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Revision 0

200-CP-1 Final COPC Lists for Waste Sites and Structures Sites

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

Contractor for the U.S. Department of Energy
under Contract DE-AC06-08RL14788

CH2MHILL
Plateau Remediation Company

P.O. Box 1600
Richland, Washington 99352

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ENVIRONMENTAL CALCULATION COVER PAGE

SECTION 1 - Completed by the Responsible Manager

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Calculation Title and Description: 200-CP-1 Final COPC Lists for Waste Sites and Structures Sites	

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ENVIRONMENTAL CALCULATION COVER PAGE (Continued)

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ENVIRONMENTAL CALCULATION COVER PAGE (Continued)

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Terms

COPC	contaminant of potential concern
ECF	environmental calculation file
OU	operable unit
PUREX	plutonium-uranium extraction
TC & WM EIS	Tank Closure and Waste Management Environmental Impact Statement

1 Purpose

The purpose of this environmental calculation file (ECF) is to document the basis for identification of contaminants of potential concern (COPCs) for the 200-CP-1 Operable Unit (OU). This ECF builds on the findings of two existing documents that previously identified COPCs for the 200-CP-1 OU Plutonium-Uranium Extraction (PUREX) Canyon and the 200-EA-1 OU and include the following:

- D&D-33703, *Data Quality Objectives Summary Report for Characterization of the 202-A Building (PUREX Canyon)*
- ECF-200EA1-18-0061, *Development of Contaminants of Potential Concern for the 200-EA-1 Operable Unit*

The COPCs are used in the development of the 200-CP-1 OU remedial investigation/feasibility study work plan and associated sampling and analysis plan. Certain COPCs are designated as mobile constituents based on their potential to impact groundwater beneath 200-CP-1. The process of identifying these constituents is also discussed as part of the ECF. The results of a background data evaluation to compare 200 CP-1 OU soil sample results against Hanford site background soil concentrations are also included in this ECF.

2 Background

The 200-CP-1 OU consists of waste sites in the Hanford Site's Central Plateau Inner Area. The waste sites include the 202A process unit/plant, 218-E-14 (Tunnel Number 1) and 218-E-15 (Tunnel Number 2), 7 cribs, 1 trench, 7 french drains, 10 injection/reverse wells, 1 septic system, 9 pipelines, 1 diversion box, 1 tank, and 9 unplanned release sites. Of these waste sites, 14 sites were originally assigned to the 200-EA-1 OU and were included in the SGW-60540, *200-EA-1 Operable Unit Scoping*. Subsequently, these 14 sites were transferred to the 200-CP-1 OU. All of the sites are associated with waste disposal or unplanned releases from the PUREX facility. Various waste streams are associated with the OU, and radionuclide and chemical contamination may be or are known to be present in the 202A PUREX Canyon and waste site soil.

Two existing documents identified in Chapter 1 were used as the starting point for identification of COPCs for evaluating human health and ecological receptors, and groundwater protection. D&D-33703 published a final list of COPCs for the PUREX Canyon and the equipment within (Table 1-8 of D&D-33703). D&D-33703 also documents the constituents that were excluded and the basis for exclusion (Table 1-7 of D&D-33703). Table 1 in this ECF has the final list of COPCs that were considered in the data quality objectives process documented in D&D-33703. The following sources were reviewed to identify constituents for consideration in the D&D-33703:

- BHI-01411, *Remedial Investigation Data Quality Objectives Summary Report for the 200-PW-2 Uranium-Rich Process Waste Group Operable Unit*
- ARH-947, *200 Areas Disposal Sites for Radioactive Liquid Wastes*
- CP-14176, *Remedial Investigation Data Quality Objectives Summary Report for the 200-PW-4 Operable Unit*
- CP-14682, *Data Quality Objectives Summary Report for the Designation of the 200-PW-2 and 200-PW-4 Investigation Derived Wastes*

- BHI-01239, *200-CW-l Gable B Pond and Ditches Cooling Water Waste Group Data Quality Objectives Summary Report*

ECF-200EA1-18-0061 documents the basis for constituent exclusion to support identification of COPCs for the 200-EA-1 OU. ECF-200EA1-18-0061 also identifies those constituents that are carried forward as COPCs in DOE/RL-2016-58, *200-EA-1 Operable Unit Waste Site RCRA Facility Remedial Investigation/Corrective Measures Study*. Table 2 of this ECF lists the COPCs that were considered in ECF-200EA1-18-0061. The following sources were reviewed to identify constituents for consideration as COPCs for the 200-EA-1 OU:

- DOE/RL-92-04, *PUREX Source Aggregate Area Management Study Report*
- DOE/RL-92-19, *200 East Groundwater Aggregate Area Management Study Report*
- DOE/RL-2007-02, *Supplemental Remedial Investigation/Feasibility Study Work Plan for the 200 Areas Central Plateau Operable Units: Volume I: Work Plan and Appendices*
- DOE/RL-2008-44, *Engineering Evaluation/Cost Analysis for the 200-MG-1 Operable Unit Waste Sites*
- DOE/RL-2008-45, *Engineering Evaluation/ Cost Analysis for the 200-MG-2 Operable Unit*
- Historical process knowledge information and existing characterization data presented in SGW-60540

Groundwater contamination in the upper-most aquifer below the 200-CP-1 OU has been observed and attributed to discharge from waste sites associated with the OU. DOE/RL-2018-66, *Hanford Site Groundwater Monitoring Report for 2018*, details contaminant plumes in the aquifer within the 200-PO-1 OU and attributes the possible origin of contaminants to cribs associated with 200-CP-1 OU. The observation that contamination has impacted the groundwater in the past indicates the possibility that contamination residing in the vadose zone may impact groundwater in the future. An evaluation of currently observed contamination in the groundwater, results from vadose zone fate and transport modeling, and constituent fate and transport parameters was undertaken to develop a list of mobile COPCs for DOE/RL-2020-27, *Remedial Investigation/Feasibility Study Work Plan for the 200-CP-1 Operable Unit* (hereinafter called the 200-CP-1 OU Work Plan).

Table 1. 200-EA-1 OU Master Contaminants of Potential Concern List

Radionuclides		
Americium-241	Iodine-129	Technetium-99
Carbon-14	Neptunium-237	Tritium (hydrogen-3)
Cesium-137	Nickel-63	Uranium-233
Cobalt-60	Plutonium-238	Uranium-234
Europium-152	Plutonium-239	Uranium-235
Europium-154	Plutonium-240	Uranium-238
Europium-155	Strontium-90	
Inorganics		
Ammonia	Cobalt	Nitrite
Antimony	Copper	Phosphate
Arsenic	Cyanide (free and total)[a]	Selenium
Barium	Fluoride	Silver
Beryllium	Lead	Sulfate
Cadmium	Manganese	Uranium (total)
Chloride	Mercury	Vanadium
Chromium (total)	Nickel	Zinc
Chromium (hexavalent)	Nitrate	
Organics		
Acenaphthene	Chlorobenzene	2-Hexanone
Acenaphthylene	Chloroform	Indeno[1,2,3-cd]pyrene
Acetone	Chrysene	4-Methyl-2-pentanone (hexone, methyl isobutyl ketone)
Acetonitrile	Cyclohexane	Methylene chloride (dichloromethane)
Aldrin	Dibenz[a,h]anthracene	Napthalene
alpha-BHC (alpha-HCH)	Dibenzofuran	Petroleum hydrocarbons (diesel to kerosene range)
Anthracene	4,4'-Dichlorodiphenyldichloroethane	Total polychlorinated biphenyls
Aroclor-1254[b]	4,4'-Dichlorodiphenyldichloroethylene	Phenanthrene
Aroclor-1260[b]	4,4'-Dichlorodiphenyltrichloroethane	Phenol
Benzene	Dieldrin	Pyrene
Benzo(a)anthracene	1,1-Dichloroethane	Tetrachloroethene (PCE)
Benzo(a)pyrene	1,2-Dichloroethane	1,1,1-Trichloroethane
Benzo(b)fluoranthene	cis-1,2-Dichloroethene	1,1,2-Trichloroethane
Benzo(ghi)perylene	trans-1,2-Dichloroethene	Toluene
Benzo(k)fluoranthene	Endrin	Tributyl phosphate
beta-BHC (beta-HCH)	Ethylbenzene	Trichloroethene
n-Butanol (butyl alcohol)	Fluoranthene	Vinyl chloride
2-Butanone (methyl ethyl ketone)	Fluorene	Xylenes (total)
n-Butylbenzene	gamma-BHC (gamma-HCH, Lindane)	
Carbon tetrachloride	n-Hexane	
Chlordane		

Source: Table 3-9 in DOE/RL-2016-58, *200-EA-1 Operable Unit Waste Site RCRA Facility Remedial Investigation/Corrective Measures Study Work Plan*.

a. Soil analysis will be performed for total cyanide only. For groundwater protection evaluations, total cyanide in soil will be evaluated using the standard for free cyanide in groundwater.

b. Polychlorinated biphenyls.

OU = operable unit

Table 2. PUREX Canyon Contaminants of Potential Concern

Radioactive		
Americium-241	Hydrogen-3 (tritium)	Radium-228
Carbon-14	Iodine-129	Strontium-90
Cesium-137	Neptunium-237	Technetium-99
Cobalt-60	Nickel-63	Thorium-232
Europium-152	Plutonium-238	Uranium-233/234
Europium-154	Plutonium-239/240	Uranium-235/236
Europium-155	Radium-226	Uranium-238
Metals/General Inorganics		
Antimony	Copper	Chloride
Arsenic	Lead	Cyanide
Barium	Mercury	Fluoride
Beryllium	Nickel	Nitrate/nitrite
Cadmium	Selenium	Phosphate
Chromium (total)	Silver	Sulfate
Chromium (VI)	Ammonia/ammonium	
Organics		
1,1-dichloroethane (DCA)	Chloroform	AMSCO*
1,2-dichloroethane (DCA)	Ethylbenzene	Dodecane*
1,1,1-trichloroethane (TCA)	Methyl ethyl ketone (MEK, 2-butanone)	Hydraulic fluids (Greases)
Acetone	Methylene chloride	Kerosene
Benzene	n-butylbenzene	Normal paraffin hydrocarbons*
Butanol	Tetrachloroethylene (PCE)	Phenol
Carbon tetrachloride	Trichloroethylene (TCE)	Polychlorinated biphenyls (PCBs)
Cis/trans-1,2- dichloroethylene	Toluene	Tributyl phosphate and derivatives (mono, di)
Chlorobenzene	Xylene	

Source: Table 1-8 in D&D-33703, *Data Quality Objectives Summary Report for Characterization of the 202-A Building (PUREX Canyon).*

*Analyzed as kerosene total petroleum hydrocarbons.

PUREX = plutonium-uranium extraction

3 Methodology

This chapter describes the methods used for COPC development and verification and the soil background evaluation.

3.1 COPC Development and Verification

The following steps were used to develop and verify the list of candidate COPCs for the 200-CP-1 OU:

1. Combine the list of candidate COPCs provided in Tables 1 and 2 of this ECF.
2. Determine if additional historic documents and characterization data that were not considered in the reference documents are published.
3. If additional historic documents are available, determine if additional candidate COPCs should be included. Apply exclusion criteria to additional candidate COPCs. Exclusion criteria used include the following:
    a. Radionuclides with radioactive half-life values less than 3 years
    b. Radionuclides that constitute less than 1% of the fission product inventory and for which historical sampling indicates nondetection
    c. Naturally occurring isotopes that were not created as a result of Hanford Site operations
    d. Constituents with atomic mass numbers greater than 242 that represent less than 1% of the actinide activities
    e. Progeny radionuclides that build insignificant activities within 50 years and/or for which no parent/progeny relationships exist that facilitate progeny estimation
    f. Constituents that would be neutralized and/or decomposed by facility processes
    g. Chemicals in a gaseous state that cannot accumulate
    h. Chemicals used in minute quantities (laboratory chemicals) relative to the bulk production chemicals (feed chemicals) consumed in the normal processes; these chemicals have no suspected introduction to the waste streams except in incidental quantities; chemicals identified as listed waste ‘chemicals of interest’ have not been excluded
    i. Chemicals that are not persistent in the environment because of volatilization, biological degradation, or other natural mitigating features
    j. Candidate chemical constituents with no published toxicity data
    k. Remaining candidate constituents were reviewed individually for constituent-specific exclusions
4. Candidate constituents for which no exclusion basis was identified were retained as COPCs for the 200-CP-1 OU Work Plan (DOE/RL-2020-27).
5. Determine if the candidate COPC pertains to the 202A process plan/unit and/or the waste streams.
6. Determine the list of COPCs that are categorized as mobile constituents as follows:
    a. Develop the list of constituents that have been observed to impact groundwater in the past in the groundwater OUs near the 200-CP-1 OU.

b. Evaluate the results of vadose zone simulations conducted as part of the DOE/EIS-0391, *Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington (TC & WM EIS)*, to determine constituents that emerge in groundwater with 1,000 years of simulated time.

   i. All constituents for any simulation where 5% or more of the total inventory reaches the water table within 1,000 years were categorized as a mobile constituent.

c. Combine the two lists from steps 6a and 6b to prepare the final list of mobile constituents for the 200-CP-1 OU.

The results of the COPC evaluation are presented in Section 7.1.

3.2 Soil Background Evaluations

Soil sample results collected from four soil boring locations within the 200-CP-1 OU were used to conduct a background evaluation. These sample results are not used for the purpose of selecting COPCs, but to present the concentrations of target analytes relative to the Hanford Site 90th percentile background values. Prior to performing the background comparison, soil sample results were retrieved from the Hanford Environmental Information System and samples flagged as Rejected within any of the Lab Qualifier, Review Qualifier, or Validation Qualifier fields removed from the dataset. Samples analyzed with water extraction methods were also removed since reported values are magnitudes lower than other methods.

During background data evaluation, the maximum detected soil concentrations for various analytes were compared to Hanford lognormal 90th percentile background values (where available) based on values listed in the following reports:

- DOE/RL-92-24, *Hanford Site Background: Part 1, Soil Background for Nonradioactive Analytes*
- ECF-HANFORD-11-0038, *Soil Background for Interim Use at the Hanford Site*
- DOE/RL-96-12, *Hanford Site Background: Part 2, Soil Background for Radionuclides*

The results of the background evaluation are presented in Section 7.2.

4 Assumptions and Inputs

The assumptions and inputs for each step in the methodology are provided in this chapter.

The following additional sources were reviewed to identify constituents for consideration as COPCs:

- ECF-HANFORD-17-0079, *Hanford Soil Inventory Model (SIM-v2) Calculated Radionuclide Inventory of Direct Liquid Discharges to Soil in the Hanford Site's 200 Area*
- HNF-1744, *Radionuclide Inventories of Liquid Waste Disposal Sites on the Hanford Site*
- PNNL-6456, *Hazard Ranking System Evaluation of CERCLA Inactive Waste Sites at Hanford Volume 1 – Evaluation Methods and Result*
- RHO-CD-673, *Handbook 200 Areas Waste Sites, Rockwell Hanford Operations*
- RPP-26744, *Hanford Soil Inventory Model*
- WHC-EP-0172, *Inventory of Chemicals Used at Hanford Production Plants and Support Operations (1944-1980)*

Several reports were used as inputs for the determination of the mobile constituent list. DOE/RL-2018-66 identified constituents in the 200-PO-1 Groundwater OU. Constituents with reported concentrations above the drinking water standard and with mappable extent were included as potential mobile constituents given the historical contamination of these constituents.

Simulation results for the TC & WM EIS (DOE/EIS-0391) were documented and placed under configuration control as part of ECF-HANFORD-16-0027, *Tank Closure and Waste Management Environmental Impact Statement STOMP Model Baseline Recalculation: PUREX Area*, and ECF-HANFORD-20-0057, *Tank Closure and Waste Management Environmental Impact Statement STOMP Model Baseline Recalculation: PUREX Area (Chemical Constituents).* Input and output files generated by these simulations were used to determine the year both radionuclides and chemical constituents were predicted to reach the groundwater and the total simulated inventory by the TC & WM EIS.

5 Software Applications

Microsoft® Excel® 2016 was used to document and sort information. This software is an appropriate and applicable tool for these uses.

6 Calculation

Section 7.1 provides compiled listings of all COPCs identified for consideration. A discussion of 200-CP-1 OU soil background comparisons is presented in Section 7.2.

Boron was identified as an additional candidate COPC following the review of additional sources presented in Chapter 3. Application of exclusion criteria is documented for each constituent in these listings. Applicability of any one criterion for a given constituent is sufficient for exclusion from consideration as a COPC, and potential application of additional criteria was not considered.

Table 10-1 in DOE/RL-2016-67, *Hanford Site Groundwater Monitoring Report for 2016*, lists the observed plumes within the 200-PO-1 OU. The following constituents from Table 10-1 are identified as groundwater COPCs currently observed above the drinking water standard and with mappable extent in DOE/RL-2016-67 for the 200-PO-1 OU:

- Nitrate
- Iodine-129
- Technetium-99
- Total uranium
- Strontium-90
- Tritium

This list does not signify that the contamination originated from waste sites or structures associated with the 200-CP-1 OU. The inclusion here suggests only that the transport of these chemicals may pose a threat to groundwater if they are present in 200-CP-1 waste sites and should be considered during the 200-CP-1 evaluation.

Results of the vadose zone simulations conducted as part of the TC & WM EIS are summarized in Table 3. The table shows chemical and radionuclide constituents where simulated discharge resulted in

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contamination arriving at the water table within a 1,000-year time period. The table includes the waste site or structure where the discharge originated, the simulated time when the discharge reached the groundwater, and the percentage of the total mass or activity that arrived at the water table within 1,000 years. Highlighted constituent names meet the criteria established in Chapter 3 to be included as mobile constituents. The simulation of total chromium as part of the TC & WM EIS notes that the long term impacts are assumed to be the result of hexavalent chromium (DOE/EIS-0391).

7 Results/Conclusions

Results of the COPC identification process and soil background evaluations are presented in this chapter.

7.1 COPC Identification

Tables 4 and 5 list the radionuclides and chemicals identified for consideration and describe either the inclusion basis or the exclusion basis for those constituents that are not retained as COPCs for the 200-CP-1 OU. The following is the final set of mobile constituents applicable to the 200-CP-1 OU Work Plan (DOE/RL-2020-27). These constituents are a combination of the constituents listed in Chapter 6 and Table 3.

- Total chromium/hexavalent chromium
- Carbon-14
- Fluoride
- Iodine-129
- Neptunium-237
- Nitrate
- Strontium-90
- Technetium-99
- Tritium
- Total uranium
- Uranium isotopes (includes uranium-233, -234, -235, and -238)

Table 3. Summary of Results from Vadose Zone Modeling Completed as part of the TC & WM EIS Modeling

Constituent[a]	Waste Site / Structure	Type	Total Estimated Inventory[b]	Units	Initial Year[c]	Peak Year[d]	Mass or Activity to Groundwater in 1,000 Years	Percentage of Mass or Activity to Groundwater in 1,000 Years
Carbon-14	216-A-5	Liquid	1.00E-02	Ci	16	22	6.78E-03	68
Cesium-137	216-A-5	Liquid	3.36E+01	Ci	19	22	2.71E-02	0
Tritium	216-A-4	Liquid	8.52E+02	Ci	18	20	9.87E+01	12
	216-A-5	Liquid	2.25E+05	Ci	15	22	2.21E+05	98
	216-A-21	Liquid	5.85E+02	Ci	20	26	4.58E+02	78
Iodine-129	216-A-5	Liquid	9.63E-01	Ci	15	22	9.62E-01	100
	216-A-15	Liquid	5.51E-07	Ci	24	35	4.32E-08	8
	216-A-2	Liquid	1.76E-05	Ci	250	1,308	2.29E-06	13
	200-E-107	Liquid	2.34E-06	Ci	880	1,679	1.84E-09	0
	202A	Solid	6.21E-03	Ci	720	1,956	1.13E-07	0
Neptunium-237	216-A-5	Liquid	1.31E+00	Ci	16	22	9.95E-01	76
	216-A-21	Liquid	2.37E-02	Ci	24	26	3.85E-05	0
Plutonium-239	216-A-5	Liquid	3.92E+01	Ci	20	22	1.65E-06	0
Strontium-90	216-A-5	Liquid	9.06E+01	Ci	16	22	3.92E+01	43
Technetium-99	216-A-4	Liquid	5.73E-01	Ci	18	20	4.68E-01	82
	216-A-5	Liquid	3.07E-01	Ci	15	22	3.06E-01	100
	216-A-21	Liquid	7.53E-03	Ci	20	26	7.47E-03	99
	216-A-2	Liquid	2.70E-02	Ci	139	1,308	3.53E-03	13
	216-A-28	Liquid	2.48E-03	Ci	380	1,451	5.98E-05	2
	216-A-35	Liquid	1.67E-08	Ci	840	1,482	1.03E-10	1
	216-A-13	Liquid	1.67E-08	Ci	840	1,494	9.90E-11	1
	216-A-22	Liquid	4.89E-04	Ci	390	1,506	8.40E-06	2
	UPR-200-E-39	Liquid	6.90E-04	Ci	490	1,642	2.94E-06	0

Table 3. Summary of Results from Vadose Zone Modeling Completed as part of the TC & WM EIS Modeling

Constituent[a]	Waste Site / Structure	Type	Total Estimated Inventory[b]	Units	Initial Year[c]	Peak Year[d]	Mass or Activity to Groundwater in 1,000 Years	Percentage of Mass or Activity to Groundwater in 1,000 Years
Uranium-238	216-A-5	Liquid	1.33E-01	Ci	16	22	1.22E-01	91
	216-A-21	Liquid	1.34E-01	Ci	20	26	4.08E-02	30
	216-A-15	Liquid	3.43E-04	Ci	380	10,000	2.35E-10	0
	216-A-4	Liquid	3.71E+00	Ci	90	10,000	5.81E-09	0
Total chromium/ hexavalent chromium[e]	200-E-103	Liquid	1.04E-04	kg	80	1,408	1.72E-05	17
	200-E-107	Liquid	1.67E+00	kg	110	1,808	4.61E-03	0
	216-A-13	Liquid	2.60E-04	kg	430	1,608	3.79E-06	1
	216-A-2	Liquid	4.56E-03	kg	139	1,408	5.97E-04	13
	216-A-28	Liquid	3.09E-03	kg	360	1,508	7.45E-05	2
	216-A-32	Liquid	1.04E-04	kg	490	1,608	1.44E-06	1
	216-A-35	Liquid	2.60E-04	kg	430	1,608	3.97E-06	2
	216-A-4	Liquid	2.34E+00	kg	16	24	1.92E+00	82
	218-E-15	Solid	9.00E+00	kg	191	1,808	9.25E-03	0
Fluoride	200-E-103	Liquid	2.23E-03	kg	70	1,408	3.71E-04	17
	216-A-13	Liquid	5.59E-03	kg	360	1,608	8.18E-05	1
	216-A-15	Liquid	1.36E+00	kg	19	34	1.19E+00	87
	216-A-22	Liquid	4.93E-03	kg	330	1,608	8.51E-05	2
	216-A-28	Liquid	7.07E-01	kg	270	1,508	1.71E-02	2
	216-A-32	Liquid	2.24E-03	kg	410	1,608	3.11E-05	1
	216-A-35	Liquid	5.59E-03	kg	360	1,608	8.56E-05	2
	216-A-4	Liquid	1.54E+02	kg	16	24	1.26E+02	82

Table 3. Summary of Results from Vadose Zone Modeling Completed as part of the TC & WM EIS Modeling

Constituent[a]	Waste Site / Structure	Type	Total Estimated Inventory[b]	Units	Initial Year[c]	Peak Year[d]	Mass or Activity to Groundwater in 1,000 Years	Percentage of Mass or Activity to Groundwater in 1,000 Years
Nitrate	200-E-103	Liquid	1.20E+00	kg	60	1,408	2.00E-01	17
	200-E-107	Liquid	4.49E+01	kg	100	1,808	1.25E-01	0
	216-A-13	Liquid	3.01E+00	kg	260	1,608	4.42E-02	1
	216-A-15	Liquid	5.64E+00	kg	19	34	4.93E+00	87
	216-A-2	Liquid	2.37E+03	kg	95	1,408	3.11E+02	13
	216-A-21	Liquid	3.20E+05	kg	19	28	3.18E+05	99
	216-A-22	Liquid	6.01E-01	kg	250	1,608	1.04E-02	2
	216-A-28	Liquid	4.35E+02	kg	190	1,508	1.05E+01	2
	216-A-32	Liquid	1.21E+00	kg	290	1,608	1.69E-02	1
	216-A-35	Liquid	3.01E+00	kg	260	1,608	4.62E-02	2
	216-A-4	Liquid	9.54E+04	kg	16	24	7.82E+04	82
	216-A-5	Liquid	1.07E+06	kg	15	22	1.07E+06	100
	UPR-200-E-39	Liquid	6.24E+00	kg	310	1,708	2.68E-02	0
Total uranium	216-A-15	Liquid	4.82E-01	kg	33	10,000	8.44E-07	0
	216-A-21	Liquid	1.94E+02	kg	19	28	5.90E+01	30
	216-A-4	Liquid	5.39E+03	kg	19	10,000	8.60E-06	0
	216-A-5	Liquid	1.99E+02	kg	15	22	1.82E+02	91

a. Shaded constituent names indicate that simulation results met criteria defined in Chapter 3 for inclusion in the list of mobile contaminants of potential concern.

b. "Total Estimated Inventory" is the value used for input values for STOMP© simulations for TC&WM EIS and are not decayed as listed in Appendix S of DOE/RL-0391, *Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington (TC & WM EIS)*.

c. Initial year is the time elapsed from the start of the simulation (01/01/1943) for contaminant mass to reach the water table.

d. Peak year is the time elapsed from the start of the simulation (01/01/1943) where the contaminant mass is the higher than any other time in the simulation.

e. Simulated total chromium impacts are assumed to be the result of hexavalent chromium (DOE/EIS-0391)

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TC & WM EIS = Tank Closure and Waste Management Environmental Impact Statement

Table 4. Radionuclide Candidate COPCs for 200-CP-1 OU

Radionuclide Candidates	Retained as a COPC?	Comment
Americium-241	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Carbon-14	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Cesium-137	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Cobalt-60	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Europium-152	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Europium-154	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Europium-155	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Hydrogen-3 (tritium)	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Iodine-129	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Neptunium-237	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Nickel-63	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Plutonium-238	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Plutonium-239	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Plutonium-240	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Radium-226	No	Naturally occurring isotope that is not significantly associated with 200-CP-1 OU waste streams
Radium-228	No	Naturally occurring isotope that is not significantly associated with 200-CP-1 OU waste streams
Strontium-90	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Technetium-99	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Thorium-232	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams*
Uranium-233	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Uranium-234	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Uranium-235	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
Uranium-238	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams

*Appendix A summarizes additional research conducted to identify waste streams, sources, and discharge sites for thorium-232 within 200-CP-1 OU.

COPC = contaminant of potential concern

OU = operable unit

Table 5. Chemical Candidate COPCs for 200-CP-1 OU

CAS No.	Chemical Candidates	Retained as a COPC?	Comment
75-34-3	1,1-Dichloroethane	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
107-06-2	1,2-Dichloroethane	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
78-93-3	2-Butanone (methyl ethyl ketone)	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
591-78-6	2-Hexanone	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
72-54-8	4,4'-Dichlorodiphenyldichloroethane	No	Analyte is not a waste stream component and was potentially used as a biological control applied on the Hanford Site to prevent the spread of contamination by biological vectors and comply with environmental, safety, health, and quality principals. The potential presence of this pesticide is likely from application of biological controls and not the result of Hanford Site operations and is unlikely to impact groundwater.
72-55-9	4'4-Dichlorodiphenyldichloroethylene	No	
50-29-3	4'4'-Dichlorodiphenyltrichloroethane	No	
108-10-1	4-Methyl-2-pentanone (hexone, methyl isobutyl ketone)	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
83-32-9	Acenaphthene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
208-96-8	Acenaphthylene	No	No available toxicity data.
67-64-1	Acetone	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams only.
75-05-8	Acetonitrile	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
309-00-2	Aldrin	No	Analyte is not a waste stream component and was potentially used as a biological control applied on the Hanford Site to prevent the spread of contamination by biological vectors and comply with environmental, safety, health, and quality principals. The presence of this pesticide is likely from application of biological controls and not the result of Hanford Site operations and is unlikely to impact groundwater.
319-84-6	alpha-BHC (alpha-HCH)	No	
7664-41-7	Ammonia	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
120-12-7	Anthracene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.

Table 5. Chemical Candidate COPCs for 200-CP-1 OU

CAS No.	Chemical Candidates	Retained as a COPC?	Comment
7440-36-0	Antimony	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams only.
11097-67-1	Aroclor-1254	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
11096-82-5	Aroclor-1260	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
7440-38-2	Arsenic	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
7440-39-3	Barium	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
71-43-2	Benzene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
56-55-3	Benzo(a)anthracene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
50-32-8	Benzo(a)pyrene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
205-99-2	Benzo(b)fluoranthene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
191-24-2	Benzo(ghi)perylene	No	No available toxicity data.
207-08-9	Benzo(k)fluoranthene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
7440-41-7	Beryllium	Yes	COPC for waste streams only.
319-85-7	beta-BHC (beta-HCH)	No	Analyte is not a waste stream component and was potentially used as a biological control i applied on the Hanford Site to prevent the spread of contamination by biological vectors and comply with environmental, safety, health, and quality principals. The presence of this pesticide is likely from application of biological controls and not the result of Hanford Site operations and is unlikely to impact groundwater.
7440-42-8	Boron	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
7440-43-9	Cadmium	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams
56-23-5	Carbon tetrachloride	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.

Table 5. Chemical Candidate COPCs for 200-CP-1 OU

CAS No.	Chemical Candidates	Retained as a COPC?	Comment
5103-74-2	Chlordane	No	Analyte is not a waste stream component and was potentially used as a biological control applied on the Hanford Site to prevent the spread of contamination by biological vectors and comply with environmental, safety, health, and quality principals. The presence of this pesticide is likely from application of biological controls and not the result of Hanford Site operations and is unlikely to impact groundwater.
16887-00-6	Chloride	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
108-90-7	Chlorobenzene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
67-66-3	Chloroform	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
7440-47-3	Chromium (total)	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
18540-29-9	Chromium (VI)	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
218-01-9	Chrysene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
156-59-2	cis-1,2-Dichloroethene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
7440-48-4	Cobalt	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
7440-50-8	Copper	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
74-90-8	Cyanide	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
110-82-7	Cyclohexane	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
53-70-3	Dibenz[a,h]anthracene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
132-64-9	Dibenzofuran	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams only.
60-57-1	Dieldrin	No	

Table 5. Chemical Candidate COPCs for 200-CP-1 OU

CAS No.	Chemical Candidates	Retained as a COPC?	Comment
72-20-8	Endrin	No	Analyte is not a waste stream component and was potentially used as a biological control applied on the Hanford Site to prevent the spread of contamination by biological vectors and comply with environmental, safety, health, and quality principals. The presence of this pesticide is likely from application of biological controls and not the result of Hanford Site operations and is unlikely to impact groundwater.
100-41-4	Ethylbenzene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
206-44-0	Fluoranthene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
86-73-7	Fluorene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
16984-48-8	Fluoride	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
58-89-9	gamma-BHC (gamma-HCH, Lindane)	No	Analyte is not a waste stream component and was potentially used as a biological control applied on the Hanford Site to prevent the spread of contamination by biological vectors and comply with environmental, safety, health, and quality principals. The presence of this pesticide is likely from application of biological controls and not the result of Hanford Site operations and is unlikely to impact groundwater.
193-39-5	Indeno[1,2,3-cd]pyrene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
7439-92-1	Lead	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
7439-96-5	Manganese	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
7439-97-6	Mercury	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
75-09-2	Methylene chloride (dichloromethane)	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
91-20-3	Naphthalene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
71-36-3	n-Butanol (butyl alcohol)	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.

Table 5. Chemical Candidate COPCs for 200-CP-1 OU

CAS No.	Chemical Candidates	Retained as a COPC?	Comment
104-51-8	n-Butylbenzene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
110-54-3	n-Hexane	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
7440-02-0	Nickel	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
14797-55-8	Nitrate	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
14797-65-0	Nitrite	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
TPH	Petroleum hydrocarbons (diesel to kerosene range)	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
85-01-8	Phenanthrene	No	No available toxicity data.
108-95-2	Phenol	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
14265-44-2	Phosphate	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
129-00-0	Pyrene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
7782-49-2	Selenium	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
7440-22-4	Silver	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
14996-02-2	Sulfate	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
127-18-4	Tetrachloroethene (PCE)	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
108-88-3	Toluene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
NA	Total polychlorinated biphenyls	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
156-60-5	trans-1,2-Dichloroethene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
126-73-8	Tributyl phosphate	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
71-55-6	1,1,1-Trichloroethane	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
79-00-5	1,1,2-Trichloroethane	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.

Table 5. Chemical Candidate COPCs for 200-CP-1 OU

CAS No.	Chemical Candidates	Retained as a COPC?	Comment
79-01-6	Trichloroethene	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
7440-61-1	Uranium	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
7440-62-2	Vanadium	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
75-01-4	Vinyl chloride	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
1330-20-7	Xylenes (total)	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.
7440-66-6	Zinc	Yes	COPC for 202A Process Unit and 200-CP-1 waste streams.

CAS = Chemical Abstracts Service
COPC = contaminant of potential concern
OU = operable unit

7.2 Soil Background Evaluation

Soil samples concentrations for all detected organics, anions, metals, and radionuclides can be found in Table B-1 of this ECF. Analytes included during analytical testing is presented in Table B-2. The results of the background comparison of soil sample maximum concentrations shown in Table 6 identified exceedances of background concentrations. When analytes with background concentrations were considered (anions, metals, and radionuclides), 209 instances were identified where an analyte maximum concentration exceeded the Lognormal 90th percentile background concentration as presented in Table 6. Of these exceedances, 78 were metals, 23 were anions, and 108 were radionuclides. Nine instances occurred in the shallow (<4.6 m [15 ft]) vadose zone which included seven exceedances for radionuclides and one each for metals and anions. In many of the cases, regardless of analyte class, concentrations were above the Lognormal 90th percentile background level in the deep (>4.6 m [15 ft]) vadose zone.

Table 6. Maximum Detected Soil Concentrations of Anions, Metals, and Radionuclides Compared to Background Soil Concentration Values

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Services No.	Number of Detects	Maximum Concentration	Lognormal 90th Percentile Background Value	No. of Detects >Lognormal 90th Percentile Background Value
Anion (Unit Concentration µg/kg)								
C5301	0	<15	Phosphate	14265-44-2	2	2,400	785	1
	45.5	>15	Phosphate	14265-44-2	1	4,200	785	1
	247.5		Nitrate	14797-55-8	1	55,700	52,000	1
	260				1	55,700		1
	262				1	92,500		1
	283				1	204,000		1
	285				1	185,000		1
	287.5				1	205,000		1
	292.5				1	233,000		1
	297.5				1	219,000		1
C5515	30.5	>15	Phosphate	14265-44-2	1	47,800	785	1
	31.5				3	103,218		3
	32				1	110,000		1
	34.5				4	65,037		4
	37.5				1	103,00		1
	40				1	5,920		1
	45.5				1	6,470		1
	47.5				1	6,950		1
	287		Nitrate	14797-55-8	1	57,100	52,000	1
	297.5				1	203,000		1
	302.5				1	234,000		1

Table 6. Maximum Detected Soil Concentrations of Anions, Metals, and Radionuclides Compared to Background Soil Concentration Values

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Services No.	Number of Detects	Maximum Concentration	Lognormal 90th Percentile Background Value	No. of Detects >Lognormal 90th Percentile Background Value
C5571	40.5	>15	Nitrate	14797-55-8	1	113,000	52,000	1
	59.9				1	1,020,000		1
Metals (Unit Concentration µg/kg)								
C5301	0	<15	Mercury	7439-97-6	1	29.7	13.1	1
	283	>15	Aluminum	7429-90-5	1	12,800,000	11,800,000	1
	287.5				1	15,300,000		1
	292.5				1	13,400,000		1
	297.5				1	22,900,000		1
	287.5		Barium	7440-39-3	1	150,000	132,000	1
	292.5				1	187,000		1
	297.5				1	197,000		1
	292.5		Calcium	7440-70-2	1	21,800,000	17,200,000	1
	283		Chromium	7440-47-3	1	23,100	18,500	1
	285				1	25,000		1
	287.5				1	30,600		1
	292.5				1	29,400		1
	297.5				1	50,600		1
	305				1	22,300		1
	315				1	23,500		1
	297.5		Cobalt	7440-48-4	1	17,400	15,700	1
	287.5		Copper	7440-50-8	1	28,300	22,000	1
	292.5			7440-50-8	1	32,600		1
	297.5			7440-50-8	1	40,200		1

Table 6. Maximum Detected Soil Concentrations of Anions, Metals, and Radionuclides Compared to Background Soil Concentration Values

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Services No.	Number of Detects	Maximum Concentration	Lognormal 90th Percentile Background Value	No. of Detects >Lognormal 90th Percentile Background Value
C5301 (cont.)	297.5	>15	Iron	7439-89-6	1	34,600,000	32,600,000	1
	283		Magnesium	7439-95-4	1	7,590,000	7,060,000	1
	287.5				1	10,000,000		1
	292.5				1	10,200,000		1
	297.5				1	13,600,000		1
	292.5		Manganese	7439-96-5	1	726,000	512,000	1
	297.5				1	589,000		1
	283		Nickel	7440-02-0	1	25,100	19,100	1
	287.5				1	31,400		1
	292.5				1	30,500		1
	297.5				1	43,100		1
	283		Potassium	7440-09-7	1	2,260,000	2,150,000	1
	287.5				1	2,870,000		1
	292.5				1	2,230,000		1
	297.5				1	3,650,000		1
	287.5		Zinc	7440-66-6	1	72,900	67,800	1
	292.5				1	78,300		1
	297.5				1	92,000		1
C5302	54.94		Chromium	7440-47-3	1	24,300	18,500	1
C5515	285		Barium	7440-39-3	1	158,000	132,000	1
	290				1	204,000		1
	297.5				1	142,000		1
	302.5				1	134,000		1

Table 6. Maximum Detected Soil Concentrations of Anions, Metals, and Radionuclides Compared to Background Soil Concentration Values

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Services No.	Number of Detects	Maximum Concentration	Lognormal 90th Percentile Background Value	No. of Detects >Lognormal 90th Percentile Background Value
C5515 (cont.)	290	>15	Calcium	7440-70-2	1	21,000,000	17,200,000	1
	285		Chromium	7440-47-3	1	34,600	18,500	1
	287				1	23,600		1
	290				1	47,500		1
	297.5				1	23,600		1
	302.5				1	20,900		1
	285		Copper	7440-50-8	1	24,900	22,000	1
	287				1	23,300		1
	290				1	37,400		1
	297.5				1	23,500		1
	287		Lead	7439-92-1	1	10,300	10,200	1
	285		Magnesium	7439-95-4	1	9,490,000	7,060,000	1
	290				1	12,400,000		1
	297.5				1	7,450,000		1
	302.5				1	7,230,000		1
	25		Mercury	7439-97-6	1	54	13.1	1
	30.5				2	73.5		2
	31.5				2	112		2
	34.5				2	154		2
	72.5				1	66		1
	290				1	79		1

Table 6. Maximum Detected Soil Concentrations of Anions, Metals, and Radionuclides Compared to Background Soil Concentration Values

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Services No.	Number of Detects	Maximum Concentration	Lognormal 90th Percentile Background Value	No. of Detects >Lognormal 90th Percentile Background Value
C5515 (cont.)	285	>15	Potassium	7440-09-7	1	3,270,000	2,150,000	1
	290				1	3,320,000		1
	297.5				1	2,320,000		1
	287		Selenium	7782-49-2	1	786	780	1
	30.5		Silver	7440-22-4	1	925	167	1
	31.5				3	630		2
	32				1	457		1
	34.5				4	416		3
	31.5		Uranium	7440-61-1	2	147,000	3,210	2
	34.5				1	106,000		1
C5571	40.5		Mercury	7439-97-6	1	980	13.1	1
	59.9				1	160		1
	40.5		Silver	7440-22-4	1	179	167	1
	59.9		Sodium	7440-23-5	1	726,000	690,000	1
Radionuclides (Unit Concentration pCi/g)								
C5301	0	<15	Cesium-137	10045-97-3	3	8.48	1.05	2
	0		Gross beta	12587-47-2	1	145	22.96	1
	0		Plutonium-239/240	PU-239/240	1	2.15	0.0248	1
	0		Potassium-40	13966-00-2	3	61.9	16.6	2
	0		Radium-226	13982-63-3	1	32.2	0.815	1
	0		Strontium-90	10098-97-2	1	21.2	0.178	1
	0		Uranium-238	U-238	2	30.8	1.06	1

Table 6. Maximum Detected Soil Concentrations of Anions, Metals, and Radionuclides Compared to Background Soil Concentration Values

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Services No.	Number of Detects	Maximum Concentration	Lognormal 90th Percentile Background Value	No. of Detects >Lognormal 90th Percentile Background Value
C5301	22.5	>15	Cesium-137	10045-97-3	1	4.85	1.05	1
	22.5		Potassium-40	13966-00-2	2	65.5	16.64	1
	31			13966-00-2	2	59.4	16.64	2
	40			13966-00-2	2	61.6	16.64	2
	45.5		Plutonium-239/240	PU-239/240	2	0.028	0.0248	1
	45.5		Potassium-40	13966-00-2	1	17.1	16.64	1
	45.5		Strontium-90	10098-97-2	2	0.44	0.178	1
	59.5		Potassium-40	13966-00-2	2	60.6	16.64	2
	73				2	73		2
	77.5				2	69.5		2
	90.5				2	56.6		2
	100				1	21.4		1
	108.5				1	20.1		1
	120				2	64.8		2
	124		Plutonium-239/240	PU-239/240	1	0.067	0.0248	1
	131		Potassium-40	13966-00-2	2	84	16.64	2
	137.5			13966-00-2	2	31.9	16.64	2
	145.5		Gross beta	12587-47-2	1	28	22.96	1
	145.5		Potassium-40	13966-00-2	1	24.7	16.64	1
	147.5		Gross beta	12587-47-2	2	42	22.96	1

Table 6. Maximum Detected Soil Concentrations of Anions, Metals, and Radionuclides Compared to Background Soil Concentration Values

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Services No.	Number of Detects	Maximum Concentration	Lognormal 90th Percentile Background Value	No. of Detects >Lognormal 90th Percentile Background Value
C5301 (cont.)	147.5	>15	Potassium-40	13966-00-2	3	51.6	16.64	3
	163			13966-00-2	1	18.9	16.64	1
	172.5			13966-00-2	2	67.4	16.64	1
	200			13966-00-2	1	17.1	16.64	1
	205			13966-00-2	2	66.4	16.64	2
	235			13966-00-2	1	18.6	16.64	1
	247.5			13966-00-2	1	19.9	16.64	1
	260			13966-00-2	1	19.4	16.64	1
	270			13966-00-2	1	18.4	16.64	1
	283			13966-00-2	1	22.4	16.64	1
	287.5			13966-00-2	1	21.3	16.64	1
	292.5			13966-00-2	1	23.7	16.64	1
	297.5			13966-00-2	1	21.1	16.64	1
	305			13966-00-2	1	17.3	16.64	1
C5302	54.94	>15	Cobalt-60	10198-40-0	1	0.072	0.00842	1
	54.94		Potassium-40	13966-00-2	3	52.7	16.64	1
C5515	27.5	>15	Cesium-137	10045-97-3	1	31,000	1.05	1
	27.5		Gross beta	12587-47-2	1	341,000	22.96	1
	27.5		Plutonium-239/240	PU-239/240	1	426,000	0.0248	1
	27.5		Strontium-90	10098-97-2	1	125,000	0.178	1
	27.5		Uranium-234	13966-29-5	1	48.4	1.098	1
	27.5		Uranium-235	15117-96-1	1	1.97	0.109	1
	27.5		Uranium-238	U-238	1	47.4	1.059	1

Table 6. Maximum Detected Soil Concentrations of Anions, Metals, and Radionuclides Compared to Background Soil Concentration Values

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Services No.	Number of Detects	Maximum Concentration	Lognormal 90th Percentile Background Value	No. of Detects >Lognormal 90th Percentile Background Value
C5515 (cont.)	30.5	>15	Cesium-137	10045-97-3	2	12,700	1.05	2
	30.5		Gross beta	12587-47-2	1	361,000	22.96	1
	30.5		Strontium-90	10098-97-2	1	162,000	0.178	1
	30.5		Uranium-238	U-238	1	18.5	1.059	1
	31.5		Cesium-137	10045-97-3	4	3,700	1.05	4
	31.5		Cobalt-60	10198-40-0	3	0.382	0.00842	3
	31.5		Gross beta	12587-47-2	1	45,500	22.96	1
	31.5		Plutonium-238	13981-16-3	2	78.1	0.00378	2
	31.5		Plutonium-239/240	PU-239/240	2	5,350	0.0248	2
	31.5		Strontium-90	10098-97-2	3	27,800	0.178	3
	31.5		Uranium-233/234	U-233/234	2	42.1	1.098	2
	31.5		Uranium-235	15117-96-1	4	4.28	0.109	1
	31.5		Uranium-238	U-238	5	49.7	1.059	3
	32		Cesium-137	10045-97-3	2	448	1.05	2
	32		Gross beta	12587-47-2	1	11,100	22.96	1
	32		Strontium-90	10098-97-2	1	8,370	0.178	1
	32		Uranium-238	U-238	1	17.5	1.059	1
	34.5		Cesium-137	10045-97-3	6	1,700	1.05	6
	34.5		Cobalt-60	10198-40-0	2	0.356	0.00842	2
	34.5		Europium-154	15585-10-1	2	1.28	0.0334	1
	34.5		Gross beta	12587-47-2	2	38,200	22.96	2
	34.5		Plutonium-238	13981-16-3	2	120	0.00378	2
	34.5		Plutonium-239/240	PU-239/240	2	6,360	0.0248	2

Table 6. Maximum Detected Soil Concentrations of Anions, Metals, and Radionuclides Compared to Background Soil Concentration Values

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Services No.	Number of Detects	Maximum Concentration	Lognormal 90th Percentile Background Value	No. of Detects >Lognormal 90th Percentile Background Value
C5515 (cont.)	34.5	>15	Strontium-90	10098-97-2	4	22,700	0.178	4
	34.5		Uranium-233/234	U-233/234	2	43.2	1.098	2
	34.5		Uranium-235	15117-96-1	3	3.9	0.109	1
	34.5		Uranium-238	U-238	5	68.6	1.059	4
	37.5		Cesium-137	10045-97-3	2	1,390	1.05	2
	37.5		Cobalt-60	10198-40-0	1	1.25	0.00842	1
	37.5		Gross beta	12587-47-2	1	10,900	22.96	1
	37.5		Strontium-90	10098-97-2	1	6,290	0.178	1
	37.5		Uranium-238	U-238	1	9.68	1.059	1
	40		Cesium-137	10045-97-3	2	41.9	1.05	2
	40		Gross beta	12587-47-2	1	133	22.96	1
	40		Strontium-90	10098-97-2	1	83.8	0.178	1
	45.5		Cesium-137	10045-97-3	1	2.5	1.05	1
	45.5		Strontium-90	10098-97-2	1	15.3	0.178	1
	47.5		Cesium-137	10045-97-3	2	38.3	1.05	2
	47.5		Gross beta	12587-47-2	1	195	22.96	1
	47.5		Strontium-90	10098-97-2	1	101	0.178	1
	49.5		Cesium-137	10045-97-3	1	14.5	1.05	1
	49.5		Plutonium-239/240	PU-239/240	1	0.56	0.0248	1
	49.5		Strontium-90	10098-97-2	1	2.2	0.178	1
	57		Cesium-137	10045-97-3	1	5.31	1.05	1
	57		Plutonium-239/240	PU-239/240	1	1.8	0.0248	1
	57		Strontium-90	10098-97-2	1	3.5	0.178	1

Table 6. Maximum Detected Soil Concentrations of Anions, Metals, and Radionuclides Compared to Background Soil Concentration Values

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Services No.	Number of Detects	Maximum Concentration	Lognormal 90th Percentile Background Value	No. of Detects >Lognormal 90th Percentile Background Value
C5515 (cont.)	57.5	>15	Cesium-137	10045-97-3	2	9.01	1.05	2
	57.5		Cobalt-60	10198-40-0	1	0.919	0.00842	1
	57.5		Gross beta	12587-47-2	1	86.3	22.96	1
	57.5		Strontium-90	10098-97-2	1	56.2	0.178	1
	64.5		Cesium-137	10045-97-3	1	7.78	1.05	1
	64.5		Strontium-90	10098-97-2	1	28	0.178	1
	72.5				1	5.15		1
	195				1	8.36		1
C5571	26.6	>15	Strontium-90	10098-97-2	1	13700	0.178	1
	40.5		Cesium-137	10045-97-3	2	3670	1.05	2
	40.5		Uranium-238	U-238	1	2.33	1.059	1
	59.9		Cesium-137	10045-97-3	2	176	1.05	2

8 References

ARH-947, 1972, *200 Areas Disposal Sites for Radioactive Liquid Wastes*, Atlantic Richfield Hanford Company, Richland, Washington. Available at: https://pdw.hanford.gov/document/0071668H.

BHl-01411, 2001, *Remedial Investigation Data Quality Objectives Summary Report for the 200-PW-2 Uranium-Rich Process Waste Group Operable Unit*, Rev. 0, Bechtel Hanford, Inc., Richland, Washington. Available at: https://pdw.hanford.gov/document/D8793039.

BHI-01239, 1999, *200-CW-l Gable B Pond and Ditches Cooling Water Waste Group Data Quality Objectives Summary Report*, Rev. 0, Bechtel Hanford, Inc., Richland, Washington. Available at: https://pdw.hanford.gov/document/D8221441.

CP-14176, 2002, *Remedial Investigation Data Quality Objectives Summary Report for the 200-PW-4 Operable Unit*, Rev. 0, Fluor Hanford, Richland, Washington. Available at:

CP-14682, 2002, *Data Quality Objectives Summary Report for the Designation of the 200-PW-2 and 200-PW-4 Investigation Derived Wastes*, Rev. 0, Fluor Hanford, Richland, Washington.

D&D-33703, 2007, *Data Quality Objectives Summary Report for Characterization of the 202-A Building (PUREX Canyon)*, Rev. 0, Fluor Hanford, Richland, Washington.

DOE/EIS-0391, 2012, *Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington (TC & WM EIS)*, U.S. Department of Energy, Office of River Protection, Richland, Washington. Available at: http://energy.gov/nepa/downloads/eis-0391-final-environmental-impact-statement.

DOE/RL-92-04, 1993, *PUREX Source Aggregate Area Management Study Report*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington. Available at: http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=D196124097. http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=D196124099.

DOE/RL-92-19, 1993, *200 East Groundwater Aggregate Area Management Study Report*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington. Available at: http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=D196136029. http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=D196136305

DOE/RL-92-24, 2001, *Hanford Site Background: Part 1, Soil Background for Nonradioactive Analytes*, Rev. 4, 2 vols., U.S. Department of Energy, Richland Operations Office, Richland, Washington. Available at: http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=0096062. http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=0096061.

DOE/RL-96-12, 1996, *Hanford Site Background: Part 2, Soil Background for Radionuclides*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington. Available at: http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=D1808987.

DOE/RL-2007-02, 2007, *Supplemental Remedial Investigation/Feasibility Study Work Plan for the 200 Areas Central Plateau Operable Units: Volume I: Work Plan and Appendices*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington. Available at: http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=0099914.

DOE/RL-2008-44, 2009, *Engineering Evaluation/Cost Analysis for the 200-MG-1 Operable Unit Waste Sites*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington. Available at: http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=0096350.

DOE/RL-2008-45, 2009, *Engineering Evaluation/Cost Analysis for the 200-MG-2 Operable Unit Waste Sites*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington. Available at: http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=0096566.

DOE/RL-2016-58, 2019, *200-EA-1 Operable Unit Waste Site RCRA Facility Remedial Investigation/Corrective Measures Study*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2018-66, 2019, *Hanford Site Groundwater Monitoring Report for 2018*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington. Available at: https://pdw.hanford.gov/document/AR-03138.

DOE/RL-2020-27, *Remedial Investigation/Feasibility Study Work Plan for the 200-CP-1 Operable Unit*, Draft A pending, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

ECF-200EA1-18-0061, 2018, *Development of Contaminants of Potential Concern for the 200-EA-1 Operable Unit*, Rev. 0, CH2M HILL Plateau Remediation Company, Richland, Washington. Available at: https://pdw.hanford.gov/document/0064402H.

ECF-HANFORD-11-0038, 2012, *Soil Background for Interim Use at the Hanford Site*, Rev. 0, CH2M HILL Plateau Remediation Company, Richland, Washington. Available at: http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=0088381.

ECF-HANFORD-16-0027, 2016, *Tank Closure and Waste Management Environmental Impact Statement STOMP Model Baseline Recalculation: PUREX Area*, Rev. 0, CH2M HILL Plateau Remediation Company, Richland, Washington.

ECF-HANFORD-17-0079, 2018, *Hanford Soil Inventory Model (SIM-v2) Calculated Radionuclide Inventory of Direct Liquid Discharges to Soil in the Hanford Site's 200 Areas*, Rev. 0, CH2M HILL Plateau Remediation Company, Richland, Washington.

ECF-HANFORD-20-0057, 2020, *Tank Closure and Waste Management Environmental Impact Statement STOMP Model Baseline Recalculation: PUREX Area (Chemical Constituents)*, Rev. 0, CH2M HILL Plateau Remediation Company, Richland, Washington.

HNF-1744, 1999, *Radionuclide Inventories of Liquid Waste Disposal Sites on the Hanford Site*, Fluor Daniel Hanford Inc., Richland, Washington. Available at: https://pdw.hanford.gov/document/00099930.

PNNL-6456, 1988, *Hazard Ranking System Evaluation of CERCLA Inactive Waste Sites at Hanford Volume 1 – Evaluation Methods and Results, Pacific Northwest Laboratory*, Richland, Washington. Available at: https://www.osti.gov/servlets/purl/6849042.

RHO-CD-673, 1979, *Handbook 200 Areas Waste Sites*, Rockwell Hanford Operations, Richland, Washington. Available at:
https://pdw.hanford.gov/document/D196039027.
https://pdw.hanford.gov/document/D196039028.
https://pdw.hanford.gov/document/D196039029.

RPP-26744, 2005, *Hanford Soil Inventory Model*, Rev. 1, CH2M Hanford Group, Richland Washington. Available at: https://pdw.hanford.gov/document/0081114H.

SGW-60540, 2017, *200-EA-1 Operable Unit Scoping*, CH2M HILL Plateau Remediation Company. Richland, Washington. Available at: http://pdw.hanford.gov/arpir/pdf.cfm?accession=0068822H.

WHC-EP-0172, 1988, *Inventory of Chemicals Used at Hanford Production Plants and Support Operations (1944-1980)*, Rev. 0, Westinghouse Hanford Company, Richland, Washington. Available at: https://pdw.hanford.gov/document/D196007060.

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Appendix A

Soil Waste Sites that Received Liquid Waste During Plutonium-Uranium Extraction Thorium Campaigns

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A1 Introduction

This appendix summarizes additional research conducted to identify waste streams, sources, and discharge sites for thorium-232 within 200-CP-1 Operable Unit (OU).

A1.1 Evaluation

The purpose of this evaluation was to identify 200-CP-1 OU waste sites that may need to consider thorium-232 as a contaminant of potential concern because of discharges that would have occurred during the PUREX thorium processing campaigns. The evaluation is based on review of ARH-2127, *PUREX Process Operation and Performance 1970 Thoria Campaign*, a detailed description of the flowsheet and operations of the thorium run in September to December 1970.

According to ARH-2127, the process flowsheet and operations for the 1970 campaign made only slight modifications to the flowsheet for the campaign that took place from May to July 1966 to improve equipment performance and product recovery. Based on review of the process descriptions in the document, comparison with the flow sketch, and the operational periods of the soil waste sites, liquid wastes discharged to soil waste sites during the thorium campaigns are listed in Table A-1.

Table A-1. Liquid Wastes Discharged to Soil Waste Sites During the Thorium Campaigns

Liquid Waste Stream	Source	Discharge Site	Operable Unit
Ammonia scrubber waste	Ammonia scrubber catch tank in cladding removal step	216-A-36B Crib	200-EA-1
Cladding waste[a]	Cladding removal step	Tank farms	N/A
Process condensate	E-H4 concentrator in the first partitioning cycle	216-A-10 Crib	200-EA-1
	E-F6 concentrator in the waste concentration/acid recovery system		
	E-J8 and E-K4 concentrators in the thorium purification system		
Acid fractionator waste	T-U6 in the waste concentration/acid recovery system	216-B-3 (B Pond) Via 216-A-29 ditch	200-CW-1 200-EA-1
Cooling water	Multiple locations throughout the process	216-A-25 (Gable Mountain Pond)	200-CW-1
Miscellaneous waste[b,c]	Laboratory hood and cell drainage 291A Stack drainage 293A Backup Facility waste	216-A-27 Crib	200-EA-1
Cooling water Steam condensate	Multiple locations throughout the process	216-A-30 Crib (1970 campaign)	200-EA-1
		216-A-6 Crib (1966 campaign)	200-EA-1
Chemical sewer waste	Multiple locations throughout the process	216-B-3 (B Pond) (1970 campaign)	200-CW-1
		216-A-9 Crib (1966 campaign)	200-EA-1

Table A-1. Liquid Wastes Discharged to Soil Waste Sites During the Thorium Campaigns

Liquid Waste Stream	Source	Discharge Site	Operable Unit
Sump drainage	203A sumps and truck apron in the thorium loadout step	216-A-3 Crib (1970 campaign)	200-EA-1
		216-A-28 Crib (1966 campaign)	200-CP-1

a. This waste was routed through the 241-A-151 Diversion Box while being discharged to tank farms. However, because the cladding waste resulted from removal of the aluminum coating from the thorium fuel and it was treated to recover residual thorium prior to discharge, it is likely that there would only have been trace amounts of thorium-232 present in the cladding waste.

b. Waste discharges to 216-A-27 Crib ceased in September 1970 and remaining wastes were routed to tank farms.

c. Trace amounts of thorium-232 may have been present in the stack drainage and sump waste from the 293A Backup facility that would have been routed through 216-TK-1/2 (200-E-189 and 200-E-190, assigned to 200-CP-1) prior to discharge to 216-A-27 Crib/Tank Farms.

N/A = not applicable

In addition, process waste from the cladding removal step, high activity waste from the fuel dissolution step, and process waste from the organic recovery system were discharged to the tank farms. Gaseous effluent from dissolver off-gas, process vent system, and canyon/gallery/laboratory ventilation was discharged through the 291A main exhaust stack and other building exhaust stacks.

Figure A-1 highlights the process wastes that were discharged during the thorium campaigns.

A1.2 Summary

The following soil waste site assigned to the 200-CP-1 OU received liquid waste that may have contained some thorium-232:

- **216-A-28 Crib** – received drainage from 203A sumps and drains that likely contained thorium-232 from equipment leakage occurring during the thorium loadout process.

The following structures assigned to the 200-CP-1 OU may have received some thorium-232 as part of process operations during the thorium campaigns:

- **241-A-151 Diversion Box and 241-A-302A Catch Tank** – discharge route for batch transfers of cladding waste to tank farms; may have received trace amounts of thorium-232 during transfers.
- **200-E-189 Neutralization Tank and 200-E-190 Catch Tank** – received 291A stack drainage and sump drainage from 293A backup facility; may have received trace amounts of thorium-232 from equipment leakage in the backup facility and stack condensate.

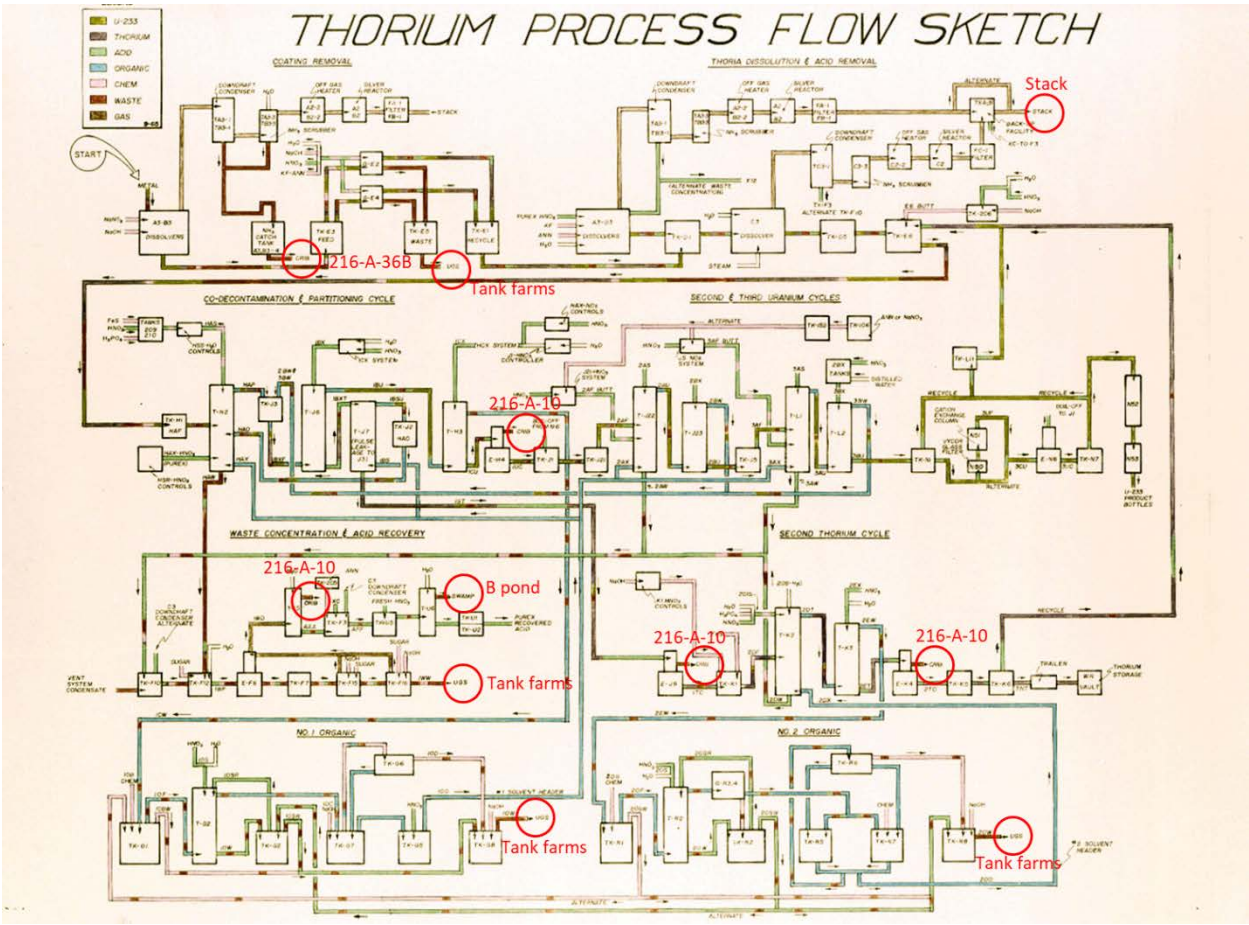

Figure A-1. Thorium Process Flow Sketch

A2 Reference

ARH-2127, 2001, *PUREX Process Operation and Performance 1970 Thoria Campaign*, Atlantic Richfield Hanford Company, Richland, Washington. Available at: https://pdw.hanford.gov/document/0077159H.

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Appendix B

200-CP-1 Operable Unit Soil Background Comparisons

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Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
Organics (Concentration Units µg/kg)								
C5301	0	<15 ft	1-Butanol	71-36-3	1	640	640	640
C5301	0	<15 ft	2-Butanone	78-93-3	1	190	190	190
C5301	0	<15 ft	Carbon disulfide	75-15-0	1	21	21	21
C5301	0	<15 ft	Decane	124-18-5	1	1800	1800	1800
C5301	0	<15 ft	Dodecane	112-40-3	1	660	660	660
C5301	0	<15 ft	Ethylbenzene	100-41-4	1	3.9	3.9	3.9
C5301	0	<15 ft	Toluene	108-88-3	1	850	850	850
C5301	0	<15 ft	Xylenes (total)	1330-20-7	1	12	12	12
C5515	34.5	>15 ft	1,2,4-Trimethylbenzene	95-63-6	2	0.43	0.55	0.49
C5515	34.5	>15 ft	Acetone	67-64-1	1	8.2	8.2	8.2
C5515	34.5	>15 ft	Methylene chloride	75-09-2	1	3.7	3.7	3.7
C5515	34.5	>15 ft	Styrene	100-42-5	1	9	9	9
C5515	34.5	>15 ft	Toluene	108-88-3	2	0.54	0.57	0.555
C5515	57	>15 ft	Acetone	67-64-1	1	7	7	7
C5515	135	>15 ft	Acetone	67-64-1	1	6.4	6.4	6.4
C5571	26.6	>15 ft	1,2,4-Trimethylbenzene	95-63-6	1	0.4	0.4	0.4
C5571	26.6	>15 ft	Toluene	108-88-3	1	0.56	0.56	0.56
C5301	262	>15 ft	Oil and grease	OIL/GREASE	1	250000	250000	250000
C5301	31.5	>15 ft	Di-n-butylphthalate	84-74-2	1	200	200	200
C5301	124	>15 ft	Diethylphthalate	84-66-2	1	280	280	280
C5515	34.5	>15 ft	Bis(2-ethylhexyl) phthalate	117-81-7	1	47	47	47
C5515	34.5	>15 ft	Di-n-butylphthalate	84-74-2	1	38	38	38
C5515	34.5	>15 ft	Tributyl phosphate	126-73-8	1	20	20	20

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	31.5	>15 ft	Aroclor-1254	11097-69-1	1	52	52	52
C5515	34.5	>15 ft	Aroclor-1254	11097-69-1	2	34	49	41.5
Anion (Concentration Unit µg/kg)								
C5301	0	<15 ft	Chloride	16887-00-6	2	788	4300	2544
C5301	0	<15 ft	Cyanide	57-12-5	1	170	170	170
C5301	0	<15 ft	Nitrate	14797-55-8	2	1290	19500	10395
C5301	0	<15 ft	Nitrogen in Nitrite and Nitrate	NO2+NO3-N	1	3600	3600	3600
C5301	0	<15 ft	Phosphate	14265-44-2	1	2400	2400	2400
C5301	0	<15 ft	Sulfate	14808-79-8	2	18700	74100	46400
C5301	31	>15 ft	Chloride	16887-00-6	1	469	469	469
C5301	45.5	>15 ft	Chloride	16887-00-6	1	500	500	500
C5301	59.5	>15 ft	Chloride	16887-00-6	1	482	482	482
C5301	100	>15 ft	Chloride	16887-00-6	1	9290	9290	9290
C5301	108.5	>15 ft	Chloride	16887-00-6	1	8450	8450	8450
C5301	120	>15 ft	Chloride	16887-00-6	1	5260	5260	5260
C5301	124	>15 ft	Chloride	16887-00-6	1	6560	6560	6560
C5301	131	>15 ft	Chloride	16887-00-6	1	6810	6810	6810
C5301	137.5	>15 ft	Chloride	16887-00-6	1	6790	6790	6790
C5301	147.5	>15 ft	Chloride	16887-00-6	1	2280	2280	2280
C5301	163	>15 ft	Chloride	16887-00-6	1	1150	1150	1150
C5301	172.5	>15 ft	Chloride	16887-00-6	1	557	557	557
C5301	200	>15 ft	Chloride	16887-00-6	1	730	730	730
C5301	205	>15 ft	Chloride	16887-00-6	1	354	354	354

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	222.5	>15 ft	Chloride	16887-00-6	1	501	501	501
C5301	262	>15 ft	Chloride	16887-00-6	1	1810	1810	1810
C5301	270	>15 ft	Chloride	16887-00-6	1	552	552	552
C5301	283	>15 ft	Chloride	16887-00-6	1	864	864	864
C5301	287.5	>15 ft	Chloride	16887-00-6	1	1020	1020	1020
C5301	292.5	>15 ft	Chloride	16887-00-6	1	845	845	845
C5301	297.5	>15 ft	Chloride	16887-00-6	1	628	628	628
C5301	305	>15 ft	Chloride	16887-00-6	1	1170	1170	1170
C5301	315	>15 ft	Chloride	16887-00-6	1	1130	1130	1130
C5301	31.5	>15 ft	Cyanide	57-12-5	1	890	890	890
C5301	22.5	>15 ft	Fluoride	16984-48-8	1	652	652	652
C5301	73	>15 ft	Fluoride	16984-48-8	1	228	228	228
C5301	90.5	>15 ft	Fluoride	16984-48-8	1	323	323	323
C5301	131	>15 ft	Fluoride	16984-48-8	1	253	253	253
C5301	137.5	>15 ft	Fluoride	16984-48-8	1	285	285	285
C5301	147.5	>15 ft	Fluoride	16984-48-8	1	245	245	245
C5301	270	>15 ft	Fluoride	16984-48-8	1	279	279	279
C5301	287.5	>15 ft	Fluoride	16984-48-8	1	356	356	356
C5301	292.5	>15 ft	Fluoride	16984-48-8	1	423	423	423
C5301	22.5	>15 ft	Nitrate	14797-55-8	1	2890	2890	2890
C5301	31	>15 ft	Nitrate	14797-55-8	1	1130	1130	1130
C5301	45.5	>15 ft	Nitrate	14797-55-8	1	2570	2570	2570
C5301	90.5	>15 ft	Nitrate	14797-55-8	1	13200	13200	13200
C5301	100	>15 ft	Nitrate	14797-55-8	1	12000	12000	12000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	108.5	>15 ft	Nitrate	14797-55-8	1	8460	8460	8460
C5301	120	>15 ft	Nitrate	14797-55-8	1	3310	3310	3310
C5301	124	>15 ft	Nitrate	14797-55-8	1	4910	4910	4910
C5301	131	>15 ft	Nitrate	14797-55-8	1	3070	3070	3070
C5301	137.5	>15 ft	Nitrate	14797-55-8	1	2320	2320	2320
C5301	147.5	>15 ft	Nitrate	14797-55-8	1	1620	1620	1620
C5301	163	>15 ft	Nitrate	14797-55-8	1	1660	1660	1660
C5301	172.5	>15 ft	Nitrate	14797-55-8	1	3290	3290	3290
C5301	200	>15 ft	Nitrate	14797-55-8	1	20100	20100	20100
C5301	205	>15 ft	Nitrate	14797-55-8	1	35700	35700	35700
C5301	222.5	>15 ft	Nitrate	14797-55-8	1	45400	45400	45400
C5301	235	>15 ft	Nitrate	14797-55-8	1	51400	51400	51400
C5301	247.5	>15 ft	Nitrate	14797-55-8	1	55700	55700	55700
C5301	260	>15 ft	Nitrate	14797-55-8	1	55700	55700	55700
C5301	262	>15 ft	Nitrate	14797-55-8	1	92500	92500	92500
C5301	270	>15 ft	Nitrate	14797-55-8	1	26700	26700	26700
C5301	283	>15 ft	Nitrate	14797-55-8	1	204000	204000	204000
C5301	285	>15 ft	Nitrate	14797-55-8	1	185000	185000	185000
C5301	287.5	>15 ft	Nitrate	14797-55-8	1	205000	205000	205000
C5301	292.5	>15 ft	Nitrate	14797-55-8	1	233000	233000	233000
C5301	297.5	>15 ft	Nitrate	14797-55-8	1	219000	219000	219000
C5301	305	>15 ft	Nitrate	14797-55-8	1	25200	25200	25200
C5301	315	>15 ft	Nitrate	14797-55-8	1	26700	26700	26700
C5301	45.5	>15 ft	Nitrite	14797-65-0	1	427	427	427

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	45.5	>15 ft	Phosphate	14265-44-2	1	4200	4200	4200
C5301	22.5	>15 ft	Sulfate	14808-79-8	1	2380	2380	2380
C5301	31	>15 ft	Sulfate	14808-79-8	1	3580	3580	3580
C5301	40	>15 ft	Sulfate	14808-79-8	1	1470	1470	1470
C5301	45.5	>15 ft	Sulfate	14808-79-8	1	4300	4300	4300
C5301	59.5	>15 ft	Sulfate	14808-79-8	1	3630	3630	3630
C5301	73	>15 ft	Sulfate	14808-79-8	1	7060	7060	7060
C5301	77.5	>15 ft	Sulfate	14808-79-8	1	8600	8600	8600
C5301	90.5	>15 ft	Sulfate	14808-79-8	1	8520	8520	8520
C5301	100	>15 ft	Sulfate	14808-79-8	1	32500	32500	32500
C5301	108.5	>15 ft	Sulfate	14808-79-8	1	23000	23000	23000
C5301	120	>15 ft	Sulfate	14808-79-8	1	15400	15400	15400
C5301	124	>15 ft	Sulfate	14808-79-8	1	13500	13500	13500
C5301	131	>15 ft	Sulfate	14808-79-8	1	9500	9500	9500
C5301	137.5	>15 ft	Sulfate	14808-79-8	1	7200	7200	7200
C5301	147.5	>15 ft	Sulfate	14808-79-8	1	15800	15800	15800
C5301	163	>15 ft	Sulfate	14808-79-8	1	5150	5150	5150
C5301	172.5	>15 ft	Sulfate	14808-79-8	1	2830	2830	2830
C5301	185.5	>15 ft	Sulfate	14808-79-8	1	2370	2370	2370
C5301	200	>15 ft	Sulfate	14808-79-8	1	2390	2390	2390
C5301	205	>15 ft	Sulfate	14808-79-8	1	1780	1780	1780
C5301	222.5	>15 ft	Sulfate	14808-79-8	1	2150	2150	2150
C5301	235	>15 ft	Sulfate	14808-79-8	1	2760	2760	2760
C5301	247.5	>15 ft	Sulfate	14808-79-8	1	2510	2510	2510

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	260	>15 ft	Sulfate	14808-79-8	1	2510	2510	2510
C5301	270	>15 ft	Sulfate	14808-79-8	1	3180	3180	3180
C5301	283	>15 ft	Sulfate	14808-79-8	1	12000	12000	12000
C5301	285	>15 ft	Sulfate	14808-79-8	1	18800	18800	18800
C5301	287.5	>15 ft	Sulfate	14808-79-8	1	18600	18600	18600
C5301	292.5	>15 ft	Sulfate	14808-79-8	1	30900	30900	30900
C5301	297.5	>15 ft	Sulfate	14808-79-8	1	28700	28700	28700
C5301	305	>15 ft	Sulfate	14808-79-8	1	17500	17500	17500
C5301	315	>15 ft	Sulfate	14808-79-8	1	10600	10600	10600
C5302	54.94	>15 ft	Chloride	16887-00-6	1	5410	5410	5410
C5302	54.94	>15 ft	Fluoride	16984-48-8	1	532	532	532
C5302	54.94	>15 ft	Sulfate	14808-79-8	1	27900	27900	27900
C5515	31.5	>15 ft	Cyanide	57-12-5	1	120	120	120
C5515	34.5	>15 ft	Cyanide	57-12-5	1	210	210	210
C5515	18	>15 ft	Fluoride	16984-48-8	1	498	498	498
C5515	25	>15 ft	Fluoride	16984-48-8	1	322	322	322
C5515	32	>15 ft	Fluoride	16984-48-8	1	205	205	205
C5515	72.5	>15 ft	Fluoride	16984-48-8	1	219	219	219
C5515	80	>15 ft	Fluoride	16984-48-8	1	290	290	290
C5515	87	>15 ft	Fluoride	16984-48-8	1	291	291	291
C5515	107	>15 ft	Fluoride	16984-48-8	1	214	214	214
C5515	132.5	>15 ft	Fluoride	16984-48-8	1	258	258	258
C5515	167.5	>15 ft	Fluoride	16984-48-8	1	205	205	205
C5515	202.5	>15 ft	Fluoride	16984-48-8	1	237	237	237

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	250.5	>15 ft	Fluoride	16984-48-8	1	201	201	201
C5515	282.5	>15 ft	Fluoride	16984-48-8	1	234	234	234
C5515	290	>15 ft	Fluoride	16984-48-8	1	289	289	289
C5515	297.5	>15 ft	Fluoride	16984-48-8	1	325	325	325
C5515	302.5	>15 ft	Fluoride	16984-48-8	1	321	321	321
C5515	15.5	>15 ft	Nitrate	14797-55-8	1	2650	2650	2650
C5515	31.5	>15 ft	Nitrate	14797-55-8	2	974	1640	1307
C5515	34.5	>15 ft	Nitrate	14797-55-8	2	2260	2840	2550
C5515	40	>15 ft	Nitrate	14797-55-8	1	7510	7510	7510
C5515	47.5	>15 ft	Nitrate	14797-55-8	1	2170	2170	2170
C5515	49.5	>15 ft	Nitrate	14797-55-8	1	3220	3220	3220
C5515	57	>15 ft	Nitrate	14797-55-8	1	3520	3520	3520
C5515	57.5	>15 ft	Nitrate	14797-55-8	1	1790	1790	1790
C5515	60	>15 ft	Nitrate	14797-55-8	1	3500	3500	3500
C5515	64.5	>15 ft	Nitrate	14797-55-8	1	13000	13000	13000
C5515	70.5	>15 ft	Nitrate	14797-55-8	1	1410	1410	1410
C5515	72.5	>15 ft	Nitrate	14797-55-8	1	2520	2520	2520
C5515	80	>15 ft	Nitrate	14797-55-8	1	1740	1740	1740
C5515	87	>15 ft	Nitrate	14797-55-8	1	5910	5910	5910
C5515	93	>15 ft	Nitrate	14797-55-8	1	2830	2830	2830
C5515	107	>15 ft	Nitrate	14797-55-8	1	1670	1670	1670
C5515	132.5	>15 ft	Nitrate	14797-55-8	1	1220	1220	1220
C5515	135	>15 ft	Nitrate	14797-55-8	1	5400	5400	5400
C5515	152.5	>15 ft	Nitrate	14797-55-8	1	1130	1130	1130

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	182.5	>15 ft	Nitrate	14797-55-8	1	1300	1300	1300
C5515	195	>15 ft	Nitrate	14797-55-8	1	2090	2090	2090
C5515	202.5	>15 ft	Nitrate	14797-55-8	1	1220	1220	1220
C5515	253	>15 ft	Nitrate	14797-55-8	1	11100	11100	11100
C5515	282.5	>15 ft	Nitrate	14797-55-8	1	1800	1800	1800
C5515	285	>15 ft	Nitrate	14797-55-8	1	33700	33700	33700
C5515	287	>15 ft	Nitrate	14797-55-8	1	57100	57100	57100
C5515	290	>15 ft	Nitrate	14797-55-8	1	51100	51100	51100
C5515	297.5	>15 ft	Nitrate	14797-55-8	1	203000	203000	203000
C5515	302.5	>15 ft	Nitrate	14797-55-8	1	234000	234000	234000
C5515	319.5	>15 ft	Nitrate	14797-55-8	1	12400	12400	12400
C5515	31.5	>15 ft	Nitrite	14797-65-0	2	1180	2560	1870
C5515	34.5	>15 ft	Nitrite	14797-65-0	1	1510	1510	1510
C5515	30.5	>15 ft	Phosphate	14265-44-2	1	47800	47800	47800
C5515	31.5	>15 ft	Phosphate	14265-44-2	3	31900	103218	73339
C5515	32	>15 ft	Phosphate	14265-44-2	1	110000	110000	110000
C5515	34.5	>15 ft	Phosphate	14265-44-2	4	31000	65037	45009
C5515	37.5	>15 ft	Phosphate	14265-44-2	1	10300	10300	10300
C5515	40	>15 ft	Phosphate	14265-44-2	1	5920	5920	5920
C5515	45.5	>15 ft	Phosphate	14265-44-2	1	6470	6470	6470
C5515	47.5	>15 ft	Phosphate	14265-44-2	1	6950	6950	6950
C5515	15.5	>15 ft	Sulfate	14808-79-8	1	12700	12700	12700
C5515	25	>15 ft	Sulfate	14808-79-8	1	14100	14100	14100
C5515	31.5	>15 ft	Sulfate	14808-79-8	2	1600	1900	1750

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	34.5	>15 ft	Sulfate	14808-79-8	1	1800	1800	1800
C5515	37.5	>15 ft	Sulfate	14808-79-8	1	2070	2070	2070
C5515	47.5	>15 ft	Sulfate	14808-79-8	1	2710	2710	2710
C5515	49.5	>15 ft	Sulfate	14808-79-8	1	5980	5980	5980
C5515	52	>15 ft	Sulfate	14808-79-8	1	3670	3670	3670
C5515	57	>15 ft	Sulfate	14808-79-8	1	6460	6460	6460
C5515	57.5	>15 ft	Sulfate	14808-79-8	1	7630	7630	7630
C5515	60	>15 ft	Sulfate	14808-79-8	1	6820	6820	6820
C5515	64.5	>15 ft	Sulfate	14808-79-8	1	12500	12500	12500
C5515	70.5	>15 ft	Sulfate	14808-79-8	1	9430	9430	9430
C5515	72.5	>15 ft	Sulfate	14808-79-8	1	18900	18900	18900
C5515	80	>15 ft	Sulfate	14808-79-8	1	39500	39500	39500
C5515	87	>15 ft	Sulfate	14808-79-8	1	75100	75100	75100
C5515	93	>15 ft	Sulfate	14808-79-8	1	53800	53800	53800
C5515	107	>15 ft	Sulfate	14808-79-8	1	8350	8350	8350
C5515	132.5	>15 ft	Sulfate	14808-79-8	1	3370	3370	3370
C5515	152.5	>15 ft	Sulfate	14808-79-8	1	5850	5850	5850
C5515	167.5	>15 ft	Sulfate	14808-79-8	1	5360	5360	5360
C5515	182.5	>15 ft	Sulfate	14808-79-8	1	5640	5640	5640
C5515	195	>15 ft	Sulfate	14808-79-8	1	6000	6000	6000
C5515	202.5	>15 ft	Sulfate	14808-79-8	1	4900	4900	4900
C5515	220	>15 ft	Sulfate	14808-79-8	1	2130	2130	2130
C5515	237.5	>15 ft	Sulfate	14808-79-8	1	4460	4460	4460
C5515	250.5	>15 ft	Sulfate	14808-79-8	1	7120	7120	7120

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	253	>15 ft	Sulfate	14808-79-8	1	8860	8860	8860
C5515	266	>15 ft	Sulfate	14808-79-8	1	9140	9140	9140
C5515	282.5	>15 ft	Sulfate	14808-79-8	1	6860	6860	6860
C5515	285	>15 ft	Sulfate	14808-79-8	1	28600	28600	28600
C5515	287	>15 ft	Sulfate	14808-79-8	1	35300	35300	35300
C5515	290	>15 ft	Sulfate	14808-79-8	1	43400	43400	43400
C5515	297.5	>15 ft	Sulfate	14808-79-8	1	31100	31100	31100
C5515	302.5	>15 ft	Sulfate	14808-79-8	1	35500	35500	35500
C5515	319.5	>15 ft	Sulfate	14808-79-8	1	12000	12000	12000
C5571	40.5	>15 ft	Fluoride	16984-48-8	1	535	535	535
C5571	59.9	>15 ft	Fluoride	16984-48-8	1	266	266	266
C5571	40.5	>15 ft	Nitrate	14797-55-8	1	113000	113000	113000
C5571	59.9	>15 ft	Nitrate	14797-55-8	1	1020000	1020000	1020000
C5571	40.5	>15 ft	Sulfate	14808-79-8	1	9820	9820	9820
C5571	59.9	>15 ft	Sulfate	14808-79-8	1	8240	8240	8240
Metals (Concentration Units µg/kg)								
C5301	0	<15 ft	Aluminum	7429-90-5	1	6640000	6640000	6640000
C5301	0	<15 ft	Arsenic	7440-38-2	1	1280	1280	1280
C5301	0	<15 ft	Barium	7440-39-3	1	60900	60900	60900
C5301	0	<15 ft	Calcium	7440-70-2	1	8660000	8660000	8660000
C5301	0	<15 ft	Chromium	7440-47-3	2	11800	12700	12250
C5301	0	<15 ft	Copper	7440-50-8	2	9500	11800	10650
C5301	0	<15 ft	Iron	7439-89-6	1	12700000	12700000	12700000
C5301	0	<15 ft	Lead	7439-92-1	1	4500	4500	4500

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	0	<15 ft	Magnesium	7439-95-4	1	5150000	5150000	5150000
C5301	0	<15 ft	Manganese	7439-96-5	1	273000	273000	273000
C5301	0	<15 ft	Mercury	7439-97-6	1	29.7	29.7	29.7
C5301	0	<15 ft	Nickel	7440-02-0	1	14100	14100	14100
C5301	0	<15 ft	Phosphorus	7723-14-0	1	878000	878000	878000
C5301	0	<15 ft	Potassium	7440-09-7	1	1500000	1500000	1500000
C5301	0	<15 ft	Strontium	7440-24-6	1	34500	34500	34500
C5301	0	<15 ft	Titanium	7440-32-6	1	341000	341000	341000
C5301	0	<15 ft	Uranium	7440-61-1	1	1180	1180	1180
C5301	0	<15 ft	Zinc	7440-66-6	1	36000	36000	36000
C5301	0	<15 ft	Zirconium	7440-67-7	1	3800	3800	3800
C5301	22.5	>15 ft	Aluminum	7429-90-5	1	5140000	5140000	5140000
C5301	31	>15 ft	Aluminum	7429-90-5	1	6350000	6350000	6350000
C5301	40	>15 ft	Aluminum	7429-90-5	1	6180000	6180000	6180000
C5301	59.5	>15 ft	Aluminum	7429-90-5	1	5200000	5200000	5200000
C5301	73	>15 ft	Aluminum	7429-90-5	1	7100000	7100000	7100000
C5301	77.5	>15 ft	Aluminum	7429-90-5	1	6860000	6860000	6860000
C5301	90.5	>15 ft	Aluminum	7429-90-5	1	5270000	5270000	5270000
C5301	100	>15 ft	Aluminum	7429-90-5	1	5350000	5350000	5350000
C5301	108.5	>15 ft	Aluminum	7429-90-5	1	6730000	6730000	6730000
C5301	120	>15 ft	Aluminum	7429-90-5	1	4490000	4490000	4490000
C5301	131	>15 ft	Aluminum	7429-90-5	1	4120000	4120000	4120000
C5301	137.5	>15 ft	Aluminum	7429-90-5	1	6900000	6900000	6900000
C5301	147.5	>15 ft	Aluminum	7429-90-5	1	6480000	6480000	6480000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	163	>15 ft	Aluminum	7429-90-5	1	4230000	4230000	4230000
C5301	172.5	>15 ft	Aluminum	7429-90-5	1	6150000	6150000	6150000
C5301	185.5	>15 ft	Aluminum	7429-90-5	1	6020000	6020000	6020000
C5301	200	>15 ft	Aluminum	7429-90-5	1	6150000	6150000	6150000
C5301	205	>15 ft	Aluminum	7429-90-5	1	5420000	5420000	5420000
C5301	222.5	>15 ft	Aluminum	7429-90-5	1	5560000	5560000	5560000
C5301	235	>15 ft	Aluminum	7429-90-5	1	8160000	8160000	8160000
C5301	247.5	>15 ft	Aluminum	7429-90-5	1	7670000	7670000	7670000
C5301	260	>15 ft	Aluminum	7429-90-5	1	6300000	6300000	6300000
C5301	270	>15 ft	Aluminum	7429-90-5	1	5480000	5480000	5480000
C5301	283	>15 ft	Aluminum	7429-90-5	1	12800000	12800000	12800000
C5301	287.5	>15 ft	Aluminum	7429-90-5	1	15300000	15300000	15300000
C5301	292.5	>15 ft	Aluminum	7429-90-5	1	13400000	13400000	13400000
C5301	297.5	>15 ft	Aluminum	7429-90-5	1	22900000	22900000	22900000
C5301	305	>15 ft	Aluminum	7429-90-5	1	6530000	6530000	6530000
C5301	315	>15 ft	Aluminum	7429-90-5	1	6940000	6940000	6940000
C5301	22.5	>15 ft	Arsenic	7440-38-2	1	1060	1060	1060
C5301	31	>15 ft	Arsenic	7440-38-2	1	2600	2600	2600
C5301	40	>15 ft	Arsenic	7440-38-2	1	2710	2710	2710
C5301	59.5	>15 ft	Arsenic	7440-38-2	1	1850	1850	1850
C5301	73	>15 ft	Arsenic	7440-38-2	1	3150	3150	3150
C5301	77.5	>15 ft	Arsenic	7440-38-2	1	2800	2800	2800
C5301	90.5	>15 ft	Arsenic	7440-38-2	1	1640	1640	1640
C5301	100	>15 ft	Arsenic	7440-38-2	1	2050	2050	2050

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	108.5	>15 ft	Arsenic	7440-38-2	1	2990	2990	2990
C5301	120	>15 ft	Arsenic	7440-38-2	1	1800	1800	1800
C5301	131	>15 ft	Arsenic	7440-38-2	1	1280	1280	1280
C5301	137.5	>15 ft	Arsenic	7440-38-2	1	2440	2440	2440
C5301	147.5	>15 ft	Arsenic	7440-38-2	1	2450	2450	2450
C5301	163	>15 ft	Arsenic	7440-38-2	1	1570	1570	1570
C5301	172.5	>15 ft	Arsenic	7440-38-2	1	1720	1720	1720
C5301	185.5	>15 ft	Arsenic	7440-38-2	1	2200	2200	2200
C5301	200	>15 ft	Arsenic	7440-38-2	1	1630	1630	1630
C5301	205	>15 ft	Arsenic	7440-38-2	1	1580	1580	1580
C5301	222.5	>15 ft	Arsenic	7440-38-2	1	1580	1580	1580
C5301	235	>15 ft	Arsenic	7440-38-2	1	2730	2730	2730
C5301	247.5	>15 ft	Arsenic	7440-38-2	1	2300	2300	2300
C5301	260	>15 ft	Arsenic	7440-38-2	1	1780	1780	1780
C5301	270	>15 ft	Arsenic	7440-38-2	1	1280	1280	1280
C5301	283	>15 ft	Arsenic	7440-38-2	1	6970	6970	6970
C5301	287.5	>15 ft	Arsenic	7440-38-2	1	2700	2700	2700
C5301	292.5	>15 ft	Arsenic	7440-38-2	1	2830	2830	2830
C5301	297.5	>15 ft	Arsenic	7440-38-2	1	4200	4200	4200
C5301	305	>15 ft	Arsenic	7440-38-2	1	1340	1340	1340
C5301	315	>15 ft	Arsenic	7440-38-2	1	1180	1180	1180
C5301	22.5	>15 ft	Barium	7440-39-3	1	59000	59000	59000
C5301	31	>15 ft	Barium	7440-39-3	1	57600	57600	57600
C5301	40	>15 ft	Barium	7440-39-3	1	58100	58100	58100

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	59.5	>15 ft	Barium	7440-39-3	1	55500	55500	55500
C5301	73	>15 ft	Barium	7440-39-3	1	65200	65200	65200
C5301	77.5	>15 ft	Barium	7440-39-3	1	67000	67000	67000
C5301	90.5	>15 ft	Barium	7440-39-3	1	63200	63200	63200
C5301	100	>15 ft	Barium	7440-39-3	1	59500	59500	59500
C5301	108.5	>15 ft	Barium	7440-39-3	1	67000	67000	67000
C5301	120	>15 ft	Barium	7440-39-3	1	56900	56900	56900
C5301	131	>15 ft	Barium	7440-39-3	1	54500	54500	54500
C5301	137.5	>15 ft	Barium	7440-39-3	1	73900	73900	73900
C5301	147.5	>15 ft	Barium	7440-39-3	1	73000	73000	73000
C5301	163	>15 ft	Barium	7440-39-3	1	53300	53300	53300
C5301	172.5	>15 ft	Barium	7440-39-3	1	60700	60700	60700
C5301	185.5	>15 ft	Barium	7440-39-3	1	58200	58200	58200
C5301	200	>15 ft	Barium	7440-39-3	1	58900	58900	58900
C5301	205	>15 ft	Barium	7440-39-3	1	52900	52900	52900
C5301	222.5	>15 ft	Barium	7440-39-3	1	61800	61800	61800
C5301	235	>15 ft	Barium	7440-39-3	1	71000	71000	71000
C5301	247.5	>15 ft	Barium	7440-39-3	1	67200	67200	67200
C5301	260	>15 ft	Barium	7440-39-3	1	68800	68800	68800
C5301	270	>15 ft	Barium	7440-39-3	1	61700	61700	61700
C5301	283	>15 ft	Barium	7440-39-3	1	104000	104000	104000
C5301	287.5	>15 ft	Barium	7440-39-3	1	150000	150000	150000
C5301	292.5	>15 ft	Barium	7440-39-3	1	187000	187000	187000
C5301	297.5	>15 ft	Barium	7440-39-3	1	197000	197000	197000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	305	>15 ft	Barium	7440-39-3	1	90100	90100	90100
C5301	315	>15 ft	Barium	7440-39-3	1	97100	97100	97100
C5301	31.5	>15 ft	Cadmium	7440-43-9	2	105	124	114.5
C5301	285	>15 ft	Cadmium	7440-43-9	1	168	168	168
C5301	22.5	>15 ft	Calcium	7440-70-2	1	4780000	4780000	4780000
C5301	31	>15 ft	Calcium	7440-70-2	1	10400000	10400000	10400000
C5301	40	>15 ft	Calcium	7440-70-2	1	9490000	9490000	9490000
C5301	59.5	>15 ft	Calcium	7440-70-2	1	8960000	8960000	8960000
C5301	73	>15 ft	Calcium	7440-70-2	1	9800000	9800000	9800000
C5301	77.5	>15 ft	Calcium	7440-70-2	1	10100000	10100000	10100000
C5301	90.5	>15 ft	Calcium	7440-70-2	1	7700000	7700000	7700000
C5301	100	>15 ft	Calcium	7440-70-2	1	9040000	9040000	9040000
C5301	108.5	>15 ft	Calcium	7440-70-2	1	8800000	8800000	8800000
C5301	120	>15 ft	Calcium	7440-70-2	1	8510000	8510000	8510000
C5301	131	>15 ft	Calcium	7440-70-2	1	7790000	7790000	7790000
C5301	137.5	>15 ft	Calcium	7440-70-2	1	9500000	9500000	9500000
C5301	147.5	>15 ft	Calcium	7440-70-2	1	10000000	10000000	10000000
C5301	163	>15 ft	Calcium	7440-70-2	1	6610000	6610000	6610000
C5301	172.5	>15 ft	Calcium	7440-70-2	1	6890000	6890000	6890000
C5301	185.5	>15 ft	Calcium	7440-70-2	1	6350000	6350000	6350000
C5301	200	>15 ft	Calcium	7440-70-2	1	6930000	6930000	6930000
C5301	205	>15 ft	Calcium	7440-70-2	1	6270000	6270000	6270000
C5301	222.5	>15 ft	Calcium	7440-70-2	1	6570000	6570000	6570000
C5301	235	>15 ft	Calcium	7440-70-2	1	8300000	8300000	8300000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	247.5	>15 ft	Calcium	7440-70-2	1	7840000	7840000	7840000
C5301	260	>15 ft	Calcium	7440-70-2	1	6840000	6840000	6840000
C5301	270	>15 ft	Calcium	7440-70-2	1	6930000	6930000	6930000
C5301	283	>15 ft	Calcium	7440-70-2	1	13100000	13100000	13100000
C5301	287.5	>15 ft	Calcium	7440-70-2	1	15400000	15400000	15400000
C5301	292.5	>15 ft	Calcium	7440-70-2	1	21800000	21800000	21800000
C5301	297.5	>15 ft	Calcium	7440-70-2	1	12400000	12400000	12400000
C5301	305	>15 ft	Calcium	7440-70-2	1	4470000	4470000	4470000
C5301	315	>15 ft	Calcium	7440-70-2	1	5500000	5500000	5500000
C5301	22.5	>15 ft	Chromium	7440-47-3	1	7020	7020	7020
C5301	31	>15 ft	Chromium	7440-47-3	1	10400	10400	10400
C5301	31.5	>15 ft	Chromium	7440-47-3	2	4940	5970	5455
C5301	40	>15 ft	Chromium	7440-47-3	1	9430	9430	9430
C5301	45.5	>15 ft	Chromium	7440-47-3	2	5480	6700	6090
C5301	59.5	>15 ft	Chromium	7440-47-3	1	7300	7300	7300
C5301	73	>15 ft	Chromium	7440-47-3	1	12100	12100	12100
C5301	77.5	>15 ft	Chromium	7440-47-3	1	11100	11100	11100
C5301	90.5	>15 ft	Chromium	7440-47-3	1	7990	7990	7990
C5301	100	>15 ft	Chromium	7440-47-3	1	8710	8710	8710
C5301	108.5	>15 ft	Chromium	7440-47-3	1	9680	9680	9680
C5301	120	>15 ft	Chromium	7440-47-3	1	6160	6160	6160
C5301	124	>15 ft	Chromium	7440-47-3	1	7380	7380	7380
C5301	131	>15 ft	Chromium	7440-47-3	1	6370	6370	6370
C5301	137.5	>15 ft	Chromium	7440-47-3	1	10300	10300	10300

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	147.5	>15 ft	Chromium	7440-47-3	1	9790	9790	9790
C5301	163	>15 ft	Chromium	7440-47-3	1	8670	8670	8670
C5301	172.5	>15 ft	Chromium	7440-47-3	1	11900	11900	11900
C5301	185.5	>15 ft	Chromium	7440-47-3	1	12000	12000	12000
C5301	200	>15 ft	Chromium	7440-47-3	1	11600	11600	11600
C5301	205	>15 ft	Chromium	7440-47-3	1	10900	10900	10900
C5301	222.5	>15 ft	Chromium	7440-47-3	1	11700	11700	11700
C5301	235	>15 ft	Chromium	7440-47-3	1	17200	17200	17200
C5301	247.5	>15 ft	Chromium	7440-47-3	1	17200	17200	17200
C5301	260	>15 ft	Chromium	7440-47-3	1	12900	12900	12900
C5301	262	>15 ft	Chromium	7440-47-3	1	13100	13100	13100
C5301	270	>15 ft	Chromium	7440-47-3	1	11700	11700	11700
C5301	283	>15 ft	Chromium	7440-47-3	1	23100	23100	23100
C5301	285	>15 ft	Chromium	7440-47-3	1	25000	25000	25000
C5301	287.5	>15 ft	Chromium	7440-47-3	1	30600	30600	30600
C5301	292.5	>15 ft	Chromium	7440-47-3	1	29400	29400	29400
C5301	297.5	>15 ft	Chromium	7440-47-3	1	50600	50600	50600
C5301	305	>15 ft	Chromium	7440-47-3	1	22300	22300	22300
C5301	315	>15 ft	Chromium	7440-47-3	1	23500	23500	23500
C5301	292.5	>15 ft	Cobalt	7440-48-4	1	14400	14400	14400
C5301	297.5	>15 ft	Cobalt	7440-48-4	1	17400	17400	17400
C5301	22.5	>15 ft	Copper	7440-50-8	1	8600	8600	8600
C5301	31	>15 ft	Copper	7440-50-8	1	9350	9350	9350
C5301	31.5	>15 ft	Copper	7440-50-8	2	8470	8590	8530

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	40	>15 ft	Copper	7440-50-8	1	8690	8690	8690
C5301	45.5	>15 ft	Copper	7440-50-8	2	6370	6600	6485
C5301	59.5	>15 ft	Copper	7440-50-8	1	7680	7680	7680
C5301	73	>15 ft	Copper	7440-50-8	1	9430	9430	9430
C5301	77.5	>15 ft	Copper	7440-50-8	1	10100	10100	10100
C5301	90.5	>15 ft	Copper	7440-50-8	1	6820	6820	6820
C5301	100	>15 ft	Copper	7440-50-8	1	8910	8910	8910
C5301	108.5	>15 ft	Copper	7440-50-8	1	7790	7790	7790
C5301	120	>15 ft	Copper	7440-50-8	1	7160	7160	7160
C5301	124	>15 ft	Copper	7440-50-8	1	8510	8510	8510
C5301	131	>15 ft	Copper	7440-50-8	1	7090	7090	7090
C5301	137.5	>15 ft	Copper	7440-50-8	1	8090	8090	8090
C5301	147.5	>15 ft	Copper	7440-50-8	1	9090	9090	9090
C5301	163	>15 ft	Copper	7440-50-8	1	8160	8160	8160
C5301	172.5	>15 ft	Copper	7440-50-8	1	9600	9600	9600
C5301	185.5	>15 ft	Copper	7440-50-8	1	9730	9730	9730
C5301	200	>15 ft	Copper	7440-50-8	1	10100	10100	10100
C5301	205	>15 ft	Copper	7440-50-8	1	9060	9060	9060
C5301	222.5	>15 ft	Copper	7440-50-8	1	10100	10100	10100
C5301	235	>15 ft	Copper	7440-50-8	1	9970	9970	9970
C5301	247.5	>15 ft	Copper	7440-50-8	1	9920	9920	9920
C5301	260	>15 ft	Copper	7440-50-8	1	9200	9200	9200
C5301	262	>15 ft	Copper	7440-50-8	1	12000	12000	12000
C5301	270	>15 ft	Copper	7440-50-8	1	10700	10700	10700

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	283	>15 ft	Copper	7440-50-8	1	18800	18800	18800
C5301	285	>15 ft	Copper	7440-50-8	1	19800	19800	19800
C5301	287.5	>15 ft	Copper	7440-50-8	1	28300	28300	28300
C5301	292.5	>15 ft	Copper	7440-50-8	1	32600	32600	32600
C5301	297.5	>15 ft	Copper	7440-50-8	1	40200	40200	40200
C5301	305	>15 ft	Copper	7440-50-8	1	15800	15800	15800
C5301	315	>15 ft	Copper	7440-50-8	1	17200	17200	17200
C5301	22.5	>15 ft	Iron	7439-89-6	1	10800000	10800000	10800000
C5301	31	>15 ft	Iron	7439-89-6	1	13400000	13400000	13400000
C5301	40	>15 ft	Iron	7439-89-6	1	13000000	13000000	13000000
C5301	59.5	>15 ft	Iron	7439-89-6	1	11100000	11100000	11100000
C5301	73	>15 ft	Iron	7439-89-6	1	15000000	15000000	15000000
C5301	77.5	>15 ft	Iron	7439-89-6	1	14000000	14000000	14000000
C5301	90.5	>15 ft	Iron	7439-89-6	1	10200000	10200000	10200000
C5301	100	>15 ft	Iron	7439-89-6	1	11900000	11900000	11900000
C5301	108.5	>15 ft	Iron	7439-89-6	1	14100000	14100000	14100000
C5301	120	>15 ft	Iron	7439-89-6	1	10100000	10100000	10100000
C5301	131	>15 ft	Iron	7439-89-6	1	9010000	9010000	9010000
C5301	137.5	>15 ft	Iron	7439-89-6	1	13600000	13600000	13600000
C5301	147.5	>15 ft	Iron	7439-89-6	1	13200000	13200000	13200000
C5301	163	>15 ft	Iron	7439-89-6	1	8580000	8580000	8580000
C5301	172.5	>15 ft	Iron	7439-89-6	1	12800000	12800000	12800000
C5301	185.5	>15 ft	Iron	7439-89-6	1	13200000	13200000	13200000
C5301	200	>15 ft	Iron	7439-89-6	1	13900000	13900000	13900000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	205	>15 ft	Iron	7439-89-6	1	11100000	11100000	11100000
C5301	222.5	>15 ft	Iron	7439-89-6	1	12700000	12700000	12700000
C5301	235	>15 ft	Iron	7439-89-6	1	15300000	15300000	15300000
C5301	247.5	>15 ft	Iron	7439-89-6	1	14800000	14800000	14800000
C5301	260	>15 ft	Iron	7439-89-6	1	12000000	12000000	12000000
C5301	270	>15 ft	Iron	7439-89-6	1	13100000	13100000	13100000
C5301	283	>15 ft	Iron	7439-89-6	1	19800000	19800000	19800000
C5301	287.5	>15 ft	Iron	7439-89-6	1	23600000	23600000	23600000
C5301	292.5	>15 ft	Iron	7439-89-6	1	25900000	25900000	25900000
C5301	297.5	>15 ft	Iron	7439-89-6	1	34600000	34600000	34600000
C5301	305	>15 ft	Iron	7439-89-6	1	16500000	16500000	16500000
C5301	315	>15 ft	Iron	7439-89-6	1	17900000	17900000	17900000
C5301	31.5	>15 ft	Lead	7439-92-1	2	3260	3460	3360
C5301	45.5	>15 ft	Lead	7439-92-1	2	2600	2850	2725
C5301	124	>15 ft	Lead	7439-92-1	1	3580	3580	3580
C5301	262	>15 ft	Lead	7439-92-1	1	4990	4990	4990
C5301	285	>15 ft	Lead	7439-92-1	1	7690	7690	7690
C5301	22.5	>15 ft	Magnesium	7439-95-4	1	3970000	3970000	3970000
C5301	31	>15 ft	Magnesium	7439-95-4	1	5090000	5090000	5090000
C5301	40	>15 ft	Magnesium	7439-95-4	1	5190000	5190000	5190000
C5301	59.5	>15 ft	Magnesium	7439-95-4	1	4270000	4270000	4270000
C5301	73	>15 ft	Magnesium	7439-95-4	1	5730000	5730000	5730000
C5301	77.5	>15 ft	Magnesium	7439-95-4	1	5450000	5450000	5450000
C5301	90.5	>15 ft	Magnesium	7439-95-4	1	4210000	4210000	4210000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	100	>15 ft	Magnesium	7439-95-4	1	4610000	4610000	4610000
C5301	108.5	>15 ft	Magnesium	7439-95-4	1	4980000	4980000	4980000
C5301	120	>15 ft	Magnesium	7439-95-4	1	3800000	3800000	3800000
C5301	131	>15 ft	Magnesium	7439-95-4	1	3570000	3570000	3570000
C5301	137.5	>15 ft	Magnesium	7439-95-4	1	5470000	5470000	5470000
C5301	147.5	>15 ft	Magnesium	7439-95-4	1	5140000	5140000	5140000
C5301	163	>15 ft	Magnesium	7439-95-4	1	3670000	3670000	3670000
C5301	172.5	>15 ft	Magnesium	7439-95-4	1	5020000	5020000	5020000
C5301	185.5	>15 ft	Magnesium	7439-95-4	1	4840000	4840000	4840000
C5301	200	>15 ft	Magnesium	7439-95-4	1	4910000	4910000	4910000
C5301	205	>15 ft	Magnesium	7439-95-4	1	4470000	4470000	4470000
C5301	222.5	>15 ft	Magnesium	7439-95-4	1	4570000	4570000	4570000
C5301	235	>15 ft	Magnesium	7439-95-4	1	6020000	6020000	6020000
C5301	247.5	>15 ft	Magnesium	7439-95-4	1	5820000	5820000	5820000
C5301	260	>15 ft	Magnesium	7439-95-4	1	5120000	5120000	5120000
C5301	270	>15 ft	Magnesium	7439-95-4	1	4150000	4150000	4150000
C5301	283	>15 ft	Magnesium	7439-95-4	1	7590000	7590000	7590000
C5301	287.5	>15 ft	Magnesium	7439-95-4	1	10000000	10000000	10000000
C5301	292.5	>15 ft	Magnesium	7439-95-4	1	10200000	10200000	10200000
C5301	297.5	>15 ft	Magnesium	7439-95-4	1	13600000	13600000	13600000
C5301	305	>15 ft	Magnesium	7439-95-4	1	4210000	4210000	4210000
C5301	315	>15 ft	Magnesium	7439-95-4	1	4400000	4400000	4400000
C5301	22.5	>15 ft	Manganese	7439-96-5	1	282000	282000	282000
C5301	31	>15 ft	Manganese	7439-96-5	1	269000	269000	269000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	40	>15 ft	Manganese	7439-96-5	1	278000	278000	278000
C5301	59.5	>15 ft	Manganese	7439-96-5	1	247000	247000	247000
C5301	73	>15 ft	Manganese	7439-96-5	1	311000	311000	311000
C5301	77.5	>15 ft	Manganese	7439-96-5	1	287000	287000	287000
C5301	90.5	>15 ft	Manganese	7439-96-5	1	258000	258000	258000
C5301	100	>15 ft	Manganese	7439-96-5	1	266000	266000	266000
C5301	108.5	>15 ft	Manganese	7439-96-5	1	277000	277000	277000
C5301	120	>15 ft	Manganese	7439-96-5	1	224000	224000	224000
C5301	131	>15 ft	Manganese	7439-96-5	1	231000	231000	231000
C5301	137.5	>15 ft	Manganese	7439-96-5	1	328000	328000	328000
C5301	147.5	>15 ft	Manganese	7439-96-5	1	332000	332000	332000
C5301	163	>15 ft	Manganese	7439-96-5	1	230000	230000	230000
C5301	172.5	>15 ft	Manganese	7439-96-5	1	254000	254000	254000
C5301	185.5	>15 ft	Manganese	7439-96-5	1	267000	267000	267000
C5301	200	>15 ft	Manganese	7439-96-5	1	256000	256000	256000
C5301	205	>15 ft	Manganese	7439-96-5	1	253000	253000	253000
C5301	222.5	>15 ft	Manganese	7439-96-5	1	250000	250000	250000
C5301	235	>15 ft	Manganese	7439-96-5	1	311000	311000	311000
C5301	247.5	>15 ft	Manganese	7439-96-5	1	295000	295000	295000
C5301	260	>15 ft	Manganese	7439-96-5	1	271000	271000	271000
C5301	270	>15 ft	Manganese	7439-96-5	1	262000	262000	262000
C5301	283	>15 ft	Manganese	7439-96-5	1	497000	497000	497000
C5301	287.5	>15 ft	Manganese	7439-96-5	1	507000	507000	507000
C5301	292.5	>15 ft	Manganese	7439-96-5	1	726000	726000	726000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	297.5	>15 ft	Manganese	7439-96-5	1	589000	589000	589000
C5301	305	>15 ft	Manganese	7439-96-5	1	305000	305000	305000
C5301	315	>15 ft	Manganese	7439-96-5	1	291000	291000	291000
C5301	22.5	>15 ft	Nickel	7440-02-0	1	8910	8910	8910
C5301	31	>15 ft	Nickel	7440-02-0	1	11600	11600	11600
C5301	40	>15 ft	Nickel	7440-02-0	1	10400	10400	10400
C5301	59.5	>15 ft	Nickel	7440-02-0	1	9290	9290	9290
C5301	73	>15 ft	Nickel	7440-02-0	1	14600	14600	14600
C5301	77.5	>15 ft	Nickel	7440-02-0	1	12700	12700	12700
C5301	90.5	>15 ft	Nickel	7440-02-0	1	9400	9400	9400
C5301	100	>15 ft	Nickel	7440-02-0	1	10800	10800	10800
C5301	108.5	>15 ft	Nickel	7440-02-0	1	8690	8690	8690
C5301	120	>15 ft	Nickel	7440-02-0	1	8150	8150	8150
C5301	131	>15 ft	Nickel	7440-02-0	1	8980	8980	8980
C5301	137.5	>15 ft	Nickel	7440-02-0	1	11000	11000	11000
C5301	147.5	>15 ft	Nickel	7440-02-0	1	11200	11200	11200
C5301	163	>15 ft	Nickel	7440-02-0	1	12400	12400	12400
C5301	172.5	>15 ft	Nickel	7440-02-0	1	15300	15300	15300
C5301	185.5	>15 ft	Nickel	7440-02-0	1	14600	14600	14600
C5301	200	>15 ft	Nickel	7440-02-0	1	13900	13900	13900
C5301	205	>15 ft	Nickel	7440-02-0	1	14400	14400	14400
C5301	222.5	>15 ft	Nickel	7440-02-0	1	13300	13300	13300
C5301	235	>15 ft	Nickel	7440-02-0	1	18000	18000	18000
C5301	247.5	>15 ft	Nickel	7440-02-0	1	18200	18200	18200

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	260	>15 ft	Nickel	7440-02-0	1	16600	16600	16600
C5301	270	>15 ft	Nickel	7440-02-0	1	11200	11200	11200
C5301	283	>15 ft	Nickel	7440-02-0	1	25100	25100	25100
C5301	287.5	>15 ft	Nickel	7440-02-0	1	31400	31400	31400
C5301	292.5	>15 ft	Nickel	7440-02-0	1	30500	30500	30500
C5301	297.5	>15 ft	Nickel	7440-02-0	1	43100	43100	43100
C5301	305	>15 ft	Nickel	7440-02-0	1	11900	11900	11900
C5301	315	>15 ft	Nickel	7440-02-0	1	14900	14900	14900
C5301	22.5	>15 ft	Phosphorus	7723-14-0	1	546000	546000	546000
C5301	31	>15 ft	Phosphorus	7723-14-0	1	497000	497000	497000
C5301	40	>15 ft	Phosphorus	7723-14-0	1	507000	507000	507000
C5301	59.5	>15 ft	Phosphorus	7723-14-0	1	469000	469000	469000
C5301	73	>15 ft	Phosphorus	7723-14-0	1	498000	498000	498000
C5301	77.5	>15 ft	Phosphorus	7723-14-0	1	481000	481000	481000
C5301	90.5	>15 ft	Phosphorus	7723-14-0	1	360000	360000	360000
C5301	100	>15 ft	Phosphorus	7723-14-0	1	537000	537000	537000
C5301	108.5	>15 ft	Phosphorus	7723-14-0	1	459000	459000	459000
C5301	120	>15 ft	Phosphorus	7723-14-0	1	446000	446000	446000
C5301	131	>15 ft	Phosphorus	7723-14-0	1	461000	461000	461000
C5301	137.5	>15 ft	Phosphorus	7723-14-0	1	443000	443000	443000
C5301	147.5	>15 ft	Phosphorus	7723-14-0	1	512000	512000	512000
C5301	163	>15 ft	Phosphorus	7723-14-0	1	463000	463000	463000
C5301	172.5	>15 ft	Phosphorus	7723-14-0	1	557000	557000	557000
C5301	185.5	>15 ft	Phosphorus	7723-14-0	1	537000	537000	537000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	200	>15 ft	Phosphorus	7723-14-0	1	573000	573000	573000
C5301	205	>15 ft	Phosphorus	7723-14-0	1	521000	521000	521000
C5301	222.5	>15 ft	Phosphorus	7723-14-0	1	603000	603000	603000
C5301	235	>15 ft	Phosphorus	7723-14-0	1	491000	491000	491000
C5301	247.5	>15 ft	Phosphorus	7723-14-0	1	511000	511000	511000
C5301	260	>15 ft	Phosphorus	7723-14-0	1	479000	479000	479000
C5301	270	>15 ft	Phosphorus	7723-14-0	1	610000	610000	610000
C5301	283	>15 ft	Phosphorus	7723-14-0	1	952000	952000	952000
C5301	287.5	>15 ft	Phosphorus	7723-14-0	1	908000	908000	908000
C5301	292.5	>15 ft	Phosphorus	7723-14-0	1	969000	969000	969000
C5301	297.5	>15 ft	Phosphorus	7723-14-0	1	834000	834000	834000
C5301	305	>15 ft	Phosphorus	7723-14-0	1	604000	604000	604000
C5301	315	>15 ft	Phosphorus	7723-14-0	1	781000	781000	781000
C5301	137.5	>15 ft	Potassium	7440-09-7	1	1740000	1740000	1740000
C5301	147.5	>15 ft	Potassium	7440-09-7	1	1330000	1330000	1330000
C5301	283	>15 ft	Potassium	7440-09-7	1	2260000	2260000	2260000
C5301	287.5	>15 ft	Potassium	7440-09-7	1	2870000	2870000	2870000
C5301	292.5	>15 ft	Potassium	7440-09-7	1	2230000	2230000	2230000
C5301	297.5	>15 ft	Potassium	7440-09-7	1	3650000	3650000	3650000
C5301	297.5	>15 ft	Sodium	7440-23-5	1	456000	456000	456000
C5301	305	>15 ft	Sodium	7440-23-5	1	352000	352000	352000
C5301	315	>15 ft	Sodium	7440-23-5	1	402000	402000	402000
C5301	22.5	>15 ft	Strontium	7440-24-6	1	24900	24900	24900
C5301	31	>15 ft	Strontium	7440-24-6	1	35000	35000	35000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	40	>15 ft	Strontium	7440-24-6	1	27400	27400	27400
C5301	59.5	>15 ft	Strontium	7440-24-6	1	28100	28100	28100
C5301	73	>15 ft	Strontium	7440-24-6	1	32600	32600	32600
C5301	77.5	>15 ft	Strontium	7440-24-6	1	33100	33100	33100
C5301	90.5	>15 ft	Strontium	7440-24-6	1	28300	28300	28300
C5301	100	>15 ft	Strontium	7440-24-6	1	26700	26700	26700
C5301	108.5	>15 ft	Strontium	7440-24-6	1	30400	30400	30400
C5301	120	>15 ft	Strontium	7440-24-6	1	30500	30500	30500
C5301	131	>15 ft	Strontium	7440-24-6	1	26900	26900	26900
C5301	137.5	>15 ft	Strontium	7440-24-6	1	33200	33200	33200
C5301	147.5	>15 ft	Strontium	7440-24-6	1	32500	32500	32500
C5301	163	>15 ft	Strontium	7440-24-6	1	25000	25000	25000
C5301	172.5	>15 ft	Strontium	7440-24-6	1	29300	29300	29300
C5301	185.5	>15 ft	Strontium	7440-24-6	1	27300	27300	27300
C5301	200	>15 ft	Strontium	7440-24-6	1	30100	30100	30100
C5301	205	>15 ft	Strontium	7440-24-6	1	26900	26900	26900
C5301	222.5	>15 ft	Strontium	7440-24-6	1	26500	26500	26500
C5301	235	>15 ft	Strontium	7440-24-6	1	39300	39300	39300
C5301	247.5	>15 ft	Strontium	7440-24-6	1	38800	38800	38800
C5301	260	>15 ft	Strontium	7440-24-6	1	34500	34500	34500
C5301	270	>15 ft	Strontium	7440-24-6	1	30400	30400	30400
C5301	283	>15 ft	Strontium	7440-24-6	1	57300	57300	57300
C5301	287.5	>15 ft	Strontium	7440-24-6	1	70700	70700	70700
C5301	292.5	>15 ft	Strontium	7440-24-6	1	81000	81000	81000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	297.5	>15 ft	Strontium	7440-24-6	1	72800	72800	72800
C5301	305	>15 ft	Strontium	7440-24-6	1	24700	24700	24700
C5301	315	>15 ft	Strontium	7440-24-6	1	30000	30000	30000
C5301	22.5	>15 ft	Titanium	7440-32-6	1	297000	297000	297000
C5301	31	>15 ft	Titanium	7440-32-6	1	524000	524000	524000
C5301	40	>15 ft	Titanium	7440-32-6	1	491000	491000	491000
C5301	59.5	>15 ft	Titanium	7440-32-6	1	380000	380000	380000
C5301	73	>15 ft	Titanium	7440-32-6	1	644000	644000	644000
C5301	77.5	>15 ft	Titanium	7440-32-6	1	581000	581000	581000
C5301	90.5	>15 ft	Titanium	7440-32-6	1	316000	316000	316000
C5301	100	>15 ft	Titanium	7440-32-6	1	322000	322000	322000
C5301	108.5	>15 ft	Titanium	7440-32-6	1	682000	682000	682000
C5301	120	>15 ft	Titanium	7440-32-6	1	290000	290000	290000
C5301	131	>15 ft	Titanium	7440-32-6	1	213000	213000	213000
C5301	137.5	>15 ft	Titanium	7440-32-6	1	477000	477000	477000
C5301	147.5	>15 ft	Titanium	7440-32-6	1	446000	446000	446000
C5301	163	>15 ft	Titanium	7440-32-6	1	184000	184000	184000
C5301	172.5	>15 ft	Titanium	7440-32-6	1	528000	528000	528000
C5301	185.5	>15 ft	Titanium	7440-32-6	1	617000	617000	617000
C5301	200	>15 ft	Titanium	7440-32-6	1	678000	678000	678000
C5301	205	>15 ft	Titanium	7440-32-6	1	325000	325000	325000
C5301	222.5	>15 ft	Titanium	7440-32-6	1	470000	470000	470000
C5301	235	>15 ft	Titanium	7440-32-6	1	826000	826000	826000
C5301	247.5	>15 ft	Titanium	7440-32-6	1	768000	768000	768000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	260	>15 ft	Titanium	7440-32-6	1	412000	412000	412000
C5301	270	>15 ft	Titanium	7440-32-6	1	451000	451000	451000
C5301	283	>15 ft	Titanium	7440-32-6	1	735000	735000	735000
C5301	287.5	>15 ft	Titanium	7440-32-6	1	543000	543000	543000
C5301	292.5	>15 ft	Titanium	7440-32-6	1	348000	348000	348000
C5301	297.5	>15 ft	Titanium	7440-32-6	1	1120000	1120000	1120000
C5301	305	>15 ft	Titanium	7440-32-6	1	941000	941000	941000
C5301	315	>15 ft	Titanium	7440-32-6	1	1160000	1160000	1160000
C5301	31.5	>15 ft	Uranium	7440-61-1	2	555	668	611.5
C5301	45.5	>15 ft	Uranium	7440-61-1	2	372	1030	701
C5301	124	>15 ft	Uranium	7440-61-1	1	403	403	403
C5301	262	>15 ft	Uranium	7440-61-1	1	529	529	529
C5301	285	>15 ft	Uranium	7440-61-1	1	925	925	925
C5301	297.5	>15 ft	Vanadium	7440-62-2	1	33200	33200	33200
C5301	22.5	>15 ft	Zinc	7440-66-6	1	27000	27000	27000
C5301	31	>15 ft	Zinc	7440-66-6	1	32000	32000	32000
C5301	40	>15 ft	Zinc	7440-66-6	1	30200	30200	30200
C5301	59.5	>15 ft	Zinc	7440-66-6	1	26600	26600	26600
C5301	73	>15 ft	Zinc	7440-66-6	1	33900	33900	33900
C5301	77.5	>15 ft	Zinc	7440-66-6	1	32400	32400	32400
C5301	90.5	>15 ft	Zinc	7440-66-6	1	26600	26600	26600
C5301	100	>15 ft	Zinc	7440-66-6	1	28400	28400	28400
C5301	108.5	>15 ft	Zinc	7440-66-6	1	33400	33400	33400
C5301	120	>15 ft	Zinc	7440-66-6	1	23200	23200	23200

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	131	>15 ft	Zinc	7440-66-6	1	20900	20900	20900
C5301	137.5	>15 ft	Zinc	7440-66-6	1	34700	34700	34700
C5301	147.5	>15 ft	Zinc	7440-66-6	1	32400	32400	32400
C5301	163	>15 ft	Zinc	7440-66-6	1	21900	21900	21900
C5301	172.5	>15 ft	Zinc	7440-66-6	1	28000	28000	28000
C5301	185.5	>15 ft	Zinc	7440-66-6	1	28000	28000	28000
C5301	200	>15 ft	Zinc	7440-66-6	1	28900	28900	28900
C5301	205	>15 ft	Zinc	7440-66-6	1	26100	26100	26100
C5301	222.5	>15 ft	Zinc	7440-66-6	1	27000	27000	27000
C5301	235	>15 ft	Zinc	7440-66-6	1	33700	33700	33700
C5301	247.5	>15 ft	Zinc	7440-66-6	1	32300	32300	32300
C5301	260	>15 ft	Zinc	7440-66-6	1	29700	29700	29700
C5301	270	>15 ft	Zinc	7440-66-6	1	28300	28300	28300
C5301	283	>15 ft	Zinc	7440-66-6	1	53300	53300	53300
C5301	287.5	>15 ft	Zinc	7440-66-6	1	72900	72900	72900
C5301	292.5	>15 ft	Zinc	7440-66-6	1	78300	78300	78300
C5301	297.5	>15 ft	Zinc	7440-66-6	1	92000	92000	92000
C5301	305	>15 ft	Zinc	7440-66-6	1	40100	40100	40100
C5301	315	>15 ft	Zinc	7440-66-6	1	40300	40300	40300
C5301	22.5	>15 ft	Zirconium	7440-67-7	1	6690	6690	6690
C5301	31	>15 ft	Zirconium	7440-67-7	1	6680	6680	6680
C5301	40	>15 ft	Zirconium	7440-67-7	1	5640	5640	5640
C5301	59.5	>15 ft	Zirconium	7440-67-7	1	5370	5370	5370
C5301	73	>15 ft	Zirconium	7440-67-7	1	6760	6760	6760

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	77.5	>15 ft	Zirconium	7440-67-7	1	6110	6110	6110
C5301	90.5	>15 ft	Zirconium	7440-67-7	1	4370	4370	4370
C5301	100	>15 ft	Zirconium	7440-67-7	1	6040	6040	6040
C5301	108.5	>15 ft	Zirconium	7440-67-7	1	7470	7470	7470
C5301	120	>15 ft	Zirconium	7440-67-7	1	5640	5640	5640
C5301	131	>15 ft	Zirconium	7440-67-7	1	5610	5610	5610
C5301	137.5	>15 ft	Zirconium	7440-67-7	1	5750	5750	5750
C5301	147.5	>15 ft	Zirconium	7440-67-7	1	7030	7030	7030
C5301	163	>15 ft	Zirconium	7440-67-7	1	3770	3770	3770
C5301	172.5	>15 ft	Zirconium	7440-67-7	1	6680	6680	6680
C5301	185.5	>15 ft	Zirconium	7440-67-7	1	6890	6890	6890
C5301	200	>15 ft	Zirconium	7440-67-7	1	9300	9300	9300
C5301	205	>15 ft	Zirconium	7440-67-7	1	5420	5420	5420
C5301	222.5	>15 ft	Zirconium	7440-67-7	1	7430	7430	7430
C5301	235	>15 ft	Zirconium	7440-67-7	1	6670	6670	6670
C5301	247.5	>15 ft	Zirconium	7440-67-7	1	6510	6510	6510
C5301	260	>15 ft	Zirconium	7440-67-7	1	4950	4950	4950
C5301	270	>15 ft	Zirconium	7440-67-7	1	8730	8730	8730
C5301	283	>15 ft	Zirconium	7440-67-7	1	8130	8130	8130
C5301	287.5	>15 ft	Zirconium	7440-67-7	1	7900	7900	7900
C5301	292.5	>15 ft	Zirconium	7440-67-7	1	8600	8600	8600
C5301	297.5	>15 ft	Zirconium	7440-67-7	1	11000	11000	11000
C5301	305	>15 ft	Zirconium	7440-67-7	1	12600	12600	12600
C5301	315	>15 ft	Zirconium	7440-67-7	1	18600	18600	18600

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5302	54.94	>15 ft	Aluminum	7429-90-5	1	6230000	6230000	6230000
C5302	54.94	>15 ft	Arsenic	7440-38-2	1	2330	2330	2330
C5302	54.94	>15 ft	Barium	7440-39-3	1	63000	63000	63000
C5302	54.94	>15 ft	Calcium	7440-70-2	1	7640000	7640000	7640000
C5302	54.94	>15 ft	Chromium	7440-47-3	1	24300	24300	24300
C5302	54.94	>15 ft	Copper	7440-50-8	1	14700	14700	14700
C5302	54.94	>15 ft	Iron	7439-89-6	1	21700000	21700000	21700000
C5302	54.94	>15 ft	Magnesium	7439-95-4	1	4430000	4430000	4430000
C5302	54.94	>15 ft	Manganese	7439-96-5	1	369000	369000	369000
C5302	54.94	>15 ft	Nickel	7440-02-0	1	15100	15100	15100
C5302	54.94	>15 ft	Phosphorus	7723-14-0	1	530000	530000	530000
C5302	54.94	>15 ft	Potassium	7440-09-7	1	1150000	1150000	1150000
C5302	54.94	>15 ft	Sodium	7440-23-5	1	328000	328000	328000
C5302	54.94	>15 ft	Strontium	7440-24-6	1	27800	27800	27800
C5302	54.94	>15 ft	Titanium	7440-32-6	1	622000	622000	622000
C5302	54.94	>15 ft	Zinc	7440-66-6	1	35100	35100	35100
C5302	54.94	>15 ft	Zirconium	7440-67-7	1	8470	8470	8470
C5515	30.5	>15 ft	Antimony	7440-36-0	1	29.3	29.3	29.3
C5515	40	>15 ft	Antimony	7440-36-0	1	19.6	19.6	19.6
C5515	47.5	>15 ft	Antimony	7440-36-0	1	12.5	12.5	12.5
C5515	52	>15 ft	Antimony	7440-36-0	1	16	16	16
C5515	60	>15 ft	Antimony	7440-36-0	1	13.7	13.7	13.7
C5515	15.5	>15 ft	Arsenic	7440-38-2	1	3320	3320	3320
C5515	18	>15 ft	Arsenic	7440-38-2	1	2130	2130	2130

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	25	>15 ft	Arsenic	7440-38-2	1	1140	1140	1140
C5515	30.5	>15 ft	Arsenic	7440-38-2	1	2360	2360	2360
C5515	31.5	>15 ft	Arsenic	7440-38-2	3	2460	2700	2553
C5515	32	>15 ft	Arsenic	7440-38-2	1	2460	2460	2460
C5515	34.5	>15 ft	Arsenic	7440-38-2	4	2170	3800	2840
C5515	37.5	>15 ft	Arsenic	7440-38-2	1	2630	2630	2630
C5515	40	>15 ft	Arsenic	7440-38-2	1	2140	2140	2140
C5515	45.5	>15 ft	Arsenic	7440-38-2	1	2610	2610	2610
C5515	47.5	>15 ft	Arsenic	7440-38-2	1	2580	2580	2580
C5515	49.5	>15 ft	Arsenic	7440-38-2	1	3890	3890	3890
C5515	52	>15 ft	Arsenic	7440-38-2	1	2830	2830	2830
C5515	57	>15 ft	Arsenic	7440-38-2	1	2980	2980	2980
C5515	57.5	>15 ft	Arsenic	7440-38-2	1	2750	2750	2750
C5515	60	>15 ft	Arsenic	7440-38-2	1	3150	3150	3150
C5515	64.5	>15 ft	Arsenic	7440-38-2	1	1640	1640	1640
C5515	70.5	>15 ft	Arsenic	7440-38-2	1	3050	3050	3050
C5515	72.5	>15 ft	Arsenic	7440-38-2	1	2460	2460	2460
C5515	80	>15 ft	Arsenic	7440-38-2	1	2720	2720	2720
C5515	87	>15 ft	Arsenic	7440-38-2	1	3150	3150	3150
C5515	93	>15 ft	Arsenic	7440-38-2	1	3240	3240	3240
C5515	107	>15 ft	Arsenic	7440-38-2	1	2600	2600	2600
C5515	132.5	>15 ft	Arsenic	7440-38-2	1	2580	2580	2580
C5515	135	>15 ft	Arsenic	7440-38-2	1	2760	2760	2760
C5515	152.5	>15 ft	Arsenic	7440-38-2	1	2580	2580	2580

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	167.5	>15 ft	Arsenic	7440-38-2	1	1670	1670	1670
C5515	182.5	>15 ft	Arsenic	7440-38-2	1	2390	2390	2390
C5515	195	>15 ft	Arsenic	7440-38-2	1	2560	2560	2560
C5515	202.5	>15 ft	Arsenic	7440-38-2	1	1740	1740	1740
C5515	220	>15 ft	Arsenic	7440-38-2	1	1250	1250	1250
C5515	237.5	>15 ft	Arsenic	7440-38-2	1	1510	1510	1510
C5515	250.5	>15 ft	Arsenic	7440-38-2	1	1550	1550	1550
C5515	253	>15 ft	Arsenic	7440-38-2	1	2380	2380	2380
C5515	266	>15 ft	Arsenic	7440-38-2	1	1050	1050	1050
C5515	282.5	>15 ft	Arsenic	7440-38-2	1	751	751	751
C5515	285	>15 ft	Arsenic	7440-38-2	1	7910	7910	7910
C5515	287	>15 ft	Arsenic	7440-38-2	1	6370	6370	6370
C5515	290	>15 ft	Arsenic	7440-38-2	1	11000	11000	11000
C5515	297.5	>15 ft	Arsenic	7440-38-2	1	2140	2140	2140
C5515	302.5	>15 ft	Arsenic	7440-38-2	1	3020	3020	3020
C5515	319.5	>15 ft	Arsenic	7440-38-2	1	716	716	716
C5515	15.5	>15 ft	Barium	7440-39-3	1	50000	50000	50000
C5515	18	>15 ft	Barium	7440-39-3	1	60700	60700	60700
C5515	25	>15 ft	Barium	7440-39-3	1	75000	75000	75000
C5515	30.5	>15 ft	Barium	7440-39-3	1	50500	50500	50500
C5515	31.5	>15 ft	Barium	7440-39-3	3	46200	70700	55966
C5515	32	>15 ft	Barium	7440-39-3	1	55200	55200	55200
C5515	34.5	>15 ft	Barium	7440-39-3	4	55200	66300	60275
C5515	37.5	>15 ft	Barium	7440-39-3	1	55400	55400	55400

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	40	>15 ft	Barium	7440-39-3	1	45100	45100	45100
C5515	45.5	>15 ft	Barium	7440-39-3	1	62500	62500	62500
C5515	47.5	>15 ft	Barium	7440-39-3	1	52500	52500	52500
C5515	49.5	>15 ft	Barium	7440-39-3	1	52300	52300	52300
C5515	52	>15 ft	Barium	7440-39-3	1	55600	55600	55600
C5515	57	>15 ft	Barium	7440-39-3	1	79400	79400	79400
C5515	57.5	>15 ft	Barium	7440-39-3	1	54900	54900	54900
C5515	60	>15 ft	Barium	7440-39-3	1	61900	61900	61900
C5515	64.5	>15 ft	Barium	7440-39-3	1	61100	61100	61100
C5515	70.5	>15 ft	Barium	7440-39-3	1	70100	70100	70100
C5515	72.5	>15 ft	Barium	7440-39-3	1	53600	53600	53600
C5515	80	>15 ft	Barium	7440-39-3	1	71800	71800	71800
C5515	87	>15 ft	Barium	7440-39-3	1	71200	71200	71200
C5515	93	>15 ft	Barium	7440-39-3	1	67100	67100	67100
C5515	107	>15 ft	Barium	7440-39-3	1	59200	59200	59200
C5515	132.5	>15 ft	Barium	7440-39-3	1	68600	68600	68600
C5515	135	>15 ft	Barium	7440-39-3	1	61400	61400	61400
C5515	152.5	>15 ft	Barium	7440-39-3	1	67300	67300	67300
C5515	167.5	>15 ft	Barium	7440-39-3	1	55000	55000	55000
C5515	182.5	>15 ft	Barium	7440-39-3	1	62900	62900	62900
C5515	195	>15 ft	Barium	7440-39-3	1	78500	78500	78500
C5515	202.5	>15 ft	Barium	7440-39-3	1	56900	56900	56900
C5515	220	>15 ft	Barium	7440-39-3	1	59900	59900	59900
C5515	237.5	>15 ft	Barium	7440-39-3	1	54700	54700	54700

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	250.5	>15 ft	Barium	7440-39-3	1	51100	51100	51100
C5515	253	>15 ft	Barium	7440-39-3	1	45500	45500	45500
C5515	266	>15 ft	Barium	7440-39-3	1	59000	59000	59000
C5515	282.5	>15 ft	Barium	7440-39-3	1	56000	56000	56000
C5515	285	>15 ft	Barium	7440-39-3	1	158000	158000	158000
C5515	287	>15 ft	Barium	7440-39-3	1	117000	117000	117000
C5515	290	>15 ft	Barium	7440-39-3	1	204000	204000	204000
C5515	297.5	>15 ft	Barium	7440-39-3	1	142000	142000	142000
C5515	302.5	>15 ft	Barium	7440-39-3	1	134000	134000	134000
C5515	319.5	>15 ft	Barium	7440-39-3	1	42200	42200	42200
C5515	31.5	>15 ft	Cadmium	7440-43-9	1	266	266	266
C5515	32	>15 ft	Cadmium	7440-43-9	1	91.5	91.5	91.5
C5515	34.5	>15 ft	Cadmium	7440-43-9	3	55.2	100	72.2
C5515	37.5	>15 ft	Cadmium	7440-43-9	1	51.6	51.6	51.6
C5515	57.5	>15 ft	Cadmium	7440-43-9	1	50.8	50.8	50.8
C5515	135	>15 ft	Cadmium	7440-43-9	1	155	155	155
C5515	285	>15 ft	Cadmium	7440-43-9	1	185	185	185
C5515	287	>15 ft	Cadmium	7440-43-9	1	351	351	351
C5515	290	>15 ft	Cadmium	7440-43-9	1	351	351	351
C5515	297.5	>15 ft	Cadmium	7440-43-9	1	150	150	150
C5515	302.5	>15 ft	Cadmium	7440-43-9	1	133	133	133
C5515	18	>15 ft	Calcium	7440-70-2	1	7510000	7510000	7510000
C5515	25	>15 ft	Calcium	7440-70-2	1	4960000	4960000	4960000
C5515	30.5	>15 ft	Calcium	7440-70-2	1	8140000	8140000	8140000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	31.5	>15 ft	Calcium	7440-70-2	1	7930000	7930000	7930000
C5515	32	>15 ft	Calcium	7440-70-2	1	7510000	7510000	7510000
C5515	34.5	>15 ft	Calcium	7440-70-2	2	8760000	9060000	8910000
C5515	37.5	>15 ft	Calcium	7440-70-2	1	8650000	8650000	8650000
C5515	40	>15 ft	Calcium	7440-70-2	1	8120000	8120000	8120000
C5515	45.5	>15 ft	Calcium	7440-70-2	1	8680000	8680000	8680000
C5515	47.5	>15 ft	Calcium	7440-70-2	1	8230000	8230000	8230000
C5515	52	>15 ft	Calcium	7440-70-2	1	9720000	9720000	9720000
C5515	57.5	>15 ft	Calcium	7440-70-2	1	9670000	9670000	9670000
C5515	60	>15 ft	Calcium	7440-70-2	1	9090000	9090000	9090000
C5515	64.5	>15 ft	Calcium	7440-70-2	1	7300000	7300000	7300000
C5515	70.5	>15 ft	Calcium	7440-70-2	1	10500000	10500000	10500000
C5515	72.5	>15 ft	Calcium	7440-70-2	1	8280000	8280000	8280000
C5515	80	>15 ft	Calcium	7440-70-2	1	8340000	8340000	8340000
C5515	87	>15 ft	Calcium	7440-70-2	1	8570000	8570000	8570000
C5515	93	>15 ft	Calcium	7440-70-2	1	8420000	8420000	8420000
C5515	107	>15 ft	Calcium	7440-70-2	1	8210000	8210000	8210000
C5515	132.5	>15 ft	Calcium	7440-70-2	1	8270000	8270000	8270000
C5515	152.5	>15 ft	Calcium	7440-70-2	1	7970000	7970000	7970000
C5515	167.5	>15 ft	Calcium	7440-70-2	1	5960000	5960000	5960000
C5515	182.5	>15 ft	Calcium	7440-70-2	1	7090000	7090000	7090000
C5515	195	>15 ft	Calcium	7440-70-2	1	8180000	8180000	8180000
C5515	202.5	>15 ft	Calcium	7440-70-2	1	6620000	6620000	6620000
C5515	220	>15 ft	Calcium	7440-70-2	1	5920000	5920000	5920000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	237.5	>15 ft	Calcium	7440-70-2	1	6000000	6000000	6000000
C5515	250.5	>15 ft	Calcium	7440-70-2	1	6100000	6100000	6100000
C5515	266	>15 ft	Calcium	7440-70-2	1	5210000	5210000	5210000
C5515	282.5	>15 ft	Calcium	7440-70-2	1	4980000	4980000	4980000
C5515	285	>15 ft	Calcium	7440-70-2	1	13300000	13300000	13300000
C5515	290	>15 ft	Calcium	7440-70-2	1	21000000	21000000	21000000
C5515	297.5	>15 ft	Calcium	7440-70-2	1	9870000	9870000	9870000
C5515	302.5	>15 ft	Calcium	7440-70-2	1	11100000	11100000	11100000
C5515	15.5	>15 ft	Chromium	7440-47-3	1	6020	6020	6020
C5515	18	>15 ft	Chromium	7440-47-3	1	7260	7260	7260
C5515	25	>15 ft	Chromium	7440-47-3	1	4570	4570	4570
C5515	30.5	>15 ft	Chromium	7440-47-3	1	10500	10500	10500
C5515	31.5	>15 ft	Chromium	7440-47-3	3	8800	11900	10000
C5515	32	>15 ft	Chromium	7440-47-3	1	9830	9830	9830
C5515	34.5	>15 ft	Chromium	7440-47-3	4	10200	10900	10500
C5515	37.5	>15 ft	Chromium	7440-47-3	1	9790	9790	9790
C5515	40	>15 ft	Chromium	7440-47-3	1	7210	7210	7210
C5515	45.5	>15 ft	Chromium	7440-47-3	1	9710	9710	9710
C5515	47.5	>15 ft	Chromium	7440-47-3	1	8860	8860	8860
C5515	49.5	>15 ft	Chromium	7440-47-3	1	7940	7940	7940
C5515	52	>15 ft	Chromium	7440-47-3	1	11200	11200	11200
C5515	57	>15 ft	Chromium	7440-47-3	1	8290	8290	8290
C5515	57.5	>15 ft	Chromium	7440-47-3	1	10200	10200	10200
C5515	60	>15 ft	Chromium	7440-47-3	1	10500	10500	10500

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	64.5	>15 ft	Chromium	7440-47-3	1	6830	6830	6830
C5515	70.5	>15 ft	Chromium	7440-47-3	1	11200	11200	11200
C5515	72.5	>15 ft	Chromium	7440-47-3	1	9040	9040	9040
C5515	80	>15 ft	Chromium	7440-47-3	1	10400	10400	10400
C5515	87	>15 ft	Chromium	7440-47-3	1	11900	11900	11900
C5515	93	>15 ft	Chromium	7440-47-3	1	12000	12000	12000
C5515	107	>15 ft	Chromium	7440-47-3	1	9400	9400	9400
C5515	132.5	>15 ft	Chromium	7440-47-3	1	9460	9460	9460
C5515	135	>15 ft	Chromium	7440-47-3	1	8210	8210	8210
C5515	152.5	>15 ft	Chromium	7440-47-3	1	11100	11100	11100
C5515	167.5	>15 ft	Chromium	7440-47-3	1	8920	8920	8920
C5515	182.5	>15 ft	Chromium	7440-47-3	1	13700	13700	13700
C5515	195	>15 ft	Chromium	7440-47-3	1	13300	13300	13300
C5515	202.5	>15 ft	Chromium	7440-47-3	1	15800	15800	15800
C5515	220	>15 ft	Chromium	7440-47-3	1	9290	9290	9290
C5515	237.5	>15 ft	Chromium	7440-47-3	1	10600	10600	10600
C5515	250.5	>15 ft	Chromium	7440-47-3	1	14800	14800	14800
C5515	253	>15 ft	Chromium	7440-47-3	1	12300	12300	12300
C5515	266	>15 ft	Chromium	7440-47-3	1	8140	8140	8140
C5515	282.5	>15 ft	Chromium	7440-47-3	1	15000	15000	15000
C5515	285	>15 ft	Chromium	7440-47-3	1	34600	34600	34600
C5515	287	>15 ft	Chromium	7440-47-3	1	23600	23600	23600
C5515	290	>15 ft	Chromium	7440-47-3	1	47500	47500	47500
C5515	297.5	>15 ft	Chromium	7440-47-3	1	23600	23600	23600

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	302.5	>15 ft	Chromium	7440-47-3	1	20900	20900	20900
C5515	319.5	>15 ft	Chromium	7440-47-3	1	12400	12400	12400
C5515	15.5	>15 ft	Copper	7440-50-8	1	7910	7910	7910
C5515	18	>15 ft	Copper	7440-50-8	1	11100	11100	11100
C5515	25	>15 ft	Copper	7440-50-8	1	11300	11300	11300
C5515	30.5	>15 ft	Copper	7440-50-8	1	8990	8990	8990
C5515	31.5	>15 ft	Copper	7440-50-8	3	7200	11800	9833
C5515	32	>15 ft	Copper	7440-50-8	1	8400	8400	8400
C5515	34.5	>15 ft	Copper	7440-50-8	4	8900	12700	10135
C5515	37.5	>15 ft	Copper	7440-50-8	1	8610	8610	8610
C5515	40	>15 ft	Copper	7440-50-8	1	7420	7420	7420
C5515	45.5	>15 ft	Copper	7440-50-8	1	8210	8210	8210
C5515	47.5	>15 ft	Copper	7440-50-8	1	8720	8720	8720
C5515	49.5	>15 ft	Copper	7440-50-8	1	8490	8490	8490
C5515	52	>15 ft	Copper	7440-50-8	1	8050	8050	8050
C5515	57	>15 ft	Copper	7440-50-8	1	7810	7810	7810
C5515	57.5	>15 ft	Copper	7440-50-8	1	8700	8700	8700
C5515	60	>15 ft	Copper	7440-50-8	1	8920	8920	8920
C5515	64.5	>15 ft	Copper	7440-50-8	1	7620	7620	7620
C5515	70.5	>15 ft	Copper	7440-50-8	1	11000	11000	11000
C5515	72.5	>15 ft	Copper	7440-50-8	1	8280	8280	8280
C5515	80	>15 ft	Copper	7440-50-8	1	8470	8470	8470
C5515	87	>15 ft	Copper	7440-50-8	1	9350	9350	9350
C5515	93	>15 ft	Copper	7440-50-8	1	9790	9790	9790

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	107	>15 ft	Copper	7440-50-8	1	8380	8380	8380
C5515	132.5	>15 ft	Copper	7440-50-8	1	8900	8900	8900
C5515	135	>15 ft	Copper	7440-50-8	1	9330	9330	9330
C5515	152.5	>15 ft	Copper	7440-50-8	1	9780	9780	9780
C5515	167.5	>15 ft	Copper	7440-50-8	1	8880	8880	8880
C5515	182.5	>15 ft	Copper	7440-50-8	1	10200	10200	10200
C5515	195	>15 ft	Copper	7440-50-8	1	11000	11000	11000
C5515	202.5	>15 ft	Copper	7440-50-8	1	9970	9970	9970
C5515	220	>15 ft	Copper	7440-50-8	1	11300	11300	11300
C5515	237.5	>15 ft	Copper	7440-50-8	1	8810	8810	8810
C5515	250.5	>15 ft	Copper	7440-50-8	1	9510	9510	9510
C5515	253	>15 ft	Copper	7440-50-8	1	9500	9500	9500
C5515	266	>15 ft	Copper	7440-50-8	1	8890	8890	8890
C5515	282.5	>15 ft	Copper	7440-50-8	1	10900	10900	10900
C5515	285	>15 ft	Copper	7440-50-8	1	24900	24900	24900
C5515	287	>15 ft	Copper	7440-50-8	1	23300	23300	23300
C5515	290	>15 ft	Copper	7440-50-8	1	37400	37400	37400
C5515	297.5	>15 ft	Copper	7440-50-8	1	23500	23500	23500
C5515	302.5	>15 ft	Copper	7440-50-8	1	21100	21100	21100
C5515	319.5	>15 ft	Copper	7440-50-8	1	9620	9620	9620
C5515	31.5	>15 ft	Hexavalent Chromium	18540-29-9	1	220	220	220
C5515	135	>15 ft	Hexavalent Chromium	18540-29-9	1	247	247	247
C5515	253	>15 ft	Hexavalent Chromium	18540-29-9	1	240	240	240
C5515	15.5	>15 ft	Lead	7439-92-1	1	3410	3410	3410

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	18	>15 ft	Lead	7439-92-1	1	2480	2480	2480
C5515	25	>15 ft	Lead	7439-92-1	1	2810	2810	2810
C5515	30.5	>15 ft	Lead	7439-92-1	1	3840	3840	3840
C5515	31.5	>15 ft	Lead	7439-92-1	3	3100	3800	3523
C5515	32	>15 ft	Lead	7439-92-1	1	3080	3080	3080
C5515	34.5	>15 ft	Lead	7439-92-1	4	2860	4500	3655
C5515	37.5	>15 ft	Lead	7439-92-1	1	3190	3190	3190
C5515	40	>15 ft	Lead	7439-92-1	1	3120	3120	3120
C5515	45.5	>15 ft	Lead	7439-92-1	1	3630	3630	3630
C5515	47.5	>15 ft	Lead	7439-92-1	1	3120	3120	3120
C5515	49.5	>15 ft	Lead	7439-92-1	1	4310	4310	4310
C5515	52	>15 ft	Lead	7439-92-1	1	3310	3310	3310
C5515	57	>15 ft	Lead	7439-92-1	1	5870	5870	5870
C5515	57.5	>15 ft	Lead	7439-92-1	1	3360	3360	3360
C5515	60	>15 ft	Lead	7439-92-1	1	3640	3640	3640
C5515	64.5	>15 ft	Lead	7439-92-1	1	2720	2720	2720
C5515	70.5	>15 ft	Lead	7439-92-1	1	3930	3930	3930
C5515	72.5	>15 ft	Lead	7439-92-1	1	3440	3440	3440
C5515	80	>15 ft	Lead	7439-92-1	1	3730	3730	3730
C5515	87	>15 ft	Lead	7439-92-1	1	4170	4170	4170
C5515	93	>15 ft	Lead	7439-92-1	1	4170	4170	4170
C5515	107	>15 ft	Lead	7439-92-1	1	3210	3210	3210
C5515	132.5	>15 ft	Lead	7439-92-1	1	3580	3580	3580
C5515	135	>15 ft	Lead	7439-92-1	1	5070	5070	5070

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	152.5	>15 ft	Lead	7439-92-1	1	3550	3550	3550
C5515	167.5	>15 ft	Lead	7439-92-1	1	2250	2250	2250
C5515	182.5	>15 ft	Lead	7439-92-1	1	2610	2610	2610
C5515	195	>15 ft	Lead	7439-92-1	1	3640	3640	3640
C5515	202.5	>15 ft	Lead	7439-92-1	1	2710	2710	2710
C5515	220	>15 ft	Lead	7439-92-1	1	2210	2210	2210
C5515	237.5	>15 ft	Lead	7439-92-1	1	2770	2770	2770
C5515	250.5	>15 ft	Lead	7439-92-1	1	2690	2690	2690
C5515	253	>15 ft	Lead	7439-92-1	1	2850	2850	2850
C5515	266	>15 ft	Lead	7439-92-1	1	2340	2340	2340
C5515	282.5	>15 ft	Lead	7439-92-1	1	1940	1940	1940
C5515	285	>15 ft	Lead	7439-92-1	1	6930	6930	6930
C5515	287	>15 ft	Lead	7439-92-1	1	10300	10300	10300
C5515	290	>15 ft	Lead	7439-92-1	1	9440	9440	9440
C5515	297.5	>15 ft	Lead	7439-92-1	1	5200	5200	5200
C5515	302.5	>15 ft	Lead	7439-92-1	1	7080	7080	7080
C5515	319.5	>15 ft	Lead	7439-92-1	1	1520	1520	1520
C5515	18	>15 ft	Magnesium	7439-95-4	1	4150000	4150000	4150000
C5515	25	>15 ft	Magnesium	7439-95-4	1	3190000	3190000	3190000
C5515	30.5	>15 ft	Magnesium	7439-95-4	1	4590000	4590000	4590000
C5515	31.5	>15 ft	Magnesium	7439-95-4	1	5220000	5220000	5220000
C5515	32	>15 ft	Magnesium	7439-95-4	1	4220000	4220000	4220000
C5515	34.5	>15 ft	Magnesium	7439-95-4	2	4610000	5050000	4830000
C5515	37.5	>15 ft	Magnesium	7439-95-4	1	4550000	4550000	4550000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	40	>15 ft	Magnesium	7439-95-4	1	3790000	3790000	3790000
C5515	45.5	>15 ft	Magnesium	7439-95-4	1	4530000	4530000	4530000
C5515	47.5	>15 ft	Magnesium	7439-95-4	1	4220000	4220000	4220000
C5515	52	>15 ft	Magnesium	7439-95-4	1	4940000	4940000	4940000
C5515	57.5	>15 ft	Magnesium	7439-95-4	1	5040000	5040000	5040000
C5515	60	>15 ft	Magnesium	7439-95-4	1	5070000	5070000	5070000
C5515	64.5	>15 ft	Magnesium	7439-95-4	1	3600000	3600000	3600000
C5515	70.5	>15 ft	Magnesium	7439-95-4	1	5670000	5670000	5670000
C5515	72.5	>15 ft	Magnesium	7439-95-4	1	4660000	4660000	4660000
C5515	80	>15 ft	Magnesium	7439-95-4	1	4740000	4740000	4740000
C5515	87	>15 ft	Magnesium	7439-95-4	1	5150000	5150000	5150000
C5515	93	>15 ft	Magnesium	7439-95-4	1	4720000	4720000	4720000
C5515	107	>15 ft	Magnesium	7439-95-4	1	4520000	4520000	4520000
C5515	132.5	>15 ft	Magnesium	7439-95-4	1	4630000	4630000	4630000
C5515	152.5	>15 ft	Magnesium	7439-95-4	1	4560000	4560000	4560000
C5515	167.5	>15 ft	Magnesium	7439-95-4	1	3670000	3670000	3670000
C5515	182.5	>15 ft	Magnesium	7439-95-4	1	4920000	4920000	4920000
C5515	195	>15 ft	Magnesium	7439-95-4	1	5140000	5140000	5140000
C5515	202.5	>15 ft	Magnesium	7439-95-4	1	4430000	4430000	4430000
C5515	220	>15 ft	Magnesium	7439-95-4	1	4120000	4120000	4120000
C5515	237.5	>15 ft	Magnesium	7439-95-4	1	3950000	3950000	3950000
C5515	250.5	>15 ft	Magnesium	7439-95-4	1	3930000	3930000	3930000
C5515	266	>15 ft	Magnesium	7439-95-4	1	2690000	2690000	2690000
C5515	282.5	>15 ft	Magnesium	7439-95-4	1	2510000	2510000	2510000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	285	>15 ft	Magnesium	7439-95-4	1	9490000	9490000	9490000
C5515	290	>15 ft	Magnesium	7439-95-4	1	12400000	12400000	12400000
C5515	297.5	>15 ft	Magnesium	7439-95-4	1	7450000	7450000	7450000
C5515	302.5	>15 ft	Magnesium	7439-95-4	1	7230000	7230000	7230000
C5515	25	>15 ft	Mercury	7439-97-6	1	54	54	54
C5515	30.5	>15 ft	Mercury	7439-97-6	2	73.5	73.5	73.5
C5515	31.5	>15 ft	Mercury	7439-97-6	2	80	112	96
C5515	34.5	>15 ft	Mercury	7439-97-6	2	95.2	154	124.6
C5515	72.5	>15 ft	Mercury	7439-97-6	1	66	66	66
C5515	290	>15 ft	Mercury	7439-97-6	1	79	79	79
C5515	18	>15 ft	Potassium	7440-09-7	1	827000	827000	827000
C5515	25	>15 ft	Potassium	7440-09-7	1	695000	695000	695000
C5515	30.5	>15 ft	Potassium	7440-09-7	1	965000	965000	965000
C5515	31.5	>15 ft	Potassium	7440-09-7	1	1180000	1180000	1180000
C5515	32	>15 ft	Potassium	7440-09-7	1	932000	932000	932000
C5515	34.5	>15 ft	Potassium	7440-09-7	2	948000	1010000	979000
C5515	37.5	>15 ft	Potassium	7440-09-7	1	899000	899000	899000
C5515	40	>15 ft	Potassium	7440-09-7	1	805000	805000	805000
C5515	45.5	>15 ft	Potassium	7440-09-7	1	943000	943000	943000
C5515	47.5	>15 ft	Potassium	7440-09-7	1	939000	939000	939000
C5515	52	>15 ft	Potassium	7440-09-7	1	1140000	1140000	1140000
C5515	57.5	>15 ft	Potassium	7440-09-7	1	1040000	1040000	1040000
C5515	60	>15 ft	Potassium	7440-09-7	1	1170000	1170000	1170000
C5515	64.5	>15 ft	Potassium	7440-09-7	1	1080000	1080000	1080000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	70.5	>15 ft	Potassium	7440-09-7	1	1300000	1300000	1300000
C5515	72.5	>15 ft	Potassium	7440-09-7	1	1060000	1060000	1060000
C5515	80	>15 ft	Potassium	7440-09-7	1	1360000	1360000	1360000
C5515	87	>15 ft	Potassium	7440-09-7	1	1570000	1570000	1570000
C5515	93	>15 ft	Potassium	7440-09-7	1	1330000	1330000	1330000
C5515	107	>15 ft	Potassium	7440-09-7	1	1170000	1170000	1170000
C5515	132.5	>15 ft	Potassium	7440-09-7	1	1220000	1220000	1220000
C5515	152.5	>15 ft	Potassium	7440-09-7	1	1260000	1260000	1260000
C5515	167.5	>15 ft	Potassium	7440-09-7	1	869000	869000	869000
C5515	182.5	>15 ft	Potassium	7440-09-7	1	1190000	1190000	1190000
C5515	195	>15 ft	Potassium	7440-09-7	1	1570000	1570000	1570000
C5515	202.5	>15 ft	Potassium	7440-09-7	1	1060000	1060000	1060000
C5515	220	>15 ft	Potassium	7440-09-7	1	891000	891000	891000
C5515	237.5	>15 ft	Potassium	7440-09-7	1	1040000	1040000	1040000
C5515	250.5	>15 ft	Potassium	7440-09-7	1	1010000	1010000	1010000
C5515	266	>15 ft	Potassium	7440-09-7	1	873000	873000	873000
C5515	282.5	>15 ft	Potassium	7440-09-7	1	638000	638000	638000
C5515	285	>15 ft	Potassium	7440-09-7	1	3270000	3270000	3270000
C5515	290	>15 ft	Potassium	7440-09-7	1	3320000	3320000	3320000
C5515	297.5	>15 ft	Potassium	7440-09-7	1	2320000	2320000	2320000
C5515	302.5	>15 ft	Potassium	7440-09-7	1	2110000	2110000	2110000
C5515	57	>15 ft	Selenium	7782-49-2	1	419	419	419
C5515	135	>15 ft	Selenium	7782-49-2	1	581	581	581
C5515	287	>15 ft	Selenium	7782-49-2	1	786	786	786

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	319.5	>15 ft	Selenium	7782-49-2	1	394	394	394
C5515	18	>15 ft	Silver	7440-22-4	1	53.9	53.9	53.9
C5515	25	>15 ft	Silver	7440-22-4	1	35.7	35.7	35.7
C5515	30.5	>15 ft	Silver	7440-22-4	1	925	925	925
C5515	31.5	>15 ft	Silver	7440-22-4	2	615	630	622.5
C5515	32	>15 ft	Silver	7440-22-4	1	457	457	457
C5515	34.5	>15 ft	Silver	7440-22-4	3	265	416	338.3
C5515	37.5	>15 ft	Silver	7440-22-4	1	150	150	150
C5515	40	>15 ft	Silver	7440-22-4	1	44.7	44.7	44.7
C5515	45.5	>15 ft	Silver	7440-22-4	1	40.5	40.5	40.5
C5515	47.5	>15 ft	Silver	7440-22-4	1	43.6	43.6	43.6
C5515	52	>15 ft	Silver	7440-22-4	1	37.4	37.4	37.4
C5515	57.5	>15 ft	Silver	7440-22-4	1	46.2	46.2	46.2
C5515	60	>15 ft	Silver	7440-22-4	1	44.9	44.9	44.9
C5515	64.5	>15 ft	Silver	7440-22-4	1	38.6	38.6	38.6
C5515	70.5	>15 ft	Silver	7440-22-4	1	46.6	46.6	46.6
C5515	72.5	>15 ft	Silver	7440-22-4	1	43.6	43.6	43.6
C5515	80	>15 ft	Silver	7440-22-4	1	34.8	34.8	34.8
C5515	87	>15 ft	Silver	7440-22-4	1	41.9	41.9	41.9
C5515	93	>15 ft	Silver	7440-22-4	1	40.7	40.7	40.7
C5515	107	>15 ft	Silver	7440-22-4	1	35.4	35.4	35.4
C5515	132.5	>15 ft	Silver	7440-22-4	1	45.5	45.5	45.5
C5515	152.5	>15 ft	Silver	7440-22-4	1	40.7	40.7	40.7
C5515	167.5	>15 ft	Silver	7440-22-4	1	35.5	35.5	35.5

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	182.5	>15 ft	Silver	7440-22-4	1	52.3	52.3	52.3
C5515	195	>15 ft	Silver	7440-22-4	1	48.6	48.6	48.6
C5515	202.5	>15 ft	Silver	7440-22-4	1	42.4	42.4	42.4
C5515	220	>15 ft	Silver	7440-22-4	1	47.2	47.2	47.2
C5515	237.5	>15 ft	Silver	7440-22-4	1	39.1	39.1	39.1
C5515	250.5	>15 ft	Silver	7440-22-4	1	37.5	37.5	37.5
C5515	266	>15 ft	Silver	7440-22-4	1	34.8	34.8	34.8
C5515	282.5	>15 ft	Silver	7440-22-4	1	43.4	43.4	43.4
C5515	285	>15 ft	Silver	7440-22-4	1	92.8	92.8	92.8
C5515	287	>15 ft	Silver	7440-22-4	1	127	127	127
C5515	290	>15 ft	Silver	7440-22-4	1	111	111	111
C5515	297.5	>15 ft	Silver	7440-22-4	1	70.6	70.6	70.6
C5515	302.5	>15 ft	Silver	7440-22-4	1	75.1	75.1	75.1
C5515	18	>15 ft	Sodium	7440-23-5	1	269000	269000	269000
C5515	25	>15 ft	Sodium	7440-23-5	1	376000	376000	376000
C5515	30.5	>15 ft	Sodium	7440-23-5	1	445000	445000	445000
C5515	31.5	>15 ft	Sodium	7440-23-5	1	361000	361000	361000
C5515	32	>15 ft	Sodium	7440-23-5	1	458000	458000	458000
C5515	34.5	>15 ft	Sodium	7440-23-5	2	276000	303000	289500
C5515	37.5	>15 ft	Sodium	7440-23-5	1	181000	181000	181000
C5515	40	>15 ft	Sodium	7440-23-5	1	101000	101000	101000
C5515	45.5	>15 ft	Sodium	7440-23-5	1	131000	131000	131000
C5515	47.5	>15 ft	Sodium	7440-23-5	1	122000	122000	122000
C5515	52	>15 ft	Sodium	7440-23-5	1	166000	166000	166000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	57.5	>15 ft	Sodium	7440-23-5	1	157000	157000	157000
C5515	60	>15 ft	Sodium	7440-23-5	1	176000	176000	176000
C5515	64.5	>15 ft	Sodium	7440-23-5	1	97200	97200	97200
C5515	70.5	>15 ft	Sodium	7440-23-5	1	149000	149000	149000
C5515	72.5	>15 ft	Sodium	7440-23-5	1	110000	110000	110000
C5515	80	>15 ft	Sodium	7440-23-5	1	120000	120000	120000
C5515	87	>15 ft	Sodium	7440-23-5	1	153000	153000	153000
C5515	93	>15 ft	Sodium	7440-23-5	1	145000	145000	145000
C5515	107	>15 ft	Sodium	7440-23-5	1	166000	166000	166000
C5515	132.5	>15 ft	Sodium	7440-23-5	1	143000	143000	143000
C5515	152.5	>15 ft	Sodium	7440-23-5	1	115000	115000	115000
C5515	167.5	>15 ft	Sodium	7440-23-5	1	127000	127000	127000
C5515	182.5	>15 ft	Sodium	7440-23-5	1	162000	162000	162000
C5515	195	>15 ft	Sodium	7440-23-5	1	178000	178000	178000
C5515	202.5	>15 ft	Sodium	7440-23-5	1	159000	159000	159000
C5515	220	>15 ft	Sodium	7440-23-5	1	170000	170000	170000
C5515	237.5	>15 ft	Sodium	7440-23-5	1	120000	120000	120000
C5515	250.5	>15 ft	Sodium	7440-23-5	1	109000	109000	109000
C5515	266	>15 ft	Sodium	7440-23-5	1	89000	89000	89000
C5515	282.5	>15 ft	Sodium	7440-23-5	1	179000	179000	179000
C5515	285	>15 ft	Sodium	7440-23-5	1	262000	262000	262000
C5515	290	>15 ft	Sodium	7440-23-5	1	300000	300000	300000
C5515	297.5	>15 ft	Sodium	7440-23-5	1	177000	177000	177000
C5515	302.5	>15 ft	Sodium	7440-23-5	1	174000	174000	174000

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	15.5	>15 ft	Uranium	7440-61-1	1	364	364	364
C5515	31.5	>15 ft	Uranium	7440-61-1	2	103000	147000	125000
C5515	34.5	>15 ft	Uranium	7440-61-1	1	106000	106000	106000
C5515	49.5	>15 ft	Uranium	7440-61-1	1	250	250	250
C5515	57	>15 ft	Uranium	7440-61-1	1	465	465	465
C5515	135	>15 ft	Uranium	7440-61-1	1	505	505	505
C5515	253	>15 ft	Uranium	7440-61-1	1	336	336	336
C5515	287	>15 ft	Uranium	7440-61-1	1	1190	1190	1190
C5515	319.5	>15 ft	Uranium	7440-61-1	1	286	286	286
C5571	40.5	>15 ft	Arsenic	7440-38-2	1	2040	2040	2040
C5571	59.9	>15 ft	Arsenic	7440-38-2	1	1110	1110	1110
C5571	40.5	>15 ft	Barium	7440-39-3	1	71400	71400	71400
C5571	59.9	>15 ft	Barium	7440-39-3	1	69900	69900	69900
C5571	40.5	>15 ft	Calcium	7440-70-2	1	9690000	9690000	9690000
C5571	59.9	>15 ft	Calcium	7440-70-2	1	7580000	7580000	7580000
C5571	40.5	>15 ft	Chromium	7440-47-3	1	16200	16200	16200
C5571	59.9	>15 ft	Chromium	7440-47-3	1	7210	7210	7210
C5571	40.5	>15 ft	Copper	7440-50-8	1	11300	11300	11300
C5571	59.9	>15 ft	Copper	7440-50-8	1	9120	9120	9120
C5571	40.5	>15 ft	Lead	7439-92-1	1	3910	3910	3910
C5571	59.9	>15 ft	Lead	7439-92-1	1	3300	3300	3300
C5571	40.5	>15 ft	Magnesium	7439-95-4	1	5150000	5150000	5150000
C5571	59.9	>15 ft	Magnesium	7439-95-4	1	3830000	3830000	3830000
C5571	40.5	>15 ft	Mercury	7439-97-6	1	980	980	980

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5571	59.9	>15 ft	Mercury	7439-97-6	1	160	160	160
C5571	40.5	>15 ft	Potassium	7440-09-7	1	1460000	1460000	1460000
C5571	59.9	>15 ft	Potassium	7440-09-7	1	1150000	1150000	1150000
C5571	40.5	>15 ft	Silver	7440-22-4	1	179	179	179
C5571	59.9	>15 ft	Silver	7440-22-4	1	103	103	103
C5571	40.5	>15 ft	Sodium	7440-23-5	1	464000	464000	464000
C5571	59.9	>15 ft	Sodium	7440-23-5	1	726000	726000	726000
Radionuclides (Concentration Unit pCi/g)								
C5301	0	<15 ft	Americium-241	14596-10-2	2	0.468	15.7	8.084
C5301	0	<15 ft	Bismuth-214	14733-03-0	1	1.11	1.11	1.11
C5301	0	<15 ft	Cesium-137	10045-97-3	3	0.14	8.48	4.98
C5301	0	<15 ft	Gross alpha	12587-46-1	1	101	101	101
C5301	0	<15 ft	Gross beta	12587-47-2	1	145	145	145
C5301	0	<15 ft	Lead-212	15092-94-1	1	0.992	0.992	0.992
C5301	0	<15 ft	Lead-214	15067-28-4	1	7.79	7.79	7.79
C5301	0	<15 ft	Plutonium-239/240	PU-239/240	1	2.15	2.15	2.15
C5301	0	<15 ft	Potassium-40	13966-00-2	3	14.4	61.9	31.3
C5301	0	<15 ft	Radium-226	13982-63-3	1	32.2	32.2	32.2
C5301	0	<15 ft	Strontium-90	10098-97-2	1	21.2	21.2	21.2
C5301	0	<15 ft	Technetium-99	14133-76-7	1	22.3	22.3	22.3
C5301	0	<15 ft	Thallium-208	14913-50-9	1	0.22	0.22	0.22
C5301	0	<15 ft	Uranium-233/234	U-233/234	1	0.665	0.665	0.665
C5301	0	<15 ft	Uranium-238	U-238	2	0.421	30.8	15.6
C5301	145.5	>15 ft	Actinium-228	14331-83-0	1	0.883	0.883	0.883

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	147.5	>15 ft	Actinium-228	14331-83-0	1	0.727	0.727	0.727
C5301	124	>15 ft	Americium-241	14596-10-2	1	0.045	0.045	0.045
C5301	145.5	>15 ft	Bismuth-212	14913-49-6	1	0.428	0.428	0.428
C5301	147.5	>15 ft	Bismuth-212	14913-49-6	1	0.447	0.447	0.447
C5301	100	>15 ft	Bismuth-214	14733-03-0	1	0.811	0.811	0.811
C5301	145.5	>15 ft	Bismuth-214	14733-03-0	1	0.287	0.287	0.287
C5301	147.5	>15 ft	Bismuth-214	14733-03-0	1	0.253	0.253	0.253
C5301	163	>15 ft	Bismuth-214	14733-03-0	1	0.567	0.567	0.567
C5301	283	>15 ft	Bismuth-214	14733-03-0	1	0.868	0.868	0.868
C5301	305	>15 ft	Bismuth-214	14733-03-0	1	0.709	0.709	0.709
C5301	22.5	>15 ft	Cesium-137	10045-97-3	1	4.85	4.85	4.85
C5301	135.5	>15 ft	Gross alpha	12587-46-1	1	2.1	2.1	2.1
C5301	137.5	>15 ft	Gross alpha	12587-46-1	1	3.7	3.7	3.7
C5301	141	>15 ft	Gross alpha	12587-46-1	1	3.5	3.5	3.5
C5301	142.5	>15 ft	Gross alpha	12587-46-1	1	4.1	4.1	4.1
C5301	145.5	>15 ft	Gross alpha	12587-46-1	1	4.4	4.4	4.4
C5301	147.5	>15 ft	Gross alpha	12587-46-1	1	4.9	4.9	4.9
C5301	133	>15 ft	Gross beta	12587-47-2	1	11	11	11
C5301	135.5	>15 ft	Gross beta	12587-47-2	1	8.1	8.1	8.1
C5301	137.5	>15 ft	Gross beta	12587-47-2	1	13	13	13
C5301	141	>15 ft	Gross beta	12587-47-2	1	18	18	18
C5301	142.5	>15 ft	Gross beta	12587-47-2	1	17	17	17
C5301	145.5	>15 ft	Gross beta	12587-47-2	1	28	28	28
C5301	147.5	>15 ft	Gross beta	12587-47-2	1	42	42	42

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	285	>15 ft	Iodine-129	15046-84-1	1	1.04	1.04	1.04
C5301	22.5	>15 ft	Lead-212	15092-94-1	1	0.496	0.496	0.496
C5301	31	>15 ft	Lead-212	15092-94-1	1	1.41	1.41	1.41
C5301	40	>15 ft	Lead-212	15092-94-1	1	0.633	0.633	0.633
C5301	59.5	>15 ft	Lead-212	15092-94-1	1	0.955	0.955	0.955
C5301	73	>15 ft	Lead-212	15092-94-1	1	0.82	0.82	0.82
C5301	77.5	>15 ft	Lead-212	15092-94-1	1	0.888	0.888	0.888
C5301	90.5	>15 ft	Lead-212	15092-94-1	1	0.701	0.701	0.701
C5301	100	>15 ft	Lead-212	15092-94-1	1	1.1	1.1	1.1
C5301	108.5	>15 ft	Lead-212	15092-94-1	1	0.965	0.965	0.965
C5301	120	>15 ft	Lead-212	15092-94-1	1	0.542	0.542	0.542
C5301	131	>15 ft	Lead-212	15092-94-1	1	0.726	0.726	0.726
C5301	137.5	>15 ft	Lead-212	15092-94-1	1	0.894	0.894	0.894
C5301	145.5	>15 ft	Lead-212	15092-94-1	1	0.881	0.881	0.881
C5301	147.5	>15 ft	Lead-212	15092-94-1	2	0.515	0.708	0.6115
C5301	163	>15 ft	Lead-212	15092-94-1	1	0.765	0.765	0.765
C5301	172.5	>15 ft	Lead-212	15092-94-1	1	0.923	0.923	0.923
C5301	185.5	>15 ft	Lead-212	15092-94-1	1	0.782	0.782	0.782
C5301	200	>15 ft	Lead-212	15092-94-1	1	0.312	0.312	0.312
C5301	205	>15 ft	Lead-212	15092-94-1	1	0.644	0.644	0.644
C5301	222.5	>15 ft	Lead-212	15092-94-1	1	0.65	0.65	0.65
C5301	235	>15 ft	Lead-212	15092-94-1	1	0.563	0.563	0.563
C5301	247.5	>15 ft	Lead-212	15092-94-1	1	0.653	0.653	0.653
C5301	270	>15 ft	Lead-212	15092-94-1	1	0.664	0.664	0.664

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	283	>15 ft	Lead-212	15092-94-1	1	1.21	1.21	1.21
C5301	287.5	>15 ft	Lead-212	15092-94-1	1	1.66	1.66	1.66
C5301	292.5	>15 ft	Lead-212	15092-94-1	1	1.12	1.12	1.12
C5301	305	>15 ft	Lead-212	15092-94-1	1	0.808	0.808	0.808
C5301	315	>15 ft	Lead-212	15092-94-1	1	0.492	0.492	0.492
C5301	40	>15 ft	Lead-214	15067-28-4	1	2.37	2.37	2.37
C5301	73	>15 ft	Lead-214	15067-28-4	1	1.04	1.04	1.04
C5301	90.5	>15 ft	Lead-214	15067-28-4	1	2.07	2.07	2.07
C5301	100	>15 ft	Lead-214	15067-28-4	1	1.64	1.64	1.64
C5301	120	>15 ft	Lead-214	15067-28-4	1	1.52	1.52	1.52
C5301	131	>15 ft	Lead-214	15067-28-4	1	0.967	0.967	0.967
C5301	145.5	>15 ft	Lead-214	15067-28-4	1	0.385	0.385	0.385
C5301	147.5	>15 ft	Lead-214	15067-28-4	1	0.283	0.283	0.283
C5301	163	>15 ft	Lead-214	15067-28-4	1	0.89	0.89	0.89
C5301	205	>15 ft	Lead-214	15067-28-4	1	0.906	0.906	0.906
C5301	235	>15 ft	Lead-214	15067-28-4	1	0.634	0.634	0.634
C5301	247.5	>15 ft	Lead-214	15067-28-4	1	1.24	1.24	1.24
C5301	283	>15 ft	Lead-214	15067-28-4	1	2.21	2.21	2.21
C5301	292.5	>15 ft	Lead-214	15067-28-4	1	2.88	2.88	2.88
C5301	305	>15 ft	Lead-214	15067-28-4	1	0.864	0.864	0.864
C5301	45.5	>15 ft	Plutonium-239/240	PU-239/240	1	0.028	0.028	0.028
C5301	124	>15 ft	Plutonium-239/240	PU-239/240	1	0.067	0.067	0.067
C5301	262	>15 ft	Plutonium-239/240	PU-239/240	1	0.01	0.01	0.01
C5301	22.5	>15 ft	Potassium-40	13966-00-2	2	16	65.5	40.75

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	31	>15 ft	Potassium-40	13966-00-2	2	17.2	59.4	38.3
C5301	40	>15 ft	Potassium-40	13966-00-2	2	19.2	61.6	40.4
C5301	45.5	>15 ft	Potassium-40	13966-00-2	1	17.1	17.1	17.1
C5301	59.5	>15 ft	Potassium-40	13966-00-2	2	18.4	60.6	39.5
C5301	73	>15 ft	Potassium-40	13966-00-2	2	17.2	73	45.1
C5301	77.5	>15 ft	Potassium-40	13966-00-2	2	19.1	69.5	44.3
C5301	90.5	>15 ft	Potassium-40	13966-00-2	2	21.6	56.6	39.1
C5301	100	>15 ft	Potassium-40	13966-00-2	1	21.4	21.4	21.4
C5301	108.5	>15 ft	Potassium-40	13966-00-2	1	20.1	20.1	20.1
C5301	120	>15 ft	Potassium-40	13966-00-2	2	18.7	64.8	41.75
C5301	131	>15 ft	Potassium-40	13966-00-2	2	20.1	84	52.05
C5301	137.5	>15 ft	Potassium-40	13966-00-2	2	21.4	31.9	26.65
C5301	145.5	>15 ft	Potassium-40	13966-00-2	1	24.7	24.7	24.7
C5301	147.5	>15 ft	Potassium-40	13966-00-2	3	17.2	51.6	28.7
C5301	163	>15 ft	Potassium-40	13966-00-2	1	18.9	18.9	18.9
C5301	172.5	>15 ft	Potassium-40	13966-00-2	2	15.3	67.4	41.35
C5301	185.5	>15 ft	Potassium-40	13966-00-2	1	15.7	15.7	15.7
C5301	200	>15 ft	Potassium-40	13966-00-2	1	17.1	17.1	17.1
C5301	205	>15 ft	Potassium-40	13966-00-2	2	20.2	66.4	43.3
C5301	222.5	>15 ft	Potassium-40	13966-00-2	1	16.5	16.5	16.5
C5301	235	>15 ft	Potassium-40	13966-00-2	1	18.6	18.6	18.6
C5301	247.5	>15 ft	Potassium-40	13966-00-2	1	19.9	19.9	19.9
C5301	260	>15 ft	Potassium-40	13966-00-2	1	19.4	19.4	19.4
C5301	270	>15 ft	Potassium-40	13966-00-2	1	18.4	18.4	18.4

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	283	>15 ft	Potassium-40	13966-00-2	1	22.4	22.4	22.4
C5301	287.5	>15 ft	Potassium-40	13966-00-2	1	21.3	21.3	21.3
C5301	292.5	>15 ft	Potassium-40	13966-00-2	1	23.7	23.7	23.7
C5301	297.5	>15 ft	Potassium-40	13966-00-2	1	21.1	21.1	21.1
C5301	305	>15 ft	Potassium-40	13966-00-2	1	17.3	17.3	17.3
C5301	315	>15 ft	Potassium-40	13966-00-2	1	14.1	14.1	14.1
C5301	283	>15 ft	Radium-224	13233-32-4	1	5.9	5.9	5.9
C5301	45.5	>15 ft	Radium-226	13982-63-3	1	0.357	0.357	0.357
C5301	145.5	>15 ft	Radium-226	13982-63-3	1	0.287	0.287	0.287
C5301	147.5	>15 ft	Radium-226	13982-63-3	1	0.253	0.253	0.253
C5301	45.5	>15 ft	Radium-228	15262-20-1	1	0.512	0.512	0.512
C5301	145.5	>15 ft	Radium-228	15262-20-1	1	0.883	0.883	0.883
C5301	147.5	>15 ft	Radium-228	15262-20-1	1	0.727	0.727	0.727
C5301	45.5	>15 ft	Strontium-90	10098-97-2	1	0.44	0.44	0.44
C5301	22.5	>15 ft	Thallium-208	14913-50-9	1	0.427	0.427	0.427
C5301	31	>15 ft	Thallium-208	14913-50-9	1	0.36	0.36	0.36
C5301	40	>15 ft	Thallium-208	14913-50-9	1	0.348	0.348	0.348
C5301	59.5	>15 ft	Thallium-208	14913-50-9	1	0.307	0.307	0.307
C5301	73	>15 ft	Thallium-208	14913-50-9	1	0.324	0.324	0.324
C5301	77.5	>15 ft	Thallium-208	14913-50-9	1	0.304	0.304	0.304
C5301	90.5	>15 ft	Thallium-208	14913-50-9	1	0.309	0.309	0.309
C5301	100	>15 ft	Thallium-208	14913-50-9	1	0.311	0.311	0.311
C5301	108.5	>15 ft	Thallium-208	14913-50-9	1	0.231	0.231	0.231
C5301	120	>15 ft	Thallium-208	14913-50-9	1	0.298	0.298	0.298

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	131	>15 ft	Thallium-208	14913-50-9	1	0.234	0.234	0.234
C5301	137.5	>15 ft	Thallium-208	14913-50-9	1	0.252	0.252	0.252
C5301	145.5	>15 ft	Thallium-208	14913-50-9	1	0.235	0.235	0.235
C5301	147.5	>15 ft	Thallium-208	14913-50-9	2	0.148	0.257	0.2025
C5301	163	>15 ft	Thallium-208	14913-50-9	1	0.229	0.229	0.229
C5301	200	>15 ft	Thallium-208	14913-50-9	1	0.193	0.193	0.193
C5301	205	>15 ft	Thallium-208	14913-50-9	1	0.191	0.191	0.191
C5301	222.5	>15 ft	Thallium-208	14913-50-9	1	0.185	0.185	0.185
C5301	235	>15 ft	Thallium-208	14913-50-9	1	0.235	0.235	0.235
C5301	247.5	>15 ft	Thallium-208	14913-50-9	1	0.172	0.172	0.172
C5301	270	>15 ft	Thallium-208	14913-50-9	1	0.234	0.234	0.234
C5301	283	>15 ft	Thallium-208	14913-50-9	1	0.367	0.367	0.367
C5301	287.5	>15 ft	Thallium-208	14913-50-9	1	0.514	0.514	0.514
C5301	292.5	>15 ft	Thallium-208	14913-50-9	1	0.542	0.542	0.542
C5301	305	>15 ft	Thallium-208	14913-50-9	1	0.144	0.144	0.144
C5301	315	>15 ft	Thallium-208	14913-50-9	1	0.212	0.212	0.212
C5301	45.5	>15 ft	Thorium-228	14274-82-9	1	0.347	0.347	0.347
C5301	45.5	>15 ft	Thorium-232	TH-232	1	0.512	0.512	0.512
C5301	124	>15 ft	Tritium	10028-17-8	1	13.1	13.1	13.1
C5301	262	>15 ft	Tritium	10028-17-8	1	511	511	511
C5301	285	>15 ft	Tritium	10028-17-8	1	1100	1100	1100
C5301	31.5	>15 ft	Uranium-233/234	U-233/234	2	0.24	0.24	0.24
C5301	45.5	>15 ft	Uranium-233/234	U-233/234	2	0.14	0.521	0.3305
C5301	124	>15 ft	Uranium-233/234	U-233/234	1	0.14	0.14	0.14

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	262	>15 ft	Uranium-233/234	U-233/234	1	0.11	0.11	0.11
C5301	285	>15 ft	Uranium-233/234	U-233/234	1	0.31	0.31	0.31
C5301	31.5	>15 ft	Uranium-235	15117-96-1	2	0.025	0.031	0.028
C5301	45.5	>15 ft	Uranium-235	15117-96-1	1	0.016	0.016	0.016
C5301	262	>15 ft	Uranium-235	15117-96-1	1	0.014	0.014	0.014
C5301	285	>15 ft	Uranium-235	15117-96-1	1	0.014	0.014	0.014
C5301	22.5	>15 ft	Uranium-238	U-238	1	0.13	0.13	0.13
C5301	31	>15 ft	Uranium-238	U-238	1	0.256	0.256	0.256
C5301	31.5	>15 ft	Uranium-238	U-238	2	0.2	0.25	0.225
C5301	40	>15 ft	Uranium-238	U-238	1	0.133	0.133	0.133
C5301	45.5	>15 ft	Uranium-238	U-238	2	0.12	0.541	0.3305
C5301	59.5	>15 ft	Uranium-238	U-238	1	0.125	0.125	0.125
C5301	73	>15 ft	Uranium-238	U-238	1	0.165	0.165	0.165
C5301	77.5	>15 ft	Uranium-238	U-238	1	0.145	0.145	0.145
C5301	90.5	>15 ft	Uranium-238	U-238	1	0.134	0.134	0.134
C5301	100	>15 ft	Uranium-238	U-238	1	0.121	0.121	0.121
C5301	108.5	>15 ft	Uranium-238	U-238	1	0.142	0.142	0.142
C5301	120	>15 ft	Uranium-238	U-238	1	0.106	0.106	0.106
C5301	124	>15 ft	Uranium-238	U-238	1	0.16	0.16	0.16
C5301	131	>15 ft	Uranium-238	U-238	1	0.107	0.107	0.107
C5301	137.5	>15 ft	Uranium-238	U-238	1	0.135	0.135	0.135
C5301	147.5	>15 ft	Uranium-238	U-238	1	0.132	0.132	0.132
C5301	163	>15 ft	Uranium-238	U-238	1	0.117	0.117	0.117
C5301	172.5	>15 ft	Uranium-238	U-238	1	0.123	0.123	0.123

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5301	185.5	>15 ft	Uranium-238	U-238	1	0.155	0.155	0.155
C5301	200	>15 ft	Uranium-238	U-238	1	0.131	0.131	0.131
C5301	205	>15 ft	Uranium-238	U-238	1	0.109	0.109	0.109
C5301	222.5	>15 ft	Uranium-238	U-238	1	0.111	0.111	0.111
C5301	235	>15 ft	Uranium-238	U-238	1	0.139	0.139	0.139
C5301	247.5	>15 ft	Uranium-238	U-238	1	0.144	0.144	0.144
C5301	260	>15 ft	Uranium-238	U-238	1	0.13	0.13	0.13
C5301	262	>15 ft	Uranium-238	U-238	1	0.17	0.17	0.17
C5301	270	>15 ft	Uranium-238	U-238	1	0.11	0.11	0.11
C5301	283	>15 ft	Uranium-238	U-238	1	0.27	0.27	0.27
C5301	285	>15 ft	Uranium-238	U-238	1	0.24	0.24	0.24
C5301	287.5	>15 ft	Uranium-238	U-238	1	0.331	0.331	0.331
C5301	292.5	>15 ft	Uranium-238	U-238	1	0.434	0.434	0.434
C5301	297.5	>15 ft	Uranium-238	U-238	1	0.282	0.282	0.282
C5301	305	>15 ft	Uranium-238	U-238	1	0.161	0.161	0.161
C5301	315	>15 ft	Uranium-238	U-238	1	0.187	0.187	0.187
C5302	54.94	>15 ft	Americium-241	14596-10-2	1	2.83	2.83	2.83
C5302	54.94	>15 ft	Bismuth-214	14733-03-0	1	0.739	0.739	0.739
C5302	54.94	>15 ft	Cesium-137	10045-97-3	2	0.26	0.829	0.5445
C5302	54.94	>15 ft	Cobalt-60	10198-40-0	1	0.072	0.072	0.072
C5302	54.94	>15 ft	Potassium-40	13966-00-2	3	16	52.7	28.4
C5302	54.94	>15 ft	Radium-226	13982-63-3	1	0.429	0.429	0.429
C5302	54.94	>15 ft	Radium-228	15262-20-1	1	0.678	0.678	0.678
C5302	54.94	>15 ft	Uranium-238	U-238	1	0.12	0.12	0.12

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	27.5	>15 ft	Americium-241	14596-10-2	2	87300	94000	90650
C5515	31.5	>15 ft	Americium-241	14596-10-2	2	418	1140	779
C5515	34.5	>15 ft	Americium-241	14596-10-2	3	414	1420	885
C5515	49.5	>15 ft	Americium-241	14596-10-2	1	0.12	0.12	0.12
C5515	57	>15 ft	Americium-241	14596-10-2	1	0.37	0.37	0.37
C5515	135	>15 ft	Americium-241	14596-10-2	1	0.041	0.041	0.041
C5515	287	>15 ft	Americium-241	14596-10-2	1	0.021	0.021	0.021
C5515	25	>15 ft	Cesium-137	10045-97-3	1	0.157	0.157	0.157
C5515	27.5	>15 ft	Cesium-137	10045-97-3	1	31000	31000	31000
C5515	30.5	>15 ft	Cesium-137	10045-97-3	2	9690	12700	11195
C5515	31.5	>15 ft	Cesium-137	10045-97-3	4	827	3700	1776.75
C5515	32	>15 ft	Cesium-137	10045-97-3	2	393	448	420.5
C5515	34.5	>15 ft	Cesium-137	10045-97-3	6	90	1700	539
C5515	37.5	>15 ft	Cesium-137	10045-97-3	2	873	1390	1132
C5515	40	>15 ft	Cesium-137	10045-97-3	2	16.4	41.9	29.15
C5515	45.5	>15 ft	Cesium-137	10045-97-3	1	2.5	2.5	2.5
C5515	47.5	>15 ft	Cesium-137	10045-97-3	2	9.29	38.3	23.8
C5515	49.5	>15 ft	Cesium-137	10045-97-3	1	14.5	14.5	14.5
C5515	52	>15 ft	Cesium-137	10045-97-3	1	0.511	0.511	0.511
C5515	57	>15 ft	Cesium-137	10045-97-3	1	5.31	5.31	5.31
C5515	57.5	>15 ft	Cesium-137	10045-97-3	2	6.16	9.01	7.59
C5515	60	>15 ft	Cesium-137	10045-97-3	1	0.914	0.914	0.914
C5515	64.5	>15 ft	Cesium-137	10045-97-3	1	7.78	7.78	7.78
C5515	31.5	>15 ft	Cobalt-60	10198-40-0	3	0.285	0.382	0.320

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	34.5	>15 ft	Cobalt-60	10198-40-0	2	0.199	0.356	0.278
C5515	37.5	>15 ft	Cobalt-60	10198-40-0	1	1.25	1.25	1.25
C5515	57.5	>15 ft	Cobalt-60	10198-40-0	1	0.919	0.919	0.919
C5515	34.5	>15 ft	Europium-154	15585-10-1	1	1.28	1.28	1.28
C5515	27.5	>15 ft	Gross alpha	12587-46-1	1	483000	483000	483000
C5515	30.5	>15 ft	Gross alpha	12587-46-1	1	16700	16700	16700
C5515	31.5	>15 ft	Gross alpha	12587-46-1	1	8580	8580	8580
C5515	32	>15 ft	Gross alpha	12587-46-1	1	5430	5430	5430
C5515	34.5	>15 ft	Gross alpha	12587-46-1	2	2450	4090	3270
C5515	37.5	>15 ft	Gross alpha	12587-46-1	1	1540	1540	1540
C5515	40	>15 ft	Gross alpha	12587-46-1	1	50.1	50.1	50.1
C5515	45.5	>15 ft	Gross alpha	12587-46-1	1	23.8	23.8	23.8
C5515	27.5	>15 ft	Gross beta	12587-47-2	1	341000	341000	341000
C5515	30.5	>15 ft	Gross beta	12587-47-2	1	361000	361000	361000
C5515	31.5	>15 ft	Gross beta	12587-47-2	1	45500	45500	45500
C5515	32	>15 ft	Gross beta	12587-47-2	1	11100	11100	11100
C5515	34.5	>15 ft	Gross beta	12587-47-2	2	23500	38200	30850
C5515	37.5	>15 ft	Gross beta	12587-47-2	1	10900	10900	10900
C5515	40	>15 ft	Gross beta	12587-47-2	1	133	133	133
C5515	47.5	>15 ft	Gross beta	12587-47-2	1	195	195	195
C5515	57.5	>15 ft	Gross beta	12587-47-2	1	86.3	86.3	86.3
C5515	34.5	>15 ft	Nickel-63	13981-37-8	1	10.6	10.6	10.6
C5515	31.5	>15 ft	Plutonium-238	13981-16-3	2	31.7	78.1	54.9
C5515	34.5	>15 ft	Plutonium-238	13981-16-3	2	61	120	90.5

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	27.5	>15 ft	Plutonium-239/240	PU-239/240	1	426000	426000	426000
C5515	31.5	>15 ft	Plutonium-239/240	PU-239/240	2	1970	5350	3660
C5515	34.5	>15 ft	Plutonium-239/240	PU-239/240	2	3900	6360	5130
C5515	49.5	>15 ft	Plutonium-239/240	PU-239/240	1	0.56	0.56	0.56
C5515	57	>15 ft	Plutonium-239/240	PU-239/240	1	1.8	1.8	1.8
C5515	31.5	>15 ft	Potassium-40	13966-00-2	2	12.4	14.3	13.35
C5515	34.5	>15 ft	Potassium-40	13966-00-2	1	11.7	11.7	11.7
C5515	34.5	>15 ft	Radium-226	13982-63-3	1	0.402	0.402	0.402
C5515	34.5	>15 ft	Radium-228	15262-20-1	1	0.83	0.83	0.83
C5515	27.5	>15 ft	Strontium-90	10098-97-2	1	125000	125000	125000
C5515	30.5	>15 ft	Strontium-90	10098-97-2	1	162000	162000	162000
C5515	31.5	>15 ft	Strontium-90	10098-97-2	3	11800	27800	19433
C5515	32	>15 ft	Strontium-90	10098-97-2	1	8370	8370	8370
C5515	34.5	>15 ft	Strontium-90	10098-97-2	4	1000	22700	9875
C5515	37.5	>15 ft	Strontium-90	10098-97-2	1	6290	6290	6290
C5515	40	>15 ft	Strontium-90	10098-97-2	1	83.8	83.8	83.8
C5515	45.5	>15 ft	Strontium-90	10098-97-2	1	15.3	15.3	15.3
C5515	47.5	>15 ft	Strontium-90	10098-97-2	1	101	101	101
C5515	49.5	>15 ft	Strontium-90	10098-97-2	1	2.2	2.2	2.2
C5515	57	>15 ft	Strontium-90	10098-97-2	1	3.5	3.5	3.5
C5515	57.5	>15 ft	Strontium-90	10098-97-2	1	56.2	56.2	56.2
C5515	64.5	>15 ft	Strontium-90	10098-97-2	1	28	28	28
C5515	72.5	>15 ft	Strontium-90	10098-97-2	1	5.15	5.15	5.15
C5515	195	>15 ft	Strontium-90	10098-97-2	1	8.36	8.36	8.36

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	31.5	>15 ft	Technetium-99	14133-76-7	2	4.7	6.27	5.485
C5515	34.5	>15 ft	Technetium-99	14133-76-7	1	4.56	4.56	4.56
C5515	34.5	>15 ft	Thorium-228	14274-82-9	1	0.709	0.709	0.709
C5515	34.5	>15 ft	Thorium-232	TH-232	1	0.83	0.83	0.83
C5515	135	>15 ft	Tritium	10028-17-8	1	14.4	14.4	14.4
C5515	253	>15 ft	Tritium	10028-17-8	1	196	196	196
C5515	287	>15 ft	Tritium	10028-17-8	1	2860	2860	2860
C5515	319.5	>15 ft	Tritium	10028-17-8	1	73	73	73
C5515	15.5	>15 ft	Uranium-233/234	U-233/234	1	0.15	0.15	0.15
C5515	31.5	>15 ft	Uranium-233/234	U-233/234	2	35	42.1	38.55
C5515	34.5	>15 ft	Uranium-233/234	U-233/234	2	40	43.2	41.6
C5515	49.5	>15 ft	Uranium-233/234	U-233/234	1	0.18	0.18	0.18
C5515	57	>15 ft	Uranium-233/234	U-233/234	1	0.12	0.12	0.12
C5515	135	>15 ft	Uranium-233/234	U-233/234	1	0.18	0.18	0.18
C5515	253	>15 ft	Uranium-233/234	U-233/234	1	0.17	0.17	0.17
C5515	287	>15 ft	Uranium-233/234	U-233/234	1	0.31	0.31	0.31
C5515	319.5	>15 ft	Uranium-233/234	U-233/234	1	0.11	0.11	0.11
C5515	27.5	>15 ft	Uranium-234	13966-29-5	1	48.4	48.4	48.4
C5515	15.5	>15 ft	Uranium-235	15117-96-1	1	0.016	0.016	0.016
C5515	27.5	>15 ft	Uranium-235	15117-96-1	1	1.97	1.97	1.97
C5515	31.5	>15 ft	Uranium-235	15117-96-1	1	4.28	4.28	4.28
C5515	34.5	>15 ft	Uranium-235	15117-96-1	1	3.9	3.9	3.9
C5515	57	>15 ft	Uranium-235	15117-96-1	1	0.012	0.012	0.012
C5515	135	>15 ft	Uranium-235	15117-96-1	1	0.013	0.013	0.013

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	287	>15 ft	Uranium-235	15117-96-1	1	0.011	0.011	0.011
C5515	319.5	>15 ft	Uranium-235	15117-96-1	1	0.012	0.012	0.012
C5515	27.5	>15 ft	Uranium-236	13982-70-2	1	1.02	1.02	1.02
C5515	15.5	>15 ft	Uranium-238	U-238	1	0.13	0.13	0.13
C5515	18	>15 ft	Uranium-238	U-238	1	0.18	0.18	0.18
C5515	25	>15 ft	Uranium-238	U-238	1	0.131	0.131	0.131
C5515	27.5	>15 ft	Uranium-238	U-238	1	47.4	47.4	47.4
C5515	30.5	>15 ft	Uranium-238	U-238	1	18.5	18.5	18.5
C5515	31.5	>15 ft	Uranium-238	U-238	3	27.7	49.7	38.5
C5515	32	>15 ft	Uranium-238	U-238	1	17.5	17.5	17.5
C5515	34.5	>15 ft	Uranium-238	U-238	4	12.9	68.6	44.8
C5515	37.5	>15 ft	Uranium-238	U-238	1	9.68	9.68	9.68
C5515	40	>15 ft	Uranium-238	U-238	1	0.322	0.322	0.322
C5515	45.5	>15 ft	Uranium-238	U-238	1	0.175	0.175	0.175
C5515	47.5	>15 ft	Uranium-238	U-238	1	0.145	0.145	0.145
C5515	49.5	>15 ft	Uranium-238	U-238	1	0.17	0.17	0.17
C5515	52	>15 ft	Uranium-238	U-238	1	0.175	0.175	0.175
C5515	57	>15 ft	Uranium-238	U-238	1	0.11	0.11	0.11
C5515	57.5	>15 ft	Uranium-238	U-238	1	0.154	0.154	0.154
C5515	60	>15 ft	Uranium-238	U-238	1	0.197	0.197	0.197
C5515	64.5	>15 ft	Uranium-238	U-238	1	0.136	0.136	0.136
C5515	70.5	>15 ft	Uranium-238	U-238	1	0.207	0.207	0.207
C5515	72.5	>15 ft	Uranium-238	U-238	1	0.156	0.156	0.156
C5515	80	>15 ft	Uranium-238	U-238	1	0.143	0.143	0.143

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5515	87	>15 ft	Uranium-238	U-238	1	0.159	0.159	0.159
C5515	93	>15 ft	Uranium-238	U-238	1	0.151	0.151	0.151
C5515	107	>15 ft	Uranium-238	U-238	1	0.158	0.158	0.158
C5515	132.5	>15 ft	Uranium-238	U-238	1	0.197	0.197	0.197
C5515	135	>15 ft	Uranium-238	U-238	1	0.17	0.17	0.17
C5515	152.5	>15 ft	Uranium-238	U-238	1	0.225	0.225	0.225
C5515	167.5	>15 ft	Uranium-238	U-238	1	0.141	0.141	0.141
C5515	182.5	>15 ft	Uranium-238	U-238	1	0.166	0.166	0.166
C5515	195	>15 ft	Uranium-238	U-238	1	0.189	0.189	0.189
C5515	202.5	>15 ft	Uranium-238	U-238	1	0.146	0.146	0.146
C5515	220	>15 ft	Uranium-238	U-238	1	0.16	0.16	0.16
C5515	237.5	>15 ft	Uranium-238	U-238	1	0.126	0.126	0.126
C5515	250.5	>15 ft	Uranium-238	U-238	1	0.123	0.123	0.123
C5515	253	>15 ft	Uranium-238	U-238	1	0.14	0.14	0.14
C5515	266	>15 ft	Uranium-238	U-238	1	0.105	0.105	0.105
C5515	282.5	>15 ft	Uranium-238	U-238	1	0.121	0.121	0.121
C5515	285	>15 ft	Uranium-238	U-238	1	0.363	0.363	0.363
C5515	287	>15 ft	Uranium-238	U-238	1	0.23	0.23	0.23
C5515	290	>15 ft	Uranium-238	U-238	1	0.407	0.407	0.407
C5515	297.5	>15 ft	Uranium-238	U-238	1	0.222	0.222	0.222
C5515	302.5	>15 ft	Uranium-238	U-238	1	0.4	0.4	0.4
C5515	319.5	>15 ft	Uranium-238	U-238	1	0.11	0.11	0.11
C5571	26.6	>15 ft	Carbon-14	14762-75-5	1	235	235	235
C5571	40.5	>15 ft	Cesium-137	10045-97-3	2	2740	3670	3205

Table B-1. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
C5571	59.9	>15 ft	Cesium-137	10045-97-3	2	3.54	176	89.8
C5571	26.6	>15 ft	Strontium-90	10098-97-2	1	13700	13700	13700
C5571	26.6	>15 ft	Tritium	10028-17-8	1	93.3	93.3	93.3
C5571	40.5	>15 ft	Uranium-238	U-238	1	2.33	2.33	2.33
C5571	59.9	>15 ft	Uranium-238	U-238	1	0.197	0.197	0.197

Table B-2. List of Analytes Tested During Soil Analysis and the Associated Analytical Method

Analyte	Chemical Abstracts Service No.	Analytical Method
Nitrogen in Nitrite and Nitrate	NO2+NO3-N	353.1_NO3/NO2
Oil and grease	OIL/GREASE	413.1_OILGREASE
Lead	7439-92-1	6010_METALS_ICP_TR
Silver	7440-22-4	6010_METALS_ICP_TR
Cadmium	7440-43-9	6010_METALS_ICP_TR
Sulfur	7704-34-9	6010M_ICP_ASTM_AE
Phosphorus	7723-14-0	6010M_ICP_ASTM_AE
Aluminum	7429-90-5	6010M_ICP_ASTM_AE
Iron	7439-89-6	6010M_ICP_ASTM_AE
Lithium	7439-93-2	6010M_ICP_ASTM_AE
Magnesium	7439-95-4	6010M_ICP_ASTM_AE
Manganese	7439-96-5	6010M_ICP_ASTM_AE
Molybdenum	7439-98-7	6010M_ICP_ASTM_AE
Nickel	7440-02-0	6010M_ICP_ASTM_AE
Potassium	7440-09-7	6010M_ICP_ASTM_AE
Rhenium	7440-15-5	6010M_ICP_ASTM_AE
Silicon	7440-21-3	6010M_ICP_ASTM_AE
Sodium	7440-23-5	6010M_ICP_ASTM_AE
Strontium	7440-24-6	6010M_ICP_ASTM_AE
Thallium	7440-28-0	6010M_ICP_ASTM_AE
Titanium	7440-32-6	6010M_ICP_ASTM_AE
Barium	7440-39-3	6010M_ICP_ASTM_AE
Beryllium	7440-41-7	6010M_ICP_ASTM_AE
Boron	7440-42-8	6010M_ICP_ASTM_AE
Chromium	7440-47-3	6010M_ICP_ASTM_AE
Cobalt	7440-48-4	6010M_ICP_ASTM_AE
Copper	7440-50-8	6010M_ICP_ASTM_AE
Vanadium	7440-62-2	6010M_ICP_ASTM_AE
Zinc	7440-66-6	6010M_ICP_ASTM_AE
Zirconium	7440-67-7	6010M_ICP_ASTM_AE
Bismuth	7440-69-9	6010M_ICP_ASTM_AE
Calcium	7440-70-2	6010M_ICP_ASTM_AE
Lead-208	13966-28-4	6020M_ICPMS_ASTM_AE
Antimony-121	14265-72-6	6020M_ICPMS_ASTM_AE
Cadmium-111	14336-64-2	6020M_ICPMS_ASTM_AE
Silver-109 metastable	14378-38-2	6020M_ICPMS_ASTM_AE

Table B-2. List of Analytes Tested During Soil Analysis and the Associated Analytical Method

Analyte	Chemical Abstracts Service No.	Analytical Method
Selenium-82	14687-58-2	6020M_ICPMS_ASTM_AE
Ruthenium-101	14914-61-5	6020M_ICPMS_ASTM_AE
Arsenic	7440-38-2	6020M_ICPMS_ASTM_AE
Antimony	7440-36-0	6020M_ICPMS_ASTM_AE
Selenium	7782-49-2	6020M_ICPMS_ASTM_AE
Hexavalent Chromium	18540-29-9	7196_CR6
Mercury	7439-97-6	7471_HG_CVAA
Aroclor-1260	11096-82-5	8082_PCB_GC
Aroclor-1254	11097-69-1	8082_PCB_GC
Aroclor-1268	11100-14-4	8082_PCB_GC
Aroclor-1221	11104-28-2	8082_PCB_GC
Aroclor-1232	11141-16-5	8082_PCB_GC
Aroclor-1248	12672-29-6	8082_PCB_GC
Aroclor-1016	12674-11-2	8082_PCB_GC
Aroclor-1262	37324-23-5	8082_PCB_GC
Aroclor-1242	53469-21-9	8082_PCB_GC
Ethylbenzene	100-41-4	8260_VOA_GCMS
Styrene	100-42-5	8260_VOA_GCMS
trans-Decalin, 2-methyl	1000152-47-3	8260_VOA_GCMS
cis-1,3-Dichloropropene	10061-01-5	8260_VOA_GCMS
trans-1,3-Dichloropropene	10061-02-6	8260_VOA_GCMS
1,2-Dichloroethane	107-06-2	8260_VOA_GCMS
4-Methyl-2-pentanone	108-10-1	8260_VOA_GCMS
Toluene	108-88-3	8260_VOA_GCMS
Chlorobenzene	108-90-7	8260_VOA_GCMS
Dodecane	112-40-3	8260_VOA_GCMS
Undecane	1120-21-4	8260_VOA_GCMS
Decane	124-18-5	8260_VOA_GCMS
Dibromochloromethane	124-48-1	8260_VOA_GCMS
Tetrachloroethene	127-18-4	8260_VOA_GCMS
Xylenes (total)	1330-20-7	8260_VOA_GCMS
Decahydronaphthalene, (cis-trans mixture)	91-17-8	8260_VOA_GCMS
2,6-Dimethyl-undecane	17301-23-4	8260_VOA_GCMS
2,6-Dimethylnonane	17302-28-2	8260_VOA_GCMS
Methyldecahydronaphthalene	2958-76-1	8260_VOA_GCMS

Table B-2. List of Analytes Tested During Soil Analysis and the Associated Analytical Method

Analyte	Chemical Abstracts Service No.	Analytical Method
1,2-Dichloroethene (Total)	540-59-0	8260_VOA_GCMS
Carbon tetrachloride	56-23-5	8260_VOA_GCMS
2-Hexanone	591-78-6	8260_VOA_GCMS
Acetone	67-64-1	8260_VOA_GCMS
Chloroform	67-66-3	8260_VOA_GCMS
1-Butanol	71-36-3	8260_VOA_GCMS
Benzene	71-43-2	8260_VOA_GCMS
1,1,1-Trichloroethane	71-55-6	8260_VOA_GCMS
Bromomethane	74-83-9	8260_VOA_GCMS
Chloromethane	74-87-3	8260_VOA_GCMS
Chloroethane	75-00-3	8260_VOA_GCMS
Vinyl chloride	75-01-4	8260_VOA_GCMS
Methylene chloride	75-09-2	8260_VOA_GCMS
Carbon disulfide	75-15-0	8260_VOA_GCMS
Bromoform	75-25-2	8260_VOA_GCMS
Bromodichloromethane	75-27-4	8260_VOA_GCMS
1,1-Dichloroethane	75-34-3	8260_VOA_GCMS
1,1-Dichloroethene	75-35-4	8260_VOA_GCMS
1,2-Dichloropropane	78-87-5	8260_VOA_GCMS
2-Butanone	78-93-3	8260_VOA_GCMS
1,1,2-Trichloroethane	79-00-5	8260_VOA_GCMS
Trichloroethene	79-01-6	8260_VOA_GCMS
1,1,2,2-Tetrachloroethane	79-34-5	8260_VOA_GCMS
n-Butylbenzene	104-51-8	8260_VOA_GCMS
cis-1,2-Dichloroethylene	156-59-2	8260_VOA_GCMS
trans-1,2-Dichloroethylene	156-60-5	8260_VOA_GCMS
Cyclohexanone	108-94-1	8260_VOA_GCMS
Hexane	110-54-3	8260_VOA_GCMS
Acetonitrile	75-05-8	8260_VOA_GCMS
1,2,4-Trimethylbenzene	95-63-6	8260_VOA_GCMS
Tetrahydrofuran	109-99-9	8260_VOA_GCMS
(m+p)-Xylene	179601-23-1	8260_VOA_GCMS
Butane, 2-methyl-	78-78-4	8260_VOA_GCMS
Tributyl phosphate	126-73-8	8270_SVOA_GCMS
1,2,4-Trichlorobenzene	120-82-1	8270_SVOA_GCMS
2,4-Dinitrotoluene	121-14-2	8270_SVOA_GCMS

Table B-2. List of Analytes Tested During Soil Analysis and the Associated Analytical Method

Analyte	Chemical Abstracts Service No.	Analytical Method
Pyrene	129-00-0	8270_SVOA_GCMS
4-Nitrophenol	100-02-7	8270_SVOA_GCMS
1,4-Dichlorobenzene	106-46-7	8270_SVOA_GCMS
Phenol	108-95-2	8270_SVOA_GCMS
4-Chloro-3-methylphenol	59-50-7	8270_SVOA_GCMS
n-Nitrosodi-n-propylamine	621-64-7	8270_SVOA_GCMS
Acenaphthene	83-32-9	8270_SVOA_GCMS
Pentachlorophenol	87-86-5	8270_SVOA_GCMS
2-Chlorophenol	95-57-8	8270_SVOA_GCMS
Di-n-butylphthalate	84-74-2	8270_SVOA_GCMS
2,4-Dimethylheptane	2213-23-2	8270_SVOA_GCMS
4-Nitroaniline	100-01-6	8270_SVOA_GCMS
Benzyl alcohol	100-51-6	8270_SVOA_GCMS
4-Bromophenylphenyl ether	101-55-3	8270_SVOA_GCMS
2,4-Dimethylphenol	105-67-9	8270_SVOA_GCMS
4-Chloroaniline	106-47-8	8270_SVOA_GCMS
Bis(2-chloro-1-methylethyl) ether	108-60-1	8270_SVOA_GCMS
2-Picoline	109-06-8	8270_SVOA_GCMS
Pyridine	110-86-1	8270_SVOA_GCMS
Bis(2-chloroethyl) ether	111-44-4	8270_SVOA_GCMS
2-Butoxyethanol	111-76-2	8270_SVOA_GCMS
Bis(2-Chloroethoxy) methane	111-91-1	8270_SVOA_GCMS
Tris-2-chloroethyl phosphate	115-96-8	8270_SVOA_GCMS
Bis(2-ethylhexyl) phthalate	117-81-7	8270_SVOA_GCMS
Di-n-octylphthalate	117-84-0	8270_SVOA_GCMS
Hexachlorobenzene	118-74-1	8270_SVOA_GCMS
Anthracene	120-12-7	8270_SVOA_GCMS
2,4-Dichlorophenol	120-83-2	8270_SVOA_GCMS
Dimethyl phthalate	131-11-3	8270_SVOA_GCMS
Total cresols	1319-77-3	8270_SVOA_GCMS
Dibenzofuran	132-64-9	8270_SVOA_GCMS
Benzo(ghi)perylene	191-24-2	8270_SVOA_GCMS
Indeno(1,2,3-cd)pyrene	193-39-5	8270_SVOA_GCMS
Benzo(b)fluoranthene	205-99-2	8270_SVOA_GCMS
Fluoranthene	206-44-0	8270_SVOA_GCMS
Benzo(k)fluoranthene	207-08-9	8270_SVOA_GCMS

Table B-2. List of Analytes Tested During Soil Analysis and the Associated Analytical Method

Analyte	Chemical Abstracts Service No.	Analytical Method
Acenaphthylene	208-96-8	8270_SVOA_GCMS
Chrysene	218-01-9	8270_SVOA_GCMS
Benzo(a)pyrene	50-32-8	8270_SVOA_GCMS
2,4-Dinitrophenol	51-28-5	8270_SVOA_GCMS
Dibenz[a,h]anthracene	53-70-3	8270_SVOA_GCMS
4,6-Dinitro-2-methylphenol	534-52-1	8270_SVOA_GCMS
1,3-Dichlorobenzene	541-73-1	8270_SVOA_GCMS
Benzo(a)anthracene	56-55-3	8270_SVOA_GCMS
2,6-Dinitrotoluene	606-20-2	8270_SVOA_GCMS
Benzoic acid	65-85-0	8270_SVOA_GCMS
3+4 Methylphenol (cresol, m+p)	65794-96-9	8270_SVOA_GCMS
Hexachloroethane	67-72-1	8270_SVOA_GCMS
4-Chlorophenylphenyl ether	7005-72-3	8270_SVOA_GCMS
Hexachlorocyclopentadiene	77-47-4	8270_SVOA_GCMS
Dibutyl Butylphosphonate	78-46-6	8270_SVOA_GCMS
Isophorone	78-59-1	8270_SVOA_GCMS
Diethylphthalate	84-66-2	8270_SVOA_GCMS
Phenanthrene	85-01-8	8270_SVOA_GCMS
Butylbenzylphthalate	85-68-7	8270_SVOA_GCMS
n-Nitrosodiphenylamine	86-30-6	8270_SVOA_GCMS
Fluorene	86-73-7	8270_SVOA_GCMS
Carbazole	86-74-8	8270_SVOA_GCMS
Hexachlorobutadiene	87-68-3	8270_SVOA_GCMS
2,4,6-Trichlorophenol	88-06-2	8270_SVOA_GCMS
2-Nitroaniline	88-74-4	8270_SVOA_GCMS
2-Nitrophenol	88-75-5	8270_SVOA_GCMS
Naphthalene	91-20-3	8270_SVOA_GCMS
2-Methylnaphthalene	91-57-6	8270_SVOA_GCMS
2-Chloronaphthalene	91-58-7	8270_SVOA_GCMS
2-Naphthylamine	91-59-8	8270_SVOA_GCMS
3,3'-Dichlorobenzidine	91-94-1	8270_SVOA_GCMS
Benzothiazole	95-16-9	8270_SVOA_GCMS
2-Methylphenol (cresol, o-)	95-48-7	8270_SVOA_GCMS
1,2-Dichlorobenzene	95-50-1	8270_SVOA_GCMS
2,4,5-Trichlorophenol	95-95-4	8270_SVOA_GCMS
Nitrobenzene	98-95-3	8270_SVOA_GCMS

Table B-2. List of Analytes Tested During Soil Analysis and the Associated Analytical Method

Analyte	Chemical Abstracts Service No.	Analytical Method
3-Nitroaniline	99-09-2	8270_SVOA_GCMS
4-Methylphenol (cresol, p-)	106-44-5	8270_SVOA_GCMS
2,6-Dimethylheptane	1072-05-5	8270_SVOA_GCMS
Heptane, 2,5-dimethyl-	2216-30-0	8270_SVOA_GCMS
Cyanide	57-12-5	9012_CYANIDE
Phosphate	14265-44-2	9056_ANIONS_IC
Nitrate	14797-55-8	9056_ANIONS_IC
Nitrogen in Nitrate	NO3-N	9056_ANIONS_IC
Nitrite	14797-65-0	9056_ANIONS_IC
Nitrogen in Nitrite	NO2-N	9056_ANIONS_IC
Sulfate	14808-79-8	9056_ANIONS_IC
Chloride	16887-00-6	9056_ANIONS_IC
Fluoride	16984-48-8	9056_ANIONS_IC
Phosphorus in phosphate	PO4-P	9056_ANIONS_IC
Gross alpha	12587-46-1	ALPHA_BETA_LSC_AE
Gross beta	12587-47-2	ALPHA_BETA_LSC_AE
Carbon-14	14762-75-5	C14_COX_LSC
Potassium-40	13966-00-2	GAMMA_GS
Radium-226	13982-63-3	GAMMA_GS
Americium-241	14596-10-2	GAMMA_GS
Bismuth-214	14733-03-0	GAMMA_GS
Thallium-208	14913-50-9	GAMMA_GS
Lead-214	15067-28-4	GAMMA_GS
Lead-212	15092-94-1	GAMMA_GS
Cobalt-60	10198-40-0	GAMMA_GS
Beryllium-7	13966-02-4	GAMMA_GS
Ruthenium-106	13967-48-1	GAMMA_GS
Cesium-134	13967-70-9	GAMMA_GS
Antimony-125	14234-35-6	GAMMA_GS
Europium-155	14391-16-3	GAMMA_GS
Europium-152	14683-23-9	GAMMA_GS
Europium-154	15585-10-1	GAMMA_GS
Radium-224	13233-32-4	GAMMA_GS
Thorium-228	14274-82-9	GAMMA_GS
Radium-228	15262-20-1	GAMMA_GS
Thorium-232	TH-232	GAMMA_GS

Table B-2. List of Analytes Tested During Soil Analysis and the Associated Analytical Method

Analyte	Chemical Abstracts Service No.	Analytical Method
Zinc-65	13982-39-3	GAMMA_GS
Actinium-228	14331-83-0	GAMMA_GS
Niobium-94	14681-63-1	GAMMA_GS
Cerium-144	14762-78-8	GAMMA_GS
Tin-113	13966-06-8	GAMMA_GS
Ruthenium-103	13968-53-1	GAMMA_GS
Barium-133	13981-41-4	GAMMA_GS
Bismuth-212	14913-49-6	GAMMA_GS
Thorium-234	15065-10-8	GAMMA_GS
Tin-126	15832-50-5	GAMMA_GS
Cerium/Praseodymium-144	CE/PR-144	GAMMA_GS
Cesium-137	10045-97-3	GAMMA_GS_AE
Iodine-129	15046-84-1	I129_SEP_LEPS_GS
Nickel-63	13981-37-8	NI63_LSC
Neptunium-237	13994-20-2	NP237_LLE_PLATE_AEA
Plutonium-238	13981-16-3	PUISO_PLATE_AEA
Plutonium-239/240	PU-239/240	PUISO_PLATE_AEA
Technetium-99	14133-76-7	RADISO_ICPMS_ASTM_AE
Uranium-238	U-238	RADISO_ICPMS_ASTM_AE
Uranium-234	13966-29-5	RADISOTOPES_ICPMS
Uranium-233	13968-55-3	RADISOTOPES_ICPMS
Uranium-236	13982-70-2	RADISOTOPES_ICPMS
Strontium-90	10098-97-2	SR90_SEP_LSC
Total beta radiostrontium	SR-RAD	SRTOT_SEP_PRECIP_GPC
Tritium	10028-17-8	TRITIUM_COX_LSC
Uranium-235	15117-96-1	UISO_PLATE_AEA
Uranium-233/234	U-233/234	UISO_PLATE_AEA
Uranium	7440-61-1	UTOT_KPA
Total petroleum hydrocarbons - diesel range	TPHDIESEL	WTPH_DIESEL
Total petroleum hydrocarbons - kerosene range	TPHKEROSENE	WTPH_DIESEL
Total petroleum hydrocarbons - gasoline range	TPHGASOLINE	WTPH_GASOLINE

Table B-2. List of Analytes Tested During Soil Analysis and the Associated Analytical Method

Analyte	Chemical Abstracts Service No.	Analytical Method

References: For EPA Methods 353.1 and 413.1, see EPA/600/4-79/020, 1983, *Methods for Chemical Analysis of Water and Wastes*, Environmental Monitoring and Support Laboratory, U.S. Environmental Protection Agency, Cincinnati, Ohio. Available at: http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=D196019611.

For four-digit EPA methods, see SW-846, *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*, as amended, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, Washington, D.C. Available at: https://www.epa.gov/hw-sw846.

WTPH-D = Washington State Department of Ecology's total petroleum hydrocarbons as diesel.

WTPH-G - Washington State Department of Ecology's total petroleum hydrocarbons as gasoline

Table B-3. Minimum, Maximum, and Mean Detected Soil Concentrations of Organics, Anions, Metals, and Radionuclides by Vadose Zone Depth

Boring	Depth (ft)	Vadose Zone Depth (ft)	Analyte	Chemical Abstracts Service No.	Number of Detects	Minimum Detected Concentration	Maximum Detected Concentration	Mean Detected Concentration
Organics (Concentration Units µg/kg)								
C5301	0	<15 ft	1-Butanol	71-36-3	1	640	640	640
C5301	0	<15 ft	2-Butanone	78-93-3	1	190	190	190
C5301	0	<15 ft	Carbon disulfide	75-15-0	1	21	21	21
C5301	0	<15 ft	Decane	124-18-5	1	1800	1800	1800
C5301	0	<15 ft	Dodecane	112-40-3	1	660	660	660
C5301	0	<15 ft	Ethylbenzene	100-41-4	1	3.9	3.9	3.9
C5301	0	<15 ft	Toluene	108-88-3	1	850	850	850
C5301	0	<15 ft	Xylenes (total)	1330-20-7	1	12	12	12
C5515	34.5	>15 ft	1,2,4-Trimethylbenzene	95-63-6	2	0.43	0.55	0.49
C5515	34.5	>15 ft	Acetone	67-64-1	1	8.2	8.2	8.2
C5515	34.5	>15 ft	Methylene chloride	75-09-2	1	3.7	3.7	3.7
C5515	34.5	>15 ft	Styrene	100-42-5	1	9	9	9
C5515	34.5	>15 ft	Toluene	108-88-3	2	0.54	0.57	0.555
C5515	57	>15 ft	Acetone	67-64-1	1	7	7	7
C5515	135	>15 ft	Acetone	67-64-1	1	6.4	6.4	6.4
C5571	26.6	>15 ft	1,2,4-Trimethylbenzene	95-63-6	1	0.4	0.4	0.4
C5571	26.6	>15 ft	Toluene	108-88-3	1	0.56	0.56	0.56
C5301	262	>15 ft	Oil and grease	OIL/GREASE	1	250000	250000	250000
C5301	31.5	>15 ft	Di-n-butylphthalate	84-74-2	1	200	200	200
C5301	124	>15 ft	Diethylphthalate	84-66-2	1	280	280	280
C5515	34.5	>15 ft	Bis(2-ethylhexyl) phthalate	117-81-7	1	47	47	47
C5515	34.5	>15 ft	Di-n-butylphthalate	84-74-2	1	38	38	38
C5515	34.5	>15 ft	Tributyl phosphate	126-73-8	1	20	20	20
C5515	31.5	>15 ft	Aroclor-1254	11097-69-1	1	52	52	52
C5515	34.5	>15 ft	Aroclor-1254	11097-69-1	2	34	49	41.5
ANION (Concentration Unit µg/kg)								
C5301	0	<15 ft	Chloride	16887-00-6	2	788	4300	2544

C5301	0	<15 ft	Cyanide	57-12-5	1	170	170	170
C5301	0	<15 ft	Nitrate	14797-55-8	2	1290	19500	10395
C5301	0	<15 ft	Nitrogen in Nitrite and Nitrate	NO2+NO3-N	1	3600	3600	3600
C5301	0	<15 ft	Phosphate	14265-44-2	1	2400	2400	2400
C5301	0	<15 ft	Sulfate	14808-79-8	2	18700	74100	46400
C5301	31	>15 ft	Chloride	16887-00-6	1	469	469	469
C5301	45.5	>15 ft	Chloride	16887-00-6	1	500	500	500
C5301	59.5	>15 ft	Chloride	16887-00-6	1	482	482	482
C5301	100	>15 ft	Chloride	16887-00-6	1	9290	9290	9290
C5301	108.5	>15 ft	Chloride	16887-00-6	1	8450	8450	8450
C5301	120	>15 ft	Chloride	16887-00-6	1	5260	5260	5260
C5301	124	>15 ft	Chloride	16887-00-6	1	6560	6560	6560
C5301	131	>15 ft	Chloride	16887-00-6	1	6810	6810	6810
C5301	137.5	>15 ft	Chloride	16887-00-6	1	6790	6790	6790
C5301	147.5	>15 ft	Chloride	16887-00-6	1	2280	2280	2280
C5301	163	>15 ft	Chloride	16887-00-6	1	1150	1150	1150
C5301	172.5	>15 ft	Chloride	16887-00-6	1	557	557	557
C5301	200	>15 ft	Chloride	16887-00-6	1	730	730	730
C5301	205	>15 ft	Chloride	16887-00-6	1	354	354	354
C5301	222.5	>15 ft	Chloride	16887-00-6	1	501	501	501
C5301	262	>15 ft	Chloride	16887-00-6	1	1810	1810	1810
C5301	270	>15 ft	Chloride	16887-00-6	1	552	552	552
C5301	283	>15 ft	Chloride	16887-00-6	1	864	864	864
C5301	287.5	>15 ft	Chloride	16887-00-6	1	1020	1020	1020
C5301	292.5	>15 ft	Chloride	16887-00-6	1	845	845	845
C5301	297.5	>15 ft	Chloride	16887-00-6	1	628	628	628
C5301	305	>15 ft	Chloride	16887-00-6	1	1170	1170	1170

C5301	315	>15 ft	Chloride	16887-00-6	1	1130	1130	1130
C5301	31.5	>15 ft	Cyanide	57-12-5	1	890	890	890
C5301	22.5	>15 ft	Fluoride	16984-48-8	1	652	652	652
C5301	73	>15 ft	Fluoride	16984-48-8	1	228	228	228
C5301	90.5	>15 ft	Fluoride	16984-48-8	1	323	323	323
C5301	131	>15 ft	Fluoride	16984-48-8	1	253	253	253
C5301	137.5	>15 ft	Fluoride	16984-48-8	1	285	285	285
C5301	147.5	>15 ft	Fluoride	16984-48-8	1	245	245	245
C5301	270	>15 ft	Fluoride	16984-48-8	1	279	279	279
C5301	287.5	>15 ft	Fluoride	16984-48-8	1	356	356	356
C5301	292.5	>15 ft	Fluoride	16984-48-8	1	423	423	423
C5301	22.5	>15 ft	Nitrate	14797-55-8	1	2890	2890	2890
C5301	31	>15 ft	Nitrate	14797-55-8	1	1130	1130	1130
C5301	45.5	>15 ft	Nitrate	14797-55-8	1	2570	2570	2570
C5301	90.5	>15 ft	Nitrate	14797-55-8	1	13200	13200	13200
C5301	100	>15 ft	Nitrate	14797-55-8	1	12000	12000	12000
C5301	108.5	>15 ft	Nitrate	14797-55-8	1	8460	8460	8460
C5301	120	>15 ft	Nitrate	14797-55-8	1	3310	3310	3310
C5301	124	>15 ft	Nitrate	14797-55-8	1	4910	4910	4910
C5301	131	>15 ft	Nitrate	14797-55-8	1	3070	3070	3070
C5301	137.5	>15 ft	Nitrate	14797-55-8	1	2320	2320	2320
C5301	147.5	>15 ft	Nitrate	14797-55-8	1	1620	1620	1620
C5301	163	>15 ft	Nitrate	14797-55-8	1	1660	1660	1660
C5301	172.5	>15 ft	Nitrate	14797-55-8	1	3290	3290	3290
C5301	200	>15 ft	Nitrate	14797-55-8	1	20100	20100	20100
C5301	205	>15 ft	Nitrate	14797-55-8	1	35700	35700	35700
C5301	222.5	>15 ft	Nitrate	14797-55-8	1	45400	45400	45400

C5301	235	>15 ft	Nitrate	14797-55-8	1	51400	51400	51400
C5301	247.5	>15 ft	Nitrate	14797-55-8	1	55700	55700	55700
C5301	260	>15 ft	Nitrate	14797-55-8	1	55700	55700	55700
C5301	262	>15 ft	Nitrate	14797-55-8	1	92500	92500	92500
C5301	270	>15 ft	Nitrate	14797-55-8	1	26700	26700	26700
C5301	283	>15 ft	Nitrate	14797-55-8	1	204000	204000	204000
C5301	285	>15 ft	Nitrate	14797-55-8	1	185000	185000	185000
C5301	287.5	>15 ft	Nitrate	14797-55-8	1	205000	205000	205000
C5301	292.5	>15 ft	Nitrate	14797-55-8	1	233000	233000	233000
C5301	297.5	>15 ft	Nitrate	14797-55-8	1	219000	219000	219000
C5301	305	>15 ft	Nitrate	14797-55-8	1	25200	25200	25200
C5301	315	>15 ft	Nitrate	14797-55-8	1	26700	26700	26700
C5301	45.5	>15 ft	Nitrite	14797-65-0	1	427	427	427
C5301	45.5	>15 ft	Phosphate	14265-44-2	1	4200	4200	4200
C5301	22.5	>15 ft	Sulfate	14808-79-8	1	2380	2380	2380
C5301	31	>15 ft	Sulfate	14808-79-8	1	3580	3580	3580
C5301	40	>15 ft	Sulfate	14808-79-8	1	1470	1470	1470
C5301	45.5	>15 ft	Sulfate	14808-79-8	1	4300	4300	4300
C5301	59.5	>15 ft	Sulfate	14808-79-8	1	3630	3630	3630
C5301	73	>15 ft	Sulfate	14808-79-8	1	7060	7060	7060
C5301	77.5	>15 ft	Sulfate	14808-79-8	1	8600	8600	8600
C5301	90.5	>15 ft	Sulfate	14808-79-8	1	8520	8520	8520
C5301	100	>15 ft	Sulfate	14808-79-8	1	32500	32500	32500
C5301	108.5	>15 ft	Sulfate	14808-79-8	1	23000	23000	23000
C5301	120	>15 ft	Sulfate	14808-79-8	1	15400	15400	15400
C5301	124	>15 ft	Sulfate	14808-79-8	1	13500	13500	13500
C5301	131	>15 ft	Sulfate	14808-79-8	1	9500	9500	9500

C5301	137.5	>15 ft	Sulfate	14808-79-8	1	7200	7200	7200
C5301	147.5	>15 ft	Sulfate	14808-79-8	1	15800	15800	15800
C5301	163	>15 ft	Sulfate	14808-79-8	1	5150	5150	5150
C5301	172.5	>15 ft	Sulfate	14808-79-8	1	2830	2830	2830
C5301	185.5	>15 ft	Sulfate	14808-79-8	1	2370	2370	2370
C5301	200	>15 ft	Sulfate	14808-79-8	1	2390	2390	2390
C5301	205	>15 ft	Sulfate	14808-79-8	1	1780	1780	1780
C5301	222.5	>15 ft	Sulfate	14808-79-8	1	2150	2150	2150
C5301	235	>15 ft	Sulfate	14808-79-8	1	2760	2760	2760
C5301	247.5	>15 ft	Sulfate	14808-79-8	1	2510	2510	2510
C5301	260	>15 ft	Sulfate	14808-79-8	1	2510	2510	2510
C5301	270	>15 ft	Sulfate	14808-79-8	1	3180	3180	3180
C5301	283	>15 ft	Sulfate	14808-79-8	1	12000	12000	12000
C5301	285	>15 ft	Sulfate	14808-79-8	1	18800	18800	18800
C5301	287.5	>15 ft	Sulfate	14808-79-8	1	18600	18600	18600
C5301	292.5	>15 ft	Sulfate	14808-79-8	1	30900	30900	30900
C5301	297.5	>15 ft	Sulfate	14808-79-8	1	28700	28700	28700
C5301	305	>15 ft	Sulfate	14808-79-8	1	17500	17500	17500
C5301	315	>15 ft	Sulfate	14808-79-8	1	10600	10600	10600
C5302	54.94	>15 ft	Chloride	16887-00-6	1	5410	5410	5410
C5302	54.94	>15 ft	Fluoride	16984-48-8	1	532	532	532
C5302	54.94	>15 ft	Sulfate	14808-79-8	1	27900	27900	27900
C5515	31.5	>15 ft	Cyanide	57-12-5	1	120	120	120
C5515	34.5	>15 ft	Cyanide	57-12-5	1	210	210	210
C5515	18	>15 ft	Fluoride	16984-48-8	1	498	498	498
C5515	25	>15 ft	Fluoride	16984-48-8	1	322	322	322
C5515	32	>15 ft	Fluoride	16984-48-8	1	205	205	205

C5515	72.5	>15 ft	Fluoride	16984-48-8	1	219	219	219
C5515	80	>15 ft	Fluoride	16984-48-8	1	290	290	290
C5515	87	>15 ft	Fluoride	16984-48-8	1	291	291	291
C5515	107	>15 ft	Fluoride	16984-48-8	1	214	214	214
C5515	132.5	>15 ft	Fluoride	16984-48-8	1	258	258	258
C5515	167.5	>15 ft	Fluoride	16984-48-8	1	205	205	205
C5515	202.5	>15 ft	Fluoride	16984-48-8	1	237	237	237
C5515	250.5	>15 ft	Fluoride	16984-48-8	1	201	201	201
C5515	282.5	>15 ft	Fluoride	16984-48-8	1	234	234	234
C5515	290	>15 ft	Fluoride	16984-48-8	1	289	289	289
C5515	297.5	>15 ft	Fluoride	16984-48-8	1	325	325	325
C5515	302.5	>15 ft	Fluoride	16984-48-8	1	321	321	321
C5515	15.5	>15 ft	Nitrate	14797-55-8	1	2650	2650	2650
C5515	31.5	>15 ft	Nitrate	14797-55-8	2	974	1640	1307
C5515	34.5	>15 ft	Nitrate	14797-55-8	2	2260	2840	2550
C5515	40	>15 ft	Nitrate	14797-55-8	1	7510	7510	7510
C5515	47.5	>15 ft	Nitrate	14797-55-8	1	2170	2170	2170
C5515	49.5	>15 ft	Nitrate	14797-55-8	1	3220	3220	3220
C5515	57	>15 ft	Nitrate	14797-55-8	1	3520	3520	3520
C5515	57.5	>15 ft	Nitrate	14797-55-8	1	1790	1790	1790
C5515	60	>15 ft	Nitrate	14797-55-8	1	3500	3500	3500
C5515	64.5	>15 ft	Nitrate	14797-55-8	1	13000	13000	13000
C5515	70.5	>15 ft	Nitrate	14797-55-8	1	1410	1410	1410
C5515	72.5	>15 ft	Nitrate	14797-55-8	1	2520	2520	2520
C5515	80	>15 ft	Nitrate	14797-55-8	1	1740	1740	1740
C5515	87	>15 ft	Nitrate	14797-55-8	1	5910	5910	5910
C5515	93	>15 ft	Nitrate	14797-55-8	1	2830	2830	2830

C5515	107	>15 ft	Nitrate	14797-55-8	1	1670	1670	1670
C5515	132.5	>15 ft	Nitrate	14797-55-8	1	1220	1220	1220
C5515	135	>15 ft	Nitrate	14797-55-8	1	5400	5400	5400
C5515	152.5	>15 ft	Nitrate	14797-55-8	1	1130	1130	1130
C5515	182.5	>15 ft	Nitrate	14797-55-8	1	1300	1300	1300
C5515	195	>15 ft	Nitrate	14797-55-8	1	2090	2090	2090
C5515	202.5	>15 ft	Nitrate	14797-55-8	1	1220	1220	1220
C5515	253	>15 ft	Nitrate	14797-55-8	1	11100	11100	11100
C5515	282.5	>15 ft	Nitrate	14797-55-8	1	1800	1800	1800
C5515	285	>15 ft	Nitrate	14797-55-8	1	33700	33700	33700
C5515	287	>15 ft	Nitrate	14797-55-8	1	57100	57100	57100
C5515	290	>15 ft	Nitrate	14797-55-8	1	51100	51100	51100
C5515	297.5	>15 ft	Nitrate	14797-55-8	1	203000	203000	203000
C5515	302.5	>15 ft	Nitrate	14797-55-8	1	234000	234000	234000
C5515	319.5	>15 ft	Nitrate	14797-55-8	1	12400	12400	12400
C5515	31.5	>15 ft	Nitrite	14797-65-0	2	1180	2560	1870
C5515	34.5	>15 ft	Nitrite	14797-65-0	1	1510	1510	1510
C5515	30.5	>15 ft	Phosphate	14265-44-2	1	47800	47800	47800
C5515	31.5	>15 ft	Phosphate	14265-44-2	3	31900	103218	73339
C5515	32	>15 ft	Phosphate	14265-44-2	1	110000	110000	110000
C5515	34.5	>15 ft	Phosphate	14265-44-2	4	31000	65037	45009
C5515	37.5	>15 ft	Phosphate	14265-44-2	1	10300	10300	10300
C5515	40	>15 ft	Phosphate	14265-44-2	1	5920	5920	5920
C5515	45.5	>15 ft	Phosphate	14265-44-2	1	6470	6470	6470
C5515	47.5	>15 ft	Phosphate	14265-44-2	1	6950	6950	6950
C5515	15.5	>15 ft	Sulfate	14808-79-8	1	12700	12700	12700
C5515	25	>15 ft	Sulfate	14808-79-8	1	14100	14100	14100

C5515	31.5	>15 ft	Sulfate	14808-79-8	2	1600	1900	1750
C5515	34.5	>15 ft	Sulfate	14808-79-8	1	1800	1800	1800
C5515	37.5	>15 ft	Sulfate	14808-79-8	1	2070	2070	2070
C5515	47.5	>15 ft	Sulfate	14808-79-8	1	2710	2710	2710
C5515	49.5	>15 ft	Sulfate	14808-79-8	1	5980	5980	5980
C5515	52	>15 ft	Sulfate	14808-79-8	1	3670	3670	3670
C5515	57	>15 ft	Sulfate	14808-79-8	1	6460	6460	6460
C5515	57.5	>15 ft	Sulfate	14808-79-8	1	7630	7630	7630
C5515	60	>15 ft	Sulfate	14808-79-8	1	6820	6820	6820
C5515	64.5	>15 ft	Sulfate	14808-79-8	1	12500	12500	12500
C5515	70.5	>15 ft	Sulfate	14808-79-8	1	9430	9430	9430
C5515	72.5	>15 ft	Sulfate	14808-79-8	1	18900	18900	18900
C5515	80	>15 ft	Sulfate	14808-79-8	1	39500	39500	39500
C5515	87	>15 ft	Sulfate	14808-79-8	1	75100	75100	75100
C5515	93	>15 ft	Sulfate	14808-79-8	1	53800	53800	53800
C5515	107	>15 ft	Sulfate	14808-79-8	1	8350	8350	8350
C5515	132.5	>15 ft	Sulfate	14808-79-8	1	3370	3370	3370
C5515	152.5	>15 ft	Sulfate	14808-79-8	1	5850	5850	5850
C5515	167.5	>15 ft	Sulfate	14808-79-8	1	5360	5360	5360
C5515	182.5	>15 ft	Sulfate	14808-79-8	1	5640	5640	5640
C5515	195	>15 ft	Sulfate	14808-79-8	1	6000	6000	6000
C5515	202.5	>15 ft	Sulfate	14808-79-8	1	4900	4900	4900
C5515	220	>15 ft	Sulfate	14808-79-8	1	2130	2130	2130
C5515	237.5	>15 ft	Sulfate	14808-79-8	1	4460	4460	4460
C5515	250.5	>15 ft	Sulfate	14808-79-8	1	7120	7120	7120
C5515	253	>15 ft	Sulfate	14808-79-8	1	8860	8860	8860
C5515	266	>15 ft	Sulfate	14808-79-8	1	9140	9140	9140

C5515	282.5	>15 ft	Sulfate	14808-79-8	1	6860	6860	6860
C5515	285	>15 ft	Sulfate	14808-79-8	1	28600	28600	28600
C5515	287	>15 ft	Sulfate	14808-79-8	1	35300	35300	35300
C5515	290	>15 ft	Sulfate	14808-79-8	1	43400	43400	43400
C5515	297.5	>15 ft	Sulfate	14808-79-8	1	31100	31100	31100
C5515	302.5	>15 ft	Sulfate	14808-79-8	1	35500	35500	35500
C5515	319.5	>15 ft	Sulfate	14808-79-8	1	12000	12000	12000
C5571	40.5	>15 ft	Fluoride	16984-48-8	1	535	535	535
C5571	59.9	>15 ft	Fluoride	16984-48-8	1	266	266	266
C5571	40.5	>15 ft	Nitrate	14797-55-8	1	113000	113000	113000
C5571	59.9	>15 ft	Nitrate	14797-55-8	1	1020000	1020000	1020000
C5571	40.5	>15 ft	Sulfate	14808-79-8	1	9820	9820	9820
C5571	59.9	>15 ft	Sulfate	14808-79-8	1	8240	8240	8240
Metals (Concentration Units µg/kg)								
C5301	0	<15 ft	Aluminum	7429-90-5	1	6640000	6640000	6640000
C5301	0	<15 ft	Arsenic	7440-38-2	1	1280	1280	1280
C5301	0	<15 ft	Barium	7440-39-3	1	60900	60900	60900
C5301	0	<15 ft	Calcium	7440-70-2	1	8660000	8660000	8660000
C5301	0	<15 ft	Chromium	7440-47-3	2	11800	12700	12250
C5301	0	<15 ft	Copper	7440-50-8	2	9500	11800	10650
C5301	0	<15 ft	Iron	7439-89-6	1	12700000	12700000	12700000
C5301	0	<15 ft	Lead	7439-92-1	1	4500	4500	4500
C5301	0	<15 ft	Magnesium	7439-95-4	1	5150000	5150000	5150000
C5301	0	<15 ft	Manganese	7439-96-5	1	273000	273000	273000
C5301	0	<15 ft	Mercury	7439-97-6	1	29.7	29.7	29.7
C5301	0	<15 ft	Nickel	7440-02-0	1	14100	14100	14100
C5301	0	<15 ft	Phosphorus	7723-14-0	1	878000	878000	878000

C5301	0	<15 ft	Potassium	7440-09-7	1	1500000	1500000	1500000
C5301	0	<15 ft	Strontium	7440-24-6	1	34500	34500	34500
C5301	0	<15 ft	Titanium	7440-32-6	1	341000	341000	341000
C5301	0	<15 ft	Uranium	7440-61-1	1	1180	1180	1180
C5301	0	<15 ft	Zinc	7440-66-6	1	36000	36000	36000
C5301	0	<15 ft	Zirconium	7440-67-7	1	3800	3800	3800
C5301	22.5	>15 ft	Aluminum	7429-90-5	1	5140000	5140000	5140000
C5301	31	>15 ft	Aluminum	7429-90-5	1	6350000	6350000	6350000
C5301	40	>15 ft	Aluminum	7429-90-5	1	6180000	6180000	6180000
C5301	59.5	>15 ft	Aluminum	7429-90-5	1	5200000	5200000	5200000
C5301	73	>15 ft	Aluminum	7429-90-5	1	7100000	7100000	7100000
C5301	77.5	>15 ft	Aluminum	7429-90-5	1	6860000	6860000	6860000
C5301	90.5	>15 ft	Aluminum	7429-90-5	1	5270000	5270000	5270000
C5301	100	>15 ft	Aluminum	7429-90-5	1	5350000	5350000	5350000
C5301	108.5	>15 ft	Aluminum	7429-90-5	1	6730000	6730000	6730000
C5301	120	>15 ft	Aluminum	7429-90-5	1	4490000	4490000	4490000
C5301	131	>15 ft	Aluminum	7429-90-5	1	4120000	4120000	4120000
C5301	137.5	>15 ft	Aluminum	7429-90-5	1	6900000	6900000	6900000
C5301	147.5	>15 ft	Aluminum	7429-90-5	1	6480000	6480000	6480000
C5301	163	>15 ft	Aluminum	7429-90-5	1	4230000	4230000	4230000
C5301	172.5	>15 ft	Aluminum	7429-90-5	1	6150000	6150000	6150000
C5301	185.5	>15 ft	Aluminum	7429-90-5	1	6020000	6020000	6020000
C5301	200	>15 ft	Aluminum	7429-90-5	1	6150000	6150000	6150000
C5301	205	>15 ft	Aluminum	7429-90-5	1	5420000	5420000	5420000
C5301	222.5	>15 ft	Aluminum	7429-90-5	1	5560000	5560000	5560000
C5301	235	>15 ft	Aluminum	7429-90-5	1	8160000	8160000	8160000
C5301	247.5	>15 ft	Aluminum	7429-90-5	1	7670000	7670000	7670000

C5301	260	>15 ft	Aluminum	7429-90-5	1	6300000	6300000	6300000
C5301	270	>15 ft	Aluminum	7429-90-5	1	5480000	5480000	5480000
C5301	283	>15 ft	Aluminum	7429-90-5	1	12800000	12800000	12800000
C5301	287.5	>15 ft	Aluminum	7429-90-5	1	15300000	15300000	15300000
C5301	292.5	>15 ft	Aluminum	7429-90-5	1	13400000	13400000	13400000
C5301	297.5	>15 ft	Aluminum	7429-90-5	1	22900000	22900000	22900000
C5301	305	>15 ft	Aluminum	7429-90-5	1	6530000	6530000	6530000
C5301	315	>15 ft	Aluminum	7429-90-5	1	6940000	6940000	6940000
C5301	22.5	>15 ft	Arsenic	7440-38-2	1	1060	1060	1060
C5301	31	>15 ft	Arsenic	7440-38-2	1	2600	2600	2600
C5301	40	>15 ft	Arsenic	7440-38-2	1	2710	2710	2710
C5301	59.5	>15 ft	Arsenic	7440-38-2	1	1850	1850	1850
C5301	73	>15 ft	Arsenic	7440-38-2	1	3150	3150	3150
C5301	77.5	>15 ft	Arsenic	7440-38-2	1	2800	2800	2800
C5301	90.5	>15 ft	Arsenic	7440-38-2	1	1640	1640	1640
C5301	100	>15 ft	Arsenic	7440-38-2	1	2050	2050	2050
C5301	108.5	>15 ft	Arsenic	7440-38-2	1	2990	2990	2990
C5301	120	>15 ft	Arsenic	7440-38-2	1	1800	1800	1800
C5301	131	>15 ft	Arsenic	7440-38-2	1	1280	1280	1280
C5301	137.5	>15 ft	Arsenic	7440-38-2	1	2440	2440	2440
C5301	147.5	>15 ft	Arsenic	7440-38-2	1	2450	2450	2450
C5301	163	>15 ft	Arsenic	7440-38-2	1	1570	1570	1570
C5301	172.5	>15 ft	Arsenic	7440-38-2	1	1720	1720	1720
C5301	185.5	>15 ft	Arsenic	7440-38-2	1	2200	2200	2200
C5301	200	>15 ft	Arsenic	7440-38-2	1	1630	1630	1630
C5301	205	>15 ft	Arsenic	7440-38-2	1	1580	1580	1580
C5301	222.5	>15 ft	Arsenic	7440-38-2	1	1580	1580	1580

C5301	235	>15 ft	Arsenic	7440-38-2	1	2730	2730	2730
C5301	247.5	>15 ft	Arsenic	7440-38-2	1	2300	2300	2300
C5301	260	>15 ft	Arsenic	7440-38-2	1	1780	1780	1780
C5301	270	>15 ft	Arsenic	7440-38-2	1	1280	1280	1280
C5301	283	>15 ft	Arsenic	7440-38-2	1	6970	6970	6970
C5301	287.5	>15 ft	Arsenic	7440-38-2	1	2700	2700	2700
C5301	292.5	>15 ft	Arsenic	7440-38-2	1	2830	2830	2830
C5301	297.5	>15 ft	Arsenic	7440-38-2	1	4200	4200	4200
C5301	305	>15 ft	Arsenic	7440-38-2	1	1340	1340	1340
C5301	315	>15 ft	Arsenic	7440-38-2	1	1180	1180	1180
C5301	22.5	>15 ft	Barium	7440-39-3	1	59000	59000	59000
C5301	31	>15 ft	Barium	7440-39-3	1	57600	57600	57600
C5301	40	>15 ft	Barium	7440-39-3	1	58100	58100	58100
C5301	59.5	>15 ft	Barium	7440-39-3	1	55500	55500	55500
C5301	73	>15 ft	Barium	7440-39-3	1	65200	65200	65200
C5301	77.5	>15 ft	Barium	7440-39-3	1	67000	67000	67000
C5301	90.5	>15 ft	Barium	7440-39-3	1	63200	63200	63200
C5301	100	>15 ft	Barium	7440-39-3	1	59500	59500	59500
C5301	108.5	>15 ft	Barium	7440-39-3	1	67000	67000	67000
C5301	120	>15 ft	Barium	7440-39-3	1	56900	56900	56900
C5301	131	>15 ft	Barium	7440-39-3	1	54500	54500	54500
C5301	137.5	>15 ft	Barium	7440-39-3	1	73900	73900	73900
C5301	147.5	>15 ft	Barium	7440-39-3	1	73000	73000	73000
C5301	163	>15 ft	Barium	7440-39-3	1	53300	53300	53300
C5301	172.5	>15 ft	Barium	7440-39-3	1	60700	60700	60700
C5301	185.5	>15 ft	Barium	7440-39-3	1	58200	58200	58200
C5301	200	>15 ft	Barium	7440-39-3	1	58900	58900	58900

C5301	205	>15 ft	Barium	7440-39-3	1	52900	52900	52900
C5301	222.5	>15 ft	Barium	7440-39-3	1	61800	61800	61800
C5301	235	>15 ft	Barium	7440-39-3	1	71000	71000	71000
C5301	247.5	>15 ft	Barium	7440-39-3	1	67200	67200	67200
C5301	260	>15 ft	Barium	7440-39-3	1	68800	68800	68800
C5301	270	>15 ft	Barium	7440-39-3	1	61700	61700	61700
C5301	283	>15 ft	Barium	7440-39-3	1	104000	104000	104000
C5301	287.5	>15 ft	Barium	7440-39-3	1	150000	150000	150000
C5301	292.5	>15 ft	Barium	7440-39-3	1	187000	187000	187000
C5301	297.5	>15 ft	Barium	7440-39-3	1	197000	197000	197000
C5301	305	>15 ft	Barium	7440-39-3	1	90100	90100	90100
C5301	315	>15 ft	Barium	7440-39-3	1	97100	97100	97100
C5301	31.5	>15 ft	Cadmium	7440-43-9	2	105	124	114.5
C5301	285	>15 ft	Cadmium	7440-43-9	1	168	168	168
C5301	22.5	>15 ft	Calcium	7440-70-2	1	4780000	4780000	4780000
C5301	31	>15 ft	Calcium	7440-70-2	1	10400000	10400000	10400000
C5301	40	>15 ft	Calcium	7440-70-2	1	9490000	9490000	9490000
C5301	59.5	>15 ft	Calcium	7440-70-2	1	8960000	8960000	8960000
C5301	73	>15 ft	Calcium	7440-70-2	1	9800000	9800000	9800000
C5301	77.5	>15 ft	Calcium	7440-70-2	1	10100000	10100000	10100000
C5301	90.5	>15 ft	Calcium	7440-70-2	1	7700000	7700000	7700000
C5301	100	>15 ft	Calcium	7440-70-2	1	9040000	9040000	9040000
C5301	108.5	>15 ft	Calcium	7440-70-2	1	8800000	8800000	8800000
C5301	120	>15 ft	Calcium	7440-70-2	1	8510000	8510000	8510000
C5301	131	>15 ft	Calcium	7440-70-2	1	7790000	7790000	7790000
C5301	137.5	>15 ft	Calcium	7440-70-2	1	9500000	9500000	9500000
C5301	147.5	>15 ft	Calcium	7440-70-2	1	10000000	10000000	10000000

C5301	163	>15 ft	Calcium	7440-70-2	1	6610000	6610000	6610000
C5301	172.5	>15 ft	Calcium	7440-70-2	1	6890000	6890000	6890000
C5301	185.5	>15 ft	Calcium	7440-70-2	1	6350000	6350000	6350000
C5301	200	>15 ft	Calcium	7440-70-2	1	6930000	6930000	6930000
C5301	205	>15 ft	Calcium	7440-70-2	1	6270000	6270000	6270000
C5301	222.5	>15 ft	Calcium	7440-70-2	1	6570000	6570000	6570000
C5301	235	>15 ft	Calcium	7440-70-2	1	8300000	8300000	8300000
C5301	247.5	>15 ft	Calcium	7440-70-2	1	7840000	7840000	7840000
C5301	260	>15 ft	Calcium	7440-70-2	1	6840000	6840000	6840000
C5301	270	>15 ft	Calcium	7440-70-2	1	6930000	6930000	6930000
C5301	283	>15 ft	Calcium	7440-70-2	1	13100000	13100000	13100000
C5301	287.5	>15 ft	Calcium	7440-70-2	1	15400000	15400000	15400000
C5301	292.5	>15 ft	Calcium	7440-70-2	1	21800000	21800000	21800000
C5301	297.5	>15 ft	Calcium	7440-70-2	1	12400000	12400000	12400000
C5301	305	>15 ft	Calcium	7440-70-2	1	4470000	4470000	4470000
C5301	315	>15 ft	Calcium	7440-70-2	1	5500000	5500000	5500000
C5301	22.5	>15 ft	Chromium	7440-47-3	1	7020	7020	7020
C5301	31	>15 ft	Chromium	7440-47-3	1	10400	10400	10400
C5301	31.5	>15 ft	Chromium	7440-47-3	2	4940	5970	5455
C5301	40	>15 ft	Chromium	7440-47-3	1	9430	9430	9430
C5301	45.5	>15 ft	Chromium	7440-47-3	2	5480	6700	6090
C5301	59.5	>15 ft	Chromium	7440-47-3	1	7300	7300	7300
C5301	73	>15 ft	Chromium	7440-47-3	1	12100	12100	12100
C5301	77.5	>15 ft	Chromium	7440-47-3	1	11100	11100	11100
C5301	90.5	>15 ft	Chromium	7440-47-3	1	7990	7990	7990
C5301	100	>15 ft	Chromium	7440-47-3	1	8710	8710	8710
C5301	108.5	>15 ft	Chromium	7440-47-3	1	9680	9680	9680

C5301	120	>15 ft	Chromium	7440-47-3	1	6160	6160	6160
C5301	124	>15 ft	Chromium	7440-47-3	1	7380	7380	7380
C5301	131	>15 ft	Chromium	7440-47-3	1	6370	6370	6370
C5301	137.5	>15 ft	Chromium	7440-47-3	1	10300	10300	10300
C5301	147.5	>15 ft	Chromium	7440-47-3	1	9790	9790	9790
C5301	163	>15 ft	Chromium	7440-47-3	1	8670	8670	8670
C5301	172.5	>15 ft	Chromium	7440-47-3	1	11900	11900	11900
C5301	185.5	>15 ft	Chromium	7440-47-3	1	12000	12000	12000
C5301	200	>15 ft	Chromium	7440-47-3	1	11600	11600	11600
C5301	205	>15 ft	Chromium	7440-47-3	1	10900	10900	10900
C5301	222.5	>15 ft	Chromium	7440-47-3	1	11700	11700	11700
C5301	235	>15 ft	Chromium	7440-47-3	1	17200	17200	17200
C5301	247.5	>15 ft	Chromium	7440-47-3	1	17200	17200	17200
C5301	260	>15 ft	Chromium	7440-47-3	1	12900	12900	12900
C5301	262	>15 ft	Chromium	7440-47-3	1	13100	13100	13100
C5301	270	>15 ft	Chromium	7440-47-3	1	11700	11700	11700
C5301	283	>15 ft	Chromium	7440-47-3	1	23100	23100	23100
C5301	285	>15 ft	Chromium	7440-47-3	1	25000	25000	25000
C5301	287.5	>15 ft	Chromium	7440-47-3	1	30600	30600	30600
C5301	292.5	>15 ft	Chromium	7440-47-3	1	29400	29400	29400
C5301	297.5	>15 ft	Chromium	7440-47-3	1	50600	50600	50600
C5301	305	>15 ft	Chromium	7440-47-3	1	22300	22300	22300
C5301	315	>15 ft	Chromium	7440-47-3	1	23500	23500	23500
C5301	292.5	>15 ft	Cobalt	7440-48-4	1	14400	14400	14400
C5301	297.5	>15 ft	Cobalt	7440-48-4	1	17400	17400	17400
C5301	22.5	>15 ft	Copper	7440-50-8	1	8600	8600	8600
C5301	31	>15 ft	Copper	7440-50-8	1	9350	9350	9350

C5301	31.5	>15 ft	Copper	7440-50-8	2	8470	8590	8530
C5301	40	>15 ft	Copper	7440-50-8	1	8690	8690	8690
C5301	45.5	>15 ft	Copper	7440-50-8	2	6370	6600	6485
C5301	59.5	>15 ft	Copper	7440-50-8	1	7680	7680	7680
C5301	73	>15 ft	Copper	7440-50-8	1	9430	9430	9430
C5301	77.5	>15 ft	Copper	7440-50-8	1	10100	10100	10100
C5301	90.5	>15 ft	Copper	7440-50-8	1	6820	6820	6820
C5301	100	>15 ft	Copper	7440-50-8	1	8910	8910	8910
C5301	108.5	>15 ft	Copper	7440-50-8	1	7790	7790	7790
C5301	120	>15 ft	Copper	7440-50-8	1	7160	7160	7160
C5301	124	>15 ft	Copper	7440-50-8	1	8510	8510	8510
C5301	131	>15 ft	Copper	7440-50-8	1	7090	7090	7090
C5301	137.5	>15 ft	Copper	7440-50-8	1	8090	8090	8090
C5301	147.5	>15 ft	Copper	7440-50-8	1	9090	9090	9090
C5301	163	>15 ft	Copper	7440-50-8	1	8160	8160	8160
C5301	172.5	>15 ft	Copper	7440-50-8	1	9600	9600	9600
C5301	185.5	>15 ft	Copper	7440-50-8	1	9730	9730	9730
C5301	200	>15 ft	Copper	7440-50-8	1	10100	10100	10100
C5301	205	>15 ft	Copper	7440-50-8	1	9060	9060	9060
C5301	222.5	>15 ft	Copper	7440-50-8	1	10100	10100	10100
C5301	235	>15 ft	Copper	7440-50-8	1	9970	9970	9970
C5301	247.5	>15 ft	Copper	7440-50-8	1	9920	9920	9920
C5301	260	>15 ft	Copper	7440-50-8	1	9200	9200	9200
C5301	262	>15 ft	Copper	7440-50-8	1	12000	12000	12000
C5301	270	>15 ft	Copper	7440-50-8	1	10700	10700	10700
C5301	283	>15 ft	Copper	7440-50-8	1	18800	18800	18800
C5301	285	>15 ft	Copper	7440-50-8	1	19800	19800	19800

C5301	287.5	>15 ft	Copper	7440-50-8	1	28300	28300	28300
C5301	292.5	>15 ft	Copper	7440-50-8	1	32600	32600	32600
C5301	297.5	>15 ft	Copper	7440-50-8	1	40200	40200	40200
C5301	305	>15 ft	Copper	7440-50-8	1	15800	15800	15800
C5301	315	>15 ft	Copper	7440-50-8	1	17200	17200	17200
C5301	22.5	>15 ft	Iron	7439-89-6	1	10800000	10800000	10800000
C5301	31	>15 ft	Iron	7439-89-6	1	13400000	13400000	13400000
C5301	40	>15 ft	Iron	7439-89-6	1	13000000	13000000	13000000
C5301	59.5	>15 ft	Iron	7439-89-6	1	11100000	11100000	11100000
C5301	73	>15 ft	Iron	7439-89-6	1	15000000	15000000	15000000
C5301	77.5	>15 ft	Iron	7439-89-6	1	14000000	14000000	14000000
C5301	90.5	>15 ft	Iron	7439-89-6	1	10200000	10200000	10200000
C5301	100	>15 ft	Iron	7439-89-6	1	11900000	11900000	11900000
C5301	108.5	>15 ft	Iron	7439-89-6	1	14100000	14100000	14100000
C5301	120	>15 ft	Iron	7439-89-6	1	10100000	10100000	10100000
C5301	131	>15 ft	Iron	7439-89-6	1	9010000	9010000	9010000
C5301	137.5	>15 ft	Iron	7439-89-6	1	13600000	13600000	13600000
C5301	147.5	>15 ft	Iron	7439-89-6	1	13200000	13200000	13200000
C5301	163	>15 ft	Iron	7439-89-6	1	8580000	8580000	8580000
C5301	172.5	>15 ft	Iron	7439-89-6	1	12800000	12800000	12800000
C5301	185.5	>15 ft	Iron	7439-89-6	1	13200000	13200000	13200000
C5301	200	>15 ft	Iron	7439-89-6	1	13900000	13900000	13900000
C5301	205	>15 ft	Iron	7439-89-6	1	11100000	11100000	11100000
C5301	222.5	>15 ft	Iron	7439-89-6	1	12700000	12700000	12700000
C5301	235	>15 ft	Iron	7439-89-6	1	15300000	15300000	15300000
C5301	247.5	>15 ft	Iron	7439-89-6	1	14800000	14800000	14800000
C5301	260	>15 ft	Iron	7439-89-6	1	12000000	12000000	12000000

C5301	270	>15 ft	Iron	7439-89-6	1	13100000	13100000	13100000
C5301	283	>15 ft	Iron	7439-89-6	1	19800000	19800000	19800000
C5301	287.5	>15 ft	Iron	7439-89-6	1	23600000	23600000	23600000
C5301	292.5	>15 ft	Iron	7439-89-6	1	25900000	25900000	25900000
C5301	297.5	>15 ft	Iron	7439-89-6	1	34600000	34600000	34600000
C5301	305	>15 ft	Iron	7439-89-6	1	16500000	16500000	16500000
C5301	315	>15 ft	Iron	7439-89-6	1	17900000	17900000	17900000
C5301	31.5	>15 ft	Lead	7439-92-1	2	3260	3460	3360
C5301	45.5	>15 ft	Lead	7439-92-1	2	2600	2850	2725
C5301	124	>15 ft	Lead	7439-92-1	1	3580	3580	3580
C5301	262	>15 ft	Lead	7439-92-1	1	4990	4990	4990
C5301	285	>15 ft	Lead	7439-92-1	1	7690	7690	7690
C5301	22.5	>15 ft	Magnesium	7439-95-4	1	3970000	3970000	3970000
C5301	31	>15 ft	Magnesium	7439-95-4	1	5090000	5090000	5090000
C5301	40	>15 ft	Magnesium	7439-95-4	1	5190000	5190000	5190000
C5301	59.5	>15 ft	Magnesium	7439-95-4	1	4270000	4270000	4270000
C5301	73	>15 ft	Magnesium	7439-95-4	1	5730000	5730000	5730000
C5301	77.5	>15 ft	Magnesium	7439-95-4	1	5450000	5450000	5450000
C5301	90.5	>15 ft	Magnesium	7439-95-4	1	4210000	4210000	4210000
C5301	100	>15 ft	Magnesium	7439-95-4	1	4610000	4610000	4610000
C5301	108.5	>15 ft	Magnesium	7439-95-4	1	4980000	4980000	4980000
C5301	120	>15 ft	Magnesium	7439-95-4	1	3800000	3800000	3800000
C5301	131	>15 ft	Magnesium	7439-95-4	1	3570000	3570000	3570000
C5301	137.5	>15 ft	Magnesium	7439-95-4	1	5470000	5470000	5470000
C5301	147.5	>15 ft	Magnesium	7439-95-4	1	5140000	5140000	5140000
C5301	163	>15 ft	Magnesium	7439-95-4	1	3670000	3670000	3670000
C5301	172.5	>15 ft	Magnesium	7439-95-4	1	5020000	5020000	5020000

C5301	185.5	>15 ft	Magnesium	7439-95-4	1	4840000	4840000	4840000
C5301	200	>15 ft	Magnesium	7439-95-4	1	4910000	4910000	4910000
C5301	205	>15 ft	Magnesium	7439-95-4	1	4470000	4470000	4470000
C5301	222.5	>15 ft	Magnesium	7439-95-4	1	4570000	4570000	4570000
C5301	235	>15 ft	Magnesium	7439-95-4	1	6020000	6020000	6020000
C5301	247.5	>15 ft	Magnesium	7439-95-4	1	5820000	5820000	5820000
C5301	260	>15 ft	Magnesium	7439-95-4	1	5120000	5120000	5120000
C5301	270	>15 ft	Magnesium	7439-95-4	1	4150000	4150000	4150000
C5301	283	>15 ft	Magnesium	7439-95-4	1	7590000	7590000	7590000
C5301	287.5	>15 ft	Magnesium	7439-95-4	1	10000000	10000000	10000000
C5301	292.5	>15 ft	Magnesium	7439-95-4	1	10200000	10200000	10200000
C5301	297.5	>15 ft	Magnesium	7439-95-4	1	13600000	13600000	13600000
C5301	305	>15 ft	Magnesium	7439-95-4	1	4210000	4210000	4210000
C5301	315	>15 ft	Magnesium	7439-95-4	1	4400000	4400000	4400000
C5301	22.5	>15 ft	Manganese	7439-96-5	1	282000	282000	282000
C5301	31	>15 ft	Manganese	7439-96-5	1	269000	269000	269000
C5301	40	>15 ft	Manganese	7439-96-5	1	278000	278000	278000
C5301	59.5	>15 ft	Manganese	7439-96-5	1	247000	247000	247000
C5301	73	>15 ft	Manganese	7439-96-5	1	311000	311000	311000
C5301	77.5	>15 ft	Manganese	7439-96-5	1	287000	287000	287000
C5301	90.5	>15 ft	Manganese	7439-96-5	1	258000	258000	258000
C5301	100	>15 ft	Manganese	7439-96-5	1	266000	266000	266000
C5301	108.5	>15 ft	Manganese	7439-96-5	1	277000	277000	277000
C5301	120	>15 ft	Manganese	7439-96-5	1	224000	224000	224000
C5301	131	>15 ft	Manganese	7439-96-5	1	231000	231000	231000
C5301	137.5	>15 ft	Manganese	7439-96-5	1	328000	328000	328000
C5301	147.5	>15 ft	Manganese	7439-96-5	1	332000	332000	332000

C5301	163	>15 ft	Manganese	7439-96-5	1	230000	230000	230000
C5301	172.5	>15 ft	Manganese	7439-96-5	1	254000	254000	254000
C5301	185.5	>15 ft	Manganese	7439-96-5	1	267000	267000	267000
C5301	200	>15 ft	Manganese	7439-96-5	1	256000	256000	256000
C5301	205	>15 ft	Manganese	7439-96-5	1	253000	253000	253000
C5301	222.5	>15 ft	Manganese	7439-96-5	1	250000	250000	250000
C5301	235	>15 ft	Manganese	7439-96-5	1	311000	311000	311000
C5301	247.5	>15 ft	Manganese	7439-96-5	1	295000	295000	295000
C5301	260	>15 ft	Manganese	7439-96-5	1	271000	271000	271000
C5301	270	>15 ft	Manganese	7439-96-5	1	262000	262000	262000
C5301	283	>15 ft	Manganese	7439-96-5	1	497000	497000	497000
C5301	287.5	>15 ft	Manganese	7439-96-5	1	507000	507000	507000
C5301	292.5	>15 ft	Manganese	7439-96-5	1	726000	726000	726000
C5301	297.5	>15 ft	Manganese	7439-96-5	1	589000	589000	589000
C5301	305	>15 ft	Manganese	7439-96-5	1	305000	305000	305000
C5301	315	>15 ft	Manganese	7439-96-5	1	291000	291000	291000
C5301	22.5	>15 ft	Nickel	7440-02-0	1	8910	8910	8910
C5301	31	>15 ft	Nickel	7440-02-0	1	11600	11600	11600
C5301	40	>15 ft	Nickel	7440-02-0	1	10400	10400	10400
C5301	59.5	>15 ft	Nickel	7440-02-0	1	9290	9290	9290
C5301	73	>15 ft	Nickel	7440-02-0	1	14600	14600	14600
C5301	77.5	>15 ft	Nickel	7440-02-0	1	12700	12700	12700
C5301	90.5	>15 ft	Nickel	7440-02-0	1	9400	9400	9400
C5301	100	>15 ft	Nickel	7440-02-0	1	10800	10800	10800
C5301	108.5	>15 ft	Nickel	7440-02-0	1	8690	8690	8690
C5301	120	>15 ft	Nickel	7440-02-0	1	8150	8150	8150
C5301	131	>15 ft	Nickel	7440-02-0	1	8980	8980	8980

C5301	137.5	>15 ft	Nickel	7440-02-0	1	11000	11000	11000
C5301	147.5	>15 ft	Nickel	7440-02-0	1	11200	11200	11200
C5301	163	>15 ft	Nickel	7440-02-0	1	12400	12400	12400
C5301	172.5	>15 ft	Nickel	7440-02-0	1	15300	15300	15300
C5301	185.5	>15 ft	Nickel	7440-02-0	1	14600	14600	14600
C5301	200	>15 ft	Nickel	7440-02-0	1	13900	13900	13900
C5301	205	>15 ft	Nickel	7440-02-0	1	14400	14400	14400
C5301	222.5	>15 ft	Nickel	7440-02-0	1	13300	13300	13300
C5301	235	>15 ft	Nickel	7440-02-0	1	18000	18000	18000
C5301	247.5	>15 ft	Nickel	7440-02-0	1	18200	18200	18200
C5301	260	>15 ft	Nickel	7440-02-0	1	16600	16600	16600
C5301	270	>15 ft	Nickel	7440-02-0	1	11200	11200	11200
C5301	283	>15 ft	Nickel	7440-02-0	1	25100	25100	25100
C5301	287.5	>15 ft	Nickel	7440-02-0	1	31400	31400	31400
C5301	292.5	>15 ft	Nickel	7440-02-0	1	30500	30500	30500
C5301	297.5	>15 ft	Nickel	7440-02-0	1	43100	43100	43100
C5301	305	>15 ft	Nickel	7440-02-0	1	11900	11900	11900
C5301	315	>15 ft	Nickel	7440-02-0	1	14900	14900	14900
C5301	22.5	>15 ft	Phosphorus	7723-14-0	1	546000	546000	546000
C5301	31	>15 ft	Phosphorus	7723-14-0	1	497000	497000	497000
C5301	40	>15 ft	Phosphorus	7723-14-0	1	507000	507000	507000
C5301	59.5	>15 ft	Phosphorus	7723-14-0	1	469000	469000	469000
C5301	73	>15 ft	Phosphorus	7723-14-0	1	498000	498000	498000
C5301	77.5	>15 ft	Phosphorus	7723-14-0	1	481000	481000	481000
C5301	90.5	>15 ft	Phosphorus	7723-14-0	1	360000	360000	360000
C5301	100	>15 ft	Phosphorus	7723-14-0	1	537000	537000	537000
C5301	108.5	>15 ft	Phosphorus	7723-14-0	1	459000	459000	459000

C5301	120	>15 ft	Phosphorus	7723-14-0	1	446000	446000	446000
C5301	131	>15 ft	Phosphorus	7723-14-0	1	461000	461000	461000
C5301	137.5	>15 ft	Phosphorus	7723-14-0	1	443000	443000	443000
C5301	147.5	>15 ft	Phosphorus	7723-14-0	1	512000	512000	512000
C5301	163	>15 ft	Phosphorus	7723-14-0	1	463000	463000	463000
C5301	172.5	>15 ft	Phosphorus	7723-14-0	1	557000	557000	557000
C5301	185.5	>15 ft	Phosphorus	7723-14-0	1	537000	537000	537000
C5301	200	>15 ft	Phosphorus	7723-14-0	1	573000	573000	573000
C5301	205	>15 ft	Phosphorus	7723-14-0	1	521000	521000	521000
C5301	222.5	>15 ft	Phosphorus	7723-14-0	1	603000	603000	603000
C5301	235	>15 ft	Phosphorus	7723-14-0	1	491000	491000	491000
C5301	247.5	>15 ft	Phosphorus	7723-14-0	1	511000	511000	511000
C5301	260	>15 ft	Phosphorus	7723-14-0	1	479000	479000	479000
C5301	270	>15 ft	Phosphorus	7723-14-0	1	610000	610000	610000
C5301	283	>15 ft	Phosphorus	7723-14-0	1	952000	952000	952000
C5301	287.5	>15 ft	Phosphorus	7723-14-0	1	908000	908000	908000
C5301	292.5	>15 ft	Phosphorus	7723-14-0	1	969000	969000	969000
C5301	297.5	>15 ft	Phosphorus	7723-14-0	1	834000	834000	834000
C5301	305	>15 ft	Phosphorus	7723-14-0	1	604000	604000	604000
C5301	315	>15 ft	Phosphorus	7723-14-0	1	781000	781000	781000
C5301	137.5	>15 ft	Potassium	7440-09-7	1	1740000	1740000	1740000
C5301	147.5	>15 ft	Potassium	7440-09-7	1	1330000	1330000	1330000
C5301	283	>15 ft	Potassium	7440-09-7	1	2260000	2260000	2260000
C5301	287.5	>15 ft	Potassium	7440-09-7	1	2870000	2870000	2870000
C5301	292.5	>15 ft	Potassium	7440-09-7	1	2230000	2230000	2230000
C5301	297.5	>15 ft	Potassium	7440-09-7	1	3650000	3650000	3650000
C5301	297.5	>15 ft	Sodium	7440-23-5	1	456000	456000	456000

C5301	305	>15 ft	Sodium	7440-23-5	1	352000	352000	352000
C5301	315	>15 ft	Sodium	7440-23-5	1	402000	402000	402000
C5301	22.5	>15 ft	Strontium	7440-24-6	1	24900	24900	24900
C5301	31	>15 ft	Strontium	7440-24-6	1	35000	35000	35000
C5301	40	>15 ft	Strontium	7440-24-6	1	27400	27400	27400
C5301	59.5	>15 ft	Strontium	7440-24-6	1	28100	28100	28100
C5301	73	>15 ft	Strontium	7440-24-6	1	32600	32600	32600
C5301	77.5	>15 ft	Strontium	7440-24-6	1	33100	33100	33100
C5301	90.5	>15 ft	Strontium	7440-24-6	1	28300	28300	28300
C5301	100	>15 ft	Strontium	7440-24-6	1	26700	26700	26700
C5301	108.5	>15 ft	Strontium	7440-24-6	1	30400	30400	30400
C5301	120	>15 ft	Strontium	7440-24-6	1	30500	30500	30500
C5301	131	>15 ft	Strontium	7440-24-6	1	26900	26900	26900
C5301	137.5	>15 ft	Strontium	7440-24-6	1	33200	33200	33200
C5301	147.5	>15 ft	Strontium	7440-24-6	1	32500	32500	32500
C5301	163	>15 ft	Strontium	7440-24-6	1	25000	25000	25000
C5301	172.5	>15 ft	Strontium	7440-24-6	1	29300	29300	29300
C5301	185.5	>15 ft	Strontium	7440-24-6	1	27300	27300	27300
C5301	200	>15 ft	Strontium	7440-24-6	1	30100	30100	30100
C5301	205	>15 ft	Strontium	7440-24-6	1	26900	26900	26900
C5301	222.5	>15 ft	Strontium	7440-24-6	1	26500	26500	26500
C5301	235	>15 ft	Strontium	7440-24-6	1	39300	39300	39300
C5301	247.5	>15 ft	Strontium	7440-24-6	1	38800	38800	38800
C5301	260	>15 ft	Strontium	7440-24-6	1	34500	34500	34500
C5301	270	>15 ft	Strontium	7440-24-6	1	30400	30400	30400
C5301	283	>15 ft	Strontium	7440-24-6	1	57300	57300	57300
C5301	287.5	>15 ft	Strontium	7440-24-6	1	70700	70700	70700

C5301	292.5	>15 ft	Strontium	7440-24-6	1	81000	81000	81000
C5301	297.5	>15 ft	Strontium	7440-24-6	1	72800	72800	72800
C5301	305	>15 ft	Strontium	7440-24-6	1	24700	24700	24700
C5301	315	>15 ft	Strontium	7440-24-6	1	30000	30000	30000
C5301	22.5	>15 ft	Titanium	7440-32-6	1	297000	297000	297000
C5301	31	>15 ft	Titanium	7440-32-6	1	524000	524000	524000
C5301	40	>15 ft	Titanium	7440-32-6	1	491000	491000	491000
C5301	59.5	>15 ft	Titanium	7440-32-6	1	380000	380000	380000
C5301	73	>15 ft	Titanium	7440-32-6	1	644000	644000	644000
C5301	77.5	>15 ft	Titanium	7440-32-6	1	581000	581000	581000
C5301	90.5	>15 ft	Titanium	7440-32-6	1	316000	316000	316000
C5301	100	>15 ft	Titanium	7440-32-6	1	322000	322000	322000
C5301	108.5	>15 ft	Titanium	7440-32-6	1	682000	682000	682000
C5301	120	>15 ft	Titanium	7440-32-6	1	290000	290000	290000
C5301	131	>15 ft	Titanium	7440-32-6	1	213000	213000	213000
C5301	137.5	>15 ft	Titanium	7440-32-6	1	477000	477000	477000
C5301	147.5	>15 ft	Titanium	7440-32-6	1	446000	446000	446000
C5301	163	>15 ft	Titanium	7440-32-6	1	184000	184000	184000
C5301	172.5	>15 ft	Titanium	7440-32-6	1	528000	528000	528000
C5301	185.5	>15 ft	Titanium	7440-32-6	1	617000	617000	617000
C5301	200	>15 ft	Titanium	7440-32-6	1	678000	678000	678000
C5301	205	>15 ft	Titanium	7440-32-6	1	325000	325000	325000
C5301	222.5	>15 ft	Titanium	7440-32-6	1	470000	470000	470000
C5301	235	>15 ft	Titanium	7440-32-6	1	826000	826000	826000
C5301	247.5	>15 ft	Titanium	7440-32-6	1	768000	768000	768000
C5301	260	>15 ft	Titanium	7440-32-6	1	412000	412000	412000
C5301	270	>15 ft	Titanium	7440-32-6	1	451000	451000	451000

C5301	283	>15 ft	Titanium	7440-32-6	1	735000	735000	735000
C5301	287.5	>15 ft	Titanium	7440-32-6	1	543000	543000	543000
C5301	292.5	>15 ft	Titanium	7440-32-6	1	348000	348000	348000
C5301	297.5	>15 ft	Titanium	7440-32-6	1	1120000	1120000	1120000
C5301	305	>15 ft	Titanium	7440-32-6	1	941000	941000	941000
C5301	315	>15 ft	Titanium	7440-32-6	1	1160000	1160000	1160000
C5301	31.5	>15 ft	Uranium	7440-61-1	2	555	668	611.5
C5301	45.5	>15 ft	Uranium	7440-61-1	2	372	1030	701
C5301	124	>15 ft	Uranium	7440-61-1	1	403	403	403
C5301	262	>15 ft	Uranium	7440-61-1	1	529	529	529
C5301	285	>15 ft	Uranium	7440-61-1	1	925	925	925
C5301	297.5	>15 ft	Vanadium	7440-62-2	1	33200	33200	33200
C5301	22.5	>15 ft	Zinc	7440-66-6	1	27000	27000	27000
C5301	31	>15 ft	Zinc	7440-66-6	1	32000	32000	32000
C5301	40	>15 ft	Zinc	7440-66-6	1	30200	30200	30200
C5301	59.5	>15 ft	Zinc	7440-66-6	1	26600	26600	26600
C5301	73	>15 ft	Zinc	7440-66-6	1	33900	33900	33900
C5301	77.5	>15 ft	Zinc	7440-66-6	1	32400	32400	32400
C5301	90.5	>15 ft	Zinc	7440-66-6	1	26600	26600	26600
C5301	100	>15 ft	Zinc	7440-66-6	1	28400	28400	28400
C5301	108.5	>15 ft	Zinc	7440-66-6	1	33400	33400	33400
C5301	120	>15 ft	Zinc	7440-66-6	1	23200	23200	23200
C5301	131	>15 ft	Zinc	7440-66-6	1	20900	20900	20900
C5301	137.5	>15 ft	Zinc	7440-66-6	1	34700	34700	34700
C5301	147.5	>15 ft	Zinc	7440-66-6	1	32400	32400	32400
C5301	163	>15 ft	Zinc	7440-66-6	1	21900	21900	21900
C5301	172.5	>15 ft	Zinc	7440-66-6	1	28000	28000	28000

C5301	185.5	>15 ft	Zinc	7440-66-6	1	28000	28000	28000
C5301	200	>15 ft	Zinc	7440-66-6	1	28900	28900	28900
C5301	205	>15 ft	Zinc	7440-66-6	1	26100	26100	26100
C5301	222.5	>15 ft	Zinc	7440-66-6	1	27000	27000	27000
C5301	235	>15 ft	Zinc	7440-66-6	1	33700	33700	33700
C5301	247.5	>15 ft	Zinc	7440-66-6	1	32300	32300	32300
C5301	260	>15 ft	Zinc	7440-66-6	1	29700	29700	29700
C5301	270	>15 ft	Zinc	7440-66-6	1	28300	28300	28300
C5301	283	>15 ft	Zinc	7440-66-6	1	53300	53300	53300
C5301	287.5	>15 ft	Zinc	7440-66-6	1	72900	72900	72900
C5301	292.5	>15 ft	Zinc	7440-66-6	1	78300	78300	78300
C5301	297.5	>15 ft	Zinc	7440-66-6	1	92000	92000	92000
C5301	305	>15 ft	Zinc	7440-66-6	1	40100	40100	40100
C5301	315	>15 ft	Zinc	7440-66-6	1	40300	40300	40300
C5301	22.5	>15 ft	Zirconium	7440-67-7	1	6690	6690	6690
C5301	31	>15 ft	Zirconium	7440-67-7	1	6680	6680	6680
C5301	40	>15 ft	Zirconium	7440-67-7	1	5640	5640	5640
C5301	59.5	>15 ft	Zirconium	7440-67-7	1	5370	5370	5370
C5301	73	>15 ft	Zirconium	7440-67-7	1	6760	6760	6760
C5301	77.5	>15 ft	Zirconium	7440-67-7	1	6110	6110	6110
C5301	90.5	>15 ft	Zirconium	7440-67-7	1	4370	4370	4370
C5301	100	>15 ft	Zirconium	7440-67-7	1	6040	6040	6040
C5301	108.5	>15 ft	Zirconium	7440-67-7	1	7470	7470	7470
C5301	120	>15 ft	Zirconium	7440-67-7	1	5640	5640	5640
C5301	131	>15 ft	Zirconium	7440-67-7	1	5610	5610	5610
C5301	137.5	>15 ft	Zirconium	7440-67-7	1	5750	5750	5750
C5301	147.5	>15 ft	Zirconium	7440-67-7	1	7030	7030	7030

C5301	163	>15 ft	Zirconium	7440-67-7	1	3770	3770	3770
C5301	172.5	>15 ft	Zirconium	7440-67-7	1	6680	6680	6680
C5301	185.5	>15 ft	Zirconium	7440-67-7	1	6890	6890	6890
C5301	200	>15 ft	Zirconium	7440-67-7	1	9300	9300	9300
C5301	205	>15 ft	Zirconium	7440-67-7	1	5420	5420	5420
C5301	222.5	>15 ft	Zirconium	7440-67-7	1	7430	7430	7430
C5301	235	>15 ft	Zirconium	7440-67-7	1	6670	6670	6670
C5301	247.5	>15 ft	Zirconium	7440-67-7	1	6510	6510	6510
C5301	260	>15 ft	Zirconium	7440-67-7	1	4950	4950	4950
C5301	270	>15 ft	Zirconium	7440-67-7	1	8730	8730	8730
C5301	283	>15 ft	Zirconium	7440-67-7	1	8130	8130	8130
C5301	287.5	>15 ft	Zirconium	7440-67-7	1	7900	7900	7900
C5301	292.5	>15 ft	Zirconium	7440-67-7	1	8600	8600	8600
C5301	297.5	>15 ft	Zirconium	7440-67-7	1	11000	11000	11000
C5301	305	>15 ft	Zirconium	7440-67-7	1	12600	12600	12600
C5301	315	>15 ft	Zirconium	7440-67-7	1	18600	18600	18600
C5302	54.94	>15 ft	Aluminum	7429-90-5	1	6230000	6230000	6230000
C5302	54.94	>15 ft	Arsenic	7440-38-2	1	2330	2330	2330
C5302	54.94	>15 ft	Barium	7440-39-3	1	63000	63000	63000
C5302	54.94	>15 ft	Calcium	7440-70-2	1	7640000	7640000	7640000
C5302	54.94	>15 ft	Chromium	7440-47-3	1	24300	24300	24300
C5302	54.94	>15 ft	Copper	7440-50-8	1	14700	14700	14700
C5302	54.94	>15 ft	Iron	7439-89-6	1	21700000	21700000	21700000
C5302	54.94	>15 ft	Magnesium	7439-95-4	1	4430000	4430000	4430000
C5302	54.94	>15 ft	Manganese	7439-96-5	1	369000	369000	369000
C5302	54.94	>15 ft	Nickel	7440-02-0	1	15100	15100	15100
C5302	54.94	>15 ft	Phosphorus	7723-14-0	1	530000	530000	530000

C5302	54.94	>15 ft	Potassium	7440-09-7	1	1150000	1150000	1150000
C5302	54.94	>15 ft	Sodium	7440-23-5	1	328000	328000	328000
C5302	54.94	>15 ft	Strontium	7440-24-6	1	27800	27800	27800
C5302	54.94	>15 ft	Titanium	7440-32-6	1	622000	622000	622000
C5302	54.94	>15 ft	Zinc	7440-66-6	1	35100	35100	35100
C5302	54.94	>15 ft	Zirconium	7440-67-7	1	8470	8470	8470
C5515	30.5	>15 ft	Antimony	7440-36-0	1	29.3	29.3	29.3
C5515	40	>15 ft	Antimony	7440-36-0	1	19.6	19.6	19.6
C5515	47.5	>15 ft	Antimony	7440-36-0	1	12.5	12.5	12.5
C5515	52	>15 ft	Antimony	7440-36-0	1	16	16	16
C5515	60	>15 ft	Antimony	7440-36-0	1	13.7	13.7	13.7
C5515	15.5	>15 ft	Arsenic	7440-38-2	1	3320	3320	3320
C5515	18	>15 ft	Arsenic	7440-38-2	1	2130	2130	2130
C5515	25	>15 ft	Arsenic	7440-38-2	1	1140	1140	1140
C5515	30.5	>15 ft	Arsenic	7440-38-2	1	2360	2360	2360
C5515	31.5	>15 ft	Arsenic	7440-38-2	3	2460	2700	2553
C5515	32	>15 ft	Arsenic	7440-38-2	1	2460	2460	2460
C5515	34.5	>15 ft	Arsenic	7440-38-2	4	2170	3800	2840
C5515	37.5	>15 ft	Arsenic	7440-38-2	1	2630	2630	2630
C5515	40	>15 ft	Arsenic	7440-38-2	1	2140	2140	2140
C5515	45.5	>15 ft	Arsenic	7440-38-2	1	2610	2610	2610
C5515	47.5	>15 ft	Arsenic	7440-38-2	1	2580	2580	2580
C5515	49.5	>15 ft	Arsenic	7440-38-2	1	3890	3890	3890
C5515	52	>15 ft	Arsenic	7440-38-2	1	2830	2830	2830
C5515	57	>15 ft	Arsenic	7440-38-2	1	2980	2980	2980
C5515	57.5	>15 ft	Arsenic	7440-38-2	1	2750	2750	2750
C5515	60	>15 ft	Arsenic	7440-38-2	1	3150	3150	3150

C5515	64.5	>15 ft	Arsenic	7440-38-2	1	1640	1640	1640
C5515	70.5	>15 ft	Arsenic	7440-38-2	1	3050	3050	3050
C5515	72.5	>15 ft	Arsenic	7440-38-2	1	2460	2460	2460
C5515	80	>15 ft	Arsenic	7440-38-2	1	2720	2720	2720
C5515	87	>15 ft	Arsenic	7440-38-2	1	3150	3150	3150
C5515	93	>15 ft	Arsenic	7440-38-2	1	3240	3240	3240
C5515	107	>15 ft	Arsenic	7440-38-2	1	2600	2600	2600
C5515	132.5	>15 ft	Arsenic	7440-38-2	1	2580	2580	2580
C5515	135	>15 ft	Arsenic	7440-38-2	1	2760	2760	2760
C5515	152.5	>15 ft	Arsenic	7440-38-2	1	2580	2580	2580
C5515	167.5	>15 ft	Arsenic	7440-38-2	1	1670	1670	1670
C5515	182.5	>15 ft	Arsenic	7440-38-2	1	2390	2390	2390
C5515	195	>15 ft	Arsenic	7440-38-2	1	2560	2560	2560
C5515	202.5	>15 ft	Arsenic	7440-38-2	1	1740	1740	1740
C5515	220	>15 ft	Arsenic	7440-38-2	1	1250	1250	1250
C5515	237.5	>15 ft	Arsenic	7440-38-2	1	1510	1510	1510
C5515	250.5	>15 ft	Arsenic	7440-38-2	1	1550	1550	1550
C5515	253	>15 ft	Arsenic	7440-38-2	1	2380	2380	2380
C5515	266	>15 ft	Arsenic	7440-38-2	1	1050	1050	1050
C5515	282.5	>15 ft	Arsenic	7440-38-2	1	751	751	751
C5515	285	>15 ft	Arsenic	7440-38-2	1	7910	7910	7910
C5515	287	>15 ft	Arsenic	7440-38-2	1	6370	6370	6370
C5515	290	>15 ft	Arsenic	7440-38-2	1	11000	11000	11000
C5515	297.5	>15 ft	Arsenic	7440-38-2	1	2140	2140	2140
C5515	302.5	>15 ft	Arsenic	7440-38-2	1	3020	3020	3020
C5515	319.5	>15 ft	Arsenic	7440-38-2	1	716	716	716
C5515	15.5	>15 ft	Barium	7440-39-3	1	50000	50000	50000

C5515	18	>15 ft	Barium	7440-39-3	1	60700	60700	60700
C5515	25	>15 ft	Barium	7440-39-3	1	75000	75000	75000
C5515	30.5	>15 ft	Barium	7440-39-3	1	50500	50500	50500
C5515	31.5	>15 ft	Barium	7440-39-3	3	46200	70700	55966
C5515	32	>15 ft	Barium	7440-39-3	1	55200	55200	55200
C5515	34.5	>15 ft	Barium	7440-39-3	4	55200	66300	60275
C5515	37.5	>15 ft	Barium	7440-39-3	1	55400	55400	55400
C5515	40	>15 ft	Barium	7440-39-3	1	45100	45100	45100
C5515	45.5	>15 ft	Barium	7440-39-3	1	62500	62500	62500
C5515	47.5	>15 ft	Barium	7440-39-3	1	52500	52500	52500
C5515	49.5	>15 ft	Barium	7440-39-3	1	52300	52300	52300
C5515	52	>15 ft	Barium	7440-39-3	1	55600	55600	55600
C5515	57	>15 ft	Barium	7440-39-3	1	79400	79400	79400
C5515	57.5	>15 ft	Barium	7440-39-3	1	54900	54900	54900
C5515	60	>15 ft	Barium	7440-39-3	1	61900	61900	61900
C5515	64.5	>15 ft	Barium	7440-39-3	1	61100	61100	61100
C5515	70.5	>15 ft	Barium	7440-39-3	1	70100	70100	70100
C5515	72.5	>15 ft	Barium	7440-39-3	1	53600	53600	53600
C5515	80	>15 ft	Barium	7440-39-3	1	71800	71800	71800
C5515	87	>15 ft	Barium	7440-39-3	1	71200	71200	71200
C5515	93	>15 ft	Barium	7440-39-3	1	67100	67100	67100
C5515	107	>15 ft	Barium	7440-39-3	1	59200	59200	59200
C5515	132.5	>15 ft	Barium	7440-39-3	1	68600	68600	68600
C5515	135	>15 ft	Barium	7440-39-3	1	61400	61400	61400
C5515	152.5	>15 ft	Barium	7440-39-3	1	67300	67300	67300
C5515	167.5	>15 ft	Barium	7440-39-3	1	55000	55000	55000
C5515	182.5	>15 ft	Barium	7440-39-3	1	62900	62900	62900

C5515	195	>15 ft	Barium	7440-39-3	1	78500	78500	78500
C5515	202.5	>15 ft	Barium	7440-39-3	1	56900	56900	56900
C5515	220	>15 ft	Barium	7440-39-3	1	59900	59900	59900
C5515	237.5	>15 ft	Barium	7440-39-3	1	54700	54700	54700
C5515	250.5	>15 ft	Barium	7440-39-3	1	51100	51100	51100
C5515	253	>15 ft	Barium	7440-39-3	1	45500	45500	45500
C5515	266	>15 ft	Barium	7440-39-3	1	59000	59000	59000
C5515	282.5	>15 ft	Barium	7440-39-3	1	56000	56000	56000
C5515	285	>15 ft	Barium	7440-39-3	1	158000	158000	158000
C5515	287	>15 ft	Barium	7440-39-3	1	117000	117000	117000
C5515	290	>15 ft	Barium	7440-39-3	1	204000	204000	204000
C5515	297.5	>15 ft	Barium	7440-39-3	1	142000	142000	142000
C5515	302.5	>15 ft	Barium	7440-39-3	1	134000	134000	134000
C5515	319.5	>15 ft	Barium	7440-39-3	1	42200	42200	42200
C5515	31.5	>15 ft	Cadmium	7440-43-9	1	266	266	266
C5515	32	>15 ft	Cadmium	7440-43-9	1	91.5	91.5	91.5
C5515	34.5	>15 ft	Cadmium	7440-43-9	3	55.2	100	72.2
C5515	37.5	>15 ft	Cadmium	7440-43-9	1	51.6	51.6	51.6
C5515	57.5	>15 ft	Cadmium	7440-43-9	1	50.8	50.8	50.8
C5515	135	>15 ft	Cadmium	7440-43-9	1	155	155	155
C5515	285	>15 ft	Cadmium	7440-43-9	1	185	185	185
C5515	287	>15 ft	Cadmium	7440-43-9	1	351	351	351
C5515	290	>15 ft	Cadmium	7440-43-9	1	351	351	351
C5515	297.5	>15 ft	Cadmium	7440-43-9	1	150	150	150
C5515	302.5	>15 ft	Cadmium	7440-43-9	1	133	133	133
C5515	18	>15 ft	Calcium	7440-70-2	1	7510000	7510000	7510000
C5515	25	>15 ft	Calcium	7440-70-2	1	4960000	4960000	4960000

C5515	30.5	>15 ft	Calcium	7440-70-2	1	8140000	8140000	8140000
C5515	31.5	>15 ft	Calcium	7440-70-2	1	7930000	7930000	7930000
C5515	32	>15 ft	Calcium	7440-70-2	1	7510000	7510000	7510000
C5515	34.5	>15 ft	Calcium	7440-70-2	2	8760000	9060000	8910000
C5515	37.5	>15 ft	Calcium	7440-70-2	1	8650000	8650000	8650000
C5515	40	>15 ft	Calcium	7440-70-2	1	8120000	8120000	8120000
C5515	45.5	>15 ft	Calcium	7440-70-2	1	8680000	8680000	8680000
C5515	47.5	>15 ft	Calcium	7440-70-2	1	8230000	8230000	8230000
C5515	52	>15 ft	Calcium	7440-70-2	1	9720000	9720000	9720000
C5515	57.5	>15 ft	Calcium	7440-70-2	1	9670000	9670000	9670000
C5515	60	>15 ft	Calcium	7440-70-2	1	9090000	9090000	9090000
C5515	64.5	>15 ft	Calcium	7440-70-2	1	7300000	7300000	7300000
C5515	70.5	>15 ft	Calcium	7440-70-2	1	10500000	10500000	10500000
C5515	72.5	>15 ft	Calcium	7440-70-2	1	8280000	8280000	8280000
C5515	80	>15 ft	Calcium	7440-70-2	1	8340000	8340000	8340000
C5515	87	>15 ft	Calcium	7440-70-2	1	8570000	8570000	8570000
C5515	93	>15 ft	Calcium	7440-70-2	1	8420000	8420000	8420000
C5515	107	>15 ft	Calcium	7440-70-2	1	8210000	8210000	8210000
C5515	132.5	>15 ft	Calcium	7440-70-2	1	8270000	8270000	8270000
C5515	152.5	>15 ft	Calcium	7440-70-2	1	7970000	7970000	7970000
C5515	167.5	>15 ft	Calcium	7440-70-2	1	5960000	5960000	5960000
C5515	182.5	>15 ft	Calcium	7440-70-2	1	7090000	7090000	7090000
C5515	195	>15 ft	Calcium	7440-70-2	1	8180000	8180000	8180000
C5515	202.5	>15 ft	Calcium	7440-70-2	1	6620000	6620000	6620000
C5515	220	>15 ft	Calcium	7440-70-2	1	5920000	5920000	5920000
C5515	237.5	>15 ft	Calcium	7440-70-2	1	6000000	6000000	6000000
C5515	250.5	>15 ft	Calcium	7440-70-2	1	6100000	6100000	6100000

C5515	266	>15 ft	Calcium	7440-70-2	1	5210000	5210000	5210000
C5515	282.5	>15 ft	Calcium	7440-70-2	1	4980000	4980000	4980000
C5515	285	>15 ft	Calcium	7440-70-2	1	13300000	13300000	13300000
C5515	290	>15 ft	Calcium	7440-70-2	1	21000000	21000000	21000000
C5515	297.5	>15 ft	Calcium	7440-70-2	1	9870000	9870000	9870000
C5515	302.5	>15 ft	Calcium	7440-70-2	1	11100000	11100000	11100000
C5515	15.5	>15 ft	Chromium	7440-47-3	1	6020	6020	6020
C5515	18	>15 ft	Chromium	7440-47-3	1	7260	7260	7260
C5515	25	>15 ft	Chromium	7440-47-3	1	4570	4570	4570
C5515	30.5	>15 ft	Chromium	7440-47-3	1	10500	10500	10500
C5515	31.5	>15 ft	Chromium	7440-47-3	3	8800	11900	10000
C5515	32	>15 ft	Chromium	7440-47-3	1	9830	9830	9830
C5515	34.5	>15 ft	Chromium	7440-47-3	4	10200	10900	10500
C5515	37.5	>15 ft	Chromium	7440-47-3	1	9790	9790	9790
C5515	40	>15 ft	Chromium	7440-47-3	1	7210	7210	7210
C5515	45.5	>15 ft	Chromium	7440-47-3	1	9710	9710	9710
C5515	47.5	>15 ft	Chromium	7440-47-3	1	8860	8860	8860
C5515	49.5	>15 ft	Chromium	7440-47-3	1	7940	7940	7940
C5515	52	>15 ft	Chromium	7440-47-3	1	11200	11200	11200
C5515	57	>15 ft	Chromium	7440-47-3	1	8290	8290	8290
C5515	57.5	>15 ft	Chromium	7440-47-3	1	10200	10200	10200
C5515	60	>15 ft	Chromium	7440-47-3	1	10500	10500	10500
C5515	64.5	>15 ft	Chromium	7440-47-3	1	6830	6830	6830
C5515	70.5	>15 ft	Chromium	7440-47-3	1	11200	11200	11200
C5515	72.5	>15 ft	Chromium	7440-47-3	1	9040	9040	9040
C5515	80	>15 ft	Chromium	7440-47-3	1	10400	10400	10400
C5515	87	>15 ft	Chromium	7440-47-3	1	11900	11900	11900

C5515	93	>15 ft	Chromium	7440-47-3	1	12000	12000	12000
C5515	107	>15 ft	Chromium	7440-47-3	1	9400	9400	9400
C5515	132.5	>15 ft	Chromium	7440-47-3	1	9460	9460	9460
C5515	135	>15 ft	Chromium	7440-47-3	1	8210	8210	8210
C5515	152.5	>15 ft	Chromium	7440-47-3	1	11100	11100	11100
C5515	167.5	>15 ft	Chromium	7440-47-3	1	8920	8920	8920
C5515	182.5	>15 ft	Chromium	7440-47-3	1	13700	13700	13700
C5515	195	>15 ft	Chromium	7440-47-3	1	13300	13300	13300
C5515	202.5	>15 ft	Chromium	7440-47-3	1	15800	15800	15800
C5515	220	>15 ft	Chromium	7440-47-3	1	9290	9290	9290
C5515	237.5	>15 ft	Chromium	7440-47-3	1	10600	10600	10600
C5515	250.5	>15 ft	Chromium	7440-47-3	1	14800	14800	14800
C5515	253	>15 ft	Chromium	7440-47-3	1	12300	12300	12300
C5515	266	>15 ft	Chromium	7440-47-3	1	8140	8140	8140
C5515	282.5	>15 ft	Chromium	7440-47-3	1	15000	15000	15000
C5515	285	>15 ft	Chromium	7440-47-3	1	34600	34600	34600
C5515	287	>15 ft	Chromium	7440-47-3	1	23600	23600	23600
C5515	290	>15 ft	Chromium	7440-47-3	1	47500	47500	47500
C5515	297.5	>15 ft	Chromium	7440-47-3	1	23600	23600	23600
C5515	302.5	>15 ft	Chromium	7440-47-3	1	20900	20900	20900
C5515	319.5	>15 ft	Chromium	7440-47-3	1	12400	12400	12400
C5515	15.5	>15 ft	Copper	7440-50-8	1	7910	7910	7910
C5515	18	>15 ft	Copper	7440-50-8	1	11100	11100	11100
C5515	25	>15 ft	Copper	7440-50-8	1	11300	11300	11300
C5515	30.5	>15 ft	Copper	7440-50-8	1	8990	8990	8990
C5515	31.5	>15 ft	Copper	7440-50-8	3	7200	11800	9833
C5515	32	>15 ft	Copper	7440-50-8	1	8400	8400	8400

C5515	34.5	>15 ft	Copper	7440-50-8	4	8900	12700	10135
C5515	37.5	>15 ft	Copper	7440-50-8	1	8610	8610	8610
C5515	40	>15 ft	Copper	7440-50-8	1	7420	7420	7420
C5515	45.5	>15 ft	Copper	7440-50-8	1	8210	8210	8210
C5515	47.5	>15 ft	Copper	7440-50-8	1	8720	8720	8720
C5515	49.5	>15 ft	Copper	7440-50-8	1	8490	8490	8490
C5515	52	>15 ft	Copper	7440-50-8	1	8050	8050	8050
C5515	57	>15 ft	Copper	7440-50-8	1	7810	7810	7810
C5515	57.5	>15 ft	Copper	7440-50-8	1	8700	8700	8700
C5515	60	>15 ft	Copper	7440-50-8	1	8920	8920	8920
C5515	64.5	>15 ft	Copper	7440-50-8	1	7620	7620	7620
C5515	70.5	>15 ft	Copper	7440-50-8	1	11000	11000	11000
C5515	72.5	>15 ft	Copper	7440-50-8	1	8280	8280	8280
C5515	80	>15 ft	Copper	7440-50-8	1	8470	8470	8470
C5515	87	>15 ft	Copper	7440-50-8	1	9350	9350	9350
C5515	93	>15 ft	Copper	7440-50-8	1	9790	9790	9790
C5515	107	>15 ft	Copper	7440-50-8	1	8380	8380	8380
C5515	132.5	>15 ft	Copper	7440-50-8	1	8900	8900	8900
C5515	135	>15 ft	Copper	7440-50-8	1	9330	9330	9330
C5515	152.5	>15 ft	Copper	7440-50-8	1	9780	9780	9780
C5515	167.5	>15 ft	Copper	7440-50-8	1	8880	8880	8880
C5515	182.5	>15 ft	Copper	7440-50-8	1	10200	10200	10200
C5515	195	>15 ft	Copper	7440-50-8	1	11000	11000	11000
C5515	202.5	>15 ft	Copper	7440-50-8	1	9970	9970	9970
C5515	220	>15 ft	Copper	7440-50-8	1	11300	11300	11300
C5515	237.5	>15 ft	Copper	7440-50-8	1	8810	8810	8810
C5515	250.5	>15 ft	Copper	7440-50-8	1	9510	9510	9510

C5515	253	>15 ft	Copper	7440-50-8	1	9500	9500	9500
C5515	266	>15 ft	Copper	7440-50-8	1	8890	8890	8890
C5515	282.5	>15 ft	Copper	7440-50-8	1	10900	10900	10900
C5515	285	>15 ft	Copper	7440-50-8	1	24900	24900	24900
C5515	287	>15 ft	Copper	7440-50-8	1	23300	23300	23300
C5515	290	>15 ft	Copper	7440-50-8	1	37400	37400	37400
C5515	297.5	>15 ft	Copper	7440-50-8	1	23500	23500	23500
C5515	302.5	>15 ft	Copper	7440-50-8	1	21100	21100	21100
C5515	319.5	>15 ft	Copper	7440-50-8	1	9620	9620	9620
C5515	31.5	>15 ft	Hexavalent Chromium	18540-29-9	1	220	220	220
C5515	135	>15 ft	Hexavalent Chromium	18540-29-9	1	247	247	247
C5515	253	>15 ft	Hexavalent Chromium	18540-29-9	1	240	240	240
C5515	15.5	>15 ft	Lead	7439-92-1	1	3410	3410	3410
C5515	18	>15 ft	Lead	7439-92-1	1	2480	2480	2480
C5515	25	>15 ft	Lead	7439-92-1	1	2810	2810	2810
C5515	30.5	>15 ft	Lead	7439-92-1	1	3840	3840	3840
C5515	31.5	>15 ft	Lead	7439-92-1	3	3100	3800	3523
C5515	32	>15 ft	Lead	7439-92-1	1	3080	3080	3080
C5515	34.5	>15 ft	Lead	7439-92-1	4	2860	4500	3655
C5515	37.5	>15 ft	Lead	7439-92-1	1	3190	3190	3190
C5515	40	>15 ft	Lead	7439-92-1	1	3120	3120	3120
C5515	45.5	>15 ft	Lead	7439-92-1	1	3630	3630	3630
C5515	47.5	>15 ft	Lead	7439-92-1	1	3120	3120	3120
C5515	49.5	>15 ft	Lead	7439-92-1	1	4310	4310	4310
C5515	52	>15 ft	Lead	7439-92-1	1	3310	3310	3310
C5515	57	>15 ft	Lead	7439-92-1	1	5870	5870	5870
C5515	57.5	>15 ft	Lead	7439-92-1	1	3360	3360	3360

C5515	60	>15 ft	Lead	7439-92-1	1	3640	3640	3640
C5515	64.5	>15 ft	Lead	7439-92-1	1	2720	2720	2720
C5515	70.5	>15 ft	Lead	7439-92-1	1	3930	3930	3930
C5515	72.5	>15 ft	Lead	7439-92-1	1	3440	3440	3440
C5515	80	>15 ft	Lead	7439-92-1	1	3730	3730	3730
C5515	87	>15 ft	Lead	7439-92-1	1	4170	4170	4170
C5515	93	>15 ft	Lead	7439-92-1	1	4170	4170	4170
C5515	107	>15 ft	Lead	7439-92-1	1	3210	3210	3210
C5515	132.5	>15 ft	Lead	7439-92-1	1	3580	3580	3580
C5515	135	>15 ft	Lead	7439-92-1	1	5070	5070	5070
C5515	152.5	>15 ft	Lead	7439-92-1	1	3550	3550	3550
C5515	167.5	>15 ft	Lead	7439-92-1	1	2250	2250	2250
C5515	182.5	>15 ft	Lead	7439-92-1	1	2610	2610	2610
C5515	195	>15 ft	Lead	7439-92-1	1	3640	3640	3640
C5515	202.5	>15 ft	Lead	7439-92-1	1	2710	2710	2710
C5515	220	>15 ft	Lead	7439-92-1	1	2210	2210	2210
C5515	237.5	>15 ft	Lead	7439-92-1	1	2770	2770	2770
C5515	250.5	>15 ft	Lead	7439-92-1	1	2690	2690	2690
C5515	253	>15 ft	Lead	7439-92-1	1	2850	2850	2850
C5515	266	>15 ft	Lead	7439-92-1	1	2340	2340	2340
C5515	282.5	>15 ft	Lead	7439-92-1	1	1940	1940	1940
C5515	285	>15 ft	Lead	7439-92-1	1	6930	6930	6930
C5515	287	>15 ft	Lead	7439-92-1	1	10300	10300	10300
C5515	290	>15 ft	Lead	7439-92-1	1	9440	9440	9440
C5515	297.5	>15 ft	Lead	7439-92-1	1	5200	5200	5200
C5515	302.5	>15 ft	Lead	7439-92-1	1	7080	7080	7080
C5515	319.5	>15 ft	Lead	7439-92-1	1	1520	1520	1520

C5515	18	>15 ft	Magnesium	7439-95-4	1	4150000	4150000	4150000
C5515	25	>15 ft	Magnesium	7439-95-4	1	3190000	3190000	3190000
C5515	30.5	>15 ft	Magnesium	7439-95-4	1	4590000	4590000	4590000
C5515	31.5	>15 ft	Magnesium	7439-95-4	1	5220000	5220000	5220000
C5515	32	>15 ft	Magnesium	7439-95-4	1	4220000	4220000	4220000
C5515	34.5	>15 ft	Magnesium	7439-95-4	2	4610000	5050000	4830000
C5515	37.5	>15 ft	Magnesium	7439-95-4	1	4550000	4550000	4550000
C5515	40	>15 ft	Magnesium	7439-95-4	1	3790000	3790000	3790000
C5515	45.5	>15 ft	Magnesium	7439-95-4	1	4530000	4530000	4530000
C5515	47.5	>15 ft	Magnesium	7439-95-4	1	4220000	4220000	4220000
C5515	52	>15 ft	Magnesium	7439-95-4	1	4940000	4940000	4940000
C5515	57.5	>15 ft	Magnesium	7439-95-4	1	5040000	5040000	5040000
C5515	60	>15 ft	Magnesium	7439-95-4	1	5070000	5070000	5070000
C5515	64.5	>15 ft	Magnesium	7439-95-4	1	3600000	3600000	3600000
C5515	70.5	>15 ft	Magnesium	7439-95-4	1	5670000	5670000	5670000
C5515	72.5	>15 ft	Magnesium	7439-95-4	1	4660000	4660000	4660000
C5515	80	>15 ft	Magnesium	7439-95-4	1	4740000	4740000	4740000
C5515	87	>15 ft	Magnesium	7439-95-4	1	5150000	5150000	5150000
C5515	93	>15 ft	Magnesium	7439-95-4	1	4720000	4720000	4720000
C5515	107	>15 ft	Magnesium	7439-95-4	1	4520000	4520000	4520000
C5515	132.5	>15 ft	Magnesium	7439-95-4	1	4630000	4630000	4630000
C5515	152.5	>15 ft	Magnesium	7439-95-4	1	4560000	4560000	4560000
C5515	167.5	>15 ft	Magnesium	7439-95-4	1	3670000	3670000	3670000
C5515	182.5	>15 ft	Magnesium	7439-95-4	1	4920000	4920000	4920000
C5515	195	>15 ft	Magnesium	7439-95-4	1	5140000	5140000	5140000
C5515	202.5	>15 ft	Magnesium	7439-95-4	1	4430000	4430000	4430000
C5515	220	>15 ft	Magnesium	7439-95-4	1	4120000	4120000	4120000

C5515	237.5	>15 ft	Magnesium	7439-95-4	1	3950000	3950000	3950000
C5515	250.5	>15 ft	Magnesium	7439-95-4	1	3930000	3930000	3930000
C5515	266	>15 ft	Magnesium	7439-95-4	1	2690000	2690000	2690000
C5515	282.5	>15 ft	Magnesium	7439-95-4	1	2510000	2510000	2510000
C5515	285	>15 ft	Magnesium	7439-95-4	1	9490000	9490000	9490000
C5515	290	>15 ft	Magnesium	7439-95-4	1	12400000	12400000	12400000
C5515	297.5	>15 ft	Magnesium	7439-95-4	1	7450000	7450000	7450000
C5515	302.5	>15 ft	Magnesium	7439-95-4	1	7230000	7230000	7230000
C5515	25	>15 ft	Mercury	7439-97-6	1	54	54	54
C5515	30.5	>15 ft	Mercury	7439-97-6	2	73.5	73.5	73.5
C5515	31.5	>15 ft	Mercury	7439-97-6	2	80	112	96
C5515	34.5	>15 ft	Mercury	7439-97-6	2	95.2	154	124.6
C5515	72.5	>15 ft	Mercury	7439-97-6	1	66	66	66
C5515	290	>15 ft	Mercury	7439-97-6	1	79	79	79
C5515	18	>15 ft	Potassium	7440-09-7	1	827000	827000	827000
C5515	25	>15 ft	Potassium	7440-09-7	1	695000	695000	695000
C5515	30.5	>15 ft	Potassium	7440-09-7	1	965000	965000	965000
C5515	31.5	>15 ft	Potassium	7440-09-7	1	1180000	1180000	1180000
C5515	32	>15 ft	Potassium	7440-09-7	1	932000	932000	932000
C5515	34.5	>15 ft	Potassium	7440-09-7	2	948000	1010000	979000
C5515	37.5	>15 ft	Potassium	7440-09-7	1	899000	899000	899000
C5515	40	>15 ft	Potassium	7440-09-7	1	805000	805000	805000
C5515	45.5	>15 ft	Potassium	7440-09-7	1	943000	943000	943000
C5515	47.5	>15 ft	Potassium	7440-09-7	1	939000	939000	939000
C5515	52	>15 ft	Potassium	7440-09-7	1	1140000	1140000	1140000
C5515	57.5	>15 ft	Potassium	7440-09-7	1	1040000	1040000	1040000
C5515	60	>15 ft	Potassium	7440-09-7	1	1170000	1170000	1170000

C5515	64.5	>15 ft	Potassium	7440-09-7	1	1080000	1080000	1080000
C5515	70.5	>15 ft	Potassium	7440-09-7	1	1300000	1300000	1300000
C5515	72.5	>15 ft	Potassium	7440-09-7	1	1060000	1060000	1060000
C5515	80	>15 ft	Potassium	7440-09-7	1	1360000	1360000	1360000
C5515	87	>15 ft	Potassium	7440-09-7	1	1570000	1570000	1570000
C5515	93	>15 ft	Potassium	7440-09-7	1	1330000	1330000	1330000
C5515	107	>15 ft	Potassium	7440-09-7	1	1170000	1170000	1170000
C5515	132.5	>15 ft	Potassium	7440-09-7	1	1220000	1220000	1220000
C5515	152.5	>15 ft	Potassium	7440-09-7	1	1260000	1260000	1260000
C5515	167.5	>15 ft	Potassium	7440-09-7	1	869000	869000	869000
C5515	182.5	>15 ft	Potassium	7440-09-7	1	1190000	1190000	1190000
C5515	195	>15 ft	Potassium	7440-09-7	1	1570000	1570000	1570000
C5515	202.5	>15 ft	Potassium	7440-09-7	1	1060000	1060000	1060000
C5515	220	>15 ft	Potassium	7440-09-7	1	891000	891000	891000
C5515	237.5	>15 ft	Potassium	7440-09-7	1	1040000	1040000	1040000
C5515	250.5	>15 ft	Potassium	7440-09-7	1	1010000	1010000	1010000
C5515	266	>15 ft	Potassium	7440-09-7	1	873000	873000	873000
C5515	282.5	>15 ft	Potassium	7440-09-7	1	638000	638000	638000
C5515	285	>15 ft	Potassium	7440-09-7	1	3270000	3270000	3270000
C5515	290	>15 ft	Potassium	7440-09-7	1	3320000	3320000	3320000
C5515	297.5	>15 ft	Potassium	7440-09-7	1	2320000	2320000	2320000
C5515	302.5	>15 ft	Potassium	7440-09-7	1	2110000	2110000	2110000
C5515	57	>15 ft	Selenium	7782-49-2	1	419	419	419
C5515	135	>15 ft	Selenium	7782-49-2	1	581	581	581
C5515	287	>15 ft	Selenium	7782-49-2	1	786	786	786
C5515	319.5	>15 ft	Selenium	7782-49-2	1	394	394	394
C5515	18	>15 ft	Silver	7440-22-4	1	53.9	53.9	53.9

C5515	25	>15 ft	Silver	7440-22-4	1	35.7	35.7	35.7
C5515	30.5	>15 ft	Silver	7440-22-4	1	925	925	925
C5515	31.5	>15 ft	Silver	7440-22-4	2	615	630	622.5
C5515	32	>15 ft	Silver	7440-22-4	1	457	457	457
C5515	34.5	>15 ft	Silver	7440-22-4	3	265	416	338.3
C5515	37.5	>15 ft	Silver	7440-22-4	1	150	150	150
C5515	40	>15 ft	Silver	7440-22-4	1	44.7	44.7	44.7
C5515	45.5	>15 ft	Silver	7440-22-4	1	40.5	40.5	40.5
C5515	47.5	>15 ft	Silver	7440-22-4	1	43.6	43.6	43.6
C5515	52	>15 ft	Silver	7440-22-4	1	37.4	37.4	37.4
C5515	57.5	>15 ft	Silver	7440-22-4	1	46.2	46.2	46.2
C5515	60	>15 ft	Silver	7440-22-4	1	44.9	44.9	44.9
C5515	64.5	>15 ft	Silver	7440-22-4	1	38.6	38.6	38.6
C5515	70.5	>15 ft	Silver	7440-22-4	1	46.6	46.6	46.6
C5515	72.5	>15 ft	Silver	7440-22-4	1	43.6	43.6	43.6
C5515	80	>15 ft	Silver	7440-22-4	1	34.8	34.8	34.8
C5515	87	>15 ft	Silver	7440-22-4	1	41.9	41.9	41.9
C5515	93	>15 ft	Silver	7440-22-4	1	40.7	40.7	40.7
C5515	107	>15 ft	Silver	7440-22-4	1	35.4	35.4	35.4
C5515	132.5	>15 ft	Silver	7440-22-4	1	45.5	45.5	45.5
C5515	152.5	>15 ft	Silver	7440-22-4	1	40.7	40.7	40.7
C5515	167.5	>15 ft	Silver	7440-22-4	1	35.5	35.5	35.5
C5515	182.5	>15 ft	Silver	7440-22-4	1	52.3	52.3	52.3
C5515	195	>15 ft	Silver	7440-22-4	1	48.6	48.6	48.6
C5515	202.5	>15 ft	Silver	7440-22-4	1	42.4	42.4	42.4
C5515	220	>15 ft	Silver	7440-22-4	1	47.2	47.2	47.2
C5515	237.5	>15 ft	Silver	7440-22-4	1	39.1	39.1	39.1

C5515	250.5	>15 ft	Silver	7440-22-4	1	37.5	37.5	37.5
C5515	266	>15 ft	Silver	7440-22-4	1	34.8	34.8	34.8
C5515	282.5	>15 ft	Silver	7440-22-4	1	43.4	43.4	43.4
C5515	285	>15 ft	Silver	7440-22-4	1	92.8	92.8	92.8
C5515	287	>15 ft	Silver	7440-22-4	1	127	127	127
C5515	290	>15 ft	Silver	7440-22-4	1	111	111	111
C5515	297.5	>15 ft	Silver	7440-22-4	1	70.6	70.6	70.6
C5515	302.5	>15 ft	Silver	7440-22-4	1	75.1	75.1	75.1
C5515	18	>15 ft	Sodium	7440-23-5	1	269000	269000	269000
C5515	25	>15 ft	Sodium	7440-23-5	1	376000	376000	376000
C5515	30.5	>15 ft	Sodium	7440-23-5	1	445000	445000	445000
C5515	31.5	>15 ft	Sodium	7440-23-5	1	361000	361000	361000
C5515	32	>15 ft	Sodium	7440-23-5	1	458000	458000	458000
C5515	34.5	>15 ft	Sodium	7440-23-5	2	276000	303000	289500
C5515	37.5	>15 ft	Sodium	7440-23-5	1	181000	181000	181000
C5515	40	>15 ft	Sodium	7440-23-5	1	101000	101000	101000
C5515	45.5	>15 ft	Sodium	7440-23-5	1	131000	131000	131000
C5515	47.5	>15 ft	Sodium	7440-23-5	1	122000	122000	122000
C5515	52	>15 ft	Sodium	7440-23-5	1	166000	166000	166000
C5515	57.5	>15 ft	Sodium	7440-23-5	1	157000	157000	157000
C5515	60	>15 ft	Sodium	7440-23-5	1	176000	176000	176000
C5515	64.5	>15 ft	Sodium	7440-23-5	1	97200	97200	97200
C5515	70.5	>15 ft	Sodium	7440-23-5	1	149000	149000	149000
C5515	72.5	>15 ft	Sodium	7440-23-5	1	110000	110000	110000
C5515	80	>15 ft	Sodium	7440-23-5	1	120000	120000	120000
C5515	87	>15 ft	Sodium	7440-23-5	1	153000	153000	153000
C5515	93	>15 ft	Sodium	7440-23-5	1	145000	145000	145000

C5515	107	>15 ft	Sodium	7440-23-5	1	166000	166000	166000
C5515	132.5	>15 ft	Sodium	7440-23-5	1	143000	143000	143000
C5515	152.5	>15 ft	Sodium	7440-23-5	1	115000	115000	115000
C5515	167.5	>15 ft	Sodium	7440-23-5	1	127000	127000	127000
C5515	182.5	>15 ft	Sodium	7440-23-5	1	162000	162000	162000
C5515	195	>15 ft	Sodium	7440-23-5	1	178000	178000	178000
C5515	202.5	>15 ft	Sodium	7440-23-5	1	159000	159000	159000
C5515	220	>15 ft	Sodium	7440-23-5	1	170000	170000	170000
C5515	237.5	>15 ft	Sodium	7440-23-5	1	120000	120000	120000
C5515	250.5	>15 ft	Sodium	7440-23-5	1	109000	109000	109000
C5515	266	>15 ft	Sodium	7440-23-5	1	89000	89000	89000
C5515	282.5	>15 ft	Sodium	7440-23-5	1	179000	179000	179000
C5515	285	>15 ft	Sodium	7440-23-5	1	262000	262000	262000
C5515	290	>15 ft	Sodium	7440-23-5	1	300000	300000	300000
C5515	297.5	>15 ft	Sodium	7440-23-5	1	177000	177000	177000
C5515	302.5	>15 ft	Sodium	7440-23-5	1	174000	174000	174000
C5515	15.5	>15 ft	Uranium	7440-61-1	1	364	364	364
C5515	31.5	>15 ft	Uranium	7440-61-1	2	103000	147000	125000
C5515	34.5	>15 ft	Uranium	7440-61-1	1	106000	106000	106000
C5515	49.5	>15 ft	Uranium	7440-61-1	1	250	250	250
C5515	57	>15 ft	Uranium	7440-61-1	1	465	465	465
C5515	135	>15 ft	Uranium	7440-61-1	1	505	505	505
C5515	253	>15 ft	Uranium	7440-61-1	1	336	336	336
C5515	287	>15 ft	Uranium	7440-61-1	1	1190	1190	1190
C5515	319.5	>15 ft	Uranium	7440-61-1	1	286	286	286
C5571	40.5	>15 ft	Arsenic	7440-38-2	1	2040	2040	2040
C5571	59.9	>15 ft	Arsenic	7440-38-2	1	1110	1110	1110

C5571	40.5	>15 ft	Barium	7440-39-3	1	71400	71400	71400
C5571	59.9	>15 ft	Barium	7440-39-3	1	69900	69900	69900
C5571	40.5	>15 ft	Calcium	7440-70-2	1	9690000	9690000	9690000
C5571	59.9	>15 ft	Calcium	7440-70-2	1	7580000	7580000	7580000
C5571	40.5	>15 ft	Chromium	7440-47-3	1	16200	16200	16200
C5571	59.9	>15 ft	Chromium	7440-47-3	1	7210	7210	7210
C5571	40.5	>15 ft	Copper	7440-50-8	1	11300	11300	11300
C5571	59.9	>15 ft	Copper	7440-50-8	1	9120	9120	9120
C5571	40.5	>15 ft	Lead	7439-92-1	1	3910	3910	3910
C5571	59.9	>15 ft	Lead	7439-92-1	1	3300	3300	3300
C5571	40.5	>15 ft	Magnesium	7439-95-4	1	5150000	5150000	5150000
C5571	59.9	>15 ft	Magnesium	7439-95-4	1	3830000	3830000	3830000
C5571	40.5	>15 ft	Mercury	7439-97-6	1	980	980	980
C5571	59.9	>15 ft	Mercury	7439-97-6	1	160	160	160
C5571	40.5	>15 ft	Potassium	7440-09-7	1	1460000	1460000	1460000
C5571	59.9	>15 ft	Potassium	7440-09-7	1	1150000	1150000	1150000
C5571	40.5	>15 ft	Silver	7440-22-4	1	179	179	179
C5571	59.9	>15 ft	Silver	7440-22-4	1	103	103	103
C5571	40.5	>15 ft	Sodium	7440-23-5	1	464000	464000	464000
C5571	59.9	>15 ft	Sodium	7440-23-5	1	726000	726000	726000
Radionuclides (Concentration Unit pCi/g)								
C5301	0	<15 ft	Americium-241	14596-10-2	2	0.468	15.7	8.084
C5301	0	<15 ft	Bismuth-214	14733-03-0	1	1.11	1.11	1.11
C5301	0	<15 ft	Cesium-137	10045-97-3	3	0.14	8.48	4.98
C5301	0	<15 ft	Gross alpha	12587-46-1	1	101	101	101
C5301	0	<15 ft	Gross beta	12587-47-2	1	145	145	145
C5301	0	<15 ft	Lead-212	15092-94-1	1	0.992	0.992	0.992

C5301	0	<15 ft	Lead-214	15067-28-4	1	7.79	7.79	7.79
C5301	0	<15 ft	Plutonium-239/240	PU-239/240	1	2.15	2.15	2.15
C5301	0	<15 ft	Potassium-40	13966-00-2	3	14.4	61.9	31.3
C5301	0	<15 ft	Radium-226	13982-63-3	1	32.2	32.2	32.2
C5301	0	<15 ft	Strontium-90	10098-97-2	1	21.2	21.2	21.2
C5301	0	<15 ft	Technetium-99	14133-76-7	1	22.3	22.3	22.3
C5301	0	<15 ft	Thallium-208	14913-50-9	1	0.22	0.22	0.22
C5301	0	<15 ft	Uranium-233/234	U-233/234	1	0.665	0.665	0.665
C5301	0	<15 ft	Uranium-238	U-238	2	0.421	30.8	15.6
C5301	145.5	>15 ft	Actinium-228	14331-83-0	1	0.883	0.883	0.883
C5301	147.5	>15 ft	Actinium-228	14331-83-0	1	0.727	0.727	0.727
C5301	124	>15 ft	Americium-241	14596-10-2	1	0.045	0.045	0.045
C5301	145.5	>15 ft	Bismuth-212	14913-49-6	1	0.428	0.428	0.428
C5301	147.5	>15 ft	Bismuth-212	14913-49-6	1	0.447	0.447	0.447
C5301	100	>15 ft	Bismuth-214	14733-03-0	1	0.811	0.811	0.811
C5301	145.5	>15 ft	Bismuth-214	14733-03-0	1	0.287	0.287	0.287
C5301	147.5	>15 ft	Bismuth-214	14733-03-0	1	0.253	0.253	0.253
C5301	163	>15 ft	Bismuth-214	14733-03-0	1	0.567	0.567	0.567
C5301	283	>15 ft	Bismuth-214	14733-03-0	1	0.868	0.868	0.868
C5301	305	>15 ft	Bismuth-214	14733-03-0	1	0.709	0.709	0.709
C5301	22.5	>15 ft	Cesium-137	10045-97-3	1	4.85	4.85	4.85
C5301	135.5	>15 ft	Gross alpha	12587-46-1	1	2.1	2.1	2.1
C5301	137.5	>15 ft	Gross alpha	12587-46-1	1	3.7	3.7	3.7
C5301	141	>15 ft	Gross alpha	12587-46-1	1	3.5	3.5	3.5
C5301	142.5	>15 ft	Gross alpha	12587-46-1	1	4.1	4.1	4.1
C5301	145.5	>15 ft	Gross alpha	12587-46-1	1	4.4	4.4	4.4
C5301	147.5	>15 ft	Gross alpha	12587-46-1	1	4.9	4.9	4.9

C5301	133	>15 ft	Gross beta	12587-47-2	1	11	11	11
C5301	135.5	>15 ft	Gross beta	12587-47-2	1	8.1	8.1	8.1
C5301	137.5	>15 ft	Gross beta	12587-47-2	1	13	13	13
C5301	141	>15 ft	Gross beta	12587-47-2	1	18	18	18
C5301	142.5	>15 ft	Gross beta	12587-47-2	1	17	17	17
C5301	145.5	>15 ft	Gross beta	12587-47-2	1	28	28	28
C5301	147.5	>15 ft	Gross beta	12587-47-2	1	42	42	42
C5301	285	>15 ft	Iodine-129	15046-84-1	1	1.04	1.04	1.04
C5301	22.5	>15 ft	Lead-212	15092-94-1	1	0.496	0.496	0.496
C5301	31	>15 ft	Lead-212	15092-94-1	1	1.41	1.41	1.41
C5301	40	>15 ft	Lead-212	15092-94-1	1	0.633	0.633	0.633
C5301	59.5	>15 ft	Lead-212	15092-94-1	1	0.955	0.955	0.955
C5301	73	>15 ft	Lead-212	15092-94-1	1	0.82	0.82	0.82
C5301	77.5	>15 ft	Lead-212	15092-94-1	1	0.888	0.888	0.888
C5301	90.5	>15 ft	Lead-212	15092-94-1	1	0.701	0.701	0.701
C5301	100	>15 ft	Lead-212	15092-94-1	1	1.1	1.1	1.1
C5301	108.5	>15 ft	Lead-212	15092-94-1	1	0.965	0.965	0.965
C5301	120	>15 ft	Lead-212	15092-94-1	1	0.542	0.542	0.542
C5301	131	>15 ft	Lead-212	15092-94-1	1	0.726	0.726	0.726
C5301	137.5	>15 ft	Lead-212	15092-94-1	1	0.894	0.894	0.894
C5301	145.5	>15 ft	Lead-212	15092-94-1	1	0.881	0.881	0.881
C5301	147.5	>15 ft	Lead-212	15092-94-1	2	0.515	0.708	0.6115
C5301	163	>15 ft	Lead-212	15092-94-1	1	0.765	0.765	0.765
C5301	172.5	>15 ft	Lead-212	15092-94-1	1	0.923	0.923	0.923
C5301	185.5	>15 ft	Lead-212	15092-94-1	1	0.782	0.782	0.782
C5301	200	>15 ft	Lead-212	15092-94-1	1	0.312	0.312	0.312
C5301	205	>15 ft	Lead-212	15092-94-1	1	0.644	0.644	0.644

C5301	222.5	>15 ft	Lead-212	15092-94-1	1	0.65	0.65	0.65
C5301	235	>15 ft	Lead-212	15092-94-1	1	0.563	0.563	0.563
C5301	247.5	>15 ft	Lead-212	15092-94-1	1	0.653	0.653	0.653
C5301	270	>15 ft	Lead-212	15092-94-1	1	0.664	0.664	0.664
C5301	283	>15 ft	Lead-212	15092-94-1	1	1.21	1.21	1.21
C5301	287.5	>15 ft	Lead-212	15092-94-1	1	1.66	1.66	1.66
C5301	292.5	>15 ft	Lead-212	15092-94-1	1	1.12	1.12	1.12
C5301	305	>15 ft	Lead-212	15092-94-1	1	0.808	0.808	0.808
C5301	315	>15 ft	Lead-212	15092-94-1	1	0.492	0.492	0.492
C5301	40	>15 ft	Lead-214	15067-28-4	1	2.37	2.37	2.37
C5301	73	>15 ft	Lead-214	15067-28-4	1	1.04	1.04	1.04
C5301	90.5	>15 ft	Lead-214	15067-28-4	1	2.07	2.07	2.07
C5301	100	>15 ft	Lead-214	15067-28-4	1	1.64	1.64	1.64
C5301	120	>15 ft	Lead-214	15067-28-4	1	1.52	1.52	1.52
C5301	131	>15 ft	Lead-214	15067-28-4	1	0.967	0.967	0.967
C5301	145.5	>15 ft	Lead-214	15067-28-4	1	0.385	0.385	0.385
C5301	147.5	>15 ft	Lead-214	15067-28-4	1	0.283	0.283	0.283
C5301	163	>15 ft	Lead-214	15067-28-4	1	0.89	0.89	0.89
C5301	205	>15 ft	Lead-214	15067-28-4	1	0.906	0.906	0.906
C5301	235	>15 ft	Lead-214	15067-28-4	1	0.634	0.634	0.634
C5301	247.5	>15 ft	Lead-214	15067-28-4	1	1.24	1.24	1.24
C5301	283	>15 ft	Lead-214	15067-28-4	1	2.21	2.21	2.21
C5301	292.5	>15 ft	Lead-214	15067-28-4	1	2.88	2.88	2.88
C5301	305	>15 ft	Lead-214	15067-28-4	1	0.864	0.864	0.864
C5301	45.5	>15 ft	Plutonium-239/240	PU-239/240	1	0.028	0.028	0.028
C5301	124	>15 ft	Plutonium-239/240	PU-239/240	1	0.067	0.067	0.067
C5301	262	>15 ft	Plutonium-239/240	PU-239/240	1	0.01	0.01	0.01

C5301	22.5	>15 ft	Potassium-40	13966-00-2	2	16	65.5	40.75
C5301	31	>15 ft	Potassium-40	13966-00-2	2	17.2	59.4	38.3
C5301	40	>15 ft	Potassium-40	13966-00-2	2	19.2	61.6	40.4
C5301	45.5	>15 ft	Potassium-40	13966-00-2	1	17.1	17.1	17.1
C5301	59.5	>15 ft	Potassium-40	13966-00-2	2	18.4	60.6	39.5
C5301	73	>15 ft	Potassium-40	13966-00-2	2	17.2	73	45.1
C5301	77.5	>15 ft	Potassium-40	13966-00-2	2	19.1	69.5	44.3
C5301	90.5	>15 ft	Potassium-40	13966-00-2	2	21.6	56.6	39.1
C5301	100	>15 ft	Potassium-40	13966-00-2	1	21.4	21.4	21.4
C5301	108.5	>15 ft	Potassium-40	13966-00-2	1	20.1	20.1	20.1
C5301	120	>15 ft	Potassium-40	13966-00-2	2	18.7	64.8	41.75
C5301	131	>15 ft	Potassium-40	13966-00-2	2	20.1	84	52.05
C5301	137.5	>15 ft	Potassium-40	13966-00-2	2	21.4	31.9	26.65
C5301	145.5	>15 ft	Potassium-40	13966-00-2	1	24.7	24.7	24.7
C5301	147.5	>15 ft	Potassium-40	13966-00-2	3	17.2	51.6	28.7
C5301	163	>15 ft	Potassium-40	13966-00-2	1	18.9	18.9	18.9
C5301	172.5	>15 ft	Potassium-40	13966-00-2	2	15.3	67.4	41.35
C5301	185.5	>15 ft	Potassium-40	13966-00-2	1	15.7	15.7	15.7
C5301	200	>15 ft	Potassium-40	13966-00-2	1	17.1	17.1	17.1
C5301	205	>15 ft	Potassium-40	13966-00-2	2	20.2	66.4	43.3
C5301	222.5	>15 ft	Potassium-40	13966-00-2	1	16.5	16.5	16.5
C5301	235	>15 ft	Potassium-40	13966-00-2	1	18.6	18.6	18.6
C5301	247.5	>15 ft	Potassium-40	13966-00-2	1	19.9	19.9	19.9
C5301	260	>15 ft	Potassium-40	13966-00-2	1	19.4	19.4	19.4
C5301	270	>15 ft	Potassium-40	13966-00-2	1	18.4	18.4	18.4
C5301	283	>15 ft	Potassium-40	13966-00-2	1	22.4	22.4	22.4
C5301	287.5	>15 ft	Potassium-40	13966-00-2	1	21.3	21.3	21.3

C5301	292.5	>15 ft	Potassium-40	13966-00-2	1	23.7	23.7	23.7
C5301	297.5	>15 ft	Potassium-40	13966-00-2	1	21.1	21.1	21.1
C5301	305	>15 ft	Potassium-40	13966-00-2	1	17.3	17.3	17.3
C5301	315	>15 ft	Potassium-40	13966-00-2	1	14.1	14.1	14.1
C5301	283	>15 ft	Radium-224	13233-32-4	1	5.9	5.9	5.9
C5301	45.5	>15 ft	Radium-226	13982-63-3	1	0.357	0.357	0.357
C5301	145.5	>15 ft	Radium-226	13982-63-3	1	0.287	0.287	0.287
C5301	147.5	>15 ft	Radium-226	13982-63-3	1	0.253	0.253	0.253
C5301	45.5	>15 ft	Radium-228	15262-20-1	1	0.512	0.512	0.512
C5301	145.5	>15 ft	Radium-228	15262-20-1	1	0.883	0.883	0.883
C5301	147.5	>15 ft	Radium-228	15262-20-1	1	0.727	0.727	0.727
C5301	45.5	>15 ft	Strontium-90	10098-97-2	1	0.44	0.44	0.44
C5301	22.5	>15 ft	Thallium-208	14913-50-9	1	0.427	0.427	0.427
C5301	31	>15 ft	Thallium-208	14913-50-9	1	0.36	0.36	0.36
C5301	40	>15 ft	Thallium-208	14913-50-9	1	0.348	0.348	0.348
C5301	59.5	>15 ft	Thallium-208	14913-50-9	1	0.307	0.307	0.307
C5301	73	>15 ft	Thallium-208	14913-50-9	1	0.324	0.324	0.324
C5301	77.5	>15 ft	Thallium-208	14913-50-9	1	0.304	0.304	0.304
C5301	90.5	>15 ft	Thallium-208	14913-50-9	1	0.309	0.309	0.309
C5301	100	>15 ft	Thallium-208	14913-50-9	1	0.311	0.311	0.311
C5301	108.5	>15 ft	Thallium-208	14913-50-9	1	0.231	0.231	0.231
C5301	120	>15 ft	Thallium-208	14913-50-9	1	0.298	0.298	0.298
C5301	131	>15 ft	Thallium-208	14913-50-9	1	0.234	0.234	0.234
C5301	137.5	>15 ft	Thallium-208	14913-50-9	1	0.252	0.252	0.252
C5301	145.5	>15 ft	Thallium-208	14913-50-9	1	0.235	0.235	0.235
C5301	147.5	>15 ft	Thallium-208	14913-50-9	2	0.148	0.257	0.2025
C5301	163	>15 ft	Thallium-208	14913-50-9	1	0.229	0.229	0.229

C5301	200	>15 ft	Thallium-208	14913-50-9	1	0.193	0.193	0.193
C5301	205	>15 ft	Thallium-208	14913-50-9	1	0.191	0.191	0.191
C5301	222.5	>15 ft	Thallium-208	14913-50-9	1	0.185	0.185	0.185
C5301	235	>15 ft	Thallium-208	14913-50-9	1	0.235	0.235	0.235
C5301	247.5	>15 ft	Thallium-208	14913-50-9	1	0.172	0.172	0.172
C5301	270	>15 ft	Thallium-208	14913-50-9	1	0.234	0.234	0.234
C5301	283	>15 ft	Thallium-208	14913-50-9	1	0.367	0.367	0.367
C5301	287.5	>15 ft	Thallium-208	14913-50-9	1	0.514	0.514	0.514
C5301	292.5	>15 ft	Thallium-208	14913-50-9	1	0.542	0.542	0.542
C5301	305	>15 ft	Thallium-208	14913-50-9	1	0.144	0.144	0.144
C5301	315	>15 ft	Thallium-208	14913-50-9	1	0.212	0.212	0.212
C5301	45.5	>15 ft	Thorium-228	14274-82-9	1	0.347	0.347	0.347
C5301	45.5	>15 ft	Thorium-232	TH-232	1	0.512	0.512	0.512
C5301	124	>15 ft	Tritium	10028-17-8	1	13.1	13.1	13.1
C5301	262	>15 ft	Tritium	10028-17-8	1	511	511	511
C5301	285	>15 ft	Tritium	10028-17-8	1	1100	1100	1100
C5301	31.5	>15 ft	Uranium-233/234	U-233/234	2	0.24	0.24	0.24
C5301	45.5	>15 ft	Uranium-233/234	U-233/234	2	0.14	0.521	0.3305
C5301	124	>15 ft	Uranium-233/234	U-233/234	1	0.14	0.14	0.14
C5301	262	>15 ft	Uranium-233/234	U-233/234	1	0.11	0.11	0.11
C5301	285	>15 ft	Uranium-233/234	U-233/234	1	0.31	0.31	0.31
C5301	31.5	>15 ft	Uranium-235	15117-96-1	2	0.025	0.031	0.028
C5301	45.5	>15 ft	Uranium-235	15117-96-1	1	0.016	0.016	0.016
C5301	262	>15 ft	Uranium-235	15117-96-1	1	0.014	0.014	0.014
C5301	285	>15 ft	Uranium-235	15117-96-1	1	0.014	0.014	0.014
C5301	22.5	>15 ft	Uranium-238	U-238	1	0.13	0.13	0.13
C5301	31	>15 ft	Uranium-238	U-238	1	0.256	0.256	0.256

C5301	31.5	>15 ft	Uranium-238	U-238	2	0.2	0.25	0.225
C5301	40	>15 ft	Uranium-238	U-238	1	0.133	0.133	0.133
C5301	45.5	>15 ft	Uranium-238	U-238	2	0.12	0.541	0.3305
C5301	59.5	>15 ft	Uranium-238	U-238	1	0.125	0.125	0.125
C5301	73	>15 ft	Uranium-238	U-238	1	0.165	0.165	0.165
C5301	77.5	>15 ft	Uranium-238	U-238	1	0.145	0.145	0.145
C5301	90.5	>15 ft	Uranium-238	U-238	1	0.134	0.134	0.134
C5301	100	>15 ft	Uranium-238	U-238	1	0.121	0.121	0.121
C5301	108.5	>15 ft	Uranium-238	U-238	1	0.142	0.142	0.142
C5301	120	>15 ft	Uranium-238	U-238	1	0.106	0.106	0.106
C5301	124	>15 ft	Uranium-238	U-238	1	0.16	0.16	0.16
C5301	131	>15 ft	Uranium-238	U-238	1	0.107	0.107	0.107
C5301	137.5	>15 ft	Uranium-238	U-238	1	0.135	0.135	0.135
C5301	147.5	>15 ft	Uranium-238	U-238	1	0.132	0.132	0.132
C5301	163	>15 ft	Uranium-238	U-238	1	0.117	0.117	0.117
C5301	172.5	>15 ft	Uranium-238	U-238	1	0.123	0.123	0.123
C5301	185.5	>15 ft	Uranium-238	U-238	1	0.155	0.155	0.155
C5301	200	>15 ft	Uranium-238	U-238	1	0.131	0.131	0.131
C5301	205	>15 ft	Uranium-238	U-238	1	0.109	0.109	0.109
C5301	222.5	>15 ft	Uranium-238	U-238	1	0.111	0.111	0.111
C5301	235	>15 ft	Uranium-238	U-238	1	0.139	0.139	0.139
C5301	247.5	>15 ft	Uranium-238	U-238	1	0.144	0.144	0.144
C5301	260	>15 ft	Uranium-238	U-238	1	0.13	0.13	0.13
C5301	262	>15 ft	Uranium-238	U-238	1	0.17	0.17	0.17
C5301	270	>15 ft	Uranium-238	U-238	1	0.11	0.11	0.11
C5301	283	>15 ft	Uranium-238	U-238	1	0.27	0.27	0.27
C5301	285	>15 ft	Uranium-238	U-238	1	0.24	0.24	0.24

C5301	287.5	>15 ft	Uranium-238	U-238	1	0.331	0.331	0.331
C5301	292.5	>15 ft	Uranium-238	U-238	1	0.434	0.434	0.434
C5301	297.5	>15 ft	Uranium-238	U-238	1	0.282	0.282	0.282
C5301	305	>15 ft	Uranium-238	U-238	1	0.161	0.161	0.161
C5301	315	>15 ft	Uranium-238	U-238	1	0.187	0.187	0.187
C5302	54.94	>15 ft	Americium-241	14596-10-2	1	2.83	2.83	2.83
C5302	54.94	>15 ft	Bismuth-214	14733-03-0	1	0.739	0.739	0.739
C5302	54.94	>15 ft	Cesium-137	10045-97-3	2	0.26	0.829	0.5445
C5302	54.94	>15 ft	Cobalt-60	10198-40-0	1	0.072	0.072	0.072
C5302	54.94	>15 ft	Potassium-40	13966-00-2	3	16	52.7	28.4
C5302	54.94	>15 ft	Radium-226	13982-63-3	1	0.429	0.429	0.429
C5302	54.94	>15 ft	Radium-228	15262-20-1	1	0.678	0.678	0.678
C5302	54.94	>15 ft	Uranium-238	U-238	1	0.12	0.12	0.12
C5515	27.5	>15 ft	Americium-241	14596-10-2	2	87300	94000	90650
C5515	31.5	>15 ft	Americium-241	14596-10-2	2	418	1140	779
C5515	34.5	>15 ft	Americium-241	14596-10-2	3	414	1420	885
C5515	49.5	>15 ft	Americium-241	14596-10-2	1	0.12	0.12	0.12
C5515	57	>15 ft	Americium-241	14596-10-2	1	0.37	0.37	0.37
C5515	135	>15 ft	Americium-241	14596-10-2	1	0.041	0.041	0.041
C5515	287	>15 ft	Americium-241	14596-10-2	1	0.021	0.021	0.021
C5515	25	>15 ft	Cesium-137	10045-97-3	1	0.157	0.157	0.157
C5515	27.5	>15 ft	Cesium-137	10045-97-3	1	31000	31000	31000
C5515	30.5	>15 ft	Cesium-137	10045-97-3	2	9690	12700	11195
C5515	31.5	>15 ft	Cesium-137	10045-97-3	4	827	3700	1776.75
C5515	32	>15 ft	Cesium-137	10045-97-3	2	393	448	420.5
C5515	34.5	>15 ft	Cesium-137	10045-97-3	6	90	1700	539
C5515	37.5	>15 ft	Cesium-137	10045-97-3	2	873	1390	1132

C5515	40	>15 ft	Cesium-137	10045-97-3	2	16.4	41.9	29.15
C5515	45.5	>15 ft	Cesium-137	10045-97-3	1	2.5	2.5	2.5
C5515	47.5	>15 ft	Cesium-137	10045-97-3	2	9.29	38.3	23.8
C5515	49.5	>15 ft	Cesium-137	10045-97-3	1	14.5	14.5	14.5
C5515	52	>15 ft	Cesium-137	10045-97-3	1	0.511	0.511	0.511
C5515	57	>15 ft	Cesium-137	10045-97-3	1	5.31	5.31	5.31
C5515	57.5	>15 ft	Cesium-137	10045-97-3	2	6.16	9.01	7.59
C5515	60	>15 ft	Cesium-137	10045-97-3	1	0.914	0.914	0.914
C5515	64.5	>15 ft	Cesium-137	10045-97-3	1	7.78	7.78	7.78
C5515	31.5	>15 ft	Cobalt-60	10198-40-0	3	0.285	0.382	0.320
C5515	34.5	>15 ft	Cobalt-60	10198-40-0	2	0.199	0.356	0.278
C5515	37.5	>15 ft	Cobalt-60	10198-40-0	1	1.25	1.25	1.25
C5515	57.5	>15 ft	Cobalt-60	10198-40-0	1	0.919	0.919	0.919
C5515	34.5	>15 ft	Europium-154	15585-10-1	1	1.28	1.28	1.28
C5515	27.5	>15 ft	Gross alpha	12587-46-1	1	483000	483000	483000
C5515	30.5	>15 ft	Gross alpha	12587-46-1	1	16700	16700	16700
C5515	31.5	>15 ft	Gross alpha	12587-46-1	1	8580	8580	8580
C5515	32	>15 ft	Gross alpha	12587-46-1	1	5430	5430	5430
C5515	34.5	>15 ft	Gross alpha	12587-46-1	2	2450	4090	3270
C5515	37.5	>15 ft	Gross alpha	12587-46-1	1	1540	1540	1540
C5515	40	>15 ft	Gross alpha	12587-46-1	1	50.1	50.1	50.1
C5515	45.5	>15 ft	Gross alpha	12587-46-1	1	23.8	23.8	23.8
C5515	27.5	>15 ft	Gross beta	12587-47-2	1	341000	341000	341000
C5515	30.5	>15 ft	Gross beta	12587-47-2	1	361000	361000	361000
C5515	31.5	>15 ft	Gross beta	12587-47-2	1	45500	45500	45500
C5515	32	>15 ft	Gross beta	12587-47-2	1	11100	11100	11100
C5515	34.5	>15 ft	Gross beta	12587-47-2	2	23500	38200	30850

C5515	37.5	>15 ft	Gross beta	12587-47-2	1	10900	10900	10900
C5515	40	>15 ft	Gross beta	12587-47-2	1	133	133	133
C5515	47.5	>15 ft	Gross beta	12587-47-2	1	195	195	195
C5515	57.5	>15 ft	Gross beta	12587-47-2	1	86.3	86.3	86.3
C5515	34.5	>15 ft	Nickel-63	13981-37-8	1	10.6	10.6	10.6
C5515	31.5	>15 ft	Plutonium-238	13981-16-3	2	31.7	78.1	54.9
C5515	34.5	>15 ft	Plutonium-238	13981-16-3	2	61	120	90.5
C5515	27.5	>15 ft	Plutonium-239/240	PU-239/240	1	426000	426000	426000
C5515	31.5	>15 ft	Plutonium-239/240	PU-239/240	2	1970	5350	3660
C5515	34.5	>15 ft	Plutonium-239/240	PU-239/240	2	3900	6360	5130
C5515	49.5	>15 ft	Plutonium-239/240	PU-239/240	1	0.56	0.56	0.56
C5515	57	>15 ft	Plutonium-239/240	PU-239/240	1	1.8	1.8	1.8
C5515	31.5	>15 ft	Potassium-40	13966-00-2	2	12.4	14.3	13.35
C5515	34.5	>15 ft	Potassium-40	13966-00-2	1	11.7	11.7	11.7
C5515	34.5	>15 ft	Radium-226	13982-63-3	1	0.402	0.402	0.402
C5515	34.5	>15 ft	Radium-228	15262-20-1	1	0.83	0.83	0.83
C5515	27.5	>15 ft	Strontium-90	10098-97-2	1	125000	125000	125000
C5515	30.5	>15 ft	Strontium-90	10098-97-2	1	162000	162000	162000
C5515	31.5	>15 ft	Strontium-90	10098-97-2	3	11800	27800	19433
C5515	32	>15 ft	Strontium-90	10098-97-2	1	8370	8370	8370
C5515	34.5	>15 ft	Strontium-90	10098-97-2	4	1000	22700	9875
C5515	37.5	>15 ft	Strontium-90	10098-97-2	1	6290	6290	6290
C5515	40	>15 ft	Strontium-90	10098-97-2	1	83.8	83.8	83.8
C5515	45.5	>15 ft	Strontium-90	10098-97-2	1	15.3	15.3	15.3
C5515	47.5	>15 ft	Strontium-90	10098-97-2	1	101	101	101
C5515	49.5	>15 ft	Strontium-90	10098-97-2	1	2.2	2.2	2.2
C5515	57	>15 ft	Strontium-90	10098-97-2	1	3.5	3.5	3.5

C5515	57.5	>15 ft	Strontium-90	10098-97-2	1	56.2	56.2	56.2
C5515	64.5	>15 ft	Strontium-90	10098-97-2	1	28	28	28
C5515	72.5	>15 ft	Strontium-90	10098-97-2	1	5.15	5.15	5.15
C5515	195	>15 ft	Strontium-90	10098-97-2	1	8.36	8.36	8.36
C5515	31.5	>15 ft	Technetium-99	14133-76-7	2	4.7	6.27	5.485
C5515	34.5	>15 ft	Technetium-99	14133-76-7	1	4.56	4.56	4.56
C5515	34.5	>15 ft	Thorium-228	14274-82-9	1	0.709	0.709	0.709
C5515	34.5	>15 ft	Thorium-232	TH-232	1	0.83	0.83	0.83
C5515	135	>15 ft	Tritium	10028-17-8	1	14.4	14.4	14.4
C5515	253	>15 ft	Tritium	10028-17-8	1	196	196	196
C5515	287	>15 ft	Tritium	10028-17-8	1	2860	2860	2860
C5515	319.5	>15 ft	Tritium	10028-17-8	1	73	73	73
C5515	15.5	>15 ft	Uranium-233/234	U-233/234	1	0.15	0.15	0.15
C5515	31.5	>15 ft	Uranium-233/234	U-233/234	2	35	42.1	38.55
C5515	34.5	>15 ft	Uranium-233/234	U-233/234	2	40	43.2	41.6
C5515	49.5	>15 ft	Uranium-233/234	U-233/234	1	0.18	0.18	0.18
C5515	57	>15 ft	Uranium-233/234	U-233/234	1	0.12	0.12	0.12
C5515	135	>15 ft	Uranium-233/234	U-233/234	1	0.18	0.18	0.18
C5515	253	>15 ft	Uranium-233/234	U-233/234	1	0.17	0.17	0.17
C5515	287	>15 ft	Uranium-233/234	U-233/234	1	0.31	0.31	0.31
C5515	319.5	>15 ft	Uranium-233/234	U-233/234	1	0.11	0.11	0.11
C5515	27.5	>15 ft	Uranium-234	13966-29-5	1	48.4	48.4	48.4
C5515	15.5	>15 ft	Uranium-235	15117-96-1	1	0.016	0.016	0.016
C5515	27.5	>15 ft	Uranium-235	15117-96-1	1	1.97	1.97	1.97
C5515	31.5	>15 ft	Uranium-235	15117-96-1	1	4.28	4.28	4.28
C5515	34.5	>15 ft	Uranium-235	15117-96-1	1	3.9	3.9	3.9
C5515	57	>15 ft	Uranium-235	15117-96-1	1	0.012	0.012	0.012

C5515	135	>15 ft	Uranium-235	15117-96-1	1	0.013	0.013	0.013
C5515	287	>15 ft	Uranium-235	15117-96-1	1	0.011	0.011	0.011
C5515	319.5	>15 ft	Uranium-235	15117-96-1	1	0.012	0.012	0.012
C5515	27.5	>15 ft	Uranium-236	13982-70-2	1	1.02	1.02	1.02
C5515	15.5	>15 ft	Uranium-238	U-238	1	0.13	0.13	0.13
C5515	18	>15 ft	Uranium-238	U-238	1	0.18	0.18	0.18
C5515	25	>15 ft	Uranium-238	U-238	1	0.131	0.131	0.131
C5515	27.5	>15 ft	Uranium-238	U-238	1	47.4	47.4	47.4
C5515	30.5	>15 ft	Uranium-238	U-238	1	18.5	18.5	18.5
C5515	31.5	>15 ft	Uranium-238	U-238	3	27.7	49.7	38.5
C5515	32	>15 ft	Uranium-238	U-238	1	17.5	17.5	17.5
C5515	34.5	>15 ft	Uranium-238	U-238	4	12.9	68.6	44.8
C5515	37.5	>15 ft	Uranium-238	U-238	1	9.68	9.68	9.68
C5515	40	>15 ft	Uranium-238	U-238	1	0.322	0.322	0.322
C5515	45.5	>15 ft	Uranium-238	U-238	1	0.175	0.175	0.175
C5515	47.5	>15 ft	Uranium-238	U-238	1	0.145	0.145	0.145
C5515	49.5	>15 ft	Uranium-238	U-238	1	0.17	0.17	0.17
C5515	52	>15 ft	Uranium-238	U-238	1	0.175	0.175	0.175
C5515	57	>15 ft	Uranium-238	U-238	1	0.11	0.11	0.11
C5515	57.5	>15 ft	Uranium-238	U-238	1	0.154	0.154	0.154
C5515	60	>15 ft	Uranium-238	U-238	1	0.197	0.197	0.197
C5515	64.5	>15 ft	Uranium-238	U-238	1	0.136	0.136	0.136
C5515	70.5	>15 ft	Uranium-238	U-238	1	0.207	0.207	0.207
C5515	72.5	>15 ft	Uranium-238	U-238	1	0.156	0.156	0.156
C5515	80	>15 ft	Uranium-238	U-238	1	0.143	0.143	0.143
C5515	87	>15 ft	Uranium-238	U-238	1	0.159	0.159	0.159
C5515	93	>15 ft	Uranium-238	U-238	1	0.151	0.151	0.151

C5515	107	>15 ft	Uranium-238	U-238	1	0.158	0.158	0.158
C5515	132.5	>15 ft	Uranium-238	U-238	1	0.197	0.197	0.197
C5515	135	>15 ft	Uranium-238	U-238	1	0.17	0.17	0.17
C5515	152.5	>15 ft	Uranium-238	U-238	1	0.225	0.225	0.225
C5515	167.5	>15 ft	Uranium-238	U-238	1	0.141	0.141	0.141
C5515	182.5	>15 ft	Uranium-238	U-238	1	0.166	0.166	0.166
C5515	195	>15 ft	Uranium-238	U-238	1	0.189	0.189	0.189
C5515	202.5	>15 ft	Uranium-238	U-238	1	0.146	0.146	0.146
C5515	220	>15 ft	Uranium-238	U-238	1	0.16	0.16	0.16
C5515	237.5	>15 ft	Uranium-238	U-238	1	0.126	0.126	0.126
C5515	250.5	>15 ft	Uranium-238	U-238	1	0.123	0.123	0.123
C5515	253	>15 ft	Uranium-238	U-238	1	0.14	0.14	0.14
C5515	266	>15 ft	Uranium-238	U-238	1	0.105	0.105	0.105
C5515	282.5	>15 ft	Uranium-238	U-238	1	0.121	0.121	0.121
C5515	285	>15 ft	Uranium-238	U-238	1	0.363	0.363	0.363
C5515	287	>15 ft	Uranium-238	U-238	1	0.23	0.23	0.23
C5515	290	>15 ft	Uranium-238	U-238	1	0.407	0.407	0.407
C5515	297.5	>15 ft	Uranium-238	U-238	1	0.222	0.222	0.222
C5515	302.5	>15 ft	Uranium-238	U-238	1	0.4	0.4	0.4
C5515	319.5	>15 ft	Uranium-238	U-238	1	0.11	0.11	0.11
C5571	26.6	>15 ft	Carbon-14	14762-75-5	1	235	235	235
C5571	40.5	>15 ft	Cesium-137	10045-97-3	2	2740	3670	3205
C5571	59.9	>15 ft	Cesium-137	10045-97-3	2	3.54	176	89.8
C5571	26.6	>15 ft	Strontium-90	10098-97-2	1	13700	13700	13700
C5571	26.6	>15 ft	Tritium	10028-17-8	1	93.3	93.3	93.3
C5571	40.5	>15 ft	Uranium-238	U-238	1	2.33	2.33	2.33
C5571	59.9	>15 ft	Uranium-238	U-238	1	0.197	0.197	0.197

Table B-4. List of Analytes Tested During Soil Analysis and the Associated Analytical Method

Analyte	Chemical Abstracts Services No.	Analytical Method
Nitrogen in Nitrite and Nitrate	NO2+NO3-N	353.1_NO3/NO2
Oil and grease	OIL/GREASE	413.1_OILGREASE
Lead	7439-92-1	6010_METALS_ICP_TR
Silver	7440-22-4	6010_METALS_ICP_TR
Cadmium	7440-43-9	6010_METALS_ICP_TR
Sulfur	7704-34-9	6010M_ICP_ASTM_AE
Phosphorus	7723-14-0	6010M_ICP_ASTM_AE
Aluminum	7429-90-5	6010M_ICP_ASTM_AE
Iron	7439-89-6	6010M_ICP_ASTM_AE
Lithium	7439-93-2	6010M_ICP_ASTM_AE
Magnesium	7439-95-4	6010M_ICP_ASTM_AE
Manganese	7439-96-5	6010M_ICP_ASTM_AE
Molybdenum	7439-98-7	6010M_ICP_ASTM_AE
Nickel	7440-02-0	6010M_ICP_ASTM_AE
Potassium	7440-09-7	6010M_ICP_ASTM_AE
Rhenium	7440-15-5	6010M_ICP_ASTM_AE
Silicon	7440-21-3	6010M_ICP_ASTM_AE
Sodium	7440-23-5	6010M_ICP_ASTM_AE
Strontium	7440-24-6	6010M_ICP_ASTM_AE
Thallium	7440-28-0	6010M_ICP_ASTM_AE
Titanium	7440-32-6	6010M_ICP_ASTM_AE
Barium	7440-39-3	6010M_ICP_ASTM_AE
Beryllium	7440-41-7	6010M_ICP_ASTM_AE
Boron	7440-42-8	6010M_ICP_ASTM_AE
Chromium	7440-47-3	6010M_ICP_ASTM_AE
Cobalt	7440-48-4	6010M_ICP_ASTM_AE
Copper	7440-50-8	6010M_ICP_ASTM_AE
Vanadium	7440-62-2	6010M_ICP_ASTM_AE
Zinc	7440-66-6	6010M_ICP_ASTM_AE
Zirconium	7440-67-7	6010M_ICP_ASTM_AE
Bismuth	7440-69-9	6010M_ICP_ASTM_AE
Calcium	7440-70-2	6010M_ICP_ASTM_AE
Lead-208	13966-28-4	6020M_ICPMS_ASTM_AE
Antimony-121	14265-72-6	6020M_ICPMS_ASTM_AE
Cadmium-111	14336-64-2	6020M_ICPMS_ASTM_AE
Silver-109 metastable	14378-38-2	6020M_ICPMS_ASTM_AE

Table B-4. List of Analytes Tested During Soil Analysis and the Associated Analytical Method

Analyte	Chemical Abstracts Services No.	Analytical Method
Selenium-82	14687-58-2	6020M_ICPMS_ASTM_AE
Ruthenium-101	14914-61-5	6020M_ICPMS_ASTM_AE
Arsenic	7440-38-2	6020M_ICPMS_ASTM_AE
Antimony	7440-36-0	6020M_ICPMS_ASTM_AE
Selenium	7782-49-2	6020M_ICPMS_ASTM_AE
Hexavalent Chromium	18540-29-9	7196_CR6
Mercury	7439-97-6	7471_HG_CVAA
Aroclor-1260	11096-82-5	8082_PCB_GC
Aroclor-1254	11097-69-1	8082_PCB_GC
Aroclor-1268	11100-14-4	8082_PCB_GC
Aroclor-1221	11104-28-2	8082_PCB_GC
Aroclor-1232	11141-16-5	8082_PCB_GC
Aroclor-1248	12672-29-6	8082_PCB_GC
Aroclor-1016	12674-11-2	8082_PCB_GC
Aroclor-1262	37324-23-5	8082_PCB_GC
Aroclor-1242	53469-21-9	8082_PCB_GC
Ethylbenzene	100-41-4	8260_VOA_GCMS
Styrene	100-42-5	8260_VOA_GCMS
trans-Decalin, 2-methyl	1000152-47-3	8260_VOA_GCMS
cis-1,3-Dichloropropene	10061-01-5	8260_VOA_GCMS
trans-1,3-Dichloropropene	10061-02-6	8260_VOA_GCMS
1,2-Dichloroethane	107-06-2	8260_VOA_GCMS
4-Methyl-2-pentanone	108-10-1	8260_VOA_GCMS
Toluene	108-88-3	8260_VOA_GCMS
Chlorobenzene	108-90-7	8260_VOA_GCMS
Dodecane	112-40-3	8260_VOA_GCMS
Undecane	1120-21-4	8260_VOA_GCMS
Decane	124-18-5	8260_VOA_GCMS
Dibromochloromethane	124-48-1	8260_VOA_GCMS
Tetrachloroethene	127-18-4	8260_VOA_GCMS
Xylenes (total)	1330-20-7	8260_VOA_GCMS
Decahydronaphthalene, (cis-trans mixture)	91-17-8	8260_VOA_GCMS
2,6-Dimethyl-undecane	17301-23-4	8260_VOA_GCMS
2,6-Dimethylnonane	17302-28-2	8260_VOA_GCMS
Methyldecahydronaphthalene	2958-76-1	8260_VOA_GCMS

Table B-4. List of Analytes Tested During Soil Analysis and the Associated Analytical Method

Analyte	Chemical Abstracts Services No.	Analytical Method
1,2-Dichloroethene (Total)	540-59-0	8260_VOA_GCMS
Carbon tetrachloride	56-23-5	8260_VOA_GCMS
2-Hexanone	591-78-6	8260_VOA_GCMS
Acetone	67-64-1	8260_VOA_GCMS
Chloroform	67-66-3	8260_VOA_GCMS
1-Butanol	71-36-3	8260_VOA_GCMS
Benzene	71-43-2	8260_VOA_GCMS
1,1,1-Trichloroethane	71-55-6	8260_VOA_GCMS
Bromomethane	74-83-9	8260_VOA_GCMS
Chloromethane	74-87-3	8260_VOA_GCMS
Chloroethane	75-00-3	8260_VOA_GCMS
Vinyl chloride	75-01-4	8260_VOA_GCMS
Methylene chloride	75-09-2	8260_VOA_GCMS
Carbon disulfide	75-15-0	8260_VOA_GCMS
Bromoform	75-25-2	8260_VOA_GCMS
Bromodichloromethane	75-27-4	8260_VOA_GCMS
1,1-Dichloroethane	75-34-3	8260_VOA_GCMS
1,1-Dichloroethene	75-35-4	8260_VOA_GCMS
1,2-Dichloropropane	78-87-5	8260_VOA_GCMS
2-Butanone	78-93-3	8260_VOA_GCMS
1,1,2-Trichloroethane	79-00-5	8260_VOA_GCMS
Trichloroethene	79-01-6	8260_VOA_GCMS
1,1,2,2-Tetrachloroethane	79-34-5	8260_VOA_GCMS
n-Butylbenzene	104-51-8	8260_VOA_GCMS
cis-1,2-Dichloroethylene	156-59-2	8260_VOA_GCMS
trans-1,2-Dichloroethylene	156-60-5	8260_VOA_GCMS
Cyclohexanone	108-94-1	8260_VOA_GCMS
Hexane	110-54-3	8260_VOA_GCMS
Acetonitrile	75-05-8	8260_VOA_GCMS
1,2,4-Trimethylbenzene	95-63-6	8260_VOA_GCMS
Tetrahydrofuran	109-99-9	8260_VOA_GCMS
(m+p)-Xylene	179601-23-1	8260_VOA_GCMS
Butane, 2-methyl-	78-78-4	8260_VOA_GCMS
Tributyl phosphate	126-73-8	8270_SVOA_GCMS
1,2,4-Trichlorobenzene	120-82-1	8270_SVOA_GCMS
2,4-Dinitrotoluene	121-14-2	8270_SVOA_GCMS

Table B-4. List of Analytes Tested During Soil Analysis and the Associated Analytical Method

Analyte	Chemical Abstracts Services No.	Analytical Method
Pyrene	129-00-0	8270_SVOA_GCMS
4-Nitrophenol	100-02-7	8270_SVOA_GCMS
1,4-Dichlorobenzene	106-46-7	8270_SVOA_GCMS
Phenol	108-95-2	8270_SVOA_GCMS
4-Chloro-3-methylphenol	59-50-7	8270_SVOA_GCMS
n-Nitrosodi-n-propylamine	621-64-7	8270_SVOA_GCMS
Acenaphthene	83-32-9	8270_SVOA_GCMS
Pentachlorophenol	87-86-5	8270_SVOA_GCMS
2-Chlorophenol	95-57-8	8270_SVOA_GCMS
Di-n-butylphthalate	84-74-2	8270_SVOA_GCMS
2,4-Dimethylheptane	2213-23-2	8270_SVOA_GCMS
4-Nitroaniline	100-01-6	8270_SVOA_GCMS
Benzyl alcohol	100-51-6	8270_SVOA_GCMS
4-Bromophenylphenyl ether	101-55-3	8270_SVOA_GCMS
2,4-Dimethylphenol	105-67-9	8270_SVOA_GCMS
4-Chloroaniline	106-47-8	8270_SVOA_GCMS
Bis(2-chloro-1-methylethyl) ether	108-60-1	8270_SVOA_GCMS
2-Picoline	109-06-8	8270_SVOA_GCMS
Pyridine	110-86-1	8270_SVOA_GCMS
Bis(2-chloroethyl) ether	111-44-4	8270_SVOA_GCMS
2-Butoxyethanol	111-76-2	8270_SVOA_GCMS
Bis(2-Chloroethoxy) methane	111-91-1	8270_SVOA_GCMS
Tris-2-chloroethyl phosphate	115-96-8	8270_SVOA_GCMS
Bis(2-ethylhexyl) phthalate	117-81-7	8270_SVOA_GCMS
Di-n-octylphthalate	117-84-0	8270_SVOA_GCMS
Hexachlorobenzene	118-74-1	8270_SVOA_GCMS
Anthracene	120-12-7	8270_SVOA_GCMS
2,4-Dichlorophenol	120-83-2	8270_SVOA_GCMS
Dimethyl phthalate	131-11-3	8270_SVOA_GCMS
Total cresols	1319-77-3	8270_SVOA_GCMS
Dibenzofuran	132-64-9	8270_SVOA_GCMS
Benzo(ghi)perylene	191-24-2	8270_SVOA_GCMS
Indeno(1,2,3-cd)pyrene	193-39-5	8270_SVOA_GCMS
Benzo(b)fluoranthene	205-99-2	8270_SVOA_GCMS
Fluoranthene	206-44-0	8270_SVOA_GCMS
Benzo(k)fluoranthene	207-08-9	8270_SVOA_GCMS

Table B-4. List of Analytes Tested During Soil Analysis and the Associated Analytical Method

Analyte	Chemical Abstracts Services No.	Analytical Method
Acenaphthylene	208-96-8	8270_SVOA_GCMS
Chrysene	218-01-9	8270_SVOA_GCMS
Benzo(a)pyrene	50-32-8	8270_SVOA_GCMS
2,4-Dinitrophenol	51-28-5	8270_SVOA_GCMS
Dibenz[a,h]anthracene	53-70-3	8270_SVOA_GCMS
4,6-Dinitro-2-methylphenol	534-52-1	8270_SVOA_GCMS
1,3-Dichlorobenzene	541-73-1	8270_SVOA_GCMS
Benzo(a)anthracene	56-55-3	8270_SVOA_GCMS
2,6-Dinitrotoluene	606-20-2	8270_SVOA_GCMS
Benzoic acid	65-85-0	8270_SVOA_GCMS
3+4 Methylphenol (cresol, m+p)	65794-96-9	8270_SVOA_GCMS
Hexachloroethane	67-72-1	8270_SVOA_GCMS
4-Chlorophenylphenyl ether	7005-72-3	8270_SVOA_GCMS
Hexachlorocyclopentadiene	77-47-4	8270_SVOA_GCMS
Dibutyl Butylphosphonate	78-46-6	8270_SVOA_GCMS
Isophorone	78-59-1	8270_SVOA_GCMS
Diethylphthalate	84-66-2	8270_SVOA_GCMS
Phenanthrene	85-01-8	8270_SVOA_GCMS
Butylbenzylphthalate	85-68-7	8270_SVOA_GCMS
n-Nitrosodiphenylamine	86-30-6	8270_SVOA_GCMS
Fluorene	86-73-7	8270_SVOA_GCMS
Carbazole	86-74-8	8270_SVOA_GCMS
Hexachlorobutadiene	87-68-3	8270_SVOA_GCMS
2,4,6-Trichlorophenol	88-06-2	8270_SVOA_GCMS
2-Nitroaniline	88-74-4	8270_SVOA_GCMS
2-Nitrophenol	88-75-5	8270_SVOA_GCMS
Naphthalene	91-20-3	8270_SVOA_GCMS
2-Methylnaphthalene	91-57-6	8270_SVOA_GCMS
2-Chloronaphthalene	91-58-7	8270_SVOA_GCMS
2-Naphthylamine	91-59-8	8270_SVOA_GCMS
3,3'-Dichlorobenzidine	91-94-1	8270_SVOA_GCMS
Benzothiazole	95-16-9	8270_SVOA_GCMS
2-Methylphenol (cresol, o-)	95-48-7	8270_SVOA_GCMS
1,2-Dichlorobenzene	95-50-1	8270_SVOA_GCMS
2,4,5-Trichlorophenol	95-95-4	8270_SVOA_GCMS
Nitrobenzene	98-95-3	8270_SVOA_GCMS

Table B-4. List of Analytes Tested During Soil Analysis and the Associated Analytical Method

Analyte	Chemical Abstracts Services No.	Analytical Method
3-Nitroaniline	99-09-2	8270_SVOA_GCMS
4-Methylphenol (cresol, p-)	106-44-5	8270_SVOA_GCMS
2,6-Dimethylheptane	1072-05-5	8270_SVOA_GCMS
Heptane, 2,5-dimethyl-	2216-30-0	8270_SVOA_GCMS
Cyanide	57-12-5	9012_CYANIDE
Phosphate	14265-44-2	9056_ANIONS_IC
Nitrate	14797-55-8	9056_ANIONS_IC
Nitrogen in Nitrate	NO3-N	9056_ANIONS_IC
Nitrite	14797-65-0	9056_ANIONS_IC
Nitrogen in Nitrite	NO2-N	9056_ANIONS_IC
Sulfate	14808-79-8	9056_ANIONS_IC
Chloride	16887-00-6	9056_ANIONS_IC
Fluoride	16984-48-8	9056_ANIONS_IC
Phosphorus in phosphate	PO4-P	9056_ANIONS_IC
Gross alpha	12587-46-1	ALPHA_BETA_LSC_AE
Gross beta	12587-47-2	ALPHA_BETA_LSC_AE
Carbon-14	14762-75-5	C14_COX_LSC
Potassium-40	13966-00-2	GAMMA_GS
Radium-226	13982-63-3	GAMMA_GS
Americium-241	14596-10-2	GAMMA_GS
Bismuth-214	14733-03-0	GAMMA_GS
Thallium-208	14913-50-9	GAMMA_GS
Lead-214	15067-28-4	GAMMA_GS
Lead-212	15092-94-1	GAMMA_GS
Cobalt-60	10198-40-0	GAMMA_GS
Beryllium-7	13966-02-4	GAMMA_GS
Ruthenium-106	13967-48-1	GAMMA_GS
Cesium-134	13967-70-9	GAMMA_GS
Antimony-125	14234-35-6	GAMMA_GS
Europium-155	14391-16-3	GAMMA_GS
Europium-152	14683-23-9	GAMMA_GS
Europium-154	15585-10-1	GAMMA_GS
Radium-224	13233-32-4	GAMMA_GS
Thorium-228	14274-82-9	GAMMA_GS
Radium-228	15262-20-1	GAMMA_GS
Thorium-232	TH-232	GAMMA_GS

Table B-4. List of Analytes Tested During Soil Analysis and the Associated Analytical Method

Analyte	Chemical Abstracts Services No.	Analytical Method
Zinc-65	13982-39-3	GAMMA_GS
Actinium-228	14331-83-0	GAMMA_GS
Niobium-94	14681-63-1	GAMMA_GS
Cerium-144	14762-78-8	GAMMA_GS
Tin-113	13966-06-8	GAMMA_GS
Ruthenium-103	13968-53-1	GAMMA_GS
Barium-133	13981-41-4	GAMMA_GS
Bismuth-212	14913-49-6	GAMMA_GS
Thorium-234	15065-10-8	GAMMA_GS
Tin-126	15832-50-5	GAMMA_GS
Cerium/Praseodymium-144	CE/PR-144	GAMMA_GS
Cesium-137	10045-97-3	GAMMA_GS_AE
Iodine-129	15046-84-1	I129_SEP_LEPS_GS
Nickel-63	13981-37-8	NI63_LSC
Neptunium-237	13994-20-2	NP237_LLE_PLATE_AEA
Plutonium-238	13981-16-3	PUISO_PLATE_AEA
Plutonium-239/240	PU-239/240	PUISO_PLATE_AEA
Technetium-99	14133-76-7	RADISO_ICPMS_ASTM_AE
Uranium-238	U-238	RADISO_ICPMS_ASTM_AE
Uranium-234	13966-29-5	RADISOTOPES_ICPMS
Uranium-233	13968-55-3	RADISOTOPES_ICPMS
Uranium-236	13982-70-2	RADISOTOPES_ICPMS
Strontium-90	10098-97-2	SR90_SEP_LSC
Total beta radiostrontium	SR-RAD	SRTOT_SEP_PRECIP_GPC
Tritium	10028-17-8	TRITIUM_COX_LSC
Uranium-235	15117-96-1	UISO_PLATE_AEA
Uranium-233/234	U-233/234	UISO_PLATE_AEA
Uranium	7440-61-1	UTOT_KPA
Total petroleum hydrocarbons - diesel range	TPHDIESEL	WTPH_DIESEL
Total petroleum hydrocarbons - kerosene range	TPHKEROSENE	WTPH_DIESEL
Total petroleum hydrocarbons - gasoline range	TPHGASOLINE	WTPH_GASOLINE

Table B-4. List of Analytes Tested During Soil Analysis and the Associated Analytical Method

Analyte	Chemical Abstracts Services No.	Analytical Method

References: For EPA Methods 353.1 and 413.1, see EPA/600/4-79/020, 1983, *Methods for Chemical Analysis of Water and Wastes,* Environmental Monitoring and Support Laboratory, U.S. Environmental Protection Agency, Cincinnati, Ohio. Available at: http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=D196019611.

For four-digit EPA methods, see SW-846, *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*, as amended, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, Washington, D.C. Available at: https://www.epa.gov/hw-sw846.

WTPH-D = Washington State Department of Ecology's total petroleum hydrocarbons as diesel.

WTPH-G = Washington State Department of Ecology's total petroleum hydrocarbons as gasoline.