	31000.00		20000.00 D
299-E32-8	12/12/94	B00G20			31000.00	
299-E32-9	12/13/94	B00G21	12.00 L	31000.00		19000.00 DQ
299-E32-9	12/13/94	B00G25			30000.00	
299-E33-28	12/12/94	B00G26	20.00 L	31000.00		18000.00 D
299-E33-28	12/12/94	B00G30			31000.00	
299-E33-29	12/12/94	B00G31	14.00 L	31000.00		22000.00 D
299-E33-29	12/12/94	B00G35			31000.00	
299-E33-30	12/14/94	B00G36	20.00 L	31000.00		22000.00 DQ
299-E33-30	12/14/94	B00G40			31000.00	
299-E33-34	12/14/94	B00G41	20.00 L	37000.00		6400.00 Q
299-E33-34	12/14/94	B00G45			36000.00	
299-E33-35	12/12/94	B00G46	20.00 L	31000.00		6200.00
299-E33-35	12/12/94	B00G50			31000.00	

Well Name	Collection Date	Sample Number	CHLORINE 25/ppb .05/.	CHROMIUM 34/ppb 11/50i	FLUORINE 34/ppb 11/50i	COBALT 34/ppb 6.5/.
299-E28-26	12/12/94	B00FX1	.04 UX	140.00		5.90 U
299-E28-26	12/12/94	B00FX5			4.60 L	
299-E28-27	12/12/94	B00FX6	.04 UX	48.00		5.90 U
299-E28-27	12/12/94	B00FY0			6.70 L	
299-E28-28	12/12/94	B00FY1	.04 U	12.00 L		5.90 U
299-E28-28	12/12/94	B00FY5			4.50 U	
299-E32-10	12/13/94	B00FY6	.20 L	33.00		5.90 U
299-E32-10	12/13/94	B00F20			10.00 L	
299-E32-2	12/13/94	B00F21	.19 L	32.00		5.90 U
299-E32-2	12/13/94	B00F25			6.70 L	
299-E32-3	12/13/94	B00F26	.08 L	23.00		5.90 U
299-E32-3	12/13/94	B00G00			4.50 U	
299-E32-4	12/13/94	B00G01	.04 U	27.00		5.90 U
299-E32-4	12/13/94	B00G05			4.50 U	
299-E32-5	12/13/94	B00FW6	.04 U	49.00		5.90 U
299-E32-5	12/13/94	B00FX0			6.30 L	
299-E32-6	12/12/94	B00G06	.04 U	64.00		5.90 U
299-E32-6	12/12/94	B00G10			5.70 L	
299-E32-7	12/12/94	B00G11	.04 U	17.00 L		5.90 U
299-E32-7	12/12/94	B00G15			4.50 U	
299-E32-8	12/12/94	B00G16	.04 UX	42.00		5.90 U
299-E32-8	12/12/94	B00G20			5.30 L	
299-E32-9	12/13/94	B00G21	.63	100.00		5.90 U
299-E32-9	12/13/94	B00G25			5.70 L	
299-E33-28	12/12/94	B00G26	.89 X	23.00		5.90 U
299-E33-28	12/12/94	B00G30			4.50 U	
299-E33-29	12/12/94	B00G31	.88 X	23.00		5.90 U
299-E33-29	12/12/94	B00G35			4.50 U	
299-E33-30	12/14/94	B00G36	.49 L	55.00		5.90 U
299-E33-30	12/14/94	B00G40			5.70 L	
299-E33-34	12/14/94	B00G41	.20 L	24.00		5.90 U
299-E33-34	12/14/94	B00G45			9.10 L	

Table 14-13. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 1 Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 9)

Well Name	Collection Date	Sample Number	CHLFORM 25/ppb .05/.	CHROMIUM 34/ppb 11/501	PCROMI 34/ppb 11/501	COBALT 34/ppb 6.5/.
299-E33-35	12/12/94	B0DG46	.04 U	27.00		5.90 U
299-E33-35	12/12/94	B0DG50			6.00 L	

Well Name	Collection Date	Sample Number	FCOBALT 34/ppb 6.5/.	COPPER 34/ppb 2.6/1000s	FCOPPER 34/ppb 2.6/1000s	CYANIDE 358/ppb .94/.
299-E28-26	12/12/94	B0DFX1		4.10 U		1.00 U
299-E28-26	12/12/94	B0DFX5	5.90 U		4.10 U	
299-E28-27	12/12/94	B0DFX6		9.00 L		1.00 U
299-E28-27	12/12/94	B0DFY0	5.90 U		4.10 U	
299-E28-28	12/12/94	B0DFY1		4.20 L		1.00 U
299-E28-28	12/12/94	B0DFY5	5.90 U		4.10 U	
299-E32-10	12/13/94	B0DFY6		4.20 L		1.00 U
299-E32-10	12/13/94	B0DFZ0	5.90 U		5.30 L	
299-E32-2	12/13/94	B0DFZ1		4.10 U		1.00 U
299-E32-2	12/13/94	B0DFZ5	5.90 U		4.10 U	
299-E32-3	12/13/94	B0DFZ6		4.10 U		1.00 U
299-E32-3	12/13/94	B0DG00	5.90 U		4.10 U	
299-E32-4	12/13/94	B0DG01		4.10 U		1.00 U
299-E32-4	12/13/94	B0DG05	5.90 U		4.10 U	
299-E32-5	12/13/94	B0DF46		4.10 U		1.00 U
299-E32-5	12/13/94	B0DFX0	5.90 U		7.40 L	
299-E32-6	12/12/94	B0DG06		6.90 L		1.00 L
299-E32-6	12/12/94	B0DG10	5.90 U		4.10 U	
299-E32-7	12/12/94	B0DG11		5.30 L		1.00 U
299-E32-7	12/12/94	B0DG15	5.90 U		4.10 U	
299-E32-8	12/12/94	B0DG16		6.30 L		1.00 U
299-E32-8	12/12/94	B0DG20	5.90 U		4.20 L	
299-E32-9	12/13/94	B0DG21		8.40 L		1.00 U
299-E32-9	12/13/94	B0DG25	5.90 U		4.10 U	
299-E33-28	12/12/94	B0DG26		6.90 L		1.00 U
299-E33-28	12/12/94	B0DG30	5.90 U		4.10 U	
299-E33-29	12/12/94	B0DG31		4.10 U		1.00 U
299-E33-29	12/12/94	B0DG35	5.90 U		4.10 U	
299-E33-30	12/14/94	B0DG36		4.10 U		1.00 L
299-E33-30	12/14/94	B0DG40	5.90 U		4.10 U	
299-E33-34	12/14/94	B0DG41		4.10 U		10.00 L
299-E33-34	12/14/94	B0DG45	6.80 L		4.10 U	
299-E33-35	12/12/94	B0DG46		4.70 L		1.00 U
299-E33-35	12/12/94	B0DG50	5.90 U		6.90 L	

Well Name	Collection Date	Sample Number	FLUORID 124/ppb 51/1400i	ALPHA 135/pCi/L .1/15	BETA 136/pCi/L .1/.	IRON 34/ppb 18/300s
299-E28-26	12/12/94	B0DFX1	400.00	7.91	10.50	860.00 BQ
299-E28-27	12/12/94	B0DFX6	600.00	7.74	13.30	210.00 BQ
299-E28-28	12/12/94	B0DFY1	500.00	11.70	9.19	61.00 BQ
299-E32-10	12/13/94	B0DFY6	500.00	1.99	34.90	460.00 BQ
299-E32-2	12/13/94	B0DFZ1	800.00	6.90	13.50	140.00 BQ
299-E32-3	12/13/94	B0DFZ6	800.00	11.80	12.60	86.00 BQ
299-E32-4	12/13/94	B0DG01	900.00	1.38	11.60	6400.00 BQ

Table 14-13. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 1 Data for Reporting Period October 1 through December 31, 1994.
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Well Name	Collection Date	Sample Number	FLUORIDE 124/ppb 51/14001	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.	IRON 34/ppb 18/300s
299-E32-5	12/13/94	B00FM6				200.00 BQ
299-E32-6	12/12/94	B00G06	600.00	6.50	11.40	260.00 BQ
299-E32-7	12/12/94	B00G11	500.00	.80 U	17.30	140.00 BQ
299-E32-8	12/12/94	B00G16	400.00	.50 U	13.30	1200.00 BQ
299-E32-9	12/13/94	B00G21	500.00	.84 U	16.30	450.00 BQ
299-E33-28	12/12/94	B00G26	400.00	.98 U	21.70	210.00 BQ
299-E33-29	12/12/94	B00G31	500.00	2.98	20.60	130.00 BQ
299-E33-30	12/14/94	B00G36	500.00	1.32	20.70	250.00 BQ
299-E33-34	12/14/94	B00G41	500.00	8.35	209.00	100.00 BQ
299-E33-35	12/12/94	B00G46	400.00	1.16	65.30	140.00 BQ

Well Name	Collection Date	Sample Number	IRON 34/ppb 18/300s	LEAD 40/ppb .86/501	FLUORIDE 40/ppb .86/501	MANGANESE 34/ppb 25/.
299-E28-26	12/12/94	B00FX1		1.70 L		12000.00
299-E28-26	12/12/94	B00FX5	72.00 BQ		1.50 U	
299-E28-27	12/12/94	B00FX6		1.50 U		11000.00
299-E28-27	12/12/94	B00FY0	29.00 BQ		1.60 L	
299-E28-28	12/12/94	B00FY1		3.20 L		12000.00
299-E28-28	12/12/94	B00FY5	17.00 BQ		1.50 U	
299-E32-10	12/13/94	B00FY6		2.60 BL		9300.00
299-E32-10	12/13/94	B00FZ0	61.00 BQ		1.60 BL	
299-E32-2	12/13/94	B00FZ1		1.50 U		11000.00
299-E32-2	12/13/94	B00FZ5	25.00 BQ		1.50 U	
299-E32-3	12/13/94	B00FZ6		1.90 BL		14000.00
299-E32-3	12/13/94	B00G00	25.00 BQ		1.50 U	
299-E32-4	12/13/94	B00G01		6.00 B		13000.00
299-E32-4	12/13/94	B00G05	98.00 BQ		1.50 U	
299-E32-5	12/13/94	B00FM6		1.50 U		15000.00
299-E32-5	12/13/94	B00FX0	33.00 BQ		1.50 U	
299-E32-6	12/12/94	B00G06		1.60 L		11000.00
299-E32-6	12/12/94	B00G10	19.00 BLQ		1.50 U	
299-E32-7	12/12/94	B00G11		1.50 U		9400.00
299-E32-7	12/12/94	B00G15	25.00 BQ		1.50 U	
299-E32-8	12/12/94	B00G16		2.80 L		9700.00
299-E32-8	12/12/94	B00G20	93.00 BQ		1.50 U	
299-E32-9	12/13/94	B00G21		1.50 U		9600.00
299-E32-9	12/13/94	B00G25	26.00 BQ		1.50 U	
299-E33-28	12/12/94	B00G26		7.70		9300.00
299-E33-28	12/12/94	B00G30	24.00 BQ		2.30 L	
299-E33-29	12/12/94	B00G31		1.50 U		9800.00
299-E33-29	12/12/94	B00G35	25.00 B		1.50 L	
299-E33-30	12/14/94	B00G36		2.00 L		9600.00
299-E33-30	12/14/94	B00G40	24.00 BQ		1.50 U	
299-E33-34	12/14/94	B00G41		1.80 L		11000.00
299-E33-34	12/14/94	B00G45	30.00 BQ		1.90 L	
299-E33-35	12/12/94	B00G46		7.20		9400.00
299-E33-35	12/12/94	B00G50	35.00 BQ		1.50 U	

Table 14-13. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 1 Data for Reporting Period October 1 through December 31, 1994.
(sheet 5 of 9)

Well Name	Collection Date	Sample Number	PHAGNES 34/ppb 25/.	MANGESE 34/ppb 1/50a	FMANGAN 34/ppb 1/50a	MERCURY 41/ppb .095/2
299-E28-26	12/12/94	800FX1		16.00		.05 UQ
299-E28-26	12/12/94	800FX5	11000.00		2.10 L	
299-E28-27	12/12/94	800FX6		5.30 L		.05 UQ
299-E28-27	12/12/94	800FY0	11000.00		2.20 L	
299-E28-28	12/12/94	800FY1		3.60 L		.05 UQ
299-E28-28	12/12/94	800FY5	12000.00		3.30 L	
299-E32-10	12/13/94	800FY6		9.50 L		.10 BLQ
299-E32-10	12/13/94	800FZ0	9200.00		5.90 L	
299-E32-2	12/13/94	800FZ1		2.60 L		.13 BLQ
299-E32-2	12/13/94	800FZ5	11000.00		1.40 L	
299-E32-3	12/13/94	800FZ6		1.50 L		.09 BLQ
299-E32-3	12/13/94	800G00	14000.00		1.60 L	
299-E32-4	12/13/94	800G01		17.00		.11 BLQ
299-E32-4	12/13/94	800G05	12000.00		2.80 L	
299-E32-5	12/13/94	800FW6		3.90 L		.24 BLQ
299-E32-5	12/13/94	800FX0	15000.00		1.40 L	
299-E32-6	12/12/94	800G06		6.60 L		.05 UQ
299-E32-6	12/12/94	800G10	11000.00		1.80 L	
299-E32-7	12/12/94	800G11		3.50 L		.05 UQ
299-E32-7	12/12/94	800G15	9400.00		2.60 L	
299-E32-8	12/12/94	800G16		8.80 L		.05 UQ
299-E32-8	12/12/94	800G20	9700.00		2.90 L	
299-E32-9	12/13/94	800G21		12.00		.11 BLQ
299-E32-9	12/13/94	800G25	9500.00		4.00 L	
299-E33-28	12/12/94	800G26		5.20 L		.05 UQ
299-E33-28	12/12/94	800G30	9300.00		1.30 L	
299-E33-29	12/12/94	800G31		3.50 L		.05 UQ
299-E33-29	12/12/94	800G35	9900.00		1.30 L	
299-E33-30	12/14/94	800G36		5.30 L		.11 BLQ
299-E33-30	12/14/94	800G40	9800.00		1.30 L	
299-E33-34	12/14/94	800G41		2.10 L		.13 BLQ
299-E33-34	12/14/94	800G45	11000.00		.95 L	
299-E33-35	12/12/94	800G46		3.70 L		.05 UQ
299-E33-35	12/12/94	800G50	9500.00		2.80 L	

Table I4-13. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 1 Data for Reporting Period October 1 through December 31, 1994.
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Well Name	Collection Date	Sample Number	MERCURY 41/ppb .095/L	NICKEL 34/ppb 16/L	NICKEL 34/ppb 16/L	NITRATE 124/ppb 96/45000
299-E28-26	12/12/94	B0DFX1		64.00		31000.00 D
299-E28-26	12/12/94	B0DFX5	.05 UQ		13.00 U	
299-E28-27	12/12/94	B0DFX6		32.00		19000.00 D
299-E28-27	12/12/94	B0DFY0	.05 UQ		13.00 U	
299-E28-28	12/12/94	B0DFY1		13.00 U		32000.00 D
299-E28-28	12/12/94	B0DFY5	.05 UQ		13.00 U	
299-E32-10	12/13/94	B0DFY6		19.00 L		9500.00 Q
299-E32-10	12/13/94	B0DFZ0	.11 BLQ		13.00 U	
299-E32-2	12/13/94	B0DFZ1		15.00 L		25000.00 DQ
299-E32-2	12/13/94	B0DFZ5	.10 BLQ		13.00 U	
299-E32-3	12/13/94	B0DFZ6		13.00 U		38000.00 DQ
299-E32-3	12/13/94	B0DG00	.11 BLQ		13.00 L	
299-E32-4	12/13/94	B0DG01		13.00 U		27000.00 DQ
299-E32-4	12/13/94	B0DG05	.10 BLQ		13.00 U	
299-E32-5	12/13/94	B0DFW6		34.00		
299-E32-5	12/13/94	B0DFX0	.06 BLQ		13.00 U	
299-E32-6	12/12/94	B0DG06		27.00 L		20000.00 D
299-E32-6	12/12/94	B0DG10	.05 UQ		13.00 U	
299-E32-7	12/12/94	B0DG11		13.00 U		9000.00
299-E32-7	12/12/94	B0DG15	.05 UQ		13.00 U	
299-E32-8	12/12/94	B0DG16		17.00 L		4700.00
299-E32-8	12/12/94	B0DG20	.05 UQ		13.00 U	
299-E32-9	12/13/94	B0DG21		42.00		4200.00 Q
299-E32-9	12/13/94	B0DG25	.10 BLQ		13.00 U	
299-E33-28	12/12/94	B0DG26		13.00 U		4600.00
299-E33-28	12/12/94	B0DG30	.06 LQ		13.00 U	
299-E33-29	12/12/94	B0DG31		15.00 L		8400.00
299-E33-29	12/12/94	B0DG35	.05 UQ		13.00 U	
299-E33-30	12/14/94	B0DG36		30.00		7000.00 Q
299-E33-30	12/14/94	B0DG40	.10 BLQ		13.00 U	
299-E33-34	12/14/94	B0DG41		13.00 U		40000.00 DQ
299-E33-34	12/14/94	B0DG45	.10 BLQ		13.00 U	
299-E33-35	12/12/94	B0DG46		13.00 U		17000.00 D
299-E33-35	12/12/94	B0DG50	.05 UQ		13.00 U	

Well Name	Collection Date	Sample Number	POTASSIUM 34/ppb 890/L	POTASSIUM 34/ppb 890/L	RADIUM 137/pCi/L /51	SODIUM 34/ppb 150/L
299-E28-26	12/12/94	B0DFX1	5600.00		.02 U	19000.00 Q
299-E28-26	12/12/94	B0DFX5		4900.00		
299-E28-27	12/12/94	B0DFX6	5900.00		.04 U	25000.00 Q
299-E28-27	12/12/94	B0DFY0		850.00 UF		
299-E28-28	12/12/94	B0DFY1	5200.00		.01 U	20000.00 Q
299-E28-28	12/12/94	B0DFY5		5100.00		
299-E32-10	12/13/94	B0DFY6	5100.00		.00 U	15000.00 Q
299-E32-10	12/13/94	B0DFZ0		5100.00		
299-E32-2	12/13/94	B0DFZ1	5700.00		.08 U	25000.00 Q
299-E32-2	12/13/94	B0DFZ5		5900.00		
299-E32-3	12/13/94	B0DFZ6	5600.00		.16	25000.00 Q
299-E32-3	12/13/94	B0DG00		5100.00		
299-E32-4	12/13/94	B0DG01	6300.00		.10 U	26000.00 Q
299-E32-4	12/13/94	B0DG05		6900.00		
299-E32-5	12/13/94	B0DFW6	6200.00		.06 U	26000.00 Q
299-E32-5	12/13/94	B0DFX0		5600.00		

Table I4-13. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 1 Data for Reporting Period October 1 through December 31, 1994.
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Well Name	Collection Date	Sample Number	POTASUM 34/ppb 890/.	PPOTASS 34/ppb 890/.	RADIUM 137/pCi/L ./51	SODIUM 34/ppb 150/.
299-E32-6	12/12/94	B00G06	6000.00		.04 U	24000.00 q
299-E32-6	12/12/94	B00G10		6500.00		
299-E32-7	12/12/94	B00G11	5500.00		.04 U	24000.00 q
299-E32-7	12/12/94	B00G15		5500.00		
299-E32-8	12/12/94	B00G16	5600.00		.07 U	20000.00 q
299-E32-8	12/12/94	B00G20		5600.00		
299-E32-9	12/13/94	B00G21	5600.00		.05 U	19000.00 q
299-E32-9	12/13/94	B00G25		5400.00		
299-E33-28	12/12/94	B00G26	5500.00		.28	19000.00 q
299-E33-28	12/12/94	B00G30		5800.00		
299-E33-29	12/12/94	B00G31	6400.00		.01 U	21000.00 q
299-E33-29	12/12/94	B00G35		5900.00		
299-E33-30	12/14/94	B00G36	6700.00		.04 U	22000.00 q
299-E33-30	12/14/94	B00G40		6500.00		
299-E33-34	12/14/94	B00G41	6100.00		.01 U	21000.00 q
299-E33-34	12/14/94	B00G45		5500.00		
299-E33-35	12/12/94	B00G46	5400.00		.07 U	15000.00 q
299-E33-35	12/12/94	B00G50		5400.00		

Well Name	Collection Date	Sample Number	SODIUM 34/ppb 150/.	SULFATE 124/ppb 89/250000s	TRITIUM 142/pCi/L ./20000	TURBID 126/NTU ./016/.
299-E28-26	12/12/94	B00FX1		50000.00 D	10200.00	5.40 q
299-E28-26	12/12/94	B00FX5	19000.00 q			
299-E28-27	12/12/94	B00FX6		48000.00 D	42400.00	1.20 q
299-E28-27	12/12/94	B00FY0	25000.00 q			
299-E28-28	12/12/94	B00FY1		52000.00 D	10300.00	1.20 q
299-E28-28	12/12/94	B00FY5	20000.00 q			
299-E32-10	12/13/94	B00FY6		28000.00 D	1700.00	3.10 q
299-E32-10	12/13/94	B00F20	15000.00 q			
299-E32-2	12/13/94	B00F21		54000.00 D	36400.00	.64 q
299-E32-2	12/13/94	B00F25	24000.00 q			
299-E32-3	12/13/94	B00F26		79000.00 D	35800.00	1.10 q
299-E32-3	12/13/94	B00G00	25000.00 q			
299-E32-4	10/11/94	B00388			582.00	91.00 q
299-E32-4	12/13/94	B00G01		45000.00 D	292.00	62.00 q
299-E32-4	12/13/94	B00G05	25000.00 q			
299-E32-5	12/13/94	B00F46				1.10 q
299-E32-5	12/13/94	B00FX0	26000.00 q			
299-E32-6	12/12/94	B00G06		47000.00 D	33100.00	1.20 q
299-E32-6	12/12/94	B00G10	24000.00 q			
299-E32-7	12/12/94	B00G11		32000.00 D	12500.00	2.40 q
299-E32-7	12/12/94	B00G15	24000.00 q			
299-E32-8	12/12/94	B00G16		29000.00 D	1660.00	6.30 q
299-E32-8	12/12/94	B00G20	20000.00 q			
299-E32-9	12/13/94	B00G21		28000.00 D	1680.00	1.20 q
299-E32-9	12/13/94	B00G25	18000.00 q			
299-E33-28	12/12/94	B00G26		29000.00 D	1530.00	2.20 q
299-E33-28	12/12/94	B00G30	19000.00 q			
299-E33-29	12/12/94	B00G31		30000.00 D	1630.00	1.20 q
299-E33-29	12/12/94	B00G35	22000.00			
299-E33-30	12/14/94	B00G36		30000.00 D	2610.00	1.10 q
299-E33-30	12/14/94	B00G40	22000.00 q			

Table 14-13. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 1 Data for Reporting Period October 1 through December 31, 1994.
(sheet 8 of 9)

Well Name	Collection Date	Sample Number	FSOBILUM 34/ppb 150/.	SULFATE 124/ppb 89/250000s	TRITIUM 142/pCi/L ./20000	TURBID 126/NTU .016/.
299-E33-34	12/14/94	B00G41		32000.00 0	5740.00	.52 q
299-E33-34	12/14/94	B00G45	20000.00 q			
299-E33-35	12/12/94	B00G46		24000.00 0	2280.00	1.40 q
299-E33-35	12/12/94	B00G50	15000.00 q			

Well Name	Collection Date	Sample Number	URANIUM 145/ppb ./.	VANADIUM 34/ppb 6.4/.	FLUORIDE 34/ppb 6.4/.	ZINC 34/ppb 4.4/5000s
299-E28-26	12/12/94	B00FX1	16.10	19.00 L		6.30 L
299-E28-26	12/12/94	B00FX5			15.00 L	
299-E28-27	12/12/94	B00FX6	10.70	21.00 L		7.10 L
299-E28-27	12/12/94	B00FY0			19.00 L	
299-E28-28	12/12/94	B00FY1	15.50	17.00 L		6.30 U
299-E28-28	12/12/94	B00FY5			16.00 L	
299-E32-10	12/13/94	B00FY6	2.31	20.00 L		6.30 U
299-E32-10	12/13/94	B00FZ0			20.00 L	
299-E32-2	12/13/94	B00FZ1	14.40	18.00 L		6.30 U
299-E32-2	12/13/94	B00FZ5			19.00 L	
299-E32-3	12/13/94	B00FZ6	18.50	18.00 L		6.30 U
299-E32-3	12/13/94	B00G00			16.00 L	
299-E32-4	12/13/94	B00G01	2.99	39.00		6.30 U
299-E32-4	12/13/94	B00G05			19.00 L	
299-E32-5	12/13/94	B00FX6	23.40	20.00 L		6.30 U
299-E32-5	12/13/94	B00FX0			16.00 L	
299-E32-6	12/12/94	B00G06	12.30	19.00 L		6.30 U
299-E32-6	12/12/94	B00G10			20.00 L	
299-E32-7	12/12/94	B00G11	4.54	20.00 L		6.30 U
299-E32-7	12/12/94	B00G15			19.00 L	
299-E32-8	12/12/94	B00G16	2.05	23.00 L		6.30 U
299-E32-8	12/12/94	B00G20			19.00 L	
299-E32-9	12/13/94	B00G21	1.91	21.00 L		6.30 U
299-E32-9	12/13/94	B00G25			19.00 L	
299-E33-28	12/12/94	B00G26	2.35	19.00 L		6.60 L
299-E33-28	12/12/94	B00G30			21.00 L	
299-E33-29	12/12/94	B00G31	2.15	22.00 L		6.30 U
299-E33-29	12/12/94	B00G35			20.00 L	
299-E33-30	12/14/94	B00G36	2.62	22.00 L		6.30 U
299-E33-30	12/14/94	B00G40			22.00 L	
299-E33-34	12/14/94	B00G41	8.87	23.00 L		6.30 U
299-E33-34	12/14/94	B00G45			20.00 L	
299-E33-35	12/12/94	B00G46	2.09	18.00 L		6.30 U
299-E33-35	12/12/94	B00G50			17.00 L	

Table 14-13. Constituents with at Least One Detected Value for the Low-Level
Waste Management Area 1 Data for Reporting Period
October 1 through December 31, 1994.
(sheet 9 of 9)

Well Name	Collection Date	Sample Number	F21WC 34/ppb 4.4/5000s
299-E28-26	12/12/94	800FX5	6.30 U
299-E28-27	12/12/94	800FY0	6.30 U
299-E28-28	12/12/94	800FY5	6.30 U
299-E32-10	12/13/94	800F20	6.30 U
299-E32-2	12/13/94	800F25	6.30 U
299-E32-3	12/13/94	800G00	6.30 U
299-E32-4	12/13/94	800G05	6.30 U
299-E32-5	12/13/94	800FX0	6.30 U
299-E32-6	12/12/94	800G10	6.30 U
299-E32-7	12/12/94	800G15	6.30 U
299-E32-8	12/12/94	800G20	6.30 U
299-E32-9	12/13/94	800G25	6.30 U
299-E33-28	12/12/94	800G30	6.30 U
299-E33-29	12/12/94	800G35	6.30 U
299-E33-30	12/14/94	800G40	6.30 U
299-E33-34	12/14/94	800G45	6.30 U
299-E33-35	12/12/94	800G50	6.30 U

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
October 1 through December 31, 1994.
(sheet 1 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 110/.	TOX ppb 5/.
299-E28-26	12/12/94	800FX1	409		8.03	8.20	300 L	14.6
		800FX2	407		8.02		300 L	6.5
		800FX3	407		8.00		300 L	5.0 U
		800FX4	405		7.98		300 L	5.0 U
299-E28-27	12/12/94	800FX6	393		7.51	8.30	300 L	5.0 U
		800FX7	395		7.51		200 L	6.5
		800FX8	395		7.50		200 L	5.0 U
		800FX9	396		7.48		300 L	5.0 U
299-E28-28	12/12/94	800FY1	423		8.23	8.20	300 L	6.7
		800FY2	422		8.24		300 L	5.0 U
		800FY3	420		8.21		300 L	5.0 U
		800FY4	421		8.19		300 L	5.0 U
299-E32-10	12/13/94	800FY6	299		7.99	8.30	300 L	5.3
		800FY7	298		8.04		400 L	5.8
		800FY8	297		8.01		400 L	5.0 U
		800FY9	299		8.00		400 L	13.2
299-E32-2	12/13/94	800F21	418		7.85	8.20	200 L	5.4
		800F22	417		7.86		200 L	5.0 U
		800F23	417		7.82		200 L	5.0 U
		800F24	416		7.81		300 L	5.0 U
299-E32-3	12/13/94	800F26	499		7.45	8.30	200 L	5.0 U
		800F27	499		7.44		200 L	5.0 U
		800F28	499		7.43		200 L	5.0 U
		800F29	498		7.42		200 L	5.0 U
299-E32-4	10/11/94	800388	413		7.52	8.00	200 LB	5.0 U
		800389	413		7.54		150 LB	5.0 U
		800390	412		7.53		200 LB	5.0 U
		800391	412		7.54		200 LB	5.8
	12/13/94	800G01	420		7.71	8.30	140 L	5.0 U
		800G02	421		7.69		110 U	5.0 U
		800G03	422		7.71		110 U	5.0 U
		800G04	423		7.72		130 L	5.0 U
299-E32-5	12/13/94	800FW6	525		7.60	8.20	130 L	5.0 U
		800FW7	532		7.60		300 L	5.0 U
		800FW8	531		7.61		200 L	
		800FW9	531		7.60		200 L	5.0 U
299-E32-6	12/12/94	800G06	403		8.26	8.30	300 L	5.0 U
		800G07	403		8.26		200 L	5.0 U
		800G08	401		8.26		400 L	5.0 U
		800G09	401		8.24		300 L	5.0 U
299-E32-7	12/12/94	800G11	354		8.35	8.30	300 L	5.0 U
		800G12	355		8.35		300 L	6.1
		800G13	354		8.34		300 L	5.3

Table 14-14. Contamination Indicator Parameters for the Low-Level
Waste Management Area 1 Data for Reporting Period
October 1 through December 31, 1994.
(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 110/.	TOX ppb 5/.
299-E32-7	12/12/94	800G14	352		8.32		400 L	11.3
299-E32-8	12/12/94	800G16	342		8.51	8.30	500 L	7.5
		800G17	340		8.50		300 L	37.8 F
		800G18	340		8.48		300 L	5.0 U
		800G19	341		8.52		300 L	5.0 U
		800G20						5.0 U
299-E32-9	12/13/94	800G21	326		7.58	8.30	300 L	5.0 U
		800G22	325		7.60		300 L	6.5
		800G23	323		7.65		300 L	5.5
		800G24	321		7.67		400 L	5.9
299-E33-28	12/12/94	800G26	330		7.78	8.30	500 L	7.3
		800G27	332		7.77		300 L	5.0 U
		800G28	332		7.77		300 L	11.0
		800G29	352		7.78		400 L	6.3
299-E33-29	12/12/94	800G31	352		7.67	8.30	300 L	5.0 U
		800G32	351		7.65		300 L	5.7
		800G33	351		7.63		300 L	5.0 U
		800G34	350		7.62		300 L	7.2
299-E33-30	12/14/94	800G36	338		8.22	8.10	300 L	5.0 U
		800G37	338		8.22		400 L	5.9
		800G38	338		8.22		300 L	5.0 U
		800G39	337		8.23		300 L	5.0 U
299-E33-34	12/14/94	800G41	438		7.10	8.10	200 L	5.0 U
		800G42	423		7.11		300 L	5.0 U
		800G43	420		7.10		300 L	5.0 U
		800G44	416		7.10		300 L	5.0 U
299-E33-35	12/12/94	800G46	318		7.56	8.30	300 L	5.0 U
		800G47	318		7.57		300 L	6.6
		800G48	318		7.57		200 L	5.0 U
		800G49	318		7.57		300 L	5.0 U

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 October 1 through December 31, 1994.
(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	94	Conductivity, field	umhos		1			52	52	
CONDUCT	73	Conductivity, lab	umhos					5	5	
TDC		Total Organic Carbon	ppb		110			56	56	
TOX		Total Organic Halogen	ppb		5			56	20	
PH	93	PH, field	PH		.01	6.5-8.5	EPAS	52	52	4
PH	125	PH, lab	PH			6.5-8.5	EPAS	14	14	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
BARIUM		Barium	ppb		.59	1000	EPAI	14	14	0
FBARIUM		Barium, filtered	ppb		.59	1000	EPAI	14	14	0
CADMIUM		Cadmium	ppb		3.3	10	EPAI	14	0	0
FCADMIU		Cadmium, filtered	ppb		3.3	10	EPAI	14	0	0
CHROMIUM		Chromium	ppb		4.5	50	EPAI	14	13	3
FCROMI		Chromium, filtered	ppb		4.5	50	EPAI	14	8	0
FLUORID		Fluoride	ppb		36	1400	EPAI	14	14	0
ALPHA		Gross alpha	pCi/L			15	EPA	14	11	0
MERCURY		Mercury	ppb		.05	2	EPA	14	5	0
FMERCUR		Mercury, filtered	ppb		.05	2	EPA	14	7	0
NITRATE		Nitrate	ppb		11	45000	EPA	14	14	0
RADIUM		Radium	pCi/L			5	EPAI	14	2	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORID		Chloride	ppb		14	250000	EPAS	14	14	0
IRON		Iron	ppb		5.24	300	EPAS	14	14	5
FIRON		Iron, filtered	ppb		5.24	300	EPAS	14	14	0
MANGESE		Manganese	ppb		.72	50	EPAS	14	14	0
FMANGAM		Manganese, filtered	ppb		.72	50	EPAS	14	14	0
LPHENOL	19	Phenol	ppb		.54			14	0	
LPHENOL	30	Phenol	ppb		.31			14	0	
SODIUM		Sodium	ppb		61			14	14	
FSODIUM		Sodium, filtered	ppb		61			14	14	
SULFATE		Sulfate	ppb		37	250000	EPAS	14	14	0

Table 14-15. Constituent List and Summary of Results for the Low-Level Waste Management Area 2 Data for Reporting Period October 1 through December 31, 1994.
(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
1,1,1-T		1,1,1-Trichloroethane		ppb	.036	200	EPA	14	3	0
1,1,2-T		1,1,2-Trichloroethane		ppb	.078			14	0	
1,1-DIC		1,1-Dichloroethane		ppb	.058			14	0	
1,2-DIC		1,2-Dichloroethane		ppb	.029	5	EPA	14	0	0
14-dben		1,4-Dichlorobenzene		ppb	.053	75	EPA	14	0	0
246-trp		2,4,6-Trichlorophenol		ppb	1.3			14	0	
24-dchp	19	2,4-Dichlorophenol		ppb	4			14	0	
24-dchp	30	2,4-Dichlorophenol		ppb	1.3			14	0	
DIMPHEN		2,4-Dimethylphenol		ppb	1.2			14	0	
DINPHEN		2,4-Dinitrophenol		ppb	3			14	0	
26-dchp		2,6-Dichlorophenol		ppb	1.4			14	0	
CHLPHEN		2-Chlorophenol		ppb	1.6			14	0	
ZHETHPH		2-Methylphenol		ppb	5.1			14	0	
2NITPH	19	2-Nitrophenol		ppb	1.9			14	0	
2NITPH	30	2-Nitrophenol		ppb	1.3			14	0	
BUTOIMP		2-sec-Butyl-4,6-dinitrophenol (DN)		ppb	1.3			13	0	
46DN2NP		4,6-Dinitro-2-methylphenol		ppb	1.3			14	0	
CHLCRES		4-Chloro-3-methylphenol		ppb	1.3			14	0	
4METHPH		4-Methylphenol		ppb	7			14	0	
NITPHEN		4-Nitrophenol		ppb	3			14	0	
ALUMINUM		Aluminum		ppb	26			14	9	
FALUMIN		Aluminum, filtered		ppb	26			14	2	
ANTIMONY		Antimony		ppb	62			14	0	
FANTIMO		Antimony, filtered		ppb	62			14	0	
AR1016		Aroclor-1016		ppb	.072			14	0	
AR1221		Aroclor-1221		ppb	.052			14	0	
AR1232		Aroclor-1232		ppb	.093			14	0	
AR1242		Aroclor-1242		ppb	.068			14	0	
AR1248		Aroclor-1248		ppb	.055			14	0	
AR1254		Aroclor-1254		ppb	.031			14	0	
AR1260		Aroclor-1260		ppb	.058			14	0	
BENZENE		Benzene		ppb	.013	5	EPA	14	0	0
BENZOTH		Benzothiazole		ppb	1.3			14	0	
BERYLLIUM		Beryllium		ppb	.17			14	4	
FBERYLL		Beryllium, filtered		ppb	.17			14	6	
BIS2EPH		Bis(2-ethylhexyl) phthalate		ppb	5.3			14	0	
BROMIDE		Bromide		ppb	100			14	1	
CALCIUM		Calcium		ppb	34			14	14	
FCALCIU		Calcium, filtered		ppb	34			14	14	
TETRANE		Carbon tetrachloride		ppb	.075	5	EPA	14	2	0
CHLFORM		Chloroform		ppb	.041			14	3	
COBALT		Cobalt		ppb	5.9			14	1	
FCOBALT		Cobalt, filtered		ppb	5.9			14	2	

Table 14-15. Constituent List and Summary of Results for the Low-Level
Waste Management Area 2 Data for Reporting Period
October 1 through December 31, 1994.
(sheet 3 of 3)

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
COPPER		Copper	ppb	4.1	1000	EPAS		14	7	0
FCOPPER		Copper, filtered	ppb	4.1	1000	EPAS		14	2	0
CRESOLS		Cresols (methylphenols)	ppb	4.8				14	0	
CYANIDE		Cyanide	ppb	1				14	0	
DECANE		Decane	ppb	1.9				14	0	
DODECAN		Dodecane	ppb	1.1				14	0	
ETHBENZ		Ethylbenzene	ppb	.051	700	EPA		14	0	0
BETA		Gross beta	pCi/L					14	14	
1-129L		Iodine-129, Low level	pCi/L		1	EPA		5	5	5
LEAD		Lead	ppb	1.5	50	EPA1		14	11	0
LEAD		Lead, filtered	ppb	1.5	50	EPA1		14	7	0
MAGNES		Magnesium	ppb	23				14	14	
FMAGNES		Magnesium, filtered	ppb	23				14	14	
METHYCH		Methylene chloride	ppb	.09				14	0	
NAPHTHA		Naphthalene	ppb	1.2				14	0	
NICKEL		Nickel	ppb	13				14	11	
FNICKEL		Nickel, filtered	ppb	13				14	2	
NITRITE		Nitrite	ppb	18	1000	EPA		14	0	0
PENTCHP	19	Pentachlorophenol	ppb	8.3	1	EPA		14	0	14*
PENTCHP	30	Pentachlorophenol	ppb	1.3	1	EPA		14	0	14*
PHOSPHA		Phosphate	ppb	82				14	0	
POTASSUM		Potassium	ppb	850				14	14	
FPOTASS		Potassium, filtered	ppb	850				14	14	
SILVER		Silver	ppb	3.6	50	EPA1		14	0	0
FSILVER		Silver, filtered	ppb	3.6	50	EPA1		14	0	0
PERCENE		Tetrachloroethene	ppb	.22	5	EPA		14	0	0
TETPHNL		Tetrachlorophenols	ppb	1.5				14	0	
TETRADE		Tetradecane	ppb	1.6				14	0	
TIN		Tin	ppb	69				14	0	
FTIN		Tin, filtered	ppb	69				14	0	
TOLUENE		Toluene	ppb	.016	1000	EPA		14	0	0
TRIBUTPH		Tributyl Phosphate	ppb	1.1				14	0	
TRICENE		Trichloroethene	ppb	.11	5	EPA		14	0	0
TRIPHNL		Trichlorophenols	ppb	1.7				14	0	
TDICHPH		Tris-2-chloroethyl phosphate	ppb	.61				14	0	
TRITIUM		Tritium	pCi/L		20000	EPA		14	12	0
TURBID		Turbidity	NTU	.016				14	14	
URANIUM		Uranium	ppb					14	14	
VANADIUM		Vanadium	ppb	6.6				14	14	
FWANADI		Vanadium, filtered	ppb	6.6				14	14	
VINYIDE		Vinyl chloride	ppb	.13	2	EPA		14	0	0
XYLENE		Xylenes (total)	ppb	.035	10000	EPA		14	0	0
ZINC		Zinc	ppb	6.3	5000	EPAS		14	5	0
FZINC		Zinc, filtered	ppb	6.3	5000	EPAS		14	3	0
CIS12DE		cis-1,2-Dichloroethylene	ppb	.11	70	EPA		14	0	0
NCRESOL		m-Cresol	ppb	2.2				14	0	
TRANSCE		trans-1,2-Dichloroethylene	ppb	.073	100	EPA		14	0	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 October 1 through December 31, 1994.
(sheet 1 of 8)

Well Name	Collection Date	Sample Number	1,1,1-T 25/ppb .22/200	ALUMINUM 34/ppb 19/.	FALUMIN 34/ppb 19/.	BARIUM 34/ppb 1.3/1000i
299-E27-10	12/13/94	800702	.04 U	26.00 U		26.00
299-E27-10	12/13/94	800706			26.00 U	
299-E27-11	11/18/94	800714	.04 U	78.00 L		39.00
299-E27-11	11/18/94	800718			26.00 U	
299-E27-17	11/18/94	800709	.04 U	26.00 U		33.00
299-E27-17	11/18/94	8007R3			26.00 U	
299-E27-8	11/17/94	8007R4	.04 U	26.00 U		25.00
299-E27-8	11/17/94	8007R8			26.00 U	
299-E27-9	11/17/94	8007R9	.04 U	35.00 L		23.00
299-E27-9	11/17/94	8007S3			26.00 U	
299-E34-10	11/21/94	8007S4	.04 U	54.00 L		38.00
299-E34-10	11/21/94	8007S8			26.00 U	
299-E34-11	11/28/94	8007S9	.04 U	30.00 L		34.00
299-E34-11	11/28/94	8007T3			32.00 L	
299-E34-12	11/28/94	8007T4	.09 L	100.00 L		68.00
299-E34-12	11/28/94	8007T5	.08 L	110.00 L		69.00
299-E34-12	11/28/94	8007V2			26.00 U	
299-E34-12	11/28/94	8007V3			26.00 U	
299-E34-2	11/21/94	8007V4	.04 U	55.00 L		36.00
299-E34-2	11/21/94	8007V8			37.00 L	
299-E34-3	11/21/94	8007V9	.04 U	26.00 U		48.00
299-E34-3	11/21/94	8007X3			26.00 U	
299-E34-5	11/18/94	8007W4	.04 U	26.00 L		27.00
299-E34-5	11/18/94	8007W8			26.00 U	
299-E34-7	11/18/94	8007W9	.04 U	67.00 L		35.00
299-E34-7	11/18/94	8007X3			26.00 U	
299-E34-9	11/28/94	8007X4	.08 L	26.00 U		45.00
299-E34-9	11/28/94	8007X8			26.00 U	

Well Name	Collection Date	Sample Number	FBARIUM 34/ppb 1.3/1000i	BERYLLIUM 34/ppb 1.5/.	FBERYLL 34/ppb 1.5/.	BROMIDE 124/ppb 110/.
299-E27-10	12/13/94	800702		.17 U		30.00 L
299-E27-10	12/13/94	800706	26.00		.17 U	
299-E27-11	11/18/94	800714		.27 L		100.00 U
299-E27-11	11/18/94	800718	39.00		.29 L	
299-E27-17	11/18/94	800709		.43 L		100.00 U
299-E27-17	11/18/94	8007R3	33.00		.58 L	
299-E27-8	11/17/94	8007R4		.17 U		100.00 U
299-E27-8	11/17/94	8007R8	25.00		.17 U	
299-E27-9	11/17/94	8007R9		.17 U		100.00 U
299-E27-9	11/17/94	8007S3	25.00		.34 L	
299-E34-10	11/21/94	8007S4		.21 L		100.00 U
299-E34-10	11/21/94	8007S8	37.00		.17 U	
299-E34-11	11/28/94	8007S9		.17 U		80.00 L
299-E34-11	11/28/94	8007T3	33.00		.17 U	
299-E34-12	11/28/94	8007T4		.17 U		60.00 L
299-E34-12	11/28/94	8007T5		.17 U		50.00 L
299-E34-12	11/28/94	8007V2	67.00		.17 U	
299-E34-12	11/28/94	8007V3	65.00		.17 U	
299-E34-2	11/21/94	8007V4		.17 U		100.00 U
299-E34-2	11/21/94	8007V8	37.00		.35 L	
299-E34-3	11/21/94	8007V9		.17 U		100.00 U
299-E34-3	11/21/94	8007X3	48.00		.17 U	

Table 14-16. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 2 Data for Reporting Period October 1 through December 31, 1994.
(sheet 2 of 8)

Well Name	Collection Date	Sample Number	FRATIUM 34/ppb 1.3/1000i	BERYLLIUM 34/ppb 1.3/.	FBERYLL 34/ppb 1.5/.	BRONTDE 124/ppb 110/.
299-E34-5	11/18/94	8007W4		.30 L		100.00 L
299-E34-5	11/18/94	8007W8	27.00		.29 L	
299-E34-7	11/18/94	8007W9		.17 U		100.00 U
299-E34-7	11/18/94	8007X3	34.00		.29 L	
299-E34-9	11/28/94	8007X4		.17 U		50.00 L
299-E34-9	11/28/94	8007X8	45.00		.17 U	

Well Name	Collection Date	Sample Number	CALCIUM 34/ppb 47/.	FCALCIU 34/ppb 47/.	TETRANE 23/ppb .32/5	CHLORID 124/ppb 71/250000s
299-E27-10	12/13/94	8007Q2	32000.00		.08 U	6600.00 Q
299-E27-10	12/13/94	8007Q6		32000.00		
299-E27-11	11/18/94	8007Y4	38000.00		.08 U	7500.00
299-E27-11	11/18/94	8007Y8		38000.00		
299-E27-17	11/18/94	8007Q9	39000.00		.08 U	8000.00
299-E27-17	11/18/94	8007R3		38000.00		
299-E27-8	11/17/94	8007R4	35000.00		.08 U	6800.00
299-E27-8	11/17/94	8007R8		35000.00		
299-E27-9	11/17/94	8007R9	36000.00		1.00 B	7000.00
299-E27-9	11/17/94	8007S3		37000.00		
299-E34-10	11/21/94	8007S4	38000.00		.08 U	8300.00 BQ
299-E34-10	11/21/94	8007S8		38000.00		
299-E34-11	11/28/94	8007S9	43000.00		.08 U	15000.00 D
299-E34-11	11/28/94	8007T3		42000.00		
299-E34-12	11/28/94	8007T4	81000.00		.08 U	9300.00
299-E34-12	11/28/94	8007T5	76000.00		.08 U	9300.00
299-E34-12	11/28/94	8007V2		88000.00		
299-E34-12	11/28/94	8007V3		83000.00		
299-E34-2	11/21/94	8007V4	54000.00		.08 U	14000.00 DBQ
299-E34-2	11/21/94	8007V8		55000.00		
299-E34-3	11/21/94	8007Y9	40000.00		.08 U	15000.00 DBQ
299-E34-3	11/21/94	8007W3		40000.00		
299-E34-5	11/18/94	8007W4	50000.00		.08 U	20000.00 B
299-E34-5	11/18/94	8007W8		49000.00		
299-E34-7	11/18/94	8007W9	31000.00		.08 U	11000.00 B
299-E34-7	11/18/94	8007X3		31000.00		
299-E34-9	11/28/94	8007X4	36000.00		.23 L	9000.00
299-E34-9	11/28/94	8007X8		37000.00		

Table 14-16. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 2 Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 8)

Well Name	Collection Date	Sample Number	CHLFORM 25/ppb .05/.	CHROMIUM 34/ppb 11/50i	FECHROMI 34/ppb 11/50i	COBALT 34/ppb 6.5/.
299-E27-10	12/13/94	B00702	.04 U	13.00 L		5.90 U
299-E27-10	12/13/94	B00706			4.50 U	
299-E27-11	11/18/94	B007Y4	.04 U	89.00		5.90 U
299-E27-11	11/18/94	B007Y8			4.50 U	
299-E27-17	11/18/94	B007Q9	.04 U	93.00		5.90 U
299-E27-17	11/18/94	B007R3			4.50 U	
299-E27-8	11/17/94	B007R4	.04 U	77.00		6.10 L
299-E27-8	11/17/94	B007R8			8.00 L	
299-E27-9	11/17/94	B007R9	.04 U	29.00		5.90 U
299-E27-9	11/17/94	B007S3			4.50 U	
299-E34-10	11/21/94	B007S4	.04 U	30.00		5.90 U
299-E34-10	11/21/94	B007S8			5.80 L	
299-E34-11	11/28/94	B007S9	.04 U	12.00 L		5.90 U
299-E34-11	11/28/94	B007T3			7.00 L	
299-E34-12	11/28/94	B007T4	.06 L	25.00		5.90 U
299-E34-12	11/28/94	B007T5	.06 L	27.00		5.90 U
299-E34-12	11/28/94	B007V2			4.50 U	
299-E34-12	11/28/94	B007V3			4.70 L	
299-E34-2	11/21/94	B007V4	.04 U	50.00		5.90 U
299-E34-2	11/21/94	B007V8			6.50 L	
299-E34-3	11/21/94	B007V9	.04 U	42.00		5.90 U
299-E34-3	11/21/94	B007W3			7.20 L	
299-E34-5	11/18/94	B007W4	.04 U	4.50 U		5.90 U
299-E34-5	11/18/94	B007W8			5.60 L	
299-E34-7	11/18/94	B007W9	.04 U	36.00		5.90 U
299-E34-7	11/18/94	B007X3			4.50 U	
299-E34-9	11/28/94	B007X4	.07 L	18.00 L		5.90 U
299-E34-9	11/28/94	B007X8			5.40 L	

Well Name	Collection Date	Sample Number	FCOBALT 34/ppb 6.5/.	COPPER 34/ppb 2.6/1000s	FCOPPER 34/ppb 2.6/1000s	FLUORIDE 124/ppb 51/1400i
299-E27-10	12/13/94	B00702		4.10 U		400.00
299-E27-10	12/13/94	B00706	5.90 U		4.10 U	
299-E27-11	11/18/94	B007Y4		12.00 L		400.00
299-E27-11	11/18/94	B007Y8	5.90 U		4.30 L	
299-E27-17	11/18/94	B007Q9		7.60 L		400.00
299-E27-17	11/18/94	B007R3	5.90 U		5.40 L	
299-E27-8	11/17/94	B007R4		4.10 U		400.00
299-E27-8	11/17/94	B007R8	8.20 L		4.10 U	
299-E27-9	11/17/94	B007R9		4.10 U		400.00
299-E27-9	11/17/94	B007S3	6.10 L		4.10 U	
299-E34-10	11/21/94	B007S4		7.50 L		400.00
299-E34-10	11/21/94	B007S8	5.90 U		4.10 U	
299-E34-11	11/28/94	B007S9		4.80 L		500.00
299-E34-11	11/28/94	B007T3	5.90 U		4.10 U	
299-E34-12	11/28/94	B007T4		4.10 U		400.00
299-E34-12	11/28/94	B007T5		5.80 L		400.00
299-E34-12	11/28/94	B007V2	5.90 U		4.10 U	
299-E34-12	11/28/94	B007V3	5.90 U		4.10 U	
299-E34-2	11/21/94	B007V4		4.10 U		600.00
299-E34-2	11/21/94	B007V8	5.90 U		4.10 U	
299-E34-3	11/21/94	B007V9		4.10 U		500.00
299-E34-3	11/21/94	B007W3	5.90 U		4.10 U	

Table 14-16. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 2 Data for Reporting Period October 1 through December 31, 1994.
(sheet 4 of 8)

Well Name	Collection Date	Sample Number	FCOBALT 34/ppb 6.5/.	COPPER 34/ppb 2.6/1000s	FCOPPER 34/ppb 2.6/1000s	FLUORIDE 124/ppb 51/1400i
299-E34-5	11/18/94	B007W4		4.10 U		500.00
299-E34-5	11/18/94	B007W8	5.90 U		4.10 U	
299-E34-7	11/18/94	B007W9		4.30 L		500.00
299-E34-7	11/18/94	B007X3	5.90 U		4.10 U	
299-E34-9	11/28/94	B007X4		5.30 L		300.00
299-E34-9	11/28/94	B007X8	5.90 U		4.10 U	

Well Name	Collection Date	Sample Number	ALPHA 133/pCi/L ./15	BETA 136/pCi/L ./.	I-129 139/pCi/L ./1	IRON 34/ppb 18/300s
299-E27-10	12/13/94	B007Q2	1.00	5.53		74.00 BQ
299-E27-11	11/18/94	B007P2			2.05	
299-E27-11	11/18/94	B007Y4	2.14	7.81		490.00 B
299-E27-17	11/18/94	B007P3			3.15	
299-E27-17	11/18/94	B007Q9	1.07	7.25		410.00 B
299-E27-8	11/17/94	B007P4			3.03	
299-E27-8	11/17/94	B007R4	2.20	6.59		330.00 B
299-E27-9	11/17/94	B007P5			2.67	
299-E27-9	11/17/94	B007R9	.69 U	5.33		180.00 B
299-E34-10	11/21/94	B007P6			1.74	
299-E34-10	11/21/94	B007S4	2.19	5.06		160.00 BQ
299-E34-11	11/28/94	B007S9	4.96	7.48		73.00 Q
299-E34-12	11/28/94	B007T4	3.73	9.31		340.00 Q
299-E34-12	11/28/94	B007T5	3.28	10.00		350.00 Q
299-E34-2	11/21/94	B007V4	3.01	5.79		210.00 BQ
299-E34-3	11/21/94	B007V9	.42 U	7.89		180.00 BQ
299-E34-5	11/18/94	B007W4	4.20	9.48		30.00 B
299-E34-7	11/18/94	B007W9	.79 U	7.27		270.00 B
299-E34-9	11/28/94	B007X4	2.45	11.50		83.00 Q

Well Name	Collection Date	Sample Number	IRON 34/ppb 18/300s	LEAD 40/ppb .86/50i	FLUORIDE 40/ppb .86/50i	MAGNES 34/ppb 25/.
299-E27-10	12/13/94	B007Q2		2.30 BL		8500.00
299-E27-10	12/13/94	B007Q6	27.00 BQ		2.80 BL	
299-E27-11	11/18/94	B007Y4		11.00		10000.00
299-E27-11	11/18/94	B007Y8	41.00 B		1.50 U	
299-E27-17	11/18/94	B007Q9		2.30 L		10000.00
299-E27-17	11/18/94	B007R3	27.00 B		1.70 L	
299-E27-8	11/17/94	B007R4		1.50 U		9600.00
299-E27-8	11/17/94	B007R8	39.00 B		1.50 U	
299-E27-9	11/17/94	B007R9		7.00		10000.00
299-E27-9	11/17/94	B007S3	27.00 B		1.50 U	
299-E34-10	11/21/94	B007S4		7.90		9900.00
299-E34-10	11/21/94	B007S8	20.00 BQ		2.40 L	
299-E34-11	11/28/94	B007S9		1.90 L		12000.00
299-E34-11	11/28/94	B007T3	16.00 LQ		1.50 L	
299-E34-12	11/28/94	B007T4		1.60 L		23000.00
299-E34-12	11/28/94	B007T5		1.50 U		22000.00
299-E34-12	11/28/94	B007V2	24.00 Q		1.50 U	
299-E34-12	11/28/94	B007V3	24.00 Q		1.50 U	

Table 14-16. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 2 Data for Reporting Period October 1 through December 31, 1994.
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Well Name	Collection Date	Sample Number	IRON 34/ppb 18/300s	LEAD 40/ppb .86/50i	FLUOR 40/ppb .86/50i	MANGANESE 34/ppb 25/.
299-E34-2	11/21/94	8007V4		2.20 L		15000.00
299-E34-2	11/21/94	8007V8	21.00 BQ		1.70 L	
299-E34-3	11/21/94	8007V9		5.70		11000.00
299-E34-3	11/21/94	8007V3	20.00 BQ		14.00	
299-E34-5	11/18/94	8007V4		2.00 L		15000.00
299-E34-5	11/18/94	8007V8	26.00 B		1.50 U	
299-E34-7	11/18/94	8007V9		2.10 L		9800.00
299-E34-7	11/18/94	8007X3	21.00 B		11.00	
299-E34-9	11/28/94	8007X4		1.50 U		10000.00
299-E34-9	11/28/94	8007X8	12.00 LB		1.50 U	

Well Name	Collection Date	Sample Number	MANGANESE 34/ppb 25/.	MANGANESE 34/ppb 1/50s	MANGANESE 34/ppb 1/50s	MERCURY 41/ppb .095/2
299-E27-10	12/13/94	8007Q2		2.20 L		.11 BLQ
299-E27-10	12/13/94	8007Q6	8500.00		2.20 L	
299-E27-11	11/18/94	8007Y4		11.00		.10 BL
299-E27-11	11/18/94	8007Y8	10000.00		4.10 L	
299-E27-17	11/18/94	8007Q9		9.30 L		.08 BL
299-E27-17	11/18/94	8007R3	10000.00		2.00 L	
299-E27-8	11/17/94	8007R4		6.90 L		.05 U
299-E27-8	11/17/94	8007R8	9700.00		1.70 L	
299-E27-9	11/17/94	8007R9		3.20 L		.05 U
299-E27-9	11/17/94	8007S3	11000.00		1.50 L	
299-E34-10	11/21/94	8007S4		4.10 L		.05 U
299-E34-10	11/21/94	8007S8	9900.00		2.00 L	
299-E34-11	11/28/94	8007S9		2.80 L		.05 U
299-E34-11	11/28/94	8007T3	12000.00		2.10 L	
299-E34-12	11/28/94	8007T4		7.90 L		.05 U
299-E34-12	11/28/94	8007T5		7.60 L		.05 U
299-E34-12	11/28/94	8007V2	23000.00		2.70 L	
299-E34-12	11/28/94	8007V3	21000.00		2.80 L	
299-E34-2	11/21/94	8007V4		4.40 L		.06 BL
299-E34-2	11/21/94	8007V8	15000.00		1.80 L	
299-E34-3	11/21/94	8007V9		4.90 L		.05 U
299-E34-3	11/21/94	8007V3	11000.00		2.10 L	
299-E34-5	11/18/94	8007V4		7.20 L		.05 U
299-E34-5	11/18/94	8007V8	15000.00		6.40 L	
299-E34-7	11/18/94	8007V9		7.20 L		.08 BL
299-E34-7	11/18/94	8007X3	9900.00		3.30 L	
299-E34-9	11/28/94	8007X4		2.50 L		.05 U
299-E34-9	11/28/94	8007X8	10000.00		1.80 L	

Table 14-16. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 2 Data for Reporting Period October 1 through December 31, 1994.
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Well Name	Collection Date	Sample Number	FMERCUR 41/ppb .095/2	NICKEL 34/ppb 16/.	FMICKEL 34/ppb 16/.	NITRATE 124/ppb 95/45000
299-E27-10	12/13/94	B007Q2		13.00 U		4000.00 Q
299-E27-10	12/13/94	B007Q6	.11 BLQ		13.00 U	
299-E27-11	11/18/94	B007Y4		54.00		7000.00
299-E27-11	11/18/94	B007Y8	.13 BL		13.00 U	
299-E27-17	11/18/94	B007Q9		59.00		6600.00
299-E27-17	11/18/94	B007R3	.05 U		13.00 U	
299-E27-8	11/17/94	B007R4		36.00		5900.00
299-E27-8	11/17/94	B007R8	.05 U		13.00 U	
299-E27-9	11/17/94	B007R9		29.00 L		6900.00
299-E27-9	11/17/94	B007S3	.05 U		13.00 U	
299-E34-10	11/21/94	B007S4		24.00 L		6600.00 Q
299-E34-10	11/21/94	B007S8	.06 BL		13.00 U	
299-E34-11	11/28/94	B007S9		13.00 U		14000.00 D
299-E34-11	11/28/94	B007T3	.03 U		13.00 U	
299-E34-12	11/28/94	B007T4		21.00 LQ		20000.00 D
299-E34-12	11/28/94	B007T5		14.00 LQ		20000.00 D
299-E34-12	11/28/94	B007V2	.05 U		13.00 U	
299-E34-12	11/28/94	B007V3	.05 L		13.00 U	
299-E34-2	11/21/94	B007V4		24.00 L		14000.00 DQ
299-E34-2	11/21/94	B007V8	.05 U		13.00 U	
299-E34-3	11/21/94	B007V9		20.00 L		9900.00 DQ
299-E34-3	11/21/94	B007W3	.05 BL		13.00 U	
299-E34-5	11/18/94	B007W4		61.00		14000.00 D
299-E34-5	11/18/94	B007W8	.08 BL		38.00	
299-E34-7	11/18/94	B007W9		21.00 L		5700.00
299-E34-7	11/18/94	B007X3	.05 U		21.00 L	
299-E34-9	11/28/94	B007X4		13.00 U		12000.00 D
299-E34-9	11/28/94	B007X8	.07 L		13.00 U	

Well Name	Collection Date	Sample Number	POTASUM 34/ppb 890/.	FPOTASS 34/ppb 890/.	RADIUM 137/pCi/L ./51	SODIUM 34/ppb 150/.
299-E27-10	12/13/94	B007Q2	6000.00		.05 U	14000.00 Q
299-E27-10	12/13/94	B007Q6		5700.00		
299-E27-11	11/18/94	B007Y4	6200.00		.06 U	14000.00 B
299-E27-11	11/18/94	B007Y8		6400.00		
299-E27-17	11/18/94	B007Q9	6000.00		.01 U	14000.00 B
299-E27-17	11/18/94	B007R3		6100.00		
299-E27-8	11/17/94	B007R4	6000.00		.10 U	13000.00 B
299-E27-8	11/17/94	B007R8		6100.00		
299-E27-9	11/17/94	B007R9	5800.00		.04 U	12000.00 B
299-E27-9	11/17/94	B007S3		5700.00		
299-E34-10	11/21/94	B007S4	6100.00		.08 U	15000.00 BQ
299-E34-10	11/21/94	B007S8		6100.00		
299-E34-11	11/28/94	B007S9	6800.00		.15	23000.00 Q
299-E34-11	11/28/94	B007T3		6900.00		
299-E34-12	11/28/94	B007T4	9600.00		.03 UQ	40000.00 Q
299-E34-12	11/28/94	B007T5	9500.00		.19 Q	38000.00 Q
299-E34-12	11/28/94	B007V2		9800.00		
299-E34-12	11/28/94	B007V3		9500.00		
299-E34-2	11/21/94	B007V4	7800.00		.01 U	23000.00 BQ
299-E34-2	11/21/94	B007V8		7900.00		
299-E34-3	11/21/94	B007V9	6300.00		.06 U	19000.00 BQ
299-E34-3	11/21/94	B007W3		6500.00		

Table 14-16. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 2 Data for Reporting Period October 1 through December 31, 1994.
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Well Name	Collection Date	Sample Number	POTASSIUM 34/ppb 890/.	POTASSIUM 34/ppb 890/.	RADIUM 137/pCi/L ./5i	SODIUM 34/ppb 150/.
299-E34-5	11/18/94	8007W4	7500.00		.10 U	29000.00 B
299-E34-5	11/18/94	8007W8		7600.00		
299-E34-7	11/18/94	8007W9	7500.00		.07 U	19000.00 B
299-E34-7	11/18/94	8007X3		7500.00		
299-E34-9	11/28/94	8007X4	6100.00		.05 U	20000.00 B
299-E34-9	11/28/94	8007X8		6700.00		

Well Name	Collection Date	Sample Number	SODIUM 34/ppb 150/.	SULFATE 124/ppb 89/250000g	TRITIUM 142/pCi/L ./20000	TURBID 126/NTU ./016/.
299-E27-10	12/13/94	8007G2		26000.00 D	5350.00	1.10 Q
299-E27-10	12/13/94	8007G6	14000.00 B			
299-E27-11	11/18/94	8007Y4		48000.00 D	2910.00	3.30
299-E27-11	11/18/94	8007Y8	14000.00 B			
299-E27-17	11/18/94	8007Q9		51000.00 D	3000.00	1.00
299-E27-17	11/18/94	8007R3	15000.00 B			
299-E27-8	11/17/94	8007R4		44000.00 D	3080.00	1.00
299-E27-8	11/17/94	8007R8	13000.00 B			
299-E27-9	11/17/94	8007R9		49000.00 D	2860.00	2.50
299-E27-9	11/17/94	8007S3	13000.00 B			
299-E34-10	11/21/94	8007S4		53000.00 D	3240.00	1.60 Q
299-E34-10	11/21/94	8007S8	15000.00 BQ			
299-E34-11	11/28/94	8007S9		72000.00 D	958.00	.99 Q
299-E34-11	11/28/94	8007T3	23000.00 Q			
299-E34-12	11/28/94	8007T4		190000.00 D	3590.00	3.80 Q
299-E34-12	11/28/94	8007T5		190000.00 D	3350.00	3.90 Q
299-E34-12	11/28/94	8007Y2	47000.00 Q			
299-E34-12	11/28/94	8007Y3	44000.00 Q			
299-E34-2	11/21/94	8007V4		120000.00 D	2200.00	1.70 Q
299-E34-2	11/21/94	8007V8	23000.00 BQ			
299-E34-3	11/21/94	8007V9		72000.00 D	378.00	1.60 Q
299-E34-3	11/21/94	8007U3	19000.00 BQ			
299-E34-5	11/18/94	8007W4		99000.00 D	272.00 U	.90
299-E34-5	11/18/94	8007W8	29000.00 B			
299-E34-7	11/18/94	8007W9		50000.00 D	22.70 U	3.30
299-E34-7	11/18/94	8007X3	19000.00 B			
299-E34-9	11/28/94	8007X4		61000.00 D	3310.00	.75 Q
299-E34-9	11/28/94	8007X8	20000.00 Q			

Table 14-16. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 2 Data for Reporting Period October 1 through December 31, 1994.
(sheet 8 of 8)

Well Name	Collection Date	Sample Number	URANIUM 145/ppb ./.	VANADIUM 34/ppb 6.4/.	FVANADI 34/ppb 6.4/.	ZINC 34/ppb 4.4/5000s
299-E27-10	12/13/94	800702	2.06	22.00 L		6.30 U
299-E27-10	12/13/94	800706			21.00 L	
299-E27-11	11/18/94	8007Y4	2.37	26.00 L		16.00
299-E27-11	11/18/94	8007Y8			22.00 L	
299-E27-17	11/18/94	800709	2.60	23.00 L		6.30 U
299-E27-17	11/18/94	8007R3			21.00 L	
299-E27-8	11/17/94	8007R4	2.64	26.00 L		6.30 U
299-E27-8	11/17/94	8007R8			25.00 L	
299-E27-9	11/17/94	8007R9	2.45	27.00 L		6.30 U
299-E27-9	11/17/94	8007S3			27.00 L	
299-E34-10	11/21/94	8007S4	2.34	21.00 L		8.80 L
299-E34-10	11/21/94	8007S8			24.00 L	
299-E34-11	11/28/94	8007S9	3.04	18.00 L		12.00
299-E34-11	11/28/94	8007T3			16.00 L	
299-E34-12	11/28/94	8007T4	2.78	20.00 L		8.70 L
299-E34-12	11/28/94	8007T5	2.73	20.00 L		7.60 L
299-E34-12	11/28/94	8007V2			20.00 L	
299-E34-12	11/28/94	8007V3			21.00 L	
299-E34-2	11/21/94	8007V4	2.10	21.00 L		6.30 U
299-E34-2	11/21/94	8007V8			21.00 L	
299-E34-3	11/21/94	8007V9	1.91	22.00 L		6.30 U
299-E34-3	11/21/94	8007V3			21.00 L	
299-E34-5	11/18/94	8007W4	4.17	18.00 L		6.30 U
299-E34-5	11/18/94	8007W8			20.00 L	
299-E34-7	11/18/94	8007W9	2.22	24.00 L		6.30 U
299-E34-7	11/18/94	8007X3			21.00 L	
299-E34-9	11/28/94	8007X4	2.47	18.00 L		6.30 U
299-E34-9	11/28/94	8007X8			20.00 L	

Well Name	Collection Date	Sample Number	FZINC 34/ppb 4.4/5000s
299-E27-10	12/13/94	800706	6.30 U
299-E27-11	11/18/94	8007Y8	6.30 U
299-E27-17	11/18/94	8007R3	6.30 U
299-E27-8	11/17/94	8007R8	6.30 U
299-E27-9	11/17/94	8007S3	6.30 U
299-E34-10	11/21/94	8007S8	6.30 U
299-E34-11	11/28/94	8007T3	6.30 U
299-E34-12	11/28/94	8007V2	6.50 L
299-E34-12	11/28/94	8007V3	6.30 U
299-E34-2	11/21/94	8007V8	6.30 U
299-E34-3	11/21/94	8007V3	6.30 U
299-E34-5	11/18/94	8007W8	6.30 U
299-E34-7	11/18/94	8007X3	10.00
299-E34-9	11/28/94	8007X8	8.20 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
October 1 through December 31, 1994.
(sheet 1 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 110/.	TOX ppb 5/.
299-E27-10	12/13/94	B007Q2	292		7.57	8.40	300 L	5.0 U
		B007Q3	293		7.56		300 L	5.0 U
		B007Q4	293		7.54		200 L	5.0 U
		B007Q5	291		7.54		200 L	5.0 U
299-E27-11	11/18/94	B007Y2		340				
		B007Y4	360		7.72	8.20	400 L	5.0 U
		B007Y5	359		7.73		300 L	5.0 U
		B007Y6	358		7.73		400 L	5.0 U
		B007Y7	357		7.74		400 L	5.0 U
299-E27-17	11/18/94	B007Y3		350				
		B007Q9	459		7.18	8.20	300 L	5.0 U
		B007R0	457		7.15		300 L	5.0 U
		B007R1	456		7.15		300 L	5.0 U
		B007R2	458		7.16		300 L	5.4
299-E27-8	11/17/94	B00794		330				
		B007R4	315		7.80	8.20	200 L	5.1
		B007R5	312		7.80		300 L	6.3
		B007R6	309		7.79		300 L	5.0 U
		B007R7	309		7.80		300 L	5.4
299-E27-9	11/17/94	B00795		340				
		B007R9	322		8.08	8.20	200 L	5.0 U
		B007S0	322		8.07		200 L	5.0 U
		B007S1	321		8.09		300 L	5.0 U
		B007S2	321		8.10		200 L	7.3
299-E34-10	11/21/94	B00796		350				
		B007S4	280		7.90	8.10	400 L	5.0 U
		B007S5	281		7.91		300 L	5.0 U
		B007S6	282		7.93		300 L	5.0 U
		B007S7	283		7.93		300 L	5.0 U
299-E34-11	11/28/94	B007S9	448		7.93	7.80	200 L	5.6
		B007T0	445		7.92		200 L	5.0 U
		B007T1	449		7.91		300 L	6.3
		B007T2	449		7.92		200 L	5.0 U
		B007T4	341		8.04	8.20	700 L	9.2
299-E34-12	11/28/94	B007T5	341		8.04	8.20	800 L	6.7
		B007T6	340		8.04		600 L	7.7
		B007T7	339		8.04		600 L	5.0 U
		B007T8					800 L	19.7
		B007T9					700 L	12.4
299-E34-2	11/21/94	B007V0					700 L	10.3
		B007V1					600 L	9.8
		B007V4	515		8.06	8.00	200 L	5.0 U
		B007V5	516		8.06		200 L	5.0 U

Table 14-17. Contamination Indicator Parameters for the Low-Level
Waste Management Area 2 Data for Reporting Period
October 1 through December 31, 1994.
(sheet 2 of 2)

Well Name	Collection Date	Sample Number	COND FIELD uMho 1/.	COND LAB uMho 1/.	pH FIELD .01/6.5-8.5e	pH LAB .01/6.5-8.5e	TOC ppb 110/.	TOX ppb 5/.
299-E34-2	11/21/94	B007V6	515		8.07		300 L	5.0 U
		B007V7	516		8.04		200 L	5.0 U
299-E34-3	11/21/94	B007V9	395		8.07	8.10	300 L	6.9
		B007W0	390		8.10		300 L	5.0 U
		B007W1	395		8.11		300 L	6.0
		B007W2	395		8.11		300 L	5.6
299-E34-5	11/18/94	B007W4	481		8.07	8.10	300 L	5.1
		B007W5	480		8.05		300 L	5.0 U
		B007W6	480		8.03		300 L	5.0 U
		B007W7	485		8.01		200 L	5.0 U
299-E34-7	11/18/94	B007W9	271		8.84	8.20	300 L	5.0 U
		B007X0	273		8.84		200 L	5.0 U
		B007X1	275		8.83		300 L	5.0 U
		B007X2	278		8.80		200 L	5.0 U
299-E34-9	11/28/94	B007X4	392		8.05	8.10	300 L	9.3
		B007X5	390		8.05		300 L	6.3
		B007X6	390		8.03		400 L	5.0 U
		B007X7	394		8.01		300 L	5.0 U

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 October 1 through December 31, 1994.
(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			29	29	
TOC		Total Organic Carbon		ppb	110			16	14	
TOX		Total Organic Halogen		ppb	5			16	9	
PH		pH, field		pH	.01	6.5-8.5	EPAS	29	29	1

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
2,4,5TP		2,4,5-TP		ppb	.015	50	EPA	1	0	0
2,4-D		2,4-D		ppb	.052	100	EPAI	1	0	0
ARSENIC		Arsenic		ppb	2.8	50	EPA	1	0	0
FARSENIC		Arsenic, filtered		ppb	2.8	50	EPA	1	0	0
BARIUM		Barium		ppb	.59	1000	EPAI	2	2	0
FBARIUM		Barium, filtered		ppb	.59	1000	EPAI	1	1	0
CADMIUM		Cadmium		ppb	3.3	10	EPAI	2	0	0
FCADMIU		Cadmium, filtered		ppb	3.3	10	EPAI	1	0	0
CHROMIUM		Chromium		ppb	4.5	50	EPAI	2	2	0
FCHROMI		Chromium, filtered		ppb	4.5	50	EPAI	1	1	0
ENDRIN		Endrin		ppb	.0011	.2	EPA	1	0	0
FLUORID		Fluoride		ppb	36	1400	EPAI	8	8	0
ALPHA		Gross alpha		pCi/L		15	EPA	1	1	0
MERCURY		Mercury		ppb	.03	2	EPA	1	1	0
FMERCUR		Mercury, filtered		ppb	.05	2	EPA	1	1	0
METHYLOR		Methoxychlor		ppb	.016	100	EPAI	1	0	0
NITRATE		Nitrate		ppb	11	45000	EPA	8	8	5
RADIUM		Radium		pCi/L		5	EPAI	1	1	0
SELENIUM		Selenium		ppb	.65	10	EPAI	1	1	0
FSELENI		Selenium, filtered		ppb	.65	10	EPAI	1	1	0
TOXAENE		Toxaphene		ppb	.85	5	EPAI	1	0	0
g-BHC		gamma-BHC (Lindane)		ppb	.0013	4	EPAI	1	0	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORID		Chloride		ppb	14	250000	EPAS	8	8	0
IRON		Iron		ppb	5.24	300	EPAS	2	2	2
FIROH		Iron, filtered		ppb	5.24	300	EPAS	1	1	0
MANGESE		Manganese		ppb	.72	50	EPAS	2	2	0
FMANGAN		Manganese, filtered		ppb	.72	50	EPAS	1	1	0
LPHENOL		Phenol		ppb	.31			1	0	
SODIUM		Sodium		ppb	61			2	2	
FSODIUM		Sodium, filtered		ppb	61			1	1	
SULFATE		Sulfate		ppb	37	250000	EPAS	8	8	0

Table 14-18. Constituent List and Summary of Results for the Low-Level Waste Management Area 3 Data for Reporting Period October 1 through December 31, 1994.
(sheet 2 of 3)

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
1,1,1-T		1,1,1-Trichloroethane	ppb	.036	200	EPA		1	0	0
1,1,2-T		1,1,2-Trichloroethane	ppb	.078				1	0	
1,1-DIC		1,1-Dichloroethane	ppb	.058				1	0	
1,2-DIC		1,2-Dichloroethane	ppb	.029	5	EPA		1	0	0
1,4-dben		1,4-Dichlorobenzene	ppb	.058	75	EPA		1	0	0
2,4,5-T		2,4,5-T	ppb	.014				1	0	
2,4,6-trp		2,4,6-Trichlorophenol	ppb	1.3				1	0	
2,4-dchp		2,4-Dichlorophenol	ppb	1.3				1	0	
DIMPHEW		2,4-Dimethylphenol	ppb	1.2				1	0	
DIMPHEW		2,4-Dinitrophenol	ppb	3				1	0	
2,6-dchp		2,6-Dichlorophenol	ppb	1.4				1	0	
CHLPHEN		2-Chlorophenol	ppb	1.6				1	0	
2NITPH		2-Nitrophenol	ppb	1.3				1	0	
BUTDIMP	30	2-sec-Butyl-4,6-dinitrophenol (DN)	ppb	1.3				1	0	
BUTDIMP	49	2-sec-Butyl-4,6-dinitrophenol (DN)	ppb	.077				1	0	
DDO		4,4'-DDO	ppb	.0013				1	0	
DOE		4,4'-DOE	ppb	.0012				1	0	
DDT		4,4'-DDT	ppb	.0011				1	0	
4,6-DN2MP		4,6-Dinitro-2-methylphenol	ppb	1.3				1	0	
CHLCRES		4-Chloro-3-methylphenol	ppb	1.3				1	0	
NITPHEN		4-Nitrophenol	ppb	3				1	0	
ALDRIN		Aldrin	ppb	.0026				1	0	
a-BHC		Alpha-BHC	ppb	.0011				1	0	
ALUMINUM		Aluminum	ppb	26				2	2	
FALUMIN		Aluminum, filtered	ppb	26				1	0	
ANTIMONY		Antimony	ppb	62				2	0	
PANTIMO		Antimony, filtered	ppb	62				1	0	
SB-125		Antimony-125	pCi/L					4	0	
BENZENE		Benzene	ppb	.013	5	EPA		1	0	0
BERYLLIUM		Beryllium	ppb	.17				2	0	
FBERYLL		Beryllium, filtered	ppb	.17				1	0	
BE-7		Beryllium-7	pCi/L					4	0	
b-BHC		Beta-BHC	ppb	.0014				1	0	
BROMIDE		Bromide	ppb	100				8	0	
CALCIUM		Calcium	ppb	34				2	2	
FCALCIU		Calcium, filtered	ppb	34				1	1	
TETRAHE		Carbon tetrachloride	ppb	.075	5	EPA		1	1	1
CEPR-144		Cerium/Praseodymium-144	pCi/L					4	0	
CS-134		Cesium-134	pCi/L					4	0	
CS-137		Cesium-137	pCi/L		200	EPA		4	0	0
CHLORDANE		Chlordane	ppb	.022	2	EPA		1	0	0
CHLFORM		Chloroform	ppb	.041				1	1	
COBALT		Cobalt	ppb	5.9				2	0	
FCOBALT		Cobalt, filtered	ppb	5.9				1	0	
CO-60		Cobalt-60	pCi/L		100	EPA		4	1	0
COPPER		Copper	ppb	4.1	1000	EPAS		2	0	0
FCOPPER		Copper, filtered	ppb	4.1	1000	EPAS		1	0	0
CRESOLS		Cresols (methylphenols)	ppb	4.8				1	0	
d-BHC		Delta-BHC	ppb	.0017				1	0	
DIELDRIN		Dieldrin	ppb	.0014				1	0	
END01		Endosulfan I	ppb	.0013				1	0	
END02		Endosulfan II	ppb	.0011				1	0	
ENDSFAN		Endosulfan sulfate	ppb	.0021				1	0	
ENDRALD		Endrin Aldehyde	ppb	.0017				1	0	
ETHBENZ		Ethylbenzene	ppb	.051	700	EPA		1	0	0
EU-154		Europium-154	pCi/L					4	0	

Table 14-18. Constituent List and Summary of Results for the Low-Level Waste Management Area 3 Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 3)

Short	(Method)	Constituent Name Full	Units	Lab MDL	DWS Limit	Agency	Number of Samples		
							Total	>MDL	>DWS
EU-155		Europium-155	pCi/L				4	0	
BETA		Gross beta	pCi/L				1	1	
HEPTLOR		Heptachlor	ppb	.0027	.4	EPA	1	0	0
HEPTIDE		Heptachlor epoxide	ppb	.0013	.2	EPA	1	0	0
I-129L		Iodine-129, Low level	pCi/L		1	EPA	4	1	0
LEAD		Lead	ppb	1.5	50	EPA1	1	1	0
FLEAD		Lead, filtered	ppb	1.5	50	EPA1	1	1	0
MAGNES		Magnesium	ppb	23			2	2	
FMAGNES		Magnesium, filtered	ppb	23			1	1	
METHYCH		Methylene chloride	ppb	.09			1	1	
NICKEL		Nickel	ppb	13			2	1	
FNICKEL		Nickel, filtered	ppb	13			1	1	
NITRITE		Nitrite	ppb	18	1000	EPA	8	0	0
PENTCHP		Pentachlorophenol	ppb	1.3	1	EPA	1	0	1*
PHOSPHA		Phosphate	ppb	82			8	0	
POTASSUM		Potassium	ppb	850			2	2	
FPOTASS		Potassium, filtered	ppb	850			1	1	
K-40		Potassium-40	pCi/L				4	3	
RU-106		Ruthenium-106	pCi/L		30	EPA	4	0	0
SILVER		Silver	ppb	3.6	50	EPA1	2	0	0
FSILVER		Silver, filtered	ppb	3.6	50	EPA1	1	0	0
SR-90		Strontium-90	pCi/L		8	EPA	4	0	0
TC-99		Technetium-99	pCi/L		900	EPA	4	4	0
PERCENE		Tetrachloroethane	ppb	.22	5	EPA	1	1	0
TETPHNL		Tetrachlorophenols	ppb	1.5			1	0	
TIN		Tin	ppb	69			2	0	
FTIN		Tin, filtered	ppb	69			1	0	
TOLUENE		Toluene	ppb	.016	1000	EPA	1	0	0
TDS		Total Dissolved Solids	ppm	10	500	EPAS	4	4	0
TRICENE		Trichloroethene	ppb	.11	5	EPA	1	1	1
TRIPHNL		Trichlorophenols	ppb	1.7			1	0	
TRITIUM		Tritium	pCi/L		20000	EPA	4	4	0
TURBID		Turbidity	NTU	.016			1	1	
VANADIUM		Vanadium	ppb	6.6			2	2	
FVANADI		Vanadium, filtered	ppb	6.6			1	1	
VINYIDE		Vinyl chloride	ppb	.13	2	EPA	1	0	0
XYLENE		Xylenes (total)	ppb	.035	10000	EPA	1	0	0
ZINC		Zinc	ppb	6.3	5000	EPAS	2	2	0
FZINC		Zinc, filtered	ppb	6.3	5000	EPAS	1	0	0
ZN-65		Zinc-65	pCi/L				4	1	
ZRNB-95		Zirconium/Niobium-95	pCi/L				4	1	
CIS12DE		cis-1,2-Dichloroethylene	ppb	.11	70	EPA	1	0	0
TRANSCE		trans-1,2-Dichloroethylene	ppb	.073	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 October 1 through December 31, 1994.
(sheet 1 of 3)

Well Name	Collection Date	Sample Number	ALUMINUM 34/ppb 19/.	ALUMINUM 34/ppb 19/.	BARIUM 34/ppb 1.3/1000i	BARIUM 34/ppb 1.3/1000i
299-W10-20	12/15/94	B00656	400.00 S		59.00	
299-W10-20	12/15/94	B00657		26.00 U		54.00
299-W9-1	8/12/94	B00674	44.00 L		29.00	

Well Name	Collection Date	Sample Number	CALCIUM 34/ppb 47/.	CALCIUM 34/ppb 47/.	TETRAHE 25/ppb .32/5	CHLORID 124/ppb 71/250000s
299-W10-19	12/14/94	B00670				15000.00 DQ
299-W10-20	12/15/94	B00656	70000.00		2200.00 DX	
299-W10-20	12/15/94	B00657		69000.00		
299-W10-20	12/15/94	B00671				17000.00 DQ
299-W10-21	12/14/94	B00672				13000.00 DQ
299-W6-2	12/14/94	B00673				4600.00 Q
299-W7-11	8/18/94	B00619				7800.00 Y
299-W7-12	8/18/94	B00624				12000.00 DY
299-W7-9	8/18/94	B00664				16000.00 DY
299-W8-1	8/18/94	B00669				16000.00 DY
299-W9-1	8/12/94	B00674	44000.00			

Well Name	Collection Date	Sample Number	CHLFORM 25/ppb .03/.	CHROMIUM 34/ppb 11/501	CHROMIUM 34/ppb 11/501	CO-60 140/pCi/L ./100
299-W10-19	12/14/94	B00670				.88 U
299-W10-20	12/15/94	B00656	60.00 Y	25.00		
299-W10-20	12/15/94	B00657			8.20 L	
299-W10-20	12/15/94	B00671				.54 U
299-W10-21	12/14/94	B00672				.88 U
299-W6-2	12/14/94	B00673				1.88
299-W9-1	8/12/94	B00674		18.00 L		

Well Name	Collection Date	Sample Number	FLUORID 124/ppb 51/14001	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.	1-129 139/pCi/L ./1
299-W10-19	12/14/94	B00670	500.00			.01 U
299-W10-20	12/15/94	B00656		1.57	24.60	
299-W10-20	12/15/94	B00671	400.00			-.05 U
299-W10-21	12/14/94	B00672	400.00			.45
299-W6-2	12/14/94	B00673	500.00			.09 U
299-W7-11	8/18/94	B00619	800.00 Y			
299-W7-12	8/18/94	B00624	700.00 Y			
299-W7-9	8/18/94	B00664	700.00 Y			
299-W8-1	8/18/94	B00669	700.00 Y			

Table 14-19. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 3 Data for Reporting Period October 1 through December 31, 1994.
(sheet 2 of 3)

Well Name	Collection Date	Sample Number	IRON	FIIRON	LEAD	FLEAD
			34/ppb 18/300s	34/ppb 18/300s	40/ppb .86/50i	40/ppb .86/50i
299-W10-20	12/15/94	B00G56	1100.00 B		8.50	
299-W10-20	12/15/94	B00G57		17.00 BL		3.70 L
299-W9-1	8/12/94	B0CB74	390.00			

Well Name	Collection Date	Sample Number	MAGNES	FMAGNES	MANGESE	FMANGAN
			34/ppb 25/.	34/ppb 25/.	34/ppb 1/50s	34/ppb 1/50s
299-W10-20	12/15/94	B00G56	22000.00		38.00	
299-W10-20	12/15/94	B00G57		22000.00		11.00
299-W9-1	8/12/94	B0CB74	15000.00		8.40 L	

Well Name	Collection Date	Sample Number	MERCURY	FMERCUR	METHYCH	NICKEL
			41/ppb .095/2	41/ppb .095/2	25/ppb .082/.	34/ppb 16/.
299-W10-20	12/15/94	B00G56	.07 BL		.22 L	13.00 U
299-W10-20	12/15/94	B00G57		.06 BL		
299-W9-1	8/12/94	B0CB74				45.00

Well Name	Collection Date	Sample Number	FNICKEL	NITRATE	POTASUM	FPOTASS
			34/ppb 16/.	124/ppb 96/45000	34/ppb 890/.	34/ppb 890/.
299-W10-19	12/14/94	B00G70		130000.00 BQ		
299-W10-20	12/15/94	B00G56			5100.00	
299-W10-20	12/15/94	B00G57	19.00 L			4900.00
299-W10-20	12/15/94	B00G71		130000.00 BQ		
299-W10-21	12/14/94	B00G72		150000.00 BQ		
299-W6-2	12/14/94	B00G73		52000.00 BQ		
299-W7-11	8/18/94	B0CB19		47000.00 DNY		
299-W7-12	8/18/94	B0CB24		29000.00 DNY		
299-W7-9	8/18/94	B0CB64		31000.00 DNY		
299-W8-1	8/18/94	B0CB69		31000.00 DNY		
299-W9-1	8/12/94	B0CB74			4000.00	

Well Name	Collection Date	Sample Number	K-40	RADIUM	SELENIUM	FSELENI
			140/pCi/L ./.	137/pCi/L ./5i	48/ppb 1.4/10i	48/ppb 1.4/10i
299-W10-19	12/14/94	B00G70	14.30 U			
299-W10-20	12/15/94	B00G56		.25	2.20 L	
299-W10-20	12/15/94	B00G57				2.20 L
299-W10-20	12/15/94	B00G71	29.70			
299-W10-21	12/14/94	B00G72	49.00			
299-W6-2	12/14/94	B00G73	55.70			

Table 14-19. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 3 Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 3)

Well Name	Collection Date	Sample Number	SODIUM 34/ppb 150/.	FSCDIUM 34/ppb 150/.	SULFATE 124/ppb 89/250000s	TC-99 143/pCi/L ./900
299-W10-19	12/14/94	B00G70			38000.00 D	76.60
299-W10-20	12/15/94	B00G56	13000.00 BQ			
299-W10-20	12/15/94	B00G57		14000.00 BQ		
299-W10-20	12/15/94	B00G71			41000.00 D	59.50
299-W10-21	12/14/94	B00G72			35000.00 D	76.30
299-W6-2	12/14/94	B00G75			23000.00 D	28.10
299-W7-11	8/18/94	B0CB19			34000.00 DY	
299-W7-12	8/18/94	B0CB24			35000.00 DY	
299-W7-9	8/18/94	B0CB64			51000.00 DY	
299-W8-1	8/18/94	B0CB69			47000.00 DY	
299-W9-1	8/12/94	B0CB74	10000.00			

Well Name	Collection Date	Sample Number	PERCENE 25/ppb .08/5	TDS 65/ppm 10/500s	TRICENE 25/ppb .043/5	TRITIUM 142/pCi/L ./20000
299-W10-19	12/14/94	B00G70		340.00		1530.00
299-W10-20	12/15/94	B00G56	1.40 Z		7.40	
299-W10-20	12/15/94	B00G71		370.00		2160.00
299-W10-21	12/14/94	B00G72		390.00		1380.00
299-W6-2	12/14/94	B00G75		250.00		7510.00

Well Name	Collection Date	Sample Number	TURBID 126/MTU .016/.	VANADIUM 34/ppb 6.4/.	FLVANAD1 34/ppb 6.4/.	ZINC 34/ppb 4.4/5000s
299-W10-20	12/15/94	B00G56	24.00 a	17.00 L		13.00
299-W10-20	12/15/94	B00G57			13.00 L	
299-W9-1	8/12/94	B0CB74		21.00 L		17.00 B

Well Name	Collection Date	Sample Number	FZINC 34/ppb 4.4/5000s	ZN-65 140/pCi/L ./.	ZRNB-95 140/pCi/L ./.
299-W10-19	12/14/94	B00G70		2.11	-2.43 U
299-W10-20	12/15/94	B00G57	6.30 U		
299-W10-20	12/15/94	B00G71		.72 U	2.45
299-W10-21	12/14/94	B00G72		.75 U	-1.13 U
299-W6-2	12/14/94	B00G75		1.20 U	.52 U

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
October 1 through December 31, 1994.

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 110/.	TOX ppb 5/.
299-W10-13	12/14/94	B00G58	452		8.51		110 L	14.0
		B00G59	453		8.58		200 L	14.4
		B00G60	450		8.61		140 L	11.1
		B00G61	451		8.61		120 L	11.1
299-W10-19	12/14/94	B00G70	558		8.77		300 L	1000.0
299-W10-20	12/15/94	B00G56	623		6.87			
		B00G71	623		6.91		400 L	1280.0
299-W10-21	12/14/94	B00G72	598		8.20		400 L	444.0
299-W6-2	11/30/94	B008J2	395		8.08			
		B008J3	395		8.08			
		B008J4	396		8.08			
		B008J5	398		8.08			
		B008J6	394		8.08			
		B008J7	395		8.08			
		B008J8	393		8.08			
		B008J9	397		8.07			
		B00G75	370		6.41 F		200 L	119.0
		B008K0	394		8.31			
299-W8-1	11/30/94	B008K1	394		8.29			
		B008K2	394		8.28			
		B008K3	393		8.28			
		B008K4	393		8.28			
		B008K5	393		8.30			
		B008K6	393		8.29			
		B008K7	393		8.28			
299-W9-1	12/14/94	B00G62	450		8.76		110 U	5.0 U
		B00G63	454		8.75		110 U	5.0 U
		B00G64	454		8.74		140 L	5.0 U
		B00G65	455		8.74		300 L	5.0 U
		B00G66					150 L	5.0 U
		B00G67					300 L	5.0 U
		B00G68					200 L	5.3
		B00G69					200 L	5.0 U

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 October 1 through December 31, 1994.
(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	unhos		1			64	64	
TOC		Total Organic Carbon	ppb		110			64	60	
TOX		Total Organic Halogen	ppb		5			55	54	
PH	93	pH, field	pH		.01	6.5-8.5	EPAS	63	63	1
PH	125	pH, lab	pH			6.5-8.5	EPAS	16	16	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
BARIUM		Barium	ppb		.59	1000	EPAI	16	16	0
FBARIUM		Barium, filtered	ppb		.59	1000	EPAI	16	16	0
CADMIUM		Cadmium	ppb		3.3	10	EPAI	16	0	0
FCADMIU		Cadmium, filtered	ppb		3.3	10	EPAI	16	0	0
CHROMIUM		Chromium	ppb		4.5	50	EPAI	16	16	10
FCHROMI		Chromium, filtered	ppb		4.5	50	EPAI	16	12	0
FLUORID		Fluoride	ppb		36	1400	EPAI	16	16	0
ALPHA		Gross alpha	pCi/L			15	EPA	16	11	0
MERCURY		Mercury	ppb		.05	2	EPA	16	3	0
FMERCUR		Mercury, filtered	ppb		.05	2	EPA	16	3	0
NITRATE		Nitrate	ppb		11	45000	EPA	16	16	6
RADIUM		Radium	pCi/L			5	EPAI	16	6	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORID		Chloride	ppb		14	250000	EPAS	16	16	0
IRON		Iron	ppb		5.24	300	EPAS	16	16	10
FIRON		Iron, filtered	ppb		5.24	300	EPAS	16	16	0
MANGESE		Manganese	ppb		.72	50	EPAS	16	16	2
FMANGAH		Manganese, filtered	ppb		.72	50	EPAS	16	16	0
LPHENOL	19	Phenol	ppb		.54			16	0	
LPHENOL	30	Phenol	ppb		.31			16	0	
SODIUM		Sodium	ppb		61			16	16	
FSODIUM		Sodium, filtered	ppb		61			16	16	
SULFATE		Sulfate	ppb		37	250000	EPAS	16	16	0

Table 14-21. Constituent List and Summary of Results for the Low-Level Waste Management Area 4 Data for Reporting Period October 1 through December 31, 1994.
(sheet 2 of 3)

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
1,1,1-T		1,1,1-Trichloroethane	ppb	.036	200	EPA		16	0	0
1,1,2-T		1,1,2-Trichloroethane	ppb	.078				16	0	
1,1-DIC		1,1-Dichloroethane	ppb	.058				16	0	
1,2-DIC		1,2-Dichloroethane	ppb	.029	5	EPA		16	0	0
14-dben		1,4-Dichlorobenzene	ppb	.055	75	EPA		16	0	0
246-trp		2,4,6-Trichlorophenol	ppb	1.3				16	0	
24-dchp	19	2,4-Dichlorophenol	ppb	4				16	0	
24-dchp	30	2,4-Dichlorophenol	ppb	1.3				16	0	
DTMPPH		2,4-Dimethylphenol	ppb	1.2				16	0	
DINPPH		2,4-Dinitrophenol	ppb	3				16	0	
26-dchp		2,6-Dichlorophenol	ppb	1.4				16	0	
CHLPPH		2-Chlorophenol	ppb	1.6				16	0	
2METPH		2-Methylphenol	ppb	5.1				16	0	
2NITPH	19	2-Nitrophenol	ppb	1.9				16	0	
2NITPH	30	2-Nitrophenol	ppb	1.3				16	0	
BUTDINP		2-sec-Butyl-4,6-dinitrophenol (DN)	ppb	1.3				16	0	
46DMZP		4,6-Dinitro-2-methylphenol	ppb	1.3				16	0	
CHLCRES		4-Chloro-3-methylphenol	ppb	1.3				16	0	
4METHPH		4-Methylphenol	ppb	7				16	0	
NITPPH		4-Nitrophenol	ppb	3				16	0	
ALUMINUM		Aluminum	ppb	26				16	10	
FALUMIN		Aluminum, filtered	ppb	26				16	1	
ANTIMONY		Antimony	ppb	62				16	0	
FANTIMO		Antimony, filtered	ppb	62				16	0	
BENZENE		Benzene	ppb	.013	5	EPA		16	1	0
BENZOTH		Benzothiazole	ppb	1.3				16	0	
BERYLLIUM		Beryllium	ppb	.17				16	1	
PBERYLL		Beryllium, filtered	ppb	.17				16	0	
BIS2EPH		Bis(2-ethylhexyl) phthalate	ppb	5.3				16	0	
BROMIDE		Bromide	ppb	100				16	1	
CALCIUM		Calcium	ppb	34				16	16	
FCALCIU		Calcium, filtered	ppb	34				16	16	
TETRAHE		Carbon tetrachloride	ppb	.073	5	EPA		16	15	13
CHLFORM		Chloroform	ppb	.041				16	15	
COBALT		Cobalt	ppb	5.9				16	0	
FCOBALT		Cobalt, filtered	ppb	5.9				16	0	
COPPER		Copper	ppb	4.1	1000	EPAS		16	9	0
FCOPPER		Copper, filtered	ppb	4.1	1000	EPAS		16	2	0
CRESOLS		Cresols (methylphenols)	ppb	4.8				16	0	
CYANIDE		Cyanide	ppb	1				16	3	
DECANE		Decane	ppb	1.9				16	0	
DODECAN		Dodecane	ppb	1.1				16	0	
ETHBENZ		Ethylbenzene	ppb	.051	700	EPA		16	0	0

Table 14-21. Constituent List and Summary of Results for the Low-Level Waste Management Area 4 Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 3)

Short	(Method)	Constituent Name	Full	Units	Lab MDL	DWS Limit	Agency	Number of Samples		
								Total	>MDL	>DWS
BETA			Gross beta	pCi/L				16	14	
LEAD			Lead	ppb	1.5	50	EPAI	16	11	0
PLEAD			Lead, filtered	ppb	1.5	50	EPAI	16	6	0
MAGNES			Magnesium	ppb	23			16	16	
FMAGNES			Magnesium, filtered	ppb	23			16	16	
METHYCH			Methylene chloride	ppb	.09			16	0	
NAPHTHA			Naphthalene	ppb	1.2			16	0	
NICKEL			Nickel	ppb	13			16	16	
FNICKEL			Nickel, filtered	ppb	13			16	3	
NITRITE			Nitrite	ppb	18	1000	EPA	16	1	0
PENTCHP	19		Pentachlorophenol	ppb	8.3	1	EPA	16	0	16*
PENTCHP	30		Pentachlorophenol	ppb	1.3	1	EPA	16	0	16*
PHOSPHA			Phosphate	ppb	82			16	0	
POTASSUM			Potassium	ppb	850			16	16	
FPOTASS			Potassium, filtered	ppb	850			16	16	
SILVER			Silver	ppb	3.6	50	EPAI	16	0	0
FSILVER			Silver, filtered	ppb	3.6	50	EPAI	16	0	0
PERCENE			Tetrachloroethene	ppb	.22	5	EPA	16	3	0
TETPHNL			Tetrachlorophenols	ppb	1.5			16	0	
TETRADE			Tetradecane	ppb	1.6			16	0	
TIN			Tin	ppb	69			16	0	
FTIN			Tin, filtered	ppb	69			16	0	
TOLUENE			Toluene	ppb	.016	1000	EPA	16	0	0
TRIBUTPH			Tributyl Phosphate	ppb	1.1			16	0	
TRICENE			Trichloroethene	ppb	.11	5	EPA	16	11	2
TRIPHNL			Trichlorophenols	ppb	1.7			16	0	
TOICHPH			Tris-2-chloroethyl phosphate	ppb	.61			16	0	
TRITIUM			Tritium	pCi/L		20000	EPA	16	2	0
TURBID			Turbidity	NTU	.016			16	16	
URANIUM			Uranium	ppb				16	16	
VARADIUM			Vanadium	ppb	6.6			16	15	
FVARADI			Vanadium, filtered	ppb	6.6			16	13	
VINYIDE			Vinyl chloride	ppb	.13	2	EPA	16	0	0
XYLENE			Xylenes (total)	ppb	.035	10000	EPA	16	0	0
ZINC			Zinc	ppb	6.3	5000	EPAS	16	12	0
FZINC			Zinc, filtered	ppb	6.3	5000	EPAS	16	3	0
CIS12DE			cis-1,2-Dichloroethylene	ppb	.11	70	EPA	16	0	0
MCRESOL			m-Cresol	ppb	2.2			16	0	
TRANSCE			trans-1,2-Dichloroethylene	ppb	.073	100	EPA	16	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
October 1 through December 31, 1994.
(sheet 1 of 9)

Well Name	Collection Date	Sample Number	ALUMINUM 34/ppb 19/.	ALUMINUM 34/ppb 19/.	BARIUM 34/ppb 1.3/1000f	BARIUM 34/ppb 1.3/1000f
299-W15-15	11/10/94	B007G0	35.00 L		38.00	
299-W15-15	11/10/94	B007G4		26.00 U		38.00
299-W15-16	11/08/94	B007G5	26.00 U		81.00	
299-W15-16	11/08/94	B007G9		26.00 U		80.00
299-W15-17	11/09/94	B007H0	26.00 U		74.00	
299-W15-17	11/09/94	B007H4		26.00 U		72.00
299-W15-18	11/08/94	B007H5	36.00 L		68.00	
299-W15-18	11/08/94	B007H9		26.00 U		69.00
299-W15-19	11/30/94	B007J0	82.00 L		60.00	
299-W15-19	11/30/94	B007J4		28.00 L		59.00
299-W15-20	11/11/94	B007J5	28.00 U		43.00	
299-W15-20	11/11/94	B007J9		26.00 U		42.00
299-W15-23	11/11/94	B007K0	30.00 L		30.00	
299-W15-23	11/11/94	B007K4		26.00 U		29.00
299-W15-24	11/10/94	B007K5	330.00		92.00	
299-W15-24	11/10/94	B007K9		26.00 U		83.00
299-W18-21	11/28/94	B007L0	31.00 L		37.00	
299-W18-21	11/28/94	B007L4		26.00 U		36.00
299-W18-22	11/29/94	B007L5	26.00 U		52.00	
299-W18-22	11/29/94	B007L9		26.00 U		54.00
299-W18-23	11/11/94	B007M0	26.00 U		27.00	
299-W18-23	11/11/94	B007M4		26.00 U		27.00
299-W18-24	11/08/94	B007M5	26.00 U		31.00	
299-W18-24	11/08/94	B007M9		26.00 U		29.00
299-W18-26	11/28/94	B007N0	2000.00		79.00	
299-W18-26	11/28/94	B007N4		26.00 U		48.00
299-W18-27	11/28/94	B007N5	290.00		33.00	
299-W18-27	11/28/94	B007N9		26.00 U		30.00
299-W18-28	11/28/94	B007P0	61.00 L		54.00	
299-W18-28	11/28/94	B007P4		26.00 U		53.00
299-W18-32	11/09/94	B007P5	150.00 L		31.00	
299-W18-32	11/09/94	B007P9		26.00 U		29.00

Well Name	Collection Date	Sample Number	BENZENE 25/ppb .24/5	BERYLLIUM 34/ppb 1.5/.	BERYLLIUM 34/ppb 1.5/.	BROMIDE 124/ppb 110/.
299-W15-15	11/10/94	B007G0	.01 U	.17 U		100.00 U
299-W15-15	11/10/94	B007G4			.17 U	
299-W15-16	11/08/94	B007G5	.06 LH	.17 U		300.00 LY
299-W15-16	11/08/94	B007G9			.17 U	
299-W15-17	11/09/94	B007H0	.01 U	.17 U		100.00 U
299-W15-17	11/09/94	B007H4			.17 U	
299-W15-18	11/08/94	B007H5	.01 UN	.17 U		100.00 UY
299-W15-18	11/08/94	B007H9			.17 U	
299-W15-19	11/30/94	B007J0	.01 U	.17 U		20.00 L
299-W15-19	11/30/94	B007J4			.17 U	
299-W15-20	11/11/94	B007J5	.01 U	.17 U		100.00 U
299-W15-20	11/11/94	B007J9			.17 U	
299-W15-23	11/11/94	B007K0	.01 U	.17 U		100.00 U
299-W15-23	11/11/94	B007K4			.17 U	
299-W15-24	11/10/94	B007K5	.01 U	.37 L		100.00 U
299-W15-24	11/10/94	B007K9			.17 U	

Table 14-22. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 4 Data for Reporting Period October 1 through December 31, 1994.
(sheet 2 of 9)

Well Name	Collection Date	Sample Number	BENZENE 25/ppb .24/5	BERYLLIUM 34/ppb 1.5/.	FBERYLL 34/ppb 1.5/.	BROMIDE 124/ppb 110/.
299-W18-21	11/28/94	B007L0	.01 UHY	.17 U		14.00 L
299-W18-21	11/28/94	B007L4			.17 U	
299-W18-22	11/29/94	B007L5	.01 U	.17 U		70.00 L
299-W18-22	11/29/94	B007L9			.17 U	
299-W18-23	11/11/94	B007M0	.01 U	.17 U		100.00 U
299-W18-23	11/11/94	B007M4			.17 U	
299-W18-24	11/08/94	B007M5	.01 UH	.17 U		100.00 U
299-W18-24	11/08/94	B007M9			.17 U	
299-W18-24	11/28/94	B007M0	.01 U	.17 U		30.00 L
299-W18-24	11/28/94	B007M4			.17 U	
299-W18-27	11/28/94	B007M5	.01 UHY	.17 U		100.00 U
299-W18-27	11/28/94	B007M9			.17 U	
299-W18-28	11/28/94	B007P0	.01 U	.17 U		13.00 L
299-W18-28	11/28/94	B007P4			.17 U	
299-W18-32	11/09/94	B007P5	.01 U	.17 U		100.00 U
299-W18-32	11/09/94	B007P9			.17 U	

Well Name	Collection Date	Sample Number	CALCIUM 34/ppb 47/.	FCALCIU 34/ppb 47/.	TETRAHE 25/ppb .32/5	CHLORID 124/ppb 71/250000s
299-W15-15	11/10/94	B007G0	38000.00		1100.00 D	5600.00 a
299-W15-15	11/10/94	B007G4		38000.00		
299-W15-16	11/08/94	B007G5	74000.00		5000.00 DH	36000.00 DRY
299-W15-16	11/08/94	B007G9		76000.00		
299-W15-17	11/09/94	B007H0	39000.00		.79 L	14000.00 D
299-W15-17	11/09/94	B007H4		39000.00		
299-W15-18	11/08/94	B007H5	61000.00		5300.00 DH	13000.00 DRY
299-W15-18	11/08/94	B007H9		62000.00		
299-W15-19	11/30/94	B007J0	46000.00		740.00 DY	13000.00 D
299-W15-19	11/30/94	B007J4		46000.00		
299-W15-20	11/11/94	B007J5	30000.00		58.00 X	4300.00
299-W15-20	11/11/94	B007J9		29000.00		
299-W15-23	11/11/94	B007K0	31000.00		440.00 D	5500.00
299-W15-23	11/11/94	B007K4		31000.00		
299-W15-24	11/10/94	B007K5	33000.00		160.00 D	6100.00 a
299-W15-24	11/10/94	B007K9		32000.00		
299-W18-21	11/28/94	B007L0	34000.00		1700.00 DHY	4900.00
299-W18-21	11/28/94	B007L4		33000.00		
299-W18-22	11/29/94	B007L5	38000.00		.08 U	12000.00 D
299-W18-22	11/29/94	B007L9		39000.00		
299-W18-23	11/11/94	B007M0	28000.00		520.00 D	3800.00
299-W18-23	11/11/94	B007M4		28000.00		
299-W18-24	11/08/94	B007M5	27000.00		630.00 DH	5600.00 a
299-W18-24	11/08/94	B007M9		27000.00		
299-W18-26	11/28/94	B007M0	34000.00		30.00	13000.00 D
299-W18-26	11/28/94	B007M4		32000.00		
299-W18-27	11/28/94	B007M5	25000.00		390.00 DXY	3300.00
299-W18-27	11/28/94	B007M9		26000.00		
299-W18-28	11/28/94	B007P0	29000.00		32.00	6400.00
299-W18-28	11/28/94	B007P4		30000.00		
299-W18-32	11/09/94	B007P5	19000.00		.97 L	5800.00
299-W18-32	11/09/94	B007P9		19000.00		

Table 14-22. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 4 Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 9)

Well Name	Collection Date	Sample Number	CHLFORM 25/ppb .05/.	CHROMIUM 34/ppb 11/501	FECHROMI 34/ppb 11/501	COPPER 34/ppb 2.6/1000s
299-W15-15	11/10/94	B007G0	4.70	29.00 Q		4.10 U
299-W15-15	11/10/94	B007G4			11.00 LQ	
299-W15-16	11/08/94	B007G5	31.00 H	100.00 Q		4.10 U
299-W15-16	11/08/94	B007G9			11.00 LQ	
299-W15-17	11/09/94	B007H0	.91	31.00 Q		4.10 U
299-W15-17	11/09/94	B007H4			9.70 LQ	
299-W15-18	11/08/94	B007H5	38.00 H	120.00 Q		4.10 U
299-W15-18	11/08/94	B007H9			8.00 LQ	
299-W15-19	11/30/94	B007J0	36.00 X	68.00		6.40 L
299-W15-19	11/30/94	B007J4			9.70 L	
299-W15-20	11/11/94	B007J5	7.20	56.00 Q		6.20 L
299-W15-20	11/11/94	B007J9			8.40 LQ	
299-W15-23	11/11/94	B007K0	2.50	81.00 Q		6.80 L
299-W15-23	11/11/94	B007K4			5.00 LQ	
299-W15-24	11/10/94	B007K5	21.00	1000.00 Q		57.00
299-W15-24	11/10/94	B007K9			5.40 LQ	
299-W18-21	11/28/94	B007L0	12.00 HY	94.00		4.10 U
299-W18-21	11/28/94	B007L4			8.70 L	
299-W18-22	11/29/94	B007L5	.04 U	100.00		4.30 L
299-W18-22	11/29/94	B007L9			8.80 L	
299-W18-23	11/11/94	B007M0	2.80	20.00 Q		4.10 U
299-W18-23	11/11/94	B007M4			5.70 LQ	
299-W18-24	11/08/94	B007M5	16.00 H	40.00 Q		4.10 U
299-W18-24	11/08/94	B007M9			4.50 UQ	
299-W18-26	11/28/94	B007N0	4.30	130.00		15.00 L
299-W18-26	11/28/94	B007N4			6.00 L	
299-W18-27	11/28/94	B007N5	2.00 HY	260.00		11.00 L
299-W18-27	11/28/94	B007N9			4.50 U	
299-W18-28	11/28/94	B007P0	9.10	47.00		4.80 L
299-W18-28	11/28/94	B007P4			4.50 U	
299-W18-32	11/09/94	B007P5	.59	14.00 LQ		4.20 L
299-W18-32	11/09/94	B007P9			4.50 UQ	

Well Name	Collection Date	Sample Number	PCOPPER 34/ppb 2.6/1000s	CYANIDE 358/ppb .94/.	FLUORIDE 124/ppb 51/1400i	ALPHA 133/pCi/L ./15
299-W15-15	11/10/94	B007G0		1.00 U	300.00	3.18
299-W15-15	11/10/94	B007G4	4.10 U			
299-W15-16	11/08/94	B007G5		1.00 U	600.00 Y	2.76
299-W15-16	11/08/94	B007G9	4.10 U			
299-W15-17	11/09/94	B007H0		2.00 L	400.00	1.17
299-W15-17	11/09/94	B007H4	4.10 U			
299-W15-18	11/08/94	B007H5		1.00 U	900.00 Y	1.94
299-W15-18	11/08/94	B007H9	4.10 U			
299-W15-19	11/30/94	B007J0		2.00 L	500.00	2.00
299-W15-19	11/30/94	B007J4	4.10 U			
299-W15-20	11/11/94	B007J5		1.00 U	400.00	.36 U
299-W15-20	11/11/94	B007J9	4.10 U			
299-W15-23	11/11/94	B007K0		1.00 U	500.00	.55 U
299-W15-23	11/11/94	B007K4	4.20 L			
299-W15-24	11/10/94	B007K5		1.00 U	500.00	1.53
299-W15-24	11/10/94	B007K9	7.80 L			

Table 14-22. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 4 Data for Reporting Period October 1 through December 31, 1994.
(sheet 4 of 9)

Well Name	Collection Date	Sample Number	COPPER 34/ppb 2.6/1000s	CYANIDE 358/ppb .94/.	FLUORIDE 124/ppb 51/1400i	ALPHA 135/pCi/L ./15
299-W18-21	11/28/94	8007L0		1.00 U	500.00	9.96
299-W18-21	11/28/94	8007L4	4.10 U			
299-W18-22	11/29/94	8007L5		1.00 U	400.00	.79 U
299-W18-22	11/29/94	8007L9	4.10 U			
299-W18-23	11/11/94	8007M0		1.00 U	500.00	1.69
299-W18-23	11/11/94	8007M4	4.10 U			
299-W18-24	11/08/94	8007M5		1.00 U	900.00	.65 U
299-W18-24	11/08/94	8007M9	4.10 U			
299-W18-26	11/28/94	8007M0		1.00 U	600.00	4.29
299-W18-26	11/28/94	8007M4	4.10 U			
299-W18-27	11/28/94	8007M5		1.00 U	400.00	.79 U
299-W18-27	11/28/94	8007M9	4.10 U			
299-W18-28	11/28/94	8007P0		1.00 U	400.00	1.26
299-W18-28	11/28/94	8007P4	4.10 U			
299-W18-32	11/09/94	8007P5		1.00 L	600.00	2.56
299-W18-32	11/09/94	8007P9	4.10 U			

Well Name	Collection Date	Sample Number	BETA 136/pCi/L ./.	IRON 34/ppb 18/300s	IRON 34/ppb 18/300s	LEAD 40/ppb .86/501
299-W15-15	11/10/94	8007G0	7.05	170.00 g		7.10
299-W15-15	11/10/94	8007G4			45.00 g	
299-W15-16	11/08/94	8007G5	15.10	420.00 g		1.80 L
299-W15-16	11/08/94	8007G9			34.00 g	
299-W15-17	11/09/94	8007H0	7.58	150.00 g		1.50 U
299-W15-17	11/09/94	8007H4			46.00 g	
299-W15-18	11/08/94	8007H5	6.51	530.00 g		1.50 U
299-W15-18	11/08/94	8007H9			30.00 g	
299-W15-19	11/30/94	8007J0	11.90	320.00 Bg		1.60 BL
299-W15-19	11/30/94	8007J4			26.00 Bg	
299-W15-20	11/11/94	8007J5	1.68 U	250.00 g		1.50 U
299-W15-20	11/11/94	8007J9			22.00 g	
299-W15-23	11/11/94	8007K0	2.95	410.00 g		2.10 L
299-W15-23	11/11/94	8007K4			16.00 Lg	
299-W15-24	11/10/94	8007K5	7.66	4900.00 g		1.60 L
299-W15-24	11/10/94	8007K9			64.00 g	
299-W18-21	11/28/94	8007L0	9.53	420.00 g		11.00
299-W18-21	11/28/94	8007L4			52.00 g	
299-W18-22	11/29/94	8007L5	5.00	420.00 Bg		1.90 L
299-W18-22	11/29/94	8007L9			30.00 Bg	
299-W18-23	11/11/94	8007M0	.54 U	95.00 g		1.50 U
299-W18-23	11/11/94	8007M4			21.00 g	
299-W18-24	11/08/94	8007M5	5.76	220.00 g		1.50 U
299-W18-24	11/08/94	8007M9			29.00 g	
299-W18-26	11/28/94	8007M0	9.02	4100.00 g		5.00 L
299-W18-26	11/28/94	8007M4			21.00 g	
299-W18-27	11/28/94	8007M5	3.46	1600.00 g		1.90 L
299-W18-27	11/28/94	8007M9			29.00 g	
299-W18-28	11/28/94	8007P0	5.01	250.00 g		5.00 L
299-W18-28	11/28/94	8007P4			12.00 Lg	
299-W18-32	11/09/94	8007P5	3.25	800.00 g		2.00 L
299-W18-32	11/09/94	8007P9			26.00 g	

Table 14-22. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 4 Data for Reporting Period October 1 through December 31, 1994.
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Well Name	Collection Date	Sample Number	LEAD 40/ppb .86/50f	MAGNES- 34/ppb 25/.	FMAGNES 34/ppb 25/.	MANGESE 34/ppb 1/50a
299-W15-15	11/10/94	B007G0		11000.00		4.60 L
299-W15-15	11/10/94	B007G4	1.50 U		11000.00	
299-W15-16	11/08/94	B007G5		21000.00		8.60 L
299-W15-16	11/08/94	B007G9	1.50 L		21000.00	
299-W15-17	11/09/94	B007H0		14000.00		5.40 L
299-W15-17	11/09/94	B007H4	1.50 U		14000.00	
299-W15-18	11/08/94	B007H5		18000.00		17.00
299-W15-18	11/08/94	B007H9	1.50 U		19000.00	
299-W15-19	11/30/94	B007J0		13000.00		7.00 L
299-W15-19	11/30/94	B007J4	2.20 SL		13000.00	
299-W15-20	11/11/94	B007J5		8500.00		7.40 L
299-W15-20	11/11/94	B007J9	1.50 L		8400.00	
299-W15-23	11/11/94	B007K0		8400.00		16.00
299-W15-23	11/11/94	B007K4	1.50 U		8400.00	
299-W15-24	11/10/94	B007K5		11000.00		130.00
299-W15-24	11/10/94	B007K9	2.20 L		10000.00	
299-W18-21	11/28/94	B007L0		11000.00		13.00
299-W18-21	11/28/94	B007L4	1.50 U		11000.00	
299-W18-22	11/29/94	B007L5		13000.00		8.80 L
299-W18-22	11/29/94	B007L9	7.10		13000.00	
299-W18-23	11/11/94	B007M0		7900.00		3.60 L
299-W18-23	11/11/94	B007M4	1.50 U		7900.00	
299-W18-24	11/08/94	B007M5		8200.00		15.00
299-W18-24	11/08/94	B007M9	1.50 U		8200.00	
299-W18-26	11/28/94	B007N0		9400.00		140.00
299-W18-26	11/28/94	B007N4	1.50 U		8400.00	
299-W18-27	11/28/94	B007N5		7700.00		47.00
299-W18-27	11/28/94	B007N9	2.10 L		7600.00	
299-W18-28	11/28/94	B007P0		8900.00		11.00
299-W18-28	11/28/94	B007P4	1.50 U		8900.00	
299-W18-32	11/09/94	B007P5		5900.00		12.00
299-W18-32	11/09/94	B007P9	1.50 U		6100.00	

Well Name	Collection Date	Sample Number	PHANGAN 34/ppb 1/50a	MERCURY 41/ppb .093/2	FMERCUR 41/ppb .095/2	NICKEL 34/ppb 16/.
299-W15-15	11/10/94	B007G0		.05 U		19.00 L
299-W15-15	11/10/94	B007G4	1.50 L		.05 U	
299-W15-16	11/08/94	B007G5		.05 U		50.00
299-W15-16	11/08/94	B007G9	2.30 L		.05 U	
299-W15-17	11/09/94	B007H0		.05 U		34.00
299-W15-17	11/09/94	B007H4	3.90 L		.05 U	
299-W15-18	11/08/94	B007H5		.05 U		68.00
299-W15-18	11/08/94	B007H9	2.50 L		.05 U	
299-W15-19	11/30/94	B007J0		.05 U		32.00
299-W15-19	11/30/94	B007J4	2.60 L		.05 U	
299-W15-20	11/11/94	B007J5		.05 U		33.00
299-W15-20	11/11/94	B007J9	2.90 L		.05 U	
299-W15-23	11/11/94	B007K0		.05 U		45.00
299-W15-23	11/11/94	B007K4	4.80 L		.05 L	
299-W15-24	11/10/94	B007K5		.05 U		520.00
299-W15-24	11/10/94	B007K9	25.00		.05 U	

Table 14-22. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 4 Data for Reporting Period October 1 through December 31, 1994.
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Well Name	Collection Date	Sample Number	FMANGAN 34/ppb 1/50s	MERCURY 41/ppb .095/2	FMERCU 41/ppb .095/2	NICKEL 34/ppb 16/.
299-W18-21	11/28/94	8007L0		.05 U		43.00
299-W18-21	11/28/94	8007L4	5.90 L		.05 U	
299-W18-22	11/29/94	8007L5		.05 U		57.00
299-W18-22	11/29/94	8007L9	1.60 L		.05 U	
299-W18-23	11/11/94	8007M0		.06 L		14.00 L
299-W18-23	11/11/94	8007M4	2.60 L		.05 U	
299-W18-24	11/08/94	8007M5		.05 U		31.00
299-W18-24	11/08/94	8007M9	2.10 L		.05 U	
299-W18-26	11/28/94	8007M0		.05 U		75.00
299-W18-26	11/28/94	8007M4	24.00		.05 U	
299-W18-27	11/28/94	8007M5		.06 L		140.00
299-W18-27	11/28/94	8007M9	3.40 L		.06 L	
299-W18-28	11/28/94	8007P0		.05 U		22.00 L
299-W18-28	11/28/94	8007P4	4.30 L		.05 U	
299-W18-32	11/09/94	8007P5		.08 L		22.00 L
299-W18-32	11/09/94	8007P9	2.90 L		.09 L	

Well Name	Collection Date	Sample Number	FNICKEL 34/ppb 16/.	NITRATE 124/ppb 96/45000	NITRITE 124/ppb 110/1000	POTASUM 34/ppb 890/.
299-W15-15	11/10/94	8007G0		67000.00 DQ	18.00 U	3900.00
299-W15-15	11/10/94	8007G4	13.00 U			
299-W15-16	11/08/94	8007G5		91000.00 DHRV	18.00 UHY	5700.00
299-W15-16	11/08/94	8007G9	14.00 L			
299-W15-17	11/09/94	8007H0		17000.00 D	18.00 U	4600.00
299-W15-17	11/09/94	8007H4	26.00 L			
299-W15-18	11/08/94	8007H5		88000.00 DHRV	18.00 UHY	5200.00
299-W15-18	11/08/94	8007H9	13.00 U			
299-W15-19	11/30/94	8007J0		80000.00 DQ	18.00 U	4900.00
299-W15-19	11/30/94	8007J4	13.00 U			
299-W15-20	11/11/94	8007J5		8600.00	18.00 U	3900.00
299-W15-20	11/11/94	8007J9	13.00 U			
299-W15-23	11/11/94	8007K0		28000.00 D	18.00 U	3900.00
299-W15-23	11/11/94	8007K4	13.00 U			
299-W15-24	11/10/94	8007K5		72000.00 DQ	300.00	5800.00
299-W15-24	11/10/94	8007K9	19.00 L			
299-W18-21	11/28/94	8007L0		67000.00 D	18.00 U	3400.00
299-W18-21	11/28/94	8007L4	13.00 U			
299-W18-22	11/29/94	8007L5		20000.00 DQ	18.00 U	4300.00
299-W18-22	11/29/94	8007L9	13.00 U			
299-W18-23	11/11/94	8007M0		5500.00	18.00 U	3400.00
299-W18-23	11/11/94	8007M4	13.00 U			
299-W18-24	11/08/94	8007M5		29000.00 DHRV	18.00 UH	3100.00
299-W18-24	11/08/94	8007M9	13.00 U			
299-W18-26	11/28/94	8007M0		4800.00	18.00 U	4900.00
299-W18-26	11/28/94	8007M4	13.00 U			
299-W18-27	11/28/94	8007M5		3700.00	18.00 U	3100.00
299-W18-27	11/28/94	8007M9	13.00 U			
299-W18-28	11/28/94	8007P0		1500.00	18.00 U	4400.00
299-W18-28	11/28/94	8007P4	13.00 U			
299-W18-32	11/09/94	8007P5		1500.00	18.00 U	3700.00
299-W18-32	11/09/94	8007P9	13.00 U			

Table 14-22. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 4 Data for Reporting Period October 1 through December 31, 1994.
(sheet 7 of 9)

Well Name	Collection Date	Sample Number	POTASS 34/ppb 890/.	RADIUM 137/pCi/L ./51	SODIUM 34/ppb 150/.	POTASSIUM 34/ppb 150/.
299-W15-15	11/10/94	800700		.18	21000.00	
299-W15-15	11/10/94	800704	3800.00			21000.00
299-W15-16	11/08/94	800705		.11 U	42000.00	
299-W15-16	11/08/94	800709	5600.00			42000.00
299-W15-17	11/09/94	800710		.11 U	16000.00	
299-W15-17	11/09/94	800714	4700.00			16000.00
299-W15-18	11/08/94	800715		.32	27000.00	
299-W15-18	11/08/94	800719	5300.00			28000.00
299-W15-19	11/30/94	8007J0		.25	23000.00 Q	
299-W15-19	11/30/94	8007J4	4500.00			24000.00 Q
299-W15-20	11/11/94	8007J5		.11 U	14000.00	
299-W15-20	11/11/94	8007J9	4000.00			14000.00
299-W15-23	11/11/94	8007K0		.30	20000.00	
299-W15-23	11/11/94	8007K4	3400.00			20000.00
299-W15-24	11/10/94	8007K5		.06 U	20000.00	
299-W15-24	11/10/94	8007K9	5700.00			20000.00
299-W18-21	11/28/94	8007L0		.02 U	25000.00 Q	
299-W18-21	11/28/94	8007L4	3200.00			24000.00 Q
299-W18-22	11/29/94	8007L5		.13	14000.00 BQ	
299-W18-22	11/29/94	8007L9	4100.00			15000.00 BQ
299-W18-23	11/11/94	8007M0		.09 U	14000.00	
299-W18-23	11/11/94	8007M4	3400.00			14000.00
299-W18-24	11/08/94	8007M5		.12 U	17000.00	
299-W18-24	11/08/94	8007M9	3500.00			17000.00
299-W18-26	11/28/94	8007N0		.67	20000.00 Q	
299-W18-26	11/28/94	8007N4	4200.00			20000.00 Q
299-W18-27	11/28/94	8007N5		.03 U	12000.00 Q	
299-W18-27	11/28/94	8007N9	2800.00			13000.00 Q
299-W18-28	11/28/94	8007P0		.13 U	14000.00 Q	
299-W18-28	11/28/94	8007P4	4500.00			14000.00 Q
299-W18-32	11/09/94	8007P5		.03 U	14000.00	
299-W18-32	11/09/94	8007P9	3300.00			14000.00

Well Name	Collection Date	Sample Number	SULFATE 124/ppb 89/250000%	PERCENE 25/ppb .08/5	TRICENE 25/ppb .043/5	TRITIUM 142/pCi/L ./20000
299-W15-15	11/10/94	800700	18000.00 D	.22 U	.37 L	198.00 U
299-W15-16	11/08/94	800705	91000.00 DY	.42 LH	6.60 H	83.60 U
299-W15-17	11/09/94	800710	28000.00 D	.22 U	.16 L	7.68 U
299-W15-18	11/08/94	800715	48000.00 DY	1.10 H	5.30 H	166.00 U
299-W15-19	11/30/94	8007J0	28000.00 D	.22 U	1.30	167.00 U
299-W15-20	11/11/94	8007J5	15000.00 D	.22 U	.15 L	213.00 U
299-W15-23	11/11/94	8007K0	16000.00 D	.22 U	.40 L	285.00
299-W15-24	11/10/94	8007K5	17000.00 D	.22 U	.11 U	185.00 U
299-W18-21	11/28/94	8007L0	20000.00 D	.22 UNY	1.70 HY	150.00 U
299-W18-22	11/29/94	8007L5	19000.00 D	.22 U	.11 U	132.00 U
299-W18-23	11/11/94	8007M0	16000.00 D	.22 U	.29 L	140.00 U
299-W18-24	11/08/94	8007M5	17000.00 D	.22 UN	1.00 H	76.90 U
299-W18-26	11/28/94	8007N0	21000.00 D	.22 U	.11 U	372.00
299-W18-27	11/28/94	8007N5	16000.00 D	2.30 HY	.14 LHY	22.40 U
299-W18-28	11/28/94	8007P0	18000.00 D	.22 U	.11 U	107.00 U
299-W18-32	11/09/94	8007P5	18000.00 D	.22 U	.11 U	206.00 U

Table 14-22. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 4 Data for Reporting Period October 1 through December 31, 1994.
(sheet 8 of 9)

Well Name	Collection Date	Sample Number	TURBID 126/NTU .016/.	URANIUM 145/ppb ./.	VANADIUM 34/ppb 6.4/.	FVANADI 34/ppb 6.4/.
299-W15-15	11/10/94	8007G0	2.40	5.04	25.00 L	
299-W15-15	11/10/94	8007G4				24.00 L
299-W15-16	11/08/94	8007G5	1.70 Q	2.43	24.00 L	
299-W15-16	11/08/94	8007G9				23.00 L
299-W15-17	11/09/94	8007H0	1.30 Q	1.09	30.00 L	
299-W15-17	11/09/94	8007H4				28.00 L
299-W15-18	11/08/94	8007H5	2.30 Q	1.81	24.00 L	
299-W15-18	11/08/94	8007H9				24.00 L
299-W15-19	11/30/94	8007J0	1.70 Q	2.61	16.00 L	
299-W15-19	11/30/94	8007J4				13.00 L
299-W15-20	11/11/94	8007J5	2.40	.79	15.00 L	
299-W15-20	11/11/94	8007J9				16.00 L
299-W15-23	11/11/94	8007K0	1.80	.93	29.00 L	
299-W15-23	11/11/94	8007K4				28.00 L
299-W15-24	11/10/94	8007K5	19.00	.85	13.00 L	
299-W15-24	11/10/94	8007K9				6.60 U
299-W18-21	11/28/94	8007L0	1.50 Q	20.20	23.00 L	
299-W18-21	11/28/94	8007L4				23.00 L
299-W18-22	11/29/94	8007L5	1.50 Q	.82	25.00 L	
299-W18-22	11/29/94	8007L9				25.00 L
299-W18-23	11/11/94	8007M0	.95	1.31	26.00 L	
299-W18-23	11/11/94	8007M4				29.00 L
299-W18-24	11/08/94	8007M5	1.70 Q	.96	33.00	
299-W18-24	11/08/94	8007M9				34.00
299-W18-26	11/28/94	8007N0	150.00 Q	1.75	11.00 L	
299-W18-26	11/28/94	8007N4				6.60 U
299-W18-27	11/28/94	8007N5	9.90 Q	.99	29.00 L	
299-W18-27	11/28/94	8007N9				26.00 L
299-W18-28	11/28/94	8007P0	1.40 Q	.91	6.60 U	
299-W18-28	11/28/94	8007P4				6.60 U
299-W18-32	11/09/94	8007P5	18.00 Q	2.38	51.00	
299-W18-32	11/09/94	8007P9				47.00

Table 14-22. Constituents with at Least One Detected Value for the Low-Level Waste Management Area 4 Data for Reporting Period October 1 through December 31, 1994.
(sheet 9 of 9)

Well Name	Collection Date	Sample Number	ZINC 34/ppb 4.4/5000s	FZINC 34/ppb 4.4/5000s
299-W15-15	11/10/94	8007G0	6.50 L	
299-W15-15	11/10/94	8007G4		6.30 U
299-W15-16	11/08/94	8007G5	6.40 L	
299-W15-16	11/08/94	8007G9		6.30 U
299-W15-17	11/09/94	8007H0	11.00	
299-W15-17	11/09/94	8007H4		6.30 U
299-W15-18	11/08/94	8007H5	9.70 L	
299-W15-18	11/08/94	8007H9		6.30 U
299-W15-19	11/30/94	8007J0	10.00	
299-W15-19	11/30/94	8007J4		6.30 U
299-W15-20	11/11/94	8007J5	6.30 U	
299-W15-20	11/11/94	8007J9		6.30 U
299-W15-23	11/11/94	8007K0	23.00	
299-W15-23	11/11/94	8007K4		6.30 U
299-W15-24	11/10/94	8007K5	22.00	
299-W15-24	11/10/94	8007K9		16.00
299-W18-21	11/28/94	8007L0	22.00	
299-W18-21	11/28/94	8007L4		6.30 U
299-W18-22	11/29/94	8007L5	6.30 U	
299-W18-22	11/29/94	8007L9		6.30 U
299-W18-23	11/11/94	8007M0	6.30 U	
299-W18-23	11/11/94	8007M4		6.30 U
299-W18-24	11/08/94	8007M5	11.00	
299-W18-24	11/08/94	8007M9		10.00
299-W18-26	11/28/94	8007M0	120.00	
299-W18-26	11/28/94	8007M4		6.30 U
299-W18-27	11/28/94	8007M5	6.60 L	
299-W18-27	11/28/94	8007M9		6.30 U
299-W18-28	11/28/94	8007P0	6.30 U	
299-W18-28	11/28/94	8007P4		6.30 U
299-W18-32	11/09/94	8007P5	430.00	
299-W18-32	11/09/94	8007P9		10.00

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
October 1 through December 31, 1994.
(sheet 1 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	TDC ppb 110/.	TOX ppb 5/.
299-W15-15	11/10/94	8007G0	378		8.01	8.20	200 LQ	507.0
		8007G1	378		8.02		300 LQ	754.0
		8007G2	377		8.03		200 LQ	516.0
299-W15-16	11/08/94	8007G3	376		8.02		200 LQ	728.0
		8007G5	784		6.32 F	7.90	500 L	2600.0
		8007G6	782		6.35 F		500 L	2690.0
		8007G7	780		6.33 F		500 L	2750.0
		8007G8	779		6.36 F		500 L	2170.0
299-W15-17	11/09/94	8007H0	364		7.97	8.20	200 L	
		8007H1	363		7.96		200 L	
		8007H2	364		7.93		300 L	
		8007H3	363		7.92		130 L	
299-W15-18	11/08/94	8007H5	476		7.48	7.90	400 L	3760.0
		8007H6	479		7.48		500 L	1740.0
		8007H7	479		7.48		400 L	3570.0
		8007H8	480		7.48		500 L	1990.0
299-W15-19	11/30/94	8007J0	398		7.70	8.10	300 L	694.0
		8007J1	395		7.74		300 L	684.0
		8007J2	394		7.77		300 L	736.0
		8007J3	399		7.79		300 L	786.0
299-W15-20	11/11/94	8007J5	294		8.41	8.40	200 L	58.4
		8007J6	294		8.43		300 L	62.5
		8007J7	290		8.44		200 L	61.9
		8007J8	287		8.44		200 L	51.6
299-W15-23	11/11/94	8007K0	324		8.40	8.20	140 L	237.0
		8007K1	323		8.38		150 L	342.0
		8007K2	321		8.37		300 L	272.0
		8007K3	322		8.36		300 L	267.0
299-W15-24	11/10/94	8007K5	345		8.26	8.00	200 LQ	93.3
		8007K6	345		8.33		200 LQ	54.3
		8007K7	348		8.47		200 LQ	80.3
		8007K8	350		8.54		200 LQ	59.3
299-W18-21	11/28/94	8007L0	376		7.90	7.90	300 L	1410.0
		8007L1	376		7.89		200 L	1340.0
		8007L2	374		7.89		300 L	1100.0
		8007L3	373		7.88		300 L	916.0
299-W18-22	11/29/94	8007L5	359		7.89	8.00	110 U	5.2
		8007L6	359		7.87		110 U	8.0
		8007L7	359				110 U	7.6
		8007L8	353		7.87		110 U	5.0 U
299-W18-23	11/11/94	8007M0	264		8.09	8.00	200 L	392.0
		8007M1	263		8.09		200 L	359.0
		8007M2	262		8.09		200 L	358.0

Table 14-23. Contamination Indicator Parameters for the Low-Level
Waste Management Area 4 Data for Reporting Period
October 1 through December 31, 1994.
(sheet 2 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 110/.	TOX ppb 5/.
299-W18-23	11/11/94	8007M3	262		8.09		200 L	358.0
299-W18-24	11/08/94	8007M5	288		7.66	8.00	300 L	585.0
		8007M6	285		7.64		300 L	568.0
		8007M7	283		7.64		500 L	567.0
		8007M8	280		7.65		400 L	560.0
299-W18-26	11/28/94	8007M0	315		8.34	8.50	300 L	25.4
		8007M1	316		8.34		300 L	
		8007M2	316		8.33		300 L	22.9
		8007M3	317		8.34		200 L	37.0
299-W18-27	11/28/94	8007M5	236		7.86	8.00	200 L	231.0
		8007M6	237		7.87		300 L	280.0
		8007M7	237		7.86		300 L	268.0
		8007M8	237		7.86		300 L	255.0
299-W18-28	11/28/94	8007P0	290		8.00	8.00	300 L	38.6
		8007P1	289		8.02		400 L	37.7
		8007P2	289		8.03		300 L	35.3
		8007P3	288		8.03		400 L	27.6
299-W18-32	11/09/94	8007P5	183		8.25	8.20	300 L	
		8007P6	183		8.24		300 L	
		8007P7	182		8.22		300 L	
		8007P8	181		8.23		300 L	

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 October 1 through December 31, 1994.

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			12	12	
TOC		Total Organic Carbon	ppb		110			5	5	
TOX		Total Organic Halogen	ppb		5			5	5	
PH		pH, field	pH		.01	6.5-8.5	EPAS	12	12	1

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
FLUORID		Fluoride	ppb		36	1400	EPA1	5	4	0
NITRATE		Nitrate	ppb		11	45000	EPA	5	5	4

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORID		Chloride	ppb		14	250000	EPAS	5	5	0
SULFATE		Sulfate	ppb		37	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
SB-125		Antimony-125	pCi/L					7	1	
BE-7		Beryllium-7	pCi/L					7	0	
BROMIDE		Bromide	ppb		100			5	2	
CEPR-144		Cerium/Praseodymium-144	pCi/L					7	0	
CS-134		Cesium-134	pCi/L					7	2	
CS-137		Cesium-137	pCi/L			200	EPA	7	0	0
CO-60		Cobalt-60	pCi/L			100	EPA	7	3	0
EU-154		Europium-154	pCi/L					7	1	
EU-155		Europium-155	pCi/L					7	1	
I-129L		Iodine-129, Low level	pCi/L			1	EPA	5	2	1
NITRITE		Nitrite	ppb		18	1000	EPA	5	0	0
PHOSPHA		Phosphate	ppb		82			5	0	
K-40		Potassium-40	pCi/L					7	6	
RU-106		Ruthenium-106	pCi/L			30	EPA	7	0	0
SR-90		Strontium-90	pCi/L			8	EPA	5	0	0
TC-99		Technetium-99	pCi/L			900	EPA	5	5	0
TDS		Total Dissolved Solids	ppm		10	500	EPAS	5	5	0
TRITIUM		Tritium	pCi/L			20000	EPA	5	5	2
ZN-65		Zinc-65	pCi/L					7	0	
ZRNB-95		Zirconium/Niobium-95	pCi/L					7	0	

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 October 1 through December 31, 1994.

Well Name	Collection Date	Sample Number	SB-125 140/pCi/L ./.	BROMIDE 124/ppb 110/.	CS-134 140/pCi/L ./.	CHLORID 124/ppb 71/250000s
299-W11-31	8/22/94	B0C884	2.53 U		.10 U	
299-W11-31	12/14/94	B00G73	3.40	200.00 L	.22 U	29000.00 DQ
299-W6-10	8/23/94	B0C889	-1.67 U		.73 U	
299-W6-2	12/14/94	B00G75	1.68 U	30.00 L	.28 U	4600.00 Q
299-W6-4	12/14/94	B00G76	1.90 U	100.00 L	1.08	9200.00 Q
299-W6-9	12/13/94	B00G77	-2.36 U	100.00 U	1.17	50.00 LQF
299-W6-9	12/13/94	B00G78	2.32 U	50.00 L	.08 U	6100.00 Q

Well Name	Collection Date	Sample Number	CO-60 140/pCi/L ./100	EU-154 140/pCi/L ./.	EU-155 140/pCi/L ./.	FLUORID 124/ppb 51/14001
299-W11-31	8/22/94	B0C884	-.06 U	.29 U	-1.03 U	
299-W11-31	12/14/94	B00G73	.69 U	-2.79 U	2.71	1200.00
299-W6-10	8/23/94	B0C889	1.32	2.51 U	.11 U	
299-W6-2	12/14/94	B00G75	1.88	-4.16 U	.29 U	500.00
299-W6-4	12/14/94	B00G76	.81 U	4.05	-.64 U	500.00
299-W6-9	12/13/94	B00G77	.89	-.80 U	1.85 U	36.00 UF
299-W6-9	12/13/94	B00G78	.51 U	2.19 U	-1.11 U	800.00

Well Name	Collection Date	Sample Number	I-129 139/pCi/L ./1	NITRATE 124/ppb 96/45000	K-40 140/pCi/L ./.	SULFATE 124/ppb 89/250000s
299-W11-31	8/22/94	B0C884			51.00	
299-W11-31	12/14/94	B00G73	1.85	120000.00 DQ	25.90	63000.00 D
299-W6-10	8/23/94	B0C889			6.22 U	
299-W6-2	12/14/94	B00G75	.09 U	52000.00 DQ	55.70	23000.00 D
299-W6-4	12/14/94	B00G76	.57	97000.00 DQ	52.50	38000.00 D
299-W6-9	12/13/94	B00G77	.16 U	600.00 Q	45.40	200.00 LF
299-W6-9	12/13/94	B00G78	.01 U	69000.00 DQ	60.90	25000.00 D

Well Name	Collection Date	Sample Number	TC-99 143/pCi/L ./900	TDS 65/ppm 10/500s	TRITIUM 142/pCi/L ./20000
299-W11-31	12/14/94	B00G73	317.00	480.00	74000.00
299-W6-2	12/14/94	B00G75	28.10	250.00	7510.00
299-W6-4	12/14/94	B00G76	55.00	280.00	32900.00
299-W6-9	12/13/94	B00G77	45.70	270.00	10700.00
299-W6-9	12/13/94	B00G78	43.30	270.00	10300.00

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 October 1 through December 31, 1994.

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 110/.	TOX ppb 5/.
299-W11-31	12/14/94	800G73	719		7.19		400 L	646.0
299-W6-2	11/30/94	8008J2	395		8.08			
		8008J3	395		8.08			
		8008J4	396		8.08			
		8008J5	398		8.08			
		8008J6	394		8.08			
		8008J7	395		8.08			
		8008J8	393		8.08			
		8008J9	397		8.07			
	12/14/94	800G75	370		6.41 F		200 L	119.0
299-W6-4	12/14/94	800G76	468		8.21		300 L	160.0
299-W6-9	12/13/94	800G77	406		7.82		200 L	115.0 Q
		800G78					300 L	207.0 Q

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.

Field pH (6.5-8.5)	299-E32-8		
Chromium, unfiltered (50 ppb)	299-E28-26 299-E32-10	299-E32-2 299-E33-30	299-E32-9
Iron, unfiltered (300 ppb)	299-E28-26* 299-E32-9*	299-E32-4* 299-E32-10*	299-E32-8*
Tritium (20,000 pCi/l)	299-E28-27 299-E32-6	299-E32-2	299-E32-3

* QC data associated with this sample was outside of established limits.

Table 14-30. Water Quality Standards Exceeded at Low-Level Waste Management Area 4.

Field pH	299-W15-16		
Chromium, unfiltered (50 ppb)	299-W15-16* 299-W15-20* 299-W18-21 299-W18-27	299-W15-18* 299-W15-23* 299-W18-22	299-W15-19* 299-W15-24* 299-W18-26
Iron, unfiltered (300 ppb)	299-W15-16* 299-W15-23* 299-W18-22* 299-W18-32*	299-W15-18* 299-W15-24* 299-W18-26*	299-W15-19* 299-W18-21* 299-W18-27*
Manganese, unfiltered (50 ppb)	299-W15-24	299-W18-26	
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-W15-18* 299-W15-23 299-W18-23 299-W18-27*
Trichloroethene (5 ppb)	299-W15-16*	299-W15-18*	

* QC data associated with this sample was outside of established limits.

Table 14-31. Water Quality Standards Exceeded at Low-Level Waste Management Area 5.

Field pH (6.5-8.5)	299-W6-2		
Nitrate (45,000 ppb)	299-W6-2* 299-W11-31*	299-W6-4*	299-W6-9*
Iodine-129 (1 pCi/L)	299-W11-31		
Tritium (20,000 pCi/l)	299-W6-4 299-W11-31	299-W6-5	299-W6-10

* QC data associated with this sample was outside of established limits.

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15.0 SINGLE-SHELL TANKS

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15.1 INTRODUCTION

Although decommissioned in 1980, the SSTs are considered to be 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 is that which 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 at some time in their history (Anderson 1990 discusses types of waste sent to various SSTs from startup until the tank was 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 the vicinity of the 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 61 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. All water levels in well 299-W23-15 depart significantly from the historical trend of water levels in this well and are flagged.

The water table in the 200 East Area is nearly flat because of declining water levels and the high transmissivity of the Hanford formation. The water table map for June 1994 (DOE-RL 1995, Fig 4.11-5) illustrates the very low slope of the water table. Water levels have been declining steadily over the past several years at all SST sites (see hydrographs of all WMAs in DOE-RL [1995]). However, data for 1994 in the 200 East area exhibited an increase in water level from March through June that was followed by a decline of similar magnitude. Data from the third quarter indicated very little change in water level. Water levels rose in almost all SST wells in the 200 East area in November by up to 6 cm (0.20 ft). Water levels declined again in December, resulting in no appreciable change of water level in SST wells in the 200 East area for the quarter as well as for the calendar year.

The change from a pattern of continuing steady decline in the water table in the previous few years in the 200 East area appears unrelated to any increased precipitation or natural recharge. It may be accounted for by increased liquid effluent discharges to the 216-B-3 Pond and elimination of open ditches carrying water to B Pond. With the startup of the 242-A Evaporator, discharges to B Pond have doubled. Discharges to the B Pond now flow directly to the 216-B-3C lobe of the pond via an underground pipeline, thus eliminating previous losses of liquid in transit via infiltration and evapotranspiration. Several brief campaigns of the 242-A Evaporator were run in calendar year 1994.

A barrier may be constructed over the 216-BY cribs in operable unit 200-BP-1 located north of WMA B-BX-BY. A modified RCRA cover was the preferred alternative in the Record of Decision that is going out for public comment. After comments are addressed, the definitive design of the cover will commence. However, it is anticipated that all wells in the area of the 216-BY cribs will be decommissioned to ease construction and to eliminate potential pathways through the cover. New groundwater monitoring wells will be constructed beyond the new cover. 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. Wells 2-E33-1 and 2-E33-5, along with well 2-E33-38, have been used to monitor water levels for the SSTs in this area of very low water table gradient in 200 East Area. Contingency planning for the location and design of replacement wells has been initiated, but the project is on hold pending review of the Record of Decision by the Yakama Nation.

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 have been 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). Water level data for this quarter continue to confirm the existence of a local high point in the water table slightly south and east of WMA U. However, the highest point of the water table in the 200 West area continues to be to the north of the 241-U Tank Farm. Groundwater flow now appears to be to the northwest (at least locally) beneath WMA U; an additional well is being considered near the northwest corner of the 241-U Tank Farm. Plans are being made to run the borehole velocity flowmeter in wells 299-W19-31 and 299-W19-32 to get a more accurate measure (compared with water level measurements in scattered wells) of the direction of groundwater flow beneath WMA U. An engineering change notice may be prepared to revise the groundwater monitoring plan when these measurements of groundwater flow direction have been completed. 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.

15.3 WATER CHEMISTRY DATA

Data received from analyses of samples collected during the fourth quarter of 1994 are provided in Tables 15-3 through 15-23. Most SST wells were not sampled this quarter; however, some data from samples collected in September 1994 are reported because they were received after the cutoff date for the July-to-September-1994 quarterly report. Quarterly sampling is presently conducted in WMAs T and TX-TY because these sites are in groundwater assessment monitoring under interim status (40 CFR 265). All other WMAs are sampled semiannually.

Much of the data for nitrate and some of the data for TOX and other constituents (e.g., metals analyzed by inductively coupled plasma) are flagged with a "Q" indicating some quality control problems during laboratory analyses of the samples. Data flags are explained in Chapter 1. Data for potassium-40 are reported as part of gamma scan analyses; however, potassium-40 is a naturally occurring isotope and is the biggest contributor to natural background radiation.

Several regulatory drinking water limits for constituent concentration have been added to the data tables, resulting in some constituents that had not previously been identified in quarterly reports exceeding concentration limits. For example, carbon tetrachloride exceeds the 5-ppb limit in a number of wells in the 200 West Area because the groundwater contains a widespread

plume of this constituent that originated from discharges to PFP cribs (DOE-RL 1994, Figure 4.1-19). Similarly, trichloroethene has exceeded the limit in some 200 West Area wells.

Regulatory limits for fluoride are not consistent. The primary DWS for fluoride is 4,000 ppb (40 CFR 141); the secondary standard (40 CFR 143.3) is 2,000 ppb. Washington State standards in *Revised Code of Washington* (RCW) 248 and WAC 173-200 are 4,000 ppb. However, Appendix III of 40 CFR 265 (EPA Interim Primary DWS) lists a range of 1.4 to 2.4 ppm (1,400 to 2,400 ppb) for fluoride. The preponderance of promulgated standards is 4,000 ppb. Groundwater quality beneath WMA T is degraded because of fluoride, which has exceeded the 4,000-ppb standard in the past and continues to do so in some wells. Fluorine-bearing compounds were used in the bismuth-phosphate process in 221-T (T Plant) and were discharged to SSTs as well as liquid effluent facilities in the northern part of 200 West Area. Tables 15-12 and 15-13 use the EPA Interim Primary DWS (i.e., 1,400-ppb standard) for fluoride.

Four quarters of background data have been obtained from wells in all WMAs and the data have been statistically evaluated for indications of contamination through analyses of TOC, pH, and specific conductance for each site. Replicate average values from downgradient wells are compared to the critical means for indicator parameters to determine whether the facilities in any SST WMAs may be affecting groundwater quality. Values for TOX were not used to calculate a critical mean for each WMA because of QC problems in the laboratory. TOX samples, previously analyzed by DataChem Laboratory, are now being analyzed by Weston. If TOX values from background wells are historically non-detects, a limit of quantitation will be used as a surrogate upgradient/downgradient comparison value. TOX data from downgradient wells will be compared accordingly. The change in groundwater flow direction beneath WMA U will necessitate a new calculation of background for this site.

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 may be found on Figures 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 list 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 15-15 through 15-17. Additional wells to supplement the groundwater quality assessment program south of WMAs T and TX-TY are being identified and checked before having any remedial work performed and adding them to the SST network. These two WMAs are in groundwater quality assessment status because of elevated specific conductance. Wells are being added to these networks to provide data for determining the possible source and extent of the high conductivity plume in groundwater beneath these two WMAs.

Several TOX samples were not collected and analyzed in quadruplicate as requested. This oversight has been corrected for future sampling. Single results for TOX will not be used in calculating the critical mean and other statistical parameters.

15.3.1 Waste Management Area A-AX

None of the wells in WMA A-AX were sampled this quarter. However, some data not received in time for the last quarterly report are included in Tables 15-3, 15-4, and 15-5.

15.3.2 Waste Management Area B-BX-BY

Two wells (299-E33-33 and 299-E33-36) were sampled this quarter. These wells are cosampled for the 216-B-63 trench project for which sampling was performed this quarter. Data for other wells in the B-BX-BY network that did not arrive in time for the last quarterly report are included in Tables 15-6 through 15-8. Iodine-129 results for these two wells this quarter were 2.76 and 5.93 pCi/L, respectively.

No exceedances of the critical mean (or critical range) for the reported indicator parameters for wells 299-E33-33 and 299-E33-36 occurred this quarter. However, the four values for pH for well 299-E33-36 (6.42, 6.46, 6.46, 6.48) depart significantly from the historical trend for pH in this well, are very unusual for Hanford Site groundwater, and are likely in error. A RADE has been submitted to check the validity of these data. Well 299-E33-36 is an upgradient well for SST WMA B-BX-BY.

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) are currently being treated. At both sites, groundwater is being extracted, run through a charcoal and zeolite treatment system, and the resulting effluent injected into the ground. No effect has been observed on water levels or water quality to date at WMA B-BX-BY during the operation of these pump-and-treat systems. The operations are scheduled to conclude in April 1995.

15.3.3 Waste Management Area C

No samples were collected this quarter from wells in WMA C. Data from gamma scan analyses that were not reported in the previous quarterly report are included in Tables 15-9 and 15-10.

15.3.4 Waste Management Area S-SX

Well 299-W22-44 was sampled early this quarter; sampling at other wells in the network was completed in late September and most of the data from that sampling were included in the previous quarterly report. No exceedances of the critical mean for field specific conductance, TOX, TOC or pH occurred for downgradient well 299-W22-44.

15.3.5 Waste Management Area T

All wells in WMA T and the expanded network were sampled this quarter. Data in Tables 15-15 through 15-17 include some from wells added to the

expanded network for assessment monitoring. Additional data are from wells that are part of the RCRA monitoring network for LLBG WMAs 3 and 5. Analytical data from unfiltered samples for iron and chromium all exceed limits, but all data from filtered sample analyses are below limits except for filtered chromium. Filtered chromium exceeds the 50-ppb limit in wells 299-W10-15 and 299-W10-16. Nitrate and fluoride continue to exceed limits in many wells. Gross beta values of 106.00, 92.7, and 86.3 pCi/L in wells 299-W10-15, 299-W11-27 and 299-W11-28 (respectively) correspond with values of 467, 11.70, and 455 pCi/L. Tritium exceeds the 20,000-pCi/L limit in all WMA T network wells except 299-W11-27 and also exceeds the limit in two LLBG wells in the expanded network.

Turbidity ranged between 1.9 and 24.00 NTUs this quarter, with four of five samples below 6.2 NTUs.

Field specific conductance continues to be elevated in downgradient well 299-W10-15 and is the parameter that triggered this site into groundwater quality assessment monitoring under interim-status regulations.

Well 2-W11-28 at WMA T was remediated in late 1993 and has been sampled on several occasions during 1994. After remediation, the well was redeveloped until turbidity reached 2.5 NTUs. Carbon steel casing rollers used in the remediation of this well broke from the drill string during remediation and now rest at the bottom of the screen. Data continue to be flagged (a P flag follows values for this well in Tables 15-15 through 15-17) until no effects of the steel on groundwater quality are observed. After remediation, an NCR was prepared because the well departs from conditions in the generic specification for well construction and because of elevated turbidity (WMC 1992a). The well was redeveloped on October 26 and a sample was collected. The sample collected in October is the first to have acceptable levels of turbidity. A lengthy purge at a low flow rate (5.7 L/m [1.5 gpm]) succeeded in obtaining a sample with a turbidity of 5.9 NTU. Analyses of unfiltered samples from this well yielded values for iron and chromium that exceeded limits, but values for analyses of filtered samples were below limits.

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 300,000 ppb in well 299-W14-12. Gross beta is elevated in wells 299-W14-12 and 299-W15-22 (see Table 15-19). Technetium-99 is elevated in the same wells and may account for elevated gross beta. Samples from wells 299-W10-17 and 299-W10-18 exceed the 1,400-ppb limit for fluoride, but not the 4,000-ppb primary DWS (40 CFR 141). Unfiltered chromium and iron exceed the limit in all wells, while unfiltered manganese exceeds the limit in all but one sample. Analyses of filtered samples for these constituents are below the limit except for one sample for filtered analyses for chromium. Tritium exceeds the limit of 20,000 pCi/L in all wells except 299-W10-18. Two values for ^{129}I in well 299-W14-12 are 34.80 and 29.00 pCi/L. Turbidity ranges from 5.3 NTU to 82 NTUs, with all but one value for turbidity equalling or exceeding 43 NTUs. Total dissolved solid exceeds the WAC limit of 500 ppm in well 299-W14-12.

Field specific conductance continues to exceed the critical mean in downgradient wells 299-W14-12 and 299-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

No samples were collected this quarter at WMA U. Data from gamma scan analyses that did not arrive in time for inclusion in the previous quarterly report are presented in Tables 15-21 and 15-22.

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

PS-80-71

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, 4th Qtr 1994
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	11/21/94 ^d
E33-36 ⁹⁰	Hanford: Water Table	Semiannually	11/21/94 ^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 ⁹²	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	10/04/94
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 ^a	Sample frequency	Sample date, 4th Qtr 1994
W23-15 ⁹¹	Ringold: Water Table	Semiannually	Not Sampled
Single-Shell Tanks Waste Management Area T			
W10-15 ⁸⁹	Ringold: Water Table	Quarterly	11/30/94
W10-16 ⁸⁹	Ringold: Water Table	Quarterly	11/29/94
W10-19 ⁹²	Ringold: Water Table	Quarterly	12/14/94
W10-20 ⁹³	Ringold: Water Table	Quarterly	12/15/94
W10-21 ⁹³	Ringold: Water Table	Quarterly	12/14/94
W11-27 ⁹¹	Ringold: Water Table	Quarterly	11/30/94
W11-28 ⁹¹	Ringold: Water Table	Quarterly	10/26/94
W11-31 ⁹²	Ringold: Water Table	Quarterly	12/14/94
Single-Shell Tanks Waste Management Area TX-TY			
W10-17 ⁹⁰	Ringold: Water Table	Quarterly	11/30/94
W10-18 ⁹⁰	Ringold: Water Table	Quarterly	11/30/94
W14-12 ⁹¹	Ringold: Water Table	Quarterly	11/30/94
W15-22 ⁹⁰	Ringold: Water Table	Quarterly	11/30/94
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 ⁹⁰	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, 4th Qtr 1994
W19-32 ⁹⁰	Ringold: Water Table	Semiannually	Not Sampled
W19-12 ⁶³	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 216-B-63 that was sampled this quarter.

Table 15-2. RCRA Water Level Measurement Report
 Single-Shell Tanks, Fourth Quarter 1994.
 (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	10/12/94	292.14	401.71	122.44
	11/15/94	291.99	401.86	122.49
	12/09/94	292.10	401.75	122.45
299-E24-20	10/12/94	287.47	401.81	122.47
	11/15/94	287.31	401.97	122.52
	12/09/94	287.48	401.80	122.47
299-E25-2	10/12/94	273.71	401.94	122.51
	11/15/94	273.51	402.14	122.57
	12/09/94	273.69	401.96	122.52
299-E25-40	10/12/94	264.03	401.88	122.49
	11/15/94	263.90	402.01	122.53
	12/09/94	264.06	401.85	122.48
299-E25-41	10/12/94	269.54	401.92	122.51
	11/15/94	269.37	402.09	122.56
	12/09/94	269.53	401.93	122.51
299-E25-46	10/12/94	292.95	401.86	122.49
	11/15/94	292.86	401.95	122.51
	12/09/94	292.92	401.89	122.50
241-B/BX/BY Tank Farm Wells				
299-E33-1	10/12/94	230.49	401.62	122.41
	11/15/94	230.40	401.71	122.44
	12/09/94	230.43	401.68	122.43
299-E33-18	10/12/94	250.19	401.67	122.43
	11/15/94	250.04	401.82	122.47
	12/09/94	250.10	401.76	122.46
299-E33-21	10/12/94	266.76	401.63	122.42
	11/15/94	266.57	401.82	122.47
	12/09/94	266.62	401.77	122.46
299-E33-31	10/12/94	245.94	401.54	122.39

Table 15-2. RCRA Water Level Measurement Report
 Single-Shell Tanks, Fourth Quarter 1994.
 (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-E33-31	11/15/94	245.80	401.68	122.43
	12/09/94	245.82	401.66	122.43
299-E33-32	10/12/94	258.58	401.44	122.36
	11/15/94	258.47	401.55	122.39
	12/09/94	258.47	401.55	122.39
299-E33-33	10/12/94	238.81	401.58	122.40
	11/15/94	238.65	401.74	122.45
	11/21/94	238.94	401.45*	122.36
	12/09/94	238.74	401.65	122.42
299-E33-36	11/21/94	248.25	398.42*	121.44
	12/21/94	246.76	399.91	121.89
299-E33-38	12/13/94	230.48	401.47	122.37
299-E33-39	12/13/94	222.04	401.25	122.30
299-E33-41	10/12/94	253.32	401.63	122.42
	11/15/94	253.33	401.62	122.41
	12/09/94	253.63	401.32	122.32
299-E33-42	10/12/94	252.73	401.57	122.40
	11/15/94	252.62	401.68	122.43
	12/09/94	252.64	401.66	122.43
299-E33-43	11/15/94	261.15	401.53	122.39
299-E33-5	10/12/94	233.05	401.67	122.43
	11/15/94	232.95	401.77	122.46
	12/09/94	232.99	401.73	122.45
299-E33-8	10/12/94	249.31	401.68	122.43
	11/15/94	249.18	401.81	122.47
	12/09/94	249.23	401.76	122.46

Table 15-2. RCRA Water Level Measurement Report
 Single-Shell Tanks, Fourth Quarter 1994.
 (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	10/12/94	259.47	401.68	122.43
	11/15/94	259.34	401.81	122.47
	12/09/94	259.44	401.71	122.44
299-E27-13	10/12/94	267.30	401.89	122.50
	11/15/94	267.20	401.99	122.53
	12/09/94	267.34	401.85	122.48
299-E27-14	10/12/94	256.85	401.69	122.44
	11/15/94	256.70	401.84	122.48
	12/09/94	256.77	401.77	122.46
299-E27-15	10/12/94	251.54	401.33	122.33
	11/15/94	251.42	401.45	122.36
	12/09/94	251.48	401.39	122.34
299-E27-7	10/12/94	232.99	401.88	122.49
	12/09/94	232.96	401.91	122.50
241-S/SX Tank Farm Wells				
299-W22-39	10/13/94	211.25	457.01	139.30
	11/14/94	211.62	456.64	139.18
	12/09/94	211.79	456.47	139.13
299-W22-44	10/04/94	219.11	459.02*	139.91
	10/13/94	219.27	458.86	139.86
	11/14/94	219.67	458.46	139.74
	12/09/94	219.86	458.27	139.68
299-W22-45	10/13/94	208.64	457.57	139.47
	11/14/94	209.02	457.19	139.35
	12/09/94	209.23	456.98	139.29
299-W22-46	10/13/94	214.44	456.74	139.21
	11/14/94	214.80	456.38	139.10
	12/09/94	214.93	456.25	139.07
299-W23-13	10/13/94	206.95	459.38	140.02

Table 15-2. RCRA Water Level Measurement Report
 Single-Shell Tanks, Fourth Quarter 1994.
 (sheet 4 of 7)

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
241-S/SX Tank Farm Wells				
299-W23-13	11/14/94	207.38	458.95	139.89
	12/09/94	207.50	458.83	139.85
299-W23-14	10/13/94	205.11	458.89	139.87
	11/14/94	205.53	458.47	139.74
	12/09/94	205.67	458.33	139.70
299-W23-15	10/13/94	197.84	467.60+	142.52
	11/14/94	198.19	467.25+	142.42
	12/09/94	198.29	467.15+	142.39
299-W23-6	10/13/94	209.92	457.06	139.31
	11/14/94	210.25	456.73	139.21
	12/09/94	210.40	456.58	139.17
299-W23-8	10/13/94	204.88	459.07	139.92
	11/14/94	205.33	458.62	139.79
	12/09/94	205.47	458.48	139.74
241-T Tank Farm Wells				
299-W10-10	10/13/94	214.58	460.77	140.44
	11/14/94	214.94	460.41	140.33
	12/09/94	214.99	460.36	140.32
299-W10-11	10/13/94	214.58	460.94	140.49
	11/14/94	214.78	460.74	140.43
	12/09/94	214.93	460.59	140.39
299-W10-12	10/13/94	214.32	460.69	140.42
	11/14/94	214.53	460.48	140.35
	12/09/94	214.67	460.34	140.31
299-W10-15	10/13/94	215.26	460.64	140.40
	11/14/94	215.48	460.42	140.34
	12/09/94	215.61	460.29	140.30
299-W10-16	10/13/94	211.98	460.78	140.45
	11/14/94	212.23	460.53	140.37

Table 15-2. RCRA Water Level Measurement Report
Single-Shell Tanks, Fourth Quarter 1994.
(sheet 5 of 7)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
241-T Tank Farm Wells				
299-W10-16	11/29/94	211.95	460.81*	140.45
	12/09/94	212.35	460.41	140.33
299-W10-8	10/13/94	219.95	460.36	140.32
	11/14/94	220.15	460.16	140.26
	12/09/94	220.26	460.05	140.22
299-W10-9	10/13/94	214.06	460.87	140.47
	11/14/94	214.35	460.58	140.38
	12/09/94	214.47	460.46	140.35
299-W11-23	10/13/94	228.12	460.02	140.21
	11/14/94	228.38	459.76	140.13
	12/09/94	228.46	459.68	140.11
299-W11-24	10/13/94	226.99	460.44	140.34
	11/14/94	227.24	460.19	140.27
	12/09/94	227.29	460.14	140.25
299-W11-27	10/13/94	225.02	460.25	140.28
	11/14/94	225.27	460.00	140.21
	11/30/94	226.90	458.37*+	139.71
	12/09/94	225.35	459.92	140.18
299-W11-28	10/13/94	232.55	460.93	140.49
	10/26/94	232.40	461.08*	140.54
	11/15/94	232.43	461.05	140.53
241-TX/TY Tank Farm Wells				
299-W10-17	10/13/94	209.72	461.12	140.55
	11/14/94	209.94	460.90	140.48
	11/30/94	209.75	461.09*	140.54
	12/09/94	210.09	460.75	140.44
299-W10-18	10/13/94	208.96	461.97	140.81
	11/14/94	209.26	461.67	140.72
	11/30/94	209.10	461.83*	140.77
	12/09/94	209.36	461.57	140.69

Table 15-2. RCRA Water Level Measurement Report
 Single-Shell Tanks, Fourth Quarter 1994.
 (sheet 6 of 7)

Well	Date	Depth to water (ft)	Water level elevation above msl	
			(ft)	(m)
241-TX/TY Tank Farm Wells				
299-W14-12	10/13/94	207.76	462.76	141.05
	11/30/94	208.05	462.47*	140.96
	12/09/94	208.16	462.36	140.93
299-W15-12	10/13/94	208.04	462.03	140.83
	11/14/94	208.33	461.74	140.74
	12/09/94	208.45	461.62	140.70
299-W15-13	10/13/94	207.99	462.13	140.86
	11/14/94	208.28	461.84	140.77
	12/09/94	208.36	461.76	140.74
299-W15-22	10/13/94	207.18	463.59	141.30
	11/14/94	207.53	463.24	141.20
	11/30/94	208.35	462.42*+	140.95
	12/09/94	207.54	463.23	141.19
241-U Tank Farm Wells				
299-W18-25	10/13/94	203.63	462.41	140.94
	11/14/94	204.07	461.97	140.81
	12/09/94	204.28	461.76	140.74
299-W18-30	10/13/94	210.03	462.81	141.06
	11/14/94	210.43	462.41	140.94
	12/09/94	210.63	462.21	140.88
299-W18-31	10/13/94	201.65	462.51	140.97
	11/14/94	202.09	462.07	140.84
	12/09/94	202.29	461.87	140.78
299-W18-33	10/13/94	206.99	461.92	140.79
	11/14/94	207.53	461.38	140.63
	12/09/94	207.71	461.20	140.57
299-W19-12	10/13/94	210.42	462.83	141.07
	11/14/94	210.84	462.41	140.94
	12/09/94	211.04	462.21	140.88

Table 15-2. RCRA Water Level Measurement Report
 Single-Shell Tanks, Fourth Quarter 1994.
 (sheet 7 of 7)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
241-U Tank Farm Wells				
299-W19-21	10/13/94	216.26	462.53	140.98
	11/14/94	216.85	461.94	140.80
	12/09/94	217.10	461.69	140.72
299-W19-27	10/13/94	221.36	462.55	140.99
	11/14/94	221.93	461.98	140.81
	12/09/94	220.14	463.77+	141.36
299-W19-31	10/13/94	211.37	462.82	140.07
	11/14/94	211.77	462.42	140.95
	12/09/94	211.94	462.25	140.89
299-W19-32	10/13/94	212.05	462.85	141.08
	11/14/94	212.54	462.36	140.93
	12/09/94	212.69	462.21	140.88
299-W19-6	10/13/94	227.88	458.72	139.82
	11/14/94	228.35	458.25	139.67
	12/09/94	228.51	458.09	139.63

- 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. Elevations marked with an '*' were measured at the time of sampling.
4. Elevations 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 A-AX Data for Reporting Period October 1 through December 31, 1994.

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
SB-125		Antimony-125		pCi/L				6	0	
BE-7		Beryllium-7		pCi/L				6	0	
CEPR-144		Cerium/Praseodymium-144		pCi/L				6	0	
CS-134		Cesium-134		pCi/L				6	0	
CS-137		Cesium-137		pCi/L		200	EPA	6	1	0
CO-60		Cobalt-60		pCi/L		100	EPA	6	0	0
EU-154		Europium-154		pCi/L				6	0	
EU-155		Europium-155		pCi/L				6	0	
K-40		Potassium-40		pCi/L				6	5	
RU-106		Ruthenium-106		pCi/L		30	EPA	6	0	0
TC-99		Technetium-99		pCi/L		900	EPA	1	1	0
ZN-65		Zinc-65		pCi/L				6	1	
ZRNB-95		Zirconium/Niobium-95		pCi/L				6	0	

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 A-AX Data for Reporting Period October 1 through December 31, 1994.

Well Name	Collection Date	Sample Number	CS-137	K-40	TC-99	ZN-65
			140/pCi/L ./200	140/pCi/L ./.	143/pCi/L ./900	140/pCi/L ./.
299-E24-19	9/16/94	80CYK7	.75 U	101.00	47.60	3.58 U
299-E24-20	9/14/94	80CYL1	-1.00 U	51.00		1.85
299-E25-40	9/14/94	80CYL5	2.45	22.40		-5.93 U
299-E25-41	9/14/94	80CYL9	.62 U	71.00		.75 U
299-E25-46	9/14/94	80CYM3	-.81 U	2.26 DQ		-2.45 U
299-E25-46	9/14/94	80CYM4	.54 U	59.90 Q		-1.16 U

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 A-AX Data for Reporting Period October 1 through December 31, 1994.

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 110/.	TOX ppb 5/.
NO DATA								

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

Table 15-6. Constituent List and Summary of Results for the Single-Shell Tank Waste Management Area B-BY-BX Data for Reporting Period October 1 through December 31, 1994.
(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	umhos		1			8	8	
CONDUCT	73	Conductivity, lab	umhos					2	2	
TOC		Total Organic Carbon	ppb		110			8	8	
TOX		Total Organic Halogen	ppb		5			8	0	
PH		pH, field	pH		.01	6.5-8.5	EPAS	8	8	4

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
BARIUM		Barium	ppb		.59	1000	EPAI	2	2	0
CADMIUM		Cadmium	ppb		3.3	10	EPAI	2	0	0
CHROMIUM		Chromium	ppb		4.5	50	EPAI	2	2	2
FLUORIDE		Fluoride	ppb		36	1400	EPAI	2	2	0
ALPHA		Gross alpha	pCi/L			15	EPA	2	1	0
NITRATE		Nitrate	ppb		11	45000	EPA	2	2	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORIDE		Chloride	ppb		14	250000	EPAS	2	2	0
IRON		Iron	ppb		9.24	300	EPAS	2	2	2
MANGANESE		Manganese	ppb		.72	50	EPAS	2	2	0
PHENOL		Phenol	ppb		.31			2	0	
SODIUM		Sodium	ppb		61			2	2	
SULFATE		Sulfate	ppb		37	250000	EPAS	2	2	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
1,1,1-T		1,1,1-Trichloroethene	ppb		.036	200	EPA	2	0	0
1,1,2-T		1,1,2-Trichloroethane	ppb		.078			2	0	
1,1-DIC		1,1-Dichloroethane	ppb		.038			2	0	
1,2-DIC		1,2-Dichloroethane	ppb		.029	5	EPA	2	0	0
14-dben		1,4-Dichlorobenzene	ppb		.055	75	EPA	2	0	0
246-trp		2,4,6-Trichlorophenol	ppb		1.3			2	0	
24-dchp		2,4-Dichlorophenol	ppb		1.3			2	0	
DMPHEN		2,4-Dimethylphenol	ppb		1.2			2	0	
DNPHEH		2,4-Dinitrophenol	ppb		3			2	0	
26-dchp		2,6-Dichlorophenol	ppb		1.4			2	0	
CHLPHEN		2-Chlorophenol	ppb		1.6			2	0	
2NITPH		2-Nitrophenol	ppb		1.3			2	0	
BUTDINP		2-sec-Butyl-4,6-dinitrophenol (DN)	ppb		1.3			2	0	
46DN2HP		4,6-Dinitro-2-methylphenol	ppb		1.3			2	0	
CHLCRES		4-Chloro-3-methylphenol	ppb		1.3			2	0	
NITPHEN		4-Nitrophenol	ppb		3			2	0	

Table 15-6. Constituent List and Summary of Results for the
Single-Shell Tank Waste Management Area B-BY-BX Data for
Reporting Period October 1 through December 31, 1994.
(sheet 2 of 2)

Short	(Method)	Constituent Name Full	Units	Lab MDL	DWS		Agency	Number of Samples		
					Limit			Total	>MDL	>DWS
ALUMINUM		Aluminum	ppb	26				2	2	
ANTIMONY		Antimony	ppb	62				2	0	
SB-125		Antimony-125	pCi/L					7	0	
BENZENE		Benzene	ppb	.013	5		EPA	2	0	0
BERYLLIUM		Beryllium	ppb	.17				2	1	
BE-7		Beryllium-7	pCi/L					7	1	
BROMIDE		Bromide	ppb	100				2	0	
CALCIUM		Calcium	ppb	34				2	2	
TETRANE		Carbon tetrachloride	ppb	.073	5		EPA	2	0	0
CEPR-144		Cerium/Praseodymium-144	pCi/L					7	1	
CS-134		Cesium-134	pCi/L					7	1	
CS-137		Cesium-137	pCi/L		200		EPA	7	0	0
CHLFORM		Chloroform	ppb	.041				2	0	
COBALT		Cobalt	ppb	5.9				2	1	
CO-60		Cobalt-60	pCi/L		100		EPA	7	1	0
COPPER		Copper	ppb	4.1	1000		EPAS	2	2	0
CRESOLS		Cresols (methylphenols)	ppb	4.8				2	0	
ETHBENZ		Ethylbenzene	ppb	.051	700		EPA	2	0	0
EU-154		Europium-154	pCi/L					7	0	
EU-155		Europium-155	pCi/L					7	0	
I-129L		Iodine-129, Low level	pCi/L		1		EPA	2	2	2
MAGNES		Magnesium	ppb	23				2	2	
METHYLCH		Methylene chloride	ppb	.09				2	0	
NICKEL		Nickel	ppb	13				2	2	
NITRITE		Nitrite	ppb	18	1000		EPA	2	0	0
PENTACHP		Pentachlorophenol	ppb	1.3	1		EPA	2	0	2*
PHOSPHA		Phosphate	ppb	82				2	0	
POTASUM		Potassium	ppb	850				2	2	
K-40		Potassium-40	pCi/L					7	6	
RU-106		Ruthenium-106	pCi/L		30		EPA	7	1	0
SILVER		Silver	ppb	3.6	50		EPA1	2	0	0
TC-99		Technetium-99	pCi/L		900		EPA	4	3	0
PERCENE		Tetrachloroethene	ppb	.22	5		EPA	2	0	0
TETPHNL		Tetrachlorophenols	ppb	1.5				2	0	
TIN		Tin	ppb	69				2	0	
TOLUENE		Toluene	ppb	.016	1000		EPA	2	0	0
TRICENE		Trichloroethene	ppb	.11	5		EPA	2	0	0
TRIPHNL		Trichlorophenols	ppb	1.7				2	0	
TRITIUM		Tritium	pCi/L		20000		EPA	2	2	0
VANADIUM		Vanadium	ppb	6.6				2	2	
VINYIDE		Vinyl chloride	ppb	.13	2		EPA	2	0	0
XYLENE		Xylenes (total)	ppb	.035	10000		EPA	2	0	0
ZINC		Zinc	ppb	6.3	5000		EPAS	2	1	0
ZN-65		Zinc-65	pCi/L					7	1	
ZRNB-95		Zirconium/Niobium-95	pCi/L					7	0	
CIS12DE		cis-1,2-Dichloroethylene	ppb	.11	70		EPA	2	0	0
TRANSCE		trans-1,2-Dichloroethylene	ppb	.073	100		EPA	2	0	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 B-BY-BX Data for Reporting Period October 1 through December 31, 1994. (sheet 1 of 2)

Well Name	Collection Date	Sample Number	ALUMINUM 34/ppb 19/.	BARIUM 34/ppb 1.3/1000i	BERYLLIUM 34/ppb 1.5/.	BE-7 140/pCi/L ./.
299-E33-31	9/16/94	BOCYQ1				9.49
299-E33-32	9/16/94	BOCYQ5				5.50 U
299-E33-33	9/16/94	BOCYQ9				-3.31 U
299-E33-33	11/21/94	BOQ776	32.00 L	31.00	.17 U	
299-E33-36	9/15/94	BOCYR3				5.67 U
299-E33-36	11/21/94	BOQ780	37.00 L	33.00	.28 L	
299-E33-41	9/16/94	BOCYR7				8.86 U
299-E33-42	9/20/94	BOCYS1				1.47 UQ
299-E33-43	9/20/94	BOCYS5				-3.42 UQ

Well Name	Collection Date	Sample Number	CALCIUM 34/ppb 47/.	CEPR-144 140/pCi/L ./.	CS-134 140/pCi/L ./.	CHLORINE 124/ppb 71/250000s
299-E33-31	9/16/94	BOCYQ1		8.75	.32 U	
299-E33-32	9/16/94	BOCYQ5		2.08 U	.99	
299-E33-33	9/16/94	BOCYQ9		-4.94 U	-.05 U	
299-E33-33	11/21/94	BOQ776	31000.00			5900.00 BQ
299-E33-36	9/15/94	BOCYR3		6.70 U	.99 U	
299-E33-36	11/21/94	BOQ780	29000.00			4400.00 BQ
299-E33-41	9/16/94	BOCYR7		3.88 U	-.68 U	
299-E33-42	9/20/94	BOCYS1		-2.04 U	.06 U	
299-E33-43	9/20/94	BOCYS5		2.36 U	-.10 U	

Well Name	Collection Date	Sample Number	CHROMIUM 34/ppb 11/50i	COBALT 34/ppb 6.5/.	CO-60 140/pCi/L ./100	COPPER 34/ppb 2.6/1000s
299-E33-31	9/16/94	BOCYQ1			.07 U	
299-E33-32	9/16/94	BOCYQ5			.33 U	
299-E33-33	9/16/94	BOCYQ9			1.08	
299-E33-33	11/21/94	BOQ776	85.00	5.90 U		6.90 L
299-E33-36	9/15/94	BOCYR3			-.46 U	
299-E33-36	11/21/94	BOQ780	120.00	8.80 L		10.00 L
299-E33-41	9/16/94	BOCYR7			.54 U	
299-E33-42	9/20/94	BOCYS1			.89 U	
299-E33-43	9/20/94	BOCYS5			.61 U	

Well Name	Collection Date	Sample Number	FLUORIDE 124/ppb 51/1400i	ALPHA 135/pCi/L ./15	I-129 139/pCi/L ./1	IRON 34/ppb 18/300s
299-E33-33	11/21/94	BOQ776	400.00	.56 U	2.76	360.00 BQ
299-E33-36	11/21/94	BOQ780	400.00	1.11	5.93	510.00 BQ

Table 15-7. Constituents with at Least One Detected Value for
the Single-Shell Tank Waste Management Area B-BY-BX Data for
Reporting Period October 1 through December 31, 1994.
(sheet 2 of 2)

Well Name	Collection Date	Sample Number	MAGNES 34/ppb 25/.	MANGESE 34/ppb 1/50s	NICKEL 34/ppb 16/.	NITRATE 124/ppb 96/45000
299-E33-33	11/21/94	800776	8700.00	9.00 L	47.00	5100.00 g
299-E33-36	11/21/94	800780	8000.00	13.00	63.00	2800.00 g

Well Name	Collection Date	Sample Number	POTASUM 34/ppb 890/.	K-40 140/pCi/L ./.	RU-106 140/pCi/L ./30	SODIUM 34/ppb 150/.
299-E33-31	9/16/94	80CY01		54.30	2.92 U	
299-E33-32	9/16/94	80CY05		4.44 U	10.30	
299-E33-33	9/16/94	80CY09		21.70	6.94 U	
299-E33-33	11/21/94	800776	5400.00			14000.00 BQ
299-E33-36	9/15/94	80CYR3		32.50	20.00 U	
299-E33-36	11/21/94	800780	5200.00			13000.00 BQ
299-E33-41	9/16/94	80CYR7		27.90	4.27 U	
299-E33-42	9/20/94	80CYS1		20.40 g	5.02 U	
299-E33-43	9/20/94	80CYS5		34.30 g	- .93 U	

Well Name	Collection Date	Sample Number	SULFATE 124/ppb 89/250000s	TC-99 143/pCi/L ./900	TRITIUM 142/pCi/L ./20000	VANADIUM 34/ppb 6.4/.
299-E33-31	9/16/94	80CY01		262.00		
299-E33-32	9/16/94	80CY05		117.00		
299-E33-33	9/16/94	80CY09		1.79 U		
299-E33-33	11/21/94	800776	33000.00 D		4040.00	23.00 L
299-E33-36	11/21/94	800780	19000.00 D		2600.00	21.00 L
299-E33-41	9/16/94	80CYR7		232.00		

Well Name	Collection Date	Sample Number	ZINC 34/ppb 4.4/5000s	ZN-65 140/pCi/L ./.
299-E33-31	9/16/94	80CY01		2.58
299-E33-32	9/16/94	80CY05		- .90 U
299-E33-33	9/16/94	80CY09		-6.85 U
299-E33-33	11/21/94	800776	6.30 U	
299-E33-36	9/15/94	80CYR3		.27 U
299-E33-36	11/21/94	800780	6.30 L	
299-E33-41	9/16/94	80CYR7		-3.09 U
299-E33-42	9/20/94	80CYS1		-2.23 U
299-E33-43	9/20/94	80CYS5		-1.07 U

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 B-BY-BX Data for Reporting Period October 1 through December 31, 1994.

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 110/.	TOX ppb 5/.
299-E33-33	11/21/94	800776	240	300	8.04		200 L	5.0 U
		800777	240		8.04		300 L	5.0 U
		800778	237		8.02		300 L	5.0 U
		800779	236		8.02		200 L	5.0 U
299-E33-36	11/21/94	800780	255	270	6.42 F		300 L	5.0 U
		800781	253		6.46 F		300 L	5.0 U
		800782	253		6.46 F		300 L	5.0 U
		800783	255		6.48 F		500 L	5.0 U

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 C Data for Reporting Period October 1 through December 31, 1994.

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS		Number of Samples		
		Full				Limit	Agency	Total	>MDL	>DWS
SB-125		Antimony-125	pCi/L					5	0	
BE-7		Beryllium-7	pCi/L					5	0	
CEPR-144		Cerium/Praseodymium-144	pCi/L					5	0	
CS-134		Cesium-134	pCi/L					5	0	
CS-137		Cesium-137	pCi/L			200	EPA	5	0	0
CO-60		Cobalt-60	pCi/L			100	EPA	5	2	0
EU-154		Europium-154	pCi/L					5	0	
EU-155		Europium-155	pCi/L					5	0	
K-40		Potassium-40	pCi/L					5	3	
RU-106		Ruthenium-106	pCi/L			30	EPA	5	0	0
ZN-65		Zinc-65	pCi/L					5	0	
ZRNB-95		Zirconium/Niobium-95	pCi/L					5	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 C Data for Reporting Period October 1 through December 31, 1994.

Well Name	Collection Date	Sample Number	CO-60 140/pCi/L ./100	K-40 140/pCi/L ./.
299-E27-12	9/15/94	B0CYN1	.75	18.60 U
299-E27-13	9/21/94	B0CYN5	1.47	45.40
299-E27-14	9/21/94	B0CYN9	-2.75 U	41.50
299-E27-15	9/15/94	B0CYP3	-.62 U	28.60
299-E27-7	9/15/94	B0CYP7	.42 U	7.75 U

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 C Data for Reporting Period October 1 through December 31, 1994.

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 110/.	TOX ppb 5/.
NO DATA								

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

Table 15-12. Constituent List and Summary of Results for the Single-Shell Tank Waste Management Area S-SX Data for Reporting Period October 1 through December 31, 1994.

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CONDUCT	94	Conductivity, field	umhos		1			4	4	
CONDUCT	73	Conductivity, lab	umhos					1	1	
TOC		Total Organic Carbon	ppb		110			4	4	
TOX		Total Organic Halogen	ppb		5			4	3	
PH	93	pH, field	pH		.01	4.5-8.5	EPAS	4	4	0
PH	125	pH, lab	pH			6.5-8.5	EPAS	1	1	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	1	1	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
SB-125		Antimony-125	pCi/L					8	0	
BE-7		Beryllium-7	pCi/L					8	1	
CEPR-144		Cerium/Praseodymium-144	pCi/L					8	0	
CS-134		Cesium-134	pCi/L					8	0	
CS-137		Cesium-137	pCi/L			200	EPA	8	1	0
CO-60		Cobalt-60	pCi/L			100	EPA	8	2	0
EU-154		Europium-154	pCi/L					8	1	
EU-155		Europium-155	pCi/L					8	2	
BETA		Gross beta	pCi/L					1	1	
I-129L		Iodine-129, Low level	pCi/L			1	EPA	1	0	0
PU-238		Plutonium-238	pCi/L					1	0	
PU39-40		Plutonium-239/40	pCi/L					1	0	
K-40		Potassium-40	pCi/L					8	6	
RU-106		Ruthenium-106	pCi/L			30	EPA	8	1	0
SR-90		Strontium-90	pCi/L			8	EPA	1	0	0
TC-99		Technetium-99	pCi/L			900	EPA	1	0	0
TDS		Total Dissolved Solids	ppm		10	500	EPAS	1	1	0
TRITIUM		Tritium	pCi/L			20000	EPA	1	0	0
TURBID		Turbidity	NTU		.016			1	1	
ZN-65		Zinc-65	pCi/L					8	1	
ZRNB-95		Zirconium/Niobium-95	pCi/L					8	1	

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

Table 15-13. Constituents with at Least One Detected Value for the Single-Shell Tank Waste Management Area S-SX Data for Reporting Period October 1 through December 31, 1994.

Well Name	Collection Date	Sample Number	BE-7 140/pCi/L ./.	CS-137 140/pCi/L ./200	CO-60 140/pCi/L ./100	EU-154 140/pCi/L ./.
299-W22-39	9/20/94	B0CYV9	6.85 g	.50 U	-.21 U	-3.97 U
299-W22-39	9/20/94	B0CYW0	3.98 Uq	.72 U	.15 U	-2.50 U
299-W22-44	10/04/94	B0CYW7	-2.40 U	1.23	1.33	-2.20 U
299-W22-45	9/20/94	B0CYX1	-7.37 Uq	-1.15 U	.96 U	.56 U
299-W22-46	9/20/94	B0CYX5	3.99 Uq	-.50 U	.75 U	1.73 U
299-W23-13	9/20/94	B0CYX9	2.01 Uq	-.36 U	.31 U	.78 U
299-W23-14	9/20/94	B0CYV3	-.97 Uq	.44 U	.67 U	2.20 U
299-W23-15	9/20/94	B0CYV7	2.67 Uq	.22 U	.75	2.44

Well Name	Collection Date	Sample Number	EU-155 140/pCi/L ./.	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.	K-40 140/pCi/L ./.
299-W22-39	9/20/94	B0CYV9	-.15 U			30.40 g
299-W22-39	9/20/94	B0CYW0	2.06 U			35.90 g
299-W22-44	10/04/94	B0CYW7	3.11	5.03	5.43 g	44.00
299-W22-45	9/20/94	B0CYX1	-1.01 U			20.90 g
299-W22-46	9/20/94	B0CYX5	1.30 U			44.50 g
299-W23-13	9/20/94	B0CYX9	.10 U			4.91 Uq
299-W23-14	9/20/94	B0CYV3	2.65			13.70 Uq
299-W23-15	9/20/94	B0CYV7	.84 U			37.70 g

Well Name	Collection Date	Sample Number	RU-106 140/pCi/L ./30	TDS 65/ppm 10/300s	TURBID 126/NTU .016/.	ZN-65 140/pCi/L ./.
299-W22-39	9/20/94	B0CYV9	4.74 U			-1.93 U
299-W22-39	9/20/94	B0CYW0	-8.89 U			-1.60 U
299-W22-44	10/04/94	B0CYW7	11.40	160.00	100.00	-.13 U
299-W22-45	9/20/94	B0CYX1	-.96 U			.68 U
299-W22-46	9/20/94	B0CYX5	2.66 U			-2.52 U
299-W23-13	9/20/94	B0CYX9	1.99 U			.49 U
299-W23-14	9/20/94	B0CYV3	-11.20 U			2.17 U
299-W23-15	9/20/94	B0CYV7	-.66 U			2.91

Well Name	Collection Date	Sample Number	ZRNB-95 140/pCi/L ./.
299-W22-39	9/20/94	B0CYV9	-1.97 U
299-W22-39	9/20/94	B0CYW0	-.21 U
299-W22-44	10/04/94	B0CYW7	-3.05 U
299-W22-45	9/20/94	B0CYX1	1.38 U
299-W22-46	9/20/94	B0CYX5	.71 U
299-W23-13	9/20/94	B0CYX9	-.35 U
299-W23-14	9/20/94	B0CYV3	2.70
299-W23-15	9/20/94	B0CYV7	-.37 U

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

Table 15-14. Contamination Indicator Parameters for the Single-Shell Tank Waste Management Area S-SX Data for Reporting Period October 1 through December 31, 1994.

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 110/.	TOX ppb 5/.
299-W22-44	10/04/94	80CYW7	196	200	7.80	8.00	300 L	6.5
		80CYW8	196		7.82		300 L	5.5
		80CYW9	195		7.80		300 L	6.1
		80CTX0	195		7.80		300 L	5.0 U

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

Table 15-15. Constituent List and Summary of Results for the
Single-Shell Tank Waste Management Area T Data for
Reporting Period October 1 through
December 31, 1994.
(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	94	Conductivity, field	umhos		1			20	20	
CONDUCT	73	Conductivity, lab	umhos					4	4	
TOC		Total Organic Carbon	ppb		110			12	12	
TOX		Total Organic Halogen	ppb		5			12	12	
PH	93	pH, field	pH		.01	6.5-8.5	EPAS	20	20	1
PH	125	pH, lab	pH			6.5-8.5	EPAS	4	4	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
2,4,5TP		2,4,5-TP	ppb		.015	50	EPA	1	0	0
2,4-D		2,4-D	ppb		.052	100	EPAI	1	0	0
ARSENIC		Arsenic	ppb		2.8	50	EPA	5	3	0
FARSENIC		Arsenic, filtered	ppb		2.8	50	EPA	5	2	0
BARIUM		Barium	ppb		.59	1000	EPAI	5	5	0
FBARIUM		Barium, filtered	ppb		.59	1000	EPAI	5	5	0
CADMIUM		Cadmium	ppb		3.3	10	EPAI	5	0	0
FCADMIUM		Cadmium, filtered	ppb		3.3	10	EPAI	5	0	0
CHROMIUM		Chromium	ppb		4.5	50	EPAI	5	5	4
FCHROMIUM		Chromium, filtered	ppb		4.5	50	EPAI	5	5	2
ENDRIN		Endrin	ppb		.0011	.2	EPA	1	0	0
FLUORIDE		Fluoride	ppb		36	1400	EPAI	12	11	3
ALPHA		Gross alpha	pCi/L			15	EPA	5	4	0
MERCURY		Mercury	ppb		.05	2	EPA	5	1	0
FMERCURY		Mercury, filtered	ppb		.05	2	EPA	5	2	0
METHYLOR		Methoxychlor	ppb		.016	100	EPAI	1	0	0
NITRATE		Nitrate	ppb		11	45000	EPA	12	12	10
RADIUM		Radium	pCi/L			5	EPAI	1	1	0
SELENIUM		Selenium	ppb		.65	10	EPAI	5	4	0
FSELENIUM		Selenium, filtered	ppb		.65	10	EPAI	5	4	0
TOXAENE		Toxaphene	ppb		.85	5	EPAI	1	0	0
g-BHC		gamma-BHC (Lindane)	ppb		.0013	4	EPAI	1	0	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORIDE		Chloride	ppb		14	250000	EPAS	12	12	0
IRON		Iron	ppb		5.24	300	EPAS	5	5	5
FIRON		Iron, filtered	ppb		5.24	300	EPAS	5	5	0
MANGANESE		Manganese	ppb		.72	50	EPAS	5	5	0
FMANGANESE		Manganese, filtered	ppb		.72	50	EPAS	5	5	0
LPHENOL		Phenol	ppb		.31			1	0	
SODIUM		Sodium	ppb		61			5	5	
FSODIUM		Sodium, filtered	ppb		61			5	5	
SULFATE		Sulfate	ppb		37	250000	EPAS	12	12	0

Table 15-15. Constituent List and Summary of Results for the
Single-Shell Tank Waste Management Area T Data for
Reporting Period October 1 through
December 31, 1994.
(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
1,1,1-T		1,1,1-Trichloroethane		ppb	.036	200	EPA	1	0	0
1,1,2-T		1,1,2-Trichloroethane		ppb	.078			1	0	
1,1-DIC		1,1-Dichloroethane		ppb	.058			1	0	
1,2-DIC		1,2-Dichloroethane		ppb	.029	5	EPA	1	0	0
14-dben		1,4-Dichlorobenzene		ppb	.055	75	EPA	1	0	0
2,4,5-T		2,4,5-T		ppb	.014			1	0	
246-trp		2,4,6-Trichlorophenol		ppb	1.3			1	0	
24-dchp		2,4-Dichlorophenol		ppb	1.3			1	0	
DIMPHEH		2,4-Dimethylphenol		ppb	1.2			1	0	
DIMPHEH		2,4-Dinitrophenol		ppb	3			1	0	
26-dchp		2,6-Dichlorophenol		ppb	1.4			1	0	
CHLPHEH		2-Chlorophenol		ppb	1.6			1	0	
2NITPH		2-Nitrophenol		ppb	1.3			1	0	
BUTDIMP	30	2-sec-Butyl-4,6-dinitrophenol (DN)		ppb	1.3			1	0	
BUTDIMP	49	2-sec-Butyl-4,6-dinitrophenol (DN)		ppb	.077			1	0	
DDD		4,4'-DDD		ppb	.0013			1	0	
DDE		4,4'-DDE		ppb	.0012			1	0	
DDT		4,4'-DDT		ppb	.0011			1	0	
46DN2MP		4,6-Dinitro-2-methylphenol		ppb	1.3			1	0	
CHLCRES		4-Chloro-3-methylphenol		ppb	1.3			1	0	
NITPHEN		4-Nitrophenol		ppb	3			1	0	
ALDRIN		Aldrin		ppb	.0026			1	0	
ALKALIN		Alkalinity		ppm	2.8			4	4	
a-BHC		Alpha-BHC		ppb	.0011			1	0	
ALUMINUM		Aluminum		ppb	26			5	5	
FALLUMIN		Aluminum, filtered		ppb	26			5	1	
ANTIMONY		Antimony		ppb	62			5	0	
FANTIMO		Antimony, filtered		ppb	62			5	0	
SB-125		Antimony-125		pCi/L				17	2	
BENZENE		Benzene		ppb	.013	5	EPA	1	0	0
BERYLLIUM		Beryllium		ppb	.47			5	1	
FBERYLL		Beryllium, filtered		ppb	.17			5	1	
BE-7		Beryllium-7		pCi/L				17	0	
b-BHC		Beta-BHC		ppb	.0014			1	0	
BROMIDE		Bromide		ppb	100			12	3	
CALCIUM		Calcium		ppb	34			5	5	
FCALCIU		Calcium, filtered		ppb	34			5	5	
TETRANE		Carbon tetrachloride		ppb	.075	5	EPA	1	1	1
CEPR-144		Cerium/Praseodymium-144		pCi/L				17	0	
CS-134		Cesium-134		pCi/L				17	2	
CS-137		Cesium-137		pCi/L		200	EPA	17	0	0
CHLORANE		Chlordane		ppb	.022	2	EPA	1	0	0
CHLFORM		Chloroform		ppb	.041			1	1	
COBALT		Cobalt		ppb	5.9			5	1	
FCOBALT		Cobalt, filtered		ppb	5.9			5	1	
CO-60		Cobalt-60		pCi/L		100	EPA	17	5	0
COPPER		Copper		ppb	4.1	1000	EPAS	5	4	0
FCOPPER		Copper, filtered		ppb	4.1	1000	EPAS	5	0	0
CRESOLS		Cresols (methylphenols)		ppb	4.8			1	0	
d-BHC		Delta-BHC		ppb	.0017			1	0	
DIELDRIN		Dieldrin		ppb	.0014			1	0	
END01		Endosulfan I		ppb	.0013			1	0	
END02		Endosulfan II		ppb	.0011			1	0	

Table 15-15. Constituent List and Summary of Results for the
Single-Shell Tank Waste Management Area T Data for
Reporting Period October 1 through
December 31, 1994.
(sheet 3 of 3)

Short	(Method)	Constituent Name Full	Units	Lab MDL	DWS Limit	Agency	Number of Samples		
							Total	>MDL	>DWS
ENDSFAN		Endosulfan sulfate	ppb	.0021			1	0	
ENDRALD		Endrin Aldehyde	ppb	.0017			1	0	
ETHBENZ		Ethylbenzene	ppb	.051	700	EPA	1	0	0
EU-154		Europium-154	pCi/L				17	1	
EU-155		Europium-155	pCi/L				17	1	
BETA		Gross beta	pCi/L				5	5	
HEPTLOR		Heptachlor	ppb	.0027	.4	EPA	1	0	0
HEPTIDE		Heptachlor epoxide	ppb	.0013	.2	EPA	1	0	0
I-129L		Iodine-129, low level	pCi/L		1	EPA	12	5	1
LEAD		Lead	ppb	1.5	50	EPAI	5	5	0
FLEAD		Lead, filtered	ppb	1.5	50	EPAI	5	4	0
MAGNES		Magnesium	ppb	23			5	5	
FMAGNES		Magnesium, filtered	ppb	23			5	5	
METHYCH		Methylene chloride	ppb	.09			1	1	
NICKEL		Nickel	ppb	13			5	4	
FNICKEL		Nickel, filtered	ppb	13			5	1	
NITRITE		Nitrite	ppb	18	1000	EPA	12	0	0
PENTCHP		Pentachlorophenol	ppb	1.3	1	EPA	1	0	1*
PHOSPHA		Phosphate	ppb	82			12	0	
PU-238		Plutonium-238	pCi/L				4	0	
PU39-40		Plutonium-239/40	pCi/L				4	1	
POTASSUM		Potassium	ppb	850			5	5	
FPOTASS		Potassium, filtered	ppb	850			5	5	
K-40		Potassium-40	pCi/L				17	15	
RU-106		Ruthenium-106	pCi/L		30	EPA	17	0	0
SILVER		Silver	ppb	3.6	50	EPAI	5	0	0
FSILVER		Silver, filtered	ppb	3.6	50	EPAI	5	0	0
SR-90		Strontium-90	pCi/L		8	EPA	12	0	0
TC-99		Technetium-99	pCi/L		900	EPA	12	12	0
PERCENE		Tetrachloroethene	ppb	.22	5	EPA	1	1	0
TETPHNL		Tetrachlorophenols	ppb	1.5			1	0	
THALLIUM		Thallium	ppb	.58			4	0	
FTHALLIUM		Thallium, filtered	ppb	.58			4	1	
TIN		Tin	ppb	69			5	0	
FTIN		Tin, filtered	ppb	69			5	0	
TOLUENE		Toluene	ppb	.016	1000	EPA	1	0	0
TDS		Total Dissolved Solids	ppm	10	500	EPAS	12	12	2
TRICENE		Trichloroethene	ppb	.11	5	EPA	1	1	1
TRIPHNL		Trichlorophenols	ppb	1.7			1	0	
TRITIUM		Tritium	pCi/L		20000	EPA	12	11	5
TURBID		Turbidity	NTU	.016			5	5	
URANIUM		Uranium	ppb				4	4	
VANADIUM		Vanadium	ppb	6.6			5	5	
EVANADI		Vanadium, filtered	ppb	6.6			5	5	
VINYIDE		Vinyl chloride	ppb	.13	2	EPA	1	0	0
XYLENE		Xylenes (total)	ppb	.035	10000	EPA	1	0	0
ZINC		Zinc	ppb	6.3	5000	EPAS	5	3	0
FZINC		Zinc, filtered	ppb	6.3	5000	EPAS	5	0	0
ZN-65		Zinc-65	pCi/L				17	2	
ZRNB-95		Zirconium/Niobium-95	pCi/L				17	1	
CIS12DE		cis-1,2-Dichloroethylene	ppb	.11	70	EPA	1	0	0
TRANSCE		trans-1,2-Dichloroethylene	ppb	.073	100	EPA	1	0	0

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

Table 15-16. Constituents with at Least One Detected Value for the
Single-Shell Tank Waste Management Area T Data for
Reporting Period October 1 through
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Well Name	Collection Date	Sample Number	ALKALIN 357/ppm 1.96/.	ALUMINUM 34/ppb 19/.	FALLUMIN 34/ppb 19/.	SB-125 140/pCi/L ./.
299-W10-15	9/21/94	B0C2H5				-.09 U
299-W10-15	11/30/94	B00870	150.00	76.00 L		1.41 U
299-W10-15	11/30/94	B00871			26.00 U	
299-W10-16	9/21/94	B0C2J0				-1.25 U
299-W10-16	11/29/94	B00872	150.00	57.00 L		0.00 U
299-W10-16	11/29/94	B00873			26.00 U	
299-W10-19	12/14/94	B00G70				.33 U
299-W10-20	12/15/94	B00G56		400.00 B		
299-W10-20	12/15/94	B00G57			26.00 U	
299-W10-20	12/15/94	B00G71				1.99 U
299-W10-21	12/14/94	B00G72				.60 U
299-W11-27	9/21/94	B0C2H4				-5.49 U
299-W11-27	11/30/94	B00878	140.00	110.00 L		3.05
299-W11-27	11/30/94	B00879			39.00 L	
299-W11-28	9/21/94	B0C2J6				-.29 U
299-W11-28	10/26/94	B005N2	150.00	45.00 L		-.76 U
299-W11-28	10/26/94	B005N3			26.00 U	
299-W11-31	8/22/94	B0C084				2.53 U
299-W11-31	12/14/94	B00G73				3.40
299-W6-2	12/14/94	B00G75				1.68 U
299-W6-4	12/14/94	B00G76				1.90 U
299-W6-9	12/13/94	B00G77				-2.36 U
299-W6-9	12/13/94	B00G78				2.32 U

Well Name	Collection Date	Sample Number	ARSENIC 43/ppb .64/50	FARSENIC 43/ppb .64/50	BARIUM 34/ppb 1.3/1000i	FBARIUM 34/ppb 1.3/1000i
299-W10-15	11/30/94	B00870	5.20		58.00	
299-W10-15	11/30/94	B00871		6.00		60.00
299-W10-16	11/29/94	B00872	5.20		34.00	
299-W10-16	11/29/94	B00873		5.30		34.00
299-W10-20	12/15/94	B00G56	2.80 U		59.00	
299-W10-20	12/15/94	B00G57		2.80 U		54.00
299-W11-27	11/30/94	B00878	2.80 U		50.00	
299-W11-27	11/30/94	B00879		2.80 U		48.00
299-W11-28	10/26/94	B005N2	3.30 LP		44.00	
299-W11-28	10/26/94	B005N3		2.80 UP		43.00

Table 15-16. Constituents with at Least One Detected Value for the
Single-Shell Tank Waste Management Area T Data for
Reporting Period October 1 through
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Well Name	Collection Date	Sample Number	BERYLLIUM 34/ppb 1.5/.	FBERYLL 34/ppb 1.5/.	BROMIDE 124/ppb 110/.	CALCIUM 34/ppb 47/.
299-W10-15	11/30/94	B00870	.17 U		100.00 DU	29000.00
299-W10-15	11/30/94	B00871		.17 U		
299-W10-16	11/29/94	B00872	.17 U		200.00 L	30000.00
299-W10-16	11/29/94	B00873		.17 U		
299-W10-19	12/14/94	B00670			80.00 L	
299-W10-20	12/15/94	B00656	.17 U			70000.00
299-W10-20	12/15/94	B00657		.17 U		
299-W10-20	12/15/94	B00671			100.00 UD	
299-W10-21	12/14/94	B00672			100.00 DU	
299-W11-27	11/30/94	B00878	.17 U		100.00 U	44000.00
299-W11-27	11/30/94	B00879		.17 U		
299-W11-28	10/26/94	B005W2	.19 LB		100.00 UD	42000.00
299-W11-28	10/26/94	B005W3		.34 LB		
299-W11-31	12/14/94	B00673			200.00 L	
299-W6-2	12/14/94	B00675			30.00 L	
299-W6-4	12/14/94	B00676			100.00 L	
299-W6-9	12/13/94	B00677			100.00 U	
299-W6-9	12/13/94	B00678			50.00 L	

Well Name	Collection Date	Sample Number	FCALCIU 34/ppb 47/.	TETRANE 25/ppb .32/5	CS-134 140/pCi/L ./.	CHLORID 124/ppb 71/250000s
299-W10-15	9/21/94	B0C2H8			.58 U	
299-W10-15	11/30/94	B00870			.51 U	26000.00 D
299-W10-15	11/30/94	B00871	35000.00			
299-W10-16	9/21/94	B0C2J0			.28 U	
299-W10-16	11/29/94	B00872			.49 U	30000.00 D
299-W10-16	11/29/94	B00873	32000.00			
299-W10-19	12/14/94	B00670			.29 U	15000.00 DQ
299-W10-20	12/15/94	B00656		2200.00 OX		
299-W10-20	12/15/94	B00657	69000.00			
299-W10-20	12/15/94	B00671			.24 U	17000.00 DQ
299-W10-21	12/14/94	B00672			.13 U	13000.00 DQ
299-W11-27	9/21/94	B0C2H4			.34 U	
299-W11-27	11/30/94	B00878			.40 U	2200.00
299-W11-27	11/30/94	B00879	42000.00			
299-W11-28	9/21/94	B0C2J6			.60 U	
299-W11-28	10/26/94	B005W2			.26 U	32000.00 D
299-W11-28	10/26/94	B005W3	43000.00			
299-W11-31	8/22/94	B0C884			.10 U	
299-W11-31	12/14/94	B00673			.22 U	29000.00 DQ
299-W6-2	12/14/94	B00675			.28 U	4600.00 Q
299-W6-4	12/14/94	B00676			1.08	9200.00 Q
299-W6-9	12/13/94	B00677			1.17	50.00 LQ
299-W6-9	12/13/94	B00678			.08 U	6100.00 Q

Table 15-16. Constituents with at Least One Detected Value for the
Single-Shell Tank Waste Management Area T Data for
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Well Name	Collection Date	Sample Number	CHLFORM 25/ppb .05/.	CHROMIUM 34/ppb 11/501	FCROMI 34/ppb 11/501	COBALT 34/ppb 6.5/.
299-W10-15	11/30/94	B00870		220.00		5.90 U
299-W10-15	11/30/94	B00871			110.00	
299-W10-16	11/29/94	B00872		350.00		9.30 L
299-W10-16	11/29/94	B00873			51.00	
299-W10-20	12/15/94	B00G56	60.00 Y	25.00		5.90 U
299-W10-20	12/15/94	B00G57			8.20 L	
299-W11-27	11/30/94	B00878		320.00		5.90 U
299-W11-27	11/30/94	B00879			17.00 L	
299-W11-28	10/26/94	B005N2		120.00		5.90 U
299-W11-28	10/26/94	B005N3			34.00	

Well Name	Collection Date	Sample Number	FCOBALT 34/ppb 6.5/.	CO-60 140/pCi/L ./100	COPPER 34/ppb 2.6/1000s	FCOPPER 34/ppb 2.6/1000s
299-W10-15	9/21/94	B0C2H8		1.13 U		
299-W10-15	11/30/94	B00870		3.09	6.90 L	
299-W10-15	11/30/94	B00871	5.90 U			4.10 U
299-W10-16	9/21/94	B0C2J0		.91 U		
299-W10-16	11/29/94	B00872		1.02 U	14.00 L	
299-W10-16	11/29/94	B00873	5.90 U			4.10 U
299-W10-19	12/14/94	B00G70		.88 U		
299-W10-20	12/15/94	B00G56			4.10 U	
299-W10-20	12/15/94	B00G57	5.90 U			4.10 U
299-W10-20	12/15/94	B00G71		.54 U		
299-W10-21	12/14/94	B00G72		.88 U		
299-W11-27	9/21/94	B0C2H4		.46 U		
299-W11-27	11/30/94	B00878		.90	16.00 L	
299-W11-27	11/30/94	B00879	5.90 U			4.10 U
299-W11-28	9/21/94	B0C2J6		1.24 U		
299-W11-28	10/26/94	B005N2		2.43	22.00	
299-W11-28	10/26/94	B005N3	6.20 L			4.10 U
299-W11-31	8/22/94	B0C884		.06 U		
299-W11-31	12/14/94	B00G75		.69 U		
299-W6-2	12/14/94	B00G75		1.88		
299-W6-4	12/14/94	B00G76		.81 U		
299-W6-9	12/13/94	B00G77		.89		
299-W6-9	12/13/94	B00G78		.51 U		

Table 15-16. Constituents with at Least One Detected Value for the Single-Shell Tank Waste Management Area T Data for Reporting Period October 1 through December 31, 1994.
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Well Name	Collection Date	Sample Number	EU-154 140/pCi/L ./.	EU-155 140/pCi/L ./.	FLUORID 124/ppb 51/1400f	ALPHA 135/pCi/L ./15
299-W10-15	9/21/94	B0C2H8	-3.12 U	1.77 U		
299-W10-15	11/30/94	B0D870	-4.66 U	-.38 U	4800.00	1.64 U
299-W10-16	9/21/94	B0C2J0	1.23 U	-.49 U		
299-W10-16	11/29/94	B0D872	-3.57 U	-1.11 U	2600.00	8.66
299-W10-19	12/14/94	B0D870	1.33 U	-.22 U	500.00	
299-W10-20	12/15/94	B0D656				1.57
299-W10-20	12/15/94	B0D671	-2.19 U	-.02 U	400.00	
299-W10-21	12/14/94	B0D672	2.70 U	1.55 U	400.00	
299-W11-27	9/21/94	B0C2H4	-1.25 U	-.86 U		
299-W11-27	11/30/94	B0D878	.95 U	-1.17 U	1000.00	1.40
299-W11-28	9/21/94	B0C2J6	-.21 U	1.49 U		
299-W11-28	10/26/94	B0D5M2	-2.41 U	.55 U	3500.00	2.98 P
299-W11-31	8/22/94	B0C8B4	.29 U	-1.03 U		
299-W11-31	12/14/94	B0D673	-2.79 U	2.71	1200.00	
299-W6-2	12/14/94	B0D675	-4.16 U	.29 U	500.00	
299-W6-4	12/14/94	B0D676	4.05	-.64 U	500.00	
299-W6-9	12/13/94	B0D677	-.80 U	1.85 U	36.00 U	
299-W6-9	12/13/94	B0D678	2.19 U	-1.11 U	800.00	

Well Name	Collection Date	Sample Number	BETA 136/pCi/L ./.	I-129 139/pCi/L ./1	IRON 34/ppb 18/300s	IRON 34/ppb 18/300s
299-W10-15	11/30/94	B0D870	106.00	.36	530.00 BQ	
299-W10-15	11/30/94	B0D871				16.00 LBQ
299-W10-16	11/29/94	B0D872	29.50	-.08 U	1600.00 BQ	
299-W10-16	11/29/94	B0D873				38.00 BQ
299-W10-19	12/14/94	B0D870		.01 U		
299-W10-20	12/15/94	B0D656	24.60		1100.00 B	
299-W10-20	12/15/94	B0D657				17.00 BL
299-W10-20	12/15/94	B0D671		-.05 U		
299-W10-21	12/14/94	B0D672		.45		
299-W11-27	11/30/94	B0D878	92.70 F	.23 U	1400.00 BQ	
299-W11-27	11/30/94	B0D879				89.00 BQ
299-W11-28	10/26/94	B0D5M2	86.30 P	.37	830.00 Q	
299-W11-28	10/26/94	B0D5M3				29.00 Q
299-W11-31	12/14/94	B0D673		1.85		
299-W6-2	12/14/94	B0D675		.09 U		
299-W6-4	12/14/94	B0D676		.57		
299-W6-9	12/13/94	B0D677		.16 U		
299-W6-9	12/13/94	B0D678		.01 U		

Table 15-16. Constituents with at Least One Detected Value for the Single-Shell Tank Waste Management Area T Data for Reporting Period October 1 through December 31, 1994.
(sheet 5 of 9)

Well Name	Collection Date	Sample Number	LEAD 40/ppb .86/50i	FLEAD 40/ppb .86/50i	MAGNES 34/ppb 25/.	FMAGNES 34/ppb 25/.
299-W10-15	11/30/94	B00870	2.10 BL		15000.00	
299-W10-15	11/30/94	B00871		2.10 BL		14000.00
299-W10-16	11/29/94	B00872	11.00		9300.00	
299-W10-16	11/29/94	B00873		1.50 U		9600.00
299-W10-20	12/15/94	B00656	8.50		22000.00	
299-W10-20	12/15/94	B00657		3.70 L		22000.00
299-W11-27	11/30/94	B00878	2.70 BL		15000.00	
299-W11-27	11/30/94	B00879		2.70 BL		14000.00
299-W11-28	10/26/94	B005M2	4.60 LPA		14000.00	
299-W11-28	10/26/94	B005M3		2.00 LPA		14000.00

Well Name	Collection Date	Sample Number	MANGESE 34/ppb 1/50s	FRANGAN 34/ppb 1/50s	MERCURY 41/ppb .095/2	FMERCUR 41/ppb .095/2
299-W10-15	11/30/94	B00870	12.00		.05 U	
299-W10-15	11/30/94	B00871		1.90 L		.12 L
299-W10-16	11/29/94	B00872	32.00		.05 U	
299-W10-16	11/29/94	B00873		2.80 L		.05 U
299-W10-20	12/15/94	B00656	38.00		.07 BL	
299-W10-20	12/15/94	B00657		11.00		.06 BL
299-W11-27	11/30/94	B00878	29.00		.05 U	
299-W11-27	11/30/94	B00879		5.10 L		.05 U
299-W11-28	10/26/94	B005M2	47.00		.05 UP	
299-W11-28	10/26/94	B005M3		37.00		.05 UP

Well Name	Collection Date	Sample Number	NETRYCH 25/ppb .082/.	NICKEL 34/ppb 16/.	FMICKEL 34/ppb 16/.	NITRATE 124/ppb 96/45000
299-W10-15	11/30/94	B00870		51.00		260000.00 DQ
299-W10-15	11/30/94	B00871			13.00 U	
299-W10-16	11/29/94	B00872		160.00		130000.00 DQ
299-W10-16	11/29/94	B00873			13.00 U	
299-W10-19	12/14/94	B00670				130000.00 DQ
299-W10-20	12/15/94	B00656	.22 L	13.00 U		
299-W10-20	12/15/94	B00657			19.00 L	
299-W10-20	12/15/94	B00671				130000.00 DQ
299-W10-21	12/14/94	B00672				150000.00 DQ
299-W11-27	11/30/94	B00878		140.00		6300.00 Q
299-W11-27	11/30/94	B00879			13.00 U	
299-W11-28	10/26/94	B005M2		31.00		210000.00 D
299-W11-28	10/26/94	B005M3			13.00 U	
299-W11-31	12/14/94	B00673				120000.00 DQ
299-W6-2	12/14/94	B00675				52000.00 DQ
299-W6-4	12/14/94	B00676				97000.00 DQ
299-W6-9	12/13/94	B00677				600.00 Q
299-W6-9	12/13/94	B00678				69000.00 DQ

Table 15-16. Constituents with at Least One Detected Value for the
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Well Name	Collection Date	Sample Number	PU39-40 146/pCi/L ./.	POTASUM 34/ppb 890/.	FPOTASS 34/ppb 890/.	K-40 140/pCi/L ./.
299-W10-15	9/21/94	B0C288				25.30
299-W10-15	11/30/94	B0D870	.00 U	5000.00		61.20 Q
299-W10-15	11/30/94	B0D871			4800.00	
299-W10-16	9/21/94	B0C280				58.70
299-W10-16	11/29/94	B0D872	.01 U	3700.00		51.30
299-W10-16	11/29/94	B0D873			4000.00	
299-W10-19	12/14/94	B0D670				14.30 U
299-W10-20	12/15/94	B0D656		5100.00		
299-W10-20	12/15/94	B0D657			4900.00	
299-W10-20	12/15/94	B0D671				29.70
299-W10-21	12/14/94	B0D672				49.00
299-W11-27	9/21/94	B0C284				38.20
299-W11-27	11/30/94	B0D878	.00 U	4500.00		11.20 UQ
299-W11-27	11/30/94	B0D879			4300.00	
299-W11-28	9/21/94	B0C286				43.30
299-W11-28	10/26/94	B0D5H2	.02 P	4800.00		56.70
299-W11-28	10/26/94	B0D5H3			4800.00	
299-W11-31	8/22/94	B0C884				51.00
299-W11-31	12/14/94	B0D673				25.90
299-W6-2	12/14/94	B0D675				55.70
299-W6-4	12/14/94	B0D676				52.50
299-W6-9	12/13/94	B0D677				45.40
299-W6-9	12/13/94	B0D678				60.90

Well Name	Collection Date	Sample Number	RADIUM 137/pCi/L ./5i	SELENIUM 48/ppb 1.4/10i	PSELENI 48/ppb 1.4/10i	SODIUM 34/ppb 150/.
299-W10-15	11/30/94	B0D870		3.40 BL		180000.00 Q
299-W10-15	11/30/94	B0D871			3.20 BL	
299-W10-16	11/29/94	B0D872		5.70 L		120000.00 SQ
299-W10-16	11/29/94	B0D873			4.90 L	
299-W10-20	12/15/94	B0D656	.25	2.20 L		13000.00 BQ
299-W10-20	12/15/94	B0D657			2.20 L	
299-W11-27	11/30/94	B0D878		.65 U		20000.00 Q
299-W11-27	11/30/94	B0D879			.65 U	
299-W11-28	10/26/94	B0D5H2		5.30 L		130000.00
299-W11-28	10/26/94	B0D5H3			5.50 L	

Table 15-16. Constituents with at Least One Detected Value for the
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Well Name	Collection Date	Sample Number	FEDOLIM 34/ppb 150/.	SULFATE 124/ppb 89/250000s	TC-99 143/pCi/L ./900	PERCENE 25/ppb .08/5
299-W10-15	11/30/94	800870		65000.00 D	467.00	
299-W10-15	11/30/94	800871	170000.00 a			
299-W10-16	11/29/94	800872		59000.00 D	113.00	
299-W10-16	11/29/94	800873	120000.00 Ba			
299-W10-19	12/14/94	800870		38000.00 D	76.60	
299-W10-20	12/15/94	800856				1.40 Z
299-W10-20	12/15/94	800857	14000.00 Ba			
299-W10-20	12/15/94	800871		41000.00 D	59.50	
299-W10-21	12/14/94	800872		35000.00 D	76.30	
299-W11-27	11/30/94	800878		60000.00 D	11.70	
299-W11-27	11/30/94	800879	20000.00 a			
299-W11-28	10/26/94	8005N2		110000.00 D	455.00 P	
299-W11-28	10/26/94	8005N3	130000.00			
299-W11-31	12/14/94	800873		63000.00 D	317.00	
299-W6-2	12/14/94	800875		23000.00 D	28.10	
299-W6-4	12/14/94	800876		38000.00 D	55.00	
299-W6-9	12/13/94	800877		200.00 L	43.70	
299-W6-9	12/13/94	800878		25000.00 D	43.30	

Well Name	Collection Date	Sample Number	THALLIUM 42/ppb 1.2/.	PTHALLIUM 42/ppb 1.2/.	TDS 65/ppm 10/500s	TRICENE 25/ppb .043/5
299-W10-15	11/30/94	800870	.58 U		730.00	
299-W10-15	11/30/94	800871		.58 U		
299-W10-16	11/29/94	800872	.58 U		500.00	
299-W10-16	11/29/94	800873		.62 L		
299-W10-19	12/14/94	800870			340.00	
299-W10-20	12/15/94	800856				7.40
299-W10-20	12/15/94	800871			370.00	
299-W10-21	12/14/94	800872			390.00	
299-W11-27	11/30/94	800878	.58 U		260.00	
299-W11-27	11/30/94	800879		.58 U		
299-W11-28	10/26/94	8005N2	.58 U		640.00 P	
299-W11-28	10/26/94	8005N3		.58 U		
299-W11-31	12/14/94	800873			480.00	
299-W6-2	12/14/94	800875			250.00	
299-W6-4	12/14/94	800876			280.00	
299-W6-9	12/13/94	800877			270.00	
299-W6-9	12/13/94	800878			270.00	

Table 15-16. Constituents with at Least One Detected Value for the
Single-Shell Tank Waste Management Area T Data for
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Well Name	Collection Date	Sample Number	TRITIUM 142/pCi/L ./20000	TURBID 126/NTU .016/.	URANIUM 145/ppb ./.	Vanadium 34/ppb 6.4/.
299-W10-15	11/30/94	B00870	32000.00	1.90 q	2.55	42.00
299-W10-16	11/29/94	B00872	45000.00	6.20 q	1.39	37.00
299-W10-19	12/14/94	B00670	1530.00			
299-W10-20	12/15/94	B00856		24.00 q		17.00 L
299-W10-20	12/13/94	B00671	2160.00			
299-W10-21	12/14/94	B00672	1380.00			
299-W11-27	11/30/94	B00878	285.00 U	5.10 q	1.86	22.00 L
299-W11-28	10/26/94	B005W2	57500.00 P	5.90 pa	2.03 P	25.00 L
299-W11-31	12/14/94	B00673	74000.00			
299-W6-2	12/14/94	B00675	7510.00			
299-W6-4	12/14/94	B00676	32900.00			
299-W6-9	12/13/94	B00677	10700.00			
299-W6-9	12/13/94	B00678	10300.00			

Well Name	Collection Date	Sample Number	FMANADI 34/ppb 6.4/.	ZINC 34/ppb 4.4/5000s	FZINC 34/ppb 4.4/5000s	ZN-65 140/pCi/L ./.
299-W10-15	9/21/94	B002M8				.85 U
299-W10-15	11/30/94	B00870		6.30 U		-.75 U
299-W10-15	11/30/94	B00871	41.00		6.30 U	
299-W10-16	9/21/94	B002J0				2.23
299-W10-16	11/29/94	B00872		6.30 U		-.14 U
299-W10-16	11/29/94	B00873	33.00		6.30 U	
299-W10-19	12/14/94	B00670				2.11
299-W10-20	12/15/94	B00856		13.00		
299-W10-20	12/15/94	B00657	13.00 L		6.30 U	
299-W10-20	12/15/94	B00671				.72 U
299-W10-21	12/14/94	B00672				.75 U
299-W11-27	9/21/94	B002M4				.80 U
299-W11-27	11/30/94	B00878		6.60 L		.40 U
299-W11-27	11/30/94	B00879	21.00 L		6.30 U	
299-W11-28	9/21/94	B002J6				-2.27 U
299-W11-28	10/26/94	B005W2		54.00		-1.20 U
299-W11-28	10/26/94	B005W3	23.00 L		6.30 U	
299-W11-31	8/22/94	B00884				2.42 U
299-W11-31	12/14/94	B00673				-1.12 U
299-W6-2	12/14/94	B00675				1.20 U
299-W6-4	12/14/94	B00676				-.31 U
299-W6-9	12/13/94	B00677				-.04 U
299-W6-9	12/13/94	B00678				-.08 U

Table 15-16. Constituents with at Least One Detected Value for the Single-Shell Tank Waste Management Area T Data for Reporting Period October 1 through December 31, 1994.
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Well Name	Collection Date	Sample Number	ZRH0-95 140/pCi/L u/l
299-W10-15	9/21/94	8002H8	-.90 U
299-W10-15	11/30/94	800870	1.70 U
299-W10-16	9/21/94	8002J0	1.75 U
299-W10-16	11/29/94	800872	-1.15 U
299-W10-19	12/14/94	800670	-2.43 U
299-W10-20	12/15/94	800671	2.45
299-W10-21	12/14/94	800672	-1.13 U
299-W11-27	9/21/94	8002H4	-1.02 U
299-W11-27	11/30/94	800878	.49 U
299-W11-28	9/21/94	8002J6	.07 U
299-W11-28	10/26/94	8005M2	2.11 U
299-W11-31	8/22/94	800884	1.91 U
299-W11-31	12/14/94	800673	.26 U
299-W6-2	12/14/94	800675	.32 U
299-W6-4	12/14/94	800676	-2.00 U
299-W6-9	12/13/94	800677	-.47 U
299-W6-9	12/13/94	800678	-.10 U

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

Table 15-17. Contamination Indicator Parameters for the
Single-Shell Tank Waste Management Area T Data for
Reporting Period October 1 through
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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 110/.	ppb 5/.
299-W10-15	11/30/94	800870	1009	1100	8.74	8.40	400 L	279.0
299-W10-16	11/29/94	800872	766	770	8.10	8.10	200 L	646.0
299-W10-19	12/14/94	800870	558		8.77		300 L	1000.0
299-W10-20	12/15/94	800856	623		6.87			
		800871	623		6.91		400 L	1280.0
299-W10-21	12/14/94	800872	598		8.20		400 L	444.0
299-W11-27	11/30/94	800878	412	410	8.11	8.10	300 L	16.7
299-W11-28	10/26/94	800882	671 P	970 P	7.95 P	8.00 HP	500 L	934.0
299-W11-31	12/14/94	800873	719		7.19		400 L	646.0
299-W6-2	11/30/94	8008J2	395		8.08			
		8008J3	395		8.08			
		8008J4	396		8.08			
		8008J5	398		8.08			
		8008J6	394		8.08			
		8008J7	395		8.08			
		8008J8	393		8.08			
		8008J9	397		8.07			
	12/14/94	800875	370		6.41 F		200 L	119.0
299-W6-4	12/14/94	800876	468		8.21		300 L	160.0
299-W6-9	12/13/94	800877	406		7.82		200 L	115.0 a
		800878					300 L	207.0 a

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

Table 15-18. Constituent List and Summary of Results for the
Single-Shell Tank Waste Management Area TX-TY Data for
Reporting Period October 1 through December 31, 1994.
(sheet 1 of 3)

CONTAMINATION INDICATOR PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS		Number of Samples		
		Full				Limit	Agency	Total	>MDL	>DWS
CONDUCT	94	Conductivity, field	umhos		1			4	4	
CONDUCT	73	Conductivity, lab	umhos					4	4	
TOC		Total Organic Carbon	ppb		110			4	4	
TOX		Total Organic Halogen	ppb		5			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	4	4	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS		Number of Samples		
		Full				Limit	Agency	Total	>MDL	>DWS
ARSENIC		Arsenic	ppb		2.8	50	EPA	4	1	0
FARSENIC		Arsenic, filtered	ppb		2.8	50	EPA	4	1	0
BARIUM		Barium	ppb		.59	1000	EPAI	4	4	0
FBARIUM		Barium, filtered	ppb		.59	1000	EPAI	4	4	0
CADMIUM		Cadmium	ppb		3.3	10	EPAI	4	0	0
FCADMIUM		Cadmium, filtered	ppb		3.3	10	EPAI	4	0	0
CHROMIUM		Chromium	ppb		4.5	50	EPAI	4	4	4
FCHROMIUM		Chromium, filtered	ppb		4.5	50	EPAI	4	4	1
FLUORIDE		Fluoride	ppb		36	1400	EPAI	4	4	2
ALPHA		Gross alpha	pCi/L			15	EPA	4	3	0
MERCURY		Mercury	ppb		.05	2	EPA	4	0	0
FMERCURY		Mercury, filtered	ppb		.05	2	EPA	4	1	0
NITRATE		Nitrate	ppb		11	45000	EPA	4	4	4
SELENIUM		Selenium	ppb		.65	10	EPAI	4	3	0
FSELENIUM		Selenium, filtered	ppb		.65	10	EPAI	4	4	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS		Number of Samples		
		Full				Limit	Agency	Total	>MDL	>DWS
CHLORIDE		Chloride	ppb		14	250000	EPAS	4	4	0
IRON		Iron	ppb		5.24	300	EPAS	4	4	4
FIROM		Iron, filtered	ppb		5.24	300	EPAS	4	4	0
MANGANESE		Manganese	ppb		.72	50	EPAS	4	4	3
FMANGANESE		Manganese, filtered	ppb		.72	50	EPAS	4	4	1
SODIUM		Sodium	ppb		61			4	4	
FSODIUM		Sodium, filtered	ppb		61			4	4	
SULFATE		Sulfate	ppb		37	250000	EPAS	4	4	0

Table 15-18. Constituent List and Summary of Results for the
Single-Shell Tank Waste Management Area TX-TY Data for
Reporting Period October 1 through December 31, 1994.
(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
ALKALIN		Alkalinity		ppm	2.8			4	4	
ALUMINUM		Aluminum		ppb	26			4	4	
ALUMIN		Aluminum, filtered		ppb	26			4	3	
ANTIMONY		Antimony		ppb	62			4	0	
ANTIMO		Antimony, filtered		ppb	62			4	0	
SB-125		Antimony-125		pCi/L				8	0	
BERYLLIUM		Beryllium		ppb	.17			4	0	
BERYLL		Beryllium, filtered		ppb	.17			4	0	
BE-7		Beryllium-7		pCi/L				8	0	
BROMIDE		Bromide		ppb	100			4	3	
CALCIUM		Calcium		ppb	34			4	4	
FCALCIU		Calcium, filtered		ppb	34			4	4	
CEPR-144		Cerium/Praseodymium-144		pCi/L				8	2	
CS-134		Cesium-134		pCi/L				8	1	
CS-137		Cesium-137		pCi/L		200	EPA	8	1	0
COBALT		Cobalt		ppb	5.9			4	1	
FCOBALT		Cobalt, filtered		ppb	5.9			4	0	
CO-60		Cobalt-60		pCi/L		100	EPA	8	2	0
COPPER		Copper		ppb	4.1	1000	EPAS	4	4	0
FCOPPER		Copper, filtered		ppb	4.1	1000	EPAS	4	1	0
EU-154		Europium-154		pCi/L				8	0	
EU-155		Europium-155		pCi/L				8	1	
BETA		Gross beta		pCi/L				4	4	
I-129L		Iodine-129, Low level		pCi/L		1	EPA	8	2	2
LEAD		Lead		ppb	1.5	50	EPA1	4	4	0
FLEAD		Lead, filtered		ppb	1.5	50	EPA1	4	1	0
MAGNES		Magnesium		ppb	23			4	4	
FMAGNES		Magnesium, filtered		ppb	23			4	4	
NICKEL		Nickel		ppb	13			4	4	
FNICKEL		Nickel, filtered		ppb	13			4	2	
NITRITE		Nitrite		ppb	18	1000	EPA	4	0	0
PHOSPHA		Phosphate		ppb	82			4	0	
PU-238		Plutonium-238		pCi/L				4	0	
PU39-40		Plutonium-239/40		pCi/L				4	0	
POTASUM		Potassium		ppb	850			4	4	
FPOTASS		Potassium, filtered		ppb	850			4	4	
K-40		Potassium-40		pCi/L				8	7	
RU-106		Ruthenium-106		pCi/L		30	EPA	8	0	0
SILVER		Silver		ppb	3.6	50	EPA1	4	0	0
FSILVER		Silver, filtered		ppb	3.6	50	EPA1	4	0	0
SR-90		Strontium-90		pCi/L		8	EPA	8	0	0
TC-99		Technetium-99		pCi/L		900	EPA	4	4	1
THALLIUM		Thallium		ppb	.58			4	0	
FTHALLIUM		Thallium, filtered		ppb	.58			4	0	
TIN		Tin		ppb	69			4	0	
FTIN		Tin, filtered		ppb	69			4	0	
TDS		Total Dissolved Solids		ppm	10	500	EPAS	4	4	1

Table 15-18. Constituent List and Summary of Results for the
Single-Shell Tank Waste Management Area TX-TY Data for
Reporting Period October 1 through December 31, 1994.
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Short	(Method)	Constituent Name		Units	Lab MDL	DWS		Number of Samples		
		Full				Limit	Agency	Total	>MDL	>DWS
TRITIUM		Tritium	pCi/L			20000	EPA	4	4	3
TURBID		Turbidity	NTU		.016			4	4	
URANIUM		Uranium	ppb					4	3	
VANADIUM		Vanadium	ppb		6.6			4	4	
FWANADI		Vanadium, filtered	ppb		6.6			4	4	
ZINC		Zinc	ppb		6.3	5000	EPAS	4	4	0
FZINC		Zinc, filtered	ppb		6.3	5000	EPAS	4	2	0
ZM-65		Zinc-65	pCi/L					8	0	
ZMNB-95		Zirconium/Niobium-95	pCi/L					8	0	

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

Table 15-19. Constituents with at Least One Detected Value for the Single-Shell Tank Waste Management Area TX-TY Data for Reporting Period October 1 through December 31, 1994.
(sheet 1 of 5)

Well Name	Collection Date	Sample Number	ALKALIN 357/ppm 1.96/.	ALUMINUM 34/ppb 19/.	FALLUMIN 34/ppb 19/.	ARSENIC 43/ppb .64/50
299-W10-17	11/30/94	B00874	140.00	55.00 L		8.20
299-W10-17	11/30/94	B00875			33.00 L	
299-W10-18	11/30/94	B00876	120.00	1700.00		2.80 U
299-W10-18	11/30/94	B00877			28.00 L	
299-W14-12	11/30/94	B00880	90.00	240.00		2.80 U
299-W14-12	11/30/94	B00881			26.00 U	
299-W15-22	11/30/94	B00882	100.00	1700.00		2.80 U
299-W15-22	11/30/94	B00883			31.00 L	

Well Name	Collection Date	Sample Number	FARSENIC 43/ppb .64/50	BARIUM 34/ppb 1.3/1000i	FBARIUM 34/ppb 1.3/1000i	BROMIDE 124/ppb 110/.
299-W10-17	11/30/94	B00874		28.00		300.00 L
299-W10-17	11/30/94	B00875	6.80		27.00	
299-W10-18	11/30/94	B00876		80.00		100.00 L
299-W10-18	11/30/94	B00877	2.80 U		59.00	
299-W14-12	11/30/94	B00880		110.00		100.00 DU
299-W14-12	11/30/94	B00881	2.80 U		100.00	
299-W15-22	11/30/94	B00882		63.00		400.00 L
299-W15-22	11/30/94	B00883	2.80 U		59.00	

Well Name	Collection Date	Sample Number	CALCIUM 34/ppb 47/.	FCALCIU 34/ppb 47/.	CEPR-144 140/ppi/L ./.	CS-134 140/ppi/L ./.
299-W10-17	9/22/94	B0C2H2			-1.05 U	.62 U
299-W10-17	11/30/94	B00874	24000.00		-1.46 U	.90 U
299-W10-17	11/30/94	B00875		23000.00		
299-W10-18	9/22/94	B0C2J2			2.98 U	-.61 U
299-W10-18	11/30/94	B00876	50000.00		-7.83 U	-1.27 U
299-W10-18	11/30/94	B00877		49000.00		
299-W14-12	9/22/94	B0C2H6			12.70	-1.02 U
299-W14-12	11/30/94	B00880	120000.00		4.28 U	1.11
299-W14-12	11/30/94	B00881		120000.00		
299-W15-22	9/22/94	B0C2J4			8.21	-.39 U
299-W15-22	11/30/94	B00882	54000.00		-6.66 U	-.25 U
299-W15-22	11/30/94	B00883		63000.00		

Table 15-19. Constituents with at Least One Detected Value for the Single-Shell Tank Waste Management Area TX-TY Data for Reporting Period October 1 through December 31, 1994.
(sheet 2 of 5)

Well Name	Collection Date	Sample Number	CS-137 140/pCi/L ./200	CHLORID 124/ppb 71/250000s	CHROMIUM 34/ppb 11/50i	CHROMIUM 34/ppb 11/50i
299-W10-17	9/22/94	B0C2H2	.34 U			
299-W10-17	11/30/94	B0D874	.40 U	36000.00 D	150.00	
299-W10-17	11/30/94	B0D875				9.40 L
299-W10-18	9/22/94	B0C2J2	1.24			
299-W10-18	11/30/94	B0D876	.21 U	38000.00 D	570.00	
299-W10-18	11/30/94	B0D877				8.10 L
299-W14-12	9/22/94	B0C2H6	.99 U			
299-W14-12	11/30/94	B0D880	-1.16 U	72000.00 D	360.00	
299-W14-12	11/30/94	B0D881				190.00
299-W15-22	9/22/94	B0C2J4	.16 U			
299-W15-22	11/30/94	B0D882	.17 U	33000.00 D	160.00	
299-W15-22	11/30/94	B0D883				7.40 L

Well Name	Collection Date	Sample Number	CORALT 34/ppb 6.5/.	FCORALT 34/ppb 6.5/.	CO-60 140/pCi/L ./100	COPPER 34/ppb 2.6/1000s
299-W10-17	9/22/94	B0C2H2			.22 U	
299-W10-17	11/30/94	B0D874	5.90 U		.72 U	7.90 L
299-W10-17	11/30/94	B0D875		5.90 U		
299-W10-18	9/22/94	B0C2J2			.61 U	
299-W10-18	11/30/94	B0D876	26.00		.30 U	37.00
299-W10-18	11/30/94	B0D877		5.90 U		
299-W14-12	9/22/94	B0C2H6			13.20	
299-W14-12	11/30/94	B0D880	5.90 U		7.80	6.40 L
299-W14-12	11/30/94	B0D881		5.90 U		
299-W15-22	9/22/94	B0C2J4			.21 U	
299-W15-22	11/30/94	B0D882	5.90 U		.23 U	12.00 L
299-W15-22	11/30/94	B0D883		5.90 U		

Well Name	Collection Date	Sample Number	FCOPPER 34/ppb 2.6/1000s	EU-155 140/pCi/L ./.	FLUORID 124/ppb 51/14001	ALPHA 135/pCi/L ./15
299-W10-17	9/22/94	B0C2H2		.57 U		
299-W10-17	11/30/94	B0D874		.64 U	2200.00	1.97
299-W10-17	11/30/94	B0D875	4.20 L			
299-W10-18	9/22/94	B0C2J2		-1.50 U		
299-W10-18	11/30/94	B0D876		.76 U	1800.00	2.77
299-W10-18	11/30/94	B0D877	4.10 U			
299-W14-12	9/22/94	B0C2H6		.48 U		
299-W14-12	11/30/94	B0D880		-1.66 U	1000.00	3.56 U
299-W14-12	11/30/94	B0D881	4.10 U			
299-W15-22	9/22/94	B0C2J4		.03 U		
299-W15-22	11/30/94	B0D882		2.20	500.00	2.17
299-W15-22	11/30/94	B0D883	4.10 U			

Table 15-19. Constituents with at Least One Detected Value for the Single-Shell Tank Waste Management Area TX-TV Data for Reporting Period October 1 through December 31, 1994.
(sheet 3 of 5)

Well Name	Collection Date	Sample Number	BETA 136/pCi/L ./.	I-129 139/pCi/L ./1	IRON 34/ppb 18/300s	FIION 34/ppb 18/300s
299-W10-17	9/22/94	800872		.05 U		
299-W10-17	11/30/94	800874	34.00	.04 U	990.00 BQ	
299-W10-17	11/30/94	800875				180.00 BQ
299-W10-18	9/22/94	800876		-.08 U		
299-W10-18	11/30/94	800877	4.73	.25 U	8800.00 BQ	
299-W10-18	11/30/94	800877				52.00 BQ
299-W14-12	9/22/94	800880		34.80		
299-W14-12	11/30/94	800880	833.00	29.00	3600.00 BQ	
299-W14-12	11/30/94	800881				46.00 BQ
299-W15-22	9/22/94	800882		.01 U		
299-W15-22	11/30/94	800882	72.00	.05 U	5800.00 BQ	
299-W15-22	11/30/94	800883				63.00 BQ

Well Name	Collection Date	Sample Number	LEAD 40/ppb .86/501	FLLEAD 40/ppb .86/501	MAGNES 34/ppb 25/.	FMAGNES 34/ppb 25/.
299-W10-17	11/30/94	800874	5.10 B		7600.00	
299-W10-17	11/30/94	800875		3.40 BL		7500.00
299-W10-18	11/30/94	800876	12.00 B		18000.00	
299-W10-18	11/30/94	800877		1.50 U		17000.00
299-W14-12	11/30/94	800880	2.20 BL		44000.00	
299-W14-12	11/30/94	800881		1.50 U		44000.00
299-W15-22	11/30/94	800882	2.10 BL		17000.00	
299-W15-22	11/30/94	800883		1.50 U		19000.00

Well Name	Collection Date	Sample Number	MANGANESE 34/ppb 1/50s	FMANGAN 34/ppb 1/50s	MERCURY 41/ppb .095/2	FMERCUR 41/ppb .095/2
299-W10-17	11/30/94	800874	29.00		.05 U	
299-W10-17	11/30/94	800875		40.00		.05 U
299-W10-18	11/30/94	800876	240.00		.05 U	
299-W10-18	11/30/94	800877		9.70 L		.05 U
299-W14-12	11/30/94	800880	140.00		.05 U	
299-W14-12	11/30/94	800881		120.00 F		.06 L
299-W15-22	11/30/94	800882	89.00		.05 U	
299-W15-22	11/30/94	800883		4.20 L		.05 U

Table 15-19. Constituents with at Least One Detected Value for the Single-Shell Tank Waste Management Area TX-TV Data for Reporting Period October 1 through December 31, 1994.
(sheet 4 of 5)

Well Name	Collection Date	Sample Number	NICKEL 34/ppb 16/.	PNICKEL 34/ppb 16/.	NITRATE 124/ppb 96/45000	POTASUM 34/ppb 890/.
299-W10-17	11/30/94	800874	120.00		96000.00 QA	3600.00
299-W10-17	11/30/94	800875		130.00		
299-W10-18	11/30/94	800876	540.00		78000.00 QA	5000.00
299-W10-18	11/30/94	800877		130.00		
299-W14-12	11/30/94	800880	70.00		300000.00 QA	6300.00
299-W14-12	11/30/94	800881		13.00 U		
299-W15-22	11/30/94	800882	91.00		110000.00 QA	4200.00
299-W15-22	11/30/94	800883		13.00 U		

Well Name	Collection Date	Sample Number	POTASS 34/ppb 890/.	K-40 140/pCi/L ./.	SELENIUM 48/ppb 1.4/10i	PSELENI 48/ppb 1.4/10i
299-W10-17	9/22/94	80CZ12		30.60		
299-W10-17	11/30/94	800874		8.77 UQ	2.00 BL	
299-W10-17	11/30/94	800875	3700.00			3.10 BL
299-W10-18	9/22/94	80CZ12		33.30		
299-W10-18	11/30/94	800876		46.00 Q	.65 U	
299-W10-18	11/30/94	800877	4800.00			1.50 BL
299-W14-12	9/22/94	80CZ16		61.70		
299-W14-12	11/30/94	800880		49.20 Q	1.50 BL	
299-W14-12	11/30/94	800881	6400.00			1.70 BL
299-W15-22	9/22/94	80CZ14		42.10		
299-W15-22	11/30/94	800882		46.20 Q	2.00 BL	
299-W15-22	11/30/94	800883	4800.00			3.00 BL

Well Name	Collection Date	Sample Number	SODIUM 34/ppb 150/.	FSODIUM 34/ppb 150/.	SULFATE 124/ppb 89/250000s	TC-99 143/pCi/L ./900
299-W10-17	11/30/94	800874	120000.00 Q		62000.00 Q	119.00
299-W10-17	11/30/94	800875		110000.00 Q		
299-W10-18	11/30/94	800876	38000.00 Q		45000.00 Q	196.00
299-W10-18	11/30/94	800877		38000.00 Q		
299-W14-12	11/30/94	800880	27000.00 Q		65000.00 Q	6290.00
299-W14-12	11/30/94	800881		27000.00 Q		
299-W15-22	11/30/94	800882	18000.00 Q		47000.00 Q	298.00
299-W15-22	11/30/94	800883		22000.00 Q		

Table 15-19. Constituents with at Least One Detected Value for the Single-Shell Tank Waste Management Area TX-TY Data for Reporting Period October 1 through December 31, 1994.
(sheet 5 of 5)

Well Name	Collection Date	Sample Number	TDS 65/ppm 10/500s	TRITIUM 142/pCi/L ./20000	TURBID 126/NTU .016/.	URANIUM 145/ppb ./.
299-W10-17	11/30/94	800874	460.00	33800.00	5.30 g	1.01
299-W10-18	11/30/94	800876	360.00	12500.00	82.00 g	1.33
299-W14-12	11/30/94	800880	770.00	233000.00	43.00 g	.84 u
299-W15-22	11/30/94	800882	360.00	22600.00	45.00 g	1.40

Well Name	Collection Date	Sample Number	VANADUM 34/ppb 6.4/.	PVANAD[34/ppb 6.4/.	ZINC 34/ppb 4.4/5000s	FZINC 34/ppb 4.4/5000s
299-W10-17	11/30/94	800874	57.00		18.00	
299-W10-17	11/30/94	800875		43.00		6.60 L
299-W10-18	11/30/94	800876	46.00		33.00	
299-W10-18	11/30/94	800877		22.00 L		6.30 U
299-W14-12	11/30/94	800880	9.80 L		17.00	
299-W14-12	11/30/94	800881		6.80 L		7.60 L
299-W15-22	11/30/94	800882	22.00 L		40.00	
299-W15-22	11/30/94	800883		21.00 L		6.30 U

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

Table 15-20. Contamination Indicator Parameters for the Single-Shell Tank Waste Management Area TX-TY Data for Reporting Period October 1 through December 31, 1994.

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 110/.	TOX ppb 5/.
299-W10-17	11/30/94	800874	711	730	7.93	8.10	400 L	950.0
299-W10-18	11/30/94	800876	582	590	7.92	7.90	300 L	291.0
299-W14-12	11/30/94	800880	1228	1200	7.35	7.60	400 L	834.0
299-W15-22	11/30/94	800882	595	600	7.86	7.90	200 L	518.0

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

Table 15-21. Constituent List and Summary of Results for the Single-Shell Tank Waste Management Area U Data for Reporting Period October 1 through December 31, 1994.

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name	Full	Units	Lab MDL	DWS Limit	Agency	Number of Samples		
								Total	>MDL	>DWS
ALPHA		Gross alpha		pCi/L		15	EPA	1	1	0

SITE SPECIFIC AND OTHER CONSTITUENTS

Short	(Method)	Constituent Name	Full	Units	Lab MDL	DWS Limit	Agency	Number of Samples		
								Total	>MDL	>DWS
SB-125		Antimony-125		pCi/L				5	0	
BE-7		Beryllium-7		pCi/L				5	0	
CEPR-144		Cerium/Praseodymium-144		pCi/L				5	1	
CS-134		Cesium-134		pCi/L				5	0	
CS-137		Cesium-137		pCi/L		200	EPA	5	1	0
CO-60		Cobalt-60		pCi/L		100	EPA	5	1	0
EU-154		Europium-154		pCi/L				5	1	
EU-155		Europium-155		pCi/L				5	1	
BETA		Gross beta		pCi/L				1	1	
I-129L		Iodine-129, Low level		pCi/L		1	EPA	5	2	0
K-40		Potassium-40		pCi/L				5	4	
RU-106		Ruthenium-106		pCi/L		30	EPA	5	1	0
SR-90		Strontium-90		pCi/L		8	EPA	5	0	0
TRITIUM		Tritium		pCi/L		20000	EPA	1	0	0
ZN-65		Zinc-65		pCi/L				5	1	
ZRNB-95		Zirconium/Niobium-95		pCi/L				5	1	

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

Table 15-22. Constituents with at Least One Detected Value for the Single-Shell Tank Waste Management Area U Data for Reporting Period October 1 through December 31, 1994.

Well Name	Collection Date	Sample Number	CEPR-144 140/pCi/L ./.	CS-137 140/pCi/L ./200	Co-60 140/pCi/L ./100	EU-154 140/pCi/L ./.
299-W18-25	9/22/94	B0CY89	-1.49 U	-.76 U	.92 U	-1.87 U
299-W18-30	9/22/94	B0CYT3	3.85 U	-.35 U	-.84 U	2.91 U
299-W18-31	9/23/94	B0CYT7	-7.07 U	-.43 U	-1.51 U	-1.11 U
299-W19-31	9/22/94	B0CYV1	10.80	2.66	1.78	-1.15 U
299-W19-32	9/22/94	B0CYV5	1.86 U	.27 U	.22 U	2.40

Well Name	Collection Date	Sample Number	EU-155 140/pCi/L ./.	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.	I-129 139/pCi/L ./1
299-W18-25	9/22/94	B0CY89	-.83 U			.60
299-W18-30	9/22/94	B0CYT3	0.00 U			-.01 U
299-W18-31	9/23/94	B0CYT7	-1.10 U	7.75 U	8.86	-.06 U
299-W19-31	9/22/94	B0CYV1	2.19			.43
299-W19-32	9/22/94	B0CYV5	-1.56 U			.09 U

Well Name	Collection Date	Sample Number	K-40 140/pCi/L ./.	RU-106 140/pCi/L ./30	Zn-65 140/pCi/L ./.	238Pu-95 140/pCi/L ./.
299-W18-25	9/22/94	B0CY89	35.60	10.80	1.86 U	-.48 U
299-W18-30	9/22/94	B0CYT3	16.80 U	3.45 U	-3.46 U	-.58 U
299-W18-31	9/23/94	B0CYT7	28.70	9.07 U	2.83	2.50 U
299-W19-31	9/22/94	B0CYV1	53.00	-4.47 U	.33 U	2.41
299-W19-32	9/22/94	B0CYV5	61.70	6.85 U	-.51 U	-.67 U

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

Table 15-23. Contamination Indicator Parameters for the Single-Shell Tank Waste Management Area U Data for Reporting Period October 1 through December 31, 1994.

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 110/.	TOX ppb 5/.
NO DATA								

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). 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.

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 was completed and all discharges to the trenches were terminated. Complete physical isolation of the trenches will occur by the end of 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.

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 fourth quarter of 1994 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 to semiannual samples, samples are collected quarterly from well 399-1-17A to provide near-trench monitoring of contaminants. Sampling dates are listed in Table 16-1. Analytical results received during the fourth quarter are presented in Tables 16-3 through 16-5.

Sampling and analysis during the fourth quarter showed that one drinking water parameter, two groundwater quality parameters, and two site-specific and other constituents exceed drinking water standards (Tables 16-3 and 16-4). Iron and manganese are assumed to be the remnants of well construction or caused by the use of stainless steel screens. The exceedance of gross alpha is probably related to uranium that is detected in downgradient wells. If the uranium component is subtracted from the gross alpha, the remainder will probably not exceed the drinking water standards. Well 399-1-16B continues to

show elevated levels of trichloroethene and cis-dichloroethene with a corresponding elevated level in the indicator parameter TOX (Table 16-5).

Field-measured pH collected from well 399-1-17A on October 7, 1994, is probably in error. The four replicates (ranging from 6.85 to 6.87) are inconsistent with historical trends, the laboratory value from a sample collected at the same time (7.30), and replicates collected December 15, 1994 (7.34-7.50). A RADE has been submitted for these data.

Figure 16-1. Well Location Map for the 300 Area Process Trenches.

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
1-10A	Downgradient	Hanford/Ringold: Water Table	Semiannually	10/05/94
1-11	Adjacent	Hanford/Ringold: Water Table	Semiannually	10/05/94
1-12	Downgradient	Hanford/Ringold: Water Table	Semiannually	10/05/94 10/06/94
1-14A	Adjacent	Hanford: Water Table	Semiannually	10/05/94
1-16A	Downgradient	Ringold: Water Table	Semiannually	10/07/94
1-16B	Downgradient	Ringold: Bottom of Unconfined Aquifer	Semiannually	10/10/94
1-17A	Downgradient	Ringold: Water Table	Quarterly	10/07/94 12/15/94
1-17B	Downgradient	Ringold: Bottom of Unconfined Aquifer	Semiannually	10/07/94
1-18A	Upgradient	Ringold: Water Table	Semiannually	10/05/94
2-1 ^a	Downgradient	Hanford/Ringold: Water Table	Semiannually	10/05/94
3-10 ^a	Downgradient	Hanford: Water Table	Semiannually	10/10/94

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
 300 Area Process Trenches, Fourth Quarter 1994.
 (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	10/25/94	35.49	341.17	103.99
	11/22/94	34.61	342.05	104.26
	12/19/94	35.15	341.51	104.09
399-1-10A	10/05/94	32.94	340.63*	103.82
	10/25/94	32.35	341.22	104.00
	11/22/94	31.55	342.02	104.25
	12/19/94	32.15	341.42	104.06
399-1-11	10/05/94	36.77	340.95*	103.92
	11/22/94	35.61	342.11	104.28
	12/19/94	35.49	342.23	104.31
399-1-12	10/06/94	43.88	340.53*	103.79
	10/25/94	43.43	340.98	103.93
	11/22/94	42.58	341.83	104.19
	12/19/94	42.48	341.93	104.22
399-1-14A	10/05/94	41.02	342.21*	104.31
	10/25/94	41.72	341.51	104.09
	11/22/94	41.03	342.20	104.30
	12/20/94	40.87	342.36	104.35
399-1-15	10/25/94	37.96	341.57	104.11
	11/22/94	37.25	342.28	104.33
	12/19/94	37.02	342.51	104.40
399-1-16A	10/07/94	41.16	340.31*	103.73
	10/25/94	40.60	340.87	103.90
	11/22/94	39.69	341.78	104.17
	12/19/94	40.07	341.40	104.06
399-1-17A	10/07/94	35.86	341.58*	104.11
	10/25/94	36.54	340.90	103.91
	11/22/94	35.66	341.78	104.17
	12/15/94	34.72	342.72*	104.46
	12/19/94	35.69	341.75	104.17
399-1-18A	10/05/94	49.06	341.72*	104.16
	10/25/94	48.77	342.01	104.24

Table 16-2. RCRA Water Level Measurement Report
 300 Area Process Trenches, Fourth Quarter 1994.
 (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	11/22/94	48.28	342.50	104.39
	12/20/94	47.96	342.82	104.49
399-1-19	10/25/94	33.59	341.05	103.95
	11/22/94	32.75	341.89	104.21
	12/19/94	32.65	341.99	104.24
399-1-3	10/25/94	43.80	340.91	103.91
	11/22/94	42.90	341.81	104.18
	12/19/94	43.18	341.53	104.10
399-1-4	10/25/94	39.20	341.38	104.05
	11/22/94	38.42	342.16	104.29
	12/20/94	38.37	342.21	104.31
399-1-5	10/25/94	38.79	340.98	103.93
	11/22/94	37.93	341.84	104.19
	12/19/94	37.86	341.91	104.21
399-1-7	10/25/94	44.70	340.90	103.91
	11/22/94	43.79	341.81	104.18
	12/19/94	44.19	341.41	104.06
399-1-8	10/25/94	43.98	340.90	103.91
	11/22/94	43.08	341.80	104.18
	12/19/94	43.28	341.60	104.12
399-2-1	10/05/94	33.81	341.42*	104.06
	10/25/94	34.34	340.89	103.90
	11/22/94	33.56	341.67	104.14
	12/19/94	34.05	341.18	103.99
399-2-2	10/25/94	36.61	340.91	103.91
	11/22/94	35.75	341.77	104.17
	12/19/94	36.18	341.34	104.04
399-2-3	10/25/94	34.50	340.92	103.91
	11/22/94	33.64	341.78	104.17
	12/19/94	34.13	341.29	104.03

Table 16-2. RCRA Water Level Measurement Report
 300 Area Process Trenches, Fourth Quarter 1994.
 (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	10/25/94	43.62	340.77	103.87
	11/22/94	42.78	341.61	104.12
	12/20/94	43.08	341.31	104.03
399-3-10	10/10/94	145.03	240.32*+	73.25
	10/25/94	44.67	340.68	103.84
	11/21/94	44.16	341.19	103.99
	12/20/94	44.16	341.19	103.99
399-3-6	10/25/94	51.98	340.82	103.88
	11/21/94	51.23	341.57	104.11
	12/20/94	51.18	341.62	104.13
399-3-9	10/25/94	47.38	340.70	103.85
	11/21/94	46.80	341.28	104.02
	12/20/94	46.78	341.30	104.03
399-4-1	10/25/94	55.02	340.58	103.81
	11/21/94	54.38	341.22	104.00
	12/20/94	54.44	341.16	103.99
399-4-10	10/25/94	37.71	340.83	103.88
	11/21/94	37.40	341.14	103.98
	12/20/94	37.41	341.13	103.98
399-4-11	10/25/94	63.84	340.61	103.82
	11/21/94	63.11	341.34	104.04
	12/20/94	63.16	341.29	104.03
399-4-7	10/25/94	37.89	340.67	103.84
	11/21/94	37.46	341.10	103.97
	12/20/94	37.49	341.07	103.96
399-5-1	10/25/94	54.52	341.01	103.94
	11/21/94	53.83	341.70	104.15
	12/20/94	53.65	341.88	104.21
399-6-1	10/26/94	47.49	341.30	104.03
	11/21/94	46.91	341.88	104.21
	12/20/94	46.97	341.82	104.19

Table 16-2. RCRA Water Level Measurement Report
 300 Area Process Trenches, Fourth Quarter 1994.
 (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				
399-8-1	10/25/94	54.92	341.21	104.00
	11/21/94	54.29	341.84	104.19
	12/19/94	53.81	342.32	104.34
399-8-2	10/25/94	56.06	341.96	104.23
	11/21/94	55.56	342.46	104.38
	12/20/94	55.08	342.94	104.53
399-8-3	10/25/94	53.25	341.50	104.09
	11/22/94	52.71	342.04	104.25
	12/19/94	52.12	342.63	104.43
699-S27-E14	10/25/94	59.16	340.52	103.79
	11/21/94	58.48	341.20	104.00
	12/20/94	58.59	341.09	103.96
Wells Monitoring the Bottom of the Unconfined Aquifer				
399-1-16B	10/10/94	39.54	341.54	104.10
	10/25/94	40.09	340.99	103.93
	11/22/94	39.19	341.89	104.21
	12/19/94	39.60	341.48	104.08
399-1-17B	10/07/94	37.34	340.46*	103.77
	10/25/94	36.80	341.00	103.94
	11/22/94	35.91	341.89	104.21
	12/19/94	35.97	341.83	104.19
399-1-18B	10/25/94	47.55	342.34	104.35
	11/22/94	46.89	343.00	104.55
	12/20/94	46.81	343.08	104.57
Wells Monitoring the Confined Aquifer				
399-1-17C	10/25/94	2.55	375.51	114.46
	11/22/94	2.92	375.14	114.34
	12/19/94	3.22	374.84	114.25

Table 16-2. RCRA Water Level Measurement Report
 300 Area Process Trenches, Fourth Quarter 1994.
 (sheet 5 of 5)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
Wells Monitoring the Confined Aquifer				
399-1-18C	10/25/94	45.11	342.90	104.52
	11/22/94	44.47	343.54	104.71
	12/20/94	44.32	343.69	104.76
399-1-9	10/25/94	27.21	357.55	108.98
	11/22/94	26.83	357.93	109.10

- 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. Elevations marked with an '*' were measured at the time of sampling.
 4. Elevations 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
October 1 through December 31, 1994.
(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	94	Conductivity, field	umhos		1			18	18	
CONDUCT	73	Conductivity, lab	umhos					13	13	
TOC		Total Organic Carbon	ppb		110			19	19	
TOX		Total Organic Halogen	ppb		5			19	15	
PH	93	pH, field	pH		.01	6.5-8.5	EPAS	18	18	0
PH	125	pH, lab	pH			6.5-8.5	EPAS	13	13	0

DRINKING WATER PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
ARSENIC		Arsenic	ppb		2.8	50	EPA	12	2	0
PARSENIC		Arsenic, filtered	ppb		2.8	50	EPA	12	2	0
BARIUM		Barium	ppb		.59	1000	EPAI	12	12	0
FBARIUM		Barium, filtered	ppb		.59	1000	EPAI	12	12	0
CADMIUM		Cadmium	ppb		3.3	10	EPAI	12	0	0
FCADMIU		Cadmium, filtered	ppb		3.3	10	EPAI	12	0	0
CHROMIUM		Chromium	ppb		4.5	50	EPAI	12	12	3
FCHROMI		Chromium, filtered	ppb		4.5	50	EPAI	12	8	0
FLUORID		Fluoride	ppb		36	1400	EPAI	1	1	0
ALPHA		Gross alpha	pCi/L			15	EPA	12	12	6
MERCURY		Mercury	ppb		.05	2	EPA	12	5	0
FMERCUR		Mercury, filtered	ppb		.05	2	EPA	12	4	0
NITRATE		Nitrate	ppb		11	45000	EPA	1	1	0
RADIUM		Radium	pCi/L			5	EPAI	12	0	0
SELENIUM		Selenium	ppb		.65	10	EPAI	12	3	0
FSELENI		Selenium, filtered	ppb		.65	10	EPAI	12	4	0

GROUNDWATER QUALITY PARAMETERS

Short	(Method)	Constituent Name		Units	Lab MDL	DWS Limit	Agency	Number of Samples		
		Full						Total	>MDL	>DWS
CHLORID		Chloride	ppb		14	250000	EPAS	1	1	0
IRON		Iron	ppb		5.24	300	EPAS	12	12	5
FIRON		Iron, filtered	ppb		5.24	300	EPAS	12	12	1
MANGESE		Manganese	ppb		.72	50	EPAS	12	12	2
FMANGAN		Manganese, filtered	ppb		.72	50	EPAS	12	12	2
SODIUM		Sodium	ppb		61			12	12	
FSODIUM		Sodium, filtered	ppb		61			12	12	
SULFATE		Sulfate	ppb		37	250000	EPAS	1	1	0

Table 16-3. Constituent List and Summary of Results for the
300 Area Process Trenches Data for Reporting Period
October 1 through December 31, 1994.
(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
1,1,1-T		1,1,1-Trichloroethane	ppb	.036	200	EPA	13	0	0
1,1,2-T		1,1,2-Trichloroethane	ppb	.078			13	0	
1,1-DIC		1,1-Dichloroethane	ppb	.058			13	0	
1,2-DIC		1,2-Dichloroethane	ppb	.029	5	EPA	13	0	0
1,4-dben		1,4-Dichlorobenzene	ppb	.055	75	EPA	13	0	0
ALKALIN		Alkalinity	ppm	2.8			12	12	
ALUMINUM		Aluminum	ppb	26			12	2	
ALUMINUM		Aluminum, filtered	ppb	26			12	0	
ANTIMONY		Antimony	ppb	62			12	0	
ANTIMONY		Antimony, filtered	ppb	62			12	0	
SB-125		Antimony-125	pCi/L				1	0	
BENZENE		Benzene	ppb	.013	5	EPA	13	6	0
BERYLLIUM		Beryllium	ppb	.17			12	0	
BERYLLIUM		Beryllium, filtered	ppb	.17			12	0	
BROMIDE		Bromide	ppb	100			1	0	
CALCIUM		Calcium	ppb	34			12	12	
CALCIUM		Calcium, filtered	ppb	34			12	12	
TETRANE		Carbon tetrachloride	ppb	.075	5	EPA	13	0	0
CS-137		Cesium-137	pCi/L		200	EPA	1	0	0
CHLFORM		Chloroform	ppb	.041			13	7	
COBALT		Cobalt	ppb	5.9			12	0	
COBALT		Cobalt, filtered	ppb	5.9			12	0	
CO-60		Cobalt-60	pCi/L		100	EPA	1	0	0
COLIFORM		Coliforms	COL	1	1	EPAI	12	0	0
COPPER		Copper	ppb	4.1	1000	EPAS	12	5	0
COPPER		Copper, filtered	ppb	4.1	1000	EPAS	12	5	0
ETHBENZ		Ethylbenzene	ppb	.051	700	EPA	13	1	0
BETA		Gross beta	pCi/L				12	12	
LEAD		Lead	ppb	1.5	50	EPAI	12	10	0
LEAD		Lead, filtered	ppb	1.5	50	EPAI	12	8	0
MAGNES		Magnesium	ppb	23			12	12	
MAGNES		Magnesium, filtered	ppb	23			12	12	
METHYCH		Methylene chloride	ppb	.09			13	0	
NICKEL		Nickel	ppb	13			12	6	
NICKEL		Nickel, filtered	ppb	13			12	4	
NITRITE		Nitrite	ppb	18	1000	EPA	1	0	0
PHOSPHA		Phosphate	ppb	82			1	0	
POTASSIUM		Potassium	ppb	850			12	12	

Table 16-3. Constituent List and Summary of Results for the
300 Area Process Trenches Data for Reporting Period
October 1 through December 31, 1994.
(sheet 3 of 3)

Short	(Method)	Constituent Name Full	Units	Lab MDL	DWS Limit	Agency	Number of Samples		
							Total	>MDL	>DWS
FPOTASS		Potassium, filtered	ppb	850			12	12	
RU-106		Ruthenium-106	pCi/L		30	EPA	1	0	0
SILVER		Silver	ppb	3.6	30	EPA1	12	0	0
FSILVER		Silver, filtered	ppb	3.6	50	EPA1	12	0	0
SR-90		Strontium-90	pCi/L		8	EPA	1	1	0
PERCENE		Tetrachloroethene	ppb	.22	5	EPA	13	9	0
TIN		Tin	ppb	69			12	0	
FTIN		Tin, filtered	ppb	69			12	0	
TOLUENE		Toluene	ppb	.016	1000	EPA	13	7	0
TRICENE		Trichloroethene	ppb	.11	5	EPA	13	8	1
TRITIUM		Tritium	pCi/L		20000	EPA	12	11	0
URANIUM		Uranium	ppb				13	13	
U-234		Uranium-234	pCi/L				1	1	
U-235		Uranium-235	pCi/L				1	1	
U-238		Uranium-238	pCi/L				1	1	
VANADIUM		Vanadium	ppb	6.6			12	3	
FVANADI		Vanadium, filtered	ppb	6.6			12	3	
VINYIDE.		Vinyl chloride	ppb	.13	2	EPA	13	0	0
XYLENE		Xylenes (total)	ppb	.033	10000	EPA	13	3	0
ZINC		Zinc	ppb	6.3	5000	EPAS	12	11	0
FZINC		Zinc, filtered	ppb	6.3	5000	EPAS	12	8	0
CIS12DE		cis-1,2-Dichloroethylene	ppb	.11	70	EPA	13	2	1
TRANSCE		trans-1,2-Dichloroethylene	ppb	.073	100	EPA	13	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
October 1 through December 31, 1994.
(sheet 1 of 8)

Well Name	Collection Date	Sample Number	ALKALIN 357/ppm 1.96/.	ALUMINUM 34/ppb 19/.	FALLUMIN 34/ppb 19/.	ARSENIC 43/ppb .64/50
399-1-10A	10/05/94	800359	120.00	26.00 U		2.80 U
399-1-10A	10/05/94	800360			26.00 U	
399-1-11	10/05/94	800361	120.00	26.00 U		2.80 U
399-1-11	10/05/94	800362			26.00 U	
399-1-12	10/05/94	800364			26.00 U	
399-1-12	10/06/94	800363	120.00	26.00 U		2.80 U
399-1-14A	10/05/94	800363	130.00	27.00 L		4.30 L
399-1-14A	10/05/94	800366			26.00 U	
399-1-16A	10/07/94	800367	110.00	26.00 U		2.80 U
399-1-16A	10/07/94	800368			26.00 U	
399-1-16B	10/10/94	800369	130.00	26.00 U		2.80 U
399-1-16B	10/10/94	800370			26.00 U	
399-1-17A	10/07/94	800371	47.00 L	26.00 U		2.80 U
399-1-17A	10/07/94	800375			26.00 U	
399-1-17B	10/07/94	800376	180.00	26.00 U		2.80 U
399-1-17B	10/07/94	800377			26.00 U	
399-1-18A	10/05/94	800378	130.00	30.00 L		5.00
399-1-18A	10/05/94	800379			26.00 U	
399-2-1	10/05/94	800380	90.00	26.00 U		2.80 U
399-2-1	10/05/94	800381	90.00	26.00 U		2.80 U
399-2-1	10/05/94	800382			26.00 U	
399-2-1	10/05/94	800383			26.00 U	
399-3-10	10/10/94	800384	100.00	26.00 U		2.80 U
399-3-10	10/10/94	800385			26.00 U	

Well Name	Collection Date	Sample Number	FARSENIC 43/ppb .64/50	BARIUM 34/ppb 1.3/1000i	FBARIUM 34/ppb 1.3/1000i	BENZENE 25/ppb .24/5
399-1-10A	10/05/94	800359		53.00		.01 U
399-1-10A	10/05/94	800360	2.80 U		51.00	
399-1-11	10/05/94	800361		42.00		.04 BL
399-1-11	10/05/94	800362	2.80 U		41.00	
399-1-12	10/05/94	800364	2.80 U		40.00	
399-1-12	10/06/94	800363		40.00		.01 U
399-1-14A	10/05/94	800365		41.00		.03 BL
399-1-14A	10/05/94	800366	3.60 L		41.00	
399-1-16A	10/07/94	800367		52.00		.01 U
399-1-16A	10/07/94	800368	2.80 U		52.00	
399-1-16B	10/10/94	800369		47.00		.06 BL
399-1-16B	10/10/94	800370	2.80 U		47.00	
399-1-17A	10/07/94	800371		28.00		.01 U
399-1-17A	10/07/94	800375	2.80 U		29.00	
399-1-17A	12/15/94	800381				.01 U
399-1-17B	10/07/94	800376		63.00		.06 BL
399-1-17B	10/07/94	800377	2.80 U		64.00	
399-1-18A	10/05/94	800378		44.00		.01 U
399-1-18A	10/05/94	800379	6.10		44.00	
399-2-1	10/05/94	800380		63.00		.02 BLQ
399-2-1	10/05/94	800381		64.00		.04 BLQ
399-2-1	10/05/94	800382	2.80 U		65.00	
399-2-1	10/05/94	800383	2.80 U		62.00	
399-3-10	10/10/94	800384		62.00		.01 U
399-3-10	10/10/94	800385	2.80 U		59.00	

Table 16-4. Constituents with at Least One Detected Value for the
300 Area Process Trenches Data for Reporting Period
October 1 through December 31, 1994.
(sheet 2 of 8)

Well Name	Collection Date	Sample Number	CALCIUM 34/ppb 47/.	PCALCIU 34/ppb 47/.	CHLORID 124/ppb 71/250000a	CHLFORM 25/ppb .05/.
399-1-10A	10/05/94	800359	50000.00			.04 U
399-1-10A	10/05/94	800360		49000.00		
399-1-11	10/05/94	800361	50000.00			.04 UQ
399-1-11	10/05/94	800362		50000.00		
399-1-12	10/05/94	800364		48000.00		
399-1-12	10/06/94	800363	49000.00			.04 UQ
399-1-14A	10/05/94	800365	47000.00			.04 UQ
399-1-14A	10/05/94	800366		47000.00		
399-1-16A	10/07/94	800367	45000.00			1.50 Q
399-1-16A	10/07/94	800368		44000.00		
399-1-16B	10/10/94	800369	17000.00			.06 LQ
399-1-16B	10/10/94	800370		17000.00		
399-1-17A	10/07/94	800371	28000.00			9.30 Q
399-1-17A	10/07/94	800373		29000.00		
399-1-17A	12/15/94	800371			120000.00 UQ	7.20
399-1-17B	10/07/94	800376	19000.00			.04 UQ
399-1-17B	10/07/94	800377		19000.00		
399-1-18A	10/05/94	800378	45000.00			.04 UQ
399-1-18A	10/05/94	800379		45000.00		
399-2-1	10/05/94	800380	37000.00			.87 Q
399-2-1	10/05/94	800381	37000.00			.93 Q
399-2-1	10/05/94	800382		38000.00		
399-2-1	10/05/94	800383		36000.00		
399-3-10	10/10/94	800384	40000.00			1.60 Q
399-3-10	10/10/94	800385		39000.00		

Table 16-4. Constituents with at Least One Detected Value for the
300 Area Process Trenches Data for Reporting Period
October 1 through December 31, 1994.
(sheet 3 of 8)

Well Name	Collection Date	Sample Number	CHROMIUM 34/ppb 11/1001	PCHROMI 34/ppb 11/1001	COPPER 34/ppb 2.6/1000s	FCOPPER 34/ppb 2.6/1000s
399-1-10A	10/05/94	800359	89.00 B		5.80 L	
399-1-10A	10/05/94	800360		19.00 LB		4.30 L
399-1-11	10/05/94	800361	41.00 B		4.10 U	
399-1-11	10/05/94	800362		21.00 B		4.10 U
399-1-12	10/05/94	800364		4.80 L		4.10 U
399-1-12	10/06/94	800363	17.00 L		4.10 U	
399-1-14A	10/05/94	800365	28.00 B		4.10 U	
399-1-14A	10/05/94	800366		19.00 LB		5.30 L
399-1-16A	10/07/94	800367	41.00		4.10 U	
399-1-16A	10/07/94	800368		7.60 L		4.10 U
399-1-16B	10/10/94	800369	33.00		4.10 U	
399-1-16B	10/10/94	800370		4.50 U		4.10 U
399-1-17A	10/07/94	800371	96.00		4.10 U	
399-1-17A	10/07/94	800375		4.50 U		4.10 U
399-1-17B	10/07/94	800376	26.00		4.10 U	
399-1-17B	10/07/94	800377		4.50 U		4.10 U
399-1-18A	10/05/94	800378	65.00 B		5.30 L	
399-1-18A	10/05/94	800379		19.00 LB		4.10 U
399-2-1	10/05/94	800380	16.00 LB		5.80 L	
399-2-1	10/05/94	800381	25.00 B		6.20 L	
399-2-1	10/05/94	800382		16.00 LB		7.20 L
399-2-1	10/05/94	800383		19.00 LB		6.20 L
399-3-10	10/10/94	800384	17.00 L		5.90 L	
399-3-10	10/10/94	800385		4.50 U		5.40 L

Well Name	Collection Date	Sample Number	ETHBENZ 25/ppb .043/700	FLUORID 124/ppb 51/14001	ALPHA 135/pCi/L ./15	BETA 136/pCi/L ./.
399-1-10A	10/05/94	800359	.05 U		62.80	17.20 G
399-1-11	10/05/94	800361	.05 U		12.50	6.51 G
399-1-12	10/06/94	800363	.05 U		17.00	6.64
399-1-14A	10/05/94	800365	.05 U		3.50	8.71
399-1-16A	10/07/94	800367	.05 U		84.00	20.00
399-1-16B	10/10/94	800369	.06 L		7.37	8.32
399-1-17A	10/07/94	800371	.05 U		7.86	2.39
399-1-17A	12/15/94	800FD1	.05 U	400.00		
399-1-17B	10/07/94	800376	.05 U		2.24	8.10
399-1-18A	10/05/94	800378	.05 U		3.86	7.77 G
399-2-1	10/05/94	800380	.05 U		75.40	27.90 G
399-2-1	10/05/94	800381	.05 U		77.00	23.30
399-3-10	10/10/94	800384	.05 U		28.90	7.42

Table 16-4. Constituents with at Least One Detected Value for the 300 Area Process Trenches
Data for Reporting Period October 1 through December 31, 1994.
(sheet 4 of 8)

Well Name	Collection Date	Sample Number	IRON 34/ppb 18/300s	FIROM 34/ppb 18/300s	LEAD 40/ppb .86/50i	FLEAD 40/ppb .86/50i
399-1-10A	10/05/94	800359	330.00 B		6.60	
399-1-10A	10/05/94	800360		33.00 B		3.10 L
399-1-11	10/05/94	800361	200.00 B		1.70 L	
399-1-11	10/05/94	800362		30.00 B		1.50 U
399-1-12	10/05/94	800364		40.00 B		2.90 LQ
399-1-12	10/06/94	800363	91.00 Q		1.70 LQ	
399-1-14A	10/05/94	800365	160.00 B		8.50	
399-1-14A	10/05/94	800366		33.00 B		4.30 L
399-1-16A	10/07/94	800367	240.00 Q		1.50 UQ	
399-1-16A	10/07/94	800368		73.00 Q		1.50 UQ
399-1-16B	10/10/94	800369	240.00 Q		2.10 LQ	
399-1-16B	10/10/94	800370		100.00 Q		5.20 Q
399-1-17A	10/07/94	800371	450.00 Q		1.50 UQ	
399-1-17A	10/07/94	800375		46.00 Q		1.50 UQ
399-1-17B	10/07/94	800376	570.00 Q		2.40 LQ	
399-1-17B	10/07/94	800377		340.00 Q		1.80 LQ
399-1-18A	10/05/94	800378	380.00 B		3.50 L	
399-1-18A	10/05/94	800379		26.00 B		1.70 L
399-2-1	10/05/94	800380	120.00 B		2.40 LQ	
399-2-1	10/05/94	800381	120.00 B		3.20 LQ	
399-2-1	10/05/94	800382		35.00 B		2.60 LQ
399-2-1	10/05/94	800383		38.00 B		1.50 UQ
399-3-10	10/10/94	800384	640.00 Q		2.70 LQ	
399-3-10	10/10/94	800385		140.00 Q		1.70 LQ

Well Name	Collection Date	Sample Number	MAGNES 34/ppb 25/.	FMAGNES 34/ppb 25/.	MANGESE 34/ppb 1/50s	FMANGAN 34/ppb 1/50s
399-1-10A	10/05/94	800359	11000.00		4.70 LB	
399-1-10A	10/05/94	800360		10000.00		1.70 LB
399-1-11	10/05/94	800361	11000.00		5.30 LB	
399-1-11	10/05/94	800362		11000.00		1.90 LB
399-1-12	10/05/94	800364		10000.00		1.70 L
399-1-12	10/06/94	800363	10000.00		2.10 L	
399-1-14A	10/05/94	800365	11000.00		2.60 LB	
399-1-14A	10/05/94	800366		11000.00		1.00 LB
399-1-16A	10/07/94	800367	8700.00		13.00	
399-1-16A	10/07/94	800368		8600.00		8.20 L
399-1-16B	10/10/94	800369	5700.00		76.00	
399-1-16B	10/10/94	800370		5700.00		73.00
399-1-17A	10/07/94	800371	6500.00		14.00	
399-1-17A	10/07/94	800375		6600.00		3.40 L
399-1-17B	10/07/94	800376	6700.00		83.00	
399-1-17B	10/07/94	800377		6800.00		82.00
399-1-18A	10/05/94	800378	13000.00		10.00 B	
399-1-18A	10/05/94	800379		13000.00		2.40 LB
399-2-1	10/05/94	800380	7400.00		2.60 LB	
399-2-1	10/05/94	800381	7500.00		3.30 LB	
399-2-1	10/05/94	800382		7600.00		1.20 LB
399-2-1	10/05/94	800383		7300.00		1.30 LB
399-3-10	10/10/94	800384	9300.00		28.00	
399-3-10	10/10/94	800385		9200.00		23.00

Table 16-4. Constituents with at Least One Detected Value for the 300 Area Process Trenches
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(sheet 5 of 8)

Well Name	Collection Date	Sample Number	MERCURY 41/ppb .095/2	THIMERCUR 41/ppb .095/2	NICKEL 34/ppb 16/.	FNICKEL 34/ppb 16/.
399-1-10A	10/05/94	B00359	.05 U		29.00 L	
399-1-10A	10/05/94	B00360		.05 U		20.00 L
399-1-11	10/05/94	B00361	.05 U		13.00 U	
399-1-11	10/05/94	B00362		.05 U		13.00 U
399-1-12	10/05/94	B00364		.05 BLQ		34.00
399-1-12	10/06/94	B00363	.08 BLQ		36.00	
399-1-14A	10/05/94	B00365	.05 U		13.00 L	
399-1-14A	10/05/94	B00366		.05 U		13.00 U
399-1-16A	10/07/94	B00367	.06 BLQ		180.00	
399-1-16A	10/07/94	B00368		.05 UQ		150.00
399-1-16B	10/10/94	B00369	.09 BLQ		13.00 U	
399-1-16B	10/10/94	B00370		.06 BLQ		13.00 U
399-1-17A	10/07/94	B00371	.05 UQ		36.00	
399-1-17A	10/07/94	B00375		.08 BLQ		13.00 U
399-1-17B	10/07/94	B00376	.13 BLQ		13.00 U	
399-1-17B	10/07/94	B00377		.07 BLQ		13.00 U
399-1-18A	10/05/94	B00378	.05 U		35.00	
399-1-18A	10/05/94	B00379		.05 U		15.00 L
399-2-1	10/05/94	B00380	.05 U		13.00 U	
399-2-1	10/05/94	B00381	.05 U		13.00 U	
399-2-1	10/05/94	B00382		.05 U		13.00 U
399-2-1	10/05/94	B00383		.05 U		13.00 U
399-3-10	10/10/94	B00384	.05 BLQ		13.00 U	
399-3-10	10/10/94	B00385		.05 UQ		13.00 U

Well Name	Collection Date	Sample Number	NITRATE 124/ppb 96/45000	POTASUM 34/ppb 890/.	FPOTASS 34/ppb 890/.	SELENUM 48/ppb 1.4/10i
399-1-10A	10/05/94	B00359		3100.00		1.40 L
399-1-10A	10/05/94	B00360			3200.00	
399-1-11	10/05/94	B00361		3400.00		.65 U
399-1-11	10/05/94	B00362			3400.00	
399-1-12	10/05/94	B00364			3300.00	
399-1-12	10/06/94	B00363		3500.00		1.30 L
399-1-14A	10/05/94	B00365		4900.00		.65 U
399-1-14A	10/05/94	B00366			4900.00	
399-1-16A	10/07/94	B00367		3400.00		2.30 L
399-1-16A	10/07/94	B00368			3500.00	
399-1-16B	10/10/94	B00369		4900.00		.65 U
399-1-16B	10/10/94	B00370			5100.00	
399-1-17A	10/07/94	B00371		1600.00		.65 U
399-1-17A	10/07/94	B00375			1800.00	
399-1-17A	12/15/94	B00FD1	4500.00 Q			
399-1-17B	10/07/94	B00376		6100.00		.65 U
399-1-17B	10/07/94	B00377			5900.00	
399-1-18A	10/05/94	B00378		6500.00		.65 U
399-1-18A	10/05/94	B00379			6000.00	
399-2-1	10/05/94	B00380		3600.00		.65 U
399-2-1	10/05/94	B00381		3800.00		.65 U
399-2-1	10/05/94	B00382			3900.00	
399-2-1	10/05/94	B00383			3600.00	
399-3-10	10/10/94	B00384		4300.00		.65 U
399-3-10	10/10/94	B00385			4400.00	

Table 16-4. Constituents with at Least One Detected Value for the 300 Area
Process Trenches Data for Reporting Period
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(sheet 6 of 8)

Well Name	Collection Date	Sample Number	FSELENI 48/ppb 1.4/10i	SODIUM 34/ppb 150/.	FSCDIUM 34/ppb 150/.	SR-90 141/pCi/L ./8
399-1-10A	10/05/94	800359		21000.00		
399-1-10A	10/05/94	800360	.82 L		21000.00	
399-1-11	10/05/94	800361		22000.00		
399-1-11	10/05/94	800362	.65 U		22000.00	
399-1-12	10/05/94	800364	.72 L		21000.00	
399-1-12	10/06/94	800363		21000.00		
399-1-14A	10/05/94	800365		22000.00		
399-1-14A	10/05/94	800366	.65 U		22000.00	
399-1-16A	10/07/94	800367		20000.00		
399-1-16A	10/07/94	800368	1.50 L		20000.00	
399-1-16B	10/10/94	800369		46000.00		
399-1-16B	10/10/94	800370	.65 U		45000.00	
399-1-17A	10/07/94	800371		19000.00		
399-1-17A	10/07/94	800375	.73 L		19000.00	
399-1-17A	12/15/94	800F01				.88
399-1-17B	10/07/94	800376		49000.00		
399-1-17B	10/07/94	800377	.65 U		50000.00.	
399-1-18A	10/05/94	800378		22000.00		
399-1-18A	10/05/94	800379	.65 U		22000.00	
399-2-1	10/05/94	800380		21000.00		
399-2-1	10/05/94	800381		21000.00		
399-2-1	10/05/94	800382	.65 U		21000.00	
399-2-1	10/05/94	800383	.65 U		21000.00	
399-3-10	10/10/94	800384		18000.00		
399-3-10	10/10/94	800385	.65 U		18000.00	

Well Name	Collection Date	Sample Number	SULFATE 124/ppb 89/250000s	PERCENE 25/ppb .08/5	TOLUENE 25/ppb .077/1000	TRICENE 25/ppb .043/5
399-1-10A	10/05/94	800359		.82	.02 U	.11 U
399-1-11	10/05/94	800361		.58	.05 BLQ	.11 U
399-1-12	10/06/94	800363		.70	.02 UQ	.25 L
399-1-14A	10/05/94	800365		.22 U	.03 BLQ	.11 U
399-1-16A	10/07/94	800367		.64	.03 BLQ	1.10
399-1-16B	10/10/94	800369		.41 L	.03 BLQ	5.40
399-1-17A	10/07/94	800371		.63	.03 BLQ	.50 L
399-1-17A	12/15/94	800F01	18000.00 B	.22 U	.02 U	.24 L
399-1-17B	10/07/94	800376		.22 U	.06 BLQ	.11 U
399-1-18A	10/05/94	800378		.22 U	.02 UQ	.11 U
399-2-1	10/05/94	800380		.65	.02 UQ	.71 L
399-2-1	10/05/94	800381		.53	.03 BLQ	.65 L
399-3-10	10/10/94	800384		.47 L	.02 UQ	.65 L

Table 16-4. Constituents with at Least One Detected Value for the
300 Area Process Trenches Data for Reporting Period
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(sheet 7 of 8)

Well Name	Collection Date	Sample Number	TRITIUM 142/pCi/L ./20000	URANIUM 145/ppb ./.	U-234 148/pCi/L ./.	U-235 148/pCi/L ./.
399-1-10A	10/05/94	800359	10800.00	25.80		
399-1-11	10/05/94	800361	9530.00	14.40		
399-1-12	10/05/94	800363	8980.00	19.90		
399-1-12	10/06/94	800363	8980.00	19.90		
399-1-14A	10/05/94	800365	7410.00	3.68		
399-1-16A	10/07/94	800367	8450.00	10.90		
399-1-16B	10/10/94	800369	625.00	5.52		
399-1-17A	10/07/94	800371	226.00	9.17		
399-1-17A	12/15/94	800FD1		44.60	24.80	.55
399-1-17B	10/07/94	800376	141.00 U	.20		
399-1-18A	10/05/94	800378	11500.00	3.97		
399-2-1	10/05/94	800380	4510.00	31.30		
399-2-1	10/05/94	800381	4480.00	32.40		
399-3-10	10/10/94	800384	3790.00	17.60		

Well Name	Collection Date	Sample Number	U-238 148/pCi/L ./.	VANADIN 34/ppb 6.4/.	EVANADI 34/ppb 6.4/.	XYLENE 25/ppb ./2/10000
399-1-10A	10/05/94	800359		6.60 U		.04 U
399-1-10A	10/05/94	800360			6.60 U	
399-1-11	10/05/94	800361		8.20 L		.08 BL
399-1-11	10/05/94	800362			8.80 L	
399-1-12	10/05/94	800364			6.60 U	
399-1-12	10/06/94	800363		6.60 U		.04 U
399-1-14A	10/05/94	800365		11.00 L		.05 BL
399-1-14A	10/05/94	800366			8.40 L	
399-1-16A	10/07/94	800367		6.60 U		.04 U
399-1-16A	10/07/94	800368			6.60 U	
399-1-16B	10/10/94	800369		6.60 U		.06 BL
399-1-16B	10/10/94	800370			6.60 U	
399-1-17A	10/07/94	800371		6.60 U		.04 U
399-1-17A	10/07/94	800375			6.60 U	
399-1-17A	12/15/94	800FD1	17.10			.04 U
399-1-17B	10/07/94	800376		6.60 U		.04 U
399-1-17B	10/07/94	800377			6.60 U	
399-1-18A	10/05/94	800378		14.00 L		.04 U
399-1-18A	10/05/94	800379			12.00 L	
399-2-1	10/05/94	800380		6.60 U		.04 U
399-2-1	10/05/94	800381		6.60 U		.04 U
399-2-1	10/05/94	800382			6.60 U	
399-2-1	10/05/94	800383			6.60 U	
399-3-10	10/10/94	800384		6.60 U		.04 U
399-3-10	10/10/94	800385			6.60 U	

Table 16-4. Constituents with at Least One Detected Value for the
300 Area Process Trenches Data for Reporting Period
October 1 through December 31, 1994.
(sheet 8 of 8)

Well Name	Collection Date	Sample Number	ZINC 34/ppb 4.4/5000s	FZINC 34/ppb 4.4/5000s	CIS120E 25/ppb .045/70
399-1-10A	10/05/94	800359	7.80 L		.11 U
399-1-10A	10/05/94	800360		6.30 U	
399-1-11	10/05/94	800361	6.30 U		.11 U
399-1-11	10/05/94	800362		6.30 U	
399-1-12	10/05/94	800364		17.00 BQ	
399-1-12	10/06/94	800363	20.00 BQ		.11 U
399-1-14A	10/05/94	800365	14.00		.11 U
399-1-14A	10/05/94	800366		6.30 U	
399-1-16A	10/07/94	800367	20.00 BQ		.11 U
399-1-16A	10/07/94	800368		21.00 BQ	
399-1-16B	10/10/94	800369	29.00 BQ		93.00 D
399-1-16B	10/10/94	800370		19.00 BQ	
399-1-17A	10/07/94	800371	24.00 BQ		.11 U
399-1-17A	10/07/94	800375		16.00 BQ	
399-1-17A	12/15/94	800801			.11 U
399-1-17B	10/07/94	800376	27.00 BQ		1.40
399-1-17B	10/07/94	800377		11.00 BQ	
399-1-18A	10/05/94	800378	6.90 L		.11 U
399-1-18A	10/05/94	800379		6.30 U	
399-2-1	10/05/94	800380	7.90 L		.11 U
399-2-1	10/05/94	800381	7.40 L		.11 U
399-2-1	10/05/94	800382		12.00	
399-2-1	10/05/94	800383		15.00	
399-3-10	10/10/94	800384	31.00 BQ		.11 U
399-3-10	10/10/94	800385		23.00 BQ	

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
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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 110/.	TOX ppb 3/.
399-1-10A	10/05/94	B00359	408	440	7.51	7.50	400 L	6.0
399-1-11	10/05/94	B00361	402	440	7.63	7.70	300 L	5.0 U
399-1-12	10/05/94	B00363	358	430	7.52	7.90 H	400 L	5.0 U
	10/06/94	B00363	358	430	7.52	7.90 H	400 L	5.0 U
399-1-14A	10/05/94	B00365	467	440	7.03	7.90	200 L	5.0 U
399-1-16A	10/07/94	B00367	349	390	7.68	7.80	300 L	5.2
399-1-16B	10/10/94	B00369	331	330	8.07	8.40	300 L	107.0
399-1-17A	10/07/94	B00371	323	310	6.87 F	7.30	500 L	26.4
		B00372	323		6.87 F		500 L	31.1
		B00373	321		6.86 F		500 L	32.8
		B00374	320		6.85 F		500 L	30.0
	12/15/94	B00FD1	649	630	7.50	7.60	600 LB	27.6
		B00FD2	641		7.44		800 LB	25.7
		B00FD3	638		7.34		700 LB	29.0
		B00FD4	640		7.34		600 LB	27.3
399-1-17B	10/07/94	B00376	314	370	7.80	8.10	300 L	8.7
399-1-18A	10/05/94	B00378	427	450	7.76	8.00	200 L	5.0 U
399-2-1	10/05/94	B00380	307	360	7.49	7.10	600 LQ	9.7
		B00381		360		7.10	400 LQ	10.8
399-3-10	10/10/94	B00384	330	370	7.39	8.00	400 L	11.6

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 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 1993b). The groundwater monitoring network consists of three upgradient 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 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 older 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 last sampled in August/September 1994 and was not sampled during this quarter. The next scheduled sampling for the NRDWL network is in February 1995. There is no new data to report at this time.

Figure 17-1. Well Location Map for the Nonradioactive Dangerous Waste Landfill and Solid Waste Landfill.

H9402908.24

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, 4th Qtr 1994
26-34A	Upgradient	Hanford: Water Table	Semiannually	n.a.
26-35A	Upgradient	Hanford: Water Table	Semiannually	n.a.
26-35C	Upgradient	Top of Ringold	Semiannually	n.a.
25-33A	Downgradient	Top of Ringold	Semiannually	n.a.
25-34A	Downgradient	Hanford: Water Table	Semiannually	n.a.
25-34B	Downgradient	Hanford: Water Table	Semiannually	n.a.
25-34D	Downgradient	Hanford: Water Table	Semiannually	n.a.
26-33	Downgradient	Hanford: Water Table	Semiannually	n.a.
26-34B	Downgradient	Hanford: Water Table	Semiannually	n.a.

n.a. not applicable

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.

Table 17-2. RCRA Water Level Measurement Report
NRDWL, Fourth Quarter 1994.
(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	10/27/94	129.70	400.61	122.11
	11/28/94	129.85	400.46	122.06
	12/15/94	129.89	400.42	122.05
699-25-34B	10/27/94	129.70	399.70+	121.83
	12/15/94	129.89	399.51+	121.77
699-25-34D	10/27/94	136.84	401.07	122.25
	11/28/94	136.83	401.08	122.25
	12/16/94	136.86	401.05	122.24
699-26-33	10/27/94	135.57	400.09	121.95
	11/28/94	134.78	400.88	122.19
	12/15/94	134.90	400.76	122.15
699-26-34A	10/27/94	127.44	400.96	122.21
	11/01/94	132.76	395.64*+	120.59
	11/28/94	127.55	400.85	122.18
	12/15/94	127.71	400.69	122.13
699-26-34B	10/27/94	129.17	401.10	122.26
	11/28/94	129.19	401.08	122.25
	12/15/94	129.21	401.06	122.24
699-26-35A	10/27/94	131.93	400.73	122.14
	11/01/94	131.68	400.98*	122.22
	11/28/94	131.59	401.07	122.25
	12/15/94	132.03	400.63	122.11
NRDWL Wells Monitoring the Upper Ringold				
699-25-33A	10/27/94	127.99	400.98	122.22
	11/28/94	128.08	400.89	122.19
	12/15/94	127.80	401.17	122.28
699-26-35C	10/27/94	131.58	401.10	122.26
	11/28/94	131.61	401.07	122.25
	12/15/94	131.62	401.06	122.24

Table 17-2. RCRA Water Level Measurement Report
NRDWL, Fourth Quarter 1994.
(sheet 2 of 3)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft)	(m)
NRDWL Wells Monitoring the Upper Ringold				
Other Wells Associated with NRDWL				
699-20-20	10/27/94	106.04	399.54	121.78
	11/28/94	106.17	399.41	121.74
	12/15/94	106.12	399.46	121.76
699-20-39	10/27/94	138.61	401.37	122.34
	11/28/94	138.77	401.21	122.29
	12/15/94	138.65	401.33	122.33
699-22-35	11/02/94	132.97	401.00*	122.22
699-23-34A	10/27/94	131.82	401.04	122.24
	11/02/94	131.80	401.06*	122.24
	11/28/94	131.83	401.03	122.23
	12/15/94	131.84	401.02	122.23
699-23-34B	11/02/94	132.48	401.02*	122.23
699-24-33	11/02/94	123.40	400.87*	122.19
	11/28/94	123.22	401.05	122.24
	12/15/94	123.24	401.03	122.23
699-24-34A	10/27/94	132.84	401.04	122.24
	11/01/94	132.76	401.12*	122.26
	11/28/94	132.84	401.04	122.24
	12/15/94	132.86	401.02	122.23
699-24-34B	10/27/94	132.43	401.07	122.25
	11/01/94	132.39	401.11*	122.26
	11/28/94	132.43	401.07	122.25
	12/15/94	132.45	401.05	122.24
699-24-34C	10/27/94	131.54	401.05	122.24
	11/02/94	131.50	401.09*	122.25
	11/28/94	131.54	401.05	122.24
	12/15/94	131.57	401.02	122.23
699-24-35	10/27/94	137.74	401.07	122.25

Table 17-2. RCRA Water Level Measurement Report
NRDWL, Fourth Quarter 1994.
(sheet 3 of 3)

Well	Date	Depth to water (ft)	Water level elevation above msl (ft) (m)	
Other Wells Associated with NRDWL				
699-24-35	11/01/94	137.71	401.10*	122.26
	11/28/94	137.75	401.06	122.24
	12/15/94	137.75	401.06	122.24
699-25-34C	10/27/94	134.41	401.05	122.24
	11/02/94	134.38	401.08*	122.25
	11/28/94	134.42	401.04	122.24
	12/15/94	134.44	401.02	122.23
699-28-40	10/27/94	158.05	401.39	122.34
	11/28/94	158.12	401.32	122.32
	12/15/94	158.01	401.43	122.36
699-31-31	10/27/94	128.38	400.94	122.21
	11/28/94	128.37	400.95	122.21
	12/15/94	128.28	401.04	122.24
699-34-39A	10/27/94	135.57	401.50	122.38
	11/28/94	135.61	401.46	122.37
	12/15/94	135.55	401.52	122.38

- 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. Elevations marked with an '*' were measured at the time of sampling.
4. Elevations marked with a '+' are outside of the expected range, and are suspected of error.

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