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D&D-30565
Revision 0

Data Quality Assessment Reports for the 200-PW-1 and 200-PW-3 Operable Units:

216-Z-9 Trench Vertical Borehole C3426, 216-Z-9 Trench Slant Borehole C3427, Dispersed Carbon Tetrachloride Vadose-Zone Plume Investigation, and 216-A-8 Crib Borehole C4545

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200

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Richland, Washington

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216-Z-9 Trench, Vertical Borehole C3426

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EXECUTIVE SUMMARY

This report summarizes the data validation and data quality assessment activities performed in support of the sampling and analysis of soil and soil-vapor samples collected during fiscal years 2003 and 2004 from the vadose zone during drilling of a vertical borehole (Borehole C3426) at the 216-Z-9 Trench. The sampling and analysis plan for these samples is included in the work plan, DOE/RL-2001-01, *Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit RI/FS Work Plan: Includes the 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units.*[1] Detection limits, precision, accuracy, and completeness were analyzed to determine if any analytical results should be rejected as a result of quality assurance/quality control deficiencies. Some data were not collected as described in the sampling and analysis plan, and four soil results for total petroleum hydrocarbons were rejected because the analyses were not performed within the prescribed holding time. Most analytical data met all quality control requirements. Based on the data validation and data quality assessment, it is concluded that the data are of the right type, quality, and quantity to support the intended use. The analytical data are acceptable for decision-making purposes in the remedial investigation/feasibility study.

The content and organization of this report follow the general guidelines for data quality assessment established by EPA/600/R-96/084, *Guidance for Data Quality Assessment, Practical Methods for Data Analysis*, EPA QA/G-9, QA00 Update.[2]

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[1] DOE/RL-2001-01, 2004, *Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit RI/FS Work Plan: Includes the 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units*, Rev. 0, Reissue, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

[2] EPA/600/R-96/084, 2000, *Guidance for Data Quality Assessment, Practical Methods for Data Analysis*, EPA QA/G-9, QA00 Update, U.S. Environmental Protection Agency, Washington, D.C. After the work was initiated for this data quality assessment, the U.S. Environmental Protection Agency replaced this procedure with EPA/240/B-06/002, *Data Quality Assessment: A Reviewers Guide*, EPA QA/G-9R, and EPA/240/B-06/003, *Data Quality Assessment, Statistical Tools for Practitioners*, EPA QA/G-9S.

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TERMS

AEA	alpha energy analysis
bgs	below ground surface
CCU	Cold Creek unit
CLARC	cleanup levels and risk calculations (Ecology, 2005)
COPC	contaminant of potential concern
DL	detection limit
DNAPL	dense, non-aqueous phase liquid
DQA	data quality assessment
DQO	data quality objective
EF	exceedance factor
EPA	U.S. Environmental Protection Agency
FS	feasibility study
GEA	gamma energy analysis
HEIS	*Hanford Environmental Information System* database
IRIS	*Integrated Risk Information System* database
LPPAL	lowest potential preliminary action level
LCS	laboratory control sample
MDA	minimum detectable activity
MS	matrix spike
MSD	matrix-spike duplicate
O&G	oil-and-grease
OU	operable unit
PAL	preliminary action level
PCB	polychlorinated biphenyl
QA	quality assurance
QC	quality control
RCRA	*Resource Conservation and Recovery Act of 1976*
RECUPLEX	Recovery of Uranium and Plutonium by Extraction
RI	remedial investigation
RL	reporting limit
RPD	relative percent difference
SAP	sampling and analysis plan
SVE	soil-vapor extraction
SVOA	semivolatile organic analysis
SVOC	semivolatile organic compound
TPH	total petroleum hydrocarbon
TQL	target quantitation limit
Tri-Party Agreement	*Hanford Federal Facility Agreement and Consent Order* (Ecology et al., 1989)
VOA	volatile organic analysis
VOC	volatile organic compound
Work Plan	*Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit RI/FS Work Plan: Includes the 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units* (DOE/RL-2001-01)
WSCF	Waste Sampling and Characterization Facility

METRIC CONVERSION CHART

Into Metric Units			Out of Metric Units		
If You Know	*Multiply By*	*To Get*	*If You Know*	*Multiply By*	*To Get*
Length			**Length**		
inches	25.4	millimeters	millimeters	0.039	inches
inches	2.54	centimeters	centimeters	0.394	inches
feet	0.305	meters	meters	3.281	feet
yards	0.914	meters	meters	1.094	yards
miles	1.609	kilometers	kilometers	0.621	miles
Area			**Area**		
sq. inches	6.452	sq. centimeters	sq. centimeters	0.155	sq. inches
sq. feet	0.093	sq. meters	sq. meters	10.76	sq. feet
sq. yards	0.836	sq. meters	sq. meters	1.196	sq. yards
sq. miles	2.6	sq. kilometers	sq. kilometers	0.4	sq. miles
acres	0.405	hectares	hectares	2.47	acres
Mass (weight)			**Mass (weight)**		
ounces	28.35	grams	grams	0.035	ounces
pounds	0.454	kilograms	kilograms	2.205	pounds
ton	0.907	metric ton	metric ton	1.102	ton
Volume			**Volume**		
teaspoons	5	milliliters	milliliters	0.033	fluid ounces
tablespoons	15	milliliters	liters	2.1	pints
fluid ounces	30	milliliters	liters	1.057	quarts
cups	0.24	liters	liters	0.264	gallons
pints	0.47	liters	cubic meters	35.315	cubic feet
quarts	0.95	liters	cubic meters	1.308	cubic yards
gallons	3.8	liters			
cubic feet	0.028	cubic meters			
cubic yards	0.765	cubic meters			
Temperature			**Temperature**		
Fahrenheit	subtract 32, then multiply by 5/9	Celsius	Celsius	multiply by 9/5, then add 32	Fahrenheit
Radioactivity			**Radioactivity**		
picocuries	37	millibecquerel	millibecquerel	0.027	picocuries

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1.0 INTRODUCTION

The *Hanford Federal Facility Agreement and Consent Order* (Ecology et al., 1989) (Tri-Party Agreement) identifies approximately 700 soil waste sites (and associated structures) resulting from the discharge of liquids and solids from Hanford Site 200 Areas processing facilities. These waste sites include *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* past-practice sites; *Resource Conservation and Recovery Act of 1976* (RCRA) past-practice sites; and RCRA treatment, storage, and disposal units. For management purposes, these 700 sites were arranged into 23 separate groups (termed operable units or OUs), based on similarities in geologic conditions, function, and types of waste received. To improve the efficiency and cost effectiveness of characterizing the 200 Areas waste sites, representative waste sites were selected that best represent typical and worst case conditions for each waste group (DOE/RL-96-81, *Waste Site Grouping for 200 Areas Soil Investigations*). The purpose of these representative waste sites is to provide focus to the remedial investigation/feasibility studies (RI/FS), which will determine risks and clean-up options for the sites.

One such representative waste site is the 216-Z-9 Trench. The 216-Z-9 Trench is a waste site in the 200-PW-1 Plutonium/Organic-Rich Process Condensate/Process Waste Group OU, which is, in turn, part of the consolidated Plutonium/Organic-Rich Process Condensate/Process Waste Group OU (Plutonium/Organic-Rich OU). The 200-PW-1 OU was established to manage the remediation of the soils contaminated by wastes from plutonium recovery and finishing operations from the Plutonium Finishing Plant complex in the 200 West Area.

The 216-Z-9 Trench is a 6.1 m (20-ft) deep open trench protected with a 27.4 by 36.6 m (90- by 120-ft) concrete cover. The walls of the trench slope down to an 18.3 by 9 m (60- by 30-ft) floor. Between 1955 and 1962, the trench received 4.1 million liters of acidic solvent and aqueous wastes from the Recovery of Uranium and Plutonium by Extraction (RECUPLEX) process. Primary constituents of the RECUPLEX waste are tributyl phosphate, carbon tetrachloride, and nitric acid. The waste is estimated to have contained 106 kg (234 lb) of plutonium and 130,000 to 480,000 kg (286,596 to 1,058,201 lb) of carbon tetrachloride. About 58 kg (128 lb) of the plutonium was mined from the top 0.3 m (1 ft) of soil under the concrete cover in 1976-1977 to remediate the contamination and to reduce the potential for occurrence of an uncontrolled nuclear chain reaction. After mining, the amount of plutonium remaining was estimated at 48 kg (106 lb) (DOE/RL-2001-01, *Plutonium/Organic-Rich Process Condensate/ Process Waste Group Operable Unit RI/FS Work Plan: Includes the 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units*) (Work Plan). Soil-vapor extraction (SVE) was started at the 216-Z-9 Trench in 1993 as an interim remedial action, and as of 2005, 54 tons of carbon tetrachloride had been removed from the soil at the site (WMP-30426, *Performance Evaluation Report for Soil Vapor Extraction Operations at the 200-PW-1 Carbon Tetrachloride Site, Fiscal Year 2005*).

The 216-Z-9 Trench overlies the 200-ZP-1 Groundwater OU. One of the major contaminants to be remediated in the 200-ZP-1 OU is carbon tetrachloride, some of which may be present as a dense, non-aqueous phase liquid (DNAPL) in the groundwater. EPA/ROD/R10-95/114, *Declaration of the Interim Record of Decision for the 200-ZP-1 Operable Unit*, requires that a DNAPL investigation be conducted at the 216-Z-9 Trench. Part of that investigation was the

construction and sampling of a vertical borehole through the groundwater near the 216-Z-9 Trench. The vadose zone data collected during the drilling of this borehole also support the 216-Z-9 RI for the 200-PW-1 OU.

Characterization requirements for the 216-Z-9 Trench borehole in the 200-PW-1 OU are discussed in the Work Plan (DOE/RL-2001-01). As discussed in the Work Plan, sufficient data could be obtained from sampling and analysis of soil and soil vapor from this borehole, as well as one shallow slant borehole drilled underneath the 216-Z-9 Trench, to refine the contaminant distribution models to reach remedial action decisions for the 216-Z-9 Trench.

2.0 PURPOSE

As stated previously, the Work Plan for the Plutonium/Organic-Rich OU calls for soil and vapor samples to be taken from a slant borehole and a vertical borehole at the 216-Z-9 Trench. This data quality assessment (DQA) assesses the quality of the laboratory data obtained for soil and vapor samples taken from the vadose zone of the vertical borehole (Borehole C3426, also designated well 299-W15-46) drilled on the south side of the trench.

This DQA is conducted in accordance with the Work Plan. The quality of the data for the borehole is assessed against the data quality requirements specified in the Work Plan. The data also are assessed to ensure that they are suitable for their intended purpose, that is, to quantify the concentrations and distributions of contaminants of potential concern (COPC) so that informed decisions may be made about the appropriateness of proposed remediation strategies for the 216-Z-9 Trench.

The DQA process completes the data life cycle (i.e., planning, implementation, and assessment) that was initiated by the data quality objective (DQO) process.

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3.0 SCOPE

The DQA process involves the scientific evaluation of data to determine if the data are of the right type, quality, and quantity to support the intended use. This DQA was performed in accordance with the guidelines of the U.S. Environmental Protection Agency (EPA) (EPA/600/R-96/084, *Guidance for Data Quality Assessment, Practical Methods for Data Analysis*, EPA QA/G-9, QA00 Update).[3] The DQA methodology consists of the following steps.

1. Review the DQOs (Chapter 4.0).
2. Conduct a preliminary data review (Chapter 5.0).
3. Select the statistical test (Chapter 6.0).
4. Verify the assumptions of the test (Chapter 6.0).
5. Draw conclusions from the data (Chapter 7.0).

The five-step DQA procedure is not intended to be a definitive analysis of a project or problem, but instead provides an initial assessment of the reasonableness of the data that have been generated. This DQA focuses on the chemical and radionuclide data, specifically on determining if the data are of the right type, quality, and quantity to support the intended use.

[3] After the work was initiated for this data quality assessment, the U.S. Environmental Protection Agency replaced this procedure with EPA/240/B-06/002, *Data Quality Assessment: A Reviewers Guide*, EPA QA/G-9R, and EPA/240/B-06/003, *Data Quality Assessment, Statistical Tools for Practitioners*, EPA QA/G-9S.

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4.0 SUMMARY OF DATA QUALITY OBJECTIVES, ERROR TOLERANCES, AND SAMPLING DESIGN

The DQO process and conclusions for the Plutonium/Organic-Rich OU are summarized in the Work Plan (DOE/RL-2001-01). Although this DQA is based on the EPA guidelines, actual decision tests for this project are performed as specified in the Work Plan. This section summarizes the DQOs, discusses error tolerances and consequences, and summarizes the sample design.

4.1 SUMMARY OF DATA QUALITY OBJECTIVES

DQOs for the vadose zone sampling of the 216-Z-9 Trench vertical borehole are developed in CP-15371, *Remedial Investigation Data Quality Objectives Summary Report for the Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit Representative Waste Sites*, and CP-15373, *Data Quality Objectives Summary Report for Investigation of Dense, Nonaqueous-Phase Liquid Carbon Tetrachloride in the 200 West Area*. The results of the DQO process as it applies to the 200-PW-1 OU are summarized in Appendix E of the Work Plan. The DQO summary in this DQA report is limited to those portions of the Work Plan that pertain directly to the assessment of the data. These include statement of the problem, decision rules, and translation of objectives into statistical hypotheses. The problem statement and decision rules are discussed below. Statistical treatment is addressed in Chapter 6.0.

4.1.1 Statement of Problem

The primary problem to solve in the DQO process is to determine the environmental measurements necessary to refine the preliminary site conceptual model, support an evaluation of risk, and support evaluation of remedial alternatives. For the 216-Z-9 Trench, it was determined that borehole soil samples were needed to determine the type and distribution of chemical and radionuclide contaminants. This information will be used to verify or refine the contaminant distribution model for this site. The model, in turn, will guide the development and implementation of remedial strategies. The amount of data needed and the analytical detection limits, precision, and accuracy required were determined based on regulatory and risk-based thresholds and other applicable requirements.

4.1.2 Decision Rules

The principal output of the DQO process is a set of decision rules. Decision rules are developed in Steps 2 through 5 of the DQO process (EPA/600/R-96/055, *Guidance for the Data Quality*

Objectives Process, EPA QA/G-4).[4] This process identifies the COPCs and the action levels for each COPC; the remedial action alternatives; the decisions to be made in the project; the principal questions that must be answered to make those decisions; and the data and analytical requirements needed to answer the questions. Decision rules are generally "IF…THEN" statements that indicate what action will be taken when a prescribed condition is met. Decision rules incorporate the parameters of interest (e.g., COPCs), the scale of the decision (e.g., location), the action level (e.g., COPC concentration), and the consequences that could result. The decision rules developed in the two DQO processes for the 216-Z-9 Trench are given in Tables 4-1 and 4-2.

Table 4-1. Decision Rules for Remedial Investigation of the 216-Z-9 Trench.

DR #	Decision Rule
1	If the true maximum (as estimated by the maximum detected sample values) activity of transuranic radionuclides within the soil samples in each of the applicable strata[a] is greater than or equal to 100 nCi/g or greater than the Class C definition, evaluate special remedial alternatives in a feasibility study; otherwise, evaluate conventional remedial alternatives in a feasibility study.
2	If the true maximum (as estimated by the maximum detected sample values) activity of radionuclides within the soil samples in each of the applicable strata[a] results in a radiological dose greater than or equal to 15 to 500 mrem/yr above background, evaluate remedial alternatives in a feasibility study; otherwise, evaluate the site for closure with no remedial action.
3	If the true maximum (as estimated by the maximum detected sample values) concentration of chemical constituents within the soil samples in each of the applicable strata[a] is greater than or equal to the preliminary action levels in Table B-9,[b] evaluate remedial alternatives in a feasibility study; otherwise, evaluate the site for closure with no remedial action.

[a]The applicable strata include the highest contaminant concentration layer, the moderate-to-low contaminant concentration layer, and the low contaminant concentration layer.

[b]Table B-9 is located in DOE/RL-2001-01, Appendix B.

Source: DOE/RL-2001-01, *Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit RI/FS Work Plan: Includes the 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units.*

DR = decision rule.

Table 4-2. Decision Rules for Remedial Investigation of Dense, Nonaqueous-Phase Liquid Carbon Tetrachloride at the 216-Z-9 Trench. (2 Pages)

DR #	Decision Rule
1	If the detected carbon tetrachloride concentrations within the shallow vadose zone, the intermediate vadose zone, or the deep vadose zone are equal to or greater than the values determined by modeling, computations, and/or engineering judgment as representing the presence of DNAPL, and/or if the direct observation of DNAPL accumulations indicates the presence of DNAPL, then evaluate for current impacts to groundwater and/or evaluate for potential future impacts to groundwater; otherwise, do not evaluate for current or future impacts.

[4] After the work was initiated for this data quality assessment, the U.S. Environmental Protection Agency replaced this procedure with EPA/240/B-06/001, *Guidance on Systematic Planning Using the Data Quality Objectives Process*, EPA QA/G-4.

Table 4-2. Decision Rules for Remedial Investigation of Dense, Nonaqueous-Phase Liquid Carbon Tetrachloride at the 216-Z-9 Trench. (2 Pages)

DR #	Decision Rule
2	If the detected carbon tetrachloride concentrations within the shallow vadose zone, the intermediate vadose zone, or the deep vadose zone are equal to or greater than the values determined by modeling, computations, and/or engineering judgment as currently impacting groundwater, then evaluate expansion of the vapor extraction system to enhance the interim response action and/or evaluate remedial alternatives in a feasibility study; otherwise, take no action.
3	If the detected carbon tetrachloride concentrations within the shallow vadose zone, the intermediate vadose zone, or the deep vadose zone are equal to or greater than the values determined by modeling, computations, and/or engineering judgment as having potential to impact groundwater in the future, then evaluate expansion of the vapor extraction system to enhance the interim response action and/or evaluate remedial alternatives in a feasibility study; otherwise, take no action.
4*	If the detected carbon tetrachloride concentrations within the shallow aquifer, the intermediate aquifer, the deep aquifer, or the basal aquifer are equal to or greater than the values determined by modeling, computations, and/or engineering judgment as representing the presence of DNAPL, and/or if the direct observation of DNAPL accumulations indicates the presence of DNAPL, then evaluate expansion of the pump-and-treat system to enhance the interim response action and/or evaluate remedial alternatives in a feasibility study; otherwise, take no action.

*This decision rule applies only to the DNAPL investigation for the groundwater (200-ZP-1 Operable Unit); it is not applicable to the remediation of the vadose zone soil contamination (200-PW-1 Operable Unit).

Source: DOE/RL-2001-01, *Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit RI/FS Work Plan: Includes the 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units.*

DNAPL = dense, nonaqueous-phase liquid.

DR = decision rule.

The radionuclide and chemical COPCs to be addressed by the decision rules in Table 4-1 are given in Table 4-3; the COPCs for the decision rules in Table 4-2 are given in Table 4-4. In Table 4-4, carbon tetrachloride is the only COPC; all the other constituents are regarded as contaminants of interest. The contaminants of interest are potential indicators of the decomposition of carbon tetrachloride and its effect on biological activity in the soil. Contaminants of interest are assessed in this report as COPCs except as noted otherwise.

In addition to the constituents given in these tables, the DQO process also specified a number of physical properties of interest. These are not contaminants as such, but are of interest for modeling movement of the contaminants through the soil and for estimating whether, based on the concentration of carbon tetrachloride and the physical properties of the sample, the carbon tetrachloride is present in the sample as a DNAPL. The DQOs also specified a qualitative yes/no field test for the presence of DNAPL. The physical property data and observations from the DNAPL field test are not assessed in this DQA report.

Table 4-3. Contaminants of Potential Concern Applicable to the Remedial Investigation of the Soil Contamination at the 216-Z-9 Trench.

Radionuclides	Metals	Volatile Organic Compounds
Americium-241	Arsenic	1,1-dichloroethane (DCA)
Cobalt-60	Cadmium	1,2-dichloroethane (DCA)
Cesium-137	Chromium (III)	1,1,1-trichloroethane (TCA)
Neptunium-237	Chromium (VI)	Acetone
Technetium-99	Copper	Benzene
Plutonium-238	Lead	Carbon tetrachloride[a]
Plutonium-239/240	Mercury	Chlorobenzene
Strontium-90	Nickel	Chloroform
Thorium-232	Selenium	1,2-dichloroethylene (cis and trans)
Tritium (Hydrogen-3)	Silver	Ethylbenzene
Uranium-233/234		Methyl ethyl ketone (MEK)
Uranium-235		Methyl isobutyl ketone (MIBK)
Uranium-238		Methylene chloride
		n-butyl benzene
		Toluene
		Tetrachloroethylene (PCE)
		Trichloroethylene (TCE)
		Xylene
Other Inorganic Constituents		**Other Organic Constituents**
Ammonia		Hydraulic fluids (lard oil)
Chloride		Normal paraffin hydrocarbons
Fluoride		Polychlorinated biphenyl (PCB) compounds
Nitrate		Phenol
Nitrite		Tributyl phosphate (TBP)
Phosphate		Dibutyl phosphate (DBP)[b]
Sulfate		Monobutyl phosphate (MBP)[b]

[a]In addition to laboratory analysis of carbon tetrachloride, carbon tetrachloride also will be measured in the headspace of soil samples using a field measurement.

[b] No direct standard analytical technique available. This compound is a degradation product of TBP and is unlikely to be present in toxic or high concentrations. This compound will be detected as TBP (tentatively identified compound) (CP-15371, *Remedial Investigation Data Quality Objectives Summary Report for the Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit Representative Waste Sites*).

Table 4-4. Contaminants of Potential Concern and Contaminants of Interest Applicable to the Remedial Investigation of Dense, Nonaqueous-Phase Liquid Carbon Tetrachloride at the 216-Z-9 Trench.

Radionuclides[a]	**Metals**[a]	**Volatile Organic Compounds**[a]
Americium-241	Phosphorus	
Plutonium-238		Carbon tetrachloride
Plutonium-239/240	**Other Inorganic Constituents**[a]	Chloroform
		Chloromethane
	Fluoride	Methylene chloride
	Nitrate	
	Nitrite	
	Phosphate	
Vapor Sample Constituents[b]		**Other Organic Constituents**[a]
Carbon tetrachloride		Lard oil
Chloroform		Tributyl phosphate (TBP)
Methane		Dibutyl phosphate (DBP)[c]
		Monobutyl phosphate (MBP)[c]

[a]Analytes in these columns are applicable to soil samples only.
[b]Analytes in this column are applicable to vapor samples only.
[c]The presence of DBP and MBP will be evaluated using analytical results for TBP, phosphate, and phosphorus.

4.2 ERROR TOLERANCES

During the DQO process, potential site remediation requirements and goals for the remediation of the 216-Z-9 Trench were addressed and preliminary action levels were set. It was determined that the consequence of selecting an inadequate nonstatistical sampling design would not be severe, because additional sampling could be performed if the sampling design were later determined to be inadequate (CP-15373). The sampling design and the precision and accuracy limits for the analyses are presented in Appendix E of the Work Plan, Tables A-3 and A-5. Generally, ±30 percent is specified for both precision and accuracy in chemical analyses of soil samples, and ±35 percent is specified for radionuclides. No precision and accuracy limits were set for the soil-vapor-screening measurements. Tables A-3 and A-5 also specify target quantitation limits (TQL) for the analysis. The TQLs are within the range of normal laboratory practice and generally are well below the preliminary action levels. Higher detection limits are given for certain analytes in highly radioactive samples, where dilution must be used to accommodate radioisotopic interferences and/or laboratory radiation safety requirements.

4.3 SAMPLING DESIGN

4.3.1 Primary Site Characterization Samples

As stated earlier, Borehole C3426 was developed and sampled to satisfy requirements of the DNAPL investigation required by a record of decision (EPA/ROD/R10-95/114) and of both the 200-PW-1 OU and the 200-ZP-1 OU. Additional samples were incorporated into the plan to support the ongoing SVE activities. The sampling and analysis plan for Borehole C3426 is documented as Appendix E of the Work Plan. Hereinafter, this appendix will be referred to as "the SAP." The quality assurance (QA) and quality control (QC) requirements applicable to the 200-PW-1 OU, including the list of COPCs, sample-handling requirements, and analytical requirements, were incorporated into the SAP as an appendix. Because of the multi-programmatic nature of Borehole C3426, 200-PW-1 OU sampling locations were planned jointly with personnel working on the 200-ZP-1 OU and are presented in a single list in the SAP.

The SAP calls for soil and vapor samples to be taken from a vertical borehole drilled through the groundwater to the underlying basalt adjacent to the 216-Z-9 Trench. The borehole was located about 4.5 m (15 ft) south of the southern edge of the concrete slab overlying the trench. The SAP specifies four types of samples to be collected from the borehole to support the 200-PW-1 OU RI/FS. These sample types and the numbers and locations of each are shown in Table 4-5.

Table 4-5. Summary of Samples to be Collected from Borehole C3426 in Support of the 200-PW-1 Operable Unit Remedial Investigation/Field Study.

Sample Purpose	Phase	Sample Depths[a]
200-PW-1 Operable Unit COPCs	Soil	106, 119, 170, 222.5
DNAPL investigation	Soil	86, 106, 115, 119, 180, 220, 225[b]
DNAPL investigation	Vapor	86, 106, 115, 119, 180, 220
Soil-vapor extraction expedited response action	Vapor	25, 45, 69, 138, 155, 170

[a]Depths in feet below ground surface. For soil samples, the depth is for the upper end of the nominal 2.5-ft sampling interval for a split-spoon sampler. For the vapors (sampled after the split-spoon soil sample is removed), the depth defines the position of an inflatable packer, which bounds the top of the sample interval. The bottom of the interval is bounded by the bottom of the hole.

[b]During planning, it was assumed that the water table was at 225 ft bgs.

COPC = contaminant of potential concern.
DNAPL = dense, nonaqueous phase liquid.

The constituents to be analyzed in the 200-PW-1 OU samples are listed in Table 4-3. The constituents to be analyzed in the other samples are listed in Table 4-4.

4.3.2 Quality Control Samples

The SAP requires field-duplicate samples, split samples, equipment-rinsate blanks, and trip blanks to be collected with the primary borehole soil samples to assess sampling and analysis

performance. Field duplicates are soil samples that are analyzed to assess laboratory performance and homogeneity of the material being sampled. Field-duplicate samples for soils are taken from homogenized soil from the entire length of a split-spoon sampler in locations suspected of having enough contamination to make useful comparisons between the duplicate pair. Field-duplicate samples are analyzed at the same laboratory as their corresponding primary field samples.

Split samples are taken for soil samples to detect interlaboratory differences. Split samples are obtained by compositing a sample at a contaminated location, then dividing the composite into separate samples for analysis at two different laboratories.

Analysis of equipment-rinsate blanks helps to determine whether analytical results may be affected by contamination of the sampling equipment. For soil sampling, equipment-rinsate blanks are deionized water samples that have been used to rinse the sampling equipment. For vapor sampling, the sample container is filled with certified clean air. Equipment blanks are packaged and shipped to the laboratories using the same methods and materials as those used for the primary samples.

Trip blanks help determine whether volatile organic analysis (VOA) results may be affected by exposure to transient vapors during sampling, transportation, storage, or analysis. Trip blanks are deionized water samples that are dispensed into VOA sample bottles at the Fluor Hanford Sample Storage and Shipping Facility. They accompany the primary-sample bottles to the field, then to the laboratory.

The SAP specifies that one field duplicate, one split sample, and one equipment-rinsate blank be collected with the soil samples. In addition, trip blanks are to be taken with each batch of soil samples shipped to the laboratories. The duplicate and split are to be analyzed for all COPCs; the equipment blank is to be analyzed for gross alpha, gross beta, metals, anions, and volatile organic compounds (VOC); and the trip blank is to be analyzed for VOCs. For vapor sample QC, the SAP requires only a single field duplicate, analyzed for all vapor COPCs.

4.3.3 Implementation of the Sampling Design

Soil samples were collected in accordance with the SAP. The borehole was drilled through the groundwater to the underlying basalt; however, the samples discussed here were taken primarily from the vadose zone. The sample collection activities started in the fall of 2003 and proceeded intermittently until groundwater was reached about a year later.

The sampling activities were reported in WMP-26264, *Borehole Summary Report for Well 299-W15-46 (C3426) Drilled at the 216-Z-9 Trench*. Additional details of the sampling, including sample numbers, sampling depths and dates, laboratories and analyses assigned to each sample, and other information, have been summarized in tables, which are attached as Appendix A to this DQA report.

Four soil samples for 200-PW-1 OU characterization and seven soil samples for the DNAPL investigation were obtained. Because two of these samples (at 33.4 and 36.4 m [109.5 and 119.5 ft] bgs) served for both 200-PW-1 OU characterization and the DNAPL investigation, the

total number of primary soil samples was nine. In addition, eight vapor samples for the DNAPL investigation, and six vapor samples for the SVE expedited response, were obtained making 14 vapor samples collected. These numbers include samples at five depths not required by the SAP. Extra 200-PW-1 OU soil samples were taken at 14.5 and 19.4 m (47.5 and 63.5 ft) bgs because screening measurements indicated high amounts of contamination at these depths. Extra DNAPL vapor samples were taken at 20 and 25 m (66 and 81 ft) bgs, and an extra sample was taken at 17.4 m (58.5 ft) for the SVE expedited response. (It should be noted that each of the samples discussed here generally is collected into containers with several different sample numbers to distinguish among those analyzed at various laboratories. For purposes of counting primary site samples, all sample numbers at a given depth are considered as a single sample. Sample depths are identified by the upper end of the sampling interval. Sampling intervals for soil samples usually are 8 m (2.5 ft.)

All samples specified in the SAP and relevant to the 200-PW-1 OU were obtained, with one exception. The vapor sample specified at the 51.8 m (170-ft) depth for the SVE expedited response was not obtained. This omission may have occurred because of a discrepancy in the SAP. Although a vapor sample at 51.8 m (170 ft) is specified in Figure 3-2 and Table 3-2 of the SAP, it was not included in the SAP, Table 3-1.

The samples were collected at approximately the depths specified; however, some of the sampling depths differed from the planned depths by as much as 1.5 m (5 ft). The actual depths of sample collection are included in the sampling summary tables in Appendix A and in the analytical data tables in Appendix B of this document. (Additional soil samples were analyzed to support sample transport and waste management at the sampling site. Because the data from these tests are not required to support the RI/FS, they will not be discussed in this DQA report. Other samples were taken for physical property testing. The results of those tests also are outside the scope of this DQA.)

The QC samples were collected and prepared as follows. An equipment-rinsate water blank was collected with the 14.5 m (47.5-ft) samples. No trip blank water samples were collected in connection with any of the vadose zone samples. However, trip blanks were collected frequently with samples from the groundwater region, including the bottom-most (69.5 m [228 ft] bgs) sample reported in this DQA.

Although project documentation designates certain vapor samples as "duplicates," no soil samples were designated as duplicates, and only one pair of samples was designated as a split pair. This split pair (samples B17NL8 and B17NL9) was obtained at the 69.5 to 70 m (228 to 230 ft) bgs interval; the only COPCs analyzed in this pair were radionuclides, hexavalent chromium, and oil-and-grease (O&G). However, split and duplicate analyses also were performed on soil samples collected from depths of 14.5, 19.4, 27.4, 33.4, 35.7, 36.4, and 56.1 m (47.5, 63.5, 90, 109.5, 117, 119.5, and 184 ft) bgs. Analysis pairs obtained for a given analyte in samples collected at the same depth and analyzed at the same laboratory are treated in this DQA as field-duplicate analyses. Pairs taken at the same depth and analyzed for the same COPC at different laboratories are treated as field split samples. Analysis of duplicate vapor samples was performed at all 14 vapor sampling depths except at 7.6 m (25 ft) bgs. However, because all analysis of vapor samples was performed in the field, no split analyses were performed.

5.0 DATA REVIEW

The samples obtained in this project were analyzed at the Waste Sampling and Characterization Facility ([WSCF], operated by Fluor Hanford for the U.S. Department of Energy, Richland Operations Office, Richland, Washington; Hanford Site 222-S Laboratory (analytical services performed under contracts with the U.S. Department of Energy, Richland Operations Office Richland, Washington; Lionville Laboratory in Lionville, Pennsylvania; Eberline Services in Richmond, California; and Severn-Trent Laboratories in St. Louis, Missouri.

The Lionville and Severn-Trent laboratories performed chemical analyses, Eberline performed radionuclide analyses, and WSCF and the 222-S Laboratory performed both chemical and radionuclide analyses. In addition, the vapor sample analysis was performed in the field by Fluor Hanford personnel.

The samples were analyzed in accordance with the SAP. The analytical data obtained for the samples (COPCs and non-COPCs) are reported in Appendix B of this DQA report. Six tables, containing the data for radionuclides, metals, VOA, semivolatile organic analysis (SVOA), general inorganic analysis methods, and general organic analysis methods, respectively, are presented.

In this section of the report, the COPC data are evaluated for compliance with the QA requirements of the SAP. The non-COPC data generally are not discussed. Data evaluation is performed to determine if the laboratories have carried out all steps required by the SAP and the laboratory contracts governing the conduct of the analyses and reporting of the data. This evaluation also examines the laboratory data to determine if an analyte is present or absent in a sample and the degree of overall uncertainty associated with that determination.

In the following subsections, a general description of laboratory QA and QC processes is given; then the following topics are considered in turn:

- Formal data validation
- Supplementary data evaluation
- Field QC results.

5.1 LABORATORY QUALITY ASSURANCE AND QUALITY CONTROL REQUIREMENTS

The QA and QC requirements govern all aspects of analytical laboratory operation, including instrument procurement, maintenance, calibration, and operation.

Laboratory internal QC checks are performed as appropriate for the analytical method at a rate of one per batch, or one in 20, whichever is more frequent. Laboratory internal QC checks include the following:

- Laboratory contamination. Each analytical batch contains a laboratory (method) blank (material of similar composition as the samples with known/minimal contamination of

the analytes of interest) carried through the complete analytical process. The method blank is used to evaluate false-positive results in samples due to contamination during handling at the laboratory.

- Analytical accuracy. For most analyses, a known quantity of representative analytes of interest (matrix spike [MS]) is added to a separate aliquot of a sample from the analytical batch. The known amount added is compared to the actual measured amount to calculate the percent recovery. The recovery percentage of the added MS is used to evaluate analytical accuracy. For analyses not amenable to MS techniques (e.g., gamma energy analysis [GEA]) or where analytical recovery is corrected via internal standards (e.g., alpha energy analysis [AEA]), accuracy is evaluated from recovery of the tracers or carriers. The accuracy of the laboratory preparation and analysis is evaluated via QC reference samples (e.g., laboratory control spikes). In addition to the MS recovery, surrogate compounds are used to evaluate accuracy in the VOA, SVOA, and polychlorinated biphenyl (PCB) compound analyses. Surrogates are compounds with instrumental responses that are typical of the other analytes. The surrogates are added into the blanks, samples, and MSs, and the recovery is evaluated.

- Analytical precision. Separate aliquots removed from the same sample container (laboratory-duplicate samples) are analyzed for each analytical batch for radionuclides and metals. The duplicate sample results are compared to the original sample results, are evaluated as relative percent differences (RPD), and are used to assess analytical precision. Alternately, a matrix-spike duplicate (MSD) may be used for assessing precision of metals, VOCs, semivolatile organic compounds, and PCBs. For an MSD, a separate aliquot is removed from the same sample container and spiked in the same manner as an MS. The recoveries from the MS and MSD are used to calculate an RPD and thus to assess precision.

- QC reference samples or laboratory control samples (LCS). An LCS is prepared from an independent standard at a concentration other than that used for calibration, but within the calibration range. The LCS is taken through all preparation and analysis steps used in the method. The LCS or QC reference sample measures the accuracy of the analytical process. Depending on how it is introduced into the analysis, the LCS sometimes is referred to as a blank-spike sample.

In addition to these QC checks, sample preservation requirements and a maximum holding time are established for each analyte. Preservation requirements may include chemical addition (e.g., pH adjustment), using containers of the proper composition, and/or refrigeration or freezing. Holding times are measured from the time that the sample is taken to the time that the sample is analyzed or prepared for analysis, depending on the analyte. These requirements are established to ensure that the analyte has not appreciably decomposed and/or volatilized before it is measured.

Laboratories also are subject to periodic and random audits of laboratory performance, systems, and overall QA program. Fluor Hanford performs these assessments to ensure that the laboratories are performing to meet laboratory contract requirements.

5.2 FORMAL DATA VALIDATION

The SAP requires that 5 percent of all data types be validated to Level "C" as described in HNF-20433, *Data Validation Procedure for Chemical Analyses*, and HNF-20434, *Data Validation Procedure for Radiochemical Analyses*. Data validation is not required for physical property measurements or radiological screening analyses, which are not part of this DQA. Data validation also is not required for vapor sample analysis. As stated earlier, nine primary soil samples were collected for COPC analysis. Therefore, the 5 percent data validation requirement is met by validating a minimum of one soil sample result for each applicable analytical method.

The following sample delivery groups were validated:

- 222S20040101 (222-S Laboratory, VOA for soil samples B191Y4 and B191Y4-A)
- WSCF20040719 (WSCF, PCB, SVOA, total petroleum hydrocarbons [TPH], AEA, and GEA for soil sample B17N63)
- H2556 (Lionville, SVOA, VOA, TPH, inductively coupled plasma spectrometry, mercury, GEA, AEA, anions, ammonia, and O&G analyses for soil sample B17N52)
- 222S20030369 and 222S20030383 (222-S Laboratory, Sr-90 in soil samples B17N46 and B17TM6 (both sample delivery groups are included in a single laboratory report)
- H2459 (Eberline, Tc-99 and tritium in soil samples B17N46-A and B17TM6-A).

The number of data validations performed met the 5 percent requirement of the SAP.

According to the Level C validation requirements, the following items were reviewed, as appropriate, for each analytical method:

- Sample holding times
- Method blanks
- MS recovery
- Surrogate recovery
- Tracer and/or carrier recovery (applies only to radionuclides)
- MS/MSD results
- Sample duplicates
- Associated LCS results
- Data package completeness
- Achievement of TQLs as specified in Table A-3 of the SAP.

During data validation, data are flagged with a "J" to indicate that the associated concentration should be regarded as an estimate, but that it may be used for decision-making purposes. Data are flagged with an "R" to indicate that the QC failure is so severe that the data should be rejected for decision-making purposes. A flag of "U" indicates that the contaminant was analyzed for, but was not detected. Unflagged results are considered accurate within the standard errors associated with the methods.

For nonradionuclide analyses, the reported value for a nondetected analyte is the laboratory-established reporting limit. For radionuclides, the reported value for a nondetect normally is the actual value obtained from analysis (positive or negative, but less than the minimum detectable activity [MDA]), except for limited analyses in which no value can be calculated. In these cases, the MDA is reported. The validation extended to some analytes that are not 200-PW-1 OU COPCs for the 216-Z-9 Trench. Validation of non-COPCs will not be discussed here.

The data validators reported that, of the data given formal validation, the majority met the applicable QC criteria. The following sections summarize the instances noted during validation in which the QC criteria were not met.

5.2.1 Sample Holding Times

Holding time requirements are stated in Table A-6 of the SAP. The maximum holding times range from 48 hours to 6 months, depending on the stability of the analyte. The holding time for anion analysis by ion chromatography is listed in Table A-6 as "28 days/48 hours." This is a reference to the hold time requirements of EPA Method 300.0 (EPA/600/4-79/020, *Methods of Chemical Analysis of Water and Wastes*), which specifies a 48-hour hold time for nitrite, nitrate, and phosphate, and 28 days for other anions.

Qualification of the data for exceeding holding times takes a graded approach. Results obtained on properly preserved samples are flagged "J" unless the hold time is more than two times the maximum time allowed. In that case, nondetect results would be rejected.

Several results were qualified because the holding time limit was exceeded. The TPH analysis results (diesel and kerosene ranges) for sample B17N52 were rejected (flagged "UR") because the holding time was more than two times the limit. Holding time limits were not met for the chloride, fluoride, and sulfate analyses in sample B17N52. However, the samples were properly preserved and holding times were less than two times the limits, so these results were qualified as approximate ("J").

5.2.2 Method Blanks

Analysis of a blank sample is required to demonstrate that the equipment, materials, and chemicals used in the analysis have not contaminated the sample with an analyte of interest. In general, the blank result is required to show that method contamination is insignificant compared to the levels found in the samples. Contamination detected in the blank analysis calls into question the accuracy, precision, and detection limit of the analytical method; the laboratory and validation procedures are designed to identify questionable results.

The U-238 result for sample B17N63 was flagged as approximate ("J") because contamination was detected in the blank and the sample result was less than five times the blank value. Results for Pu-238, U-233/234, and U-235 in sample B17N63 also were flagged as approximate because no blank value was reported.

5.2.3 Accuracy

Accuracy of a laboratory method is assessed by evaluating the recoveries of LCSs, MSs, and/or surrogate spikes, depending on the method. Instances of data validation qualification related to accuracy requirements are summarized in Table 5-1.

Table 5-1. Validator Qualifications Related to Accuracy Requirements.

Sample	Constituent	Reason	Recovery	Control Limits	Flag
B17N63	All aroclors	Low MS/MSD	66.2%/52.7%	70% – 130%	J
B17N63	Plutonium-238	No LCS	--	65% – 135%	J
B17N63	Uranium-233/234	No LCS	--	65% – 135%	J
B17N63	Uranium-235	No LCS	--	65% –135%	J
B17N63	Neptunium-237	Low LCS	49%	65% –135%	J
B17N63	Uranium-233/234	No tracer	--	20% –105%	J
B17N63	Uranium-235	No tracer	--	20% –105%	J
B17N63	Uranium-238	No tracer	--	20% –105%	J
B17N63	Neptunium-237	No tracer	--	20% –105%	J
B17N52	TPH-diesel range	No MSD	--	70% –130%	UJ
B17N52	TPH-kerosene range	No MSD	--	70% –130%	UJ
B17N52	Phenol	Low MS	68%	70% –130%	UJ
B17N52	Antimony	Low MS	63%	70% –130%	UJ

Aroclor is an expired trademark.
J = Analysis should be regarded as approximate due to quality control criteria exceedance.
LCS = laboratory control sample.
MS = matrix spike.
MSD = matrix-spike duplicate.
TPH = total petroleum hydrocarbon.
U = Analyte was undetected, with the indicated reporting limit.

5.2.4 Precision

Duplicate analysis of laboratory samples and MSDs are performed to document analytical precision. Instances of data validation qualification related to precision requirements are summarized in Table 5-2.

Table 5-2. Validator Qualifications Related to Precision Requirements.

Sample	Constituent	Reason	RPD	Control Limits	Flag
B17N63	Plutonium-239/240	High RPD	37.5	±35%	J
B17N63	Plutonium-238	No duplicate	--	--	J
B17N63	Uranium-233/234	No duplicate	--	--	J
B17N63	Uranium-235	No duplicate	--	--	J

J = Analysis should be regarded as approximate due to quality control criteria exceedance.
RPD = relative percent difference.

5.2.5 Detection Limits

The validators compared the reported detection limits against the TQLs identified in Table A-3 of the SAP. Generally, they found that the detection limits satisfied the TQLs. This was not the case for the VOAs of samples B191Y4-A (35.1 to 35.8 m [115 to 117.5 ft] bgs) and B18XT1 (36.4 to 37.2 [119.5 to 122 ft] bgs), which were run at high calibration ranges. (However, low-range analyses were run for other samples taken from the same depths.) The other validated results for which the detection limits exceeded the TQLs are shown in Table 5-3.

The validation rules do not require results with high detection limits to be qualified. However, detection-limit shortcomings should be taken into consideration when making decisions based on the data. The investigation of the degree to which the analyses met the detection-limit goals of the project will be extended to all analytical results obtained for the project in Section 5.3 of this DQA report.

Table 5-3. Instances in Which the Detection Limit Exceeded the Target Quantitation Limit.

Sample	Constituent	TQL	RL or MDA
B17N63	All aroclors	16.5 µg/kg	50 µg/kg
B17N63	Cobalt-60	0.05 pCi/g	0.091 pCi/g
B17N52	TPH-Diesel	5000 µg/kg	20900 µg/kg
B17N52	TPH-kerosene	5000 µg/kg	20900 µg/kg
B17N52	Uranium-233/234	1 pCi/g	9.5 pCi/g
B17N52	Uranium-235	1 pCi/g	11 pCi/g
B17N52	Uranium-238	1 pCi/g	9.5 pCi/g
B17N52	Plutonium-238	1 pCi/g	2.6 pCi/g
B17N52	Cobalt-60	0.05 pCi/g	0.53 pCi/g
B17N52	Cesium-137	0.1 pCi/g	0.47 pCi/g
B17TM6-A	Technetium-99	16 pCi/g	15 pCi/g

NOTE: Results of volatile organic analyses performed with high calibration ranges are not included. See text.
Aroclor is an expired trademark.
MDA = minimum detectable activity.
RL = reporting limit.
TPH = total petroleum hydrocarbon.
TQL = target quantitation limit.

5.2.6 Completeness

The term "completeness" refers to the number of valid (non-rejected) results obtained as a percentage of the total number of results required by the SAP. Completeness was reported to be 100 percent in all except one of the data validation reports. In that one report (for sample delivery group H2556, covering SVOA and TPH for sample B17N52), two results were rejected. In total, data validation was performed on 307 results. Therefore, the overall completeness was 99.3 percent.

5.2.7 Summary of the Data Validation

The data validation activity resulted in the rejection of two analytical results. These were the TPH-diesel and TPH-kerosene range results for sample B17N52, a soil sample collected from a depth of 27.4 m (90 ft). The rejection was due to exceeding the holding time limit.

A number of minor shortcomings were found in the execution of some analytical determinations, resulting in those determinations being flagged as approximate. The majority of laboratory data were obtained without exceeding any QC criteria.

5.3 SUPPLEMENTARY DATA EVALUATION

The formal data validation described in the previous section included evaluation of 5 percent of all project data as required in the SAP; however, a DQA is required for all COPC data. Therefore, supplemental data evaluation was performed. To ensure adequate data quality, the data were evaluated for completeness and for adequacy of detection limits. In addition, the data were reviewed for inconsistencies. This section summarizes the results of these evaluations. The data used for these evaluations were extracted from the *Hanford Environmental Information System* (HEIS) database at various times, as detailed in Table 5-4.

Table 5-4. Pedigree for Data Set Used in Supplementary Evaluation.

Date	Action
03/16/06	Original data for site samples.
03/23/06	Added data for water blank samples B17MM8, B17MM9, and B17MN0.
06/09/06	Corrected HEIS entry problem in nitrate and nitrite data for sample B17TM6.
06/15/06	Added data for split-pair samples B19NJ7 and B1B9Y4 (89.8 m [294.5 ft]).

ft bgs = feet below ground surface.
HEIS = *Hanford Environmental Information System* database.

5.3.1 Completeness

As discussed in Section 4.3.1, the SAP called for samples to be taken at various depths for various purposes. To determine the degree to which the analysis plan was realized, the analytical results tabulated in Appendix B of this DQA report were compared against the sampling plan

shown in Table 4-5 and the COPCs to be analyzed in each sample as shown in Tables 4-3 and 4-4. The results of this review are summarized in Tables 5-5 through 5-8. Each entry in these tables indicates that an analysis requirement was not met. A blank cell indicates the analysis was performed as required by the SAP. The number entered indicates the depth of the nearest sample in which the particular COPC was determined. An entry of "none" indicates that the analyte was not analyzed for any depth between the adjacent planned depths. (For instance, in Table 5-4, Tc-99 was not analyzed at any depth between 36.4 and 69 m [119.5 and 226.5 ft], so "none" is entered for the 51.8 m [170-ft] planned depth.)

Table 5-5. Nearest Analyses for Omitted Contaminants of Potential Concern for 200-PW-1 Operable Unit Samples.[a] (2 Pages)

Scheduled Depth (ft bgs)	**106**	**119**	**170**	**222.5**
Actual Depth (ft bgs)	**109.5**	**119.5**	**174**	**226.5**
Americium-241				
Cobalt-60				
Cesium-137				
Neptunium-237				
Technetium-99		115	none	228
Plutonium-238				
Plutonium-239/240				
Strontium-90		115	none	228
Thorium-232		115	none	228
Tritium	115			
Uranium-233/234				
Uranium-235				
Uranium-238				
Arsenic				
Cadmium				
Chromium				
Hexavalent chromium	119.5			
Copper				
Lead				
Mercury				
Nickel				
Selenium				
Silver				
Ammonia				
Chloride				
Fluoride				
Nitrate				
Nitrite				

Table 5-5. Nearest Analyses for Omitted Contaminants of Potential Concern for 200-PW-1 Operable Unit Samples.[a] (2 Pages)

Scheduled Depth (ft bgs)	**106**	**119**	**170**	**222.5**
Actual Depth (ft bgs)	**109.5**	**119.5**	**174**	**226.5**
Phosphate				
Sulfate				
1,1-dichloroethane				
1,2-dichloroethane				
1,1,1-trichloroethane				
Acetone				
Benzene				
Carbon tetrachloride				
Chlorobenzene				
Chloroform				
cis-1,2-dichloroethylene				
trans-1,2-dichloroethylene				
Ethylbenzene				
Methyl ethyl ketone				
Methyl isobutyl ketone				
Methylene chloride				
n-butylbenzene	90			
Toluene				
Tetrachloroethylene				
Trichloroethylene				
Xylene				
Hydraulic fluids and NPH[b]	115			
Polychlorinated biphenyl compounds				
Phenol				
Tributyl phosphate				

[a]The number entered in the table indicates the depth of the nearest sample in which the particular COPC was determined. An entry of "none" indicates that the analyte was not analyzed at or near the planned depth. Vacancies in the table indicate that the COPC was analyzed in the sample as planned.

[b]Analyzed as total petroleum hydrocarbons and/or oil-and-grease.

COPC = contaminant of potential concern.

NPH = normal paraffin hydrocarbon.

ft bgs = feet below ground surface. All depths indicate the upper bound of the 2.5-ft split-spoon sampling interval.

Table 5-6. Nearest Analyses for Omitted Contaminants of Potential Concern for DNAPL Soil Samples.[a]

Scheduled Depth (ft bgs)	86	106[b]	115	119[b]	180	220	225
Actual Depth (ft bgs)	**90**	**109.5**	**115**	**119.5**	**184**	**224**	**228**
Americium-241							
Plutonium-238							
Plutonium-239/240							
Phosphorus							
Fluoride							
Nitrate							
Nitrite							
Phosphate							
Carbon tetrachloride							
Chloroform							
Chloromethane							
Methylene chloride							
Hydraulic fluids and NPH[c]		none					
Tributyl phosphate							

[a]The number entered in the table indicates the depth of the nearest sample in which the particular COPC was determined. An entry of "none" indicates that the analyte was not analyzed at or near the planned depth. Vacancies in the table indicate that the COPC was analyzed in the sample as planned.
[b]Samples at these depths also were analyzed for 200-PW-1 Operable Unit COPCs.
[c]Analyzed as total petroleum hydrocarbons and/or oil-and-grease.
COPC = contaminant of potential concern.
DNAPL = dense, nonaqueous phase liquid.
ft bgs = feet below ground surface. All depths indicate the upper bound of the 2.5-ft split-spoon sampling interval.
NPH = normal paraffin hydrocarbon.

Table 5-7. Nearest Analyses for Omitted Contaminants of Potential Concern for DNAPL Vapor Samples.*

Scheduled Depth (ft bgs)	86	106	115	119	180	220	225
Actual Depth (ft bgs)	**90**	**110**	**118**	**119.5**	**184**	**224**	**228**
Carbon tetrachloride							
Chloroform							
Methane					none	none	

*The number entered in the table indicates the depth of the nearest sample in which the particular COPC was determined. An entry of "none" indicates that the analyte was not analyzed at or near the planned depth. Vacancies in the table indicate that the COPC was analyzed in the sample as planned.
COPC = contaminant of potential concern.
DNAPL = dense, nonaqueous phase liquid.
ft bgs = feet below ground surface. All depths indicate the upper bound of the sampling interval.

Table 5-8. Nearest Analyses for Omitted Contaminants of Potential Concern for Soil-Vapor Extraction Samples.*

Scheduled Depth (ft bgs)	**25**	**45**	**69**	**138**	**155**	**170**
Actual Depth (ft bgs)	**29**	**49.5**	**64**	**141**	**159**	**none**
Carbon tetrachloride						none
Chloroform						none
Methane				none	none	none

*The number entered in the table indicates the depth of the nearest sample in which the particular COPC was determined. An entry of "none" indicates that the analyte was not analyzed at or near the planned depth. Vacancies in the table indicate that the COPC was analyzed in the sample as planned.

COPC = contaminant of potential concern.

ft bgs = feet below ground surface. All depths indicate the upper bound of the sampling interval.

A percent completion may be calculated for the analysis project by counting the entries in Tables 5-5 through 5-8 and comparing the count with the number of COPC determinations required. Table 5-9 summarizes these statistics. The overall completion rate was 94.2 percent. A completion rate of at least 90 percent is widely accepted as adequate in waste site characterization studies conducted in the United States. EPA/240/R-02/009, *EPA Guidance for Quality Assurance Project Plans*, EPA QA/G-5, Section 2.1.7, does not state a completeness criterion. Instead, it indicates that project QA plans should establish a completeness criterion. However, the SAP for this project does not state a completeness target. Therefore, a widely accepted value for completeness is used.

Table 5-9. Analysis Completion Summary. (2 Pages)

Purpose		**Number of COPCs[a]**	**Number of Required Depths[b]**	**Number of Determinations Required[c]**	**Number of Determinations Not Performed[d]**	**Percent Completion[e]**
1	200-PW-1 OU soil	58	4	232	13	97.4%
2	DNAPL soil	15	7	105	1	99.0%
3	Shared by soil samples	13[f]	2[g]	26	1	96.1%
4	DNAPL vapor	3	6	18	2	88.9%
5	SVE	3	6	18	5	72.2%
6	Shared by vapor samples	3[h]	0	0	0	0.0%
Totals[i]		63	21	347	20	94.2%

Table 5-9. Analysis Completion Summary. (2 Pages)

Purpose	Number of COPCs[a]	Number of Required Depths[b]	Number of Determinations Required[c]	Number of Determinations Not Performed[d]	Percent Completion[e]

[a]From Tables 4-3 and 4-4.
[b]From Table 4-5.
[c]Product of the previous two columns, except see note (i) for total.
[d]From Tables 5-5 through 5-8.
[e]100% minus quotient of the previous two columns.
[f]Two DNAPL soil COPCs (phosphorus and chloromethane) are different from those required for the 200-PW-1 OU, so 13 are shared.
[g]Soil samples at the 109.5- and 119.5-ft depths were used for both 200-PW-1 OU and DNAPL requirements.
[h]SVE samples are to be analyzed for the same constituents as DNAPL vapors.
[i]The "totals" are calculated as the sums of entries in rows 1, 2, 4, and 5 of this column, reduced by the entries in rows 3 and 6 of this column. This calculation avoids double-counting shared items. Overall percent completion is calculated according to Note (e).
COPC = contaminant of potential concern.
DNAPL = dense, nonaqueous phase liquid.
OU = operable unit.
SVE = soil-vapor extraction.

Impacts of missing data – 200-PW-1 OU samples. Tables 5-5 through 5-8 make it easy to see the locations not sampled or samples not analyzed. For the four 200-PW-1 OU samples, Tc-99, Sr-90, and Th-232 were omitted at three of the four required depths. Tritium, hexavalent chromium, n-butylbenzene, and hydraulic fluids were missed at the 33.4 m (109.5-ft) depth.

However, for many of these omissions, the consequences are mitigated by an analysis in a nearby sample. For instance, Tc-99, Sr-90, and Th-232 measurements were performed on samples within 1.8 m (6 ft) of the planned 36.3 and 68 m (119- and 222.5-ft) bgs depth. Because Tc-99 and Sr-90 were undetected at these depths, it is unlikely that they would have been detected at the intermediate (53 m [174-ft]) depth. Thorium was not detected at 35.1 m (115 ft), but was detected at 69 m (226.5 ft); however, the concentration found (0.52 pCi/g) is only about half of the average concentration naturally occurring in the earth's crust and only about one-tenth of the lowest potential preliminary action level (LPPAL). Thus, significant concentrations of Th-232 also are unlikely to be found at the 53 m (174-ft) depth.

Tritium, O&G, and TPH were not measured in a sample from the 32.3 m (106-ft) bgs depth as planned, but were measured in a 35.1 m (115-ft) sample. The 35.1 m (115-ft) depth sample probably captured the maximum concentration of tritium more accurately, because that depth is within the Cold Creek unit (CCU) (33.1 to 36 m [108.5 to 116.5 ft] bgs), in which the highest concentrations of most COPCs generally are found.

Analysis of n-butylbenzene was planned for the 32.3 m (106-ft) depth, but the closest depth at which n-butylbenzene actually was analyzed was 35.8 m (117.5 ft) bgs, which is slightly below the CCU. Nevertheless, it is highly unlikely that n-butylbenzene would be detected in the CCU, because all other measurements for n-butylbenzene were nondetects, and n-butylbenzene was not a major waste disposed of at the site.

Hexavalent chromium was not analyzed at the planned 32.3 m (106-ft) depth nor in the CCU, so the maximum concentration for hexavalent chromium possibly was missed. Although the total

chromium concentration was at least 30 times higher than the hexavalent chromium concentration at each depth where both were measured, it may be necessary to use the concentration of total chromium as an upper bound in the risk assessment for the hexavalent chromium in the CCU.

Impacts of missing data – DNAPL soil samples. The only analysis missed for the DNAPL soil samples was hydraulic fluids and normal paraffin hydrocarbon at the 33.4 m (109.5-ft) level. Neither an O&G nor a TPH analysis was conducted for this sample. However, an O&G or a TPH measurement was obtained at all the other planned depths, including the 35.1 m (115-ft) depth in the CCU, where the maximum concentration is expected, so the one missing data point for hydraulic fluids and normal paraffin hydrocarbon is not likely to have an impact.

Impacts of missing data – vapor samples. For the DNAPL vapor samples, methane measurements were omitted for the samples at 56.1 and 68.3 m (184 and 224 ft) bgs. For the SVE samples, methane measurements were not performed for the 43 and 48.5 m (141- and 159-ft) samples. However, as discussed in Section 4.1.2, methane is not truly a COPC, but rather serves only as a secondary indicator for carbon tetrachloride. Therefore, the lack of these data should not have a serious impact.

Besides the omitted methane measurements, the vapor sample planned for 51.8 m (170 ft) bgs was not taken. The impact of one missing sample should not be severe, because vapor samples were taken at 14 other depths.

5.3.2 Detection Limits

The detection limits (MDA or reporting limit) for nondetected COPCs were compared to the TQLs given in the "low concentration" column of Table A-3 of the SAP. Of the 939 determinations for which a TQL applied, the TQL was exceeded in 135 cases (14.4 percent of the cases). These counts do not include the high-range VOAs run on samples B17N68, B18XR8, B18XT1, and B191Y4-A, because VOAs also were run by the same laboratory at low range on samples from the same depths (samples B17N60, B18XW3, B17N63, and B191Y4, respectively).

The analyses with detection limits exceeding the TQLs are shown in Table 5-10. The detection limits for various radionuclides were elevated in samples taken at 14.5 and 19.2 m (47.5 and 63 ft) bgs, and in the 33.5 to 36.6 m (110- to 120-ft) bgs region, where Pu-239 levels were high. The highest exceedance factor was for Pu-238 at 19.4 m (63.5 ft) bgs, for which the detection limit was 19,200 pCi/g, compared to the 1 pCi/g TQL. The Pu-239 concentration at this depth was the highest found in the borehole, measuring 115,000 pCi/g. The PCB measurements also exceeded the TQLs frequently. Of the 63 PCB measurements recorded, 42 exceeded their TQLs. The other exceedances were relatively well distributed among a number of samples, methods, and COPCs.

Table 5-10. Nondetect Analytical Results Exceeding the Target Quantitation Limit. (4 Pages)

Constituent	Sample[a]	Depth[b]	DL or MDA	TQL	Units	EF
Ammonium ion	B17N46	47.5 - 50	28,600	643	µg/kg	44.0
Ammonium ion	B17TM6	63.5 - 66	28,500	643	µg/kg	44.0
Arsenic	B17TM6	63.5 - 66	10,300	10,000	µg/kg	1.0
Fluoride	B18XR8	109.5 - 112	24,900	5000	µg/kg	5.0
Mercury	B17N70	184 - 186.3	987	200	µg/kg	4.9
Mercury	B17NL8	228 - 230	1010	200	µg/kg	5.1
Mercury	B17NL9	228 - 230	1010	200	µg/kg	5.1
Nitrite	B17TM6	63.5 - 66	35,800	8214	µg/kg	4.4
Nitrite	B18XR8	109.5 - 112	736,000	8214	µg/kg	90.0
Phosphate	B17N46	47.5 - 50	12,100	5000	µg/kg	2.4
Phosphate	B17TM6	63.5 - 66	12,100	5000	µg/kg	2.4
Phosphate	B18XR8	109.5 - 112	249,000	5000	µg/kg	50.0
Phosphate	B17N60	117 - 119.5	8280	5000	µg/kg	1.7
Phosphate	B17N63	119.5 - 122	8430	5000	µg/kg	1.7
Phosphate	B17N67	174 - 176.5	8280	5000	µg/kg	1.7
Phosphate	B17N70	184 - 186.3	8280	5000	µg/kg	1.7
Phosphate	B17N73	224 - 226.2	8280	5000	µg/kg	1.7
Phosphate	B17NL5	226.5 - 228	8280	5000	µg/kg	1.7
Phosphate	B17NL8	228 - 230	8280	5000	µg/kg	1.7
Phosphate	B17NL9	228 - 230	8280	5000	µg/kg	1.7
Selenium	B17N46	47.5 - 50	10,500	10,000	µg/kg	1.1
Selenium	B17TM6	63.5 - 66	10,400	10,000	µg/kg	1.0
Sulfate	B18XR8	109.5 - 112	287,000	5000	µg/kg	57.0
Oil and grease	B17N69	174 - 176.5	689,000	200,000	µg/kg	3.4
Oil and grease	B17N72	184 - 186.3	685,000	200,000	µg/kg	3.4
Oil and grease	B17NL3	224 - 226.2	716,000	200,000	µg/kg	3.6
Oil and grease	B17NL7	226.5 - 228	720,000	200,000	µg/kg	3.6
Aroclor-1016	B17N46	47.5 - 50	40	16.5	µg/kg	2.4
Aroclor-1016	B17TM6	63.5 - 66	160	16.5	µg/kg	9.7
Aroclor-1016	B18XR8	109.5 - 112	39	16.5	µg/kg	2.4
Aroclor-1016	B191Y7	115 - 117.5	27	16.5	µg/kg	1.6
Aroclor-1016	B17N63	119.5 - 122	50	16.5	µg/kg	3.0
Aroclor-1016	B17N67	174 - 176.5	49	16.5	µg/kg	3.0
Aroclor-1016	B17NL5	226.5 - 228	56	16.5	µg/kg	3.4
Aroclor-1221	B17TM6	63.5 - 66	50	16.5	µg/kg	3.0
Aroclor-1221	B191Y7	115 - 117.5	27	16.5	µg/kg	1.6

Table 5-10. Nondetect Analytical Results Exceeding the Target Quantitation Limit. (4 Pages)

Constituent	Sample[a]	Depth[b]	DL or MDA	TQL	Units	EF
Aroclor-1221	B17N63	119.5 - 122	100	16.5	µg/kg	6.1
Aroclor-1221	B17N67	174 - 176.5	98	16.5	µg/kg	5.9
Aroclor-1221	B17NL5	226.5 - 228	110	16.5	µg/kg	6.7
Aroclor-1232	B17N46	47.5 - 50	220	16.5	µg/kg	13.0
Aroclor-1232	B17TM6	63.5 - 66	890	16.5	µg/kg	54.0
Aroclor-1232	B18XR8	109.5 - 112	220	16.5	µg/kg	13.0
Aroclor-1232	B191Y7	115 - 117.5	27	16.5	µg/kg	1.6
Aroclor-1232	B17N63	119.5 - 122	50	16.5	µg/kg	3.0
Aroclor-1232	B17N67	174 - 176.5	49	16.5	µg/kg	3.0
Aroclor-1232	B17NL5	226.5 - 228	56	16.5	µg/kg	3.4
Aroclor-1242	B17N46	47.5 - 50	41	16.5	µg/kg	2.5
Aroclor-1242	B17TM6	63.5 - 66	160	16.5	µg/kg	9.7
Aroclor-1242	B18XR8	109.5 - 112	40	16.5	µg/kg	2.4
Aroclor-1242	B191Y7	115 - 117.5	27	16.5	µg/kg	1.6
Aroclor-1242	B17N63	119.5 - 122	50	16.5	µg/kg	3.0
Aroclor-1242	B17N67	174 - 176.5	49	16.5	µg/kg	3.0
Aroclor-1242	B17NL5	226.5 - 228	56	16.5	µg/kg	3.4
Aroclor-1248	B191Y7	115 - 117.5	27	16.5	µg/kg	1.6
Aroclor-1248	B17N63	119.5 - 122	50	16.5	µg/kg	3.0
Aroclor-1248	B17N67	174 - 176.5	49	16.5	µg/kg	3.0
Aroclor-1248	B17NL5	226.5 - 228	56	16.5	µg/kg	3.4
Aroclor-1254	B17TM6	63.5 - 66	30	16.5	µg/kg	1.8
Aroclor-1254	B191Y7	115 - 117.5	27	16.5	µg/kg	1.6
Aroclor-1254	B17N63	119.5 - 122	50	16.5	µg/kg	3.0
Aroclor-1254	B17N67	174 - 176.5	49	16.5	µg/kg	3.0
Aroclor-1254	B17NL5	226.5 - 228	56	16.5	µg/kg	3.4
Aroclor-1260	B17N46	47.5 - 50	55	16.5	µg/kg	3.3
Aroclor-1260	B17TM6	63.5 - 66	220	16.5	µg/kg	13.0
Aroclor-1260	B18XR8	109.5 - 112	54	16.5	µg/kg	3.3
Aroclor-1260	B191Y7	115 - 117.5	27	16.5	µg/kg	1.6
Aroclor-1260	B17N63	119.5 - 122	50	16.5	µg/kg	3.0
Aroclor-1260	B17N67	174 - 176.5	49	16.5	µg/kg	3.0
Aroclor-1260	B17NL5	226.5 - 228	56	16.5	µg/kg	3.4
1,1,1-Trichloroethane	B17TM6	63.5 - 66	140	5	µg/kg	28.0
1,1-Dichloroethane	B17TM6	63.5 - 66	160	10	µg/kg	16.0
1,2-Dichloroethane	B17TM6	63.5 - 66	150	5	µg/kg	30.0

Table 5-10. Nondetect Analytical Results Exceeding the Target Quantitation Limit. (4 Pages)

Constituent	Sample[a]	Depth[b]	DL or MDA	TQL	Units	EF
1,2-Dichloroethene (Total)	B17TM6	63.5 - 66	270	10	µg/kg	27.0
2-Butanone	B17TM6	63.5 - 66	160	10	µg/kg	16.0
4-Methyl-2-Pentanone	B17TM6	63.5 - 66	140	10	µg/kg	14.0
Acetone	B17TM6	63.5 - 66	180	20	µg/kg	9.0
Benzene	B17TM6	63.5 - 66	130	5	µg/kg	26.0
Chlorobenzene	B17TM6	63.5 - 66	150	5	µg/kg	30.0
Chloromethane	B17TM6	63.5 - 66	320	5	µg/kg	64.0
Chloromethane	B17N52	90 - 92.5	10	5	µg/kg	2.0
Ethylbenzene	B17TM6	63.5 - 66	190	5	µg/kg	38.0
Methylene chloride	B17TM6	63.5 - 66	250	5	µg/kg	50.0
Toluene	B17TM6	63.5 - 66	130	5	µg/kg	26.0
Trichloroethene	B17TM6	63.5 - 66	170	5	µg/kg	34.0
Xylenes (total)	B17TM6	63.5 - 66	310	5	µg/kg	62.0
Phenol	B17N46	47.5 - 50	960	330	µg/kg	2.9
Phenol	B17TM6	63.5 - 66	160,000	330	µg/kg	480.0
Phenol	B17N52	90 - 92.5	350	330	µg/kg	1.1
Phenol	B18XR8	109.5 - 112	960	330	µg/kg	2.9
Phenol	B17N65	119.5 - 122	380	330	µg/kg	1.2
Oil and grease	B17NM3	228 - 230	691,000	200,000	µg/kg	3.5
Oil and grease	B17NM5	228 - 230	700,000	200,000	µg/kg	3.5
TPH - diesel range	B191Y7	115 - 117.5	12,000	5000	µg/kg	2.4
TPH - diesel range	B17N65	119.5 - 122	13,600	5000	µg/kg	2.7
TPH - kerosene range	B191Y7	115 - 117.5	12,000	5000	µg/kg	2.4
TPH - kerosene range	B17N65	119.5 - 122	13,600	5000	µg/kg	2.7
Cesium-137	B17N46	47.5 - 50	394	0.1	pCi/g	3900.0
Cesium-137	B17N46-A	47.5 - 50	18	0.1	pCi/g	180.0
Cesium-137	B17TM6	63.5 - 66	766	0.1	pCi/g	7700.0
Cesium-137	B17TM6-A	63.5 - 66	11	0.1	pCi/g	110.0
Cesium-137	B17N52	90 - 92.5	0.47	0.1	pCi/g	4.7
Cesium-137	B18XR8	109.5 - 112	26.1	0.1	pCi/g	260.0
Cesium-137	B191Y7	115 - 117.5	0.69	0.1	pCi/g	6.9
Cobalt-60	B17N46	47.5 - 50	260	0.05	pCi/g	5200.0
Cobalt-60	B17N46-A	47.5 - 50	21	0.05	pCi/g	420.0
Cobalt-60	B17TM6	63.5 - 66	383	0.05	pCi/g	7700.0
Cobalt-60	B17TM6-A	63.5 - 66	15	0.05	pCi/g	300.0
Cobalt-60	B17N52	90 - 92.5	0.53	0.05	pCi/g	11.0

Table 5-10. Nondetect Analytical Results Exceeding the Target Quantitation Limit. (4 Pages)

Constituent	Sample[a]	Depth[b]	DL or MDA	TQL	Units	EF
Cobalt-60	B17N57	109.5 - 112	0.61	0.05	pCi/g	12.0
Cobalt-60	B18XR8	109.5 - 112	15.3	0.05	pCi/g	310.0
Cobalt-60	B191Y7	115 - 117.5	0.58	0.05	pCi/g	12.0
Cobalt-60	B17N60	117 - 119.5	0.11	0.05	pCi/g	2.2
Cobalt-60	B17N63	119.5 - 122	0.091	0.05	pCi/g	1.8
Cobalt-60	B17NM3	228 - 230	0.088	0.05	pCi/g	1.8
Neptunium-237	B17N46	47.5 - 50	504	1	pCi/g	500.0
Neptunium-237	B17TM6	63.5 - 66	337	1	pCi/g	340.0
Neptunium-237	B17N57	109.5 - 112	170	1	pCi/g	170.0
Neptunium-237	B191Y7	115 - 117.5	72	1	pCi/g	72.0
Plutonium-238	B17N46	47.5 - 50	10,600	1	pCi/g	11000.0
Plutonium-238	B17TM6	63.5 - 66	19,200	1	pCi/g	19000.0
Plutonium-238	B17N52	90 - 92.5	2.6	1	pCi/g	2.6
Plutonium-238	B190T8-A	112 - 112	1480	1	pCi/g	1500.0
Plutonium-238	B191Y7	115 - 117.5	140	1	pCi/g	140.0
Strontium-90	B17N46	47.5 - 50	7.86	1	pCi/g	7.9
Strontium-90	B17N57	109.5 - 112	440	1	pCi/g	440.0
Strontium-90	B191Y7	115 - 117.5	210	1	pCi/g	210.0
Technetium-99	B17TM6-A	63.5 - 66	16	15	pCi/g	1.1
Technetium-99	B17N57	109.5 - 112	26	15	pCi/g	1.7
Technetium-99	B191Y7	115 - 117.5	23	15	pCi/g	1.5
Thorium-232	B17N57	109.5 - 112	27	1	pCi/g	27.0
Thorium-232	B191Y7	115 - 117.5	15	1	pCi/g	15.0
Uranium-233/234	B17N52	90 - 92.5	9.5	1	pCi/g	9.5
Uranium-233/234	B191Y7	115 - 117.5	110	1	pCi/g	110.0
Uranium-235	B17N52	90 - 92.5	11	1	pCi/g	11.0
Uranium-235	B191Y7	115 - 117.5	130	1	pCi/g	130.0
Uranium-238	B17N52	90 - 92.5	9.5	1	pCi/g	9.5
Uranium-238	B191Y7	115 - 117.5	110	1	pCi/g	110.0

[a]All samples in this table are soils.
[b]Depths are expressed as the upper and lower bound of the sampling interval in feet below ground surface.
Aroclor is an expired trademark.
DL = detection limit.
EF = exceedance factor; the ratio of the DL or MDA to the TQL.
MDA = minimum detectable activity.
TPH = total petroleum hydrocarbon.
TQL = target quantitation limit, from Table A-3 of DOE/RL-2001-01, Appendix E.
DOE/RL-2001-01, *Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit RI/FS Work Plan: Includes the 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units.*

A comparison of detection limits also was made to the LPPAL for each nondetect result of a COPC. To determine the LPPALs, the preliminary action levels for chemical COPCs listed in Table A-3a of the SAP were updated with the January 25, 2006, Hanford Site cleanup levels and risk calculations (CLARC), which are based on the Ecology CLARC database (Ecology 2005, *Cleanup Levels & Risk Calculations (CLARC)* database), augmented with information from EPA 2003, *Integrated Risk Information System* (IRIS), a database available through the EPA National Center for Environmental Assessment; risk-assessment databases maintained by Oak Ridge National Laboratory; and other references. It is a standard practice of Fluor Hanford remediation programs to perform data assessment using the latest version of the CLARC database for the Hanford Site.

The preliminary action levels for radionuclide COPCs were taken directly from Table A-3b of the SAP. Radionuclides are not included in the CLARC database.

The results of comparing the detection limits to the LPPALs are given in Table 5-11. Of the 832 analytical determinations for which an LPPAL was specified, the detection limits exceeded the LPPALs in 89 cases (10.7 percent of the cases). For many of the exceedances, the impact was minimized because the detection limit was achieved for another sample at the same or nearby depth.

Table 5-11. Nondetect Analytical Results Exceeding the Lowest Potential Preliminary Action Level. (4 Pages)

Constituent	Sample[a]	Depth[b]	DL or MDA	LPPAL	Units	EF
Fluoride	B18XR8	109.5 - 112	24,900	24,100	µg/kg	1.0
Mercury	B17N70	184 - 186.3	987	330	µg/kg	3.0
Mercury	B17NL8	228 - 230	1010	330	µg/kg	3.1
Mercury	B17NL9	228 - 230	1010	330	µg/kg	3.1
Nitrite	B18XR8	109.5 - 112	736,000	13,143	µg/kg	56.0
Selenium	B17N46	47.5 - 50	10,500	800	µg/kg	13.0
Selenium	B17TM6	63.5 - 66	10,400	800	µg/kg	13.0
Selenium	B18XR8	109.5 - 112	9180	800	µg/kg	11.0
Selenium	B17N67	174 - 176.5	1000	800	µg/kg	1.3
Selenium	B17N70	184 - 186.3	1000	800	µg/kg	1.3
Selenium	B17N73	224 - 226.2	1000	800	µg/kg	1.3
Selenium	B17NL5	226.5 - 228	1000	800	µg/kg	1.3
Selenium	B17NL8	228 - 230	1000	800	µg/kg	1.3
Selenium	B17NL9	228 - 230	1000	800	µg/kg	1.3
Aroclor-1221	B17N46	47.5 - 50	13	9.2	µg/kg	1.4
Aroclor-1221	B17TM6	63.5 - 66	50	9.2	µg/kg	5.4
Aroclor-1221	B18XR8	109.5 - 112	12	9.2	µg/kg	1.3
Aroclor-1221	B191Y7	115 - 117.5	27	9.2	µg/kg	2.9
Aroclor-1221	B17N63	119.5 - 122	100	9.2	µg/kg	11.0

Table 5-11. Nondetect Analytical Results Exceeding the Lowest Potential Preliminary Action Level. (4 Pages)

Constituent	Sample[a]	Depth[b]	DL or MDA	LPPAL	Units	EF
Aroclor-1221	B17N65	119.5 - 122	15	9.2	µg/kg	1.6
Aroclor-1221	B17N67	174 - 176.5	98	9.2	µg/kg	11.0
Aroclor-1221	B17NL5	226.5 - 228	110	9.2	µg/kg	12.0
Aroclor-1232	B17N46	47.5 - 50	220	9.2	µg/kg	24.0
Aroclor-1232	B17TM6	63.5 - 66	890	9.2	µg/kg	97.0
Aroclor-1232	B18XR8	109.5 - 112	220	9.2	µg/kg	24.0
Aroclor-1232	B191Y7	115 - 117.5	27	9.2	µg/kg	2.9
Aroclor-1232	B17N63	119.5 - 122	50	9.2	µg/kg	5.4
Aroclor-1232	B17N65	119.5 - 122	15	9.2	µg/kg	1.6
Aroclor-1232	B17N67	174 - 176.5	49	9.2	µg/kg	5.3
Aroclor-1232	B17NL5	226.5 - 228	56	9.2	µg/kg	6.1
Aroclor-1242	B17N46	47.5 - 50	41	39.4	µg/kg	1.0
Aroclor-1242	B17TM6	63.5 - 66	160	39.4	µg/kg	4.1
Aroclor-1242	B18XR8	109.5 - 112	40	39.4	µg/kg	1.0
Aroclor-1242	B17N63	119.5 - 122	50	39.4	µg/kg	1.3
Aroclor-1242	B17N67	174 - 176.5	49	39.4	µg/kg	1.2
Aroclor-1242	B17NL5	226.5 - 228	56	39.4	µg/kg	1.4
Aroclor-1248	B17N63	119.5 - 122	50	38.6	µg/kg	1.3
Aroclor-1248	B17N67	174 - 176.5	49	38.6	µg/kg	1.3
Aroclor-1248	B17NL5	226.5 - 228	56	38.6	µg/kg	1.5
1,2-Dichloroethane	B17TM6	63.5 - 66	150	2.32	µg/kg	65.0
1,2-Dichloroethane	B17N52	90 - 92.5	5	2.32	µg/kg	2.2
Benzene	B17TM6	63.5 - 66	130	4.48	µg/kg	29.0
Benzene	B17N52	90 - 92.5	5	4.48	µg/kg	1.1
Carbon tetrachloride	B17N52	90 - 92.5	5	3.1	µg/kg	1.6
Chloromethane	B17TM6	63.5 - 66	320	16.5	µg/kg	19.0
Methylene chloride	B17TM6	63.5 - 66	250	25.4	µg/kg	9.8
Tetrachloroethene	B17N52	90 - 92.5	5	0.859	µg/kg	5.8
Tetrachloroethene	B17N60	117 - 119.5	2.1	0.859	µg/kg	2.4
Tetrachloroethene	B17N63	119.5 - 122	2.1	0.859	µg/kg	2.4
Tetrachloroethene	B17N67	174 - 176.5	2.1	0.859	µg/kg	2.4
Tetrachloroethene	B17N70	184 - 186.3	2.1	0.859	µg/kg	2.4
Tetrachloroethene	B17N74	184 - 186.3	2.1	0.859	µg/kg	2.4
Tetrachloroethene	B17N73	224 - 226.2	2.1	0.859	µg/kg	2.4
Tetrachloroethene	B17NL5	226.5 - 228	1.9	0.859	µg/kg	2.2

Table 5-11. Nondetect Analytical Results Exceeding the Lowest Potential Preliminary Action Level. (4 Pages)

Constituent	Sample[a]	Depth[b]	DL or MDA	LPPAL	Units	EF
Tetrachloroethene	B17NL8	228 - 230	1.8	0.859	µg/kg	2.1
Tetrachloroethene	B17NL9	228 - 230	1.8	0.859	µg/kg	2.1
Trichloroethene	B17TM6	63.5 - 66	170	26.3	µg/kg	6.5
Phenol	B17TM6	63.5 - 66	160,000	22,000	µg/kg	7.3
Cesium-137	B17N46	47.5 - 50	394	23.4	pCi/g	17.0
Cesium-137	B17TM6	63.5 - 66	766	23.4	pCi/g	33.0
Cesium-137	B18XR8	109.5 - 112	26.1	23.4	pCi/g	1.1
Cobalt-60	B17N46	47.5 - 50	260	4.6	pCi/g	57.0
Cobalt-60	B17N46-A	47.5 - 50	21	4.6	pCi/g	4.6
Cobalt-60	B17TM6	63.5 - 66	383	4.6	pCi/g	83.0
Cobalt-60	B17TM6-A	63.5 - 66	15	4.6	pCi/g	3.3
Cobalt-60	B18XR8	109.5 - 112	15.3	4.6	pCi/g	3.3
Neptunium-237	B17N46	47.5 - 50	504	4.6	pCi/g	110.0
Neptunium-237	B17TM6	63.5 - 66	337	4.6	pCi/g	73.0
Neptunium-237	B17N57	109.5 - 112	170	4.6	pCi/g	37.0
Neptunium-237	B191Y7	115 - 117.5	72	4.6	pCi/g	16.0
Plutonium-238	B17N46	47.5 - 50	10,600	60.1	pCi/g	180.0
Plutonium-238	B17TM6	63.5 - 66	19,200	60.1	pCi/g	320.0
Plutonium-238	B190T8-A	112 - 112	1480	60.1	pCi/g	25.0
Plutonium-238	B191Y7	115 - 117.5	140	60.1	pCi/g	2.3
Strontium-90	B17N46	47.5 - 50	7.86	4.03	pCi/g	2.0
Strontium-90	B17N57	109.5 - 112	440	4.03	pCi/g	110.0
Strontium-90	B191Y7	115 - 117.5	210	4.03	pCi/g	52.0
Technetium-99	B17TM6-A	63.5 - 66	16	3.6	pCi/g	4.4
Technetium-99	B17N57	109.5 - 112	26	3.6	pCi/g	7.2
Technetium-99	B191Y7	115 - 117.5	23	3.6	pCi/g	6.4
Thorium-232	B17N57	109.5 - 112	27	4.8	pCi/g	5.6
Thorium-232	B191Y7	115 - 117.5	15	4.8	pCi/g	3.1
Tritium	B191Y7	115 - 117.5	130	80	pCi/g	1.6
Uranium-233/234	B17N52	90 - 92.5	9.5	0.45	pCi/g	21.0
Uranium-233/234	B191Y7	115 - 117.5	110	0.45	pCi/g	240.0
Uranium-235	B17N52	90 - 92.5	11	0.045	pCi/g	240.0
Uranium-235	B191Y7	115 - 117.5	130	0.045	pCi/g	2900.0

Table 5-11. Nondetect Analytical Results Exceeding the Lowest Potential Preliminary Action Level. (4 Pages)

Constituent	Sample[a]	Depth[b]	DL or MDA	LPPAL	Units	EF
Uranium-238	B17N52	90 - 92.5	9.5	0.44	pCi/g	22.0
Uranium-238	B191Y7	115 - 117.5	110	0.44	pCi/g	250.0

[a]All samples in this table are soils.
[b]Depths are expressed as the upper and lower bounds of the sampling interval in feet below ground surface.
Aroclor is an expired trademark.
DL = detection limit.
EF = exceedance factor; the ratio of the DL or MDA to the LPPAL.
LPPAL = lowest potential preliminary action level.
MDA = minimum detectable activity.

This was not the case for several aroclors with very low LPPALs. The LPPALs were exceeded for Aroclor-1221 and Aroclor-1232 in all eight soil samples in which they were measured. Similarly, the LPPALs were exceeded in six of eight soil measurements for Aroclor-1242 and three of eight soil measurements for Aroclor-1248. The rest of the aroclors have higher LPPALs; detection limits were adequate to meet these.

High exceedances of the LPPALs were recorded for several radionuclides in samples with significant plutonium contamination. The largest exceedance was for U-235 at a depth of 35.1 m (115 ft) bgs, where the detection limit was 130 pCi/g vs. an LPPAL of 0.045 pCi/g.

Measurements of selenium and tetrachloroethene, with LPPALs of 800 µg/kg and 0.859 µg/kg, respectively, also were troublesome. The detection limit for selenium did not meet the LPPAL in 9 of the 12 nondetects recorded for that metal. The detection limit for tetrachloroethene did not meet the LPPAL in 10 of the 12 nondetects recorded for that compound. However, none of these exceedance factors was very large, the greatest being 13 for selenium at 14.5 and 19.4 m (47.5 and 63.5 ft) bgs.

For most of the instances where detection limits did not achieve the LPPALs, it should be possible to minimize the impacts of inadequate detection limits by applying knowledge of the processes and release histories and by using data for analytes with analogous mobilities in the soil.

5.3.3 Data Consistency Checks

The data tables in Appendix B were reviewed for reasonableness and internal consistency. Specific lines of inquiry are described in the following paragraphs.

Volatile organic analysis. At several sample depths, multiple VOA results were obtained, often with different calibration ranges. In some cases (at depth intervals of 27.4 to 28.2 m [90 to 92.5 ft], 35.1 to 35.8 m [115 to 117.5 ft], 35.7 to 36.4 m [117 to 119.5 ft], and 36.4 to 37.2 m [119.5 to 122 ft]) the results conflicted. That is, the detected values were substantially disparate or a nondetect value was substantially lower than a detect value. The laboratory narratives were reviewed for any information that might lead one result to be preferred over another. However,

in all cases, the laboratory narrative did not provide information to qualify either result. Therefore, conservatism dictates that the higher result be preferred, whether it is a detection or nondetection.

The VOA for sample B191Y4 reported a detection for benzoic acid, 2-[(trimethylsilyl)oxy]-trimethylsilyl ester. This compound is contamination from the laboratory's gas chromatography column (i.e., "column bleed"). It is not a contaminant from the 216-Z-9 Trench, so this result has been qualified in Appendix B with an "R" (reject for decision-making).

Vapor analysis. At the 19.8 to 20.1 m (65- to 66-ft) interval, the results for carbon tetrachloride are divided about equally into two groups. One set of results ranges from 53 to 55 ppm and the other ranges from 13 to 16 ppm. At the 20.1 to 20.4 m (66- to 67-ft) interval, one carbon tetrachloride measurement is 18.3 ppm, and the other four measurements range from 8450 to 8560 ppm. For the chloroform results at the 20.1 to 20.4 m (66- to 67-ft) depth, one result is <1 ppm, and the other four results range from 125 to 130 ppm. Examination of the field-screening data sheets reveals that, at each depth, the higher results were obtained in one sampling event, and the lower results were obtained in a second sampling event some time later. Clearly, the vapors evaporate from the borehole if sampling is delayed. This fact must be considered when using the data obtained after sampling delays.

Uranium isotope measurements. Total uranium was not a COPC. However, for all 13 soil samples that were analyzed for uranium isotopes, the total uranium also was measured, so that a check of the separate isotope measurements could be made. The uranium isotope measurements were each converted from activity to weight basis, and then summed. The sum was compared against the total uranium result. With proper allowance taken for nondetect measurements, the two values for the total uranium concentration in each compared within 35 percent except for sample B17N60 (35.7 to 36.4 [117 to 119.5 ft]) and sample B17N63 (36.4 to 37.2 m [119.5 to 122 ft]). In these two samples, the total of the isotope results exceeded the total uranium result by 86 percent and 108 percent, respectively. The uranium isotope results for sample B17N63 were flagged by the validator for a number of QC problems. However, uranium isotopes in samples B17N60 and B17N63 compared favorably with each other and with sample B18XT1, as discussed in Section 5.4.1.

Phosphorus measurements vs. phosphate measurements. Phosphate and total phosphorus were both measured at a number of depths. Phosphate was not detected in any sample. In samples where total phosphorus was detected, the value always exceeded the detection limit for phosphate. Thus, the two measurements are consistent with each other.

Nitrate and nitrite measurements vs. total nitrate/nitrite measurements. The individual measurements of nitrate and nitrite in each sample should sum to equal the value obtained for the nitrate/nitrite method. This was found to be the case (within ±30 percent) for all but two of the 11 samples (or sample pairs) where this comparison could be made. For samples B17N46 (14.5 m [47.5 ft]) and B17TM6 (19.4 m [63.5 ft]), the sum of nitrate and nitrite is far greater than the combined nitrate/nitrite result. The nitrate/nitrate determination was performed at greater than two times the holding time limit (28 days), and no MSs were performed due to the high radiation level of the sample. For conservatism and because of the QC problems, the separate

nitrate and nitrite results obtained by ion chromatography probably should be preferred to the combined nitrate/nitrate results for these two samples.

Hold time for sample B191Y7. As discussed in Appendix A in connection with Sample Disposition Record F04-026, O&G, TPH, PCB, semivolatile organic compound (SVOC), mercury, and anion chromatography analyses for sample B191Y7 were all performed after the allowed holding time had elapsed. The TPH extraction was performed after two times the holding period had elapsed, and all results were nondetects, so the two TPH results were rejected for use in decision-making and were flagged "UR." Holding times for PCB and SVOC, O&G, mercury, and anion analyses in this sample were less than two times the allowed time, so the results were accepted for decision-making, but flagged "J" to indicate that they should be regarded as approximate.

5.4 RESULTS OF THE FIELD QUALITY CONTROL PROGRAM

As discussed in Section 4.3.3, a number of QC samples were collected in the field. Soil samples were collected for duplicate and split analysis, and an equipment blank and a trip blank were collected in association with the primary characterization samples reported here.

In the following subsections, the analytical results for all the COPCs in all the field QC samples are compared against the requirements and expectations. All chemical and radiochemical laboratory data for the QC samples (COPCs and non-COPCs) are included in the Appendix B tables.

5.4.1 Field-Duplicate Samples

Whereas laboratory duplicates are used to evaluate the precision of the laboratory-analysis process, field duplicates are collected to provide a measure of the overall precision of the complete sampling and analysis process. High RPDs for field duplicates may indicate local heterogeneity in the sampled soil and/or errors caused by the sampling process.

Duplicate soil samples. Duplicate analyses of soil samples, as defined in Section 4.3.3, were performed on sample pairs taken at depths of 35.7 m, 36.4, 56.1, and 69.5 m (117, 119.5, 184, and 228 ft) bgs. A summary of duplicate analyses performed is given in Table 5-12.

In addition to the samples shown in Table 5-12, samples B18XW3 and B18XR8 (33.4 m [109.5 ft] bgs), samples B191Y4 and B191Y4-A (35.1 m [115 ft] bgs), and samples B17N64 and B17N68 (35.7 m [117 ft] bgs) were field duplicates analyzed for VOCs. However, the latter sample in each pair was analyzed at a very high range, with detection levels far above the required limits. Therefore, field-duplicate comparisons were not performed for these pairs of samples. Also eliminated from consideration as duplicate analyses were GEA determinations of the actinide isotopes. AEA is required for reliably determining these isotopes at the required detection limits.

Table 5-12. Summary of Duplicate Analysis Performed.

Laboratory	Depth*	Sample Pair	Analyses
222-S	117	B17N64, B17N64-A	VOA
WSCF	119.5	B17N63, B18XT1	VOA
WSCF	184	B17N70, B17N74	VOA
WSCF	228	B17NL8, B17NL9	Metals, anions, VOA, ammonia, SVOA, TPH, GEA, uranium, neptunium, plutonium, and americium isotopes
Eberline	228	B17NM3, B17NM5	Radionuclide COPCs except uranium, americium, and plutonium isotopes
Lionville	228	B17NM3, B17NM5	Nitrate/nitrite, hexavalent chromium, oil and grease

*Depths are the tops of the sampling intervals in ft bgs (feet below ground surface).
222-S = Hanford Site 222-S Laboratory.
COPC = contaminants of potential concern.
Eberline = Eberline Services (Richmond, California, laboratory).
GEA = gamma energy analysis.
Lionville = Lionville Laboratory (Lionville, Pennsylvania).
SVOA = semivolatile organic analysis.
TPH = total petroleum hydrocarbon.
VOA = volatile organic analysis.
WSCF = Waste Sampling and Characterization Facility.

Appendix C lists the 117 field-duplicate analysis pairs that were completed for the COPCs. At least one duplicate analysis was performed for each COPC except PCBs. For the 200-PW-1 OU and the DNAPL study combined, there are 60 COPCs for soils (see Table 5-9). Because nine primary soil samples were taken for this project, only one duplicate analysis is required for each COPC. This requirement was met, except for the PCBs (seven aroclor COPCs). However, this omission should have little impact on the uncertainty of the data, because all but two aroclor results were nondetects. The two detects were both for Aroclor-1248. A value of 150 µg/kg was obtained for sample B17N46 (14.5 to 15.2 m [47.5 to 50 ft] bgs) and 1600 µg/kg was found for sample B17TM6 (19.4 to 20.1 m [63.5 to 66 ft] bgs). These values clearly are in excess of the 38.6 µg/kg LPPAL for Aroclor-1248.

The RPDs between the pairs of field duplicates were calculated to determine whether the precision requirements of the project (RPD $\leq$ 35 percent for radionuclides, RPD $\leq$ 30 percent for others) were met. Following the validation rules (HNF-20433 and HNF-20434), RPDs were calculated only when the results for the duplicate and the corresponding primary sample were more than five times the required detection limit (i.e., the TQL). When at least one result was a detect and one or both results were less than five times the TQL, the results were compared by difference, using the reporting value or MDA for nondetects. A difference of up to two times the TQL is considered satisfactory for soil samples. Where both results were nondetects, the difference between results was not evaluated.

The results of the RPD calculations are given in Appendix C. For most of the duplicate pairs, both results were non-detects, so the precision criteria were applied to just 25 of the 117 duplicate pairs. Of these, five cases exceeded the precision requirements. These cases, shown in Table 5-13, constitute 4.3 percent of the 117 pairs. This number of exceedances is well within an acceptable range for field-duplicate analysis. The exceedances all occurred in the VOAs of the 35.7 and 36.4 m (117- and 119.5-ft) samples. Some exceedances may be due to contamination of sample B18XT1. This sample is suspected to have been contaminated by hydraulic fluid from the drilling equipment, according to a note in HEIS.

Table 5-13. Field-Duplicate Sample Analyses Exceeding Precision Requirements.

Constituent	Depth	Sample 1			Sample 2			TQL	Units	RPD
		Sample	Result	Q	Sample	Result	Q			
Acetone	117	B17N64	170		B17N64-A	79		20	µg/kg	4.6 × RDL
Acetone	119.5	B17N63	2.1	U	B18XT1	540		20	µg/kg	26.9 × RDL
Carbon tetrachloride	117	B17N64	92		B17N64-A	240		5	µg/kg	89.2%
Chloromethane	119.5	B17N63	2.1	U	B18XT1	110		5	µg/kg	21.6 × RDL
Methylene chloride	119.5	B17N63	2.1	U	B18XT1	20	J	5	µg/kg	3.6 × RDL

J = Result is an estimate.
Q = laboratory qualification code.
RPD = relative percent difference.
TQL = target quantitation limit.
U = Analyte was undetected, with the indicated reporting limit.

Duplicate soil-vapor samples. Vapor samples were taken at 14 depths, so the 5 percent requirement for duplicate analysis in vapor samples is met by analyzing each COPC at least once. Analysis of carbon tetrachloride and chloroform was performed on duplicate samples for each of these depths except 7.6 m (25 ft) bgs. Duplicate analysis was performed for methane at ten depths. As a result, the requirement for duplicate analysis of the three COPCs required for vapor samples was met in full.

Precision and accuracy criteria for vapor samples were not specified in the SAP, so RPDs were not calculated for vapor duplicates. However, by visually scanning the VOA table in Appendix B, one can see that agreement between samples taken at the same depth is quite good for all four vapor COPCs. There are some exceptions to this stable performance for carbon tetrachloride and chloroform measurements at the 19.8 to 20.1 and the 20.1 to 20.4 m (65- to 66- and the 66- to 67-ft) bgs intervals. This occurrence is discussed in Section 5.3.3.

5.4.2 Split Samples

Field split samples are collected and analyzed to detect whether analytical results are consistent among laboratories and analytical methods. Each sample of a split pair is analyzed at a different laboratory. The project requirement for split samples is to prepare one split pair for every 20 primary soil samples and to analyze the splits for all COPCs. Because this project has nine primary soil samples, each COPC must be analyzed in at least one split pair. The SAP does not require split-sample analysis for vapor samples.

Split analyses of soil samples were performed on sample pairs taken at depths of 14.5, 19.4, 27.4, 33.4, 35.7, 36.4, 69.5, and 89.8 m (47.5, 63.5, 90, 109.5, 117, 119.5, 228, and 294.5 ft) bgs. As was done for field duplicates, the high-range VOAs and actinide determinations by GEA were not considered as split analyses.

A summary of split analyses performed is given in Table 5-14, and the 153 field-duplicate analysis pairs that were completed for the COPCs are listed in Appendix C.

Table 5-14. Summary of Split-Sample Analyses Performed.

Depth*	Lab	Sample	Lab	Sample	Analyses
47.5	222-S	B17N46	Eberline	B17N46-A	Am-241, Th-232, uranium isotopes, GEA
63.5	222-S	B17TM6	Eberline	B17TM6-A	Th-232, uranium isotopes, GEA
90	Lionville	B17N52	222-S	B17N61	VOA
109.5	Eberline	B17N57	222-S	B18XR8	Np-237, Th-232, GEA
117	WSCF	B17N60	222-S	B17N64	VOA
117	WSCF	B17N60	222-S	B17N64-A	VOA
119.5	WSCF	B17N63	Lionville	B17N65	Anions, metals, PCBs, SVOA, TPH
228	WSCF	B17NL8	Eberline	B17NM3	GEA, Np-237
228	WSCF	B17NL8	Eberline	B17NM5	GEA, Np-237
228	WSCF	B17NL9	Eberline	B17NM3	GEA, Np-237
228	WSCF	B17NL9	Eberline	B17NM5	GEA, Np-237

*Depths are the tops of the sampling interval in ft bgs (feet below ground surface).
222-S = Hanford Site 222-S Laboratory.
Eberline = Eberline Services (Richmond, California, laboratory).
GEA = gamma energy analysis.
Lionville = Lionville Laboratory (Lionville, Pennsylvania).
PCB = polychlorinated biphenyl.
SVOA = semivolatile organic analysis.
TPH = total petroleum hydrocarbon.
VOA = volatile organic analysis.
WSCF = Waste Sampling and Characterization Facility.

Among the split-sample pairs shown in Table 5-14, split analyses were not performed for hexavalent chromium, n-butylbenzene, cis- and trans-1,2-dichloroethylene, Am-241, Tc-99, tritium, plutonium isotopes, and uranium isotopes. Although this DQA is focused on the vadose zone, the borehole QC was performed on a whole-borehole basis. Therefore, for the purposes of this DQA, a split pair of soil samples below the water table was selected to fill some of the gaps in the split-sample analyses. These samples, B19NJ7 (analyzed at WSCF) and B1B9Y4 (analyzed at Lionville Laboratory), were taken at 89.8 m (294.5 ft) bgs and were considered here only in their role as split samples. The data from these samples were not evaluated in other sections of this DQA. These samples were both analyzed for metals, anions, VOA, SVOA, Am-241, Np-237, plutonium and uranium isotopes, TPH, and GEA.

After consideration of the duplicates at 89.8 m (294.5 ft) bgs, the only COPCs without split-sample analysis were hexavalent chromium, tritium, and Tc-99. The omission for tritium is inconsequential, because all tritium results were nondetects. The omission for hexavalent

chromium should not increase the uncertainty of the data substantially, because the only detection (in sample B17TM6-B, at 19.4 to 27.1 m [63.5 to 66 ft] bgs) had a value of 750 µg/kg, well below the LPPAL of 2100 µg/kg.

For Tc-99, the significance of omitting a split-sample analysis is diminished by the much greater impact of the MDAs being so close to the LPPAL. Five of the seven Tc-99 results for soil samples were nondetects. For three of the nondetects, the MDAs exceeded the 3.6 pCi/g LPPAL.

The results of the RPD calculations for the split samples are shown in Appendix C. Of the 153 pairs of results, 25 of them (16.3 percent) exceeded the precision limits. These exceedances involved 16 of the 60 soil COPCs. The exceedances are displayed in Table 5-15. Precision was not evaluated for more than half of the split determinations because the analytes were undetected in both samples.

The rate of exceeding the precision criteria was higher than is typical for analytical data of this type, so several laboratory data reports were reviewed to find explanations. The following observations were made.

- For samples B17N52 and B17N61 (27.4 m [90 ft] bgs), all laboratory QC results were within limits for the analyses used in split comparisons.

- For samples B17N57 and B18XR8 (33.4 m [109.5 ft] bgs), the MDAs for Th-232, Np-237, and Cs-137 exceeded the TQLs for one or both samples. This was the major cause of the high RPDs for these results.

- For samples B17N60 and B17N64, at 35.7 to 36.4 m (117 to 119.5 ft) bgs:

  For sample B17N60, all laboratory QC results for VOA were within limits.

  Sample B17N64 was received at the laboratory in a set of bottles for VOA. Laboratory personnel noted that the visual appearance of the material differed from one bottle to the next. Therefore, results were reported on two bottles of differing appearance. Results for acetone in the first analysis exceeded the calibration range, so the second bottle was analyzed at a higher range and reported as sample B17N64-A. The re-analysis produced somewhat different results for 2-butanone, acetone, and carbon tetrachloride, but the results still were far higher than the nondetects reported for sample B17N60. These differences are considered to be due to inhomogeneous distribution of the COPCs in sample B17N64.

Table 5-15. Split-Sample Analyses Exceeding Precision Requirements. (2 Pages)

Constituent	Depth	Sample 1					Sample 2					TQL	Units	RPD
		Sample	Result	Q	V	MDA	Sample	Result	Q	V	MDA			
Chloride	294.5	B19NJ7	2960	B			B1B9Y4	13500				2000	µg/kg	5.3 × RDL
Nitrate	119.5	B17N63	143000				B17N65	2280000	D			11071.43	µg/kg	176.4%
Nitrate	294.5	B19NJ7	868000				B1B9Y4	216000				11071.43	µg/kg	120.3%
Nitrogen in ammonium	294.5	B19NJ7	307	B			B1B9Y4	15800	U			500	µg/kg	31.0 × RDL
Cadmium	119.5	B17N63	75	U			B17N65	5300				500	µg/kg	10.5 × RDL
Cadmium	294.5	B19NJ7	1380				B1B9Y4	30				500	µg/kg	2.7 × RDL
Chromium	294.5	B19NJ7	4180				B1B9Y4	15100				1000	µg/kg	10.9 × RDL
Copper	119.5	B17N63	15200				B17N65	26300				1000	µg/kg	53.5%
Mercury	294.5	B19NJ7	839				B1B9Y4	20	U			200	µg/kg	4.1 × RDL
Silver	294.5	B19NJ7	7620				B1B9Y4	110	U			2000	µg/kg	3.8 × RDL
2-Butanone	90	B17N52	10	U			B17N61	36				10	µg/kg	2.6 × RDL
2-Butanone	117	B17N60	2.1	U			B17N64	75				10	µg/kg	7.3 × RDL
2-Butanone	117	B17N60	2.1	U			B17N64-A	80				10	µg/kg	7.8 × RDL
Acetone	117	B17N60	2.1	U			B17N64	170				20	µg/kg	8.4 × RDL
Acetone	117	B17N60	2.1	U			B17N64-A	79				20	µg/kg	3.8 × RDL
Carbon tetrachloride	90	B17N52	5	U			B17N61	19				5	µg/kg	2.8 × RDL
Carbon tetrachloride	117	B17N60	2.1	U			B17N64	92				5	µg/kg	18.0 × RDL
Carbon tetrachloride	117	B17N60	2.1	U			B17N64-A	240				5	µg/kg	47.6 × RDL
Chloroform	117	B17N60	2.1	U			B17N64-A	13				5	µg/kg	2.2 × RDL
Methylene chloride	90	B17N52	12				B17N61	1.4	U			5	µg/kg	2.1 × RDL
Methylene chloride	294.5	B19NJ7	2.1	U			B1B9Y4	13	B			5	µg/kg	2.2 × RDL
Cesium-137	109.5	B17N57	1.04			0.66	B18XR8	26.1	U			0.1	pCi/g	10.4 ×RDL

Table 5-15. Split-Sample Analyses Exceeding Precision Requirements. (2 Pages)

Constituent	Depth	Sample 1					Sample 2					TQL	Units	RPD
		Sample	Result	Q	V	MDA	Sample	Result	Q	V	MDA			
Neptunium-237	109.5	B17N57	0	U		170	B18XR8	28.9				1	pCi/g	141.9%
Thorium-232	109.5	B17N57	-10.2	U		27	B18XR8	0.698				1	pCi/g	26.3 × RDL

B = For organic analyses, indicates that the blank was contaminated with the analyte. For inorganic analysis, indicates that the analyte was detected in the sample at a level below the target quantitation limit.
D = Result was determined on a dilution of the sample.
MDA = minimum detectable activity
Q = laboratory qualification code.
RPD = relative percent difference.
TQL = target quantitation limit.
U = Analyte was undetected, with the indicated reporting limit.
V = validation qualification code.

- For samples B17N63 and B17N65, at 36.4 to 37.2 m (119.5 to 122 ft) bgs:

  For sample B17N63, all laboratory QC results were within limits.

  For sample B17N65, laboratory QC results for nitrate were within limits. However, the MS results for cadmium and copper were very low. In addition, the results for the laboratory duplicate were much lower than the original sample aliquot. The blank values were acceptable. The laboratory ran a post-digestion spike and obtained acceptable results for all metals. This combination of observations indicates that the cadmium and copper levels in the original metals aliquot of sample B17N65 were elevated due to sample inhomogeneity or laboratory contamination.

After reviewing the laboratory reports, it was concluded that the exceedances in Table 5-15 do not constitute a clear reason to reject any of these data. Most differences could as easily be due to inhomogeneous distribution of the contaminant in the soil as to sampling or laboratory error.

5.4.3 Equipment-Rinsate-Blank Sample

An equipment-rinsate-water-blank sample was obtained before borehole sampling was begun. The rinsed sampling equipment was sealed until it was used to collect samples at the 14.5 to 15.2 m (47.5- to 50-ft) bgs interval; the equipment rinsate was analyzed to check the potential for sample contamination originating from the field-sampling equipment or from equipment-cleansing agents. The sample was collected in three portions and assigned three separate sample numbers for shipment to different laboratories. Analysis was coordinated so that each COPC was analyzed in one laboratory or another. This meets the requirement of the SAP for obtaining and analyzing one equipment rinsate for every 20 soil samples.

Of the 63 analyses obtained for metal, inorganic, and radionuclide COPCs in the equipment rinsate, two were detects. As shown in Table 5-16, the detections for the COPCs were all at levels below the applicable TQLs and LPPALs.

Table 5-16. Detected Contaminants of Potential Concern in Equipment Blanks.

Sample Number	Constituent Name	Analytical Result	Lab Qualifier	TQL	LPPAL	Analytical Units
B17MM8	Chloride	92	B	200	1000000	µg/L
B17MM8	Ammonium ion	5.15	B	64.3	N/A	µg/L

B = The result was greater than the detection limit but less than the reporting limit.
LAPPL = lowest potential preliminary action level.
N/A = not applicable.
TQL = target quantitation limit.

Among the nondetect results for the equipment blank, none exceeded the TQLs. One nondetect result exceeded the LPPAL. A result of <1 µg/L was reported for tetrachloroethene, which has a LPPAL of 0.859 µg/kg.

The SAP did not require equipment blanks for vapor sampling. However, as shown in the field-screening documentation, instrument blanks were measured at the beginning and end of each daily analysis run. Blank results were found to be <1 ppmv for all analytes except on one day, August 16, 2004, when the methylene chloride blank values were 1.84 ppmv and 2.04 ppmv at the beginning and end of the day, respectively. The field-screening documentation did not comment on these unusual blank values. The samples analyzed that day were B17XD4, B17XD5, B17XD6, B17XD7, and B17XD8. The sample results were all less than 10 times the blank results. Accordingly, in the course of this DQA, the methylene chloride results for these samples were flagged "J" to indicate that they should be regarded as estimates.

5.4.4 Trip Blank Samples

Trip blanks are obtained to determine whether VOC determinations might be contaminated by organic vapors, such as internal-combustion-engine exhaust, in the sampling environment. The SAP called for a trip blank to be taken for every shipment of VOA samples to a laboratory. No trip blank samples were taken with the vadose zone samples, although a trip blank was taken with the uppermost sample in the groundwater. Trip blank sample B1B9N6 was taken in association with samples at the 69.5 m (228-ft) bgs depth. This trip blank was analyzed for all COPCs, and no analytes were detected. The detection limits were all less than the applicable TQLs. All the LPPALs also were satisfied, except for the very low LPPAL for tetrachloroethene.

As a general statement, failure to collect trip blanks with the vadose zone soils increases the risk of not detecting environmental contamination of VOA samples beyond the risk level inherent in the sampling plan. However, of the 39 results in which a volatile COPC was detected in a soil sample, none of them exceeded the TQL or LPPAL. This clearly demonstrates that the samples were not significantly contaminated by the sampling environment.

5.4.5 Summary of Field Quality Control Sample Discussion

The overall results of the field QC sampling and analysis program were adequate. For soils, the greatest difficulty was encountered with split samples, of which 16.3 percent exceeded the precision criteria. Only one of these exceedances could be associated with identifiable laboratory QC irregularities. The others likely are due to inhomogeneous distribution of COPCs in the soil. Comparison of COPCs in soil duplicates was completed except for PCBs. All but 4.3 percent of the duplicate comparisons met the precision requirements. The required equipment blank was collected and analyzed, with no results exceeding the TQLs. Trip blanks were not collected for the vadose zone samples, but excellent results were obtained with a trip blank collected with the uppermost soil sample in the saturated zone.

For vapor sampling, duplicate analysis was performed as required. The SAP does not require split-sample analysis and equipment blanks for vapor samples. Trip blanks also were not applicable for vapor samples, because conventional VOA was not performed on them.

5.5 SUITABILITY OF DATA

Detection limits, precision, accuracy, and completeness were assessed against project criteria to determine whether the quantity and quality of the analytical data meet project requirements.

Overall, an adequate amount (94.2 percent) of the primary soil data and QC data required were obtained. Technetium-99, Sr-90, and Th-232 results were not obtained at most of the planned depths; however, measurements obtained at reasonably nearby depths provide adequate data. No data were obtained for hexavalent chromium in the CCU (33.1 to 36 m [108.5 to 116.5 ft] bgs), so it may be necessary to use total chromium as an upper bound for hexavalent chromium in this depth range. Total chromium values typically are 30 or more times greater than the hexavalent chromium concentrations in the borehole. Except for hexavalent chromium in the CCU, modeling of contaminant distributions should not be unduly hindered by lack of data.

Two analytical results, the TPH-diesel and TPH-kerosene range results for sample B17N52, were rejected in data validation for exceeding the holding time limit. Other deficiencies found in data validation were minor. Laboratory precision and accuracy, as estimated from the validation results, are acceptable.

In addition, the TPH-diesel and TPH-kerosene range results for sample B191Y7 were rejected for hold time exceedance. These rejections occurred during the course of this DQA in connection with assessing the impacts of sample disposition reports. The impacts of rejecting the four TPH results are minimal, because they are backed up by O&G results at the same depths. The detection limits for O&G analysis are higher than those for the TPH, but are well below the 2×10^6 µg/kg LPPAL.

Detection limits exceeded the LPPALs for about 10.4 percent of the determinations. This is not an unreasonably large number of exceedances, and they are distributed over a number of COPCs and depths, so the usability of the data is not severely impacted. Contamination from sampling and/or laboratory operations was infrequent and minor. Overall precision, as assessed by field-duplicate sample results, was acceptable. Precision as indicated by split-sample results was higher than desired, but was judged as marginally acceptable.

The overall conclusion of this DQA is that the data are of the right type and of sufficient quality and quantity to support the intended use. The analytical data are acceptable for RI/FS decision-making purposes.

6.0 SELECT THE STATISTICAL TEST

The number of samples for this waste site is limited, the soil samples having been collected from just nine depths in one borehole. The location of the borehole and the sampling depths were selected by professional judgment rather than a random process. These factors do not provide data that are amenable to standard statistical treatments. Therefore, the maximum sample result obtained for each COPC will be used for decision-making purposes.

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7.0 VERIFY THE ASSUMPTIONS

The data will be used to support an RI/FS decision, not to determine if the vadose zone adjacent to the 216-Z-9 Trench is clean. The assumptions and bases of the judgmental sample collection locations have been agreed upon and documented (DOE/RL-2001-01) and are not addressed further in this document.

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8.0 DRAW CONCLUSIONS FROM DATA

The conclusion of this evaluation is that the data are of the right type, quality, and quantity to support the intended use (i.e., RI/FS decision-making). Detection limits, precision, accuracy, and sample delivery group completeness were analyzed to determine if any analytical results should be rejected because of QA/QC deficiencies. The analytical data were found to be acceptable for decision-making purposes, including decisions regarding attainment of preliminary remedial goals and evaluation of risk.

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9.0 REFERENCES

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[5] After the work was initiated for this data quality assessment, the U.S. Environmental Protection Agency replaced this procedure with EPA/240/B-06/001, *Guidance on Systematic Planning Using the Data Quality Objectives Process*, EPA QA/G-4.

[6] After the work was initiated for this data quality assessment, the U.S. Environmental Protection Agency replaced this procedure with EPA/240/B-06/002, *Data Quality Assessment: A Reviewers Guide*, EPA QA/G-9R, and EPA/240/B-06/003, *Data Quality Assessment, Statistical Tools for Practitioners*, EPA QA/G-9S.

APPENDIX A
BOREHOLE SAMPLING DATA SHEETS

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TABLES

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. A-25
Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole..... A-46

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APPENDIX A

BOREHOLE SAMPLING DATA SHEETS

Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17N45	U	F03-018/ SOIL		Waste Sampling & Characterization	1, 2, 3, 10, 14, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	47.5 - 50 ft	299-W15-46	10/20/03 10:29 AM		
B17N46	U	F03-018/ SOIL	222S20030369 - 10/27/2003	222-S Lab Operations	2, 4, 10, 12, 14, 16, 17, 18, 19, 20, 24, 25, 26, 35, 39, 41, 42, 46, 52	47.5 - 50 ft	299-W15-46	10/20/03 10:29 AM	VOA-Low;	
B17N46: ALL DETECTED COMPOUNDS FOR VOA WERE WITHIN THE CALIBRATION RANGE FOR THE LOW LEVEL VOAs SO HIGH LEVEL VOA DID NOT REQUIRE ANALYSIS. SAMPLE WAS NOT HOMOGENEOUS - MIXTURE OF COARSE SAND, PEA GRAVEL AND PEBBLES.										
B17N46-A	U	F03-018/ SOIL	H2459 - 12/8/2003	Eberline Services	27, 35, 36, 38, 40, 44, 48, 50	47.5 - 50 ft	299-W15-46	10/20/03 10:29 AM		
B17N46-B	U	F03-018/ SOIL	W04140 - 12/18/2003	Severn Trent Incorporated, Richland	7, 8, 9, 11, 21	47.5 - 50 ft	299-W15-46	10/20/03 10:29 AM		
B17N47	U	F03-018/ SOIL		Eberline Services	7, 8, 9, 11, 19, 22, 27, 35, 36, 38, 39, 40, 44, 47, 48, 49, 50	47.5 - 50 ft	299-W15-46	10/20/03 10:29 AM		B17NM8 / RAD Screen;
B17N51	U	F03-018/ SOIL		222-S Lab Operations	16	47.5 - 50 ft	299-W15-46	10/20/03 10:29 AM		

Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17N52	U	F03-018/ SOIL	H2556 - 3/23/2004	Eberline Services	2, 5, 7, 8, 9, 10, 11, 12, 16, 17, 18, 19, 20, 22, 24, 25, 26, 35, 41, 51, 52, 53	90 - 92.5 ft	299-W15-46	03/23/04 12:10 PM		
B17N53	U	F03-018/ SOIL	H2556 - 4/7/2004	Shaw Group	29, 30, 31, 32, 33, 34	90 - 92.5 ft	299-W15-46	03/23/04 08:35 AM		
B17N54	U	F03-018/ SOIL		PNL - 3720 Building	28, 37, 45	107.5 - 110 ft	299-W15-46	04/06/04 01:40 PM		
B17N57	U	F03-018/ SOIL	H2590 - 4/18/2004	Eberline Services	27, 35, 36, 38, 39, 40, 44, 47, 48, 49	109.5 - 112 ft	299-W15-46	04/08/04 10:15 AM		
B17N58	U	F03-018/ SOIL	H2576 - 4/8/2004	Shaw Group	29, 30, 31, 32, 33, 34	110 - 112.5 ft	299-W15-46	04/08/04 10:15 AM		
B17N59	U	F03-018/ SOIL		PNL - 3720 Building	28, 37, 45	115 - 117.5 ft	299-W15-46	04/15/04 10:00 AM		
B17N60	U	F03-018/ SOIL	WSCF20040704 - 4/21/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	117 - 119.5 ft	299-W15-46	04/21/04 02:00 PM		

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Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17N61	U	F03-018/ SOIL	222S20040061 - 3/24/2004	222-S Lab Operations	16	90 - 92.5 ft	299-W15-46	03/23/04 08:35 AM	VOA-Low;	
B17N61: ANALYSIS FOR LOW-LEVEL VOAs WAS THE ONLY REQUEST FOR THIS SAMPLE. THE SAMPLE WAS DESCRIBED AS DARK BROWN, MEDIUM COARSE SAND.										
B17N63	U	F03-018/ SOIL	WSCF20040719 - 5/3/2004	Waste Sampling & Characterization	1, 2, 3, 10, 14, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	119.5 - 122 ft	299-W15-46	05/03/04 09:43 AM		
B17N64	U	F03-018/ SOIL	222S20040100 - 4/21/2004	222-S Lab Operations	16	117 - 119.5 ft	299-W15-46	04/21/04 02:00 PM	VOA-Low;	B17N68 / VOA-High;
B17N64: 3 OF 5 BOTTLES CONTAINED DARK BROWN, MEDIUM COARSE SAND AND THE REMAINING 2 CONTAINED LIGHTER COLORED, BEIGE, MEDIUM COARSE SAND. THE INITIAL LOW-LEVEL VOA WAS PERFORMED USING THE FIRST THREE OF THE BOTTLES IN NUMERICAL ORDER WAS REPORTED AS SAMPLE NUMBER S04M000115. THIS BOTTLE CONTAINED THE BEIGE SAND. THE BOTTLES CHOSED FOR THE MS AND MSD CONTAINED THE DARKER BROWN SAND. AN ADDITIONAL VOA ANALYSIS WAS REQUESTED ON THE REMAINING VIAL OF DARKER SAND. NO ADDITIONAL QC WAS PERFORMED. THE ADDITIONAL VOA WAS REPORTED UNDER B17N64-A.										
B17N64-A	U	F03-018/ SOIL	222S20040100 - 4/21/2004	222-S Lab Operations	16	117 - 119.5 ft	299-W15-46	04/21/04 02:00 PM	VOA-Low;	
B17N64-A: 3 OF 5 BOTTLES CONTAINED DARK BROWN, MEDIUM COARSE SAND AND THE REMAINING 2 CONTAINED LIGHTER COLORED, BEIGE, MEDIUM COARSE SAND. THE INITIAL LOW-LEVEL VOA WAS PERFORMED USING THE FIRST THREE OF THE BOTTLES IN NUMERICAL ORDER WAS REPORTED AS SAMPLE NUMBER S04M000115. THIS BOTTLE CONTAINED THE BEIGE SAND. THE BOTTLES CHOSED FOR THE MS AND MSD CONTAINED THE DARKER BROWN SAND. AN ADDITIONAL VOA ANALYSIS WAS REQUESTED ON THE REMAINING VIAL OF DARKER SAND. NO ADDITIONAL QC WAS PERFORMED. THE ADDITIONAL VOA WAS REPORTED UNDER B17N64-A.										
B17N65	U	F03-018/ SOIL	H2590 - 5/13/2004	Eberline Services	2, 7, 8, 9, 10, 11, 12, 14, 17, 19, 50, 53	119.5 - 122 ft	299-W15-46	05/03/04 09:43 AM		
B17N66	U	F03-018/ SOIL		PNL - 3720 Building	28, 37, 45	122 - 124.5 ft	299-W15-46	05/04/04 09:20 AM		

Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17N67	U	F03-018/ SOIL	WSCF20041457 - 8/23/2004	Waste Sampling & Characterization	1, 2, 3, 10, 14, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	174 - 176.5 ft	299-W15-46	08/23/04 01:09 PM		
B17N68	U	F03-018/ SOIL	222S20040100 - 4/21/2004	222-S Lab Operations	16	117 - 119.5 ft	299-W15-46	04/21/04 02:00 PM	VOA-High;	B17N64 / VOA-Low;
B17N68: DARK BROWN, MEDIUM COARSE SAND										
B17N69	U	F03-018/ SOIL	H2690 - 8/23/2004	Eberline Services	7, 8, 9, 11, 19, 22, 50	174 - 176.5 ft	299-W15-46	08/23/04 01:09 PM		
B17N70	U	F03-018/ SOIL	WSCF20041487 - 8/25/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	184 - 186.5 ft	299-W15-46	08/25/04 11:35 AM		
B17N71	U	F03-018/ SOIL		222-S Lab Operations	16	184 - 186.5 ft	299-W15-46	08/25/04 11:35 AM		
B17N72	U	F03-018/ SOIL	H2703 - 8/25/2004	Eberline Services	7, 8, 9, 11, 19, 22	184 - 186.5 ft	299-W15-46	08/25/04 11:35 AM		
B17N73	U	F03-018/ SOIL	WSCF20041594 - 9/9/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	224 - 226.5 ft	299-W15-46	09/09/04 08:20 AM		

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Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17N74	U	F03-018/ SOIL	WSCF20041486 - 8/25/2004	Waste Sampling & Characterization	16	184 - 186.5 ft	299-W15-46	08/25/04 11:35 AM		
B17NL3	U	F03-018/ SOIL	H2719 - 9/9/2004	Eberline Services	7, 8, 9, 11, 19, 22	224 - 226.5 ft	299-W15-46	09/09/04 08:20 AM		
B17NL4	U	F03-018/ SOIL	H2719 - 9/9/2004	Shaw Group	29, 30, 31, 32, 33, 34	224 - 226.5 ft	299-W15-46	09/09/04 08:20 AM		
B17NL5	U	F03-018/ SOIL	WSCF20041594 - 9/9/2004	Waste Sampling & Characterization	1, 2, 3, 10, 14, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	226.5 - 229 ft	299-W15-46	09/09/04 08:58 AM		
B17NL6	U	F03-018/ SOIL	222S20030368 - 10/23/2003	222-S Lab Operations	43	50.5 - 53 ft	299-W15-46	10/22/03 10:45 AM	RAD Screen;	
B17NL7	U	F03-018/ SOIL	H2719 - 9/9/2004	Eberline Services	7, 8, 9, 11, 19, 22, 50	226.5 - 229 ft	299-W15-46	09/09/04 08:58 AM		
B17NL8	U	F03-018/ SOIL	WSCF20041628 - 9/15/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	228 - 230.5 ft	299-W15-46	09/15/04 08:40 AM	Primary Replicate;	B17NL9 / Replicate;

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Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17NL9	U	F03-018/ SOIL	WSCF20041628 - 9/15/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	228 - 230.5 ft	299-W15-46	09/15/04 09:40 AM	Replicate;	B17NL8 / Primary Replicate;
B17NM2	U	F03-018/ SOIL	WSCF20041723 - 9/27/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	230.5 - 232 ft	299-W15-46	09/27/04 08:05 AM		
B17NM3	U	F03-018/ SOIL	H2726 - 9/15/2004	Eberline Services, Lionville Laboratory Incorporated	7, 8, 9, 11, 19, 22, 27, 35, 36, 38, 39, 40, 44, 47, 48, 49, 50	228 - 230.5 ft	299-W15-46	09/15/04 08:40 AM	Primary Replicate;	B17NM5 / Replicate;
B17NM4	U	F03-018/ SOIL	H2750 - 9/28/2004	Eberline Services	7, 8, 9, 11, 19, 22, 27, 35, 36, 38, 39, 40, 44, 47, 48, 49, 50	232 - 234.5 ft	299-W15-46	09/27/04 08:05 AM		
B17NM5	U	F03-018/ SOIL	H2726 - 9/17/2004	Eberline Services, Lionville Laboratory Incorporated	7, 8, 9, 11, 19, 22, 27, 35, 36, 38, 39, 40, 44, 47, 48, 49, 50	228 - 230.5 ft	299-W15-46	09/15/04 08:40 AM	Replicate;	B17NM3 / Primary Replicate;
B17NM8	U	F03-018/ SOIL	222S20030350 - 10/21/2003	222-S Lab Operations	43	47.5 - 50 ft	299-W15-46	10/20/03 10:29 AM	RAD Screen;	B17N47 / RAD Screen;
B17NN0	U	F03-018/ SOIL	222S20040059 - 3/23/2004	222-S Lab Operations	43	90 - 92.5 ft	299-W15-46	03/23/04 08:35 AM	RAD Screen;	

Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17NN1	U	F03-018/ SOIL	222S20040069 - 4/6/2004	222-S Lab Operations	43	102.5 - 110 ft	299-W15-46	04/06/04 01:40 PM	RAD Screen;	
B17NN2	U	F03-018/ SOIL	222S20040072 - 4/8/2004	222-S Lab Operations	43	110 - 112.5 ft	299-W15-46	04/08/04 10:15 AM	RAD Screen;	
B17NN3	U	F03-018/ SOIL	222S20040096 - 4/16/2004	222-S Lab Operations	43	115 - 117.5 ft	299-W15-46	04/15/04 10:00 AM	RAD Screen;	
B17NN4	U	F03-018/ SOIL	222S20030377 - 10/29/2003	222-S Lab Operations	43	63.5 - 66 ft	299-W15-46	10/29/03 08:56 AM	RAD Screen;	B17TM6 / RAD Screen;
B17NN4-A	U	F03-018/ SOIL	222S20040099 - 4/21/2004	222-S Lab Operations	43	117 - 119.5 ft	299-W15-46	04/21/04 02:00 PM	RAD Screen;	
B17NN4-B	U	F03-018/ SOIL	WSCF20040677 - 4/26/2004	Waste Sampling & Characterization	23	117 - 119.5 ft	299-W15-46	04/21/04 02:00 PM	RAD Screen;	
B17NN5	U	F03-018/ SOIL	WSCF20040718 - 5/3/2004	222-S Lab Operations	43	119.5 - 122 ft	299-W15-46	05/03/04 09:43 AM	RAD Screen;	

Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17NN6	U	F03-018/ SOIL	WSCF20040727 - 5/4/2004	222-S Lab Operations	43	122 - 124.5 ft	299-W15-46	05/04/04 09:20 AM	RAD Screen;	
B17NN7	U	F03-018/ SOIL	WSCF20041458 - 8/23/2004	Waste Sampling & Characterization	23	174 - 176.5 ft	299-W15-46	08/23/04 01:09 PM	RAD Screen;	
B17NN8	U	F03-018/ SOIL	WSCF20041484 - 8/25/2004	Waste Sampling & Characterization	23	184 - 186.5 ft	299-W15-46	08/25/04 11:35 AM	RAD Screen;	
B17NN9	U	F03-018/ SOIL	WSCF20041593 - 9/9/2004	Waste Sampling & Characterization	43	224 - 226.5 ft	299-W15-46	09/09/04 08:20 AM	RAD Screen;	
B17NP0	U	F03-018/ SOIL	WSCF20041595 - 9/9/2004	Waste Sampling & Characterization	43	226.5 - 229 ft	299-W15-46	09/09/04 08:50 AM	RAD Screen;	
B17NP1	U	F03-018/ SOIL	WSCF20041625 - 9/15/2004	Waste Sampling & Characterization	43	228 - 230.5 ft	299-W15-46	09/15/04 08:40 AM	RAD Screen;	
B17NP2	U	F03-018/ SOIL	WSCF20041703 - 9/23/2004	Waste Sampling & Characterization	23	230.5 - 232 ft	299-W15-46	09/23/04 10:45 AM	RAD Screen;	

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Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17NP3	U	F03-018/ SOIL	WSCF20041721 - 9/27/2004	Waste Sampling & Characterization	23	230.5 - 232 ft	299-W15-46	09/27/04 08:05 AM	RAD Screen;	
B17RC0	U	F03-018/ SOIL	H2398 - 10/16/2003	Eberline Services	13, 15	0 - .5 ft	299-W15-46	10/07/03 01:15 PM		B17RC1 / RAD Screen;
B17RC1	U	F03-018/ SOIL	WSCF20031359 - 10/7/2003	222-S Lab Operations	43	0 - .5 ft	299-W15-46	10/07/03 01:15 PM	RAD Screen;	B17RC0 / RAD Screen;
B17RF2	U	F03-018/ SOIL		PNL - 3720 Building	28, 37, 45	50.5 - 53 ft	299-W15-46	10/22/03 10:45 AM		
B17RM3	U	F03-018/ SOIL	H2587 - 5/13/2004	Shaw Group	29, 30, 31, 32, 33, 34	119.5 - 122 ft	299-W15-46	05/03/04 09:43 AM		
B17T82	U	F03-018/ SOIL	H2604 - 5/27/2004	Shaw Group	29, 30, 31, 32, 33, 34	117 - 119.5 ft	299-W15-46	04/21/04 02:00 PM		
B17T84	U	F03-018/ SOIL	H2693 - 8/25/2004	Shaw Group	29, 30, 31, 32, 33, 34	184 - 186.5 ft	299-W15-46	08/25/04 11:35 AM		

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Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER, DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17TM6	U	F03-018/ SOIL	222S20030383 - 10/31/2003	222-S Lab Operations	2, 4, 10, 12, 14, 16, 17, 18, 19, 20, 24, 25, 26, 35, 39, 41, 42, 43, 46, 52	63.5 - 66 ft	299-W15-46	10/29/03 08:56 AM	VOA-High;	B17NN4 / RAD Screen;
B17TM6: A VERY HIGH CONCENTRATION OF CARBON TETRACHLORIDE WAS DETECTED DURING THE ANALYSIS OF THE LOW LEVEL VOA AND THE RESULTS WERE UNUSABLE. THE HIGH LEVEL RESULTS WERE OBTAINED FROM TWO DIFFERENT DILUTIONS OF THE HIGH LEVEL SAMPLE. SAMPLE WAS NOT HOMOGENEOUS - MIXTURE OF COARSE SAND, PEA GRAVEL AND PEBBLES. THE SAMPLES FOR BOTH THE LOW AND HIGH LEVEL VOAs WERE EACH PROVIDED IN A SINGLE AMBER GLASS BOTTLE WITH NO PRESERVATIVE. THE BOTTLES HAD TO BE OPENED IN A HOOD TO OBTAIN ALIQUOTS FOR ANALYSIS. THE SAMPLE INTEGRITY WAS COMPROMISED AND THE RESULTS MAY BE BIASED LOW.										
B17TM6-A	U	F03-018/ SOIL	H2459 - 12/8/2003	Eberline Services	27, 35, 36, 38, 40, 44, 48, 50	63.5 - 66 ft	299-W15-46	10/29/03 08:56 AM		
B17TM6-B	U	F03-018/ SOIL	W04140 - 12/18/2003	Severn Trent Incorporated, Richland	7, 8, 9, 11, 21	63.5 - 66 ft	299-W15-46	10/29/03 08:56 AM		
B17TM8	U	F03-018/ SOIL		Waste Sampling & Characterization	2, 3, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	102 - 104.5 ft	299-W15-46	04/05/04 02:31 PM		
B18XM8	U	F03-018/ SOIL	222S20040068 - 4/5/2004	222-S Lab Operations	43	102 - 104.5 ft	299-W15-46	04/05/04 02:31 PM	RAD Screen;	
B18XR8	U	F03-018/ SOIL	222S20040073 - 4/8/2004	222-S Lab Operations	2, 4, 10, 12, 14, 16, 17, 18, 19, 20, 24, 25, 26, 35, 39, 41, 42, 46, 52	109.5 - 112 ft	299-W15-46	04/08/04 10:15 AM	VOA-High;	B18XW3 / VOA-Low;
B18XR8: REQUESTED HIGH-LEVEL VOA ANALYSIS ONLY. DARK BROWN, MEDIUM COARSE SAND.										

Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B18XT1	U	F03-018/ SOIL	WSCF20040719 - 5/3/2004	Waste Sampling & Characterization	16	119.5 - 122 ft	299-W15-46	05/03/04 09:43 AM		
B18XW3	U	F03-018/ SOIL	222S20040073 - 4/14/2004	222-S Lab Operations	16	109.5 - 112 ft	299-W15-46	04/08/04 10:15 AM	VOA-Low;	B18XR8 / VOA-High;
B18XW3: REQUESTED LOW-LEVEL VOA ANALYSIS ONLY										
B190T8	U	F03-018/ SOIL	222S20040096 - 4/15/2004	222-S Lab Operations	43	112 - 112 ft	299-W15-46	04/15/04 02:13 PM	RAD Screen;	
B190T8-A	U	F03-018/ SOIL	222S20040073 - 4/15/2004	222-S Lab Operations	41	112 - 112 ft	299-W15-46	04/15/04 02:13 PM		
B190T8-A: REQUESTED THAT LAB USE THE RADSCREEN BOTTLE (B190T8) FOR ADDITIONAL ISOTOPIC PLUTONIUM ANALYSIS. SAMPLE WAS DARK BROWN, MEDIUM COARSE SAND										
B191Y4	U	F03-018/ SOIL	222S20040101 - 4/21/2004	222-S Lab Operations	16, 17, 24, 25, 26, 35, 39, 41, 42, 46, 52	115 - 117.5 ft	299-W15-46	04/15/04 09:30 AM	VOA-Low;	B191Y4-A / VOA-High;
B191Y4: 3 BOTTLES WERE RECEIVED FOR VOA. THEY WERE FILLED TO THE TOP WITH SOIL, LEAVING NO HEAD-SPACE. NO PRESERVATIVE WAS ADDED TO THE BOTTLES IN THE FIELD. IT WAS UNCLEAR WHETHER LOW-LEVEL OR HIGH-LEVEL VOA ANALYSIS WAS REQUESTED. THE CHEMIST PRESERVED PORTIONS OF THE SAMPLE FOR BOTH ANALYSES. THE LAB WAS INSTRUCTED TO REPORT THE HIGH-LEVEL VOA ON SAMPLE B191Y4-A.										
B191Y4-A	U	F03-018/ SOIL	222S20040101 - 4/21/2004	222-S Lab Operations	16	115 - 117.5 ft	299-W15-46	04/15/04 09:30 AM	VOA-High;	B191Y4 / VOA-Low;
B191Y4-A: 3 BOTTLES WERE RECEIVED FOR VOA. THEY WERE FILLED TO THE TOP WITH SOIL, LEAVING NO HEAD-SPACE. NO PRESERVATIVE WAS ADDED TO THE BOTTLES IN THE FIELD. IT WAS UNCLEAR WHETHER LOW-LEVEL OR HIGH-LEVEL VOA ANALYSIS WAS REQUESTED. THE CHEMIST PRESERVED PORTIONS OF THE SAMPLE FOR BOTH ANALYSES. THE LAB WAS INSTRUCTED TO REPORT THE HIGH-LEVEL VOA ON SAMPLE B191Y4-A.										

Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B191Y5	U	F03-018/ SOIL	222S20040099 - 4/21/2004	222-S Lab Operations	43	115 - 117.5 ft	299-W15-46	04/15/04 09:30 AM	RAD Screen;	
B191Y6	U	F03-018/ SOIL	H2576 - 5/3/2004	Shaw Group	29	115 - 117.5 ft	299-W15-46	04/15/04 09:30 AM		
B191Y7	U	F03-018/ SOIL	H2590 - 4/30/2004	Eberline Services	2, 5, 7, 8, 9, 10, 11, 12, 14, 17, 18, 19, 20, 22, 24, 25, 26, 27, 35, 36, 38, 39, 40, 41, 44, 47, 48, 49, 50, 51, 52, 53	115 - 117.5 ft	299-W15-46	04/15/04 09:30 AM		
B19LH8	U	F03-018/ SOIL	WSCF20041763 - 9/29/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	237 - 239.5 ft	299-W15-46	09/29/04 09:18 AM		
B19LH9	U	F03-018/ SOIL	WSCF20041784 - 10/4/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	247 - 249.5 ft	299-W15-46	10/04/04 12:00 PM		
B19LJ0	U	F03-018/ SOIL	WSCF20041823 - 10/7/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	257 - 259.5 ft	299-W15-46	10/07/04 10:15 AM		
B19LJ1	U	F03-018/ SOIL	WSCF20041876 - 10/13/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	277 - 279.5 ft	299-W15-46	10/13/04 01:45 PM		

Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B19LJ2	U	F03-018/ SOIL	WSCF20041934 - 10/21/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	297 - 299.5 ft	299-W15-46	10/21/04 11:50 AM		
B19LJ3	U	F03-018/ SOIL	WSCF20041987 - 10/28/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	317 - 319.5 ft	299-W15-46	10/28/04 07:30 AM		
B19LJ4	U	F03-018/ SOIL	WSCF20042029 - 11/2/2004	Waste Sampling & Characterization	1, 2, 3, 10, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	337 - 339.5 ft	299-W15-46	11/02/04 07:10 AM		
B19LJ5	U	F03-018/ SOIL	WSCF20042126 - 11/11/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	377 - 379.5 ft	299-W15-46	11/11/04 01:45 PM		
B19LJ6	U	F03-018/ SOIL	WSCF20042271 - 11/30/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	419.5 - 421 ft	299-W15-46	11/30/04 10:00 AM		
B19LJ7	U	F03-018/ SOIL	WSCF20042207 - 11/22/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	398 - 400.5 ft	299-W15-46	11/22/04 10:10 AM		
B19LJ8	U	F03-018/ SOIL	WSCF20050046 - 1/10/2005	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	482 - 484.5 ft	299-W15-46	01/10/05 11:15 AM		B19LL0 / RAD Screen;

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Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B19LJ9	U	F03-018/ SOIL	WSCF20050145 - 1/21/2005	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	520 - 522.5 ft	299-W15-46	01/21/05 12:40 PM		
B19LK0	U	F03-018/ SOIL	WSCF20041762 - 9/29/2004	Waste Sampling & Characterization	23	237 - 239.5 ft	299-W15-46	09/29/04 09:18 AM	RAD Screen;	B19NB4 / RAD Screen;
B19LK1	U	F03-018/ SOIL	WSCF20041782 - 10/4/2004	Waste Sampling & Characterization	23	247 - 249.5 ft	299-W15-46	10/04/04 12:00 PM	RAD Screen;	
B19LK2	U	F03-018/ SOIL	WSCF20041819 - 10/7/2004	Waste Sampling & Characterization	23	257 - 259.5 ft	299-W15-46	10/07/04 09:00 AM	RAD Screen;	B19NC2 / RAD Screen;
B19LK3	U	F03-018/ SOIL	WSCF20041875 - 10/13/2004	Waste Sampling & Characterization	23	277 - 279.5 ft	299-W15-46	10/13/04 01:45 PM	RAD Screen;	
B19LK4	U	F03-018/ SOIL	WSCF20041933 - 10/21/2004	Waste Sampling & Characterization	23	297 - 299.5 ft	299-W15-46	10/21/04 11:50 AM	RAD Screen;	
B19LK5	U	F03-018/ SOIL	WSCF20041986 - 10/28/2004	Waste Sampling & Characterization	23	317 - 319.5 ft	299-W15-46	10/28/04 07:30 AM	RAD Screen;	B19NC0 / RAD Screen; B19ND1 / RAD Screen; B19ND2 / RAD Screen;

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Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B19LK6	U	F03-018/ SOIL	WSCF20042027 - 11/2/2004	Waste Sampling & Characterization	23	337 - 339.5 ft	299-W15-46	11/02/04 07:10 AM	RAD Screen;	B19NK1 / RAD Screen; B19NK4 / RAD Screen; B1BB01 / RAD Screen; B1BB02 / RAD Screen;
B19LK7	U	F03-018/ SOIL	WSCF20042124 - 11/11/2004	Waste Sampling & Characterization	23	377 - 379.5 ft	299-W15-46	11/11/04 01:45 PM	RAD Screen;	B19NC1 / RAD Screen; B19NC3 / RAD Screen; B19ND3 / RAD Screen; B19ND4 / RAD Screen; B19ND5 / RAD Screen; B1BW60 / RAD Screen; B1BW61 / RAD Screen;
B19LK8	U	F03-018/ SOIL	WSCF20042270 - 11/30/2004	Waste Sampling & Characterization	23	417 - 419.5 ft	299-W15-46	11/30/04 10:00 AM	RAD Screen;	
B19LK9	U	F03-018/ SOIL	WSCF20042205 - 11/22/2004	Waste Sampling & Characterization	23	432 - 434.5 ft	299-W15-46	11/22/04 10:10 AM	RAD Screen;	
B19LL0	U	F03-018/ SOIL	WSCF20050045 - 1/10/2005	Waste Sampling & Characterization	23	482 - 484.5 ft	299-W15-46	01/10/05 11:15 AM	RAD Screen;	B19LJ8 / RAD Screen; B19NC4 / RAD Screen; B19ND6 / RAD Screen;
B19LL1	U	F03-018/ SOIL	WSCF20050144 - 1/21/2005	Waste Sampling & Characterization	23	520 - 522.5 ft	299-W15-46	01/21/05 12:40 PM	RAD Screen;	B19NC5 / RAD Screen; B19ND7 / RAD Screen;
B19NB4	U	F03-018/ SOIL	H2790 - 10/5/2004	Eberline Services	7, 8, 9, 11, 19, 22	237 - 239.5 ft	299-W15-46	09/29/04 09:18 AM		B19LK0 / RAD Screen;

Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B19NB5	U	F03-018/ SOIL	H2772 - 10/4/2004	Eberline Services	7, 8, 9, 11, 19, 22	247 - 249.5 ft	299-W15-46	10/04/04 12:00 PM		
B19NB6	U	F03-018/ SOIL	H2795 - 10/12/2004	Lionville Laboratory Incorporated	7, 8, 9, 11, 19, 22	257 - 259.5 ft	299-W15-46	10/07/04 09:00 AM	primary Replicate;	B1B9X9 / Replicate;
B19NB7	U	F03-018/ SOIL	H2804 - 10/13/2004	Eberline Services	7, 8, 9, 11, 19, 22	277 - 279.5 ft	299-W15-46	10/13/04 01:45 PM		
B19NB8	U	F03-018/ SOIL	H2809 - 10/27/2004	Eberline Services	7, 8, 9, 11, 19, 22	297 - 299.5 ft	299-W15-46	10/21/04 11:50 AM		
B19NB9	U	F03-018/ SOIL	H2825 - 11/3/2004	Eberline Services	7, 8, 9, 11, 19, 22	317 - 319.5 ft	299-W15-46	10/28/04 07:30 AM		
B19NC0	U	F03-018/ SOIL	H2825 - 11/3/2004	Eberline Services	7, 8, 9, 11, 19, 22	337 - 339.5 ft	299-W15-46	11/02/04 07:10 AM		B19LK5 / RAD Screen;
B19NC1	U	F03-018/ SOIL	H2844 - 11/17/2004	Eberline Services	7, 8, 9, 11, 19, 22	377 - 379.5 ft	299-W15-46	11/11/04 01:45 PM		B19LK7 / RAD Screen;

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Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B19NC2	U	F03-018/ SOIL	H2878 - 12/1/2004	Eberline Services	7, 8, 9, 11, 19, 22	419.5 - 421 ft	299-W15-46	11/30/04 10:00 AM		B19LK2 / RAD Screen;
B19NC3	U	F03-018/ SOIL	H2867 - 11/23/2004	Eberline Services	7, 8, 9, 11, 19, 22	398 - 400.5 ft	299-W15-46	11/22/04 10:10 AM		B19LK7 / RAD Screen;
B19NC4	U	F03-018/ SOIL	H2980 - NOT SHIPPED	Eberline Services	7, 8, 9, 11, 19, 22	482 - 484.5 ft	299-W15-46	01/10/05 11:15 AM		B19LL0 / RAD Screen;
B19NC5	U	F03-018/ SOIL	H3003 - 1/27/2005	Lionville Laboratory Incorporated	7, 8, 9, 11, 19, 22	520 - 522 ft	299-W15-46	01/21/05 12:40 PM		B19LL1 / RAD Screen;
B19NC6	U	F03-018/ SOIL	H2764 - 10/4/2004	Shaw Group	29, 30, 31, 32, 33, 34	237 - 239.5 ft	299-W15-46	09/29/04 09:18 AM		
B19NC7	U	F03-018/ SOIL	H2770 - 10/6/2004	Shaw Group	29, 30, 31, 32, 33, 34	247 - 249.5 ft	299-W15-46	10/04/04 12:00 PM		
B19NC8	U	F03-018/ SOIL	H2775 - 10/7/2004	Shaw Group	29, 30, 31, 32, 33, 34	257 - 259.5 ft	299-W15-46	10/07/04 10:15 AM		

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Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B19NC9	U	F03-018/ SOIL	H2786 - 10/26/2004	Shaw Group	29, 30, 31, 32, 33, 34	277 - 279.5 ft	299-W15-46	10/13/04 01:45 PM		
B19ND0	U	F03-018/ SOIL	H2800 - 11/3/2004	Shaw Group	29, 30, 31, 32, 33, 34	297 - 299.5 ft	299-W15-46	10/21/04 11:50 AM		
B19ND1	U	F03-018/ SOIL	H2809 - 11/3/2004	Shaw Group	29, 30, 31, 32, 33, 34	317 - 319.5 ft	299-W15-46	10/28/04 07:30 AM		B19LK5 / RAD Screen;
B19ND2	U	F03-018/ SOIL	H2809 - 11/3/2004	Shaw Group	29, 30, 31, 32, 33, 34	337 - 339.5 ft	299-W15-46	11/02/04 07:10 AM		B19LK5 / RAD Screen;
B19ND3	U	F03-018/ SOIL	H2843 - 11/22/2004	Shaw Group	29, 30, 31, 32, 33, 34	377 - 379.5 ft	299-W15-46	11/11/04 01:45 PM		B19LK7 / RAD Screen;
B19ND4	U	F03-018/ SOIL	H2863 - 12/2/2004	Shaw Group	29, 30, 31, 32, 33, 34	419.5 - 421 ft	299-W15-46	11/30/04 02:45 PM		B19LK7 / RAD Screen;
B19ND5	U	F03-018/ SOIL	H2857 - 11/23/2004	Shaw Group	29, 30, 31, 32, 33, 34	398 - 400.5 ft	299-W15-46	11/22/04 10:10 AM		B19LK7 / RAD Screen;

Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B19ND6	U	F03-018/ SOIL	H2977 - NOT SHIPPED	Shaw Group	29, 30, 31, 32, 33, 34	482 - 484.5 ft	299-W15-46	01/10/05 11:15 AM		B19LL0 / RAD Screen;
B19ND7	U	F03-018/ SOIL	H2994 - 1/21/2005	Shaw Group	29, 30, 31, 32, 33, 34	520 - 522.5 ft	299-W15-46	01/21/05 12:40 PM		B19LL1 / RAD Screen;
B19NJ7	U	F03-018/ SOIL	WSCF20041934 - 10/21/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	294.5 - 297 ft	299-W15-46	10/21/04 09:00 AM	Primary Split;	B1B9Y4 / Split;
B19NJ8	U	F03-018/ SOIL	WSCF20042117 - 11/11/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	367 - 369.5 ft	299-W15-46	11/10/04 01:45 PM	Primary Split;	B1BB01 / Split;
B19NK0	U	F03-018/ SOIL	H2800 - 10/27/2004	Eberline Services	7, 8, 9, 11, 19, 22, 27, 35, 36, 38, 39, 40, 44, 47, 48, 49, 50	294.5 - 297 ft	299-W15-46	10/21/04 09:00 AM	Primary Split;	B1B9Y5 / Split;
B19NK1	U	F03-018/ SOIL	H2817 - 11/11/2004	Eberline Services	7, 8, 9, 11, 19, 22, 27, 35, 36, 38, 39, 40, 44, 47, 48, 49, 50	367 - 369.5 ft	299-W15-46	11/10/04 01:45 PM	Primary Split;	B19LK6 / RAD Screen; B1BB02 / Split;
B19NK3	U	F03-018/ SOIL	H2800 - 11/3/2004	Shaw Group	29, 30, 31, 32, 33, 34	294.5 - 297 ft	299-W15-46	10/21/04 09:00 AM		

Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B19NK4	U	F03-018/ SOIL	H2817 - 11/11/2004	Shaw Group	29, 30, 31, 32, 33, 34	367 - 369.5 ft	299-W15-46	11/10/04 01:45 PM		B19LK6 / RAD Screen;
B19NK6	U	F03-018/ SOIL		PNL - 3720 Building	28, 37, 45	292 - 294.5 ft	299-W15-46	10/18/04 01:42 PM		
B19NK7	U	F03-018/ SOIL	PNL0047 - NOT SHIPPED	PNL - 3720 Building	28, 37, 45	364.5 - 367 ft	299-W15-46	11/09/04 09:20 AM		
B19NK8	U	F03-018/ SOIL		PNL - 3720 Building	45	423 ft	299-W15-46	01/04/05 01:25 PM		
B19NM2	U	F03-018/ SOIL	WSCF20041933 - 10/21/2004	Waste Sampling & Characterization	23	294.5 - 297 ft	299-W15-46	10/21/04 09:00 AM	RAD Screen;	
B19PJ2	U	F03-018/ SOIL	WSCF20042116 - 11/11/2004	Waste Sampling & Characterization	23	367 - 369.5 ft	299-W15-46	11/10/04 01:45 PM	RAD Screen;	
B1B9N5	U	F03-018/ SOIL	WSCF20042029 - 11/2/2004	Waste Sampling & Characterization	16	338 - 340 ft	299-W15-46	11/02/04 01:20 PM		

Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1B9X8	U	F03-018/ SOIL	WSCF20041821 - 10/7/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	257 - 259.5 ft	299-W15-46	10/07/04 01:45 PM		
B1B9X9	U	F03-018/ SOIL	H2795 - 10/12/2004	Lionville Laboratory Incorporated	7, 8, 9, 11, 19, 22	257 - 259.5 ft	299-W15-46	10/07/04 09:00 AM	Replicate;	B19NB6 / Primary Replicate;
B1B9Y4	U	F03-018/ SOIL	H2800 - 10/27/2004	Eberline Services, Lionville Laboratory Incorporated	2, 5, 10, 12, 16, 17, 18, 20, 24, 25, 26, 27, 35, 36, 38, 39, 40, 41, 44, 47, 48, 49, 51, 52, 53	294.5 - 297 ft	299-W15-46	10/21/04 09:00 AM	Split;	B19NJ7 / Primary Split;
B1B9Y5	U	F03-018/ SOIL	W04378 - 10/27/2004	Severn Trent St. Louis	6, 8, 9, 11, 19, 22	294.5 - 297 ft	299-W15-46	10/21/04 09:00 AM	Split;	B19NK0 / Primary Split;
B1BB01	U	F03-018/ SOIL	H2817 - 11/11/2004	Eberline Services, Lionville Laboratory Incorporated	2, 5, 10, 12, 16, 17, 18, 20, 24, 25, 26, 35, 41, 50, 51, 52, 53	367 - 369.5 ft	299-W15-46	11/10/04 01:45 PM	Split;	B19LK6 / RAD Screen; B19NJ8 / Primary Split;
B1BB02	U	F03-018/ SOIL	W04381 - 11/11/2004	Severn Trent St. Louis	6, 8, 9, 11, 19, 22	367 - 369.5 ft	299-W15-46	11/10/04 01:45 PM	Split;	B19LK6 / RAD Screen; B19NK1 / Primary Split;
B1BW58	U	F03-018/ SOIL	WSCF20042271 - 11/30/2004	Waste Sampling & Characterization	1, 2, 3, 10, 16, 17, 18, 20, 24, 25, 26, 35, 39, 41, 51, 53	417 - 419.5 ft	299-W15-46	11/30/04 08:40 AM		

Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1BW59	U	F03-018/ SOIL	WSCF20042270 - 11/30/2004	Waste Sampling & Characterization	23	417 - 419.5 ft	299-W15-46	11/30/04 08:40 AM	RAD Screen;	
B1BW60	U	F03-018/ SOIL	H2878 - 12/1/2004	Lionville Laboratory Incorporated	7, 8, 9, 11, 19, 22	417 - 419.5 ft	299-W15-46	11/30/04 09:40 AM		B19LK7 / RAD Screen;
B1BW61	U	F03-018/ SOIL	H2863 - NOT SHIPPED	Shaw Group	29, 30, 31, 32, 33, 34	417 - 419.5 ft	299-W15-46	11/30/04 08:40 AM		B19LK7 / RAD Screen;

Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP

ANALYTE CODES

1	200.8_METALS_ICPMS
2	300.0_ANIONS_IC
3	300.7_CATIONS_IC
4	350.1_AMMONIA
5	350.3_AMMONIA
6	353.1_NO3/NO2
7	353.2_NO3/NO2
8	413.1_OILGREASE
9	415.1_TOC
10	6010_METALS_ICP
11	7196_CR6
12	7471_HG_CVAA
13	8081_PEST_GC
14	8082_PCB_GC
15	8151_HERBICIDE_GC
16	8260_VOA_GCMS
17	8270_SVOA_GCMS
18	9010_CYANIDE
19	9030_SULFIDE
20	9045_PH
21	9060_TOC
22	9080_CATIONEXCH
23	ACTIVITY_SCAN
24	ALPHA_GPC
25	AMCMISO_FIE_PLT_AEA
26	BETA_GPC
27	C14_LSC
28	CRYSTALSTRUCT_XRD
29	D2216_%MOIS
30	D2937_DENSITY
31	D422_PARTCLSIZE
32	D4373_GASGEN

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Table A-1. Summary of Soil Samples Collected from the C3426 Borehole. (24 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-018	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; CHAMBERS, RL; GENT, PM; HUGHES, KD; MAHOOD, RO; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N 360 1, HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1, HNF-N-362-1, HNF-N-384 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
33		D5084_HYDRCON								
34		D854_PARTLDEN								
35		GAMMA_GS								
36		I129_SEP_LSC								
37		KD_BATCHCOLUMN								
38		NI63_LSC								
39		NP237_LLE_PLATE_AEA								
40		PA231_IE_PLATE_AEA								
41		PUISO_PLATE_AEA								
42		RADISOTOPES_ICPMS								
43		RADSCREEN								
44		SE79_SEP_IE_LSC								
45		SPECIAL_STUDIES								
46		SRISO_SEP_PRECIP_GPC								
47		SRTOT_SEP_PRECIP_GPC								
48		TC99_SEP_GPC								
49		THISO_IE_PLATE_AEA								
50		TRITIUM_DIST_LSC								
51		UISO_PLATE_AEA								
52		UTOT_KPA								
53		WTPH_DIESEL								

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17MM8	U	F03-019/ WATER	WSCF20031306 - 9/24/2003	Waste Sampling & Characterization	2, 5, 6, 7, 14, 18, 19, 20, 21, 23, 24, 25, 26, 28, 32, 35, 39, 42, 44			09/23/03 01:30 PM	Equipment Blank; Unfiltered;	
B17MM9	U	F03-019/ WATER	H2360 - 9/25/2003	Eberline Services	8, 10, 12, 13, 17, 22, 27, 29, 31, 33, 36, 37, 40		3728 BLDG 300 AREA	09/23/03 01:00 PM	Equipment Blank; Unfiltered;	
B17MN0	U	F03-019/ WATER	W04131 - 9/23/2003	Severn Trent Incorporated, Richland	15			09/23/03 01:00 PM	Equipment Blank; Unfiltered;	
B17NM6	U	F03-019/ WATER	WSCF20041754 - 9/28/2004	Waste Sampling & Characterization	2, 5, 6, 7, 14, 15, 19, 20, 25, 28, 32, 35, 39, 41, 42	234.5 ft	299-W15-46	09/28/04 01:55 PM	Filtered;	
B17NM7	U	F03-019/ WATER	H2754 - 9/29/2004	Eberline Services, Lionville Laboratory Incorporated	21, 27, 29, 33, 36, 37	234.5 ft	299-W15-46	09/28/04 01:55 PM	Filtered;	
B19ND9	U	F03-019/ WATER	WSCF20041807 - 10/6/2004	Waste Sampling & Characterization	19, 20, 25, 35, 39	251 ft	299-W15-46	10/06/04 10:15 AM	Filtered;	B1B9R6 / Trip Blank;
B19NF0	U	F03-019/ WATER	WSCF20041835 - 10/11/2004	Waste Sampling & Characterization	19, 20, 25, 35, 39	257 ft	299-W15-46	10/11/04 08:30 AM	Primary Replicate; Filtered;	B1B9R8 / Trip Blank; B1B9Y0 / Replicate;

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B19NF1	U	F03-019/ WATER	WSCF20041866 - 10/12/2004	Waste Sampling & Characterization	19, 20, 25, 35, 39	267 ft	299-W15-46	10/12/04 12:00 PM	Filtered;	B1B9R9 / Trip Blank;
B19NF2	U	F03-019/ WATER	WSCF20041887 - 10/14/2004	Waste Sampling & Characterization	19, 20, 25, 35, 39	277 ft	299-W15-46	10/14/04 09:57 AM	Unfiltered;	B1B9T1 / Trip Blank;
B19NF3	U	F03-019/ WATER	WSCF20041952 - 10/25/2004	Waste Sampling & Characterization	19, 20, 25, 35, 39	297 - 299.5 ft	299-W15-46	10/25/04 12:05 PM	Filtered;	B1B9T5 / Trip Blank; B1BCH8 / Equipment Blank;
B19NF4	U	F03-019/ WATER	WSCF20041997 - 10/28/2004	Waste Sampling & Characterization	19, 20, 25, 35, 39	317 - 319.5 ft	299-W15-46	10/28/04 10:45 AM	Unfiltered;	B1B9T7 / Trip Blank;
B19NF5	U	F03-019/ WATER	WSCF20042036 - 11/2/2004	Waste Sampling & Characterization	19, 20, 25, 35, 39	337 - 339.5 ft	299-W15-46	11/02/04 09:55 AM	Unfiltered;	B1B9T9 / Trip Blank;
B19NF6	U	F03-019/ WATER	WSCF20042087 - 11/8/2004	Waste Sampling & Characterization	19, 20, 25, 35, 39	357 ft	299-W15-46	11/08/04 10:25 AM	Filtered;	B1B9V0 / Trip Blank;
B19NF7	U	F03-019/ WATER	WSCF20042149 - 11/15/2004	Waste Sampling & Characterization	19, 20, 25, 35, 39	377 - 379.5 ft	299-W15-46	11/15/04 09:15 AM	Filtered;	B1B9V4 / Trip Blank;

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B19NF8	U	F03-019/ WATER	WSCF20042226 - 11/23/2004	Waste Sampling & Characterization	19, 20, 25, 35, 39	400 ft	299-W15-46	11/23/04 11:15 AM	Filtered;	B1B9V5 / Trip Blank;
B19NF9	U	F03-019/ WATER	WSCF20042278 - 11/30/2004	Waste Sampling & Characterization	19, 20, 25, 35, 39	419.5 - 421 ft	299-W15-46	11/30/04 12:44 PM	Filtered;	
B19NH1	U	F03-019/ WATER	WSCF20050084 - 1/13/2005	Waste Sampling & Characterization	19, 20, 25, 35, 39	482 - 484.5 ft	299-W15-46	01/13/05 09:25 AM	Unfiltered;	B1B9W3 / Trip Blank;
B19NH3	U	F03-019/ WATER	H2794 - 10/6/2004	Eberline Services	10, 13	251 ft	299-W15-46	10/06/04 10:15 AM	Filtered;	B19NL0 / RAD Screen;
B19NH4	U	F03-019/ WATER	H2794 - 10/12/2004	Eberline Services	10, 13	257 ft	299-W15-46	10/11/04 08:30 AM	Primary Replicate; Filtered;	B19NL1 / RAD Screen; B1B9Y1 / Replicate;
B19NH5	U	F03-019/ WATER	H2796 - 10/14/2004	Eberline Services	10, 13	267 ft	299-W15-46	10/12/04 12:00 PM	Filtered;	B19NL2 / RAD Screen;
B19NH6	U	F03-019/ WATER	H2788 - 10/14/2004	Eberline Services	10, 13	267 ft	299-W15-46	10/14/04 09:57 AM	Unfiltered;	

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B19NH7	U	F03-019/ WATER	H2799 - 10/25/2004	Eberline Services	10, 13	297 - 299.5 ft	299-W15-46	10/25/04 12:05 PM	Filtered;	B1BCH9 / Equipment Blank;
B19NH8	U	F03-019/ WATER	H2824 - 10/28/2004	Eberline Services	10, 13	317 - 319.5 ft	299-W15-46	10/28/04 10:45 AM	Unfiltered;	B19PH2 / RAD Screen;
B19NH9	U	F03-019/ WATER	H2824 - 11/3/2004	Eberline Services	10, 13	337 - 339.5 ft	299-W15-46	11/02/04 09:55 AM	Unfiltered;	B19PH2 / RAD Screen;
B19NJ0	U	F03-019/ WATER	H2818 - 11/11/2004	Lionville Laboratory Incorporated	10, 13	357 ft	299-W15-46	11/08/04 10:25 AM	Filtered;	
B19NJ1	U	F03-019/ WATER	H2845 - 11/17/2004	Eberline Services	10, 13	377 - 379.5 ft	299-W15-46	11/15/04 09:15 AM	Filtered;	B19PH9 / RAD Screen;
B19NJ2	U	F03-019/ WATER	H2879 - 12/1/2004	Eberline Services	10, 13	397 ft	299-W15-46	11/23/04 11:15 AM	Filtered;	B19PH5 / RAD Screen;
B19NJ3	U	F03-019/ WATER	H2879 - 12/1/2004	Eberline Services	10, 13	419.5 - 421 ft	299-W15-46	11/30/04 12:44 PM	Filtered;	B19PH5 / RAD Screen;

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B19NJ5	U	F03-019/ WATER	H2981 - 1/20/2005	Lionville Laboratory Incorporated	10, 13	482 - 484.5 ft	299-W15-46	01/13/05 09:25 AM	Unfiltered;	
B19NL0	U	F03-019/ WATER	WSCF20041805 - 10/6/2004	Waste Sampling & Characterization	23	251 ft	299-W15-46	10/06/04 12:35 PM	RAD Screen; Filtered;	B19NH3 / RAD Screen;
B19NL1	U	F03-019/ WATER	WSCF20041833 - 10/11/2004	Waste Sampling & Characterization	23	257 ft	299-W15-46	10/11/04 08:30 AM	RAD Screen; Filtered;	B19NH4 / RAD Screen; B1B9Y1 / RAD Screen;
B19NL2	U	F03-019/ WATER	WSCF20041855 - 10/12/2004	Waste Sampling & Characterization	23	267 ft	299-W15-46	10/12/04 12:00 PM	RAD Screen; Filtered;	B19NH5 / RAD Screen;
B19NL3	U	F03-019/ WATER	WSCF20041886 - 10/14/2004	Waste Sampling & Characterization	23	267 ft	299-W15-46	10/14/04 09:57 AM	RAD Screen; Filtered;	B1B9T1 / Trip Blank;
B19NL5	U	F03-019/ WATER	WSCF20041702 - 9/23/2004	Waste Sampling & Characterization	23	230.5 - 232 ft	299-W15-46	09/23/04 12:25 PM	RAD Screen; Unfiltered;	
B19NM3	U	F03-019/ WATER	WSCF20041913 - 10/19/2004	Waste Sampling & Characterization	5, 6, 7, 14, 19, 20, 21, 28, 32, 39, 42	292 - 294 ft	299-W15-46	10/19/04 10:47 AM	Primary Split; Unfiltered;	B1B9T3 / Trip Blank; B1B9Y2 / Split;

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B19NM4	U	F03-019/ WATER	WSCF20042104 - 11/10/2004	Waste Sampling & Characterization	5, 6, 7, 14, 19, 20, 21, 28, 32, 39, 42	364.5 - 366.6 ft	299-W15-46	11/10/04 07:55 AM	Primary Split; Filtered;	B1B9V2 / Trip Blank; B1BB03 / Split;
B19NM5	U	F03-019/ WATER	WSCF20041912 - 10/19/2004	Waste Sampling & Characterization	23	294.5 - 297 ft	299-W15-46	10/19/04 10:47 AM	RAD Screen; Unfiltered;	B1B9T3 / Trip Blank;
B19NM6	U	F03-019/ WATER	WSCF20042103 - 11/10/2004	Waste Sampling & Characterization	23	367 - 369.5 ft	299-W15-46	11/10/04 07:55 AM	RAD Screen; Filtered;	B19NM8 / RAD Screen; B1B9V2 / Trip Blank; B1BB03 / RAD Screen; B1BB04 / RAD Screen;
B19NM7	U	F03-019/ WATER	H2788 - 9/29/2004	Eberline Services	27, 29, 33, 36, 37	232 - 234.5 ft	299-W15-46	09/28/04 01:55 PM	Primary Split; Unfiltered;	B1B9Y3 / Split;
B19NM8	U	F03-019/ WATER	H2818 - 11/11/2004	Eberline Services	27, 29, 33, 36, 37	367 - 369.5 ft	299-W15-46	11/10/04 07:55 AM	Primary Split; Filtered;	B19NM6 / RAD Screen; B1BB04 / Split;
B19NM9	U	F03-019/ WATER	WSCF20050186 - 1/26/2005	Waste Sampling & Characterization	2, 5, 6, 7, 14, 15, 19, 20, 25, 28, 32, 35, 39, 41, 42	520 - 525 ft	299-W15-46	01/26/05 01:05 PM	Primary Replicate; Filtered;	B1B9N2 / Replicate; B1B9X7 / Trip Blank;
B19PF9	U	F03-019/ WATER	WSCF20050185 - 1/26/2005	Waste Sampling & Characterization	23	527 - 529.5 ft	299-W15-46	01/26/05 01:05 PM	RAD Screen; Filtered;	B19PH0 / RAD Screen; B1B9N3 / RAD Screen; B1B9X7 / Trip Blank;

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B19PH0	U	F03-019/ WATER	H2992 - 1/27/2005	Eberline Services, Lionville Laboratory Incorporated	21, 27, 29, 33, 36, 37	527 - 529.5 ft	299-W15-46	01/26/05 01:05 PM	Primary Replicate; Filtered;	B19PF9 / RAD Screen; B1B9N3 / Replicate;
B19PH1	U	F03-019/ WATER	WSCF20041950 - 10/25/2004	Waste Sampling & Characterization	23	297 - 299.5 ft	299-W15-46	10/25/04 12:05 PM	RAD Screen; Filtered;	B1B9T5 / Trip Blank; B1BCH8 / Equipment Blank;
B19PH2	U	F03-019/ WATER	WSCF20041996 - 10/28/2004	Waste Sampling & Characterization	23	317 - 319.5 ft	299-W15-46	10/28/04 10:45 AM	RAD Screen; Unfiltered;	B19NH8 / RAD Screen; B19NH9 / RAD Screen; B1B9T7 / Trip Blank;
B19PH3	U	F03-019/ WATER	WSCF20042034 - 11/2/2004	Waste Sampling & Characterization	23	337 - 339.5 ft	299-W15-46	11/02/04 09:55 AM	RAD Screen; Unfiltered;	B1B9T9 / Trip Blank;
B19PH4	U	F03-019/ WATER	WSCF20042085 - 11/8/2004	Waste Sampling & Characterization	23	357 ft	299-W15-46	11/08/04 10:25 AM	RAD Screen; Unfiltered;	
B19PH5	U	F03-019/ WATER	WSCF20042224 - 11/23/2004	Waste Sampling & Characterization	23	397 ft	299-W15-46	11/23/04 11:15 AM	RAD Screen; Unfiltered;	B19NJ2 / RAD Screen; B19NJ3 / RAD Screen; B1B9V5 / Trip Blank;
B19PH6	U	F03-019/ WATER	WSCF20042275 - 11/30/2004	Waste Sampling & Characterization	23	419.5 - 421 ft	299-W15-46	11/30/04 12:44 PM	RAD Screen; Filtered;	

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAV, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B19PH8	U	F03-019/ WATER	WSCF20050083 - 1/13/2005	Waste Sampling & Characterization	23	482 - 484.5 ft	299-W15-46	01/13/05 09:25 AM	Unfiltered;	B1B9W3 / Trip Blank;
B19PH9	U	F03-019/ WATER	WSCF20042151 - 11/15/2004	Waste Sampling & Characterization	23	377 - 379.5 ft	299-W15-46	11/15/04 09:15 AM	RAD Screen; Filtered;	B19NJ1 / RAD Screen; B1B9V4 / Trip Blank;
B19PJ4	U	F03-019/ WATER	WSCF20041753 - 9/28/2004	Waste Sampling & Characterization	23	234.5 ft	299-W15-46	09/28/04 01:55 PM	RAD Screen; Filtered;	B1B9R2 / Trip Blank;
B1B444	U	F03-019/ WATER		PNL - 3720 Building	30	230.5 - 232 ft	299-W15-46	09/23/04 10:30 AM	Unfiltered;	
B1B445	U	F03-019/ WATER		PNL - 3720 Building	30	292 - 294.5 ft	299-W15-46	10/19/04 11:13 AM	Filtered;	
B1B446	U	F03-019/ WATER		PNL - 3720 Building	30	364.5 - 367 ft	299-W15-46	11/10/04 07:55 AM	Unfiltered;	
B1B7X6	U	F03-019/ WATER	WSCF20041615 - 9/14/2004	Waste Sampling & Characterization	23	228 - 230.5 ft	299-W15-46	09/14/04 09:55 AM	RAD Screen; Filtered;	

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1B7X7	U	F03-019/ WATER	WSCF20041616 - 9/14/2004	Waste Sampling & Characterization	5, 6, 7, 14, 15, 19, 20, 25, 28, 32, 35, 39, 42	228 - 230.5 ft	299-W15-46	09/14/04 09:55 AM	Filtered;	
B1B7X8	U	F03-019/ WATER	H2727 - 9/17/2004	Eberline Services, Lionville Laboratory Incorporated	21, 27, 29, 33, 36, 37	228 - 230.5 ft	299-W15-46	09/13/04 02:20 PM	Filtered;	
B1B9N2	U	F03-019/ WATER	WSCF20050186 - 1/26/2005	Waste Sampling & Characterization	2, 5, 6, 7, 14, 15, 19, 20, 25, 28, 32, 35, 39, 41, 42	520 - 525 ft	299-W15-46	01/26/05 01:05 PM	Replicate; Unfiltered;	B19NM9 / Primary Replicate; B1B9X7 / Trip Blank;
B1B9N3	U	F03-019/ WATER	H2992 - 1/27/2005	Eberline Services, Lionville Laboratory Incorporated	21, 27, 29, 33, 36, 37	527 - 529.5 ft	299-W15-46	01/26/05 01:05 PM	Replicate; Filtered;	B19PF9 / RAD Screen; B19PH0 / Primary Replicate;
B1B9N4	U	F03-019/ WATER	WSCF20041616 - 9/14/2004	Waste Sampling & Characterization	19			09/14/04 09:55 AM	Trip Blank; Unfiltered;	
B1B9N6	U	F03-019/ WATER	WSCF20041629 - 9/15/2004	Waste Sampling & Characterization	19			09/15/04 08:05 AM	Trip Blank; Unfiltered;	
B1B9R2	U	F03-019/ WATER	WSCF20041755 - 9/28/2004	Waste Sampling & Characterization	19			09/28/04 03:15 PM	Trip Blank; Unfiltered;	B19PJ4 / Trip Blank;

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1B9R3	U	F03-019/ WATER	WSCF20041761 - 9/29/2004	Waste Sampling & Characterization	19			09/29/04 08:45 AM	Trip Blank; Unfiltered;	
B1B9R5	U	F03-019/ WATER	WSCF20041783 - 10/4/2004	Waste Sampling & Characterization	19			10/04/04 01:00 PM	Trip Blank; Unfiltered;	
B1B9R6	U	F03-019/ WATER	WSCF20041807 - 10/6/2004	Waste Sampling & Characterization	19			10/06/04 11:50 AM	Trip Blank; Unfiltered;	B19ND9 / Trip Blank;
B1B9R7	U	F03-019/ WATER	WSCF20041820 - 10/7/2004	Waste Sampling & Characterization	19			10/07/04 12:00 PM	Trip Blank; Unfiltered;	
B1B9R8	U	F03-019/ WATER	WSCF20041835 - 10/11/2004	Waste Sampling & Characterization	19			10/11/04 08:20 AM	Trip Blank; Unfiltered;	B19NF0 / Trip Blank;
B1B9R9	U	F03-019/ WATER	WSCF20041866 - 10/12/2004	Waste Sampling & Characterization	19			10/11/04 12:15 PM	Trip Blank; Unfiltered;	B19NF1 / Trip Blank;
B1B9T0	U	F03-019/ WATER	WSCF20041877 - 10/13/2004	Waste Sampling & Characterization	19			10/13/04 02:45 PM	Trip Blank; Unfiltered;	

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1B9T1	U	F03-019/ WATER	WSCF20041887 - 10/14/2004	Waste Sampling & Characterization	19			10/14/04 09:50 AM	Trip Blank; Unfiltered;	B19NF2 / Trip Blank; B19NL3 / Trip Blank;
B1B9T2	U	F03-019/ WATER	WSCF20041935 - 10/21/2004	Waste Sampling & Characterization	19			10/21/04 10:20 AM	Trip Blank; Unfiltered;	
B1B9T3	U	F03-019/ WATER	WSCF20041913 - 10/19/2004	Waste Sampling & Characterization	19			10/19/04 10:45 AM	Trip Blank; Unfiltered;	B19NM3 / Trip Blank; B19NM5 / Trip Blank;
B1B9T5	U	F03-019/ WATER	WSCF20041952 - 10/25/2004	Waste Sampling & Characterization	19			10/25/04 06:45 AM	Trip Blank; Unfiltered;	B19NF3 / Trip Blank; B19PH1 / Trip Blank;
B1B9T6	U	F03-019/ WATER	WSCF20041988 - 10/28/2004	Waste Sampling & Characterization	19			10/28/04 08:20 AM	Trip Blank; Unfiltered;	
B1B9T7	U	F03-019/ WATER	WSCF20041997 - 10/28/2004	Waste Sampling & Characterization	19			10/28/04 11:15 AM	Trip Blank; Unfiltered;	B19NF4 / Trip Blank; B19PH2 / Trip Blank;
B1B9T8	U	F03-019/ WATER	WSCF20042028 - 11/2/2004	Waste Sampling & Characterization	19			11/02/04 07:45 AM	Trip Blank; Unfiltered;	

Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1B9T9	U	F03-019/ WATER	WSCF20042036 - 11/2/2004	Waste Sampling & Characterization	19			11/02/04 10:30 AM	Trip Blank; Unfiltered;	B19NF5 / Trip Blank; B19PH3 / Trip Blank;
B1B9V0	U	F03-019/ WATER	WSCF20042087 - 11/8/2004	Waste Sampling & Characterization	19			11/08/04 10:10 AM	Trip Blank; Unfiltered;	B19NF6 / Trip Blank;
B1B9V1	U	F03-019/ WATER	WSCF20042119 - 11/11/2004	Waste Sampling & Characterization	19			11/10/04 01:30 PM	Trip Blank; Unfiltered;	
B1B9V2	U	F03-019/ WATER	WSCF20042104 - 11/10/2004	Waste Sampling & Characterization	19			11/10/04 08:25 AM	Trip Blank; Unfiltered;	B19NM4 / Trip Blank; B19NM6 / Trip Blank;
B1B9V4	U	F03-019/ WATER	WSCF20042149 - 11/15/2004	Waste Sampling & Characterization	19			11/15/04 09:00 AM	Trip Blank; Unfiltered;	B19NF7 / Trip Blank; B19PH9 / Trip Blank;
B1B9V5	U	F03-019/ WATER	WSCF20042226 - 11/23/2004	Waste Sampling & Characterization	19			11/23/04 11:00 AM	Trip Blank; Unfiltered;	B19NF8 / Trip Blank; B19PH5 / Trip Blank;
B1B9V7	U	F03-019/ WATER	WSCF20042278 - 11/30/2004	Waste Sampling & Characterization	19			11/30/04 12:30 PM	Trip Blank; Unfiltered;	

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1B9W0	U	F03-019/ WATER	WSCF20042208 - 11/22/2004	Waste Sampling & Characterization	19			11/22/04 10:00 AM	Trip Blank; Unfiltered;	
B1B9W2	U	F03-019/ WATER	WSCF20050047 - 1/10/2005	Waste Sampling & Characterization	19			01/10/05 08:00 AM	Trip Blank; Unfiltered;	
B1B9W3	U	F03-019/ WATER	WSCF20050084 - 1/13/2005	Waste Sampling & Characterization	19			01/13/05 09:45 AM	Trip Blank; Unfiltered;	B19NH1 / Trip Blank; B19PH8 / Trip Blank;
B1B9W4	U	F03-019/ WATER	WSCF20050146 - 1/24/2005	Waste Sampling & Characterization	19			01/21/05 02:30 PM	Trip Blank; Unfiltered;	
B1B9X7	U	F03-019/ WATER	WSCF20050186 - 1/26/2005	Waste Sampling & Characterization	19			01/26/05 01:00 PM	Trip Blank; Unfiltered;	B19NM9 / Trip Blank; B19PF9 / Trip Blank; B1B9N2 / Trip Blank;
B1B9Y0	U	F03-019/ WATER	WSCF20041835 - 10/11/2004	Waste Sampling & Characterization	19, 20, 25, 35, 39	257 ft	299-W15-46	10/11/04 08:30 AM	Replicate; Filtered;	B19NF0 / Primary Replicate;
B1B9Y1	U	F03-019/ WATER	H2794 - 10/12/2004	Lionville Laboratory Incorporated	10, 13	257 ft	299-W15-46	10/11/04 08:30 AM	Replicate; Filtered;	B19NH4 / Primary Replicate; B19NL1 / RAD Screen;

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1B9Y2	U	F03-019/ WATER	H2788 - 10/21/2004	Eberline Services, Lionville Laboratory Incorporated	6, 10, 14, 19, 20, 21, 28, 32, 38, 42	292 - 294 ft	299-W15-46	10/19/04 10:47 AM	Split; Filtered;	B19NM3 / Primary Split;
B1B9Y3	U	F03-019/ WATER	W04422 - 10/21/2004	Severn Trent Incorporated, Richland	27, 29, 36, 37	294.5 - 297 ft	299-W15-46	10/19/04 10:47 AM	Split; Filtered;	B19NM7 / Primary Split;
B1BB03	U	F03-019/ WATER	H2818 - 11/11/2004	Eberline Services, Lionville Laboratory Incorporated	6, 10, 14, 19, 20, 28, 32, 38, 42	364.5 - 366.6 ft	299-W15-46	11/10/04 07:55 AM	Split; Filtered;	B19NM4 / Primary Split; B19NM6 / RAD Screen;
B1BB04	U	F03-019/ WATER	W04437 - 11/11/2004	Severn Trent Incorporated, Richland	27, 29, 36, 37	367 - 369.5 ft	299-W15-46	11/10/04 07:55 AM	Split; Filtered;	B19NM6 / RAD Screen; B19NM8 / Primary Split;
B1BCH8	U	F03-019/ WATER	WSCF20041952 - 10/25/2004	Waste Sampling & Characterization	2, 5, 6, 7, 14, 15, 18, 19, 20, 21, 24, 25, 26, 28, 32, 35, 39, 41, 42, 44			10/25/04 08:15 AM	Equipment Blank; Unfiltered;	B19NF3 / Equipment Blank; B19PH1 / Equipment Blank;
B1BCH9	U	F03-019/ WATER	H2799 - 10/27/2004	Eberline Services, Lionville Laboratory Incorporated	8, 9, 10, 12, 13, 16, 17, 22, 27, 29, 31, 33, 35, 36, 37, 40			10/25/04 08:15 AM	Equipment Blank; Unfiltered;	B19NH7 / Equipment Blank;
B1BW57	U	F03-019/ WATER	WSCF20042272 - 11/30/2004	Waste Sampling & Characterization	19			11/30/04 08:45 AM	Trip Blank; Unfiltered;	

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1C886	U	F03-019/ WATER	WSCF20050212 - 1/31/2005	Waste Sampling & Characterization	19, 20		299-W15-46	01/27/05 01:45 PM	Unfiltered;	
B1CLT0	U	F03-019/ WATER	FP0226 - 10/11/2004	Field Analysis Activities	43	268 ft	299-W15-46	10/12/04 12:00 AM	Unfiltered;	
B1CLT1	U	F03-019/ WATER	FP0226 - 10/14/2004	Field Analysis Activities	43	277 ft	299-W15-46	10/14/04 12:00 AM	Unfiltered;	
B1CLT2	U	F03-019/ WATER	FP0226 - 10/19/2004	Field Analysis Activities	43	292 ft	299-W15-46	10/19/04 12:00 AM	Unfiltered;	
B1CLT3	U	F03-019/ WATER	FP0226 - 10/25/2004	Field Analysis Activities	43	297.5 ft	299-W15-46	10/25/04 12:00 AM	Unfiltered;	
B1CLT4	U	F03-019/ WATER	FP0226 - 11/2/2004	Field Analysis Activities	43	339 ft	299-W15-46	11/02/04 12:00 AM	Unfiltered;	
B1CLT5	U	F03-019/ WATER	FP0226 - 11/8/2004	Field Analysis Activities	43	357 ft	299-W15-46	11/08/04 12:00 AM	Unfiltered;	

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1CLT6	U	F03-019/ WATER	FP0226 - 11/10/2004	Field Analysis Activities	43	364.5 - 366.6 ft	299-W15-46	11/10/04 12:00 AM	Unfiltered;	
B1CLT7	U	F03-019/ WATER	FP0226 - 11/15/2004	Field Analysis Activities	43	377 ft	299-W15-46	11/15/04 09:30 AM	Unfiltered;	
B1CLT8	U	F03-019/ WATER	FP0226 - 11/23/2004	Field Analysis Activities	43	400 ft	299-W15-46	11/23/04 12:00 AM	Unfiltered;	
B1CLT9	U	F03-019/ WATER	FP0226 - 11/30/2004	Field Analysis Activities	43	419 ft	299-W15-46	11/30/04 12:00 AM	Unfiltered;	
B1CLV0	U	F03-019/ WATER	FP0226 - 11/30/2004	Field Analysis Activities	43	419 ft	299-W15-46	11/30/04 12:00 AM	Unfiltered;	
B1CLV1	U	F03-019/ WATER	FP0226 - 1/13/2005	Field Analysis Activities	43	482 ft	299-W15-46	01/13/05 12:00 AM	Unfiltered;	
B1CLV2	U	F03-019/ WATER	FP0226 - 1/26/2005	Field Analysis Activities	43	520 - 525 ft	299-W15-46	01/26/05 01:05 PM	Primary Replicate; Unfiltered;	B1CLV3 / Replicate;

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1CLV3	U	F03-019/ WATER	FP0226 - 1/27/2005	Field Analysis Activities	43	520 - 525 ft	299-W15-46	01/26/05 01:05 PM	Replicate; Unfiltered;	B1CLV2 / Primary Replicate;
B1FJJ8	U	F03-019/ WATER	FP0249 - 9/14/2004	Field Analysis Activities	1, 3, 4, 11, 34	228 ft	299-W15-46	09/14/04 12:00 AM	Unfiltered;	
B1FJJ9	U	F03-019/ WATER	FP0249 - 9/28/2004	Field Analysis Activities	1, 3, 4, 11, 34	237 ft	299-W15-46	09/28/04 12:00 AM	Unfiltered;	
B1FJK0	U	F03-019/ WATER	FP0249 - 10/6/2004	Field Analysis Activities	1, 3, 4, 11, 34	253 ft	299-W15-46	10/06/04 12:00 AM	Unfiltered;	
B1FJK1	U	F03-019/ WATER	FP0249 - 10/11/2004	Field Analysis Activities	1, 3, 4, 11, 34	260.5 ft	299-W15-46	10/11/04 12:00 AM	Unfiltered;	
B1FJK2	U	F03-019/ WATER	FP0249 - 10/12/2004	Field Analysis Activities	1, 3, 4, 11, 34	268 ft	299-W15-46	10/12/04 12:00 AM	Unfiltered;	
B1FJK3	U	F03-019/ WATER	FP0249 - 10/14/2004	Field Analysis Activities	1, 3, 4, 11, 34	278 ft	299-W15-46	10/14/04 12:00 AM	Unfiltered;	

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1FJK4	U	F03-019/ WATER	FP0249 - 10/19/2004	Field Analysis Activities	1, 3, 4, 11, 34	293 ft	299-W15-46	10/19/04 12:00 AM	Unfiltered;	
B1FJK5	U	F03-019/ WATER	FP0249 - 10/25/2004	Field Analysis Activities	1, 3, 4, 11, 34	297.5 ft	299-W15-46	10/25/04 12:00 AM	Unfiltered;	
B1FJK6	U	F03-019/ WATER	FP0249 - 10/28/2004	Field Analysis Activities	1, 3, 4, 11, 34	317 ft	299-W15-46	10/28/04 12:00 AM	Unfiltered;	
B1FJK7	U	F03-019/ WATER	FP0249 - 11/2/2004	Field Analysis Activities	1, 3, 4, 11, 34	339 ft	299-W15-46	11/02/04 12:00 AM	Unfiltered;	
B1FJK8	U	F03-019/ WATER	FP0249 - 11/8/2004	Field Analysis Activities	1, 3, 4, 11, 34	357 ft	299-W15-46	11/08/04 12:00 AM	Unfiltered;	
B1FJK9	U	F03-019/ WATER	FP0249 - 11/10/2004	Field Analysis Activities	1, 3, 4, 11, 34	365 ft	299-W15-46	11/10/04 12:00 AM	Unfiltered;	
B1FJL0	U	F03-019/ WATER	FP0249 - 11/15/2004	Field Analysis Activities	1, 3, 4, 11, 34	379 ft	299-W15-46	11/15/04 12:00 AM	Unfiltered;	

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Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1FJL1	U	F03-019/ WATER	FP0249 - 11/17/2004	Field Analysis Activities	1, 3, 4, 11, 34	397.5 ft	299-W15-46	11/17/04 12:00 AM	Unfiltered;	
B1FJL2	U	F03-019/ WATER	FP0249 - NOT SHIPPED	Field Analysis Activities	1, 3, 4, 11, 34	400 ft	299-W15-46	11/23/04 12:00 AM	Unfiltered;	
B1FJL3	U	F03-019/ WATER	FP0249 - 1/13/2005	Field Analysis Activities	1, 3, 4, 11, 34	482 ft	299-W15-46	01/13/05 12:00 AM	Unfiltered;	
B1FJL4	U	F03-019/ WATER	FP0249 - 1/26/2005	Field Analysis Activities	1, 3, 4, 11, 34	528 ft	299-W15-46	01/26/05 12:00 AM	Unfiltered;	
B1H3H1	U	F03-019/ WATER	FPFAKE0004 - 9/28/2004	Field Analysis Activities	43		299-W15-46	09/28/04 12:00 AM	Unfiltered;	

Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP

ANALYTE CODES

1	120.1_CONDUCT_FLD
2	150.1_PH
3	170.1_TEMP_FLD
4	180.1_TURBIDITY_FLD
5	200.8_METALS_ICPMS
6	300.0_ANIONS_IC
7	300.7_CATIONS_IC
8	310.1_ALKALINITY
9	350.3_AMMONIA
10	353.2_NO3/NO2
11	360.1_OXYGEN_FLD
12	413.1_OILGREASE
13	415.1_TOC
14	6010_METALS_ICP
15	7196_CR6
16	7470_HG_CVAA
17	8081_PEST_GC
18	8082_PCB_GC
19	8260_VOA_GCMS
20	8270_SVOA_GCMS
21	9010_CYANIDE
22	9030_SULFIDE
23	ACTIVITY_SCAN
24	ALPHA_GPC
25	AMCMISO_EIE_PLT_AEA
26	BETA_GPC
27	C14_LSC
28	GAMMA_GS
29	I129_SEP_LSC
30	KD_BATCHCOLUMN
31	NI63_LSC
32	NP237_LLE_PLATE_AEA

Table A-2. Summary of Water Samples Collected from the C3426 Borehole. (21 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-019	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; HUGHES, KD; JOHANSEN, TM; PFISTER, RT; POPE, JS; TYRA, D; WEIL, MR; WIBERG, D
LOG BOOK	HNF-N-336 1, HNF-N-336-1, HNF-N-360 1, HNF-N-360-1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
33		PA231_IE_PLATE_AEA								
34		PH_ELECT_FLD								
35		PUISO_PLATE_AEA								
36		SE79_SEP_IE_LSC								
37		SRTOT_SEP_PRECIP_GPC								
38		TC99_SEP_GPC								
39		TC99_SEP_LSC								
40		THISO_IE_PLATE_AEA								
41		TRITIUM_DIST_LSC								
42		UISO_PLATE_AEA								
43		VOA_GC_FLD								
44		WTPH_DIESEL								

Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17RM4	U	F03-022/ GASEOUS	FP0231 - 10/13/2003	Field Analysis Activities	1, 2, 3	28.5 - 29.5 ft	299-W15-46	10/13/03 10:40 AM		
B17RM5	U	F03-022/ GASEOUS	FP0231 - 10/20/2003	Field Analysis Activities	1, 2, 3	49.5 - 50 ft	299-W15-46	10/20/03 01:46 PM		
B17RM6	U	F03-022/ GASEOUS	FP0231 - 10/20/2003	Field Analysis Activities	1, 2, 3	49.5 - 50 ft	299-W15-46	10/20/03 01:46 PM	Primary Replicate;	B18CX0 / Replicate;
B17RM7	U	F03-022/ GASEOUS	FP0231 - 10/21/2003	Field Analysis Activities	1, 2, 3	49.5 - 50 ft	299-W15-46	10/21/03 08:10 AM	Primary Replicate;	B18CX1 / Replicate;
B17RM8	U	F03-022/ GASEOUS	FP0231 - 10/21/2003	Field Analysis Activities	1, 2, 3	49.5 - 50 ft	299-W15-46	10/21/03 08:16 AM		
B17RM9	U	F03-022/ GASEOUS		Field Analysis Activities	1, 4	58.5 - 59.5 ft	299-W15-46	10/27/03 09:00 AM		
B17RN0	U	F03-022/ GASEOUS	FP0231 - 10/27/2003	Field Analysis Activities	1, 2, 3	58.5 - 59.5 ft	299-W15-46	10/27/03 09:07 AM	Primary Replicate;	B18CX3 / Replicate;

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Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17RN1	U	F03-022/ GASEOUS	FP0231 - 10/27/2003	Field Analysis Activities	1, 2, 3	58.5 - 59.5 ft	299-W15-46	10/27/03 09:14 AM		
B17RN2	U	F03-022/ GASEOUS	FP0231 - 10/27/2003	Field Analysis Activities	1, 2, 3	58.5 - 59.5 ft	299-W15-46	10/27/03 09:21 AM		
B17RN3	U	F03-022/ GASEOUS	FP0231 - 10/31/2003	Field Analysis Activities	1, 2, 3	65 - 66 ft	299-W15-46	10/31/03 11:16 AM	Primary Replicate;	B17RN4 / Replicate;
B17RN4	U	F03-022/ GASEOUS	FP0231 - 10/31/2003	Field Analysis Activities	1, 2, 3	65 - 66 ft	299-W15-46	10/31/03 11:16 AM	Replicate;	B17RN3 / Primary Replicate;
B17RN5	U	F03-022/ GASEOUS	FP0231 - 10/31/2003	Field Analysis Activities	1, 2, 3	65 - 66 ft	299-W15-46	10/31/03 11:09 AM		
B17RN6	U	F03-022/ GASEOUS	FP0231 - 10/31/2003	Field Analysis Activities	1, 2, 3	65 - 66 ft	299-W15-46	10/31/03 11:02 AM		
B17RN7	U	F03-022/ GASEOUS		Field Analysis Activities	1	65 - 68 ft	299-W15-46	10/31/03 10:55 AM		

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Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17RN8	U	F03-022/ GASEOUS		Field Analysis Activities	1	65 - 66 ft	299-W15-46	11/04/03 10:13 AM		
B17RN8: PURGE VAPOR SAMPLE										
B17X84	U	F03-022/ GASEOUS	FP0231 - 11/4/2003	Field Analysis Activities	1, 2, 3	65 - 66 ft	299-W15-46	11/04/03 10:18 AM		
B17X85	U	F03-022/ GASEOUS	FP0231 - 11/4/2003	Field Analysis Activities	1, 2, 3	65 - 66 ft	299-W15-46	11/04/03 10:26 AM		
B17X86	U	F03-022/ GASEOUS	FP0231 - 11/4/2003	Field Analysis Activities	1, 2, 3	65 - 66 ft	299-W15-46	11/04/03 10:32 AM	Primary Replicate;	B17X87 / Replicate;
B17X87	U	F03-022/ GASEOUS	FP0231 - 11/4/2003	Field Analysis Activities	1, 2, 3	65 - 66 ft	299-W15-46	11/04/03 10:32 AM	Replicate;	B17X86 / Primary Replicate;
B17X88	U	F03-022/ GASEOUS		Field Analysis Activities	1	66 - 67 ft	299-W15-46	11/10/03 09:09 AM		
B17X89	U	F03-022/ GASEOUS		Field Analysis Activities	1	66 - 67 ft	299-W15-46	11/10/03 09:16 AM		

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Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17X90	U	F03-022/ GASEOUS	FP0231 - 11/10/2003	Field Analysis Activities	1, 2, 3	66 - 67 ft	299-W15-46	11/10/03 09:23 AM		
B17X91	U	F03-022/ GASEOUS	FP0231 - 11/10/2003	Field Analysis Activities	1, 2, 3	66 - 67 ft	299-W15-46	11/10/03 09:30 AM		
B17X92	U	F03-022/ GASEOUS	FP0231 - 11/10/2003	Field Analysis Activities	1, 2, 3	66 - 67 ft	299-W15-46	11/10/03 09:37 AM	Primary Replicate;	B17X93 / Replicate;
B17X93	U	F03-022/ GASEOUS	FP0231 - 11/10/2003	Field Analysis Activities	1, 2, 3	66 - 67 ft	299-W15-46	11/10/03 09:37 AM	Replicate;	B17X92 / Primary Replicate;
B17X94	U	F03-022/ GASEOUS		Field Analysis Activities	1	66 - 67.5 ft	299-W15-46	03/15/04 12:02 PM		
B17X95	U	F03-022/ GASEOUS		Field Analysis Activities	1	66 - 67.5 ft	299-W15-46	03/15/04 12:08 PM		
B17X96	U	F03-022/ GASEOUS	FP0231 - 3/15/2004	Field Analysis Activities	1, 2, 3	66 - 67.5 ft	299-W15-46	03/15/04 12:15 PM		

Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17X97	U	F03-022/ GASEOUS	FP0231 - 3/15/2004	Field Analysis Activities	1, 2, 3	66 - 67.5 ft	299-W15-46	03/15/04 12:22 PM	Primary Replicate;	B17X98 / Replicate;
B17X98	U	F03-022/ GASEOUS	FP0231 - 3/15/2004	Field Analysis Activities	1, 2, 3	66 - 67.5 ft	299-W15-46	03/15/04 12:22 PM	Replicate;	B17X97 / Primary Replicate;
B17X99	U	F03-022/ GASEOUS		Field Analysis Activities	1	81 - 82 ft	299-W15-46	03/22/04 07:24 AM		
B17XB0	U	F03-022/ GASEOUS		Field Analysis Activities	1	81 - 82 ft	299-W15-46	03/22/04 07:31 AM		
B17XB1	U	F03-022/ GASEOUS	FP0231 - 3/22/2004	Field Analysis Activities	1, 2, 3	81 - 82 ft	299-W15-46	03/22/04 07:39 AM		
B17XB2	U	F03-022/ GASEOUS	FP0231 - 3/22/2004	Field Analysis Activities	1, 2, 3	81 - 82 ft	299-W15-46	03/22/04 07:47 AM	Primary Replicate;	B17XB3 / Replicate;
B17XB3	U	F03-022/ GASEOUS	FP0231 - 3/22/2004	Field Analysis Activities	1, 2, 3	81 - 82 ft	299-W15-46	03/22/04 07:47 AM	Replicate;	B17XB2 / Primary Replicate;

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Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17XB4	U	F03-022/ GASEOUS		Field Analysis Activities	1, 2, 3	90 - 92.5 ft	299-W15-46	03/23/04 12:00 PM		
B17XB5	U	F03-022/ GASEOUS		Field Analysis Activities	1, 2, 3	90 - 92.5 ft	299-W15-46	03/23/04 12:06 PM		
B17XB6	U	F03-022/ GASEOUS	FP0231 - 3/23/2004	Field Analysis Activities	1, 2, 3	90 - 92.5 ft	299-W15-46	03/23/04 12:13 PM		
B17XB7	U	F03-022/ GASEOUS	FP0231 - 3/23/2004	Field Analysis Activities	1, 2, 3	90 - 92.5 ft	299-W15-46	03/23/04 12:19 PM	Primary Replicate;	B17XB8 / Replicate;
B17XB8	U	F03-022/ GASEOUS	FP0231 - 3/23/2004	Field Analysis Activities	1, 2, 3	90 - 92.5 ft	299-W15-46	03/23/04 12:19 PM	Replicate;	B17XB7 / Primary Replicate;
B17XB9	U	F03-022/ GASEOUS	FP0231 - 4/12/2004	Field Analysis Activities	1, 2, 3	110 - 112 ft	299-W15-46	04/12/04 07:50 AM		
B17XC0	U	F03-022/ GASEOUS	FP0231 - 4/12/2004	Field Analysis Activities	1, 2, 3	110 - 112 ft	299-W15-46	04/12/04 07:57 AM	Primary Replicate;	B17XC1 / Replicate;

Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17XC1	U	F03-022/ GASEOUS	FP0231 - 4/12/2004	Field Analysis Activities	1, 2, 3	110 - 112 ft	299-W15-46	04/12/04 07:57 AM	Replicate;	B17XC0 / Primary Replicate;
B17XC2	U	F03-022/ GASEOUS				110 - 112 ft	299-W15-46	04/12/04 08:04 AM		
B17XC3	U	F03-022/ GASEOUS	FP0231 - 4/12/2004	Field Analysis Activities	1, 2, 3	110 - 112 ft	299-W15-46	04/12/04 08:40 AM		
B17XC4	U	F03-022/ GASEOUS	FP0231 - 4/22/2004	Field Analysis Activities	1, 2, 3	118 - 119.5 ft	299-W15-46	04/22/04 07:48 AM		
B17XC5	U	F03-022/ GASEOUS	FP0231 - 4/22/2004	Field Analysis Activities	1, 2, 3	118 - 119.5 ft	299-W15-46	04/22/04 07:54 AM		
B17XC6	U	F03-022/ GASEOUS	FP0231 - 4/22/2004	Field Analysis Activities	1, 2, 3	118 - 119.5 ft	299-W15-46	04/22/04 08:00 AM		
B17XC7	U	F03-022/ GASEOUS	FP0231 - 4/22/2004	Field Analysis Activities	1, 2, 3	118 - 119.5 ft	299-W15-46	04/22/04 08:06 AM	Primary Replicate;	B17XC8 / Replicate;

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Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17XC8	U	F03-022/ GASEOUS	FP0231 - 4/22/2004	Field Analysis Activities	1, 2, 3	118 - 119.5 ft	299-W15-46	04/22/04 08:06 AM	Replicate;	B17XC7 / Primary Replicate;
B17XC9	U	F03-022/ GASEOUS	FP0231 - 5/3/2004	Field Analysis Activities	1, 2, 3	119.5 - 122 ft	299-W15-46	05/03/04 12:25 PM		
B17XD0	U	F03-022/ GASEOUS	FP0231 - 5/3/2004	Field Analysis Activities	1, 2, 3	119.5 - 122 ft	299-W15-46	05/03/04 12:40 PM		
B17XD1	U	F03-022/ GASEOUS	FP0231 - 5/3/2004	Field Analysis Activities	1, 2, 3	119.5 - 122 ft	299-W15-46	05/03/04 12:55 PM		
B17XD2	U	F03-022/ GASEOUS	FP0231 - 5/3/2004	Field Analysis Activities	1, 2, 3	119.5 - 122 ft	299-W15-46	05/03/04 01:01 PM	Primary Replicate;	B17XD3 / Replicate;
B17XD3	U	F03-022/ GASEOUS	FP0231 - 5/3/2004	Field Analysis Activities	1, 2, 3	119.5 - 122 ft	299-W15-46	05/03/04 01:01 PM	Replicate;	B17XD2 / Primary Replicate;
B17XD4	U	F03-022/ GASEOUS	FP0231 - 8/16/2004	Field Analysis Activities	1, 2, 3	141 - 143 ft	299-W15-46	08/16/04 08:37 AM		

Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17XD5	U	F03-022/ GASEOUS	FP0231 - 8/16/2004	Field Analysis Activities	1, 2, 3	141 - 143 ft	299-W15-46	08/16/04 04:08 PM		
B17XD6	U	F03-022/ GASEOUS	FP0231 - 8/16/2004	Field Analysis Activities	1, 2, 3	141 - 143 ft	299-W15-46	08/16/04 08:54 AM		
B17XD7	U	F03-022/ GASEOUS	FP0231 - 8/16/2004	Field Analysis Activities	1, 2, 3	141 - 143 ft	299-W15-46	08/16/04 04:18 PM	Primary Replicate;	B17XD8 / Replicate;
B17XD8	U	F03-022/ GASEOUS	FP0231 - 8/16/2004	Field Analysis Activities	1, 2, 3	141 - 143 ft	299-W15-46	08/16/04 09:02 AM	Replicate;	B17XD7 / Primary Replicate;
B17XD9	U	F03-022/ GASEOUS	FP0231 - 8/19/2004	Field Analysis Activities	1, 2, 3	159 - 160 ft	299-W15-46	08/19/04 07:43 AM		
B17XF0	U	F03-022/ GASEOUS	FP0231 - 8/19/2004	Field Analysis Activities	1, 2, 3	159 - 160 ft	299-W15-46	08/19/04 07:52 AM	Primary Replicate;	B17XF1 / Replicate;
B17XF1	U	F03-022/ GASEOUS	FP0231 - 8/19/2004	Field Analysis Activities	1, 2, 3	159 - 160 ft	299-W15-46	08/19/04 07:52 AM	Replicate;	B17XF0 / Primary Replicate;

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Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B17XF2	U	F03-022/ GASEOUS	FP0231 - 8/19/2004	Field Analysis Activities	1, 2, 3	159 - 160 ft	299-W15-46	08/19/04 08:11 AM	Primary Replicate;	B17XF3 / Replicate;
B17XF3	U	F03-022/ GASEOUS	FP0231 - 8/19/2004	Field Analysis Activities	1, 2, 3	159 - 160 ft	299-W15-46	08/19/04 08:11 AM	Replicate;	B17XF2 / Primary Replicate;
B18CX0	U	F03-022/ GASEOUS	FP0231 - 10/20/2003	Field Analysis Activities	1, 2, 3	49.5 - 50 ft	299-W15-46	10/20/03 01:52 PM	Replicate;	B17RM6 / Primary Replicate;
B18CX1	U	F03-022/ GASEOUS	FP0231 - 10/21/2003	Field Analysis Activities	1, 2, 3, 4	49.5 - 50 ft	299-W15-46	10/21/03 08:10 AM	Replicate;	B17RM7 / Primary Replicate;
B18CX3	U	F03-022/ GASEOUS	FP0231 - 10/27/2003	Field Analysis Activities	1, 2, 3, 4	58.5 - 59.5 ft	299-W15-46	10/27/03 09:07 AM	Replicate;	B17RN0 / Primary Replicate;
B1B7J2	U	F03-022/ GASEOUS	FP0231 - 9/9/2004	Field Analysis Activities	1, 2, 3	223 - 224 ft	299-W15-46	09/09/04 06:49 AM		
B1B7J3	U	F03-022/ GASEOUS	FP0231 - 9/9/2004	Field Analysis Activities	1, 2, 3	223 - 224 ft	299-W15-46	09/09/04 06:59 AM		

Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1B7J4	U	F03-022/ GASEOUS	FP0231 - 9/9/2004	Field Analysis Activities	1, 2, 3	223 - 224 ft	299-W15-46	09/09/04 07:11 AM		
B1B7J5	U	F03-022/ GASEOUS	FP0231 - 9/9/2004	Field Analysis Activities	1, 2, 3	223 - 224 ft	299-W15-46	09/09/04 07:22 AM	Primary Replicate;	B1B7J6 / Replicate;
B1B7J6	U	F03-022/ GASEOUS	FP0231 - 9/9/2004	Field Analysis Activities	1, 2, 3	223 - 224 ft	299-W15-46	09/09/04 07:22 AM	Replicate;	B1B7J5 / Primary Replicate;
B1B7J7	U	F03-022/ GASEOUS	FP0231 - 8/25/2004	Field Analysis Activities	1, 2, 3	184 - 186.3 ft	299-W15-46	08/25/04 02:41 PM		
B1B7J8	U	F03-022/ GASEOUS	FP0231 - 8/25/2004	Field Analysis Activities	1, 2, 3	184 - 186.3 ft	299-W15-46	08/25/04 02:49 PM		
B1B7J9	U	F03-022/ GASEOUS	FP0231 - 8/25/2004	Field Analysis Activities	1, 2, 3	184 - 186.3 ft	299-W15-46	08/25/04 02:57 PM		
B1B7K0	U	F03-022/ GASEOUS	FP0231 - 8/25/2004	Field Analysis Activities	1, 2, 3	184 - 186.3 ft	299-W15-46	08/25/04 03:05 PM	Primary Replicate;	B1B7K1 / Replicate;

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Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1B7K1	U	F03-022/ GASEOUS	FP0231 - 8/25/2004	Field Analysis Activities	1, 2, 3	184 - 186.3 ft	299-W15-46	08/25/04 03:05 PM	Replicate;	B1B7K0 / Primary Replicate;
B1C3H9	U	F03-022/ GASEOUS	FP0242 - 1/10/2005	Field Analysis Activities	1	107 - 109 ft	299-W15-50	01/10/05 10:49 AM		
B1C3J0	U	F03-022/ GASEOUS	FP0242 - 1/10/2005	Field Analysis Activities	1	107 - 109 ft	299-W15-50	01/10/05 10:58 AM	Primary Replicate;	B1C3J1 / Replicate;
B1C3J1	U	F03-022/ GASEOUS	FP0242 - 1/10/2005	Field Analysis Activities	1	107 - 109 ft	299-W15-50	01/10/05 10:58 AM	Replicate;	B1C3J0 / Primary Replicate;
B1C3J2	U	F03-022/ GASEOUS	FP0242 - 1/10/2005	Field Analysis Activities	1	109 - 111 ft	299-W15-50	01/10/05 03:25 PM		
B1C3J3	U	F03-022/ GASEOUS	FP0242 - 1/10/2005	Field Analysis Activities	1	109 - 111 ft	299-W15-50	01/10/05 03:31 PM	Primary Replicate;	B1C3J4 / Replicate;
B1C3J4	U	F03-022/ GASEOUS	FP0242 - 1/10/2005	Field Analysis Activities	1	109 - 111 ft	299-W15-50	01/10/05 03:31 PM	Replicate;	B1C3J3 / Primary Replicate;

Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDERJJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1C3J5	U	F03-022/ GASEOUS	FP0242 - 1/17/2005	Field Analysis Activities	1	209 - 210 ft	299-W15-50	01/17/05 11:40 AM		
B1C3J6	U	F03-022/ GASEOUS	FP0242 - 1/17/2005	Field Analysis Activities	1	209 - 210 ft	299-W15-50	01/17/05 11:47 AM	Primary Replicate;	B1C3J7 / Replicate;
B1C3J7	U	F03-022/ GASEOUS	FP0242 - 1/17/2005	Field Analysis Activities	1	209 - 210 ft	299-W15-50	01/17/05 11:47 AM	Replicate;	B1C3J6 / Primary Replicate;
B1C7N7	U	F03-022/ GASEOUS	FP0243 - 11/1/2004	Field Analysis Activities	1	122 ft	299-W18-16	11/01/04 04:15 PM	Primary Replicate;	B1C7N8 / Replicate;
B1C7N8	U	F03-022/ GASEOUS	FP0243 - 11/1/2004	Field Analysis Activities	1	122 ft	299-W18-16	11/01/04 04:15 PM	Replicate;	B1C7N7 / Primary Replicate;
B1C7N9	U	F03-022/ GASEOUS	FP0243 - 11/1/2004	Field Analysis Activities	1	122 ft	299-W18-16	11/01/04 04:17 PM	Primary Replicate;	B1C7P0 / Replicate;
B1C7P0	U	F03-022/ GASEOUS	FP0243 - 11/1/2004	Field Analysis Activities	1	122 ft	299-W18-16	11/01/04 04:17 PM	Replicate;	B1C7N9 / Primary Replicate;

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Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1C7P1	U	F03-022/ GASEOUS		Field Analysis Activities	1	122 ft	299-W18-16	11/01/04 04:13 PM		
B1C7P2	U	F03-022/ GASEOUS	FP0243 - 11/3/2004	Field Analysis Activities	1	144 ft	299-W18-16	11/03/04 02:07 PM		
B1C7P3	U	F03-022/ GASEOUS	FP0243 - 11/3/2004	Field Analysis Activities	1	144 ft	299-W18-16	11/03/04 02:11 PM		
B1C7P4	U	F03-022/ GASEOUS	FP0243 - 11/3/2004	Field Analysis Activities	1	144 ft	299-W18-16	11/03/04 02:16 PM		
B1C7P5	U	F03-022/ GASEOUS	FP0243 - 11/3/2004	Field Analysis Activities	1	144 ft	299-W18-16	11/03/04 02:22 PM	Primary Replicate;	B1C7P6 / Replicate;
B1C7P6	U	F03-022/ GASEOUS	FP0243 - 11/3/2004	Field Analysis Activities	1	144 ft	299-W18-16	11/03/04 02:24 PM	Replicate;	B1C7P5 / Primary Replicate;
B1C7P7	U	F03-022/ GASEOUS	FP0243 - 11/15/2004	Field Analysis Activities	1	229.5 ft	299-W18-16	11/15/04 01:36 PM		

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Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1C7P8	U	F03-022/ GASEOUS	FP0243 - 11/15/2004	Field Analysis Activities	1	229.5 ft	299-W18-16	11/15/04 01:39 PM		
B1C7P9	U	F03-022/ GASEOUS	FP0243 - 11/15/2004	Field Analysis Activities	1	229.5 ft	299-W18-16	11/15/04 01:42 PM		
B1C7R0	U	F03-022/ GASEOUS	FP0243 - 11/15/2004	Field Analysis Activities	1	229.5 ft	299-W18-16	11/15/04 01:45 PM	Primary Replicate;	B1C7R1 / Replicate;
B1C7R1	U	F03-022/ GASEOUS	FP0243 - 11/15/2004	Field Analysis Activities	1	229.5 ft	299-W18-16	11/15/04 01:45 PM	Replicate;	B1C7R0 / Primary Replicate;
B1C7R2	U	F03-022/ GASEOUS	FP0244 - 11/12/2004	Field Analysis Activities	1	130 ft	299-W15-49	11/12/04 09:19 AM	Primary Replicate;	B1C7R3 / Replicate;
B1C7R3	U	F03-022/ GASEOUS	FP0244 - 11/12/2004	Field Analysis Activities	1	130 ft	299-W15-49	11/12/04 09:19 AM	Replicate;	B1C7R2 / Primary Replicate;
B1C7R4	U	F03-022/ GASEOUS	FP0244 - 11/16/2004	Field Analysis Activities	1	167.8 ft	299-W15-49	11/16/04 09:30 AM		

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Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1C7R5	U	F03-022/ GASEOUS	FP0244 - 11/16/2004	Field Analysis Activities	1	167.8 ft	299-W15-49	11/16/04 09:37 AM		
B1C7R6	U	F03-022/ GASEOUS	FP0244 - 11/16/2004	Field Analysis Activities	1	167.8 ft	299-W15-49	11/16/04 09:44 AM		
B1C7R7	U	F03-022/ GASEOUS	FP0244 - 11/16/2004	Field Analysis Activities	1	167.8 ft	299-W15-49	11/16/04 09:51 AM	Primary Replicate;	B1C7R8 / Replicate;
B1C7R8	U	F03-022/ GASEOUS	FP0244 - 11/16/2004	Field Analysis Activities	1	167.8 ft	299-W15-49	11/16/04 09:51 AM	Replicate;	B1C7R7 / Primary Replicate;
B1C7R9	U	F03-022/ GASEOUS	FP0244 - 11/23/2004	Field Analysis Activities	1	230 ft	299-W15-49	11/23/04 11:45 AM		
B1C7T0	U	F03-022/ GASEOUS	FP0244 - 11/23/2004	Field Analysis Activities	1	230 ft	299-W15-49	11/23/04 11:50 AM		
B1C7T1	U	F03-022/ GASEOUS	FP0244 - 11/23/2004	Field Analysis Activities	1	230 ft	299-W15-49	11/23/04 11:55 AM		

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Table A-3. Summary of Soil Vapor Samples Collected from the C3426 Borehole. (17 Pages)

SAMPLE SUMMARY

SAF NUMBER	F03-022	SAMPLE EVENT TITLE	216-Z-9 Trench Characterization
PROJECT	CPP 200 Area	TASK MANAGER	ROHAY, VJ
OPERABLE UNIT	200-PW-1	SAMPLERS	ALEXANDER,DJ; GENT, PM; MAHOOD, RO
LOG BOOK	HNF-N-313 1, HNF-N-388 1		

SAMPLE NUMBER	SAMPLE STATUS	SAF NUM/ MATRIX	SDG NUM/ SHIPPED DATE	LABORATORY	ANALYTE CODE	SAMPLE INTERVAL	LOCATION	DATE COLLECTED	SAMPLE TYPE	RELATED SAMPLES/ RELATIONSHIP
B1C7T2	U	F03-022/ GASEOUS	FP0244 - 11/23/2004	Field Analysis Activities	1	230 ft	299-W15-49	11/23/04 12:01 PM	Primary Replicate;	B1C7T3 / Replicate;
B1C7T3	U	F03-022/ GASEOUS	FP0244 - 11/23/2004	Field Analysis Activities	1	230 ft	299-W15-49	11/23/04 12:01 PM	Replicate;	B1C7T2 / Primary Replicate;
B1C7T4	U	F03-022/ GASEOUS	FP0245 - 2/7/2005	Field Analysis Activities	1	128 - 132.5 ft	C4738	02/07/05 02:42 PM	Primary Replicate;	B1C7T5 / Replicate;
B1C7T5	U	F03-022/ GASEOUS	FP0245 - 2/7/2005	Field Analysis Activities	1	128 - 132.5 ft	C4738	02/07/05 02:42 PM	Replicate;	B1C7T4 / Primary Replicate;

ANALYTE CODES

1	GAS_IR_FLD
2	H2O_B&K_FLD
3	VOA_B&K_FLD
4	VOA_GC_FLD

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SAMPLE DISPOSITION RECORDS

Several sampling irregularities occurred during this project. These were documented in the five Sample Disposition Records (SDR) summarized below. Two of the SDRs indicate that assessment of the irregularity should take place during the data quality assessment. The results of these assessments are given below.

SDRF04-026

SDRF04-026, Rev. 1, documents an error in the sampling date for samples B191Y4, B191Y4-A, B191Y5, B191Y6, and B191Y7. The chain of custody recorded the sampling date for these samples as April 21, 2004. However, the sampled material actually was removed from the borehole on April 15, 2004. The material was sealed in the split-spoon sampler liner and stored in a freezer until April 21, 2004. On that date, the samples were collected from the liner. The SDR, approved on September 12, 2006, corrects the sampling date to April 15, 2006. The documented borehole depth on this date is consistent with the documented sample depth of 35 to 35.8 m (115 to 117.5 ft) below ground surface (bgs).

In cases such as this, where a soil sample is sealed and frozen in the sampler liner, the U.S. Environmental Protection Agency in other Regions has accepted the practice of measuring the hold time from when the sample is thawed and removed from the liner. Using this practice, it was determined that several analyses for sample B191Y7 were performed out of hold time.

- The total petroleum hydrocarbon (TPH) extraction was performed on May 21, 2004, at which time more than two times the 14-day holding period had elapsed. Both TPH results were nondetects; therefore, all results for these analyses were rejected for use in making remedial action decisions (flagged "UR").
- Polychlorinated biphenyl and semivolatile organic extractions were performed on May 18, 2004, which was after the 14-day holding period had elapsed, but before two times the holding period had elapsed. All results were nondetects; therefore, all results for these analyses were qualified as approximate (flagged "UJ").
- Oil-and-grease analysis was performed on May 24, 2004, which was after the 28-day holding period had elapsed, but before two times the holding period had elapsed. Oil-and-grease was not detected in the sample; therefore, the result was qualified as approximate (flagged "UJ").
- Anion analysis was performed on June 8, 2004, which was after the 28-day holding period had elapsed, but before two times the holding period had elapsed. Therefore, all results were qualified as approximate. Detect results (nitrate, nitrite, chloride, and fluoride) were flagged "J," and nondetect results (phosphate and sulfate) were flagged "UJ."
- Mercury analysis was performed on June 2, 2004, which was after the 28-day holding period had elapsed, but before two times the holding period had elapsed. Mercury was detected in the sample; therefore, the mercury result was qualified as approximate (flagged "J").

The only analysis performed on samples B191Y4 and B191Y4-A was volatile organic analysis. According to information in the *Hanford Environmental Information System* database, this analysis was completed on April 21, 2006, which is within hold time. No characterization data were collected for sample B191Y5. Sample B191Y6 was used for physical property testing, which is not considered in the data quality assessment.

SDRF04-027

SDRF04-027 documents a time gap of 15 minutes in the chain of custody for samples B17N64 and B17NN4-A. According to the receiver, this time gap occurred because the relinquisher signed the Chain of Custody Form before all the receiving inspections were made, and the receiver signed afterwards. The sample was in custody of the receiver in the intervening time. Therefore, the error documented in SDRF04-027 had no impact on the quality of the data assessed in this data quality assessment.

SDRF04-028 and SDRF04-029

SDRF04-028 and SDRF04-029 involve samples that were not used for characterization. For this reason, the errors had no impact on the quality of the data assessed in this data quality assessment.

SDR04-003

SDR04-003 documents the fact that certain analyses were cancelled for sample B191Y7 because of insufficient samples. However, the only contaminant of potential concern canceled was ammonia, and this cancellation did not result in any impact on data sufficiency for the project. Therefore, this event had no impact on the quality of the data assessed in this data quality assessment.

REFERENCE

Hanford Environmental Information System, Hanford Site database.

APPENDIX B

ANALYTICAL DATA FOR BOREHOLE C3426 AT THE 216-Z-9 TRENCH

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TABLES

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. B-5
Table B-2. Metal Analysis Results for Borehole C3426 Samples. B-56
Table B-3. General Chemistry Analysis Results for Borehole C3426 Samples. B-71
Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. B-80
Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. B-113
Table B-6. Miscellaneous Organic Analysis Results for Borehole C3426 Samples. B-155

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APPENDIX B

ANALYTICAL DATA FOR BOREHOLE C3426 AT THE 216-Z-9 TRENCH

The tables in this appendix list all the chemical and radiochemical results obtained in response to DOE/RL-2001-01, *Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit RI/FS Work Plan, Includes: 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units*, for Borehole C3426 at the 216-Z-9 Trench. These results apply mainly to samples from the vadose zone. The tables omit all of the groundwater samples retrieved from the borehole, most of the sediment samples in the groundwater region, and most of the trip blanks associated with samples in the groundwater region.

The "Sample Top" and Sample Bottom" columns in these tables indicate the upper and lower bounds of the sampling interval in feet below ground surface (bgs). Depths noted for quality control (QC) blank samples indicate the depth at which borehole samples were being taken at the time the blank was at the sampling site.

The "Sample" column gives the sample number used in the *Hanford Environmental Information System* database.

The "Media" column indicates the type of sample. The indicators are "S" for soil, "V" for vapor, and "W" for water.

The "QC" column designates the field QC samples. In this column, "E" indicates an equipment blank, i.e., a water sample used to rinse the sampling equipment as a check for contamination; "T" indicates a trip blank, a water sample used to check for contamination by volatile organic compounds during sampling and transportation operations; and "D" indicates a field-duplicate sample, obtained to measure sampling and laboratory error. (The designations of duplicate samples in these tables are taken from sampling documentation; for discussions of the selection of duplicate pairs actually selected to perform relative percent difference calculations, see Sections 4.3.3 and 5.4.1 of this data quality assessment report.)

The "Sample Date" column indicates the date when the sample was removed from the borehole.

Analyte names are given in the top row of each table. Below each analyte name are shown the U.S. Environmental Protection Agency or American Society for Testing and Materials method number(s) or brief descriptive name(s) of the analytical method(s) used for the analyte. Four-digit methods are found in SW-846, *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, Third Edition; Final Update III-B*. Methods 150.1, 300.0, 335.2, 350.3, 353.1, 413.1, and 415.1 are found in EPA/600/4-79/020, *Methods of Chemical Analysis of Water and Wastes*. Method 200.8 is found in EPA/600/4-91/010, *Methods for the Determination of Metals in Environmental Samples*. Method 300.7 is found in EPA/600/4-86/024, *Development of Standard Methods for the Collection and Analysis of Precipitation*. Method 353.2 is found in EPA/600/R-93/100, *Methods for the Determination of Inorganic Substances in Environmental Samples*. Methods 900 and 906 are found in EPA/600/4-80/032, *Prescribed Procedures for Measurement of Radioactivity in Drinking Water*.

Term	Definition
3M	Separation using a 3M brand separations disk
AEA	Alpha energy analysis
Calculation	The result is calculated stoichiometrically from the column(s) to the left.
ChemOx	Chemical oxidation
CombOx	Oxidation by combustion
Dist	Separation by distillation
Field	Field measurement
GEA	Gamma energy analysis
GPC	Gas proportional counting
IR	Infrared spectrometry
IX	Ion exchange
KPA	Kinetic phosphorimetric analysis
LEPS	Low-energy photon spectroscopy
LSC	Liquid scintillation counting
PAA	Infrared photoacoustic analyzer
Plate	Alpha mount by electroplating
Prec	Chemical precipitation
SX/GC-FID	Solvent extraction/gas chromatography method for total petroleum hydrocarbons using a flame ionization detector
Sep	Chemical separation

3M is a trademark of 3M Company, St. Paul, Minnesota.

The letters in the columns labeled "Q" are QC flags affixed by the laboratories. The flags have the following meanings.

B: For organic analyses, indicates that the blank was contaminated with the analyte.

For inorganic analysis, indicates that the analyte was detected in the sample at a level below the target quantitation limit.

C: For organic analyses, indicates that analyte result was confirmed by gas chromatography scan.

For inorganic analysis, indicates that the analyte was detected in the associated method blank and in the sample at a concentration less than or equal to five times the level found in the blank.

D: Result was determined on a dilution of the sample.

E: For organic analysis, indicates that the result exceeded the calibration range.

For inorganic analysis, indicates that the result is an estimate, due to interference.

J: Result is an estimate.

N: Tentatively identified compound.

U: Analyte was undetected, with the indicated reporting limit.

Where more than one letter is used for a result, the meanings of the individual letters are combined.

Where validation qualifier flags were assigned by the data validator, they are entered in a separate column labeled "V." Where validation flags do not occur, this column may be omitted. Validation flags have the following meanings.

J: Result is an estimate.

U: Analyte was undetected, with the indicated reporting limit.

R: Result is rejected for decision-making

For radionuclide analysis, a column labeled "MDA" appears. This column gives the "minimum detectable activity" as reported by the laboratory.

The row across the bottom of each table gives the target quantitation limits (TQL) taken from Table A-3 of the borehole sampling and analysis plan (SAP) (DOE/RL-2001-01, Appendix B). These are the detection limits that should be achieved in the analyses. Entries of "N/A" in this row indicate either that the analyte is not a contaminant of potential concern (COPC), or there is no limit specified in Table A-3 of the SAP.

The numbers in the column labeled "Purpose" indicate the (main) purpose for which the sample was obtained. The number codes are as follows:

Number	Description
1	Sample taken for 200-PW-1 COPC analysis
2	Sample taken for dense, nonaqueous phase liquid (DNAPL) investigation
3	Extra sample taken for DNAPL investigation (not required by SAP)
4	Sample taken to support Soil Vapor Extraction (SVE) program
5	Extra SVE sample (not required by SAP)
6	Sample taken for other purpose (e.g., QC or waste designation)

REFERENCES

DOE/RL-2001-01, 2004, *Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit RI/FS Work Plan, Includes: 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units*, Rev. 0, Reissue, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

EPA/600/4-79/020, 1983, *Methods of Chemical Analysis of Water and Wastes*, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, Ohio.

EPA/600/4-80/032, 1980, *Prescribed Procedures for Measurement of Radioactivity in Drinking Water*, Environmental Monitoring and Support Laboratory, U.S. Environmental Protection Agency, Cincinnati, Ohio.

EPA/600/4-86/024, 1986, *Development of Standard Methods for the Collection and Analysis of Precipitation*, U.S. Environmental Protection Agency, Washington, D.C.

EPA/600/4-91/010, 1991, *Methods for the Determination of Metals in Environmental Samples*, U.S. Environmental Protection Agency, Washington, D.C.

EPA/600/R-93/100, 1993, *Methods for the Determination of Inorganic Substances in Environmental Samples,* Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, Ohio.

SW-846, 2005, *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, Third Edition; Final Update III-B*, as amended, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, Washington, D.C. Available on the Internet at www.epa.gov/SW-846/main.htm .

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Actinium-228					Americium-241														
							GEA					Plate/AEA					GEA					Prec/AEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V		10/13/03																				
47.5	50.0	B17N46	6	S		10/20/03						114000	pCi/g			13000										
47.5	50.0	B17N46-A	6	S		10/20/03											324000	pCi/g			370					
47.5	50.0	B17N46-B	6	S		10/20/03																				
47.5	50.0	B17MM8	6	W	E	9/23/03	23.4	pCi/L	U		38						7.67	pCi/L	U		60	0.044	pCi/L	U		0.13
47.5	50.0	B17MM9	6	W	E	9/23/03																				
47.5	50.0	B17MN0	6	W	E	9/23/03																				
49.5	50.0	B17RM5	4	V		10/20/03																				
49.5	50.0	B17RM6	4	V		10/20/03																				
49.5	50.0	B17RM7	4	V		10/21/03																				
49.5	50.0	B17RM8	4	V		10/21/03																				
49.5	50.0	B18CX0	4	V	D	10/20/03																				
49.5	50.0	B18CX1	4	V	D	10/21/03																				
58.5	59.5	B17RN0	5	V		10/27/03																				
58.5	59.5	B17RN1	5	V		10/27/03																				
58.5	59.5	B17RN2	5	V		10/27/03																				
58.5	59.5	B18CX3	5	V	D	10/27/03																				
63.5	66.0	B17TM6	6	S		10/29/03											53200	pCi/g			13000					
63.5	66.0	B17TM6-A	6	S		10/29/03											3480	pCi/g			130					
63.5	66.0	B17TM6-B	6	S		10/29/03																				
65.0	66.0	B17RN3	4	V		10/31/03																				
65.0	66.0	B17RN5	4	V		10/31/03																				
65.0	66.0	B17RN6	4	V		10/31/03																				
65.0	66.0	B17RN4	4	V	D	10/31/03																				
65.0	66.0	B17X85	4	V		11/4/03																				
65.0	66.0	B17X86	4	V		11/4/03																				
65.0	66.0	B17X87	4	V	D	11/4/03																				
66.0	67.0	B17X90	3	V		11/10/03																				
66.0	67.0	B17X91	3	V		11/10/03																				
66.0	67.0	B17X92	3	V		11/10/03																				
66.0	67.0	B17X93	3	V	D	11/10/03																				
66.0	67.5	B17X96	3	V		3/15/04																				
66.0	67.5	B17X97	3	V		3/15/04																				
66.0	67.5	B17X98	3	V	D	3/15/04																				
81.0	82.0	B17XB1	3	V		3/22/04																				
81.0	82.0	B17XB2	3	V		3/22/04																				
81.0	82.0	B17XB3	3	V	D	3/22/04																				
90.0	92.5	B17N52	2	S		3/23/04						4380	pCi/g			12	4740	pCi/g			4.4					
90.0	92.5	B17N61	2	S		3/23/04																				
90.0	92.5	B17XB6	2	V		3/23/04																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Actinium-228					Americium-241														
							GEA					Plate/AEA					GEA					Prec/AEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB7	2	V		3/23/04																				
90.0	92.5	B17XB8	2	V	D	3/23/04																				
109.5	112.0	B17N57	1	S		4/8/04											300000	pCi/g	U		300000					
109.5	112.0	B18XR8	1	S		4/8/04						309000	pCi/g													
109.5	112.0	B18XW3	1	S		4/8/04																				
110.0	112.0	B17XB9	2	V		4/12/04																				
110.0	112.0	B17XC0	2	V		4/12/04																				
110.0	112.0	B17XC3	2	V		4/12/04																				
110.0	112.0	B17XC1	2	V	D	4/12/04																				
112.0	112.0	B190T8-A	6	S		4/15/04																				
115.0	117.5	B191Y4	2	S		4/21/04																				
115.0	117.5	B191Y4-A	2	S		4/21/04																				
115.0	117.5	B191Y7	2	S		4/21/04						105000	pCi/g			90	80000	pCi/g	U		80000					
118.0	119.5	B17XC4	2	V		4/22/04																				
118.0	119.5	B17XC5	2	V		4/22/04																				
118.0	119.5	B17XC6	2	V		4/22/04																				
118.0	119.5	B17XC7	2	V		4/22/04																				
118.0	119.5	B17XC8	2	V	D	4/22/04																				
117.0	119.5	B17N60	6	S		4/21/04																980	pCi/g			1.2
117.0	119.5	B17N64	6	S		4/21/04																				
117.0	119.5	B17N64-A	6	S		4/21/04																				
117.0	119.5	B17N68	6	S		4/21/04																				
119.5	122.0	B17N63	1	S		5/3/04																190	pCi/g			1.2
119.5	122.0	B17N65	1	S		5/3/04																				
119.5	122.0	B18XT1	1	S		5/3/04																				
119.5	122.0	B17XC9	2	V		5/3/04																				
119.5	122.0	B17XD0	2	V		5/3/04																				
119.5	122.0	B17XD1	2	V		5/3/04																				
119.5	122.0	B17XD2	2	V		5/3/04																				
119.5	122.0	B17XD3	2	V	D	5/3/04																				
141.0	143.0	B17XD4	4	V		8/16/04																				
141.0	143.0	B17XD5	4	V		8/16/04																				
141.0	143.0	B17XD6	4	V		8/16/04																				
141.0	143.0	B17XD7	4	V		8/16/04																				
141.0	143.0	B17XD8	4	V	D	8/16/04																				
159.0	160.0	B17XD9	4	V		8/19/04																				
159.0	160.0	B17XF0	4	V		8/19/04																				
159.0	160.0	B17XF2	4	V		8/19/04																				
159.0	160.0	B17XF1	4	V	D	8/19/04																				
159.0	160.0	B17XF3	4	V	D	8/19/04																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Actinium-228					Americium-241														
							GEA					Plate/AEA					GEA					Prec/AEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
174.0	176.5	B17N67	1	S		8/23/04																0.038	pCi/g			0.016
174.0	176.5	B17N69	1	S		8/23/04																				
184.0	186.3	B17N70	2	S		8/25/04																0.18	pCi/g			0.017
184.0	186.3	B17N72	2	S		8/25/04																				
184.0	186.3	B17N74	2	S		8/25/04																				
184.0	186.3	B1B7J7	2	V		8/25/04																				
184.0	186.3	B1B7J8	2	V		8/25/04																				
184.0	186.3	B1B7J9	2	V		8/25/04																				
184.0	186.3	B1B7K0	2	V		8/25/04																				
184.0	186.3	B1B7K1	2	V	D	8/25/04																				
223.9	224.0	B1B7J2	2	V		9/9/04																				
223.9	224.0	B1B7J3	2	V		9/9/04																				
223.9	224.0	B1B7J4	2	V		9/9/04																				
223.9	224.0	B1B7J5	2	V		9/9/04																				
223.9	224.0	B1B7J6	2	V	D	9/9/04																				
224.0	226.2	B17N73	2	S		9/9/04																0.017	pCi/g	U		0.033
224.0	226.2	B17NL3	2	S		9/9/04																				
226.5	228.0	B17NL5	1	S		9/9/04																0.009	pCi/g	U		0.028
226.5	228.0	B17NL7	1	S		9/9/04																				
228.0	230.0	B17NL8	2	S		9/15/04																0.012	pCi/g	U		0.049
228.0	230.0	B17NL9	2	S		9/15/04																0.025	pCi/g	U		0.033
228.0	230.0	B17NM3	2	S	D	9/15/04											0.2	pCi/g	U		0.2					
228.0	230.0	B17NM5	2	S	D	9/15/04											0.069	pCi/g	U		0.069					
228.0	230.0	B1B9N6	6	W	T	9/15/04																				
294.5	297.0	B19NJ7	6	S		10/21/04																0.068	pCi/g	U		0.013
294.5	297.0	B1B9Y4	6	S		10/21/04						-0.038	pCi/g	U		0.29		pCi/g	U		0.16					
TQL (µg/kg)							N/A					1														

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Antimony-125					Bismuth-212					Bismuth-214				
							GEA					GEA					GEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V		10/13/03															
47.5	50.0	B17N46	6	S		10/20/03	591	pCi/g	U		591										
47.5	50.0	B17N46-A	6	S		10/20/03															
47.5	50.0	B17N46-B	6	S		10/20/03															
47.5	50.0	B17MM8	6	W	E	9/23/03	-2.77	pCi/L	U		27	42.7	pCi/L	U		88	52.7	pCi/L			22
47.5	50.0	B17MM9	6	W	E	9/23/03															
47.5	50.0	B17MN0	6	W	E	9/23/03															
49.5	50.0	B17RM5	4	V		10/20/03															
49.5	50.0	B17RM6	4	V		10/20/03															
49.5	50.0	B17RM7	4	V		10/21/03															
49.5	50.0	B17RM8	4	V		10/21/03															
49.5	50.0	B18CX0	4	V	D	10/20/03															
49.5	50.0	B18CX1	4	V	D	10/21/03															
58.5	59.5	B17RN0	5	V		10/27/03															
58.5	59.5	B17RN1	5	V		10/27/03															
58.5	59.5	B17RN2	5	V		10/27/03															
58.5	59.5	B18CX3	5	V	D	10/27/03															
63.5	66.0	B17TM6	6	S		10/29/03	792	pCi/g	U		792										
63.5	66.0	B17TM6-A	6	S		10/29/03															
63.5	66.0	B17TM6-B	6	S		10/29/03															
65.0	66.0	B17RN3	4	V		10/31/03															
65.0	66.0	B17RN5	4	V		10/31/03															
65.0	66.0	B17RN6	4	V		10/31/03															
65.0	66.0	B17RN4	4	V	D	10/31/03															
65.0	66.0	B17X85	4	V		11/4/03															
65.0	66.0	B17X86	4	V		11/4/03															
65.0	66.0	B17X87	4	V	D	11/4/03															
66.0	67.0	B17X90	3	V		11/10/03															
66.0	67.0	B17X91	3	V		11/10/03															
66.0	67.0	B17X92	3	V		11/10/03															
66.0	67.0	B17X93	3	V	D	11/10/03															
66.0	67.5	B17X96	3	V		3/15/04															
66.0	67.5	B17X97	3	V		3/15/04															
66.0	67.5	B17X98	3	V	D	3/15/04															
81.0	82.0	B17XB1	3	V		3/22/04															
81.0	82.0	B17XB2	3	V		3/22/04															
81.0	82.0	B17XB3	3	V	D	3/22/04															
90.0	92.5	B17N52	2	S		3/23/04	0.96	pCi/g	U		0.96										
90.0	92.5	B17N61	2	S		3/23/04															
90.0	92.5	B17XB6	2	V		3/23/04															

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Antimony-125					Bismuth-212					Bismuth-214				
							GEA					GEA					GEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB7	2	V		3/23/04															
90.0	92.5	B17XB8	2	V	D	3/23/04															
109.5	112.0	B17N57	1	S		4/8/04	1.3	pCi/g	U		1.3										
109.5	112.0	B18XR8	1	S		4/8/04	34.7	pCi/g													
109.5	112.0	B18XW3	1	S		4/8/04															
110.0	112.0	B17XB9	2	V		4/12/04															
110.0	112.0	B17XC0	2	V		4/12/04															
110.0	112.0	B17XC3	2	V		4/12/04															
110.0	112.0	B17XC1	2	V	D	4/12/04															
112.0	112.0	B190T8-A	6	S		4/15/04															
115.0	117.5	B191Y4	2	S		4/21/04															
115.0	117.5	B191Y4-A	2	S		4/21/04															
115.0	117.5	B191Y7	2	S		4/21/04	0.78	pCi/g	U		0.78										
118.0	119.5	B17XC4	2	V		4/22/04															
118.0	119.5	B17XC5	2	V		4/22/04															
118.0	119.5	B17XC6	2	V		4/22/04															
118.0	119.5	B17XC7	2	V		4/22/04															
118.0	119.5	B17XC8	2	V	D	4/22/04															
117.0	119.5	B17N60	6	S		4/21/04	-0.045	pCi/g	U		0.22										
117.0	119.5	B17N64	6	S		4/21/04															
117.0	119.5	B17N64-A	6	S		4/21/04															
117.0	119.5	B17N68	6	S		4/21/04															
119.5	122.0	B17N63	1	S		5/3/04	-0.057	pCi/g	U		0.19										
119.5	122.0	B17N65	1	S		5/3/04															
119.5	122.0	B18XT1	1	S		5/3/04															
119.5	122.0	B17XC9	2	V		5/3/04															
119.5	122.0	B17XD0	2	V		5/3/04															
119.5	122.0	B17XD1	2	V		5/3/04															
119.5	122.0	B17XD2	2	V		5/3/04															
119.5	122.0	B17XD3	2	V	D	5/3/04															
141.0	143.0	B17XD4	4	V		8/16/04															
141.0	143.0	B17XD5	4	V		8/16/04															
141.0	143.0	B17XD6	4	V		8/16/04															
141.0	143.0	B17XD7	4	V		8/16/04															
141.0	143.0	B17XD8	4	V	D	8/16/04															
159.0	160.0	B17XD9	4	V		8/19/04															
159.0	160.0	B17XF0	4	V		8/19/04															
159.0	160.0	B17XF2	4	V		8/19/04															
159.0	160.0	B17XF1	4	V	D	8/19/04															
159.0	160.0	B17XF3	4	V	D	8/19/04															

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Antimony-125					Bismuth-212					Bismuth-214				
							GEA					GEA					GEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
174.0	176.5	B17N67	1	S		8/23/04	-0.005	pCi/g	U		0.032										
174.0	176.5	B17N69	1	S		8/23/04															
184.0	186.3	B17N70	2	S		8/25/04	-0.009	pCi/g	U		0.034										
184.0	186.3	B17N72	2	S		8/25/04															
184.0	186.3	B17N74	2	S		8/25/04															
184.0	186.3	B1B7J7	2	V		8/25/04															
184.0	186.3	B1B7J8	2	V		8/25/04															
184.0	186.3	B1B7J9	2	V		8/25/04															
184.0	186.3	B1B7K0	2	V		8/25/04															
184.0	186.3	B1B7K1	2	V	D	8/25/04															
223.9	224.0	B1B7J2	2	V		9/9/04															
223.9	224.0	B1B7J3	2	V		9/9/04															
223.9	224.0	B1B7J4	2	V		9/9/04															
223.9	224.0	B1B7J5	2	V		9/9/04															
223.9	224.0	B1B7J6	2	V	D	9/9/04															
224.0	226.2	B17N73	2	S		9/9/04	0.019	pCi/g	U		0.035										
224.0	226.2	B17NL3	2	S		9/9/04															
226.5	228.0	B17NL5	1	S		9/9/04	0	pCi/g	U		0.041										
226.5	228.0	B17NL7	1	S		9/9/04															
228.0	230.0	B17NL8	2	S		9/15/04	0.013	pCi/g	U		0.034										
228.0	230.0	B17NL9	2	S		9/15/04	0.001	pCi/g	U		0.032										
228.0	230.0	B17NM3	2	S	D	9/15/04	0.17	pCi/g	U		0.17										
228.0	230.0	B17NM5	2	S	D	9/15/04	0.061	pCi/g	U		0.061										
228.0	230.0	B1B9N6	6	W	T	9/15/04															
294.5	297.0	B19NJ7	6	S		10/21/04	0	pCi/g	U		0.022										
294.5	297.0	B1B9Y4	6	S		10/21/04		pCi/g	U		0.11										
TQL (µg/kg)							N/A					N/A					N/A				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Carbon-14										Cerium-144					Cesium-134				
							ChemOx/LSC					CombOx/LSC					GEA					GEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V		10/13/03																				
47.5	50.0	B17N46	6	S		10/20/03																223	pCi/g	U		223
47.5	50.0	B17N46-A	6	S		10/20/03						5.38	pCi/g	U		24										
47.5	50.0	B17N46-B	6	S		10/20/03																				
47.5	50.0	B17MM8	6	W	E	9/23/03											7.3	pCi/L	U		63	-4.12	pCi/L	U		12
47.5	50.0	B17MM9	6	W	E	9/23/03	2.5	pCi/L	U		40															
47.5	50.0	B17MN0	6	W	E	9/23/03																				
49.5	50.0	B17RM5	4	V		10/20/03																				
49.5	50.0	B17RM6	4	V		10/20/03																				
49.5	50.0	B17RM7	4	V		10/21/03																				
49.5	50.0	B17RM8	4	V		10/21/03																				
49.5	50.0	B18CX0	4	V	D	10/20/03																				
49.5	50.0	B18CX1	4	V	D	10/21/03																				
58.5	59.5	B17RN0	5	V		10/27/03																				
58.5	59.5	B17RN1	5	V		10/27/03																				
58.5	59.5	B17RN2	5	V		10/27/03																				
58.5	59.5	B18CX3	5	V	D	10/27/03																				
63.5	66.0	B17TM6	6	S		10/29/03																298	pCi/g	U		298
63.5	66.0	B17TM6-A	6	S		10/29/03						-13.7	pCi/g	U		39										
63.5	66.0	B17TM6-B	6	S		10/29/03																				
65.0	66.0	B17RN3	4	V		10/31/03																				
65.0	66.0	B17RN5	4	V		10/31/03																				
65.0	66.0	B17RN6	4	V		10/31/03																				
65.0	66.0	B17RN4	4	V	D	10/31/03																				
65.0	66.0	B17X85	4	V		11/4/03																				
65.0	66.0	B17X86	4	V		11/4/03																				
65.0	66.0	B17X87	4	V	D	11/4/03																				
66.0	67.0	B17X90	3	V		11/10/03																				
66.0	67.0	B17X91	3	V		11/10/03																				
66.0	67.0	B17X92	3	V		11/10/03																				
66.0	67.0	B17X93	3	V	D	11/10/03																				
66.0	67.5	B17X96	3	V		3/15/04																				
66.0	67.5	B17X97	3	V		3/15/04																				
66.0	67.5	B17X98	3	V	D	3/15/04																				
81.0	82.0	B17XB1	3	V		3/22/04																				
81.0	82.0	B17XB2	3	V		3/22/04																				
81.0	82.0	B17XB3	3	V	D	3/22/04																				
90.0	92.5	B17N52	2	S		3/23/04																0.61	pCi/g	U		0.61
90.0	92.5	B17N61	2	S		3/23/04																				
90.0	92.5	B17XB6	2	V		3/23/04																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Carbon-14										Cerium-144					Cesium-134				
							ChemOx/LSC					CombOx/LSC					GEA					GEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB7	2	V		3/23/04																				
90.0	92.5	B17XB8	2	V	D	3/23/04																				
109.5	112.0	B17N57	1	S		4/8/04						65.9	pCi/g	U		96						0.62	pCi/g	U		0.62
109.5	112.0	B18XR8	1	S		4/8/04																12.5	pCi/g			
109.5	112.0	B18XW3	1	S		4/8/04																				
110.0	112.0	B17XB9	2	V		4/12/04																				
110.0	112.0	B17XC0	2	V		4/12/04																				
110.0	112.0	B17XC3	2	V		4/12/04																				
110.0	112.0	B17XC1	2	V	D	4/12/04																				
112.0	112.0	B190T8-A	6	S		4/15/04																				
115.0	117.5	B191Y4	2	S		4/21/04																				
115.0	117.5	B191Y4-A	2	S		4/21/04																				
115.0	117.5	B191Y7	2	S		4/21/04						49.2	pCi/g	U		100						0.55	pCi/g	U		0.55
118.0	119.5	B17XC4	2	V		4/22/04																				
118.0	119.5	B17XC5	2	V		4/22/04																				
118.0	119.5	B17XC6	2	V		4/22/04																				
118.0	119.5	B17XC7	2	V		4/22/04																				
118.0	119.5	B17XC8	2	V	D	4/22/04																				
117.0	119.5	B17N60	6	S		4/21/04																0.017	pCi/g	U		0.11
117.0	119.5	B17N64	6	S		4/21/04																				
117.0	119.5	B17N64-A	6	S		4/21/04																				
117.0	119.5	B17N68	6	S		4/21/04																				
119.5	122.0	B17N63	1	S		5/3/04																0.025	pCi/g	U		0.098
119.5	122.0	B17N65	1	S		5/3/04																				
119.5	122.0	B18XT1	1	S		5/3/04																				
119.5	122.0	B17XC9	2	V		5/3/04																				
119.5	122.0	B17XD0	2	V		5/3/04																				
119.5	122.0	B17XD1	2	V		5/3/04																				
119.5	122.0	B17XD2	2	V		5/3/04																				
119.5	122.0	B17XD3	2	V	D	5/3/04																				
141.0	143.0	B17XD4	4	V		8/16/04																				
141.0	143.0	B17XD5	4	V		8/16/04																				
141.0	143.0	B17XD6	4	V		8/16/04																				
141.0	143.0	B17XD7	4	V		8/16/04																				
141.0	143.0	B17XD8	4	V	D	8/16/04																				
159.0	160.0	B17XD9	4	V		8/19/04																				
159.0	160.0	B17XF0	4	V		8/19/04																				
159.0	160.0	B17XF2	4	V		8/19/04																				
159.0	160.0	B17XF1	4	V	D	8/19/04																				
159.0	160.0	B17XF3	4	V	D	8/19/04																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Carbon-14										Cerium-144					Cesium-134				
							ChemOx/LSC					CombOx/LSC					GEA					GEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
174.0	176.5	B17N67	1	S		8/23/04																0.029	pCi/g	U		0.03
174.0	176.5	B17N69	1	S		8/23/04																				
184.0	186.3	B17N70	2	S		8/25/04																0.043	pCi/g	U		0.05
184.0	186.3	B17N72	2	S		8/25/04																				
184.0	186.3	B17N74	2	S		8/25/04																				
184.0	186.3	B1B7J7	2	V		8/25/04																				
184.0	186.3	B1B7J8	2	V		8/25/04																				
184.0	186.3	B1B7J9	2	V		8/25/04																				
184.0	186.3	B1B7K0	2	V		8/25/04																				
184.0	186.3	B1B7K1	2	V	D	8/25/04																				
223.9	224.0	B1B7J2	2	V		9/9/04																				
223.9	224.0	B1B7J3	2	V		9/9/04																				
223.9	224.0	B1B7J4	2	V		9/9/04																				
223.9	224.0	B1B7J5	2	V		9/9/04																				
223.9	224.0	B1B7J6	2	V	D	9/9/04																				
224.0	226.2	B17N73	2	S		9/9/04																0.038	pCi/g	U		0.017
224.0	226.2	B17NL3	2	S		9/9/04																				
226.5	228.0	B17NL5	1	S		9/9/04																0.036	pCi/g	U		0.04
226.5	228.0	B17NL7	1	S		9/9/04																				
228.0	230.0	B17NL8	2	S		9/15/04																0.035	pCi/g	U		0.016
228.0	230.0	B17NL9	2	S		9/15/04																0.022	pCi/g	U		0.015
228.0	230.0	B17NM3	2	S	D	9/15/04						-0.205	pCi/g	U		2.5						0.11	pCi/g	U		0.11
228.0	230.0	B17NM5	2	S	D	9/15/04						-1.03	pCi/g	U		2.2						0.035	pCi/g	U		0.035
228.0	230.0	B1B9N6	6	W	T	9/15/04																				
294.5	297.0	B19NJ7	6	S		10/21/04																0.025	pCi/g	U		0.011
294.5	297.0	B1B9Y4	6	S		10/21/04																	pCi/g	U		0.065
TQL (µg/kg)							1										N/A					N/A				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Cesium-137					Cobalt-60					Europium-152				
							GEA					GEA					GEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V		10/13/03															
47.5	50.0	B17N46	6	S		10/20/03	394	pCi/g	U		394	260	pCi/g	U		260	327	pCi/g	U		327
47.5	50.0	B17N46-A	6	S		10/20/03	18	pCi/g	U		18	21	pCi/g	U		21	38	pCi/g	U		38
47.5	50.0	B17N46-B	6	S		10/20/03															
47.5	50.0	B17MM8	6	W	E	9/23/03	0.193	pCi/L	U		11	-2.45	pCi/L	U		11	-0.073	pCi/L	U		30
47.5	50.0	B17MM9	6	W	E	9/23/03															
47.5	50.0	B17MN0	6	W	E	9/23/03															
49.5	50.0	B17RM5	4	V		10/20/03															
49.5	50.0	B17RM6	4	V		10/20/03															
49.5	50.0	B17RM7	4	V		10/21/03															
49.5	50.0	B17RM8	4	V		10/21/03															
49.5	50.0	B18CX0	4	V	D	10/20/03															
49.5	50.0	B18CX1	4	V	D	10/21/03															
58.5	59.5	B17RN0	5	V		10/27/03															
58.5	59.5	B17RN1	5	V		10/27/03															
58.5	59.5	B17RN2	5	V		10/27/03															
58.5	59.5	B18CX3	5	V	D	10/27/03															
63.5	66.0	B17TM6	6	S		10/29/03	766	pCi/g	U		766	383	pCi/g	U		383	701	pCi/g	U		701
63.5	66.0	B17TM6-A	6	S		10/29/03	11	pCi/g	U		11	15	pCi/g	U		15	31	pCi/g	U		31
63.5	66.0	B17TM6-B	6	S		10/29/03															
65.0	66.0	B17RN3	4	V		10/31/03															
65.0	66.0	B17RN5	4	V		10/31/03															
65.0	66.0	B17RN6	4	V		10/31/03															
65.0	66.0	B17RN4	4	V	D	10/31/03															
65.0	66.0	B17X85	4	V		11/4/03															
65.0	66.0	B17X86	4	V		11/4/03															
65.0	66.0	B17X87	4	V	D	11/4/03															
66.0	67.0	B17X90	3	V		11/10/03															
66.0	67.0	B17X91	3	V		11/10/03															
66.0	67.0	B17X92	3	V		11/10/03															
66.0	67.0	B17X93	3	V	D	11/10/03															
66.0	67.5	B17X96	3	V		3/15/04															
66.0	67.5	B17X97	3	V		3/15/04															
66.0	67.5	B17X98	3	V	D	3/15/04															
81.0	82.0	B17XB1	3	V		3/22/04															
81.0	82.0	B17XB2	3	V		3/22/04															
81.0	82.0	B17XB3	3	V	D	3/22/04															
90.0	92.5	B17N52	2	S		3/23/04	0.47	pCi/g	U		0.47	0.53	pCi/g	U		0.53	1	pCi/g	U		1
90.0	92.5	B17N61	2	S		3/23/04															
90.0	92.5	B17XB6	2	V		3/23/04															

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Cesium-137					Cobalt-60					Europium-152				
							GEA					GEA					GEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB7	2	V		3/23/04															
90.0	92.5	B17XB8	2	V	D	3/23/04															
109.5	112.0	B17N57	1	S		4/8/04	1.04	pCi/g			0.66	0.61	pCi/g	U		0.61	1.4	pCi/g	U		1.4
109.5	112.0	B18XR8	1	S		4/8/04	26.1	pCi/g	U			15.3	pCi/g	U			20.7	pCi/g			
109.5	112.0	B18XW3	1	S		4/8/04															
110.0	112.0	B17XB9	2	V		4/12/04															
110.0	112.0	B17XC0	2	V		4/12/04															
110.0	112.0	B17XC3	2	V		4/12/04															
110.0	112.0	B17XC1	2	V	D	4/12/04															
112.0	112.0	B190T8-A	6	S		4/15/04															
115.0	117.5	B191Y4	2	S		4/21/04															
115.0	117.5	B191Y4-A	2	S		4/21/04															
115.0	117.5	B191Y7	2	S		4/21/04	0.69	pCi/g	U		0.69	0.58	pCi/g	U		0.58	0.87	pCi/g	U		0.87
118.0	119.5	B17XC4	2	V		4/22/04															
118.0	119.5	B17XC5	2	V		4/22/04															
118.0	119.5	B17XC6	2	V		4/22/04															
118.0	119.5	B17XC7	2	V		4/22/04															
118.0	119.5	B17XC8	2	V	D	4/22/04															
117.0	119.5	B17N60	6	S		4/21/04	-0.045	pCi/g	U		0.095	-0.025	pCi/g	U		0.11	0.051	pCi/g	U		0.24
117.0	119.5	B17N64	6	S		4/21/04															
117.0	119.5	B17N64-A	6	S		4/21/04															
117.0	119.5	B17N68	6	S		4/21/04															
119.5	122.0	B17N63	1	S		5/3/04	0.268	pCi/g			0.081	0	pCi/g	U		0.091	-0.182	pCi/g	U		0.22
119.5	122.0	B17N65	1	S		5/3/04															
119.5	122.0	B18XT1	1	S		5/3/04															
119.5	122.0	B17XC9	2	V		5/3/04															
119.5	122.0	B17XD0	2	V		5/3/04															
119.5	122.0	B17XD1	2	V		5/3/04															
119.5	122.0	B17XD2	2	V		5/3/04															
119.5	122.0	B17XD3	2	V	D	5/3/04															
141.0	143.0	B17XD4	4	V		8/16/04															
141.0	143.0	B17XD5	4	V		8/16/04															
141.0	143.0	B17XD6	4	V		8/16/04															
141.0	143.0	B17XD7	4	V		8/16/04															
141.0	143.0	B17XD8	4	V	D	8/16/04															
159.0	160.0	B17XD9	4	V		8/19/04															
159.0	160.0	B17XF0	4	V		8/19/04															
159.0	160.0	B17XF2	4	V		8/19/04															
159.0	160.0	B17XF1	4	V	D	8/19/04															
159.0	160.0	B17XF3	4	V	D	8/19/04															

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Cesium-137					Cobalt-60					Europium-152				
							GEA					GEA					GEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
174.0	176.5	B17N67	1	S		8/23/04	0	pCi/g	U		0.012	0.001	pCi/g	U		0.012	-0.006	pCi/g	U		0.035
174.0	176.5	B17N69	1	S		8/23/04															
184.0	186.3	B17N70	2	S		8/25/04	0.047	pCi/g			0.013	-0.004	pCi/g	U		0.011	0.008	pCi/g	U		0.039
184.0	186.3	B17N72	2	S		8/25/04															
184.0	186.3	B17N74	2	S		8/25/04															
184.0	186.3	B1B7J7	2	V		8/25/04															
184.0	186.3	B1B7J8	2	V		8/25/04															
184.0	186.3	B1B7J9	2	V		8/25/04															
184.0	186.3	B1B7K0	2	V		8/25/04															
184.0	186.3	B1B7K1	2	V	D	8/25/04															
223.9	224.0	B1B7J2	2	V		9/9/04															
223.9	224.0	B1B7J3	2	V		9/9/04															
223.9	224.0	B1B7J4	2	V		9/9/04															
223.9	224.0	B1B7J5	2	V		9/9/04															
223.9	224.0	B1B7J6	2	V	D	9/9/04															
224.0	226.2	B17N73	2	S		9/9/04	0	pCi/g	U		0.013	-0.008	pCi/g	U		0.014	-0.018	pCi/g	U		0.036
224.0	226.2	B17NL3	2	S		9/9/04															
226.5	228.0	B17NL5	1	S		9/9/04	-0.005	pCi/g	U		0.015	0.002	pCi/g	U		0.015	0.014	pCi/g	U		0.044
226.5	228.0	B17NL7	1	S		9/9/04															
228.0	230.0	B17NL8	2	S		9/15/04	0.018	pCi/g			0.013	0.003	pCi/g	U		0.012	-0.01	pCi/g	U		0.038
228.0	230.0	B17NL9	2	S		9/15/04	0.003	pCi/g	U		0.014	-0.003	pCi/g	U		0.012	-0.007	pCi/g	U		0.036
228.0	230.0	B17NM3	2	S	D	9/15/04	0.094	pCi/g	U		0.094	0.088	pCi/g	U		0.088	0.18	pCi/g	U		0.18
228.0	230.0	B17NM5	2	S	D	9/15/04	0.027	pCi/g	U		0.027	0.031	pCi/g	U		0.031	0.062	pCi/g	U		0.062
228.0	230.0	B1B9N6	6	W	T	9/15/04															
294.5	297.0	B19NJ7	6	S		10/21/04	0.002	pCi/g	U		0.009	0.001	pCi/g	U		0.009	0.019	pCi/g	U		0.024
294.5	297.0	B1B9Y4	6	S		10/21/04		pCi/g	U		0.048		pCi/g	U		0.056		pCi/g	U		0.1
TQL (µg/kg)							0.1					0.05					N/A				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Europium-154					Europium-155					Gross alpha									
							GEA					GEA					900					GPC				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V		10/13/03																				
47.5	50.0	B17N46	6	S		10/20/03	784	pCi/g	U		784	280	pCi/g	U		280						148000	pCi/g			1200
47.5	50.0	B17N46-A	6	S		10/20/03	50	pCi/g	U		50	70	pCi/g	U		70										
47.5	50.0	B17N46-B	6	S		10/20/03																				
47.5	50.0	B17MM8	6	W	E	9/23/03	1.98	pCi/L	U		29	-8.24	pCi/L	U		32						0.81	pCi/L			0.69
47.5	50.0	B17MM9	6	W	E	9/23/03																				
47.5	50.0	B17MN0	6	W	E	9/23/03																				
49.5	50.0	B17RM5	4	V		10/20/03																				
49.5	50.0	B17RM6	4	V		10/20/03																				
49.5	50.0	B17RM7	4	V		10/21/03																				
49.5	50.0	B17RM8	4	V		10/21/03																				
49.5	50.0	B18CX0	4	V	D	10/20/03																				
49.5	50.0	B18CX1	4	V	D	10/21/03																				
58.5	59.5	B17RN0	5	V		10/27/03																				
58.5	59.5	B17RN1	5	V		10/27/03																				
58.5	59.5	B17RN2	5	V		10/27/03																				
58.5	59.5	B18CX3	5	V	D	10/27/03																				
63.5	66.0	B17TM6	6	S		10/29/03	1020	pCi/g	U		1020	788	pCi/g	U		788						145000	pCi/g			1600
63.5	66.0	B17TM6-A	6	S		10/29/03	40	pCi/g	U		40	31	pCi/g	U		31										
63.5	66.0	B17TM6-B	6	S		10/29/03																				
65.0	66.0	B17RN3	4	V		10/31/03																				
65.0	66.0	B17RN5	4	V		10/31/03																				
65.0	66.0	B17RN6	4	V		10/31/03																				
65.0	66.0	B17RN4	4	V	D	10/31/03																				
65.0	66.0	B17X85	4	V		11/4/03																				
65.0	66.0	B17X86	4	V		11/4/03																				
65.0	66.0	B17X87	4	V	D	11/4/03																				
66.0	67.0	B17X90	3	V		11/10/03																				
66.0	67.0	B17X91	3	V		11/10/03																				
66.0	67.0	B17X92	3	V		11/10/03																				
66.0	67.0	B17X93	3	V	D	11/10/03																				
66.0	67.5	B17X96	3	V		3/15/04																				
66.0	67.5	B17X97	3	V		3/15/04																				
66.0	67.5	B17X98	3	V	D	3/15/04																				
81.0	82.0	B17XB1	3	V		3/22/04																				
81.0	82.0	B17XB2	3	V		3/22/04																				
81.0	82.0	B17XB3	3	V	D	3/22/04																				
90.0	92.5	B17N52	2	S		3/23/04	1	pCi/g	U		1	1.1	pCi/g	U		1.1	4600	pCi/g			24					
90.0	92.5	B17N61	2	S		3/23/04																				
90.0	92.5	B17XB6	2	V		3/23/04																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Europium-154					Europium-155					Gross alpha									
							GEA					GEA					900					GPC				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB7	2	V		3/23/04																				
90.0	92.5	B17XB8	2	V	D	3/23/04																				
109.5	112.0	B17N57	1	S		4/8/04	1.6	pCi/g	U		1.6	13	pCi/g	U		13										
109.5	112.0	B18XR8	1	S		4/8/04	44	pCi/g				20.6	pCi/g									296000	pCi/g			
109.5	112.0	B18XW3	1	S		4/8/04																				
110.0	112.0	B17XB9	2	V		4/12/04																				
110.0	112.0	B17XC0	2	V		4/12/04																				
110.0	112.0	B17XC3	2	V		4/12/04																				
110.0	112.0	B17XC1	2	V	D	4/12/04																				
112.0	112.0	B190T8-A	6	S		4/15/04																				
115.0	117.5	B191Y4	2	S		4/21/04																				
115.0	117.5	B191Y4-A	2	S		4/21/04																				
115.0	117.5	B191Y7	2	S		4/21/04	1.3	pCi/g	U		1.3	4.1	pCi/g	U		4.1	77000	pCi/g			170					
118.0	119.5	B17XC4	2	V		4/22/04																				
118.0	119.5	B17XC5	2	V		4/22/04																				
118.0	119.5	B17XC6	2	V		4/22/04																				
118.0	119.5	B17XC7	2	V		4/22/04																				
118.0	119.5	B17XC8	2	V	D	4/22/04																				
117.0	119.5	B17N60	6	S		4/21/04	0.016	pCi/g	U		0.33	-0.048	pCi/g	U		0.28						1400	pCi/g			8.1
117.0	119.5	B17N64	6	S		4/21/04																				
117.0	119.5	B17N64-A	6	S		4/21/04																				
117.0	119.5	B17N68	6	S		4/21/04																				
119.5	122.0	B17N63	1	S		5/3/04	0.121	pCi/g	U		0.27	0.1	pCi/g	U		0.25						220	pCi/g			7.7
119.5	122.0	B17N65	1	S		5/3/04																				
119.5	122.0	B18XT1	1	S		5/3/04																				
119.5	122.0	B17XC9	2	V		5/3/04																				
119.5	122.0	B17XD0	2	V		5/3/04																				
119.5	122.0	B17XD1	2	V		5/3/04																				
119.5	122.0	B17XD2	2	V		5/3/04																				
119.5	122.0	B17XD3	2	V	D	5/3/04																				
141.0	143.0	B17XD4	4	V		8/16/04																				
141.0	143.0	B17XD5	4	V		8/16/04																				
141.0	143.0	B17XD6	4	V		8/16/04																				
141.0	143.0	B17XD7	4	V		8/16/04																				
141.0	143.0	B17XD8	4	V	D	8/16/04																				
159.0	160.0	B17XD9	4	V		8/19/04																				
159.0	160.0	B17XF0	4	V		8/19/04																				
159.0	160.0	B17XF2	4	V		8/19/04																				
159.0	160.0	B17XF1	4	V	D	8/19/04																				
159.0	160.0	B17XF3	4	V	D	8/19/04																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Europium-154					Europium-155					Gross alpha									
							GEA					GEA					900					GPC				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
174.0	176.5	B17N67	1	S		8/23/04	-0.019	pCi/g	U		0.036	0.057	pCi/g			0.046						2.1	pCi/g			0.72
174.0	176.5	B17N69	1	S		8/23/04																				
184.0	186.3	B17N70	2	S		8/25/04	0.008	pCi/g	U		0.038	-0.006	pCi/g	U		0.067						2.1	pCi/g			0.52
184.0	186.3	B17N72	2	S		8/25/04																				
184.0	186.3	B17N74	2	S		8/25/04																				
184.0	186.3	B1B7J7	2	V		8/25/04																				
184.0	186.3	B1B7J8	2	V		8/25/04																				
184.0	186.3	B1B7J9	2	V		8/25/04																				
184.0	186.3	B1B7K0	2	V		8/25/04																				
184.0	186.3	B1B7K1	2	V	D	8/25/04																				
223.9	224.0	B1B7J2	2	V		9/9/04																				
223.9	224.0	B1B7J3	2	V		9/9/04																				
223.9	224.0	B1B7J4	2	V		9/9/04																				
223.9	224.0	B1B7J5	2	V		9/9/04																				
223.9	224.0	B1B7J6	2	V	D	9/9/04																				
224.0	226.2	B17N73	2	S		9/9/04	-0.027	pCi/g	U		0.043	0.067	pCi/g			0.051						2.6	pCi/g			0.57
224.0	226.2	B17NL3	2	S		9/9/04																				
226.5	228.0	B17NL5	1	S		9/9/04	0.018	pCi/g	U		0.052	0.05	pCi/g	U		0.066						1.8	pCi/g			0.55
226.5	228.0	B17NL7	1	S		9/9/04																				
228.0	230.0	B17NL8	2	S		9/15/04	-0.009	pCi/g	U		0.037	0.022	pCi/g	U		0.064						0.99	pCi/g			0.56
228.0	230.0	B17NL9	2	S		9/15/04	-0.011	pCi/g	U		0.037	0.022	pCi/g	U		0.054						1.4	pCi/g			0.64
228.0	230.0	B17NM3	2	S	D	9/15/04	0.3	pCi/g	U		0.3	0.18	pCi/g	U		0.18										
228.0	230.0	B17NM5	2	S	D	9/15/04	0.096	pCi/g	U		0.096	0.063	pCi/g	U		0.063										
228.0	230.0	B1B9N6	6	W	T	9/15/04																				
294.5	297.0	B19NJ7	6	S		10/21/04						0.027	pCi/g	U		0.033						0.92	pCi/g			0.34
294.5	297.0	B1B9Y4	6	S		10/21/04							pCi/g	U		0.12	4.8	pCi/g			3.6					
TQL (µg/kg)							N/A					N/A					N/A									

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Gross beta										Iodine-129					Lead-212				
							900					GPC					Sep/LEPS					GEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V		10/13/03																				
47.5	50.0	B17N46	6	S		10/20/03						27200	pCi/g			3500										
47.5	50.0	B17N46-A	6	S		10/20/03											-0.393	pCi/g	U		21					
47.5	50.0	B17N46-B	6	S		10/20/03																				
47.5	50.0	B17MM8	6	W	E	9/23/03						2.9	pCi/L			1.1						-6.39	pCi/L	U		19
47.5	50.0	B17MM9	6	W	E	9/23/03											-0.408	pCi/L	U		3.7					
47.5	50.0	B17MN0	6	W	E	9/23/03																				
49.5	50.0	B17RM5	4	V		10/20/03																				
49.5	50.0	B17RM6	4	V		10/20/03																				
49.5	50.0	B17RM7	4	V		10/21/03																				
49.5	50.0	B17RM8	4	V		10/21/03																				
49.5	50.0	B18CX0	4	V	D	10/20/03																				
49.5	50.0	B18CX1	4	V	D	10/21/03																				
58.5	59.5	B17RN0	5	V		10/27/03																				
58.5	59.5	B17RN1	5	V		10/27/03																				
58.5	59.5	B17RN2	5	V		10/27/03																				
58.5	59.5	B18CX3	5	V	D	10/27/03																				
63.5	66.0	B17TM6	6	S		10/29/03						10800	pCi/g			4900										
63.5	66.0	B17TM6-A	6	S		10/29/03											-7.26	pCi/g	U		43					
63.5	66.0	B17TM6-B	6	S		10/29/03																				
65.0	66.0	B17RN3	4	V		10/31/03																				
65.0	66.0	B17RN5	4	V		10/31/03																				
65.0	66.0	B17RN6	4	V		10/31/03																				
65.0	66.0	B17RN4	4	V	D	10/31/03																				
65.0	66.0	B17X85	4	V		11/4/03																				
65.0	66.0	B17X86	4	V		11/4/03																				
65.0	66.0	B17X87	4	V	D	11/4/03																				
66.0	67.0	B17X90	3	V		11/10/03																				
66.0	67.0	B17X91	3	V		11/10/03																				
66.0	67.0	B17X92	3	V		11/10/03																				
66.0	67.0	B17X93	3	V	D	11/10/03																				
66.0	67.5	B17X96	3	V		3/15/04																				
66.0	67.5	B17X97	3	V		3/15/04																				
66.0	67.5	B17X98	3	V	D	3/15/04																				
81.0	82.0	B17XB1	3	V		3/22/04																				
81.0	82.0	B17XB2	3	V		3/22/04																				
81.0	82.0	B17XB3	3	V	D	3/22/04																				
90.0	92.5	B17N52	2	S		3/23/04	1960	pCi/g			69															
90.0	92.5	B17N61	2	S		3/23/04																				
90.0	92.5	B17XB6	2	V		3/23/04																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Gross beta										Iodine-129					Lead-212				
							900					GPC					Sep/LEPS					GEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB7	2	V		3/23/04																				
90.0	92.5	B17XB8	2	V	D	3/23/04																				
109.5	112.0	B17N57	1	S		4/8/04											-27.5	pCi/g	U		71					
109.5	112.0	B18XR8	1	S		4/8/04						54800	pCi/g													
109.5	112.0	B18XW3	1	S		4/8/04																				
110.0	112.0	B17XB9	2	V		4/12/04																				
110.0	112.0	B17XC0	2	V		4/12/04																				
110.0	112.0	B17XC3	2	V		4/12/04																				
110.0	112.0	B17XC1	2	V	D	4/12/04																				
112.0	112.0	B190T8-A	6	S		4/15/04																				
115.0	117.5	B191Y4	2	S		4/21/04																				
115.0	117.5	B191Y4-A	2	S		4/21/04																				
115.0	117.5	B191Y7	2	S		4/21/04	1810	pCi/g			520						-9.74	pCi/g	U		44					
118.0	119.5	B17XC4	2	V		4/22/04																				
118.0	119.5	B17XC5	2	V		4/22/04																				
118.0	119.5	B17XC6	2	V		4/22/04																				
118.0	119.5	B17XC7	2	V		4/22/04																				
118.0	119.5	B17XC8	2	V	D	4/22/04																				
117.0	119.5	B17N60	6	S		4/21/04						240	pCi/g			9.1										
117.0	119.5	B17N64	6	S		4/21/04																				
117.0	119.5	B17N64-A	6	S		4/21/04																				
117.0	119.5	B17N68	6	S		4/21/04																				
119.5	122.0	B17N63	1	S		5/3/04						25	pCi/g		J	8.7										
119.5	122.0	B17N65	1	S		5/3/04																				
119.5	122.0	B18XT1	1	S		5/3/04																				
119.5	122.0	B17XC9	2	V		5/3/04																				
119.5	122.0	B17XD0	2	V		5/3/04																				
119.5	122.0	B17XD1	2	V		5/3/04																				
119.5	122.0	B17XD2	2	V		5/3/04																				
119.5	122.0	B17XD3	2	V	D	5/3/04																				
141.0	143.0	B17XD4	4	V		8/16/04																				
141.0	143.0	B17XD5	4	V		8/16/04																				
141.0	143.0	B17XD6	4	V		8/16/04																				
141.0	143.0	B17XD7	4	V		8/16/04																				
141.0	143.0	B17XD8	4	V	D	8/16/04																				
159.0	160.0	B17XD9	4	V		8/19/04																				
159.0	160.0	B17XF0	4	V		8/19/04																				
159.0	160.0	B17XF2	4	V		8/19/04																				
159.0	160.0	B17XF1	4	V	D	8/19/04																				
159.0	160.0	B17XF3	4	V	D	8/19/04																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Gross beta										Iodine-129					Lead-212				
							900					GPC					Sep/LEPS					GEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
174.0	176.5	B17N67	1	S		8/23/04						2.1	pCi/g			0.55										
174.0	176.5	B17N69	1	S		8/23/04																				
184.0	186.3	B17N70	2	S		8/25/04						1	pCi/g			0.33										
184.0	186.3	B17N72	2	S		8/25/04																				
184.0	186.3	B17N74	2	S		8/25/04																				
184.0	186.3	B1B7J7	2	V		8/25/04																				
184.0	186.3	B1B7J8	2	V		8/25/04																				
184.0	186.3	B1B7J9	2	V		8/25/04																				
184.0	186.3	B1B7K0	2	V		8/25/04																				
184.0	186.3	B1B7K1	2	V	D	8/25/04																				
223.9	224.0	B1B7J2	2	V		9/9/04																				
223.9	224.0	B1B7J3	2	V		9/9/04																				
223.9	224.0	B1B7J4	2	V		9/9/04																				
223.9	224.0	B1B7J5	2	V		9/9/04																				
223.9	224.0	B1B7J6	2	V	D	9/9/04																				
224.0	226.2	B17N73	2	S		9/9/04						0.63	pCi/g			0.62										
224.0	226.2	B17NL3	2	S		9/9/04																				
226.5	228.0	B17NL5	1	S		9/9/04						0.8	pCi/g			0.6										
226.5	228.0	B17NL7	1	S		9/9/04																				
228.0	230.0	B17NL8	2	S		9/15/04						0.93	pCi/g			0.6										
228.0	230.0	B17NL9	2	S		9/15/04						0.45	pCi/g	U		0.64										
228.0	230.0	B17NM3	2	S	D	9/15/04											-0.232	pCi/g	U		3.8					
228.0	230.0	B17NM5	2	S	D	9/15/04											-0.224	pCi/g	U		1.1					
228.0	230.0	B1B9N6	6	W	T	9/15/04																				
294.5	297.0	B19NJ7	6	S		10/21/04																				
294.5	297.0	B1B9Y4	6	S		10/21/04	19.4	pCi/g			5.9						0.033	pCi/g	U		1.5					
TQL (µg/kg)							N/A										N/A					N/A				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Lead-214					Neptunium-237									
							GEA					Plate/AEA					IX/Prec/AEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V		10/13/03															
47.5	50.0	B17N46	6	S		10/20/03						504	pCi/g	U		504					
47.5	50.0	B17N46-A	6	S		10/20/03															
47.5	50.0	B17N46-B	6	S		10/20/03															
47.5	50.0	B17MM8	6	W	E	9/23/03	20.5	pCi/L	U		28						0.004	pCi/L	U		0.01
47.5	50.0	B17MM9	6	W	E	9/23/03															
47.5	50.0	B17MN0	6	W	E	9/23/03															
49.5	50.0	B17RM5	4	V		10/20/03															
49.5	50.0	B17RM6	4	V		10/20/03															
49.5	50.0	B17RM7	4	V		10/21/03															
49.5	50.0	B17RM8	4	V		10/21/03															
49.5	50.0	B18CX0	4	V	D	10/20/03															
49.5	50.0	B18CX1	4	V	D	10/21/03															
58.5	59.5	B17RN0	5	V		10/27/03															
58.5	59.5	B17RN1	5	V		10/27/03															
58.5	59.5	B17RN2	5	V		10/27/03															
58.5	59.5	B18CX3	5	V	D	10/27/03															
63.5	66.0	B17TM6	6	S		10/29/03						337	pCi/g	U		337					
63.5	66.0	B17TM6-A	6	S		10/29/03															
63.5	66.0	B17TM6-B	6	S		10/29/03															
65.0	66.0	B17RN3	4	V		10/31/03															
65.0	66.0	B17RN5	4	V		10/31/03															
65.0	66.0	B17RN6	4	V		10/31/03															
65.0	66.0	B17RN4	4	V	D	10/31/03															
65.0	66.0	B17X85	4	V		11/4/03															
65.0	66.0	B17X86	4	V		11/4/03															
65.0	66.0	B17X87	4	V	D	11/4/03															
66.0	67.0	B17X90	3	V		11/10/03															
66.0	67.0	B17X91	3	V		11/10/03															
66.0	67.0	B17X92	3	V		11/10/03															
66.0	67.0	B17X93	3	V	D	11/10/03															
66.0	67.5	B17X96	3	V		3/15/04															
66.0	67.5	B17X97	3	V		3/15/04															
66.0	67.5	B17X98	3	V	D	3/15/04															
81.0	82.0	B17XB1	3	V		3/22/04															
81.0	82.0	B17XB2	3	V		3/22/04															
81.0	82.0	B17XB3	3	V	D	3/22/04															
90.0	92.5	B17N52	2	S		3/23/04															
90.0	92.5	B17N61	2	S		3/23/04															
90.0	92.5	B17XB6	2	V		3/23/04															

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Lead-214					Neptunium-237									
							GEA					Plate/AEA					IX/Prec/AEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB7	2	V		3/23/04															
90.0	92.5	B17XB8	2	V	D	3/23/04															
109.5	112.0	B17N57	1	S		4/8/04						0	pCi/g	U		170					
109.5	112.0	B18XR8	1	S		4/8/04						28.9	pCi/g								
109.5	112.0	B18XW3	1	S		4/8/04															
110.0	112.0	B17XB9	2	V		4/12/04															
110.0	112.0	B17XC0	2	V		4/12/04															
110.0	112.0	B17XC3	2	V		4/12/04															
110.0	112.0	B17XC1	2	V	D	4/12/04															
112.0	112.0	B190T8-A	6	S		4/15/04															
115.0	117.5	B191Y4	2	S		4/21/04															
115.0	117.5	B191Y4-A	2	S		4/21/04															
115.0	117.5	B191Y7	2	S		4/21/04						24	pCi/g	U		72					
118.0	119.5	B17XC4	2	V		4/22/04															
118.0	119.5	B17XC5	2	V		4/22/04															
118.0	119.5	B17XC6	2	V		4/22/04															
118.0	119.5	B17XC7	2	V		4/22/04															
118.0	119.5	B17XC8	2	V	D	4/22/04															
117.0	119.5	B17N60	6	S		4/21/04											0.24	pCi/g	X		0.075
117.0	119.5	B17N64	6	S		4/21/04															
117.0	119.5	B17N64-A	6	S		4/21/04															
117.0	119.5	B17N68	6	S		4/21/04															
119.5	122.0	B17N63	1	S		5/3/04											2.9	pCi/g	X	J	0.073
119.5	122.0	B17N65	1	S		5/3/04															
119.5	122.0	B18XT1	1	S		5/3/04															
119.5	122.0	B17XC9	2	V		5/3/04															
119.5	122.0	B17XD0	2	V		5/3/04															
119.5	122.0	B17XD1	2	V		5/3/04															
119.5	122.0	B17XD2	2	V		5/3/04															
119.5	122.0	B17XD3	2	V	D	5/3/04															
141.0	143.0	B17XD4	4	V		8/16/04															
141.0	143.0	B17XD5	4	V		8/16/04															
141.0	143.0	B17XD6	4	V		8/16/04															
141.0	143.0	B17XD7	4	V		8/16/04															
141.0	143.0	B17XD8	4	V	D	8/16/04															
159.0	160.0	B17XD9	4	V		8/19/04															
159.0	160.0	B17XF0	4	V		8/19/04															
159.0	160.0	B17XF2	4	V		8/19/04															
159.0	160.0	B17XF1	4	V	D	8/19/04															
159.0	160.0	B17XF3	4	V	D	8/19/04															

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Lead-214					Neptunium-237									
							GEA					Plate/AEA					IX/Prec/AEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
174.0	176.5	B17N67	1	S		8/23/04											0.005	pCi/g	X		0.002
174.0	176.5	B17N69	1	S		8/23/04															
184.0	186.3	B17N70	2	S		8/25/04											-0.003	pCi/g	U		0.012
184.0	186.3	B17N72	2	S		8/25/04															
184.0	186.3	B17N74	2	S		8/25/04															
184.0	186.3	B1B7J7	2	V		8/25/04															
184.0	186.3	B1B7J8	2	V		8/25/04															
184.0	186.3	B1B7J9	2	V		8/25/04															
184.0	186.3	B1B7K0	2	V		8/25/04															
184.0	186.3	B1B7K1	2	V	D	8/25/04															
223.9	224.0	B1B7J2	2	V		9/9/04															
223.9	224.0	B1B7J3	2	V		9/9/04															
223.9	224.0	B1B7J4	2	V		9/9/04															
223.9	224.0	B1B7J5	2	V		9/9/04															
223.9	224.0	B1B7J6	2	V	D	9/9/04															
224.0	226.2	B17N73	2	S		9/9/04											0.001	pCi/g	U		0.007
224.0	226.2	B17NL3	2	S		9/9/04															
226.5	228.0	B17NL5	1	S		9/9/04											0.002	pCi/g	U		0.01
226.5	228.0	B17NL7	1	S		9/9/04															
228.0	230.0	B17NL8	2	S		9/15/04											0.001	pCi/g	U		0.01
228.0	230.0	B17NL9	2	S		9/15/04											-0.002	pCi/g	U		0.009
228.0	230.0	B17NM3	2	S	D	9/15/04						0.061	pCi/g	U		0.18					
228.0	230.0	B17NM5	2	S	D	9/15/04						0.131	pCi/g	U		0.2					
228.0	230.0	B1B9N6	6	W	T	9/15/04															
294.5	297.0	B19NJ7	6	S		10/21/04											0.002	pCi/g	U		0.007
294.5	297.0	B1B9Y4	6	S		10/21/04						0.019	pCi/g	U		0.047					
TQL (µg/kg)							N/A					1									

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Nickel-63					Niobium-94					Plutonium-238									
							LSC					GEA					Plate/AEA					IX/Prec/AEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V		10/13/03																				
47.5	50.0	B17N46	6	S		10/20/03											10600	pCi/g	U		10600					
47.5	50.0	B17N46-A	6	S		10/20/03	308	pCi/g	U		930															
47.5	50.0	B17N46-B	6	S		10/20/03																				
47.5	50.0	B17MM8	6	W	E	9/23/03						1.51	pCi/L	U		10						-0.052	pCi/L	U		0.23
47.5	50.0	B17MM9	6	W	E	9/23/03	0.331	pCi/L	U		3															
47.5	50.0	B17MN0	6	W	E	9/23/03																				
49.5	50.0	B17RM5	4	V		10/20/03																				
49.5	50.0	B17RM6	4	V		10/20/03																				
49.5	50.0	B17RM7	4	V		10/21/03																				
49.5	50.0	B17RM8	4	V		10/21/03																				
49.5	50.0	B18CX0	4	V	D	10/20/03																				
49.5	50.0	B18CX1	4	V	D	10/21/03																				
58.5	59.5	B17RN0	5	V		10/27/03																				
58.5	59.5	B17RN1	5	V		10/27/03																				
58.5	59.5	B17RN2	5	V		10/27/03																				
58.5	59.5	B18CX3	5	V	D	10/27/03																				
63.5	66.0	B17TM6	6	S		10/29/03											19200	pCi/g	U		19200					
63.5	66.0	B17TM6-A	6	S		10/29/03	378	pCi/g	U		930															
63.5	66.0	B17TM6-B	6	S		10/29/03																				
65.0	66.0	B17RN3	4	V		10/31/03																				
65.0	66.0	B17RN5	4	V		10/31/03																				
65.0	66.0	B17RN6	4	V		10/31/03																				
65.0	66.0	B17RN4	4	V	D	10/31/03																				
65.0	66.0	B17X85	4	V		11/4/03																				
65.0	66.0	B17X86	4	V		11/4/03																				
65.0	66.0	B17X87	4	V	D	11/4/03																				
66.0	67.0	B17X90	3	V		11/10/03																				
66.0	67.0	B17X91	3	V		11/10/03																				
66.0	67.0	B17X92	3	V		11/10/03																				
66.0	67.0	B17X93	3	V	D	11/10/03																				
66.0	67.5	B17X96	3	V		3/15/04																				
66.0	67.5	B17X97	3	V		3/15/04																				
66.0	67.5	B17X98	3	V	D	3/15/04																				
81.0	82.0	B17XB1	3	V		3/22/04																				
81.0	82.0	B17XB2	3	V		3/22/04																				
81.0	82.0	B17XB3	3	V	D	3/22/04																				
90.0	92.5	B17N52	2	S		3/23/04											1.9	pCi/g	U		2.6					
90.0	92.5	B17N61	2	S		3/23/04																				
90.0	92.5	B17XB6	2	V		3/23/04																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Nickel-63					Niobium-94					Plutonium-238									
							LSC					GEA					Plate/AEA					IX/Prec/AEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB7	2	V		3/23/04																				
90.0	92.5	B17XB8	2	V	D	3/23/04																				
109.5	112.0	B17N57	1	S		4/8/04	1540	pCi/g	U		2300															
109.5	112.0	B18XR8	1	S		4/8/04											657	pCi/g								
109.5	112.0	B18XW3	1	S		4/8/04																				
110.0	112.0	B17XB9	2	V		4/12/04																				
110.0	112.0	B17XC0	2	V		4/12/04																				
110.0	112.0	B17XC3	2	V		4/12/04																				
110.0	112.0	B17XC1	2	V	D	4/12/04																				
112.0	112.0	B190T8-A	6	S		4/15/04											1480	pCi/g	U							
115.0	117.5	B191Y4	2	S		4/21/04																				
115.0	117.5	B191Y4-A	2	S		4/21/04																				
115.0	117.5	B191Y7	2	S		4/21/04	2360	pCi/g			1100						72.9	pCi/g	U		140					
118.0	119.5	B17XC4	2	V		4/22/04																				
118.0	119.5	B17XC5	2	V		4/22/04																				
118.0	119.5	B17XC6	2	V		4/22/04																				
118.0	119.5	B17XC7	2	V		4/22/04																				
118.0	119.5	B17XC8	2	V	D	4/22/04																				
117.0	119.5	B17N60	6	S		4/21/04																5.8	pCi/g			0.23
117.0	119.5	B17N64	6	S		4/21/04																				
117.0	119.5	B17N64-A	6	S		4/21/04																				
117.0	119.5	B17N68	6	S		4/21/04																				
119.5	122.0	B17N63	1	S		5/3/04																1.6	pCi/g		J	0.25
119.5	122.0	B17N65	1	S		5/3/04																				
119.5	122.0	B18XT1	1	S		5/3/04																				
119.5	122.0	B17XC9	2	V		5/3/04																				
119.5	122.0	B17XD0	2	V		5/3/04																				
119.5	122.0	B17XD1	2	V		5/3/04																				
119.5	122.0	B17XD2	2	V		5/3/04																				
119.5	122.0	B17XD3	2	V	D	5/3/04																				
141.0	143.0	B17XD4	4	V		8/16/04																				
141.0	143.0	B17XD5	4	V		8/16/04																				
141.0	143.0	B17XD6	4	V		8/16/04																				
141.0	143.0	B17XD7	4	V		8/16/04																				
141.0	143.0	B17XD8	4	V	D	8/16/04																				
159.0	160.0	B17XD9	4	V		8/19/04																				
159.0	160.0	B17XF0	4	V		8/19/04																				
159.0	160.0	B17XF2	4	V		8/19/04																				
159.0	160.0	B17XF1	4	V	D	8/19/04																				
159.0	160.0	B17XF3	4	V	D	8/19/04																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Nickel-63					Niobium-94					Plutonium-238									
							LSC					GEA					Plate/AEA					IX/Prec/AEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
174.0	176.5	B17N67	1	S		8/23/04																-0.004	pCi/g	U		0.062
174.0	176.5	B17N69	1	S		8/23/04																				
184.0	186.3	B17N70	2	S		8/25/04																0.006	pCi/g	U		0.065
184.0	186.3	B17N72	2	S		8/25/04																				
184.0	186.3	B17N74	2	S		8/25/04																				
184.0	186.3	B1B7J7	2	V		8/25/04																				
184.0	186.3	B1B7J8	2	V		8/25/04																				
184.0	186.3	B1B7J9	2	V		8/25/04																				
184.0	186.3	B1B7K0	2	V		8/25/04																				
184.0	186.3	B1B7K1	2	V	D	8/25/04																				
223.9	224.0	B1B7J2	2	V		9/9/04																				
223.9	224.0	B1B7J3	2	V		9/9/04																				
223.9	224.0	B1B7J4	2	V		9/9/04																				
223.9	224.0	B1B7J5	2	V		9/9/04																				
223.9	224.0	B1B7J6	2	V	D	9/9/04																				
224.0	226.2	B17N73	2	S		9/9/04																0.025	pCi/g	U		0.054
224.0	226.2	B17NL3	2	S		9/9/04																				
226.5	228.0	B17NL5	1	S		9/9/04																0.002	pCi/g	U		0.047
226.5	228.0	B17NL7	1	S		9/9/04																				
228.0	230.0	B17NL8	2	S		9/15/04																0.009	pCi/g	U		0.058
228.0	230.0	B17NL9	2	S		9/15/04																0.016	pCi/g	U		0.055
228.0	230.0	B17NM3	2	S	D	9/15/04	0.796	pCi/g	U		3.4															
228.0	230.0	B17NM5	2	S	D	9/15/04	0.457	pCi/g	U		3.8															
228.0	230.0	B1B9N6	6	W	T	9/15/04																				
294.5	297.0	B19NJ7	6	S		10/21/04																				
294.5	297.0	B1B9Y4	6	S		10/21/04	0.85	pCi/g	U		3.5						0	pCi/g	U		0.15					
TQL (µg/kg)							N/A					N/A					1									

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Plutonium-239/240										Potassium-40					Protactinium-231				
							Plate/AEA					IX/Prec/AEA					GEA					IX/Prec/AEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V		10/13/03																				
47.5	50.0	B17N46	6	S		10/20/03	44600	pCi/g			6400															
47.5	50.0	B17N46-A	6	S		10/20/03											300	pCi/g	U		300		pCi/g	U		13
47.5	50.0	B17N46-B	6	S		10/20/03																				
47.5	50.0	B17MM8	6	W	E	9/23/03						0.017	pCi/L	U		0.092										
47.5	50.0	B17MM9	6	W	E	9/23/03																0.103	pCi/L			0.088
47.5	50.0	B17MN0	6	W	E	9/23/03																				
49.5	50.0	B17RM5	4	V		10/20/03																				
49.5	50.0	B17RM6	4	V		10/20/03																				
49.5	50.0	B17RM7	4	V		10/21/03																				
49.5	50.0	B17RM8	4	V		10/21/03																				
49.5	50.0	B18CX0	4	V	D	10/20/03																				
49.5	50.0	B18CX1	4	V	D	10/21/03																				
58.5	59.5	B17RN0	5	V		10/27/03																				
58.5	59.5	B17RN1	5	V		10/27/03																				
58.5	59.5	B17RN2	5	V		10/27/03																				
58.5	59.5	B18CX3	5	V	D	10/27/03																				
63.5	66.0	B17TM6	6	S		10/29/03	115000	pCi/g			14000															
63.5	66.0	B17TM6-A	6	S		10/29/03											230	pCi/g	U		230	12.9	pCi/g			12
63.5	66.0	B17TM6-B	6	S		10/29/03																				
65.0	66.0	B17RN3	4	V		10/31/03																				
65.0	66.0	B17RN5	4	V		10/31/03																				
65.0	66.0	B17RN6	4	V		10/31/03																				
65.0	66.0	B17RN4	4	V	D	10/31/03																				
65.0	66.0	B17X85	4	V		11/4/03																				
65.0	66.0	B17X86	4	V		11/4/03																				
65.0	66.0	B17X87	4	V	D	11/4/03																				
66.0	67.0	B17X90	3	V		11/10/03																				
66.0	67.0	B17X91	3	V		11/10/03																				
66.0	67.0	B17X92	3	V		11/10/03																				
66.0	67.0	B17X93	3	V	D	11/10/03																				
66.0	67.5	B17X96	3	V		3/15/04																				
66.0	67.5	B17X97	3	V		3/15/04																				
66.0	67.5	B17X98	3	V	D	3/15/04																				
81.0	82.0	B17XB1	3	V		3/22/04																				
81.0	82.0	B17XB2	3	V		3/22/04																				
81.0	82.0	B17XB3	3	V	D	3/22/04																				
90.0	92.5	B17N52	2	S		3/23/04	29.9	pCi/g			1.8						18.8	pCi/g			5.6					
90.0	92.5	B17N61	2	S		3/23/04																				
90.0	92.5	B17XB6	2	V		3/23/04																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Plutonium-239/240										Potassium-40					Protactinium-231				
							Plate/AEA					IX/Prec/AEA					GEA					IX/Prec/AEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB7	2	V		3/23/04																				
90.0	92.5	B17XB8	2	V	D	3/23/04																				
109.5	112.0	B17N57	1	S		4/8/04											15.8	pCi/g			5.3	0.953	pCi/g	U		13
109.5	112.0	B18XR8	1	S		4/8/04	2260	pCi/g																		
109.5	112.0	B18XW3	1	S		4/8/04																				
110.0	112.0	B17XB9	2	V		4/12/04																				
110.0	112.0	B17XC0	2	V		4/12/04																				
110.0	112.0	B17XC3	2	V		4/12/04																				
110.0	112.0	B17XC1	2	V	D	4/12/04																				
112.0	112.0	B190T8-A	6	S		4/15/04	4990	pCi/g																		
115.0	117.5	B191Y4	2	S		4/21/04																				
115.0	117.5	B191Y4-A	2	S		4/21/04																				
115.0	117.5	B191Y7	2	S		4/21/04	4480	pCi/g			140						21.6	pCi/g			5.4	7.4	pCi/g	U		10
118.0	119.5	B17XC4	2	V		4/22/04																				
118.0	119.5	B17XC5	2	V		4/22/04																				
118.0	119.5	B17XC6	2	V		4/22/04																				
118.0	119.5	B17XC7	2	V		4/22/04																				
118.0	119.5	B17XC8	2	V	D	4/22/04																				
117.0	119.5	B17N60	6	S		4/21/04						130	pCi/g			0.088										
117.0	119.5	B17N64	6	S		4/21/04																				
117.0	119.5	B17N64-A	6	S		4/21/04																				
117.0	119.5	B17N68	6	S		4/21/04																				
119.5	122.0	B17N63	1	S		5/3/04						4.4	pCi/g		J	0.086										
119.5	122.0	B17N65	1	S		5/3/04																				
119.5	122.0	B18XT1	1	S		5/3/04																				
119.5	122.0	B17XC9	2	V		5/3/04																				
119.5	122.0	B17XD0	2	V		5/3/04																				
119.5	122.0	B17XD1	2	V		5/3/04																				
119.5	122.0	B17XD2	2	V		5/3/04																				
119.5	122.0	B17XD3	2	V	D	5/3/04																				
141.0	143.0	B17XD4	4	V		8/16/04																				
141.0	143.0	B17XD5	4	V		8/16/04																				
141.0	143.0	B17XD6	4	V		8/16/04																				
141.0	143.0	B17XD7	4	V		8/16/04																				
141.0	143.0	B17XD8	4	V	D	8/16/04																				
159.0	160.0	B17XD9	4	V		8/19/04																				
159.0	160.0	B17XF0	4	V		8/19/04																				
159.0	160.0	B17XF2	4	V		8/19/04																				
159.0	160.0	B17XF1	4	V	D	8/19/04																				
159.0	160.0	B17XF3	4	V	D	8/19/04																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Plutonium-239/240										Potassium-40					Protactinium-231				
							Plate/AEA					IX/Prec/AEA					GEA					IX/Prec/AEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
174.0	176.5	B17N67	1	S		8/23/04						0.004	pCi/g	U		0.019										
174.0	176.5	B17N69	1	S		8/23/04																				
184.0	186.3	B17N70	2	S		8/25/04						0.03	pCi/g			0.02										
184.0	186.3	B17N72	2	S		8/25/04																				
184.0	186.3	B17N74	2	S		8/25/04																				
184.0	186.3	B1B7J7	2	V		8/25/04																				
184.0	186.3	B1B7J8	2	V		8/25/04																				
184.0	186.3	B1B7J9	2	V		8/25/04																				
184.0	186.3	B1B7K0	2	V		8/25/04																				
184.0	186.3	B1B7K1	2	V	D	8/25/04																				
223.9	224.0	B1B7J2	2	V		9/9/04																				
223.9	224.0	B1B7J3	2	V		9/9/04																				
223.9	224.0	B1B7J4	2	V		9/9/04																				
223.9	224.0	B1B7J5	2	V		9/9/04																				
223.9	224.0	B1B7J6	2	V	D	9/9/04																				
224.0	226.2	B17N73	2	S		9/9/04						0.002	pCi/g	U		0.02										
224.0	226.2	B17NL3	2	S		9/9/04																				
226.5	228.0	B17NL5	1	S		9/9/04						0.006	pCi/g	U		0.017										
226.5	228.0	B17NL7	1	S		9/9/04																				
228.0	230.0	B17NL8	2	S		9/15/04						0.002	pCi/g	U		0.02										
228.0	230.0	B17NL9	2	S		9/15/04						0.014	pCi/g	U		0.018										
228.0	230.0	B17NM3	2	S	D	9/15/04											11.7	pCi/g			0.65	0.064	pCi/g	U		0.31
228.0	230.0	B17NM5	2	S	D	9/15/04											9.83	pCi/g			0.31	0.048	pCi/g	U		0.092
228.0	230.0	B1B9N6	6	W	T	9/15/04																				
294.5	297.0	B19NJ7	6	S		10/21/04						0.009	pCi/g	U		0.014										
294.5	297.0	B1B9Y4	6	S		10/21/04	0	pCi/g	U		0.15						15.1	pCi/g			0.49					
TQL (µg/kg)							1										N/A					N/A				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Radium-226					Radium-228					Ruthenium-103					Ruthenium-106				
							GEA					GEA					GEA					GEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V		10/13/03																				
47.5	50.0	B17N46	6	S		10/20/03																				
47.5	50.0	B17N46-A	6	S		10/20/03	43	pCi/g	U		43	66	pCi/g	U		66										
47.5	50.0	B17N46-B	6	S		10/20/03																				
47.5	50.0	B17MM8	6	W	E	9/23/03	52.7	pCi/L			30	23.4	pCi/L	U		38	-4.49	pCi/L	U		13	-14.5	pCi/L	U		100
47.5	50.0	B17MM9	6	W	E	9/23/03																				
47.5	50.0	B17MN0	6	W	E	9/23/03																				
49.5	50.0	B17RM5	4	V		10/20/03																				
49.5	50.0	B17RM6	4	V		10/20/03																				
49.5	50.0	B17RM7	4	V		10/21/03																				
49.5	50.0	B17RM8	4	V		10/21/03																				
49.5	50.0	B18CX0	4	V	D	10/20/03																				
49.5	50.0	B18CX1	4	V	D	10/21/03																				
58.5	59.5	B17RN0	5	V		10/27/03																				
58.5	59.5	B17RN1	5	V		10/27/03																				
58.5	59.5	B17RN2	5	V		10/27/03																				
58.5	59.5	B18CX3	5	V	D	10/27/03																				
63.5	66.0	B17TM6	6	S		10/29/03																				
63.5	66.0	B17TM6-A	6	S		10/29/03	35	pCi/g	U		35	58	pCi/g	U		58										
63.5	66.0	B17TM6-B	6	S		10/29/03																				
65.0	66.0	B17RN3	4	V		10/31/03																				
65.0	66.0	B17RN5	4	V		10/31/03																				
65.0	66.0	B17RN6	4	V		10/31/03																				
65.0	66.0	B17RN4	4	V	D	10/31/03																				
65.0	66.0	B17X85	4	V		11/4/03																				
65.0	66.0	B17X86	4	V		11/4/03																				
65.0	66.0	B17X87	4	V	D	11/4/03																				
66.0	67.0	B17X90	3	V		11/10/03																				
66.0	67.0	B17X91	3	V		11/10/03																				
66.0	67.0	B17X92	3	V		11/10/03																				
66.0	67.0	B17X93	3	V	D	11/10/03																				
66.0	67.5	B17X96	3	V		3/15/04																				
66.0	67.5	B17X97	3	V		3/15/04																				
66.0	67.5	B17X98	3	V	D	3/15/04																				
81.0	82.0	B17XB1	3	V		3/22/04																				
81.0	82.0	B17XB2	3	V		3/22/04																				
81.0	82.0	B17XB3	3	V	D	3/22/04																				
90.0	92.5	B17N52	2	S		3/23/04	0.82	pCi/g	U		0.82	2.4	pCi/g	U		2.4										
90.0	92.5	B17N61	2	S		3/23/04																				
90.0	92.5	B17XB6	2	V		3/23/04																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Radium-226					Radium-228					Ruthenium-103					Ruthenium-106				
							GEA					GEA					GEA					GEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB7	2	V		3/23/04																				
90.0	92.5	B17XB8	2	V	D	3/23/04																				
109.5	112.0	B17N57	1	S		4/8/04	0.778	pCi/g	U		0.92	2.79	pCi/g			2.5										
109.5	112.0	B18XR8	1	S		4/8/04																				
109.5	112.0	B18XW3	1	S		4/8/04																				
110.0	112.0	B17XB9	2	V		4/12/04																				
110.0	112.0	B17XC0	2	V		4/12/04																				
110.0	112.0	B17XC3	2	V		4/12/04																				
110.0	112.0	B17XC1	2	V	D	4/12/04																				
112.0	112.0	B190T8-A	6	S		4/15/04																				
115.0	117.5	B191Y4	2	S		4/21/04																				
115.0	117.5	B191Y4-A	2	S		4/21/04																				
115.0	117.5	B191Y7	2	S		4/21/04	0.736	pCi/g			0.7	3	pCi/g	U		3										
118.0	119.5	B17XC4	2	V		4/22/04																				
118.0	119.5	B17XC5	2	V		4/22/04																				
118.0	119.5	B17XC6	2	V		4/22/04																				
118.0	119.5	B17XC7	2	V		4/22/04																				
118.0	119.5	B17XC8	2	V	D	4/22/04																				
117.0	119.5	B17N60	6	S		4/21/04																				
117.0	119.5	B17N64	6	S		4/21/04																				
117.0	119.5	B17N64-A	6	S		4/21/04																				
117.0	119.5	B17N68	6	S		4/21/04																				
119.5	122.0	B17N63	1	S		5/3/04																				
119.5	122.0	B17N65	1	S		5/3/04																				
119.5	122.0	B18XT1	1	S		5/3/04																				
119.5	122.0	B17XC9	2	V		5/3/04																				
119.5	122.0	B17XD0	2	V		5/3/04																				
119.5	122.0	B17XD1	2	V		5/3/04																				
119.5	122.0	B17XD2	2	V		5/3/04																				
119.5	122.0	B17XD3	2	V	D	5/3/04																				
141.0	143.0	B17XD4	4	V		8/16/04																				
141.0	143.0	B17XD5	4	V		8/16/04																				
141.0	143.0	B17XD6	4	V		8/16/04																				
141.0	143.0	B17XD7	4	V		8/16/04																				
141.0	143.0	B17XD8	4	V	D	8/16/04																				
159.0	160.0	B17XD9	4	V		8/19/04																				
159.0	160.0	B17XF0	4	V		8/19/04																				
159.0	160.0	B17XF2	4	V		8/19/04																				
159.0	160.0	B17XF1	4	V	D	8/19/04																				
159.0	160.0	B17XF3	4	V	D	8/19/04																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Radium-226					Radium-228					Ruthenium-103					Ruthenium-106				
							GEA					GEA					GEA					GEA				
							Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
174.0	176.5	B17N67	1	S		8/23/04																				
174.0	176.5	B17N69	1	S		8/23/04																				
184.0	186.3	B17N70	2	S		8/25/04																				
184.0	186.3	B17N72	2	S		8/25/04																				
184.0	186.3	B17N74	2	S		8/25/04																				
184.0	186.3	B1B7J7	2	V		8/25/04																				
184.0	186.3	B1B7J8	2	V		8/25/04																				
184.0	186.3	B1B7J9	2	V		8/25/04																				
184.0	186.3	B1B7K0	2	V		8/25/04																				
184.0	186.3	B1B7K1	2	V	D	8/25/04																				
223.9	224.0	B1B7J2	2	V		9/9/04																				
223.9	224.0	B1B7J3	2	V		9/9/04																				
223.9	224.0	B1B7J4	2	V		9/9/04																				
223.9	224.0	B1B7J5	2	V		9/9/04																				
223.9	224.0	B1B7J6	2	V	D	9/9/04																				
224.0	226.2	B17N73	2	S		9/9/04																				
224.0	226.2	B17NL3	2	S		9/9/04																				
226.5	228.0	B17NL5	1	S		9/9/04																				
226.5	228.0	B17NL7	1	S		9/9/04																				
228.0	230.0	B17NL8	2	S		9/15/04																				
228.0	230.0	B17NL9	2	S		9/15/04																				
228.0	230.0	B17NM3	2	S	D	9/15/04	0.323	pCi/g			0.15	0.467	pCi/g			0.35										
228.0	230.0	B17NM5	2	S	D	9/15/04	0.287	pCi/g			0.049	0.462	pCi/g			0.13										
228.0	230.0	B1B9N6	6	W	T	9/15/04																				
294.5	297.0	B19NJ7	6	S		10/21/04																				
294.5	297.0	B1B9Y4	6	S		10/21/04	0.352	pCi/g			0.095	0.369	pCi/g			0.23										
TQL (µg/kg)							N/A					N/A					N/A					N/A				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Selenium-79										Strontium-89,90					Technetium-99								
					IX/LSC					Dist/LSC					GPC					3M/LSC					Sep/GPC			
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V																								
47.5	50.0	B17N46	6	S											7.86	pCi/g	U		7.86									
47.5	50.0	B17N46-A	6	S	-21.3	pCi/g	U		24																18	pCi/g			14
47.5	50.0	B17N46-B	6	S																								
47.5	50.0	B17MM8	6	W																-3.9	pCi/L	U		2.5				
47.5	50.0	B17MM9	6	W						-3.99	pCi/L	U		23	-0.2	pCi/L	U		0.72									
47.5	50.0	B17MN0	6	W																								
49.5	50.0	B17RM5	4	V																								
49.5	50.0	B17RM6	4	V																								
49.5	50.0	B17RM7	4	V																								
49.5	50.0	B17RM8	4	V																								
49.5	50.0	B18CX0	4	V																								
49.5	50.0	B18CX1	4	V																								
58.5	59.5	B17RN0	5	V																								
58.5	59.5	B17RN1	5	V																								
58.5	59.5	B17RN2	5	V																								
58.5	59.5	B18CX3	5	V																								
63.5	66.0	B17TM6	6	S											13.4	pCi/g			15									
63.5	66.0	B17TM6-A	6	S	-69.1	pCi/g	U		79																15.8	pCi/g	U		16
63.5	66.0	B17TM6-B	6	S																								
65.0	66.0	B17RN3	4	V																								
65.0	66.0	B17RN5	4	V																								
65.0	66.0	B17RN6	4	V																								
65.0	66.0	B17RN4	4	V																								
65.0	66.0	B17X85	4	V																								
65.0	66.0	B17X86	4	V																								
65.0	66.0	B17X87	4	V																								
66.0	67.0	B17X90	3	V																								
66.0	67.0	B17X91	3	V																								
66.0	67.0	B17X92	3	V																								
66.0	67.0	B17X93	3	V																								
66.0	67.5	B17X96	3	V																								
66.0	67.5	B17X97	3	V																								
66.0	67.5	B17X98	3	V																								
81.0	82.0	B17XB1	3	V																								
81.0	82.0	B17XB2	3	V																								
81.0	82.0	B17XB3	3	V																								
90.0	92.5	B17N52	2	S																								
90.0	92.5	B17N61	2	S																								
90.0	92.5	B17XB6	2	V																								
90.0	92.5	B17XB7	2	V																								

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Selenium-79										Strontium-89,90					Technetium-99								
					IX/LSC					Dist/LSC					GPC					3M/LSC					Sep/GPC			
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB8	2	V																								
109.5	112.0	B17N57	1	S	-34.2	pCi/g	U		110						65.5	pCi/g	U		440						1.32	pCi/g	U		26
109.5	112.0	B18XR8	1	S											0.741	pCi/g												
109.5	112.0	B18XW3	1	S																								
110.0	112.0	B17XB9	2	V																								
110.0	112.0	B17XC0	2	V																								
110.0	112.0	B17XC3	2	V																								
110.0	112.0	B17XC1	2	V																								
112.0	112.0	B190T8-A	6	S																								
115.0	117.5	B191Y4	2	S																								
115.0	117.5	B191Y4-A	2	S																								
115.0	117.5	B191Y7	2	S	-42.2	pCi/g	U		60						-16.5	pCi/g	U		210						-2.26	pCi/g	U		23
118.0	119.5	B17XC4	2	V																								
118.0	119.5	B17XC5	2	V																								
118.0	119.5	B17XC6	2	V																								
118.0	119.5	B17XC7	2	V																								
118.0	119.5	B17XC8	2	V																								
117.0	119.5	B17N60	6	S																								
117.0	119.5	B17N64	6	S																								
117.0	119.5	B17N64-A	6	S																								
117.0	119.5	B17N68	6	S																								
119.5	122.0	B17N63	1	S																								
119.5	122.0	B17N65	1	S																								
119.5	122.0	B18XT1	1	S																								
119.5	122.0	B17XC9	2	V																								
119.5	122.0	B17XD0	2	V																								
119.5	122.0	B17XD1	2	V																								
119.5	122.0	B17XD2	2	V																								
119.5	122.0	B17XD3	2	V																								
141.0	143.0	B17XD4	4	V																								
141.0	143.0	B17XD5	4	V																								
141.0	143.0	B17XD6	4	V																								
141.0	143.0	B17XD7	4	V																								
141.0	143.0	B17XD8	4	V																								
159.0	160.0	B17XD9	4	V																								
159.0	160.0	B17XF0	4	V																								
159.0	160.0	B17XF2	4	V																								
159.0	160.0	B17XF1	4	V																								
159.0	160.0	B17XF3	4	V																								
174.0	176.5	B17N67	1	S																								
174.0	176.5	B17N69	1	S																								

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Selenium-79										Strontium-89,90					Technetium-99									
					IX/LSC					Dist/LSC					GPC					3M/LSC					Sep/GPC				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
184.0	186.3	B17N70	2	S																									
184.0	186.3	B17N72	2	S																									
184.0	186.3	B17N74	2	S																									
184.0	186.3	B1B7J7	2	V																									
184.0	186.3	B1B7J8	2	V																									
184.0	186.3	B1B7J9	2	V																									
184.0	186.3	B1B7K0	2	V																									
184.0	186.3	B1B7K1	2	V																									
223.9	224.0	B1B7J2	2	V																									
223.9	224.0	B1B7J3	2	V																									
223.9	224.0	B1B7J4	2	V																									
223.9	224.0	B1B7J5	2	V																									
223.9	224.0	B1B7J6	2	V																									
224.0	226.2	B17N73	2	S																									
224.0	226.2	B17NL3	2	S																									
226.5	228.0	B17NL5	1	S																									
226.5	228.0	B17NL7	1	S																									
228.0	230.0	B17NL8	2	S																									
228.0	230.0	B17NL9	2	S																									
228.0	230.0	B17NM3	2	S	-1.14	pCi/g	U		2.5						0.096	pCi/g	U		0.24						0.138	pCi/g	U		0.7
228.0	230.0	B17NM5	2	S	-0.451	pCi/g	U		3.3						0.078	pCi/g	U		0.3						-0.062	pCi/g	U		0.64
228.0	230.0	B1B9N6	6	W																									
294.5	297.0	B19NJ7	6	S																									
294.5	297.0	B1B9Y4	6	S	0.404	pCi/g	U		2.3																1.06	pCi/g			0.76
TQL (µg/kg)					N/A										1					15									

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Thallium-208					Thorium-228										Thorium-230				
					GEA					Plate/AEA					GEA					Plate/AEA				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V																				
47.5	50.0	B17N46	6	S																				
47.5	50.0	B17N46-A	6	S											32	pCi/g	U		32					
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	12	pCi/L			10															
47.5	50.0	B17MM9	6	W						0	pCi/L	U		0.1						0.066	pCi/L	U		0.16
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S																				
63.5	66.0	B17TM6-A	6	S											32	pCi/g	U		32					
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																				
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																				
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																				
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				
81.0	82.0	B17XB3	3	V																				
90.0	92.5	B17N52	2	S											1.6	pCi/g	U		1.6					
90.0	92.5	B17N61	2	S																				
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Thallium-208					Thorium-228										Thorium-230				
					GEA					Plate/AEA					GEA					Plate/AEA				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB8	2	V																				
109.5	112.0	B17N57	1	S						2.05	pCi/g	U		27	1.13	pCi/g			0.85	43	pCi/g	U		93
109.5	112.0	B18XR8	1	S																				
109.5	112.0	B18XW3	1	S																				
110.0	112.0	B17XB9	2	V																				
110.0	112.0	B17XC0	2	V																				
110.0	112.0	B17XC3	2	V																				
110.0	112.0	B17XC1	2	V																				
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S																				
115.0	117.5	B191Y4-A	2	S																				
115.0	117.5	B191Y7	2	S						1.06	pCi/g	U		13	1.71	pCi/g			0.49	72	pCi/g			48
118.0	119.5	B17XC4	2	V																				
118.0	119.5	B17XC5	2	V																				
118.0	119.5	B17XC6	2	V																				
118.0	119.5	B17XC7	2	V																				
118.0	119.5	B17XC8	2	V																				
117.0	119.5	B17N60	6	S																				
117.0	119.5	B17N64	6	S																				
117.0	119.5	B17N64-A	6	S																				
117.0	119.5	B17N68	6	S																				
119.5	122.0	B17N63	1	S																				
119.5	122.0	B17N65	1	S																				
119.5	122.0	B18XT1	1	S																				
119.5	122.0	B17XC9	2	V																				
119.5	122.0	B17XD0	2	V																				
119.5	122.0	B17XD1	2	V																				
119.5	122.0	B17XD2	2	V																				
119.5	122.0	B17XD3	2	V																				
141.0	143.0	B17XD4	4	V																				
141.0	143.0	B17XD5	4	V																				
141.0	143.0	B17XD6	4	V																				
141.0	143.0	B17XD7	4	V																				
141.0	143.0	B17XD8	4	V																				
159.0	160.0	B17XD9	4	V																				
159.0	160.0	B17XF0	4	V																				
159.0	160.0	B17XF2	4	V																				
159.0	160.0	B17XF1	4	V																				
159.0	160.0	B17XF3	4	V																				
174.0	176.5	B17N67	1	S																				
174.0	176.5	B17N69	1	S																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Thallium-208					Thorium-228										Thorium-230				
					GEA					Plate/AEA					GEA					Plate/AEA				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
184.0	186.3	B17N70	2	S																				
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S																				
184.0	186.3	B1B7J7	2	V																				
184.0	186.3	B1B7J8	2	V																				
184.0	186.3	B1B7J9	2	V																				
184.0	186.3	B1B7K0	2	V																				
184.0	186.3	B1B7K1	2	V																				
223.9	224.0	B1B7J2	2	V																				
223.9	224.0	B1B7J3	2	V																				
223.9	224.0	B1B7J4	2	V																				
223.9	224.0	B1B7J5	2	V																				
223.9	224.0	B1B7J6	2	V																				
224.0	226.2	B17N73	2	S																				
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S																				
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S																				
228.0	230.0	B17NL9	2	S																				
228.0	230.0	B17NM3	2	S						0.462	pCi/g			0.14	0.47	pCi/g			0.13	0.562	pCi/g			0.2
228.0	230.0	B17NM5	2	S						0.574	pCi/g			0.077	0.38	pCi/g			0.031	0.384	pCi/g			0.22
228.0	230.0	B1B9N6	6	W																				
294.5	297.0	B19NJ7	6	S																				
294.5	297.0	B1B9Y4	6	S						0.499	pCi/g			0.083						0.45	pCi/g			0.19
TQL (µg/kg)					N/A					N/A										N/A				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Thorium-232															Thorium-234				
					Plate/AEA					GEA					200.8					GEA				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V																				
47.5	50.0	B17N46	6	S											0.322	pCi/g								
47.5	50.0	B17N46-A	6	S						66	pCi/g	U		66										
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W																-566	pCi/L	U		580
47.5	50.0	B17MM9	6	W	-0.013	pCi/L	U		0.1															
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S											0.329	pCi/g								
63.5	66.0	B17TM6-A	6	S						58	pCi/g	U		58										
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																				
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																				
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																				
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				
81.0	82.0	B17XB3	3	V																				
90.0	92.5	B17N52	2	S						2.4	pCi/g	U		2.4										
90.0	92.5	B17N61	2	S																				
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Thorium-232															Thorium-234				
					Plate/AEA					GEA					200.8					GEA				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB8	2	V																				
109.5	112.0	B17N57	1	S	-10.2	pCi/g	U		27	2.79	pCi/g			2.5										
109.5	112.0	B18XR8	1	S											0.698	pCi/g								
109.5	112.0	B18XW3	1	S																				
110.0	112.0	B17XB9	2	V																				
110.0	112.0	B17XC0	2	V																				
110.0	112.0	B17XC3	2	V																				
110.0	112.0	B17XC1	2	V																				
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S																				
115.0	117.5	B191Y4-A	2	S																				
115.0	117.5	B191Y7	2	S	-5.29	pCi/g	U		15	3	pCi/g	U		3										
118.0	119.5	B17XC4	2	V																				
118.0	119.5	B17XC5	2	V																				
118.0	119.5	B17XC6	2	V																				
118.0	119.5	B17XC7	2	V																				
118.0	119.5	B17XC8	2	V																				
117.0	119.5	B17N60	6	S																				
117.0	119.5	B17N64	6	S																				
117.0	119.5	B17N64-A	6	S																				
117.0	119.5	B17N68	6	S																				
119.5	122.0	B17N63	1	S																				
119.5	122.0	B17N65	1	S																				
119.5	122.0	B18XT1	1	S																				
119.5	122.0	B17XC9	2	V																				
119.5	122.0	B17XD0	2	V																				
119.5	122.0	B17XD1	2	V																				
119.5	122.0	B17XD2	2	V																				
119.5	122.0	B17XD3	2	V																				
141.0	143.0	B17XD4	4	V																				
141.0	143.0	B17XD5	4	V																				
141.0	143.0	B17XD6	4	V																				
141.0	143.0	B17XD7	4	V																				
141.0	143.0	B17XD8	4	V																				
159.0	160.0	B17XD9	4	V																				
159.0	160.0	B17XF0	4	V																				
159.0	160.0	B17XF2	4	V																				
159.0	160.0	B17XF1	4	V																				
159.0	160.0	B17XF3	4	V																				
174.0	176.5	B17N67	1	S																				
174.0	176.5	B17N69	1	S																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Thorium-232															Thorium-234				
					Plate/AEA					GEA					200.8					GEA				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
184.0	186.3	B17N70	2	S																				
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S																				
184.0	186.3	B1B7J7	2	V																				
184.0	186.3	B1B7J8	2	V																				
184.0	186.3	B1B7J9	2	V																				
184.0	186.3	B1B7K0	2	V																				
184.0	186.3	B1B7K1	2	V																				
223.9	224.0	B1B7J2	2	V																				
223.9	224.0	B1B7J3	2	V																				
223.9	224.0	B1B7J4	2	V																				
223.9	224.0	B1B7J5	2	V																				
223.9	224.0	B1B7J6	2	V																				
224.0	226.2	B17N73	2	S																				
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S																				
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S																				
228.0	230.0	B17NL9	2	S																				
228.0	230.0	B17NM3	2	S	0.517	pCi/g			0.086	0.467	pCi/g			0.35										
228.0	230.0	B17NM5	2	S	0.524	pCi/g			0.053	0.462	pCi/g			0.13										
228.0	230.0	B1B9N6	6	W																				
294.5	297.0	B19NJ7	6	S																				
294.5	297.0	B1B9Y4	6	S	0.48	pCi/g			0.059	0.369	pCi/g			0.23										
TQL (µg/kg)					1															N/A				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Tin-113					Tin-126					Tritium									
					GEA					GEA					906					ChemOx/LSC				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V																				
47.5	50.0	B17N46	6	S																				
47.5	50.0	B17N46-A	6	S																-1.1	pCi/g	U		26
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	0.831	pCi/L	U		14	-30.7	pCi/L	U		24										
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S																				
63.5	66.0	B17TM6-A	6	S																2.55	pCi/g	U		41
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																				
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																				
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																				
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				
81.0	82.0	B17XB3	3	V																				
90.0	92.5	B17N52	2	S																				
90.0	92.5	B17N61	2	S																				
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Tin-113					Tin-126					Tritium									
					GEA					GEA					906					ChemOx/LSC				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB8	2	V																				
109.5	112.0	B17N57	1	S																				
109.5	112.0	B18XR8	1	S																				
109.5	112.0	B18XW3	1	S																				
110.0	112.0	B17XB9	2	V																				
110.0	112.0	B17XC0	2	V																				
110.0	112.0	B17XC3	2	V																				
110.0	112.0	B17XC1	2	V																				
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S																				
115.0	117.5	B191Y4-A	2	S																				
115.0	117.5	B191Y7	2	S																28.2	pCi/g	U		130
118.0	119.5	B17XC4	2	V																				
118.0	119.5	B17XC5	2	V																				
118.0	119.5	B17XC6	2	V																				
118.0	119.5	B17XC7	2	V																				
118.0	119.5	B17XC8	2	V																				
117.0	119.5	B17N60	6	S																				
117.0	119.5	B17N64	6	S																				
117.0	119.5	B17N64-A	6	S																				
117.0	119.5	B17N68	6	S																				
119.5	122.0	B17N63	1	S																				
119.5	122.0	B17N65	1	S											0.119	pCi/g	U		0.31					
119.5	122.0	B18XT1	1	S																				
119.5	122.0	B17XC9	2	V																				
119.5	122.0	B17XD0	2	V																				
119.5	122.0	B17XD1	2	V																				
119.5	122.0	B17XD2	2	V																				
119.5	122.0	B17XD3	2	V																				
141.0	143.0	B17XD4	4	V																				
141.0	143.0	B17XD5	4	V																				
141.0	143.0	B17XD6	4	V																				
141.0	143.0	B17XD7	4	V																				
141.0	143.0	B17XD8	4	V																				
159.0	160.0	B17XD9	4	V																				
159.0	160.0	B17XF0	4	V																				
159.0	160.0	B17XF2	4	V																				
159.0	160.0	B17XF1	4	V																				
159.0	160.0	B17XF3	4	V																				
174.0	176.5	B17N67	1	S																				
174.0	176.5	B17N69	1	S											-0.129	pCi/g	U		0.26					

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Tin-113					Tin-126					Tritium									
					GEA					GEA					906					ChemOx/LSC				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
184.0	186.3	B17N70	2	S																				
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S																				
184.0	186.3	B1B7J7	2	V																				
184.0	186.3	B1B7J8	2	V																				
184.0	186.3	B1B7J9	2	V																				
184.0	186.3	B1B7K0	2	V																				
184.0	186.3	B1B7K1	2	V																				
223.9	224.0	B1B7J2	2	V																				
223.9	224.0	B1B7J3	2	V																				
223.9	224.0	B1B7J4	2	V																				
223.9	224.0	B1B7J5	2	V																				
223.9	224.0	B1B7J6	2	V																				
224.0	226.2	B17N73	2	S																				
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S																				
226.5	228.0	B17NL7	1	S											0	pCi/g	U		0.54					
228.0	230.0	B17NL8	2	S																				
228.0	230.0	B17NL9	2	S																				
228.0	230.0	B17NM3	2	S																-0.24	pCi/g	U		0.35
228.0	230.0	B17NM5	2	S																-0.32	pCi/g	U		0.31
228.0	230.0	B1B9N6	6	W																				
294.5	297.0	B19NJ7	6	S																				
294.5	297.0	B1B9Y4	6	S																				
TQL (µg/kg)					N/A					N/A					400									

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Uranium-233/234										Uranium-234				
					Plate/AEA					IX/Prec/AEA					200.8				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V															
47.5	50.0	B17N46	6	S											11.8	pCi/g			
47.5	50.0	B17N46-A	6	S															
47.5	50.0	B17N46-B	6	S															
47.5	50.0	B17MM8	6	W						0.004	pCi/L	U		0.04					
47.5	50.0	B17MM9	6	W															
47.5	50.0	B17MN0	6	W															
49.5	50.0	B17RM5	4	V															
49.5	50.0	B17RM6	4	V															
49.5	50.0	B17RM7	4	V															
49.5	50.0	B17RM8	4	V															
49.5	50.0	B18CX0	4	V															
49.5	50.0	B18CX1	4	V															
58.5	59.5	B17RN0	5	V															
58.5	59.5	B17RN1	5	V															
58.5	59.5	B17RN2	5	V															
58.5	59.5	B18CX3	5	V															
63.5	66.0	B17TM6	6	S											2.08	pCi/g			
63.5	66.0	B17TM6-A	6	S															
63.5	66.0	B17TM6-B	6	S															
65.0	66.0	B17RN3	4	V															
65.0	66.0	B17RN5	4	V															
65.0	66.0	B17RN6	4	V															
65.0	66.0	B17RN4	4	V															
65.0	66.0	B17X85	4	V															
65.0	66.0	B17X86	4	V															
65.0	66.0	B17X87	4	V															
66.0	67.0	B17X90	3	V															
66.0	67.0	B17X91	3	V															
66.0	67.0	B17X92	3	V															
66.0	67.0	B17X93	3	V															
66.0	67.5	B17X96	3	V															
66.0	67.5	B17X97	3	V															
66.0	67.5	B17X98	3	V															
81.0	82.0	B17XB1	3	V															
81.0	82.0	B17XB2	3	V															
81.0	82.0	B17XB3	3	V															
90.0	92.5	B17N52	2	S	0	pCi/g	U		9.5										
90.0	92.5	B17N61	2	S															
90.0	92.5	B17XB6	2	V															
90.0	92.5	B17XB7	2	V															

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Uranium-233/234										Uranium-234				
					Plate/AEA					IX/Prec/AEA					200.8				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB8	2	V															
109.5	112.0	B17N57	1	S															
109.5	112.0	B18XR8	1	S											0.422	pCi/g			
109.5	112.0	B18XW3	1	S															
110.0	112.0	B17XB9	2	V															
110.0	112.0	B17XC0	2	V															
110.0	112.0	B17XC3	2	V															
110.0	112.0	B17XC1	2	V															
112.0	112.0	B190T8-A	6	S															
115.0	117.5	B191Y4	2	S															
115.0	117.5	B191Y4-A	2	S															
115.0	117.5	B191Y7	2	S	28.9	pCi/g	U		110										
118.0	119.5	B17XC4	2	V															
118.0	119.5	B17XC5	2	V															
118.0	119.5	B17XC6	2	V															
118.0	119.5	B17XC7	2	V															
118.0	119.5	B17XC8	2	V															
117.0	119.5	B17N60	6	S						0.52	pCi/g			0.026					
117.0	119.5	B17N64	6	S															
117.0	119.5	B17N64-A	6	S															
117.0	119.5	B17N68	6	S															
119.5	122.0	B17N63	1	S						0.69	pCi/g		J	0.078					
119.5	122.0	B17N65	1	S															
119.5	122.0	B18XT1	1	S															
119.5	122.0	B17XC9	2	V															
119.5	122.0	B17XD0	2	V															
119.5	122.0	B17XD1	2	V															
119.5	122.0	B17XD2	2	V															
119.5	122.0	B17XD3	2	V															
141.0	143.0	B17XD4	4	V															
141.0	143.0	B17XD5	4	V															
141.0	143.0	B17XD6	4	V															
141.0	143.0	B17XD7	4	V															
141.0	143.0	B17XD8	4	V															
159.0	160.0	B17XD9	4	V															
159.0	160.0	B17XF0	4	V															
159.0	160.0	B17XF2	4	V															
159.0	160.0	B17XF1	4	V															
159.0	160.0	B17XF3	4	V															
174.0	176.5	B17N67	1	S						0.1	pCi/g			0.026					
174.0	176.5	B17N69	1	S															

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Uranium-233/234										Uranium-234				
					Plate/AEA					IX/Prec/AEA					200.8				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
184.0	186.3	B17N70	2	S						0.08	pCi/g			0.026					
184.0	186.3	B17N72	2	S															
184.0	186.3	B17N74	2	S															
184.0	186.3	B1B7J7	2	V															
184.0	186.3	B1B7J8	2	V															
184.0	186.3	B1B7J9	2	V															
184.0	186.3	B1B7K0	2	V															
184.0	186.3	B1B7K1	2	V															
223.9	224.0	B1B7J2	2	V															
223.9	224.0	B1B7J3	2	V															
223.9	224.0	B1B7J4	2	V															
223.9	224.0	B1B7J5	2	V															
223.9	224.0	B1B7J6	2	V															
224.0	226.2	B17N73	2	S						0.15	pCi/g			0.019					
224.0	226.2	B17NL3	2	S															
226.5	228.0	B17NL5	1	S						0.1	pCi/g			0.017					
226.5	228.0	B17NL7	1	S															
228.0	230.0	B17NL8	2	S						0.088	pCi/g			0.005					
228.0	230.0	B17NL9	2	S						0.1	pCi/g			0.018					
228.0	230.0	B17NM3	2	S															
228.0	230.0	B17NM5	2	S															
228.0	230.0	B1B9N6	6	W															
294.5	297.0	B19NJ7	6	S						0.035	pCi/g			0.016					
294.5	297.0	B1B9Y4	6	S	0.279	pCi/g			0.15										
TQL (µg/kg)					1										1				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Uranium-235																		
					Plate/AEA					GEA					200.8					IX/Prec/AEA				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V																				
47.5	50.0	B17N46	6	S											0.0225	pCi/g								
47.5	50.0	B17N46-A	6	S																				
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W						-10.9	pCi/L	U		69						0.005	pCi/L	U		0.044
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S											0.0476	pCi/g								
63.5	66.0	B17TM6-A	6	S																				
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																				
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																				
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																				
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				
81.0	82.0	B17XB3	3	V																				
90.0	92.5	B17N52	2	S	1.5	pCi/g	U		11	1.3	pCi/g	U		1.3										
90.0	92.5	B17N61	2	S																				
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Uranium-235																			
					Plate/AEA					GEA					200.8					IX/Prep/AEA				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB8	2	V																				
109.5	112.0	B17N57	1	S						3	pCi/g	U		3										
109.5	112.0	B18XR8	1	S											0.0147	pCi/g								
109.5	112.0	B18XW3	1	S																				
110.0	112.0	B17XB9	2	V																				
110.0	112.0	B17XC0	2	V																				
110.0	112.0	B17XC3	2	V																				
110.0	112.0	B17XC1	2	V																				
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S																				
115.0	117.5	B191Y4-A	2	S																				
115.0	117.5	B191Y7	2	S	0	pCi/g	U		130	1.2	pCi/g	U		1.2										
118.0	119.5	B17XC4	2	V																				
118.0	119.5	B17XC5	2	V																				
118.0	119.5	B17XC6	2	V																				
118.0	119.5	B17XC7	2	V																				
118.0	119.5	B17XC8	2	V																				
117.0	119.5	B17N60	6	S																0.074	pCi/g			0.029
117.0	119.5	B17N64	6	S																				
117.0	119.5	B17N64-A	6	S																				
117.0	119.5	B17N68	6	S																				
119.5	122.0	B17N63	1	S																0.13	pCi/g		J	0.085
119.5	122.0	B17N65	1	S																				
119.5	122.0	B18XT1	1	S																				
119.5	122.0	B17XC9	2	V																				
119.5	122.0	B17XD0	2	V																				
119.5	122.0	B17XD1	2	V																				
119.5	122.0	B17XD2	2	V																				
119.5	122.0	B17XD3	2	V																				
141.0	143.0	B17XD4	4	V																				
141.0	143.0	B17XD5	4	V																				
141.0	143.0	B17XD6	4	V																				
141.0	143.0	B17XD7	4	V																				
141.0	143.0	B17XD8	4	V																				
159.0	160.0	B17XD9	4	V																				
159.0	160.0	B17XF0	4	V																				
159.0	160.0	B17XF2	4	V																				
159.0	160.0	B17XF1	4	V																				
159.0	160.0	B17XF3	4	V																				
174.0	176.5	B17N67	1	S																0.026	pCi/g			0.005
174.0	176.5	B17N69	1	S																				

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Uranium-235																			
					Plate/AEA					GEA					200.8					IX/Prec/AEA				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
184.0	186.3	B17N70	2	S																0.019	pCi/g			0.016
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S																				
184.0	186.3	B1B7J7	2	V																				
184.0	186.3	B1B7J8	2	V																				
184.0	186.3	B1B7J9	2	V																				
184.0	186.3	B1B7K0	2	V																				
184.0	186.3	B1B7K1	2	V																				
223.9	224.0	B1B7J2	2	V																				
223.9	224.0	B1B7J3	2	V																				
223.9	224.0	B1B7J4	2	V																				
223.9	224.0	B1B7J5	2	V																				
223.9	224.0	B1B7J6	2	V																				
224.0	226.2	B17N73	2	S																0.013	pCi/g	U		0.014
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S																0.006	pCi/g	U		0.015
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S																0.01	pCi/g			0.006
228.0	230.0	B17NL9	2	S																0.006	pCi/g			0.006
228.0	230.0	B17NM3	2	S						0.26	pCi/g	U		0.26										
228.0	230.0	B17NM5	2	S						0.094	pCi/g	U		0.094										
228.0	230.0	B1B9N6	6	W																				
294.5	297.0	B19NJ7	6	S																				
294.5	297.0	B1B9Y4	6	S	0	pCi/g	U		0.18		pCi/g	U		0.16										
TQL (µg/kg)					1																			

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Uranium-238																					Zinc-65				
					Plate/AEA					GEA					200.8					IX/Prec/AEA					GEA				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
29.0	29.5	B17RM4	4	V																										
47.5	50.0	B17N46	6	S											0.249	pCi/g														
47.5	50.0	B17N46-A	6	S						2100	pCi/g	U		2100																
47.5	50.0	B17N46-B	6	S																										
47.5	50.0	B17MM8	6	W																0.004	pCi/L	U		0.04	-8.26	pCi/L	U		24
47.5	50.0	B17MM9	6	W																										
47.5	50.0	B17MN0	6	W																										
49.5	50.0	B17RM5	4	V																										
49.5	50.0	B17RM6	4	V																										
49.5	50.0	B17RM7	4	V																										
49.5	50.0	B17RM8	4	V																										
49.5	50.0	B18CX0	4	V																										
49.5	50.0	B18CX1	4	V																										
58.5	59.5	B17RN0	5	V																										
58.5	59.5	B17RN1	5	V																										
58.5	59.5	B17RN2	5	V																										
58.5	59.5	B18CX3	5	V																										
63.5	66.0	B17TM6	6	S											0.622	pCi/g														
63.5	66.0	B17TM6-A	6	S						1300	pCi/g	U		1300																
63.5	66.0	B17TM6-B	6	S																										
65.0	66.0	B17RN3	4	V																										
65.0	66.0	B17RN5	4	V																										
65.0	66.0	B17RN6	4	V																										
65.0	66.0	B17RN4	4	V																										
65.0	66.0	B17X85	4	V																										
65.0	66.0	B17X86	4	V																										
65.0	66.0	B17X87	4	V																										
66.0	67.0	B17X90	3	V																										
66.0	67.0	B17X91	3	V																										
66.0	67.0	B17X92	3	V																										
66.0	67.0	B17X93	3	V																										
66.0	67.5	B17X96	3	V																										
66.0	67.5	B17X97	3	V																										
66.0	67.5	B17X98	3	V																										
81.0	82.0	B17XB1	3	V																										
81.0	82.0	B17XB2	3	V																										
81.0	82.0	B17XB3	3	V																										
90.0	92.5	B17N52	2	S	1.24	pCi/g	U		9.5	55	pCi/g	U		55																
90.0	92.5	B17N61	2	S																										
90.0	92.5	B17XB6	2	V																										
90.0	92.5	B17XB7	2	V																										

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Uranium-238																				Zinc-65				
					Plate/AEA					GEA					200.8					IX/Prec/AEA					GEA				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
90.0	92.5	B17XB8	2	V																									
109.5	112.0	B17N57	1	S						65	pCi/g	U		65															
109.5	112.0	B18XR8	1	S											0.31	pCi/g													
109.5	112.0	B18XW3	1	S																									
110.0	112.0	B17XB9	2	V																									
110.0	112.0	B17XC0	2	V																									
110.0	112.0	B17XC3	2	V																									
110.0	112.0	B17XC1	2	V																									
112.0	112.0	B190T8-A	6	S																									
115.0	117.5	B191Y4	2	S																									
115.0	117.5	B191Y4-A	2	S																									
115.0	117.5	B191Y7	2	S	14.5	pCi/g	U		110	45	pCi/g	U		45															
118.0	119.5	B17XC4	2	V																									
118.0	119.5	B17XC5	2	V																									
118.0	119.5	B17XC6	2	V																									
118.0	119.5	B17XC7	2	V																									
118.0	119.5	B17XC8	2	V																									
117.0	119.5	B17N60	6	S																0.49	pCi/g			0.072					
117.0	119.5	B17N64	6	S																									
117.0	119.5	B17N64-A	6	S																									
117.0	119.5	B17N68	6	S																									
119.5	122.0	B17N63	1	S																0.67	pCi/g		J	0.078					
119.5	122.0	B17N65	1	S																									
119.5	122.0	B18XT1	1	S																									
119.5	122.0	B17XC9	2	V																									
119.5	122.0	B17XD0	2	V																									
119.5	122.0	B17XD1	2	V																									
119.5	122.0	B17XD2	2	V																									
119.5	122.0	B17XD3	2	V																									
141.0	143.0	B17XD4	4	V																									
141.0	143.0	B17XD5	4	V																									
141.0	143.0	B17XD6	4	V																									
141.0	143.0	B17XD7	4	V																									
141.0	143.0	B17XD8	4	V																									
159.0	160.0	B17XD9	4	V																									
159.0	160.0	B17XF0	4	V																									
159.0	160.0	B17XF2	4	V																									
159.0	160.0	B17XF1	4	V																									
159.0	160.0	B17XF3	4	V																									
174.0	176.5	B17N67	1	S																0.14	pCi/g			0.013					
174.0	176.5	B17N69	1	S																									

Table B-1. Radiochemical Analysis Results for Borehole C3426 Samples. (51 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Uranium-238																					Zinc-65				
					Plate/AEA					GEA					200.8					IX/Prec/AEA					GEA				
					Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	MDA
184.0	186.3	B17N70	2	S																0.094	pCi/g			0.021					
184.0	186.3	B17N72	2	S																									
184.0	186.3	B17N74	2	S																									
184.0	186.3	B1B7J7	2	V																									
184.0	186.3	B1B7J8	2	V																									
184.0	186.3	B1B7J9	2	V																									
184.0	186.3	B1B7K0	2	V																									
184.0	186.3	B1B7K1	2	V																									
223.9	224.0	B1B7J2	2	V																									
223.9	224.0	B1B7J3	2	V																									
223.9	224.0	B1B7J4	2	V																									
223.9	224.0	B1B7J5	2	V																									
223.9	224.0	B1B7J6	2	V																									
224.0	226.2	B17N73	2	S																0.16	pCi/g			0.016					
224.0	226.2	B17NL3	2	S																									
226.5	228.0	B17NL5	1	S																0.12	pCi/g			0.005					
226.5	228.0	B17NL7	1	S																									
228.0	230.0	B17NL8	2	S																0.075	pCi/g			0.005					
228.0	230.0	B17NL9	2	S																0.094	pCi/g			0.005					
228.0	230.0	B17NM3	2	S						9.5	pCi/g	U		9.5															
228.0	230.0	B17NM5	2	S						3.5	pCi/g	U		3.5															
228.0	230.0	B1B9N6	6	W																									
294.5	297.0	B19NJ7	6	S																0.051	pCi/g			0.016					
294.5	297.0	B1B9Y4	6	S	0.338	pCi/g			0.15		pCi/g	U		6.4															
TQL (µg/kg)					1																				N/A				

Table B-2. Metal Analysis Results for Borehole C3426 Samples.
(15 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Aluminum				Antimony				Arsenic				Barium				Beryllium				Bismuth				Cadmium			
					6010				6010				6010				6010				6010				6010				6010			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																												
47.5	50.0	B17N46	6	S					4290	µg/kg	U		11000	µg/kg			93200	µg/kg			270	µg/kg	U		10400	µg/kg	U		3500	µg/kg		
47.5	50.0	B17N46-A	6	S																												
47.5	50.0	B17N46-B	6	S																												
47.5	50.0	B17MM8	6	W	50	µg/L	U		11	µg/L	U		24	µg/L	U		0.3	µg/L	U		1	µg/L	U		100	µg/L	U		1.5	µg/L	U	
47.5	50.0	B17MM9	6	W																												
47.5	50.0	B17MN0	6	W																												
49.5	50.0	B17RM5	4	V																												
49.5	50.0	B17RM6	4	V																												
49.5	50.0	B17RM7	4	V																												
49.5	50.0	B17RM8	4	V																												
49.5	50.0	B18CX0	4	V																												
49.5	50.0	B18CX1	4	V																												
58.5	59.5	B17RN0	5	V																												
58.5	59.5	B17RN1	5	V																												
58.5	59.5	B17RN2	5	V																												
58.5	59.5	B18CX3	5	V																												
63.5	66.0	B17TM6	6	S					4630	µg/kg			10300	µg/kg	U		53400	µg/kg			293	µg/kg			10400	µg/kg	U		1790	µg/kg		
63.5	66.0	B17TM6-A	6	S																												
63.5	66.0	B17TM6-B	6	S																												
65.0	66.0	B17RN3	4	V																												
65.0	66.0	B17RN5	4	V																												
65.0	66.0	B17RN6	4	V																												
65.0	66.0	B17RN4	4	V																												
65.0	66.0	B17X85	4	V																												
65.0	66.0	B17X86	4	V																												
65.0	66.0	B17X87	4	V																												
66.0	67.0	B17X90	3	V																												
66.0	67.0	B17X91	3	V																												
66.0	67.0	B17X92	3	V																												
66.0	67.0	B17X93	3	V																												
66.0	67.5	B17X96	3	V																												
66.0	67.5	B17X97	3	V																												
66.0	67.5	B17X98	3	V																												
81.0	82.0	B17XB1	3	V																												
81.0	82.0	B17XB2	3	V																												
81.0	82.0	B17XB3	3	V																												
90.0	92.5	B17N52	2	S	6710000	µg/kg	C		270	µg/kg	U	UJ	6400	µg/kg			52100	µg/kg	C		390	µg/kg			260	µg/kg	U		40200	µg/kg		
90.0	92.5	B17N61	2	S																												
90.0	92.5	B17XB6	2	V																												
90.0	92.5	B17XB7	2	V																												
90.0	92.5	B17XB8	2	V																												
109.5	112.0	B17N57	1	S																												
109.5	112.0	B18XR8	1	S					9320	µg/kg	U		9550	µg/kg	U		43400	µg/kg			1430	µg/kg	U		9440	µg/kg	U		11700	µg/kg		

Table B-2. Metal Analysis Results for Borehole C3426 Samples.
(15 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Aluminum				Antimony				Arsenic				Barium				Beryllium				Bismuth				Cadmium			
					6010				6010				6010				6010				6010				6010				6010			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
109.5	112.0	B18XW3	1	S																												
110.0	112.0	B17XB9	2	V																												
110.0	112.0	B17XC0	2	V																												
110.0	112.0	B17XC3	2	V																												
110.0	112.0	B17XC1	2	V																												
112.0	112.0	B190T8-A	6	S																												
115.0	117.5	B191Y4	2	S																												
115.0	117.5	B191Y4-A	2	S																												
115.0	117.5	B191Y7	2	S	12400000	µg/kg			250	µg/kg	U		3900	µg/kg			36000	µg/kg			340	µg/kg			240	µg/kg	U		5100	µg/kg		
118.0	119.5	B17XC4	2	V																												
118.0	119.5	B17XC5	2	V																												
118.0	119.5	B17XC6	2	V																												
118.0	119.5	B17XC7	2	V																												
118.0	119.5	B17XC8	2	V																												
117.0	119.5	B17N60	6	S	8100000	µg/kg			1080	µg/kg			3490	µg/kg			80200	µg/kg			460	µg/kg			5000	µg/kg	U		70	µg/kg	U	
117.0	119.5	B17N64	6	S																												
117.0	119.5	B17N64-A	6	S																												
117.0	119.5	B17N68	6	S																												
119.5	122.0	B17N63	1	S	13100000	µg/kg			1520	µg/kg	E		2660	µg/kg			96300	µg/kg			395	µg/kg			5000	µg/kg	UE		75	µg/kg	U	
119.5	122.0	B17N65	1	S	9950000	µg/kg			300	µg/kg	U		4700	µg/kg			112000	µg/kg			640	µg/kg			290	µg/kg	U		5300	µg/kg		
119.5	122.0	B18XT1	1	S																												
119.5	122.0	B17XC9	2	V																												
119.5	122.0	B17XD0	2	V																												
119.5	122.0	B17XD1	2	V																												
119.5	122.0	B17XD2	2	V																												
119.5	122.0	B17XD3	2	V																												
141.0	143.0	B17XD4	4	V																												
141.0	143.0	B17XD5	4	V																												
141.0	143.0	B17XD6	4	V																												
141.0	143.0	B17XD7	4	V																												
141.0	143.0	B17XD8	4	V																												
159.0	160.0	B17XD9	4	V																												
159.0	160.0	B17XF0	4	V																												
159.0	160.0	B17XF2	4	V																												
159.0	160.0	B17XF1	4	V																												
159.0	160.0	B17XF3	4	V																												
174.0	176.5	B17N67	1	S	4970000	µg/kg			540	µg/kg	U		1200	µg/kg	U		60500	µg/kg			280	µg/kg			2200	µg/kg	U		1270	µg/kg		
174.0	176.5	B17N69	1	S																												
184.0	186.3	B17N70	2	S	5410000	µg/kg			540	µg/kg	U		1810	µg/kg			53200	µg/kg			284	µg/kg			2200	µg/kg	U		1430	µg/kg		
184.0	186.3	B17N72	2	S																												
184.0	186.3	B17N74	2	S																												
184.0	186.3	B1B7J7	2	V																												
184.0	186.3	B1B7J8	2	V																												
184.0	186.3	B1B7J9	2	V																												

Table B-2. Metal Analysis Results for Borehole C3426 Samples.
(15 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Aluminum				Antimony				Arsenic				Barium				Beryllium				Bismuth				Cadmium			
					6010				6010				6010				6010				6010				6010				6010			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
184.0	186.3	B1B7K0	2	V																												
184.0	186.3	B1B7K1	2	V																												
223.9	224.0	B1B7J2	2	V																												
223.9	224.0	B1B7J3	2	V																												
223.9	224.0	B1B7J4	2	V																												
223.9	224.0	B1B7J5	2	V																												
223.9	224.0	B1B7J6	2	V																												
224.0	226.2	B17N73	2	S	6510000	µg/kg			540	µg/kg	U		1620	µg/kg			106000	µg/kg			296	µg/kg			5000	µg/kg	U		75	µg/kg	U	
224.0	226.2	B17NL3	2	S																												
226.5	228.0	B17NL5	1	S	7370000	µg/kg			828	µg/kg			1200	µg/kg	U		107000	µg/kg			310	µg/kg			2200	µg/kg	U		75	µg/kg	U	
226.5	228.0	B17NL7	1	S																												
228.0	230.0	B17NL8	2	S	5840000	µg/kg			1850	µg/kg			1200	µg/kg	U		59400	µg/kg			204	µg/kg			2200	µg/kg	U		75	µg/kg	U	
228.0	230.0	B17NL9	2	S	4780000	µg/kg			540	µg/kg	U		1200	µg/kg	U		52400	µg/kg			162	µg/kg			2200	µg/kg	U		75	µg/kg	U	
228.0	230.0	B17NM3	2	S																												
228.0	230.0	B17NM5	2	S																												
228.0	230.0	B1B9N6	6	W																												
294.5	297.0	B19NJ7	6	S	3090000	µg/kg			1470	µg/kg			1360	µg/kg			11400	µg/kg			300	µg/kg			899	µg/kg			1380	µg/kg		
294.5	297.0	B1B9Y4	6	S	4430000	µg/kg			310	µg/kg	U		1400	µg/kg			22300	µg/kg			170	µg/kg			360	µg/kg	U		30	µg/kg		
TQL (µg/kg)					N/A				N/A				10,000				N/A				N/A				N/A				500			

Table B-2. Metal Analysis Results for Borehole C3426 Samples.
(15 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Calcium				Chromium				Cobalt				Copper				Hexavalent Chromium				Iron				Lead			
					6010				6010				6010				6010				7196				6010				6010			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																												
47.5	50.0	B17N46	6	S					16000	µg/kg							16600	µg/kg											8210	µg/kg		
47.5	50.0	B17N46-A	6	S																												
47.5	50.0	B17N46-B	6	S																	54	µg/kg	U									
47.5	50.0	B17MM8	6	W	25	µg/L	U		4	µg/L	U		1.8	µg/L	U		1.3	µg/L	U						31	µg/L	U		13	µg/L	U	
47.5	50.0	B17MM9	6	W																												
47.5	50.0	B17MN0	6	W																	2	µg/L	U									
49.5	50.0	B17RM5	4	V																												
49.5	50.0	B17RM6	4	V																												
49.5	50.0	B17RM7	4	V																												
49.5	50.0	B17RM8	4	V																												
49.5	50.0	B18CX0	4	V																												
49.5	50.0	B18CX1	4	V																												
58.5	59.5	B17RN0	5	V																												
58.5	59.5	B17RN1	5	V																												
58.5	59.5	B17RN2	5	V																												
58.5	59.5	B18CX3	5	V																												
63.5	66.0	B17TM6	6	S					22500	µg/kg							9950	µg/kg											6580	µg/kg		
63.5	66.0	B17TM6-A	6	S																												
63.5	66.0	B17TM6-B	6	S																	750	µg/kg										
65.0	66.0	B17RN3	4	V																												
65.0	66.0	B17RN5	4	V																												
65.0	66.0	B17RN6	4	V																												
65.0	66.0	B17RN4	4	V																												
65.0	66.0	B17X85	4	V																												
65.0	66.0	B17X86	4	V																												
65.0	66.0	B17X87	4	V																												
66.0	67.0	B17X90	3	V																												
66.0	67.0	B17X91	3	V																												
66.0	67.0	B17X92	3	V																												
66.0	67.0	B17X93	3	V																												
66.0	67.5	B17X96	3	V																												
66.0	67.5	B17X97	3	V																												
66.0	67.5	B17X98	3	V																												
81.0	82.0	B17XB1	3	V																												
81.0	82.0	B17XB2	3	V																												
81.0	82.0	B17XB3	3	V																												
90.0	92.5	B17N52	2	S	7940000	µg/kg	C		12200	µg/kg	C		6100	µg/kg			11800	µg/kg			210	µg/kg	U		15300000	µg/kg	C		5200	µg/kg		
90.0	92.5	B17N61	2	S																												
90.0	92.5	B17XB6	2	V																												
90.0	92.5	B17XB7	2	V																												
90.0	92.5	B17XB8	2	V																												
109.5	112.0	B17N57	1	S																												
109.5	112.0	B18XR8	1	S					15500	µg/kg							13200	µg/kg											5760	µg/kg		

Table B-2. Metal Analysis Results for Borehole C3426 Samples.
(15 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Calcium				Chromium				Cobalt				Copper				Hexavalent Chromium				Iron				Lead			
					6010				6010				6010				6010				7196				6010				6010			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
109.5	112.0	B18XW3	1	S																												
110.0	112.0	B17XB9	2	V																												
110.0	112.0	B17XC0	2	V																												
110.0	112.0	B17XC3	2	V																												
110.0	112.0	B17XC1	2	V																												
112.0	112.0	B190T8-A	6	S																												
115.0	117.5	B191Y4	2	S																												
115.0	117.5	B191Y4-A	2	S																												
115.0	117.5	B191Y7	2	S	2960000	µg/kg			22400	µg/kg			5800	µg/kg			13300	µg/kg							14900000	µg/kg			620000	µg/kg		
118.0	119.5	B17XC4	2	V																												
118.0	119.5	B17XC5	2	V																												
118.0	119.5	B17XC6	2	V																												
118.0	119.5	B17XC7	2	V																												
118.0	119.5	B17XC8	2	V																												
117.0	119.5	B17N60	6	S	32900000	µg/kg			48700	µg/kg			20600	µg/kg			7000	µg/kg							49400000	µg/kg			11800	µg/kg		
117.0	119.5	B17N64	6	S																												
117.0	119.5	B17N64-A	6	S																												
117.0	119.5	B17N68	6	S																												
119.5	122.0	B17N63	1	S	29000000	µg/kg			162000	µg/kg			17100	µg/kg			15200	µg/kg							37000000	µg/kg			11800	µg/kg		
119.5	122.0	B17N65	1	S	30600000	µg/kg			128000	µg/kg			12500	µg/kg			26300	µg/kg			230	µg/kg	U		34100000	µg/kg			3800	µg/kg		
119.5	122.0	B18XT1	1	S																												
119.5	122.0	B17XC9	2	V																												
119.5	122.0	B17XD0	2	V																												
119.5	122.0	B17XD1	2	V																												
119.5	122.0	B17XD2	2	V																												
119.5	122.0	B17XD3	2	V																												
141.0	143.0	B17XD4	4	V																												
141.0	143.0	B17XD5	4	V																												
141.0	143.0	B17XD6	4	V																												
141.0	143.0	B17XD7	4	V																												
141.0	143.0	B17XD8	4	V																												
159.0	160.0	B17XD9	4	V																												
159.0	160.0	B17XF0	4	V																												
159.0	160.0	B17XF2	4	V																												
159.0	160.0	B17XF1	4	V																												
159.0	160.0	B17XF3	4	V																												
174.0	176.5	B17N67	1	S	2570000	µg/kg			38000	µg/kg			6580	µg/kg			18400	µg/kg							12600000	µg/kg			63	µg/kg	U	
174.0	176.5	B17N69	1	S																	210	µg/kg	U									
184.0	186.3	B17N70	2	S	2310000	µg/kg			54400	µg/kg			6880	µg/kg			13300	µg/kg							13900000	µg/kg			63	µg/kg	U	
184.0	186.3	B17N72	2	S																	210	µg/kg	U									
184.0	186.3	B17N74	2	S																												
184.0	186.3	B1B7J7	2	V																												
184.0	186.3	B1B7J8	2	V																												
184.0	186.3	B1B7J9	2	V																												

Table B-2. Metal Analysis Results for Borehole C3426 Samples.
(15 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Calcium				Chromium				Cobalt				Copper				Hexavalent Chromium				Iron				Lead			
					6010				6010				6010				6010				7196				6010				6010			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
184.0	186.3	B1B7K0	2	V																												
184.0	186.3	B1B7K1	2	V																												
223.9	224.0	B1B7J2	2	V																												
223.9	224.0	B1B7J3	2	V																												
223.9	224.0	B1B7J4	2	V																												
223.9	224.0	B1B7J5	2	V																												
223.9	224.0	B1B7J6	2	V																												
224.0	226.2	B17N73	2	S	3280000	µg/kg			35700	µg/kg			9450	µg/kg			14900	µg/kg							16500000	µg/kg			63	µg/kg	U	
224.0	226.2	B17NL3	2	S																	220	µg/kg	U									
226.5	228.0	B17NL5	1	S	3210000	µg/kg			21100	µg/kg			10500	µg/kg			18000	µg/kg							17000000	µg/kg			63	µg/kg	U	
226.5	228.0	B17NL7	1	S																	220	µg/kg	U									
228.0	230.0	B17NL8	2	S	3040000	µg/kg			26200	µg/kg			8290	µg/kg			13700	µg/kg							14800000	µg/kg			63	µg/kg	U	
228.0	230.0	B17NL9	2	S	2490000	µg/kg			34000	µg/kg			5130	µg/kg			10800	µg/kg							12000000	µg/kg			63	µg/kg	U	
228.0	230.0	B17NM3	2	S																	210	µg/kg	U									
228.0	230.0	B17NM5	2	S																	210	µg/kg	U									
228.0	230.0	B1B9N6	6	W																												
294.5	297.0	B19NJ7	6	S	1300000	µg/kg			4180	µg/kg			3990	µg/kg			7880	µg/kg							8950000	µg/kg			790	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	2650000	µg/kg			15100	µg/kg			5100	µg/kg			8700	µg/kg							12600000	µg/kg			2700	µg/kg		
TQL (µg/kg)					N/A				1,000				N/A				2,500				500				N/A				10,000			

Table B-2. Metal Analysis Results for Borehole C3426 Samples.
(15 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Lithium				Magnesium				Manganese				Mercury											
					6010				6010				6010				7470				7471				200.8			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																								
47.5	50.0	B17N46	6	S	8260	µg/kg							157000	µg/kg							99.2	µg/kg						
47.5	50.0	B17N46-A	6	S																								
47.5	50.0	B17N46-B	6	S																								
47.5	50.0	B17MM8	6	W	1.9	µg/L	U		37	µg/L	U		1	µg/L	U										0.1	µg/L	U	
47.5	50.0	B17MM9	6	W																								
47.5	50.0	B17MN0	6	W																								
49.5	50.0	B17RM5	4	V																								
49.5	50.0	B17RM6	4	V																								
49.5	50.0	B17RM7	4	V																								
49.5	50.0	B17RM8	4	V																								
49.5	50.0	B18CX0	4	V																								
49.5	50.0	B18CX1	4	V																								
58.5	59.5	B17RN0	5	V																								
58.5	59.5	B17RN1	5	V																								
58.5	59.5	B17RN2	5	V																								
58.5	59.5	B18CX3	5	V																								
63.5	66.0	B17TM6	6	S	10600	µg/kg							190000	µg/kg							642	µg/kg						
63.5	66.0	B17TM6-A	6	S																								
63.5	66.0	B17TM6-B	6	S																								
65.0	66.0	B17RN3	4	V																								
65.0	66.0	B17RN5	4	V																								
65.0	66.0	B17RN6	4	V																								
65.0	66.0	B17RN4	4	V																								
65.0	66.0	B17X85	4	V																								
65.0	66.0	B17X86	4	V																								
65.0	66.0	B17X87	4	V																								
66.0	67.0	B17X90	3	V																								
66.0	67.0	B17X91	3	V																								
66.0	67.0	B17X92	3	V																								
66.0	67.0	B17X93	3	V																								
66.0	67.5	B17X96	3	V																								
66.0	67.5	B17X97	3	V																								
66.0	67.5	B17X98	3	V																								
81.0	82.0	B17XB1	3	V																								
81.0	82.0	B17XB2	3	V																								
81.0	82.0	B17XB3	3	V																								
90.0	92.5	B17N52	2	S	10100	µg/kg	C		4790000	µg/kg	C		353000	µg/kg	C						20	µg/kg	U					
90.0	92.5	B17N61	2	S																								
90.0	92.5	B17XB6	2	V																								
90.0	92.5	B17XB7	2	V																								
90.0	92.5	B17XB8	2	V																								
109.5	112.0	B17N57	1	S																								
109.5	112.0	B18XR8	1	S	10400	µg/kg							310000	µg/kg			90	µg/kg										

Table B-2. Metal Analysis Results for Borehole C3426 Samples.
(15 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Lithium				Magnesium				Manganese				Mercury											
					6010				6010				6010				7470				7471				200.8			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
109.5	112.0	B18XW3	1	S																								
110.0	112.0	B17XB9	2	V																								
110.0	112.0	B17XC0	2	V																								
110.0	112.0	B17XC3	2	V																								
110.0	112.0	B17XC1	2	V																								
112.0	112.0	B190T8-A	6	S																								
115.0	117.5	B191Y4	2	S																								
115.0	117.5	B191Y4-A	2	S																								
115.0	117.5	B191Y7	2	S	11900	µg/kg			4300000	µg/kg			181000	µg/kg							380	µg/kg		J				
118.0	119.5	B17XC4	2	V																								
118.0	119.5	B17XC5	2	V																								
118.0	119.5	B17XC6	2	V																								
118.0	119.5	B17XC7	2	V																								
118.0	119.5	B17XC8	2	V																								
117.0	119.5	B17N60	6	S	5060	µg/kg			6590000	µg/kg			408000	µg/kg	E										10	µg/kg	U	
117.0	119.5	B17N64	6	S																								
117.0	119.5	B17N64-A	6	S																								
117.0	119.5	B17N68	6	S																								
119.5	122.0	B17N63	1	S	6140	µg/kg			6930000	µg/kg			373000	µg/kg											10	µg/kg	U	
119.5	122.0	B17N65	1	S	7300	µg/kg			7130000	µg/kg			410000	µg/kg							20	µg/kg	U					
119.5	122.0	B18XT1	1	S																								
119.5	122.0	B17XC9	2	V																								
119.5	122.0	B17XD0	2	V																								
119.5	122.0	B17XD1	2	V																								
119.5	122.0	B17XD2	2	V																								
119.5	122.0	B17XD3	2	V																								
141.0	143.0	B17XD4	4	V																								
141.0	143.0	B17XD5	4	V																								
141.0	143.0	B17XD6	4	V																								
141.0	143.0	B17XD7	4	V																								
141.0	143.0	B17XD8	4	V																								
159.0	160.0	B17XD9	4	V																								
159.0	160.0	B17XF0	4	V																								
159.0	160.0	B17XF2	4	V																								
159.0	160.0	B17XF1	4	V																								
159.0	160.0	B17XF3	4	V																								
174.0	176.5	B17N67	1	S	8280	µg/kg			3120000	µg/kg			207000	µg/kg											1020	µg/kg		
174.0	176.5	B17N69	1	S																								
184.0	186.3	B17N70	2	S	9110	µg/kg			3370000	µg/kg			2240000	µg/kg											987	µg/kg	U	
184.0	186.3	B17N72	2	S																								
184.0	186.3	B17N74	2	S																								
184.0	186.3	B1B7J7	2	V																								
184.0	186.3	B1B7J8	2	V																								
184.0	186.3	B1B7J9	2	V																								

Table B-2. Metal Analysis Results for Borehole C3426 Samples.
(15 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Lithium				Magnesium				Manganese				Mercury											
					6010				6010				6010				7470				7471				200.8			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
184.0	186.3	B1B7K0	2	V																								
184.0	186.3	B1B7K1	2	V																								
223.9	224.0	B1B7J2	2	V																								
223.9	224.0	B1B7J3	2	V																								
223.9	224.0	B1B7J4	2	V																								
223.9	224.0	B1B7J5	2	V																								
223.9	224.0	B1B7J6	2	V																								
224.0	226.2	B17N73	2	S	6800	µg/kg			3680000	µg/kg			318000	µg/kg											399	µg/kg		
224.0	226.2	B17NL3	2	S																								
226.5	228.0	B17NL5	1	S	7930	µg/kg			4660000	µg/kg			515000	µg/kg											180	µg/kg		
226.5	228.0	B17NL7	1	S																								
228.0	230.0	B17NL8	2	S	7840	µg/kg			4060000	µg/kg			269000	µg/kg											1010	µg/kg	U	
228.0	230.0	B17NL9	2	S	5140	µg/kg			2930000	µg/kg			166000	µg/kg											1010	µg/kg	U	
228.0	230.0	B17NM3	2	S																								
228.0	230.0	B17NM5	2	S																								
228.0	230.0	B1B9N6	6	W																								
294.5	297.0	B19NJ7	6	S	5140	µg/kg			2420000	µg/kg			112000	µg/kg											839	µg/kg		
294.5	297.0	B1B9Y4	6	S	5800	µg/kg			2890000	µg/kg			164000	µg/kg							20	µg/kg	U					
TQL (µg/kg)					N/A				N/A				N/A				200											

Table B-2. Metal Analysis Results for Borehole C3426 Samples.
(15 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Nickel				Phosphorus				Potassium				Selenium				Silver				Sodium			
					6010				6010				6010				6010				6010				6010			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																								
47.5	50.0	B17N46	6	S	9110	µg/kg			464000	µg/kg							10500	µg/kg	U		1110	µg/kg	U					
47.5	50.0	B17N46-A	6	S																								
47.5	50.0	B17N46-B	6	S																								
47.5	50.0	B17MM8	6	W	3	µg/L	U		34	µg/L	U		178	µg/L	U		19	µg/L	U		2.3	µg/L	U		291	µg/L	U	
47.5	50.0	B17MM9	6	W																								
47.5	50.0	B17MN0	6	W																								
49.5	50.0	B17RM5	4	V																								
49.5	50.0	B17RM6	4	V																								
49.5	50.0	B17RM7	4	V																								
49.5	50.0	B17RM8	4	V																								
49.5	50.0	B18CX0	4	V																								
49.5	50.0	B18CX1	4	V																								
58.5	59.5	B17RN0	5	V																								
58.5	59.5	B17RN1	5	V																								
58.5	59.5	B17RN2	5	V																								
58.5	59.5	B18CX3	5	V																								
63.5	66.0	B17TM6	6	S	20200	µg/kg			595000	µg/kg							10400	µg/kg	U		1150	µg/kg						
63.5	66.0	B17TM6-A	6	S																								
63.5	66.0	B17TM6-B	6	S																								
65.0	66.0	B17RN3	4	V																								
65.0	66.0	B17RN5	4	V																								
65.0	66.0	B17RN6	4	V																								
65.0	66.0	B17RN4	4	V																								
65.0	66.0	B17X85	4	V																								
65.0	66.0	B17X86	4	V																								
65.0	66.0	B17X87	4	V																								
66.0	67.0	B17X90	3	V																								
66.0	67.0	B17X91	3	V																								
66.0	67.0	B17X92	3	V																								
66.0	67.0	B17X93	3	V																								
66.0	67.5	B17X96	3	V																								
66.0	67.5	B17X97	3	V																								
66.0	67.5	B17X98	3	V																								
81.0	82.0	B17XB1	3	V																								
81.0	82.0	B17XB2	3	V																								
81.0	82.0	B17XB3	3	V																								
90.0	92.5	B17N52	2	S	11600	µg/kg			476000	µg/kg			1510000	µg/kg	C		340	µg/kg	U		60	µg/kg	U		648000	µg/kg	C	
90.0	92.5	B17N61	2	S																								
90.0	92.5	B17XB6	2	V																								
90.0	92.5	B17XB7	2	V																								
90.0	92.5	B17XB8	2	V																								
109.5	112.0	B17N57	1	S																								
109.5	112.0	B18XR8	1	S	25400	µg/kg			533000	µg/kg							9180	µg/kg	U		743	µg/kg	U					

Table B-2. Metal Analysis Results for Borehole C3426 Samples.
(15 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Nickel				Phosphorus				Potassium				Selenium				Silver				Sodium			
					6010				6010				6010				6010				6010				6010			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
109.5	112.0	B18XW3	1	S																								
110.0	112.0	B17XB9	2	V																								
110.0	112.0	B17XC0	2	V																								
110.0	112.0	B17XC3	2	V																								
110.0	112.0	B17XC1	2	V																								
112.0	112.0	B190T8-A	6	S																								
115.0	117.5	B191Y4	2	S																								
115.0	117.5	B191Y4-A	2	S																								
115.0	117.5	B191Y7	2	S	22300	µg/kg			620000	µg/kg			1730000	µg/kg			320	µg/kg	U		60	µg/kg	U		998000	µg/kg		
118.0	119.5	B17XC4	2	V																								
118.0	119.5	B17XC5	2	V																								
118.0	119.5	B17XC6	2	V																								
118.0	119.5	B17XC7	2	V																								
118.0	119.5	B17XC8	2	V																								
117.0	119.5	B17N60	6	S	8280	µg/kg			1470000	µg/kg			536000	µg/kg			1990	µg/kg			974	µg/kg	E		1770000	µg/kg		
117.0	119.5	B17N64	6	S																								
117.0	119.5	B17N64-A	6	S																								
117.0	119.5	B17N68	6	S																								
119.5	122.0	B17N63	1	S	72900	µg/kg			973000	µg/kg			833000	µg/kg			3760	µg/kg			1710	µg/kg	E		2660000	µg/kg		
119.5	122.0	B17N65	1	S	71100	µg/kg			1010000	µg/kg			1070000	µg/kg			380	µg/kg	U		70	µg/kg	U		2550000	µg/kg		
119.5	122.0	B18XT1	1	S																								
119.5	122.0	B17XC9	2	V																								
119.5	122.0	B17XD0	2	V																								
119.5	122.0	B17XD1	2	V																								
119.5	122.0	B17XD2	2	V																								
119.5	122.0	B17XD3	2	V																								
141.0	143.0	B17XD4	4	V																								
141.0	143.0	B17XD5	4	V																								
141.0	143.0	B17XD6	4	V																								
141.0	143.0	B17XD7	4	V																								
141.0	143.0	B17XD8	4	V																								
159.0	160.0	B17XD9	4	V																								
159.0	160.0	B17XF0	4	V																								
159.0	160.0	B17XF2	4	V																								
159.0	160.0	B17XF1	4	V																								
159.0	160.0	B17XF3	4	V																								
174.0	176.5	B17N67	1	S	21400	µg/kg			494000	µg/kg			972000	µg/kg			1000	µg/kg	U		2880	µg/kg			561000	µg/kg	E	
174.0	176.5	B17N69	1	S																								
184.0	186.3	B17N70	2	S	28500	µg/kg			524000	µg/kg			1210000	µg/kg			1000	µg/kg	U		2560	µg/kg			661000	µg/kg	E	
184.0	186.3	B17N72	2	S																								
184.0	186.3	B17N74	2	S																								
184.0	186.3	B1B7J7	2	V																								
184.0	186.3	B1B7J8	2	V																								
184.0	186.3	B1B7J9	2	V																								

Table B-2. Metal Analysis Results for Borehole C3426 Samples.
(15 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Nickel				Phosphorus				Potassium				Selenium				Silver				Sodium			
					6010				6010				6010				6010				6010				6010			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
184.0	186.3	B1B7K0	2	V																								
184.0	186.3	B1B7K1	2	V																								
223.9	224.0	B1B7J2	2	V																								
223.9	224.0	B1B7J3	2	V																								
223.9	224.0	B1B7J4	2	V																								
223.9	224.0	B1B7J5	2	V																								
223.9	224.0	B1B7J6	2	V																								
224.0	226.2	B17N73	2	S	20200	µg/kg			663000	µg/kg			970000	µg/kg			1000	µg/kg	U		958	µg/kg	E		325000	µg/kg	E	
224.0	226.2	B17NL3	2	S																								
226.5	228.0	B17NL5	1	S	17400	µg/kg			584000	µg/kg			89800	µg/kg			1000	µg/kg	U		120	µg/kg	U		145000	µg/kg	E	
226.5	228.0	B17NL7	1	S																								
228.0	230.0	B17NL8	2	S	13900	µg/kg			523000	µg/kg	E		693000	µg/kg	E		1000	µg/kg	U		683	µg/kg	E		200000	µg/kg	E	
228.0	230.0	B17NL9	2	S	16700	µg/kg			466000	µg/kg	E		704000	µg/kg	E		1000	µg/kg	U		388	µg/kg	E		197000	µg/kg	E	
228.0	230.0	B17NM3	2	S																								
228.0	230.0	B17NM5	2	S																								
228.0	230.0	B1B9N6	6	W																								
294.5	297.0	B19NJ7	6	S	8840	µg/kg			226000	µg/kg			435000	µg/kg			3180	µg/kg			7620	µg/kg			29700	µg/kg		
294.5	297.0	B1B9Y4	6	S	12500	µg/kg	C		290000	µg/kg			586000	µg/kg							110	µg/kg	U		65200	µg/kg		
TQL (µg/kg)					4,000				10,000				N/A				10,000				2,000				N/A			

Table B-2. Metal Analysis Results for Borehole C3426 Samples.
(15 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Strontium				Uranium									Vanadium				Zinc			
					6010				200.8				KPA					6010				6010			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																					
47.5	50.0	B17N46	6	S	11700	µg/kg							897	µg/kg								48800	µg/kg		
47.5	50.0	B17N46-A	6	S																					
47.5	50.0	B17N46-B	6	S																					
47.5	50.0	B17MM8	6	W	2.3	µg/L	U		0.1	µg/L	U							3.6	µg/L	U		5.2	µg/L	U	
47.5	50.0	B17MM9	6	W																					
47.5	50.0	B17MN0	6	W																					
49.5	50.0	B17RM5	4	V																					
49.5	50.0	B17RM6	4	V																					
49.5	50.0	B17RM7	4	V																					
49.5	50.0	B17RM8	4	V																					
49.5	50.0	B18CX0	4	V																					
49.5	50.0	B18CX1	4	V																					
58.5	59.5	B17RN0	5	V																					
58.5	59.5	B17RN1	5	V																					
58.5	59.5	B17RN2	5	V																					
58.5	59.5	B18CX3	5	V																					
63.5	66.0	B17TM6	6	S	13700	µg/kg							2040	µg/kg								37800	µg/kg		
63.5	66.0	B17TM6-A	6	S																					
63.5	66.0	B17TM6-B	6	S																					
65.0	66.0	B17RN3	4	V																					
65.0	66.0	B17RN5	4	V																					
65.0	66.0	B17RN6	4	V																					
65.0	66.0	B17RN4	4	V																					
65.0	66.0	B17X85	4	V																					
65.0	66.0	B17X86	4	V																					
65.0	66.0	B17X87	4	V																					
66.0	67.0	B17X90	3	V																					
66.0	67.0	B17X91	3	V																					
66.0	67.0	B17X92	3	V																					
66.0	67.0	B17X93	3	V																					
66.0	67.5	B17X96	3	V																					
66.0	67.5	B17X97	3	V																					
66.0	67.5	B17X98	3	V																					
81.0	82.0	B17XB1	3	V																					
81.0	82.0	B17XB2	3	V																					
81.0	82.0	B17XB3	3	V																					
90.0	92.5	B17N52	2	S	25300	µg/kg	C						1620	µg/kg			37	30600	µg/kg			35400	µg/kg		
90.0	92.5	B17N61	2	S																					
90.0	92.5	B17XB6	2	V																					
90.0	92.5	B17XB7	2	V																					
90.0	92.5	B17XB8	2	V																					
109.5	112.0	B17N57	1	S																					
109.5	112.0	B18XR8	1	S	15200	µg/kg							1220	µg/kg								42300	µg/kg		

Table B-2. Metal Analysis Results for Borehole C3426 Samples.
(15 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Strontium				Uranium									Vanadium				Zinc			
					6010				200.8				KPA					6010				6010			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	Conc'n	Units	Q	V
109.5	112.0	B18XW3	1	S																					
110.0	112.0	B17XB9	2	V																					
110.0	112.0	B17XC0	2	V																					
110.0	112.0	B17XC3	2	V																					
110.0	112.0	B17XC1	2	V																					
112.0	112.0	B190T8-A	6	S																					
115.0	117.5	B191Y4	2	S																					
115.0	117.5	B191Y4-A	2	S																					
115.0	117.5	B191Y7	2	S	15100	µg/kg							3140	µg/kg			340	23300	µg/kg			33500	µg/kg		
118.0	119.5	B17XC4	2	V																					
118.0	119.5	B17XC5	2	V																					
118.0	119.5	B17XC6	2	V																					
118.0	119.5	B17XC7	2	V																					
118.0	119.5	B17XC8	2	V																					
117.0	119.5	B17N60	6	S	78200	µg/kg			522	µg/kg								137000	µg/kg			65800	µg/kg		
117.0	119.5	B17N64	6	S																					
117.0	119.5	B17N64-A	6	S																					
117.0	119.5	B17N68	6	S																					
119.5	122.0	B17N63	1	S	83200	µg/kg			667	µg/kg								105000	µg/kg			54200	µg/kg		
119.5	122.0	B17N65	1	S	87100	µg/kg												114000	µg/kg			57600	µg/kg		
119.5	122.0	B18XT1	1	S																					
119.5	122.0	B17XC9	2	V																					
119.5	122.0	B17XD0	2	V																					
119.5	122.0	B17XD1	2	V																					
119.5	122.0	B17XD2	2	V																					
119.5	122.0	B17XD3	2	V																					
141.0	143.0	B17XD4	4	V																					
141.0	143.0	B17XD5	4	V																					
141.0	143.0	B17XD6	4	V																					
141.0	143.0	B17XD7	4	V																					
141.0	143.0	B17XD8	4	V																					
159.0	160.0	B17XD9	4	V																					
159.0	160.0	B17XF0	4	V																					
159.0	160.0	B17XF2	4	V																					
159.0	160.0	B17XF1	4	V																					
159.0	160.0	B17XF3	4	V																					
174.0	176.5	B17N67	1	S	31100	µg/kg			995	µg/kg	U							26400	µg/kg			32300	µg/kg		
174.0	176.5	B17N69	1	S																					
184.0	186.3	B17N70	2	S	21000	µg/kg			987	µg/kg	U							26400	µg/kg			31900	µg/kg		
184.0	186.3	B17N72	2	S																					
184.0	186.3	B17N74	2	S																					
184.0	186.3	B1B7J7	2	V																					
184.0	186.3	B1B7J8	2	V																					
184.0	186.3	B1B7J9	2	V																					

Table B-2. Metal Analysis Results for Borehole C3426 Samples.
(15 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Strontium				Uranium									Vanadium				Zinc			
					6010				200.8				KPA					6010				6010			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	MDA	Conc'n	Units	Q	V	Conc'n	Units	Q	V
184.0	186.3	B1B7K0	2	V																					
184.0	186.3	B1B7K1	2	V																					
223.9	224.0	B1B7J2	2	V																					
223.9	224.0	B1B7J3	2	V																					
223.9	224.0	B1B7J4	2	V																					
223.9	224.0	B1B7J5	2	V																					
223.9	224.0	B1B7J6	2	V																					
224.0	226.2	B17N73	2	S	23000	µg/kg			382	µg/kg								56700	µg/kg			35900	µg/kg		
224.0	226.2	B17NL3	2	S																					
226.5	228.0	B17NL5	1	S	25900	µg/kg			158	µg/kg	U							51700	µg/kg			37000	µg/kg		
226.5	228.0	B17NL7	1	S																					
228.0	230.0	B17NL8	2	S	18200	µg/kg			1010	µg/kg	U							33800	µg/kg			37400	µg/kg		
228.0	230.0	B17NL9	2	S	15800	µg/kg			1010	µg/kg	U							25200	µg/kg			27800	µg/kg		
228.0	230.0	B17NM3	2	S																					
228.0	230.0	B17NM5	2	S																					
228.0	230.0	B1B9N6	6	W																					
294.5	297.0	B19NJ7	6	S	5860	µg/kg			270	µg/kg								10900	µg/kg			22000	µg/kg		
294.5	297.0	B1B9Y4	6	S	9600	µg/kg							726	µg/kg				18600	µg/kg			30100	µg/kg		
TQL (µg/kg)					N/A				N/A									N/A				N/A			

Table B-3. General Chemistry Analysis Results for Borehole C3426 Samples. (9 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Ammonia				Ammonium ion				Nitrogen in Ammonia				Chloride				Cyanide							
							350.3				300.7				Calculation [b]				300.0				335.2				9010			
							Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V		10/13/03																								
47.5	50.0	B17N46	6	S		10/20/03					28600	µg/kg	U		22200	µg/kg	U		9060	µg/kg							624	µg/kg	U	
47.5	50.0	B17N46-A	6	S		10/20/03																								
47.5	50.0	B17N46-B	6	S		10/20/03																								
47.5	50.0	B17MM8	6	W	E	9/23/03					5.15	µg/L	B		4.01	µg/L	B		92	µg/L	B		4	µg/L	U					
47.5	50.0	B17MM9	6	W	E	9/23/03																								
47.5	50.0	B17MN0	6	W	E	9/23/03																								
49.5	50.0	B17RM5	4	V		10/20/03																								
49.5	50.0	B17RM6	4	V		10/20/03																								
49.5	50.0	B17RM7	4	V		10/21/03																								
49.5	50.0	B17RM8	4	V		10/21/03																								
49.5	50.0	B18CX0	4	V	D	10/20/03																								
49.5	50.0	B18CX1	4	V	D	10/21/03																								
58.5	59.5	B17RN0	5	V		10/27/03																								
58.5	59.5	B17RN1	5	V		10/27/03																								
58.5	59.5	B17RN2	5	V		10/27/03																								
58.5	59.5	B18CX3	5	V	D	10/27/03																								
63.5	66.0	B17TM6	6	S		10/29/03					22100	µg/kg	U		17200	µg/kg	U		51400	µg/kg							477	µg/kg	U	
63.5	66.0	B17TM6-A	6	S		10/29/03																								
63.5	66.0	B17TM6-B	6	S		10/29/03																								
65.0	66.0	B17RN3	4	V		10/31/03																								
65.0	66.0	B17RN5	4	V		10/31/03																								
65.0	66.0	B17RN6	4	V		10/31/03																								
65.0	66.0	B17RN4	4	V	D	10/31/03																								
65.0	66.0	B17X85	4	V		11/4/03																								
65.0	66.0	B17X86	4	V		11/4/03																								
65.0	66.0	B17X87	4	V	D	11/4/03																								
66.0	67.0	B17X90	3	V		11/10/03																								
66.0	67.0	B17X91	3	V		11/10/03																								
66.0	67.0	B17X92	3	V		11/10/03																								
66.0	67.0	B17X93	3	V	D	11/10/03																								
66.0	67.5	B17X96	3	V		3/15/04																								
66.0	67.5	B17X97	3	V		3/15/04																								
66.0	67.5	B17X98	3	V	D	3/15/04																								
81.0	82.0	B17XB1	3	V		3/22/04																								
81.0	82.0	B17XB2	3	V		3/22/04																								
81.0	82.0	B17XB3	3	V	D	3/22/04																								
90.0	92.5	B17N52	2	S		3/23/04	7050	µg/kg							5810	µg/kg			27700	µg/kg		J					480	µg/kg	U	
90.0	92.5	B17N61	2	S		3/23/04																								
90.0	92.5	B17XB6	2	V		3/23/04																								
90.0	92.5	B17XB7	2	V		3/23/04																								

Table B-3. General Chemistry Analysis Results for Borehole C3426 Samples. (9 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Ammonia				Ammonium ion				Nitrogen in Ammonia				Chloride				Cyanide							
							350.3				300.7				Calculation [b]				300.0				335.2				9010			
							Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
90.0	92.5	B17XB8	2	V	D	3/23/04																								
109.5	112.0	B17N57	1	S		4/8/04																								
109.5	112.0	B18XR8	1	S		4/8/04					192000				149000	µg/kg			39700	µg/kg							451	µg/kg	U	
109.5	112.0	B18XW3	1	S		4/8/04																								
110.0	112.0	B17XB9	2	V		4/12/04																								
110.0	112.0	B17XC0	2	V		4/12/04																								
110.0	112.0	B17XC3	2	V		4/12/04																								
110.0	112.0	B17XC1	2	V	D	4/12/04																								
112.0	112.0	B190T8-A	6	S		4/15/04																								
115.0	117.5	B191Y4	2	S		4/21/04																								
115.0	117.5	B191Y4-A	2	S		4/21/04																								
115.0	117.5	B191Y7	2	S		4/21/04													43000	µg/kg		J								
118.0	119.5	B17XC4	2	V		4/22/04																								
118.0	119.5	B17XC5	2	V		4/22/04																								
118.0	119.5	B17XC6	2	V		4/22/04																								
118.0	119.5	B17XC7	2	V		4/22/04																								
118.0	119.5	B17XC8	2	V	D	4/22/04																								
117.0	119.5	B17N60	6	S		4/21/04					18000	µg/kg	E		14000	µg/kg	E		13000	µg/kg			200	µg/kg	U					
117.0	119.5	B17N64	6	S		4/21/04																								
117.0	119.5	B17N64-A	6	S		4/21/04																								
117.0	119.5	B17N68	6	S		4/21/04																								
119.5	122.0	B17N63	1	S		5/3/04					10200	µg/kg	E		7930	µg/kg	E		19300	µg/kg			200	µg/kg	U					
119.5	122.0	B17N65	1	S		5/3/04													18200	µg/kg										
119.5	122.0	B18XT1	1	S		5/3/04																								
119.5	122.0	B17XC9	2	V		5/3/04																								
119.5	122.0	B17XD0	2	V		5/3/04																								
119.5	122.0	B17XD1	2	V		5/3/04																								
119.5	122.0	B17XD2	2	V		5/3/04																								
119.5	122.0	B17XD3	2	V	D	5/3/04																								
141.0	143.0	B17XD4	4	V		8/16/04																								
141.0	143.0	B17XD5	4	V		8/16/04																								
141.0	143.0	B17XD6	4	V		8/16/04																								
141.0	143.0	B17XD7	4	V		8/16/04																								
141.0	143.0	B17XD8	4	V	D	8/16/04																								
159.0	160.0	B17XD9	4	V		8/19/04																								
159.0	160.0	B17XF0	4	V		8/19/04																								
159.0	160.0	B17XF2	4	V		8/19/04																								
159.0	160.0	B17XF1	4	V	D	8/19/04																								
159.0	160.0	B17XF3	4	V	D	8/19/04																								
174.0	176.5	B17N67	1	S		8/23/04					2110	µg/kg	B		1640	µg/kg	B		5030	µg/kg	B		200	µg/kg	U					
174.0	176.5	B17N69	1	S		8/23/04																								

Table B-3. General Chemistry Analysis Results for Borehole C3426 Samples. (9 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	QC	Sample Date	Ammonia				Ammonium ion				Nitrogen in Ammonia				Chloride				Cyanide							
							350.3				300.7				Calculation [b]				300.0				335.2				9010			
							Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
184.0	186.3	B17N70	2	S		8/25/04					1170	µg/kg	B		910	µg/kg	B		5130	µg/kg	B		200	µg/kg	U					
184.0	186.3	B17N72	2	S		8/25/04																								
184.0	186.3	B17N74	2	S		8/25/04																								
184.0	186.3	B1B7J7	2	V		8/25/04																								
184.0	186.3	B1B7J8	2	V		8/25/04																								
184.0	186.3	B1B7J9	2	V		8/25/04																								
184.0	186.3	B1B7K0	2	V		8/25/04																								
184.0	186.3	B1B7K1	2	V	D	8/25/04																								
223.9	224.0	B1B7J2	2	V		9/9/04																								
223.9	224.0	B1B7J3	2	V		9/9/04																								
223.9	224.0	B1B7J4	2	V		9/9/04																								
223.9	224.0	B1B7J5	2	V		9/9/04																								
223.9	224.0	B1B7J6	2	V	D	9/9/04																								
224.0	226.2	B17N73	2	S		9/9/04					1000	µg/kg	B		778	µg/kg	B		3300	µg/kg	B		200	µg/kg	U					
224.0	226.2	B17NL3	2	S		9/9/04																								
226.5	228.0	B17NL5	1	S		9/9/04					923	µg/kg	B		718	µg/kg	B		4640	µg/kg	B		200	µg/kg	U					
226.5	228.0	B17NL7	1	S		9/9/04																								
228.0	230.0	B17NL8	2	S		9/15/04					1290	µg/kg	B		1000	µg/kg	B		3820	µg/kg	B		200	µg/kg	U					
228.0	230.0	B17NL9	2	S		9/15/04					1380	µg/kg	B		1070	µg/kg	B		3900	µg/kg	B		200	µg/kg	U					
228.0	230.0	B17NM3	2	S	D	9/15/04																								
228.0	230.0	B17NM5	2	S	D	9/15/04																								
228.0	230.0	B1B9N6	6	W	T	9/15/04																								
294.5	297.0	B19NJ7	6	S		10/21/04									307	µg/kg	B		2960	µg/kg	B		200	µg/kg	U					
294.5	297.0	B1B9Y4	6	S		10/21/04									15800	µg/kg	U		13500	µg/kg							630	µg/kg	U	
TQL (µg/kg)							(a)				(a)				500				2000				N/A							

Table B-3. General Chemistry Analysis Results for Borehole C3426 Samples. (9 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Fluoride				Nitrate				Nitrogen in Nitrate				Nitrite				Nitrogen in Nitrite				Nitrogen in Nitrite and Nitrate			
					300.0				300.0				Calculation [c]				300.0				Calculation [d]				353.1			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																								
47.5	50.0	B17N46	6	S	7050	µg/kg			87600	µg/kg			19800	µg/kg			12100	µg/kg			3680	µg/kg						
47.5	50.0	B17N46-A	6	S																								
47.5	50.0	B17N46-B	6	S																					9600	µg/kg		
47.5	50.0	B17MM8	6	W	23	µg/L	U		57.5	µg/L	U		13	µg/L	U		62.4	µg/L	U		19	µg/L	U					
47.5	50.0	B17MM9	6	W																								
47.5	50.0	B17MN0	6	W																								
49.5	50.0	B17RM5	4	V																								
49.5	50.0	B17RM6	4	V																								
49.5	50.0	B17RM7	4	V																								
49.5	50.0	B17RM8	4	V																								
49.5	50.0	B18CX0	4	V																								
49.5	50.0	B18CX1	4	V																								
58.5	59.5	B17RN0	5	V																								
58.5	59.5	B17RN1	5	V																								
58.5	59.5	B17RN2	5	V																								
58.5	59.5	B18CX3	5	V																								
63.5	66.0	B17TM6	6	S	3020	µg/kg			369000	µg/kg			83300	µg/kg			10900	µg/kg	U		3320	µg/kg	U					
63.5	66.0	B17TM6-A	6	S																								
63.5	66.0	B17TM6-B	6	S																					10800	µg/kg		
65.0	66.0	B17RN3	4	V																								
65.0	66.0	B17RN5	4	V																								
65.0	66.0	B17RN6	4	V																								
65.0	66.0	B17RN4	4	V																								
65.0	66.0	B17X85	4	V																								
65.0	66.0	B17X86	4	V																								
65.0	66.0	B17X87	4	V																								
66.0	67.0	B17X90	3	V																								
66.0	67.0	B17X91	3	V																								
66.0	67.0	B17X92	3	V																								
66.0	67.0	B17X93	3	V																								
66.0	67.5	B17X96	3	V																								
66.0	67.5	B17X97	3	V																								
66.0	67.5	B17X98	3	V																								
81.0	82.0	B17XB1	3	V																								
81.0	82.0	B17XB2	3	V																								
81.0	82.0	B17XB3	3	V																								
90.0	92.5	B17N52	2	S	7800	µg/kg		J	1550000	µg/kg			350000	µg/kg			2060	µg/kg			627	µg/kg						
90.0	92.5	B17N61	2	S																								
90.0	92.5	B17XB6	2	V																								
90.0	92.5	B17XB7	2	V																								

Table B-3. General Chemistry Analysis Results for Borehole C3426 Samples. (9 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Fluoride				Nitrate				Nitrogen in Nitrate				Nitrite				Nitrogen in Nitrite				Nitrogen in Nitrite and Nitrate			
					300.0				300.0				Calculation [c]				300.0				Calculation [d]				353.1			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
90.0	92.5	B17XB8	2	V																								
109.5	112.0	B17N57	1	S																								
109.5	112.0	B18XR8	1	S	24900	µg/kg	U		5910000	µg/kg			1330000	µg/kg			224000	µg/kg	U		68200	µg/kg	U					
109.5	112.0	B18XW3	1	S																								
110.0	112.0	B17XB9	2	V																								
110.0	112.0	B17XC0	2	V																								
110.0	112.0	B17XC3	2	V																								
110.0	112.0	B17XC1	2	V																								
112.0	112.0	B190T8-A	6	S																								
115.0	117.5	B191Y4	2	S																								
115.0	117.5	B191Y4-A	2	S																								
115.0	117.5	B191Y7	2	S	2400	µg/kg		J	5580000	µg/kg	D	J	1260000	µg/kg	D	J	2240	µg/kg		J	682	µg/kg		J				
118.0	119.5	B17XC4	2	V																								
118.0	119.5	B17XC5	2	V																								
118.0	119.5	B17XC6	2	V																								
118.0	119.5	B17XC7	2	V																								
118.0	119.5	B17XC8	2	V																								
117.0	119.5	B17N60	6	S	3720	µg/kg			153000	µg/kg			34500	µg/kg			3120	µg/kg	U		950	µg/kg	U					
117.0	119.5	B17N64	6	S																								
117.0	119.5	B17N64-A	6	S																								
117.0	119.5	B17N68	6	S																								
119.5	122.0	B17N63	1	S	5420	µg/kg			143000	µg/kg			32300	µg/kg			3180	µg/kg	U		968	µg/kg	U					
119.5	122.0	B17N65	1	S	6800	µg/kg			2280000	µg/kg	D		515000	µg/kg	D		1420	µg/kg	U		432	µg/kg	U					
119.5	122.0	B18XT1	1	S																								
119.5	122.0	B17XC9	2	V																								
119.5	122.0	B17XD0	2	V																								
119.5	122.0	B17XD1	2	V																								
119.5	122.0	B17XD2	2	V																								
119.5	122.0	B17XD3	2	V																								
141.0	143.0	B17XD4	4	V																								
141.0	143.0	B17XD5	4	V																								
141.0	143.0	B17XD6	4	V																								
141.0	143.0	B17XD7	4	V																								
141.0	143.0	B17XD8	4	V																								
159.0	160.0	B17XD9	4	V																								
159.0	160.0	B17XF0	4	V																								
159.0	160.0	B17XF2	4	V																								
159.0	160.0	B17XF1	4	V																								
159.0	160.0	B17XF3	4	V																								
174.0	176.5	B17N67	1	S	1150	µg/kg	U		83700	µg/kg			18900	µg/kg			3120	µg/kg	U		950	µg/kg	U					
174.0	176.5	B17N69	1	S																								

Table B-3. General Chemistry Analysis Results for Borehole C3426 Samples. (9 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Fluoride				Nitrate				Nitrogen in Nitrate				Nitrite				Nitrogen in Nitrite				Nitrogen in Nitrite and Nitrate			
					300.0				300.0				Calculation [c]				300.0				Calculation [d]				353.1			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
184.0	186.3	B17N70	2	S	1150	µg/kg	U		95600	µg/kg			21600	µg/kg			3120	µg/kg	U		950	µg/kg	U					
184.0	186.3	B17N72	2	S																								
184.0	186.3	B17N74	2	S																								
184.0	186.3	B1B7J7	2	V																								
184.0	186.3	B1B7J8	2	V																								
184.0	186.3	B1B7J9	2	V																								
184.0	186.3	B1B7K0	2	V																								
184.0	186.3	B1B7K1	2	V																								
223.9	224.0	B1B7J2	2	V																								
223.9	224.0	B1B7J3	2	V																								
223.9	224.0	B1B7J4	2	V																								
223.9	224.0	B1B7J5	2	V																								
223.9	224.0	B1B7J6	2	V																								
224.0	226.2	B17N73	2	S	1150	µg/kg	U		28900	µg/kg			6530	µg/kg			3120	µg/kg	U		950	µg/kg	U					
224.0	226.2	B17NL3	2	S																								
226.5	228.0	B17NL5	1	S	1150	µg/kg	U		54400	µg/kg	B		12300	µg/kg	B		3120	µg/kg	U		950	µg/kg	U					
226.5	228.0	B17NL7	1	S																								
228.0	230.0	B17NL8	2	S	1150	µg/kg	U		41100	µg/kg			9280	µg/kg			3120	µg/kg	U		950	µg/kg	U					
228.0	230.0	B17NL9	2	S	1150	µg/kg	U		41000	µg/kg			9260	µg/kg			3120	µg/kg	U		950	µg/kg	U					
228.0	230.0	B17NM3	2	S																								
228.0	230.0	B17NM5	2	S																								
228.0	230.0	B1B9N6	6	W																								
294.5	297.0	B19NJ7	6	S	1130	µg/kg	U						196000	µg/kg							3060	µg/kg	U					
294.5	297.0	B1B9Y4	6	S	1300	µg/kg	U		216000	µg/kg			48800	µg/kg			1260	µg/kg	U		383	µg/kg	U					
TQL (µg/kg)					5000				(a)				2500				(a)				2500				750			

Table B-3. General Chemistry Analysis Results for Borehole C3426 Samples. (9 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Nitrogen in Nitrite and Nitrate				pH Measurement								Phosphate				Sulfate				Sulfide			
					353.2				150.1				9045				300.0				300.0				9030			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																								
47.5	50.0	B17N46	6	S									6.5	pH			12100	µg/kg	U		170000	µg/kg			10600	µg/kg	U	
47.5	50.0	B17N46-A	6	S																								
47.5	50.0	B17N46-B	6	S																								
47.5	50.0	B17MM8	6	W					6.038	pH							166	µg/L	U		100	µg/L	U					
47.5	50.0	B17MM9	6	W	20	µg/L	U																		1000	µg/L	U	
47.5	50.0	B17MN0	6	W																								
49.5	50.0	B17RM5	4	V																								
49.5	50.0	B17RM6	4	V																								
49.5	50.0	B17RM7	4	V																								
49.5	50.0	B17RM8	4	V																								
49.5	50.0	B18CX0	4	V																								
49.5	50.0	B18CX1	4	V																								
58.5	59.5	B17RN0	5	V																								
58.5	59.5	B17RN1	5	V																								
58.5	59.5	B17RN2	5	V																								
58.5	59.5	B18CX3	5	V																								
63.5	66.0	B17TM6	6	S									3.86	pH			12100	µg/kg	U		456000	µg/kg			10600	µg/kg	U	
63.5	66.0	B17TM6-A	6	S																								
63.5	66.0	B17TM6-B	6	S																								
65.0	66.0	B17RN3	4	V																								
65.0	66.0	B17RN5	4	V																								
65.0	66.0	B17RN6	4	V																								
65.0	66.0	B17RN4	4	V																								
65.0	66.0	B17X85	4	V																								
65.0	66.0	B17X86	4	V																								
65.0	66.0	B17X87	4	V																								
66.0	67.0	B17X90	3	V																								
66.0	67.0	B17X91	3	V																								
66.0	67.0	B17X92	3	V																								
66.0	67.0	B17X93	3	V																								
66.0	67.5	B17X96	3	V																								
66.0	67.5	B17X97	3	V																								
66.0	67.5	B17X98	3	V																								
81.0	82.0	B17XB1	3	V																								
81.0	82.0	B17XB2	3	V																								
81.0	82.0	B17XB3	3	V																								
90.0	92.5	B17N52	2	S	384000	µg/kg							8.4	pH			1300	µg/kg	U		8100	µg/kg		J	20600	µg/kg	U	
90.0	92.5	B17N61	2	S																								
90.0	92.5	B17XB6	2	V																								
90.0	92.5	B17XB7	2	V																								

Table B-3. General Chemistry Analysis Results for Borehole C3426 Samples. (9 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Nitrogen in Nitrite and Nitrate				pH Measurement								Phosphate				Sulfate				Sulfide			
					353.2				150.1				9045				300.0				300.0				9030			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
90.0	92.5	B17XB8	2	V																								
109.5	112.0	B17N57	1	S																								
109.5	112.0	B18XR8	1	S									5.97	pH			249000	µg/kg	U		287000	µg/kg	U		14600	µg/kg	U	
109.5	112.0	B18XW3	1	S																								
110.0	112.0	B17XB9	2	V																								
110.0	112.0	B17XC0	2	V																								
110.0	112.0	B17XC3	2	V																								
110.0	112.0	B17XC1	2	V																								
112.0	112.0	B190T8-A	6	S																								
115.0	117.5	B191Y4	2	S																								
115.0	117.5	B191Y4-A	2	S																								
115.0	117.5	B191Y7	2	S													1200	µg/kg	U	UJ	1200	µg/kg	U	UJ				
118.0	119.5	B17XC4	2	V																								
118.0	119.5	B17XC5	2	V																								
118.0	119.5	B17XC6	2	V																								
118.0	119.5	B17XC7	2	V																								
118.0	119.5	B17XC8	2	V																								
117.0	119.5	B17N60	6	S					7.41	pH							8280	µg/kg	UE		11300	µg/kg						
117.0	119.5	B17N64	6	S																								
117.0	119.5	B17N64-A	6	S																								
117.0	119.5	B17N68	6	S																								
119.5	122.0	B17N63	1	S					8.316	pH							8430	µg/kg	U		34200	µg/kg						
119.5	122.0	B17N65	1	S	432000	µg/kg	D										1400	µg/kg	U		39700	µg/kg			23100	µg/kg	U	
119.5	122.0	B18XT1	1	S																								
119.5	122.0	B17XC9	2	V																								
119.5	122.0	B17XD0	2	V																								
119.5	122.0	B17XD1	2	V																								
119.5	122.0	B17XD2	2	V																								
119.5	122.0	B17XD3	2	V																								
141.0	143.0	B17XD4	4	V																								
141.0	143.0	B17XD5	4	V																								
141.0	143.0	B17XD6	4	V																								
141.0	143.0	B17XD7	4	V																								
141.0	143.0	B17XD8	4	V																								
159.0	160.0	B17XD9	4	V																								
159.0	160.0	B17XF0	4	V																								
159.0	160.0	B17XF2	4	V																								
159.0	160.0	B17XF1	4	V																								
159.0	160.0	B17XF3	4	V																								
174.0	176.5	B17N67	1	S					9.377	pH							8280	µg/kg	U		17500	µg/kg	B					
174.0	176.5	B17N69	1	S	21200	µg/kg																			69300	µg/kg		

Table B-3. General Chemistry Analysis Results for Borehole C3426 Samples. (9 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Nitrogen in Nitrite and Nitrate				pH Measurement								Phosphate				Sulfate				Sulfide			
					353.2				150.1				9045				300.0				300.0				9030			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
184.0	186.3	B17N70	2	S					9.379	pH							8280	µg/kg	U		10200	µg/kg	B					
184.0	186.3	B17N72	2	S	22100	µg/kg																			38700	µg/kg	U	
184.0	186.3	B17N74	2	S																								
184.0	186.3	B1B7J7	2	V																								
184.0	186.3	B1B7J8	2	V																								
184.0	186.3	B1B7J9	2	V																								
184.0	186.3	B1B7K0	2	V																								
184.0	186.3	B1B7K1	2	V																								
223.9	224.0	B1B7J2	2	V																								
223.9	224.0	B1B7J3	2	V																								
223.9	224.0	B1B7J4	2	V																								
223.9	224.0	B1B7J5	2	V																								
223.9	224.0	B1B7J6	2	V																								
224.0	226.2	B17N73	2	S					8.454	pH							8280	µg/kg	U		11200	µg/kg	B					
224.0	226.2	B17NL3	2	S	8100	µg/kg																			50500	µg/kg	U	
226.5	228.0	B17NL5	1	S					8.059	pH							8280	µg/kg	U		5000	µg/kg	U					
226.5	228.0	B17NL7	1	S	7500	µg/kg																			54800	µg/kg	U	
228.0	230.0	B17NL8	2	S					8.128	pH							8280	µg/kg	U		5000	µg/kg	U					
228.0	230.0	B17NL9	2	S					8.2	pH							8280	µg/kg	U		9930	µg/kg	B					
228.0	230.0	B17NM3	2	S	9200	µg/kg	D																		38200	µg/kg	U	
228.0	230.0	B17NM5	2	S	7500	µg/kg	D																		39000	µg/kg	U	
228.0	230.0	B1B9N6	6	W																								
294.5	297.0	B19NJ7	6	S													24900	µg/kg	U		4900	µg/kg	U					
294.5	297.0	B1B9Y4	6	S									8.2	pH			1300	µg/kg	U		12400	µg/kg						
TQL (µg/kg)					750				N/A								5000				5000				N/A			

(a) Refer to the column for "Nitrogen in Ammonia," "Nitrogen in Nitrate," or "Nitrogen in Nitrite," as appropriate.

(b) Results calculated from the "Ammonia" and "Ammonium Ion" columns, except sample B19NJ7 (method 300.7) and sample B1B9Y4 (method 350.3).

(c) Results calculated from the "Nitrate"columns, except sample B19NJ7 (method 300.0).

(d) Results calculated from the "Nitrate"columns, except sample B19NJ7 (method 300.0).

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	1,1,1-Trichloroethane				1,1,2,2-Tetrachloroethane				1,1,2-Trichloroethane				1,1-Dichloroethane				1,1-Dichloroethene				1,2-Dibromo-3-chloropropane			
					8260				8260				8260				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																								
47.5	50.0	B17N46	6	S	0.76	µg/kg	U										0.87	µg/kg	U		0.83	µg/kg	U					
47.5	50.0	B17N46-A	6	S																								
47.5	50.0	B17N46-B	6	S																								
47.5	50.0	B17MM8	6	W	1	µg/L	U		1	µg/L	U		1	µg/L	U		1	µg/L	U		1	µg/L	U					
47.5	50.0	B17MM9	6	W																								
47.5	50.0	B17MN0	6	W																								
49.5	50.0	B17RM5	4	V																								
49.5	50.0	B17RM6	4	V																								
49.5	50.0	B17RM7	4	V																								
49.5	50.0	B17RM8	4	V																								
49.5	50.0	B18CX0	4	V																								
49.5	50.0	B18CX1	4	V																								
58.5	59.5	B17RN0	5	V																								
58.5	59.5	B17RN1	5	V																								
58.5	59.5	B17RN2	5	V																								
58.5	59.5	B18CX3	5	V																								
63.5	66.0	B17TM6	6	S	140	µg/kg	U										160	µg/kg	U		150	µg/kg	U					
63.5	66.0	B17TM6-A	6	S																								
63.5	66.0	B17TM6-B	6	S																								
65.0	66.0	B17RN3	4	V																								
65.0	66.0	B17RN5	4	V																								
65.0	66.0	B17RN6	4	V																								
65.0	66.0	B17RN4	4	V																								
65.0	66.0	B17X85	4	V																								
65.0	66.0	B17X86	4	V																								
65.0	66.0	B17X87	4	V																								
66.0	67.0	B17X90	3	V																								
66.0	67.0	B17X91	3	V																								
66.0	67.0	B17X92	3	V																								
66.0	67.0	B17X93	3	V																								
66.0	67.5	B17X96	3	V																								
66.0	67.5	B17X97	3	V																								
66.0	67.5	B17X98	3	V																								
81.0	82.0	B17XB1	3	V																								
81.0	82.0	B17XB2	3	V																								

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	1,1,1-Trichloroethane				1,1,2,2-Tetrachloroethane				1,1,2-Trichloroethane				1,1-Dichloroethane				1,1-Dichloroethene				1,2-Dibromo-3-chloropropane			
					8260				8260				8260				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																								
90.0	92.5	B17N52	2	S	5	µg/kg	U		5	µg/kg	U		5	µg/kg	U		5	µg/kg	U		5	µg/kg	U					
90.0	92.5	B17N61	2	S	0.77	µg/kg	U										0.88	µg/kg	U		0.84	µg/kg	U					
90.0	92.5	B17XB6	2	V																								
90.0	92.5	B17XB7	2	V																								
90.0	92.5	B17XB8	2	V																								
109.5	112.0	B17N57	1	S																								
109.5	112.0	B18XR8	1	S	130	µg/kg	U										300	µg/kg	U		140	µg/kg	U					
109.5	112.0	B18XW3	1	S	0.63	µg/kg	U										0.72	µg/kg	U		0.68	µg/kg	U					
110.0	112.0	B17XB9	2	V																								
110.0	112.0	B17XC0	2	V																								
110.0	112.0	B17XC3	2	V																								
110.0	112.0	B17XC1	2	V																								
112.0	112.0	B190T8-A	6	S																								
115.0	117.5	B191Y4	2	S	0.69	µg/kg	U										0.79	µg/kg	U		1.1	µg/kg			588	µg/kg	J	
115.0	117.5	B191Y4-A	2	S	69	µg/kg	U										79	µg/kg	U		75	µg/kg	U					
115.0	117.5	B191Y7	2	S																								
118.0	119.5	B17XC4	2	V																								
118.0	119.5	B17XC5	2	V																								
118.0	119.5	B17XC6	2	V																								
118.0	119.5	B17XC7	2	V																								
118.0	119.5	B17XC8	2	V																								
117.0	119.5	B17N60	6	S	2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U					
117.0	119.5	B17N64	6	S	0.84	µg/kg	U										0.96	µg/kg	U		0.91	µg/kg	U					
117.0	119.5	B17N64-A	6	S	0.59	µg/kg	U										0.67	µg/kg	U		0.64	µg/kg	U					
117.0	119.5	B17N68	6	S	77	µg/kg	U										89	µg/kg	U		84	µg/kg	U					
119.5	122.0	B17N63	1	S	2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U					
119.5	122.0	B17N65	1	S																								
119.5	122.0	B18XT1	1	S	11	µg/kg	U		11	µg/kg	U		11	µg/kg	U		11	µg/kg	U		11	µg/kg	U					
119.5	122.0	B17XC9	2	V																								
119.5	122.0	B17XD0	2	V																								
119.5	122.0	B17XD1	2	V																								
119.5	122.0	B17XD2	2	V																								
119.5	122.0	B17XD3	2	V																								
141.0	143.0	B17XD4	4	V																								
141.0	143.0	B17XD5	4	V																								

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	1,1,1-Trichloroethane				1,1,2,2-Tetrachloroethane				1,1,2-Trichloroethane				1,1-Dichloroethane				1,1-Dichloroethene				1,2-Dibromo-3-chloropropane			
					8260				8260				8260				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V																								
141.0	143.0	B17XD7	4	V																								
141.0	143.0	B17XD8	4	V																								
159.0	160.0	B17XD9	4	V																								
159.0	160.0	B17XF0	4	V																								
159.0	160.0	B17XF2	4	V																								
159.0	160.0	B17XF1	4	V																								
159.0	160.0	B17XF3	4	V																								
174.0	176.5	B17N67	1	S	2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U					
174.0	176.5	B17N69	1	S																								
184.0	186.3	B17N70	2	S	2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U					
184.0	186.3	B17N72	2	S																								
184.0	186.3	B17N74	2	S	2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U					
184.0	186.3	B1B7J7	2	V																								
184.0	186.3	B1B7J8	2	V																								
184.0	186.3	B1B7J9	2	V																								
184.0	186.3	B1B7K0	2	V																								
184.0	186.3	B1B7K1	2	V																								
223.9	224.0	B1B7J2	2	V																								
223.9	224.0	B1B7J3	2	V																								
223.9	224.0	B1B7J4	2	V																								
223.9	224.0	B1B7J5	2	V																								
223.9	224.0	B1B7J6	2	V																								
224.0	226.2	B17N73	2	S	2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U					
224.0	226.2	B17NL3	2	S																								
226.5	228.0	B17NL5	1	S	1.9	µg/kg	U		1.9	µg/kg	U		1.9	µg/kg	U		1.9	µg/kg	U		1.9	µg/kg	U					
226.5	228.0	B17NL7	1	S																								
228.0	230.0	B17NL8	2	S	1.8	µg/kg	U		1.8	µg/kg	U		1.8	µg/kg	U		1.8	µg/kg	U		1.8	µg/kg	U					
228.0	230.0	B17NL9	2	S	1.8	µg/kg	U		1.8	µg/kg	U		1.8	µg/kg	U		1.8	µg/kg	U		1.8	µg/kg	U					
228.0	230.0	B17NM3	2	S																								
228.0	230.0	B17NM5	2	S																								
228.0	230.0	B1B9N6	6	W	1	µg/L	U		1	µg/L	U		1	µg/L	U		1	µg/L	U		1	µg/L	U					
294.5	297.0	B19NJ7	6	S	2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U					
294.5	297.0	B1B9Y4	6	S	6	µg/kg	U		6	µg/kg	U		6	µg/kg	U		6	µg/kg	U		6	µg/kg	U					
TQL (µg/kg)					5				N/A				N/A				10				N/A				N/A			

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	1,2-Dichloroethane				1,2-Dichloroethene (Total)				1,2-Dichloropropane				1-Butanol			
					8260				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																
47.5	50.0	B17N46	6	S	0.83	µg/kg	U		1.5	µg/kg	U									
47.5	50.0	B17N46-A	6	S																
47.5	50.0	B17N46-B	6	S																
47.5	50.0	B17MM8	6	W	1	µg/L	U		1	µg/L	U		1	µg/L	U		20	µg/L	U	
47.5	50.0	B17MM9	6	W																
47.5	50.0	B17MN0	6	W																
49.5	50.0	B17RM5	4	V																
49.5	50.0	B17RM6	4	V																
49.5	50.0	B17RM7	4	V																
49.5	50.0	B17RM8	4	V																
49.5	50.0	B18CX0	4	V																
49.5	50.0	B18CX1	4	V																
58.5	59.5	B17RN0	5	V																
58.5	59.5	B17RN1	5	V																
58.5	59.5	B17RN2	5	V																
58.5	59.5	B18CX3	5	V																
63.5	66.0	B17TM6	6	S	150	µg/kg	U		270	µg/kg	U									
63.5	66.0	B17TM6-A	6	S																
63.5	66.0	B17TM6-B	6	S																
65.0	66.0	B17RN3	4	V																
65.0	66.0	B17RN5	4	V																
65.0	66.0	B17RN6	4	V																
65.0	66.0	B17RN4	4	V																
65.0	66.0	B17X85	4	V																
65.0	66.0	B17X86	4	V																
65.0	66.0	B17X87	4	V																
66.0	67.0	B17X90	3	V																
66.0	67.0	B17X91	3	V																
66.0	67.0	B17X92	3	V																
66.0	67.0	B17X93	3	V																
66.0	67.5	B17X96	3	V																
66.0	67.5	B17X97	3	V																
66.0	67.5	B17X98	3	V																
81.0	82.0	B17XB1	3	V																
81.0	82.0	B17XB2	3	V																

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	1,2-Dichloroethane				1,2-Dichloroethene (Total)				1,2-Dichloropropane				1-Butanol			
					8260				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																
90.0	92.5	B17N52	2	S	5	µg/kg	U		5	µg/kg	U		5	µg/kg	U		76.174	µg/kg	J	
90.0	92.5	B17N61	2	S	0.84	µg/kg	U		1.5	µg/kg	U						260	µg/kg		
.90.0	92.5	B17XB6	2	V																
90.0	92.5	B17XB7	2	V																
90.0	92.5	B17XB8	2	V																
109.5	112.0	B17N57	1	S																
109.5	112.0	B18XR8	1	S	140	µg/kg	U		260	µg/kg	U									
109.5	112.0	B18XW3	1	S	0.68	µg/kg	U		1.2	µg/kg	U						1500	µg/kg	E	
110.0	112.0	B17XB9	2	V																
110.0	112.0	B17XC0	2	V																
110.0	112.0	B17XC3	2	V																
110.0	112.0	B17XC1	2	V																
112.0	112.0	B190T8-A	6	S																
115.0	117.5	B191Y4	2	S	0.75	µg/kg	U		1.4	µg/kg	U						947	µg/kg	E	
115.0	117.5	B191Y4-A	2	S	75	µg/kg	U		140	µg/kg	U									
115.0	117.5	B191Y7	2	S																
118.0	119.5	B17XC4	2	V																
118.0	119.5	B17XC5	2	V																
118.0	119.5	B17XC6	2	V																
118.0	119.5	B17XC7	2	V																
118.0	119.5	B17XC8	2	V																
117.0	119.5	B17N60	6	S	2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		42	µg/kg	U	
117.0	119.5	B17N64	6	S	0.91	µg/kg	U		1.6	µg/kg	U									
117.0	119.5	B17N64-A	6	S	0.64	µg/kg	U		1.2	µg/kg	U						301	µg/kg		
117.0	119.5	B17N68	6	S	84	µg/kg	U		150	µg/kg	U									
119.5	122.0	B17N63	1	S	2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		42	µg/kg	U	
119.5	122.0	B17N65	1	S																
119.5	122.0	B18XT1	1	S	11	µg/kg	U		11	µg/kg	U		11	µg/kg	U					
119.5	122.0	B17XC9	2	V																
119.5	122.0	B17XD0	2	V																
119.5	122.0	B17XD1	2	V																
119.5	122.0	B17XD2	2	V																
119.5	122.0	B17XD3	2	V																
141.0	143.0	B17XD4	4	V																
141.0	143.0	B17XD5	4	V																

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	1,2-Dichloroethane				1,2-Dichloroethene (Total)				1,2-Dichloropropane				1-Butanol			
					8260				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V																
141.0	143.0	B17XD7	4	V																
141.0	143.0	B17XD8	4	V																
159.0	160.0	B17XD9	4	V																
159.0	160.0	B17XF0	4	V																
159.0	160.0	B17XF2	4	V																
159.0	160.0	B17XF1	4	V																
159.0	160.0	B17XF3	4	V																
174.0	176.5	B17N67	1	S	2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		41	µg/kg	U	
174.0	176.5	B17N69	1	S																
184.0	186.3	B17N70	2	S	2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		41	µg/kg	U	
184.0	186.3	B17N72	2	S																
184.0	186.3	B17N74	2	S	2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U					
184.0	186.3	B1B7J7	2	V																
184.0	186.3	B1B7J8	2	V																
184.0	186.3	B1B7J9	2	V																
184.0	186.3	B1B7K0	2	V																
184.0	186.3	B1B7K1	2	V																
223.9	224.0	B1B7J2	2	V																
223.9	224.0	B1B7J3	2	V																
223.9	224.0	B1B7J4	2	V																
223.9	224.0	B1B7J5	2	V																
223.9	224.0	B1B7J6	2	V																
224.0	226.2	B17N73	2	S	2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		43	µg/kg	U	
224.0	226.2	B17NL3	2	S																
226.5	228.0	B17NL5	1	S	1.9	µg/kg	U		1.9	µg/kg	U		1.9	µg/kg	U		38	µg/kg	U	
226.5	228.0	B17NL7	1	S																
228.0	230.0	B17NL8	2	S	1.8	µg/kg	U		1.8	µg/kg	U		1.8	µg/kg	U		37	µg/kg	U	
228.0	230.0	B17NL9	2	S	1.8	µg/kg	U		1.8	µg/kg	U		1.8	µg/kg	U		37	µg/kg	U	
228.0	230.0	B17NM3	2	S																
228.0	230.0	B17NM5	2	S																
228.0	230.0	B1B9N6	6	W	1	µg/L	U		1	µg/L	U		1	µg/L	U		20	µg/L	U	
294.5	297.0	B19NJ7	6	S	2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U		42	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	6	µg/kg	U		6	µg/kg	U		6	µg/kg	U		250	µg/kg	U	
TQL (µg/kg)					5				10				N/A				N/A			

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	2-Butanone								2-Ethyl-1-hexanol				2-Hexanone				2-Methyl-2-Propanol			
					8260				PAA				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																				
47.5	50.0	B17N46	6	S	24	µg/kg																		
47.5	50.0	B17N46-A	6	S																				
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	1	µg/L	U										1	µg/L	U					
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S	160	µg/kg	U																	
63.5	66.0	B17TM6-A	6	S																				
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																				
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																				
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																				
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	2-Butanone								2-Ethyl-1-hexanol				2-Hexanone				2-Methyl-2-Propanol			
					8260				PAA				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																				
90.0	92.5	B17N52	2	S	10	µg/kg	U										10	µg/kg	U					
90.0	92.5	B17N61	2	S	36	µg/kg							8.5	µg/kg							4.3	µg/kg		
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				
90.0	92.5	B17XB8	2	V																				
109.5	112.0	B17N57	1	S																				
109.5	112.0	B18XR8	1	S	150	µg/kg	U																	
109.5	112.0	B18XW3	1	S	27	µg/kg							24	µg/kg			1.3	µg/kg	J					
110.0	112.0	B17XB9	2	V					3.25	PPM(V/V)														
110.0	112.0	B17XC0	2	V					2.11	PPM(V/V)														
110.0	112.0	B17XC3	2	V					2.7	PPM(V/V)														
110.0	112.0	B17XC1	2	V					1.98	PPM(V/V)														
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S	22	µg/kg											1.5	µg/kg	J					
115.0	117.5	B191Y4-A	2	S	81	µg/kg	U																	
115.0	117.5	B191Y7	2	S																				
118.0	119.5	B17XC4	2	V					1	PPM(V/V)	U													
118.0	119.5	B17XC5	2	V					1	PPM(V/V)	U													
118.0	119.5	B17XC6	2	V					1	PPM(V/V)	U													
118.0	119.5	B17XC7	2	V					1	PPM(V/V)	U													
118.0	119.5	B17XC8	2	V					1	PPM(V/V)	U													
117.0	119.5	B17N60	6	S	2.1	µg/kg	U										2.1	µg/kg	U					
117.0	119.5	B17N64	6	S	75	µg/kg											1.3	µg/kg	J					
117.0	119.5	B17N64-A	6	S	80	µg/kg											7.6	µg/kg						
117.0	119.5	B17N68	6	S	91	µg/kg	U																	
119.5	122.0	B17N63	1	S	2.1	µg/kg	U										2.1	µg/kg	U					
119.5	122.0	B17N65	1	S																				
119.5	122.0	B18XT1	1	S	11	µg/kg	U										11	µg/kg	U					
119.5	122.0	B17XC9	2	V					1.28	PPM(V/V)	U													
119.5	122.0	B17XD0	2	V					1.45	PPM(V/V)														
119.5	122.0	B17XD1	2	V					1	PPM(V/V)	U													
119.5	122.0	B17XD2	2	V					1.49	PPM(V/V)														
119.5	122.0	B17XD3	2	V					1.44	PPM(V/V)														
141.0	143.0	B17XD4	4	V					1.96	PPM(V/V)														
141.0	143.0	B17XD5	4	V					1.4	PPM(V/V)														

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	2-Butanone								2-Ethyl-1-hexanol				2-Hexanone				2-Methyl-2-Propanol			
					8260				PAA				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V					1.62	PPM(V/V)														
141.0	143.0	B17XD7	4	V					1.53	PPM(V/V)														
141.0	143.0	B17XD8	4	V					1.49	PPM(V/V)														
159.0	160.0	B17XD9	4	V					1.55	PPM(V/V)														
159.0	160.0	B17XF0	4	V					1.31	PPM(V/V)														
159.0	160.0	B17XF2	4	V					1.34	PPM(V/V)														
159.0	160.0	B17XF1	4	V					1.14	PPM(V/V)														
159.0	160.0	B17XF3	4	V					1.32	PPM(V/V)														
174.0	176.5	B17N67	1	S	2.1	µg/kg	U										2.1	µg/kg	U					
174.0	176.5	B17N69	1	S																				
184.0	186.3	B17N70	2	S	2.1	µg/kg	U										2.1	µg/kg	U					
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S	2.1	µg/kg	U										2.1	µg/kg	U					
184.0	186.3	B1B7J7	2	V					1	PPM(V/V)	U													
184.0	186.3	B1B7J8	2	V					1	PPM(V/V)	U													
184.0	186.3	B1B7J9	2	V					1	PPM(V/V)	U													
184.0	186.3	B1B7K0	2	V					1	PPM(V/V)	U													
184.0	186.3	B1B7K1	2	V					1	PPM(V/V)	U													
223.9	224.0	B1B7J2	2	V					1	PPM(V/V)	U													
223.9	224.0	B1B7J3	2	V					1	PPM(V/V)	U													
223.9	224.0	B1B7J4	2	V					1.05	PPM(V/V)														
223.9	224.0	B1B7J5	2	V					1	PPM(V/V)	U													
223.9	224.0	B1B7J6	2	V					1	PPM(V/V)	U													
224.0	226.2	B17N73	2	S	2.1	µg/kg	U										2.1	µg/kg	U					
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S	1.9	µg/kg	U										1.9	µg/kg	U					
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S	1.8	µg/kg	U										1.8	µg/kg	U					
228.0	230.0	B17NL9	2	S	1.8	µg/kg	U										1.8	µg/kg	U					
228.0	230.0	B17NM3	2	S																				
228.0	230.0	B17NM5	2	S																				
228.0	230.0	B1B9N6	6	W	1	µg/L	U										1	µg/L	U					
294.5	297.0	B19NJ7	6	S	2.1	µg/kg	U										2.1	µg/kg	U					
294.5	297.0	B1B9Y4	6	S	12	µg/kg	U										12	µg/kg	U					
TQL (µg/kg)					10				N/A				N/A				N/A				N/A			

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	2-Pentanone				2-Propanol				4-Methyl-2-Pentanone				Acetone				Acetonitrile				Benzene			
					8260				8260				8260				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																								
47.5	50.0	B17N46	6	S									0.81	µg/kg	U		15	µg/kg							0.72	µg/kg	U	
47.5	50.0	B17N46-A	6	S																								
47.5	50.0	B17N46-B	6	S																								
47.5	50.0	B17MM8	6	W									1	µg/L	U		1	µg/L	U		2	µg/L	U		1	µg/L	U	
47.5	50.0	B17MM9	6	W																								
47.5	50.0	B17MN0	6	W																								
49.5	50.0	B17RM5	4	V																								
49.5	50.0	B17RM6	4	V																								
49.5	50.0	B17RM7	4	V																								
49.5	50.0	B17RM8	4	V																								
49.5	50.0	B18CX0	4	V																								
49.5	50.0	B18CX1	4	V																								
58.5	59.5	B17RN0	5	V																								
58.5	59.5	B17RN1	5	V																								
58.5	59.5	B17RN2	5	V																								
58.5	59.5	B18CX3	5	V																								
63.5	66.0	B17TM6	6	S									140	µg/kg	U		180	µg/kg	U						130	µg/kg	U	
63.5	66.0	B17TM6-A	6	S																								
63.5	66.0	B17TM6-B	6	S																								
65.0	66.0	B17RN3	4	V																								
65.0	66.0	B17RN5	4	V																								
65.0	66.0	B17RN6	4	V																								
65.0	66.0	B17RN4	4	V																								
65.0	66.0	B17X85	4	V																								
65.0	66.0	B17X86	4	V																								
65.0	66.0	B17X87	4	V																								
66.0	67.0	B17X90	3	V																								
66.0	67.0	B17X91	3	V																								
66.0	67.0	B17X92	3	V																								
66.0	67.0	B17X93	3	V																								
66.0	67.5	B17X96	3	V																								
66.0	67.5	B17X97	3	V																								
66.0	67.5	B17X98	3	V																								
81.0	82.0	B17XB1	3	V																								
81.0	82.0	B17XB2	3	V																								

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	2-Pentanone				2-Propanol				4-Methyl-2-Pentanone				Acetone				Acetonitrile				Benzene			
					8260				8260				8260				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																								
90.0	92.5	B17N52	2	S									10	µg/kg	U		9	µg/kg	J		10	µg/kg	U		5	µg/kg	U	
90.0	92.5	B17N61	2	S									0.82	µg/kg	U		26	µg/kg							0.73	µg/kg	U	
90.0	92.5	B17XB6	2	V																								
90.0	92.5	B17XB7	2	V																								
90.0	92.5	B17XB8	2	V																								
109.5	112.0	B17N57	1	S																								
109.5	112.0	B18XR8	1	S									140	µg/kg	U		170	µg/kg	U						120	µg/kg	U	
109.5	112.0	B18XW3	1	S									0.66	µg/kg	U		51	µg/kg							0.59	µg/kg	U	
110.0	112.0	B17XB9	2	V																								
110.0	112.0	B17XC0	2	V																								
110.0	112.0	B17XC3	2	V																								
110.0	112.0	B17XC1	2	V																								
112.0	112.0	B190T8-A	6	S																								
115.0	117.5	B191Y4	2	S					10	µg/kg			0.73	µg/kg	U		41	µg/kg							0.97	µg/kg		
115.0	117.5	B191Y4-A	2	S									73	µg/kg	U		590	µg/kg							65	µg/kg	U	
115.0	117.5	B191Y7	2	S																								
118.0	119.5	B17XC4	2	V																								
118.0	119.5	B17XC5	2	V																								
118.0	119.5	B17XC6	2	V																								
118.0	119.5	B17XC7	2	V																								
118.0	119.5	B17XC8	2	V																								
117.0	119.5	B17N60	6	S									2.1	µg/kg	U		2.1	µg/kg	U		4.2	µg/kg	U		2.1	µg/kg	U	
117.0	119.5	B17N64	6	S	6.6	µg/kg	J						1.2	µg/kg			170	µg/kg							0.79	µg/kg	U	
117.0	119.5	B17N64-A	6	S	6	µg/kg	J						0.62	µg/kg	U		79	µg/kg							0.56	µg/kg	U	
117.0	119.5	B17N68	6	S									82	µg/kg	U		660	µg/kg							73	µg/kg	U	
119.5	122.0	B17N63	1	S									2.1	µg/kg	U		2.1	µg/kg	U		4.2	µg/kg	U		2.1	µg/kg	U	
119.5	122.0	B17N65	1	S																								
119.5	122.0	B18XT1	1	S									11	µg/kg	U		540	µg/kg			22	µg/kg	U		11	µg/kg	U	
119.5	122.0	B17XC9	2	V																								
119.5	122.0	B17XD0	2	V																								
119.5	122.0	B17XD1	2	V																								
119.5	122.0	B17XD2	2	V																								
119.5	122.0	B17XD3	2	V																								
141.0	143.0	B17XD4	4	V																								
141.0	143.0	B17XD5	4	V																								

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	2-Pentanone				2-Propanol				4-Methyl-2-Pentanone				Acetone				Acetonitrile				Benzene			
					8260				8260				8260				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V																								
141.0	143.0	B17XD7	4	V																								
141.0	143.0	B17XD8	4	V																								
159.0	160.0	B17XD9	4	V																								
159.0	160.0	B17XF0	4	V																								
159.0	160.0	B17XF2	4	V																								
159.0	160.0	B17XF1	4	V																								
159.0	160.0	B17XF3	4	V																								
174.0	176.5	B17N67	1	S									2.1	µg/kg	U		2.1	µg/kg	U		4.2	µg/kg	U		2.1	µg/kg	U	
174.0	176.5	B17N69	1	S																								
184.0	186.3	B17N70	2	S									2.1	µg/kg	U		2.1	µg/kg	U		4.2	µg/kg	U		2.1	µg/kg	U	
184.0	186.3	B17N72	2	S																								
184.0	186.3	B17N74	2	S									2.1	µg/kg	U		2.1	µg/kg	U		4.2	µg/kg	U		2.1	µg/kg	U	
184.0	186.3	B1B7J7	2	V																								
184.0	186.3	B1B7J8	2	V																								
184.0	186.3	B1B7J9	2	V																								
184.0	186.3	B1B7K0	2	V																								
184.0	186.3	B1B7K1	2	V																								
223.9	224.0	B1B7J2	2	V																								
223.9	224.0	B1B7J3	2	V																								
223.9	224.0	B1B7J4	2	V																								
223.9	224.0	B1B7J5	2	V																								
223.9	224.0	B1B7J6	2	V																								
224.0	226.2	B17N73	2	S									2.1	µg/kg	U		2.1	µg/kg	U		4.2	µg/kg	U		2.1	µg/kg	U	
224.0	226.2	B17NL3	2	S																								
226.5	228.0	B17NL5	1	S									1.9	µg/kg	U		1.9	µg/kg	U		3.8	µg/kg	U		1.9	µg/kg	U	
226.5	228.0	B17NL7	1	S																								
228.0	230.0	B17NL8	2	S									1.8	µg/kg	U		1.8	µg/kg	U		3.7	µg/kg	U		1.8	µg/kg	U	
228.0	230.0	B17NL9	2	S									1.8	µg/kg	U		1.8	µg/kg	U		3.7	µg/kg	U		1.8	µg/kg	U	
228.0	230.0	B17NM3	2	S																								
228.0	230.0	B17NM5	2	S																								
228.0	230.0	B1B9N6	6	W									1	µg/L	U		1	µg/L	U		2	µg/L	U		1	µg/L	U	
294.5	297.0	B19NJ7	6	S									2.1	µg/kg	U		2.1	µg/kg	U		4.2	µg/kg	U		2.1	µg/kg	U	
294.5	297.0	B1B9Y4	6	S									12	µg/kg	U		12	µg/kg	U		24	µg/kg	U		6	µg/kg	U	
TQL (µg/kg)					N/A				N/A				10				20				N/A				5			

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Benzoic acid, 2-[(trimethylsilyl)oxy]-, trimethylsilyl ester				Bromodichloro-methane				Bromoform				Bromomethane				Butyraldehyde				Carbon Dioxide			
					8260				8260				8260				8260				8260				Field Measurement			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																					0	%	U	
47.5	50.0	B17N46	6	S																								
47.5	50.0	B17N46-A	6	S																								
47.5	50.0	B17N46-B	6	S																								
47.5	50.0	B17MM8	6	W					1	µg/L	U		1	µg/L	U		1	µg/L	U									
47.5	50.0	B17MM9	6	W																								
47.5	50.0	B17MN0	6	W																								
49.5	50.0	B17RM5	4	V																					0	%(vol)	U	
49.5	50.0	B17RM6	4	V																					0	%(vol)	U	
49.5	50.0	B17RM7	4	V																					0	%(vol)	U	
49.5	50.0	B17RM8	4	V																					0	%(vol)	U	
49.5	50.0	B18CX0	4	V																					0	%(vol)	U	
49.5	50.0	B18CX1	4	V																					0	%(vol)	U	
58.5	59.5	B17RN0	5	V																					0.8	%(vol)		
58.5	59.5	B17RN1	5	V																					0.7	%(vol)		
58.5	59.5	B17RN2	5	V																					0.6	%(vol)		
58.5	59.5	B18CX3	5	V																					0.8	%(vol)		
63.5	66.0	B17TM6	6	S																								
63.5	66.0	B17TM6-A	6	S																								
63.5	66.0	B17TM6-B	6	S																								
65.0	66.0	B17RN3	4	V																					0	%(vol)		
65.0	66.0	B17RN5	4	V																					0	%(vol)	U	
65.0	66.0	B17RN6	4	V																					0	%(vol)	U	
65.0	66.0	B17RN4	4	V																					0	%(vol)	U	
65.0	66.0	B17X85	4	V																					0	%		
65.0	66.0	B17X86	4	V																					0	%		
65.0	66.0	B17X87	4	V																								
66.0	67.0	B17X90	3	V																					3.2	%(vol)		
66.0	67.0	B17X91	3	V																					3.1	%(vol)		
66.0	67.0	B17X92	3	V																					3.2	%(vol)		
66.0	67.0	B17X93	3	V																					3.2	%(vol)		
66.0	67.5	B17X96	3	V																								
66.0	67.5	B17X97	3	V																					0.2	%(vol)		
66.0	67.5	B17X98	3	V																								
81.0	82.0	B17XB1	3	V																					0.8	%(vol)		
81.0	82.0	B17XB2	3	V																					0.8	%(vol)		

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Benzoic acid, 2-[(trimethylsilyl)oxy]-, trimethylsilyl ester				Bromodichloro-methane				Bromoform				Bromomethane				Butyraldehyde				Carbon Dioxide			
					8260				8260				8260				8260				8260				Field Measurement			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																								
90.0	92.5	B17N52	2	S					5	µg/kg	U		5	µg/kg	U		10	µg/kg	U									
90.0	92.5	B17N61	2	S																								
90.0	92.5	B17XB6	2	V																					1.3	%(vol)		
90.0	92.5	B17XB7	2	V																					1.3	%(vol)		
90.0	92.5	B17XB8	2	V																								
109.5	112.0	B17N57	1	S																								
109.5	112.0	B18XR8	1	S																								
109.5	112.0	B18XW3	1	S																	18	µg/kg						
110.0	112.0	B17XB9	2	V																					2.4	%(vol)		
110.0	112.0	B17XC0	2	V																					2.2	%(vol)		
110.0	112.0	B17XC3	2	V																					2	%(vol)		
110.0	112.0	B17XC1	2	V																					2.2	%(vol)		
112.0	112.0	B190T8-A	6	S																								
115.0	117.5	B191Y4	2	S	6.3	µg/kg		R																				
115.0	117.5	B191Y4-A	2	S																								
115.0	117.5	B191Y7	2	S																								
118.0	119.5	B17XC4	2	V																					0	%(vol)	U	
118.0	119.5	B17XC5	2	V																					0	%(vol)	U	
118.0	119.5	B17XC6	2	V																					0	%(vol)	U	
118.0	119.5	B17XC7	2	V																					0	%(vol)	U	
118.0	119.5	B17XC8	2	V																					0	%(vol)	U	
117.0	119.5	B17N60	6	S					2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U									
117.0	119.5	B17N64	6	S																								
117.0	119.5	B17N64-A	6	S																								
117.0	119.5	B17N68	6	S																								
119.5	122.0	B17N63	1	S					2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U									
119.5	122.0	B17N65	1	S																								
119.5	122.0	B18XT1	1	S					11	µg/kg	U		11	µg/kg	U		31	µg/kg	J									
119.5	122.0	B17XC9	2	V																					0	%	U	
119.5	122.0	B17XD0	2	V																					0	%	U	
119.5	122.0	B17XD1	2	V																					0	%	U	
119.5	122.0	B17XD2	2	V																					0	%	U	
119.5	122.0	B17XD3	2	V																					0	%	U	
141.0	143.0	B17XD4	4	V																								
141.0	143.0	B17XD5	4	V																								

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Benzoic acid, 2-[(trimethylsilyl)oxy]-, trimethylsilyl ester				Bromodichloro-methane				Bromoform				Bromomethane				Butyraldehyde				Carbon Dioxide			
					8260				8260				8260				8260				8260				Field Measurement			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V																								
141.0	143.0	B17XD7	4	V																								
141.0	143.0	B17XD8	4	V																								
159.0	160.0	B17XD9	4	V																								
159.0	160.0	B17XF0	4	V																								
159.0	160.0	B17XF2	4	V																								
159.0	160.0	B17XF1	4	V																								
159.0	160.0	B17XF3	4	V																								
174.0	176.5	B17N67	1	S					2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U									
174.0	176.5	B17N69	1	S																								
184.0	186.3	B17N70	2	S					2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U									
184.0	186.3	B17N72	2	S																								
184.0	186.3	B17N74	2	S					2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U									
184.0	186.3	B1B7J7	2	V																								
184.0	186.3	B1B7J8	2	V																								
184.0	186.3	B1B7J9	2	V																								
184.0	186.3	B1B7K0	2	V																								
184.0	186.3	B1B7K1	2	V																								
223.9	224.0	B1B7J2	2	V																								
223.9	224.0	B1B7J3	2	V																								
223.9	224.0	B1B7J4	2	V																								
223.9	224.0	B1B7J5	2	V																								
223.9	224.0	B1B7J6	2	V																								
224.0	226.2	B17N73	2	S					2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U									
224.0	226.2	B17NL3	2	S																								
226.5	228.0	B17NL5	1	S					1.9	µg/kg	U		1.9	µg/kg	U		1.9	µg/kg	U									
226.5	228.0	B17NL7	1	S																								
228.0	230.0	B17NL8	2	S					1.8	µg/kg	U		1.8	µg/kg	U		1.8	µg/kg	U									
228.0	230.0	B17NL9	2	S					1.8	µg/kg	U		1.8	µg/kg	U		1.8	µg/kg	U									
228.0	230.0	B17NM3	2	S																								
228.0	230.0	B17NM5	2	S																								
228.0	230.0	B1B9N6	6	W					1	µg/L	U		1	µg/L	U		1	µg/L	U									
294.5	297.0	B19NJ7	6	S					2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U									
294.5	297.0	B1B9Y4	6	S					6	µg/kg	U		6	µg/kg	U		12	µg/kg	U									
TQL (µg/kg)					N/A				N/A				N/A				N/A				N/A				N/A			

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Carbon disulfide				Carbon tetrachloride								Chlorobenzene				Chloroethane			
					8260				8260				PAA				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V									1	PPM(V/V)	U									
47.5	50.0	B17N46	6	S					14	µg/kg							0.83	µg/kg	U					
47.5	50.0	B17N46-A	6	S																				
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	1	µg/L	U		1	µg/L	U						1	µg/L	U		1	µg/L	U	
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V									1	PPM(V/V)	U									
49.5	50.0	B17RM6	4	V									1	PPM(V/V)	U									
49.5	50.0	B17RM7	4	V									1	PPM(V/V)	U									
49.5	50.0	B17RM8	4	V									1	PPM(V/V)	U									
49.5	50.0	B18CX0	4	V									1	PPM(V/V)	U									
49.5	50.0	B18CX1	4	V									1	PPM(V/V)	U									
58.5	59.5	B17RN0	5	V									222	PPM(V/V)										
58.5	59.5	B17RN1	5	V									231	PPM(V/V)										
58.5	59.5	B17RN2	5	V									220	PPM(V/V)										
58.5	59.5	B18CX3	5	V									227	PPM(V/V)										
63.5	66.0	B17TM6	6	S					380000	µg/kg							150	µg/kg	U					
63.5	66.0	B17TM6-A	6	S																				
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V									52.9	PPM(V/V)										
65.0	66.0	B17RN5	4	V									54.7	PPM(V/V)										
65.0	66.0	B17RN6	4	V									54.1	PPM(V/V)										
65.0	66.0	B17RN4	4	V									53.6	PPM(V/V)										
65.0	66.0	B17X85	4	V									13.1	PPM(V/V)										
65.0	66.0	B17X86	4	V									15.8	PPM(V/V)										
65.0	66.0	B17X87	4	V									15.3	PPM(V/V)										
66.0	67.0	B17X90	3	V									8540	PPM(V/V)										
66.0	67.0	B17X91	3	V									8450	PPM(V/V)										
66.0	67.0	B17X92	3	V									8550	PPM(V/V)										
66.0	67.0	B17X93	3	V									8560	PPM(V/V)										
66.0	67.5	B17X96	3	V									16.4	PPM(V/V)										
66.0	67.5	B17X97	3	V									18.3	PPM(V/V)										
66.0	67.5	B17X98	3	V									18.3	PPM(V/V)										
81.0	82.0	B17XB1	3	V									4870	PPM(V/V)										
81.0	82.0	B17XB2	3	V									4760	PPM(V/V)										

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Carbon disulfide				Carbon tetrachloride								Chlorobenzene				Chloroethane			
					8260				8260				PAA				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V									4790	PPM(V/V)										
90.0	92.5	B17N52	2	S	5	µg/kg	U		5	µg/kg	U						5	µg/kg	U		10	µg/kg	U	
90.0	92.5	B17N61	2	S					19	µg/kg							0.84	µg/kg	U					
90.0	92.5	B17XB6	2	V									5750	PPM(V/V)										
90.0	92.5	B17XB7	2	V									5770	PPM(V/V)										
90.0	92.5	B17XB8	2	V									5780	PPM(V/V)										
109.5	112.0	B17N57	1	S																				
109.5	112.0	B18XR8	1	S					240	µg/kg	U						140	µg/kg	U					
109.5	112.0	B18XW3	1	S					260	µg/kg							0.68	µg/kg	U					
110.0	112.0	B17XB9	2	V									9700	PPM(V/V)										
110.0	112.0	B17XC0	2	V									9310	PPM(V/V)										
110.0	112.0	B17XC3	2	V									9240	PPM(V/V)										
110.0	112.0	B17XC1	2	V									9330	PPM(V/V)										
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S	11	µg/kg			290	µg/kg	J						0.98	µg/kg						
115.0	117.5	B191Y4-A	2	S					130	µg/kg	U						75	µg/kg	U					
115.0	117.5	B191Y7	2	S																				
118.0	119.5	B17XC4	2	V									4.05	PPM(V/V)										
118.0	119.5	B17XC5	2	V									3.99	PPM(V/V)										
118.0	119.5	B17XC6	2	V									3.94	PPM(V/V)										
118.0	119.5	B17XC7	2	V									4.33	PPM(V/V)										
118.0	119.5	B17XC8	2	V									4.33	PPM(V/V)										
117.0	119.5	B17N60	6	S	2.1	µg/kg	U		2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U	
117.0	119.5	B17N64	6	S					92	µg/kg							0.91	µg/kg	U					
117.0	119.5	B17N64-A	6	S					240	µg/kg							0.64	µg/kg	U					
117.0	119.5	B17N68	6	S					140	µg/kg	U						84	µg/kg	U					
119.5	122.0	B17N63	1	S	2.1	µg/kg	U		2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U	
119.5	122.0	B17N65	1	S																				
119.5	122.0	B18XT1	1	S	11	µg/kg	U		11	µg/kg	U						11	µg/kg	U		11	µg/kg	U	
119.5	122.0	B17XC9	2	V									25.6	PPM(V/V)	U									
119.5	122.0	B17XD0	2	V									26.7	PPM(V/V)										
119.5	122.0	B17XD1	2	V									27	PPM(V/V)										
119.5	122.0	B17XD2	2	V									27.5	PPM(V/V)										
119.5	122.0	B17XD3	2	V									27.5	PPM(V/V)										
141.0	143.0	B17XD4	4	V									1.32	PPM(V/V)										
141.0	143.0	B17XD5	4	V									1	PPM(V/V)	U									

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Carbon disulfide				Carbon tetrachloride								Chlorobenzene				Chloroethane			
					8260				8260				PAA				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V									1.01	PPM(V/V)										
141.0	143.0	B17XD7	4	V									1.15	PPM(V/V)										
141.0	143.0	B17XD8	4	V									1.16	PPM(V/V)										
159.0	160.0	B17XD9	4	V									6.24	PPM(V/V)										
159.0	160.0	B17XF0	4	V									5.73	PPM(V/V)										
159.0	160.0	B17XF2	4	V									2.4	PPM(V/V)										
159.0	160.0	B17XF1	4	V									5.7	PPM(V/V)										
159.0	160.0	B17XF3	4	V									2.41	PPM(V/V)										
174.0	176.5	B17N67	1	S	2.1	µg/kg	U		2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U	
174.0	176.5	B17N69	1	S																				
184.0	186.3	B17N70	2	S	2.1	µg/kg	U		2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U	
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S	2.1	µg/kg	U		2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U	
184.0	186.3	B1B7J7	2	V									8.81	PPM(V/V)										
184.0	186.3	B1B7J8	2	V									10.5	PPM(V/V)										
184.0	186.3	B1B7J9	2	V									10.5	PPM(V/V)										
184.0	186.3	B1B7K0	2	V									10.5	PPM(V/V)										
184.0	186.3	B1B7K1	2	V									10.5	PPM(V/V)										
223.9	224.0	B1B7J2	2	V									16.9	PPM(V/V)										
223.9	224.0	B1B7J3	2	V									17	PPM(V/V)										
223.9	224.0	B1B7J4	2	V									17.1	PPM(V/V)										
223.9	224.0	B1B7J5	2	V									16.8	PPM(V/V)										
223.9	224.0	B1B7J6	2	V									16.8	PPM(V/V)										
224.0	226.2	B17N73	2	S	2.1	µg/kg	U		2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U	
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S	1.9	µg/kg	U		1.9	µg/kg	U						1.9	µg/kg	U		1.9	µg/kg	U	
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S	1.8	µg/kg	U		1.8	µg/kg	U						1.8	µg/kg	U		1.8	µg/kg	U	
228.0	230.0	B17NL9	2	S	1.8	µg/kg	U		1.8	µg/kg	U						1.8	µg/kg	U		1.8	µg/kg	U	
228.0	230.0	B17NM3	2	S																				
228.0	230.0	B17NM5	2	S																				
228.0	230.0	B1B9N6	6	W	1	µg/L	U		1	µg/L	U						1	µg/L	U		1	µg/L	U	
294.5	297.0	B19NJ7	6	S	2.1	µg/kg	U		250	µg/kg							2.1	µg/kg	U		2.1	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	6	µg/kg	U		180	µg/kg							6	µg/kg	U		12	µg/kg	U	
TQL (µg/kg)					N/A				5				N/A				5				N/A			

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Chloroform								Chloromethane				cis-1,2-Dichloroethylene				cis-1,3-Dichloropropene			
					8260				PAA				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V					1	PPM(V/V)	U													
47.5	50.0	B17N46	6	S	0.78	µg/kg	U						1.8	µg/kg	U									
47.5	50.0	B17N46-A	6	S																				
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	1	µg/L	U						1	µg/L	U						1	µg/L	U	
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V					1.97	PPM(V/V)														
49.5	50.0	B17RM6	4	V					1.24	PPM(V/V)														
49.5	50.0	B17RM7	4	V					1	PPM(V/V)	U													
49.5	50.0	B17RM8	4	V					1	PPM(V/V)	U													
49.5	50.0	B18CX0	4	V					1.19	PPM(V/V)														
49.5	50.0	B18CX1	4	V					1	PPM(V/V)	U													
58.5	59.5	B17RN0	5	V					4.12	PPM(V/V)														
58.5	59.5	B17RN1	5	V					3.95	PPM(V/V)														
58.5	59.5	B17RN2	5	V					3.7	PPM(V/V)														
58.5	59.5	B18CX3	5	V					4.13	PPM(V/V)														
63.5	66.0	B17TM6	6	S	4900	µg/kg							320	µg/kg	U									
63.5	66.0	B17TM6-A	6	S																				
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V					1	PPM(V/V)	U													
65.0	66.0	B17RN5	4	V					1	PPM(V/V)	U													
65.0	66.0	B17RN6	4	V					1	PPM(V/V)	U													
65.0	66.0	B17RN4	4	V					1	PPM(V/V)	U													
65.0	66.0	B17X85	4	V					1	PPM(V/V)	U													
65.0	66.0	B17X86	4	V					1	PPM(V/V)	U													
65.0	66.0	B17X87	4	V					1	PPM(V/V)	U													
66.0	67.0	B17X90	3	V					125	PPM(V/V)														
66.0	67.0	B17X91	3	V					126	PPM(V/V)														
66.0	67.0	B17X92	3	V					130	PPM(V/V)														
66.0	67.0	B17X93	3	V					130	PPM(V/V)														
66.0	67.5	B17X96	3	V					1	PPM(V/V)	U													
66.0	67.5	B17X97	3	V					1	PPM(V/V)	U													
66.0	67.5	B17X98	3	V					1	PPM(V/V)	U													
81.0	82.0	B17XB1	3	V					9.41	PPM(V/V)														
81.0	82.0	B17XB2	3	V					9.78	PPM(V/V)														

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Chloroform								Chloromethane				cis-1,2-Dichloroethylene				cis-1,3-Dichloropropene			
					8260				PAA				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V					9.73	PPM(V/V)														
90.0	92.5	B17N52	2	S	5	µg/kg	U						10	µg/kg	U		5	µg/kg	U		5	µg/kg	U	
90.0	92.5	B17N61	2	S	0.96	µg/kg							1.8	µg/kg	U									
90.0	92.5	B17XB6	2	V					15.2	PPM(V/V)														
90.0	92.5	B17XB7	2	V					15.4	PPM(V/V)														
90.0	92.5	B17XB8	2	V					15.4	PPM(V/V)														
109.5	112.0	B17N57	1	S																				
109.5	112.0	B18XR8	1	S	140	µg/kg	U						620	µg/kg	U									
109.5	112.0	B18XW3	1	S	15	µg/kg							1.5	µg/kg	U									
110.0	112.0	B17XB9	2	V					1.85	PPM(V/V)														
110.0	112.0	B17XC0	2	V					1.06	PPM(V/V)														
110.0	112.0	B17XC3	2	V					1.38	PPM(V/V)														
110.0	112.0	B17XC1	2	V					1.15	PPM(V/V)														
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S	14	µg/kg							1.6	µg/kg	U									
115.0	117.5	B191Y4-A	2	S	71	µg/kg	U						160	µg/kg	U									
115.0	117.5	B191Y7	2	S																				
118.0	119.5	B17XC4	2	V					1	PPM(V/V)	U													
118.0	119.5	B17XC5	2	V					1	PPM(V/V)	U													
118.0	119.5	B17XC6	2	V					1	PPM(V/V)	U													
118.0	119.5	B17XC7	2	V					1	PPM(V/V)	U													
118.0	119.5	B17XC8	2	V					1	PPM(V/V)	U													
117.0	119.5	B17N60	6	S	2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
117.0	119.5	B17N64	6	S	8.7	µg/kg							2	µg/kg	U									
117.0	119.5	B17N64-A	6	S	13	µg/kg							1.4	µg/kg	U									
117.0	119.5	B17N68	6	S	80	µg/kg	U						180	µg/kg	U									
119.5	122.0	B17N63	1	S	2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
119.5	122.0	B17N65	1	S																				
119.5	122.0	B18XT1	1	S	11	µg/kg	U						110	µg/kg							11	µg/kg	U	
119.5	122.0	B17XC9	2	V					1.26	PPM(V/V)	U													
119.5	122.0	B17XD0	2	V					1.4	PPM(V/V)														
119.5	122.0	B17XD1	2	V					1.14	PPM(V/V)														
119.5	122.0	B17XD2	2	V					1.18	PPM(V/V)														
119.5	122.0	B17XD3	2	V					1.48	PPM(V/V)														
141.0	143.0	B17XD4	4	V					1.86	PPM(V/V)														
141.0	143.0	B17XD5	4	V					1.43	PPM(V/V)														

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Chloroform								Chloromethane				cis-1,2-Dichloroethylene				cis-1,3-Dichloropropene			
					8260				PAA				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V					1.91	PPM(V/V)														
141.0	143.0	B17XD7	4	V					2.45	PPM(V/V)														
141.0	143.0	B17XD8	4	V					2.35	PPM(V/V)														
159.0	160.0	B17XD9	4	V					2.71	PPM(V/V)														
159.0	160.0	B17XF0	4	V					2	PPM(V/V)														
159.0	160.0	B17XF2	4	V					1.34	PPM(V/V)														
159.0	160.0	B17XF1	4	V					2.34	PPM(V/V)														
159.0	160.0	B17XF3	4	V					1.32	PPM(V/V)														
174.0	176.5	B17N67	1	S	2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
174.0	176.5	B17N69	1	S																				
184.0	186.3	B17N70	2	S	2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S	2.1	µg/kg	U						2.1	µg/kg	U						2.1	µg/kg	U	
184.0	186.3	B1B7J7	2	V					2.71	PPM(V/V)														
184.0	186.3	B1B7J8	2	V					2.42	PPM(V/V)														
184.0	186.3	B1B7J9	2	V					2.02	PPM(V/V)														
184.0	186.3	B1B7K0	2	V					1.76	PPM(V/V)														
184.0	186.3	B1B7K1	2	V					1.84	PPM(V/V)														
223.9	224.0	B1B7J2	2	V					4.95	PPM(V/V)														
223.9	224.0	B1B7J3	2	V					5.09	PPM(V/V)														
223.9	224.0	B1B7J4	2	V					4.75	PPM(V/V)														
223.9	224.0	B1B7J5	2	V					5.03	PPM(V/V)														
223.9	224.0	B1B7J6	2	V					4.86	PPM(V/V)														
224.0	226.2	B17N73	2	S	2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S	1.9	µg/kg	U						1.9	µg/kg	U		1.9	µg/kg	U		1.9	µg/kg	U	
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S	1.8	µg/kg	U						1.8	µg/kg	U		1.8	µg/kg	U		1.8	µg/kg	U	
228.0	230.0	B17NL9	2	S	1.8	µg/kg	U						1.8	µg/kg	U		1.8	µg/kg	U		1.8	µg/kg	U	
228.0	230.0	B17NM3	2	S																				
228.0	230.0	B17NM5	2	S																				
228.0	230.0	B1B9N6	6	W	1	µg/L	U						1	µg/L	U		1	µg/L	U		1	µg/L	U	
294.5	297.0	B19NJ7	6	S	13	µg/kg							2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	6	µg/kg	U						12	µg/kg	U		6	µg/kg	U		6	µg/kg	U	
TQL (µg/kg)					5				N/A				5				10				N/A			

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Dibromochloro-methane				Ethylbenzene				Hexachloroethane				Hexanal				Hexane				Methane			
					8260				8260				8260				8260				8260				Field Measurement			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																					0	%(vol)		
47.5	50.0	B17N46	6	S					1.1	µg/kg	U																	
47.5	50.0	B17N46-A	6	S																								
47.5	50.0	B17N46-B	6	S																								
47.5	50.0	B17MM8	6	W	1	µg/L	U		1	µg/L	U										1	µg/L	U					
47.5	50.0	B17MM9	6	W																								
47.5	50.0	B17MN0	6	W																								
49.5	50.0	B17RM5	4	V																					0	%(vol)		
49.5	50.0	B17RM6	4	V																					0	%(vol)	U	
49.5	50.0	B17RM7	4	V																					0	%(vol)	U	
49.5	50.0	B17RM8	4	V																					0	%(vol)		
49.5	50.0	B18CX0	4	V																					0	%(vol)	U	
49.5	50.0	B18CX1	4	V																					0	%(vol)	U	
58.5	59.5	B17RN0	5	V																					0	%(vol)	U	
58.5	59.5	B17RN1	5	V																					0	%(vol)		
58.5	59.5	B17RN2	5	V																					0	%(vol)		
58.5	59.5	B18CX3	5	V																					0	%(vol)	U	
63.5	66.0	B17TM6	6	S					190	µg/kg	U																	
63.5	66.0	B17TM6-A	6	S																								
63.5	66.0	B17TM6-B	6	S																								
65.0	66.0	B17RN3	4	V																					0.1	%(vol)		
65.0	66.0	B17RN5	4	V																					0	%(vol)		
65.0	66.0	B17RN6	4	V																					0	%(vol)		
65.0	66.0	B17RN4	4	V																					0	%(vol)	U	
65.0	66.0	B17X85	4	V																					0	%	U	
65.0	66.0	B17X86	4	V																					0	%	U	
65.0	66.0	B17X87	4	V																					0	%		
66.0	67.0	B17X90	3	V																					0	%(vol)	U	
66.0	67.0	B17X91	3	V																					0	%(vol)	U	
66.0	67.0	B17X92	3	V																					0	%(vol)	U	
66.0	67.0	B17X93	3	V																					0	%(vol)	U	
66.0	67.5	B17X96	3	V																					0	%(vol)	U	
66.0	67.5	B17X97	3	V																					0	%(vol)	U	
66.0	67.5	B17X98	3	V																					0	%		
81.0	82.0	B17XB1	3	V																					0	%(vol)	U	
81.0	82.0	B17XB2	3	V																					0	%(vol)	U	

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Dibromochloro-methane				Ethylbenzene				Hexachloroethane				Hexanal				Hexane				Methane			
					8260				8260				8260				8260				8260				Field Measurement			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																					0	%		
90.0	92.5	B17N52	2	S	5	µg/kg	U		5	µg/kg	U										2	µg/kg	J					
90.0	92.5	B17N61	2	S					1.1	µg/kg	U																	
90.0	92.5	B17XB6	2	V																					0	%(vol)	U	
90.0	92.5	B17XB7	2	V																					0	%(vol)	U	
90.0	92.5	B17XB8	2	V																					0	%		
109.5	112.0	B17N57	1	S																								
109.5	112.0	B18XR8	1	S					180	µg/kg	U																	
109.5	112.0	B18XW3	1	S					0.88	µg/kg	U		5.2	µg/kg														
110.0	112.0	B17XB9	2	V																					0	%(vol)	U	
110.0	112.0	B17XC0	2	V																					0	%(vol)	U	
110.0	112.0	B17XC3	2	V																					0	%(vol)	U	
110.0	112.0	B17XC1	2	V																					0	%(vol)	U	
112.0	112.0	B190T8-A	6	S																								
115.0	117.5	B191Y4	2	S					0.97	µg/kg	U																	
115.0	117.5	B191Y4-A	2	S					97	µg/kg	U																	
115.0	117.5	B191Y7	2	S																								
118.0	119.5	B17XC4	2	V																					0	%(vol)	U	
118.0	119.5	B17XC5	2	V																					0	%(vol)	U	
118.0	119.5	B17XC6	2	V																					0	%(vol)	U	
118.0	119.5	B17XC7	2	V																					0	%(vol)	U	
118.0	119.5	B17XC8	2	V																					0	%(vol)	U	
117.0	119.5	B17N60	6	S	2.1	µg/kg	U		2.1	µg/kg	U										2.1	µg/kg	U					
117.0	119.5	B17N64	6	S					1.2	µg/kg	U																	
117.0	119.5	B17N64-A	6	S					0.82	µg/kg	U		15	µg/kg			13	µg/kg										
117.0	119.5	B17N68	6	S					110	µg/kg	U																	
119.5	122.0	B17N63	1	S	2.1	µg/kg	U		2.1	µg/kg	U										2.1	µg/kg	U					
119.5	122.0	B17N65	1	S																								
119.5	122.0	B18XT1	1	S	11	µg/kg	U		11	µg/kg	U										11	µg/kg	U					
119.5	122.0	B17XC9	2	V																					0	%	U	
119.5	122.0	B17XD0	2	V																					0	%	U	
119.5	122.0	B17XD1	2	V																					0	%	U	
119.5	122.0	B17XD2	2	V																					0	%	U	
119.5	122.0	B17XD3	2	V																					0	%	U	
141.0	143.0	B17XD4	4	V																								
141.0	143.0	B17XD5	4	V																								

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Dibromochloro-methane				Ethylbenzene				Hexachloroethane				Hexanal				Hexane				Methane			
					8260				8260				8260				8260				8260				Field Measurement			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V																								
141.0	143.0	B17XD7	4	V																								
141.0	143.0	B17XD8	4	V																								
159.0	160.0	B17XD9	4	V																								
159.0	160.0	B17XF0	4	V																								
159.0	160.0	B17XF2	4	V																								
159.0	160.0	B17XF1	4	V																								
159.0	160.0	B17XF3	4	V																								
174.0	176.5	B17N67	1	S	2.1	µg/kg	U		2.1	µg/kg	U										2.1	µg/kg	U					
174.0	176.5	B17N69	1	S																								
184.0	186.3	B17N70	2	S	2.1	µg/kg	U		2.1	µg/kg	U										2.1	µg/kg	U					
184.0	186.3	B17N72	2	S																								
184.0	186.3	B17N74	2	S	2.1	µg/kg	U		2.1	µg/kg	U										2.1	µg/kg	U					
184.0	186.3	B1B7J7	2	V																								
184.0	186.3	B1B7J8	2	V																								
184.0	186.3	B1B7J9	2	V																								
184.0	186.3	B1B7K0	2	V																								
184.0	186.3	B1B7K1	2	V																								
223.9	224.0	B1B7J2	2	V																								
223.9	224.0	B1B7J3	2	V																								
223.9	224.0	B1B7J4	2	V																								
223.9	224.0	B1B7J5	2	V																								
223.9	224.0	B1B7J6	2	V																								
224.0	226.2	B17N73	2	S	2.1	µg/kg	U		2.1	µg/kg	U										2.1	µg/kg	U					
224.0	226.2	B17NL3	2	S																								
226.5	228.0	B17NL5	1	S	1.9	µg/kg	U		1.9	µg/kg	U										1.9	µg/kg	U					
226.5	228.0	B17NL7	1	S																								
228.0	230.0	B17NL8	2	S	1.8	µg/kg	U		1.8	µg/kg	U										1.8	µg/kg	U					
228.0	230.0	B17NL9	2	S	1.8	µg/kg	U		1.8	µg/kg	U										1.8	µg/kg	U					
228.0	230.0	B17NM3	2	S																								
228.0	230.0	B17NM5	2	S																								
228.0	230.0	B1B9N6	6	W	1	µg/L	U		1	µg/L	U										1	µg/L	U					
294.5	297.0	B19NJ7	6	S	2.1	µg/kg	U		2.1	µg/kg	U										2.1	µg/kg	U					
294.5	297.0	B1B9Y4	6	S	6	µg/kg	U		6	µg/kg	U										6	µg/kg	U					
TQL (µg/kg)					N/A				5				N/A				N/A				N/A				N/A			

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Methylene chloride								n-Butylbenzene				Nitromethane				n-Valeraldehyde			
					8260				PAA				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																				
47.5	50.0	B17N46	6	S					1.4	µg/kg														
47.5	50.0	B17N46-A	6	S																				
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	1	µg/L	U						1	µg/L	U									
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S	250	µg/kg																		
63.5	66.0	B17TM6-A	6	S																				
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																				
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																				
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																				
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Methylene chloride								n-Butylbenzene				Nitromethane				n-Valeraldehyde			
					8260				PAA				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																				
90.0	92.5	B17N52	2	S	12	µg/kg							5	µg/kg	U									
90.0	92.5	B17N61	2	S	1.4	µg/kg	U																	
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				
90.0	92.5	B17XB8	2	V																				
109.5	112.0	B17N57	1	S																				
109.5	112.0	B18XR8	1	S	240	µg/kg	U																	
109.5	112.0	B18XW3	1	S	1.1	µg/kg	U										5.5	µg/kg						
110.0	112.0	B17XB9	2	V					36.8	PPM(V/V)														
110.0	112.0	B17XC0	2	V					29.6	PPM(V/V)														
110.0	112.0	B17XC3	2	V					37	PPM(V/V)														
110.0	112.0	B17XC1	2	V					30.6	PPM(V/V)														
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S	1.2	µg/kg	U																	
115.0	117.5	B191Y4-A	2	S	120	µg/kg	U																	
115.0	117.5	B191Y7	2	S																				
118.0	119.5	B17XC4	2	V					1.08	PPM(V/V)	U													
118.0	119.5	B17XC5	2	V					1.41	PPM(V/V)														
118.0	119.5	B17XC6	2	V					1.04	PPM(V/V)														
118.0	119.5	B17XC7	2	V					2.42	PPM(V/V)														
118.0	119.5	B17XC8	2	V					2.2	PPM(V/V)														
117.0	119.5	B17N60	6	S	2.1	µg/kg	U						2.1	µg/kg	U									
117.0	119.5	B17N64	6	S	1.5	µg/kg	U																	
117.0	119.5	B17N64-A	6	S	1.1	µg/kg	U														8.9	µg/kg		
117.0	119.5	B17N68	6	S	140	µg/kg	U																	
119.5	122.0	B17N63	1	S	2.1	µg/kg	U						2.1	µg/kg	U									
119.5	122.0	B17N65	1	S																				
119.5	122.0	B18XT1	1	S	20	µg/kg	J						11	µg/kg	U									
119.5	122.0	B17XC9	2	V					4.28	PPM(V/V)														
119.5	122.0	B17XD0	2	V					4.42	PPM(V/V)														
119.5	122.0	B17XD1	2	V					3.75	PPM(V/V)														
119.5	122.0	B17XD2	2	V					4.56	PPM(V/V)														
119.5	122.0	B17XD3	2	V					4.42	PPM(V/V)														
141.0	143.0	B17XD4	4	V					3.21	PPM(V/V)		J												
141.0	143.0	B17XD5	4	V					3.02	PPM(V/V)		J												

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Methylene chloride								n-Butylbenzene				Nitromethane				n-Valeraldehyde			
					8260				PAA				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V					3.11	PPM(V/V)		J												
141.0	143.0	B17XD7	4	V					3.01	PPM(V/V)		J												
141.0	143.0	B17XD8	4	V					3.25	PPM(V/V)		J												
159.0	160.0	B17XD9	4	V					6.26	PPM(V/V)														
159.0	160.0	B17XF0	4	V					7.02	PPM(V/V)														
159.0	160.0	B17XF2	4	V					5.94	PPM(V/V)														
159.0	160.0	B17XF1	4	V					6.54	PPM(V/V)														
159.0	160.0	B17XF3	4	V					5.75	PPM(V/V)														
174.0	176.5	B17N67	1	S	2.1	µg/kg	U						2.1	µg/kg	U									
174.0	176.5	B17N69	1	S																				
184.0	186.3	B17N70	2	S	2.1	µg/kg	U						2.1	µg/kg	U									
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S	2.1	µg/kg	U						2.1	µg/kg	U									
184.0	186.3	B1B7J7	2	V					4.75	PPM(V/V)														
184.0	186.3	B1B7J8	2	V					5.99	PPM(V/V)														
184.0	186.3	B1B7J9	2	V					6.64	PPM(V/V)														
184.0	186.3	B1B7K0	2	V					6.09	PPM(V/V)														
184.0	186.3	B1B7K1	2	V					5.88	PPM(V/V)														
223.9	224.0	B1B7J2	2	V					13	PPM(V/V)														
223.9	224.0	B1B7J3	2	V					12.6	PPM(V/V)														
223.9	224.0	B1B7J4	2	V					13.3	PPM(V/V)														
223.9	224.0	B1B7J5	2	V					12.7	PPM(V/V)														
223.9	224.0	B1B7J6	2	V					12.7	PPM(V/V)														
224.0	226.2	B17N73	2	S	2.1	µg/kg	U						2.1	µg/kg	U									
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S	1.9	µg/kg	U						1.9	µg/kg	U									
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S	1.8	µg/kg	U						1.8	µg/kg	U									
228.0	230.0	B17NL9	2	S	1.8	µg/kg	U						1.8	µg/kg	U									
228.0	230.0	B17NM3	2	S																				
228.0	230.0	B17NM5	2	S																				
228.0	230.0	B1B9N6	6	W	1	µg/L	U						1	µg/L	U									
294.5	297.0	B19NJ7	6	S	2.1	µg/kg	U						2.1	µg/kg	U									
294.5	297.0	B1B9Y4	6	S	13	µg/kg	B						6	µg/kg	U									
TQL (µg/kg)					5				N/A				5				N/A				N/A			

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Styrene				Tetrachloroethene				Tetrahydrofuran				Toluene				trans-1,2-Dichloroethylene				trans-1,3-Dichloropropene			
					8260				8260				8260				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																								
47.5	50.0	B17N46	6	S					0.76	µg/kg	U						0.7	µg/kg	U									
47.5	50.0	B17N46-A	6	S																								
47.5	50.0	B17N46-B	6	S																								
47.5	50.0	B17MM8	6	W	1	µg/L	U		1	µg/L	U						1	µg/L	U		1	µg/L	U		1	µg/L	U	
47.5	50.0	B17MM9	6	W																								
47.5	50.0	B17MN0	6	W																								
49.5	50.0	B17RM5	4	V																								
49.5	50.0	B17RM6	4	V																								
49.5	50.0	B17RM7	4	V																								
49.5	50.0	B17RM8	4	V																								
49.5	50.0	B18CX0	4	V																								
49.5	50.0	B18CX1	4	V																								
58.5	59.5	B17RN0	5	V																								
58.5	59.5	B17RN1	5	V																								
58.5	59.5	B17RN2	5	V																								
58.5	59.5	B18CX3	5	V																								
63.5	66.0	B17TM6	6	S					17000	µg/kg							130	µg/kg	U									
63.5	66.0	B17TM6-A	6	S																								
63.5	66.0	B17TM6-B	6	S																								
65.0	66.0	B17RN3	4	V																								
65.0	66.0	B17RN5	4	V																								
65.0	66.0	B17RN6	4	V																								
65.0	66.0	B17RN4	4	V																								
65.0	66.0	B17X85	4	V																								
65.0	66.0	B17X86	4	V																								
65.0	66.0	B17X87	4	V																								
66.0	67.0	B17X90	3	V																								
66.0	67.0	B17X91	3	V																								
66.0	67.0	B17X92	3	V																								
66.0	67.0	B17X93	3	V																								
66.0	67.5	B17X96	3	V																								
66.0	67.5	B17X97	3	V																								
66.0	67.5	B17X98	3	V																								
81.0	82.0	B17XB1	3	V																								
81.0	82.0	B17XB2	3	V																								

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Styrene				Tetrachloroethene				Tetrahydrofuran				Toluene				trans-1,2-Dichloroethylene				trans-1,3-Dichloropropene			
					8260				8260				8260				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																								
90.0	92.5	B17N52	2	S	5	µg/kg	U		5	µg/kg	U						5	µg/kg	U		5	µg/kg	U		5	µg/kg	U	
90.0	92.5	B17N61	2	S					0.77	µg/kg	U		9.6	µg/kg	J		0.71	µg/kg	U									
90.0	92.5	B17XB6	2	V																								
90.0	92.5	B17XB7	2	V																								
90.0	92.5	B17XB8	2	V																								
109.5	112.0	B17N57	1	S																								
109.5	112.0	B18XR8	1	S					130	µg/kg	U						120	µg/kg	U									
109.5	112.0	B18XW3	1	S					0.94	µg/kg			112	µg/kg			0.57	µg/kg	U									
110.0	112.0	B17XB9	2	V																								
110.0	112.0	B17XC0	2	V																								
110.0	112.0	B17XC3	2	V																								
110.0	112.0	B17XC1	2	V																								
112.0	112.0	B190T8-A	6	S																								
115.0	117.5	B191Y4	2	S	2.9	µg/kg	J		1.6	µg/kg			51	µg/kg			0.97	µg/kg										
115.0	117.5	B191Y4-A	2	S					69	µg/kg	U						63	µg/kg	U									
115.0	117.5	B191Y7	2	S																								
118.0	119.5	B17XC4	2	V																								
118.0	119.5	B17XC5	2	V																								
118.0	119.5	B17XC6	2	V																								
118.0	119.5	B17XC7	2	V																								
118.0	119.5	B17XC8	2	V																								
117.0	119.5	B17N60	6	S	2.1	µg/kg	U		2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
117.0	119.5	B17N64	6	S					2	µg/kg			93	µg/kg			1.3	µg/kg										
117.0	119.5	B17N64-A	6	S					5.4	µg/kg			36	µg/kg			0.54	µg/kg	U									
117.0	119.5	B17N68	6	S					77	µg/kg	U						7	µg/kg	U									
119.5	122.0	B17N63	1	S	2.1	µg/kg	U		2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
119.5	122.0	B17N65	1	S																								
119.5	122.0	B18XT1	1	S	11	µg/kg	U		11	µg/kg	U						1	µg/kg	U						11	µg/kg	U	
119.5	122.0	B17XC9	2	V																								
119.5	122.0	B17XD0	2	V																								
119.5	122.0	B17XD1	2	V																								
119.5	122.0	B17XD2	2	V																								
119.5	122.0	B17XD3	2	V																								
141.0	143.0	B17XD4	4	V																								
141.0	143.0	B17XD5	4	V																								

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Styrene				Tetrachloroethene				Tetrahydrofuran				Toluene				trans-1,2-Dichloroethylene				trans-1,3-Dichloropropene			
					8260				8260				8260				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V																								
141.0	143.0	B17XD7	4	V																								
141.0	143.0	B17XD8	4	V																								
159.0	160.0	B17XD9	4	V																								
159.0	160.0	B17XF0	4	V																								
159.0	160.0	B17XF2	4	V																								
159.0	160.0	B17XF1	4	V																								
159.0	160.0	B17XF3	4	V																								
174.0	176.5	B17N67	1	S	2.1	µg/kg	U		2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
174.0	176.5	B17N69	1	S																								
184.0	186.3	B17N70	2	S	3.4	µg/kg	J		2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
184.0	186.3	B17N72	2	S																								
184.0	186.3	B17N74	2	S	2.1	µg/kg	U		2.1	µg/kg	U						2.1	µg/kg	U						2.1	µg/kg	U	
184.0	186.3	B1B7J7	2	V																								
184.0	186.3	B1B7J8	2	V																								
184.0	186.3	B1B7J9	2	V																								
184.0	186.3	B1B7K0	2	V																								
184.0	186.3	B1B7K1	2	V																								
223.9	224.0	B1B7J2	2	V																								
223.9	224.0	B1B7J3	2	V																								
223.9	224.0	B1B7J4	2	V																								
223.9	224.0	B1B7J5	2	V																								
223.9	224.0	B1B7J6	2	V																								
224.0	226.2	B17N73	2	S	2.1	µg/kg	U		2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
224.0	226.2	B17NL3	2	S																								
226.5	228.0	B17NL5	1	S	1.9	µg/kg	U		1.9	µg/kg	U						1.9	µg/kg	U		1.9	µg/kg	U		1.9	µg/kg	U	
226.5	228.0	B17NL7	1	S																								
228.0	230.0	B17NL8	2	S	1.8	µg/kg	U		1.8	µg/kg	U						1.8	µg/kg	U		1.8	µg/kg	U		1.8	µg/kg	U	
228.0	230.0	B17NL9	2	S	1.8	µg/kg	U		1.8	µg/kg	U						1.8	µg/kg	U		1.8	µg/kg	U		1.8	µg/kg	U	
228.0	230.0	B17NM3	2	S																								
228.0	230.0	B17NM5	2	S																								
228.0	230.0	B1B9N6	6	W	1	µg/L	U		1	µg/L	U						1	µg/L	U		1	µg/L	U		1	µg/L	U	
294.5	297.0	B19NJ7	6	S	2.1	µg/kg	U		2.1	µg/kg	U						2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	6	µg/kg	U		6	µg/kg	U						6	µg/kg	U		6	µg/kg	U		6	µg/kg	U	
TQL (µg/kg)					N/A				5				N/A				5				10				N/A			

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Tribromoethylene				Trichloroethene				Vinyl chloride				Xylenes (total)			
					8260				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																
47.5	50.0	B17N46	6	S					0.94	µg/kg	U		1.6	µg/kg	U		1.7	µg/kg	U	
47.5	50.0	B17N46-A	6	S																
47.5	50.0	B17N46-B	6	S																
47.5	50.0	B17MM8	6	W					1	µg/L	U		1	µg/L	U		1	µg/L	U	
47.5	50.0	B17MM9	6	W																
47.5	50.0	B17MN0	6	W																
49.5	50.0	B17RM5	4	V																
49.5	50.0	B17RM6	4	V																
49.5	50.0	B17RM7	4	V																
49.5	50.0	B17RM8	4	V																
49.5	50.0	B18CX0	4	V																
49.5	50.0	B18CX1	4	V																
58.5	59.5	B17RN0	5	V																
58.5	59.5	B17RN1	5	V																
58.5	59.5	B17RN2	5	V																
58.5	59.5	B18CX3	5	V																
63.5	66.0	B17TM6	6	S					170	µg/kg	U		290	µg/kg	U		310	µg/kg	U	
63.5	66.0	B17TM6-A	6	S																
63.5	66.0	B17TM6-B	6	S																
65.0	66.0	B17RN3	4	V																
65.0	66.0	B17RN5	4	V																
65.0	66.0	B17RN6	4	V																
65.0	66.0	B17RN4	4	V																
65.0	66.0	B17X85	4	V																
65.0	66.0	B17X86	4	V																
65.0	66.0	B17X87	4	V																
66.0	67.0	B17X90	3	V																
66.0	67.0	B17X91	3	V																
66.0	67.0	B17X92	3	V																
66.0	67.0	B17X93	3	V																
66.0	67.5	B17X96	3	V																
66.0	67.5	B17X97	3	V																
66.0	67.5	B17X98	3	V																
81.0	82.0	B17XB1	3	V																
81.0	82.0	B17XB2	3	V																

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Tribromoethylene				Trichloroethene				Vinyl chloride				Xylenes (total)			
					8260				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																
90.0	92.5	B17N52	2	S					5	µg/kg	U		10	µg/kg	U		5	µg/kg	U	
90.0	92.5	B17N61	2	S					0.95	µg/kg	U		1.7	µg/kg	U		1.8	µg/kg	U	
90.0	92.5	B17XB6	2	V																
90.0	92.5	B17XB7	2	V																
90.0	92.5	B17XB8	2	V																
109.5	112.0	B17N57	1	S																
109.5	112.0	B18XR8	1	S					160	µg/kg	U		560	µg/kg	U		300	µg/kg	U	
109.5	112.0	B18XW3	1	S					0.77	µg/kg	U		1.3	µg/kg	U		1.4	µg/kg	U	
110.0	112.0	B17XB9	2	V																
110.0	112.0	B17XC0	2	V																
110.0	112.0	B17XC3	2	V																
110.0	112.0	B17XC1	2	V																
112.0	112.0	B190T8-A	6	S																
115.0	117.5	B191Y4	2	S					1.1	µg/kg			1.5	µg/kg	U		1.6	µg/kg	U	
115.0	117.5	B191Y4-A	2	S					85	µg/kg	U		150	µg/kg	U		160	µg/kg	U	
115.0	117.5	B191Y7	2	S																
118.0	119.5	B17XC4	2	V																
118.0	119.5	B17XC5	2	V																
118.0	119.5	B17XC6	2	V																
118.0	119.5	B17XC7	2	V																
118.0	119.5	B17XC8	2	V																
117.0	119.5	B17N60	6	S					2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
117.0	119.5	B17N64	6	S					1	µg/kg	U		1.8	µg/kg	U		1.9	µg/kg	U	
117.0	119.5	B17N64-A	6	S	5.7	µg/kg			0.72	µg/kg	U		1.3	µg/kg	U		1.3	µg/kg	U	
117.0	119.5	B17N68	6	S					95	µg/kg	U		170	µg/kg	U		180	µg/kg	U	
119.5	122.0	B17N63	1	S					2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
119.5	122.0	B17N65	1	S																
119.5	122.0	B18XT1	1	S					11	µg/kg	U		11	µg/kg	U		11	µg/kg	U	
119.5	122.0	B17XC9	2	V																
119.5	122.0	B17XD0	2	V																
119.5	122.0	B17XD1	2	V																
119.5	122.0	B17XD2	2	V																
119.5	122.0	B17XD3	2	V																
141.0	143.0	B17XD4	4	V																
141.0	143.0	B17XD5	4	V																

Table B-4. Volatile Organic Analysis Results for Borehole C3426 Samples. (33 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Tribromoethylene				Trichloroethene				Vinyl chloride				Xylenes (total)			
					8260				8260				8260				8260			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V																
141.0	143.0	B17XD7	4	V																
141.0	143.0	B17XD8	4	V																
159.0	160.0	B17XD9	4	V																
159.0	160.0	B17XF0	4	V																
159.0	160.0	B17XF2	4	V																
159.0	160.0	B17XF1	4	V																
159.0	160.0	B17XF3	4	V																
174.0	176.5	B17N67	1	S					2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
174.0	176.5	B17N69	1	S																
184.0	186.3	B17N70	2	S					2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
184.0	186.3	B17N72	2	S																
184.0	186.3	B17N74	2	S					2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
184.0	186.3	B1B7J7	2	V																
184.0	186.3	B1B7J8	2	V																
184.0	186.3	B1B7J9	2	V																
184.0	186.3	B1B7K0	2	V																
184.0	186.3	B1B7K1	2	V																
223.9	224.0	B1B7J2	2	V																
223.9	224.0	B1B7J3	2	V																
223.9	224.0	B1B7J4	2	V																
223.9	224.0	B1B7J5	2	V																
223.9	224.0	B1B7J6	2	V																
224.0	226.2	B17N73	2	S					2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
224.0	226.2	B17NL3	2	S																
226.5	228.0	B17NL5	1	S					1.9	µg/kg	U		1.9	µg/kg	U		1.9	µg/kg	U	
226.5	228.0	B17NL7	1	S																
228.0	230.0	B17NL8	2	S					1.8	µg/kg	U		1.8	µg/kg	U		1.8	µg/kg	U	
228.0	230.0	B17NL9	2	S					1.8	µg/kg	U		1.8	µg/kg	U		1.8	µg/kg	U	
228.0	230.0	B17NM3	2	S																
228.0	230.0	B17NM5	2	S																
228.0	230.0	B1B9N6	6	W					1	µg/L	U		1	µg/L	U		1	µg/L	U	
294.5	297.0	B19NJ7	6	S					2.1	µg/kg	U		2.1	µg/kg	U		2.1	µg/kg	U	
294.5	297.0	B1B9Y4	6	S					6	µg/kg	U		12	µg/kg	U		6	µg/kg	U	
TQL (µg/kg)					N/A				5				N/A				5			

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	1,2,4-Trichlorobenzene				1,2,4-Trimethylbenzene				1,2-Dichlorobenzene				1,3-Dichlorobenzene				1,4-Dichlorobenzene			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																				
47.5	50.0	B17N46	6	S	960	µg/kg	U														960	µg/kg	U	
47.5	50.0	B17N46-A	6	S																				
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	3.1	µg/L	U		1.9	µg/L	U		4.3	µg/L	U		5.4	µg/L	U		5.2	µg/L	U	
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S	160000	µg/kg	U														160000	µg/kg	U	
63.5	66.0	B17TM6-A	6	S																				
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																				
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																				
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																				
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	1,2,4-Trichlorobenzene				1,2,4-Trimethylbenzene				1,2-Dichlorobenzene				1,3-Dichlorobenzene				1,4-Dichlorobenzene			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																				
90.0	92.5	B17N52	2	S	350	µg/kg	U	UJ					350	µg/kg	U	UJ	350	µg/kg	U	UJ	350	µg/kg	U	UJ
90.0	92.5	B17N61	2	S																				
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				
90.0	92.5	B17XB8	2	V																				
109.5	112.0	B17N57	1	S																				
109.5	112.0	B18XR8	1	S	960	µg/kg	U														960	µg/kg	U	
109.5	112.0	B18XW3	1	S																				
110.0	112.0	B17XB9	2	V																				
110.0	112.0	B17XC0	2	V																				
110.0	112.0	B17XC3	2	V																				
110.0	112.0	B17XC1	2	V																				
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S																				
115.0	117.5	B191Y4-A	2	S																				
115.0	117.5	B191Y7	2	S	330	µg/kg	U	UJ					330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ
118.0	119.5	B17XC4	2	V																				
118.0	119.5	B17XC5	2	V																				
118.0	119.5	B17XC6	2	V																				
118.0	119.5	B17XC7	2	V																				
118.0	119.5	B17XC8	2	V																				
117.0	119.5	B17N60	6	S	310	µg/kg	U		130	µg/kg	U		380	µg/kg	U		340	µg/kg	U		330	µg/kg	U	
117.0	119.5	B17N64	6	S																				
117.0	119.5	B17N64-A	6	S																				
117.0	119.5	B17N68	6	S																				
119.5	122.0	B17N63	1	S	310	µg/kg	U		130	µg/kg	U		380	µg/kg	U		340	µg/kg	U		330	µg/kg	U	
119.5	122.0	B17N65	1	S	380	µg/kg	U						380	µg/kg	U		380	µg/kg	U		380	µg/kg	U	
119.5	122.0	B18XT1	1	S																				
119.5	122.0	B17XC9	2	V																				
119.5	122.0	B17XD0	2	V																				
119.5	122.0	B17XD1	2	V																				
119.5	122.0	B17XD2	2	V																				
119.5	122.0	B17XD3	2	V																				
141.0	143.0	B17XD4	4	V																				
141.0	143.0	B17XD5	4	V																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	1,2,4-Trichlorobenzene				1,2,4-Trimethylbenzene				1,2-Dichlorobenzene				1,3-Dichlorobenzene				1,4-Dichlorobenzene			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V																				
141.0	143.0	B17XD7	4	V																				
141.0	143.0	B17XD8	4	V																				
159.0	160.0	B17XD9	4	V																				
159.0	160.0	B17XF0	4	V																				
159.0	160.0	B17XF2	4	V																				
159.0	160.0	B17XF1	4	V																				
159.0	160.0	B17XF3	4	V																				
174.0	176.5	B17N67	1	S	300	µg/kg	U		120	µg/kg	U		370	µg/kg	U		330	µg/kg	U		320	µg/kg	U	
174.0	176.5	B17N69	1	S																				
184.0	186.3	B17N70	2	S	300	µg/kg	U		120	µg/kg	U		370	µg/kg	U		330	µg/kg	U		320	µg/kg	U	
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S																				
184.0	186.3	B1B7J7	2	V																				
184.0	186.3	B1B7J8	2	V																				
184.0	186.3	B1B7J9	2	V																				
184.0	186.3	B1B7K0	2	V																				
184.0	186.3	B1B7K1	2	V																				
223.9	224.0	B1B7J2	2	V																				
223.9	224.0	B1B7J3	2	V																				
223.9	224.0	B1B7J4	2	V																				
223.9	224.0	B1B7J5	2	V																				
223.9	224.0	B1B7J6	2	V																				
224.0	226.2	B17N73	2	S	310	µg/kg	U		130	µg/kg	U		380	µg/kg	U		340	µg/kg	U		330	µg/kg	U	
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S	330	µg/kg	U		140	µg/kg	U		410	µg/kg	U		360	µg/kg	U		350	µg/kg	U	
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S	320	µg/kg	U		130	µg/kg	U		400	µg/kg	U		350	µg/kg	U		340	µg/kg	U	
228.0	230.0	B17NL9	2	S	320	µg/kg	U		130	µg/kg	U		400	µg/kg	U		350	µg/kg	U		340	µg/kg	U	
228.0	230.0	B17NM3	2	S																				
228.0	230.0	B17NM5	2	S																				
228.0	230.0	B1B9N6	6	W																				
294.5	297.0	B19NJ7	6	S	360	µg/kg	U		150	µg/kg	U		450	µg/kg	U		400	µg/kg	U		390	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	410	µg/kg	U						410	µg/kg	U		410	µg/kg	U		410	µg/kg	U	
TQL (µg/kg)					N/A				N/A				N/A				N/A				N/A			

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	2,4,5-Trichlorophenol				2,4,6-Trichlorophenol				2,4-Dichlorophenol				2,4-Dimethylphenol				2,4-Dinitrophenol			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																				
47.5	50.0	B17N46	6	S																				
47.5	50.0	B17N46-A	6	S																				
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	2	µg/L	U		2.5	µg/L	U		1.4	µg/L	U		4.4	µg/L	U		3.4	µg/L	U	
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S																				
63.5	66.0	B17TM6-A	6	S																				
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																				
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																				
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																				
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	2,4,5-Trichlorophenol				2,4,6-Trichlorophenol				2,4-Dichlorophenol				2,4-Dimethylphenol				2,4-Dinitrophenol			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																				
90.0	92.5	B17N52	2	S	870	µg/kg	U		350	µg/kg	U		350	µg/kg	U	UJ	350	µg/kg	U	UJ	870	µg/kg	U	
90.0	92.5	B17N61	2	S																				
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				
90.0	92.5	B17XB8	2	V																				
109.5	112.0	B17N57	1	S																				
109.5	112.0	B18XR8	1	S																				
109.5	112.0	B18XW3	1	S																				
110.0	112.0	B17XB9	2	V																				
110.0	112.0	B17XC0	2	V																				
110.0	112.0	B17XC3	2	V																				
110.0	112.0	B17XC1	2	V																				
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S																				
115.0	117.5	B191Y4-A	2	S																				
115.0	117.5	B191Y7	2	S	840	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ	840	µg/kg	U	UJ
118.0	119.5	B17XC4	2	V																				
118.0	119.5	B17XC5	2	V																				
118.0	119.5	B17XC6	2	V																				
118.0	119.5	B17XC7	2	V																				
118.0	119.5	B17XC8	2	V																				
117.0	119.5	B17N60	6	S	77	µg/kg	U		70	µg/kg	U		84	µg/kg	U		70	µg/kg	U		700	µg/kg	U	
117.0	119.5	B17N64	6	S																				
117.0	119.5	B17N64-A	6	S																				
117.0	119.5	B17N68	6	S																				
119.5	122.0	B17N63	1	S	77	µg/kg	U		70	µg/kg	U		84	µg/kg	U		70	µg/kg	U		700	µg/kg	U	
119.5	122.0	B17N65	1	S	940	µg/kg	U		380	µg/kg	U		380	µg/kg	U		380	µg/kg	U		940	µg/kg	U	
119.5	122.0	B18XT1	1	S																				
119.5	122.0	B17XC9	2	V																				
119.5	122.0	B17XD0	2	V																				
119.5	122.0	B17XD1	2	V																				
119.5	122.0	B17XD2	2	V																				
119.5	122.0	B17XD3	2	V																				
141.0	143.0	B17XD4	4	V																				
141.0	143.0	B17XD5	4	V																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	2,4,5-Trichlorophenol				2,4,6-Trichlorophenol				2,4-Dichlorophenol				2,4-Dimethylphenol				2,4-Dinitrophenol			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V																				
141.0	143.0	B17XD7	4	V																				
141.0	143.0	B17XD8	4	V																				
159.0	160.0	B17XD9	4	V																				
159.0	160.0	B17XF0	4	V																				
159.0	160.0	B17XF2	4	V																				
159.0	160.0	B17XF1	4	V																				
159.0	160.0	B17XF3	4	V																				
174.0	176.5	B17N67	1	S	75	µg/kg	U		68	µg/kg	U		82	µg/kg	U		68	µg/kg	U		680	µg/kg	U	
174.0	176.5	B17N69	1	S																				
184.0	186.3	B17N70	2	S	75	µg/kg	U		68	µg/kg	U		82	µg/kg	U		68	µg/kg	U		680	µg/kg	U	
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S																				
184.0	186.3	B1B7J7	2	V																				
184.0	186.3	B1B7J8	2	V																				
184.0	186.3	B1B7J9	2	V																				
184.0	186.3	B1B7K0	2	V																				
184.0	186.3	B1B7K1	2	V																				
223.9	224.0	B1B7J2	2	V																				
223.9	224.0	B1B7J3	2	V																				
223.9	224.0	B1B7J4	2	V																				
223.9	224.0	B1B7J5	2	V																				
223.9	224.0	B1B7J6	2	V																				
224.0	226.2	B17N73	2	S	78	µg/kg	U		71	µg/kg	U		85	µg/kg	U		71	µg/kg	U		710	µg/kg	U	
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S	83	µg/kg	U		75	µg/kg	U		90	µg/kg	U		75	µg/kg	U		750	µg/kg	U	
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S	81	µg/kg	U		73	µg/kg	U		88	µg/kg	U		73	µg/kg	U		730	µg/kg	U	
228.0	230.0	B17NL9	2	S	81	µg/kg	U		73	µg/kg	U		88	µg/kg	U		73	µg/kg	U		730	µg/kg	U	
228.0	230.0	B17NM3	2	S																				
228.0	230.0	B17NM5	2	S																				
228.0	230.0	B1B9N6	6	W																				
294.5	297.0	B19NJ7	6	S	91	µg/kg	U		83	µg/kg	U		99	µg/kg	U		83	µg/kg	U		830	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	1000	µg/kg	U		410	µg/kg	U		410	µg/kg	U		410	µg/kg	U		1000	µg/kg	U	
TQL (µg/kg)					N/A				N/A				N/A				N/A				N/A			

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	2,4-Dinitrotoluene				2,6-Dinitrotoluene				2,6-di-tert-Butyl-p-benzoquinone				2-Chloronaphthalene				2-Chlorophenol			
					8270				8270				1625				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																				
47.5	50.0	B17N46	6	S	960	µg/kg	U														960	µg/kg	U	
47.5	50.0	B17N46-A	6	S																				
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	1.9	µg/L	U		2.3	µg/L	U						2.4	µg/L	U		1.8	µg/L	U	
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S	160000	µg/kg	U														160000	µg/kg	U	
63.5	66.0	B17TM6-A	6	S																				
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																				
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																				
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																				
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	2,4-Dinitrotoluene				2,6-Dinitrotoluene				2,6-di-tert-Butyl-p-benzoquinone				2-Chloronaphthalene				2-Chlorophenol			
					8270				8270				1625				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																				
90.0	92.5	B17N52	2	S	350	µg/kg	U		350	µg/kg	U						350	µg/kg	U		350	µg/kg	U	UJ
90.0	92.5	B17N61	2	S																				
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				
90.0	92.5	B17XB8	2	V																				
109.5	112.0	B17N57	1	S																				
109.5	112.0	B18XR8	1	S	960	µg/kg	U														960	µg/kg	U	
109.5	112.0	B18XW3	1	S									4.5	µg/kg										
110.0	112.0	B17XB9	2	V																				
110.0	112.0	B17XC0	2	V																				
110.0	112.0	B17XC3	2	V																				
110.0	112.0	B17XC1	2	V																				
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S																				
115.0	117.5	B191Y4-A	2	S																				
115.0	117.5	B191Y7	2	S	330	µg/kg	U	UJ	330	µg/kg	U	UJ					330	µg/kg	U	UJ	330	µg/kg	U	UJ
118.0	119.5	B17XC4	2	V																				
118.0	119.5	B17XC5	2	V																				
118.0	119.5	B17XC6	2	V																				
118.0	119.5	B17XC7	2	V																				
118.0	119.5	B17XC8	2	V																				
117.0	119.5	B17N60	6	S	70	µg/kg	U		70	µg/kg	U						70	µg/kg	U		150	µg/kg	U	
117.0	119.5	B17N64	6	S									6.2	µg/kg										
117.0	119.5	B17N64-A	6	S																				
117.0	119.5	B17N68	6	S																				
119.5	122.0	B17N63	1	S	70	µg/kg	U		70	µg/kg	U						70	µg/kg	U		150	µg/kg	U	
119.5	122.0	B17N65	1	S	380	µg/kg	U		380	µg/kg	U						380	µg/kg	U		380	µg/kg	U	
119.5	122.0	B18XT1	1	S																				
119.5	122.0	B17XC9	2	V																				
119.5	122.0	B17XD0	2	V																				
119.5	122.0	B17XD1	2	V																				
119.5	122.0	B17XD2	2	V																				
119.5	122.0	B17XD3	2	V																				
141.0	143.0	B17XD4	4	V																				
141.0	143.0	B17XD5	4	V																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	2,4-Dinitrotoluene				2,6-Dinitrotoluene				2,6-di-tert-Butyl-p-benzoquinone				2-Chloronaphthalene				2-Chlorophenol			
					8270				8270				1625				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V																				
141.0	143.0	B17XD7	4	V																				
141.0	143.0	B17XD8	4	V																				
159.0	160.0	B17XD9	4	V																				
159.0	160.0	B17XF0	4	V																				
159.0	160.0	B17XF2	4	V																				
159.0	160.0	B17XF1	4	V																				
159.0	160.0	B17XF3	4	V																				
174.0	176.5	B17N67	1	S	68	µg/kg	U		68	µg/kg	U						68	µg/kg	U		150	µg/kg	U	
174.0	176.5	B17N69	1	S																				
184.0	186.3	B17N70	2	S	68	µg/kg	U		68	µg/kg	U						68	µg/kg	U		150	µg/kg	U	
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S																				
184.0	186.3	B1B7J7	2	V																				
184.0	186.3	B1B7J8	2	V																				
184.0	186.3	B1B7J9	2	V																				
184.0	186.3	B1B7K0	2	V																				
184.0	186.3	B1B7K1	2	V																				
223.9	224.0	B1B7J2	2	V																				
223.9	224.0	B1B7J3	2	V																				
223.9	224.0	B1B7J4	2	V																				
223.9	224.0	B1B7J5	2	V																				
223.9	224.0	B1B7J6	2	V																				
224.0	226.2	B17N73	2	S	71	µg/kg	U		71	µg/kg	U						71	µg/kg	U		160	µg/kg	U	
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S	75	µg/kg	U		75	µg/kg	U						75	µg/kg	U		170	µg/kg	U	
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S	73	µg/kg	U		73	µg/kg	U						73	µg/kg	U		160	µg/kg	U	
228.0	230.0	B17NL9	2	S	73	µg/kg	U		73	µg/kg	U						73	µg/kg	U		160	µg/kg	U	
228.0	230.0	B17NM3	2	S																				
228.0	230.0	B17NM5	2	S																				
228.0	230.0	B1B9N6	6	W																				
294.5	297.0	B19NJ7	6	S	83	µg/kg	U		83	µg/kg	U						83	µg/kg	U		180	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	410	µg/kg	U		410	µg/kg	U						410	µg/kg	U		410	µg/kg	U	
TQL (µg/kg)					N/A				N/A				N/A				N/A				N/A			

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	2-Methylnaphthalene				2-Methylphenol (cresol, o-)				2-Nitroaniline				2-Nitrophenol				3,3'-Dichlorobenzidine			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																				
47.5	50.0	B17N46	6	S					960	µg/kg	U													
47.5	50.0	B17N46-A	6	S																				
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	2	µg/L	U		2.4	µg/L	U		2.2	µg/L	U		2.1	µg/L	U		4.2	µg/L	U	
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S					160000	µg/kg	U													
63.5	66.0	B17TM6-A	6	S																				
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																				
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																				
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																				
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	2-Methylnaphthalene				2-Methylphenol (cresol, o-)				2-Nitroaniline				2-Nitrophenol				3,3'-Dichlorobenzidine			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																				
90.0	92.5	B17N52	2	S	350	µg/kg	U		350	µg/kg	U	UJ	870	µg/kg	U	UJ	350	µg/kg	U		350	µg/kg	U	UJ
90.0	92.5	B17N61	2	S																				
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				
90.0	92.5	B17XB8	2	V																				
109.5	112.0	B17N57	1	S																				
109.5	112.0	B18XR8	1	S					960	µg/kg	U													
109.5	112.0	B18XW3	1	S																				
110.0	112.0	B17XB9	2	V																				
110.0	112.0	B17XC0	2	V																				
110.0	112.0	B17XC3	2	V																				
110.0	112.0	B17XC1	2	V																				
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S																				
115.0	117.5	B191Y4-A	2	S																				
115.0	117.5	B191Y7	2	S	330	µg/kg	U	UJ	330	µg/kg	U	UJ	840	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ
118.0	119.5	B17XC4	2	V																				
118.0	119.5	B17XC5	2	V																				
118.0	119.5	B17XC6	2	V																				
118.0	119.5	B17XC7	2	V																				
118.0	119.5	B17XC8	2	V																				
117.0	119.5	B17N60	6	S	190	µg/kg	U		70	µg/kg	U		70	µg/kg	U		180	µg/kg	U		84	µg/kg	U	
117.0	119.5	B17N64	6	S																				
117.0	119.5	B17N64-A	6	S																				
117.0	119.5	B17N68	6	S																				
119.5	122.0	B17N63	1	S	190	µg/kg	U		70	µg/kg	U		70	µg/kg	U		180	µg/kg	U		84	µg/kg	U	
119.5	122.0	B17N65	1	S	380	µg/kg	U		380	µg/kg	U		940	µg/kg	U		380	µg/kg	U		380	µg/kg	U	
119.5	122.0	B18XT1	1	S																				
119.5	122.0	B17XC9	2	V																				
119.5	122.0	B17XD0	2	V																				
119.5	122.0	B17XD1	2	V																				
119.5	122.0	B17XD2	2	V																				
119.5	122.0	B17XD3	2	V																				
141.0	143.0	B17XD4	4	V																				
141.0	143.0	B17XD5	4	V																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	2-Methylnaphthalene				2-Methylphenol (cresol, o-)				2-Nitroaniline				2-Nitrophenol				3,3'-Dichlorobenzidine			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V																				
141.0	143.0	B17XD7	4	V																				
141.0	143.0	B17XD8	4	V																				
159.0	160.0	B17XD9	4	V																				
159.0	160.0	B17XF0	4	V																				
159.0	160.0	B17XF2	4	V																				
159.0	160.0	B17XF1	4	V																				
159.0	160.0	B17XF3	4	V																				
174.0	176.5	B17N67	1	S	180	µg/kg	U		68	µg/kg	U		68	µg/kg	U		180	µg/kg	U		82	µg/kg	U	
174.0	176.5	B17N69	1	S																				
184.0	186.3	B17N70	2	S	180	µg/kg	U		68	µg/kg	U		68	µg/kg	U		180	µg/kg	U		82	µg/kg	U	
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S																				
184.0	186.3	B1B7J7	2	V																				
184.0	186.3	B1B7J8	2	V																				
184.0	186.3	B1B7J9	2	V																				
184.0	186.3	B1B7K0	2	V																				
184.0	186.3	B1B7K1	2	V																				
223.9	224.0	B1B7J2	2	V																				
223.9	224.0	B1B7J3	2	V																				
223.9	224.0	B1B7J4	2	V																				
223.9	224.0	B1B7J5	2	V																				
223.9	224.0	B1B7J6	2	V																				
224.0	226.2	B17N73	2	S	190	µg/kg	U		71	µg/kg	U		71	µg/kg	U		180	µg/kg	U		85	µg/kg	U	
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S	200	µg/kg	U		75	µg/kg	U		75	µg/kg	U		200	µg/kg	U		90	µg/kg	U	
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S	200	µg/kg	U		73	µg/kg	U		73	µg/kg	U		190	µg/kg	U		88	µg/kg	U	
228.0	230.0	B17NL9	2	S	200	µg/kg	U		73	µg/kg	U		73	µg/kg	U		190	µg/kg	U		88	µg/kg	U	
228.0	230.0	B17NM3	2	S																				
228.0	230.0	B17NM5	2	S																				
228.0	230.0	B1B9N6	6	W																				
294.5	297.0	B19NJ7	6	S	220	µg/kg	U		83	µg/kg	U		83	µg/kg	U		220	µg/kg	U		99	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	410	µg/kg	U		410	µg/kg	U		1000	µg/kg	U		410	µg/kg	U		410	µg/kg	U	
TQL (µg/kg)					N/A				N/A				N/A				N/A				N/A			

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	3+4 Methylphenol (cresol, m+p)				3-Nitroaniline				4,6-Dinitro-2-methylphenol				4-Bromophenylphenyl ether				4-Chloro-3-methylphenol			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																				
47.5	50.0	B17N46	6	S	960	µg/kg	U														960	µg/kg	U	
47.5	50.0	B17N46-A	6	S																				
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	3.3	µg/L	U		4.6	µg/L	U		1.8	µg/L	U		2	µg/L	U		1.3	µg/L	U	
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S	160000	µg/kg	U														160000	µg/kg	U	
63.5	66.0	B17TM6-A	6	S																				
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																				
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																				
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																				
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	3+4 Methylphenol (cresol, m+p)				3-Nitroaniline				4,6-Dinitro-2-methylphenol				4-Bromophenylphenyl ether				4-Chloro-3-methylphenol			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																				
90.0	92.5	B17N52	2	S	350	µg/kg	U	UJ	870	µg/kg	U	UJ	870	µg/kg	U		350	µg/kg	U	UJ	350	µg/kg	U	UJ
90.0	92.5	B17N61	2	S																				
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				
90.0	92.5	B17XB8	2	V																				
109.5	112.0	B17N57	1	S																				
109.5	112.0	B18XR8	1	S	960	µg/kg	U														960	µg/kg	U	
109.5	112.0	B18XW3	1	S																				
110.0	112.0	B17XB9	2	V																				
110.0	112.0	B17XC0	2	V																				
110.0	112.0	B17XC3	2	V																				
110.0	112.0	B17XC1	2	V																				
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S																				
115.0	117.5	B191Y4-A	2	S																				
115.0	117.5	B191Y7	2	S					840	µg/kg	U	UJ	840	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ
118.0	119.5	B17XC4	2	V																				
118.0	119.5	B17XC5	2	V																				
118.0	119.5	B17XC6	2	V																				
118.0	119.5	B17XC7	2	V																				
118.0	119.5	B17XC8	2	V																				
117.0	119.5	B17N60	6	S	120	µg/kg	U		70	µg/kg	U		700	µg/kg	U		70	µg/kg	U		70	µg/kg	U	
117.0	119.5	B17N64	6	S																				
117.0	119.5	B17N64-A	6	S																				
117.0	119.5	B17N68	6	S																				
119.5	122.0	B17N63	1	S	120	µg/kg	U		70	µg/kg	U		700	µg/kg	U		70	µg/kg	U		70	µg/kg	U	
119.5	122.0	B17N65	1	S					940	µg/kg	U		940	µg/kg	U		380	µg/kg	U		380	µg/kg	U	
119.5	122.0	B18XT1	1	S																				
119.5	122.0	B17XC9	2	V																				
119.5	122.0	B17XD0	2	V																				
119.5	122.0	B17XD1	2	V																				
119.5	122.0	B17XD2	2	V																				
119.5	122.0	B17XD3	2	V																				
141.0	143.0	B17XD4	4	V																				
141.0	143.0	B17XD5	4	V																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	3+4 Methylphenol (cresol, m+p)				3-Nitroaniline				4,6-Dinitro-2-methylphenol				4-Bromophenylphenyl ether				4-Chloro-3-methylphenol			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V																				
141.0	143.0	B17XD7	4	V																				
141.0	143.0	B17XD8	4	V																				
159.0	160.0	B17XD9	4	V																				
159.0	160.0	B17XF0	4	V																				
159.0	160.0	B17XF2	4	V																				
159.0	160.0	B17XF1	4	V																				
159.0	160.0	B17XF3	4	V																				
174.0	176.5	B17N67	1	S	120	µg/kg	U		68	µg/kg	U		680	µg/kg	U		68	µg/kg	U		68	µg/kg	U	
174.0	176.5	B17N69	1	S																				
184.0	186.3	B17N70	2	S	120	µg/kg	U		68	µg/kg	U		680	µg/kg	U		68	µg/kg	U		68	µg/kg	U	
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S																				
184.0	186.3	B1B7J7	2	V																				
184.0	186.3	B1B7J8	2	V																				
184.0	186.3	B1B7J9	2	V																				
184.0	186.3	B1B7K0	2	V																				
184.0	186.3	B1B7K1	2	V																				
223.9	224.0	B1B7J2	2	V																				
223.9	224.0	B1B7J3	2	V																				
223.9	224.0	B1B7J4	2	V																				
223.9	224.0	B1B7J5	2	V																				
223.9	224.0	B1B7J6	2	V																				
224.0	226.2	B17N73	2	S	120	µg/kg	U		71	µg/kg	U		710	µg/kg	U		71	µg/kg	U		71	µg/kg	U	
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S	130	µg/kg	U		75	µg/kg	U		750	µg/kg	U		75	µg/kg	U		75	µg/kg	U	
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S	120	µg/kg	U		73	µg/kg	U		730	µg/kg	U		73	µg/kg	U		73	µg/kg	U	
228.0	230.0	B17NL9	2	S	120	µg/kg	U		73	µg/kg	U		730	µg/kg	U		73	µg/kg	U		73	µg/kg	U	
228.0	230.0	B17NM3	2	S																				
228.0	230.0	B17NM5	2	S																				
228.0	230.0	B1B9N6	6	W																				
294.5	297.0	B19NJ7	6	S	140	µg/kg	U		83	µg/kg	U		830	µg/kg	U		83	µg/kg	U		83	µg/kg	U	
294.5	297.0	B1B9Y4	6	S					1000	µg/kg	U		1000	µg/kg	U		410	µg/kg	U		410	µg/kg	U	
TQL (µg/kg)					N/A				N/A				N/A				N/A				N/A			

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	4-Chloroaniline				4-Chlorophenyl phenyl ether				4-Methylphenol (cresol, p-)				4-Nitroaniline				4-Nitrophenol			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																				
47.5	50.0	B17N46	6	S																	960	µg/kg	U	
47.5	50.0	B17N46-A	6	S																				
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	7.4	µg/L	U		2.3	µg/L	U						3	µg/L	U		1.4	µg/L	U	
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S																	160000	µg/kg	U	
63.5	66.0	B17TM6-A	6	S																				
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																				
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																				
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																				
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	4-Chloroaniline				4-Chlorophenyl phenyl ether				4-Methylphenol (cresol, p-)				4-Nitroaniline				4-Nitrophenol			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																				
90.0	92.5	B17N52	2	S	350	µg/kg	U	UJ	350	µg/kg	U	UJ					870	µg/kg	U	UJ	870	µg/kg	U	
90.0	92.5	B17N61	2	S																				
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				
90.0	92.5	B17XB8	2	V																				
109.5	112.0	B17N57	1	S																				
109.5	112.0	B18XR8	1	S									960	µg/kg	U						960	µg/kg	U	
109.5	112.0	B18XW3	1	S																				
110.0	112.0	B17XB9	2	V																				
110.0	112.0	B17XC0	2	V																				
110.0	112.0	B17XC3	2	V																				
110.0	112.0	B17XC1	2	V																				
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S																				
115.0	117.5	B191Y4-A	2	S																				
115.0	117.5	B191Y7	2	S	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ	840	µg/kg	U	UJ	840	µg/kg	U	UJ
118.0	119.5	B17XC4	2	V																				
118.0	119.5	B17XC5	2	V																				
118.0	119.5	B17XC6	2	V																				
118.0	119.5	B17XC7	2	V																				
118.0	119.5	B17XC8	2	V																				
117.0	119.5	B17N60	6	S	98	µg/kg	U		70	µg/kg	U						260	µg/kg	U		680	µg/kg	U	
117.0	119.5	B17N64	6	S																				
117.0	119.5	B17N64-A	6	S																				
117.0	119.5	B17N68	6	S																				
119.5	122.0	B17N63	1	S	98	µg/kg	U		70	µg/kg	U						260	µg/kg	U		680	µg/kg	U	
119.5	122.0	B17N65	1	S	380	µg/kg	U		380	µg/kg	U		380	µg/kg	U		940	µg/kg	U		940	µg/kg	U	
119.5	122.0	B18XT1	1	S																				
119.5	122.0	B17XC9	2	V																				
119.5	122.0	B17XD0	2	V																				
119.5	122.0	B17XD1	2	V																				
119.5	122.0	B17XD2	2	V																				
119.5	122.0	B17XD3	2	V																				
141.0	143.0	B17XD4	4	V																				
141.0	143.0	B17XD5	4	V																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	4-Chloroaniline				4-Chlorophenyl phenyl ether				4-Methylphenol (cresol, p-)				4-Nitroaniline				4-Nitrophenol			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V																				
141.0	143.0	B17XD7	4	V																				
141.0	143.0	B17XD8	4	V																				
159.0	160.0	B17XD9	4	V																				
159.0	160.0	B17XF0	4	V																				
159.0	160.0	B17XF2	4	V																				
159.0	160.0	B17XF1	4	V																				
159.0	160.0	B17XF3	4	V																				
174.0	176.5	B17N67	1	S	96	µg/kg	U		68	µg/kg	U						250	µg/kg	U		660	µg/kg	U	
174.0	176.5	B17N69	1	S																				
184.0	186.3	B17N70	2	S	96	µg/kg	U		68	µg/kg	U						250	µg/kg	U		660	µg/kg	U	
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S																				
184.0	186.3	B1B7J7	2	V																				
184.0	186.3	B1B7J8	2	V																				
184.0	186.3	B1B7J9	2	V																				
184.0	186.3	B1B7K0	2	V																				
184.0	186.3	B1B7K1	2	V																				
223.9	224.0	B1B7J2	2	V																				
223.9	224.0	B1B7J3	2	V																				
223.9	224.0	B1B7J4	2	V																				
223.9	224.0	B1B7J5	2	V																				
223.9	224.0	B1B7J6	2	V																				
224.0	226.2	B17N73	2	S	99	µg/kg	U		71	µg/kg	U						260	µg/kg	U		690	µg/kg	U	
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S	110	µg/kg	U		75	µg/kg	U						280	µg/kg	U		730	µg/kg	U	
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S	100	µg/kg	U		73	µg/kg	U						270	µg/kg	U		710	µg/kg	U	
228.0	230.0	B17NL9	2	S	100	µg/kg	U		73	µg/kg	U						270	µg/kg	U		710	µg/kg	U	
228.0	230.0	B17NM3	2	S																				
228.0	230.0	B17NM5	2	S																				
228.0	230.0	B1B9N6	6	W																				
294.5	297.0	B19NJ7	6	S	120	µg/kg	U		83	µg/kg	U						310	µg/kg	U		800	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	410	µg/kg	U		410	µg/kg	U		410	µg/kg	U		1000	µg/kg	U		1000	µg/kg	U	
TQL (µg/kg)					N/A				N/A				N/A				N/A				N/A			

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Acenaphthene				Acenaphthylene				Anthracene				Benzo(a)anthracene			
					8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																
47.5	50.0	B17N46	6	S	960	µg/kg	U													
47.5	50.0	B17N46-A	6	S																
47.5	50.0	B17N46-B	6	S																
47.5	50.0	B17MM8	6	W	2.5	µg/L	U		2.4	µg/L	U		2.1	µg/L	U		2.2	µg/L	U	
47.5	50.0	B17MM9	6	W																
47.5	50.0	B17MN0	6	W																
49.5	50.0	B17RM5	4	V																
49.5	50.0	B17RM6	4	V																
49.5	50.0	B17RM7	4	V																
49.5	50.0	B17RM8	4	V																
49.5	50.0	B18CX0	4	V																
49.5	50.0	B18CX1	4	V																
58.5	59.5	B17RN0	5	V																
58.5	59.5	B17RN1	5	V																
58.5	59.5	B17RN2	5	V																
58.5	59.5	B18CX3	5	V																
63.5	66.0	B17TM6	6	S	160000	µg/kg	U													
63.5	66.0	B17TM6-A	6	S																
63.5	66.0	B17TM6-B	6	S																
65.0	66.0	B17RN3	4	V																
65.0	66.0	B17RN5	4	V																
65.0	66.0	B17RN6	4	V																
65.0	66.0	B17RN4	4	V																
65.0	66.0	B17X85	4	V																
65.0	66.0	B17X86	4	V																
65.0	66.0	B17X87	4	V																
66.0	67.0	B17X90	3	V																
66.0	67.0	B17X91	3	V																
66.0	67.0	B17X92	3	V																
66.0	67.0	B17X93	3	V																
66.0	67.5	B17X96	3	V																
66.0	67.5	B17X97	3	V																
66.0	67.5	B17X98	3	V																
81.0	82.0	B17XB1	3	V																
81.0	82.0	B17XB2	3	V																

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Acenaphthene				Acenaphthylene				Anthracene				Benzo(a)anthracene			
					8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																
90.0	92.5	B17N52	2	S	350	µg/kg	U		350	µg/kg	U		350	µg/kg	U		350	µg/kg	U	
90.0	92.5	B17N61	2	S																
90.0	92.5	B17XB6	2	V																
90.0	92.5	B17XB7	2	V																
90.0	92.5	B17XB8	2	V																
109.5	112.0	B17N57	1	S																
109.5	112.0	B18XR8	1	S	960	µg/kg	U													
109.5	112.0	B18XW3	1	S																
110.0	112.0	B17XB9	2	V																
110.0	112.0	B17XC0	2	V																
110.0	112.0	B17XC3	2	V																
110.0	112.0	B17XC1	2	V																
112.0	112.0	B190T8-A	6	S																
115.0	117.5	B191Y4	2	S																
115.0	117.5	B191Y4-A	2	S																
115.0	117.5	B191Y7	2	S	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ
118.0	119.5	B17XC4	2	V																
118.0	119.5	B17XC5	2	V																
118.0	119.5	B17XC6	2	V																
118.0	119.5	B17XC7	2	V																
118.0	119.5	B17XC8	2	V																
117.0	119.5	B17N60	6	S	70	µg/kg	U		84	µg/kg	U		70	µg/kg	U		70	µg/kg	U	
117.0	119.5	B17N64	6	S																
117.0	119.5	B17N64-A	6	S																
117.0	119.5	B17N68	6	S																
119.5	122.0	B17N63	1	S	70	µg/kg	U		84	µg/kg	U		70	µg/kg	U		70	µg/kg	U	
119.5	122.0	B17N65	1	S	380	µg/kg	U		380	µg/kg	U		380	µg/kg	U		380	µg/kg	U	
119.5	122.0	B18XT1	1	S																
119.5	122.0	B17XC9	2	V																
119.5	122.0	B17XD0	2	V																
119.5	122.0	B17XD1	2	V																
119.5	122.0	B17XD2	2	V																
119.5	122.0	B17XD3	2	V																
141.0	143.0	B17XD4	4	V																
141.0	143.0	B17XD5	4	V																

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Acenaphthene				Acenaphthylene				Anthracene				Benzo(a)anthracene			
					8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V																
141.0	143.0	B17XD7	4	V																
141.0	143.0	B17XD8	4	V																
159.0	160.0	B17XD9	4	V																
159.0	160.0	B17XF0	4	V																
159.0	160.0	B17XF2	4	V																
159.0	160.0	B17XF1	4	V																
159.0	160.0	B17XF3	4	V																
174.0	176.5	B17N67	1	S	68	µg/kg	U		82	µg/kg	U		68	µg/kg	U		68	µg/kg	U	
174.0	176.5	B17N69	1	S																
184.0	186.3	B17N70	2	S	68	µg/kg	U		82	µg/kg	U		68	µg/kg	U		68	µg/kg	U	
184.0	186.3	B17N72	2	S																
184.0	186.3	B17N74	2	S																
184.0	186.3	B1B7J7	2	V																
184.0	186.3	B1B7J8	2	V																
184.0	186.3	B1B7J9	2	V																
184.0	186.3	B1B7K0	2	V																
184.0	186.3	B1B7K1	2	V																
223.9	224.0	B1B7J2	2	V																
223.9	224.0	B1B7J3	2	V																
223.9	224.0	B1B7J4	2	V																
223.9	224.0	B1B7J5	2	V																
223.9	224.0	B1B7J6	2	V																
224.0	226.2	B17N73	2	S	71	µg/kg	U		85	µg/kg	U		71	µg/kg	U		71	µg/kg	U	
224.0	226.2	B17NL3	2	S																
226.5	228.0	B17NL5	1	S	75	µg/kg	U		90	µg/kg	U		75	µg/kg	U		75	µg/kg	U	
226.5	228.0	B17NL7	1	S																
228.0	230.0	B17NL8	2	S	73	µg/kg	U		88	µg/kg	U		73	µg/kg	U		73	µg/kg	U	
228.0	230.0	B17NL9	2	S	73	µg/kg	U		88	µg/kg	U		73	µg/kg	U		73	µg/kg	U	
228.0	230.0	B17NM3	2	S																
228.0	230.0	B17NM5	2	S																
228.0	230.0	B1B9N6	6	W																
294.5	297.0	B19NJ7	6	S	83	µg/kg	U		99	µg/kg	U		83	µg/kg	U		83	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	410	µg/kg	U		410	µg/kg	U		410	µg/kg	U		410	µg/kg	U	
TQL (µg/kg)					N/A				N/A				N/A				N/A			

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Benzo(a)pyrene				Benzo(b)-fluoranthene				Benzo(ghi)perylene				Benzo(k)-fluoranthene			
					8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																
47.5	50.0	B17N46	6	S																
47.5	50.0	B17N46-A	6	S																
47.5	50.0	B17N46-B	6	S																
47.5	50.0	B17MM8	6	W	2.2	µg/L	U		1.8	µg/L	U		2.6	µg/L	U		2.9	µg/L	U	
47.5	50.0	B17MM9	6	W																
47.5	50.0	B17MN0	6	W																
49.5	50.0	B17RM5	4	V																
49.5	50.0	B17RM6	4	V																
49.5	50.0	B17RM7	4	V																
49.5	50.0	B17RM8	4	V																
49.5	50.0	B18CX0	4	V																
49.5	50.0	B18CX1	4	V																
58.5	59.5	B17RN0	5	V																
58.5	59.5	B17RN1	5	V																
58.5	59.5	B17RN2	5	V																
58.5	59.5	B18CX3	5	V																
63.5	66.0	B17TM6	6	S																
63.5	66.0	B17TM6-A	6	S																
63.5	66.0	B17TM6-B	6	S																
65.0	66.0	B17RN3	4	V																
65.0	66.0	B17RN5	4	V																
65.0	66.0	B17RN6	4	V																
65.0	66.0	B17RN4	4	V																
65.0	66.0	B17X85	4	V																
65.0	66.0	B17X86	4	V																
65.0	66.0	B17X87	4	V																
66.0	67.0	B17X90	3	V																
66.0	67.0	B17X91	3	V																
66.0	67.0	B17X92	3	V																
66.0	67.0	B17X93	3	V																
66.0	67.5	B17X96	3	V																
66.0	67.5	B17X97	3	V																
66.0	67.5	B17X98	3	V																
81.0	82.0	B17XB1	3	V																
81.0	82.0	B17XB2	3	V																

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Benzo(a)pyrene				Benzo(b)-fluoranthene				Benzo(ghi)perylene				Benzo(k)-fluoranthene			
					8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
81.0	82.0	B17XB3	3	V																
90.0	92.5	B17N52	2	S	350	µg/kg	U		350	µg/kg	U		350	µg/kg	U		350	µg/kg	U	
90.0	92.5	B17N61	2	S																
90.0	92.5	B17XB6	2	V																
90.0	92.5	B17XB7	2	V																
90.0	92.5	B17XB8	2	V																
109.5	112.0	B17N57	1	S																
109.5	112.0	B18XR8	1	S																
109.5	112.0	B18XW3	1	S																
110.0	112.0	B17XB9	2	V																
110.0	112.0	B17XC0	2	V																
110.0	112.0	B17XC3	2	V																
110.0	112.0	B17XC1	2	V																
112.0	112.0	B190T8-A	6	S																
115.0	117.5	B191Y4	2	S																
115.0	117.5	B191Y4-A	2	S																
115.0	117.5	B191Y7	2	S	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ
118.0	119.5	B17XC4	2	V																
118.0	119.5	B17XC5	2	V																
118.0	119.5	B17XC6	2	V																
118.0	119.5	B17XC7	2	V																
118.0	119.5	B17XC8	2	V																
117.0	119.5	B17N60	6	S	70	µg/kg	U		70	µg/kg	U		70	µg/kg	U		70	µg/kg	U	
117.0	119.5	B17N64	6	S																
117.0	119.5	B17N64-A	6	S																
117.0	119.5	B17N68	6	S																
119.5	122.0	B17N63	1	S	70	µg/kg	U		70	µg/kg	U		70	µg/kg	U		70	µg/kg	U	
119.5	122.0	B17N65	1	S	380	µg/kg	U		380	µg/kg	U		380	µg/kg	U		380	µg/kg	U	
119.5	122.0	B18XT1	1	S																
119.5	122.0	B17XC9	2	V																
119.5	122.0	B17XD0	2	V																
119.5	122.0	B17XD1	2	V																
119.5	122.0	B17XD2	2	V																
119.5	122.0	B17XD3	2	V																
141.0	143.0	B17XD4	4	V																
141.0	143.0	B17XD5	4	V																

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Benzo(a)pyrene				Benzo(b)-fluoranthene				Benzo(ghi)perylene				Benzo(k)-fluoranthene			
					8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
141.0	143.0	B17XD6	4	V																
141.0	143.0	B17XD7	4	V																
141.0	143.0	B17XD8	4	V																
159.0	160.0	B17XD9	4	V																
159.0	160.0	B17XF0	4	V																
159.0	160.0	B17XF2	4	V																
159.0	160.0	B17XF1	4	V																
159.0	160.0	B17XF3	4	V																
174.0	176.5	B17N67	1	S	68	µg/kg	U		68	µg/kg	U		68	µg/kg	U		68	µg/kg	U	
174.0	176.5	B17N69	1	S																
184.0	186.3	B17N70	2	S	68	µg/kg	U		68	µg/kg	U		68	µg/kg	U		68	µg/kg	U	
184.0	186.3	B17N72	2	S																
184.0	186.3	B17N74	2	S																
184.0	186.3	B1B7J7	2	V																
184.0	186.3	B1B7J8	2	V																
184.0	186.3	B1B7J9	2	V																
184.0	186.3	B1B7K0	2	V																
184.0	186.3	B1B7K1	2	V																
223.9	224.0	B1B7J2	2	V																
223.9	224.0	B1B7J3	2	V																
223.9	224.0	B1B7J4	2	V																
223.9	224.0	B1B7J5	2	V																
223.9	224.0	B1B7J6	2	V																
224.0	226.2	B17N73	2	S	71	µg/kg	U		71	µg/kg	U		71	µg/kg	U		71	µg/kg	U	
224.0	226.2	B17NL3	2	S																
226.5	228.0	B17NL5	1	S	75	µg/kg	U		75	µg/kg	U		75	µg/kg	U		75	µg/kg	U	
226.5	228.0	B17NL7	1	S																
228.0	230.0	B17NL8	2	S	73	µg/kg	U		73	µg/kg	U		73	µg/kg	U		73	µg/kg	U	
228.0	230.0	B17NL9	2	S	73	µg/kg	U		73	µg/kg	U		73	µg/kg	U		73	µg/kg	U	
228.0	230.0	B17NM3	2	S																
228.0	230.0	B17NM5	2	S																
228.0	230.0	B1B9N6	6	W																
294.5	297.0	B19NJ7	6	S	83	µg/kg	U		83	µg/kg	U		83	µg/kg	U		83	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	410	µg/kg	U		410	µg/kg	U		410	µg/kg	U		410	µg/kg	U	
TQL (µg/kg)					N/A				N/A				N/A				N/A			

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Bis(2-chloro-1-methylethyl)ether				Bis(2-Chloroethoxy)-methane				Bis(2-chloroethyl) ether				Bis(2-ethylhexyl) phthalate				Butylbenzylphthalate			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V	Conc'n																			
47.5	50.0	B17N46	6	S																				
47.5	50.0	B17N46-A	6	S																				
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	2.2	µg/L	U		2.1	µg/L	U		3.5	µg/L	U		2.7	µg/L	U		2.1	µg/L	U	
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S																				
63.5	66.0	B17TM6-A	6	S																				
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																				
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																				
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																				
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				
81.0	82.0	B17XB3	3	V																				
90.0	92.5	B17N52	2	S	350	µg/kg	U		350	µg/kg	U	UJ	350	µg/kg	U	UJ	350	µg/kg	U	UJ	350	µg/kg	U	
90.0	92.5	B17N61	2	S																				
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				
90.0	92.5	B17XB8	2	V																				
109.5	112.0	B17N57	1	S																				
109.5	112.0	B18XR8	1	S																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Bis(2-chloro-1-methylethyl)ether				Bis(2-Chloroethoxy)-methane				Bis(2-chloroethyl) ether				Bis(2-ethylhexyl) phthalate				Butylbenzylphthalate			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
109.5	112.0	B18XW3	1	S																				
110.0	112.0	B17XB9	2	V																				
110.0	112.0	B17XC0	2	V																				
110.0	112.0	B17XC3	2	V																				
110.0	112.0	B17XC1	2	V																				
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S																				
115.0	117.5	B191Y4-A	2	S																				
115.0	117.5	B191Y7	2	S	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ
118.0	119.5	B17XC4	2	V																				
118.0	119.5	B17XC5	2	V																				
118.0	119.5	B17XC6	2	V																				
118.0	119.5	B17XC7	2	V																				
118.0	119.5	B17XC8	2	V																				
117.0	119.5	B17N60	6	S	270	µg/kg	U		120	µg/kg	U		260	µg/kg	U		590	µg/kg	U		70	µg/kg	U	
117.0	119.5	B17N64	6	S																				
117.0	119.5	B17N64-A	6	S																				
117.0	119.5	B17N68	6	S																				
119.5	122.0	B17N63	1	S	270	µg/kg	U		120	µg/kg	U		260	µg/kg	U		590	µg/kg	U		70	µg/kg	U	
119.5	122.0	B17N65	1	S	380	µg/kg	U		380	µg/kg	U		380	µg/kg	U		380	µg/kg	U		380	µg/kg	U	
119.5	122.0	B18XT1	1	S																				
119.5	122.0	B17XC9	2	V																				
119.5	122.0	B17XD0	2	V																				
119.5	122.0	B17XD1	2	V																				
119.5	122.0	B17XD2	2	V																				
119.5	122.0	B17XD3	2	V																				
141.0	143.0	B17XD4	4	V																				
141.0	143.0	B17XD5	4	V																				
141.0	143.0	B17XD6	4	V																				
141.0	143.0	B17XD7	4	V																				
141.0	143.0	B17XD8	4	V																				
159.0	160.0	B17XD9	4	V																				
159.0	160.0	B17XF0	4	V																				
159.0	160.0	B17XF2	4	V																				
159.0	160.0	B17XF1	4	V																				
159.0	160.0	B17XF3	4	V																				
174.0	176.5	B17N67	1	S	260	µg/kg	U		120	µg/kg	U		250	µg/kg	U		580	µg/kg	U		68	µg/kg	U	
174.0	176.5	B17N69	1	S																				
184.0	186.3	B17N70	2	S	260	µg/kg	U		120	µg/kg	U		250	µg/kg	U		570	µg/kg	U		68	µg/kg	U	
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S																				
184.0	186.3	B1B7J7	2	V																				
184.0	186.3	B1B7J8	2	V																				
184.0	186.3	B1B7J9	2	V																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Bis(2-chloro-1-methylethyl)ether				Bis(2-Chloroethoxy)-methane				Bis(2-chloroethyl) ether				Bis(2-ethylhexyl) phthalate				Butylbenzylphthalate			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
184.0	186.3	B1B7K0	2	V																				
184.0	186.3	B1B7K1	2	V																				
223.9	224.0	B1B7J2	2	V																				
223.9	224.0	B1B7J3	2	V																				
223.9	224.0	B1B7J4	2	V																				
223.9	224.0	B1B7J5	2	V																				
223.9	224.0	B1B7J6	2	V																				
224.0	226.2	B17N73	2	S	270	µg/kg	U		120	µg/kg	U		260	µg/kg	U		590	µg/kg	U		71	µg/kg	U	
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S	290	µg/kg	U		130	µg/kg	U		280	µg/kg	U		630	µg/kg	U		75	µg/kg	U	
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S	280	µg/kg	U		120	µg/kg	U		270	µg/kg	U		610	µg/kg	U		73	µg/kg	U	
228.0	230.0	B17NL9	2	S	280	µg/kg	U		120	µg/kg	U		270	µg/kg	U		620	µg/kg	U		73	µg/kg	U	
228.0	230.0	B17NM3	2	S																				
228.0	230.0	B17NM5	2	S																				
228.0	230.0	B1B9N6	6	W																				
294.5	297.0	B19NJ7	6	S	310	µg/kg	U		140	µg/kg	U		310	µg/kg	U		700	µg/kg	U		83	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	410	µg/kg	U		410	µg/kg	U		410	µg/kg	U		150	µg/kg	JB		410	µg/kg	U	
TQL (µg/kg)					N/A				N/A				N/A				N/A				N/A			

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Carbazole				Chrysene				Cyclohexanone				Diacetone alcohol				Dibenz[a,h]-anthracene			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																				
47.5	50.0	B17N46	6	S																				
47.5	50.0	B17N46-A	6	S																				
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	1.5	µg/L	U		2.4	µg/L	U		5.2	µg/L	U						2.7	µg/L	U	
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S																				
63.5	66.0	B17TM6-A	6	S																				
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																				
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																				
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																				
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				
81.0	82.0	B17XB3	3	V																				
90.0	92.5	B17N52	2	S	350	µg/kg	U		350	µg/kg	U										350	µg/kg	U	
90.0	92.5	B17N61	2	S																				
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				
90.0	92.5	B17XB8	2	V																				
109.5	112.0	B17N57	1	S																				
109.5	112.0	B18XR8	1	S																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Carbazole				Chrysene				Cyclohexanone				Diacetone alcohol				Dibenz[a,h]-anthracene			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
109.5	112.0	B18XW3	1	S																				
110.0	112.0	B17XB9	2	V																				
110.0	112.0	B17XC0	2	V																				
110.0	112.0	B17XC3	2	V																				
110.0	112.0	B17XC1	2	V																				
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S																				
115.0	117.5	B191Y4-A	2	S																				
115.0	117.5	B191Y7	2	S	330	µg/kg	U	UJ	330	µg/kg	U	UJ									330	µg/kg	U	UJ
118.0	119.5	B17XC4	2	V																				
118.0	119.5	B17XC5	2	V																				
118.0	119.5	B17XC6	2	V																				
118.0	119.5	B17XC7	2	V																				
118.0	119.5	B17XC8	2	V																				
117.0	119.5	B17N60	6	S	84	µg/kg	U		70	µg/kg	U		350	µg/kg	U						70	µg/kg	U	
117.0	119.5	B17N64	6	S																				
117.0	119.5	B17N64-A	6	S																				
117.0	119.5	B17N68	6	S																				
119.5	122.0	B17N63	1	S	84	µg/kg	U		70	µg/kg	U		350	µg/kg	U						70	µg/kg	U	
119.5	122.0	B17N65	1	S	380	µg/kg	U		380	µg/kg	U										380	µg/kg	U	
119.5	122.0	B18XT1	1	S																				
119.5	122.0	B17XC9	2	V																				
119.5	122.0	B17XD0	2	V																				
119.5	122.0	B17XD1	2	V																				
119.5	122.0	B17XD2	2	V																				
119.5	122.0	B17XD3	2	V																				
141.0	143.0	B17XD4	4	V																				
141.0	143.0	B17XD5	4	V																				
141.0	143.0	B17XD6	4	V																				
141.0	143.0	B17XD7	4	V																				
141.0	143.0	B17XD8	4	V																				
159.0	160.0	B17XD9	4	V																				
159.0	160.0	B17XF0	4	V																				
159.0	160.0	B17XF2	4	V																				
159.0	160.0	B17XF1	4	V																				
159.0	160.0	B17XF3	4	V																				
174.0	176.5	B17N67	1	S	82	µg/kg	U		68	µg/kg	U		340	µg/kg	U						68	µg/kg	U	
174.0	176.5	B17N69	1	S																				
184.0	186.3	B17N70	2	S	82	µg/kg	U		68	µg/kg	U		340	µg/kg	U						68	µg/kg	U	
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S																				
184.0	186.3	B1B7J7	2	V																				
184.0	186.3	B1B7J8	2	V																				
184.0	186.3	B1B7J9	2	V																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Carbazole				Chrysene				Cyclohexanone				Diacetone alcohol				Dibenz[a,h]-anthracene			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
184.0	186.3	B1B7K0	2	V																				
184.0	186.3	B1B7K1	2	V																				
223.9	224.0	B1B7J2	2	V																				
223.9	224.0	B1B7J3	2	V																				
223.9	224.0	B1B7J4	2	V																				
223.9	224.0	B1B7J5	2	V																				
223.9	224.0	B1B7J6	2	V																				
224.0	226.2	B17N73	2	S	85	µg/kg	U		71	µg/kg	U		350	µg/kg	U						71	µg/kg	U	
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S	90	µg/kg	U		75	µg/kg	U		380	µg/kg	U						75	µg/kg	U	
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S	88	µg/kg	U		73	µg/kg	U		370	µg/kg	U		1500	µg/kg	J		73	µg/kg	U	
228.0	230.0	B17NL9	2	S	88	µg/kg	U		73	µg/kg	U		370	µg/kg	U						73	µg/kg	U	
228.0	230.0	B17NM3	2	S																				
228.0	230.0	B17NM5	2	S																				
228.0	230.0	B1B9N6	6	W																				
294.5	297.0	B19NJ7	6	S	99	µg/kg	U		83	µg/kg	U		410	µg/kg	U						83	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	410	µg/kg	U		410	µg/kg	U										410	µg/kg	U	
TQL (µg/kg)					N/A				N/A				N/A				N/A				N/A			

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Dibenzofuran				Diethylphthalate				Dimethyl phthalate				Di-n-butylphthalate				Di-n-octylphthalate			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																				
47.5	50.0	B17N46	6	S																				
47.5	50.0	B17N46-A	6	S																				
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	2	µg/L	U		6.5	µg/L	U		2.2	µg/L	U		2.2	µg/L	U		2.6	µg/L	U	
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S																				
63.5	66.0	B17TM6-A	6	S																				
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																				
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																				
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																				
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				
81.0	82.0	B17XB3	3	V																				
90.0	92.5	B17N52	2	S	350	µg/kg	U		350	µg/kg	U	UJ	350	µg/kg	U	UJ	350	µg/kg	U	UJ	350	µg/kg	U	UJ
90.0	92.5	B17N61	2	S																				
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				
90.0	92.5	B17XB8	2	V																				
109.5	112.0	B17N57	1	S																				
109.5	112.0	B18XR8	1	S																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Dibenzofuran				Diethylphthalate				Dimethyl phthalate				Di-n-butylphthalate				Di-n-octylphthalate			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
109.5	112.0	B18XW3	1	S																				
110.0	112.0	B17XB9	2	V																				
110.0	112.0	B17XC0	2	V																				
110.0	112.0	B17XC3	2	V																				
110.0	112.0	B17XC1	2	V																				
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S																				
115.0	117.5	B191Y4-A	2	S																				
115.0	117.5	B191Y7	2	S	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ
118.0	119.5	B17XC4	2	V																				
118.0	119.5	B17XC5	2	V																				
118.0	119.5	B17XC6	2	V																				
118.0	119.5	B17XC7	2	V																				
118.0	119.5	B17XC8	2	V																				
117.0	119.5	B17N60	6	S	70	µg/kg	U		200	µg/kg	U		70	µg/kg	U		91	µg/kg	U		70	µg/kg	U	
117.0	119.5	B17N64	6	S																				
117.0	119.5	B17N64-A	6	S																				
117.0	119.5	B17N68	6	S																				
119.5	122.0	B17N63	1	S	70	µg/kg	U		200	µg/kg	U		70	µg/kg	U		91	µg/kg	U		70	µg/kg	U	
119.5	122.0	B17N65	1	S	380	µg/kg	U		380	µg/kg	U		380	µg/kg	U		380	µg/kg	U		380	µg/kg	U	
119.5	122.0	B18XT1	1	S																				
119.5	122.0	B17XC9	2	V																				
119.5	122.0	B17XD0	2	V																				
119.5	122.0	B17XD1	2	V																				
119.5	122.0	B17XD2	2	V																				
119.5	122.0	B17XD3	2	V																				
141.0	143.0	B17XD4	4	V																				
141.0	143.0	B17XD5	4	V																				
141.0	143.0	B17XD6	4	V																				
141.0	143.0	B17XD7	4	V																				
141.0	143.0	B17XD8	4	V																				
159.0	160.0	B17XD9	4	V																				
159.0	160.0	B17XF0	4	V																				
159.0	160.0	B17XF2	4	V																				
159.0	160.0	B17XF1	4	V																				
159.0	160.0	B17XF3	4	V																				
174.0	176.5	B17N67	1	S	68	µg/kg	U		190	µg/kg	U		68	µg/kg	U		94	µg/kg	J		68	µg/kg	U	
174.0	176.5	B17N69	1	S																				
184.0	186.3	B17N70	2	S	68	µg/kg	U		190	µg/kg	U		68	µg/kg	U		89	µg/kg	U		68	µg/kg	U	
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S																				
184.0	186.3	B1B7J7	2	V																				
184.0	186.3	B1B7J8	2	V																				
184.0	186.3	B1B7J9	2	V																				

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Dibenzofuran				Diethylphthalate				Dimethyl phthalate				Di-n-butylphthalate				Di-n-octylphthalate			
					8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
184.0	186.3	B1B7K0	2	V																				
184.0	186.3	B1B7K1	2	V																				
223.9	224.0	B1B7J2	2	V																				
223.9	224.0	B1B7J3	2	V																				
223.9	224.0	B1B7J4	2	V																				
223.9	224.0	B1B7J5	2	V																				
223.9	224.0	B1B7J6	2	V																				
224.0	226.2	B17N73	2	S	71	µg/kg	U		230	µg/kg	J		71	µg/kg	U		220	µg/kg	J		71	µg/kg	U	
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S	75	µg/kg	U		220	µg/kg	J		75	µg/kg	U		120	µg/kg	J		75	µg/kg	U	
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S	73	µg/kg	U		860	µg/kg	B		73	µg/kg	U		210	µg/kg	J		73	µg/kg	U	
228.0	230.0	B17NL9	2	S	73	µg/kg	U		210	µg/kg	U		73	µg/kg	U		130	µg/kg	J		73	µg/kg	U	
228.0	230.0	B17NM3	2	S																				
228.0	230.0	B17NM5	2	S																				
228.0	230.0	B1B9N6	6	W																				
294.5	297.0	B19NJ7	6	S	83	µg/kg	U		230	µg/kg	U		83	µg/kg	U		4100	µg/kg			83	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	410	µg/kg	U		410	µg/kg	U		410	µg/kg	U		48	µg/kg	JB		410	µg/kg	U	
TQL (µg/kg)					N/A				N/A				N/A				N/A				N/A			

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Fluoranthene				Fluorene				Hexachlorobenzene				Hexachlorobutadiene				Hexachloro-cyclopentadiene				Hexachloroethane			
					8270				8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																								
47.5	50.0	B17N46	6	S																								
47.5	50.0	B17N46-A	6	S																								
47.5	50.0	B17N46-B	6	S																								
47.5	50.0	B17MM8	6	W	2.2	µg/L	U		2.1	µg/L	U		2.2	µg/L	U		3.7	µg/L	U		8	µg/L	U		5.7	µg/L	U	
47.5	50.0	B17MM9	6	W																								
47.5	50.0	B17MN0	6	W																								
49.5	50.0	B17RM5	4	V																								
49.5	50.0	B17RM6	4	V																								
49.5	50.0	B17RM7	4	V																								
49.5	50.0	B17RM8	4	V																								
49.5	50.0	B18CX0	4	V																								
49.5	50.0	B18CX1	4	V																								
58.5	59.5	B17RN0	5	V																								
58.5	59.5	B17RN1	5	V																								
58.5	59.5	B17RN2	5	V																								
58.5	59.5	B18CX3	5	V																								
63.5	66.0	B17TM6	6	S																								
63.5	66.0	B17TM6-A	6	S																								
63.5	66.0	B17TM6-B	6	S																								
65.0	66.0	B17RN3	4	V																								
65.0	66.0	B17RN5	4	V																								
65.0	66.0	B17RN6	4	V																								
65.0	66.0	B17RN4	4	V																								
65.0	66.0	B17X85	4	V																								
65.0	66.0	B17X86	4	V																								
65.0	66.0	B17X87	4	V																								
66.0	67.0	B17X90	3	V																								
66.0	67.0	B17X91	3	V																								
66.0	67.0	B17X92	3	V																								
66.0	67.0	B17X93	3	V																								
66.0	67.5	B17X96	3	V																								
66.0	67.5	B17X97	3	V																								
66.0	67.5	B17X98	3	V																								
81.0	82.0	B17XB1	3	V																								
81.0	82.0	B17XB2	3	V																								
81.0	82.0	B17XB3	3	V																								
90.0	92.5	B17N52	2	S	350	µg/kg	U		350	µg/kg	U		350	µg/kg	U	UJ	350	µg/kg	U	UJ	350	µg/kg	U	UJ	350	µg/kg	U	UJ
90.0	92.5	B17N61	2	S																								
90.0	92.5	B17XB6	2	V																								
90.0	92.5	B17XB7	2	V																								
90.0	92.5	B17XB8	2	V																								
109.5	112.0	B17N57	1	S																								
109.5	112.0	B18XR8	1	S																								

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Fluoranthene				Fluorene				Hexachlorobenzene				Hexachlorobutadiene				Hexachloro-cyclopentadiene				Hexachloroethane			
					8270				8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
109.5	112.0	B18XW3	1	S																								
110.0	112.0	B17XB9	2	V																								
110.0	112.0	B17XC0	2	V																								
110.0	112.0	B17XC3	2	V																								
110.0	112.0	B17XC1	2	V																								
112.0	112.0	B190T8-A	6	S																								
115.0	117.5	B191Y4	2	S																								
115.0	117.5	B191Y4-A	2	S																								
115.0	117.5	B191Y7	2	S	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ
118.0	119.5	B17XC4	2	V																								
118.0	119.5	B17XC5	2	V																								
118.0	119.5	B17XC6	2	V																								
118.0	119.5	B17XC7	2	V																								
118.0	119.5	B17XC8	2	V																								
117.0	119.5	B17N60	6	S	70	µg/kg	U		70	µg/kg	U		70	µg/kg	U		380	µg/kg	U		330	µg/kg	U		490	µg/kg	U	
117.0	119.5	B17N64	6	S																								
117.0	119.5	B17N64-A	6	S																								
117.0	119.5	B17N68	6	S																								
119.5	122.0	B17N63	1	S	70	µg/kg	U		70	µg/kg	U		70	µg/kg	U		380	µg/kg	U		330	µg/kg	U		490	µg/kg	U	
119.5	122.0	B17N65	1	S	380	µg/kg	U		380	µg/kg	U		380	µg/kg	U		380	µg/kg	U		380	µg/kg	U		380	µg/kg	U	
119.5	122.0	B18XT1	1	S																								
119.5	122.0	B17XC9	2	V																								
119.5	122.0	B17XD0	2	V																								
119.5	122.0	B17XD1	2	V																								
119.5	122.0	B17XD2	2	V																								
119.5	122.0	B17XD3	2	V																								
141.0	143.0	B17XD4	4	V																								
141.0	143.0	B17XD5	4	V																								
141.0	143.0	B17XD6	4	V																								
141.0	143.0	B17XD7	4	V																								
141.0	143.0	B17XD8	4	V																								
159.0	160.0	B17XD9	4	V																								
159.0	160.0	B17XF0	4	V																								
159.0	160.0	B17XF2	4	V																								
159.0	160.0	B17XF1	4	V																								
159.0	160.0	B17XF3	4	V																								
174.0	176.5	B17N67	1	S	68	µg/kg	U		68	µg/kg	U		68	µg/kg	U		380	µg/kg	U		320	µg/kg	U		480	µg/kg	U	
174.0	176.5	B17N69	1	S																								
184.0	186.3	B17N70	2	S	68	µg/kg	U		68	µg/kg	U		68	µg/kg	U		380	µg/kg	U		320	µg/kg	U		480	µg/kg	U	
184.0	186.3	B17N72	2	S																								
184.0	186.3	B17N74	2	S																								
184.0	186.3	B1B7J7	2	V																								
184.0	186.3	B1B7J8	2	V																								
184.0	186.3	B1B7J9	2	V																								

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Fluoranthene				Fluorene				Hexachlorobenzene				Hexachlorobutadiene				Hexachloro-cyclopentadiene				Hexachloroethane			
					8270				8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
184.0	186.3	B1B7K0	2	V																								
184.0	186.3	B1B7K1	2	V																								
223.9	224.0	B1B7J2	2	V																								
223.9	224.0	B1B7J3	2	V																								
223.9	224.0	B1B7J4	2	V																								
223.9	224.0	B1B7J5	2	V																								
223.9	224.0	B1B7J6	2	V																								
224.0	226.2	B17N73	2	S	71	µg/kg	U		71	µg/kg	U		71	µg/kg	U		390	µg/kg	U		330	µg/kg	U		500	µg/kg	U	
224.0	226.2	B17NL3	2	S																								
226.5	228.0	B17NL5	1	S	75	µg/kg	U		75	µg/kg	U		75	µg/kg	U		410	µg/kg	U		350	µg/kg	U		530	µg/kg	U	
226.5	228.0	B17NL7	1	S																								
228.0	230.0	B17NL8	2	S	73	µg/kg	U		73	µg/kg	U		73	µg/kg	U		400	µg/kg	U		340	µg/kg	U		510	µg/kg	U	
228.0	230.0	B17NL9	2	S	73	µg/kg	U		73	µg/kg	U		73	µg/kg	U		400	µg/kg	U		340	µg/kg	U		510	µg/kg	U	
228.0	230.0	B17NM3	2	S																								
228.0	230.0	B17NM5	2	S																								
228.0	230.0	B1B9N6	6	W																								
294.5	297.0	B19NJ7	6	S	83	µg/kg	U		83	µg/kg	U		83	µg/kg	U		460	µg/kg	U		390	µg/kg	U		580	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	410	µg/kg	U		410	µg/kg	U		410	µg/kg	U		410	µg/kg	U		410	µg/kg	U		410	µg/kg	U	
TQL (µg/kg)					N/A				N/A				N/A				N/A				N/A				N/A			

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Indeno(1,2,3-cd)pyrene				Isophorone				Naphthalene				Nitrobenzene				N-Nitrosodi-n-dipropylamine				N-Nitroso-diphenylamine			
					8270				8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																								
47.5	50.0	B17N46	6	S																	960	µg/kg	U					
47.5	50.0	B17N46-A	6	S																								
47.5	50.0	B17N46-B	6	S																								
47.5	50.0	B17MM8	6	W	2.7	µg/L	U		2	µg/L	U		2.5	µg/L	U		2.1	µg/L	U		1.8	µg/L	U		2.4	µg/L	U	
47.5	50.0	B17MM9	6	W																								
47.5	50.0	B17MN0	6	W																								
49.5	50.0	B17RM5	4	V																								
49.5	50.0	B17RM6	4	V																								
49.5	50.0	B17RM7	4	V																								
49.5	50.0	B17RM8	4	V																								
49.5	50.0	B18CX0	4	V																								
49.5	50.0	B18CX1	4	V																								
58.5	59.5	B17RN0	5	V																								
58.5	59.5	B17RN1	5	V																								
58.5	59.5	B17RN2	5	V																								
58.5	59.5	B18CX3	5	V																								
63.5	66.0	B17TM6	6	S																	160000	µg/kg	U					
63.5	66.0	B17TM6-A	6	S																								
63.5	66.0	B17TM6-B	6	S																								
65.0	66.0	B17RN3	4	V																								
65.0	66.0	B17RN5	4	V																								
65.0	66.0	B17RN6	4	V																								
65.0	66.0	B17RN4	4	V																								
65.0	66.0	B17X85	4	V																								
65.0	66.0	B17X86	4	V																								
65.0	66.0	B17X87	4	V																								
66.0	67.0	B17X90	3	V																								
66.0	67.0	B17X91	3	V																								
66.0	67.0	B17X92	3	V																								
66.0	67.0	B17X93	3	V																								
66.0	67.5	B17X96	3	V																								
66.0	67.5	B17X97	3	V																								
66.0	67.5	B17X98	3	V																								
81.0	82.0	B17XB1	3	V																								
81.0	82.0	B17XB2	3	V																								
81.0	82.0	B17XB3	3	V																								
90.0	92.5	B17N52	2	S	350	µg/kg	U		350	µg/kg	U	UJ	350	µg/kg	U		350	µg/kg	U		350	µg/kg	U	UJ	350	µg/kg	U	
90.0	92.5	B17N61	2	S																								
90.0	92.5	B17XB6	2	V																								
90.0	92.5	B17XB7	2	V																								
90.0	92.5	B17XB8	2	V																								
109.5	112.0	B17N57	1	S																								
109.5	112.0	B18XR8	1	S																	960	µg/kg	U					

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Indeno(1,2,3-cd)pyrene				Isophorone				Naphthalene				Nitrobenzene				N-Nitrosodi-n-dipropylamine				N-Nitroso-diphenylamine			
					8270				8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
109.5	112.0	B18XW3	1	S																								
110.0	112.0	B17XB9	2	V																								
110.0	112.0	B17XC0	2	V																								
110.0	112.0	B17XC3	2	V																								
110.0	112.0	B17XC1	2	V																								
112.0	112.0	B190T8-A	6	S																								
115.0	117.5	B191Y4	2	S																								
115.0	117.5	B191Y4-A	2	S																								
115.0	117.5	B191Y7	2	S	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ
118.0	119.5	B17XC4	2	V																								
118.0	119.5	B17XC5	2	V																								
118.0	119.5	B17XC6	2	V																								
118.0	119.5	B17XC7	2	V																								
118.0	119.5	B17XC8	2	V																								
117.0	119.5	B17N60	6	S	70	µg/kg	U		70	µg/kg	U		300	µg/kg	U		270	µg/kg	U		70	µg/kg	U		70	µg/kg	U	
117.0	119.5	B17N64	6	S																								
117.0	119.5	B17N64-A	6	S																								
117.0	119.5	B17N68	6	S																								
119.5	122.0	B17N63	1	S	70	µg/kg	U		70	µg/kg	U		300	µg/kg	U		270	µg/kg	U		70	µg/kg	U		70	µg/kg	U	
119.5	122.0	B17N65	1	S	380	µg/kg	U		380	µg/kg	U		380	µg/kg	U		380	µg/kg	U		380	µg/kg	U		380	µg/kg	U	
119.5	122.0	B18XT1	1	S																								
119.5	122.0	B17XC9	2	V																								
119.5	122.0	B17XD0	2	V																								
119.5	122.0	B17XD1	2	V																								
119.5	122.0	B17XD2	2	V																								
119.5	122.0	B17XD3	2	V																								
141.0	143.0	B17XD4	4	V																								
141.0	143.0	B17XD5	4	V																								
141.0	143.0	B17XD6	4	V																								
141.0	143.0	B17XD7	4	V																								
141.0	143.0	B17XD8	4	V																								
159.0	160.0	B17XD9	4	V																								
159.0	160.0	B17XF0	4	V																								
159.0	160.0	B17XF2	4	V																								
159.0	160.0	B17XF1	4	V																								
159.0	160.0	B17XF3	4	V																								
174.0	176.5	B17N67	1	S	68	µg/kg	U		68	µg/kg	U		290	µg/kg	U		270	µg/kg	U		68	µg/kg	U		68	µg/kg	U	
174.0	176.5	B17N69	1	S																								
184.0	186.3	B17N70	2	S	68	µg/kg	U		68	µg/kg	U		290	µg/kg	U		270	µg/kg	U		68	µg/kg	U		68	µg/kg	U	
184.0	186.3	B17N72	2	S																								
184.0	186.3	B17N74	2	S																								
184.0	186.3	B1B7J7	2	V																								
184.0	186.3	B1B7J8	2	V																								
184.0	186.3	B1B7J9	2	V																								

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Indeno(1,2,3-cd)pyrene				Isophorone				Naphthalene				Nitrobenzene				N-Nitrosodi-n-dipropylamine				N-Nitroso-diphenylamine			
					8270				8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
184.0	186.3	B1B7K0	2	V																								
184.0	186.3	B1B7K1	2	V																								
223.9	224.0	B1B7J2	2	V																								
223.9	224.0	B1B7J3	2	V																								
223.9	224.0	B1B7J4	2	V																								
223.9	224.0	B1B7J5	2	V																								
223.9	224.0	B1B7J6	2	V																								
224.0	226.2	B17N73	2	S	71	µg/kg	U		71	µg/kg	U		300	µg/kg	U		280	µg/kg	U		71	µg/kg	U		71	µg/kg	U	
224.0	226.2	B17NL3	2	S																								
226.5	228.0	B17NL5	1	S	75	µg/kg	U		75	µg/kg	U		320	µg/kg	U		290	µg/kg	U		75	µg/kg	U		75	µg/kg	U	
226.5	228.0	B17NL7	1	S																								
228.0	230.0	B17NL8	2	S	73	µg/kg	U		73	µg/kg	U		310	µg/kg	U		290	µg/kg	U		73	µg/kg	U		73	µg/kg	U	
228.0	230.0	B17NL9	2	S	73	µg/kg	U		73	µg/kg	U		320	µg/kg	U		290	µg/kg	U		73	µg/kg	U		73	µg/kg	U	
228.0	230.0	B17NM3	2	S																								
228.0	230.0	B17NM5	2	S																								
228.0	230.0	B1B9N6	6	W																								
294.5	297.0	B19NJ7	6	S	83	µg/kg	U		83	µg/kg	U		360	µg/kg	U		320	µg/kg	U		83	µg/kg	U		83	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	410	µg/kg	U		410	µg/kg	U		410	µg/kg	U		410	µg/kg	U		410	µg/kg	U		410	µg/kg	U	
TQL (µg/kg)					N/A				N/A				N/A				N/A				N/A				N/A			

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Pentachlorophenol				Phenanthrene				Phenol				Phenyl sulfone				Pyrene				Tributyl phosphate			
					8270				8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																								
47.5	50.0	B17N46	6	S	960	µg/kg	U						960	µg/kg	U						960	µg/kg	U		35000	µg/kg		
47.5	50.0	B17N46-A	6	S																								
47.5	50.0	B17N46-B	6	S																								
47.5	50.0	B17MM8	6	W	1.8	µg/L	U		2.3	µg/L	U		1.8	µg/L	U						2.2	µg/L	U		2.6	µg/L	U	
47.5	50.0	B17MM9	6	W																								
47.5	50.0	B17MN0	6	W																								
49.5	50.0	B17RM5	4	V																								
49.5	50.0	B17RM6	4	V																								
49.5	50.0	B17RM7	4	V																								
49.5	50.0	B17RM8	4	V																								
49.5	50.0	B18CX0	4	V																								
49.5	50.0	B18CX1	4	V																								
58.5	59.5	B17RN0	5	V																								
58.5	59.5	B17RN1	5	V																								
58.5	59.5	B17RN2	5	V																								
58.5	59.5	B18CX3	5	V																								
63.5	66.0	B17TM6	6	S	160000	µg/kg	U						160000	µg/kg	U						160000	µg/kg	U		2100000	µg/kg		
63.5	66.0	B17TM6-A	6	S																								
63.5	66.0	B17TM6-B	6	S																								
65.0	66.0	B17RN3	4	V																								
65.0	66.0	B17RN5	4	V																								
65.0	66.0	B17RN6	4	V																								
65.0	66.0	B17RN4	4	V																								
65.0	66.0	B17X85	4	V																								
65.0	66.0	B17X86	4	V																								
65.0	66.0	B17X87	4	V																								
66.0	67.0	B17X90	3	V																								
66.0	67.0	B17X91	3	V																								
66.0	67.0	B17X92	3	V																								
66.0	67.0	B17X93	3	V																								
66.0	67.5	B17X96	3	V																								
66.0	67.5	B17X97	3	V																								
66.0	67.5	B17X98	3	V																								
81.0	82.0	B17XB1	3	V																								
81.0	82.0	B17XB2	3	V																								
81.0	82.0	B17XB3	3	V																								
90.0	92.5	B17N52	2	S	870	µg/kg	U		350	µg/kg	U		350	µg/kg	U	UJ					350	µg/kg	U		40633.34	µg/kg	D	
90.0	92.5	B17N61	2	S																								
90.0	92.5	B17XB6	2	V																								
90.0	92.5	B17XB7	2	V																								
90.0	92.5	B17XB8	2	V																								
109.5	112.0	B17N57	1	S																								
109.5	112.0	B18XR8	1	S	960	µg/kg	U						960	µg/kg	U						960	µg/kg	U		960	µg/kg	U	

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Pentachlorophenol				Phenanthrene				Phenol				Phenyl sulfone				Pyrene				Tributyl phosphate			
					8270				8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
109.5	112.0	B18XW3	1	S																								
110.0	112.0	B17XB9	2	V																								
110.0	112.0	B17XC0	2	V																								
110.0	112.0	B17XC3	2	V																								
110.0	112.0	B17XC1	2	V																								
112.0	112.0	B190T8-A	6	S																								
115.0	117.5	B191Y4	2	S																								
115.0	117.5	B191Y4-A	2	S																								
115.0	117.5	B191Y7	2	S	840	µg/kg	U	UJ	330	µg/kg	U	UJ	330	µg/kg	U	UJ					330	µg/kg	U	UJ	330	µg/kg	U	UJ
118.0	119.5	B17XC4	2	V																								
118.0	119.5	B17XC5	2	V																								
118.0	119.5	B17XC6	2	V																								
118.0	119.5	B17XC7	2	V																								
118.0	119.5	B17XC8	2	V																								
117.0	119.5	B17N60	6	S	310	µg/kg	U		70	µg/kg	U		100	µg/kg	U						70	µg/kg	U		70	µg/kg	U	
117.0	119.5	B17N64	6	S																								
117.0	119.5	B17N64-A	6	S																								
117.0	119.5	B17N68	6	S																								
119.5	122.0	B17N63	1	S	310	µg/kg	U		70	µg/kg	U		100	µg/kg	U						70	µg/kg	U		70	µg/kg	U	
119.5	122.0	B17N65	1	S	940	µg/kg	U		380	µg/kg	U		380	µg/kg	U						380	µg/kg	U		380	µg/kg	U	
119.5	122.0	B18XT1	1	S																								
119.5	122.0	B17XC9	2	V																								
119.5	122.0	B17XD0	2	V																								
119.5	122.0	B17XD1	2	V																								
119.5	122.0	B17XD2	2	V																								
119.5	122.0	B17XD3	2	V																								
141.0	143.0	B17XD4	4	V																								
141.0	143.0	B17XD5	4	V																								
141.0	143.0	B17XD6	4	V																								
141.0	143.0	B17XD7	4	V																								
141.0	143.0	B17XD8	4	V																								
159.0	160.0	B17XD9	4	V																								
159.0	160.0	B17XF0	4	V																								
159.0	160.0	B17XF2	4	V																								
159.0	160.0	B17XF1	4	V																								
159.0	160.0	B17XF3	4	V																								
174.0	176.5	B17N67	1	S	310	µg/kg	UJ		68	µg/kg	U		100	µg/kg	U						68	µg/kg	U		68	µg/kg	U	
174.0	176.5	B17N69	1	S																								
184.0	186.3	B17N70	2	S	310	µg/kg	U		68	µg/kg	U		100	µg/kg	U						68	µg/kg	U		68	µg/kg	U	
184.0	186.3	B17N72	2	S																								
184.0	186.3	B17N74	2	S																								
184.0	186.3	B1B7J7	2	V																								
184.0	186.3	B1B7J8	2	V																								
184.0	186.3	B1B7J9	2	V																								

Table B-5. Semivolatile Organic Analysis Results for Borehole C3426 Samples. (42 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Pentachlorophenol				Phenanthrene				Phenol				Phenyl sulfone				Pyrene				Tributyl phosphate			
					8270				8270				8270				8270				8270				8270			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
184.0	186.3	B1B7K0	2	V																								
184.0	186.3	B1B7K1	2	V																								
223.9	224.0	B1B7J2	2	V																								
223.9	224.0	B1B7J3	2	V																								
223.9	224.0	B1B7J4	2	V																								
223.9	224.0	B1B7J5	2	V																								
223.9	224.0	B1B7J6	2	V																								
224.0	226.2	B17N73	2	S	320	µg/kg	U		71	µg/kg	U		110	µg/kg	U						71	µg/kg	U		71	µg/kg	U	
224.0	226.2	B17NL3	2	S																								
226.5	228.0	B17NL5	1	S	340	µg/kg	U		75	µg/kg	U		110	µg/kg	U		240	µg/kg	J		75	µg/kg	U		75	µg/kg	U	
226.5	228.0	B17NL7	1	S																								
228.0	230.0	B17NL8	2	S	330	µg/kg	U		73	µg/kg	U		110	µg/kg	U						73	µg/kg	U		73	µg/kg	U	
228.0	230.0	B17NL9	2	S	330	µg/kg	U		73	µg/kg	U		110	µg/kg	U						73	µg/kg	U		73	µg/kg	U	
228.0	230.0	B17NM3	2	S																								
228.0	230.0	B17NM5	2	S																								
228.0	230.0	B1B9N6	6	W																								
294.5	297.0	B19NJ7	6	S	370	µg/kg	U		83	µg/kg	U		120	µg/kg	U						83	µg/kg	U		83	µg/kg	U	
294.5	297.0	B1B9Y4	6	S	1000	µg/kg	U		410	µg/kg	U		410	µg/kg	U						410	µg/kg	U		410	µg/kg	U	
TQL (µg/kg)					N/A				N/A				330				N/A				N/A				3,300			

Table B-6. Miscellaneous Organic Analysis Results for Borehole C3426 Samples. (12 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Aroclor-1016				Aroclor-1221				Aroclor-1232				Aroclor-1242				Aroclor-1248			
					8082				8082				8082				8082				8082			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																				
47.5	50.0	B17N46	6	S	40	µg/kg	U		13	µg/kg	U		220	µg/kg	U		41	µg/kg	U		150	µg/kg		
47.5	50.0	B17N46-A	6	S																				
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	0.099	µg/L	U		0.2	µg/L	U		0.099	µg/L	U		0.099	µg/L	U		0.099	µg/L	U	
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S	160	µg/kg	U		50	µg/kg	U		890	µg/kg	U		160	µg/kg	U		1600	µg/kg		
63.5	66.0	B17TM6-A	6	S																				
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																				
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																				
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																				
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				
81.0	82.0	B17XB3	3	V																				
90.0	92.5	B17N52	2	S																				

Table B-6. Miscellaneous Organic Analysis Results for Borehole C3426 Samples. (12 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Aroclor-1016				Aroclor-1221				Aroclor-1232				Aroclor-1242				Aroclor-1248			
					8082				8082				8082				8082				8082			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
90.0	92.5	B17N61	2	S																				
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				
90.0	92.5	B17XB8	2	V																				
109.5	112.0	B17N57	1	S																				
109.5	112.0	B18XR8	1	S	39	µg/kg	U		12	µg/kg	U		220	µg/kg	U		40	µg/kg	U		13	µg/kg	U	
109.5	112.0	B18XW3	1	S																				
110.0	112.0	B17XB9	2	V																				
110.0	112.0	B17XC0	2	V																				
110.0	112.0	B17XC3	2	V																				
110.0	112.0	B17XC1	2	V																				
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S																				
115.0	117.5	B191Y4-A	2	S																				
115.0	117.5	B191Y7	2	S	27	µg/kg	U	UJ	27	µg/kg	U	UJ	27	µg/kg	U	UJ	27	µg/kg	U	UJ	27	µg/kg	U	UJ
118.0	119.5	B17XC4	2	V																				
118.0	119.5	B17XC5	2	V																				
118.0	119.5	B17XC6	2	V																				
118.0	119.5	B17XC7	2	V																				
118.0	119.5	B17XC8	2	V																				
117.0	119.5	B17N60	6	S																				
117.0	119.5	B17N64	6	S																				
117.0	119.5	B17N64-A	6	S																				
117.0	119.5	B17N68	6	S																				
119.5	122.0	B17N63	1	S	50	µg/kg	U	J	100	µg/kg	U	J	50	µg/kg	U	J	50	µg/kg	U	J	50	µg/kg	U	J
119.5	122.0	B17N65	1	S	15	µg/kg	U		15	µg/kg	U		15	µg/kg	U		15	µg/kg	U		15	µg/kg	U	
119.5	122.0	B18XT1	1	S																				
119.5	122.0	B17XC9	2	V																				
119.5	122.0	B17XD0	2	V																				
119.5	122.0	B17XD1	2	V																				
119.5	122.0	B17XD2	2	V																				
119.5	122.0	B17XD3	2	V																				
141.0	143.0	B17XD4	4	V																				
141.0	143.0	B17XD5	4	V																				
141.0	143.0	B17XD6	4	V																				
141.0	143.0	B17XD7	4	V																				
141.0	143.0	B17XD8	4	V																				
159.0	160.0	B17XD9	4	V																				

Table B-6. Miscellaneous Organic Analysis Results for Borehole C3426 Samples. (12 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Aroclor-1016				Aroclor-1221				Aroclor-1232				Aroclor-1242				Aroclor-1248			
					8082				8082				8082				8082				8082			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
159.0	160.0	B17XF0	4	V																				
159.0	160.0	B17XF2	4	V																				
159.0	160.0	B17XF1	4	V																				
159.0	160.0	B17XF3	4	V																				
174.0	176.5	B17N67	1	S	49	µg/kg	U		98	µg/kg	U		49	µg/kg	U		49	µg/kg	U		49	µg/kg	U	
174.0	176.5	B17N69	1	S																				
184.0	186.3	B17N70	2	S																				
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S																				
184.0	186.3	B1B7J7	2	V																				
184.0	186.3	B1B7J8	2	V																				
184.0	186.3	B1B7J9	2	V																				
184.0	186.3	B1B7K0	2	V																				
184.0	186.3	B1B7K1	2	V																				
223.9	224.0	B1B7J2	2	V																				
223.9	224.0	B1B7J3	2	V																				
223.9	224.0	B1B7J4	2	V																				
223.9	224.0	B1B7J5	2	V																				
223.9	224.0	B1B7J6	2	V																				
224.0	226.2	B17N73	2	S																				
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S	56	µg/kg	U		110	µg/kg	U		56	µg/kg	U		56	µg/kg	U		56	µg/kg	U	
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S																				
228.0	230.0	B17NL9	2	S																				
228.0	230.0	B17NM3	2	S																				
228.0	230.0	B17NM5	2	S																				
228.0	230.0	B1B9N6	6	W																				
294.5	297.0	B19NJ7	6	S																				
294.5	297.0	B1B9Y4	6	S																				
TQL (µg/kg)					16.5				16.5				16.5				16.5				16.5			

Table B-6. Miscellaneous Organic Analysis Results for Borehole C3426 Samples. (12 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Aroclor-1254				Aroclor-1260				Aroclor-1262				Aroclor-1268				Carbon Dioxide			
					8082				8082				8082				8082				IR, field			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																				
47.5	50.0	B17N46	6	S	7.6	µg/kg	U		55	µg/kg	U													
47.5	50.0	B17N46-A	6	S																				
47.5	50.0	B17N46-B	6	S																				
47.5	50.0	B17MM8	6	W	0.099	µg/L	U		0.099	µg/L	U		0.099	µg/L	U		0.099	µg/L	U					
47.5	50.0	B17MM9	6	W																				
47.5	50.0	B17MN0	6	W																				
49.5	50.0	B17RM5	4	V																				
49.5	50.0	B17RM6	4	V																				
49.5	50.0	B17RM7	4	V																				
49.5	50.0	B17RM8	4	V																				
49.5	50.0	B18CX0	4	V																				
49.5	50.0	B18CX1	4	V																				
58.5	59.5	B17RN0	5	V																				
58.5	59.5	B17RN1	5	V																				
58.5	59.5	B17RN2	5	V																				
58.5	59.5	B18CX3	5	V																				
63.5	66.0	B17TM6	6	S	30	µg/kg	U		220	µg/kg	U													
63.5	66.0	B17TM6-A	6	S																				
63.5	66.0	B17TM6-B	6	S																				
65.0	66.0	B17RN3	4	V																				
65.0	66.0	B17RN5	4	V																				
65.0	66.0	B17RN6	4	V																				
65.0	66.0	B17RN4	4	V																				
65.0	66.0	B17X85	4	V																				
65.0	66.0	B17X86	4	V																				
65.0	66.0	B17X87	4	V																	0	%		
66.0	67.0	B17X90	3	V																				
66.0	67.0	B17X91	3	V																				
66.0	67.0	B17X92	3	V																				
66.0	67.0	B17X93	3	V																				
66.0	67.5	B17X96	3	V																	0.1	%(vol)		
66.0	67.5	B17X97	3	V																				
66.0	67.5	B17X98	3	V																	0.2	%		
81.0	82.0	B17XB1	3	V																				
81.0	82.0	B17XB2	3	V																				
81.0	82.0	B17XB3	3	V																	0.8	%		
90.0	92.5	B17N52	2	S																				

Table B-6. Miscellaneous Organic Analysis Results for Borehole C3426 Samples. (12 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Aroclor-1254				Aroclor-1260				Aroclor-1262				Aroclor-1268				Carbon Dioxide			
					8082				8082				8082				8082				IR, field			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
90.0	92.5	B17N61	2	S																				
90.0	92.5	B17XB6	2	V																				
90.0	92.5	B17XB7	2	V																				
90.0	92.5	B17XB8	2	V																	1.3	%		
109.5	112.0	B17N57	1	S																				
109.5	112.0	B18XR8	1	S	7.4	µg/kg	U		54	µg/kg	U													
109.5	112.0	B18XW3	1	S																				
110.0	112.0	B17XB9	2	V																				
110.0	112.0	B17XC0	2	V																				
110.0	112.0	B17XC3	2	V																				
110.0	112.0	B17XC1	2	V																				
112.0	112.0	B190T8-A	6	S																				
115.0	117.5	B191Y4	2	S																				
115.0	117.5	B191Y4-A	2	S																				
115.0	117.5	B191Y7	2	S	27	µg/kg	U	UJ	27	µg/kg	U	UJ												
118.0	119.5	B17XC4	2	V																				
118.0	119.5	B17XC5	2	V																				
118.0	119.5	B17XC6	2	V																				
118.0	119.5	B17XC7	2	V																				
118.0	119.5	B17XC8	2	V																				
117.0	119.5	B17N60	6	S																				
117.0	119.5	B17N64	6	S																				
117.0	119.5	B17N64-A	6	S																				
117.0	119.5	B17N68	6	S																				
119.5	122.0	B17N63	1	S	50	µg/kg	U	J	50	µg/kg	U	J	50	µg/kg	U	J	50	µg/kg	U	J				
119.5	122.0	B17N65	1	S	15	µg/kg	U		15	µg/kg	U													
119.5	122.0	B18XT1	1	S																				
119.5	122.0	B17XC9	2	V																				
119.5	122.0	B17XD0	2	V																				
119.5	122.0	B17XD1	2	V																				
119.5	122.0	B17XD2	2	V																				
119.5	122.0	B17XD3	2	V																				
141.0	143.0	B17XD4	4	V																				
141.0	143.0	B17XD5	4	V																				
141.0	143.0	B17XD6	4	V																				
141.0	143.0	B17XD7	4	V																				
141.0	143.0	B17XD8	4	V																				
159.0	160.0	B17XD9	4	V																				

Table B-6. Miscellaneous Organic Analysis Results for Borehole C3426 Samples. (12 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Aroclor-1254				Aroclor-1260				Aroclor-1262				Aroclor-1268				Carbon Dioxide			
					8082				8082				8082				8082				IR, field			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
159.0	160.0	B17XF0	4	V																				
159.0	160.0	B17XF2	4	V																				
159.0	160.0	B17XF1	4	V																				
159.0	160.0	B17XF3	4	V																				
174.0	176.5	B17N67	1	S	49	µg/kg	U		49	µg/kg	U		49	µg/kg	U		49	µg/kg	U					
174.0	176.5	B17N69	1	S																				
184.0	186.3	B17N70	2	S																				
184.0	186.3	B17N72	2	S																				
184.0	186.3	B17N74	2	S																				
184.0	186.3	B1B7J7	2	V																				
184.0	186.3	B1B7J8	2	V																				
184.0	186.3	B1B7J9	2	V																				
184.0	186.3	B1B7K0	2	V																				
184.0	186.3	B1B7K1	2	V																				
223.9	224.0	B1B7J2	2	V																				
223.9	224.0	B1B7J3	2	V																				
223.9	224.0	B1B7J4	2	V																				
223.9	224.0	B1B7J5	2	V																				
223.9	224.0	B1B7J6	2	V																				
224.0	226.2	B17N73	2	S																				
224.0	226.2	B17NL3	2	S																				
226.5	228.0	B17NL5	1	S	56	µg/kg	U		56	µg/kg	U		56	µg/kg	U		56	µg/kg	U					
226.5	228.0	B17NL7	1	S																				
228.0	230.0	B17NL8	2	S																				
228.0	230.0	B17NL9	2	S																				
228.0	230.0	B17NM3	2	S																				
228.0	230.0	B17NM5	2	S																				
228.0	230.0	B1B9N6	6	W																				
294.5	297.0	B19NJ7	6	S																				
294.5	297.0	B1B9Y4	6	S																				
TQL (µg/kg)					16.5				16.5				16.5				16.5				N/A			

Table B-6. Miscellaneous Organic Analysis Results for Borehole C3426 Samples. (12 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Methane				Oil and grease								Oxygen				Total Inorganic Carbon							
					IR, field				413.1				9071				IR, field				415.1				9060			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V	0	%	U										18.8	%										
47.5	50.0	B17N46	6	S																								
47.5	50.0	B17N46-A	6	S																								
47.5	50.0	B17N46-B	6	S									107000	µg/kg	B										23800	µg/kg	B	
47.5	50.0	B17MM8	6	W																								
47.5	50.0	B17MM9	6	W					960	µg/L	U										500	µg/L	U					
47.5	50.0	B17MN0	6	W																								
49.5	50.0	B17RM5	4	V	0	%(vol)	U										18.8	%(vol)										
49.5	50.0	B17RM6	4	V	0	%(vol)	U										18.8	%(vol)										
49.5	50.0	B17RM7	4	V	0	%(vol)	U										19	%(vol)										
49.5	50.0	B17RM8	4	V	0	%(vol)	U										19	%(vol)										
49.5	50.0	B18CX0	4	V	0	%(vol)	U										18.8	%(vol)										
49.5	50.0	B18CX1	4	V	0	%(vol)	U										19	%(vol)										
58.5	59.5	B17RN0	5	V	0	%(vol)	U										18	%(vol)										
58.5	59.5	B17RN1	5	V	0	%(vol)	U										18.5	%(vol)										
58.5	59.5	B17RN2	5	V	0	%(vol)	U										18.6	%(vol)										
58.5	59.5	B18CX3	5	V	0	%(vol)	U										18.1	%(vol)										
63.5	66.0	B17TM6	6	S																								
63.5	66.0	B17TM6-A	6	S																								
63.5	66.0	B17TM6-B	6	S									2400000	µg/kg											260000	µg/kg		
65.0	66.0	B17RN3	4	V	0.1	%(vol)											18.8	%(vol)										
65.0	66.0	B17RN5	4	V	0	%(vol)	U										18.7	%(vol)										
65.0	66.0	B17RN6	4	V	0	%(vol)	U										18.6	%(vol)										
65.0	66.0	B17RN4	4	V	0	%(vol)	U										18.8	%(vol)										
65.0	66.0	B17X85	4	V	0	%	U										18.9	%										
65.0	66.0	B17X86	4	V	0	%	U										18.9	%										
65.0	66.0	B17X87	4	V	0	%											18.8	%										
66.0	67.0	B17X90	3	V	0	%(vol)	U										14.2	%(vol)										
66.0	67.0	B17X91	3	V	0	%(vol)	U										14.6	%(vol)										
66.0	67.0	B17X92	3	V	0	%(vol)	U										14.4	%(vol)										
66.0	67.0	B17X93	3	V	0	%(vol)	U										14.4	%(vol)										
66.0	67.5	B17X96	3	V	0	%(vol)	U																					
66.0	67.5	B17X97	3	V	0	%(vol)	U																					
66.0	67.5	B17X98	3	V	0	%																						
81.0	82.0	B17XB1	3	V	0	%(vol)	U																					
81.0	82.0	B17XB2	3	V	0	%(vol)	U																					
81.0	82.0	B17XB3	3	V	0	%																						
90.0	92.5	B17N52	2	S									1620000	µg/kg											1980000	µg/kg		J

Table B-6. Miscellaneous Organic Analysis Results for Borehole C3426 Samples. (12 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Methane				Oil and grease								Oxygen				Total Inorganic Carbon							
					IR, field				413.1				9071				IR, field				415.1				9060			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
90.0	92.5	B17N61	2	S																								
90.0	92.5	B17XB6	2	V	0	%(vol)	U																					
90.0	92.5	B17XB7	2	V	0	%(vol)	U																					
90.0	92.5	B17XB8	2	V	0	%																						
109.5	112.0	B17N57	1	S																								
109.5	112.0	B18XR8	1	S																								
109.5	112.0	B18XW3	1	S																								
110.0	112.0	B17XB9	2	V	0	%(vol)	U																					
110.0	112.0	B17XC0	2	V	0	%(vol)	U																					
110.0	112.0	B17XC3	2	V	0	%(vol)	U																					
110.0	112.0	B17XC1	2	V	0	%(vol)	U																					
112.0	112.0	B190T8-A	6	S																								
115.0	117.5	B191Y4	2	S																								
115.0	117.5	B191Y4-A	2	S																								
115.0	117.5	B191Y7	2	S									133000	µg/kg	U	UJ												
118.0	119.5	B17XC4	2	V	0	%(vol)	U																					
118.0	119.5	B17XC5	2	V	0	%(vol)	U																					
118.0	119.5	B17XC6	2	V	0	%(vol)	U																					
118.0	119.5	B17XC7	2	V	0	%(vol)	U																					
118.0	119.5	B17XC8	2	V	0	%(vol)	U																					
117.0	119.5	B17N60	6	S																								
117.0	119.5	B17N64	6	S																								
117.0	119.5	B17N64-A	6	S																								
117.0	119.5	B17N68	6	S																								
119.5	122.0	B17N63	1	S																								
119.5	122.0	B17N65	1	S									152000	µg/kg	U						5440000	µg/kg						
119.5	122.0	B18XT1	1	S																								
119.5	122.0	B17XC9	2	V	0	%	U																					
119.5	122.0	B17XD0	2	V	0	%	U																					
119.5	122.0	B17XD1	2	V	0	%	U																					
119.5	122.0	B17XD2	2	V	0	%	U																					
119.5	122.0	B17XD3	2	V	0	%	U																					
141.0	143.0	B17XD4	4	V																								
141.0	143.0	B17XD5	4	V																								
141.0	143.0	B17XD6	4	V																								
141.0	143.0	B17XD7	4	V																								
141.0	143.0	B17XD8	4	V																								
159.0	160.0	B17XD9	4	V																								

Table B-6. Miscellaneous Organic Analysis Results for Borehole C3426 Samples. (12 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Methane				Oil and grease								Oxygen				Total Inorganic Carbon							
					IR, field				413.1				9071				IR, field				415.1				9060			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
159.0	160.0	B17XF0	4	V																								
159.0	160.0	B17XF2	4	V																								
159.0	160.0	B17XF1	4	V																								
159.0	160.0	B17XF3	4	V																								
174.0	176.5	B17N67	1	S																								
174.0	176.5	B17N69	1	S					689000	µg/kg	U										60300	µg/kg	U					
184.0	186.3	B17N70	2	S																								
184.0	186.3	B17N72	2	S					685000	µg/kg	U										175000	µg/kg						
184.0	186.3	B17N74	2	S																								
184.0	186.3	B1B7J7	2	V																								
184.0	186.3	B1B7J8	2	V																								
184.0	186.3	B1B7J9	2	V																								
184.0	186.3	B1B7K0	2	V																								
184.0	186.3	B1B7K1	2	V																								
223.9	224.0	B1B7J2	2	V																								
223.9	224.0	B1B7J3	2	V																								
223.9	224.0	B1B7J4	2	V																								
223.9	224.0	B1B7J5	2	V																								
223.9	224.0	B1B7J6	2	V																								
224.0	226.2	B17N73	2	S																								
224.0	226.2	B17NL3	2	S					716000	µg/kg	U										4700	µg/kg	U					
226.5	228.0	B17NL5	1	S																								
226.5	228.0	B17NL7	1	S					720000	µg/kg	U										22900	µg/kg	U					
228.0	230.0	B17NL8	2	S																								
228.0	230.0	B17NL9	2	S																								
228.0	230.0	B17NM3	2	S									691000	µg/kg	U						46000	µg/kg	U					
228.0	230.0	B17NM5	2	S									700000	µg/kg	U						59500	µg/kg	U					
228.0	230.0	B1B9N6	6	W																								
294.5	297.0	B19NJ7	6	S																								
294.5	297.0	B1B9Y4	6	S																								
TQL (µg/kg)					N/A				5000								N/A				N/A							

Table B-6. Miscellaneous Organic Analysis Results for Borehole C3426 Samples. (12 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Total Organic Carbon								Total Petroleum Hydrocarbons - Diesel Range				Total Petroleum Hydrocarbons - Kerosene Range			
					415.1				9060				SX/GC-FID				SX/GC-FID			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
29.0	29.5	B17RM4	4	V																
47.5	50.0	B17N46	6	S																
47.5	50.0	B17N46-A	6	S																
47.5	50.0	B17N46-B	6	S					341000	µg/kg										
47.5	50.0	B17MM8	6	W									80	µg/L	U		80	µg/L	U	
47.5	50.0	B17MM9	6	W	500	µg/L	U													
47.5	50.0	B17MN0	6	W																
49.5	50.0	B17RM5	4	V																
49.5	50.0	B17RM6	4	V																
49.5	50.0	B17RM7	4	V																
49.5	50.0	B17RM8	4	V																
49.5	50.0	B18CX0	4	V																
49.5	50.0	B18CX1	4	V																
58.5	59.5	B17RN0	5	V																
58.5	59.5	B17RN1	5	V																
58.5	59.5	B17RN2	5	V																
58.5	59.5	B18CX3	5	V																
63.5	66.0	B17TM6	6	S																
63.5	66.0	B17TM6-A	6	S																
63.5	66.0	B17TM6-B	6	S					2430000	µg/kg										
65.0	66.0	B17RN3	4	V																
65.0	66.0	B17RN5	4	V																
65.0	66.0	B17RN6	4	V																
65.0	66.0	B17RN4	4	V																
65.0	66.0	B17X85	4	V																
65.0	66.0	B17X86	4	V																
65.0	66.0	B17X87	4	V																
66.0	67.0	B17X90	3	V																
66.0	67.0	B17X91	3	V																
66.0	67.0	B17X92	3	V																
66.0	67.0	B17X93	3	V																
66.0	67.5	B17X96	3	V																
66.0	67.5	B17X97	3	V																
66.0	67.5	B17X98	3	V																
81.0	82.0	B17XB1	3	V																
81.0	82.0	B17XB2	3	V																
81.0	82.0	B17XB3	3	V																
90.0	92.5	B17N52	2	S	143000	µg/kg							20.9	µg/kg	U	UR	20.9	µg/kg	U	UR

Table B-6. Miscellaneous Organic Analysis Results for Borehole C3426 Samples. (12 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Total Organic Carbon								Total Petroleum Hydrocarbons - Diesel Range				Total Petroleum Hydrocarbons - Kerosene Range			
					415.1				9060				SX/GC-FID				SX/GC-FID			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
90.0	92.5	B17N61	2	S																
90.0	92.5	B17XB6	2	V																
90.0	92.5	B17XB7	2	V																
90.0	92.5	B17XB8	2	V																
109.5	112.0	B17N57	1	S																
109.5	112.0	B18XR8	1	S																
109.5	112.0	B18XW3	1	S																
110.0	112.0	B17XB9	2	V																
110.0	112.0	B17XC0	2	V																
110.0	112.0	B17XC3	2	V																
110.0	112.0	B17XC1	2	V																
112.0	112.0	B190T8-A	6	S																
115.0	117.5	B191Y4	2	S																
115.0	117.5	B191Y4-A	2	S																
115.0	117.5	B191Y7	2	S									12000	µg/kg	U	UR	12000	µg/kg	U	UR
118.0	119.5	B17XC4	2	V																
118.0	119.5	B17XC5	2	V																
118.0	119.5	B17XC6	2	V																
118.0	119.5	B17XC7	2	V																
118.0	119.5	B17XC8	2	V																
117.0	119.5	B17N60	6	S									3900	µg/kg	U		3900	µg/kg	U	
117.0	119.5	B17N64	6	S																
117.0	119.5	B17N64-A	6	S																
117.0	119.5	B17N68	6	S																
119.5	122.0	B17N63	1	S									3900	µg/kg	U		3900	µg/kg	U	
119.5	122.0	B17N65	1	S	2600000	µg/kg							13600	µg/kg	U		13600	µg/kg	U	
119.5	122.0	B18XT1	1	S																
119.5	122.0	B17XC9	2	V																
119.5	122.0	B17XD0	2	V																
119.5	122.0	B17XD1	2	V																
119.5	122.0	B17XD2	2	V																
119.5	122.0	B17XD3	2	V																
141.0	143.0	B17XD4	4	V																
141.0	143.0	B17XD5	4	V																
141.0	143.0	B17XD6	4	V																
141.0	143.0	B17XD7	4	V																
141.0	143.0	B17XD8	4	V																
159.0	160.0	B17XD9	4	V																

Table B-6. Miscellaneous Organic Analysis Results for Borehole C3426 Samples. (12 Pages)

Sample Top (ft bgs)	Sample Bottom (ft bgs)	Sample	Purpose	Media	Total Organic Carbon								Total Petroleum Hydrocarbons - Diesel Range				Total Petroleum Hydrocarbons - Kerosene Range			
					415.1				9060				SX/GC-FID				SX/GC-FID			
					Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V	Conc'n	Units	Q	V
159.0	160.0	B17XF0	4	V																
159.0	160.0	B17XF2	4	V																
159.0	160.0	B17XF1	4	V																
159.0	160.0	B17XF3	4	V																
174.0	176.5	B17N67	1	S									3900	µg/kg	U		3900	µg/kg	U	
174.0	176.5	B17N69	1	S					76500	µg/kg										
184.0	186.3	B17N70	2	S									3900	µg/kg	U		3900	µg/kg	U	
184.0	186.3	B17N72	2	S					39500	µg/kg	U									
184.0	186.3	B17N74	2	S																
184.0	186.3	B1B7J7	2	V																
184.0	186.3	B1B7J8	2	V																
184.0	186.3	B1B7J9	2	V																
184.0	186.3	B1B7K0	2	V																
184.0	186.3	B1B7K1	2	V																
223.9	224.0	B1B7J2	2	V																
223.9	224.0	B1B7J3	2	V																
223.9	224.0	B1B7J4	2	V																
223.9	224.0	B1B7J5	2	V																
223.9	224.0	B1B7J6	2	V																
224.0	226.2	B17N73	2	S									4000	µg/kg	U		4000	µg/kg	U	
224.0	226.2	B17NL3	2	S	97900	µg/kg	U													
226.5	228.0	B17NL5	1	S									4200	µg/kg	U		4200	µg/kg	U	
226.5	228.0	B17NL7	1	S	280000	µg/kg														
228.0	230.0	B17NL8	2	S									4000	µg/kg	U		4000	µg/kg	U	
228.0	230.0	B17NL9	2	S									4100	µg/kg	U		4100	µg/kg	U	
228.0	230.0	B17NM3	2	S	90300	µg/kg														
228.0	230.0	B17NM5	2	S	227000	µg/kg														
228.0	230.0	B1B9N6	6	W																
294.5	297.0	B19NJ7	6	S									4700	µg/kg	U		4700	µg/kg	U	
294.5	297.0	B1B9Y4	6	S									14.9	µg/kg	U		14.9	µg/kg	U	
TQL (µg/kg)					N/A								5000				5000			

APPENDIX C

RELATIVE PERCENT DIFFERENCES FOR THE DUPLICATE AND SPLIT-SAMPLE RESULTS

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TABLES

Table C-1. Relative Percent Differences for Field-Duplicate Samples.....C-1

Table C-2. Relative Percent Difference for Split Samples.....C-6

TERMS

MDA	minimum detectable activity
N/A	not applicable
RDL	required detection limit (equivalent to TQL in this study)
RPD	relative percent difference
TQL	target quantitation limit

The relative percent difference values shown in **boldface** did not meet the applicable precision criteria and are discussed in Section 5.4 of the data quality assessment report. The qualifiers used in Tables C-1 and C-2 have the same meaning as those used in Appendix B.

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Table C-1. Relative Percent Differences for Field-Duplicate Samples. (5 Pages)

Constituent	Depth	Sample 1					Sample 2					TQL	Units	RPD
		Sample	Result	Q	V	MDA	Sample	Result	Q	V	MDA			
Ammonium ion	228	B17NL8	1290	B			B17NL9	1380	B			643	µg/kg	0.1 × RDL
Chloride	228	B17NL8	3820	B			B17NL9	3900	B			2000	µg/kg	0.0 × RDL
Fluoride	228	B17NL8	1150	U			B17NL9	1150	U			5000	µg/kg	N/A
Nitrate	228	B17NL8	41100				B17NL9	41000				11100	µg/kg	0.0 × RDL
Nitrite	228	B17NL8	3120	U			B17NL9	3120	U			8210	µg/kg	N/A
Nitrogen in Nitrite and Nitrate	228	B17NM3	9200	D			B17NM5	7500	D			2500	µg/kg	0.7 × RDL
Phosphate	228	B17NL8	8280	U			B17NL9	8280	U			5000	µg/kg	N/A
Sulfate	228	B17NL8	5000	U			B17NL9	9930	B			5000	µg/kg	1.0 × RDL
Arsenic	228	B17NL8	1200	U			B17NL9	1200	U			10000	µg/kg	N/A
Cadmium	228	B17NL8	75	U			B17NL9	75	U			500	µg/kg	N/A
Chromium	228	B17NL8	26200				B17NL9	34000				1000	µg/kg	25.9%
Copper	228	B17NL8	13700				B17NL9	10800				1000	µg/kg	23.7%
Lead	228	B17NL8	63	U			B17NL9	63	U			10000	µg/kg	N/A
Mercury	228	B17NL8	1010	U			B17NL9	1010	U			200	µg/kg	N/A
Nickel	228	B17NL8	13900				B17NL9	16700				4000	µg/kg	0.7 × RDL
Phosphorus	228	B17NL8	523000	E			B17NL9	466000	E			10000	µg/kg	11.5%
Selenium	228	B17NL8	1000	U			B17NL9	1000	U			10000	µg/kg	N/A
Silver	228	B17NL8	683	E			B17NL9	388	E			2000	µg/kg	0.1 × RDL
Hexavalent Chromium	228	B17NM3	210	U			B17NM5	210	U			500	µg/kg	N/A
1,1,1-Trichloroethane	117	B17N64	0.84	U			B17N64-A	0.59	U			5	µg/kg	N/A
1,1,1-Trichloroethane	119.5	B17N63	2.1	U			B18XT1	11	U			5	µg/kg	N/A
1,1,1-Trichloroethane	184	B17N70	2.1	U			B17N74	2.1	U			5	µg/kg	N/A
1,1-Dichloroethane	117	B17N64	0.96	U			B17N64-A	0.67	U			10	µg/kg	N/A
1,1-Dichloroethane	119.5	B17N63	2.1	U			B18XT1	11	U			10	µg/kg	N/A
1,1-Dichloroethane	184	B17N70	2.1	U			B17N74	2.1	U			10	µg/kg	N/A
1,1-Dichloroethane	228	B17NL8	1.8	U			B17NL9	1.8	U			10	µg/kg	N/A
1,2-Dichloroethane	117	B17N64	0.91	U			B17N64-A	0.64	U			5	µg/kg	N/A

Table C-1. Relative Percent Differences for Field-Duplicate Samples. (5 Pages)

Constituent	Depth	Sample 1					Sample 2					TQL	Units	RPD
		Sample	Result	Q	V	MDA	Sample	Result	Q	V	MDA			
1,2-Dichloroethane	119.5	B17N63	2.1	U			B18XT1	11	U			5	µg/kg	N/A
1,2-Dichloroethane	184	B17N70	2.1	U			B17N74	2.1	U			5	µg/kg	N/A
1,2-Dichloroethane	228	B17NL8	1.8	U			B17NL9	1.8	U			5	µg/kg	N/A
1,2-Dichloroethene (Total)	117	B17N64	1.6	U			B17N64-A	1.2	U			10	µg/kg	N/A
1,2-Dichloroethene (Total)	119.5	B17N63	2.1	U			B18XT1	11	U			10	µg/kg	N/A
1,2-Dichloroethene (Total)	184	B17N70	2.1	U			B17N74	2.1	U			10	µg/kg	N/A
1,2-Dichloroethene (Total)	228	B17NL8	1.8	U			B17NL9	1.8	U			10	µg/kg	N/A
2-Butanone	117	B17N64	75				B17N64-A	80				10	µg/kg	6.5%
2-Butanone	119.5	B17N63	2.1	U			B18XT1	11	U			10	µg/kg	N/A
2-Butanone	184	B17N70	2.1	U			B17N74	2.1	U			10	µg/kg	N/A
2-Butanone	228	B17NL8	1.8	U			B17NL9	1.8	U			10	µg/kg	N/A
4-Methyl-2-Pentanone	117	B17N64	1.2				B17N64-A	0.62	U			10	µg/kg	0.1 × RDL
4-Methyl-2-Pentanone	119.5	B17N63	2.1	U			B18XT1	11	U			10	µg/kg	N/A
4-Methyl-2-Pentanone	184	B17N70	2.1	U			B17N74	2.1	U			10	µg/kg	N/A
4-Methyl-2-Pentanone	228	B17NL8	1.8	U			B17NL9	1.8	U			10	µg/kg	N/A
Acetone	117	B17N64	170				B17N64-A	79				20	µg/kg	**4.6 × RDL**
Acetone	119.5	B17N63	2.1	U			B18XT1	540				20	µg/kg	**26.9 × RDL**
Acetone	184	B17N70	2.1	U			B17N74	2.1	U			20	µg/kg	N/A
Acetone	228	B17NL8	1.8	U			B17NL9	1.8	U			20	µg/kg	N/A
Benzene	117	B17N64	0.79	U			B17N64-A	0.56	U			5	µg/kg	N/A
Benzene	119.5	B17N63	2.1	U			B18XT1	11	U			5	µg/kg	N/A
Benzene	184	B17N70	2.1	U			B17N74	2.1	U			5	µg/kg	N/A
Benzene	228	B17NL8	1.8	U			B17NL9	1.8	U			5	µg/kg	N/A
Carbon tetrachloride	117	B17N64	92				B17N64-A	240				5	µg/kg	**89.2%**
Carbon tetrachloride	119.5	B17N63	2.1	U			B18XT1	11	U			5	µg/kg	N/A

Table C-1. Relative Percent Differences for Field-Duplicate Samples. (5 Pages)

Constituent	Depth	Sample 1					Sample 2					TQL	Units	RPD
		Sample	Result	Q	V	MDA	Sample	Result	Q	V	MDA			
Carbon tetrachloride	184	B17N70	2.1	U			B17N74	2.1	U			5	µg/kg	N/A
Carbon tetrachloride	228	B17NL8	1.8	U			B17NL9	1.8	U			5	µg/kg	N/A
Chlorobenzene	117	B17N64	0.91	U			B17N64-A	0.64	U			5	µg/kg	N/A
Chlorobenzene	119.5	B17N63	2.1	U			B18XT1	11	U			5	µg/kg	N/A
Chlorobenzene	184	B17N70	2.1	U			B17N74	2.1	U			5	µg/kg	N/A
Chlorobenzene	228	B17NL8	1.8	U			B17NL9	1.8	U			5	µg/kg	N/A
Chloroform	117	B17N64	8.7				B17N64-A	13				5	µg/kg	0.9 × RDL
Chloroform	119.5	B17N63	2.1	U			B18XT1	11	U			5	µg/kg	N/A
Chloroform	184	B17N70	2.1	U			B17N74	2.1	U			5	µg/kg	N/A
Chloroform	228	B17NL8	1.8	U			B17NL9	1.8	U			5	µg/kg	N/A
Chloromethane	117	B17N64	2	U			B17N64-A	1.4	U			5	µg/kg	N/A
Chloromethane	119.5	B17N63	2.1	U			B18XT1	110				5	µg/kg	**21.6 × RDL**
Chloromethane	184	B17N70	2.1	U			B17N74	2.1	U			5	µg/kg	N/A
Chloromethane	228	B17NL8	1.8	U			B17NL9	1.8	U			5	µg/kg	N/A
cis-1,2-Dichloroethylene	228	B17NL8	1.8	U			B17NL9	1.8	U			10	µg/kg	N/A
Ethylbenzene	117	B17N64	1.2	U			B17N64-A	0.82	U			5	µg/kg	N/A
Ethylbenzene	119.5	B17N63	2.1	U			B18XT1	11	U			5	µg/kg	N/A
Ethylbenzene	184	B17N70	2.1	U			B17N74	2.1	U			5	µg/kg	N/A
Ethylbenzene	228	B17NL8	1.8	U			B17NL9	1.8	U			5	µg/kg	N/A
Methylene chloride	117	B17N64	1.5	U			B17N64-A	1.1	U			5	µg/kg	N/A
Methylene chloride	119.5	B17N63	2.1	U			B18XT1	20	J			5	µg/kg	**3.6 × RDL**
Methylene chloride	184	B17N70	2.1	U			B17N74	2.1	U			5	µg/kg	N/A
Methylene chloride	228	B17NL8	1.8	U			B17NL9	1.8	U			5	µg/kg	N/A
n-Butylbenzene	119.5	B17N63	2.1	U			B18XT1	11	U			5	µg/kg	N/A
n-Butylbenzene	184	B17N70	2.1	U			B17N74	2.1	U			5	µg/kg	N/A
n-Butylbenzene	228	B17NL8	1.8	U			B17NL9	1.8	U			5	µg/kg	N/A
Tetrachloroethene	117	B17N64	2				B17N64-A	5.4				5	µg/kg	0.7 × RDL

Table C-1. Relative Percent Differences for Field-Duplicate Samples. (5 Pages)

Constituent	Depth	Sample 1					Sample 2					TQL	Units	RPD
		Sample	Result	Q	V	MDA	Sample	Result	Q	V	MDA			
Tetrachloroethene	119.5	B17N63	2.1	U			B18XT1	11	U			5	µg/kg	N/A
Tetrachloroethene	184	B17N70	2.1	U			B17N74	2.1	U			5	µg/kg	N/A
Tetrachloroethene	228	B17NL8	1.8	U			B17NL9	1.8	U			5	µg/kg	N/A
Toluene	117	B17N64	1.3				B17N64-A	0.54	U			5	µg/kg	0.2 × RDL
Toluene	119.5	B17N63	2.1	U			B18XT1	11	U			5	µg/kg	N/A
Toluene	184	B17N70	2.1	U			B17N74	2.1	U			5	µg/kg	N/A
Toluene	228	B17NL8	1.8	U			B17NL9	1.8	U			5	µg/kg	N/A
trans-1,2-Dichloroethylene	228	B17NL8	1.8	U			B17NL9	1.8	U			10	µg/kg	N/A
Trichloroethene	117	B17N64	1	U			B17N64-A	0.72	U			5	µg/kg	N/A
Trichloroethene	119.5	B17N63	2.1	U			B18XT1	11	U			5	µg/kg	N/A
Trichloroethene	184	B17N70	2.1	U			B17N74	2.1	U			5	µg/kg	N/A
Trichloroethene	228	B17NL8	1.8	U			B17NL9	1.8	U			5	µg/kg	N/A
Xylenes (total)	117	B17N64	1.9	U			B17N64-A	1.3	U			5	µg/kg	N/A
Xylenes (total)	119.5	B17N63	2.1	U			B18XT1	11	U			5	µg/kg	N/A
Xylenes (total)	184	B17N70	2.1	U			B17N74	2.1	U			5	µg/kg	N/A
Xylenes (total)	228	B17NL8	1.8	U			B17NL9	1.8	U			5	µg/kg	N/A
Phenol	228	B17NL8	110	U			B17NL9	110	U			330	µg/kg	N/A
Tributyl phosphate	228	B17NL8	73	U			B17NL9	73	U			3300	µg/kg	N/A
Oil and grease	228	B17NM3	691000	U			B17NM5	700000	U			200000	µg/kg	N/A
TPH - diesel range	228	B17NL8	4000	U			B17NL9	4100	U			5000	µg/kg	N/A
TPH - kerosene range	228	B17NL8	4000	U			B17NL9	4100	U			5000	µg/kg	N/A
Americium-241	228	B17NL8	0.012	U		0.049	B17NL9	0.025	U		0.033	1	pCi/g	N/A
Cesium-137	228	B17NL8	0.018			0.013	B17NL9	0.003	U		0.014	0.1	pCi/g	0.0 × RDL
Cesium-137	228	B17NM3		U		0.094	B17NM5		U		0.027	0.1	pCi/g	N/A
Cobalt-60	228	B17NL8	0.003	U		0.012	B17NL9	-0.003	U		0.012	0.05	pCi/g	N/A
Cobalt-60	228	B17NM3		U		0.088	B17NM5		U		0.031	0.05	pCi/g	N/A
Neptunium-237	228	B17NL8	0.001	U		0.01	B17NL9	-0.002	U		0.009	1	pCi/g	N/A

Table C-1. Relative Percent Differences for Field-Duplicate Samples. (5 Pages)

Constituent	Depth	Sample 1					Sample 2					TQL	Units	RPD
		Sample	Result	Q	V	MDA	Sample	Result	Q	V	MDA			
Neptunium-237	228	B17NM3	0.061	U		0.18	B17NM5	0.131	U		0.2	1	pCi/g	N/A
Plutonium-238	228	B17NL8	0.009	U		0.058	B17NL9	0.016	U		0.055	1	pCi/g	N/A
Plutonium-239/240	228	B17NL8	0.002	U		0.02	B17NL9	0.014	U		0.018	1	pCi/g	N/A
Strontium-90	228	B17NM3	0.096	U		0.24	B17NM5	0.078	U		0.3	1	pCi/g	N/A
Technetium-99	228	B17NM3	0.138	U		0.7	B17NM5	-0.062	U		0.64	15	pCi/g	N/A
Thorium-232	228	B17NM3	0.517			0.086	B17NM5	0.524			0.053	1	pCi/g	0.0 × RDL
Tritium	228	B17NM3	-0.24	U		0.35	B17NM5	-0.32	U		0.31	400	pCi/g	N/A
Uranium-233/234	228	B17NL8	0.088			0.005	B17NL9	0.1			0.018	1	pCi/g	0.0 × RDL
Uranium-235	228	B17NL8	0.01			0.006	B17NL9	0.006			0.006	1	pCi/g	0.0 × RDL
Uranium-238	228	B17NL8	0.075			0.005	B17NL9	0.094			0.005	1	pCi/g	0.0 × RDL

B = For organic analyses, indicates that the blank was contaminated with the analyte. For inorganic analysis, indicates that the analyte was detected in the sample at a level below the target quantitation limit.
D = Result was determined on a dilution of the sample.
E = For organic analysis, indicates that the result exceeded the calibration range. For inorganic analysis, indicates that the result is an estimate, due to interference.
J = Result is an estimate.
MDA = minimum detectable activity.
N/A = not applicable.
Q = laboratory qualification code.
RDL = required detection limit (equivalent to TQL in this study).
RPD = relative percent difference.
TQL = target quantitation limit.
U = Analyte was undetected, with the indicated reporting limit.
V = validation qualification code.

Table C-2. Relative Percent Difference for Split Samples. (7 Pages)

Constituent	Depth	Sample 1					Sample 2					TQL	Units	RPD
		Sample	Result	Q	V	MDA	Sample	Result	Q	V	MDA			
Chloride	119.5	B17N63	19300				B17N65	18200				2000	µg/kg	5.9%
Chloride	294.5	B19NJ7	2960	B			B1B9Y4	13500				2000	µg/kg	**5.3 × RDL**
Fluoride	119.5	B17N63	5420				B17N65	6800				5000	µg/kg	0.3 × RDL
Fluoride	294.5	B19NJ7	1130	U			B1B9Y4	1300	U			5000	µg/kg	N/A
Nitrate	119.5	B17N63	143000				B17N65	2280000	D			11071.43	µg/kg	**176.4%**
Nitrate	294.5	B19NJ7	868000				B1B9Y4	216000				11071.43	µg/kg	**120.3%**
Nitrite	119.5	B17N63	3180	U			B17N65	1420	U			8214.286	µg/kg	N/A
Nitrite	294.5	B19NJ7	10054.29	U			B1B9Y4	1260	U			8214.286	µg/kg	N/A
Nitrogen in ammonium	294.5	B19NJ7	307	B			B1B9Y4	15800	U			500	µg/kg	**31.0 × RDL**
Phosphate	119.5	B17N63	8430	UE			B17N65	1400	U			5000	µg/kg	N/A
Sulfate	119.5	B17N63	34200				B17N65	39700				5000	µg/kg	14.9%
Sulfate	294.5	B19NJ7	4900	U			B1B9Y4	12400				5000	µg/kg	1.5 × RDL
Arsenic	119.5	B17N63	2660				B17N65	4700				10000	µg/kg	0.2 × RDL
Arsenic	294.5	B19NJ7	1360				B1B9Y4	1400				10000	µg/kg	0.0 × RDL
Cadmium	119.5	B17N63	75	U			B17N65	5300				500	µg/kg	**10.5 × RDL**
Cadmium	294.5	B19NJ7	1380				B1B9Y4	30				500	µg/kg	**2.7 × RDL**
Chromium	119.5	B17N63	162000				B17N65	128000				1000	µg/kg	23.4%
Chromium	294.5	B19NJ7	4180				B1B9Y4	15100				1000	µg/kg	**10.9 × RDL**
Copper	119.5	B17N63	15200				B17N65	26300				1000	µg/kg	**53.5%**
Copper	294.5	B19NJ7	7880				B1B9Y4	8700				1000	µg/kg	9.9%
Lead	119.5	B17N63	11800				B17N65	3800				10000	µg/kg	0.8 × RDL
Lead	294.5	B19NJ7	790	U			B1B9Y4	2700				10000	µg/kg	0.2 × RDL
Mercury	119.5	B17N63	10	U			B17N65	20	UI			200	µg/kg	N/A
Mercury	294.5	B19NJ7	839				B1B9Y4	20	UI			200	µg/kg	**4.1 × RDL**
Nickel	119.5	B17N63	72900				B17N65	71100				4000	µg/kg	2.5%
Nickel	294.5	B19NJ7	8840				B1B9Y4	12500	C			4000	µg/kg	0.9 × RDL
Phosphorus	119.5	B17N63	973000				B17N65	1010000				10000	µg/kg	3.7%

Table C-2. Relative Percent Difference for Split Samples. (7 Pages)

Constituent	Depth	Sample 1					Sample 2					TQL	Units	RPD
		Sample	Result	Q	V	MDA	Sample	Result	Q	V	MDA			
Phosphorus	294.5	B19NJ7	226000				B1B9Y4	290000				10000	µg/kg	24.8%
Selenium	119.5	B17N63	3760				B17N65	380	U			10000	µg/kg	0.3 × RDL
Silver	119.5	B17N63	1710	E			B17N65	70	U			2000	µg/kg	0.8 × RDL
Silver	294.5	B19NJ7	7620				B1B9Y4	110	U			2000	µg/kg	**3.8 × RDL**
1,1,1-Trichloroethane	90	B17N52	5	U			B17N61	0.77	U			5	µg/kg	N/A
1,1,1-Trichloroethane	117	B17N60	2.1	U			B17N64	0.84	U			5	µg/kg	N/A
1,1,1-Trichloroethane	117	B17N60	2.1	U			B17N64-A	0.59	U			5	µg/kg	N/A
1,1,1-Trichloroethane	294.5	B19NJ7	2.1	U			B1B9Y4	6	U			5	µg/kg	N/A
1,1-Dichloroethane	90	B17N52	5	U			B17N61	0.88	U			10	µg/kg	N/A
1,1-Dichloroethane	117	B17N60	2.1	U			B17N64	0.96	U			10	µg/kg	N/A
1,1-Dichloroethane	117	B17N60	2.1	U			B17N64-A	0.67	U			10	µg/kg	N/A
1,1-Dichloroethane	294.5	B19NJ7	2.1	U			B1B9Y4	6	U			10	µg/kg	N/A
1,2-Dichloroethane	90	B17N52	5	U			B17N61	0.84	U			5	µg/kg	N/A
1,2-Dichloroethane	117	B17N60	2.1	U			B17N64	0.91	U			5	µg/kg	N/A
1,2-Dichloroethane	117	B17N60	2.1	U			B17N64-A	0.64	U			5	µg/kg	N/A
1,2-Dichloroethane	294.5	B19NJ7	2.1	U			B1B9Y4	6	U			5	µg/kg	N/A
1,2-Dichloroethene (Total)	90	B17N52	5	U			B17N61	1.5	U			10	µg/kg	N/A
1,2-Dichloroethene (Total)	117	B17N60	2.1	U			B17N64	1.6	U			10	µg/kg	N/A
1,2-Dichloroethene (Total)	117	B17N60	2.1	U			B17N64-A	1.2	U			10	µg/kg	N/A
1,2-Dichloroethene (Total)	294.5	B19NJ7	2.1	U			B1B9Y4	6	U			10	µg/kg	N/A
2-Butanone	90	B17N52	10	U			B17N61	36				10	µg/kg	**2.6 × RDL**
2-Butanone	117	B17N60	2.1	U			B17N64	75				10	µg/kg	**7.3 × RDL**
2-Butanone	117	B17N60	2.1	U			B17N64-A	80				10	µg/kg	**7.8 × RDL**
2-Butanone	294.5	B19NJ7	2.1	U			B1B9Y4	12	U			10	µg/kg	N/A
4-Methyl-2-Pentanone	90	B17N52	10	U			B17N61	0.82	U			10	µg/kg	N/A

Table C-2. Relative Percent Difference for Split Samples. (7 Pages)

Constituent	Depth	Sample 1					Sample 2					TQL	Units	RPD
		Sample	Result	Q	V	MDA	Sample	Result	Q	V	MDA			
4-Methyl-2-Pentanone	117	B17N60	2.1	U			B17N64	1.2				10	µg/kg	0.1 × RDL
4-Methyl-2-Pentanone	117	B17N60	2.1	U			B17N64-A	0.62	U			10	µg/kg	N/A
Acetone	90	B17N52	9	J			B17N61	26				20	µg/kg	0.9 × RDL
Acetone	117	B17N60	2.1	U			B17N64	170				20	µg/kg	**8.4 × RDL**
Acetone	117	B17N60	2.1	U			B17N64-A	79				20	µg/kg	**3.8 × RDL**
Acetone	294.5	B19NJ7	2.1	U			B1B9Y4	12	U			20	µg/kg	N/A
Benzene	90	B17N52	5	U			B17N61	0.73	U			5	µg/kg	N/A
Benzene	117	B17N60	2.1	U			B17N64	0.79	U			5	µg/kg	N/A
Benzene	117	B17N60	2.1	U			B17N64-A	0.56	U			5	µg/kg	N/A
Benzene	294.5	B19NJ7	2.1	U			B1B9Y4	6	U			5	µg/kg	N/A
Carbon tetrachloride	90	B17N52	5	U			B17N61	19				5	µg/kg	**2.8 × RDL**
Carbon tetrachloride	117	B17N60	2.1	U			B17N64	92				5	µg/kg	**18.0 × RDL**
Carbon tetrachloride	117	B17N60	2.1	U			B17N64-A	240				5	µg/kg	**47.6 × RDL**
Carbon tetrachloride	294.5	B19NJ7	250				B1B9Y4	180				5	µg/kg	32.6%
Chlorobenzene	90	B17N52	5	U			B17N61	0.84	U			5	µg/kg	N/A
Chlorobenzene	117	B17N60	2.1	U			B17N64	0.91	U			5	µg/kg	N/A
Chlorobenzene	117	B17N60	2.1	U			B17N64-A	0.64	U			5	µg/kg	N/A
Chlorobenzene	294.5	B19NJ7	2.1	U			B1B9Y4	6	U			5	µg/kg	N/A
Chloroform	90	B17N52	5	U			B17N61	0.96				5	µg/kg	0.8 × RDL
Chloroform	117	B17N60	2.1	U			B17N64	8.7				5	µg/kg	1.3 × RDL
Chloroform	117	B17N60	2.1	U			B17N64-A	13				5	µg/kg	**2.2 × RDL**
Chloroform	294.5	B19NJ7	13				B1B9Y4	6	U			5	µg/kg	1.4 × RDL
Chloromethane	90	B17N52	10	U			B17N61	1.8	U			5	µg/kg	N/A
Chloromethane	117	B17N60	2.1	U			B17N64	2	U			5	µg/kg	N/A
Chloromethane	117	B17N60	2.1	U			B17N64-A	1.4	U			5	µg/kg	N/A
Chloromethane	294.5	B19NJ7	2.1	U			B1B9Y4	12	U			5	µg/kg	N/A
cis-1,2-Dichloroethylene	294.5	B19NJ7	2.1	U			B1B9Y4	6	U			10	µg/kg	N/A

Table C-2. Relative Percent Difference for Split Samples. (7 Pages)

Constituent	Depth	Sample 1					Sample 2					TQL	Units	RPD
		Sample	Result	Q	V	MDA	Sample	Result	Q	V	MDA			
Ethylbenzene	90	B17N52	5	U			B17N61	1.1	U			5	µg/kg	N/A
Ethylbenzene	117	B17N60	2.1	U			B17N64	1.2	U			5	µg/kg	N/A
Ethylbenzene	117	B17N60	2.1	U			B17N64-A	0.82	U			5	µg/kg	N/A
Ethylbenzene	294.5	B19NJ7	2.1	U			B1B9Y4	6	U			5	µg/kg	N/A
Methylene chloride	90	B17N52	12				B17N61	1.4	U			5	µg/kg	**2.1 × RDL**
Methylene chloride	117	B17N60	2.1	U			B17N64	1.5	U			5	µg/kg	N/A
Methylene chloride	117	B17N60	2.1	U			B17N64-A	1.1	U			5	µg/kg	N/A
Methylene chloride	294.5	B19NJ7	2.1	U			B1B9Y4	13	B			5	µg/kg	**2.2 × RDL**
n-Butylbenzene	294.5	B19NJ7	2.1	U			B1B9Y4	6	U			5	µg/kg	N/A
Tetrachloroethene	90	B17N52	5	U			B17N61	0.77	U			5	µg/kg	N/A
Tetrachloroethene	117	B17N60	2.1	U			B17N64	2				5	µg/kg	0.0 × RDL
Tetrachloroethene	117	B17N60	2.1	U			B17N64-A	5.4				5	µg/kg	0.7 × RDL
Tetrachloroethene	294.5	B19NJ7	2.1	U			B1B9Y4	6	U			5	µg/kg	N/A
Toluene	90	B17N52	5	U			B17N61	0.71	U			5	µg/kg	N/A
Toluene	117	B17N60	2.1	U			B17N64	1.3				5	µg/kg	0.2 × RDL
Toluene	117	B17N60	2.1	U			B17N64-A	0.54	U			5	µg/kg	N/A
Toluene	294.5	B19NJ7	2.1	U			B1B9Y4	6	U			5	µg/kg	N/A
trans-1,2-Dichloroethylene	294.5	B19NJ7	2.1	U			B1B9Y4	6	U			10	µg/kg	N/A
Trichloroethene	90	B17N52	5	U			B17N61	0.95	U			5	µg/kg	N/A
Trichloroethene	117	B17N60	2.1	U			B17N64	1	U			5	µg/kg	N/A
Trichloroethene	117	B17N60	2.1	U			B17N64-A	0.72	U			5	µg/kg	N/A
Trichloroethene	294.5	B19NJ7	2.1	U			B1B9Y4	6	U			5	µg/kg	N/A
Xylenes (total)	90	B17N52	5	U			B17N61	1.8	U			5	µg/kg	N/A
Xylenes (total)	117	B17N60	2.1	U			B17N64	1.9	U			5	µg/kg	N/A
Xylenes (total)	117	B17N60	2.1	U			B17N64-A	1.3	U			5	µg/kg	N/A
Xylenes (total)	294.5	B19NJ7	2.1	U			B1B9Y4	6	U			5	µg/kg	N/A
Aroclor-1016	119.5	B17N63	50	U	J		B17N65	15	U			16.5	µg/kg	N/A

Table C-2. Relative Percent Difference for Split Samples. (7 Pages)

Constituent	Depth	Sample 1					Sample 2					TQL	Units	RPD
		Sample	Result	Q	V	MDA	Sample	Result	Q	V	MDA			
Aroclor-1221	119.5	B17N63	100	U	J		B17N65	15	U			16.5	µg/kg	N/A
Aroclor-1232	119.5	B17N63	50	U	J		B17N65	15	U			16.5	µg/kg	N/A
Aroclor-1242	119.5	B17N63	50	U	J		B17N65	15	U			16.5	µg/kg	N/A
Aroclor-1248	119.5	B17N63	50	U	J		B17N65	15	U			16.5	µg/kg	N/A
Aroclor-1254	119.5	B17N63	50	U	J		B17N65	15	U			16.5	µg/kg	N/A
Aroclor-1260	119.5	B17N63	50	U	J		B17N65	15	U			16.5	µg/kg	N/A
Phenol	119.5	B17N63	100	U			B17N65	380	U			330	µg/kg	N/A
Phenol	294.5	B19NJ7	120	U			B1B9Y4	410	U			330	µg/kg	N/A
TPH - diesel range	119.5	B17N63	3900	U			B17N65	13600	U			5000	µg/kg	N/A
TPH - kerosene range	119.5	B17N63	3900	U			B17N65	13600	U			5000	µg/kg	N/A
TPH - diesel range	294.5	B19NJ7	4700	U			B1B9Y4	14.9	U			5000	µg/kg	N/A
TPH - kerosene range	294.5	B19NJ7	4700	U			B1B9Y4	14.9	U			5000	µg/kg	N/A
Tributyl phosphate	119.5	B17N63	70	U			B17N65	380	U			3300	µg/kg	N/A
Tributyl phosphate	294.5	B19NJ7	83	U			B1B9Y4	410	U			3300	µg/kg	N/A
Americium-241	294.5	B19NJ7	0.068	U		0.013	B1B9Y4	-0.038	U		0.29	1	pCi/g	N/A
Cesium-137	47.5	B17N46	394	U			B17N46-A		U		18	0.1	pCi/g	N/A
Cesium-137	63.5	B17TM6	766	U			B17TM6-A		U		11	0.1	pCi/g	N/A
Cesium-137	109.5	B17N57	1.04			0.66	B18XR8	26.1	U			0.1	pCi/g	**10.4 × RDL**
Cesium-137	228	B17NL8	0.018			0.013	B17NM5		U		0.027	0.1	pCi/g	0.1 × RDL
Cesium-137	228	B17NL8	0.018			0.013	B17NM3		U		0.094	0.1	pCi/g	0.8 × RDL
Cesium-137	228	B17NL9	0.003	U		0.014	B17NM5		U		0.027	0.1	pCi/g	N/A
Cesium-137	228	B17NL9	0.003	U		0.014	B17NM3		U		0.094	0.1	pCi/g	N/A
Cesium-137	294.5	B19NJ7	0.002	U		0.009	B1B9Y4		U		0.048	0.1	pCi/g	N/A
Cobalt-60	47.5	B17N46	260	U			B17N46-A		U		21	0.05	pCi/g	N/A
Cobalt-60	63.5	B17TM6	383	U			B17TM6-A		U		15	0.05	pCi/g	N/A
Cobalt-60	109.5	B17N57		U		0.61	B18XR8	15.3	U			0.05	pCi/g	N/A
Cobalt-60	228	B17NL8	0.003	U		0.012	B17NM5		U		0.031	0.05	pCi/g	N/A
Cobalt-60	228	B17NL8	0.003	U		0.012	B17NM3		U		0.088	0.05	pCi/g	N/A

Table C-2. Relative Percent Difference for Split Samples. (7 Pages)

Constituent	Depth	Sample 1					Sample 2					TQL	Units	RPD
		Sample	Result	Q	V	MDA	Sample	Result	Q	V	MDA			
Cobalt-60	228	B17NL9	-0.003	U		0.012	B17NM3		U		0.088	0.05	pCi/g	N/A
Cobalt-60	228	B17NL9	-0.003	U		0.012	B17NM5		U		0.031	0.05	pCi/g	N/A
Cobalt-60	294.5	B19NJ7	0.001	U		0.009	B1B9Y4		U		0.056	0.05	pCi/g	N/A
Neptunium-237	109.5	B17N57	0	U		170	B18XR8	28.9				1	pCi/g	**141.9%**
Neptunium-237	228	B17NL8	0.001	U		0.01	B17NM3	0.061	U		0.18	1	pCi/g	N/A
Neptunium-237	228	B17NL8	0.001	U		0.01	B17NM5	0.131	U		0.2	1	pCi/g	N/A
Neptunium-237	228	B17NL9	-0.002	U		0.009	B17NM5	0.131	U		0.2	1	pCi/g	N/A
Neptunium-237	228	B17NL9	-0.002	U		0.009	B17NM3	0.061	U		0.18	1	pCi/g	N/A
Neptunium-237	294.5	B19NJ7	0.002	U		0.007	B1B9Y4	0.019	U		0.047	1	pCi/g	N/A
Plutonium-238	294.5	B19NJ7	0.006			0.004	B1B9Y4	0	U		0.15	1	pCi/g	0.1 × RDL
Plutonium-239/240	294.5	B19NJ7	0.009	U		0.014	B1B9Y4	0	U		0.15	1	pCi/g	N/A
Strontium-90	47.5	B17N46	7.86	U			B17N57	65.5	U		440	1	pCi/g	N/A
Thorium-232	109.5	B17N57	-10.2	U		27	B18XR8	0.698				1	pCi/g	**26.3 × RDL**
Uranium-233/234	294.5	B19NJ7	0.035			0.016	B1B9Y4	0.279			0.15	1	pCi/g	0.2 × RDL
Uranium-235	294.5	B19NJ7	0.015	U		0.018	B1B9Y4	0	U		0.18	1	pCi/g	N/A
Uranium-238	294.5	B19NJ7	0.051			0.016	B1B9Y4	0.338			0.15	1	pCi/g	0.3 × RDL

Table C-2. Relative Percent Difference for Split Samples. (7 Pages)

Constituent	Depth	Sample 1					Sample 2					TQL	Units	RPD
		Sample	Result	Q	V	MDA	Sample	Result	Q	V	MDA			

B = For organic analyses, indicates that the blank was contaminated with the analyte. For inorganic analysis, indicates that the analyte was detected in the sample at a level below the target quantitation limit.
C = For organic analyses, indicates that analyte result was confirmed by gas chromatography scan. For inorganic analysis, indicates that the analyte was detected in the associated method blank and in the sample at a concentration less than or equal to five times the level found in the blank.
D = Result was determined on a dilution of the sample.
E = For organic analysis, indicates that the result exceeded the calibration range. For inorganic analysis, indicates that the result is an estimate, due to interference.
J = Result is an estimate.
MDA = minimum detectable activity.
N/A = not applicable.
Q = laboratory qualification code.
RDL = required detection limit (equivalent to TQL in this study).
RPD = relative percent difference.
TPH = total petroleum hydrocarbon
TQL = target quantitation limit.
U = Analyte was undetected, with the indicated reporting limit.
V = validation qualification code.

216-Z-9 Trench, Slant Borehole C3427

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EXECUTIVE SUMMARY

This report summarizes the data validation and data quality assessment activities performed in support of the sampling and analysis of soil and soil vapor samples collected during fiscal year 2006 during drilling of a slant borehole (Borehole C3427) at the 216-Z-9 Trench. The sampling and analysis plan for these samples is included in the work plan, DOE/RL-2001-01, *Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit RI/FS Work Plan: Includes the 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units.*[1] Detection limits, precision, accuracy, and completeness were analyzed to determine if any analytical results should be rejected as a result of quality assurance/quality control deficiencies. Based on the data validation and data quality assessment, it is concluded that the data are of the right type, quality, and quantity to support the intended use. The analytical data are acceptable for decision-making purposes in the remedial investigation/feasibility study.

The content and organization of this report follow the general guidelines for data quality assessment established by EPA/600/R-96/084, *Guidance for Data Quality Assessment, Practical Methods for Data Analysis*, EPA QA/G-9, QA00 Update.[2]

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[1] DOE/RL-2001-01, 2004, *Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit RI/FS Work Plan: Includes the 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units*, Rev. 0, Reissue, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

[2] EPA/600/R-96/084, 2000, *Guidance for Data Quality Assessment, Practical Methods for Data Analysis*, EPA QA/G-9, QA00 Update, U.S. Environmental Protection Agency, Washington, D.C. After the work was initiated for this data quality assessment, the U.S. Environmental Protection Agency replaced this procedure with EPA/240/B-06/002, *Data Quality Assessment: A Reviewers Guide*, EPA QA/G-9R, and EPA/240/B-06/003, *Data Quality Assessment, Statistical Tools for Practitioners*, EPA QA/G-9S.

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TERMS

AEA	alpha energy analysis
B&K	Brüel and Kjaer
bgs	below ground surface
CERCLA	*Comprehensive Environmental Response, Compensation, and Liability Act of 1980*
CLARC	cleanup levels and risk calculations (Ecology, 2005)
COPC	contaminant of potential concern
DL	detection limit
DNAPL	dense, nonaqueous-phase liquid
DQA	data quality assessment
DQO	data quality objective
DR	decision rule
EF	exceedance factor
EPA	U.S. Environmental Protection Agency
H1	Hanford formation upper gravel sequence
H2	Hanford formation sand-dominated facies
HEIS	*Hanford Environmental Information System* database
IRIS	*Integrated Risk Information System* database
LCS	laboratory control sample
LPPAL	lowest potential preliminary action level
MDA	minimum detectable activity
MS	matrix spike
MSD	matrix-spike duplicate
OU	operable unit
PCB	polychlorinated biphenyl
PNNL	Pacific Northwest National Laboratory
QA	quality assurance
QC	quality control
RCRA	*Resource Conservation and Recovery Act of 1976*
RDL	radiation detection limit
RECUPLEX	Recovery of Uranium and Plutonium by Extraction (process)
RI	remedial investigation
RPD	relative percent difference
SAF	Sampling Authorization Form
SAP	sampling and analysis plan
SDG	sample delivery group
SVE	soil-vapor extraction
SVOA	semivolatile organic analysis
TBP	tributyl phosphate
TQL	target quantitation limit
Tri-Party Agreement	*Hanford Federal Facility Agreement and Consent Order*
VOA	volatile organic analysis
VOC	volatile organic compound

Work Plan	*Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit RI/FS Work Plan: Includes the 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units* (DOE/RL-2001-01)
WSCF	Waste Sampling and Characterization Facility

METRIC CONVERSION CHART

Into Metric Units			Out of Metric Units		
If you know	*Multiply by*	*To get*	*If you know*	*Multiply by*	*To get*
Length			**Length**		
inches	25.40	millimeters	millimeters	0.0394	inches
inches	2.54	centimeters	centimeters	0.394	inches
feet	0.305	meters	meters	3.281	feet
yards	0.914	meters	meters	1.094	yards
miles (statute)	1.609	kilometers	kilometers	0.621	miles (statute)
Area			**Area**		
sq. inches	6.452	sq. centimeters	sq. centimeters	0.155	sq. inches
sq. feet	0.0929	sq. meters	sq. meters	10.764	sq. feet
sq. yards	0.836	sq. meters	sq. meters	1.196	sq. yards
sq. miles	2.591	sq. kilometers	sq. kilometers	0.386	sq. miles
acres	0.405	hectares	hectares	2.471	acres
Mass (weight)			**Mass (weight)**		
ounces (avoir)	28.349	grams	grams	0.0353	ounces (avoir)
pounds	0.453	kilograms	kilograms	2.205	pounds (avoir)
tons (short)	0.907	ton (metric)	ton (metric)	1.102	tons (short)
Volume			**Volume**		
teaspoons	5	milliliters	milliliters	0.034	ounces (U.S., liquid)
tablespoons	15	milliliters	liters	2.113	pints
ounces (U.S., liquid)	29.573	milliliters	liters	1.057	quarts (U.S., liquid)
cups	0.24	liters	liters	0.264	gallons (U.S., liquid)
pints	0.473	liters	cubic meters	35.315	cubic feet
quarts (U.S., liquid)	0.946	liters	cubic meters	1.308	cubic yards
gallons (U.S., liquid)	3.785	liters			
cubic feet	0.0283	cubic meters			
cubic yards	0.764	cubic meters			
Temperature			**Temperature**		
Fahrenheit	(°F-32)*5/9	Centigrade	Centigrade	(°C*9/5)+32	Fahrenheit
Radioactivity			**Radioactivity**		
picocurie	37	millibecquerel	millibecquerel	0.027	picocurie

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1.0 INTRODUCTION

The *Hanford Federal Facility Agreement and Consent Order* (Ecology et al., 1989) (Tri-Party Agreement) identifies approximately 700 soil waste sites (and associated structures) resulting from the discharge of liquids and solids from Hanford Site 200 Areas processing facilities. These waste sites include *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) past-practice sites; *Resource Conservation and Recovery Act of 1976* (RCRA) past-practice sites; and RCRA treatment, storage, and disposal units. For management purposes, these 700 sites were arranged into 23 separate groups (termed operable units or OUs), based on similarities in geologic conditions, function, and types of waste received. To improve the efficiency and cost effectiveness of characterizing the 200 Areas waste sites, representative waste sites were selected that best represent typical and worst case conditions for each waste group (DOE/RL-96-81, *Waste Site Grouping for 200 Areas Soil Investigations*). The purpose of these representative waste sites is to provide focus to the remedial investigation/feasibility studies (RI/FS), which will determine risks and clean-up options for the sites.

One such representative waste site is the 216-Z-9 Trench. The 216-Z-9 Trench is a waste site in the 200-PW-1 Plutonium/Organic-Rich Process Condensate/Process Waste Group OU, which is, in turn, part of the consolidated Plutonium/Organic-Rich Process Condensate/Process Waste Group OU (Plutonium/Organic-Rich OU). The 200-PW-1 OU was established to manage the remediation of the soils contaminated by wastes from plutonium recovery and finishing operations from the Plutonium Finishing Plant complex in the 200 West Area.

The 216-Z-9 Trench is a 6.1 m (20-ft)-deep open trench protected with a 27.4 by 36.6 m (90- by 120-ft) concrete cover. The walls of the trench slope down to an 18.3 by 9.1 m (60- by 30-ft) floor. Between 1955 and 1962, the trench received 4.1 million liters of acidic solvent and aqueous wastes from the Recovery of Uranium and Plutonium by Extraction (RECUPLEX) process. Primary constituents of the RECUPLEX waste are tributyl phosphate (TBP), carbon tetrachloride, and nitric acid. The waste is estimated to have contained 106 kg of plutonium and 130,000 to 480,000 kg of carbon tetrachloride. About 58 kg of the plutonium was mined from the top 0.3 m (1 ft) of soil under the cover in 1976-1977 to remediate the contamination and to reduce the potential for occurrence of an uncontrolled nuclear chain reaction. After the mining, the amount of plutonium remaining was estimated at 48 kg (DOE/RL-2001-01, *Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit RI/FS Work Plan: Includes the 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units* or the Work Plan). Soil-vapor extraction (SVE) was started at the 216-Z-9 Trench in 1993 as an interim remedial action, and as of 2005, 54 tons of carbon tetrachloride had been removed from the soil at the site (WMP-30426, *Performance Evaluation Report for Soil Vapor Extraction Operations at the 200-PW-1 Carbon Tetrachloride Site, Fiscal Year 2005*).

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2.0 PURPOSE

As described in the sampling and analysis plan (SAP) (DOE/RL-2001-01, Appendix B), a slant borehole was drilled to access the contamination under the 216-Z-9 Trench from a starting point at the ground surface near the east edge of the trench. (The slant borehole was necessary to access sediment beneath the waste site, because the concrete cover over the trench was judged to be too weak to support the weight of a drill rig.) This data quality assessment (DQA) report assesses the quality of the data for samples taken from the slant borehole (Borehole C3427).

This DQA is conducted in accordance with the Work Plan (DOE/RL-2001-01). The quality of the data for the borehole is assessed against the data quality requirements specified in the data quality objectives (DQO) report and summarized in the Work Plan. The data also are assessed to ensure that they are suitable for their intended purpose; that is, to quantify the concentrations and distributions of contaminants of potential concern (COPC) so that informed decisions can be made about the appropriateness of proposed remediation strategies for the 216-Z-9 Trench.

The DQA process completes the data life cycle (i.e., planning, implementation, and assessment) that was initiated by the DQO process.

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3.0 SCOPE

The DQA process involves the scientific evaluation of data to determine if the data are of the right type, quality, and quantity to support the intended use. This DQA follows the guidelines of EPA/600/R-96/084, *Guidance for Data Quality Assessment, Practical Methods for Data Analysis*, EPA QA/G-9, QA00 Update).[3] The DQA methodology consists of the following steps.

1. Review the DQOs (Chapter 4.0).
2. Conduct a preliminary data review (Chapter 5.0).
3. Select the statistical test (Chapter 6.0).
4. Verify the assumptions of the test (Chapter 6.0).
5. Draw conclusions from the data (Chapter 7.0).

The five-step DQA process is not intended to be a definitive analysis of a project or problem, but instead provides an initial assessment of the reasonableness of the data that have been generated. This DQA focuses on the chemical and radionuclide data, specifically on determining if the data are of the right type, quality, and quantity to support the intended use.

[3] After the work was initiated for this data quality assessment, the U.S. Environmental Protection Agency replaced this procedure with EPA/240/B-06/002, *Data Quality Assessment: A Reviewers Guide*, EPA QA/G-9R, and EPA/240/B-06/003, *Data Quality Assessment, Statistical Tools for Practitioners*, EPA QA/G-9S.

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4.0 SUMMARY OF DATA QUALITY OBJECTIVES, ERROR TOLERANCES, AND SAMPLING DESIGN

The DQO process and decision rules for the 216-Z-9 Trench representative waste site investigation are summarized in the Work Plan (DOE/RL-2001-01). Although this DQA is based on the U.S. Environmental Protection Agency guidelines, actual decision tests for this project are performed as specified in the Work Plan. This section summarizes the DQOs, discusses error tolerances and consequences, and summarizes the sample design.

4.1 SUMMARY OF DATA QUALITY OBJECTIVES

The DQOs for the 216-Z-9 Trench were developed in two separate DQO processes. One DQO process considers all of the contaminants known or suspected to have been discharged to the waste site. This process and the resulting DQOs are reported in CP-15371, *Remedial Investigation Data Quality Objectives Summary Report for the Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit Representative Waste Sites*. In the text below, the sampling and analysis conducted in response to this DQO process are referred to as 200-PW-1 OU activities.

The other DQO process focuses on the carbon tetrachloride contamination. The 216-Z-9 Trench overlies the 200-ZP-1 Groundwater OU, and one of the major concerns to be remediated in the 200-ZP-1 Groundwater OU is a large groundwater plume of carbon tetrachloride that may include some carbon tetrachloride as a dense, nonaqueous-phase liquid (DNAPL). EPA/ROD/R10-95/114, *Declaration of the Interim Record of Decision for the 200-ZP-1 Operable Unit*, requires that a DNAPL investigation be conducted at the 216-Z-9 Trench. The DQO process performed in response to this requirement is reported in CP-15373, *Data Quality Objectives Summary Report for Investigation of Dense, Nonaqueous-Phase Liquid Carbon Tetrachloride in the 200 West Area*. The sampling and analysis conducted in response to this DQO process are referred to as DNAPL activities in the text.

The results of the two DQO processes as they apply to sampling during drilling of the slant borehole are summarized in the SAP (DOE/RL-2001-01, Appendix B). The DQO summary in this DQA report is limited to those portions that pertain directly to the assessment of the data. These include statement of the problem, decision rules, and translation of objectives into statistical hypotheses. The problem statement and decision rules are discussed below. Statistical treatment is addressed in Chapter 6.0.

4.1.1 Statement of the Problem

The primary problem to solve in the DQO process is to determine the environmental measurements necessary to refine the preliminary site conceptual models, support an evaluation of risk, and support the evaluation of remedial alternatives. For the 216-Z-9 Trench, it was determined that borehole soil samples were needed to determine the type and distribution of

chemical and radionuclide contaminants. This information will be used to verify or refine the contaminant distribution model for the 216-Z-9 Trench. The model, in turn, will guide the development and implementation of remedial strategies. The amount of data needed and the analytical detection limits, precision, and accuracy required were determined based on regulatory and risk-based thresholds and other applicable requirements.

4.1.2 Decision Rules

The principal output of the DQO process is a set of decision rules. Decision rules are developed in Steps 2 through 5 of the DQO process (EPA/600/R-96/055, *Guidance for the Data Quality Objectives Process*, EPA QA/G-4).[4] This process identifies the COPCs and the action levels for each COPC, remedial-action alternatives, the decisions to be made in the project, the principal questions that must be answered to make those decisions, and the data and analytical requirements needed to answer the questions. Decision rules generally are "IF…THEN" statements that indicate what action will be taken when a prescribed condition is met. Decision rules incorporate the parameters of interest (e.g., COPCs), the scale of the decision (e.g., location), the action level (e.g., COPC concentration), and the consequences that could result. The decision rules developed in the two DQO processes for the 216-Z-9 Trench are given in Tables 4-1 and 4-2.

Table 4-1. Decision Rules for Remedial Investigation of the 216-Z-9 Trench.

DR#	Decision Rule
1	If the true maximum (as estimated by the maximum detected sample values) activity of transuranic radionuclides within the soil samples in each of the applicable strata [a] is greater than or equal to 100 nCi/g or the greater than Class C definition, evaluate special remedial alternatives in a feasibility study; otherwise, evaluate conventional remedial alternatives in a feasibility study.
2	If the true maximum (as estimated by the maximum detected sample values) activity of radionuclides within the soil samples in each of the applicable strata [a] results in a radiological dose greater than or equal to 15 to 500 mrem/yr above background, evaluate remedial alternatives in a feasibility study; otherwise, evaluate the site for closure with no remedial action.
3	If the true maximum (as estimated by the maximum detected sample values) concentration of chemical constituents within the soil samples in each of the applicable strata [a] is greater than or equal to the preliminary action levels in Table B-9, evaluate remedial alternatives in a feasibility study; otherwise, evaluate the site for closure with no remedial action [b]

[a] The applicable strata include the highest contaminant concentration layer, the moderate-to-low contaminant concentration layer, and the low contaminant concentration layer.
[b] Table B-9 is part of DOE/RL-2001-01, Appendix B.
From DOE/RL-2001-01, *Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit RI/FS Work Plan: Includes the 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units.*
DR = decision rule.

[4] After the work was initiated for this data quality assessment, the U.S. Environmental Protection Agency replaced this procedure with EPA/240/B-06/001, *Guidance on Systematic Planning Using the Data Quality Objectives Process*, EPA QA/G-4.

Table 4-2. Decision Rules for Remedial Investigation of Dense, Nonaqueous-Phase Liquid Carbon Tetrachloride at the 216-Z-9 Trench.

DR #	Decision Rule
1	If the detected carbon tetrachloride concentrations within the shallow vadose zone, the intermediate vadose zone, or the deep vadose zone are equal to or greater than the values determined by modeling, computations, and/or engineering judgment as representing the presence of DNAPL, and/or if the direct observation of DNAPL accumulations indicates the presence of DNAPL, then evaluate for current impacts to groundwater and/or evaluate for potential future impacts to groundwater; otherwise, do not evaluate for current or future impacts.
2	If the detected carbon tetrachloride concentrations within the shallow vadose zone, the intermediate vadose zone, or the deep vadose zone are equal to or greater than the values determined by modeling, computations, and/or engineering judgment as currently impacting groundwater, then evaluate expansion of the vapor extraction system to enhance the interim response action and/or evaluate remedial alternatives in a feasibility study; otherwise, take no action.
3	If the detected carbon tetrachloride concentrations within the shallow vadose zone, the intermediate vadose zone, or the deep vadose zone are equal to or greater than the values determined by modeling, computations, and/or engineering judgment as having potential to impact groundwater in the future, then evaluate expansion of the vapor extraction system to enhance the interim response action and/or evaluate remedial alternatives in a feasibility study; otherwise, take no action.
4 [a]	If the detected carbon tetrachloride concentrations within the shallow aquifer, the intermediate aquifer, the deep aquifer, or the basal aquifer are equal to or greater than the values determined by modeling, computations, and/or engineering judgment as representing the presence of DNAPL, and/or if the direct observation of DNAPL accumulations indicates the presence of DNAPL, then evaluate expansion of the pump-and-treat system to enhance the interim response action and/or evaluate remedial alternatives in a feasibility study; otherwise, take no action.

[a] This decision rule applies only to the DNAPL investigation for the groundwater (200-ZP-1 Groundwater Operable Unit); it is not applicable to the remediation of the vadose-zone soil contamination (200-PW-1 Operable Unit).

From DOE/RL-2001-01, *Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit RI/FS Work Plan: Includes the 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units.*

DNAPL = dense, nonaqueous-phase liquid.

DR = decision rule.

The radionuclide and chemical COPCs to be addressed by the decision rules are given in Table 4-3 and Table 4-4. In Table 4-4, carbon tetrachloride is the only contaminant of concern; all the other constituents are regarded only as contaminants of interest. The contaminants of interest are potential indicators of the process effluent coincidentally disposed of with the carbon tetrachloride. Contaminants of interest are assessed in this report as COPCs except as otherwise noted.

In addition to the constituents given in these tables, the SAP (DOE/RL-2001-01, Appendix B) also lists a number of physical properties of interest. These are not contaminants as such, but are of interest for modeling the movement of the contaminants through the soil and for phase partitioning calculations that can be used to estimate whether a DNAPL is present in the soil sample. The physical property data will not be assessed in this DQA report.

Table 4-3. Contaminants of Potential Concern Applicable to the Remedial Investigation of the Soil Contamination at the 216-Z-9 Trench.

Radionuclides	Metals	Volatile Organic Compounds
Americium-241	Arsenic	1,1-dichloroethane (DCA)
Cobalt-60	Cadmium	1,2-dichloroethane (DCA)
Cesium-137	Chromium (III)	1,1,1-trichloroethane (TCA)
Neptunium-237	Chromium (VI)	Acetone
Technetium-99	Copper	Benzene
Plutonium-238	Lead	Carbon tetrachloride [a]
Plutonium-239/240	Mercury	Chlorobenzene
Strontium-90	Nickel	Chloroform
Thorium-232	Selenium	Cis-1,2-dichloroethylene
Tritium (Hydrogen-3)	Silver	Trans-1,2-dichloroethylene
Uranium-233/234		Ethylbenzene
Uranium-235		Methyl ethyl ketone (MEK)
Uranium-238		Methyl isobutyl ketone (MIBK)
		Methylene chloride
		n-butyl benzene
		Toluene
		Tetrachloroethylene (PCE)
		Trichloroethylene (TCE)
		Xylene

Other Inorganic Constituents	Other Organic Constituents
Ammonia	Hydraulic fluids (lard oil)
Chloride	Normal paraffin hydrocarbons
Fluoride	Polychlorinated biphenyl compounds (PCB)
Nitrate	Phenol
Nitrite	Tributyl phosphate (TBP)
Phosphate	Dibutyl phosphate (DBP) [b]
Sulfate	Monobutyl phosphate (MBP) [b]

[a] In addition to laboratory analysis of carbon tetrachloride, carbon tetrachloride also will be measured in the headspace of soil samples, using a field measurement.

[b] No direct standard analytical technique available. This compound is a degradation product of TBP and is unlikely to be present in toxic or high concentrations. This compound will be detected as TBP (tentatively identified compound) (CP-15371, *Remedial Investigation Data Quality Objectives Summary Report for the Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit Representative Waste Sites*).

Table 4-4. Contaminants of Potential Concern and Contaminants of Interest Applicable to the Remedial Investigation of Dense, Nonaqueous-Phase Liquid Carbon Tetrachloride at the 216-Z-9 Trench.

Radionuclides [a]	Metals [a]	Volatile Organic Compounds [a]
Americium-241	Phosphorus	Butanol
Plutonium-238		Carbon tetrachloride
Plutonium-239/240		Chloroform
Other Inorganic Constituents [a]		Chloromethane
Fluoride		Methylene chloride
Nitrate		
Nitrite		
Phosphate		

Vapor Sample Constituents [b]	Other Organic Constituents [a]
Carbon tetrachloride	Lard oil
Chloroform	Tributyl phosphate (TBP)
Methane	Dibutyl phosphate (DBP) [c]
Carbon dioxide	Monobutyl phosphate (MBP) [c]
	Dibutyl butyl phosphonate (DBBP) [c]

[a] Analytes in these columns are applicable to soil samples only.
[b] Analytes in this column are applicable to vapor samples only.
[c] The presence of DBBP, DBP, and MBP will be evaluated using analytical results for TBP, phosphate, and phosphorus.

4.2 ERROR TOLERANCES

During the DQO processes, potential site-remediation requirements and goals for the remediation of the 216-Z-9 Trench were addressed, and preliminary action levels were set. It was determined that the consequence of selecting an inadequate nonstatistical sampling design would not be severe, because additional sampling could be performed if the sampling design were determined later to be inadequate. Precision and accuracy limits for the analyses were presented in Table B-9 and Table B-10 of the SAP (DOE/RL-2001-01, Appendix B). Generally, ± 30 percent is specified for both precision and accuracy for the chemical analyses of soil samples, and ± 35 percent is specified for radionuclides. No precision and accuracy limits were set for the soil-vapor screening measurements. Table B-9 and Table B-10 of the SAP also specify target quantitation limits (TQL) for the analysis. The TQLs are within the range of normal laboratory practice and generally are well below the preliminary action levels. Higher detection limits are given for certain analytes in highly radioactive samples, where dilution must be used to accommodate radioisotopic interferences and/or laboratory radiation safety requirements.

4.3 SAMPLING DESIGN

4.3.1 Primary Site-Characterization Samples

The SAP (DOE/RL-2001-01, Appendix B) calls for soil and vapor samples to be taken from a slant borehole drilled under the trench from a starting point east of the trench cover. The SAP specifies samples to be collected from the borehole to support three different programs, as shown in Table 4-5. The 200-PW-1 and DNAPL programs were discussed in Section 4.1. The SVE program was mentioned in Chapter 1.0.

Table 4-5 shows two sets of sampling depths. During predrilling preparations, the depths specified in the SAP were revised based on (1) observations made at the vertical Borehole C3426, which was drilled after the SAP had been written (WMP-26264, *Borehole Summary Report for Well 299-W15-46 (C3426) Drilled at the 216-Z-9 Trench*), and (2) the cross-well seismic investigation conducted in the vicinity of the 216-Z-9 Trench to estimate the topography at contacts between stratigraphic layers (DOE/RL-2006-58, *Carbon Tetrachloride DNAPL Source Term Characterization Report*). Borehole C3426 was expected to provide improved estimations of the stratigraphy at Borehole C3427, because it is relatively close to the subsurface sediments to be investigated by drilling Borehole C3427. The SAP had eight 200-PW-1/DNAPL soil samples and four Pacific Northwest National Laboratory (PNNL) soil samples, while the revised plan had twelve 200-PW-1/DNAPL soil samples. The samples identified for contaminant transport or as PNNL liner in Table 4-5 indicated a sample interval for PNNL. However, at PNNL's request, these samples were not collected (WMP-30566, *Borehole Summary Report for Well 299-W15-48 (C3427) Drilled at the 216-Z-9 Trench*). In the revision, two of the PNNL sample intervals were used to collect the 200-PW-1/DNAPL soil samples and the other two PNNL sample intervals were not collected. In the revision, three new soil sample intervals were added, and two old soil sample intervals were combined into one to ensure that all sampling goals were met (WMP-30566). Soil samples at 18.9, 26.7, and 33.2 m (62, 87.5, and 109 ft) below ground surface (bgs) were added for volatile organic analysis (VOA) and/or semivolatile organic analysis (SVOA) only. The revised sampling strategy did not affect the soil-vapor samples; both the SAP and the revised plan had nine samples.

In Table 4-5, as elsewhere in this document, the upper limit of the sampling interval (normally 0.6 m [2 ft] for split-spoon soil samples) is used to express the depth of a sample. Except where distance along the inclined borehole shaft is specifically stated, the units of depth in this report will be expressed as vertical meters (feet) below ground surface.

The data to be obtained during the sampling campaign and the purposes for the data are further described in the SAP; these descriptions are repeated here in Table 4-5. The constituents to be analyzed in the 200-PW-1 OU samples are listed in Table 4-3. The constituents to be analyzed in the DNAPL and SVE samples are listed in Table 4-4.

Table 4-5. Cross-Walk Between Sample Depths in the Sampling and Analysis Plan and Modified Sample Depths, Based on New Information from Well 299-W15-46 (Borehole C3426) and the Cross-Well Seismic Reflection Investigation. (3 Pages)

Sample Depth in SAP [a] (vertical ft)	Rationale in SAP	Actual Sample Depth at Borehole C3426 [b] (vertical ft)	Observations at Borehole C3426 [b] (vertical ft)	Modified Planned Sample Depth at Borehole C3427 [c] (vertical ft)
48 – 50.5 ft	Characterize the vadose zone for DNAPL at the depth that corresponds to the initial depth of elevated plutonium concentrations in well 299-W15-8 south of the 216-Z-9 Trench	47.5 to 49.5 ft; 49.5 to 52.0 ft (50.5 to 53.0 ft PNNL sample)	First alpha encountered from 47.5 to 49.5 ft Interval with orange matrix from 49 to 49.5 ft	44.5 to 47.0 ft Soil Soil vapor
66.5 – 69 ft	Characterize the Hanford formation upper gravel sequence for 200-PW-1 Operable Unit COPCs as close as possible to the area underneath the footprint of the 216-Z-9 Trench		Hanford upper gravel sequence extends to 65 ft	57.0 to 59.5 ft (selected because this interval is the base of the Hanford gravel and therefore is as close as possible to the area underneath the footprint; and to ensure that the silt layer is not missed) Soil
69 – 71.5 ft	Characterize the contact between the Hanford formation upper gravel and sandy sequences for contaminant transport and evaluation of soil-vapor extraction interim action	63.5 to 66 ft	65 to 67 ft is the silt layer between the Hanford gravel sequence and the Hanford sand sequence; sample interval has high CCl_4, TBP, PCE; 64.5 ft vial tests positive for DNAPL; cross-well seismic suggests that top of silt is 60 ft bgs at Borehole C3427	59.5 to 62.0 ft (selected to encounter "64.5 ft" depth in an inner liner) Soil Soil vapor
Not identified in SAP				62.0 to 64.5 ft (selected to ensure that the silt layer is not missed) Soil (VOCs only and PNNL liner)

Table 4-5. Cross-Walk Between Sample Depths in the Sampling and Analysis Plan and Modified Sample Depths, Based on New Information from Well 299-W15-46 (Borehole C3426) and the Cross-Well Seismic Reflection Investigation. (3 Pages)

Sample Depth in SAP [a] (vertical ft)	Rationale in SAP	Actual Sample Depth at Borehole C3426 [b] (vertical ft)	Observations at Borehole C3426 [b] (vertical ft)	Modified Planned Sample Depth at Borehole C3427 [c] (vertical ft)
86 – 88.5 ft	Characterize the vadose zone for DNAPL within the Hanford formation sandy sequence to evaluate vertical distribution of contaminants	90.0 to 92.5 ft	Hanford sandy sequence extends from 67 to 108.5 ft; sample interval has high TBP; unknown clear liquid observed in field screening DNAPL vial	85 to 87.5 ft (selected to correspond to 90.0-ft sample in Borehole C3426) (selected for duplicate sample) Soil Soil vapor 87.5 to 90 ft (selected to ensure that clear liquid is not missed) Soil (VOCs, SVOCs only and PNNL liner)
99.5 – 102 ft	Characterize the vadose zone near the top of the CCU, a zone of potential perching, for contaminant transport and evaluation of soil-vapor extraction interim action	(107.0 to 109.5 ft PNNL sample)		
102.5 – 105 ft	Characterize the Hanford formation sandy sequence for 200-PW-1 Operable Unit COPCs near the contact with the CCU, a zone of potential perching		CCU top is at 108.5 ft in Borehole C3426; CCU top is predicted to be at 103 ft in Borehole C3427	100.5 to 103 ft (selected to characterize Hanford sandy sequence above CCU) Soil Soil vapor
106 – 108.5 ft	Characterize the CCU silt, a potential zone of sorption, for DNAPL	110.0 to 112.5 ft	CCU silt is from 108.5 to 116.5 ft	104.0 to 106.5 ft (selected to characterize top of silt) Soil Soil vapor 109.0 to 111.5 ft (selected to characterize bottom of silt) Soil (VOCs only and PNNL liner) Soil vapor

Table 4-5. Cross-Walk Between Sample Depths in the Sampling and Analysis Plan and Modified Sample Depths, Based on New Information from Well 299-W15-46 (Borehole C3426) and the Cross-Well Seismic Reflection Investigation. (3 Pages)

Sample Depth in SAP [a] (vertical ft)	Rationale in SAP	Actual Sample Depth at Borehole C3426 [b] (vertical ft)	Observations at Borehole C3426 [b] (vertical ft)	Modified Planned Sample Depth at Borehole C3427 [c] (vertical ft)
111 – 113.5 ft	Characterize the CCU silt/carbonate contact for contaminant transport and evaluation of soil-vapor extraction interim action	(115.0 to 117.5 ft PNNL sample; 1 liner for 200-PW-1 Operable Unit) 117.0 to 119.5 ft	CCU carbonate is from 116.5 to 118.0 ft; black crumbly layer from 118.0 to 118.5 ft	
115 – 117.5 ft	Characterize the CCU silt/carbonate contact for DNAPL		CCU silt/carbonate contact is at 116.5 ft	111.5 to 114.0 ft (selected to include the silt/carbonate contact and bottom of the CCU) Soil Soil vapor
117.5 – 120 ft	Characterize the bottom of the CCU for 200-PW-1 Operable Unit COPCs; evaluate contaminant gradients within the CCU			
120.5 – 123 ft	Characterize the contact between the CCU and the Ringold Formation for DNAPL	119.0 to 121.5 ft		114.0 to 116.5 ft (selected to include the CCU/Ringold contact) (selected for split sample) Soil Soil vapor
123.5 – 126 ft	Characterize the top of the Ringold Formation for contaminant transport and evaluation of soil-vapor extraction interim action; evaluate gradient through the CCU.	(122.0 to 124.5 ft PNNL sample)	Ringold starts at 118.5 ft	116.5 to 119.0 ft (selected to characterize the top of the Ringold) Soil (VOCs only and PNNL liner) Soil vapor

[a] Depth does not account for 4 ft of fill added at Borehole C3426 before drilling began.
[b] Depth does account for 4 ft of fill added at Borehole C3426 before drilling began.
[c] Ground surface at Borehole C3427 is 4.5 ft lower than ground surface at Borehole C3426.
DOE/RL-2001-01, *Plutonium/Organic-Rich Process Condensate/Process Waste Group Operable Unit RI/FS Work Plan: Includes the 200-PW-1, 200-PW-3, and 200-PW-6 Operable Units.*

bgs = below ground surface.
CCU = Cold Creek unit.
COPC = contaminant of potential concern.
DNAPL = dense, nonaqueous-phase liquid.
PCE = tetrachloroethylene (perchloroethylene)
PNNL = Pacific Northwest National Laboratory.
SAP = sampling and analysis plan (DOE/RL-2001-01, Appendix B).
SVOC = semivolatile organic compound.
TBP = tributyl phosphate.
VOC = volatile organic compound.

4.3.2 Quality Control Samples

The SAP (DOE/RL-2001-01, Appendix B) specified the quality control (QC) criteria for the soil and soil-vapor samples.

4.3.2.1 Quality Control for Soil Samples

The SAP requires field duplicate samples, split samples, equipment-rinsate blanks, and trip blanks to be collected with the primary borehole soil samples, to assess sampling and analysis performance. Field duplicates are samples that are analyzed to assess laboratory performance and homogeneity of the material being sampled. Field duplicate samples for soils are taken from homogenized soil from the entire depth of a split-spoon sampler in locations suspected of having sufficient contamination to make useful comparisons between the duplicate pair. Field duplicate samples are analyzed at the same laboratory as the corresponding primary field samples.

Split samples are taken for soil samples to detect interlaboratory differences. Split samples are obtained by compositing a sample at a contaminated location, then dividing the composite into separate samples for analysis at two different laboratories.

Analysis of equipment-rinsate blanks helps to determine whether analytical results may be affected by contamination of the sampling equipment. For soil sampling, equipment-rinsate blanks are deionized water samples that have been used to rinse the sampling equipment. Equipment blanks are packaged and shipped to the laboratories using the same methods and materials that were used for the primary samples.

Trip blanks help determine whether VOA results may be affected by exposure to vapors from any background activities during sampling, transportation, storage, or analysis. Trip blanks are deionized water samples that are dispensed into VOA sample bottles at the Fluor Hanford Sample Storage and Shipping Facility. They accompany the primary sample bottles to the field, then to the laboratory.

The SAP (DOE/RL-2001-01, Appendix B) specifies that field duplicates, split samples, equipment rinsates, and trip blanks are to be taken for soil samples at a rate of at least 5 percent (at least one for every 20 primary samples). Because there were 12 planned soil-sample intervals to be collected, there should be at least one field duplicate, one split sample, one equipment-rinsate blank, and one trip blank for the soils.

4.3.2.2 Quality Control for Vapor Samples

For vapor sampling, field duplicate samples and equipment-rinsate blanks are required at a rate of at least 5 percent. Because vapor samples were taken at 10 distinct depths, one duplicate sample and one equipment-rinsate blank are required. Vapor sample duplicates are defined as samples collected with enough volume to permit two separate analyses, performed sequentially by the same analyzer. For vapor-sampling equipment blanks, the sample container is filled with certified clean air and analyzed to assess cleanliness. Equipment blanks are analyzed for the same constituents that are analyzed for in the actual samples.

4.3.3 Implementation of the Sampling Design

This section summarizes the collection of primary field samples and QC samples from Borehole C3427 and the extent to which the sampling and analysis goals of the SAP were achieved. Further assessment of the completeness of the sampling and analysis is given in Sections 5.2 and 5.3. Selected details of the sampling, including sample numbers, sampling depths and dates, laboratories and analyses assigned to each sample, and other information, are given in tables included as Appendix A of this DQA report. Full details of the sampling activities may be found in WMP-30566.

4.3.3.1 Primary Sample Collection

Soil and soil-vapor samples were collected in accordance with the SAP. However, the SAP provides only guidance for the number of samples, the sampling locations, and the angle of the borehole. These parameters were set during pre-job planning and were adjusted as necessary during borehole construction. The drilling angle of the borehole was set at 32 degrees from vertical, to obtain as many samples as possible beneath the footprint of the 216-Z-9 Trench. The sample collection activities started in mid-February 2006 and were completed in mid-May 2006.

Soil samples were obtained at all depths shown in Table 4-5 except for the deepest sample, which was not collected because the target stratigraphic unit was not as deep as anticipated (WMP-30566). Depth adjustments were made as discussed in the previous paragraph. Table 4-6 illustrates how the sample intervals are aligned with the stratigraphy. The data in the column labeled 'Observed Stratum Depth' in this table were determined by lithologic examination during the boring of the slant borehole.

Table 4-6. Alignment of Samples with Soil Stratigraphy. (2 Pages)

Stratum	Observed Stratum Depth (ft bgs)	Soil Sampling Interval (ft bgs)	Vapor Sampling Interval (ft bgs)
Hanford formation upper fine	0 to 17.0	Not required in SAP	Not required in SAP
Hanford formation upper gravel-dominated sequence	17.0 to 43.7	Not sampled	Not sampled
Hanford formation sand-dominated sequence	43.7 to 103.0	44.5 to 46.2	44.5 to 46.2
		56.8 to 58.5	
		59.4 to 61.1	59.4 to 61.1
		61.9 to 63.6	
		84.8 to 86.5	84.8 to 86.5
		87.3 to 89.0	
		100.5 to 102.2	100.5 to 102.2

Table 4-6. Alignment of Samples with Soil Stratigraphy. (2 Pages)

Stratum	Observed Stratum Depth (ft bgs)	Soil Sampling Interval (ft bgs)	Vapor Sampling Interval (ft bgs)
Cold Creek unit - silt	103.0 to 111.5	103.9 to 105.6	103.9 to 105.6
		109.0 to 110.7	109.0 to 110.7
Cold Creek unit - caliche	111.5 to 112.8	111.5 to 112.8	111.5 to 112.8
Ringold Formation Unit 5	112.8 to 123.4	114.5 to 118.7	114.7 to 118.7
			118.3 to 118.7
			118.3 to 123.4

bgs = below ground surface.

The sampling intervals in Table 4-6 range from 13.6 to 37.6 m (44.5 to 123.4 ft) bgs. The sampling depths given in the table were calculated trigonometrically from the borehole-length measurements, assuming level ground surface and a borehole angle of 32 degrees from vertical.

At Borehole C3427, the upper gravel sequence of the Hanford formation did not extend nearly to the depth found at the C3426 borehole. Consequently, samples were not taken in this stratum. However, the sample at 13.6 to 14 m (44.5 to 46.2 ft) bgs was collected within 0.24 m (0.8 ft) of the base of the upper gravel sequence of the Hanford formation, thereby providing information about the interface between the upper gravel- and lower sand-dominated sequences. The top of the Ringold Formation at Borehole C3427 was not as deep as anticipated, so the sample at 34.9 to 36.2 m (114.5 to 118.7 ft) bgs characterized the top of this formation and the deepest planned sample in Table 4-5 was not collected as previously noted. The sampling rationale listed in Table 4-5 for all other samples was adequately covered by the sample collection.

In addition to the samples shown in Table 4-6, soil samples also were collected to support waste designation of drilling wastes. Analysis and testing of these samples is not required to support the 216-Z-9 Trench remedial investigation (RI) and will not be assessed in this DQA. Other samples were taken for physical property testing. The results of those tests also are outside the scope of this DQA.

4.3.3.2 Quality Control

The QC samples for soil analysis were collected and prepared as follows. Replicate soil samples were collected at the 26.6 m (87.3-ft) bgs depth, and samples for split analysis were collected at 34.9 m (114.5 ft) bgs. An equipment-rinsate water blank was collected during the sampling campaign (when the borehole had been drilled to 31.7 m [103.9 ft] bgs). Six trip-blank water samples were collected at intervals over the sampling campaign. Because soil samples were taken at 11 depths, the number of QC samples taken satisfies the 5 percent criterion described in Section 4.3.2.

Methanol was added to selected soil samples in the field to preserve them for VOA, as described in U.S. Environmental Protection Agency (EPA) Method 5035 (SW-846, *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, Third Edition; Final Update III-B*, as

amended) All of the VOA samples reserved for analysis at a high calibration range were treated with methanol. Samples for analysis at the low calibration range were not preserved. Methanol blank samples were obtained as a control for contamination that might occur in the process of preservation. The blank samples were prepared by injecting methanol into an empty VOA sample bottle that had been opened briefly in the sampling environment. Each blank was collected with a specific VOA-high sample, so each blank was associated with a specific depth.

Duplicate sample and equipment blank analyses also were required by the SAP (DOE/RL-2001-01, Appendix B) for soil-vapor samples. Duplicate vapor samples were obtained at nearly all depths sampled. However, equipment blanks were not analyzed. Processes for evaluating any blank contamination are discussed in Section 5.3.3.2.

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5.0 DATA REVIEW

The samples collected from Borehole C3427 were analyzed in accordance with the SAP (DOE/RL-2001-01, Appendix B). The analytical data obtained for the samples (COPCs and non-COPCs) are reported in Appendix B of this DQA. Six tables are presented, containing the data for radiochemicals, metals, VOA, SVOA, general chemistry, and miscellaneous organic analysis methods.

In this section of the report, the COPC data are evaluated for compliance with the quality assurance (QA) requirements of the SAP. Data evaluation is performed to determine if the laboratories have carried out all steps required by the SAP and the laboratory contracts governing the conduct of the analyses and reporting of the data. This evaluation also examines the laboratory data to determine if an analyte is present or absent in a sample and the degree of overall uncertainty associated with that determination.

This chapter is divided into three main sections. First, a summary of standard laboratory practices for QA and QC is presented. This summary provides the background concepts inherent in data quality assessment. The QA/QC section is followed by an assessment of the soil data, then by a similar discussion of the soil-vapor data. These discussions emphasize the quality of the COPC data; the non-COPCs generally are not discussed.

5.1 LABORATORY QUALITY ASSURANCE AND QUALITY CONTROL REQUIREMENTS

The QA and QC requirements govern all aspects of analytical laboratory operation, including instrument procurement, maintenance, calibration, and operation.

Laboratory internal QC checks are performed as appropriate for the analytical method at a rate of one per batch, or one in 20, whichever is more frequent. Laboratory internal QC checks include the following.

- Laboratory contamination. Each analytical batch contains a laboratory (method) blank (material of composition similar to that of the samples with known/minimal contamination of the analytes of interest) carried through the complete analytical process. The method blank is used to evaluate false-positive results in samples, caused by contamination during handling at the laboratory.

- Analytical accuracy. For most analyses, a known quantity of representative analytes of interest (matrix spike [MS]) is added to a separate aliquot of a sample from the analytical batch. The known amount added is compared to the actual measured amount to calculate the percent recovery. The recovery percentage of the added MS is used to evaluate analytical accuracy. For analyses not amenable to MS techniques (e.g., gamma energy analysis) or where analytical recovery is corrected via internal standards (e.g., alpha energy analysis [AEA]), accuracy is evaluated from recovery of the tracers or carriers. The accuracy of the laboratory preparation and analysis is evaluated via QC reference samples (e.g., laboratory control spikes). In addition to the MS recovery, surrogate

compounds are used to evaluate accuracy in the VOA, SVOA, and polychlorinated biphenyl (PCB) compound analyses. Surrogates are compounds with instrumental responses that are typical of the other analytes. The surrogates are added into the blanks, samples, and MSs, and the recovery is evaluated.

- Analytical precision. Separate aliquots removed from the same sample container (laboratory-duplicate samples) are analyzed for each analytical batch for radionuclides and metals. The duplicate sample results are compared to the original sample results, are evaluated as relative percent differences (RPD), and are used to assess analytical precision. Alternately, a matrix-spike duplicate (MSD) may be used for assessing precision of metals, volatile organic compounds (VOC), semivolatile organic compounds, and PCBs. For an MSD, a separate aliquot is removed from the same sample container and spiked in the same manner as an MS. The recoveries from the MS and MSD are used to calculate an RPD and thus to assess precision.

- QC reference samples or laboratory control samples (LCS): An LCS is prepared from an independent standard at a concentration other than that used for calibration, but within the calibration range. The LCS is taken through all preparation and analysis steps used in the method. The LCS or QC reference sample measures the accuracy of the analytical process. Depending on how it is introduced into the analysis, the LCS sometimes is referred to as a blank-spike sample.

In addition to these QC checks, sample preservation requirements and a maximum holding time are established for each analyte. Preservation requirements may include chemical addition (e.g., pH adjustment), using containers of the proper composition, and/or refrigeration or freezing. Holding times are measured from the time that the sample is taken to the time that the sample is analyzed or prepared for analysis, depending on the analyte. These requirements are established to ensure that the analyte has not appreciably decomposed and/or volatilized before it is measured.

Laboratories also are subject to periodic and random audits of laboratory performance, systems, and overall QA program. These assessments are performed by the QA group of the Groundwater Remediation Project to ensure that the laboratories' performances meet the laboratory contract requirements.

5.2 REVIEW OF SOIL DATA

The soil samples obtained for Borehole C3427 were analyzed at the following laboratories:

- Severn-Trent Laboratories (St. Louis, Missouri)
- Severn-Trent Laboratories (Richland, Washington)
- Waste Sampling and Characterization Facility (WSCF, operated by Fluor Hanford, Inc., for the U.S. Department of Energy, Richland Operations Office, Richland, Washington)

- Eberline Services (Richmond, California)
- Lionville Laboratory (Lionville, Pennsylvania).

The Severn-Trent St. Louis, WSCF, and Lionville Laboratories performed the chemical analyses, and Eberline, WSCF, and Severn-Trent Richland performed the radionuclide analyses.

In the remainder of this section, the following topics are considered for the soil-sample data: formal data validation, supplementary data evaluation, and field QC results.

5.2.1 Formal Data Validation

For soil analysis, the SAP (DOE/RL-2001-01, Appendix B) requires that 5 percent of all data types be validated to Level "C" as defined in HNF-20433, *Data Validation Procedure for Chemical Analyses*, and HNF-20434, *Data Validation Procedure for Radiochemical Analyses*. Data validation is not required for physical property measurements or radiological screening analyses, which are not part of this DQA. As stated above, 11 primary soil samples were collected for COPC analysis. Therefore, the 5 percent data validation requirement is met by validating a minimum of one soil sample result for each applicable analytical method.

The following sample delivery groups (SDG), samples, and analytical methods were validated:

- H3417R (Eberline, Richmond, California; tritium, radiostrontium, Tc-99, gamma spectroscopy, and AEA methods for Am-241, Np-237, and isotopes of plutonium, uranium, and thorium for soil samples B1HK52 and B1HK57)
- WSCF20060386 (WSCF; VOA for soil sample B1HKY9)
- WSCF20060387 (WSCF; VOA for soil samples B1HK55 and B1HK56)
- WSCF20060388 (WSCF; gamma spectroscopy and AEA methods for Am-241, plutonium isotopes, and uranium isotopes for soil sample B1HK53)
- WSCF20060389 (WSCF; SVOA, PCB, metals, ion chromatography, and ammonia for soil sample B1HK57)
- WSCF20060409 (WSCF; VOA for soil sample B1HK57)
- W04913 (Severn-Trent, St. Louis; total organic carbon, total inorganic carbon, nitrogen in nitrate and nitrite, hexavalent chromium, and oil & grease for soil sample B1HK57).

The number of data validations performed met the 5 percent requirement of the SAP.

For the analytical results that were validated, the following items were reviewed, as appropriate, for Level C validation:

- Sample holding times
- Method blanks

- MS recovery
- Surrogate recovery
- Tracer and/or carrier recovery (for radionuclides only)
- MS/MSD results
- Sample duplicates
- Associated laboratory control sample results
- Data package completeness
- Achievement of TQLs as specified in Table B-9 of the SAP (DOE/RL-2001-01, Appendix B).

During data validation, data are flagged with a "J" to indicate that the associated concentration should be regarded as an estimate, but that it may be used for decision-making purposes. Data are flagged with an "R" to indicate that the QC failure is so severe that the data should be rejected for decision-making purposes. Data flagged as below the detection limits (i.e., "U") indicate that the contaminant was analyzed for but was not detected. Unflagged results are considered accurate within the standard errors associated with the methods.

For nonradionuclide analyses, the reported value for a nondetected analyte is the laboratory-established reporting limit. For radionuclides, the reported value for a nondetect normally is the actual value obtained from analysis (positive or negative, but less than the minimum detectable activity [MDA]), except for limited analyses in which no value can be calculated. In these cases, the MDA is reported. The validation is extended to some analytes that are not COPCs for the 216-Z-9 Trench. However, validation of non-COPCs will not be discussed here.

The data validators reported that, of the data given formal validation, the laboratory met the majority of the standards for precision, accuracy, and completeness. The following sections summarize the instances noted during validation in which the QC criteria were not met.

5.2.1.1 Sample Holding Times

Holding time requirements are stated in Table B-11 of the SAP (DOE/RL-2001-01, Appendix B). The maximum holding times range from 48 hours to 6 months, depending on the stability of the analyte. The holding time for anion analysis by ion chromatography is listed in Table B-11 as "28 days/48 hours." This is a reference to the hold-time requirements of EPA Method 300.0 (EPA/600/4-79/020, *Methods of Chemical Analysis of Water and Wastes*), which specifies a 48-hour hold time for nitrite, nitrate, and phosphate, and 28 days for other anions.

Qualification of the data for exceeding holding times takes a graded approach. Results obtained on properly preserved samples are flagged "J" unless the hold time is more than two times the maximum time allowed. In that case, nondetect results would be rejected.

Three results were qualified because the holding-time limit was exceeded. The oil & grease, hexavalent chromium, and mercury results for sample B1HK57 were qualified as approximate. The oil & grease and hexavalent chromium results were flagged "UJ," and the mercury result was flagged "J."

5.2.1.2 Method Blanks

Analysis of a blank sample is required to demonstrate that the equipment, materials, and chemicals used in the analysis have not contaminated the sample with an analyte of interest. In general, the blank result is required to show that method contamination is insignificant compared to the levels found in the samples. Contamination detected in the blank analysis calls into question the accuracy, precision, and detection limit of the analytical method; the laboratory and validation procedures are designed to identify questionable results.

No results were qualified because of irregularities in blank determination.

5.2.1.3 Accuracy

Accuracy of a laboratory method is assessed by evaluating the recoveries of LCSs, MSs, and/or surrogate spikes, depending on the method. The SAP (DOE/RL-2001-01, Appendix B) specifies that accuracy must be within 65 to 135 percent for radionuclides and within 70 to 130 percent for other COPCs. These criteria were met for all analyses validated except for phosphate in sample B1HK57. The MS and MSD recoveries for phosphate were 60.3 and 62.6 percent, respectively.

5.2.1.4 Precision

The RPDs between duplicate analyses of laboratory samples or between MSs and MSDs are calculated to document analytical precision. The SAP specifies that precision (i.e., the RPDs) must be < 35 percent for radionuclides and < 30 percent for other COPCs. As detailed in the validation procedures, RPDs are not calculated when either result is less than five times the required detection limit (RDL). When both results are nondetects, the precision calculation is not applicable. When either the sample or the duplicate result is less than five times greater than the required detection limit, the difference between results is calculated; the precision is acceptable for soil samples, if the difference is less than two times the RDL. Precision criteria for all validated COPC results were met satisfactorily.

5.2.1.5 Detection Limits

The validators compared the reported detection limits against the TQLs identified in Table B-9 of the SAP. The cases in which the detection limits exceeded the TQLs are shown in Table 5-1. For samples B1HK54 and B1HK56, the VOA was run at a high calibration range, as requested in the chain-of-custody document. As a result, the detection limits for all COPCs in those samples exceeded the TQLs. (As will be discussed in Section 5.2.2.2, high-range VOAs were accompanied by low-range determinations at all depths; detection limits generally were achieved for the low-range VOA determinations.)

The validation rules do not require results with high detection limits to be qualified. However, detection-limit shortcomings should be taken into consideration when making decisions based on the data. The investigation of the degree to which the analyses met the detection-limit goals of the project will be extended to all analytical results obtained for the project in Section 5.2.2.2 of this DQA report.

Table 5-1. Validated Results Exceeding Detection Limit Criteria.

Sample	Depth (ft bgs)	Constituent	DL or MDA	TQL	Units
B1HK52	84.8	Cobalt-60	0.17	0.05	pCi/g
B1HK52	84.8	Neptunium-237	270	1	pCi/g
B1HK52	84.8	Plutonium-238	300	1	pCi/g
B1HK52	84.8	Strontium-89/90	1400	1	pCi/g
B1HK52	84.8	Thorium-232	440	1	pCi/g
B1HK52	84.8	Uranium-233/234	85	1	pCi/g
B1HK52	84.8	Uranium-235	83	1	pCi/g
B1HK52	84.8	Uranium-238	85	1	pCi/g
B1HK57	103.9	Cesium-137	2.1	0.1	pCi/g
B1HK57	103.9	Cobalt-60	2.9	0.05	pCi/g
B1HK57	103.9	Strontium-89/90	2.8	1	pCi/g
B1HK57	103.9	Phosphate	12,000	5,000	µg/kg
B1HK54	122.5	All VOCs	*	*	--
B1HK56	122.5	All VOCs	*	*	--
B1HK57	103.9	Aroclor-1221	23	16.5	µg/kg

Aroclor is an expired trademark.
*Individual DLs and TQLs for VOCs may be found in Appendix B.

bgs = below ground surface.
DL = detection limit.
MDA = minimum detectable activity.
TQL = target quantitation limit.
VOC = volatile organic compound.

5.2.1.6 Completeness

The term 'completeness' refers to the number of valid (nonrejected) results obtained as a percentage of the total number of results required by the SAP (DOE/RL-2001-01, Appendix B) for the samples validated. Completeness was reported to be 100 percent in all of the data validation reports.

5.2.1.7 Summary of the Data Validation

The validated data were found to be complete, with only minor deviations from the specified QC criteria. Three results were qualified because the holding time limit was exceeded, and one result was qualified for MS problems. A number of COPC determinations, mostly for radionuclides, did not meet detection-limit criteria. No data were rejected for use in making decisions to support the RI.

5.2.2 Supplementary Data Evaluation

The formal data validation described in the previous section included evaluation of 5 percent of the soil data obtained for Borehole C3427; however, DQA is required for all COPC data. Therefore, supplemental evaluation of all of the soil data was performed. To ensure adequate data quality, the data were evaluated for completeness and for adequacy of detection limits. In addition, the data were reviewed for inconsistencies. This section summarizes the results of these evaluations. This data evaluation is based on the soil data present in the *Hanford Environmental Information System* (HEIS) database on August 10, 2006, related to Sampling Authorization Form (SAF) F06-005, maintained by Fluor Hanford Sample and Data Management. This SAF encompasses all Borehole C3427 soil-sample data that support the RI.

5.2.2.1 Completeness

As discussed in Section 4.3.1, the SAP (DOE/RL-2001-01, Appendix B) called for soil samples to be taken at various depths for various purposes. Because many of the samples were used to satisfy a number of purposes, the soil samples at each of the 11 sampling depths generally were analyzed for all of the COPCs – both those for the 200-PW-1 OU RI and those for the DNAPL investigation, as identified in Tables 4-3 and 4-4, respectively. There were two exceptions to this generalization:

- The 18.9 m (61.9 ft) bgs sampling depth was analyzed for VOCs only
- Aroclors[5] were not analyzed for the 25.8 m (84.8 ft) bgs depth.

As noted in Section 4.3.1, the 18.9 m (61.9-ft) sample was intended for VOA only. The omission of Aroclors at 25.8 m (84.8 ft) was inadvertent. The purpose of samples at these intervals was to establish the distribution of COPCs through the Hanford formation sand sequence. The lack of some data at these intervals is not critical, because they are bounded by other samples in the same stratum, and radical variations within the stratum are not expected.

Although the required number of soil samples was obtained, the soil sampling of Borehole C3427 cannot be considered 100 percent complete, because a sample was not obtained in the Hanford formation upper gravel-dominated sequence (to meet purpose 2 in Table 4-6).

5.2.2.2 Detection Limits

The detection limits (MDA or reporting limit) for nondetected COPCs in soil samples were compared to the TQLs given in the "soil – other low activity" column of Table B-9 of the SAP (DOE/RL-2001-01, Appendix B). Of the 782 soil-sample determinations performed for which a TQL applied, the TQL was exceeded in 48 cases (6.1 percent of the cases). These counts do not include the high-range VOA results, because these analyses also were run by the same laboratory at low range on other samples obtained at the same depths.

The soil analyses with detection limits exceeding the TQLs are shown in Table 5-2. Most of the exceedances were for radionuclides determined by AEA. Undoubtedly, the large amounts of plutonium and americium in these soils were the main factor causing the high detection limits.

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[5] Aroclor is an expired trademark.

Table 5-2. Nondetect Analytical Results Exceeding the Target Quantitation Limit. (2 Pages)

Constituent	Sample [a]	Depth (ft bgs) [b]	DL or MDA	TQL	Units	EF
Ammonia	B1HK27	56.8	2800	607	µg/kg	4.61
Ammonia	B1HK32	59.4	2800	607	µg/kg	4.61
Ammonia	B1HK52	84.8	11200	607	µg/kg	18.5
Ammonia	B1HK47	87.3	11100	607	µg/kg	18.3
Ammonia	B1HL22	87.3	11300	607	µg/kg	18.6
Ammonia	B1HK42	100.5	2800	607	µg/kg	4.61
Ammonia	B1HL26	114.5	2800	607	µg/kg	4.61
Phosphate	B1HK57	103.9	12000	5000	µg/kg	2.4
Phosphate	B1HK62	109.0	12000	5000	µg/kg	2.4
Phosphate	B1HK67	111.5	12000	5000	µg/kg	2.4
Phosphate	B1HK77	114.5	12000	5000	µg/kg	2.4
Aroclor-1016	B1HK77	114.5	140	16.5	µg/kg	8.48
Aroclor-1221	B1HK57	103.9	23	16.5	µg/kg	1.39
Aroclor-1221	B1HK62	109.0	25	16.5	µg/kg	1.52
Aroclor-1221	B1HK67	111.5	23	16.5	µg/kg	1.39
Aroclor-1221	B1HK77	114.5	140	16.5	µg/kg	8.48
Aroclor-1232	B1HK77	114.5	140	16.5	µg/kg	8.48
Aroclor-1242	B1HK77	114.5	140	16.5	µg/kg	8.48
Aroclor-1248	B1HK77	114.5	140	16.5	µg/kg	8.48
Aroclor-1254	B1HK77	114.5	140	16.5	µg/kg	8.48
Aroclor-1260	B1HK77	114.5	140	16.5	µg/kg	8.48
Chloromethane	B1HK75	114.5	7	5	µg/kg	1.4
Oil & grease	B1HL26	114.5	702000	200000	µg/kg	3.51
Phenol	B1HK77	114.5	350	330	µg/kg	1.06
Neptunium-237	B1HK32	59.4	340	1	pCi/g	340
Neptunium-237	B1HK52	84.8	270	1	pCi/g	270
Neptunium-237	B1HL22	87.3	230	1	pCi/g	230
Neptunium-237	B1HK77	114.5	14	1	pCi/g	14
Plutonium-238	B1HK27	56.8	1700	1	pCi/g	1700
Plutonium-238	B1HK52	84.8	300	1	pCi/g	300
Plutonium-238	B1HK47	87.3	290	1	pCi/g	290
Strontium-89/90	B1HK99	44.5	28	1	pCi/g	28
Strontium-89/90	B1HK57	103.9	2.8	1	pCi/g	2.8
Strontium-89/90	B1HL26	114.5	9.42	1	pCi/g	9.42
Technetium-99	B1HK47	87.3	26	15	pCi/g	1.73
Technetium-99	B1HL22	87.3	26	15	pCi/g	1.73
Thorium-232	B1HK52	84.8	440	1	pCi/g	440
Uranium-233/234	B1HK99	44.5	64	1	pCi/g	64
Uranium-233/234	B1HK32	59.4	380	1	pCi/g	380

Table 5-2. Nondetect Analytical Results Exceeding the Target Quantitation Limit. (2 Pages)

Constituent	Sample [a]	Depth (ft bgs) [b]	DL or MDA	TQL	Units	EF
Uranium-233/234	B1HK47	87.3	77	1	pCi/g	77
Uranium-233/234	B1HL22	87.3	110	1	pCi/g	110
Uranium-233/234	B1HK42	100.5	140	1	pCi/g	140
Uranium-233/234	B1HL26	114.5	2.3	1	pCi/g	2.3
Uranium-235	B1HK27	56.8	610	1	pCi/g	610
Uranium-235	B1HK52	84.8	83	1	pCi/g	83
Uranium-238	B1HK27	56.8	500	1	pCi/g	500
Uranium-238	B1HK42	100.5	140	1	pCi/g	140
Uranium-238	B1HL26	114.5	1.9	1	pCi/g	1.9

[a] All samples in this table are soils.
[b] Depths are expressed as the upper bound of the sampling interval in vertical feet below ground surface.

bgs = below ground surface.
DL = detection limit.
EF = exceedance factor; the ratio of the DL or MDA to the TQL.
MDA = minimum detectable activity.
TQL = target quantitation limit, from Table B-9 of the SAP (DOE/RL-2001-01, Appendix B).

A comparison of soil analysis detection limits also was made to the lowest potential preliminary action level (LPPAL) for each nondetect result of a COPC in the soils. To determine the LPPALs for nonradioactive COPCs, the preliminary action limits listed in Table B-9 of the SAP (DOE/RL-2001-01, Appendix B) were updated with the January 25, 2006, version of the Hanford Site cleanup levels and risk calculations (CLARC) database, which are based on the Washington State Department of Ecology CLARC database (Ecology, 2005, *Cleanup Levels & Risk Calculations (CLARC)* database), augmented with information from *Integrated Risk Information System* (IRIS, a database available through the EPA National Center for Environmental Assessment, available on the Internet at http://www.epa.gov/iris/), risk-assessment databases maintained by Oak Ridge National Laboratory, and other references. It is a standard practice of Fluor Hanford remediation programs to perform data assessment using the latest version of the CLARC database for the Hanford Site. The LPPALs for radionuclides were taken directly from Table B-9 of the SAP. The CLARC database does not include values for radionuclides.

The results of comparing the detection limits to the LPPALs are given in Table 5-3. Of the 758 analytical determinations for which an LPPAL was specified, the detection limits exceeded the LPPALs in 76 cases (10.0 percent of the cases). As was the case for the TQL exceedances, most of the LPPAL exceedances were for AEA radionuclide determinations, where interference by plutonium and americium is a problem. These exceedances will not affection RI decisions, because clean-up decisions will be driven by the plutonium and americium.

Exceedances for other COPCs were few in number and relatively smaller in magnitude.

Table 5-3. Nondetect Analytical Results Exceeding the Lowest Applicable Preliminary Action Limit. (3 Pages)

Constituent	Sample [a]	Depth (ft bgs) [b]	DL or MDA	LPPAL	Units	EF
Aroclor-1254	B1HK77	114.5	140	66.4	µg/kg	2.11
Tetrachloroethene	B1HK55	103.9	1.4	0.859	µg/kg	1.63
Tetrachloroethene	B1HK65	111.5	1.2	0.859	µg/kg	1.4
Tetrachloroethene	B1HK75	114.5	3	0.859	µg/kg	3.49

Aroclor is an expired trademark.
[a] All samples in this table are soils.
[b] Depths are expressed as the upper bound of the sampling interval in vertical feet below ground surface.

bgs = below ground surface.
DL = detection limit.
EF = exceedance factor; the ratio of the DL or MDA to the LPPAL.
LPPAL = lowest potential preliminary action limit.
MDA = minimum detectable activity.

5.2.2.3 Data Consistency Checks

The data tables in Appendix B were reviewed for internal inconsistencies and obviously erratic concentration trends in the soil data. Specific lines of inquiry included in this review are discussed below.

5.2.2.3.1 Volatile Organic Analysis

At most sample depths, VOA results were obtained with two different calibration ranges. A pattern may be observed for several COPCs (1-butanol, 2-butanone, acetone, carbon tetrachloride, chloroform, methylene chloride, tetrachloroethene) wherein the high-range result is most often greater than the low-range result. The high-range samples were preserved in the field with methanol. The low-range samples were not. The higher results for the high-range samples may be the result of improved extraction of the analytes, but contamination associated with the methanol preservation also must be considered. Contamination of the methanol preservative is discussed further in Section 5.2.3.5.

Impacts of contaminating the high-range samples are minimal, because the low-range results were normally acceptable. The occasions where the VOC result exceeded the low calibration range are shown in Table 5-4, which indicates that the low-range and high-range results are either both below or both above the LPPAL in each case.

Two VOA samples were reported to contain a tentatively identified compound. The compound found in both samples is identified as acetic acid, methyl ester (i.e., methyl acetate). The two samples were the methanol blank and corresponding high-range sample from the 34.9 m (114.5-ft) bgs depth. This compound probably also is a contaminant of the methanol preservative.

Table 5-3. Nondetect Analytical Results Exceeding the Lowest Applicable Preliminary Action Limit. (3 Pages)

Constituent	Sample [a]	Depth (ft bgs) [b]	DL or MDA	LPPAL	Units	EF
Neptunium-237	B1HK99	44.5	46	4.6	pCi/g	10
Neptunium-237	B1HK27	56.8	280	4.6	pCi/g	60.9
Neptunium-237	B1HK32	59.4	340	4.6	pCi/g	73.9
Neptunium-237	B1HK52	84.8	270	4.6	pCi/g	58.7
Neptunium-237	B1HK47	87.3	230	4.6	pCi/g	50
Neptunium-237	B1HL22	87.3	230	4.6	pCi/g	50
Neptunium-237	B1HK42	100.5	490	4.6	pCi/g	107
Neptunium-237	B1HK77	114.5	14	4.6	pCi/g	3.04
Plutonium-238	B1HK27	56.8	1700	60.1	pCi/g	28.3
Plutonium-238	B1HK52	84.8	300	60.1	pCi/g	4.99
Plutonium-238	B1HK47	87.3	290	60.1	pCi/g	4.83
Plutonium-238	B1HL22	87.3	330	60.1	pCi/g	5.49
Plutonium-238	B1HK42	100.5	720	60.1	pCi/g	12
Technetium-99	B1HK47	87.3	26	3.6	pCi/g	7.22
Technetium-99	B1HL22	87.3	26	3.6	pCi/g	7.22
Technetium-99	B1HK42	100.5	18	3.6	pCi/g	5
Technetium-99	B1HK77	114.5	4.6	3.6	pCi/g	1.28
Thorium-232	B1HK99	44.5	170	4.8	pCi/g	35.4
Thorium-232	B1HK27	56.8	440	4.8	pCi/g	91.7
Thorium-232	B1HK32	59.4	200	4.8	pCi/g	41.7
Thorium-232	B1HK52	84.8	440	4.8	pCi/g	91.7
Thorium-232	B1HL22	87.3	53	4.8	pCi/g	11
Thorium-232	B1HK47	87.3	470	4.8	pCi/g	97.9
Thorium-232	B1HK42	100.5	100	4.8	pCi/g	20.8
Thorium-232	B1HK77	114.5	8.1	4.8	pCi/g	1.69
Strontium-89/90	B1HK99	44.5	28	4.03	pCi/g	6.95
Strontium-89/90	B1HK27	56.8	1900	4.03	pCi/g	471
Strontium-89/90	B1HK32	59.4	1100	4.03	pCi/g	273
Strontium-89/90	B1HK52	84.8	1400	4.03	pCi/g	347
Strontium-89/90	B1HK47	87.3	1400	4.03	pCi/g	347
Strontium-89/90	B1HL22	87.3	1400	4.03	pCi/g	347
Strontium-89/90	B1HK42	100.5	2500	4.03	pCi/g	620
Strontium-89/90	B1HL26	114.5	9.42	4.03	pCi/g	2.34
Strontium-89/90	B1HK77	114.5	28	4.03	pCi/g	6.95
Uranium-233/234	B1HK99	44.5	64	0.45	pCi/g	142
Uranium-233/234	B1HK27	56.8	500	0.45	pCi/g	1110

Table 5-3. Nondetect Analytical Results Exceeding the Lowest Applicable Preliminary Action Limit. (3 Pages)

Constituent	Sample [a]	Depth (ft bgs) [b]	DL or MDA	LPPAL	Units	EF
Uranium-233/234	B1HK32	59.4	380	0.45	pCi/g	844
Uranium-233/234	B1HK52	84.8	85	0.45	pCi/g	189
Uranium-233/234	B1HK47	87.3	77	0.45	pCi/g	171
Uranium-233/234	B1HL22	87.3	110	0.45	pCi/g	244
Uranium-233/234	B1HK42	100.5	140	0.45	pCi/g	311
Uranium-233/234	B1HL26	114.5	2.3	0.45	pCi/g	5.11
Uranium-235	B1HK99	44.5	77	0.045	pCi/g	1710
Uranium-235	B1HK27	56.8	610	0.045	pCi/g	13600
Uranium-235	B1HK32	59.4	470	0.045	pCi/g	10400
Uranium-235	B1HK52	84.8	83	0.045	pCi/g	1840
Uranium-235	B1HL22	87.3	82	0.045	pCi/g	1820
Uranium-235	B1HK47	87.3	120	0.045	pCi/g	2670
Uranium-235	B1HK42	100.5	170	0.045	pCi/g	3780
Uranium-235	B1HL26	114.5	2.2	0.045	pCi/g	48.9
Uranium-238	B1HK99	44.5	64	0.44	pCi/g	145
Uranium-238	B1HK27	56.8	500	0.44	pCi/g	1140
Uranium-238	B1HK32	59.4	380	0.44	pCi/g	864
Uranium-238	B1HK52	84.8	85	0.44	pCi/g	193
Uranium-238	B1HK47	87.3	77	0.44	pCi/g	175
Uranium-238	B1HL22	87.3	85	0.44	pCi/g	193
Uranium-238	B1HK42	100.5	140	0.44	pCi/g	318
Uranium-238	B1HL26	114.5	1.9	0.44	pCi/g	4.32
Selenium	B1HK57	103.9	1780	800	µg/kg	2.23
Selenium	B1HK62	109.0	1680	800	µg/kg	2.1
Selenium	B1HK77	114.5	1820	800	µg/kg	2.28
1,2-Dichloroethane	B1HK75	114.5	3	2.32	µg/kg	1.29
Aroclor-1221	B1HK57	103.9	23	9.2	µg/kg	2.5
Aroclor-1221	B1HK62	109.0	25	9.2	µg/kg	2.72
Aroclor-1221	B1HK67	111.5	23	9.2	µg/kg	2.5
Aroclor-1221	B1HK77	114.5	140	9.2	µg/kg	15.2
Aroclor-1232	B1HK57	103.9	12	9.2	µg/kg	1.3
Aroclor-1232	B1HK62	109.0	12	9.2	µg/kg	1.3
Aroclor-1232	B1HK67	111.5	11	9.2	µg/kg	1.2
Aroclor-1232	B1HK77	114.5	140	9.2	µg/kg	15.2
Aroclor-1242	B1HK77	114.5	140	39.4	µg/kg	3.55
Aroclor-1248	B1HK77	114.5	140	38.6	µg/kg	3.63

Table 5-4. High- and Low-Range Volatile Organic Analysis Results Where the Low-Range Result Exceeds the Calibration Range.

Analyte	Depth (ft bgs)	Low-Range Result (µg/kg)	High-Range Result (µg/kg)	LPPAL (µg/kg)
1-butanol	87.3	2500	4400	6620
		3200	5000	
2-butanone	103.9	240	1700	19,600
Carbon tetrachloride	103.9	150	470	3.1
	109	150	6300	
Chloroform	109	250	170	38.1

bgs = below ground surface.
LPPAL = lowest applicable preliminary action level.

5.2.2.3.2 Phosphorus Measurements Versus Phosphate Measurements

Phosphate and total phosphorus both were measured at all soil sampling depths. Phosphate was undetected in most samples, and the phosphate was always lower than the total phosphorus in the same sample. Thus, the two measurements are consistent with each other.

5.2.2.3.3 Nitrate and Nitrite Measurements Versus Total Nitrate/Nitrite Measurements

The individual measurements of nitrate and nitrite in each sample should sum to equal the value obtained for the nitrate/nitrite method. This was found to be the case (within ± 30 percent) for all 13 samples where this comparison could be made. Nitrate was quite high in all samples except B1HK27, collected at 17.3 m (56.8 ft) bgs. In that one sample, nitrate was undetected, with a detection limit of 487 µg/kg. This low result is supported by the nitrate/nitrite result, which was a detection, but with a value only 23 percent greater than the sum of the detection limits for the nitrate and nitrite in the sample.

5.2.2.3.4 Oil & Grease Measurements Versus Total Petroleum Hydrocarbon Measurements

Oil & grease was detected in samples B1HK27 and B1HK32 (17.3 and 18.1 m [56.8 and 59.4 ft] bgs, respectively). The results greatly exceed the sum of the total petroleum hydrocarbon measurements. However, the TBP results for those samples are roughly the same as those for oil & grease. The oil & grease analysis method may be detecting TBP in those samples.

5.2.2.3.5 Semivolatile Organic Analysis

Detection of decamethylcyclopentasiloxane was reported for sample B1HK27 (17.3 m [56.8 ft] bgs). This nontoxic compound commonly bleeds from gas chromatography columns or from septa. This result does not indicate contamination present in the waste site. Therefore, this result was rejected for decision-making and flagged with an "R" in Appendix B.

5.2.3 Field Quality-Control Program

As discussed in Section 4.3.3, a number of QC samples were collected in the field as controls for analysis of the soil samples. Soil samples were collected at a single depth for duplicate analysis, and at another depth for split analysis. Liquid QC samples, including an equipment blank, 6 trip blanks, and 10 methanol blanks, also were collected.

In the subsections below, the analytical results for all soil COPCs in these field QC samples are compared against the requirements and expectations. All chemical and radiochemical laboratory data for the QC samples (COPCs and non-COPCs) are included in the Appendix B tables.

5.2.3.1 Field Duplicate Samples

Whereas laboratory duplicates are used to evaluate the precision of the laboratory analysis process, field duplicates are collected to provide a measure of the overall precision of the complete sampling and analysis process. High RPDs for field duplicates may indicate local heterogeneity in the sample and/or errors resulting from the sampling process. Field duplicate samples are analyzed at the same laboratory using the same analytical method.

Duplicate analyses of soil samples were performed on sample pairs taken at the 26.6 to 27.1 m (87.3 to 89.0-ft) bgs depth interval. Each COPC was analyzed in duplicate at a single laboratory, thus meeting the SAP (DOE/RL-2001-01, Appendix B) requirement for number of duplicates analyzed (as discussed in Section 4.3.3.2).

The RPDs between the pairs of field duplicates were calculated to determine whether the precision requirements of the project (RPD $\leq$ 35 percent for radionuclides, RPD $\leq$ 30 percent for others) were met. Following the validation rules (HNF-20433 and HNF-20434), RPDs were calculated only when the results for the duplicate and the corresponding primary sample were more than five times the required detection limit (i.e., the TQL). When at least one result was a detection and one or both results were less than five times the TQL, the results were compared by difference, using the minimum reporting value or MDA for nondetects. A difference of up to two times the TQL is considered satisfactory for soil samples. Where both results were nondetects, the difference between results was not evaluated.

The results of the RPD calculations are provided in Appendix C. Precision was not evaluated for most of the duplicate determinations because, as is common in environmental analysis, the analytes were undetected in both samples. Of the 64 pairs, three exceeded the precision requirement. These cases were for chloride (RPD = 31.0 percent), nitrate (RPD = 34.2 percent), and 2-butanone (methyl ethyl ketone, RPD = 47.2 percent). The three exceedances constitute 4.7 percent of the 188 pairs. This number of exceedances is within an acceptable range for field duplicate analysis.

5.2.3.2 Split Samples

Field split samples are collected and analyzed to detect whether analytical results are consistent among laboratories and analytical methods. Each sample of a split pair is analyzed at a different laboratory. The project requirement for split samples is to prepare one split pair for every