Westinghouse

Hematite Decommissioning Project

DO-08-003

RADIOLOGICAL CHARACTERIZATION REPORT

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ACRONYMS AND ABBREVIATIONS

%	Percent
ABB	Asea Brown Boveri
Am	Americium
ASTM	American Society Of Testing Materials
bgs	below ground surface
BTV	Background Threshold Value
CE	Combustion Engineering, Inc.
CFR	Code Of Federal Regulations
cm	centimeter
cm^2	square centimeter
DCGL	Derived Concentration Guideline Level
DOE	U.S. Department Of Energy
dpm	disintegration per minute
dpm/100 cm^2	disintegration per minute per 100 square centimeters
DQO	Data Quality Objectives
EM	Electromagnetic
EPA	U.S. Environmental Protection Agency
FD	Field Duplicate
FSS	Final Status Survey
FSSP	Final Status Survey Plan
ft	feet
g	gram
GM	Geiger-Mueller
GPR	Ground Penetrating Radar
GPS	Global Positioning System
Gulf	Gulf United Nuclear Fuels Corporation
GWS	Gamma Walkover Survey
HDP	Hematite Decommissioning Project
HEU	High Enriched Uranium
HSA	Historical Site Assessment
in	inches
Kd	distribution coefficient
LEU	Low Enriched Uranium
LSC	Liquid Scintillation Counting

ACRONYMS AND ABBREVIATIONS
(Continued)

LVI	LVI Services, Inc.
m	meter
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual (NUREG-1575)
MDC	Minimum Detectable Concentration
MDNR	Missouri Department Of Natural Resources
mrem	millirem
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NaI	Sodium Iodide
NIST	National Institute Of Standards And Technology
Np	Neptunium
NRC	U.S. Nuclear Regulatory Commission
NTU	Nephelometric Unit
pCi/g	picoCurie per gram
pCi/L	picoCuries per liter
Pu	Plutonium
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
Ra	Radium
RB	Rinsate Blank
RI	Remedial Investigation
RIFS	Remedial Investigation Feasibility Study
RMC	Radiation Management Corporation
RSSI	Radiation Survey And Site Investigation
SAIC	Science Applications International Corporation
SOF	Sum-Of-The-Fractions
Tc	Technetium
TEDE	Total Effective Dose Equivalent
Th	Thorium
TRU	Transuranic
U	Uranium
UBC	Under Building Contamination
UF_4	Uranium Tetrafluoride

ACRONYMS AND ABBREVIATIONS

(Continued)

UF_6	Uranium Hexafluoride
UNC	United Nuclear Corporation
UO_2	Uranium Dioxide
VOC	Volatile Organic Compound
WEC	Westinghouse Electric Company LLC

EXECUTIVE SUMMARY

The Hematite Radiological Characterization Report (HRCR) provides a summary of Hematite facility characterization information that will be used to evaluate site areas with regard to classification of impacted site areas. The Site operated from 1956 to 2001 primarily manufacturing Uranium metal and Uranium compounds from a wide variety of Uranium enrichments for government and commercial use. These activities began with the start of fuel fabrication operations in 1956, and continued following the cessation of fuel fabrication in 2001, with decommissioning and site maintenance activities through the present. This HRCR compiles characterization information to be used in assessing the present radiological status of the site. The HRCR was developed following the methodology provided in NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM; Reference 1-1) and NUREG-1757, Consolidated NMSS Decommissioning Guidance (Reference 1-2).

The HRCR discusses the characterization efforts from the several characterization survey campaigns and compiles the data into one report. The data were reviewed, separated into logical areas, and evaluated against the proposed soil and building surface derived concentration guideline levels (DCGL). The data sets were tabulated and basic statistics calculated. The data sets were evaluated to determine preliminary classification (Class 1, Class 2, or Class 3) for the impacted areas in accordance with guidance from MARSSIM (NUREG-1575). The soil data were also evaluated to estimate the lateral and vertical depth of the contamination.

The impacted area is bounded on the south by the railroad; bounded on the north by State Road P; bounded on the east by the Northeast Site Creek; and bounded on the west by the western edges of the Site Pond and Site Creek. The extent of the impacted areas identified in the HSA was re-evaluated and modified utilizing the characterization sampling results contained in this report. The impacted area has been extended south along the Site Creek, Virginia Tributary, and Joachim Creek. The extension of the impacted area was based on process knowledge of the liquid effluent flow path, and the identification of trace amounts of Tc-99 in sediment samples at locations near the confluence with of the Site Creek with Virginia Tributary. The increased impacted area also includes Class 3 buffer zones.

The conclusion that areas were non-impacted was based on a review of the Historical Site Assessment (HSA), gamma scan measurements, and analytical results obtained from soil sampling. Non-impacted areas do not show detectable Tc-99 activity or concentrations of licensed radioactivity statistically distinguishable from background. The results of background soil samples are presented in section 4.22 of this report.

Characterization surveys in Buildings 110, 230, and 231 demonstrated that only isolated remediation may be needed prior to moving forward with final status surveys.

1.0 INTRODUCTION

The Westinghouse Electric Company LLC Former Fuel Cycle Facility at Hematite, Missouri, hereafter referred to as the Hematite Decommissioning Project (HDP), is located at 3300 State Road P (Site), approximately 2.5 miles west of Missouri Highway A, in Festus, Missouri. The Site consists of approximately 228 acres.

The primary operations of the facility centered upon the manufacturing of Uranium metal and Uranium compounds from a wide variety of Uranium enrichments for use as nuclear fuel. Specifically, operations included the conversion of Uranium hexafluoride (UF_6) gas of various Uranium enrichments to Uranium oxide, Uranium carbide, Uranium dioxide (UO_2) pellets and Uranium metal. Secondary operations included research and development and Uranium scrap recovery processes.

The Radiation Survey and Site Investigation (RSSI) Process described in the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) (Reference 1-1) is a graded approach that starts with the Historical Site Assessment (HSA) followed by surveys, including characterization surveys, remedial action surveys during decontamination and concluding with the final status survey (FSS).

1.1 REPORT ORGANIZATION

This report is organized by presenting historical information followed by the report objectives, methodology, and sampling and measurement types for each sampling campaign.

The results are grouped by the following areas, and generally follow those established in the Westinghouse Remedial Investigation Feasibility Study [RIFS] Work Plan (Reference 1-2).

- Ground Water;
- Surface Water Features – Site Pond and Creek;
- Surface Water Features – Northeast Site Creek;
- Surface Water Features – Joachim Creek;
- Burial Pits;
- Soil Area – Southeast of Process Buildings;
- Soil Area – Evaporation Ponds;
- Former Leach Field;

- Soil Beneath Buildings to be Demolished;
- Outdoor Soil – Impacted;
- Outdoor Soil – Non-Impacted;
- Former Gas Station;
- Natural Gas Pipeline;
- Red Room Roof Burial and Cistern Burn Pit Areas;
- Underground Systems – Storm Drain System (Buildings to Outfall #3);
- Underground Systems – Sanitary Wastewater Treatment Plant (Buildings to Outfall #1);
- Remaining Site Structures – Buildings 110, 230, and 231; and
- Railroad Spur.

Section 4 combines all the data sets into one, while maintaining unique identifying information about the origin of the data, and evaluates the extent of contamination in various areas. The results section also provides a preliminary classification (in accordance with MARSSIM) for the areas based on history, characterization data, and proposed derived concentration guideline levels.

Radiological characterization, as outlined in NUREG-1757, Vol. 1, Consolidated NMSS Decommissioning Guidance, Decommissioning Process for Materials Licensees, Appendix D, XIV.b (Reference 1-3), includes:

- A description and justification of the survey measurements for impacted media;
- A description of the field instruments and methods used for measuring concentrations, and the sensitivities of those instruments and methods;
- A description of the laboratory instruments and methods used for measuring concentrations and sensitivities of the instruments and methods;
- The survey results in tables of the concentrations of residual radioactivity;
- Maps or drawings of the Site, showing areas classified as non-impacted, and impacted;

- Justification for areas that are considered non-impacted;
- A discussion of the adequacy of the characterization;
- A discussion of areas that are not readily accessible and how they were surveyed; and,
- A discussion of the ratios of radionuclides that may be expected in residual activity.

Section 5.0 provides the conclusion of this report with a discussion of these characterization objectives.

1.2 CHARACTERIZATION CAMPAIGNS

Radiological characterization surveys for the HDP were conducted in several phases by multiple contractors over several years. This report presents a summary of the characterization activities to date with text directly copied from survey report documents whenever possible. The characterization campaigns for buildings have focused on those that will remain after license termination (specifically Buildings 110, 230 and 231). Buildings and slabs that will be demolished and the associated rubble that will be shipped to a licensed disposal site will be addressed separately during waste characterization efforts. The demolition and waste shipment activities rely on operational surveys to ensure that waste characterization controls are implemented.

A listing of characterization activities by contractor is provided below for the major characterization campaigns. Some of the characterization data is discussed qualitatively, while the more recent and comprehensive sampling efforts provide summaries of the sampling results. Tables of the individual sample radiological analyses are provided at the end of Section 4.

1.2.1 Radiation Management Corporation

Radiation Management Corporation (RMC) conducted a radiological survey of the Hematite Burial Site in 1982, under contract with the U.S. Nuclear Regulatory Commission (NRC). This survey is documented in NUREG/CR-3387, Radiological Survey of the Combustion Engineering Burial Site Hematite, Missouri (Reference 1-4). Information from this study is discussed only qualitatively, since the results from this study were likely used as input into the subsequent studies. It should be noted that the stated ratios of U-234/U-238 at the enrichments quoted in the following text summaries from Reference 1-4 are dated from June 1983 and have been superseded by the WEC document, Derivation of Surrogates and Scaling Factors for Hard-to-Detect Radionuclides, Appendix D (Reference 1-5).

Results of surface soil sampling indicated low-level surface contamination that might have resulted from past burial activities or from airborne (i.e., stack) releases. The highest Uranium-235 (U-235) concentration in surface soil was noted to be 1.1 picoCuries per gram (pCi/g). Activity concentrations for Uranium-234 (U-234) ranged from 2 to 47 pCi/g, as estimated from Uranium-238 (U-238) activity that ranged from 1.7 pCi/g to 4.7 pCi/g, assuming an activity ratio of U-234 to U-238 equal to 10. The activity ratio was estimated from a 4 percent average U-235 enrichment in five samples that were analyzed for isotopic Uranium using alpha spectroscopy. Note that the U-234/U-238 ratios as quoted from Reference 1-4 have been updated and the ranges of concentration for U-234 would decrease if recalculated based on the U-234/U-238 ratios for 4 percent enrichment from the Appendix D of Reference 1-5. The updated U-234/U-238 ratio for 4 percent enrichment would be 3.73.

Sub-surface soil samples were collected to a maximum sample depth of 13 feet (ft). The results showed the highest U-235 concentration was 21.5 pCi/g in the Burial Pits area. The highest U-234 activity in the Burial Pits was approximately 400 pCi/g, as estimated from measured U-238 activity of 38 pCi/g and a U-234 to U-238 activity ratio of 10 (note that the U-234 concentrations would decrease if calculated by the updated U-234/U-238 activity ratios of Reference 1-5). Sub-surface contamination was evaluated by extensive logging of holes drilled through and around the burial site, using both a 1-inch (in) by 1-in sodium iodide (NaI) detector and an intrinsic germanium detector. A total of 14 holes were drilled on the burial site, 10 of which were lined with 4-in PVC casing for logging. The other four holes were lined with 2-in slotted casings for use as water sampling wells. For three of these holes, cores were taken during drilling activities. Each core was dried and counted in a manner identical to the surface soil samples. In addition, four core samples were sent to an analytical laboratory for duplicate gamma spectral analysis and Uranium determinations using alpha spectroscopy. Each bore hole was logged with the NaI detector to identify areas of increased gross activity, and then the germanium detector was used at selected locations to quantify and qualify the increases.

In the ground water and surface water samples, only one ground water sample collected from a borehole showed gross alpha activity exceeding 15 picoCuries per liter (pCi/L), the drinking water limit at the time. Gross beta activity exceeding 50 pCi/L was found in five of the 22 samples, three of which came from a borehole near the Evaporation Ponds.

Results of the gamma radiation surveys indicated detectable levels above background in the northwest corner of the Burial Pit area adjacent to the old security fence. It was determined that these levels were due to containers of UF_6 routinely stored in an area next to the fence line rather than buried material.

1.2.2 Berkshire Environmental

A geophysical investigation was performed by Berkshire Environmental, a subcontractor of Allgeier, Martin, and Associates, Inc. between August 10 and August 13, 1998 (Reference 1-6). The investigation used electromagnetic (EM) and magnetic methods over the suspected Burial Pit area to determine the real extent of buried materials, assess the contents of these pits, determine the number and location of disposal pits, delineate the burial pits laterally, and explore for possible inorganic soil or ground water contamination related to the pits. Results of the survey revealed several EM and magnetic anomalies that were interpreted to be burial pits. However, the exact number of burial pits could not be determined. The investigation also showed a high percentage of metallic material within the top 10 feet of soil. The lateral delineation of the burial pits in this investigation is consistent with the burial pit boundaries shown on the 1969 Hematite Long-Range Site Plan.

1.2.3 Geophex Ltd.

Geophex Ltd. performed a preliminary geophysical survey on December 16 and 17, 2002 (Reference 1-7). The purpose of the investigation was to test the effectiveness of three geophysical methods including EM, magnetic, and ground penetrating radar (GPR) for determining the location of the burial pits at the Site. According to Geophex, GPR proved effective in identifying only surface anomalies, while EM and magnetic methods were successful in identifying sub-surface anomalies.

Surveying was conducted in three areas around the Site. The first grid, Grid 1, measured 100 ft by 150 ft and was located northeast of the Uranium Fluoride Production building. The second grid, Grid 2, measured 130 ft by 150 ft and was located east of the Site and northwest of the Missouri Pacific Railroad. Grids 1 and 2 were located in select areas where analysis of historical aerial photographs showed burial pits or burial pit scars. The third grid, Grid 3, measured 80 ft by 150 ft and was located southwest of the Facility buildings and southeast of the barn in an area of the Site where no reported burial operations took place.

1.2.3.1 Grid 1

The EM survey of Grid 1 identified three trench-like anomalies and eight smaller sub-surface anomalies. The magnetic data from this grid also indicated significant amounts of buried ferrous materials in the areas identified by the EM survey.

1.2.3.2 Grid 2

The EM survey of Grid 2 identified several sub-surface anomalies varying in size. The magnetic data from this grid also indicated buried ferrous materials in the areas identified in the EM survey. An additional area of buried ferrous material not identified by the EM survey was located in the north corner of the grid by the magnetic survey.

1.2.3.3 Grid 3

The EM and magnetic survey of Grid 3 did not identify any sub-surface anomalies. Anomalies detected were all attributed to surface features such as manhole covers, concrete, and a water tank.

1.2.3.4 Summary

The results of the investigation showed metallic anomalies in Grid 1 and Grid 2 not attributed to surface features, while Grid 3 anomalies were all attributed to surface features. These results are consistent with the 1969 Hematite Long-Range Site Plan which shows Grid 1 and Grid 2 located within the burial pit area, while Grid 3 is located on an undeveloped portion of the Site.

In summary, available geophysical methods could identify some sub-surface features that were likely buried waste materials (i.e., ferrous and non-ferrous metals), but these geophysical surveys were not successful in delineating individual burial pit boundaries. Furthermore, the geophysical methods identified only ferrous and non-ferrous metal anomalies, materials not always present in the buried waste, and the effectiveness of the geophysical methods was limited by the amount of cover soil atop the burial pits.

1.2.4 Leggette, Brashears and Graham, Inc.

Remedial Investigation Feasibility Study (RIFS) Work Plan (Reference 1-2) was developed by Leggette, Brashears and Graham, Inc. in March of 2003 in the standard format prescribed by the U.S. Environmental Protection Agency (EPA). The plan was designed to characterize specific areas of concern, provide data for future potential remedy selection, understand risks, and fill data gaps from previous characterization efforts. A conceptual site model was established to show the potential pathways for contaminant migration, through air, surface water, sediment, soil, or ground water. Implementation of the RIFS was accomplished through a series of characterization studies, including the results of the various radiological characterization campaigns presented in this report.

1.2.5 LVI Services, Inc.

LVI Services, Inc. (LVI) conducted characterization and final status surveys of Building 230 in 2003 and 2004 using the MARSSIM methodology (Reference 1-8). The data presented in the LVI report was not used to release Building 230 for unrestricted use; therefore, the LVI data will be summarized as characterization data in this report.

1.2.6 Science Applications International Corporation

Science Applications International Corporation (SAIC) performed a gamma walkover survey (GWS) in 2003 (Reference 1-9) and conducted characterization surveys between April 2004 and January 2005 (Reference 1-10). These activities were undertaken consistent with the comprehensive Site characterization approach outlined in the RIFS Work Plan. Field activities included the collection of surface soil, surface water, sediment samples, sub-surface soil samples, installation of ground water monitoring wells, and subsequent ground water sampling for radiological and chemical constituents.

1.2.7 CH2M HILL

CH2M HILL performed radiological characterization samples of the limestone storage pile in September of 2005 to support decisions on appropriate disposal options of the spent limestone material. The characterization effort was designed to generate radiological data to assist in the waste management process and support WEC in the decision process for determining the radiological status of the limestone storage pile.

1.2.8 Cabrera Services, Inc.

Cabrera Services, Inc. (Cabrera Services) conducted sub-surface investigation activities in November 2006 in the Burial Pits and surrounding soil, and Red Room Roof Burial area of the HDP to provide information on the characteristics of buried waste and surrounding soil (Reference 1-11).

1.2.9 Energy*Solutions*, LLC

Energy*Solutions*, LLC (Energy*Solutions*) conducted surface and sub-surface soil investigation activities in November and December of 2007 in portions of the HDP and surface activity investigation activities in building structures of the HDP that may remain in place after license termination (Reference 1-12).

1.2.10 Westinghouse Electric Company LLC

WEC collected additional surface and sub-surface soil samples in June and July 2008. Samples were collected over the area to be affected by the installation of a Rail Spur. Samples were also collected from a limited portion of the Site to provide information for pre-excavation engineering design. These samples were collected to define the depth of soil overburden at each burial pit location, as well as investigate the concentration of residual radioactive material over the Natural Gas Pipeline, the Former Leach Field, and specific areas adjacent the process buildings.

1.3 REFERENCES FOR SECTION 1.0

1-1 U.S. Nuclear Regulatory Commission, NUREG-1575, "Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)," Revision 1, August 2000, includes the June 2001 updates.

1-2 Leggette, Brashears & Graham, Inc, "Westinghouse Remedial Investigation Feasibility Study Work Plan," Revision 0, May 9, 2003.

1-3 U.S. Nuclear Regulatory Commission, NUREG-1757, "Consolidated NMSS Decommissioning Guidance, Decommissioning Process for Materials Licensees," Volume 1, Final Report, September 2002.

1-4 U.S. Nuclear Regulatory Commission, NUREG/CR-3387, "Radiological Survey of the Combustion Engineering Burial Site Hematite, Missouri," July 1983.

1-5 Westinghouse Electric Company Document No. DO-08-008, "Derivation of Surrogates and Scaling Factors for Hard-to-Detect Radionuclides".

1-6 Allgeier, Martin, and Associates, Inc., "Geophysical Survey," September 1998.

1-7 Geophex Ltd., "Geophysical Survey at the Westinghouse Hematite Facility Festus, MO," February 2005.

1-8 LVI Services, Inc., HE-R-01, "MARSSIM Survey Methodology for Final Status Surveys of Building 230," Revision 1, February 2004.

1-9 SAIC Report, "Gamma Survey Data Evaluation Report," Revision 1, May 2004.

1-10 Westinghouse Electric Company Document No. DO-04-010, "Hematite Radiological Characterization Report," Revision 1.1, April 2006.

1-11 Cabrera Services, Inc., "Buried Waste Evaluation Report, prepared for Westinghouse Electric Company Hematite Site, Hematite Missouri, Final," March 2007.

1-12 Energy*Solutions*, LLC, CS-HP-PN-006, "Supplemental Characterization Survey Plan for Westinghouse Electric Company-Hematite Facility," Revision 0, November 2007.

2.0 HISTORICAL SITE ASSESSMENT

The Historical Site Assessment (Reference 2-1) was revised in 2009 following the guidance in MARSSIM and the following sections provide a summary applicable to site characterization. Reference 2-1 concluded that the Site areas within the historical definition of the "central tract" are impacted areas. The central tract is bounded as Site property south of State Road P, west of the Northeast Site Creek, north of the railroad track, and east of the Site Creek/Pond. The Site Creek from the train track to Joachim creek should also be considered impacted due to the stream flowing down from the Site Pond. The outer area around the Site includes a Class 3 buffer zone.

2.1 PHYSICAL SETTING

The Site consists of approximately 228 acres, of which approximately 20 acres comprise the central tract where primary radiological operations occurred per Reference 2-1. The Site is located in the east portion of Missouri in Jefferson County near the town of Hematite. The Site is located on Missouri State Road P, between the hills to the northwest and a terrace/floodplain of Joachim Creek. The Pleistocene terrace deposit has a surface topography that slopes gently to the southeast eventually blending with the alluvial floodplain deposits of the Joachim Creek, a tributary of the Mississippi River. The impacted and non-impacted areas based on historical site operations, property boundaries, building locations, and other features are shown on Figure 2-1.

The predominant wind direction is from the southeast at approximately 120 degrees. (HDP Effluent and Environmental Plan, Reference 2-2) The wind frequency distribution data comes from the Doe Run facility in Herculaneum, Missouri. Wind rose data from the St. Louis/Lambert International Airport also show wind direction primarily from the southeast and to a lesser extent from the northwest. Although the wind blows predominately from the southeast and northwest it is variable by season and year and location.

Ground water flow has been investigated and reported as part of the Westinghouse RIFS Work Plan in 2003 (Reference 2-3), during a Hydrogeologic Investigation and Ground water, Soil and Stream Characterization in 1998 (Reference 2-4) and as part of more recent studies of overburden and bedrock hydrogeology (References 2-9 and 2-10). WEC summarized that ground water flow in the overburden materials is to the east/southeast, in the Jefferson City formations the flow is to the northeast/southeast, and in the Roubidoux formations the flow is to the northeast (Reference 2-5).

2.2 SITE RADIOLOGICAL CONTAMINANTS

Based on information from Reference 2-1 and previous investigations, the primary radiological contaminants on Site are U-234, U-235, U-238, and Technetium-99 (Tc-99). Additionally, Thorium-232 (Th-232) in secular equilibrium with its progeny, Uranium-236 (U-236), and transuranic (TRU) radionuclides, may be present in trace quantities.

Uranium enrichment may vary from natural to highly enriched Uranium, with trace quantities of depleted. A limited amount of work was also performed with Thorium compounds as part of early research into the use of Thorium in the fuel cycle. Any Thorium present at the Site is assumed to be derived from naturally occurring Th-232 in secular equilibrium with its progeny and only present in trace quantities in localized areas. In addition, quantities of Tc-99, as a contaminant in the Uranium received from the enrichment facilities, have been detected in some of the soil and environmental monitoring wells at the Site.

The use of contaminated Uranium in the gaseous diffusion cascades from reprocessed Uranium recycled from spent fuel is postulated to raise the potential for TRU radionuclides to be present in trace quantities with the feed Uranium stock in addition to the Tc-99 contaminant. A review of the characteristics of recycled Uranium was examined in the U.S. Department of Energy (DOE) Project Overview and Field Site Reports entitled Preliminary Review of the Flow and Characteristics of Recycled Uranium throughout the DOE Complex 1952 – 1999, Volume 1, Project Overview (Reference 2-6). This publication notes that most of the fission products and TRU radionuclides were disposed of as high level waste during reprocessing. It further notes that trace concentrations of Plutonium-239/240 (Pu-239/240), Neptunium (Np-237), and Tc-99 remained with the recovered Uranium.

The activation product, U-236, may also be observed as a contaminant that may have been introduced to the site with enriched Uranium, extracted from recycled fuel. Natural Uranium does not contain U-236 in detectable quantities. The composition of reprocessed/recycled Uranium depends on the initial enrichment and the time the fuel has been in the reactor. Recycled Uranium typically contains 0.4 percent to 0.6 percent U-236 (Reference 2-7). Therefore, only trace quantities of U-236 would be expected, if any. In addition, alpha spectroscopy of samples cannot differentiate between U-235 and U-236 alpha energies; therefore, this report assumes all the reported activity is U-235.

Since the Tc-99 forms volatile and semi-volatile chemical compounds that tend to migrate toward the top of the enrichment cascade, it is reasonable to assume that Tc-99 would tend to end up in the enriched product. On the basis of activity fraction, it was found that the most significant radionuclide observed in representative sampling of contaminants in recycled Uranium is Tc-99, followed by Americium-241 (Am-241), and then by Np-237.

The DOE report noted TRU concentrations in very high enriched, as well as low enriched Uranium (LEU) product, were less than detectable limits (e.g.,<5 disintegration per minute per gram of Uranium equivalent to 2.3 pCi/g of total Uranium). On the basis of this information, Tc-99 was expected to be the predominant recycled Uranium contaminant observed at the Site. TRU radionuclides Am-241, Np-237, and Pu-239/240 are likely to be present only in trace concentrations.

2.3 HISTORICAL OPERATIONS

The first phase of operations began when Mallinckrodt Chemical Works (MCW) purchased the original parcel of farmland that includes the central tract area in 1956. The primary focus of operations during this time period was Uranium fuel research and production of fuels for various government applications. MCW owned and operated the Hematite facility until May 1961, when ownership was transferred to United Nuclear Corporation (UNC). UNC operated the site until 1971 when UNC and Gulf Oil Corporation (Gulf) entered into a joint venture forming the Gulf United Nuclear Fuels Corporation (GUNFC). GUNFC operated the facility until November 1973, at which time UNC sold its interest in GUNFC, and Gulf changed the name of GUNFC to Gulf Nuclear Fuels Corporation (GNFC). In January 1974, the Hematite facility was transferred to General Atomic Company, a partnership between Gulf and Scallop Nuclear, Inc.

The second phase of operations began in May 1974, when the site was purchased by Combustion Engineering, Inc. (CE). Under ownership by CE, the focus of operations at Hematite facility was in the fabrication of fuel pellets using low-enriched Uranium for commercial power plants ($\leq$5 percent enrichment in the U-235 isotope). CE continued to fabricate fuel pellets and produce fuel assemblies for commercial power plants until 2000. In April 2000, the Hematite Site was acquired from CE by the then parent company of WEC, British Nuclear Fuels Limited (BNFL), and merged into WEC as part of the purchase of CE's nuclear operations. WEC permanently ceased Hematite operations in June 2001 and the site then entered into decommissioning (Reference 2-2).

Primary functions at the facility throughout its history have included the manufacture of Uranium metal and Uranium compounds from a wide variety of Uranium enrichments for use as nuclear fuel. Specifically, operations included the conversion of UF_6 gas of various U-235 enrichments to UO_2, Uranium carbide, UO_2 pellets, and Uranium metal. These products were manufactured for use by the federal government and government contractors and by commercial and research reactors. Research and development was also conducted at the facility, as were Uranium scrap recovery processes.

During the period prior to CE's purchase of the Facility in 1974, government projects dominated the operations on Site. Much of the work on behalf of the government at the Site was classified, and therefore specific details regarding the exact nature of the processes are not known. Examples of known projects during this time include:

- Production of Uranium metal for nuclear submarines and surface ship reactors;
- Supply of specialized Uranium oxides for the Army Package Power Reactor;
- Supply of high-enriched oxides for a General Atomics' gas-cooled reactor in Fort St. Vrain, Colorado;

- Production of high-enriched metal for materials test reactors utilized by the U.S. Navy;
- Supply of Uranium-beryllium pellets for use at Idaho Falls;
- Production of high-enrichment Uranium-zirconium pellets for the Shippingport naval reactor under contract to Bettis Laboratory; and,
- Production of high-enriched oxides for General Atomics for use in the NERVA nuclear rocket projects.

Although the physical design of the facility has changed over the years, certain areas were dedicated to particular production processes as well as certain types of work (e.g., low enrichment processes versus high enrichment processes). For example, Building 240 was historically dedicated to the chemical conversion of Uranium into compounds, solutions, and metal. Building 240 was further divided into areas for high enriched Uranium (HEU) and LEU processes: the "Red Room" (Area 240-2) containing high enriched conversion processes and the "Green Room" (Area 240-3) containing low enriched conversion processes and high enriched scrap processing. The Red Room was specifically used for the reduction of UF_6 to Uranium Tetrafluoride (UF_4), the conversion of UF_4 to Uranium metal, HEU scrap recovery, and other chemical conversion processes using high enriched Uranium.

Building 255 was used for the fabrication of Uranium compounds into physical shapes. Other activities included the blending of UO_2 with other chemical compounds.

Other areas were used for storage, and again were separated primarily by degree of enriched material or product stored. High enrichment storage areas included Buildings 235, 250 and 252. Also, high enriched scrap was stored in an outdoor, fenced 75 ft by 120 ft area in the south eastern portion of the Site.

The Site ceased production in June 2001 after nearly 47 years of operations under several owners and operators. In September 2001, WEC submitted a request to the NRC to amend its license, changing the scope of licensed activities to those associated with decommissioning. The NRC issued the requested license amendment in April 2002.

Additional history of specific areas is discussed in the sections below.

2.3.1 BURIAL PITS

From the late 1950s to approximately 1970, waste material from operations, including waste contaminated with Uranium, was disposed of in unlined pits (Burial Pits), approximately 20 ft wide by 40 ft long by 12 ft deep that were covered with fill materials. These Burial Pits are located on the east side of the Site. The media of concern for the Burial Pits are soil and ground

water. Radionuclide contaminants of concern were identified to be U-234, U-235, U-238, Tc-99 and Th-232.

2.3.2 SURFACE WATER FEATURES – SITE POND/SITE CREEK

The Site Pond is located on the southwest portion of the Site area. The Site Creek and Site Pond represent the release point for the process liquid effluent waste stream, from fuel fabrication and decommissioning operations. The Site Pond and Site Creek receive storm water from the site and effluent from the sanitary wastewater treatment plant. The media of concern for the Site Pond and Site Creek are surface water, stream sediment, soil and ground water. Radionuclide contaminants of concern were identified to be U-234, U-235, U-238, Tc-99 and Th-232.

Other surface water features include the Northeast Site Creek to the east of the Burial Pit area and Joachim Creek on the southernmost boundary of the Site property.

2.3.3 EVAPORATION PONDS

Liquid wastes generated at the Site, associated with a limited number of operations, were historically discharged to two Evaporation Ponds, located just inside the fence in the south-central portion of the Site area. The media of concern for the Evaporation Ponds are soil and ground water. Radionuclide contaminants of concern were identified to be U-234, U-235, U-238, Tc-99, and Th-232.

2.3.4 FORMER LEACH FIELD

The Former Leach Field and associated septic system were used until 1977 when a water treatment plant was built and placed into service. Reference 2-1 describes that on-site sanitary treatment incorporated a design where building drains and plumbing were directed first to a buried hold-up tank and then to a connected Leach Field. Thus, any contaminated liquids, including mop water and personnel shower water may have contaminated the piping, storage tank, and the Leach Field. Between 1977 and 1978 the Sanitary Wastewater Treatment Plant was modified. The hold-up tank was bypassed and the system was connected into a water treatment plant located just northwest of the Evaporation Ponds. The discharge of this system was to Outfall #1. The Former Leach Field is located west of the water treatment plant and Evaporation Ponds. The media of concern that may have been impacted by the Former Leach Field are soil and ground water. Radionuclide contaminants of concern were identified to be U-234, U-235, U-238, and Tc-99.

2.3.5 SOIL BENEATH BUILDINGS

Buildings of the Site were used for Uranium processing activities therefore radionuclide contaminants may be expected in soil directly under and in the immediate vicinity of the building foundations. The media of concern for the areas beneath the buildings are soil and ground water. Radionuclide contaminants of concern were identified to be U-234, U-235, U-238, and Tc-99.

Prior to construction of Building 253, the area was specifically approved by the NRC in 1990 for use of backfill material with limestone fill containing less than 30 pCi/g of Uranium. The NRC authorized this with the understanding that at the end of the Site's operation lifetime, further decontamination may be necessary. Based on the authorization of the NRC to use limestone as fill material, it is a potential media of concern for soil beneath Building 253.

2.3.6 LIMESTONE STORAGE AND FILL AREAS

Limestone was used as off-gas scrubber media. Reference 2-1 details the storage and movement of "spent limestone," and its use as fill material. The affinity of the limestone for Tc-99 is also described in Reference 2-1. Three locations of limestone storage and fill areas are noted on figures presented in subsequent sections. A composite sample from each limestone area was obtained by SAIC. Each limestone area is depicted in the figures later in this report. In addition, limestone fill was potentially used as backfill material during construction of Building 253 as noted above and described in Reference 2-1.

2.3.7 OUTDOOR AND SHALLOW SURFACE AREAS

The media of concern for the Outdoor and Shallow Surface Areas is soil. Radionuclide contaminants of concern were identified to be U-234, U-235, U-238, Tc-99, and Th-232.

2.3.8 FORMER GASOLINE STATION

The Former Gas Station is located on the northeast portion of the Site adjacent to the north side of State Road P. There are no known radiological issues associated with this area.

2.3.9 NATURAL GAS PIPELINE

The Natural Gas Pipeline is located along the northern side of the railroad line that lies on the southeast portion of the Site. The Natural Gas Pipeline itself is not of concern radiologically. However, since the pipeline alignment is down-gradient of the Burial Pits, Evaporation Ponds, and the Former Leach Field, it was initially assumed that the trench in which it is buried may have acted as a conduit for contaminant transport in the sub-surface. Since no bedding was placed it may be a possible pathway, with limited migration. The media of concern for the Natural Gas Pipeline is soil.

2.3.10 RED ROOM ROOF BURIAL AREA

Just south of the Tile Barn (Building 101) located in the western corner of the Site is an area where the roof of the Red Room (Building 240) is reported to have been buried. The Red Room was used for the handling of HEU in various chemical forms and the roof may be radioactively contaminated. The medium of concern in this area is soil. Radionuclide contaminants of concern were identified to be U-234, U-235, and U-238.

2.3.11 DEUL'S MOUNTAIN

During the construction of the Building 256 warehouse, a large area of potentially contaminated soil was removed and stored along the southeast corner of the fence-line. This pile was known as "Deul's Mountain." The medium of concern is soil. Radionuclide contaminants of concern were identified to be U-234, U-235, U-238, and Tc-99. The pile was removed and disposed of at a licensed burial site in 2005.

2.3.12 CISTERN BURN PIT

The cistern near the Tile Barn was used historically to burn wood pallets and other miscellaneous combustibles that may have contained low levels of radioactive material (Cistern Burn Pit). The Cistern Burn Pit is located in the western corner of the Site just south of the Tile Barn. In early 1993, the cistern was cleaned to less than 30 pCi/g of Uranium. The medium of concern for this area is soil. Radionuclide contaminants of concern were identified to be U-234, U-235 and U-238.

2.3.13 SITE BUILDINGS

The site contains 16 buildings that have been impacted by licensed activities. Ten of the site buildings are planned to be demolished to the slabs prior to Decommissioning Plan (DP) approval as previously authorized by approved License Conditions, and as amended based on the evaluation of residual radioactivity. The buildings planned for demolition include:

- Building 101 – Tile Barn;
- Building 120 – Wood Barn;
- Building 240 – Process Building;
- Building 245 – Well House;
- Building 252 – South Storage Building;
- Building 253 – Process Building;
- Building 254 – Process Building;
- Building 255 – Pellet Plant;
- Building 256 – Process Warehouse; and
- Building 260 – Oxide Building.

Characterization data for structures to be demolished prior to DP approval are based largely on operational surveys. A summary of the operational survey results are provided in Section 4.24.

The buildings expected to remain in use to support the decommissioning include:

- Building 110 – Office and Security
- Building 115 – Fire Pump House
- Building 230 – Rod Loading
- Building 231 – Warehouse
- Building 235 – West Storage Building
- Waste Water Treatment Shed

Buildings 115, 235 and the Waste Water Treatment Shed may be demolished as remediation of the site progresses and the buildings are no longer needed. Buildings 110, 230 and 231 are intended to be decontaminated as required, radiologically evaluated and released for unrestricted use prior to license termination. Information on these three buildings is provided below.

2.3.13.1 Building 110

Building 110, also referred to as the Security Building. The building has never been used for the handling or storage of radioactive materials. With the exception of the drain systems, it was not anticipated that any radiological contamination above background levels would be identified.

2.3.13.2 Building 230

Building 230 is a split level mezzanine building that was constructed in 1992 and housed the fuel assembly fabrication equipment for commercial operations. Radioactive material was used in this building during site operations.

Prior to construction, Health Physics sampling was performed to confirm that the building site was less than a 30 pCi/g gross alpha soil concentration guideline. Pre-construction survey results, documented in ABB Interoffice Correspondence (Reference 2-8), document that the maximum activity soil concentration was 11.6 pCi/g with an average concentration of 6.2 +/- 2.8 pCi/g gross alpha.

During its operational history, Building 230, referred to as the Rod Loading Building, was used for loading finished fuel pellets into fuel rods/assemblies. Fuel pellets were brought into the building in stainless steel transfer boxes via the Cushman room, and sent into both the Gadolinium Room and the Rod Assembly Room via a conveyor system.

The Rod Load Room is located at the center of the "U-shaped" open area and under the mezzanine of Building 230. The trays of pellets were unloaded from the transfer boxes inside the Rod Load Room and stored within the adjacent Kardex system, allowing specific allotments of pellets to be accessed at the appropriate time. The pellets were then loaded into empty zirconium alloy tubes. Once the zirconium tubes were fully loaded with pellets, they were moved from the Rod Load Room onto the automated rod line in the open area of Building 230.

The automated rod line was located directly north of and adjacent to the Rod Load Room. The automated rod load line passed the loaded rods through a series of stations, where end caps were welded, the welds were ground flush, and the rods were inspected. If any of the rods required further processing, they could be moved back into the Rod Load Room at one of several penetrations in wall separating the areas.

Once all the rods passed final inspection, they were moved to the Assembly Area, which was located in the western end of the "U-Shaped" area. The rods were assembled into fuel bundles using a client-specified pattern within a vertical metal framework, referred to as the cage. Once assembled, they were placed into storage racks until shipped. Low levels of surface activity due to any of the radionuclides of concern were expected on building surfaces and potentially in cracks and crevices.

2.3.13.3 Building 231

This warehouse was used for covered storage of facility materials and equipment. Some shipping container refurbishment was performed in this area. Low levels of surface activity due to any of the radionuclides of concern were expected on building surfaces and potentially in cracks and crevices.

2.4 REFERENCES FOR SECTION 2.0

2-1 Westinghouse Electric Company Document No. DO-08-005, "Historical Site Assessment".

2-2 Westinghouse Electric Company Document No. PO-EM-001, "Effluent and Environmental Monitoring Plan."

2-3 Leggette, Brashears & Graham, Inc., "Westinghouse Remedial Investigation Feasibility Study Work Plan," Revision 0, May 9, 2003.

2-4 Leggette, Brashears & Graham, Inc., "Hydrologeologic Investigation and Ground-Water, Soil and Stream Characterization," 1998.

2-5 Westinghouse Electric Company LLC E-mail Correspondence, Subject: "Ground Water and Surface Water Background Samples," April 10, 2008.

2-6 U.S. Department of Energy, "Preliminary Review of the Flow and Characteristics of Recycled Uranium throughout the DOE Complex 1952 – 1999, Volume 1, Project Overview," March 2001.

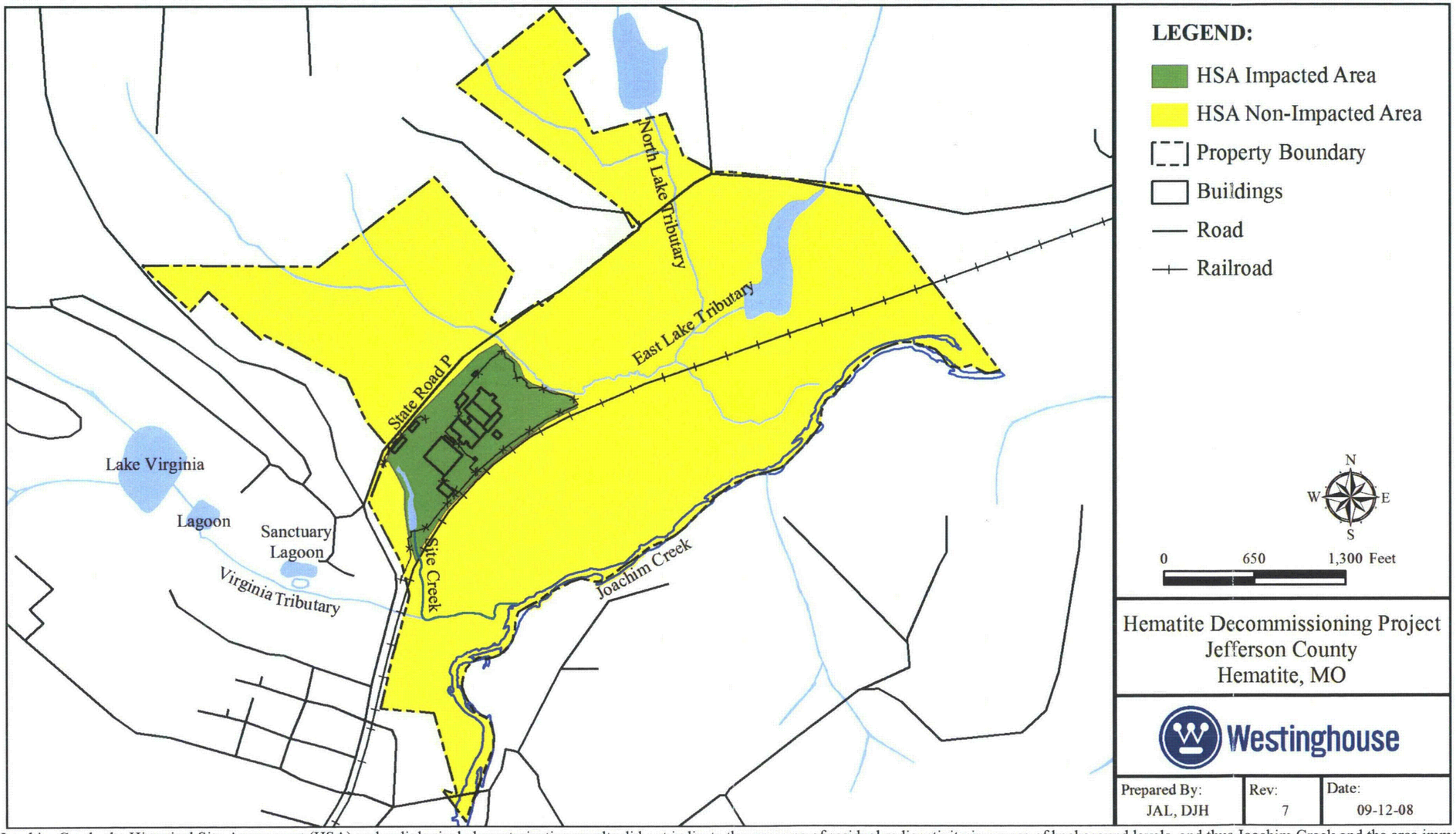
2-7 World Nuclear Association, "Processing of Used Nuclear Fuel for Recycle," April 2008. http://www.world-nuclear.org/info/inf69.html?terms=236

2-8 Asea Brown Boveri Inter-Office Correspondence, "Health Physics Sampling of Consolidated Construction Site," January 7, 1992.

2-9 SAIC Report, "Supplemental Analysis of Hydrogeologic Conditions in Overburden at Westinghouse Hematite Facility, Hematite, Missouri ," Revision 0, July 2009.

2-10 SAIC Report, "Radionuclide Activity in Bedrock Groundwater at Westinghouse Hematite Facility, Hematite, Missouri," Revision 0, July 2009.

Figure 2-1
Impacted And Non-Impacted Areas (based on Historical Site Assessment)



NOTE: With regard to Joachim Creek, the Historical Site Assessment (HSA) and radiological characterization results did not indicate the presence of residual radioactivity in excess of background levels, and thus Joachim Creek and the area immediately adjacent could be considered non-impacted. However, Tc-99 was detected in samples collected at locations just below the confluence of the Site Creek with the Virginia Tributary, and thus the Site Creek has been designated as an impacted area. Consistent with NUREG-1575 (MARSSIM), Section 4.4, regarding the use of impacted area buffer zones, a reasonably conservative and prudent approach has been taken by establishing an impacted (Class 3) buffer zone along a portion of the Joachim Creek. This buffer zone extends from the confluence of the Site Creek and the Joachim Creek eastward along the Joachim Creek to the location of the nearest radiological characterization sample collected on the Joachim Creek.

3.0 METHODOLOGY

The following sections summarize the basis of the proposed DCGLs for soil and building surfaces, the report objectives, and the methodology used by each contractor for the characterization surveys that were performed.

3.1 RELEASE CRITERIA

DCGL values were initially derived for building surfaces in 2005 and for Site soil in 2006. The modeling and resulting DCGL values for building surfaces and Site soil were reviewed and revised in Chapter 5 of the Hematite Site Decommissioning Plan. The DCGLs are considered proposed at the time of the writing of this report as they have not been approved by the NRC.

Table 3-1 presents the proposed site-specific DCGLs as developed for soil; Table 3-2 presents the proposed site-specific DCGLs for buildings and structural surfaces. These DCGLs are radionuclide specific and were determined based upon the site conceptual models. These proposed DCGLs have been used to evaluate all of the previous characterization data as presented in this report.

3.2 DATA QUALITY OBJECTIVES (DQOs)

3.2.1 REPORT OBJECTIVES

This report compiles and evaluates the data from a number of characterization efforts at the Hematite Site. The DQOs were specified prior to data collection for each of the characterization efforts and are discussed in subsequent sections.

The DQOs that were applicable to this report include:

- To combine data from the various characterization campaigns;
- To evaluate the methods used to obtain the characterization data to determine if DQOs were met, and to ensure the data are of sufficient quantity and quality to adequately characterize the site;
- To evaluate the data for each area and document the lateral and vertical extent of the contamination;
- To provide preliminary classification (for FSS) of the areas based on a comparison of the data to the proposed DCGLs.

The steps in the DQO process and their applicability to this report are:

3.2.1.1 Statement Of The Problem

Characterization data sets have been collected during several separate measurement and sampling campaigns. Several companies were contracted by the Hematite Site to complete different characterization campaigns, and WEC completed the final campaign. This data is summarized and evaluated in this characterization reports as a single document.

3.2.1.2 Identification of The Decision

Characterization data are collected to make decisions on remediation, to provide input into the decommissioning planning process, and to classify FSS areas.

3.2.1.3 Identification of Inputs to the Decisions

The data from each measurement and sampling campaign is reviewed. Inputs into whether the data are useful for making decisions on remediation and decommissioning planning, and therefore summarized in the Chapter 5 of this report include:

- Were data collected using an approved plan and procedures?

- Were instruments calibrated to industry standards?
- Was appropriate daily quality control (QC) performed on the instruments used in the field?
- Were samples collected in a manner that minimized cross-contamination, allowed the samples to be identified with a specific location, and controlled using chain of custody?
- Were the data analyzed with sufficiently low MDCs (minimum detectable concentrations) in areas that do not exhibit elevated activity, such that decisions on area classification can be made with sufficient confidence?
- Were a sufficient number of data points collected to characterize the areas at the appropriate confidence level?

3.2.1.4 Definition Of The Study Boundaries

This report is limited to the radiological characterization of ground and surface water, surface and sub-surface soil around the Site, soil and sediments in the Pond and along creeks, soil under buildings, soil in areas that are assumed to be non-impacted, and building surface contamination for structures that will remain after license termination. Buildings that have been identified as contaminated and will be removed and disposed prior to DP approval as previously authorized by approved License Conditions are not included in this report.

3.2.1.5 Development Of A Decision Rule

Decision rules include:

Soil sample results from the impacted area with activity concentrations in excess of the proposed soil DCGLs will be an indicator that soil contamination is present and will be evaluated to determine the lateral and vertical extent;

Surface activity measurements in excess of proposed building DCGLs will be an indicator that surface contamination is present and will need to be addressed in the remediation action plan to include delineation of decontamination boundaries; and,

Surface activity measurements below the MDC will be an indication that the area does not contain significant residual radioactivity. If the MDC is less than 25 percent of the building surface activity DCGL for Uranium, the data will be assumed to be collected with sufficient sensitivity to classify the area. Note that although the DCGL for Thorium is more limiting, the radionuclide mixture at the Hematite Site is assumed to be primarily Uranium; therefore the proposed building surface DCGL for Uranium is used.

3.2.1.6 Specification Of Limits On Decision Errors

The decision errors for soil and smear sample analysis and fixed point measurements are generally set so that the probability of making Type I and Type II decision errors is 0.05. The exception to setting decision errors at 0.05 is with scanning. Scanning is performed in two phases, where the surveyor is scanning at rate and is required to make a decision on where to slow down based on audible count rates; therefore, a higher false positive rate is initially accepted because the scanning involves the two phases.

3.2.1.7 Optimize The Design For Obtaining Data

Because the data has already been obtained this step does not apply to the report DQOs.

3.2.2 LVI

The primary purpose of Site activities implemented by LVI were to conduct operational surveys within Building 230 to determine which areas were suitable for release. The survey approach did not define formal DQO, and did not fully implement the recommendations of ISO 7503-1, "Evaluation of surface contamination - Part 1: Beta-emitters (maximum beta energy greater than 0,15 MeV) and alpha-emitters" (Reference 3-4), guidance for surface activity measurements. The presented data is considered scoping data and conclusions were reviewed in the context of augmenting the DQOs for the characterization of Building 230.

3.2.3 SAIC

Information on the DQOs used by SAIC was obtained in the Final Draft Quality Assurance Project Plan, Hematite Remedial Investigation Feasibility Study (Reference 3-5). The seven-step DQO statements from the SAIC QAPP are summarized here.

3.2.3.1 Statement Of The Problem

The problem is the presence of residual radioactive material and volatile organic compounds (VOCs) associated with past Site operations in and around the facility.

3.2.3.2 Identification Of The Decision

The decision statements for this investigation involve decisions on remedial actions and include:

Determine the lateral and vertical extent of soil contamination and whether surface and near-surface Uranium, Thorium, and Technetium concentrations in soil associated with Site operations exceed background concentrations. Require further investigations or a response action, or recommend that no further investigation of these media is necessary.

Determine the lateral and vertical extent of ground water contamination, the extent of surface water contamination and whether ground water and surface water Uranium, and Technetium concentrations associated with Site operations exceed background concentrations. Require further investigation or a response action, or recommend that no further investigation of these media is necessary.

Determine the lateral and vertical extent of ground water contamination above cleanup objectives, and whether an on-going source exists at the Site, and recommend further investigation or response actions.

Determine the extent of contamination within the sub-surface soil above cleanup objectives and recommend further investigation or response objectives.

3.2.3.3 Identification Of Inputs To The Decisions

Inputs to the decision on radioactivity concentrations, in excess of background, in surface and near-surface soil, sediments, and waste piles involve measuring Uranium, Thorium and Technetium concentrations in impacted and non-impacted areas. The field activities to do this include: gross gamma walk-over surveys, surface soil samples, collection of soil cores/discrete samples, Geiger-Mueller (GM) scans of soil cores, ground water and surface water samples, and contract laboratory analyses.

3.2.3.4 Definition Of The Study Boundaries

The population of interest is surface and shallow sub-surface soil that may have been contaminated with radionuclides during historical Site operations. The 228 acre facility property defines the horizontal boundary for the study. The vertical boundary (probable depths) had not been defined at the time of the RIFS QAPP.

3.2.3.5 Development Of A Decision Rule

The intent of this effort is to identify surface soil, sediments, below grade soil and water samples where radionuclide concentrations exceed background and where VOC concentrations in ground water and surface water exceed applicable standards. Data collected will be evaluated to determine the need for additional actions. During this characterization campaign, the NRC interim soil surface screening values for U-238 (14 pCi/g) were used to determine the need for further analysis. However the data collected during this characterization campaign is being evaluated in this report to the current proposed DCGLs as presented above.

3.2.3.6 Specification Of Limits On Decision Errors

The quality applicable to offsite laboratory data generated during this effort is categorized as definitive data. Definitive data are generated using rigorous analytical methods such as approved

EPA reference methods. Data are analyte-specific and both identification and quantification are confirmed.

3.2.3.7 Optimize The Design For Obtaining Data

To the extent practical, the design for collecting data has been optimized to achieve the stated DQOs. The scope of work and data collection process has been designed to provide near real-time data during implementation of field activities. This data will be used to modify and expand the scope of field activities, as needed, to ensure the DQOs are met.

The design in the QAPP included data quality assessment, criteria for collecting the various sample media, and precision, accuracy, completeness, representativeness, and comparability criteria.

3.2.3.8 SAIC Gamma Walkover Survey DQOs

SAIC performed a GWS in 2003. DQOs identified for the Gamma Survey Data Evaluation Report (Reference 3-6) were related to instrument quality control (QC) and are listed in the report as:

- The initial mean background count-rate for each 2 inch by 2 inch NaI will be within 10 percent of the mean background count-rate (at the same location) for all instruments used in the survey.
- All survey instruments will be calibrated at least annually using calibration sources traceable to the National Institute of Standards and Technology (NIST).
- All survey instruments will be performance checked at the beginning of each survey day to determine the usability of data collected. The established acceptance criteria for background and source response will be ±20 percent of the mean value determined during the initial instrument setup procedure.

3.2.4 CH2M HILL

The objectives of the sampling campaign by CH2M HILL were to generate analytical data from the limestone storage area that could be utilized to support decisions on appropriate disposal options of the limestone storage pile southeast of the process buildings. The characterization effort was designed to generate analytical data to assist in the characterization of the limestone pile. The objectives of the characterization activities presented in the Work Plan for the Characterization of Spent Limestone Piles at the Hematite Former Fuel Cycle Facility (Reference 3-7) are as follows:

- Complete field tasks in accordance with Westinghouse's Environmental Health and Safety and radiation protection program; and
- To utilize analytical data generated during characterization activities to support decisions on appropriate disposal options of the limestone storage pile southeast of the process buildings.
- The characterization activities of this campaign were limited to the limestone storage pile southeast of the process buildings at the Westinghouse Facility.

3.2.5 CABRERA SERVICES

In 2005, Cabrera Services conducted sub-surface investigation activities in two areas of the HDP to provide information on the characteristics of buried waste and surrounding soil. The two areas were the Red Room Roof burial area and the Burial Pits. The primary objectives of the field activities were to gather information regarding the:

- Extent of buried waste;
- Location of individual pits;
- Thickness of cover soil atop the burial pits;
- Waste thickness within individual burial pits;
- Characteristics (both radiological and chemical) of waste material;
- Characteristics (both radiological and chemical) of soil and water within and around the burial pits; and
- Potential for VOC air emissions from waste and soil.

The data generated from the field activities was used to supplement existing information regarding the Burial Pits and the Red Room Roof area. Only radiological activities and results of the reference report were included in this report.

It was identified that two revisions of the work plan existed at the time of the sampling event, Work Plan for Buried Waste Investigation at the Hematite Site (Revisions 0 and A). Revision A was used in the field and did not include all of the DQOs specified in Revision 0 (the official version of the work plan). A technical review of both work plans was performed to evaluate if the modifications to the DQOs altered the quality and/or outcome of the resultant datasets or decisions. This evaluation was completed in January 2008, along with a review of the "Buried Waste Evaluation Report" (Reference 3-19) prepared by Cabrera Services. Based on the

evaluation it was determined that the modifications did not alter the methods in which the samples were collected, investigated, analyzed, and reported and that the analytical results provided in the Cabrera Services Final Evaluation Report are satisfactory and acceptable to be used as outlined in the report.

3.2.6 ENERGY*SOLUTIONS*

In 2007, Energy*Solutions* obtained surface and sub-surface samples from outdoor soil areas within the impacted area of the Site and soil areas underneath buildings. The additional samples were obtained using the Supplemental Characterization Survey Plan (Reference 3-8). The sample locations and data were in conjunction with previous studies to identify surrogates and bound the areas requiring remediation.

The primary objectives were to gather information regarding the:

- Residual surface activity in Building 110, 230 and 231;
- Surface and sub-surface residual soil activity in locations designed to fill in data gaps for the previously established systematic triangular sampling grid; and
- Sub-surface residual soil activity beneath building slabs (UBC) to supplement and bound the prior dataset and provide characterization information from beneath slabs not previously sampled.

3.2.7 WESTINGHOUSE ELECTRIC COMPANY LLC

In 2008, WEC obtained additional surface and sub-surface samples. The primary objectives were to gather information regarding the:

- Surface and sub-surface residual soil activity in locations around the proposed Rail Spur; and,
- Surface and sub-surface residual soil activity in specific bias locations to assist in the engineering design for remediation planning.

3.2.7.1 DQOs For Rail Spur Survey

DQOs for the survey of the Rail Spur were defined in the survey plan. Conservative assumptions were made to support the use of the data collected during the survey for FSS data at a later date, if possible. The seven-step DQO statements are summarized here.

3.2.7.1.1 Problem Description

A Rail Spur is to be installed within an impacted area of the site and additional survey and sampling data is needed prior to its installation to support the release of the area for unrestricted use or prior to making a determination of the scope of potential subsurface contamination that will require remediation following the completion of rail shipping.

3.2.7.1.2 Decision Identification

The purpose of this survey is to collect data that will meet the requirements of the Chapter 14 that can be used to release the area for unrestricted use or to determine if future remediation is required. Once the DQOs have been defined, the final status survey design will be evaluated to verify that the DQOs for unrestricted use will be satisfied.

3.2.7.1.3 Inputs To The Decision

A GWS will be performed to identify potential areas of elevated activity that require investigation. The MDC for the GWS will be less than 150 pCi/g of total Uranium assuming 20 percent enrichment.

Biased soil samples will be collected at any areas of elevated activity identified during the GWS. Systematic soil samples will be collected at unbiased locations throughout the two predefined survey units. The number of systematic soil sampling locations within each survey unit is expected to exceed the minimum number to be required by the approved Final Status Survey Plan (FSSP).

All soil samples will be sent off-site for analysis. At a minimum each soil sample will be analyzed for Tc-99 and gamma-emitting radionuclides by gamma spectroscopy. The minimum detectable activities specified for the off-site sample analyses are expected to be a small fraction (< 10 percent) of the proposed site-specific DCGLs. Split samples will be collected from approximately every twentieth sample in order to monitor accuracy of the off-site laboratory.

3.2.7.1.4 Boundaries Of The Study

The boundaries of the proposed Rail Spur encompass an area of approximately 3200 square meters that runs adjacent to the existing rail. The area will be divided into two survey units of approximately equal size.

3.2.7.1.5 Decision Rule

The results obtained during this survey will be evaluated against the approved DCGLs using hypothesis testing in accordance with the statistical requirements of the approved FSSP.

3.2.7.1.5 Decision Rule

The results obtained during this survey will be evaluated against the approved DCGLs using hypothesis testing in accordance with the statistical requirements of the approved FSSP.

3.2.7.1.6 Limits On Decision Errors

The limits on the decision error will be as specified in the approved FSSP.

3.2.7.1.7 Design For Data Collection

The survey units are conservatively classified as Class 1 areas. Each survey unit will require a walkover gamma scan of 100 percent of the accessible areas, and, will be gridded using a triangular grid to identify 22 systematic soil sampling locations in each survey unit. At each soil sampling location a minimum of three soil samples will be collected at depths of 0 to 15 cm, 15 cm to 1.5 m, and 1.5 m to 4.5 m. It is expected that design of this survey will result in the collection of data that will satisfy the requirements of the approved FSSP.

3.2.7.2 DQOS – Sampling Plan For Engineering Final Design

Surveys of the Burial Pit overburden, the Former Leach Field, the Natural Gas Pipeline, and areas adjacent to the process buildings were performed at bias locations to assist in the engineering design for remediation planning. The DQOs are defined in the sampling plan and subsequent work package and are summarized below.

3.2.7.2.1 Problem Description

Elevated concentrations of radiological contaminants were identified in soil during characterization studies and additional sampling is desired to better define the associated locations and depth of soil requiring excavation.

3.2.7.2.2 Decision Identification

This data collection effort is desired to provide necessary information to guide planning for remediation (if required) as well as survey and release activities. The output from this study is also designed to provide input appropriate for the development of remediation and post remediation survey plans.

3.2.7.2.3 Inputs To The Decision

Obtain surface and sub-surface soil samples from the impacted soil area to supplement existing radionuclide data. All sample locations are considered biased and selected based upon professional judgment. All depressions (sunken areas) observed in the burial pit area were selected for evaluation.

Field instruments will be used primarily in a scan mode with MDCs established per MARSSIM. Laboratory lower limits of detection for radioactivity target 10 percent of the proposed DCGLs, but must be less than 50 percent of the proposed DCGL. QC samples will be selected from samples which provide a wide spectrum of positive results for comparisons.

3.2.7.2.4 Boundaries Of The Study

The sampling plan addresses a remedial investigation survey for radiological concerns of the burial pit area, the natural gas line, the leach field, and the land areas adjacent to the process buildings. Surface and sub-surface soil locations are as selected by professional judgment of the health physics staff.

3.2.7.2.5 Decision Rule

Activity or concentration measurements are indicators that contaminants are or are not present. As recommended in MARSSIM, the Sum-Of-The Fractions (SOF) of the concentrations measured relative to respective DCGLs will be used to evaluate the levels of residual concentrations. Concentrations need to be addressed in the remediation action plan to include the delineation of decontamination boundaries at and below the ground surface. Results of logs and sample analysis are indicative of field conditions to be used with professional judgment.

For the Burial Pits, additional rules are applied as follows:

- A sample core filled with soil will be indicative that a burial pit was not located;
- A sample core or drill cuttings (spoils) that contain waste materials will be indicative that a burial pit was located (whether or not contaminated);
- A sample core that has poor material recovery and has radioactive contamination, determined by core scan, may be indicative that a contaminated burial pit was located;
- A sample core that has poor material recovery will be an indicator that potentially a burial pit was located; and,
- A drilling refusal may be an indicator that material in a pit may have been located.

3.2.7.2.6 Limits On Decision Errors

Results of data collected may support final status surveys as biased samples but they may be reported separately from routine final status data. Additional remedial surveys may be required during and post excavation activities. MARSSIM probability errors for final status surveys are not applicable to this type of survey.

3.2.7.2.7 Design For Data Collection

No specific criterion is recommended in MARSSIM regarding biased sampling of volumetric and sub-surface soil. Professional judgment determined what locations would compliment previous characterization sampling efforts. A linear and biased relationship was used along the Gas Line. The sampling plan is optimized to establish radionuclide concentrations at the various depths which are of concern based on proposed DCGLs, i.e., core intervals for samples match the subsurface depth assumptions used during DCGL development.

3.3 SURVEY TECHNIQUE

3.3.1 LVI

Surveys of Building 230 were conducted in three phases:

1. A walkover was performed with a gamma survey instrument to ensure no significant sources of activity were missed during remediation activities;

2. Fixed-point measurements were performed at identified locations, recording alpha/beta direct readings, alpha/beta removable readings, and exposure readings at one centimeter; and,

3. An appropriate proportion of the surface area was scanned using a GM, gas flow proportional, or an alpha/beta scintillation detector.

Fixed-point measurements were taken with a sample density determined by the methodology described in MARSSIM. Sample locations of all fixed-point measurements were recorded on survey unit maps.

As noted in the DQO, Section 3.2.2, the survey approach did not define formal DQO, and did not fully implement the recommendations of ISO 7503-1. The presented data is considered scoping data and conclusions were reviewed in the context of augmenting the DQOs for the characterization of Building 230.

3.3.2 SAIC

As reported in Reference 3-6, SAIC performed a GWS of the Hematite Facility during the period of April 7 through 24, 2003. The gamma survey provided information for subsequent sampling campaigns. Radiological characterization survey samples obtained by SAIC included soil borings, surface soil and sediment, and water samples. The following sections detail field screening methods used.

3.3.2.1 Gamma Walkover Survey

The GWS survey was conducted in accordance with an approved plan (Reference 3-12). The purpose of the GWS was to identify the presence of low-level gamma radiation that could indicate the presence of Uranium (natural Uranium, LEU, and HEU) or Th-232 (and progeny) in surface soil. The survey was conducted to aid in RIFS sample strategies, and define area classification (impacted or non-impacted).

The survey was designed to cover 100 percent of the areas directly adjacent to and surrounding the buildings. Approximately 10 percent of the remaining areas were surveyed, focusing on

locations with higher potential for detection of elevated gamma radiation levels, such as in drainage ditches. The survey was conducted with 2 inch by 2 inch NaI detectors coupled to a rate meter and a global positioning system (GPS) data logger.

Figure 3-1 was taken from Reference 3-6 and shows colored-coded survey results which were used qualitatively in the classification of areas. Additional figures can be found in Reference 3-6. Areas of elevated count rate were investigated and explained in the report. Areas that could not be attributed to storage of materials or instrument geometry effects were investigated during subsequent sampling and analysis. Although the asphalt drive to the west of Building 230 was initially thought to have significantly elevated gamma radiation levels, upon further investigation it was discovered that containers of radioactive material had been stored inside Building 230 in close proximity to the western wall. During the SAIC investigation it could not be determined if the containers were the sole contributor to the increased gamma radiation levels outside of Building 230. However, follow-up radiation scans and soil sampling (SS-GL-023 and SS-GL-024) during the WEC campaign in 2008 indicated that the soil activity in this area is at or near background levels. Based on location (e.g., within the property fence line) and survey results, the area is an impacted Class 3.

The following areas were confirmed to have elevated readings:

1. Several isolated areas of elevated gamma radiation were detected around the Tile Barn;

2. A narrow strip just east of the two Evaporation Ponds adjacent to the fence line;

3. The Cistern Burn Pit area; and,

4. In areas of the railroad easement that cuts through the Site where a portion of the ballast used to construct the railroad is noted to contain Rhyolite.

Rhyolite is known to have naturally occurring radioactivity. Increased gamma radiation levels were confirmed to be associated with the Rhyolite, a volcanic rock with the mineralogical composition of granite.

Additional isolated areas were identified in the GWS for further investigation.

3.3.2.2 Surface Soil Sampling

As described in the SAIC report, surface soil samples were scanned with a GM detector and/or a NaI detector to identify elevated radioactivity concentrations. The results of these scans provided semi-quantitative data regarding the potential for elevated Uranium, Thorium, and/or Technetium in soil samples. Detector readings are influenced by any beta or gamma emitting radionuclides and are not specific to Uranium, Thorium or Technetium contamination from

licensed material and therefore are used in a semi-quantitative manner. Count rates significantly higher than the relative background in the local area were assumed to indicate the presence of radionuclide contaminants. The detectors were held as close as practical to the exposed soil. The audible output of the detector and deflection of the count rate needle was monitored during the scan. During the scan, any areas noted as exceeding the relative background of the local area were noted and recorded in field logbooks. Based on the magnitude of an increase in relative background, the location was selected for biased sampling.

3.3.2.3 Subsurface Soil Sampling

As described in the QAPP for the RIFS, a direct push drilling rig was utilized for soil borings. Soil cores were approximately 4 ft in length and were collected to depths of up to 25 ft below ground surface (bgs) or refusal. The soil core length was scanned using a 2 inch by 2 inch NaI (gamma) and a GM (beta/gamma) hand-held meter to identify the area within each sampling interval of the core having the highest instrument response. The core soil volume at the area of highest counts and the soil 6 to 8 inches on either side of the chosen area formed the sample to be analyzed. The area of highest scan response was counted for one minute and the results recorded in the logbook. If the soil in the sampling interval was determined to be homogeneous with regard to gamma and beta activity, then the approximate mid-point of the sampling interval was selected for sampling and a one-minute fixed point measurement performed. The results of radiological screening provided information regarding the potential for elevated radiological contaminants in soil cores.

3.3.2.4 Ground Water Sampling

Field parameters (i.e. specific conductivity, pH, temperature and turbidity) were measured after removal of the calculated purge volume required for low flow sampling and were recorded in logbooks. Purging was continued until stability was reached for a minimum of two parameter measurements taken in three-minute intervals. Parameters were considered stable when pH varied less than 0.1 pH units, temperature varied less than 0.5°C, conductivity varied less than 3 percent, and turbidity was less than 10 nephelometric units (NTUs), if possible. If 10 NTUs could not be achieved after three attempts to stabilize, then the well was developed until the water was clear to the unaided eye and turbidity varied less than 10 percent. Wells that were pumped dry were allowed to recover for a minimum of 24 hours prior to sample collection.

3.3.2.5 Sample Analysis

Sample analysis methods for radionuclide concentrations were obtained from Table Q-8 of the QAPP and include:

- EPA 900.0, Gross Alpha and Gross Beta Radioactivity in Drinking Water;

- ASTM 3972-90M, Standard Test Method for Isotopic Uranium in Water by Radiochemistry;
- EPA 901.1M, Gamma Spectroscopy;
- EPA / ASTM 3972-90M, Isotopic Plutonium; and,
- EPA 906.0 Modified, Liquid Scintillation (Tc-99).

3.3.3 CH2M HILL

Soil borings were advanced into the limestone piles using a hand-held flighted auger kit equipped with an electric rotary hammer drill and three lengths of three foot long by two-inch diameter flight augers. The unit was powered by a 3,500-watt portable generator. Field personnel collected limestone cuttings brought to ground surface on the auger flights in clean, disposable aluminum pans. The actual depth of each sample was not defined in the report. After the boring termination depth was reached, the cuttings were composited in the pan and containerized in clean laboratory supplied sample containers. The composite soil samples were analyzed for Total Uranium and Tc-99.

3.3.4 CABRERA SERVICES

Radiological characterization survey techniques used by Cabrera Services included soil borings using push drill technology around the perimeter of the Burial Pit area and hollow stem augers equipped with split spoon samplers in and around representative burial pits. Hollow stem augers were used within the Red Roof Room burial pit area as well. Soil cores were screened in the field using instruments to detect radiological contaminants. The field screening results were the basis for selection of the cores that were submitted to Severn Trent Laboratories for analysis. Prior to leaving a boring location, a surveying stake or survey pin flag labeled with the location was placed immediately adjacent to the sampling location. Boreholes were filled with grout.

Samples were submitted for analysis of the following parameters:

- Gamma spectroscopy (EPA 901.1 MOD);
- Isotopic Thorium and Uranium by alpha spectroscopy (EML A-01-R MOD);
- Percent moisture (MCAWW 160.3 MOD); and,
- Technetium-99 by liquid scintillation (EML TC-02-RC MOD).

3.3.5 ENERGY*SOLUTIONS*

3.3.5.1 Building Surfaces

The overall strategy was to collect systematic and biased surface activity concentration measurements to locate and identify any potential residual contamination, to document the current surface activity concentration levels to facilitate any required remediation, and to provide data for designing the FSS for these buildings. Based on historical operational information it was anticipated that residual surface activity concentrations would not exceed the proposed building DCGLs.

Surveys were performed in accordance with Reference 3-8,Westinghouse Work Package, WP-2007-007 (Reference 3-13), which adopted the ISO 7503-1 guidance for surface activity measurements. For the purposes of this survey, Buildings 110, 230 and 231 were classified as impacted Class 1, Class 2 or Class 3, in accordance with NUREG-1575 (MARSSIM), based upon historical information and prior survey data. The survey consisted of the following elements listed below.

- Surveys were performed of floors, walls, and ceilings at fixed locations provided in survey maps for total surface alpha and alpha-plus-beta activity concentrations;
- Removable activity concentrations (smear) surveys were performed at each fixed survey location;
- Scan surveys were performed of floors to identify elevated levels of total surface alpha and alpha-plus-beta activity and any locations that exceeded 1,000 disintegrations per minute per 100 square centimeters (dpm/100 cm2) total alpha or alpha-plus-beta were marked with a felt tip pen and the elevated activity concentration level was recorded;
- Scan surveys (10 percent) were performed of overhead horizontal surfaces for total surface alpha and alpha-plus-beta activity concentrations;
- Scan surveys were performed of vent ducts at accessible locations for total surface alpha and alpha-plus-beta activity concentrations;
- Surveys were performed on the roofs of the buildings for total surface alpha and alpha-plus-beta activity concentrations at fixed locations provided in survey instructions with smears from each fixed location;
- Surveys were performed of building exterior walls for total surface alpha and alpha-plus-beta activity concentrations at fixed locations provided in survey instructions with smears from each fixed location;

- Exposure rate surveys were performed of floors and roofs at fixed locations provided in survey instructions along with 10 percent exposure rate scan surveys;
- Exposure rate surveys were performed of drain openings;
- Samples were obtained from each drain using primarily a spoon with extension handle and the drain and sample locations were marked on maps;
- Surveys were performed of drain openings for total removable surface alpha and alpha-plus-beta activity concentrations with smears obtained from each drain (Building 231 had no drains);
- Exposure rate surveys for elevated radiation levels were performed in Building 230 focusing on joints, cracks and pits and locations of elevated radiation levels were identified and samples of materials from these areas were collected, with some samples sent off-site for analysis;
- Alpha-plus-beta scan surveys of joints and cracks were performed in Building 230 for elevated radiation levels and locations of elevated radiation levels were identified and samples of materials from these areas were collected, with some samples sent off-site for analysis; and,
- Surveys of overhead horizontal surfaces were performed for total direct and removable alpha and alpha-plus-beta activity concentrations.

3.3.5.2 Soil

The main purpose of sampling the outdoor soil areas was to assess radiological activity concentration of the soil where it had not been previously characterized, delineate elevated activity concentration boundaries, and determine the thickness of elevated activity concentration soil layers. Soil sampling of outdoor areas was performed in accordance with Reference 3-8 and the Westinghouse Work Package, WP-2007-005 (Reference 3-14). The survey consisted of the following elements listed below.

- Sample locations were marked with wood stakes;
- Geoprobe samples were obtained and the outdoor survey locations were logged with a GPS system;
- Three soil samples were obtained from each sample location, a surface sample (0 in to 6 in depth), a near surface sample (6 in to 4.5 ft) and a deep sample (4.5 ft to ground water, refusal or 20-ft maximum) and the highest gamma reading from each depth in 6-inch intervals was selected for analyses;

- In certain sample locations, as indicated by the sampling nomenclature for Tc-99 evaluation, the 6 in to 4.5 ft depth sample was divided equally into two samples and composited over that volume to better characterize the Tc-99 activity concentration at depth;
- Sampling tools were wiped down and surveyed between sample locations to verify that they were not contaminated;
- Sample containers were labeled, surveyed to verify that they were not contaminated externally, and the samples were transferred to Test America Laboratories St. Louis for analysis;
- Chain of Custody Records were utilized to maintain control of samples and specify analytical requirements; and,
- The surface soil samples and the near surface composite samples each had a gamma spectroscopy analysis, an alpha spectroscopy analysis and a Tc-99 analysis. The deep composite samples each had a gamma spectroscopy analysis. Ten percent were analyzed for isotopic Uranium concentration by chemical separation and alpha spectroscopy analysis, and for Tc-99 concentration by chemical separation and liquid scintillation counting (LSC).

3.3.6 WESTINGHOUSE ELECTRIC COMPANY LLC

3.3.6.1 Rail Spur Survey

The survey of the Rail Spur included a GWS and soil sampling (biased and systematic) and analysis. The GWS was performed using a NaI detector held approximately 6 in above the surface being surveyed. The meter was moved in a serpentine pattern at a speed of approximately 1 meter per second. The survey covered 100 percent of the accessible surface areas along the Rail Spur. Biased soil sampling locations were located in any area with readings exceeding twice background. Biased soil samples were collected in a manner similar to the systematic soil samples.

Systematic soil samples were taken at 22 locations for each of the two survey units in a grid pattern. At each soil sample location, a composite soil sample was obtained of the following depths using a split spoon sampling rig or equivalent: 0 to 15 cm, 15 cm to 1.5 m, 1.5 m to a maximum of 4.5 m. If ground water was encountered, or the drill encountered refusal the deepest sample was not obtained to a maximum depth of 4.5 m.

Each split spoon was opened and the contents scanned with an exposure rate meter and a beta sensitive meter. Approximately 2 liters of soil were collected for each sample at the designated locations.

3.3.6.2 Sampling Survey For Areas Associated With The Engineering Final Design Plan

The survey techniques for the biased samples in the Burial Pits, along the Natural Gas Pipeline, the Leach Field and adjacent to the process buildings was similar to that used for the systematic samples along the Rail Spur. Samples were collected at each coring location for depths that match the DCGL depths, typically: surface (0 – 0.15 m), shallow volumetric (0.15 m – 1.5 m), and deep volumetric (1.5 m to ground water or as specified).

3.3.6.3 Sample Analysis

Samples were labeled in the field, a chain of custody was completed, and the samples shipped to an analytical lab for analysis by gamma spectroscopy and by liquid scintillation for Tc-99. Approximately 10 percent of the samples were also analyzed by alpha spectroscopy for isotopic Uranium. The analysis methods were:

- Gamma spectroscopy (EPA 901.1 MOD, gamma spectroscopy);
- Isotopic Uranium (ASTM D3972-90M, alpha spectroscopy); and,
- Technetium-99 (ASTM C1387-98, liquid scintillation counting).

3.4 QUALITY ASSURANCE (QA)

The quality assurance activities performed by each contractor in support of characterization activities are discussed in the following sections.

3.4.1 LVI

Instrumentation used in the LVI study was calibrated annually and daily operation and background checks were performed in accordance with project procedures. Survey forms within the LVI report show the following were recorded: detector calibration due date, meter calibration due date, background count rate and instrument correction factor (which appeared to be the efficiency and a correction for detector area combined into one factor).

3.4.2 SAIC

3.4.2.1 QA Samples

Field duplicates were collected at a rate of one per 20 environmental samples, and field rinsate blanks (RB) were collected once per day and submitted to the analytical laboratory to provide a means to assess the quality of the data resulting from the field sampling program. The laboratory performed matrix spikes (MS) and matrix spike duplicates (MSD) on each batch of 20 samples.

Analytical data packages compiled by the off-site analytical laboratory were reviewed to ensure data package completeness and 10 percent of the data were validated.

3.4.2.2 Chain Of Custody

To ensure defensibility of analytical results, sample chain of custody was maintained at all times, from the time the sample was collected to the time the analytical results were received by the analytical laboratory.

3.4.2.3 Sample Designation

Surface and sub-surface soil samples were labeled according to the following scheme: XX-01-03-SL, where the first field (XX) identifies the sample by area, the second field (01) corresponds to the sample/borehole location number in that area (e.g., if there are 10 soil sampling/boring locations in that area then this field will range from 1 – 10), the third field (03) corresponds to the sampling depth bgs (e.g., 3 ft bgs), and the fourth field (SL) identifies the sample as soil. Sample label designations are listed below.

- Surface Water Features SW-##-##-SL
- Burial Pits BP-##-##-SL

- Evaporation Ponds EP-##-##-SL
- Leach Field LF-##-##-SL
- Soil Beneath Buildings BD-##-##-SL
- Limestone Storage LS-##-##-SL
- Outdoor And Shallow Surface Areas OA-##-##-SL
- Former Gas Station GS-##-##-SL
- Natural Gas Pipeline PL-##-##-SL
- Deul's Mountain DM-##-##-SL
- Cistern/Burn Pit Area CB-##-##-SL
- Exploration of Nature And Extent NB-##-##-SL
- Off-site Soil Samples BG-##-##-SL

Surface water samples were labeled as SW-###, and surface water sediment samples were labeled as SW-###-SS. It is important to note that surface water and surface water sediment samples were taken at different locations, i.e., SW-002 and SW-002-SS are not in the same location.

Ground water samples were labeled according to the following scheme: XX-001-##-##-XX-GW, where the first field (XX) identifies the sample by area (e.g., OB for permanent overburden well, BR for bedrock well, and NB for temporary overburden well), the second field (001) corresponds to the well location number in that area, the third field (03) corresponds to the upper depth of the screened interval (e.g., 40 ft bgs), the fourth field (50) corresponds to the lower depth of the screened interval (e.g., 50 ft bgs), the fifth field (OL) identified where the sample was analyzed (i.e., OL for off-site laboratory) and the sixth field (GW) identifies the sample as ground water. Examples of sample label designations are listed below.

- Permanent Overburden Wells OB-##-##-##-OL-GW
- Permanent Bedrock Wells BR-##-##-##-OL-GW
- Temporary Wells NB-##-##-##-OL-GW

3.4.2.4 Equipment Calibration

All applicable sampling, field-screening, and analytical equipment used to support sampling activities were calibrated to operate within the specifications provided by the manufacturer. Calibration was performed as stipulated by the Hematite NRC radioactive material license. Radiological screening instruments source/response checks were performed daily when in use.

3.4.2.5 Field Duplicates (FD)

Duplicate field samples were obtained at a rate of one per 20 environmental samples or one per batch of samples (which ever was greater). A total of 28 FDs were collected from a total of 551 samples collected during the SAIC sampling campaign.

3.4.2.6 Rinsate Blanks (RB)

RBs were prepared at a frequency of one per day of sampling and were analyzed for the analytes being sampled by the sampling equipment. RBs were only applicable if sampling equipment was reused.

3.4.2.7 Matrix Spike (MS)

MS analyses were conducted at a rate of one per matrix per batch of 20 samples for Tc-99 analysis by LSC; and isotopic Uranium, isotopic Thorium, or isotopic Plutonium analyses by alpha spectroscopy. Matrix spikes are performed as an indication of possible chemical recovery problems in an analytical method. In radiochemical analyses the addition of a radioactive tracer or a stable carrier is frequently used as a means to evaluate chemical recovery.

3.4.2.8 Matrix Spike Duplicate (MSD)

MSD analyses were conducted at a rate of one per matrix per batch of 20 samples when MS analyses are conducted as described above.

3.4.2.9 QA/QC Sample Designation

QA/QC samples were labeled as described above for the appropriate media but have a suffix added to the end of the sample ID to identify the type of QA/QC sample as follows:

- FD – field duplicate;
- MS – matrix spike;
- MSD – matrix spike duplicate; and,
- RB – rinsate blank.

3.4.3 CH2M HILL

3.4.3.1 Field And Laboratory QC Samples

One field duplicate sample was collected for every 20 samples per parameter. One equipment blank was collected for each parameter. The survey design presented in Reference 3-7 details the additional QC requirements relevant to analysis of environmental samples that were followed during analytical activities for fixed-base, laboratories producing definitive data.

3.4.3.2 Sample Identification

During the characterization of the limestone storage pile, a consistent sample identification system was employed to ensure uniqueness and clarity in sample names. Each sample collected was assigned an identification number that includes the following information:

- Sample type;
- Sample location number; and,
- Matrix type.

The complete sample name consisted of the three bulleted components listed above, using the following format:

(sample type)(sample number)(matrix type)

A two-character abbreviation was used to designate the type of sample being collected. The abbreviation used for this campaign was only specific to borings from the limestone storage pile and were given the two character abbreviation of "LB".

Sample locations were assigned a two-digit number. Sample numbering began with "01" and was assigned sequentially in the order of sample collection.

For limestone/rock, the abbreviation of "R" was used to designate the type of matrix.

For example, "LB02R" represents a composite limestone storage pile sample collected from boring location two with a matrix of limestone/rock.

Identification numbers were also assigned to QA/QC samples during the environmental restoration activities. Collected samples were named in a similar manner identical to ordinary environmental samples, except the symbol "C" and the number of the collocated sample were added to the end of the sample name. An example is provided below.

LB02RC1: Collocated sample number 1 associated with node at LB02

Duplicate samples were named in a similar manner identically to ordinary environmental samples, except the symbol "D" was added to the end of the sample name to indicate a duplicate sample. An example is provided below.

LB02RD Duplicate collected from location LB-02

The equipment blank was labeled by date as shown in the example below:

EB-093005: equipment blank collected on September 30, 2005

3.4.4 CABRERA SERVICES

3.4.4.1 Field QC Samples

QC samples were collected at a rate of one duplicate per 10 target samples (10 percent) for all radiological analyses. Equipment blank [these also appear to have been designated as RBs in the report tables] and smear samples were collected from decontaminated sampling equipment at a rate of one per 20 target samples (5 percent) to evaluate the potential for cross-contamination.

3.4.4.2 Laboratory QC Samples

Laboratory QC samples included MS and MSD samples at a rate of one per batch of 20 samples analyzed.

3.4.4.3 Sample Identification

Sample nomenclature for the Cabrera Services samples used the form WW-XX-YY-ZZ, where WW describes the medium (SO=soil, WS=waste, WA=water [trip blank], GW=ground water). XX described the general location of the sample (e.g., XX: RR=red room roof area, BP=burial pit area, PB=perimeter boring). YY consisted of an integer (1-9) followed by an alphanumeric character (A-H) designating a particular soil boring within a burial pit. The last two characters (ZZ) consist of a two digit integer representing the depth of the sample in feet below ground surface. For example;

- Burial Pit Soils Sample taken to a core depth of 8 ft SO-BP5C-08

3.4.5 ENERGY*SOLUTIONS*

3.4.5.1 Laboratory QC Samples

Laboratory QC samples for sample analysis included MS, MSD, and duplicate analysis at a rate of one per batch of 20 samples analyzed.

3.4.5.2 Chain Of Custody

Chain of custody records were utilized to maintain control of samples and specify analytical requirements.

3.4.5.3 Sample Identification

Sample nomenclature for this investigation continued the format used previously at this Site. Soil samples were labeled according to the following scheme: XX-01-03-SL, where the first field (XX) identifies the sample by area, the second field (01) corresponds to the sample/borehole location number in that area (e.g., if there are 10 soil sampling/boring locations in that area then this field will range from 1 to 10), the third field (03) corresponds to the sampling depth bgs (e.g., 3 ft bgs), and the fourth field (SL) identifies the sample as soil. Sample label designations are listed below.

- Soil Beneath Buildings BD-###-#-SL
- Exploration Of Nature And Extent NB-###-#-SL

Samples from inside the buildings were labeled according to the following scheme: X01-YYY-3-ZZ, where the first field (X01) identifies the sample type and sample location number (e.g., if there are eight drain sample locations this field will range from D01 to D08), the second field (YYY) corresponds to the building number, the third field (3) corresponds to the survey area classification (1 to 3 as per MARSSIM), and the fourth field (ZZ) identifies the sample material (SS for sediment and DUST for dust or surface scraping). Sample label designations are listed below.

- Drain Samples D##-YYY-#-SS
- Building Dust Samples BD##-YYY-#-DUST

3.4.5.4 Equipment Calibration

Survey instruments, counting devices and other equipment used for the detection and measurement of radioactivity were cared for and maintained according to Energy*Solutions* qualiy assurance program. These Energy*Solutions* procedures complied with the requirements of the Hematite Quality Assurance Program Plan (Reference 3-17). Sections of the Energy*Solutions* report that address QA for equipment calibration include Sections 7.12.2 "Calibration Procedures," 7.12.3 "Records," 7.12.4 "Adequacy of Measurement Reference Standard," 7.12.5 "Environmental Controls," 7.12.6 "Intervals of Calibration," 7.12.7 "Traceability," and 7.12.8 "Labeling."

Energy*Solutions* calibrated the instruments and associated detectors used at Hematite on a semi-annual basis using NIST traceable sources and calibration equipment.

The instrument calibration included:

- High voltage calibration;
- Discriminator/threshold calibration;
- Window calibration;
- Alarm operation verification; and,
- Scaler calibration verification.

The detector calibration included:

- Operating voltage determination;
- Calibration constant determination; and,
- Dead time correction determination.

Calibration labels showing the instrument identification number, calibration date, and calibration due date were attached to all portable field instruments. The user was required to check the instrument calibration label before each use. Calibration records and daily source check records are included in Appendix B of the Hematite Supplemental Characterization Report (Reference 3-18).

Daily instrument QC checks were performed before and after each day's survey activities.

3.4.6 WESTINGHOUSE ELECTRIC COMPANY LLC

3.4.6.1 QC Samples

A split sample was collected from approximately one in every 20 samples. Both samples were analyzed using the same methods.

3.4.6.2 Chain Of Custody

Chain of custody forms were used to track samples collected and sent off-site for analysis.

3.4.6.3 Sample Identification

Samples along the Rail Spur were identified using the nomenclature:

FS-AC-SPN-TYP-SSL-MED-Z-DE

Where:

FS	designation for FSS
AC	area of concern (19)
SPN	designation for survey package number (1 or 2)
TYP	designation for basis biased, systematic, or QC (BIA, SYS, QC)
SSL	sample location number
MED	media (SO, soil; SL, sludge; GW, ground water)
Z	zone from which a composite sample was collected (1, 2 or 3)
DE	median depth below ground surface for biased samples only.

Samples from other areas were identified using the following nomenclature:

SS-AA-###-BB

Where:

SS	Soil Sample
AA	area designation (BP - Burial Pits; GA - Gas Line area; LF - Leach Field; LA - areas adjacent to process buildings; HS - hot spot)
###	sequential sample number
BB	depth (SF - surface; SV - shallow volumetric; DV - deep volumetric).

Biased samples were identified using:

SS-AA-###-BB-EL-#

Where:

EL	elevated level
#	sample depth in feet

3.5 REFERENCES FOR SECTION 3.0

3-1 Deleted

3-2 Deleted

3-3 Deleted

3-4 International Organization for Standardization (ISO), ISO 7503-1, "Evaluation of surface contamination -- Part 1: Beta-emitters (maximum beta energy greater than 0,15 MeV) and alpha-emitters," 1998.

3-5 Leggette, Brashears & Graham, Inc, "Final Draft Quality Assurance Project Plan, Hematite Remedial Investigation Feasibility Study," Revision 1.1, Appendix A to the RIFS Work PlanMay, 2003.

3-6 SAIC Report, "Gamma Survey Data Evaluation Report," Revision 1, May 2004.

3-7 CH2M HILL, "Work Plan for the Characterization of Spent Limestone Piles at the Hematite Former Fuel Cycle Facility," September 2005.

3-8 Energy*Solutions*, LLC, CS-HP-PN-006, "Supplemental Characterization Survey Plan for Westinghouse Electric Company-Hematite Facility," Revision 0, November 2007.

3-9 Deleted

3-10 Deleted

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3-12 Westinghouse Electric Company LLC, "Gamma Survey Plan for the Hematite Site," April 2003.

3-13 Westinghouse Electric Company LLC, Work Package WP-2007-007, "Supplemental Characterization Buildings to Remain," Revision 0, November 7, 2007.

3-14 Westinghouse Electric Company LLC, Work Package WP-2007-005, "Supplemental Soil Characterization Sampling Impacted Outdoor Areas," Revision 1, November 19, 2007.

3-15 Deleted

3-16 Deleted

3-17 Westinghouse Electric Company Document No. HDP-PO-QA-001, "Quality Assurance Program".

3-18 Energy*Solutions*, LLC, "Hematite Supplemental Characterization Report," Revision 0, February 2008.

3-19 Cabrera Services, Inc., "Buried Waste Evaluation Report, Prepared for Westinghouse Electric Company Hematite Site, Hematite Missouri, Final," March 2007.

Table 3-1

Proposed Site-Specific Soil DCGLs

Radionuclide	$DCGL_w$ (pCi/g) [a] By Conceptual Site Model				
	Surface Zone	Root Zone	Deep Zone	Uniform Zone	Excavation Scenario
U-234	545.5	255	978,500	206.9	935.6
U-235 + D [b]	109.8	90.6	846,300	77.8	223.2
U-238 + D [b]	319.3	198.6	336,100	181	591
Tc-99	161.9	31.4	101,700	26.9	79.2
Th-232 + C [c]	5.1	2.2	10,204	2.2	5.6
Ra-226 + C [c,d]	6.0	2.2	12,030	2.0	5.2
Np-237 + D [b]	17.3	5.0	0.3	0.3	N/A
Pu-239/240	239.5	84.8	353,500	83.1	246.6
Am-241	220.7	118.5	3,309	79.3	229.2

[a] The reported soil limits are the activities for the parent radionuclide as specified.
[b] "+ D" = plus short-lived decay products.
[c] "+ C" = plus the entire decay chain (progeny) in secular equilibrium.
[d] This DCGL only applies to those areas of the site identified as a Ra-226 Impacted Area.

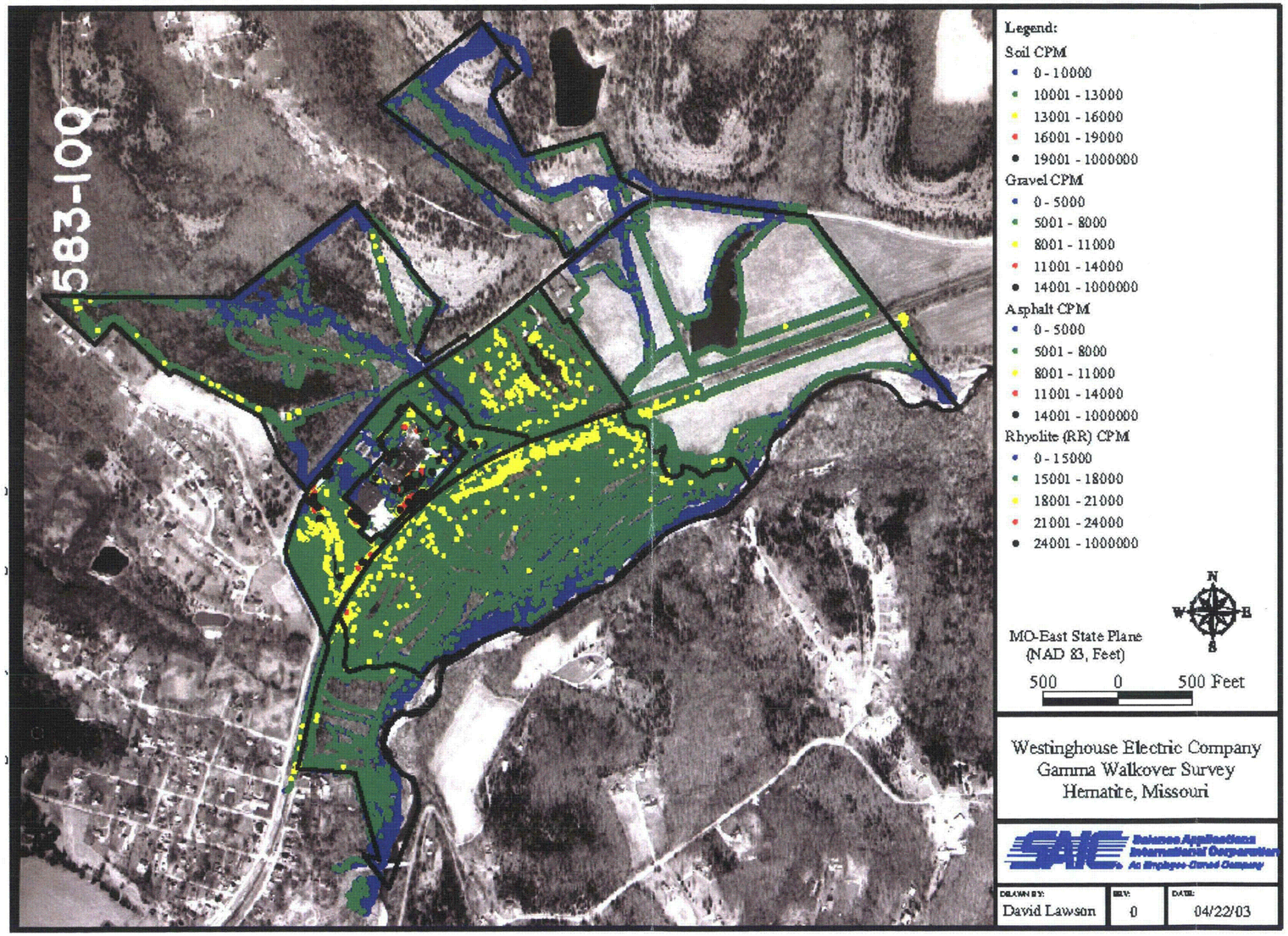
Proposed Site-Specific Building And Structural Surface DCGLs

Radionuclide	Occupancy $DCGL_w$ (dpm/100 cm^2)[a] By Conceptual Site Model	
	Small Office	Large Warehouse
U-234	20,000	49,000
U-235 + D[b]	19,000	37,000
U-238 + D[b]	21,000	49,000
Tc-99	13,000,000	13,000,000
Th-232 + C[c]	1,200	2,200
Np-237 + D[b]	2,700	4,000
Pu-239/240	3,500	5,300
Am-241	3,400	5,100

[a] The reported building DCGLs are in gross radioactivity limits rounded down (truncated) to two significant figures.
[b] "+ D" = plus short-lived decay products.
[c] "+ C" = plus the entire decay chain (progeny) in secular equilibrium.

Figure 3-1

Gamma Walkover Survey



Note: Soil Background ranges from 10,001 to 13,000 cpm.

4.0 MEASUREMENT TYPES, SAMPLES AND RESULTS

This section contains information on measurements, samples and results for each of the areas from which ground water, surface water, surface soil, sub-surface soil, and sediment samples were collected. Off-site background soil samples were also collected. Surface activity measurement information for buildings is included as well.

The results are organized by surface features, buildings, and areas that are similar enough or in close enough proximity to be grouped together. Areas were subdivided and a preliminary FSS classification was made based on the characterization data using the logic described below.

Thorium-232 is present naturally in background soil, is a potential trace radionuclide of concern, and has a low DCGL compared to the background soil concentration. Therefore, an analysis was performed and documented in Appendix A of this report to determine which areas are distinguishable from background and to determine if individual sample results exceeded an upper 95 percent confidence interval of background for Th-232, described in ProUCL as a background threshold value (BTV). This analysis is used for the characterization data in the following way:

1. If the Th-232 in an area is distinguishable from background (as determined by either the Wilcoxon Mann Whitney test OR the Quantile test), Th-232 is assumed to be present as residual licensed material in the entire area. Each Th-232 value in the area data set is used in the SOF calculation (concentration/DCGL), with a background value of 1.0 pCi/g Th-232 subtracted from each measurement.

2. If the Th-232 in an area is indistinguishable from background, each sample result is further evaluated using the BTV of 1.7 pCi/g criterion to flag outliers in the area data set. If the Th-232 result is less than 1.7 pCi/g, then Th-232 is not included in the SOF calculation (concentration/DCGL). Any sample greater than 1.7 pCi/g will be evaluated using the SOF calculation (concentration/DCGL), with a background value of 1.0 pCi/g Th-232 subtracted from each measurement.

Areas identified in the Historical Site Assessment (Reference 4-1) as non-impacted areas based on historical site activities (e.g., process knowledge) were evaluated to determine if the characterization samples collected in the non-impacted areas identified detectable Tc-99 and/or residual radioactivity concentrations of licensed radioactivity statistically distinguishable from background. These areas were reviewed to determine if the area classification should be changed from "non-impacted" to "impacted."

The radionuclides identified in each sample, including the samples at depth, were compared to their respective DCGL values. The SOF for all analyzed radionuclides was calculated. Each sample was classified as Class 1 if the SOF result was greater than 1.0; Class 2 if the SOF was between 0.25 and 1.0; and Class 3 if the SOF was less than 0.25.

Where isotopic Uranium analysis was available, the isotopic Uranium was used in the SOF determination. If isotopic Uranium was not available, the gamma spectroscopy analyses for U-235 and U-238 were used and U-234 activity concentration was estimated based on the U-235 enrichment and U-234:U-235 activity relationship derived in the WEC document Derivation of Surrogates and Scaling Factors for Hard-to-Detect Radionuclides, Appendix D (Reference 4-2).

The area classification was based on the most conservative sample result for the area.

The maximum depth of any sample showing licensed material was reviewed and noted. Analysis results below the maximum depth of contamination were reviewed to determine if samples below that depth were available and verified to be non-impacted.

4.1 GROUND WATER

4.1.1 SUMMARY OF GROUND WATER STUDIES

Groundwater investigation studies have been performed by SAIC and Cabrera Services. In addition, license wells are sampled routinely. Cabrera Services' samples (GW-BP-2, GW-BP-2D, GW-BP-5A, GW-BP-7A, and GW-BP-9A) were collected at very shallow depths (between 5 ft and 11.5 ft) in the center of four burial locations (Reference 4-3). As discussed in the "Remedial Investigation Report for the Westinghouse Hematite Site" (Reference 4-17), SAIC collected ground water from five temporary monitoring wells installed during initial field activities and analyzed the samples via an onsite mobile laboratory to determine the horizontal extent of ground water impacts so that sufficient permanent wells would be installed prior to demobilization of staff and equipment. A Site-wide ground water monitoring event was conducted in December 2004 and January 2005; however, a separate report was not developed as this information was added to the Remedial Investigation Report. The wells that were sampled during this phase of work were selected due to their location down gradient of Site source areas and because it was estimated at the time that these locations were at the down gradient edge of the radiological contaminant plume in overburden ground water. One ground water sample was obtained in the vicinity of the Site Pond (SW-07).

Interim ground water monitoring has been conducted since the time of the Remedial Investigation Report and wells are sampled periodically. The Environmental Monitoring Plan (Reference 4-4) also lists ground water monitoring wells that are periodically sampled for the purpose of trending contaminant levels. Ground water sampling locations are shown on Figure 4-1.

Ground water samples during the initial field activities were collected from temporary monitoring wells that were not developed, but were purged using low flow techniques prior to sampling. Ground water samples of temporary monitoring wells were obtained using a peristaltic pump. All samples collected during this phase of sampling were unfiltered.

Ground water samples obtained from the Site-wide ground water monitoring event were analyzed for the following radiological parameters: gross alpha/beta, isotopic Uranium and Thorium using alpha spectroscopy, and Tc-99 using LSC.

In addition, 30 ground water samples were analyzed for TRU radionuclides (Am-241, Np-237, and isotopic Plutonium) during the site-wide ground water monitoring event. Twenty of the locations were generated randomly and the remaining ten were selected to ensure that known source areas were adequately represented in the data set.

The five Cabrera Services samples were analyzed for isotopic Thorium, isotopic Uranium, Tc-99, and two samples were also analyzed for TRU radionuclides (Am-241, Np-237 and isotopic Plutonium).

Ground water monitoring wells indicative of background are based on their location relative to the central tract of the Site (Reference 4-5). Ground water flow in the overburden materials is to the east/southeast. Based on these conditions, overburden monitoring well NB-57A is located up gradient of the facility. In the Jefferson City and Roubidoux formations, the flow is to the northeast/southeast and northeast, respectively. The BR-12 series monitoring wells were installed during the RI to assess up gradient ground water conditions. RI ground water samples from these wells are labeled GW-BR12JC-12804 (Jefferson City) and GW-BR12RB-120804 (Roubidoux). The Uranium enrichment for this data appears to be slightly enriched; however, due to the low activity concentrations of U-235 as reported by alpha spectroscopy, the calculated enrichment in within the margin of error and considered to be indistinguishable from background.

4.1.2 SUMMARY OF RESULTS

A comprehensive compilation of groundwater data and statistics, including quality control data and results that were less than the MDC, is provided in Table 4-1. The GPS coordinates of the wells are provided in Table 4-2. To facilitate a discussion of the groundwater monitoring results, Table 4-3 summarizes a reduced data set that only includes field results that exceeded the MDC with all quality control data removed.

4.1.3 DISCUSSION OF RESULTS

The data in Tables 4-1 and 4-3 were categorized according to the location (depth) of the well screen, and the associated hydrostratigraphic unit(s) (HSU) providing the sample. A detailed review of the hydrogeology of the Hematite Site, including the overburden and bedrock HSUs, and an analysis of the well screen depths and monitoring results is provided in SAIC Report, "Supplemental Analysis of Hydrogeologic Conditions in Overburden at Westinghouse Hematite Facility" (Reference 4-17) and SAIC Report, "Radionuclide Activity in Bedrock Groundwater at Westinghouse Hematite Facility" (Reference 4-18). A summary is provided below.

The Hematite Facility is located on alluvial deposits that form a terrace and floodplain associated with erosional and depositional cycles of the ancestral Joachim Creek. Alluvial depositional environments are heterogeneous with abrupt variations in lithology representing intermingled episodes of erosion and deposition as the stream channel migrates laterally within its flood plain. The overall thickness of alluvium/terrace deposits underlying the Joachim Creek valley near the Hematite Facility varies from approximately 17 to 45 ft and is comprised primarily of fine-grained silt and clay that overlies sand and gravel near the bedrock surface. The sand and gravel unit represents multiple episodes of deposition associated with terrace formation and subsequent creek meander. The resulting unit is variably distributed with thickness increasing toward Joachim Creek. There are five HSUs underlying the Hematite facility as listed below;

- Near surface silty clay,

- Discontinuous "fat" clay layer,
- Deeper silty clay,
- Clayey, silty sand and gravel (sand/gravel) aquifer, and
- Bedrock aquifer.

The first three HSUs including the near surface silty clay, the discontinuous "fat" clay layer with high plasticity, and the deeper silty clay comprise a surficial aquitard, predominantly clay, The surficial aquitard is hereafter referred to as Overburden Clay. Sand and silt are present in the Overburden Clay as discontinuous thin layers, lenses, inclusions, or seams that are capable of transmitting water laterally over limited distances within the Overburden Clay.

Precipitation and recharge interaction with the contaminated soil and buried waste materials results in the generation of leachate that migrates downward under prevailing seepage conditions in the Overburden Clay and subsequently flows laterally within the fourth HSU, i.e., the Sand/Gravel aquifer, which is also located in the overburden.

North of the Missouri Pacific railroad line (Hematite Facility) the Overburden Clay ranges from 6.1 m to 11.6 m thick with an average thickness of 9.1 m. Total porosity in the clay ranged from 0.41 feet to 0.48 feet. Saturation in the Overburden Clay is variable and dependent on precipitation events and recharge. The calculated vertical hydraulic gradient through the clay is downward-directed with a range from 0.035 feet/foot to 1.049 feet/foot and an average of 0.574 feet/foot. The calculated hydraulic gradients are consistent with the clay aquitard lithology.

The Sand/Gravel aquifer thickens from less than 1.5 m in the terrace deposits at the northern facility boundary to approximately 6.1 m in the vicinity of Joachim Creek. The average sand thickness in the facility area is 2 m. Field (slug) testing in the Sand/Gravel aquifer indicated hydraulic conductivity ranging from 3.38×10^{-4} cm/sec to 6.91×10^{-2} cm/sec with a geometric mean of 7.987×10^{-3} cm/sec.

The development of a sustainable water supply from the Overburden Clay for the purposes of domestic supply or irrigation is considered impractical and infeasible based on the mean hydraulic conductivity of the clay (2.85×10^{-5} cm/sec), the low mean matrix permeability (3.48×10^{-8} cm/sec) of the clay, and the apparent lack of interconnected flow pathways in the clay. In addition, a survey of 721 private drinking wells, 38 public wells, and 4 industrial wells within a 5-mile radius of the Hematite facility provided no documentation to indicate that any of the wells are completed in overburden, or more specifically a clay resource. Domestic and industrial water wells in the region produce water predominantly from the Powell-Gasconade bedrock aquifer group of the Ozark Aquifer, which includes the Jefferson City and the Roubidoux Formations.

Although the Hematite area well survey did not identify any domestic or industrial wells completed in the overburden, the Sand/Gravel aquifer is conservatively assumed to be a potential source of potable water. Development of a water supply from the Sand/Gravel aquifer would be challenging on the HDP Site property because of the limited overall thickness of the aquifer. However, the sand and gravel deposits on the facility remain an effective under-drain for the Overburden Clay and provide a viable water resource immediately down-gradient of the plant area boundary south of the facility. The thickness of sand in this area was estimated from an isopach (thickness) contour map to be approximately 2.4 m. The thickest accumulation of sand (7.6 m) is encountered farther down-gradient on the Joachim Creek floodplain. While the thicker sand would be more suitable for a well, the sand thickness adjacent to the facility (2.4 m), at the down-gradient edge of the contaminated zone, could provide sufficient resource for the development of a domestic water supply.

Based on the above discussion, water samples collected from wells screened in the Overburden Clay is considered to be leachate from surrounding contaminated soil, and not representative of potable groundwater. Only water collected from wells screened in the Sand/Gravel aquifer or the Bedrock aquifer are considered to represent potable groundwater. The characterization and monitoring results are provided in Tables 4-1 and 4-3.

The documentation detailing the construction of each well was reviewed to determine whether the well was screened in The Overburden Clay, the Sand/Gravel aquifer, or the bedrock aquifer. The records were found to be incomplete for a number of the wells which were defined as belonging within one of three categories:

1. the record contains no information regarding well construction (note that there is only one well in this category with all Tc-99 results <MDC),

2. the records indicate that the well was constructed in the overburden but contained no information as to screen depth, or

3. the records indicated construction in the overburden and included a screen depth but the screen appears to be located to some extent in both the Overburden Clay and the Sand/Gravel aquifer.

Considering the above exceptions, the data in Tables 4-1 and 4-3 was organized into six categories based on the location of the well screen as listed below:

- Overburden Clay,
- Sand/Gravel Aquifer,
- Bedrock Aquifer,

- No Well Construction Record,
- Overburden - Unknown Screen Depth, and
- Overburden - Hybrid Screen (screened in both the Overburden Clay and the Sand/Gravel aquifer).

An analysis of the results in Table 4-3 for wells with known well screen location, (i.e., Overburden Clay; Sand/Gravel Aquifer; and Bedrock Aquifer) shows that the water (leachate) collected from the Overburden Clay contains significant concentrations of Tc-99 with 85 of 143 results exceeding the MDC with a range from 2.4 to 5,330 pCi/L Tc-99. However, this is in direct contrast to the results obtained from the Sand/Gravel aquifer, and the Bedrock aquifer that show very limited positive results. Seven out of 100 samples collected from the Sand/Gravel aquifer exceeded the MDC with a range of 1.15 to 5.95 pCi/L Tc-99. Five out of 128 samples collected from the Bedrock aquifer exceeded the MDC with a range of 2.03 to 48.9 pCi/L Tc-99.

There were also positive uranium results in the samples from the Sand/Gravel and Bedrock aquifers. The positive uranium results were evaluated and found to be indistinguishable from background which was expected given the relative low mobility of Uranium compared to Technetium.

In addition to the very limited number of positive results from the Sand.Gravel aquifer and the Bedrock aquifer, a review of the location and time of the sample collection indicates a very disparate and disconnected pattern for the positive results. As discussed in Reference 4-18, it appears that the positive results from the bedrock wells could be attributed to sampling or analytical anomolies. The very limited positive results from the Sand/Gravel aquifer are also scattered and disconnected in time and location. While it cannot be demonstrated with certainty that the limited positive Tc-99 results in the samples from the aquifers do not represent actual contamination, it can be concluded with high confidence that there is no significant groundwater contamination plume in the aquifers underlying the Hematite Site.

A review of the data from the Overburden - Unknown Screen Depth wells and Overburden - Hybrid Screen wells (screened in both the Overburden Clay and Sand/Gravel Aquifer) shows a pattern of positive Tc-99 results that is similar to the Overburden Clay category. Of particular interest are the Overburden – Hybrid Screen data because the screen draws from both the Overburden Clay and the Sand/Gravel aquifer and it cannot be ruled out that the source of the contamination is the Sand/Gravel aquifer. However, the discussion above regarding the results from wells known to be screened only in Overburden Clay or the Sand/Gravel aquifer demonstrate a clear pattern that leads to a conclusion that the source of the contamination in the Overburden - Hybrid Screen wells is most likely leachate from the clay. Therefore, the positive results from the hybrid wells, as well as the Overburden - Unknown Screen Depth wells, are assumed to be caused by contamination in the clay, not the Sand/Gravel aquifer. Additional

wells will be constructed and sampled in the vicinity of a select number of hybrid wells to confirm this assumption.

4.2 SURFACE WATER

4.2.1 STUDIES PERFORMED

SAIC was the only study where surface water was collected for characterization. SAIC collected surface water samples from Site Creek, Northeast Site Creek, East Lake tributary and Joachim Creek. The samples were grab samples collected at mid-depth in moving water at the main flow line of the creek to represent the entire cross section of the creek. The sampling crew selected the most appropriate sampling location near the planned location that exhibited the greatest degree of cross-sectional homogeneity. Since mixing is primarily attributed to turbulence and water velocity, the sampling crew sampled immediately downstream of a mixing zone to ensure good vertical mixing. Surface water samples collected from Site Pond were vertical composites at the deepest point in the Site Pond. Sample locations are shown in Figure 4-2.

Prior to surface water sampling, field parameters such as dissolved oxygen, pH, temperature and conductivity were measured at each surface water sampling location.

Surface water samples were analyzed for gross alpha/beta, isotopic Thorium using alpha spectroscopy, Tc-99 using LSC, and isotopic Uranium using alpha spectroscopy.

4.2.2 SUMMARY OF RESULTS

Surface water data and statistics are summarized in Table 4-4 along with the analytical data. Table 4-5 provides the GPS locations for the samples.

4.3 SURFACE WATER SURROUNDING AREAS

4.3.1 STUDIES PERFORMED

Sediment and soil along surface water features (Site Pond and surrounding creeks) was investigated by SAIC and Energy*Solutions*. The data were combined and then separated into the following survey area data sets based on geographical locations: Site Pond, Site Creek, Northeast Site Creek, and Joachim Creek.

4.3.1.1 SAIC

Grab sediment (streambed) samples were collected from Site Creek, Northeast Site Creek and Joachim Creek. The sampling crew collected samples in depositional areas along the main flow line of the water body because contaminants tend to concentrate in the fine-grained sediments in depositional zones. Sediment samples from Site Pond were collected at the deepest point in the Pond.

Sediment samples were analyzed by gamma spectroscopy, isotopic Uranium using alpha spectroscopy, and Tc-99 using LSC. In addition, 20 percent of sediment samples were analyzed for isotopic Thorium using alpha spectroscopy.

Approximately 10 percent of the sediment samples were selected for TRU analysis (isotopic Pu-239/240 and Np-237). Americium-241 by alpha spectroscopy was not conducted on the sediment samples because Am-241 results would be available from gamma spectroscopy analyses.

SAIC collected a boring location on the northeast side of the Site Pond to address soil that may have been impacted by effluent from the facility sanitary wastewater treatment plant. The remaining boring locations were situated to provide adequate characterization data in areas surrounding the Site Pond.

4.3.1.2 Energy*Solutions*

Energy*Solutions* collected additional trend samples in areas that had limited previous characterization.

4.3.2 SITE POND RESULTS

Sample locations for the Site Pond soil and sediment samples are found in Figure 4-3. The Site Pond soil and sediment analytical sample results and the evaluation of the data by comparison with the proposed DCGLs are provided in Table 4-6 and Table 4-7, respectively. The Site Pond was noted to contain residual radioactive material at concentrations where the SOF was greater than 1.0 and therefore should be classified as Class 1. Contamination within the Site Pond soil

and bank samples was noted to extend to a depth of up to 9 ft in one location where Tc-99 was detected at a concentration of 0.9 pCi/g. This low activity concentration resulted in a SOF of 0.01 and is considered insignificant.

4.3.3 SITE CREEK RESULTS

Sample locations for the Site Creek soil and sediment samples are shown in Figure 4-4. The Site Creek soil and sediment analytical sample results and the evaluation of the data by comparison with the proposed DCGLs are provided in Table 4-8 and Table 4-9, respectively. The Site creek areas are noted to contain small amounts of residual radioactive material at concentrations where the SOFs are less than 0.25 and therefore could initially be classified as Class 3. However, characterization results show the activity to be within the top 6 inches of soil. Historical information provided in Reference 4-1 indicates that remedial action of the Site Creek between the dam and the railroad tracks was performed circa 1996 to reduce Uranium contamination levels in the silt to an average concentration of less than 30 pCi/g enriched Uranium. Therefore, the Site Creek is a Class 1 area from the Site Pond outfall south to the railroad tracks.

From the Site Creek south of the railroad tracks to the confluence of the Virginia Tributary, Tc-99 was measured above MDC levels in two characterization samples (NB-14-00-SL and NB-11-00-SL). The SOF for one of these samples was greater than 0.25 (0.18 and 0.26, respectively) and this area will be considered Class 2.

The remaining area of the Site Creek extending south from the Virginia Tributary (sample NB-10-00-SL) will be considered Class 3.

4.3.4 NORTHEAST SITE CREEK RESULTS

Sample locations for the Northeast Site Creek soil and sediment samples are found in Figure 4-5. The Northeast Site Creek soil and sediment analytical sample results and the evaluation of the data by comparison with the proposed DCGLs are provided in Table 4-10 and Table 4-11, respectively. The Northeast Site creek areas are noted to contain small amounts of residual radioactive material at concentrations where the SOF are less than 0.25 of the DCGL and therefore should initially be classified as Class 3.

4.3.5 JOACHIM CREEK RESULTS

Sample locations for the Joachim Creek soil and sediment samples are found in Figure 4-6. The Joachim Creek soil and sediment analytical sample results and the evaluation of the data by comparison with the proposed DCGLs are provided in Table 4-12 and Table 4-13, respectively. Reference 4-1 and the results of the characterization did not indicate the presence of residual radioactivity in excess of background levels, and the Joachim Creek could be classified as non-impacted. However, the Class 3 area from the Site Creek is proposed to extend along the

Joachim Creek up to the first sample location (sample SW-14-SS) east from the confluence of the Site Creek.

4.4 BURIAL PITS

4.4.1 SUMMARY OF STUDIES OF BURIAL PIT AREAS

Samples within the Burial Pit area have been obtained by SAIC, Cabrera Services, and Energy*Solutions*, and WEC. Sample locations are shown in Figure 4-7.

4.4.1.1 SAIC

SAIC collected surface soil samples in a grid spaced across the area identified to contain the Burial Pits. Locations indicating elevated levels of gamma radiation during the gamma survey were investigated.

Sub-surface soil samples were collected from locations along the northeast and southeast perimeter of the area identified to contain the Burial Pits. These locations are situated between the Burial Pits and an adjacent intermittent stream (Northeast Site Creek) and the Natural Gas Pipeline, both of which are down gradient of the Burial Pits. Sampling locations were selected down gradient of the area where the Burial Pits are suspected to be located to characterize soil and potentially provide information related to Burial Pit location within the area.

Sub-surface samples were collected in the Burial Pit area for the Site distribution coefficient (K_d) study. Sampling also occurred at one other location within the burial pit area. Sampling within the burial pit areas was planned to be conducted in 2-ft to 4-ft intervals to minimize the chance of drilling through a burial pit and creating a pathway for contaminant migration. At the first location where this was attempted, a burial pit was located at approximately 10 ft to 12 ft bgs and drilling was stopped. WEC decided not to attempt further sampling in areas where Burial Pits were known to be located.

SAIC also collected a composite sample of the limestone fill area of which a portion falls within this area.

4.4.1.2 Cabrera Services

The proposed boring locations were selected to identify the center and edges of six burial pits identified in the Work Plan for Buried Waste Investigation At the Hematite Site (Reference 4-6). These locations were staked by WEC personnel prior to initiation of field work. The locations were based on historical aerial photograph interpretation. Borings in this area were labeled "BP" for Burial Pit.

The Burial Pits were numbered as BP-1 through BP-7, and each boring for the respective pit was then lettered sequentially for the number of borings in each pit. One Burial Pit initially identified (BP-3) was not investigated due to accessibility issues in the field; Burial Pit 7 (BP-7) was chosen as a replacement location. Burial Pit borings 8 and 9 were not scoped in the Work Plan;

they are additional borings completed during the field activities. These two additional borings were made available as a result of combining two corner locations for Pits 5 and 7. The first boring in each pit, the "A" boring, was located in the center of the pit and was used to penetrate the waste zone for purposes of determining soil cover and waste thicknesses. The purpose of the corner borings was to verify the lateral extent of the pit boundary. If waste was encountered at one of these corner locations, that boring was abandoned and another boring was "stepped out" approximately 5 ft from the original boring. This methodology was followed until waste was not encountered at the corner boring locations. If water was encountered in the center ("A") boring, a monitoring well was installed at that location.

The thickness of the soil cover was assessed in all the burial pit borings. The thickness of the cover appeared to be in excess of 4 ft in all the borings. An exact measurement was not possible because the cover soil to waste interface was not pronounced. The waste material observed in the borings was typically degraded and when the waste was observed it was always deeper than 4 ft (typically in the 6 to 10 ft bgs range).

4.4.1.3 Energy*Solutions*

Soil sampling of outdoor areas was performed in accordance with the Supplemental Characterization Survey Plan for Westinghouse Electric Company-Hematite Facility (Reference 4-7) and the WEC Work Package, WP-2007-005 (Reference 4-8). The survey consisted of the elements listed below.

Sample locations were marked with wood stakes. Geoprobe samples were obtained at systematic and biased locations. After sampling, the outdoor survey locations were logged with a GPS system.

Soil samples were obtained from each sample location: a surface sample (0 in to 6 in depth), a near surface composite sample (6 in to 4.5 ft depth) and deep composite sample (4.5 ft to ground water, refusal or 20 ft maximum). In certain sample locations, as indicated by the sampling nomenclature, the 6 in to 4.5 ft depth sample was divided equally into two samples to better characterize the Tc-99 activity concentration at depth.

Sampling tools were wiped down and surveyed between sample locations to verify that they were not contaminated. Sample containers were labeled, surveyed to verify that they were not contaminated externally, and transferred to Test America Laboratories St. Louis for analysis.

Chain of Custody Records were utilized to maintain control of samples and specify analytical requirements.

The surface soil samples and the near surface composite samples each had gamma spectroscopy analysis, alpha spectroscopy analysis and Tc-99 analysis. The deep composite samples each had

gamma spectroscopy analysis and 10 percent of the total number of deep samples had an alpha spectroscopy analysis and a Tc-99 analysis.

4.4.1.4 Westinghouse Electric Company LLC

Westinghouse collected surface and sub-surface samples in biased locations within the Burial Pits based on areas where subsidence was identified on the surface and in areas showing elevated exposure rates. Samples were collected in accordance with the Sampling Plan for Engineering Final Design Westinghouse Electric Company Festus, Missouri (Reference 4-9) and the WEC Work Instruction, WP-2008-006 (Reference 4-10). Samples were analyzed for Tc-99 and gamma emitting radionuclides.

4.4.2 SUMMARY OF RESULTS AND DATA EVALUATION

Table 4-14 and Table 4-15 provide the data tables and evaluation of the data for the Burial Pits, excluding the Radium-impacted Area which are provided in Table 4-16 and Table 4-17.

The Burial Pit area contains licensed activity greater than the proposed surface soil DCGLs and therefore should be classified as Class 1. The material is noted to be in pockets within the broad area called the Burial Pit area and data from a number of locations does not show licensed radioactive material.

The impacted area for the Burial Pits, based on the existing characterization data, extends down to a depth of approximately 23 ft bgs. The only contaminant at this depth was Tc-99 at 1.7 pCi/g. Because water samples from the Cabrera Services study were obtained from wells at depths of 5 to 11.5 ft, the soil samples at 23 ft are presumed to have a significant water intrusion. Technetium-99 tends to move more readily in water and with VOCs, and at this depth and from review of the boring logs of Reference 4-3, there may have been significant water.

The Burial Pit area contains a portion of a limestone fill area. The limestone composite sample is noted to contain residual radioactive material at concentrations where the SOF is between 0.25 and 1.0 of the DCGL and therefore the initial classification could be Class 2. However the limestone will be considered Class 1 because it is a composite sample (i.e. one of the samples could be above the DCGL) and also in consideration of other limestone results being elevated.

4.4.3 ELEVATED RADIUM RESULTS

Characterization results identified two samples containing waste material near 9-ft depth bgs with elevated Radium-226 (Ra-226) activity based on gamma spectroscopy of the progeny lead-214 (Pb-214) and/or bismuth-214 (Bi-214). The two samples were confirmed to be collected from waste material based on a review of the boring logs. Results for sample IDs SO-BP6C-12 and SS-BP-028-DV-EL-9 were 414 pCi/g and 183 pCi/g, respectively. These samples were collected from the Burial Pits area, more specifically noted at BP-1A and BP-6A

illustrated in Figure 3-1 of Reference 4-3. Waste is planned to be remediated from the Burial Pits, including BP-1A and BP-6A.

The elevated Ra-226 activity in this isolated area believed to represent a diffuse source (i.e., not a discrete source) that was likely introduced into the Burial Pits as contaminated equipment or materials. Based on interview/discussions with a former facility manager of the Hematite Site, the materials were introduced to the Site from the Mallinckrodt Site Uranium Division. Radium-226 was not a licensed radionuclide for the Site and elevated levels of significance outside of typical background levels were not identified in the other hundreds of Site characterization samples collected from soil throughout the Site during the characterization campaigns.

Based on these findings Ra-226 is confined to an area in the northern portion of the burial pit as illustrated in Figure 4-7, and consists of an area of 1,292 square meters.

4.5 AREA SOUTHEAST OF PROCESS BUILDINGS

4.5.1 SUMMARY OF STUDIES

Characterization samples southeast of the process building (including the former Deul's Mountain area) were collected primarily by SAIC, Energy*Solutions*, and WEC.

Deul's Mountain was still present when the SAIC sampling was conducted and samples were taken at locations in and adjacent to the pile.

Reference 4-1 notes that the soil and debris in Deul's pile was excavated to ground level and disposed of off-site in 2005.

Surface and sub-surface soil sampling locations for the soil area southeast of the process buildings are shown on Figure 4-8.

4.5.1.1 SAIC

SAIC collected surface soil samples at locations on a grid pattern. Locations indicating elevated levels of gamma radiation during the gamma survey were also investigated by sampling. Samples were collected with hand augers and/or trowels from the ground surface to within 15 cm (6 inches) bgs (or refusal) at all surface soil sampling locations.

Surface soil samples were analyzed by gamma spectroscopy, alpha spectroscopy (for isotopic Uranium and Thorium), and LSC (Tc-99). Gamma spectroscopy and Tc-99 by LSC analyses were conducted on 100 percent of samples. Isotopic Uranium analyses were conducted on approximately 10 percent of samples. Approximately 10 percent of surface soil samples collected during the SAIC characterization were selected for isotopic Pu-239/240 and Np-237 analysis by alpha spectroscopy.

SAIC sub-surface soil locations were initially planned based on the location of source areas and potentially impacted areas at the Site, on the results of the gamma survey to some extent, and upon the findings of the Interim Hydrogeologic Investigation. The location and frequency of sub-surface sampling was expected to change during implementation of the task specific work plan as a result of the interpretation of data collected during field screening, sampling events or receipt of laboratory analysis results. Sampling outside of source areas (i.e., to determine extent of contamination) was led primarily through the use of an *in situ* Membrane Interface Probe/Electrical Conductivity probe to detect the presence of VOCs in sub-surface soil. For the purposes of the characterization effort, an initial conservative assumption was made that if VOCs were detected down gradient of source areas, then there was a possibility of radionuclide migration as well. Therefore, sampling for radionuclide contaminants was conducted at nearly all sub-surface sampling locations regardless of location.

A few of the locations in or adjacent to source areas exhibited elevated activity during the gamma survey, but the elevated activity was not detected when screening surface soil and/or from analytical results of surface soil sampling at that location. In these cases, it was assumed that sub-surface contamination might be present and sub-surface sampling was performed.

Sub-surface soil samples were collected from depth intervals of approximately 10 ft beginning at 6 in bgs in the soil profile. Samples for analysis were selected from within these 10-ft intervals where radiological contamination was detected during field screening of soil cores. Generally, one sample was collected from each interval unless more than one distinct depth of contamination was noted from field screening. In those cases, more than one sample per interval was collected. If the soil in the sampling interval was determined to be homogeneous with regard to gamma and beta activity, then the approximate mid-point of the sampling interval was selected for sampling. Additional samples were collected from the depth interval that included the static water level and from just above the soil-bedrock interface.

Sub-surface soil samples were analyzed by gamma spectroscopy, isotopic Uranium and Thorium using alpha spectroscopy, and Tc-99 using LSC. Gamma spectroscopy analysis and LSC for Tc-99 were conducted on 100 percent of samples. Isotopic Uranium analyses were conducted on approximately 10 percent of samples.

SAIC also collected a composite sample of the limestone storage area that falls within this area, defined as "Area Southeast of the Process Buildings."

4.5.1.2 CH2M HILL

CH2M HILL collected a total of 46 limestone storage pile composite soil samples from a grid pattern with the locations coordinates tracked using GPS. The composite samples were analyzed for isotopic Uranium using alpha spectroscopy and for Tc-99 using LSC. Alpha spectroscopy analysis and LSC for Tc-99 were conducted on all samples.

4.5.1.3 Energy*Solutions*

Energy*Solutions* investigated areas that had not previously been investigated. The grid pattern that SAIC had established was extended into areas not previously investigated within the main area of the Site. These systematic sampling locations included areas identified as impacted in Reference 4-1 to the north and west of the buildings as well as areas around the buildings. Energy*Solutions* also collected samples at biased locations based on gamma walkover surveys. Proposed systematic soil sample locations in and around buildings, and at the outdoor soil locations were identified on maps in survey packages. If there were interferences at these locations, the sample location was offset to avoid the interferences as necessary.

4.5.1.4 Westinghouse Electric Company LLC

Westinghouse collected additional surface and sub-surface samples in biased locations based on areas where subsidence in the surface was identified, in areas showing elevated exposure rates, and areas where additional information was needed. Samples were collected in accordance with Reference 4-9 and Reference 4-10. Samples were analyzed for Tc-99 and gamma emitting radionuclides.

4.5.2 SUMMARY OF RESULTS AND DATA EVALUATION

Table 4-18 and Table 4-19 provide the data tables and evaluation of the data for the soil area southeast of the process buildings.

Based on previous remediation (removal of Deul's Mountain) and the characterization results, the area southeast of the process buildings should be classified as Class 1. Residual radioactivity is noted to extend down to a depth of 16 ft bgs. However, the samples at this depth only show low levels of Tc-99 (0.54 to 0.89 pCi/g) with a resulting SOF of less than 0.01, and is considered insignificant.

4.6 SOIL AREA – EVAPORATION PONDS

4.6.1 SUMMARY OF STUDIES

SAIC and WEC performed studies of the Evaporation Ponds. SAIC collected surface soil samples from locations surrounding the Evaporation Ponds. Locations indicating elevated levels of gamma radiation during the gamma survey were investigated. Sub-surface soil samples were also collected from locations surrounding the Evaporation Ponds, including the sub-surface soil samples collected for the previous Site K_d study. Westinghouse collected additional samples in 2008 from locations surrounding the Evaporation Ponds based on gamma walkover surveys and biased locations selected by the Health Physics department. Sub-surface soil sampling locations for the RI are shown on Figure 4-9.

4.6.2 SUMMARY OF RESULTS AND DATA EVALUATION

Table 4-20 and Table 4-21 provide the data tables and evaluation of the data for the Evaporation Pond area.

The former Evaporation Ponds contain licensed activity greater than the proposed surface soil DCGLs and therefore should be classified as Class 1.

The detectable Tc-99 activity for the Evaporation Ponds is noted to extend down to a depth of approximately 30 ft bgs.

4.7 FORMER LEACH FIELD

4.7.1 SUMMARY OF STUDIES

SAIC, Energy*Solutions*, and WEC performed investigations in the area of the Former Leach Field. Figure 4-10 shows the sample locations.

4.7.1.1 SAIC

SAIC collected surface and subsurface soil samples from locations surrounding the Former Leach Field. Most of the area above the Former Leach Field is covered by asphalt or concrete.

4.7.1.2 Energy*Solutions*

Energy*Solutions*' sampling effort included sample locations in the Former Leach Field area.

4.7.1.3 Westinghouse Electric Company LLC

Westinghouse collected additional surface and sub-surface samples in 2008 from locations within the Former Leach Field area.

4.7.2 SUMMARY OF RESULTS AND DATA EVALUATION

Table 4-22 and Table 4-23 provide the data tables and evaluation of the data for the Former Leach Field area.

The maximum SOF for samples from the Former Leach Field was 0.36 of the DCGL and therefore an initial classification of Class 2 is justified. However, based on process knowledge, as described in Section 2.3.4 and in Reference 4-1, the initial classification will be set to Class 1 for the area defined by sample IDs containing "LF." The remainder of the area should be set to Class 3 based on characterization results.

The impacted area for the Former Leach Field appears to be mainly confined to within the top 5 ft of soil, however one sample (LF-08-37-SL) location showed Tc-99 activity at a depth of 37 ft. The SOF for this sample was less than 0.01, and therefore insignificant.

4.8 SOIL BENEATH BUILDINGS TO BE DEMOLISHED

4.8.1 SUMMARY OF STUDIES

UBC was investigated by SAIC and Energy*Solutions*. Figure 4-11 shows the sample locations for the under building soil characterization for buildings that are scheduled to be demolished.

4.8.1.1 SAIC

Sampling was conducted inside the building structures in November 2003. Direct push technology was used to advance borings and collect soil samples from the fill beneath the concrete floor (impervious surface cover), from the soil immediately beneath the fill, and from sub-surface soil at depth at each boring, as appropriate. Sub-surface soil samples were collected at locations adjacent to the buildings in spring and summer of 2004.

Sub-surface soil samples were collected from locations inside and adjacent to the process buildings, including the restricted area adjacent to the process buildings for the Site K_d study, Determination of Distribution Coefficients for Radionuclides of Concern at the Westinghouse Hematite Facility (Reference 4-11). In addition, samples of concrete flooring/fill material from under concrete were collected during sampling from under the process buildings.

4.8.1.2 Energy*Solutions*

Soil samples were collected from beneath floor slabs and around the perimeter of buildings in November 2007. The overall strategy was to collect systematic and biased samples to determine if UBC is a concern.

Sampling of soil beneath the buildings was performed in accordance with Reference 4-7 and WEC Work Package, WP-2007-006 (Reference 4-12). The survey included the following elements:

- Sample locations were marked with a felt tip pen or paint;
- The building floor surfaces were bored through using a 4-in diameter concrete coring machine with samples collected continuously in new 4 ft acetate liners using a Geoprobe™ Macro-Core sampler at the specified locations;
- Geoprobe™ samples were obtained at these locations to ground water, refusal or 20-ft maximum;
- Three soil samples were obtained from each sample location, a surface sample (0 in to 6 in depth), a near surface composite sample (6 in to 4.5 ft depth) and deep composite sample (4.5 ft to ground water, refusal or 20 ft maximum);

- Sampling tools were wiped down and surveyed between sample locations to verify that they were not contaminated;
- Sample containers were labeled, surveyed to verify that they were not contaminated externally, and transferred to Test America Laboratories St. Louis for analysis;
- Chain of Custody Records were utilized to maintain control of samples and specify analytical requirements; and,
- The surface soil samples and the near surface composite samples each had gamma spectroscopy analysis, alpha spectroscopy analysis and Tc-99 analysis and the deep composite samples each had gamma spectroscopy analysis. Ten percent of the total number of deep samples had alpha spectroscopy analysis and a Tc-99 analysis.

4.8.2 SUMMARY OF RESULTS AND DATA EVALUATION

Table 4-24 and Table 4-25 provide the data tables and evaluation of the data for the soil beneath buildings to be demolished. A few of the sample analysis results for the soil below buildings to be demolished show results where the SOF exceeds 1.0. Therefore, based on previous remediation prior to building construction and the results of the characterization samples, the areas under the buildings to be demolished should be classified as Class 1.

The impacted area below the buildings is noted to extend down to a maximum depth of 5 ft bgs with samples obtained at 4.5 ft showing Tc-99 above the analysis MDC; samples below 4.5 ft did not show residual licensed radioactivity.

4.9 OUTDOOR SOIL – IMPACTED – SITE POND SURROUNDING AREA

4.9.1 SUMMARY OF STUDIES

Surface and sub-surface soil in areas surrounding the Site Pond were investigated by SAIC, Energy*Solutions*, and WEC.

The sample locations are shown on Figure 4-12.

4.9.1.1 SAIC

SAIC collected surface soil samples at locations on a grid pattern. Locations indicating elevated levels of gamma radiation during the gamma survey were also investigated.

SAIC collected surface soil samples from locations of potentially impacted areas within the Site and from locations based on the results of the gamma survey. Samples were collected from the ground surface to within 15 cm (6 in) bgs (or refusal) at all surface soil sampling locations with hand augers and/or trowels. Fifteen of the surface soil samples (NB-01-00-SL through NB-15-00-SL) were collected to investigate anomalies identified during the gamma survey.

Surface soil samples were analyzed by gamma spectroscopy, isotopic Uranium and Thorium using alpha spectroscopy, and Tc-99 using LSC. Gamma spectroscopy and Tc-99 by LSC analysis was conducted on 100 percent of samples. Isotopic Uranium analyses were conducted on approximately 10 percent of samples.

Approximately 10 percent of the surface soil samples collected during the SAIC characterization were selected for isotopic Pu-239/240 and Np-237 analysis by alpha spectroscopy.

Sub-surface soil samples were collected from depth intervals of approximately 10 ft beginning at 6 in bgs in the soil profile. Samples for analysis were selected from within these 10-ft intervals where radiological contamination was detected during field screening of soil cores. Generally, one sample was collected from each interval unless more than one distinct depth of contamination was noted from field screening. In those cases, more than one sample per interval was collected. If the soil in the sampling interval was determined to be homogeneous with regard to gamma and beta activity, then the approximate mid-point of the sampling interval was selected for sampling. Additional samples were collected from the depth interval that included the static water level and from just above the soil-bedrock interface.

Sub-surface soil samples were analyzed by gamma spectroscopy, isotopic Uranium and Thorium using alpha spectroscopy, and Tc-99 using LSC. Gamma spectroscopy analysis and LSC for Tc-99 were conducted on 100 percent of samples. Isotopic Uranium analyses were conducted on approximately 10 percent of samples.

4.9.1.2 EnergySolutions

Energy*Solutions* investigated areas that had not previously been investigated. The grid pattern that SAIC had established was extended into areas not previously investigated within the central tract of the Site. These systematic sampling locations included areas identified as impacted in Reference 4-1 to the north and west of the buildings as well as areas around the buildings. Energy*Solutions* also collected samples at biased locations based on gamma walkover surveys. Proposed systematic soil sample locations in and around buildings, and at the outdoor soil locations were identified on maps in survey packages. If there were interferences at these locations, the sample location was offset to avoid the interferences as necessary.

4.9.1.3 Westinghouse Electric Company LLC

Additional walkover gamma surveys performed in July 2008 indicate slightly elevated gamma readings between the Site Pond and Building 230. This area will be investigated further prior to FSS. Additional surface and sub-surface samples were also obtained in July 2008. Some of these samples are within the area designated as the Site Pond surrounding area and so have been included in this data set.

4.9.2 SUMMARY OF RESULTS AND DATA EVALUATION

Data tables and an evaluation of the data for surface and sub-surface soil for the area surrounding the Site Pond are shown in Table 4-26 and Table 4-27.

The Site Pond surrounding areas show only small amounts of radioactive material in the surface soil, and the SOF for the activity concentrations are less than 0.25. Most samples did not show residual radioactive material, but two did show small amounts of Tc-99. Therefore the areas surrounding the Site Pond should be initially classified as Class 3.

The depth of contamination is limited to the top 6 inches of soil. Samples were obtained in this area down to depths of 17.5 ft bgs but none showed residual licensed radioactive material. The sub-surface soil in the areas surrounding the Site Pond should be considered non-impacted.

4.10 OUTDOOR SOIL – IMPACTED – SOUTH OF STATE ROAD P AND NORTH OF PROCESS BUILDINGS

4.10.1 SUMMARY OF STUDIES

Surface and sub-surface soil from areas south of State Road P and north of the process buildings (excluding the parking lot) were investigated by SAIC, Energy*Solutions*, and WEC. Samples were collected as described in Section 4.12.1. The sample locations can be found on Figure 4-13.

SAIC also collected a composite sample of the limestone fill area a portion of which falls within this area.

In addition to the characterization surveys and sampling, a total of 38 soil samples were collected by WEC in August and October 2008 within, and adjacent to the exterior of the Wood Barn. The sampling was performed in support of near-term decommissioning planning and thus was less formalized in nature than the previous characterization surveys. Analyses were conducted for U-238, U-235, Am-241 and Tc-99. Uranium-234 was estimated based on the ratio of U-238 to U-235 in each sample. The individual sample results in terms of SOF (summed over all radionuclides in the sample), ranged from 0.005 to 3.71. The mean, median, and standard deviation of the SOF results were 0.714, 0.342, and 0.914, respectively.

4.10.2 SUMMARY OF RESULTS AND DATA EVALUATION

Data tables and an evaluation of the data for surface and sub-surface soil for the area south of State Road P and north of the process buildings are shown in Table 4-28 and Table 4-29.

The area surrounding the Tile Barn and Wood Barn should be classified as Class 1 because some of the samples showed activity concentrations exceeding the proposed DCGL. The area north of the Burial Pits contained small amounts of residual radioactive material at concentrations where the SOF was less than 0.25, and should initially be classified as Class 3, except for the area which contains a portion of the limestone fill area which should be Class 1.

4.11 OUTDOOR SOIL – IMPACTED – BUILDING EXTERIORS

4.11.1 SUMMARY OF STUDIES

Surface and sub-surface soil in close proximity to the buildings were investigated by SAIC, Energy*Solutions*, and WEC. Samples were collected as described in Section 4.12.1. These datasets include samples within approximately 15 ft of the buildings. Sample locations can be found on Figure 4-14.

4.11.2 SUMMARY OF RESULTS AND DATA EVALUATION

Data tables and an evaluation of the data for surface and sub-surface soil for the building exteriors are shown in Table 4-30 and Table 4-31.

Areas north, south, and west of Building 230 had licensed radioactivity concentrations in surface samples with a SOF less than 0.25 and are Class 3. Sub-surface contamination was not identified; therefore, the sub-surface soil should be classified as non-impacted.

The remainder of surface soil areas immediately surrounding the buildings (within 15 ft of the building) had licensed radioactivity concentrations that are greater than or equal to a SOF of 1.0 and therefore should be classified as Class 1. The area between Building 255 and the Burial Pits showed a few sub-surface samples that exceeded a SOF of 1.0. The residual radioactive material was noted to extend to a depth of 16 ft bgs.

4.12 OUTDOOR SOIL – IMPACTED – PARKING LOT

4.12.1 SUMMARY OF STUDIES

Soil below the asphalt within the parking lot were investigated by SAIC and Energy*Solutions*. Samples were collected as described in Section 4.12.1. Sample locations are shown on Figure 4-15.

4.12.2 SUMMARY OF RESULTS AND DATA EVALUATION

Data tables and an evaluation of the data for surface and sub-surface soil for the parking lots are shown in Table 4-32 and Table 4-33.

The parking lot did not show residual radioactive material and could be classified as non-impacted. However based on the adjacent Class 1 areas should be classified as Class 3. In addition, most of the samples were collected from depths below 5 ft.

4.13 OUTDOOR SOIL – NON-IMPACTED – EAST OF NORTHEAST SITE CREEK

4.13.1 SUMMARY OF STUDIES

Energy*Solutions* and SAIC obtained surface and sub-surface soil samples in the area east of the Northeast Site Creek. Sampling locations are shown in Figure 4-16.

4.13.2 SUMMARY OF RESULTS AND DATA EVALUATION

Table 4-34 and Table 4-35 provide the data tables and an evaluation of the data for the area east of the Northeast Site creek. The sample results confirm that this area is non-impacted.

4.14 OUTDOOR SOIL – NON-IMPACTED – NORTH OF STATE ROAD P

4.14.1 SUMMARY OF STUDIES

SAIC obtained surface and soil samples in the area north of State Road P. Sampling locations are shown in Figure 4-17.

4.14.2 SUMMARY OF RESULTS AND DATA EVALUATION

Table 4-36 and Table 4-37 provide the data tables and an evaluation of the surface samples taken north of State Road P.

Sample results confirm that the area north of State Road P is non-impacted.

4.15 OUTDOOR SOIL – NON-IMPACTED – SOUTH OF RAILROAD

4.15.1 SUMMARY OF STUDIES

SAIC obtained surface and sub-surface soil samples in the area south of the railroad. Sampling locations are shown in Figure 4-18.

4.15.2 SUMMARY OF RESULTS AND DATA EVALUATION

Table 4-38 and Table 4-39 provide the data tables and an evaluation of the data for the area south of the railroad tracks. Two samples, NB-40-25-SL and NB-32-27-SL, showed low activity concentrations of Tc-99 (0.83 pCi/g and 1.68 pCi/g). However, when these samples are normalized using the Deep Volumetric DCGL for Tc-99, the detected SOF is noted to be less than 0.005, and insignificant. It is assumed that these samples became cross contaminated with Tc-99 based on its activity concentration in the groundwater during sample collection.

Sample results confirm that the area south of the railroad is non-impacted.

4.16 FORMER GASOLINE STATION

SAIC collected surface soil samples in the area near the Former Gasoline Station. Sample locations are shown in Figure 4-19.

Table 4-40 and Table 4-41 provide the data tables and an evaluation of the data for the Former Gasoline Station.

None of the samples showed any detectable licensed radioactive material. The Former Gasoline Station is non-impacted radiologically.

4.17 NATURAL GAS PIPELINE

Soil samples were collected along the buried Natural Gas Pipeline that runs along the north side of the railroad by SAIC, Energy*Solutions*, and WEC. The sample locations are shown on Figure 4-20. These soil samples are summarized in Table 4-42 and Table 4-43. The tables also provide the results and an evaluation of the data.

The results show that for a majority of the area where the Natural Gas Pipeline is located, there are low levels of contamination. Radioactive activity in the soil samples taken from the soil surrounding the pipeline from the area just south of the Evaporation Pond to the area just south of the Burial Pits showed SOFs that exceeded 1.0. The activity in this area was noted to extend down to a maximum depth of 33 ft. The soil in this portion of the Natural Gas Pipeline area should be classified as Class 1.

Based on soil characterization results, the soil in the area of the Natural Gas Pipeline to the east of the Burial Pits should be classified as Class 2. The remainder of the Natural Gas Pipeline area should be classified as Class 3.

4.18 RED ROOM ROOF BURIAL AND CISTERN BURN PIT AREAS

4.18.1 SUMMARY OF STUDIES

Sampling of the Cistern Burn Pit area was conducted by SAIC. Sampling of the Red Room Roof Burial area was conducted by SAIC and Cabrera Services. This area also contains a limestone fill area. The Red Room Roof Burial area and Cistern Burn Pit surface and sub-surface sample locations are shown on Figure 4-21.

4.18.1.1 SAIC

Elevated gamma radiation readings were identified by SAIC south-southwest of the Tile Barn during the gamma survey; however, it could not be verified that this was due to the presence of the Red Room Roof Burial area. Surface soil samples were collected from locations within or adjacent to the suspected Red Room Roof Burial area based on gamma survey results. Sub-surface soil samples were also collected.

Elevated gamma radiation readings were identified in the vicinity of the Cistern Burn Pit during the gamma survey; however, it was not possible to determine if the readings were due to contamination from the Cistern Burn Pit, the Red Room Roof Burial area, or from another source.

A surface soil sample was collected from within the Cistern Burn Pit. The location indicated elevated levels of gamma radiation during the gamma survey. Sub-surface soil samples were also collected from the surface location in the Cistern Burn Pit.

SAIC also collected a composite sample from the limestone fill area.

4.18.1.2 Cabrera Services

Cabrera Services collected samples from locations around the Red Room Roof Burial area.

4.18.2 SUMMARY OF RESULTS AND DATA EVALUATION

Table 4-44 and Table 4-45 provide the data tables and evaluation of the data for the Red Room Roof Burial area and the Cistern Burn Pit Burial area.

The Red Room Roof Burial area and Cistern Burn Pit area could be combined into one survey area. Licensed material greater than the proposed DCGLs were noted in these areas and they should be classified as Class 1.

The impacted area for the Red Room Roof Burial area and Cistern Burn Pit area extends down to a depth of approximately 6 ft bgs. No samples between depths of 7 ft and 25 ft contained residual radioactive material.

4.19 UNDERGROUND SYSTEMS

The Underground Systems were divided into two areas:

- Storm Drain System (Buildings to Outfall #3), and
- Sanitary Wastewater Treatment Plant (Buildings to Outfall #1).

Outfall #1 and Outfall #3 and the history of the systems that supply water to the outfalls are discussed in Reference 4-4. The reference also describes that water flows from building roof areas and ground surface drains to the Site Pond via the storm water system (Outfall #3). During facility operation this system also received condensed steam from the UF_6 vaporizer steam jackets and cooling water from heat exchangers. Water from Outfall #3 is designated as Sample Point WS-3 (sampled monthly) and also as Sample Point WS-20 (sampled weekly for 10 CFR 20 dose compliance) in PO-EM-001.

Sanitary waste waters flow to the Site sanitary system from sinks, toilets, showers and drinking fountains. This system used to receive laundry water (after the water was filtered and held for sampling) and waste water from the process water demineralizer system and laboratory sinks. The effluent is sampled and analyzed weekly for gross alpha and beta activity by taking a grab sample. Outfall #1 is designated as Sample Point WS-1 and WS-18 (Sanitary Wastewater Treatment Plant Outfall). WS-18 is sampled weekly for 10 CFR 20 dose compliance.

Effluent data summaries from 2002 through 2007 were reviewed. The maximum gross alpha activity in Outfall #1 was noted to be 28 percent of the alpha limit for water effluent (Reference 4-13).

Because of the history associated with these systems, both underground systems will be classified as Class 1 and surveyed and remediated as needed.

4.20 SOIL BENEATH REMAINING SITE STRUCTURES

4.20.1 SUMMARY OF STUDIES

UBC for buildings that will remain after decommissioning (Buildings 110, 230 and 231) was investigated by Energy*Solutions*. Sample locations are shown in Figure 4-22.

Soil samples were collected from beneath floor slabs and around the perimeter of Building 230 and Building 231 which are expected to remain after completion of the remediation portion of the decommissioning process. One sample (BD-19) was collected from the outside of Building 110. At the time of characterization, additional samples under the slab of Building 110 could not be taken due to logistics. Subsequently, the results of sample BD-19 are considered as representative of the radiological condition of the soils under Building 110. This is reasonable based upon the information provided in the HSA, from process knowledge and from past radiological surveys as UBC is not anticipated under Building 110.

The overall strategy was to collect systematic and biased samples to determine if UBC is a concern for those buildings that are expected to remain after license termination. The sampling of soil under and around these buildings was an important aspect of this characterization as UBC was not well characterized previously since the buildings were originally slated for demolition. It was anticipated that UBC soil samples would be below the proposed soil DCGLs.

Sampling of soil beneath these buildings was performed in accordance with Reference 4-7 and Reference 4-12. The survey consisted of the elements listed below.

- Sample locations were marked with a felt tip pen or paint;
- The building floor surfaces were bored through using a 4-in diameter concrete coring machine with samples collected continuously in new 4 ft acetate liners using a Geoprobe™ Macro-Core sampler at the specified locations;
- Geoprobe™ samples were obtained at these locations to ground water, refusal or 20 ft maximum;
- Three soil samples were obtained from each sample location, a surface sample (0 in to 6 in depth), a near surface composite sample (6 in to 4.5 ft depth) and deep composite sample (4.5 ft to ground water, refusal or 20 ft maximum);
- Sampling tools were wiped down and surveyed between sample locations to verify that they were not contaminated;

- Sample containers were labeled, surveyed to verify that they were not contaminated externally, and transferred to Test America Laboratories St. Louis for analysis;
- Chain of Custody Records were utilized to maintain control of samples and specify analytical requirements; and,
- The surface soil samples and the near surface composite samples each had gamma spectroscopy analysis, alpha spectroscopy analysis and a Tc-99 analysis. The deep composite samples each had gamma spectroscopy analysis. Ten percent of the total number of deep samples had an alpha spectroscopy analysis and a Tc-99 analysis.

4.20.2 SUMMARY OF RESULTS AND DATA EVALUATION

Table 4-46 and Table 4-47 provide the data tables and evaluation of the data for UBC studies of buildings that are expected to remain after license termination.

The results show that Tc-99 was detected at very low concentrations (less than 1.0 pCi/g) at a depth of 2.5 ft in Building 230. These low concentrations when normalized to the DCGL show a SOF of less than 0.25 and therefore can be classified as Class 3.

The samples for Building 231 and Building 110 did not show licensed activity and the soil below these buildings may be classified as Class 3.

4.21 RAILROAD SPUR

The Railroad Spur is expected to extend from the back fence starting at approximately 50 ft east of the Evaporation Ponds and continuing approximately 1000 feet south adjacent to the rail line to the active main rail line.

Surface and sub-surface soil samples collected by SAIC and Energy*Solutions* and reported in other sections of this report were also included within this area. Westinghouse collected additional surface and sub-surface soil samples—these are unique to the Railroad Spur area and are not reported in any other sections of this report.

Figure 4-23 shows the sample locations of samples collected in this area. Table 4-48 and Table 4-49 provide the data and data analysis. The results for samples in the vicinity of the Evaporation Ponds show surface activity exceeding a SOF of 1.0 and will be a Class 1 area. The remainder of the samples collected showed surface activity consistent with Class 2 and Class 3 areas. Sub-surface samples show activity (the maximum SOF was 0.31) at a depth of 4.5 ft bgs. Very low activity concentrations are noted below 4.5 ft bgs (SOF <0.1) but detectable Tc-99 is noted in samples as deep as 25 ft bgs.

4.22 BACKGROUND SOIL SAMPLES

4.22.1 SUMMARY OF STUDIES OF BACKGROUND SOIL

SAIC collected soil samples at two off-site locations considered to be representative of on-site soil types. At each off-site location, surface and sub-surface (at 3 ft depth) samples were collected. Figure 4-24 shows the location of the two off-site sample locations.

4.22.2 RADIONUCLIDE ACTIVITY CONCENTRATIONS FOR OFF-SITE SOIL

A summary of the background soil sample results is provided in Table 4-50. Table 4-51 provides the GPS coordinates.

4.23 REMAINING SITE STRUCTURES

Structures that will remain after license termination include Building 110 (Security Building), Building 230 and Building 231.

4.23.1 SUMMARY OF STUDIES

LVI performed detailed surveys of Building 230 in 2004 and the surveys were presented as a FSS in MARSSIM Survey Methodology for Final Status Surveys of Building 230 (Reference 4-14). The surveys from the LVI report are presented as characterization data in this report.

Energy*Solutions* performed detailed characterization surveys of Building 110, Building 230 and Building 231 in 2007. The results of this survey are documented in Hematite Supplemental Characterization Report (Reference 4-15).

The data in this section are primarily surface activity measurements (total and removable). SAIC analyzed concrete samples from the building boring locations. Energy*Solutions* did not analyze and disposed of the concrete portion of the borings collected for under building samples as dry active waste. Energy*Solutions* obtained samples of drains and dust samples and had select samples analyzed for radionuclide activity concentrations. The samples of the drains can be used to characterize the inaccessible areas as well as an indication of the radionuclide mixture within the buildings. The results of these building samples are presented in Table 4-52 and Table 4-53. The measurement results as reported in Section 4.26 are in dpm/100 cm^2 alpha + beta unless other wise stated.

4.23.2 BUILDING 110

Energy*Solutions* performed characterization surveys of Building 110. All areas in Building 110 were surveyed as MARSSIM Class 3 survey areas. The survey areas included floor, walls, ceiling, drains, sumps, roof and overhead horizontal surfaces.

Figure 4-25 shows the Building 110 interior measurement locations. Figure-4-26 shows the roof measurement locations. The results of this Class 3 survey are summarized in Table 4-54. The conclusion from this building characterization with the analysis updated to include a proposed surface DCGL of 6,700 dpm/100 cm^2 (most limiting DCGL for the Uranium isotopes as presented in Table 3-2 of this report for a small office) presented in Section 3 of this report is provided below. Note that surface DCGLs are in units of dpm/100 cm^2 alpha-plus-beta.

Building 110 in general is well maintained and the surface activity concentrations levels are well below the proposed release criteria. No areas exceeded the proposed DCGL of 6,700 dpm/100 cm^2. Excluding the "guard area" drain, the interior areas averaged less than a total surface activity concentration of 498 dpm/100 cm^2 with a maximum of 1,527 dpm/100 cm^2.

The exterior averaged less than a total surface activity concentration of 782 dpm/100 cm^2 with a maximum of 1,527 dpm/100 cm^2. The surface of drains in the building averaged a total surface activity concentration of 1,371 dpm/100 cm^2 with a maximum of 3,192 dpm/100 cm^2 on Drain 3 in the janitor's closet.

Exposure rate measurements were performed at contact (at 1 cm) and at 1 m from each drain in Building 110. The highest contact exposure rate was measured on Drain 1 in the restroom of the guard area and a sample was collected. Drain 1 exhibited elevated activity concentrations which may need to be addressed during site remediation and FSS.

4.23.3 BUILDING 230

LVI and Energy*Solutions* performed surveys of Building 230.

The LVI surveys are considered to be scoping data to augment future characterization efforts of Building 230. The LVI survey results were documented in appendices of Reference 4-14. LVI surveys were performed using criteria of 1,000 dpm/100 cm^2 removable alpha or beta activity and 5,000 dpm/100 cm^2 fixed alpha or beta activity. LVI concluded that fixed alpha and beta contamination levels within the building were significantly less than 5,000 dpm/100 cm^2 and removable alpha and beta levels were significantly less than 1,000 dpm/100 cm^2. Specific survey conclusions are noted below. In each of the Results Sections of the LVI report the conclusion "No contamination was found above the release criteria" was stated.

LVI Survey of the Machine Shop: Loose contamination levels were discovered to be no higher than 29 dpm/100 cm^2. Fixed contamination levels were discovered to be no higher than 481 dpm/100 cm^2. Exposure rate measurements were indistinguishable from background levels. Scans of two drains indicated activity levels well above background; this was attributed to a change in the background between a tiled floor surface and the metal pipes of the drains.

LVI Survey of the M&TE Room: Loose contamination levels were discovered to be no higher than 22 dpm/100 cm^2. Fixed contamination levels were discovered to be no higher than 342 dpm/100cm^2. Exposure rate measurements were indistinguishable from background levels.

LVI Survey of the Met QA Laboratory: Loose contamination levels were discovered to be no higher than 20 dpm/100 cm^2. Fixed contamination levels were discovered to be no higher than 379 dpm/100 cm^2. Exposure rate measurements were indistinguishable from background levels.

LVI Survey of the Men's Room: Loose contamination levels were discovered to be no higher than 22 dpm/100 cm^2. Fixed contamination levels were discovered to be no higher than 627 dpm/100 cm^2. Exposure rate measurements were indistinguishable from background levels.

LVI Survey of the Gadolinium Room: Loose contamination levels were discovered to be no higher than 41 dpm/100 cm^2. Fixed contamination levels were discovered to be no higher than 1,180 dpm/100 cm^2. Exposure rate measurements were indistinguishable from background levels.

LVI Survey of the Rod Load Room – Tennelec Room: Loose contamination levels were discovered to be no higher than 27 dpm/100 cm^2. Fixed contamination levels were discovered to be no higher than 182 dpm/100 cm^2. Exposure rate measurements were indistinguishable from background levels.

LVI Survey of the Rod Load Room - Woman's Restroom: Loose contamination levels were discovered to be no higher than 29 dpm/100 cm^2. Fixed contamination levels were discovered to be no higher than 1,882 dpm/100 cm^2. Exposure rate measurements were indistinguishable from background levels.

LVI Survey of the Rod Load Room - Men's Restroom: Loose contamination levels were discovered to be no higher than 42 dpm/100 cm^2. Fixed contamination levels were discovered to be no higher than 2,884 dpm/100 cm^2. Exposure rate measurements were indistinguishable from background levels.

LVI Survey of the Rod Load Room - Kardex Room: Loose contamination levels were discovered to be no higher than 53 dpm/100 cm^2. Fixed contamination levels were discovered to be no higher than 1,925 dpm/100 cm^2. Exposure rate measurements were indistinguishable from background levels.

LVI Survey of the Rod Load Room: Loose contamination levels were discovered to be no higher than 131 dpm/100 cm^2. Fixed contamination levels were discovered to be no higher than 3,790 dpm/100 cm^2. Exposure rate measurements were indistinguishable from background levels.

LVI Survey of the Ultrasonic Tank Room: Loose contamination levels were discovered to be no higher than 38 dpm/100 cm^2. Fixed contamination levels were discovered to be no higher than 300 dpm/100 cm^2. Exposure rate measurements were indistinguishable from background levels.

LVI Survey of the Electric Room: Loose contamination levels were discovered to be no higher than 21 dpm/100 cm^2. Fixed contamination levels were discovered to be no higher than 366 dpm/100 cm^2. Exposure rate measurements were indistinguishable from background levels.

LVI Survey of the HEPA Room: Loose contamination levels were discovered to be no higher than 26 dpm/100 cm^2. Fixed contamination levels were discovered to be no higher than 949 dpm/100 cm^2. Exposure rate measurements were indistinguishable from background levels.

LVI Survey of the Cushman Room: Loose contamination levels were discovered to be no higher than 44 dpm/100 cm^2. Fixed contamination levels were discovered to be no higher than 1,295 dpm/100 cm^2. Exposure rate measurements were indistinguishable from background levels.

LVI Survey of the U-Shaped Area: Loose contamination levels were discovered to be no higher than 26 dpm/100 cm^2. Fixed contamination levels were discovered to be no higher than 1,346 dpm/100 cm^2. Exposure rate measurements were indistinguishable from background levels.

Energy*Solutions* performed characterization surveys of Building 230 in 2007, as MARSSIM Class 1, Class 2 and Class 3 survey areas. Figure 4-27, Figure 4-28 and Figure 4-29 are drawings of the Building 230 interior impacted areas, first floor classifications, and mezzanine classifications, respectively. The surveys identified a few areas of elevated activity above the proposed DCGL of 6,700 dpm/100 cm^2 (most limiting DCGL for the Uranium isotopes as presented in Table 3-2 for a small office). The areas surveyed in Building 230 are described in subsequent paragraphs.

Class 1 areas included the former Rod Load Room, the Men's and Women's Rest Rooms, the Women's Change Room and the Gadolinium Room. Survey locations included floors, walls, ceilings, drains, sumps, overhead horizontal surfaces and vent ducts excluding partitions, equipment and furniture. Figure 4-30 and Figure 4-31 show Building 230 Class 1 interior measurement locations and interior drain locations, respectively. The results of the Class 1 surveys are summarized in Table 4-55.

Class 2 areas included the open "U-shaped" area, machine shop, Ultra Sonic Room, HEPA filter Room and open area south of the Cushman Room. Survey area includes floor, walls, ceilings, drains, sumps and overhead horizontal surfaces excluding partitions, equipment and furniture. Figure 4-32 shows Building 230 Class 2 interior measurement locations. Figure 4-33 shows Building 230 Class 2 measurement locations for the pit and HEPA duct. The results of the Class 2 survey are summarized in Table 4-56.

Class 3 areas included the Electrical Room, the Cushman Room, The M&TE Room the Met QA Lab, the second floor offices, the Warehouse Area and the main building structure outside. Survey area includes floor, walls, ceilings, drains, sumps and overhead horizontal surfaces excluding partitions, equipment and furniture. Figure 4-34 and Figure 4-35 show Building 230 Class 3 first floor measurement locations and the Class 3 Mezzanine measurement locations respectively. Figure 4-36 and Figure 4-37 show the Class 3 measurement locations for the Building 230 roof and the HEPA roof. The results of the Class 3 surveys are summarized in Table 4-57.

The conclusions from this building characterization are provided below. Elevated levels will be addressed in remediation plans and are also described.

Building 230, Class 1 Survey – the following areas identified residual surface contamination that exceeded 6,700 dpm/100 cm^2: ventilation duct, KARDEX room floor, bathrooms, trench, and floor seams. Alpha-plus-beta surface scans identified residual surface activity at the edges of a bench in the men's rest room. A special survey of the men's room was performed to investigate the elevated surface activity. The bench was removed by WEC and a dust sample (BD1-230-1-DUST) was collected. The dust sample resulted in 64,900 pCi/g of total Uranium and the direct surface activity measurement was 126,049 dpm/100 cm^2 (alpha-plus-beta) which exceeded the $DCGL_w$. The area was remediated by WEC and post-remediation scans were conducted with no further elevated surface activity identified. In addition, floor drains in/near the men's restroom were sampled; i.e. Drain 5 (D05-230-1-SS) and Drain 15 (D15-230-1-SS) janitor's closet and east end of Rod Loading Room, respectively. These drain sample results of "drain crud" indicated elevated residual Uranium activity at 2,451 pCi/g and 4,661 pCi/g, respectively. The following drains in the Class 1 survey areas showed surface activity that exceeded 6,700 dpm/100 cm^2: D04, D05, D07, and D15.

Building 230, Class 2 Survey – alpha-plus-beta surface scans identified residual surface activity at/in floor seems at three locations in the "U-shaped" area that exceeded 6,700 dpm/100 cm^2. None of the drains identified surface activity measurements that exceeded 6,700 dpm/100 cm^2. These areas are expected to be classified as Class 1 during FSS.

Building 230 Class 3 Survey – surface activity measurements on the surfaces of Drain 01 (Cushman Room) did not exceed 6,700 dpm/100 cm^2; however, a "drain crud" sample from this drain also indicated elevated activity. This area is expected to be a Class 1 during FSS.

Building 230 in general is well maintained and the mean values for residual surface activity levels are below the proposed release criteria. The drains in the building exhibited elevated activity concentrations which will need to be addressed during Site remedial investigations, Site remediation and/or the Site FSS. The alpha and beta surveys identified a few areas that exceeded the proposed DCGL of 6,700 dpm/100 cm^2. These included the surfaces of some drains, one floor joint, and the floor in a restroom. The floor joint and the restroom floor were decontaminated after this survey was completed. There were other areas that exhibited some elevated activity concentrations that did not exceed the proposed DCGL of 6,700 dpm/100 cm^2. These areas may also warrant evaluation during Site remediation and FSS. These included the KARDEX Room floors and lower walls, electrical trench areas around the Rod Loading Room, floor seams, restroom floors and vent ducts.

4.23.4 BUILDING 231

Energy*Solutions* performed characterization surveys of Building 231. The following areas in Building 231 were surveyed as MARSSIM Class 2 and Class 3 survey areas:

- Class 2 areas included the floor, walls, ceiling and overhead horizontal surfaces excluding partitions, equipment and furniture; and,

- Class 3 areas included outside walls and the roof.

Figure 4-38 is a drawing of the Building 231 interior measurement locations. Figure 4-39 shows the measurement locations for Building 231 roof. The summary of results for these surveys is documented in Table 4-58 and Table 4-59. The conclusion from this building characterization with the analysis updated to include a proposed surface DCGL of 23,000 dpm/100 cm^2 (most limiting DCGL for the Uranium isotopes as presented in Table 3-2 for a large warehouse) is that no areas exceed the proposed DCGL. The interior areas averaged less than 210 dpm/100 cm^2 total surface activity with a maximum of 523 dpm/100 cm^2. The exterior averaged less than 561 dpm/100 cm^2 total surface activity with a maximum of 892 dpm/100 cm^2.

4.24 BUILDINGS THAT WILL BE DEMOLISHED

Three of the remaining structures, Building 115, the Sanitary Wastewater Treatment Plant Shed and Building 235, may be demolished at some point after DP approval or, if deemed economically advantageous remain intact after license termination. If the decision is made that these buildings are to remain and be subjected to FSS, then additional characterization surveys will be performed to support the new DQOs for these structures. The remainder of the buildings at the site are expected to be demolished during the site decommissioning. These buildings have had detailed operational surveys performed but since they will not remain on site for FSS, detailed formal characterization has not been performed. This section presents a summary of the operational surveys.

4.24.1 BUILDING 101 (TILE BARN)

Building 101, the Tile Barn, existed on the property prior to the initial purchase by Mallinckrodt in 1954. The former dairy barn was designated as a temporary storage facility. The main floor is concrete; the walls are constructed of hollow tile to an elevation of about 12 ft off the floor.

Detailed radiological characterization of Building 101 has not been performed. Detailed operational surveys from 2005 were reviewed. The three surveys of the Tile Barn show activity results as follows:

- CH-102705-01, Tile Barn 2nd Floor Characterization After Item Removal and Sweeping, 11/27/05 showed total alpha readings of up to 13,822 dpm/100 cm2 and total beta-gamma readings up to 108,412 dpm/100 cm2 with the highest removable activity level observed was 352±106 dpm/100 cm2 alpha and 619±117 dpm/100 cm2 beta;

- CH-112105-01, Tile Barn 2nd Floor West End Characterization, 11/21/05 showed total alpha readings of up to 1,968 dpm/100 cm2 and total beta-gamma readings up to 1,268 dpm/100 cm2 with the highest removable activity level observed was 89±53 dpm/100 cm2 alpha and 76±40 dpm/100 cm2 beta; and

- CH-111805-01, Tile Barn 1st Floor Characterization of Interior Walls showed an alpha background of 130 cpm, and the results were therefore determined to be questionable.

4.24.2 BUILDING 120 (WOOD BARN)

Operational surveys from 2005 were reviewed. Survey CH-111805-02, Westinghouse Wood Barn, Verification/Characterization Pre-job, dated 11/18/05, showed total alpha readings up to 33,654 dpm/100 cm^2. However, the minimum detectable activity for alpha listed on page 1 of the survey indicated a 100 cpm background for the alpha survey, which is very high for an alpha

meter (Ludlum Model 34-90). The survey notes that "all hot spot areas >5,000 dpm alpha fixed noted with orange spray paint for referenced removal." Total beta-gamma readings were not documented in the survey. The highest removable activity level observed was 76±50 dpm/100 cm^2 alpha and 72±40 dpm/100 cm^2 beta

4.24.3 BUILDING 240 (LABORATORY)

Operational survey CH-122705-05, dated 12/21/2005, was performed as characterization of walls and floors in Building 240 Laboratory prior to building demolition. Results of this survey showed total alpha readings of up to 10,055 dpm/100 cm^2 and total beta-gamma readings up to 4,818 dpm/100 cm^2. The highest removable activity level observed was 515 dpm/100 cm^2 alpha and 234 dpm/100 cm^2 beta.

4.24.4 BUILDING 240 (RED ROOM)

Operational Survey CH-122705-06, dated 12/22/2005, was performed as characterization of walls and floors in Building 240 Red Room prior to building demolition. Results of this survey showed total alpha readings of up to 259,753 dpm/100 cm^2 and total beta-gamma readings up to 1,157,036 dpm/100 cm^2. The highest removable activity level observed was 9,204 dpm/100 cm^2 alpha and 4,406 dpm/100 cm^2 beta.

4.24.5 BUILDING 240 (MAINTENANCE SHOP)

Operational Survey CH-012306-01, dated 1/11/2006, was performed as characterization of walls and floors of Building 240 Maintenance Shop prior to building demolition. Results of this survey showed total alpha readings of up to 27,428 dpm/100 cm^2 and total beta-gamma readings up to 124,155 dpm/100 cm^2. The highest removable activity level observed was 525 dpm/100 cm^2 alpha and 342 dpm/100 cm^2 beta.

4.24.6 BUILDING 240 (GREEN ROOM)

Operational Survey CH-012306-02, dated 1/11/2006, was performed as characterization of walls and floors of Building 240 Green Room prior to building demolition. Results of this survey showed total alpha readings of up to 79,151 dpm/100 cm^2 and total beta-gamma readings up to 71,555 dpm/100 cm^2. The highest removable activity level observed was 2,941 dpm/100 cm^2 alpha and 1,522 dpm/100 cm^2 beta.

4.24.7 BUILDING 240 (HEPA ROOM)

Operational Survey CH-012306-03, dated 1/16/2006, was performed as characterization of walls and floors of Building 240 HEPA Room prior to building demolition. Results of this survey showed total alpha readings of up to 5,329 dpm/100 cm^2 and total beta-gamma readings up to

1,782 dpm/100 cm^2. The highest removable activity level observed was 1,593 dpm/100 cm^2 alpha and 1,455 dpm/100 cm^2 beta.

4.24.8 BUILDING 252 (SOUTH STORAGE FACILITY)

Operational Survey CH-012306-04, dated 12/21/2005, was performed as characterization of walls and floors of Building 252 South Storage Facility prior to building demolition. Results of this survey showed total alpha readings of up to 52,082 dpm/100 cm^2 and total beta-gamma readings up to 12,096 dpm/100 cm^2. The highest removable activity level observed was 6,284 dpm/100 cm^2 alpha and 1,686 dpm/100 cm^2 beta.

4.24.9 BUILDING 253 (CAN STORAGE AND DECONTAMINATION)

Operational Survey CH-012706-01, dated 1/25/2006, was performed as characterization of walls and floors of Building 253 Can Storage and Decontamination prior to building demolition. Results of this survey showed total alpha readings of up to 35,970 dpm/100 cm^2 and total beta-gamma readings up to 182,048 dpm/100 cm^2. The highest removable activity level observed was 1,039 dpm/100 cm^2 alpha and 526 dpm/100 cm^2 beta.

4.24.10 BUILDING 254 (PELLET PLANT)

Operational Survey CH-012706-04, dated 1/25/2006, was performed as characterization of walls and floors of Building 254 Pellet Plant prior to building demolition. Results of this survey showed total alpha readings of up to 76,986 dpm/100 cm^2 and total beta-gamma readings up to 268,995 dpm/100 cm^2. The highest removable activity level observed was 3,049 dpm/100 cm^2 alpha and 1,586 dpm/100 cm^2 beta.

4.24.11 BUILDING 255 (ERBIA)

Operational Survey CH-122705-07, dated 12/22/2005, was performed as characterization of walls and floors of Building 255 Erbia prior to building demolition. Results of this survey showed total alpha readings of up to 50,233 dpm/100 cm^2 and total beta-gamma readings up to 105,455 dpm/100 cm^2. The highest removable activity level observed was 7,086 dpm/100 cm^2 alpha and 3,735 dpm/100 cm^2 beta.

4.24.12 BUILDING 256-1 (FILTER SHREDDER ROOM)

Operational Survey CH-012706-02, dated 1/25/2006, was performed as characterization of walls and floors of Building 256-1 Filter Shredder Room prior to building demolition. Results of this survey showed total alpha readings of up to 62,781 dpm/100 cm^2 and total beta-gamma readings up to 94,741 dpm/100 cm^2. The highest removable activity level observed was 730 dpm/100 cm^2 alpha and 459 dpm/100 cm^2 beta.

4.24.13 BUILDING 256-2 (WAREHOUSE)

Operational Survey CH-012706-03, dated 1/25/2006, was performed as characterization of walls and floors of Building 256-2 Warehouse prior to building demolition. Results of this survey showed total alpha readings of up to 2,398 dpm/100 cm^2 and total beta-gamma readings up to 3,809 dpm/100 cm^2. The highest removable activity level observed was 383 dpm/100 cm^2 alpha and 238 dpm/100 cm^2 beta.

4.24.14 BUILDING 260

Operational Survey CH-120905-03, dated 12/09/2005, was performed as characterization of walls and floors of Building 260 Dock, Control Room, and all four floors prior to building demolition. Results of this survey showed total alpha readings of up to 75,479 dpm/100 cm^2 and total beta-gamma readings up to 129,903 dpm/100 cm^2. The highest removable activity level observed was 4,584 dpm/100 cm^2 alpha and 2,432 dpm/100 cm^2 beta.

4.24.15 BUILDING 260 (LIMESTONE SHED)

Operational Survey CH-012706-05, dated 1/24/2006, was performed as characterization of walls and floors of Building 260 Limestone Shed prior to building demolition. Results of this survey showed total alpha readings of up to 4,451 dpm/100 cm^2 and total beta-gamma readings up to 6,096 dpm/100 cm^2. The highest removable activity level observed was 168 dpm/100 cm^2 alpha and 86 dpm/100 cm^2 beta.

4.25 REFERENCES FOR SECTION 4.0

4-1 Westinghouse Electric Company Document No. DO-08-005, "Historical Site Assessment".

4-2 Westinghouse Electric Company Document No. DO-08-008, "Derivation of Surrogates and Scaling Factors for Hard-to-Detect Radionuclides".

4-3 Cabrera Services, Inc., "Buried Waste Evaluation Report, prepared for Westinghouse Electric Company Hematite Site, Hematite Missouri, Final," March 2007.

4-4 Westinghouse Electric Company Document No. PO-EM-001, "Environmental Monitoring Plan," Revision 1, 2006.

4-5 Westinghouse Electric Company LLC, E-mail Correspondence, Subject: "Ground Water and Surface Water Background Samples," April 10, 2008.

4-6 Cabrera Services, Inc., EO-06-004, "Work Plan for Buried Waste Investigation At the Hematite Site," Revision 0, October 2006.

4-7 Energy*Solutions*, LLC, CS-HP-PN-006, "Supplemental Characterization Survey Plan for Westinghouse Electric Company-Hematite Facility," Revision 0, November 2007.

4-8 Westinghouse Electric Company LLC, Work Package WP-2007-005, "Supplemental Soil Characterization Sampling Impacted Outdoor Areas," Revision1, November 19, 2007.

4-9 Westinghouse Electric Company Document No. HGP-PLN-08-002, "Sampling Plan for Engineering Final Design Westinghouse Electric Company Festus, Missouri," Revision 0, June 2008.

4-10 Westinghouse Electric Company LLC, Work Package WP-2008-006, "Work Package for Selected Soil Areas Survey," Revision 1, May 2008.

4-11 Geo Consultants and SAIC, "Determination of Distribution Coefficients for Radionuclides of Concern at the Westinghouse Hematite Facility," Revision 0.

4-12 Westinghouse Electric Company LLC, Work Package WP-2007-006, "Supplemental Under Building Characterization Sampling," Revision 0, November 7, 2007.

4-13 Westinghouse Electric Company LLC, E-mail Correspondence, Subject: "Effluent Data 2002 – 2007," Allison K. Wilding to Duane R. Quayle, April 11, 2008.

4-14 LVI Services, Inc., HE-R-01, "MARSSIM Survey Methodology for Final Status Surveys of Building 230," Revision 1, February 2004.

4-15 Energy*Solutions*, LLC, "Hematite Supplemental Characterization Report," Revision 0, February 2008.

4-16 SAIC Report, "Remedial Investigation Report for the Westinghouse Hematite Site," Revision 1, January 2007

4-17 SAIC Report, "Supplemental Analysis of Hydrogeologic Conditions in Overburden at Westinghouse Hematite Facility, Hematite, Missouri ," Revision 0, July 2009.

4-18 SAIC Report, "Radionuclide Activity in Bedrock Groundwater at Westinghouse Hematite Facility, Hematite, Missouri," Revision 0, July 2009.

Table 4-1

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium (pCi/L)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
No Well Construction Record – Statistical Data Analyses																																
No. of Detects	1			6			0			0			0			0			0			5			0			5			0	0
No. of Non-Detects	18			13			0			0			0			12			4			0			5			0			5	5
Detection Freq.	5.3%			31.6%			NA			NA			NA			0.0%			0.0%			100.0%			0.0%			100.0%			0.0%	NA
Max. Conc.	5.7			9.2			NA			NA			NA			-1.5			0.00			1.9			0.06			1.1			3.1	NA
Min. Conc.	-4.9			0.98			NA			NA			NA			-7.5			-0.03			1.1			-0.01			0.41			1.6	NA
Mean Conc.	1.00			3.6			NA			NA			NA			-3.6			-0.01			1.3			0.02			0.74			2.1	NA
Std. Deviation	2.5			1.9			NA			NA			NA			1.8			0.02			0.34			0.04			0.27			0.58	NA
No Well Construction Record – Analytical Data Results																																
L21048-1	**-0.83**	3.6	6.2	5.0	3.4	–	–	–	–	–	–	–	–	–	–	**-4.7**	2.8	4.7	–	–	–	*1.1*	*0.51*	*0.33*	***0.00***	*0.00*	*0.09*	*0.80*	*0.50*	*0.54*	**1.9**	**<MDC**
L22035-1	**1.5**	3.4	4.8	**2.0**	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22502-1	**1.6**	3.2	4.3	**2.2**	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L23211-1	**3.4**	3.3	3.4	**2.5**	3.0	–	–	–	–	–	–	–	–	–	–	**-2.8**	2.7	4.5	***0.00***	*0.26*	*0.46*	*1.1*	*0.39*	*0.24*	***-0.01***	*0.10*	*0.19*	*0.86*	*0.35*	*0.27*	**2.0**	**<MDC**
L23797-1	**-0.61**	4.7	7.5	**3.1**	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L24369-1	5.7	5.3	5.6	9.2	4.2	–	–	–	–	–	–	–	–	–	–	**-4.0**	3.1	5.1	***-0.03***	*0.13*	*0.28*	*1.1*	*0.38*	*0.18*	***0.06***	*0.11*	*0.10*	*0.41*	*0.25*	*0.23*	**1.6**	**<MDC**
L24860-1	**2.6**	4.0	5.1	**3.1**	2.9	–	–	–	–	–	–	–	–	–	–	**-3.5**	3.0	5.0	–	–	–	*1.9*	*0.52*	*0.28*	***0.06***	*0.11*	*0.10*	*1.1*	*0.40*	*0.28*	**3.1**	**<MDC**
L24860-1R1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	***-0.02***	*0.09*	*0.21*	–	–	–	–	–	–	–	–	–	–	–
L25059-1	**4.1**	4.3	4.7	**2.3**	3.8	–	–	–	–	–	–	–	–	–	–	**-2.0**	2.9	4.8	***0.00***	*0.07*	*0.15*	*1.3*	*0.39*	*0.19*	***0.00***	*0.00*	*0.05*	*0.54*	*0.25*	*0.14*	**1.8**	**<MDC**
L25505-1	**-0.28**	3.9	6.6	5.1	2.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26212-1	**-0.71**	3.6	6.1	**3.8**	3.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26847-1	**-1.8**	4.0	7.1	**0.98**	4.1	–	–	–	–	–	–	–	–	–	–	**-2.0**	2.9	4.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L28108-1	**0.26**	2.1	3.4	**2.0**	3.2	–	–	–	–	–	–	–	–	–	–	**-6.0**	3.9	6.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L29059-1	**-1.2**	3.4	6.1	**2.3**	3.4	–	–	–	–	–	–	–	–	–	–	**-2.6**	3.0	5.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L29927-1	**0.88**	4.4	6.5	5.7	3.4	–	–	–	–	–	–	–	–	–	–	**-2.2**	3.1	5.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L30517-1	**0.88**	4.7	7.2	**2.5**	3.1	–	–	–	–	–	–	–	–	–	–	**-1.5**	3.2	5.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L31288-1	**1.7**	3.0	4.0	4.6	2.8	–	–	–	–	–	–	–	–	–	–	**-4.6**	4.1	6.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L31925-1	**-4.9**	5.7	10.5	**3.8**	3.1	–	–	–	–	–	–	–	–	–	–	**-7.5**	3.1	5.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L32916-2	**3.5**	4.9	6.2	5.7	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L33682-1	**3.0**	5.1	6.7	**2.7**	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Bedrock Aquifer – Statistical Data Analyses																																
No. of Detects	176			208			0			0			0			4			4			121			33			114			33	33
No. of Non-Detects	79			47			8			8			8			124			24			7			95			14			95	95
Detection Freq.	69.0%			81.6%			0.0%			0.0%			0.0%			3.1%			14.3%			94.5%			25.8%			89.1%			25.8%	25.8%
Max. Conc.	277.0			224.0			0.02			0.01			0.02			48.9			0.74			12.4			0.23			1.7			13.7	7.4%
Min. Conc.	-4.3			0.23			0.00			-0.01			0.00			-8.3			0.00			0.02			-0.05			0.00			0.06	0.7%
Mean Conc.	8.3			8.8			0.01			0.00			0.01			0.56			0.05			2.4			0.03			0.44			2.9	2.3%
Std. Deviation	18.1			15.7			0.01			0.01			0.01			5.4			0.14			1.8			0.04			0.34			2.1	1.6%
Bedrock Aquifer – Analytical Data Results																																
GW-BR01JC-030608	14.1	8.0	7.8	15.3	4.0	4.5	–	–	–	–	–	–	–	–	–	**-1.4**	4.1	8.0	–	–	–	*2.3*	*0.33*	*0.10*	***0.00***	*0.01*	*0.03*	*0.32*	*0.12*	*0.07*	**2.7**	**<MDC**
GW-BR01JC-032409	9.0	3.2	2.9	6.0	1.6	1.9	–	–	–	–	–	–	–	–	–	**-0.82**	0.80	1.5	–	–	–	*3.7*	*0.56*	*0.13*	*0.23*	*0.13*	*0.08*	*0.54*	*0.18*	*0.04*	4.5	6.2%
GW-BR01JC-062408	**5.6**	8.4	8.7	**6.9**	5.9	8.3	–	–	–	–	–	–	–	–	–	**-2.0**	3.1	5.2	–	–	–	*3.5*	*0.47*	*0.05*	***0.02***	*0.04*	*0.04*	*0.97*	*0.23*	*0.07*	**4.5**	**<MDC**
GW-BR01JC-062807	12.3	5.4	4.2	51.7	5.2	3.6	–	–	–	–	–	–	–	–	–	48.9	4.9	6.6	–	–	–	*2.8*	*0.48*	*0.12*	***0.02***	*0.06*	*0.10*	*0.62*	*0.21*	*0.08*	**3.4**	**<MDC**
GW-BR01JC-091508	14.9	2.8	1.8	7.8	2.4	3.5	–	–	–	–	–	–	–	–	–	**0.40**	1.7	2.8	–	–	–	*3.4*	*0.47*	*0.08*	***0.00***	*0.03*	*0.07*	*0.59*	*0.16*	*0.05*	**4.0**	**<MDC**
GW-BR01JC-091807	12.5	6.6	5.8	21.4	4.2	4.3	–	–	–	–	–	–	–	–	–	**-1.2**	3.3	5.5	–	–	–	*3.2*	*0.54*	*0.12*	*0.04*	*0.06*	*0.03*	*0.46*	*0.20*	*0.18*	3.7	1.4%
GW-BR01JC-120407	24.2	10.2	9.3	57.7	6.9	5.6	–	–	–	–	–	–	–	–	–	**-0.38**	3.1	5.2	–	–	–	*3.9*	*0.58*	*0.11*	*0.15*	*0.11*	*0.05*	*1.5*	*0.34*	*0.15*	5.6	1.5%
GW-BR01JC-120808	15.7	5.2	4.7	8.0	2.5	2.9	–	–	–	–	–	–	–	–	–	**2.4**	2.2	3.5	–	–	–	*4.0*	*0.61*	*0.09*	***0.08***	*0.08*	*0.10*	*0.62*	*0.21*	*0.08*	**4.7**	**<MDC**
GW-BR01RB-030608	**5.4**	6.8	8.9	**2.3**	2.6	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR01RB-032409	5.0	2.5	2.9	**0.30**	1.3	2.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR01RB-062408	**4.6**	6.9	7.2	**0.88**	4.6	7.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR01RB-062707	5.0	3.1	1.9	**3.1**	2.4	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR01RB-091508	5.8	1.4	1.2	**1.4**	1.1	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR01RB-091807	**0.56**	3.7	5.9	**2.9**	2.8	4.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR01RB-120507	**1.5**	4.1	6.1	**3.0**	2.6	3.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR01RB-120808	6.5	2.8	2.9	**1.2**	1.2	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR02RB-030608	**1.7**	4.9	7.5	**1.9**	2.4	3.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR02RB-032309	6.3	2.3	2.2	**0.79**	0.88	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR02RB-062508	**-0.56**	5.4	9.1	3.3	2.3	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR02RB-062807	5.6	3.6	3.5	5.3	2.5	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR02RB-091608	3.7	2.2	2.8	**0.70**	1.1	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Bedrock Aquifer – Analytical Data Results																																
GW-BR02RB-091907	**1.8**	2.7	3.7	**2.7**	2.3	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR02RB-120507	**-0.65**	4.7	8.0	7.2	3.3	4.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR02RB-121008	6.4	2.3	2.1	**0.59**	0.72	1.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR03JC-030408	**2.9**	3.3	3.9	5.6	2.8	3.7	–	–	–	–	–	–	–	–	–	**1.4**	2.9	4.7	–	–	–	*2.7*	*0.46*	*0.10*	***0.01***	*0.04*	*0.07*	*0.30*	*0.15*	*0.12*	**3.0**	**<MDC**
GW-BR03JC-031609	5.1	2.2	2.6	4.1	1.2	1.6	–	–	–	–	–	–	–	–	–	**-0.28**	0.74	1.3	–	–	–	*2.5*	*0.40*	*0.09*	***0.01***	*0.03*	*0.08*	*0.19*	*0.10*	*0.08*	**2.7**	**<MDC**
GW-BR03JC-062508	**4.3**	5.1	6.4	9.3	3.1	3.8	–	–	–	–	–	–	–	–	–	**-0.61**	3.2	5.4	–	–	–	*3.4*	*0.66*	*0.03*	***0.00***	*0.00*	*0.02*	*0.36*	*0.14*	*0.03*	**3.7**	**<MDC**
GW-BR03JC-062607	**4.6**	4.1	4.7	11.2	3.2	3.8	–	–	–	–	–	–	–	–	–	**-4.9**	3.3	5.6	–	–	–	*2.3*	*0.35*	*0.06*	***0.05***	*0.06*	*0.05*	*0.27*	*0.12*	*0.08*	**2.6**	**<MDC**
GW-BR03JC-091807	**2.3**	3.6	4.9	5.2	2.8	4.0	–	–	–	–	–	–	–	–	–	**-2.0**	3.1	5.1	–	–	–	*2.5*	*0.42*	*0.20*	***-0.01***	*0.04*	*0.09*	*0.25*	*0.14*	*0.14*	**2.7**	**<MDC**
GW-BR03JC-091908	4.5	2.2	2.5	4.5	1.3	1.6	–	–	–	–	–	–	–	–	–	-0.4	1.7	2.8	–	–	–	*2.9*	*0.40*	*0.05*	***0.01***	*0.02*	*0.03*	*0.26*	*0.10*	*0.05*	**3.1**	**<MDC**
GW-BR03JC-120407	**2.8**	4.6	6.5	9.4	2.8	3.3	–	–	–	–	–	–	–	–	–	**-3.9**	3.1	5.2	–	–	–	*2.5*	*0.42*	*0.08*	*0.04*	*0.05*	*0.03*	*0.27*	*0.13*	*0.05*	2.8	2.1%
GW-BR03JC-120908	3.1	1.5	1.6	4.4	1.5	2.1	–	–	–	–	–	–	–	–	–	-0.5	0.7	1.3	–	–	–	*2.5*	*0.40*	*0.06*	*0.06*	*0.06*	*0.04*	*0.22*	*0.10*	*0.07*	2.5	3.8%
GW-BR03OB-062508	**-0.69**	4.1	7.2	**3.6**	2.8	4.0	–	–	–	–	–	–	–	–	–	**-5.4**	3.6	6.1	–	–	–	*0.55*	*0.16*	*0.04*	***0.01***	*0.03*	*0.03*	*0.27*	*0.11*	*0.05*	**0.82**	**<MDC**
GW-BR03RB-030408	5.3	4.2	4.5	10.3	3.2	3.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR03RB-031609	10.7	3.5	3.2	**1.1**	1.3	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR03RB-062508	**2.0**	4.9	7.0	6.3	3.0	4.0	–	–	–	–	–	–	–	–	–	**-2.5**	3.2	5.3	–	–	–	*2.0*	*0.44*	*0.03*	***0.01***	*0.03*	*0.02*	*0.19*	*0.10*	*0.03*	**2.2**	**<MDC**
GW-BR03RB-062607	**3.4**	4.0	5.0	**3.1**	2.6	3.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR03RB-091807	**0.00**	3.8	6.3	**2.7**	2.8	4.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR03RB-091908	5.2	3.1	4.0	2.7	1.6	2.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR03RB-120407	**4.5**	6.5	9.0	6.1	2.7	3.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR03RB-120908	10.4	3.0	2.1	3.0	1.7	2.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR04JC-030608	23.6	10.6	9.6	16.8	3.8	4.2	–	–	–	–	–	–	–	–	–	**-4.4**	3.9	7.8	–	–	–	*3.4*	*0.47*	*0.15*	***0.04***	*0.06*	*0.06*	*1.1*	*0.25*	*0.12*	**4.5**	**<MDC**
GW-BR04JC-031209	26.5	6.4	3.9	15.7	3.9	4.8	–	–	–	–	–	–	–	–	–	**0.16**	0.73	1.2	–	–	–	*3.8*	*0.48*	*0.05*	*0.07*	*0.06*	*0.06*	*1.2*	*0.22*	*0.04*	5.0	0.9%
GW-BR04JC-062608	10.8	6.9	6.7	16.5	3.7	3.8	–	–	–	–	–	–	–	–	–	**-3.3**	3.6	6.0	–	–	–	*3.4*	*0.45*	*0.04*	***0.04***	*0.05*	*0.04*	*0.56*	*0.17*	*0.07*	**4.0**	**<MDC**
GW-BR04JC-062707	277.0	70.7	46.7	224.0	25.4	20.2	–	–	–	–	–	–	–	–	–	**-2.3**	4.0	6.6	–	–	–	*4.5*	*0.69*	*0.20*	***-0.02***	*0.06*	*0.15*	*1.3*	*0.35*	*0.22*	**5.8**	**<MDC**
GW-BR04JC-091608	5.6	2.5	2.6	6.9	1.7	1.9	–	–	–	–	–	–	–	–	–	**0.20**	1.8	3.0	–	–	–	*3.1*	*0.42*	*0.06*	***0.02***	*0.03*	*0.06*	*0.56*	*0.15*	*0.06*	**3.7**	**<MDC**
GW-BR04JC-091907	20.2	8.7	7.3	15.8	3.8	4.3	–	–	–	–	–	–	–	–	–	**-0.39**	3.4	5.5	–	–	–	*3.5*	*0.44*	*0.10*	***0.02***	*0.04*	*0.04*	*0.95*	*0.21*	*0.09*	**4.5**	**<MDC**
GW-BR04JC-120607	11.7	7.6	8.5	18.5	3.8	4.1	–	–	–	–	–	–	–	–	–	**-8.3**	3.5	5.9	–	–	–	*3.4*	*0.50*	*0.10*	***0.01***	*0.04*	*0.05*	*0.94*	*0.24*	*0.13*	**4.4**	**<MDC**
GW-BR04JC-121008	11.6	3.3	2.5	9.3	1.8	1.7	–	–	–	–	–	–	–	–	–	**-1.8**	1.6	2.9	–	–	–	*2.9*	*0.50*	*0.09*	***0.03***	*0.06*	*0.12*	*0.65*	*0.21*	*0.09*	**3.6**	**<MDC**
GW-BR04RB-030608	8.1	6.2	7.1	**3.7**	2.6	3.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Bedrock Aquifer – Analytical Data Results																																
GW-BR04RB-031209	7.5	2.5	2.4	1.8	0.90	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR04RB-062608	5.5	4.6	5.1	6.8	2.7	3.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR04RB-062707	4.7	2.8	1.7	5.7	2.5	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR04RB-091608	7.5	2.2	1.6	2.2	1.2	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR04RB-091907	5.6	4.7	5.3	**3.0**	2.6	3.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR04RB-120507	5.6	4.1	4.5	6.1	2.8	3.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR04RB-121008	4.7	1.9	2.0	2.8	0.94	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR05RB-030608	**2.6**	4.7	6.7	6.1	2.7	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR05RB-032309	5.2	2.7	3.5	4.7	1.2	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR05RB-062508	**-2.9**	4.1	7.8	5.8	2.5	3.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR05RB-062807	**1.9**	2.8	3.6	6.4	2.6	3.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR05RB-091608	9.3	3.0	2.8	3.4	1.2	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR05RB-092007	**3.3**	3.8	5.0	6.6	2.9	3.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR05RB-120507	**3.1**	3.7	4.8	6.1	2.9	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR05RB-121008	**1.8**	1.6	2.4	2.7	0.98	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR06RB-030408	8.2	4.8	4.5	6.7	2.9	3.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR06RB-030508	**2.7**	4.2	5.7	3.8	2.6	3.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR06RB-031109	9.3	3.5	3.6	5.6	2.0	2.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR06RB-062508	15.2	7.6	6.9	6.0	2.9	3.9	–	–	–	–	–	–	–	–	–	**-5.2**	3.2	5.3	–	–	–	*7.5*	*0.81*	*0.05*	*0.06*	*0.07*	*0.05*	*0.43*	*0.16*	*0.04*	8.0	2.1%
GW-BR06RB-062607	**3.8**	4.1	5.0	6.6	2.9	3.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR06RB-091807	7.6	5.9	6.6	5.5	3.1	4.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR06RB-091808	7.1	2.7	2.8	**0.81**	0.82	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR06RB-120407	8.7	7.0	8.7	6.9	2.8	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR06RB-120908	6.7	2.0	1.6	2.9	1.4	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR07JC-030308	**3.7**	4.1	5.3	9.2	3.3	4.3	–	–	–	–	–	–	–	–	–	**-0.80**	3.0	5.0	–	–	–	*4.7*	*0.58*	*0.12*	*0.08*	*0.07*	*0.02*	*0.71*	*0.20*	*0.11*	5.5	1.7%
GW-BR07JC-032409	6.8	2.1	2.4	**1.6**	1.1	1.7	–	–	–	–	–	–	–	–	–	**-0.93**	0.74	1.4	–	–	–	*4.1*	*0.62*	*0.09*	***0.06***	*0.07*	*0.09*	*0.54*	*0.19*	*0.11*	**4.7**	**<MDC**
GW-BR07JC-062608	**5.8**	6.0	6.7	4.5	3.0	4.3	–	–	–	–	–	–	–	–	–	**-6.2**	3.5	5.9	–	–	–	*4.3*	*0.57*	*0.14*	***0.05***	*0.06*	*0.05*	*0.41*	*0.16*	*0.07*	**4.7**	**<MDC**
GW-BR07JC-062807	13.5	6.9	6.0	17.3	3.9	4.2	–	–	–	–	–	–	–	–	–	**-0.21**	3.8	6.3	–	–	–	*3.7*	*0.43*	*0.09*	*0.07*	*0.07*	*0.06*	*0.76*	*0.18*	*0.10*	4.6	1.5%
GW-BR07JC-091708	5.0	3.0	3.9	**2.9**	2.6	4.1	–	–	–	–	–	–	–	–	–	**-0.40**	1.8	3.0	–	–	–	*3.6*	*0.46*	*0.06*	***0.04***	*0.04*	*0.05*	*0.42*	*0.12*	*0.05*	**4.1**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium (pCi/L)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Bedrock Aquifer – Analytical Data Results																																
GW-BR07JC-091907	11.6	6.9	6.7	7.5	3.1	4.1	–	–	–	–	–	–	–	–	–	**-0.87**	3.3	5.5	–	–	–	*3.7*	*0.45*	*0.14*	*0.07*	*0.06*	*0.05*	*0.60*	*0.17*	*0.13*	4.4	1.7%
GW-BR07JC-120507	**5.0**	7.4	10.2	8.8	3.4	4.4	–	–	–	–	–	–	–	–	–	**-6.3**	3.5	5.9	–	–	–	*4.9*	*0.63*	*0.11*	***-0.02***	*0.02*	*0.08*	*0.81*	*0.22*	*0.09*	**5.7**	**<MDC**
GW-BR07JC-121108	7.8	2.8	2.6	3.0	1.4	2.0	–	–	–	–	–	–	–	–	–	-2.7	1.2	2.3	–	–	–	*3.9*	*0.51*	*0.05*	*0.11*	*0.08*	*0.07*	*0.34*	*0.12*	*0.05*	4.3	4.7%
GW-BR08JC-030408	6.0	4.7	5.1	15.9	3.6	4.0	–	–	–	–	–	–	–	–	–	**-1.5**	3.1	5.1	–	–	–	*0.64*	*0.27*	*0.21*	***0.01***	*0.06*	*0.11*	***0.15***	*0.18*	*0.28*	**0.80**	**<MDC**
GW-BR08JC-031109	4.3	2.8	3.5	4.2	2.1	2.9	–	–	–	–	–	–	–	–	–	2.0	0.82	1.2	–	–	–	*0.46*	*0.14*	*0.05*	***0.00***	*0.01*	*0.03*	*0.17*	*0.08*	*0.06*	**0.63**	**<MDC**
GW-BR08JC-062408	**3.0**	6.0	7.0	7.9	5.4	7.3	–	–	–	–	–	–	–	–	–	**-2.9**	3.2	5.3	–	–	–	*0.57*	*0.18*	*0.04*	***0.04***	*0.06*	*0.07*	*0.27*	*0.13*	*0.07*	**0.87**	**<MDC**
GW-BR08JC-062807	**4.8**	4.9	6.1	13.7	3.7	4.5	–	–	–	–	–	–	–	–	–	**-0.64**	4.1	6.7	–	–	–	*0.55*	*0.20*	*0.12*	***0.01***	*0.07*	*0.11*	***0.09***	*0.10*	*0.13*	**0.65**	**<MDC**
GW-BR08JC-091807	**0.62**	4.1	6.5	9.3	3.3	4.3	–	–	–	–	–	–	–	–	–	**1.6**	3.3	5.4	–	–	–	*1.1*	*0.27*	*0.14*	***0.05***	*0.06*	*0.05*	*0.42*	*0.17*	*0.13*	**1.6**	**<MDC**
GW-BR08JC-091808	5.5	3.0	3.7	6.3	1.7	2.0	–	–	–	–	–	–	–	–	–	**1.9**	1.8	2.9	–	–	–	*0.48*	*0.17*	*0.10*	***0.05***	*0.06*	*0.08*	*0.10*	*0.08*	*0.06*	**0.62**	**<MDC**
GW-BR08JC-120407	**0.00**	5.3	8.7	16.1	3.4	3.5	–	–	–	–	–	–	–	–	–	**-1.2**	3.4	5.6	–	–	–	*0.84*	*0.22*	*0.09*	***0.02***	*0.03*	*0.02*	*0.24*	*0.12*	*0.06*	**1.1**	**<MDC**
GW-BR08JC-120808	6.3	2.5	2.5	7.5	1.6	1.7	–	–	–	–	–	–	–	–	–	**1.3**	0.91	1.4	–	–	–	*0.52*	*0.19*	*0.10*	***0.07***	*0.07*	*0.08*	*0.12*	*0.09*	*0.09*	**0.71**	**<MDC**
GW-BR08RB-030408	**3.3**	3.3	3.9	6.1	2.8	3.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR08RB-031109	13.3	3.8	2.9	**2.3**	1.6	2.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR08RB-062408	14.0	9.7	6.5	**2.0**	4.6	7.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR08RB-062807	10.0	5.6	5.7	5.5	3.1	4.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR08RB-091807	**1.0**	3.5	5.3	**3.4**	2.8	4.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR08RB-091808	7.9	2.4	1.9	4.9	1.1	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR08RB-120407	**6.2**	5.3	6.7	9.2	2.8	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR08RB-120908	6.2	2.0	1.7	4.0	1.3	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR09JC-030608	**0.74**	6.1	9.8	8.5	3.1	3.8	–	–	–	–	–	–	–	–	–	**3.0**	2.9	4.7	–	–	–	*2.7*	*0.38*	*0.09*	***0.01***	*0.03*	*0.04*	*0.52*	*0.16*	*0.08*	**3.2**	**<MDC**
GW-BR09JC-032309	9.4	3.1	3.0	5.2	1.5	1.9	–	–	–	–	–	–	–	–	–	**-0.29**	0.73	1.3	–	–	–	*2.6*	*0.43*	*0.07*	***0.08***	*0.08*	*0.09*	*0.68*	*0.20*	*0.06*	**3.3**	**<MDC**
GW-BR09JC-062508	**-4.3**	6.1	11.6	8.3	2.9	3.5	–	–	–	–	–	–	–	–	–	**-1.8**	3.3	5.4	–	–	–	*2.3*	*0.37*	*0.07*	*0.04*	*0.05*	*0.02*	*0.35*	*0.14*	*0.07*	2.7	1.9%
GW-BR09JC-062807	**5.0**	5.1	6.3	11.6	3.6	4.6	–	–	–	–	–	–	–	–	–	**-2.3**	3.9	6.5	–	–	–	*2.8*	*0.46*	*0.15*	***0.00***	*0.04*	*0.09*	*0.60*	*0.21*	*0.14*	**3.4**	**<MDC**
GW-BR09JC-091608	6.5	3.0	3.3	7.7	2.0	2.2	–	–	–	–	–	–	–	–	–	**-0.80**	1.8	3.1	–	–	–	*2.5*	*0.36*	*0.05*	***0.00***	*0.01*	*0.05*	*0.52*	*0.14*	*0.02*	**3.0**	**<MDC**
GW-BR09JC-092007	5.7	4.8	5.3	8.0	3.1	4.1	–	–	–	–	–	–	–	–	–	**0.93**	3.4	5.6	–	–	–	*2.3*	*0.59*	*0.17*	*0.08*	*0.07*	*0.04*	*0.42*	*0.14*	*0.05*	2.8	2.9%
GW-BR09JC-120507	**4.0**	4.6	6.1	7.4	3.1	4.2	–	–	–	–	–	–	–	–	–	**0.46**	3.5	5.7	–	–	–	*3.7*	*0.70*	*0.20*	***0.04***	*0.09*	*0.12*	*1.3*	*0.38*	*0.10*	**5.0**	**<MDC**
GW-BR09JC-121008	9.3	2.7	1.9	9.0	1.9	2.2	–	–	–	–	–	–	–	–	–	**-1.8**	1.4	2.6	–	–	–	*2.3*	*0.49*	*0.18*	*0.17*	*0.14*	*0.08*	*0.79*	*0.28*	*0.13*	3.2	3.2%
GW-BR10JC-030508	9.8	6.3	6.4	16.9	3.7	3.8	–	–	–	–	–	–	–	–	–	**1.7**	4.2	8.1	–	–	–	*3.6*	*1.1*	*0.16*	***-0.05***	*0.07*	*0.28*	***0.31***	*0.33*	*0.36*	**3.9**	**<MDC**
GW-BR10JC-031609	*9.4*	*3.8*	*4.4*	*5.4*	*1.7*	*2.0*	–	–	–	–	–	–	–	–	–	**0.27**	0.73	1.2	–	–	–	*2.7*	*0.40*	*0.08*	***0.01***	*0.03*	*0.07*	*0.37*	*0.13*	*0.06*	**3.1**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Bedrock Aquifer – Analytical Data Results																																
GW-BR10JC-062408	**4.8**	7.1	7.4	7.7	5.5	7.5	–	–	–	–	–	–	–	–	–	**-1.1**	3.1	5.1	–	–	–	*2.5*	*0.39*	*0.06*	***0.01***	*0.03*	*0.04*	*0.42*	*0.15*	*0.07*	**2.9**	**<MDC**
GW-BR10JC-062707	11.0	4.6	2.0	11.0	3.1	3.5	–	–	–	–	–	–	–	–	–	**0.16**	4.0	6.6	–	–	–	*3.2*	*0.61*	*0.18*	***0.00***	*0.00*	*0.04*	*0.44*	*0.21*	*0.10*	**3.6**	**<MDC**
GW-BR10JC-091807	**3.9**	4.6	5.8	7.8	3.1	4.2	–	–	–	–	–	–	–	–	–	**-1.4**	3.1	5.1	–	–	–	*2.6*	*0.48*	*0.23*	***-0.01***	*0.02*	*0.08*	*0.67*	*0.25*	*0.22*	**3.2**	**<MDC**
GW-BR10JC-091808	5.7	2.8	3.2	5.2	1.4	1.7	–	–	–	–	–	–	–	–	–	**-0.70**	1.9	3.1	–	–	–	*2.7*	*0.40*	*0.07*	***0.01***	*0.03*	*0.06*	*0.39*	*0.14*	*0.07*	**3.1**	**<MDC**
GW-BR10JC-120407	**2.8**	5.4	7.9	12.9	3.2	3.5	–	–	–	–	–	–	–	–	–	**-0.03**	3.1	5.2	–	–	–	*2.6*	*0.42*	*0.09*	***-0.01***	*0.02*	*0.07*	*0.64*	*0.20*	*0.09*	**3.2**	**<MDC**
GW-BR10JC-120908	7.6	2.4	2.0	6.4	1.7	2.1	–	–	–	–	–	–	–	–	–	**-0.71**	0.78	1.4	–	–	–	*2.1*	*0.37*	*0.10*	***0.08***	*0.08*	*0.11*	*0.35*	*0.13*	*0.08*	**2.6**	**<MDC**
GW-BR10JC-121304	5.2	1.6	1.5	8.9	2.1	2.6	–	–	–	–	–	–	–	–	–	**0.04**	5.8	10.1	***0.03***	*0.03*	*0.03*	*2.1*	*0.40*	*0.06*	***0.04***	*0.04*	*0.04*	*0.49*	*0.14*	*0.05*	**2.6**	**<MDC**
GW-BR10RB-030508	10.7	5.7	5.3	6.9	2.8	3.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR10RB-031609	16.3	3.7	2.1	4.9	1.5	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR10RB-062408	8.1	7.6	6.3	**4.5**	4.9	7.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR10RB-062707	9.1	3.9	1.8	8.3	2.8	3.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR10RB-091807	6.5	5.1	5.6	5.9	3.0	4.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR10RB-091808	10.9	3.3	2.8	3.0	1.3	1.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR10RB-120407	**5.9**	5.0	6.0	8.0	3.0	3.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR10RB-120908	7.7	2.2	1.7	4.3	1.3	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR10RB-121304	15.7	3.4	1.5	9.1	2.4	3.1	–	–	–	–	–	–	–	–	–	**2.2**	6.0	10.2	***0.00***	*0.02*	*0.03*	*4.5*	*0.78*	*0.03*	***0.01***	*0.03*	*0.05*	*0.38*	*0.12*	*0.03*	**4.9**	**<MDC**
GW-BR11JC-030608	7.3	5.0	5.5	10.4	3.0	3.6	–	–	–	–	–	–	–	–	–	**-0.51**	3.9	7.7	–	–	–	*1.8*	*0.28*	*0.07*	***0.03***	*0.04*	*0.03*	*0.44*	*0.14*	*0.08*	**2.3**	**<MDC**
GW-BR11JC-032309	5.6	1.8	1.5	5.6	1.1	1.1	–	–	–	–	–	–	–	–	–	**-0.50**	0.85	1.5	–	–	–	*1.4*	*0.29*	*0.10*	***0.06***	*0.06*	*0.07*	*0.27*	*0.12*	*0.06*	**1.7**	**<MDC**
GW-BR11JC-062508	**0.87**	4.4	7.0	8.3	2.6	3.1	–	–	–	–	–	–	–	–	–	**-5.0**	3.1	5.3	–	–	–	*1.6*	*0.29*	*0.06*	*0.03*	*0.04*	*0.02*	*0.48*	*0.15*	*0.06*	2.2	0.9%
GW-BR11JC-062807	**2.3**	2.6	3.1	9.8	2.7	3.2	–	–	–	–	–	–	–	–	–	**-2.6**	3.8	6.3	–	–	–	*1.6*	*0.32*	*0.10*	***0.02***	*0.03*	*0.02*	*0.31*	*0.14*	*0.09*	**1.9**	**<MDC**
GW-BR11JC-092007	**2.1**	2.4	3.2	9.0	2.8	3.4	–	–	–	–	–	–	–	–	–	**-0.45**	3.3	5.4	–	–	–	*1.6*	*0.32*	*0.12*	***0.01***	*0.04*	*0.05*	*0.33*	*0.15*	*0.13*	**1.9**	**<MDC**
GW-BR11JC-092208	7.9	2.7	2.3	5.7	1.4	1.6	–	–	–	–	–	–	–	–	–	**0.2**	2.0	3.4	–	–	–	*1.7*	*0.49*	*0.18*	***0.02***	*0.09*	*0.22*	*0.39*	*0.23*	*0.15*	**2.1**	**<MDC**
GW-BR11JC-120607	5.3	4.2	5.0	11.8	3.1	3.7	–	–	–	–	–	–	–	–	–	**5.3**	3.9	6.3	–	–	–	*2.0*	*0.37*	*0.11*	***0.01***	*0.04*	*0.07*	*0.20*	*0.11*	*0.05*	**2.2**	**<MDC**
GW-BR11JC-121008	5.5	1.9	1.8	6.2	1.2	1.0	–	–	–	–	–	–	–	–	–	**-1.1**	0.67	1.3	–	–	–	*1.5*	*0.34*	*0.11*	*0.06*	*0.07*	*0.06*	*0.55*	*0.20*	*0.07*	2.1	1.7%
GW-BR11JC-121304	8.0	1.9	1.0	11.5	2.4	2.5	–	–	–	–	–	–	–	–	–	**5.8**	6.3	10.2	***0.00***	*0.02*	*0.04*	*2.2*	*0.42*	*0.04*	***0.01***	*0.03*	*0.04*	*0.30*	*0.10*	*0.04*	**2.5**	**<MDC**
GW-BR12JC-030308	6.1	4.5	5.0	5.4	3.0	4.3	–	–	–	–	–	–	–	–	–	**-1.9**	3.0	5.0	–	–	–	*0.61*	*0.19*	*0.08*	***0.02***	*0.03*	*0.02*	*0.35*	*0.14*	*0.06*	**0.98**	**<MDC**
GW-BR12JC-032409	7.3	2.5	2.1	4.0	1.5	1.9	–	–	–	–	–	–	–	–	–	**1.5**	7.3	13.0	–	–	–	*2.0*	*0.40*	*0.14*	*0.10*	*0.09*	*0.09*	*0.19*	*0.12*	*0.09*	2.3	7.4%
GW-BR12JC-062508	**5.4**	5.2	6.2	10.9	3.2	3.8	–	–	–	–	–	–	–	–	–	**-4.8**	3.6	6.0	–	–	–	*2.7*	*0.40*	*0.05*	*0.07*	*0.07*	*0.04*	*0.29*	*0.12*	*0.05*	3.0	3.5%
GW-BR12JC-062707	3.5	2.6	1.8	7.6	2.7	3.4	–	–	–	–	–	–	–	–	–	**-1.9**	3.9	6.5	–	–	–	*2.6*	*0.44*	*0.12*	***0.02***	*0.06*	*0.07*	*0.39*	*0.16*	*0.10*	**3.0**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Bedrock Aquifer – Analytical Data Results																																
GW-BR12JC-091508	6.1	1.4	1.3	7.4	1.4	1.7	–	–	–	–	–	–	–	–	–	**1.3**	2.2	3.5	–	–	–	*2.6*	*0.37*	*0.06*	***0.01***	*0.02*	*0.03*	*0.24*	*0.09*	*0.05*	**2.9**	**<MDC**
GW-BR12JC-091907	7.2	5.6	6.3	7.1	3.0	4.0	–	–	–	–	–	–	–	–	–	**2.5**	3.4	5.5	–	–	–	*3.1*	*0.39*	*0.09*	***0.01***	*0.02*	*0.03*	*0.36*	*0.13*	*0.09*	**3.4**	**<MDC**
GW-BR12JC-120307	**3.3**	3.9	5.1	7.2	2.9	3.8	–	–	–	–	–	–	–	–	–	**-5.8**	3.5	5.9	–	–	–	*2.6*	*0.80*	*0.30*	***0.00***	*0.00*	*0.09*	*0.39*	*0.30*	*0.23*	**3.0**	**<MDC**
GW-BR12JC-120804	10.4	2.4	1.5	9.7	2.3	2.8	***0.01***	*0.03*	*0.06*	***-0.01***	*0.02*	*0.04*	***0.01***	*0.03*	*0.04*	**4.6**	4.6	7.5	*0.04*	*0.04*	*0.03*	*4.5*	*0.79*	*0.02*	*0.07*	*0.05*	*0.02*	*1.2*	*0.27*	*0.02*	5.7	0.9%
GW-BR12JC-120808	7.4	2.6	2.2	4.9	1.2	1.4	–	–	–	–	–	–	–	–	–	**0.28**	0.84	1.4	–	–	–	*2.4*	*0.44*	*0.09*	***0.04***	*0.05*	*0.05*	*0.33*	*0.15*	*0.04*	**2.8**	**<MDC**
GW-BR12RB-030308	**2.7**	3.8	5.1	5.2	3.0	4.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR12RB-032409	8.3	2.5	2.8	2.5	1.5	2.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR12RB-062508	**4.6**	4.9	6.0	6.8	2.9	3.8	–	–	–	–	–	–	–	–	–	**-8.2**	3.6	6.1	–	–	–	*4.1*	*0.55*	*0.07*	***-0.01***	*0.01*	*0.05*	*0.35*	*0.15*	*0.08*	**4.4**	**<MDC**
GW-BR12RB-062707	3.6	2.7	1.9	6.1	2.6	3.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR12RB-091508	6.6	1.3	1.0	5.9	1.0	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR12RB-091907	**4.3**	5.1	6.5	8.3	3.1	4.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR12RB-120307	**1.6**	3.4	5.0	8.6	3.0	3.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR12RB-120804	13.1	2.8	1.4	10.2	2.3	2.5	***0.02***	*0.03*	*0.05*	***0.00***	*0.01*	*0.02*	***0.00***	*0.03*	*0.06*	**0.81**	4.1	7.0	*0.06*	*0.04*	*0.02*	*12.4*	*2.0*	*0.04*	*0.06*	*0.04*	*0.02*	*1.2*	*0.26*	*0.05*	13.7	0.7%
GW-BR12RB-120808	10.6	2.8	2.0	4.6	1.0	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BR1JC-121704	10.1	1.9	0.88	12.1	2.2	1.5	***0.01***	*0.04*	*0.03*	***0.00***	*0.02*	*0.04*	***0.00***	*0.03*	*0.03*	**4.3**	6.4	10.6	*0.74*	*0.21*	*0.05*	*1.7*	*0.34*	*0.04*	*0.06*	*0.05*	*0.04*	*0.53*	*0.15*	*0.04*	2.3	1.7%
GW-BR1RB-120704	5.7	1.6	1.5	3.4	1.7	3.2	***0.01***	*0.04*	*0.06*	***-0.01***	*0.02*	*0.05*	***0.00***	*0.03*	*0.05*	**4.4**	4.7	7.6	***0.02***	*0.02*	*0.03*	*4.1*	*0.73*	*0.06*	*0.09*	*0.06*	*0.06*	*1.1*	*0.25*	*0.06*	5.3	1.3%
GW-BR2JC-120804	8.7	2.1	1.3	10.2	2.3	2.6	–	–	–	–	–	–	–	–	–	**2.4**	3.9	6.4	***0.02***	*0.03*	*0.04*	*1.2*	*0.24*	*0.05*	***0.02***	*0.03*	*0.04*	*0.28*	*0.09*	*0.05*	**1.4**	**<MDC**
GW-BR2RB-120804	4.2	1.3	1.3	3.6	1.5	2.6	***0.00***	*0.03*	*0.05*	***0.00***	*0.01*	*0.03*	***0.02***	*0.03*	*0.02*	**3.1**	3.0	4.8	*0.12*	*0.07*	*0.06*	*3.6*	*0.63*	*0.05*	*0.06*	*0.04*	*0.02*	*0.77*	*0.18*	*0.04*	4.5	1.3%
GW-BR3JC-120904	8.0	2.2	1.6	7.2	2.2	3.2	–	–	–	–	–	–	–	–	–	**2.9**	4.8	8.0	***0.01***	*0.03*	*0.05*	*3.4*	*0.62*	*0.06*	*0.06*	*0.05*	*0.04*	*0.66*	*0.17*	*0.05*	4.1	1.3%
GW-BR3RB-120904	7.9	2.0	1.5	6.6	1.9	2.7	–	–	–	–	–	–	–	–	–	**3.2**	4.5	7.4	***0.02***	*0.03*	*0.02*	*2.1*	*0.41*	*0.09*	***0.06***	*0.05*	*0.06*	*0.24*	*0.10*	*0.07*	**2.4**	**<MDC**
GW-BR4JC-121404	6.2	1.2	0.58	9.0	1.7	1.3	–	–	–	–	–	–	–	–	–	**2.3**	5.5	9.4	***0.03***	*0.03*	*0.05*	*3.8*	*0.68*	*0.05*	*0.05*	*0.04*	*0.05*	*1.00*	*0.23*	*0.04*	4.8	0.8%
GW-BR4RB-121004	9.6	2.3	1.6	6.6	1.8	2.6	–	–	–	–	–	–	–	–	–	**6.4**	6.5	10.3	***0.02***	*0.03*	*0.05*	*3.3*	*0.60*	*0.05*	*0.05*	*0.04*	*0.04*	*0.19*	*0.08*	*0.04*	3.5	3.8%
GW-BR5JC-121304	6.6	1.7	1.2	9.1	2.2	2.8	–	–	–	–	–	–	–	–	–	**6.9**	6.5	10.3	***0.01***	*0.03*	*0.06*	*1.8*	*0.37*	*0.05*	***0.02***	*0.03*	*0.05*	*0.57*	*0.16*	*0.06*	**2.4**	**<MDC**
GW-BR5RB-121004	7.9	2.1	1.7	6.0	2.0	3.1	–	–	–	–	–	–	–	–	–	**4.9**	6.1	10.0	***0.01***	*0.03*	*0.04*	*5.8*	*0.99*	*0.06*	*0.09*	*0.06*	*0.05*	*0.59*	*0.16*	*0.05*	6.5	2.2%
GW-BR6RB-120704	9.5	2.3	1.4	4.6	1.7	2.9	***0.00***	*0.03*	*0.02*	***0.01***	*0.01*	*0.01*	***0.02***	*0.03*	*0.05*	**2.0**	4.6	7.7	***0.00***	*0.01*	*0.03*	*7.9*	*1.4*	*0.06*	*0.08*	*0.06*	*0.05*	*0.50*	*0.15*	*0.07*	8.5	2.3%
GW-BR7JC-121504	6.2	1.7	1.4	5.9	1.6	2.4	–	–	–	–	–	–	–	–	–	**-1.7**	6.4	11.5	***0.04***	*0.03*	*0.04*	*4.7*	*0.82*	*0.06*	*0.10*	*0.06*	*0.06*	*1.4*	*0.30*	*0.07*	6.2	1.1%
GW-BR7RB-121404	19.0	3.2	0.58	10.8	2.0	1.4	–	–	–	–	–	–	–	–	–	**3.7**	6.0	9.9	***0.02***	*0.03*	*0.06*	*5.2*	*0.89*	*0.04*	*0.06*	*0.04*	*0.04*	*0.37*	*0.11*	*0.03*	5.7	2.3%
GW-BR8JC-120604	4.1	0.94	0.66	14.0	2.5	1.4	–	–	–	–	–	–	–	–	–	**4.4**	5.4	8.9	***0.02***	*0.03*	*0.04*	*0.73*	*0.17*	*0.03*	***0.00***	*0.03*	*0.04*	*0.21*	*0.08*	*0.03*	**0.94**	**<MDC**
GW-BR8RB-120704	10.9	2.5	1.4	7.5	2.0	2.7	–	–	–	–	–	–	–	–	–	**-0.27**	4.7	8.0	***0.00***	*0.01*	*0.03*	*5.8*	*1.0*	*0.06*	***0.03***	*0.04*	*0.06*	*0.25*	*0.10*	*0.06*	**6.1**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Bedrock Aquifer – Analytical Data Results																																
GW-BR9JC-121404	5.8	1.2	0.85	8.0	1.6	1.6	***0.00***	*0.03*	*0.02*	***0.00***	*0.02*	*0.04*	***0.01***	*0.02*	*0.02*	**7.3**	6.9	11.0	***0.02***	*0.03*	*0.05*	*2.5*	*0.47*	*0.05*	*0.05*	*0.04*	*0.04*	*0.49*	*0.14*	*0.03*	3.1	1.6%
GW-FD2-121304	9.0	2.2	1.2	8.6	2.2	3.0	–	–	–	–	–	–	–	–	–	**6.4**	6.9	11.1	***0.00***	*0.03*	*0.04*	*1.7*	*0.35*	*0.04*	***0.04***	*0.04*	*0.05*	*0.50*	*0.15*	*0.04*	**2.2**	**<MDC**
GW-FD4-121404	8.4	1.6	0.84	10.3	2.0	1.6	***0.01***	*0.03*	*0.02*	***0.00***	*0.01*	*0.03*	***0.00***	*0.03*	*0.04*	**3.0**	5.9	9.8	***0.00***	*0.02*	*0.06*	*2.7*	*0.49*	*0.03*	***0.03***	*0.04*	*0.05*	*0.58*	*0.15*	*0.04*	**3.3**	**<MDC**
GW-FD6-121304	9.0	2.3	1.7	8.0	2.0	2.7	–	–	–	–	–	–	–	–	–	**5.7**	6.4	10.4	***0.00***	*0.03*	*0.08*	*1.8*	*0.36*	*0.06*	***0.02***	*0.03*	*0.05*	*0.47*	*0.13*	*0.04*	**2.3**	**<MDC**
GW-PW03JC-092107	8.6	6.7	7.4	11.8	3.6	4.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW03JC-120607	**0.74**	5.7	9.1	15.0	4.0	4.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW03RB-030608	11.1	8.1	9.1	48.7	5.9	4.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW03RB-032309	5.8	2.8	3.6	4.0	1.5	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW03RB-062608	7.4	6.3	6.9	17.6	3.8	3.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW03RB-062707	4.5	3.0	1.9	6.7	2.7	3.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW03RB-091608	5.8	2.5	2.7	2.6	1.1	1.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW03RB-091907	**2.7**	5.0	6.9	13.5	3.6	4.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW03RB-120607	7.1	5.7	6.7	15.4	3.7	4.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW03RB-121008	6.3	2.4	2.4	4.3	1.1	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW06JC-030508	15.7	7.6	6.8	13.7	3.5	3.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW06JC-031309	8.5	2.4	1.6	7.9	1.7	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW06JC-062608	12.6	7.7	6.8	6.3	3.2	4.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW06JC-062807	10.5	5.7	5.7	10.1	3.4	4.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW06JC-091907	**3.9**	4.6	5.8	8.5	3.1	3.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW06JC-092308	12.0	3.5	2.6	5.6	1.5	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW06JC-120507	7.0	5.3	6.2	7.8	3.0	3.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW06JC-121208	7.3	2.6	2.5	4.9	1.4	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW06RB-031309	9.0	3.3	3.6	2.2	1.1	1.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW06RB-062608	9.7	6.5	6.0	**1.6**	2.7	4.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW06RB-062807	5.2	2.9	1.6	3.8	2.3	3.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW06RB-091708	6.5	2.4	2.1	3.2	2.0	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW06RB-091907	**5.5**	5.0	5.8	**1.9**	2.5	3.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW06RB-120507	**2.3**	3.5	4.8	**3.0**	2.5	3.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW06RB-121208	5.7	2.2	2.0	**1.6**	1.2	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Bedrock Aquifer – Analytical Data Results																																
GW-PW16JC-030508	12.9	7.6	7.5	18.2	4.4	4.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW16JC-032609	83.0	18.0	10.0	33.6	6.9	6.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW16JC-062608	**3.9**	5.2	6.3	13.8	4.5	5.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW16JC-062807	8.8	5.0	4.6	15.9	3.5	3.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW16JC-092007	18.2	8.4	6.8	21.1	4.6	5.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW16JC-092208	15.4	6.3	6.5	9.1	3.1	3.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW16JC-120507	15.5	11.1	12.7	24.7	5.6	6.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW16JC-121208	10.9	5.4	6.2	**3.2**	2.8	4.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW16RB-030508	6.2	4.8	5.3	4.7	2.7	3.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW16RB-032609	4.5	2.1	2.3	1.6	1.0	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW16RB-062608	8.1	6.1	6.0	**3.6**	2.8	4.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW16RB-062807	**2.7**	3.0	3.6	**2.8**	2.3	3.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW16RB-091708	8.9	3.0	2.2	**3.0**	2.4	3.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW16RB-092007	4.7	3.7	4.0	4.2	2.7	3.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW16RB-120507	**2.2**	3.3	4.6	**2.0**	2.4	3.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW16RB-121108	7.2	2.4	2.2	2.1	0.93	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW19JC-030508	14.2	7.3	6.7	10.2	3.2	3.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW19JC-032509	12.4	3.7	3.2	4.2	1.7	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW19JC-062608	10.1	7.2	6.8	7.0	3.3	4.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW19JC-062807	10.2	6.0	6.1	8.8	3.4	4.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW19JC-091708	11.6	3.9	3.3	**4.8**	3.2	4.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW19JC-091907	7.7	6.0	6.7	10.2	3.3	4.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW19JC-120407	**6.3**	5.8	7.3	14.4	3.2	3.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW19JC-121108	10.1	3.2	2.5	4.0	1.5	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW19RB-030508	17.5	8.1	7.0	13.0	3.5	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW19RB-032509	11.1	3.3	2.7	4.0	1.6	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW19RB-062608	13.5	7.9	6.8	**4.1**	3.0	4.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW19RB-062807	**2.1**	4.3	6.1	10.0	3.5	4.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW19RB-091708	13.5	4.6	4.1	**3.3**	3.6	5.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Bedrock Aquifer – Analytical Data Results																																
GW-PW19RB-091907	16.6	7.9	6.9	16.6	3.8	4.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW19RB-120407	12.1	7.0	7.7	11.4	3.0	3.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PW19RB-121108	10.5	3.2	2.7	3.5	1.4	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PZ03-030508	**2.9**	10.1	15.2	11.6	4.5	5.1	–	–	–	–	–	–	–	–	–	**1.9**	4.2	8.1	–	–	–	*0.34*	*0.15*	*0.10*	***0.02***	*0.03*	*0.03*	*0.14*	*0.09*	*0.07*	**0.49**	**<MDC**
GW-PZ03-031909	6.8	3.3	4.0	**2.8**	1.9	2.9	–	–	–	–	–	–	–	–	–	2.5	0.99	1.5	–	–	–	*0.09*	*0.06*	*0.07*	***0.00***	*0.00*	*0.05*	***0.00***	*0.02*	*0.06*	**0.09**	**<MDC**
GW-PZ03-062608	**3.7**	5.3	6.9	9.9	3.2	3.9	–	–	–	–	–	–	–	–	–	**-2.4**	3.6	6.1	–	–	–	***0.08***	*0.16*	*0.23*	***-0.03***	*0.05*	*0.18*	***0.10***	*0.16*	*0.20*	**0.18**	**<MDC**
GW-PZ03-062807	**4.0**	4.0	4.7	11.5	3.2	3.8	–	–	–	–	–	–	–	–	–	**4.6**	4.0	6.5	–	–	–	*0.41*	*0.19*	*0.18*	***-0.01***	*0.01*	*0.06*	***0.12***	*0.12*	*0.16*	**0.53**	**<MDC**
GW-PZ03-091508	4.4	1.4	1.6	5.5	1.5	2.2	–	–	–	–	–	–	–	–	–	**2.6**	1.8	2.9	–	–	–	*0.11*	*0.07*	*0.06*	***0.00***	*0.01*	*0.03*	***0.03***	*0.03*	*0.04*	**0.13**	**<MDC**
GW-PZ03-091807	**4.2**	3.9	4.4	8.9	3.1	3.8	–	–	–	–	–	–	–	–	–	**3.1**	3.2	5.2	–	–	–	*0.09*	*0.07*	*0.02*	***0.01***	*0.04*	*0.07*	*0.07*	*0.07*	*0.07*	**0.16**	**<MDC**
GW-PZ03-120407	**5.2**	6.6	9.1	10.1	3.0	3.6	–	–	–	–	–	–	–	–	–	**1.6**	3.2	5.2	–	–	–	*0.13*	*0.11*	*0.12*	***-0.01***	*0.02*	*0.08*	*0.08*	*0.08*	*0.07*	**0.21**	**<MDC**
GW-PZ03-120808	6.0	2.6	2.8	3.8	1.4	1.9	–	–	–	–	–	–	–	–	–	3.7	0.97	1.2	–	–	–	***0.03***	*0.07*	*0.12*	***0.00***	*0.01*	*0.09*	***0.05***	*0.06*	*0.08*	**0.08**	**<MDC**
GW-PZ04-030608	**0.77**	6.4	10.2	**0.23**	2.4	3.9	–	–	–	–	–	–	–	–	–	**-0.21**	3.0	5.0	–	–	–	***0.04***	*0.09*	*0.16*	***0.01***	*0.04*	*0.05*	***0.11***	*0.10*	*0.11*	**0.16**	**<MDC**
GW-PZ04-031209	**2.5**	2.1	3.2	**0.90**	1.3	2.0	–	–	–	–	–	–	–	–	–	**1.2**	0.81	1.3	–	–	–	*0.12*	*0.09*	*0.10*	***-0.01***	*0.01*	*0.08*	***0.01***	*0.04*	*0.08*	**0.13**	**<MDC**
GW-PZ04-062508	**2.8**	5.1	7.2	**2.9**	2.7	4.0	–	–	–	–	–	–	–	–	–	**-4.2**	3.6	6.0	–	–	–	*0.13*	*0.08*	*0.03*	***0.02***	*0.05*	*0.06*	*0.07*	*0.07*	*0.07*	**0.23**	**<MDC**
GW-PZ04-062807	**0.48**	2.9	4.4	**2.3**	2.4	3.7	–	–	–	–	–	–	–	–	–	**0.03**	3.8	6.3	–	–	–	*1.8*	*0.33*	*0.15*	***0.01***	*0.03*	*0.04*	*0.27*	*0.13*	*0.13*	**2.1**	**<MDC**
GW-PZ04-091508	**0.99**	0.84	1.3	4.0	1.3	2.0	–	–	–	–	–	–	–	–	–	**0.50**	2.0	3.4	–	–	–	***0.03***	*0.04*	*0.06*	***0.02***	*0.03*	*0.05*	***0.03***	*0.03*	*0.05*	**0.07**	**<MDC**
GW-PZ04-091907	**2.4**	3.7	5.0	5.1	2.7	3.6	–	–	–	–	–	–	–	–	–	**-2.1**	3.4	5.7	–	–	–	***0.04***	*0.06*	*0.08*	***-0.01***	*0.01*	*0.04*	***0.03***	*0.06*	*0.09*	**0.07**	**<MDC**
GW-PZ04-120507	5.0	4.2	4.8	**3.3**	2.6	3.8	–	–	–	–	–	–	–	–	–	**-5.0**	3.5	5.9	–	–	–	***0.06***	*0.09*	*0.11*	***0.00***	*0.00*	*0.03*	*0.08*	*0.08*	*0.07*	**0.14**	**<MDC**
GW-PZ04-120908	2.1	1.5	1.8	**1.7**	1.6	2.6	–	–	–	–	–	–	–	–	–	**-1.7**	0.95	1.8	–	–	–	*0.21*	*0.09*	*0.05*	***0.02***	*0.03*	*0.06*	*0.09*	*0.06*	*0.04*	**0.32**	**<MDC**
GW-PZ3-121704	6.3	1.2	0.59	7.0	1.4	1.3	–	–	–	–	–	–	–	–	–	**9.0**	8.4	13.4	***0.01***	*0.03*	*0.04*	*0.29*	*0.11*	*0.07*	***0.01***	*0.03*	*0.06*	*0.15*	*0.07*	*0.05*	**0.45**	**<MDC**
GW-PZ4-121304	**0.19**	0.70	1.6	**0.79**	1.3	2.7	–	–	–	–	–	–	–	–	–	**3.0**	6.7	11.3	***0.03***	*0.03*	*0.04*	*0.10*	*0.06*	*0.08*	***0.02***	*0.03*	*0.05*	***0.03***	*0.03*	*0.06*	**0.15**	**<MDC**
GW-WS30-121604	7.9	1.6	1.0	72.8	11.7	1.7	–	–	–	–	–	–	–	–	–	**9.3**	6.8	10.4	***0.04***	*0.04*	*0.05*	*6.0*	*1.0*	*0.09*	*0.16*	*0.08*	*0.05*	*1.7*	*0.36*	*0.07*	7.9	1.4%
GW-WS31-030408	**3.0**	4.7	6.6	6.9	3.0	4.1	–	–	–	–	–	–	–	–	–	**0.83**	2.9	4.8	–	–	–	*1.3*	*0.29*	*0.14*	***0.04***	*0.06*	*0.04*	*0.30*	*0.14*	*0.10*	**1.7**	**<MDC**
GW-WS31-032009	8.3	3.7	4.5	6.9	2.0	2.3	–	–	–	–	–	–	–	–	–	-0.35	0.8	1.5	–	–	–	*1.1*	*0.22*	*0.07*	***0.00***	*0.01*	*0.05*	*0.18*	*0.08*	*0.02*	**1.29**	**<MDC**
GW-WS31-062608	11.1	7.1	6.9	13.0	3.5	3.9	–	–	–	–	–	–	–	–	–	**-2.2**	3.6	6.1	–	–	–	*0.26*	*0.06*	*0.00*	***0.01***	*0.01*	*0.02*	*0.06*	*0.03*	*0.02*	**0.32**	**<MDC**
GW-WS31-062807	**3.3**	3.7	4.4	9.9	3.0	3.7	–	–	–	–	–	–	–	–	–	**0.82**	3.9	6.3	–	–	–	***0.02***	*0.08*	*0.15*	***-0.01***	*0.02*	*0.07*	***0.04***	*0.08*	*0.13*	**0.06**	**<MDC**
GW-WS31-091907	**5.1**	4.6	5.3	14.2	3.4	3.7	–	–	–	–	–	–	–	–	–	**0.51**	3.5	5.7	–	–	–	*1.7*	*0.31*	*0.12*	***0.01***	*0.03*	*0.04*	*0.31*	*0.13*	*0.10*	**2.0**	**<MDC**
GW-WS31-091908	4.7	2.3	2.5	5.1	2.1	3.1	–	–	–	–	–	–	–	–	–	**0.80**	1.8	2.9	–	–	–	*1.1*	*0.22*	*0.06*	***-0.01***	*0.01*	*0.06*	*0.21*	*0.09*	*0.06*	**1.3**	**<MDC**
GW-WS31-120307	8.9	5.6	6.1	13.3	3.4	3.9	–	–	–	–	–	–	–	–	–	**-4.5**	3.5	5.9	–	–	–	*1.9*	*0.36*	*0.14*	***0.03***	*0.05*	*0.05*	*0.38*	*0.16*	*0.13*	**2.4**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Bedrock Aquifer – Analytical Data Results																																
GW-WS31-120908	9.1	2.7	2.0	8.5	2.2	2.8	–	–	–	–	–	–	–	–	–	**0.05**	0.75	1.3	–	–	–	*1.6*	*0.30*	*0.09*	*0.16*	*0.10*	*0.08*	*0.46*	*0.15*	*0.03*	2.2	5.2%
GW-WS31-121604	8.2	1.6	0.77	9.2	1.8	1.5	–	–	–	–	–	–	–	–	–	**5.2**	6.4	10.5	***0.01***	*0.03*	*0.07*	*1.1*	*0.24*	*0.04*	***0.02***	*0.03*	*0.05*	*0.20*	*0.09*	*0.04*	**1.3**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium (pCi/L)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Sand/Gravel Aquifer – Statistical Data Analyses																																
No. of Detects	27			74			1			0			0			8			6			86			22			76			20	20
No. of Non-Detects	72			25			3			4			4			92			10			13			77			23			79	79
Detection Freq.	27.3%			74.7%			25.0%			0.0%			0.0%			8.0%			37.5%			86.9%			22.2%			76.8%			20.2%	20.2%
Max. Conc.	26.0			37.8			0.03			0.00			0.01			13.4			0.12			6.8			0.44			3.1			8.6	12.8%
Min. Conc.	-4.5			-2.0			0.00			-0.01			-0.01			-6.4			0.00			0.00			-0.02			-0.02			0.01	0.9%
Mean Conc.	2.3			5.6			0.01			0.00			0.00			0.33			0.03			0.76			0.05			0.37			1.2	3.6%
Std. Deviation	3.8			6.0			0.01			0.00			0.01			3.0			0.04			1.1			0.08			0.45			1.5	3.2%
Sand/Gravel Aquifer – Analytical Data Results																																
GW-BR03OB-030408	**1.7**	2.9	3.9	5.3	2.7	3.8	–	–	–	–	–	–	–	–	–	**1.5**	3.0	4.9	–	–	–	*3.2*	*0.46*	*0.09*	***0.04***	*0.06*	*0.06*	*0.34*	*0.14*	*0.07*	**3.6**	**<MDC**
GW-BR03OB-031609	3.1	2.4	3.4	2.6	1.8	2.7	–	–	–	–	–	–	–	–	–	-0.1	0.7	1.2	–	–	–	*0.8*	*0.22*	*0.09*	*0.09*	*0.08*	*0.05*	*0.38*	*0.15*	*0.04*	1.2	3.4%
GW-BR03OB-062607	**0.00**	2.7	4.4	**2.0**	2.4	3.6	–	–	–	–	–	–	–	–	–	**-0.21**	3.4	5.6	–	–	–	*3.5*	*0.43*	*0.07*	*0.18*	*0.10*	*0.06*	*3.1*	*0.40*	*0.05*	6.8	0.9%
GW-BR03OB-091807	**0.00**	3.3	5.4	**3.2**	2.8	4.1	–	–	–	–	–	–	–	–	–	**-3.9**	3.1	5.1	–	–	–	*0.75*	*0.23*	*0.13*	***0.01***	*0.04*	*0.07*	*0.43*	*0.17*	*0.09*	**1.2**	**<MDC**
GW-BR03OB-091908	4.7	2.1	2.2	4.3	1.8	2.6	–	–	–	–	–	–	–	–	–	**0.70**	1.8	3.0	–	–	–	*0.58*	*0.15*	*0.05*	***0.01***	*0.02*	*0.03*	*0.34*	*0.11*	*0.05*	**0.93**	**<MDC**
GW-BR03OB-120908	**1.4**	1.4	2.1	3.3	1.5	2.2	–	–	–	–	–	–	–	–	–	**-0.09**	0.99	1.7	–	–	–	*0.57*	*0.18*	*0.06*	***0.04***	*0.06*	*0.08*	*0.22*	*0.11*	*0.06*	**0.83**	**<MDC**
GW-BR06OB-030408	12.0	7.4	7.0	30.5	5.0	4.7	–	–	–	–	–	–	–	–	–	**-0.05**	3.0	5.0	–	–	–	*1.7*	*0.32*	*0.09*	*0.07*	*0.07*	*0.04*	*0.85*	*0.22*	*0.09*	2.7	1.3%
GW-BR06OB-031209	3.7	2.6	3.7	4.3	1.3	1.5	–	–	–	–	–	–	–	–	–	**1.1**	0.81	1.3	–	–	–	*2.1*	*0.32*	*0.06*	*0.09*	*0.07*	*0.06*	*0.80*	*0.18*	*0.05*	2.9	1.8%
GW-BR06OB-062508	**4.2**	5.7	7.4	16.7	3.8	4.1	–	–	–	–	–	–	–	–	–	**-5.6**	3.2	5.4	–	–	–	*2.6*	*0.44*	*0.15*	***0.05***	*0.07*	*0.05*	*0.75*	*0.22*	*0.08*	**3.4**	**<MDC**
GW-BR06OB-062607	**5.4**	4.9	5.6	17.2	4.1	4.7	–	–	–	–	–	–	–	–	–	**-2.5**	3.4	5.7	–	–	–	*3.5*	*0.51*	*0.09*	*0.21*	*0.12*	*0.03*	*1.9*	*0.36*	*0.13*	5.6	1.7%
GW-BR06OB-091807	26.0	9.4	7.0	35.7	6.9	7.7	–	–	–	–	–	–	–	–	–	**-1.6**	3.3	5.4	–	–	–	*2.7*	*0.46*	*0.11*	*0.15*	*0.11*	*0.03*	*0.86*	*0.25*	*0.17*	3.7	2.7%
GW-BR06OB-091808	9.3	3.6	3.8	3.1	1.4	1.9	–	–	–	–	–	–	–	–	–	**2.4**	2.2	3.6	–	–	–	*6.8*	*0.78*	*0.08*	*0.44*	*0.16*	*0.06*	*1.4*	*0.27*	*0.07*	8.6	4.8%
GW-BR06OB-120407	11.4	9.2	11.4	37.8	5.1	4.2	–	–	–	–	–	–	–	–	–	**1.1**	3.3	5.4	–	–	–	*2.7*	*0.49*	*0.11*	***0.05***	*0.10*	*0.14*	*1.1*	*0.31*	*0.13*	**3.9**	**<MDC**
GW-BR06OB-120908	7.5	2.3	1.7	5.3	1.9	2.6	–	–	–	–	–	–	–	–	–	**-0.25**	0.89	1.6	–	–	–	*2.9*	*0.43*	*0.09*	*0.13*	*0.09*	*0.06*	*0.94*	*0.22*	*0.06*	4.0	2.2%
GW-BR08OB-030508	**-0.65**	3.9	6.7	5.3	2.9	3.9	–	–	–	–	–	–	–	–	–	**2.1**	4.2	8.1	–	–	–	*1.2*	*0.28*	*0.09*	*0.09*	*0.08*	*0.03*	*1.1*	*0.25*	*0.07*	2.3	1.2%
GW-BR08OB-031109	2.0	2.0	3.0	3.9	1.7	2.3	–	–	–	–	–	–	–	–	–	0.31	0.69	1.2	–	–	–	*0.5*	*0.14*	*0.05*	***0.04***	*0.04*	*0.05*	*0.23*	*0.09*	*0.04*	**0.77**	**<MDC**
GW-BR08OB-062408	**4.3**	*6.4*	*6.6*	**-2.0**	*4.1*	*7.2*	–	–	–	–	–	–	–	–	–	**-1.2**	*3.2*	*5.3*	–	–	–	*0.30*	*0.12*	*0.03*	***0.00***	*0.01*	*0.04*	*0.27*	*0.12*	*0.07*	**0.57**	**<MDC**
GW-BR08OB-062807	**1.1**	4.2	6.4	**3.6**	3.1	4.6	–	–	–	–	–	–	–	–	–	**-2.2**	4.1	6.7	–	–	–	*0.41*	*0.18*	*0.12*	***0.00***	*0.00*	*0.03*	*0.28*	*0.15*	*0.08*	**0.69**	**<MDC**
GW-BR08OB-091807	**0.00**	3.9	6.3	**2.5**	2.8	4.3	–	–	–	–	–	–	–	–	–	**-0.93**	3.1	5.2	–	–	–	*1.8*	*0.37*	*0.16*	*0.09*	*0.09*	*0.06*	*0.55*	*0.21*	*0.14*	2.4	2.6%
GW-BR08OB-091808	2.0	1.4	1.7	**1.9**	1.3	2.0	–	–	–	–	–	–	–	–	–	**0.90**	1.9	3.2	–	–	–	*0.61*	*0.16*	*0.05*	***0.02***	*0.03*	*0.03*	*0.34*	*0.11*	*0.04*	**0.97**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Sand/Gravel Aquifer – Analytical Data Results																																
GW-BR08OB-120407	**1.3**	5.6	8.8	8.0	2.8	3.5	–	–	–	–	–	–	–	–	–	**-0.05**	3.3	5.4	–	–	–	*0.52*	*0.20*	*0.14*	***0.01***	*0.04*	*0.08*	*0.50*	*0.19*	*0.13*	**1.0**	**<MDC**
GW-BR08OB-120808	2.4	1.7	2.4	2.3	1.0	1.4	–	–	–	–	–	–	–	–	–	**0.33**	0.66	1.1	–	–	–	*0.48*	*0.21*	*0.14*	***0.02***	*0.05*	*0.10*	*0.24*	*0.14*	*0.09*	**0.74**	**<MDC**
GW-BR10OB-030508	**5.2**	6.1	7.8	8.7	3.3	4.2	–	–	–	–	–	–	–	–	–	**-2.7**	4.1	8.1	–	–	–	*1.5*	*0.31*	*0.12*	*0.09*	*0.09*	*0.07*	*1.7*	*0.33*	*0.08*	3.2	0.9%
GW-BR10OB-031609	5.8	3.7	5.3	**1.5**	2.1	3.4	–	–	–	–	–	–	–	–	–	**-0.06**	0.74	1.3	–	–	–	*0.90*	*0.22*	*0.08*	***0.01***	*0.03*	*0.07*	*0.55*	*0.17*	*0.07*	**1.5**	**<MDC**
GW-BR10OB-062408	**1.8**	6.2	8.3	**2.2**	5.0	7.8	–	–	–	–	–	–	–	–	–	**-4.5**	3.2	5.3	–	–	–	*0.70*	*0.20*	*0.02*	***0.03***	*0.05*	*0.05*	*0.41*	*0.16*	*0.08*	**1.1**	**<MDC**
GW-BR10OB-062707	6.0	3.7	2.3	6.7	2.9	3.7	–	–	–	–	–	–	–	–	–	**-3.6**	4.0	6.7	–	–	–	*0.53*	*0.22*	*0.15*	***0.00***	*0.00*	*0.03*	*0.31*	*0.17*	*0.16*	**0.84**	**<MDC**
GW-BR10OB-091807	**-1.3**	3.6	6.7	5.3	3.1	4.4	–	–	–	–	–	–	–	–	–	**-1.3**	3.2	5.4	–	–	–	*1.1*	*0.20*	*0.08*	***0.01***	*0.03*	*0.04*	*0.29*	*0.11*	*0.08*	**1.4**	**<MDC**
GW-BR10OB-091808	**1.6**	2.1	3.4	4.0	1.4	1.7	–	–	–	–	–	–	–	–	–	**0.50**	1.7	2.8	–	–	–	*0.75*	*0.21*	*0.06*	***0.03***	*0.05*	*0.09*	*0.31*	*0.13*	*0.07*	**1.1**	**<MDC**
GW-BR10OB-120407	**0.67**	5.9	9.4	10.8	3.1	3.6	–	–	–	–	–	–	–	–	–	**-2.7**	3.3	5.4	–	–	–	*0.60*	*0.20*	*0.04*	***-0.01***	*0.02*	*0.07*	*0.26*	*0.14*	*0.12*	**0.86**	**<MDC**
GW-BR10OB-120804	3.2	1.3	1.6	4.5	1.7	2.8	–	–	–	–	–	–	–	–	–	**4.2**	4.4	7.1	*0.06*	*0.05*	*0.05*	*0.61*	*0.16*	*0.04*	***0.01***	*0.03*	*0.04*	*0.43*	*0.13*	*0.05*	**1.0**	**<MDC**
GW-BR10OB-120908	5.3	2.4	2.5	7.4	2.1	2.8	–	–	–	–	–	–	–	–	–	**-0.20**	0.84	1.5	–	–	–	*0.88*	*0.21*	*0.09*	*0.06*	*0.06*	*0.06*	*0.46*	*0.15*	*0.06*	1.4	2.1%
GW-BR3OB-120804	2.2	1.0	1.4	3.4	1.4	2.6	–	–	–	–	–	–	–	–	–	**2.4**	4.8	8.0	***0.03***	*0.03*	*0.04*	*0.44*	*0.13*	*0.05*	***0.01***	*0.03*	*0.05*	*0.32*	*0.10*	*0.05*	**0.76**	**<MDC**
GW-BR6OB-120704	7.3	1.8	1.4	12.3	2.6	2.6	–	–	–	–	–	–	–	–	–	**1.2**	4.3	7.3	*0.09*	*0.04*	*0.03*	*4.8*	*0.84*	*0.08*	*0.19*	*0.09*	*0.04*	*1.4*	*0.30*	*0.04*	6.4	2.1%
GW-BR8OB-120604	1.3	0.53	0.70	1.6	0.89	1.5	***0.00***	*0.03*	*0.05*	***0.00***	*0.01*	*0.01*	***-0.01***	*0.04*	*0.08*	**2.7**	5.3	8.8	***0.01***	*0.03*	*0.02*	*0.50*	*0.14*	*0.08*	***0.03***	*0.03*	*0.04*	*0.39*	*0.12*	*0.04*	**0.92**	**<MDC**
GW-NB44-030508	**3.6**	3.4	3.7	7.5	2.7	3.5	–	–	–	–	–	–	–	–	–	**-0.97**	3.9	7.8	–	–	–	***0.01***	*0.05*	*0.09*	***-0.02***	*0.02*	*0.07*	***0.06***	*0.07*	*0.08*	**0.07**	**<MDC**
GW-NB44-031009	**1.5**	1.8	2.8	1.9	1.2	1.9	–	–	–	–	–	–	–	–	–	1.2	0.74	1.1	–	–	–	***0.01***	*0.03*	*0.07*	***0.00***	*0.01*	*0.05*	***0.03***	*0.04*	*0.05*	**0.04**	**<MDC**
GW-NB44-062408	**-0.74**	4.9	8.4	5.0	2.8	3.9	–	–	–	–	–	–	–	–	–	**-6.4**	3.2	5.5	–	–	–	*0.20*	*0.11*	*0.08*	***-0.02***	*0.02*	*0.09*	***0.05***	*0.09*	*0.15*	**0.24**	**<MDC**
GW-NB44-062607	**0.00**	3.7	6.1	4.4	2.9	4.2	–	–	–	–	–	–	–	–	–	**-3.2**	3.4	5.7	–	–	–	*0.23*	*0.12*	*0.09*	***0.02***	*0.05*	*0.08*	*0.18*	*0.11*	*0.08*	**0.42**	**<MDC**
GW-NB44-091708	**1.3**	1.6	2.6	4.1	2.4	3.6	–	–	–	–	–	–	–	–	–	**0.50**	2.1	3.5	–	–	–	***0.02***	*0.04*	*0.06*	***0.00***	*0.01*	*0.05*	***0.01***	*0.02*	*0.04*	**0.03**	**<MDC**
GW-NB44-092007	**-0.51**	3.7	6.3	**1.3**	2.9	4.6	–	–	–	–	–	–	–	–	–	**-3.1**	3.3	5.6	–	–	–	*0.31*	*0.15*	*0.11*	***0.01***	*0.04*	*0.05*	***0.03***	*0.06*	*0.07*	**0.36**	**<MDC**
GW-NB44-120507	**-0.86**	3.0	5.3	5.1	2.9	4.1	–	–	–	–	–	–	–	–	–	**0.67**	3.5	5.7	–	–	–	*0.14*	*0.09*	*0.08*	***0.02***	*0.03*	*0.02*	***0.05***	*0.06*	*0.06*	**0.21**	**<MDC**
GW-NB44-120604	1.7	0.68	0.93	3.7	1.2	1.7	–	–	–	–	–	–	–	–	–	**1.9**	4.6	7.7	***0.01***	*0.03*	*0.07*	*0.06*	*0.04*	*0.05*	*0.05*	*0.04*	*0.02*	*0.08*	*0.05*	*0.05*	0.19	7.7%
GW-NB44-121108	**2.8**	2.2	3.2	1.5	0.99	1.4	–	–	–	–	–	–	–	–	–	**-0.09**	0.79	1.4	–	–	–	*0.17*	*0.08*	*0.03*	*0.05*	*0.05*	*0.03*	***0.02***	*0.03*	*0.03*	**0.24**	**<MDC**
GW-NB63-120704	**0.79**	0.64	1.1	3.4	1.5	2.6	***0.01***	*0.03*	*0.06*	***-0.01***	*0.01*	*0.03*	***0.01***	*0.03*	*0.04*	**3.1**	5.3	8.8	*0.01*	*0.02*	*0.01*	*0.37*	*0.12*	*0.04*	***0.02***	*0.03*	*0.04*	*0.21*	*0.09*	*0.02*	**0.59**	**<MDC**
GW-NB64-030408	**0.59**	2.7	3.9	**3.5**	2.6	3.8	–	–	–	–	–	–	–	–	–	**0.33**	2.9	4.8	–	–	–	*0.67*	*0.23*	*0.08*	***-0.01***	*0.02*	*0.06*	*0.34*	*0.16*	*0.07*	**1.0**	**<MDC**
GW-NB64-030909	**0.50**	2.2	4.1	**1.3**	1.5	2.5	–	–	–	–	–	–	–	–	–	**0.91**	0.77	1.2	–	–	–	*0.28*	*0.16*	*0.12*	*0.17*	*0.14*	*0.08*	*0.18*	*0.13*	*0.06*	0.63	12.8%
GW-NB64-062508	**-4.2**	5.0	9.8	7.2	2.7	3.4	–	–	–	–	–	–	–	–	–	**-4.7**	3.2	5.4	–	–	–	*0.21*	*0.08*	*0.03*	***-0.01***	*0.01*	*0.04*	*0.16*	*0.07*	*0.05*	**0.37**	**<MDC**
GW-NB64-062607	**5.1**	4.6	5.3	9.6	3.2	4.0	–	–	–	–	–	–	–	–	–	**-0.97**	3.4	5.6	–	–	–	*0.37*	*0.13*	*0.07*	*0.03*	*0.04*	*0.02*	*0.31*	*0.12*	*0.02*	0.70	1.4%
GW-NB64-091808	**0.30**	1.2	2.2	2.7	1.5	2.2	–	–	–	–	–	–	–	–	–	**1.0**	1.8	3.0	–	–	–	*0.24*	*0.10*	*0.06*	***0.01***	*0.03*	*0.05*	*0.13*	*0.07*	*0.03*	**0.37**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Sand/Gravel Aquifer – Analytical Data Results																																
GW-NB64-091907	7.4	6.2	7.0	6.8	3.1	4.2	–	–	–	–	–	–	–	–	–	**-3.2**	3.4	5.7	–	–	–	*0.40*	*0.14*	*0.09*	***0.02***	*0.04*	*0.06*	*0.18*	*0.10*	*0.08*	**0.60**	**<MDC**
GW-NB64-120407	**2.3**	4.0	5.6	**3.1**	2.6	3.9	–	–	–	–	–	–	–	–	–	**0.13**	3.1	5.2	–	–	–	*0.28*	*0.13*	*0.08*	***0.04***	*0.06*	*0.07*	*0.13*	*0.09*	*0.08*	**0.44**	**<MDC**
GW-NB64-121008	**1.1**	1.6	2.7	1.8	1.1	1.6	–	–	–	–	–	–	–	–	–	**-0.02**	1.4	2.5	–	–	–	*0.74*	*0.35*	*0.18*	***0.17***	*0.20*	*0.26*	*0.42*	*0.26*	*0.18*	**1.3**	**<MDC**
GW-NB64-122104	**0.02**	0.56	1.2	4.3	1.3	2.1	*0.03*	*0.04*	*0.03*	***0.00***	*0.01*	*0.02*	***0.00***	*0.04*	*0.05*	**4.1**	5.9	9.8	***0.01***	*0.03*	*0.05*	*0.23*	*0.09*	*0.05*	***0.00***	*0.03*	*0.04*	*0.15*	*0.07*	*0.04*	**0.39**	**<MDC**
GW-NB66-120604	**1.0**	0.71	1.1	3.6	1.5	2.6	–	–	–	–	–	–	–	–	–	**5.1**	4.7	7.5	***0.01***	*0.02*	*0.02*	*0.74*	*0.18*	*0.05*	***0.03***	*0.03*	*0.05*	*0.37*	*0.11*	*0.05*	**1.1**	**<MDC**
GW-NB67-120704	1.6	0.94	1.5	**2.1**	1.5	2.9	–	–	–	–	–	–	–	–	–	**3.3**	4.9	8.1	***0.00***	*0.01*	*0.03*	*1.5*	*0.33*	*0.07*	*0.07*	*0.05*	*0.05*	*0.62*	*0.18*	*0.05*	2.2	1.7%
GW-NB72-030408	9.2	5.0	3.6	6.6	2.8	3.7	–	–	–	–	–	–	–	–	–	**1.6**	2.9	4.7	–	–	–	***0.10***	*0.18*	*0.26*	***0.00***	*0.00*	*0.08*	***0.12***	*0.18*	*0.20*	**0.22**	**<MDC**
GW-NB72-030909	**1.2**	2.4	4.2	3.4	1.8	2.6	–	–	–	–	–	–	–	–	–	3.3	0.99	1.3	–	–	–	*0.17*	*0.13*	*0.13*	***0.11***	*0.12*	*0.13*	*0.13*	*0.11*	*0.10*	**0.41**	**<MDC**
GW-NB72-062508	**-3.0**	5.2	9.5	4.9	2.5	3.3	–	–	–	–	–	–	–	–	–	**-3.7**	3.3	5.4	–	–	–	*0.05*	*0.05*	*0.05*	***-0.01***	*0.01*	*0.05*	***0.01***	*0.03*	*0.05*	**0.06**	**<MDC**
GW-NB72-062707	**3.9**	4.8	6.3	8.1	3.4	4.6	–	–	–	–	–	–	–	–	–	**1.6**	4.1	6.8	–	–	–	*0.35*	*0.21*	*0.14*	***0.03***	*0.06*	*0.05*	***0.03***	*0.11*	*0.20*	**0.41**	**<MDC**
GW-NB72-091808	**0.30**	1.1	2.1	3.9	1.6	2.4	–	–	–	–	–	–	–	–	–	3.3	2.0	3.1	–	–	–	***0.02***	*0.04*	*0.07*	***0.00***	*0.01*	*0.04*	***0.00***	*0.01*	*0.05*	**0.02**	**<MDC**
GW-NB72-091907	**5.4**	5.2	6.2	4.8	2.9	4.0	–	–	–	–	–	–	–	–	–	**1.6**	3.6	5.8	–	–	–	***0.03***	*0.06*	*0.07*	***0.00***	*0.00*	*0.03*	***0.08***	*0.09*	*0.11*	**0.11**	**<MDC**
GW-NB72-120507	**-1.8**	2.9	5.7	**2.0**	2.7	4.1	–	–	–	–	–	–	–	–	–	**5.5**	3.7	5.9	–	–	–	***0.00***	*0.06*	*0.11*	***0.01***	*0.07*	*0.11*	*0.15*	*0.14*	*0.15*	**0.16**	**<MDC**
GW-NB72-121008	**0.90**	1.3	2.2	**1.3**	0.92	1.4	–	–	–	–	–	–	–	–	–	**-0.23**	0.67	1.2	–	–	–	*1.0*	*0.61*	*0.44*	*0.41*	*0.41*	*0.28*	***0.19***	*0.30*	*0.49*	**1.6**	**<MDC**
GW-NB72-122104	**1.0**	0.69	1.2	**4.1**	1.3	2.1	–	–	–	–	–	–	–	–	–	**4.1**	5.8	9.6	***0.03***	*0.03*	*0.04*	***0.01***	*0.03*	*0.06*	***0.01***	*0.03*	*0.02*	***0.01***	*0.03*	*0.05*	**0.03**	**<MDC**
GW-NB73-030508	**-1.4**	8.4	14.5	8.1	4.1	5.0	–	–	–	–	–	–	–	–	–	**0.27**	4.0	7.7	–	–	–	*0.40*	*0.14*	*0.06*	***0.02***	*0.04*	*0.04*	*0.36*	*0.13*	*0.04*	**0.78**	**<MDC**
GW-NB73-030909	**1.9**	2.0	3.1	4.7	1.9	2.5	–	–	–	–	–	–	–	–	–	1.9	0.87	1.3	–	–	–	*0.63*	*0.26*	*0.18*	***0.08***	*0.11*	*0.14*	*0.39*	*0.20*	*0.14*	**1.1**	**<MDC**
GW-NB73-062408	**2.4**	6.2	9.2	6.7	3.0	4.0	–	–	–	–	–	–	–	–	–	**-1.9**	3.3	5.4	–	–	–	*0.56*	*0.15*	*0.03*	***0.03***	*0.04*	*0.03*	*0.51*	*0.15*	*0.06*	**1.1**	**<MDC**
GW-NB73-062707	**4.7**	5.3	6.7	7.2	3.4	4.7	–	–	–	–	–	–	–	–	–	**1.3**	4.1	6.8	–	–	–	*0.38*	*0.17*	*0.11*	***0.02***	*0.06*	*0.07*	*0.23*	*0.12*	*0.04*	**0.63**	**<MDC**
GW-NB73-091808	**0.90**	1.3	2.2	2.8	1.7	2.6	–	–	–	–	–	–	–	–	–	**0.40**	1.8	3.0	–	–	–	*0.45*	*0.14*	*0.05*	***0.02***	*0.04*	*0.06*	*0.28*	*0.11*	*0.05*	**0.75**	**<MDC**
GW-NB73-091907	**6.9**	6.2	7.2	8.2	3.2	4.3	–	–	–	–	–	–	–	–	–	**-1.2**	3.5	5.8	–	–	–	*0.48*	*0.15*	*0.04*	***0.02***	*0.04*	*0.05*	*0.18*	*0.09*	*0.03*	**0.68**	**<MDC**
GW-NB73-120407	**-4.5**	3.5	7.8	6.0	2.6	3.5	–	–	–	–	–	–	–	–	–	**1.2**	3.2	5.2	–	–	–	*0.33*	*0.15*	*0.12*	***-0.01***	*0.05*	*0.12*	*0.31*	*0.14*	*0.14*	**0.64**	**<MDC**
GW-NB73-121008	**0.90**	2.1	3.7	3.8	1.2	1.6	–	–	–	–	–	–	–	–	–	2.0	0.88	1.3	–	–	–	*0.66*	*0.39*	*0.28*	***0.17***	*0.23*	*0.35*	*0.41*	*0.30*	*0.24*	**1.2**	**<MDC**
GW-NB73-122004	2.7	0.67	0.59	7.0	1.4	1.1	***0.02***	*0.04*	*0.06*	***0.00***	*0.02*	*0.04*	***0.01***	*0.03*	*0.02*	**13.4**	9.8	14.9	*0.12*	*0.07*	*0.06*	*0.54*	*0.16*	*0.02*	***0.02***	*0.03*	*0.03*	*0.47*	*0.14*	*0.02*	**1.0**	**<MDC**
GW-NB74-030408	**3.4**	4.1	4.5	8.6	3.2	4.0	–	–	–	–	–	–	–	–	–	**3.1**	2.9	4.7	–	–	–	*1.7*	*0.43*	*0.19*	***0.07***	*0.10*	*0.11*	*0.43*	*0.21*	*0.13*	**2.2**	**<MDC**
GW-NB74-032609	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4.2	1.0	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-NB74-062607	**0.93**	3.2	4.9	9.1	3.1	3.8	–	–	–	–	–	–	–	–	–	**-1.7**	3.4	5.6	–	–	–	*0.15*	*0.13*	*0.07*	***-0.01***	*0.02*	*0.09*	***0.10***	*0.12*	*0.12*	**0.25**	**<MDC**
GW-NB74-062708	**1.3**	3.8	5.4	6.0	3.0	4.2	–	–	–	–	–	–	–	–	–	6.0	3.4	5.5	–	–	–	*0.13*	*0.10*	*0.05*	***0.05***	*0.08*	*0.08*	***0.05***	*0.07*	*0.08*	**0.23**	**<MDC**
GW-NB74-092007	**7.5**	10.2	14.6	6.4	3.4	4.8	–	–	–	–	–	–	–	–	–	**3.7**	3.4	5.6	–	–	–	***0.00***	*0.10*	*0.21*	***-0.01***	*0.05*	*0.12*	***0.01***	*0.09*	*0.18*	**0.01**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Sand/Gravel Aquifer – Analytical Data Results																																
GW-NB74-120507	**-0.56**	4.1	6.9	**2.3**	2.8	4.4	–	–	–	–	–	–	–	–	–	**2.7**	3.6	5.9	–	–	–	***0.17***	*0.18*	*0.22*	***0.00***	*0.00*	*0.06*	***-0.02***	*0.03*	*0.12*	**0.17**	**<MDC**
GW-NB74-121304	2.1	0.81	1.1	5.6	1.6	2.2	–	–	–	–	–	–	–	–	–	**7.6**	6.5	10.2	*0.06*	*0.05*	*0.04*	*0.07*	*0.04*	*0.03*	***0.02***	*0.03*	*0.04*	*0.04*	*0.03*	*0.04*	**0.13**	**<MDC**
GW-NB77-122004	1.1	0.42	0.53	3.5	0.93	1.1	–	–	–	–	–	–	–	–	–	**3.7**	6.9	11.6	***0.01***	*0.03*	*0.04*	*0.48*	*0.14*	*0.04*	***0.02***	*0.03*	*0.02*	*0.27*	*0.10*	*0.04*	**0.77**	**<MDC**
GW-NB82-030408	**0.00**	1.7	2.9	**3.1**	2.4	3.5	–	–	–	–	–	–	–	–	–	**-1.1**	2.9	4.8	–	–	–	*0.48*	*0.17*	*0.11*	***0.04***	*0.05*	*0.04*	*0.10*	*0.08*	*0.09*	**0.62**	**<MDC**
GW-NB82-030909	**0.00**	1.2	2.5	**1.4**	1.0	1.6	–	–	–	–	–	–	–	–	–	**0.46**	0.72	1.2	–	–	–	*0.47*	*0.22*	*0.16*	*0.26*	*0.18*	*0.13*	*0.45*	*0.21*	*0.14*	1.2	8.2%
GW-NB82-062508	**-2.9**	5.0	9.3	5.7	2.6	3.3	–	–	–	–	–	–	–	–	–	**-5.9**	3.2	5.5	–	–	–	*0.43*	*0.14*	*0.06*	***0.00***	*0.03*	*0.06*	*0.24*	*0.11*	*0.06*	**0.68**	**<MDC**
GW-NB82-062607	**0.44**	2.9	4.5	3.8	2.6	3.7	–	–	–	–	–	–	–	–	–	**-3.1**	3.4	5.6	–	–	–	*0.39*	*0.16*	*0.12*	***-0.01***	*0.01*	*0.04*	*0.46*	*0.16*	*0.07*	**0.85**	**<MDC**
GW-NB82-091708	**0.80**	1.3	2.2	3.8	2.2	3.3	–	–	–	–	–	–	–	–	–	**0.05**	2.1	3.5	–	–	–	*0.37*	*0.11*	*0.05*	*0.05*	*0.04*	*0.04*	*0.19*	*0.08*	*0.05*	0.61	3.5%
GW-NB82-092007	**-0.48**	3.4	5.9	**2.6**	2.7	4.1	–	–	–	–	–	–	–	–	–	**-4.0**	3.3	5.6	–	–	–	*0.63*	*0.21*	*0.14*	***0.02***	*0.04*	*0.03*	*0.36*	*0.16*	*0.12*	**1.0**	**<MDC**
GW-NB82-120407	**2.8**	3.7	4.9	**2.0**	2.4	3.7	–	–	–	–	–	–	–	–	–	**-0.82**	3.1	5.2	–	–	–	*0.42*	*0.29*	*0.25*	***0.00***	*0.00*	*0.07*	*0.58*	*0.32*	*0.16*	**1.00**	**<MDC**
GW-NB82-121004	1.2	0.78	1.2	**1.5**	1.4	2.9	–	–	–	–	–	–	–	–	–	**1.5**	6.0	10.3	***0.03***	*0.04*	*0.06*	*0.50*	*0.15*	*0.04*	***0.01***	*0.04*	*0.05*	*0.38*	*0.13*	*0.04*	**0.88**	**<MDC**
GW-NB82-121008	**1.1**	1.4	2.3	1.2	0.80	1.2	–	–	–	–	–	–	–	–	–	**-0.64**	0.72	1.3	–	–	–	*0.45*	*0.19*	*0.15*	***0.10***	*0.10*	*0.12*	*0.36*	*0.16*	*0.05*	**0.91**	**<MDC**
GW-NB83-120904	2.3	1.1	1.6	**2.3**	1.4	2.6	–	–	–	–	–	–	–	–	–	**0.86**	4.4	7.4	***0.02***	*0.03*	*0.07*	*0.06*	*0.04*	*0.05*	***0.01***	*0.03*	*0.05*	***0.01***	*0.03*	*0.04*	**0.08**	**<MDC**
GW-NB84-030508	**1.1**	3.0	4.3	4.3	2.6	3.6	–	–	–	–	–	–	–	–	–	**-2.4**	3.9	7.8	–	–	–	*0.13*	*0.09*	*0.04*	***0.02***	*0.03*	*0.02*	***0.04***	*0.06*	*0.06*	**0.18**	**<MDC**
GW-NB84-031709	2.7	1.9	2.7	2.0	1.3	2.0	–	–	–	–	–	–	–	–	–	**-0.56**	0.67	1.2	–	–	–	***0.03***	*0.04*	*0.05*	***0.00***	*0.01*	*0.03*	***0.03***	*0.03*	*0.04*	**0.05**	**<MDC**
GW-NB84-062408	**0.75**	5.4	8.5	5.5	2.8	3.9	–	–	–	–	–	–	–	–	–	**-3.7**	3.3	5.4	–	–	–	*0.12*	*0.07*	*0.03*	***-0.01***	*0.02*	*0.06*	*0.05*	*0.05*	*0.04*	**0.16**	**<MDC**
GW-NB84-062607	**3.4**	4.0	5.0	7.0	2.9	3.8	–	–	–	–	–	–	–	–	–	**-4.2**	3.4	5.6	–	–	–	*0.04*	*0.05*	*0.03*	***0.01***	*0.03*	*0.02*	***0.02***	*0.04*	*0.05*	**0.08**	**<MDC**
GW-NB84-091708	**0.00**	2.1	4.3	**6.0**	4.0	6.2	–	–	–	–	–	–	–	–	–	**1.4**	2.1	3.5	–	–	–	***0.04***	*0.04*	*0.06*	***0.00***	*0.01*	*0.03*	*0.06*	*0.05*	*0.04*	**0.10**	**<MDC**
GW-NB84-092007	**1.6**	4.5	6.7	8.8	3.3	4.3	–	–	–	–	–	–	–	–	–	**-1.2**	3.4	5.5	–	–	–	*0.32*	*0.12*	*0.07*	***0.02***	*0.04*	*0.05*	*0.28*	*0.11*	*0.05*	**0.61**	**<MDC**
GW-NB84-120507	**-1.0**	3.5	6.3	**3.6**	2.9	4.2	–	–	–	–	–	–	–	–	–	**0.70**	3.5	5.7	–	–	–	***0.10***	*0.09*	*0.10*	***0.00***	*0.04*	*0.06*	***0.01***	*0.06*	*0.11*	**0.11**	**<MDC**
GW-NB84-120804	2.6	1.1	1.6	5.8	1.9	3.0	–	–	–	–	–	–	–	–	–	**3.3**	4.3	7.1	*0.06*	*0.04*	*0.02*	*0.08*	*0.05*	*0.03*	***0.01***	*0.03*	*0.04*	*0.05*	*0.04*	*0.02*	**0.13**	**<MDC**
GW-NB84-121008	**1.0**	1.0	1.5	3.1	1.5	2.2	–	–	–	–	–	–	–	–	–	1.5	0.79	1.2	–	–	–	*0.67*	*0.40*	*0.26*	*0.34*	*0.32*	*0.32*	*0.57*	*0.38*	*0.36*	1.6	8.5%

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium (pCi/L)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Overburden Clay – Statistical Data Analyses																																
No. of Detects	31			45			0			0			0			34			2			51			22			48			22	22
No. of Non-Detects	22			8			4			4			4			28			16			4			33			7			33	33
Detection Freq.	58.5%			84.9%			0.0%			0.0%			0.0%			54.8%			11.1%			92.7%			40.0%			87.3%			40.0%	40.0%
Max. Conc.	305.0			1,090			0.02			0.00			0.01			2,280			0.09			172.0			7.6			26.6			206.2	6.4%
Min. Conc.	-1.9			0.82			-0.01			0.00			0.00			-6.9			0.00			0.01			-0.04			0.00			0.03	0.9%
Mean Conc.	23.1			106.1			0.01			0.00			0.01			196.2			0.02			16.3			0.60			2.7			19.6	3.5%
Std. Deviation	51.2			249.3			0.01			0.00			0.01			496.2			0.02			35.8			1.4			5.5			42.5	1.4%
Overburden Clay – Analytical Data Results																																
EP-20-20-30-OL-GW	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,280	366.0	10.8	***0.00***	*0.03*	*0.07*	*2.3*	*0.49*	*0.07*	***0.10***	*0.08*	*0.10*	*0.62*	*0.20*	*0.09*	**3.0**	**<MDC**
GW-BD06-030308	21.2	9.5	7.6	5.9	3.2	4.5	–	–	–	–	–	–	–	–	–	**0.33**	2.9	4.7	–	–	–	*36.3*	*2.6*	*0.06*	*1.4*	*0.29*	*0.04*	*5.2*	*0.58*	*0.04*	42.9	4.0%
GW-BD06-062308	21.4	9.2	5.6	5.3	3.4	4.9	–	–	–	–	–	–	–	–	–	**-4.2**	3.2	5.4	–	–	–	*35.8*	*2.4*	*0.03*	*0.99*	*0.22*	*0.03*	*5.5*	*0.55*	*0.06*	42.3	2.7%
GW-BD06-062707	57.2	14.1	8.6	19.9	4.6	5.3	–	–	–	–	–	–	–	–	–	**-2.8**	3.8	6.4	–	–	–	*68.9*	*8.7*	*0.29*	*3.0*	*0.85*	*0.07*	*10.7*	*1.8*	*0.27*	82.6	4.3%
GW-BD06-091807	83.5	14.3	5.4	19.7	4.0	4.1	–	–	–	–	–	–	–	–	–	**0.87**	3.3	5.5	–	–	–	*126.0*	*8.6*	*0.06*	*4.3*	*0.59*	*0.06*	*17.9*	*1.5*	*0.12*	148.3	3.6%
GW-BD06-091908	21.9	6.4	5.3	**2.8**	2.0	2.9	–	–	–	–	–	–	–	–	–	**0.10**	1.7	2.9	–	–	–	*30.0*	*2.8*	*0.06*	*1.3*	*0.31*	*0.08*	*4.4*	*0.62*	*0.10*	35.6	4.2%
GW-BD06-120307	23.1	8.9	7.7	9.5	3.3	4.2	–	–	–	–	–	–	–	–	–	**-6.0**	3.5	5.9	–	–	–	*32.6*	*3.6*	*0.17*	*0.94*	*0.36*	*0.10*	*5.3*	*0.89*	*0.15*	38.8	2.7%
GW-BD08-030308	**0.65**	3.5	5.3	5.6	3.2	4.5	–	–	–	–	–	–	–	–	–	7.0	3.1	5.0	–	–	–	*1.3*	*0.27*	*0.05*	*0.07*	*0.07*	*0.02*	*0.18*	*0.10*	*0.06*	1.6	6.0%
GW-BD08-062707	9.2	6.7	7.5	21.7	4.5	5.0	–	–	–	–	–	–	–	–	–	38.9	4.8	6.7	–	–	–	*9.6*	*1.1*	*0.18*	*0.26*	*0.16*	*0.08*	*1.1*	*0.30*	*0.16*	10.9	3.7%
GW-BD08-062708	**3.3**	5.2	6.7	**3.7**	3.1	4.6	–	–	–	–	–	–	–	–	–	10.8	3.5	5.6	–	–	–	*2.3*	*0.37*	*0.06*	*0.10*	*0.08*	*0.06*	*0.40*	*0.15*	*0.08*	2.8	3.6%
GW-BD08-091807	**2.6**	3.8	4.9	6.4	3.0	3.9	–	–	–	–	–	–	–	–	–	**5.3**	3.5	5.7	–	–	–	*2.0*	*0.34*	*0.11*	***0.04***	*0.05*	*0.04*	*0.28*	*0.13*	*0.12*	**2.3**	**<MDC**
GW-BD08-120307	**2.5**	5.3	7.7	4.5	2.9	4.2	–	–	–	–	–	–	–	–	–	**0.26**	3.6	6.0	–	–	–	*3.7*	*0.54*	*0.09*	*0.08*	*0.08*	*0.07*	*0.49*	*0.18*	*0.09*	4.3	2.4%
GW-BD6-121404	2.6	0.95	1.2	3.0	1.5	2.4	–	–	–	–	–	–	–	–	–	**1.7**	6.6	11.3	***0.04***	*0.04*	*0.05*	*2.3*	*0.44*	*0.06*	*0.13*	*0.07*	*0.05*	*0.35*	*0.11*	*0.05*	2.8	5.5%
GW-BD8-122804	5.9	1.2	0.53	12.6	2.2	1.2	–	–	–	–	–	–	–	–	–	20.5	6.7	8.1	***0.01***	*0.03*	*0.07*	*6.2*	*1.1*	*0.05*	*0.18*	*0.08*	*0.04*	*0.68*	*0.17*	*0.03*	7.0	3.9%
GW-BP20B-030508	**-0.44**	2.6	4.6	4.2	2.8	3.8	–	–	–	–	–	–	–	–	–	**1.4**	4.1	7.9	–	–	–	*0.45*	*0.16*	*0.08*	***-0.01***	*0.01*	*0.05*	*0.32*	*0.14*	*0.06*	**0.77**	**<MDC**
GW-BP20B-031909	3.5	1.1	0.80	8.6	1.5	1.5	–	–	–	–	–	–	–	–	–	8.1	1.4	1.4	–	–	–	*0.20*	*0.09*	*0.07*	***0.00***	*0.03*	*0.08*	*0.06*	*0.05*	*0.04*	**0.26**	**<MDC**
GW-BP20B-033109	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BP20B-062308	**0.24**	1.7	2.8	5.5	2.3	3.0	–	–	–	–	–	–	–	–	–	**0.51**	3.3	5.4	–	–	–	*0.19*	*0.10*	*0.03*	***0.01***	*0.03*	*0.04*	***0.04***	*0.05*	*0.06*	**0.25**	**<MDC**
GW-BP20B-062707	13.9	4.5	1.6	23.0	3.6	3.2	–	–	–	–	–	–	–	–	–	38.5	4.9	6.8	–	–	–	*2.3*	*0.48*	*0.08*	*0.17*	*0.14*	*0.07*	*0.99*	*0.31*	*0.13*	3.5	2.6%
GW-BP20B-091508	2.5	0.69	0.73	4.1	0.79	1.0	–	–	–	–	–	–	–	–	–	3.8	2.1	3.4	–	–	–	*0.21*	*0.09*	*0.04*	***0.01***	*0.02*	*0.06*	*0.05*	*0.05*	*0.05*	**0.27**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Overburden Clay – Analytical Data Results																																
GW-BP20B-121108	3.2	1.2	1.3	2.4	0.85	1.1	–	–	–	–	–	–	–	–	–	2.4	1.0	1.5	–	–	–	*0.40*	*0.14*	*0.08*	***0.07***	*0.07*	*0.08*	*0.12*	*0.08*	*0.08*	**0.59**	**<MDC**
GW-BP22B-030608	**1.4**	2.2	3.1	49.5	4.5	2.9	–	–	–	–	–	–	–	–	–	64.0	5.2	7.4	–	–	–	*0.12*	*0.10*	*0.11*	***-0.01***	*0.02*	*0.06*	*0.11*	*0.09*	*0.09*	**0.23**	**<MDC**
GW-BP22B-033009	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	53.0	5.0	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BP22B-062608	5.7	2.7	2.2	44.4	4.3	2.7	–	–	–	–	–	–	–	–	–	61.3	5.7	8.4	–	–	–	***0.04***	*0.07*	*0.10*	***0.00***	*0.00*	*0.03*	***0.00***	*0.05*	*0.10*	**0.04**	**<MDC**
GW-BP22B-062807	5.5	2.9	1.6	16.6	3.8	4.2	–	–	–	–	–	–	–	–	–	87.5	9.8	13.3	–	–	–	*3.1*	*0.52*	*0.13*	*0.05*	*0.07*	*0.03*	*0.81*	*0.26*	*0.16*	3.9	0.9%
GW-BP22B-122804	4.1	0.88	0.59	41.8	6.8	1.4	–	–	–	–	–	–	–	–	–	70.3	13.8	8.3	*0.09*	*0.06*	*0.07*	*0.72*	*0.19*	*0.06*	***0.05***	*0.04*	*0.05*	*0.39*	*0.13*	*0.02*	**1.2**	**<MDC**
GW-CB02-121404	2.0	0.80	1.1	2.4	1.2	2.0	***-0.01***	*0.04*	*0.06*	***0.00***	*0.01*	*0.01*	***0.01***	*0.02*	*0.02*	**3.8**	6.3	10.5	***0.00***	*0.03*	*0.06*	*0.08*	*0.05*	*0.04*	***0.02***	*0.03*	*0.06*	*0.06*	*0.04*	*0.03*	**0.16**	**<MDC**
GW-EP20-030408	15.6	7.5	3.8	710.0	18.6	3.9	–	–	–	–	–	–	–	–	–	1,150	48.1	22.7	–	–	–	*0.17*	*0.10*	*0.04*	***-0.01***	*0.02*	*0.06*	***0.06***	*0.07*	*0.08*	**0.23**	**<MDC**
GW-EP20-032609	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,030	88.0	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-EP20-062708	5.5	4.1	3.6	532.0	15.1	4.0	–	–	–	–	–	–	–	–	–	1,140	47.7	24.1	–	–	–	*0.35*	*0.11*	*0.05*	***0.00***	*0.02*	*0.04*	*0.14*	*0.07*	*0.05*	**0.49**	**<MDC**
GW-EP20-062807	13.8	5.6	3.3	589.0	16.4	4.3	–	–	–	–	–	–	–	–	–	1,100	45.8	21.2	–	–	–	*0.80*	*0.18*	*0.06*	***0.02***	*0.03*	*0.03*	*0.10*	*0.06*	*0.04*	**0.91**	**<MDC**
GW-EP20-092007	**4.9**	4.6	5.9	503.0	16.3	5.0	–	–	–	–	–	–	–	–	–	1,200	50.2	24.0	–	–	–	*0.16*	*0.10*	*0.08*	*0.03*	*0.05*	*0.02*	*0.08*	*0.07*	*0.07*	0.27	6.4%
GW-EP20-120507	143.0	19.5	7.8	677.0	18.1	4.5	–	–	–	–	–	–	–	–	–	1,450	60.1	27.4	–	–	–	***0.04***	*0.15*	*0.27*	***0.02***	*0.07*	*0.09*	***0.14***	*0.18*	*0.25*	**0.20**	**<MDC**
GW-EP20-121504	2.5	0.88	1.2	1,090	174.0	1.4	–	–	–	–	–	–	–	–	–	1,930	310.0	10.3	***0.05***	*0.06*	*0.10*	*0.11*	*0.06*	*0.05*	***0.01***	*0.03*	*0.05*	***0.04***	*0.04*	*0.06*	**0.16**	**<MDC**
GW-NB32-122004	**1.1**	0.72	1.1	15.8	3.1	2.6	–	–	–	–	–	–	–	–	–	17.3	7.6	10.1	***0.01***	*0.03*	*0.05*	*0.36*	*0.12*	*0.08*	***0.02***	*0.03*	*0.05*	*0.18*	*0.08*	*0.07*	**0.56**	**<MDC**
GW-NB33-030508	**-1.9**	5.4	9.9	5.4	3.5	4.6	–	–	–	–	–	–	–	–	–	**4.3**	4.1	7.8	–	–	–	*0.30*	*0.14*	*0.10*	***-0.01***	*0.01*	*0.05*	*0.24*	*0.12*	*0.08*	**0.54**	**<MDC**
GW-NB33-031009	1.9	1.1	1.3	2.5	0.98	1.3	–	–	–	–	–	–	–	–	–	**-0.01**	0.82	1.4	–	–	–	*0.15*	*0.07*	*0.05*	***0.02***	*0.03*	*0.03*	*0.10*	*0.06*	*0.02*	**0.27**	**<MDC**
GW-NB33-062408	**0.00**	1.7	2.8	**2.1**	2.0	3.0	–	–	–	–	–	–	–	–	–	**-6.9**	3.1	5.2	–	–	–	*0.15*	*0.10*	*0.02*	***-0.01***	*0.01*	*0.06*	*0.11*	*0.09*	*0.05*	**0.26**	**<MDC**
GW-NB33-062707	**2.8**	4.0	5.4	**3.2**	2.8	4.3	–	–	–	–	–	–	–	–	–	28.9	4.6	6.6	–	–	–	*0.32*	*0.18*	*0.22*	***-0.01***	*0.02*	*0.08*	*0.38*	*0.18*	*0.15*	**0.70**	**<MDC**
GW-NB33-091708	**1.1**	0.88	1.2	3.8	1.3	1.9	–	–	–	–	–	–	–	–	–	**-0.20**	1.9	3.2	–	–	–	*0.07*	*0.05*	*0.05*	***0.01***	*0.03*	*0.07*	*0.08*	*0.06*	*0.03*	**0.15**	**<MDC**
GW-NB33-092007	**6.2**	9.3	13.6	43.9	6.3	6.0	–	–	–	–	–	–	–	–	–	**0.19**	3.4	5.5	–	–	–	*1.5*	*0.34*	*0.07*	***0.04***	*0.06*	*0.06*	*1.1*	*0.30*	*0.11*	**2.6**	**<MDC**
GW-NB33-120507	**2.9**	4.3	5.9	8.2	3.2	4.2	–	–	–	–	–	–	–	–	–	**0.35**	3.6	5.9	–	–	–	*0.36*	*0.17*	*0.12*	***-0.01***	*0.01*	*0.06*	*0.27*	*0.15*	*0.10*	**0.63**	**<MDC**
GW-NB33-121008	56.0	14.0	10.0	42.9	7.1	5.6	–	–	–	–	–	–	–	–	–	**-0.01**	0.74	1.3	–	–	–	*1.5*	*0.43*	*0.23*	***0.12***	*0.13*	*0.15*	*1.3*	*0.39*	*0.16*	**2.9**	**<MDC**
GW-NB33-122104	**0.23**	0.67	1.4	2.5	1.2	2.2	–	–	–	–	–	–	–	–	–	**1.1**	5.5	9.4	***0.00***	*0.03*	*0.07*	*0.08*	*0.05*	*0.06*	***0.02***	*0.03*	*0.02*	*0.07*	*0.05*	*0.04*	**0.16**	**<MDC**
GW-NB36-122204	**1.1**	0.73	1.2	3.0	1.4	2.7	–	–	–	–	–	–	–	–	–	**1.4**	5.4	9.2	***0.00***	*0.03*	*0.02*	*0.12*	*0.07*	*0.08*	***0.00***	*0.03*	*0.06*	*0.04*	*0.04*	*0.02*	**0.16**	**<MDC**
GW-NB38-120904	**1.4**	0.93	1.6	**2.3**	1.4	2.6	–	–	–	–	–	–	–	–	–	**5.1**	4.9	7.8	*0.04*	*0.03*	*0.04*	*0.20*	*0.08*	*0.03*	***0.02***	*0.03*	*0.05*	*0.13*	*0.06*	*0.03*	**0.35**	**<MDC**
GW-NB79-121704	***0.96***	*0.87*	*1.6*	**2.6**	*1.5*	*3.0*	***0.01***	*0.04*	*0.06*	***0.00***	*0.01*	*0.02*	***0.01***	*0.03*	*0.02*	**-2.8**	*7.5*	*13.5*	***0.01***	*0.03*	*0.05*	***0.07***	*0.06*	*0.11*	***-0.04***	*0.03*	*0.12*	***0.06***	*0.05*	*0.08*	**0.13**	**<MDC**
GW-RR05-120904	**0.99**	0.84	1.5	**0.82**	1.3	2.8	***0.02***	*0.03*	*0.02*	***0.00***	*0.02*	*0.01*	***0.00***	*0.02*	*0.04*	**1.7**	4.5	7.6	***0.03***	*0.03*	*0.05*	*0.20*	*0.08*	*0.06*	***0.02***	*0.03*	*0.06*	*0.11*	*0.06*	*0.07*	**0.33**	**<MDC**
GW-SW07-121004	1.7	1.0	1.6	**2.4**	1.5	3.0	***0.01***	*0.04*	*0.03*	***0.00***	*0.01*	*0.03*	***0.01***	*0.03*	*0.05*	**6.8**	6.0	9.5	***0.02***	*0.03*	*0.02*	*0.12*	*0.07*	*0.06*	***0.01***	*0.03*	*0.03*	*0.12*	*0.07*	*0.02*	**0.25**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium (pCi/L)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Overburden Clay – Analytical Data Results																																
GW-WS22-032609	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2.8	0.94	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-WS22-121304	**0.09**	0.58	1.3	6.4	1.8	2.7	–	–	–	–	–	–	–	–	–	20.0	9.0	12.4	***0.01***	*0.02*	*0.03*	***0.01***	*0.03*	*0.05*	***0.00***	*0.03*	*0.05*	***0.01***	*0.03*	*0.04*	**0.03**	**<MDC**
GW-WS24-030408	72.2	16.2	4.2	67.7	6.5	4.5	–	–	–	–	–	–	–	–	–	96.6	6.2	7.9	–	–	–	*65.9*	*7.6*	*0.16*	*2.2*	*0.65*	*0.11*	*10.9*	*1.7*	*0.05*	79.0	3.0%
GW-WS24-033009	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	51.4	5.0	1.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-WS24-062708	102.0	18.5	6.5	34.3	4.8	4.5	–	–	–	–	–	–	–	–	–	38.4	4.4	6.8	–	–	–	*110.8*	*8.3*	*0.04*	*3.5*	*0.56*	*0.07*	*16.4*	*1.5*	*0.07*	130.7	3.2%
GW-WS24-062907	34.6	9.2	5.0	18.4	3.8	3.9	–	–	–	–	–	–	–	–	–	8.8	4.0	6.4	–	–	–	*64.0*	*9.3*	*0.20*	*2.6*	*0.89*	*0.12*	*8.2*	*1.7*	*0.17*	74.8	4.7%
GW-WS24-092107	305.0	35.4	20.8	880.0	24.4	14.4	–	–	–	–	–	–	–	–	–	47.2	4.7	6.8	–	–	–	*87.7*	*8.2*	*0.25*	*3.0*	*0.63*	*0.08*	*14.0*	*1.7*	*0.23*	104.6	3.2%
GW-WS24-121504	132.0	21.4	1.1	33.5	5.6	2.2	–	–	–	–	–	–	–	–	–	23.8	8.5	10.6	***0.00***	*0.03*	*0.04*	*172.0*	*26.8*	*0.08*	*7.6*	*1.3*	*0.05*	*26.6*	*4.2*	*0.06*	206.2	4.2%
GW-WS26-033009	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**0.84**	0.92	1.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-WS26-121504	18.0	3.5	1.8	8.8	2.4	2.9	–	–	–	–	–	–	–	–	–	**3.0**	7.0	11.8	***0.00***	*0.03*	*0.06*	*19.0*	*3.1*	*0.05*	*0.68*	*0.18*	*0.04*	*10.9*	*1.8*	*0.04*	30.6	1.0%
GW-WS28-033109	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	32.6	3.4	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-WS28-121604	**0.76**	0.50	0.83	6.7	1.4	1.5	–	–	–	–	–	–	–	–	–	20.9	8.3	10.9	***0.03***	*0.04*	*0.04*	*0.40*	*0.13*	*0.06*	***0.02***	*0.03*	*0.06*	*0.29*	*0.11*	*0.04*	**0.71**	**<MDC**
GW-WS33-032509	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**1.1**	0.84	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
NB-32-24-34-OL-GW	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	11.0	7.3	10.9	***0.03***	*0.03*	*0.05*	*1.3*	*0.34*	*0.07*	*0.09*	*0.08*	*0.08*	*0.84*	*0.25*	*0.10*	2.3	1.7%

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Overburden Hybrid Screen – Statistical Data Analyses																																
No. of Detects	77			160			0			2			0			83			17			172			62			149			57	57
No. of Non-Detects	135			52			16			14			16			145			33			43			153			66			158	158
Detection Freq.	36.3%			75.5%			0.0%			12.5%			0.0%			36.4%			34.0%			80.0%			28.8%			69.3%			26.5%	26.5%
Max. Conc.	345.0			4,250			0.02			0.09			0.01			6,400			0.59			315.0			16.5			56.3			387.8	7.5%
Min. Conc.	-2.5			-0.08			-0.01			-0.01			-0.01			-7.8			-0.01			-0.16			-0.03			-0.02			0.00	0.4%
Mean Conc.	14.1			117.7			0.01			0.01			0.00			177.7			0.06			7.4			0.30			1.5			9.2	2.7%
Std. Deviation	48.9			457.2			0.01			0.02			0.01			730.6			0.10			35.9			1.6			6.5			43.9	1.3%
Overburden Hybrid Screen – Analytical Data Results																																
GW-BD02-030308	20.7	11.8	10.7	1,500	34.8	7.5	–	–	–	–	–	–	–	–	–	2,870	117.0	36.0	–	–	–	*3.1*	*0.75*	*0.37*	***0.03***	*0.09*	*0.11*	*0.84*	*0.37*	*0.26*	**4.0**	**<MDC**
GW-BD02-062708	13.0	9.8	8.6	2,220	44.7	7.6	–	–	–	–	–	–	–	–	–	21.9	3.9	6.2	–	–	–	*1.1*	*0.23*	*0.06*	*0.05*	*0.06*	*0.04*	*0.21*	*0.10*	*0.05*	1.3	3.7%
GW-BD02-062907	345.0	83.3	42.3	3,020	96.0	25.0	–	–	–	–	–	–	–	–	–	6,400	259.0	71.5	–	–	–	*31.6*	*4.8*	*0.32*	*0.80*	*0.46*	*0.23*	*6.9*	*1.5*	*0.32*	39.2	1.8%
GW-BD02-091807	127.0	20.9	7.6	621.0	19.3	4.9	–	–	–	–	–	–	–	–	–	3,370	137.0	40.2	–	–	–	*1.7*	*0.33*	*0.09*	*0.06*	*0.07*	*0.05*	*0.78*	*0.22*	*0.11*	2.5	1.2%
GW-BD02-120307	78.2	16.3	9.3	415.0	16.5	5.6	–	–	–	–	–	–	–	–	–	1,750	72.7	32.1	–	–	–	*1.5*	*0.32*	*0.09*	***-0.01***	*0.05*	*0.11*	*0.39*	*0.16*	*0.11*	**1.9**	**<MDC**
GW-BD03-030308	**0.00**	3.6	5.9	6.3	3.7	5.3	–	–	–	–	–	–	–	–	–	12.6	3.2	5.1	–	–	–	*0.16*	*0.10*	*0.07*	***0.01***	*0.03*	*0.04*	*0.07*	*0.06*	*0.05*	**0.24**	**<MDC**
GW-BD03-062308	**-1.7**	3.5	7.0	**4.5**	4.0	5.9	–	–	–	–	–	–	–	–	–	**5.5**	3.5	5.7	–	–	–	*0.39*	*0.16*	*0.09*	***0.01***	*0.06*	*0.10*	***0.06***	*0.10*	*0.17*	**0.47**	**<MDC**
GW-BD03-062807	131.0	71.4	64.1	481.0	48.6	33.8	–	–	–	–	–	–	–	–	–	58.6	5.2	6.8	–	–	–	*33.7*	*4.4*	*0.22*	*1.1*	*0.47*	*0.18*	*5.9*	*1.1*	*0.27*	40.7	2.8%
GW-BD03-091807	**0.87**	5.3	8.2	9.3	3.8	5.0	–	–	–	–	–	–	–	–	–	8.0	3.4	5.5	–	–	–	*0.40*	*0.17*	*0.15*	*0.04*	*0.05*	*0.03*	*0.12*	*0.10*	*0.11*	0.55	4.5%
GW-BD03-091908	**2.8**	6.4	11.0	**5.3**	4.1	6.3	–	–	–	–	–	–	–	–	–	16.6	2.7	3.3	–	–	–	*0.16*	*0.08*	*0.04*	***0.00***	*0.01*	*0.03*	***0.01***	*0.02*	*0.04*	**0.18**	**<MDC**
GW-BD03-120307	**0.73**	5.6	8.9	22.3	4.7	5.1	–	–	–	–	–	–	–	–	–	**-0.51**	3.7	6.2	–	–	–	*3.7*	*0.89*	*0.19*	*0.15*	*0.17*	*0.07*	*0.79*	*0.37*	*0.11*	4.7	2.9%
GW-BD04-030308	**-1.8**	4.3	8.3	39.4	5.3	4.8	–	–	–	–	–	–	–	–	–	99.6	6.3	8.0	–	–	–	*0.43*	*0.15*	*0.06*	*0.03*	*0.04*	*0.02*	*0.16*	*0.10*	*0.07*	0.62	3.0%
GW-BD04-062308	8.5	7.1	8.1	931.0	24.0	5.4	–	–	–	–	–	–	–	–	–	2,510	102.0	36.0	–	–	–	*5.3*	*0.92*	*0.31*	*0.29*	*0.21*	*0.15*	*0.91*	*0.34*	*0.25*	6.5	4.7%
GW-BD04-062707	**6.0**	7.5	9.8	180.0	10.8	5.7	–	–	–	–	–	–	–	–	–	513.0	22.6	15.0	–	–	–	*2.6*	*0.88*	*0.68*	***0.02***	*0.14*	*0.25*	*0.68*	*0.48*	*0.59*	**3.3**	**<MDC**
GW-BD04-091807	16.7	7.3	5.8	52.2	5.8	4.2	–	–	–	–	–	–	–	–	–	116.0	7.2	8.9	–	–	–	*0.96*	*0.31*	*0.23*	***0.07***	*0.09*	*0.07*	***0.14***	*0.17*	*0.27*	**1.2**	**<MDC**
GW-BD04-091908	321.0	55.0	14.0	4,250	330.0	9.0	–	–	–	–	–	–	–	–	–	5,110	440.0	10.0	–	–	–	*215.0*	*22.0*	*1.0*	*9.5*	*3.2*	*1.3*	*44.3*	*7.0*	*1.3*	268.8	3.2%
GW-BD04-120307	**4.2**	6.2	8.5	15.8	3.9	4.4	–	–	–	–	–	–	–	–	–	24.7	4.3	6.9	–	–	–	*1.6*	*0.64*	*0.28*	*0.26*	*0.26*	*0.09*	*9.6*	*2.7*	*0.61*	11.5	0.4%
GW-BD1-121704	8.6	2.1	1.9	88.8	14.4	2.9	–	–	–	–	–	–	–	–	–	191.0	33.2	9.9	***0.01***	*0.03*	*0.06*	*8.9*	*1.5*	*0.04*	*0.38*	*0.13*	*0.03*	*1.6*	*0.33*	*0.04*	10.9	3.6%
GW-BD13-030308	**-0.58**	3.8	6.6	10.4	3.1	3.8	–	–	–	–	–	–	–	–	–	19.5	3.4	5.4	–	–	–	*0.27*	*0.13*	*0.08*	***0.03***	*0.05*	*0.04*	*0.15*	*0.11*	*0.11*	**0.44**	**<MDC**
GW-BD13-031909	2.0	1.4	1.7	5.0	2.2	3.3	–	–	–	–	–	–	–	–	–	1.6	0.96	1.5	–	–	–	*0.20*	*0.09*	*0.06*	***0.01***	*0.03*	*0.06*	***0.05***	*0.05*	*0.06*	**0.26**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium (pCi/L)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Overburden Hybrid Screen – Analytical Data Results																																
GW-BD13-032709	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BD13-062308	**1.7**	4.1	5.9	17.2	4.0	4.6	–	–	–	–	–	–	–	–	–	31.0	4.2	6.5	–	–	–	*0.20*	*0.11*	*0.04*	***0.01***	*0.04*	*0.06*	*0.07*	*0.07*	*0.06*	**0.27**	**<MDC**
GW-BD13-062507	**0.00**	3.8	6.3	4.4	2.8	4.0	–	–	–	–	–	–	–	–	–	**0.19**	3.4	5.7	–	–	–	*0.31*	*0.15*	*0.10*	***-0.03***	*0.06*	*0.15*	*0.18*	*0.12*	*0.09*	**0.48**	**<MDC**
GW-BD13-091508	**1.0**	1.0	1.6	2.2	1.1	1.7	–	–	–	–	–	–	–	–	–	**-0.60**	1.9	3.2	–	–	–	*0.09*	*0.06*	*0.05*	***0.01***	*0.02*	*0.04*	*0.09*	*0.05*	*0.02*	**0.19**	**<MDC**
GW-BD13-091807	4.2	3.5	3.9	7.6	2.9	3.7	–	–	–	–	–	–	–	–	–	**2.7**	3.2	5.2	–	–	–	*0.46*	*0.14*	*0.08*	*0.02*	*0.03*	*0.02*	*0.18*	*0.09*	*0.06*	0.66	1.9%
GW-BD13-120407	**0.49**	4.3	6.9	4.0	2.4	3.4	–	–	–	–	–	–	–	–	–	**0.10**	3.1	5.2	–	–	–	*0.20*	*0.12*	*0.07*	***0.01***	*0.04*	*0.05*	***0.02***	*0.05*	*0.06*	**0.23**	**<MDC**
GW-BD13-120808	**2.0**	1.6	2.2	**1.0**	1.2	1.9	–	–	–	–	–	–	–	–	–	**0.26**	0.65	1.1	–	–	–	*0.18*	*0.12*	*0.13*	***-0.01***	*0.02*	*0.11*	***0.13***	*0.10*	*0.10*	**0.31**	**<MDC**
GW-BD13-122804	2.2	0.64	0.71	4.1	1.1	1.3	–	–	–	–	–	–	–	–	–	**0.06**	4.7	8.1	*0.08*	*0.05*	*0.04*	*0.15*	*0.08*	*0.08*	***0.03***	*0.04*	*0.06*	*0.08*	*0.05*	*0.04*	**0.27**	**<MDC**
GW-BD14-030308	11.8	8.6	9.6	13.6	3.7	4.4	–	–	–	–	–	–	–	–	–	**0.68**	2.9	4.7	–	–	–	*6.0*	*0.89*	*0.18*	*0.13*	*0.12*	*0.04*	*1.3*	*0.37*	*0.20*	7.4	1.5%
GW-BD14-032709	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**0.49**	0.82	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BD14-062507	**7.7**	6.6	8.3	8.5	3.4	4.6	–	–	–	–	–	–	–	–	–	**0.05**	3.4	5.6	–	–	–	*2.9*	*0.49*	*0.09*	*0.08*	*0.08*	*0.03*	*0.52*	*0.20*	*0.13*	3.5	2.4%
GW-BD14-062608	26.9	9.9	7.0	22.3	4.3	4.1	–	–	–	–	–	–	–	–	–	**0.06**	3.7	6.1	–	–	–	*1.0*	*0.32*	*0.12*	***0.00***	*0.06*	*0.13*	***0.07***	*0.12*	*0.17*	**1.1**	**<MDC**
GW-BD14-091707	7.1	6.0	6.6	7.6	3.1	4.0	–	–	–	–	–	–	–	–	–	**-1.3**	3.1	5.2	–	–	–	*1.4*	*0.32*	*0.17*	***0.01***	*0.04*	*0.06*	***0.20***	*0.16*	*0.22*	**1.6**	**<MDC**
GW-BD14-120407	**4.4**	7.2	10.3	7.7	2.9	3.7	–	–	–	–	–	–	–	–	–	**1.4**	3.2	5.3	–	–	–	*0.49*	*0.20*	*0.11*	*0.04*	*0.06*	*0.03*	*0.14*	*0.11*	*0.09*	0.67	4.6%
GW-BD14-122904	1.5	0.73	1.1	2.6	1.2	1.8	–	–	–	–	–	–	–	–	–	**5.4**	4.9	7.8	***0.02***	*0.03*	*0.02*	*0.10*	*0.06*	*0.05*	***0.00***	*0.03*	*0.05*	***0.01***	*0.03*	*0.05*	**0.12**	**<MDC**
GW-BD16-122204	–	–	–	–	–	–	***0.01***	*0.03*	*0.05*	*0.02*	*0.02*	*0.02*	***0.00***	*0.03*	*0.02*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BD2-121604	26.9	5.7	4.4	3,000	479.0	5.7	–	–	–	–	–	–	–	–	–	5,100	813.0	7.5	*0.59*	*0.16*	*0.06*	*8.0*	*1.4*	*0.07*	*0.43*	*0.15*	*0.08*	*1.6*	*0.34*	*0.07*	10.0	4.0%
GW-BD3-121704	18.1	3.5	1.9	18.0	3.7	3.5	–	–	–	–	–	–	–	–	–	14.6	7.4	10.6	*0.27*	*0.10*	*0.05*	*13.8*	*2.3*	*0.06*	*0.45*	*0.15*	*0.06*	*2.0*	*0.41*	*0.04*	16.3	3.3%
GW-BD4-121704	4.2	1.3	1.5	161.0	25.9	2.4	–	–	–	–	–	–	–	–	–	298.0	50.9	11.6	*0.06*	*0.05*	*0.04*	*1.3*	*0.29*	*0.05*	*0.07*	*0.05*	*0.06*	*0.41*	*0.13*	*0.05*	1.8	2.6%
GW-BD5-121504	8.8	1.7	0.93	62.9	10.2	1.8	–	–	–	–	–	–	–	–	–	117.0	22.3	11.0	*0.24*	*0.10*	*0.06*	*8.8*	*1.4*	*0.05*	*0.36*	*0.11*	*0.03*	*1.6*	*0.31*	*0.04*	10.7	3.4%
GW-BP17-030308	**4.9**	7.0	9.4	21.3	4.3	4.5	–	–	–	–	–	–	–	–	–	28.4	3.7	5.8	–	–	–	*1.7*	*0.36*	*0.21*	***-0.01***	*0.01*	*0.05*	*1.0*	*0.28*	*0.22*	**2.7**	**<MDC**
GW-BP17-031809	5.6	3.9	5.1	5.4	2.9	4.2	–	–	–	–	–	–	–	–	–	15.1	1.9	1.2	–	–	–	*1.1*	*0.23*	*0.08*	***0.03***	*0.04*	*0.05*	*0.82*	*0.19*	*0.05*	**2.0**	**<MDC**
GW-BP17-033009	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BP17-062308	**7.3**	6.5	7.6	12.1	4.3	5.7	–	–	–	–	–	–	–	–	–	19.3	3.9	6.3	–	–	–	*1.3*	*0.30*	*0.04*	***0.01***	*0.04*	*0.05*	*0.78*	*0.23*	*0.12*	**2.1**	**<MDC**
GW-BP17-062807	7.8	5.1	3.3	6.0	3.2	4.4	–	–	–	–	–	–	–	–	–	9.7	4.3	6.8	–	–	–	*0.64*	*0.18*	*0.09*	***0.04***	*0.05*	*0.04*	*0.21*	*0.11*	*0.08*	**0.88**	**<MDC**
GW-BP17-091508	**2.8**	4.4	7.3	19.8	4.2	4.2	–	–	–	–	–	–	–	–	–	43.2	4.4	2.9	–	–	–	*1.7*	*0.29*	*0.04*	*0.08*	*0.06*	*0.06*	*0.97*	*0.21*	*0.02*	2.7	1.2%
GW-BP17-092107	**5.1**	6.0	7.6	10.2	3.8	4.9	–	–	–	–	–	–	–	–	–	8.6	3.4	5.4	–	–	–	*4.1*	*0.48*	*0.10*	*0.08*	*0.07*	*0.03*	*0.78*	*0.19*	*0.09*	5.0	1.6%
GW-BP17-120307	**0.73**	5.7	9.0	9.6	3.5	4.5	–	–	–	–	–	–	–	–	–	**0.83**	3.7	6.1	–	–	–	***-0.16***	*0.12*	*0.46*	***0.05***	*0.17*	*0.22*	***0.16***	*0.31*	*0.46*	**0.22**	**<MDC**
GW-BP17-120908	6.4	3.3	3.7	20.2	3.9	4.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	*1.0*	*0.22*	*0.05*	*0.06*	*0.05*	*0.03*	*0.55*	*0.15*	*0.06*	1.6	1.7%

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Overburden Hybrid Screen – Analytical Data Results																																
GW-BP17-122204	1.7	0.68	0.92	7.5	1.6	1.6	***-0.01***	*0.04*	*0.06*	***0.01***	*0.01*	*0.03*	***0.00***	*0.04*	*0.05*	**8.0**	6.0	9.3	***0.02***	*0.03*	*0.04*	*0.05*	*0.04*	*0.04*	***0.00***	*0.03*	*0.04*	***0.03***	*0.03*	*0.04*	**0.08**	**<MDC**
GW-BP20A-030408	**-0.48**	3.8	6.4	**2.1**	2.6	4.0	–	–	–	–	–	–	–	–	–	**-2.2**	2.8	4.7	–	–	–	***0.12***	*0.17*	*0.19*	***-0.03***	*0.05*	*0.20*	***0.01***	*0.13*	*0.25*	**0.13**	**<MDC**
GW-BP20A-031909	**1.0**	1.1	1.7	2.8	1.5	2.3	–	–	–	–	–	–	–	–	–	**-0.62**	0.81	1.5	–	–	–	***0.01***	*0.03*	*0.06*	***0.00***	*0.01*	*0.05*	***0.01***	*0.02*	*0.04*	**0.02**	**<MDC**
GW-BP20A-033109	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BP20A-062308	7.3	6.1	6.9	6.3	3.4	4.8	–	–	–	–	–	–	–	–	–	**-1.9**	3.2	5.3	–	–	–	*0.26*	*0.13*	*0.02*	***0.01***	*0.04*	*0.05*	*0.33*	*0.15*	*0.04*	**0.61**	**<MDC**
GW-BP20A-062607	**3.3**	3.9	5.0	7.5	3.0	3.8	–	–	–	–	–	–	–	–	–	**-2.5**	3.4	5.7	–	–	–	*0.10*	*0.09*	*0.08*	***-0.01***	*0.02*	*0.08*	***0.08***	*0.09*	*0.11*	**0.18**	**<MDC**
GW-BP20A-091508	**1.3**	1.1	1.7	1.9	0.77	1.1	–	–	–	–	–	–	–	–	–	**-1.5**	1.9	3.3	–	–	–	***0.02***	*0.03*	*0.04*	***0.00***	*0.01*	*0.03*	***0.00***	*0.03*	*0.06*	**0.03**	**<MDC**
GW-BP20A-091807	8.3	4.7	4.3	5.3	2.8	3.8	–	–	–	–	–	–	–	–	–	**-0.18**	3.1	5.2	–	–	–	*0.05*	*0.05*	*0.04*	***0.00***	*0.01*	*0.03*	*0.08*	*0.06*	*0.05*	**0.13**	**<MDC**
GW-BP20A-120307	**0.43**	3.3	5.3	4.3	2.7	3.8	–	–	–	–	–	–	–	–	–	**-4.5**	3.7	6.1	–	–	–	***0.15***	*0.35*	*0.60*	***0.12***	*0.22*	*0.20*	***0.01***	*0.28*	*0.55*	**0.28**	**<MDC**
GW-BP20A-120908	**0.70**	1.2	2.0	**1.6**	1.5	2.3	–	–	–	–	–	–	–	–	–	**-0.69**	0.90	1.6	–	–	–	*0.05*	*0.04*	*0.04*	***0.03***	*0.04*	*0.05*	***0.03***	*0.03*	*0.04*	**0.10**	**<MDC**
GW-BP21-030508	**-1.3**	3.7	6.9	**2.3**	2.9	4.2	–	–	–	–	–	–	–	–	–	**-0.05**	4.0	7.7	–	–	–	***0.01***	*0.03*	*0.04*	***0.02***	*0.04*	*0.03*	***0.03***	*0.05*	*0.07*	**0.06**	**<MDC**
GW-BP21-031809	**0.61**	0.97	1.6	**0.11**	0.68	1.2	–	–	–	–	–	–	–	–	–	**0.11**	0.75	1.3	–	–	–	***-0.01***	*0.02*	*0.06*	***0.00***	*0.00*	*0.04*	***0.01***	*0.01*	*0.02*	**0.01**	**<MDC**
GW-BP21-033109	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BP21-062308	**1.3**	2.4	3.4	**2.0**	2.6	4.0	–	–	–	–	–	–	–	–	–	**-5.6**	3.2	5.5	–	–	–	*0.04*	*0.05*	*0.03*	***0.00***	*0.03*	*0.07*	*0.12*	*0.08*	*0.04*	**0.16**	**<MDC**
GW-BP21-062607	**0.61**	2.1	3.2	4.4	2.3	3.2	–	–	–	–	–	–	–	–	–	**-5.1**	3.3	5.6	–	–	–	***0.16***	*0.13*	*0.17*	***0.00***	*0.05*	*0.10*	***0.04***	*0.09*	*0.14*	**0.21**	**<MDC**
GW-BP21-091608	**-0.19**	0.83	1.8	**0.41**	0.64	1.1	–	–	–	–	–	–	–	–	–	**-1.3**	2.1	3.5	–	–	–	***-0.01***	*0.01*	*0.06*	***0.00***	*0.01*	*0.05*	***0.02***	*0.03*	*0.05*	**0.02**	**<MDC**
GW-BP21-092007	**3.3**	3.5	4.5	7.1	2.9	3.8	–	–	–	–	–	–	–	–	–	**-0.51**	3.4	5.6	–	–	–	*0.45*	*0.15*	*0.11*	***0.00***	*0.03*	*0.05*	***0.07***	*0.08*	*0.11*	**0.52**	**<MDC**
GW-BP21-120307	**0.61**	2.5	3.8	**2.6**	2.3	3.5	–	–	–	–	–	–	–	–	–	**-7.2**	3.5	5.9	–	–	–	***0.11***	*0.10*	*0.13*	***0.00***	*0.04*	*0.08*	***0.01***	*0.06*	*0.11*	**0.11**	**<MDC**
GW-BP21-120808	**1.1**	1.2	1.9	**0.21**	0.74	1.2	–	–	–	–	–	–	–	–	–	**0.29**	0.72	1.2	–	–	–	***0.00***	*0.04*	*0.10*	***-0.01***	*0.01*	*0.10*	***0.00***	*0.04*	*0.10*	**0.01**	**<MDC**
GW-BP22A-030508	**0.00**	5.7	9.5	5.1	3.5	4.6	–	–	–	–	–	–	–	–	–	**-2.7**	4.0	7.9	–	–	–	*0.23*	*0.11*	*0.06*	***-0.01***	*0.01*	*0.04*	***0.01***	*0.04*	*0.07*	**0.23**	**<MDC**
GW-BP22A-033009	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**0.18**	0.77	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BP22A-062507	**-1.6**	2.4	4.6	**2.6**	2.4	3.6	–	–	–	–	–	–	–	–	–	**-1.0**	3.4	5.6	–	–	–	*0.11*	*0.09*	*0.10*	***-0.01***	*0.02*	*0.06*	*0.11*	*0.08*	*0.05*	**0.22**	**<MDC**
GW-BP22A-062608	10.0	6.3	6.7	21.0	3.8	3.8	–	–	–	–	–	–	–	–	–	**-1.6**	3.6	6.0	–	–	–	***0.04***	*0.07*	*0.09*	***0.00***	*0.00*	*0.03*	***0.03***	*0.06*	*0.09*	**0.07**	**<MDC**
GW-BP22A-091807	3.6	2.8	3.0	9.4	2.8	3.4	–	–	–	–	–	–	–	–	–	**-0.69**	3.1	5.2	–	–	–	*0.65*	*0.16*	*0.06*	***-0.01***	*0.03*	*0.04*	*0.31*	*0.11*	*0.06*	**0.96**	**<MDC**
GW-BP22A-120307	**0.69**	2.7	4.2	**2.4**	2.4	3.6	–	–	–	–	–	–	–	–	–	**-4.2**	3.5	5.9	–	–	–	*0.11*	*0.09*	*0.10*	***0.03***	*0.05*	*0.04*	*0.06*	*0.06*	*0.05*	**0.20**	**<MDC**
GW-BP22A-122804	2.2	0.95	1.3	3.8	1.5	2.5	***0.00***	*0.04*	*0.06*	***0.01***	*0.02*	*0.03*	***0.00***	*0.03*	*0.04*	**-0.29**	4.5	7.8	***0.04***	*0.03*	*0.04*	*0.14*	*0.07*	*0.08*	***0.03***	*0.04*	*0.06*	*0.09*	*0.05*	*0.02*	**0.26**	**<MDC**
GW-DM02-030408	121.0	17.6	3.0	364.0	13.0	3.9	–	–	–	–	–	–	–	–	–	576.0	25.1	16.4	–	–	–	*117.3*	*11.1*	*0.11*	*4.6*	*0.84*	*0.08*	*21.6*	*2.4*	*0.16*	143.5	3.2%
GW-DM02-033009	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	173.0	15.0	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-DM02-062608	191.0	21.0	5.3	309.0	12.1	3.5	–	–	–	–	–	–	–	–	–	542.0	24.3	18.2	–	–	–	*151.4*	*21.5*	*0.26*	*4.6*	*1.3*	*0.18*	*26.2*	*4.3*	*0.15*	182.1	2.6%

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Overburden Hybrid Screen – Analytical Data Results																																
GW-DM02-062807	150.0	16.0	5.1	119.0	7.4	3.8	–	–	–	–	–	–	–	–	–	192.0	9.9	9.6	–	–	–	*183.7*	*11.5*	*0.15*	*6.2*	*0.69*	*0.05*	*30.5*	*2.2*	*0.15*	220.5	3.1%
GW-DM02-091907	217.0	22.3	5.8	243.0	11.1	3.8	–	–	–	–	–	–	–	–	–	203.0	10.8	11.7	–	–	–	*203.6*	*13.5*	*0.09*	*7.5*	*0.83*	*0.06*	*33.7*	*2.5*	*0.05*	244.8	3.3%
GW-DM02-120607	255.0	49.4	26.4	199.0	18.1	12.5	–	–	–	–	–	–	–	–	–	**-4.4**	3.6	6.0	–	–	–	*166.9*	*11.4*	*0.09*	*6.1*	*0.74*	*0.04*	*29.8*	*2.3*	*0.05*	202.8	3.1%
GW-DM02-122204	301.0	48.3	0.93	55.6	9.2	3.0	***0.00***	*0.03*	*0.05*	*0.09*	*0.05*	*0.01*	***0.01***	*0.03*	*0.04*	44.1	9.7	7.8	*0.02*	*0.02*	*0.02*	*315.0*	*50.9*	*0.07*	*16.5*	*2.8*	*0.07*	*56.3*	*9.2*	*0.08*	387.8	4.4%
GW-EP14-030308	**4.9**	7.0	9.4	26.8	4.4	4.1	–	–	–	–	–	–	–	–	–	**4.1**	3.0	4.8	–	–	–	*0.69*	*0.24*	*0.18*	***0.07***	*0.08*	*0.08*	*0.38*	*0.18*	*0.18*	**1.1**	**<MDC**
GW-EP14-031909	6.9	2.8	2.6	10.4	3.2	4.3	–	–	–	–	–	–	–	–	–	8.4	1.4	1.4	–	–	–	*0.32*	*0.12*	*0.06*	***0.02***	*0.04*	*0.06*	*0.24*	*0.10*	*0.06*	**0.58**	**<MDC**
GW-EP14-032709	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–				–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-EP14-062408	15.0	8.8	9.0	50.5	5.9	4.6	–	–	–	–	–	–	–	–	–	54.6	5.1	7.5	–	–	–	*0.73*	*0.34*	*0.14*	***0.03***	*0.09*	*0.12*	*0.52*	*0.30*	*0.20*	**1.3**	**<MDC**
GW-EP14-062807	13.1	7.5	4.4	19.0	4.5	5.0	–	–	–	–	–	–	–	–	–	17.8	4.5	6.8	–	–	–	*2.6*	*0.53*	*0.14*	*0.15*	*0.13*	*0.07*	*1.0*	*0.32*	*0.16*	3.8	2.2%
GW-EP14-091508	**1.8**	3.0	5.2	10.0	2.6	3.0	–	–	–	–	–	–	–	–	–	10.9	2.2	3.1	–	–	–	*0.41*	*0.13*	*0.05*	***0.05***	*0.05*	*0.06*	*0.08*	*0.06*	*0.04*	**0.54**	**<MDC**
GW-EP14-091907	21.8	10.9	9.9	61.6	6.8	4.9	–	–	–	–	–	–	–	–	–	13.0	3.9	6.2	–	–	–	*3.1*	*0.71*	*0.09*	*0.17*	*0.14*	*0.09*	*1.2*	*0.37*	*0.05*	4.5	2.1%
GW-EP14-120607	**16.8**	22.0	29.6	52.6	11.7	13.0	–	–	–	–	–	–	–	–	–	**-6.7**	3.6	6.0	–	–	–	*1.3*	*0.38*	*0.16*	*0.06*	*0.08*	*0.04*	*0.27*	*0.18*	*0.17*	1.6	3.2%
GW-EP14-120808	3.1	2.2	3.0	6.9	1.7	2.0	–	–	–	–	–	–	–	–	–	9.9	1.5	1.3	–	–	–	*0.27*	*0.16*	*0.15*	***0.00***	*0.02*	*0.06*	***0.11***	*0.10*	*0.14*	**0.38**	**<MDC**
GW-EP15-121004	**0.88**	0.86	1.6	219.0	35.5	2.9	–	–	–	–	–	–	–	–	–	362.0	60.5	10.1	***0.01***	*0.03*	*0.07*	***0.02***	*0.04*	*0.09*	***0.01***	*0.03*	*0.06*	***0.00***	*0.03*	*0.05*	**0.04**	**<MDC**
GW-EP16-030508	**2.0**	4.7	6.8	510.0	19.8	4.2	–	–	–	–	–	–	–	–	–	778.0	33.3	19.3	–	–	–	*0.18*	*0.09*	*0.05*	***0.01***	*0.03*	*0.02*	*0.16*	*0.09*	*0.06*	**0.36**	**<MDC**
GW-EP16-032509	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	434.0	37.0	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-EP16-062607	**3.4**	3.8	4.8	226.0	9.3	3.2	–	–	–	–	–	–	–	–	–	375.0	17.3	14.2	–	–	–	*0.69*	*0.22*	*0.14*	***-0.01***	*0.01*	*0.05*	*0.14*	*0.11*	*0.13*	**0.84**	**<MDC**
GW-EP16-062708	**2.1**	2.2	2.3	421.0	12.9	3.6	–	–	–	–	–	–	–	–	–	810.0	34.7	20.6	–	–	–	*1.4*	*0.22*	*0.02*	*0.03*	*0.03*	*0.01*	*0.29*	*0.10*	*0.04*	1.7	1.5%
GW-EP16-091608	**1.1**	1.6	2.6	427.0	33.0	1.0	–	–	–	–	–	–	–	–	–	952.0	82.0	6.0	–	–	–	*0.13*	*0.07*	*0.04*	***0.00***	*0.01*	*0.05*	*0.11*	*0.07*	*0.06*	**0.24**	**<MDC**
GW-EP16-091907	11.9	5.6	5.0	230.0	10.1	3.8	–	–	–	–	–	–	–	–	–	328.0	15.6	13.9	–	–	–	*2.8*	*0.40*	*0.05*	*0.12*	*0.09*	*0.06*	*0.87*	*0.21*	*0.06*	3.8	2.1%
GW-EP16-120407	28.4	7.4	5.0	151.0	8.3	3.8	–	–	–	–	–	–	–	–	–	246.0	12.0	11.1	–	–	–	*12.5*	*2.6*	*0.48*	*0.81*	*0.56*	*0.39*	*2.7*	*0.96*	*0.48*	15.9	4.5%
GW-EP16-121304	2.7	1.3	1.8	446.0	71.7	2.9	***0.01***	*0.04*	*0.03*	***0.00***	*0.01*	*0.04*	***-0.01***	*0.03*	*0.06*	675.0	110.0	10.0	***0.01***	*0.03*	*0.04*	***0.05***	*0.05*	*0.08*	***0.00***	*0.02*	*0.05*	***0.03***	*0.03*	*0.04*	**0.08**	**<MDC**
GW-FD1-120704	**0.93**	0.91	1.8	10.5	2.4	2.9	–	–	–	–	–	–	–	–	–	8.6	5.1	7.7	***0.01***	*0.02*	*0.03*	*0.21*	*0.09*	*0.06*	***0.00***	*0.03*	*0.05*	*0.18*	*0.08*	*0.04*	**0.39**	**<MDC**
GW-FD3-121304	**1.2**	1.0	1.8	378.0	60.6	2.4	***0.00***	*0.04*	*0.05*	***0.00***	*0.01*	*0.02*	***0.00***	*0.03*	*0.04*	712.0	116.0	10.9	***-0.01***	*0.03*	*0.07*	*0.16*	*0.07*	*0.05*	*0.03*	*0.03*	*0.02*	*0.08*	*0.05*	*0.02*	0.28	5.3%
GW-FD5-121604	10.1	1.8	0.61	11.0	2.0	1.4	–	–	–	–	–	–	–	–	–	**5.7**	6.8	11.1	***0.04***	*0.04*	*0.04*	*1.2*	*0.29*	*0.02*	*0.06*	*0.05*	*0.03*	*0.27*	*0.11*	*0.02*	1.6	3.5%
GW-FD7-122004	2.2	1.0	1.4	3.1	1.6	3.0	***0.02***	*0.04*	*0.06*	***0.00***	*0.01*	*0.03*	***0.01***	*0.03*	*0.05*	**6.4**	8.7	14.3	***0.01***	*0.03*	*0.08*	*1.1*	*0.25*	*0.04*	***0.02***	*0.03*	*0.05*	*0.32*	*0.11*	*0.04*	**1.4**	**<MDC**
GW-LF08-122104	4.7	1.1	0.79	176.0	28.2	1.4	–	–	–	–	–	–	–	–	–	246.0	41.6	8.5	*0.10*	*0.06*	*0.04*	*0.45*	*0.14*	*0.05*	***0.00***	*0.03*	*0.05*	*0.18*	*0.08*	*0.04*	**0.63**	**<MDC**
GW-LF09-030508	**0.00**	5.8	9.6	10.9	4.1	4.6	–	–	–	–	–	–	–	–	–	**3.0**	4.0	7.8	–	–	–	*1.8*	*0.43*	*0.08*	*0.09*	*0.08*	*0.03*	*0.45*	*0.18*	*0.07*	2.4	2.8%
GW-LF09-032609	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4.2	1.1	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Overburden Hybrid Screen – Analytical Data Results																																
GW-LF09-062507	**0.46**	4.0	6.4	**2.0**	2.6	4.1	–	–	–	–	–	–	–	–	–	**0.32**	3.4	5.6	–	–	–	*0.83*	*0.22*	*0.08*	*0.03*	*0.05*	*0.02*	*0.23*	*0.11*	*0.05*	1.1	2.2%
GW-LF09-062708	**3.6**	3.8	4.2	**2.6**	2.7	4.0	–	–	–	–	–	–	–	–	–	**1.5**	3.3	5.4	–	–	–	*1.6*	*0.27*	*0.04*	*0.08*	*0.07*	*0.06*	*0.38*	*0.13*	*0.04*	2.0	3.0%
GW-LF09-091907	**5.4**	4.8	5.6	5.4	2.8	3.9	–	–	–	–	–	–	–	–	–	**-1.1**	3.4	5.7	–	–	–	*1.0*	*0.22*	*0.07*	*0.06*	*0.07*	*0.05*	*0.23*	*0.10*	*0.07*	1.3	3.8%
GW-LF09-120407	**4.7**	4.6	6.0	5.8	2.5	3.3	–	–	–	–	–	–	–	–	–	**0.59**	3.2	5.2	–	–	–	*0.88*	*0.22*	*0.09*	***0.03***	*0.05*	*0.06*	*0.11*	*0.09*	*0.10*	**1.0**	**<MDC**
GW-LF09-122004	1.9	1.0	1.5	4.4	1.6	2.8	***0.01***	*0.04*	*0.03*	***0.00***	*0.01*	*0.03*	***0.00***	*0.03*	*0.04*	**8.5**	8.6	13.6	***0.01***	*0.03*	*0.04*	*1.1*	*0.26*	*0.07*	***0.03***	*0.03*	*0.05*	*0.23*	*0.09*	*0.05*	**1.4**	**<MDC**
GW-NB31-030508	**3.4**	5.2	7.0	351.0	16.6	4.3	–	–	–	–	–	–	–	–	–	644.0	27.9	17.6	–	–	–	*0.20*	*0.16*	*0.11*	***0.00***	*0.00*	*0.05*	*0.12*	*0.13*	*0.11*	**0.32**	**<MDC**
GW-NB31-031009	1.8	1.2	1.6	112.0	9.2	1.3	–	–	–	–	–	–	–	–	–	118.0	10.0	1.0	–	–	–	*0.20*	*0.11*	*0.09*	***0.04***	*0.05*	*0.07*	*0.08*	*0.07*	*0.07*	**0.32**	**<MDC**
GW-NB31-062408	**2.2**	2.7	3.6	159.0	8.0	3.2	–	–	–	–	–	–	–	–	–	279.0	13.6	12.9	–	–	–	*0.16*	*0.10*	*0.06*	***-0.01***	*0.01*	*0.04*	*0.09*	*0.08*	*0.08*	**0.26**	**<MDC**
GW-NB31-062707	**2.5**	3.1	4.1	167.0	8.4	3.8	–	–	–	–	–	–	–	–	–	282.0	13.4	11.4	–	–	–	*0.05*	*0.06*	*0.04*	***0.02***	*0.03*	*0.03*	*0.06*	*0.06*	*0.05*	**0.13**	**<MDC**
GW-NB31-091608	**0.11**	0.91	1.8	96.1	7.9	1.0	–	–	–	–	–	–	–	–	–	206.0	18.0	3.0	–	–	–	*0.15*	*0.08*	*0.05*	***0.00***	*0.01*	*0.03*	*0.06*	*0.05*	*0.05*	**0.21**	**<MDC**
GW-NB31-092007	**-0.89**	4.5	7.7	314.0	11.6	4.1	–	–	–	–	–	–	–	–	–	551.0	24.3	16.7	–	–	–	*0.18*	*0.10*	*0.06*	***0.02***	*0.03*	*0.02*	*0.13*	*0.09*	*0.06*	**0.33**	**<MDC**
GW-NB31-120507	31.4	6.9	4.1	259.0	10.5	3.8	–	–	–	–	–	–	–	–	–	471.0	21.4	16.6	–	–	–	*0.27*	*0.13*	*0.08*	***0.00***	*0.00*	*0.03*	*0.16*	*0.10*	*0.06*	**0.43**	**<MDC**
GW-NB31-121008	4.1	1.8	2.0	92.9	7.6	0.90	–	–	–	–	–	–	–	–	–	195.0	17.0	1.0	–	–	–	*0.47*	*0.19*	*0.12*	***0.08***	*0.09*	*0.12*	*0.24*	*0.13*	*0.08*	**0.79**	**<MDC**
GW-NB31-122104	**0.53**	0.78	1.6	46.9	7.9	2.6	***0.02***	*0.04*	*0.05*	***0.00***	*0.02*	*0.04*	***-0.01***	*0.03*	*0.07*	30.6	8.8	9.5	***0.01***	*0.03*	*0.05*	*0.12*	*0.07*	*0.06*	***0.02***	*0.03*	*0.05*	*0.12*	*0.06*	*0.04*	**0.27**	**<MDC**
GW-NB34-030508	5.7	3.8	3.5	12.2	3.1	3.4	–	–	–	–	–	–	–	–	–	**6.6**	4.1	7.7	–	–	–	*0.28*	*0.16*	*0.12*	***0.02***	*0.05*	*0.07*	*0.35*	*0.17*	*0.09*	**0.64**	**<MDC**
GW-NB34-031009	1.9	1.4	1.9	10.9	2.6	3.2	–	–	–	–	–	–	–	–	–	3.3	0.87	1.1	–	–	–	***0.07***	*0.06*	*0.07*	***0.01***	*0.03*	*0.07*	***0.05***	*0.05*	*0.06*	**0.13**	**<MDC**
GW-NB34-062408	**2.3**	3.8	5.2	10.6	3.0	3.5	–	–	–	–	–	–	–	–	–	**1.8**	3.4	5.5	–	–	–	*0.13*	*0.09*	*0.04*	***-0.01***	*0.02*	*0.07*	*0.07*	*0.08*	*0.07*	**0.20**	**<MDC**
GW-NB34-062707	**1.9**	3.8	5.4	13.0	3.5	4.3	–	–	–	–	–	–	–	–	–	**5.0**	4.2	6.8	–	–	–	*0.24*	*0.17*	*0.14*	***0.00***	*0.00*	*0.04*	*0.20*	*0.14*	*0.09*	**0.44**	**<MDC**
GW-NB34-091708	**2.5**	2.0	2.8	10.4	3.3	4.6	–	–	–	–	–	–	–	–	–	8.0	2.2	3.3	–	–	–	*0.51*	*0.15*	*0.04*	*0.04*	*0.04*	*0.03*	*0.55*	*0.15*	*0.07*	1.1	1.0%
GW-NB34-092007	**0.95**	3.8	5.9	14.9	3.8	4.5	–	–	–	–	–	–	–	–	–	**5.1**	3.5	5.6	–	–	–	*0.66*	*0.22*	*0.06*	***0.05***	*0.07*	*0.06*	*0.28*	*0.15*	*0.10*	**0.99**	**<MDC**
GW-NB34-120507	**1.4**	3.9	5.8	14.5	3.6	4.1	–	–	–	–	–	–	–	–	–	9.0	3.7	5.9	–	–	–	*0.31*	*0.16*	*0.11*	***-0.01***	*0.02*	*0.06*	*0.22*	*0.14*	*0.13*	**0.53**	**<MDC**
GW-NB34-120704	2.0	0.98	1.5	10.0	2.4	2.9	–	–	–	–	–	–	–	–	–	**7.4**	5.1	7.8	***0.01***	*0.02*	*0.05*	*0.20*	*0.08*	*0.04*	***0.02***	*0.03*	*0.04*	*0.11*	*0.06*	*0.04*	**0.33**	**<MDC**
GW-NB34-121008	2.4	1.1	1.2	8.5	1.5	1.5	–	–	–	–	–	–	–	–	–	7.1	1.2	1.3	–	–	–	*0.52*	*0.20*	*0.12*	*0.11*	*0.10*	*0.06*	*0.21*	*0.13*	*0.10*	0.84	7.5%
GW-NB35-030508	**2.0**	6.9	10.3	10.6	4.1	4.7	–	–	–	–	–	–	–	–	–	**5.0**	4.1	7.8	–	–	–	***0.09***	*0.10*	*0.12*	***0.01***	*0.05*	*0.09*	***0.13***	*0.12*	*0.14*	**0.23**	**<MDC**
GW-NB35-031009	**-0.17**	0.86	1.9	2.3	1.1	1.5	–	–	–	–	–	–	–	–	–	3.0	0.96	1.3	–	–	–	***0.00***	*0.02*	*0.07*	***0.00***	*0.01*	*0.06*	***0.03***	*0.04*	*0.06*	**0.03**	**<MDC**
GW-NB35-062408	**1.2**	3.2	4.7	9.0	2.8	3.4	–	–	–	–	–	–	–	–	–	5.7	3.5	5.7	–	–	–	*0.12*	*0.11*	*0.04*	***0.02***	*0.06*	*0.08*	***0.09***	*0.11*	*0.13*	**0.23**	**<MDC**
GW-NB35-062707	**0.41**	3.0	4.7	5.1	2.8	4.0	–	–	–	–	–	–	–	–	–	**3.8**	4.2	6.8	–	–	–	*0.21*	*0.18*	*0.18*	***0.01***	*0.12*	*0.22*	***0.04***	*0.11*	*0.18*	**0.26**	**<MDC**
GW-NB35-091808	**1.0**	1.1	1.7	2.8	1.2	1.7	–	–	–	–	–	–	–	–	–	3.1	1.8	2.9	–	–	–	*0.09*	*0.06*	*0.04*	***0.01***	*0.03*	*0.06*	*0.07*	*0.05*	*0.03*	**0.16**	**<MDC**
GW-NB35-092007	**-0.80**	2.8	5.0	**3.8**	2.9	4.3	–	–	–	–	–	–	–	–	–	**-0.48**	3.4	5.6	–	–	–	***0.10***	*0.13*	*0.17*	***-0.03***	*0.03*	*0.12*	***0.06***	*0.11*	*0.17*	**0.16**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium (pCi/L)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Overburden Hybrid Screen – Analytical Data Results																																
GW-NB35-120507	**1.2**	3.3	5.0	5.3	2.9	4.0	–	–	–	–	–	–	–	–	–	**2.2**	3.6	5.9	–	–	–	***0.07***	*0.08*	*0.10*	***-0.01***	*0.05*	*0.12*	***-0.02***	*0.04*	*0.12*	**0.07**	**<MDC**
GW-NB35-121008	**0.80**	1.3	2.2	1.9	0.74	0.96	–	–	–	–	–	–	–	–	–	3.2	0.97	1.3	–	–	–	*0.75*	*0.53*	*0.61*	***0.20***	*0.38*	*0.68*	*0.54*	*0.44*	*0.52*	**1.5**	**<MDC**
GW-NB35-122104	4.5	1.0	0.86	10.0	1.9	1.6	–	–	–	–	–	–	–	–	–	**5.9**	6.0	9.6	*0.22*	*0.10*	*0.04*	*0.15*	*0.07*	*0.05*	***0.00***	*0.03*	*0.06*	*0.14*	*0.07*	*0.05*	**0.29**	**<MDC**
GW-NB39-121504	2.0	0.86	1.2	8.7	2.0	2.4	–	–	–	–	–	–	–	–	–	**7.7**	6.7	10.5	***0.01***	*0.02*	*0.05*	*1.2*	*0.27*	*0.05*	***0.04***	*0.04*	*0.05*	*0.18*	*0.08*	*0.04*	**1.4**	**<MDC**
GW-NB46-121004	**-0.24**	0.59	1.6	**1.7**	1.4	3.0	–	–	–	–	–	–	–	–	–	**3.6**	6.0	10.0	***0.03***	*0.03*	*0.05*	***0.03***	*0.03*	*0.04*	***-0.01***	*0.03*	*0.06*	***0.02***	*0.03*	*0.04*	**0.05**	**<MDC**
GW-NB50-030608	**8.2**	9.2	12.1	94.4	8.6	5.6	–	–	–	–	–	–	–	–	–	**-2.5**	3.3	5.6	–	–	–	*1.8*	*0.33*	*0.18*	*0.12*	*0.09*	*0.04*	*1.2*	*0.27*	*0.18*	3.1	1.6%
GW-NB50-031709	**3.8**	2.9	4.2	**1.5**	1.8	2.9	–	–	–	–	–	–	–	–	–	**0.23**	0.91	1.5	–	–	–	*0.05*	*0.04*	*0.05*	***0.00***	*0.01*	*0.05*	***0.04***	*0.04*	*0.06*	**0.09**	**<MDC**
GW-NB50-032609	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-NB50-062308	**1.5**	4.2	6.0	5.8	3.5	4.9	–	–	–	–	–	–	–	–	–	**-5.0**	3.3	5.5	–	–	–	*0.16*	*0.07*	*0.04*	***-0.01***	*0.01*	*0.04*	*0.14*	*0.07*	*0.05*	**0.29**	**<MDC**
GW-NB50-062507	16.4	11.4	12.5	54.5	6.3	5.2	–	–	–	–	–	–	–	–	–	**-3.1**	3.4	5.6	–	–	–	*1.2*	*0.28*	*0.10*	*0.05*	*0.06*	*0.03*	*1.0*	*0.26*	*0.11*	2.2	0.8%
GW-NB50-091608	**-0.30**	1.7	3.6	**1.4**	1.4	2.1	–	–	–	–	–	–	–	–	–	**-2.0**	1.9	3.2	–	–	–	*0.11*	*0.07*	*0.05*	***0.02***	*0.03*	*0.03*	*0.07*	*0.05*	*0.04*	**0.20**	**<MDC**
GW-NB50-091807	**3.3**	4.1	5.1	16.5	3.7	4.0	–	–	–	–	–	–	–	–	–	**1.9**	3.4	5.5	–	–	–	*0.37*	*0.16*	*0.12*	***-0.01***	*0.01*	*0.05*	*0.21*	*0.12*	*0.09*	**0.59**	**<MDC**
GW-NB50-120407	**6.1**	6.0	7.5	11.5	3.4	4.2	–	–	–	–	–	–	–	–	–	**-3.8**	3.1	5.2	–	–	–	*0.19*	*0.13*	*0.12*	***0.03***	*0.06*	*0.08*	*0.37*	*0.16*	*0.06*	**0.59**	**<MDC**
GW-NB50-120908	**2.0**	1.8	2.6	**-0.03**	2.0	3.4	–	–	–	–	–	–	–	–	–	**-1.4**	0.79	1.5	–	–	–	*0.18*	*0.09*	*0.07*	***0.01***	*0.03*	*0.07*	*0.25*	*0.10*	*0.05*	**0.44**	**<MDC**
GW-NB50-121604	1.3	0.57	0.82	2.0	1.0	1.7	***0.01***	*0.03*	*0.02*	***0.00***	*0.01*	*0.02*	***0.01***	*0.04*	*0.03*	**5.3**	6.3	10.2	*0.07*	*0.05*	*0.05*	*0.29*	*0.10*	*0.03*	*0.05*	*0.04*	*0.04*	*0.25*	*0.09*	*0.03*	0.59	2.7%
GW-NB54-030508	**-2.5**	7.0	12.9	**3.3**	3.4	4.9	–	–	–	–	–	–	–	–	–	**0.89**	4.0	7.8				***0.06***	*0.07*	*0.07*	***0.03***	*0.05*	*0.04*	*0.07*	*0.06*	*0.05*	**0.15**	**<MDC**
GW-NB54-032609	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**-0.51**	0.70	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-NB54-062507	**1.7**	5.3	8.1	7.5	3.3	4.5	–	–	–	–	–	–	–	–	–	**-2.1**	3.4	5.6	–	–	–	*0.49*	*0.19*	*0.18*	***0.02***	*0.05*	*0.07*	*0.51*	*0.18*	*0.12*	**1.0**	**<MDC**
GW-NB54-062608	**0.85**	4.5	6.8	**0.74**	2.8	4.5	–	–	–	–	–	–	–	–	–	**-7.8**	3.6	6.1	–	–	–	*3.1*	*0.49*	*0.06*	*0.12*	*0.09*	*0.03*	*1.0*	*0.27*	*0.02*	4.3	1.7%
GW-NB54-091907	**3.4**	5.3	7.2	8.4	3.3	4.3	–	–	–	–	–	–	–	–	–	**-4.2**	3.5	5.9	–	–	–	***0.04***	*0.05*	*0.05*	*0.02*	*0.03*	*0.02*	*0.05*	*0.05*	*0.04*	**0.11**	**<MDC**
GW-NB54-120407	**-0.49**	3.5	6.0	5.0	2.8	3.9	–	–	–	–	–	–	–	–	–	**-2.9**	3.1	5.2	–	–	–	***0.10***	*0.11*	*0.16*	***0.00***	*0.05*	*0.09*	***0.08***	*0.10*	*0.13*	**0.18**	**<MDC**
GW-NB54-122004	1.1	0.48	0.64	1.8	0.97	1.5	–	–	–	–	–	–	–	–	–	**2.9**	8.9	15.2	***0.03***	*0.03*	*0.04*	***0.02***	*0.03*	*0.04*	***0.01***	*0.03*	*0.06*	***0.04***	*0.04*	*0.06*	**0.07**	**<MDC**
GW-NB56-121604	**0.93**	0.85	1.6	**1.3**	1.4	2.9	–	–	–	–	–	–	–	–	–	**2.9**	5.9	9.9	***0.01***	*0.03*	*0.04*	*0.09*	*0.05*	*0.06*	***0.01***	*0.02*	*0.05*	*0.07*	*0.04*	*0.04*	**0.18**	**<MDC**
GW-NB57A-030608	**0.00**	4.0	6.5	**3.7**	2.7	3.9	–	–	–	–	–	–	–	–	–	**-4.2**	3.9	7.8	–	–	–	*0.12*	*0.09*	*0.11*	***0.01***	*0.03*	*0.04*	***0.08***	*0.07*	*0.09*	**0.21**	**<MDC**
GW-NB57A-031809	1.8	2.3	3.9	**0.90**	1.4	2.3	–	–	–	–	–	–	–	–	–	**-0.11**	0.71	1.2	–	–	–	***0.02***	*0.03*	*0.05*	***0.00***	*0.01*	*0.03*	***0.00***	*0.02*	*0.06*	**0.02**	**<MDC**
GW-NB57A-032609	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-NB57A-062308	**2.3**	5.8	8.6	5.1	2.8	3.9	–	–	–	–	–	–	–	–	–	**-4.9**	3.2	5.4	–	–	–	*0.32*	*0.14*	*0.04*	***-0.01***	*0.02*	*0.07*	*0.42*	*0.16*	*0.07*	**0.74**	**<MDC**
GW-NB57A-062507	**0.49**	4.2	6.8	**1.7**	2.7	4.2	–	–	–	–	–	–	–	–	–	**-3.5**	3.4	5.6	–	–	–	***0.03***	*0.05*	*0.06*	***0.00***	*0.00*	*0.02*	***0.00***	*0.04*	*0.08*	**0.03**	**<MDC**
GW-NB57A-091608	**2.9**	2.3	3.1	3.7	1.8	2.5	–	–	–	–	–	–	–	–	–	**-0.70**	1.9	3.1	–	–	–	***0.04***	*0.05*	*0.06*	***0.00***	*0.01*	*0.03*	***0.03***	*0.04*	*0.05*	**0.07**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Overburden Hybrid Screen – Analytical Data Results																																
GW-NB57A-091907	**5.1**	5.5	6.7	**2.8**	2.7	4.1	–	–	–	–	–	–	–	–	–	**-2.8**	3.5	5.8	–	–	–	***0.03***	*0.04*	*0.06*	***0.00***	*0.02*	*0.04*	***0.05***	*0.05*	*0.06*	**0.09**	**<MDC**
GW-NB57A-120407	**-0.48**	3.5	6.0	**3.9**	2.7	3.9	–	–	–	–	–	–	–	–	–	**-1.00**	3.1	5.2	–	–	–	*0.12*	*0.09*	*0.09*	***0.00***	*0.00*	*0.02*	***0.08***	*0.08*	*0.10*	**0.20**	**<MDC**
GW-NB57A-121108	**0.80**	1.6	2.8	**0.70**	1.2	2.0	–	–	–	–	–	–	–	–	–	**-1.2**	0.81	1.5	–	–	–	*0.12*	*0.08*	*0.10*	***0.01***	*0.03*	*0.08*	***0.05***	*0.05*	*0.07*	**0.17**	**<MDC**
GW-NB57A-121404	1.3	0.55	0.72	**1.2**	0.92	1.6	–	–	–	–	–	–	–	–	–	**2.9**	6.8	11.4	***0.02***	*0.03*	*0.03*	*0.30*	*0.10*	*0.03*	*0.03*	*0.03*	*0.02*	*0.12*	*0.06*	*0.02*	0.45	4.4%
GW-NB57B-121504	2.5	0.72	0.72	**0.68**	0.93	1.5	–	–	–	–	–	–	–	–	–	**4.5**	8.4	14.0	***0.02***	*0.03*	*0.04*	*1.7*	*0.33*	*0.04*	*0.07*	*0.05*	*0.05*	*0.81*	*0.19*	*0.02*	2.6	1.3%
GW-NB61-122204	**0.54**	0.70	1.4	**2.1**	1.4	2.6	–	–	–	–	–	–	–	–	–	**0.55**	5.1	8.8	***0.04***	*0.04*	*0.07*	*0.08*	*0.05*	*0.05*	***0.02***	*0.03*	*0.05*	*0.08*	*0.05*	*0.02*	**0.17**	**<MDC**
GW-NB65-122004	0.98	0.54	0.79	2.3	0.88	1.3	***0.00***	*0.04*	*0.05*	***0.01***	*0.01*	*0.03*	***0.00***	*0.03*	*0.04*	**2.1**	7.3	12.6	***0.01***	*0.03*	*0.04*	*0.68*	*0.18*	*0.06*	***0.01***	*0.03*	*0.04*	*0.45*	*0.14*	*0.04*	**1.1**	**<MDC**
GW-NB71-121304	**1.3**	0.88	1.5	**0.97**	1.4	3.0	–	–	–	–	–	–	–	–	–	**6.2**	6.4	10.2	***0.02***	*0.03*	*0.05*	*0.05*	*0.04*	*0.03*	*0.02*	*0.03*	*0.02*	***0.01***	*0.02*	*0.02*	**0.09**	**<MDC**
GW-NB78-122104	2.4	0.90	1.1	2.7	1.2	2.1	–	–	–	–	–	–	–	–	–	**3.1**	5.6	9.4	***0.00***	*0.02*	*0.06*	*1.2*	*0.25*	*0.04*	***0.04***	*0.04*	*0.06*	*0.88*	*0.21*	*0.04*	**2.1**	**<MDC**
GW-NB80-030608	**1.4**	6.1	9.4	5.3	2.8	3.8	–	–	–	–	–	–	–	–	–	**-0.95**	3.2	5.2	–	–	–	*0.34*	*0.15*	*0.12*	***0.02***	*0.04*	*0.03*	*0.15*	*0.11*	*0.12*	**0.51**	**<MDC**
GW-NB80-032309	**1.9**	1.7	2.4	2.3	1.1	1.6	–	–	–	–	–	–	–	–	–	**0.32**	0.81	1.4	–	–	–	*0.20*	*0.13*	*0.12*	*0.07*	*0.09*	*0.07*	***0.09***	*0.10*	*0.13*	**0.37**	**<MDC**
GW-NB80-032709	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-NB80-062308	**3.0**	4.0	4.9	**3.3**	2.8	4.2	–	–	–	–	–	–	–	–	–	**-6.7**	3.2	5.5	–	–	–	*0.31*	*0.11*	*0.04*	***-0.01***	*0.01*	*0.04*	*0.20*	*0.09*	*0.06*	**0.50**	**<MDC**
GW-NB80-062807	**0.00**	2.9	4.8	6.8	2.9	3.8	–	–	–	–	–	–	–	–	–	**-3.9**	4.0	6.8	–	–	–	***0.10***	*0.11*	*0.11*	***0.00***	*0.00*	*0.04*	*0.12*	*0.11*	*0.10*	**0.22**	**<MDC**
GW-NB80-091808	**0.90**	1.7	3.0	**1.6**	1.6	2.6	–	–	–	–	–	–	–	–	–	**0.70**	1.7	2.8	–	–	–	*0.24*	*0.09*	*0.04*	*0.03*	*0.04*	*0.03*	*0.14*	*0.07*	*0.06*	0.41	3.4%
GW-NB80-092007	**-1.5**	3.4	6.4	**3.4**	2.9	4.3	–	–	–	–	–	–	–	–	–	**-4.4**	3.3	5.6	–	–	–	*0.19*	*0.09*	*0.08*	***0.01***	*0.02*	*0.03*	*0.13*	*0.08*	*0.07*	**0.33**	**<MDC**
GW-NB80-120507	**5.4**	5.2	6.6	8.4	3.3	4.3	–	–	–	–	–	–	–	–	–	**3.7**	3.6	5.9	–	–	–	***0.04***	*0.10*	*0.18*	***-0.02***	*0.03*	*0.10*	***0.09***	*0.11*	*0.15*	**0.13**	**<MDC**
GW-NB80-121208	**1.8**	2.1	3.3	**1.7**	1.5	2.3	–	–	–	–	–	–	–	–	–	**-0.63**	0.79	1.4	–	–	–	*0.12*	*0.07*	*0.04*	***0.02***	*0.03*	*0.03*	*0.09*	*0.06*	*0.05*	**0.24**	**<MDC**
GW-NB80-121704	**0.31**	0.75	1.7	**1.9**	1.4	2.9	***0.01***	*0.04*	*0.06*	***0.00***	*0.01*	*0.03*	***0.01***	*0.03*	*0.02*	**2.8**	6.2	10.5	***0.01***	*0.03*	*0.07*	***0.03***	*0.04*	*0.06*	***0.01***	*0.03*	*0.05*	*0.06*	*0.04*	*0.05*	**0.10**	**<MDC**
GW-NB81-030408	**0.65**	1.6	2.1	**1.7**	2.1	3.3	–	–	–	–	–	–	–	–	–	**-1.3**	2.9	4.8	–	–	–	***-0.10***	*0.12*	*0.34*	***0.00***	*0.00*	*0.07*	***0.22***	*0.24*	*0.29*	**0.22**	**<MDC**
GW-NB81-030909	**0.50**	1.0	1.8	**0.31**	0.70	1.2	–	–	–	–	–	–	–	–	–	**-0.04**	0.73	1.3	–	–	–	*0.59*	*0.28*	*0.22*	***0.02***	*0.08*	*0.19*	***0.12***	*0.13*	*0.17*	**0.73**	**<MDC**
GW-NB81-062508	**-1.9**	3.2	6.0	4.4	2.3	3.0	–	–	–	–	–	–	–	–	–	**-5.1**	3.2	5.4	–	–	–	*0.27*	*0.13*	*0.07*	***-0.01***	*0.01*	*0.05*	*0.13*	*0.09*	*0.04*	**0.41**	**<MDC**
GW-NB81-062707	**2.2**	3.7	5.1	11.9	3.4	4.2	–	–	–	–	–	–	–	–	–	**-3.0**	4.0	6.7	–	–	–	***0.23***	*0.27*	*0.27*	***0.00***	*0.00*	*0.11*	*0.42*	*0.36*	*0.35*	**0.65**	**<MDC**
GW-NB81-091808	**0.80**	1.0	1.6	1.2	0.68	0.99	–	–	–	–	–	–	–	–	–	**1.5**	2.2	3.5	–	–	–	***0.01***	*0.03*	*0.06*	***0.00***	*0.01*	*0.03*	***0.00***	*0.02*	*0.05*	**0.01**	**<MDC**
GW-NB81-091907	**4.1**	4.0	4.8	7.1	2.8	3.7	–	–	–	–	–	–	–	–	–	**-4.1**	3.5	5.9	–	–	–	*0.08*	*0.09*	*0.08*	***0.00***	*0.00*	*0.03*	***0.03***	*0.06*	*0.09*	**0.11**	**<MDC**
GW-NB81-120507	**0.73**	2.9	4.5	**0.93**	2.4	3.9	–	–	–	–	–	–	–	–	–	**-0.70**	3.6	5.9	–	–	–	***-0.04***	*0.10*	*0.26*	***0.00***	*0.00*	*0.07*	***-0.02***	*0.13*	*0.28*	**0**	**<MDC**
GW-NB81-120904	**0.59**	0.75	1.5	**1.7**	1.3	2.6	–	–	–	–	–	–	–	–	–	**4.0**	4.6	7.4	***0.02***	*0.03*	*0.04*	***0.03***	*0.03*	*0.04*	***0.02***	*0.03*	*0.05*	***0.01***	*0.03*	*0.04*	**0.06**	**<MDC**
GW-NB81-121108	**0.50**	1.2	2.0	1.3	0.78	1.1	–	–	–	–	–	–	–	–	–	**-1.3**	0.83	1.5	–	–	–	***0.00***	*0.03*	*0.08*	***0.01***	*0.04*	*0.08*	***0.03***	*0.04*	*0.07*	**0.04**	**<MDC**
GW-NB85-030508	**3.9**	5.2	6.3	9.8	3.2	3.9	–	–	–	–	–	–	–	–	–	**-0.43**	4.0	7.8	–	–	–	*0.82*	*0.21*	*0.09*	***0.00***	*0.06*	*0.12*	*0.65*	*0.19*	*0.13*	**1.5**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium (pCi/L)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Overburden Hybrid Screen – Analytical Data Results																																
GW-NB85-031709	**-0.42**	0.96	2.0	1.6	0.79	1.1	–	–	–	–	–	–	–	–	–	**0.42**	0.77	1.3	–	–	–	***0.00***	*0.02*	*0.07*	*0.04*	*0.04*	*0.03*	***0.01***	*0.03*	*0.07*	**0.04**	**<MDC**
GW-NB85-062408	7.0	3.8	3.8	10.2	2.8	3.2	–	–	–	–	–	–	–	–	–	**-5.1**	3.2	5.4	–	–	–	*0.65*	*0.30*	*0.09*	***0.07***	*0.12*	*0.11*	***0.18***	*0.20*	*0.24*	**0.90**	**<MDC**
GW-NB85-062607	**5.7**	6.4	8.2	13.0	3.4	3.9	–	–	–	–	–	–	–	–	–	**-3.6**	3.4	5.6	–	–	–	*0.83*	*0.23*	*0.06*	***0.01***	*0.04*	*0.05*	*0.60*	*0.20*	*0.10*	**1.4**	**<MDC**
GW-NB85-091708	**-0.20**	1.7	3.4	**-0.08**	2.2	3.9	–	–	–	–	–	–	–	–	–	**-0.20**	2.0	3.4	–	–	–	*0.11*	*0.06*	*0.04*	***-0.01***	*0.01*	*0.06*	***0.04***	*0.04*	*0.05*	**0.15**	**<MDC**
GW-NB85-092007	**4.5**	5.9	7.9	12.4	3.8	4.7	–	–	–	–	–	–	–	–	–	**-4.2**	3.3	5.6	–	–	–	*1.1*	*0.20*	*0.08*	***0.00***	*0.01*	*0.03*	*0.88*	*0.18*	*0.06*	**2.0**	**<MDC**
GW-NB85-120507	**4.2**	6.3	8.7	8.3	3.5	4.7	–	–	–	–	–	–	–	–	–	**2.2**	3.6	5.9	–	–	–	*0.77*	*0.33*	*0.15*	*0.15*	*0.16*	*0.11*	*0.68*	*0.31*	*0.12*	1.6	3.2%
GW-NB85-120804	**1.6**	0.99	1.7	**1.6**	1.4	2.8	–	–	–	–	–	–	–	–	–	**4.9**	4.3	6.9	***0.06***	*0.05*	*0.06*	*0.22*	*0.08*	*0.05*	***0.00***	*0.03*	*0.02*	*0.17*	*0.07*	*0.02*	**0.39**	**<MDC**
GW-NB85-121108	**2.6**	2.0	3.0	1.5	0.96	1.4	–	–	–	–	–	–	–	–	–	**-0.98**	0.97	1.7	–	–	–	*0.29*	*0.11*	*0.05*	***0.03***	*0.04*	*0.05*	*0.22*	*0.09*	*0.03*	**0.54**	**<MDC**
GW-NB86-120804	2.0	0.97	1.3	**2.1**	1.4	2.8	***0.02***	*0.03*	*0.04*	***0.00***	*0.01*	*0.01*	***0.00***	*0.03*	*0.03*	**4.3**	4.3	6.8	*0.07*	*0.04*	*0.04*	*0.52*	*0.14*	*0.05*	***0.03***	*0.03*	*0.06*	*0.34*	*0.10*	*0.02*	**0.88**	**<MDC**
GW-OA19-122104	4.2	1.4	1.5	7.2	1.9	2.7	–	–	–	–	–	–	–	–	–	**8.6**	6.2	9.6	***0.05***	*0.05*	*0.06*	*3.0*	*0.55*	*0.03*	*0.09*	*0.05*	*0.02*	*0.58*	*0.15*	*0.03*	3.7	2.2%
GW-OB01-030608	**3.1**	6.2	8.8	**4.7**	3.4	4.8	–	–	–	–	–	–	–	–	–	**0.00**	4.0	7.7	–	–	–	*1.6*	*0.26*	*0.10*	*0.04*	*0.04*	*0.02*	*1.4*	*0.24*	*0.08*	3.0	0.5%
GW-OB01-032009	5.5	3.6	4.3	**4.3**	4.2	6.8	–	–	–	–	–	–	–	–	–	**-0.90**	0.76	1.4	–	–	–	*1.1*	*0.21*	*0.04*	***0.04***	*0.05*	*0.06*	*0.74*	*0.17*	*0.05*	**1.9**	**<MDC**
GW-OB01-062508	**1.5**	5.1	7.6	**2.0**	3.0	4.6	–	–	–	–	–	–	–	–	–	**-3.5**	3.6	6.0	–	–	–	*0.94*	*0.21*	*0.03*	*0.06*	*0.06*	*0.04*	*0.77*	*0.19*	*0.06*	1.8	1.3%
GW-OB01-062707	**2.7**	3.3	3.2	4.4	3.0	4.3	–	–	–	–	–	–	–	–	–	**-2.1**	4.0	6.7	–	–	–	*1.1*	*0.27*	*0.14*	***-0.01***	*0.04*	*0.10*	*0.98*	*0.25*	*0.13*	**2.0**	**<MDC**
GW-OB01-091508	3.7	3.1	4.7	**0.60**	1.6	2.6	–	–	–	–	–	–	–	–	–	**-0.30**	2.2	3.7	–	–	–	*0.79*	*0.19*	*0.07*	***0.03***	*0.04*	*0.06*	*0.84*	*0.19*	*0.08*	**1.66**	**<MDC**
GW-OB01-092007	**-1.5**	5.3	9.4	**3.8**	3.4	5.1	–	–	–	–	–	–	–	–	–	**-1.4**	3.4	5.6	–	–	–	*1.0*	*0.25*	*0.10*	***-0.01***	*0.02*	*0.06*	*0.75*	*0.21*	*0.08*	**1.8**	**<MDC**
GW-OB01-121208	6.8	4.4	5.7	**3.9**	2.7	4.0	–	–	–	–	–	–	–	–	–	**-0.36**	0.79	1.4	–	–	–	*1.0*	*0.22*	*0.06*	*0.05*	*0.05*	*0.03*	*0.86*	*0.20*	*0.03*	1.9	0.9%
GW-OB1-121404	3.4	1.2	1.4	4.2	1.7	2.7	–	–	–	–	–	–	–	–	–	**5.5**	6.7	10.8	***0.03***	*0.03*	*0.05*	*0.91*	*0.21*	*0.05*	*0.04*	*0.04*	*0.02*	*0.76*	*0.18*	*0.02*	1.7	0.9%
GW-OB2-121404	6.0	1.3	0.89	10.9	2.1	1.8	–	–	–	–	–	–	–	–	–	**-1.7**	4.4	7.9	*0.24*	*0.09*	*0.02*	*0.32*	*0.11*	*0.09*	***0.04***	*0.04*	*0.06*	*0.35*	*0.11*	*0.04*	**0.70**	**<MDC**
GW-PL04-122204	**0.94**	0.69	1.2	8.9	2.1	2.5	***0.00***	*0.04*	*0.03*	***-0.01***	*0.02*	*0.05*	***0.01***	*0.04*	*0.06*	9.0	5.9	9.0	***0.05***	*0.05*	*0.08*	*0.11*	*0.06*	*0.05*	***0.00***	*0.03*	*0.05*	*0.08*	*0.05*	*0.06*	**0.20**	**<MDC**
GW-PL06-030508	**3.2**	3.0	3.2	57.1	5.2	3.4	–	–	–	–	–	–	–	–	–	106.0	6.8	8.6	–	–	–	***0.08***	*0.08*	*0.09*	***0.00***	*0.00*	*0.03*	***0.03***	*0.05*	*0.07*	**0.10**	**<MDC**
GW-PL06-032509	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	133.0	12.0	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-PL06-062707	10.3	4.2	1.8	77.9	6.0	3.4	–	–	–	–	–	–	–	–	–	153.0	8.5	9.1	–	–	–	*0.12*	*0.09*	*0.03*	***-0.02***	*0.03*	*0.10*	***0.07***	*0.08*	*0.08*	**0.19**	**<MDC**
GW-PL06-062708	**4.8**	4.9	5.5	59.0	5.7	4.3	–	–	–	–	–	–	–	–	–	117.0	7.3	9.2	–	–	–	*0.36*	*0.13*	*0.05*	***0.02***	*0.04*	*0.05*	*0.38*	*0.14*	*0.10*	**0.76**	**<MDC**
GW-PL06-091907	**3.7**	4.3	5.5	73.3	6.1	3.9	–	–	–	–	–	–	–	–	–	126.0	7.8	9.8	–	–	–	***0.03***	*0.04*	*0.04*	***0.01***	*0.02*	*0.02*	*0.04*	*0.04*	*0.04*	**0.08**	**<MDC**
GW-PL06-120407	7.3	4.4	4.8	72.8	5.9	3.7	–	–	–	–	–	–	–	–	–	133.0	7.6	8.7	–	–	–	*0.15*	*0.13*	*0.10*	***-0.01***	*0.02*	*0.07*	***-0.01***	*0.02*	*0.06*	**0.15**	**<MDC**
GW-PL06-120808	3.1	1.5	1.7	95.0	8.1	2.1	–	–	–	–	–	–	–	–	–	160.0	14.0	1.0	–	–	–	***0.07***	*0.08*	*0.11*	***0.00***	*0.01*	*0.09*	***0.06***	*0.07*	*0.10*	**0.13**	**<MDC**
GW-PL06-121504	**0.09**	0.75	1.7	87.1	14.3	3.0	–	–	–	–	–	–	–	–	–	92.3	18.0	9.8	***0.01***	*0.04*	*0.07*	***0.04***	*0.04*	*0.06*	***0.00***	*0.02*	*0.05*	*0.07*	*0.04*	*0.04*	**0.11**	**<MDC**
GW-WS23-032709	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**-0.79**	0.75	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium (pCi/L)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Overburden Hybrid Screen – Analytical Data Results																																
GW-WS23-121304	5.8	1.3	0.95	7.1	1.8	2.3	***0.01***	*0.03*	*0.05*	***-0.01***	*0.01*	*0.04*	***0.01***	*0.04*	*0.05*	**8.1**	6.5	10.2	*0.23*	*0.09*	*0.07*	*0.09*	*0.06*	*0.06*	***0.02***	*0.03*	*0.06*	*0.11*	*0.06*	*0.07*	**0.22**	**<MDC**
GW-WS25-033009	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**-0.44**	0.80	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-WS25-121504	6.8	1.4	0.80	8.9	1.8	1.6	***0.01***	*0.03*	*0.03*	***0.00***	*0.01*	*0.02*	***0.00***	*0.04*	*0.05*	**5.7**	6.2	10.0	*0.09*	*0.06*	*0.06*	*0.73*	*0.18*	*0.03*	*0.05*	*0.04*	*0.02*	*0.49*	*0.13*	*0.02*	1.3	1.6%
GW-WS27-033009	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**0.07**	0.80	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-WS27-121504	**0.64**	0.58	0.91	3.2	1.1	1.6	–	–	–	–	–	–	–	–	–	**6.6**	7.9	12.8	*0.03*	*0.03*	*0.02*	*0.62*	*0.16*	*0.03*	***0.04***	*0.04*	*0.05*	*0.43*	*0.13*	*0.04*	**1.1**	**<MDC**
GW-WS29-033109	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**-0.38**	0.70	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-WS29-121604	**0.05**	0.73	1.8	**0.64**	1.5	3.2	–	–	–	–	–	–	–	–	–	**4.6**	6.8	11.2	*0.06*	*0.05*	*0.06*	*0.06*	*0.05*	*0.06*	*0.03*	*0.03*	*0.02*	***0.04***	*0.04*	*0.05*	**0.13**	**<MDC**
GW-WS32-033009	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	12.5	1.7	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-WS32-121704	**0.82**	0.72	1.3	14.6	3.0	2.9	–	–	–	–	–	–	–	–	–	16.5	7.7	10.7	*0.08*	*0.06*	*0.07*	*0.17*	*0.08*	*0.06*	***0.01***	*0.04*	*0.05*	*0.06*	*0.05*	*0.05*	**0.24**	**<MDC**
GW-WS34-032509	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**-0.83**	0.73	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-WS34-121404	2.4	0.71	0.71	3.8	1.2	1.7	–	–	–	–	–	–	–	–	–	**2.7**	6.0	10.1	***0.00***	*0.03*	*0.04*	***0.02***	*0.03*	*0.05*	***0.03***	*0.03*	*0.06*	***0.00***	*0.02*	*0.06*	**0.05**	**<MDC**
NB-30-27-32-OL-GW	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**5.1**	6.6	10.9	***0.05***	*0.04*	*0.06*	*0.57*	*0.19*	*0.08*	*0.11*	*0.08*	*0.09*	*0.69*	*0.22*	*0.08*	1.4	2.3%
NB-34-22-32-OL-GW	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**6.0**	7.5	12.2	***0.01***	*0.02*	*0.05*	*0.39*	*0.16*	*0.07*	***0.03***	*0.05*	*0.04*	***0.09***	*0.08*	*0.09*	**0.52**	**<MDC**
NB-35-24-29-OL-GW	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**6.2**	6.7	10.7	*0.04*	*0.03*	*0.02*	*0.34*	*0.16*	*0.17*	***0.08***	*0.08*	*0.10*	*0.19*	*0.11*	*0.07*	**0.61**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium (pCi/L)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Overburden Unknown Screen depth – Statistical Data Analyses																																
No. of Detects	118			163			0			1			0			80			21			55			21			45			19	19
No. of Non-Detects	60			15			3			2			3			39			22			6			41			17			43	43
Detection Freq.	66.3%			91.6%			0.0%			33.3%			0.0%			67.2%			48.8%			90.2%			33.9%			72.6%			30.6%	30.6%
Max. Conc.	170.3			3,275			0.20			8.1			0.01			5,330			4.5			7,900			310.0			270.0			8,480	15.1%
Min. Conc.	-3.3			-1.4			0.00			-0.19			0.01			-8.2			-0.07			0.01			-0.05			-210.3			0.01	0.5%
Mean Conc.	12.6			359.5			0.06			2.6			0.01			616.1			0.30			143.1			5.7			5.1			160.4	3.9%
Std. Deviation	26.1			760.3			0.12			4.7			0.00			1,214			0.69			1,011			39.4			46.1			1,077	3.3%
Overburden Unknown Screen Depth – Analytical Data Results																																
GW-BP15-033109	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**-0.15**	0.80	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BP2A-040109	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	435.0	37.0	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BP2-XX	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	604.0	62.0	6.0	***0.03***	*0.06*	*0.10*	*404.0*	*57.0*	*0.20*	*19.5*	*3.2*	*0.20*	*99.0*	*14.0*	*0.10*	522.5	3.0%
GW-BP2-XX-D	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	494.0	51.0	5.0	***0.09***	*0.10*	*0.11*	*137.0*	*18.0*	*0.20*	*6.0*	*1.1*	*0.10*	*32.8*	*4.6*	*0.10*	175.8	2.8%
GW-BP40-033109	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	55.9	5.4	1.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BP55-040109	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**0.23**	0.85	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BP5A-040109	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**-0.58**	0.82	1.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BP5A-XX	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**-2.6**	1.7	2.9	*0.19*	*0.13*	*0.08*	*24.3*	*3.4*	*0.10*	*1.0*	*0.34*	*0.10*	*1.4*	*0.40*	*0.09*	26.8	10.0%
GW-BP7A-033109	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**-0.44**	0.74	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-BP7A-XX	–	–	–	–	–	–	***0.20***	*0.26*	*0.34*	*8.1*	*2.7*	*1.4*	***0.01***	*0.05*	*0.10*	**-2.3**	1.8	3.2	***0.06***	*0.08*	*0.09*	*7,900*	*1,300*	*100.0*	*310.0*	*170.0*	*110.0*	*270.0*	*160.0*	*50.0*	8,480	15.1%
GW-BP9A-XX	–	–	–	–	–	–	***0.00***	*0.10*	*0.19*	***-0.19***	*0.58*	*1.3*	***0.01***	*0.06*	*0.12*	10.1	2.2	2.9	***0.06***	*0.09*	*0.13*	*67.4*	*9.1*	*0.20*	*3.5*	*0.74*	*0.10*	*26.2*	*3.7*	*0.10*	97.1	2.0%
GW-RMC9-033009	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1740	150.0	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-WS07-032509	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	524.0	45.0	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-WS13-032709	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	31.6	3.3	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-WS14-033009	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	155.0	14.0	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-WS14-121604	3.4	1.2	1.3	72.9	12.1	3.0	***0.00***	*0.03*	*0.05*	***0.00***	*0.01*	*0.02*	***0.01***	*0.04*	*0.05*	138.0	25.2	10.2	*0.17*	*0.08*	*0.05*	*1.4*	*0.28*	*0.05*	*0.05*	*0.04*	*0.05*	*0.33*	*0.10*	*0.05*	1.7	2.5%
GW-WS15-033009	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	28.7	3.0	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-WS15-121604	1.9	1.1	1.7	14.0	3.0	3.0	–	–	–	–	–	–	–	–	–	20.9	8.0	10.4	*0.12*	*0.07*	*0.08*	*2.0*	*0.40*	*0.08*	*0.11*	*0.07*	*0.05*	*0.49*	*0.15*	*0.08*	2.5	3.3%
GW-WS16-030508	**0.48**	3.2	5.0	20.3	4.4	3.9	–	–	–	–	–	–	–	–	–	16.5	4.6	8.1	–	–	–	*0.26*	*0.13*	*0.09*	***-0.01***	*0.05*	*0.12*	*0.14*	*0.11*	*0.14*	**0.40**	**<MDC**
GW-WS16-033109	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	32.3	3.3	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Overburden Unknown Screen Depth – Analytical Data Results																																
GW-WS16-062608	**1.1**	1.2	1.4	22.4	3.2	3.0	–	–	–	–	–	–	–	–	–	36.2	4.4	6.7	–	–	–	*0.07*	*0.06*	*0.02*	***-0.01***	*0.01*	*0.04*	***0.03***	*0.04*	*0.05*	**0.10**	**<MDC**
GW-WS16-062907	**1.7**	1.7	1.9	38.5	3.9	2.7	–	–	–	–	–	–	–	–	–	42.8	4.8	6.5	–	–	–	***0.13***	*0.10*	*0.13*	***-0.03***	*0.02*	*0.09*	***0.04***	*0.08*	*0.14*	**0.17**	**<MDC**
GW-WS16-091807	3.1	2.0	2.0	34.7	3.9	2.9	–	–	–	–	–	–	–	–	–	41.5	4.5	6.7	–	–	–	*0.50*	*0.18*	*0.12*	***-0.01***	*0.02*	*0.07*	*0.30*	*0.14*	*0.10*	**0.79**	**<MDC**
GW-WS16-120407	9.5	6.3	7.4	43.9	4.8	3.4	–	–	–	–	–	–	–	–	–	38.7	4.3	6.2	–	–	–	*0.09*	*0.08*	*0.09*	*0.03*	*0.05*	*0.02*	***0.03***	*0.06*	*0.10*	**0.16**	**<MDC**
GW-WS16-121604	**0.12**	0.39	0.74	8.0	1.6	1.4	–	–	–	–	–	–	–	–	–	24.0	8.7	11.0	*0.07*	*0.05*	*0.04*	*0.08*	*0.05*	*0.03*	***0.00***	*0.02*	*0.04*	***0.03***	*0.03*	*0.04*	**0.11**	**<MDC**
GW-WS17B-030508	12.3	6.3	5.5	2,270	45.5	4.4	–	–	–	–	–	–	–	–	–	3,290	134.0	38.7	–	–	–	***0.06***	*0.07*	*0.09*	***0.00***	*0.04*	*0.07*	***0.04***	*0.06*	*0.08*	**0.10**	**<MDC**
GW-WS17B-033109	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,240	190.0	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-WS17B-062608	3.2	1.9	1.5	2,150	43.1	5.1	–	–	–	–	–	–	–	–	–	3,790	154.0	43.4	–	–	–	*0.07*	*0.06*	*0.02*	***0.00***	*0.03*	*0.06*	***0.03***	*0.05*	*0.07*	**0.11**	**<MDC**
GW-WS17B-062907	10.5	4.0	2.9	1,730	34.7	4.1	–	–	–	–	–	–	–	–	–	2,370	96.5	30.1	–	–	–	***0.01***	*0.04*	*0.07*	***-0.01***	*0.01*	*0.05*	***-0.01***	*0.01*	*0.04*	**0.01**	**<MDC**
GW-WS17B-091508	**1.3**	2.3	4.2	1,800	140.0	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GW-WS17B-091807	2.8	1.9	1.9	1,870	37.6	4.2	–	–	–	–	–	–	–	–	–	2,820	115.0	34.5	–	–	–	*0.64*	*0.20*	*0.08*	***-0.01***	*0.01*	*0.05*	*0.11*	*0.09*	*0.09*	**0.75**	**<MDC**
GW-WS17B-121704	14.8	3.5	2.7	1,790	286.0	3.4	–	–	–	–	–	–	–	–	–	3,610	577.0	13.7	*0.13*	*0.07*	*0.05*	*0.48*	*0.14*	*0.04*	*0.03*	*0.03*	*0.02*	*0.10*	*0.06*	*0.04*	0.61	3.9%
GW-WS7-121304	12.1	2.6	1.4	290.0	46.7	2.6	–	–	–	–	–	–	–	–	–	476.0	78.7	10.4	***0.02***	*0.03*	*0.07*	*12.6*	*2.0*	*0.04*	*0.53*	*0.15*	*0.05*	*2.0*	*0.37*	*0.03*	15.1	4.1%
GW-WS8-120904	2.0	0.97	1.4	9.2	2.3	2.9	–	–	–	–	–	–	–	–	–	**1.2**	5.6	9.5	*0.13*	*0.06*	*0.03*	*0.38*	*0.12*	*0.05*	***0.01***	*0.03*	*0.04*	*0.16*	*0.07*	*0.04*	**0.55**	**<MDC**
L20802-1	**0.10**	2.7	3.9	**2.8**	2.7	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L21048-14	**0.61**	2.9	4.0	**2.2**	2.9	3.5	–	–	–	–	–	–	–	–	–	**-3.8**	2.8	4.7	–	–	–	*1.9*	*0.60*	*0.39*	***0.05***	*0.10*	*0.07*	*0.35*	*0.27*	*0.22*	**2.3**	**<MDC**
L21048-5	8.8	7.0	6.9	36.1	7.4	6.7	–	–	–	–	–	–	–	–	–	**-2.9**	2.8	4.7	–	–	–	*3.2*	*1.3*	*0.64*	***0.00***	*0.00*	*0.21*	*3.7*	*1.4*	*0.17*	**6.9**	**<MDC**
L21048-6	9.3	7.8	6.8	30.6	9.3	8.8	–	–	–	–	–	–	–	–	–	**-1.8**	2.8	4.7	–	–	–	***0.24***	*0.57*	*0.85*	***0.00***	*0.00*	*0.20*	***-0.15***	*0.22*	*0.60*	**0.24**	**<MDC**
L21048-7	**3.1**	3.6	4.2	150.6	8.3	3.6	–	–	–	–	–	–	–	–	–	292.0	5.6	4.7	–	–	–	*2.2*	*0.76*	*0.32*	***0.07***	*0.14*	*0.11*	*0.12*	*0.16*	*0.08*	**2.4**	**<MDC**
L21048-9	**5.8**	8.8	10.1	35.3	10.1	10.0	–	–	–	–	–	–	–	–	–	**2.8**	2.9	4.7	–	–	–	*35.0*	*7.4*	*1.6*	*1.6*	*1.3*	*0.38*	*51.7*	*9.9*	*1.6*	88.3	0.5%
L21054-1	13.6	5.6	5.2	202.6	9.2	3.5	–	–	–	–	–	–	–	–	–	450.0	6.6	4.7	*0.79*	*0.59*	*0.54*	*14.8*	*1.8*	*0.15*	*0.34*	*0.26*	*0.07*	*2.2*	*0.61*	*0.22*	17.3	2.4%
L21054-2	**-2.3**	3.6	6.5	11.6	3.6	3.8	–	–	–	–	–	–	–	–	–	15.1	3.0	4.7	***0.48***	*0.69*	*0.93*	*1.2*	*0.49*	*0.39*	***0.00***	*0.00*	*0.07*	*0.37*	*0.26*	*0.16*	**1.6**	**<MDC**
L21054-3	112.4	21.2	3.7	3,275	65.3	3.0	–	–	–	–	–	–	–	–	–	5,330	20.8	4.7	*0.19*	*0.17*	*0.06*	*1.1*	*0.50*	*0.08*	***0.00***	*0.00*	*0.25*	*0.33*	*0.29*	*0.20*	**1.5**	**<MDC**
L21203-1	**0.83**	1.8	2.3	5.6	2.6	2.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L21475-1	**1.9**	2.2	2.5	**1.1**	2.6	3.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L21835-1	**0.78**	2.1	2.9	3.0	2.5	2.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22035-10	22.6	8.1	4.1	2,800	55.9	5.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22035-4	10.0	3.6	2.8	287.4	10.4	3.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22035-5	5.6	2.9	2.4	14.6	3.3	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Overburden Unknown Screen Depth – Analytical Data Results																																
L22035-6	3.2	2.5	2.7	13.5	3.3	3.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22035-7	4.7	2.8	3.1	157.9	8.0	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22035-8	**0.52**	2.2	3.5	7.6	3.1	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22035-9	4.6	2.4	1.9	10.5	3.0	2.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22276-1	**0.23**	2.0	2.9	4.6	2.5	2.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22415-1	**2.3**	2.2	2.4	**2.2**	2.7	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22502-10	146.2	21.7	3.6	2,801	55.9	5.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22502-4	37.3	6.8	2.5	350.0	11.6	3.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22502-5	3.4	2.4	2.0	14.9	3.3	2.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22502-6	9.5	3.6	2.2	16.2	3.5	3.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22502-7	12.8	4.4	2.8	135.5	7.6	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22502-8	5.5	3.1	2.9	11.2	3.3	3.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22502-9	7.7	3.7	2.6	8.9	4.1	4.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22565-1	**2.7**	2.7	3.3	6.4	2.7	2.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22742-1	**0.77**	2.3	3.2	**0.66**	2.6	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L22919-1	**-0.11**	2.1	3.0	4.6	2.6	2.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L23210-1	**1.9**	2.0	2.1	4.0	2.6	2.9	–	–	–	–	–	–	–	–	–	**-4.5**	3.6	6.1	***-0.01***	*0.17*	*0.30*	*1.6*	*0.44*	*0.32*	***0.07***	*0.11*	*0.11*	*0.49*	*0.23*	*0.13*	**2.1**	**<MDC**
L23211-10	**1.4**	2.1	2.8	2,604	52.2	4.9	–	–	–	–	–	–	–	–	–	3,980	22.1	7.0	***0.05***	*0.13*	*0.16*	*1.5*	*0.37*	*0.08*	*0.05*	*0.07*	*0.04*	*0.22*	*0.15*	*0.12*	1.8	3.5%
L23211-4	17.1	4.6	2.0	239.7	9.8	3.1	–	–	–	–	–	–	–	–	–	423.0	6.3	4.5	*0.25*	*0.16*	*0.13*	*16.4*	*1.5*	*0.19*	*0.46*	*0.23*	*0.14*	*2.6*	*0.49*	*0.17*	19.4	2.7%
L23211-5	8.1	3.3	1.9	14.7	3.3	3.0	–	–	–	–	–	–	–	–	–	**-2.2**	3.0	5.0	*0.55*	*0.26*	*0.11*	*0.36*	*0.20*	*0.15*	***0.05***	*0.13*	*0.19*	*0.24*	*0.17*	*0.13*	**0.66**	**<MDC**
L23211-6	8.9	3.6	2.0	17.3	3.6	3.1	–	–	–	–	–	–	–	–	–	**-2.8**	3.2	5.3	*0.39*	*0.20*	*0.12*	*1.9*	*0.39*	*0.14*	*0.07*	*0.08*	*0.03*	*0.49*	*0.21*	*0.14*	2.4	2.1%
L23211-7	8.4	3.4	2.2	144.5	7.8	3.2	–	–	–	–	–	–	–	–	–	272.0	5.9	5.4	***0.14***	*0.18*	*0.17*	*13.0*	*2.0*	*0.26*	*0.17*	*0.20*	*0.08*	*1.3*	*0.53*	*0.26*	14.5	2.0%
L23211-8	3.2	2.6	2.5	13.9	3.5	3.4	–	–	–	–	–	–	–	–	–	12.7	3.9	6.1	***0.13***	*0.18*	*0.20*	*0.91*	*0.29*	*0.12*	***0.03***	*0.05*	*0.04*	*0.35*	*0.18*	*0.08*	**1.3**	**<MDC**
L23211-9	8.2	3.4	2.0	17.7	3.5	3.1	–	–	–	–	–	–	–	–	–	**-0.78**	4.4	7.3	*0.82*	*0.44*	*0.21*	*0.43*	*0.39*	*0.36*	*0.32*	*0.32*	*0.12*	***0.17***	*0.29*	*0.36*	**0.92**	**<MDC**
L23290-1	**1.0**	2.5	3.3	4.6	2.6	2.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L23622-1	**-2.7**	3.3	5.4	**0.38**	2.6	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L23716-1	3.4	3.0	3.0	**-0.63**	2.8	3.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L23797-10	10.0	5.4	5.4	2,772	55.3	5.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L23797-4	19.9	6.3	4.9	304.4	11.5	3.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Overburden Unknown Screen Depth – Analytical Data Results																																
L23797-5	3.4	3.3	3.3	15.6	3.6	3.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L23797-6	**1.6**	3.9	5.7	8.3	3.6	4.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L23797-7	15.2	7.6	6.6	196.4	10.0	4.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L23797-8	**6.0**	5.2	6.7	54.7	6.0	4.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L23797-9	5.4	3.9	4.0	18.6	3.8	3.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L24111-1	**3.5**	3.7	4.4	**1.2**	2.9	3.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L24234-1	39.3	5.7	5.2	79.0	5.7	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L24336-1	**0.95**	1.7	1.9	**1.8**	2.6	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L24369-10	111.0	14.8	3.4	1,684	33.4	4.2	–	–	–	–	–	–	–	–	–	1,680	13.1	5.4	*0.37*	*0.20*	*0.14*	*1.8*	*0.63*	*0.40*	***0.02***	*0.13*	*0.22*	*0.46*	*0.31*	*0.22*	**2.3**	**<MDC**
L24369-4	29.0	7.4	3.5	251.6	12.0	3.9	–	–	–	–	–	–	–	–	–	350.0	6.5	5.1	***0.03***	*0.06*	*0.08*	*3.2*	*0.62*	*0.21*	***0.02***	*0.07*	*0.09*	*0.42*	*0.23*	*0.21*	**3.7**	**<MDC**
L24369-5	6.6	3.6	2.6	17.3	4.1	3.5	–	–	–	–	–	–	–	–	–	**-3.3**	3.1	5.2	*0.18*	*0.13*	*0.12*	***0.09***	*0.12*	*0.14*	***-0.01***	*0.03*	*0.10*	***-0.05***	*0.05*	*0.18*	**0.09**	**<MDC**
L24369-6	15.3	6.9	4.5	54.1	6.7	4.3	–	–	–	–	–	–	–	–	–	**-3.3**	3.1	5.2	***-0.01***	*0.05*	*0.11*	*0.67*	*0.28*	*0.11*	***-0.01***	*0.02*	*0.09*	***0.27***	*0.23*	*0.29*	**0.94**	**<MDC**
L24369-7	14.2	5.5	3.8	129.6	8.9	4.0	–	–	–	–	–	–	–	–	–	188.0	5.2	5.2	***-0.01***	*0.05*	*0.11*	*0.77*	*0.38*	*0.36*	***-0.03***	*0.04*	*0.17*	***0.09***	*0.19*	*0.30*	**0.85**	**<MDC**
L24369-8	7.8	4.7	4.7	18.3	4.6	4.4	–	–	–	–	–	–	–	–	–	**4.4**	3.7	6.0	*0.15*	*0.12*	*0.11*	*0.76*	*0.35*	*0.17*	***0.05***	*0.09*	*0.07*	*0.39*	*0.26*	*0.20*	**1.2**	**<MDC**
L24369-9	81.7	24.1	12.9	146.0	12.6	7.1	–	–	–	–	–	–	–	–	–	**-2.7**	3.2	5.4	*4.5*	*0.72*	*0.15*	*1.6*	*0.52*	*0.31*	***-0.03***	*0.04*	*0.17*	*0.57*	*0.33*	*0.30*	**2.1**	**<MDC**
L24526-1	**2.3**	4.0	5.4	3.9	2.9	3.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L24696-1	**1.5**	2.3	2.8	4.7	2.8	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L24832-1	**0.95**	1.5	1.8	4.9	2.4	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L24860-10	99.3	14.6	3.6	1,689	33.7	3.9	–	–	–	–	–	–	–	–	–	2,960	17.0	5.1	–	–	–	*1.3*	*0.60*	*0.46*	***-0.02***	*0.05*	*0.19*	*1.00*	*0.50*	*0.26*	**2.3**	**<MDC**
L24860-10R1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	***0.08***	*0.11*	*0.12*	–	–	–	–	–	–	–	–	–	–	–
L24860-4	17.4	5.3	3.2	233.9	9.7	3.1	–	–	–	–	–	–	–	–	–	399.0	6.8	5.0	–	–	–	*11.0*	*1.5*	*0.30*	*0.41*	*0.28*	*0.20*	*1.8*	*0.53*	*0.26*	13.2	3.4%
L24860-4R1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	***-0.07***	*0.08*	*0.33*	–	–	–	–	–	–	–	–	–	–	–
L24860-5	2.2	2.0	2.1	5.1	2.5	2.6	–	–	–	–	–	–	–	–	–	**-2.3**	3.1	5.2	–	–	–	*2.1*	*0.91*	*0.72*	***0.06***	*0.20*	*0.26*	*1.4*	*0.68*	*0.36*	**3.5**	**<MDC**
L24860-5R1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	*0.57*	*0.23*	*0.15*	–	–	–	–	–	–	–	–	–	–	–
L24860-6	5.7	3.7	3.1	16.5	4.4	3.9	–	–	–	–	–	–	–	–	–	**-1.9**	3.0	5.0	–	–	–	*0.80*	*0.36*	*0.33*	***0.04***	*0.08*	*0.06*	*0.94*	*0.36*	*0.17*	**1.8**	**<MDC**
L24860-6R1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	*0.35*	*0.18*	*0.13*	–	–	–	–	–	–	–	–	–	–	–
L24860-7	19.6	5.7	3.5	169.9	8.5	3.2	–	–	–	–	–	–	–	–	–	287.0	6.1	5.2	–	–	–	–	–	–	**10.1**	38.0	64.0	**-210.3**	577.8	904.9	**338.0**	**<MDC**
L24860-7R1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	*0.56*	*0.25*	*0.17*	*9.3*	*1.1*	*0.11*	*0.26*	*0.17*	*0.04*	*0.95*	*0.31*	*0.13*	10.5	4.1%
L24860-8	10.7	5.2	5.0	28.2	5.3	4.6	–	–	–	–	–	–	–	–	–	15.4	3.3	5.1	–	–	–	*5.3*	*1.8*	*1.0*	***0.23***	*0.41*	*0.38*	*2.2*	*1.1*	*0.44*	**7.8**	**<MDC**

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Overburden Unknown Screen Depth – Analytical Data Results																																
L24860-8R1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	*0.34*	*0.19*	*0.11*	–	–	–	–	–	–	–	–	–	–	–
L24860-9	2.2	2.2	2.1	12.1	2.9	2.6	–	–	–	–	–	–	–	–	–	**4.8**	3.2	5.2	–	–	–	*1.3*	*0.56*	*0.35*	***0.06***	*0.20*	*0.31*	*0.99*	*0.48*	*0.25*	**2.3**	**<MDC**
L24860-9R1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	*0.59*	*0.24*	*0.09*	–	–	–	–	–	–	–	–	–	–	–
L24927-1	**-1.5**	2.2	3.8	4.9	2.7	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L25059-10	8.7	4.9	3.6	1,983	39.8	5.1	–	–	–	–	–	–	–	–	–	3,150	18.2	4.8	***0.01***	*0.08*	*0.14*	*0.20*	*0.17*	*0.12*	***0.00***	*0.09*	*0.19*	***0.11***	*0.13*	*0.12*	**0.31**	**<MDC**
L25059-4	9.7	4.5	3.5	237.2	11.7	4.3	–	–	–	–	–	–	–	–	–	378.0	6.9	4.8	***0.05***	*0.12*	*0.16*	*11.0*	*1.3*	*0.14*	*0.40*	*0.24*	*0.05*	*1.7*	*0.46*	*0.14*	13.1	3.5%
L25059-5	4.0	2.7	2.3	6.4	3.5	3.7	–	–	–	–	–	–	–	–	–	**-0.36**	2.9	4.8	***0.07***	*0.15*	*0.11*	*0.30*	*0.21*	*0.16*	***0.03***	*0.09*	*0.11*	*0.15*	*0.15*	*0.09*	**0.48**	**<MDC**
L25059-6	2.7	2.5	2.5	7.8	3.7	3.9	–	–	–	–	–	–	–	–	–	**-2.5**	2.9	4.8	***0.07***	*0.14*	*0.20*	***0.27***	*0.26*	*0.30*	***-0.02***	*0.04*	*0.14*	***0.02***	*0.19*	*0.35*	**0.29**	**<MDC**
L25059-7	**1.2**	2.5	3.4	143.8	9.3	4.3	–	–	–	–	–	–	–	–	–	210.0	5.5	4.8	***0.17***	*0.17*	*0.19*	*1.8*	*0.55*	*0.29*	***0.12***	*0.16*	*0.12*	*0.27*	*0.23*	*0.23*	**2.2**	**<MDC**
L25059-8	4.0	3.2	3.5	15.6	4.4	4.3	–	–	–	–	–	–	–	–	–	16.7	3.2	4.8	***0.21***	*0.23*	*0.25*	*2.9*	*0.75*	*0.23*	***-0.05***	*0.06*	*0.25*	*0.87*	*0.40*	*0.12*	**3.8**	**<MDC**
L25059-9	**1.6**	2.1	2.1	9.1	3.7	3.7	–	–	–	–	–	–	–	–	–	9.5	3.2	5.0	***0.01***	*0.07*	*0.12*	*0.38*	*0.25*	*0.11*	***0.00***	*0.00*	*0.07*	***0.00***	*0.09*	*0.18*	**0.38**	**<MDC**
L25136-1	**1.8**	2.1	2.3	**1.3**	2.6	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L25289-1	**2.2**	2.5	2.7	**-1.4**	2.7	3.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L25382-1	**-0.03**	2.7	4.1	**0.34**	2.5	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L25505-10	8.4	4.7	3.9	2,095	42.0	3.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L25505-4	4.2	3.5	3.8	234.2	9.9	2.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L25505-5	**-0.06**	1.4	1.9	5.5	2.3	2.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L25505-6	4.1	2.7	2.3	94.1	6.1	2.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L25505-7	**1.3**	2.6	3.8	108.5	6.9	2.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L25505-8	4.4	3.2	3.8	24.7	3.8	2.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L25505-9	3.2	2.2	2.0	14.9	2.9	2.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L25710-1	**-3.3**	3.0	5.5	9.9	2.9	3.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L25833-1	**2.4**	3.5	4.5	7.2	3.0	3.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26006-1	**1.6**	2.5	3.2	**-0.97**	2.7	3.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26212-10	170.3	17.3	3.5	1,626	32.5	4.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26212-4	118.8	19.6	10.5	458.0	18.5	7.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26212-5	3.9	2.3	2.1	6.9	3.0	3.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26212-6	4.2	3.3	4.0	10.7	3.5	3.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26212-7	18.3	5.7	4.0	103.0	7.2	3.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Overburden Unknown Screen Depth – Analytical Data Results																																
L26212-8	6.6	3.7	4.4	26.7	4.4	3.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26212-9	6.9	3.2	2.5	24.1	4.0	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26371-1	**0.08**	2.5	3.8	4.1	2.9	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26460-1	**1.6**	2.9	3.9	4.8	3.0	3.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26694-1	**3.1**	3.0	3.4	2.9	2.4	2.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26847-10	43.1	10.6	5.5	2,240	44.2	5.8	–	–	–	–	–	–	–	–	–	3,490	19.5	5.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26847-4	8.3	4.7	4.3	296.9	13.2	4.8	–	–	–	–	–	–	–	–	–	448.0	7.4	4.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26847-5	5.0	3.2	2.9	4.4	3.7	4.1	–	–	–	–	–	–	–	–	–	**-2.5**	2.9	4.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26847-6	9.0	5.3	4.6	21.5	5.3	4.8	–	–	–	–	–	–	–	–	–	**-0.38**	3.0	4.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26847-7	8.3	4.6	4.5	105.3	8.4	4.8	–	–	–	–	–	–	–	–	–	158.0	5.0	4.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26847-8	9.9	5.2	5.0	27.8	5.5	5.0	–	–	–	–	–	–	–	–	–	34.0	3.5	4.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L26847-9	13.9	6.3	5.1	42.1	6.3	5.0	–	–	–	–	–	–	–	–	–	16.0	3.2	4.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L27001-1	**0.59**	3.3	4.8	**1.3**	2.7	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L28108-10	9.6	3.4	2.8	2,290	45.7	5.2	–	–	–	–	–	–	–	–	–	3,370	171.0	47.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L28108-4	16.8	5.6	4.0	268.0	10.8	3.6	–	–	–	–	–	–	–	–	–	396.0	22.4	17.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L28108-5	4.2	1.9	1.2	4.6	2.8	3.0	–	–	–	–	–	–	–	–	–	**-4.8**	3.9	6.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L28108-6	3.1	1.8	1.4	7.9	3.1	3.2	–	–	–	–	–	–	–	–	–	**-5.7**	3.9	6.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L28108-7	12.3	4.1	2.1	87.5	6.5	3.6	–	–	–	–	–	–	–	–	–	132.0	9.4	10.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L28108-8	14.1	5.0	2.8	43.3	6.5	5.2	–	–	–	–	–	–	–	–	–	49.3	5.7	8.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L28108-9	9.8	4.1	2.6	30.0	5.7	5.1	–	–	–	–	–	–	–	–	–	**3.2**	4.2	6.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L29059-10	17.1	4.4	2.4	2,090	41.9	5.2	–	–	–	–	–	–	–	–	–	3,280	133.0	36.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L29059-4	42.8	8.1	3.7	296.9	11.4	3.8	–	–	–	–	–	–	–	–	–	587.0	25.3	15.6	–	–	–	*13.2*	*1.1*	*0.11*	*0.38*	*0.18*	*0.09*	*2.2*	*0.39*	*0.12*	15.8	2.6%
L29059-5	2.3	2.0	2.0	**2.1**	2.7	3.3	–	–	–	–	–	–	–	–	–	**-0.49**	3.1	5.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L29059-6	**2.2**	2.8	3.4	11.0	3.6	3.8	–	–	–	–	–	–	–	–	–	**0.51**	3.2	5.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L29059-7	11.5	4.9	3.9	48.3	5.4	4.0	–	–	–	–	–	–	–	–	–	76.6	5.4	7.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L29059-8	7.9	4.9	5.0	32.0	4.9	4.3	–	–	–	–	–	–	–	–	–	81.9	5.6	7.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L29059-9	9.0	3.9	3.3	42.0	5.0	3.8	–	–	–	–	–	–	–	–	–	33.9	4.0	5.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L29927-10	19.1	4.9	2.2	2,478	49.0	5.2	–	–	–	–	–	–	–	–	–	3,710	150.0	37.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L29927-4	13.8	5.1	3.8	294.7	11.0	3.4	–	–	–	–	–	–	–	–	–	464.0	20.4	13.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Overburden Unknown Screen Depth – Analytical Data Results																																
L29927-5	**1.7**	2.0	2.2	6.5	2.8	2.9	–	–	–	–	–	–	–	–	–	**-0.54**	3.1	5.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L29927-6	7.0	3.8	4.2	12.2	3.5	3.6	–	–	–	–	–	–	–	–	–	**-0.49**	3.1	5.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L29927-7	**3.2**	4.0	4.8	60.1	5.7	3.6	–	–	–	–	–	–	–	–	–	79.2	5.4	6.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L29927-8	**5.2**	4.5	5.3	27.6	4.5	3.8	–	–	–	–	–	–	–	–	–	28.5	3.6	5.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L29927-9	8.8	4.3	4.2	42.2	5.0	3.6	–	–	–	–	–	–	–	–	–	39.4	4.0	5.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L30517-10	5.6	3.9	4.4	2,617	52.0	5.1	–	–	–	–	–	–	–	–	–	4,280	173.0	43.6	–	–	–	*0.66*	*0.30*	*0.27*	***0.01***	*0.07*	*0.13*	***0.12***	*0.17*	*0.24*	**0.79**	**<MDC**
L30517-4	17.0	5.7	4.4	375.4	12.3	3.3	–	–	–	–	–	–	–	–	–	642.0	27.8	17.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L30517-5	**0.46**	2.1	2.8	3.8	2.5	2.8	–	–	–	–	–	–	–	–	–	**-2.7**	3.3	5.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L30517-6	**-1.1**	2.3	4.0	4.8	2.7	3.1	–	–	–	–	–	–	–	–	–	**-2.4**	3.2	5.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L30517-7	**2.0**	3.4	4.6	41.5	4.7	3.4	–	–	–	–	–	–	–	–	–	78.6	5.6	7.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L30517-8	7.7	5.4	6.1	25.2	4.2	3.8	–	–	–	–	–	–	–	–	–	173.0	9.3	10.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L30517-9	10.1	6.9	7.8	75.0	6.5	4.2	–	–	–	–	–	–	–	–	–	71.5	5.5	7.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L31288-10	22.5	5.4	3.0	2,675	52.9	4.6	–	–	–	–	–	–	–	–	–	3,730	151.0	41.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L31288-4	18.2	5.1	2.7	371.5	11.9	2.9	–	–	–	–	–	–	–	–	–	599.0	26.2	17.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L31288-5	6.6	2.9	1.9	13.3	3.0	2.5	–	–	–	–	–	–	–	–	–	**-4.5**	4.3	7.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L31288-6	4.9	2.1	1.5	11.5	2.7	2.4	–	–	–	–	–	–	–	–	–	**-3.8**	4.2	7.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L31288-7	9.7	3.6	2.5	55.0	4.9	2.8	–	–	–	–	–	–	–	–	–	88.8	6.3	7.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L31288-8	14.2	4.9	2.7	69.1	5.7	2.9	–	–	–	–	–	–	–	–	–	77.5	6.0	7.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L31288-9	19.9	7.6	6.0	103.1	7.5	4.1	–	–	–	–	–	–	–	–	–	60.5	5.4	7.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L31925-10	28.9	9.1	6.6	2,031	40.4	4.3	–	–	–	–	–	–	–	–	–	2,950	120.0	36.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L31925-4	9.1	5.6	6.2	330.8	11.6	3.2	–	–	–	–	–	–	–	–	–	516.0	22.8	15.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L31925-5	**0.29**	3.4	4.1	11.1	3.0	2.8	–	–	–	–	–	–	–	–	–	**-4.5**	3.3	5.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L31925-6	**0.34**	3.0	4.2	6.6	2.7	2.8	–	–	–	–	–	–	–	–	–	**-8.2**	3.1	5.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L31925-7	**0.14**	4.0	6.1	50.1	5.0	3.2	–	–	–	–	–	–	–	–	–	66.2	5.2	7.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L31925-8	**1.1**	5.0	7.3	48.2	5.1	3.4	–	–	–	–	–	–	–	–	–	45.8	4.6	6.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L31925-9	**10.7**	9.7	12.7	91.0	7.3	4.4	–	–	–	–	–	–	–	–	–	40.6	4.4	6.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L32916-1	10.8	7.1	6.3	81.1	6.8	3.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L32916-5	20.2	5.7	3.6	372.6	12.1	3.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L32916-6	3.1	2.2	2.0	9.5	2.7	2.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Table 4-1 (continued)

Ground Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/L)	(U-235)
Overburden Unknown Screen Depth – Analytical Data Results																																
L32916-7	6.3	3.9	4.1	16.7	3.5	3.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L32916-8	**0.94**	2.7	3.7	24.1	3.8	3.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L33110-1	5.3	2.5	2.2	32.6	3.8	2.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L33110-2	3.3	1.9	1.1	1,950	39.2	4.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L33682-4	**2.7**	3.6	4.6	310.1	11.4	3.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L33682-5	5.6	4.0	4.5	9.7	3.7	4.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L33682-6	**1.0**	2.5	4.1	11.3	3.5	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L33682-7	–	–	–	86.2	7.6	4.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L33682-7C1	32.2	14.2	13.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
L33682-8	148.8	63.8	41.2	338.7	37.5	28.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	*6.4*	*2.0*	*0.85*	***0.04***	*0.27*	*0.47*	*3.9*	*1.5*	*0.76*	**10.4**	**<MDC**
L33682-8R1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	*7.3*	*3.3*	*1.0*	***0.27***	*0.54*	*1.0*	*7.6*	*3.3*	*1.0*	**15.2**	**<MDC**

NOTE 1 – Bolded values indicate analytical result is less than the MDC value, italicized values indicate an alpha spectroscopy versus gamma spectroscopy result, and cells with "–" indicate that no analysis or calculation was performed.
NOTE 2 – The total Uranium calculation uses actual analytical data for U-235 and U-238; however, when U-234 was not reported, it was calculated as discussed in Section 4.0. Using the individual analytical values reported in the table above, which are rounded, may yield a slightly different value for total Uranium.
NOTE 3 – The reported total Uranium value was bolded when any of the Uranium isotope analytical results were less than MDC.
NOTE 4 – A value was not calculated for U-235 percent enrichment (by weight) if the total Uranium value was less than MDC.

Table 4-2

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
No Well Construction Record					
L21048-1	SAIC	5/16/2003	WS-04	862801	826356
L22035-1	SAIC	9/22/2003	WS-04	862801	826356
L22502-1	SAIC	11/25/2003	WS-04	862801	826356
L23211-1	SAIC	4/1/2004	WS-04	862801	826356
L23797-1	SAIC	6/30/2004	WS-04	862801	826356
L24369-1	SAIC	10/1/2004	WS-04	862801	826356
L24860-1	SAIC	12/27/2004	WS-04	862801	826356
L24860-1R1	SAIC	12/27/2004	WS-04	862801	826356
L25059-1	SAIC	1/31/2005	WS-04	862801	826356
L25505-1	SAIC	4/25/2005	WS-04	862801	826356
L26212-1	SAIC	8/5/2005	WS-04	862801	826356
L26847-1	SAIC	10/14/2005	WS-04	862801	826356
L28108-1	SAIC	3/22/2006	WS-04	862801	826356
L29059-1	SAIC	6/23/2006	WS-04	862801	826356
L29927-1	SAIC	9/18/2006	WS-04	862801	826356
L30517-1	SAIC	11/9/2006	WS-04	862801	826356
L31288-1	SAIC	2/23/2007	WS-04	862801	826356
L31925-1	SAIC	5/10/2007	WS-04	862801	826356
L32916-2	SAIC	8/30/2007	WS-04	862801	826356
L33682-1	SAIC	11/12/2007	WS-04	862801	826356

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
Bedrock Aquifer					
GW-BR01JC-030608	SAIC	3/6/2008	BR-01-JC	864376.00559	826535.694357
GW-BR01JC-032409	SAIC	3/24/2009	BR-01-JC	864376.00559	826535.694357
GW-BR01JC-062408	SAIC	6/24/2008	BR-01-JC	864376.00559	826535.694357
GW-BR01JC-062807	SAIC	6/28/2007	BR-01-JC	864376.00559	826535.694357
GW-BR01JC-091508	SAIC	9/15/2008	BR-01-JC	864376.00559	826535.694357
GW-BR01JC-091807	SAIC	9/18/2007	BR-01-JC	864376.00559	826535.694357
GW-BR01JC-120407	SAIC	12/4/2007	BR-01-JC	864376.00559	826535.694357
GW-BR01JC-120808	SAIC	12/8/2008	BR-01-JC	864376.00559	826535.694357
GW-BR01RB-030608	SAIC	3/6/2008	BR-01-RB	864405.8982	826496.9207
GW-BR01RB-032409	SAIC	3/24/2009	BR-01-RB	864405.8982	826496.9207
GW-BR01RB-062408	SAIC	6/24/2008	BR-01-RB	864405.8982	826496.9207
GW-BR01RB-062707	SAIC	6/27/2007	BR-01-RB	864405.8982	826496.9207
GW-BR01RB-091508	SAIC	9/15/2008	BR-01-RB	864405.8982	826496.9207
GW-BR01RB-091807	SAIC	9/18/2007	BR-01-RB	864405.8982	826496.9207
GW-BR01RB-120507	SAIC	12/5/2007	BR-01-RB	864405.8982	826496.9207
GW-BR01RB-120808	SAIC	12/8/2008	BR-01-RB	864405.8982	826496.9207
GW-BR02RB-030608	SAIC	3/6/2008	BR-02-RB	865531.4954	830549.2555
GW-BR02RB-032309	SAIC	3/23/2009	BR-02-RB	865531.4954	830549.2555
GW-BR02RB-062508	SAIC	6/25/2008	BR-02-RB	865531.4954	830549.2555
GW-BR02RB-062807	SAIC	6/28/2007	BR-02-RB	865531.4954	830549.2555
GW-BR02RB-091608	SAIC	9/16/2008	BR-02-RB	865531.4954	830549.2555
GW-BR02RB-091907	SAIC	9/19/2007	BR-02-RB	865531.4954	830549.2555

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-BR02RB-120507	SAIC	12/5/2007	BR-02-RB	865531.4954	830549.2555
GW-BR02RB-121008	SAIC	12/10/2008	BR-02-RB	865531.4954	830549.2555
GW-BR03JC-030408	SAIC	3/3/2008	BR-03-JC	863896.283	828126.329
GW-BR03JC-031609	SAIC	3/16/2009	BR-03-JC	863896.283	828126.329
GW-BR03JC-062508	SAIC	6/25/2008	BR-03-JC	863896.283	828126.329
GW-BR03JC-062607	SAIC	6/26/2007	BR-03-JC	863896.283	828126.329
GW-BR03JC-091807	SAIC	9/18/2007	BR-03-JC	863896.283	828126.329
GW-BR03JC-091908	SAIC	9/19/2008	BR-03-JC	863896.283	828126.329
GW-BR03JC-120407	SAIC	12/4/2007	BR-03-JC	863896.283	828126.329
GW-BR03JC-120908	SAIC	12/9/2008	BR-03-JC	863896.283	828126.329
GW-BR03OB-062508	SAIC	6/25/2008	BR-03-RB	863885.718	828112.273
GW-BR03RB-030408	SAIC	3/3/2008	BR-03-RB	863885.718	828112.273
GW-BR03RB-031609	SAIC	3/16/2009	BR-03-RB	863885.718	828112.273
GW-BR03RB-062508	SAIC	6/25/2008	BR-03-RB	863885.718	828112.273
GW-BR03RB-062607	SAIC	6/26/2007	BR-03-RB	863885.718	828112.273
GW-BR03RB-091807	SAIC	9/18/2007	BR-03-RB	863885.718	828112.273
GW-BR03RB-091908	SAIC	9/19/2008	BR-03-RB	863885.718	828112.273
GW-BR03RB-120407	SAIC	12/4/2007	BR-03-RB	863885.718	828112.273
GW-BR03RB-120908	SAIC	12/9/2008	BR-03-RB	863885.718	828112.273
GW-BR04JC-030608	SAIC	3/6/2008	BR-04-JC	865741.254113	828009.2628
GW-BR04JC-031209	SAIC	3/12/2009	BR-04-JC	865741.254113	828009.2628
GW-BR04JC-062608	SAIC	6/26/2008	BR-04-JC	865741.254113	828009.2628
GW-BR04JC-062707	SAIC	6/27/2007	BR-04-JC	865741.254113	828009.2628

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-BR04JC-091608	SAIC	9/16/2008	BR-04-JC	865741.254113	828009.2628
GW-BR04JC-091907	SAIC	9/19/2007	BR-04-JC	865741.254113	828009.2628
GW-BR04JC-120607	SAIC	12/6/2007	BR-04-JC	865741.254113	828009.2628
GW-BR04JC-121008	SAIC	12/10/2008	BR-04-JC	865741.254113	828009.2628
GW-BR04RB-030608	SAIC	3/6/2008	BR-04-RB	865781.5246	828096.5211
GW-BR04RB-031209	SAIC	3/12/2009	BR-04-RB	865781.5246	828096.5211
GW-BR04RB-062608	SAIC	6/26/2008	BR-04-RB	865781.5246	828096.5211
GW-BR04RB-062707	SAIC	6/27/2007	BR-04-RB	865781.5246	828096.5211
GW-BR04RB-091608	SAIC	9/16/2008	BR-04-RB	865781.5246	828096.5211
GW-BR04RB-091907	SAIC	9/19/2007	BR-04-RB	865781.5246	828096.5211
GW-BR04RB-120507	SAIC	12/5/2007	BR-04-RB	865781.5246	828096.5211
GW-BR04RB-121008	SAIC	12/10/2008	BR-04-RB	865781.5246	828096.5211
GW-BR05RB-030608	SAIC	3/6/2008	BR-05-RB	866422.6343	828840.0698
GW-BR05RB-032309	SAIC	3/23/2009	BR-05-RB	866422.6343	828840.0698
GW-BR05RB-062508	SAIC	6/25/2008	BR-05-RB	866422.6343	828840.0698
GW-BR05RB-062807	SAIC	6/28/2007	BR-05-RB	866422.6343	828840.0698
GW-BR05RB-091608	SAIC	9/16/2008	BR-05-RB	866422.6343	828840.0698
GW-BR05RB-092007	SAIC	9/20/2007	BR-05-RB	866422.6343	828840.0698
GW-BR05RB-120507	SAIC	12/5/2007	BR-05-RB	866422.6343	828840.0698
GW-BR05RB-121008	SAIC	12/10/2008	BR-05-RB	866422.6343	828840.0698
GW-BR06RB-030408	SAIC	3/3/2008	BR-06-RB	863687.916	827467.843
GW-BR06RB-030508	SAIC	3/5/2008	BR-06-RB	863687.916	827467.843
GW-BR06RB-031109	SAIC	3/11/2009	BR-06-RB	863687.916	827467.843

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-BR06RB-062508	SAIC	6/25/2008	BR-06-RB	863687.916	827467.843
GW-BR06RB-062607	SAIC	6/26/2007	BR-06-RB	863687.916	827467.843
GW-BR06RB-091807	SAIC	9/18/2007	BR-06-RB	863687.916	827467.843
GW-BR06RB-091808	SAIC	9/18/2008	BR-06-RB	863687.916	827467.843
GW-BR06RB-120407	SAIC	12/4/2007	BR-06-RB	863687.916	827467.843
GW-BR06RB-120908	SAIC	12/9/2008	BR-06-RB	863687.916	827467.843
GW-BR07JC-030308	SAIC	3/3/2008	BR-07-JC	864147.098129	829606.266411
GW-BR07JC-032409	SAIC	3/24/2009	BR-07-JC	864147.098129	829606.266411
GW-BR07JC-062608	SAIC	6/26/2008	BR-07-JC	864147.098129	829606.266411
GW-BR07JC-062807	SAIC	6/28/2007	BR-07-JC	864147.098129	829606.266411
GW-BR07JC-091708	SAIC	9/17/2008	BR-07-JC	864147.098129	829606.266411
GW-BR07JC-091907	SAIC	9/19/2007	BR-07-JC	864147.098129	829606.266411
GW-BR07JC-120507	SAIC	12/5/2007	BR-07-JC	864147.098129	829606.266411
GW-BR07JC-121108	SAIC	12/11/2008	BR-07-JC	864147.098129	829606.266411
GW-BR08JC-030408	SAIC	3/3/2008	BR-08-JC	864793.1723	828597.7762
GW-BR08JC-031109	SAIC	3/11/2009	BR-08-JC	864793.1723	828597.7762
GW-BR08JC-062408	SAIC	6/24/2008	BR-08-JC	864793.1723	828597.7762
GW-BR08JC-062807	SAIC	6/28/2007	BR-08-JC	864793.1723	828597.7762
GW-BR08JC-091807	SAIC	9/18/2007	BR-08-JC	864793.1723	828597.7762
GW-BR08JC-091808	SAIC	9/18/2008	BR-08-JC	864793.1723	828597.7762
GW-BR08JC-120407	SAIC	12/4/2007	BR-08-JC	864793.1723	828597.7762
GW-BR08JC-120808	SAIC	12/8/2008	BR-08-JC	864793.1723	828597.7762
GW-BR08RB-030408	SAIC	3/3/2008	BR-08-RB	864793.0701	828603.5976

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-BR08RB-031109	SAIC	3/11/2009	BR-08-RB	864793.0701	828603.5976
GW-BR08RB-062408	SAIC	6/24/2008	BR-08-RB	864793.0701	828603.5976
GW-BR08RB-062807	SAIC	6/28/2007	BR-08-RB	864793.0701	828603.5976
GW-BR08RB-091807	SAIC	9/18/2007	BR-08-RB	864793.0701	828603.5976
GW-BR08RB-091808	SAIC	9/18/2008	BR-08-RB	864793.0701	828603.5976
GW-BR08RB-120407	SAIC	12/4/2007	BR-08-RB	864793.0701	828603.5976
GW-BR08RB-120908	SAIC	12/9/2008	BR-08-RB	864793.0701	828603.5976
GW-BR09JC-030608	SAIC	3/6/2008	BR-09-JC	865335.211645	828731.744452
GW-BR09JC-032309	SAIC	3/23/2009	BR-09-JC	865335.211645	828731.744452
GW-BR09JC-062508	SAIC	6/25/2008	BR-09-JC	865335.211645	828731.744452
GW-BR09JC-062807	SAIC	6/28/2007	BR-09-JC	865335.211645	828731.744452
GW-BR09JC-091608	SAIC	9/16/2008	BR-09-JC	865335.211645	828731.744452
GW-BR09JC-092007	SAIC	9/20/2007	BR-09-JC	865335.211645	828731.744452
GW-BR09JC-120507	SAIC	12/5/2007	BR-09-JC	865335.211645	828731.744452
GW-BR09JC-121008	SAIC	12/10/2008	BR-09-JC	865335.211645	828731.744452
GW-BR10JC-030508	SAIC	3/5/2008	BR-10-JC	864347.99	828685.386
GW-BR10JC-031609	SAIC	3/16/2009	BR-10-JC	864347.99	828685.386
GW-BR10JC-062408	SAIC	6/24/2008	BR-10-JC	864347.99	828685.386
GW-BR10JC-062707	SAIC	6/27/2007	BR-10-JC	864347.99	828685.386
GW-BR10JC-091807	SAIC	9/18/2007	BR-10-JC	864347.99	828685.386
GW-BR10JC-091808	SAIC	9/18/2008	BR-10-JC	864347.99	828685.386
GW-BR10JC-120407	SAIC	12/4/2007	BR-10-JC	864347.99	828685.386
GW-BR10JC-120908	SAIC	12/9/2008	BR-10-JC	864347.99	828685.386

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-BR10JC-121304	SAIC	12/6/2004	BR-10-JC	864347.99	828685.386
GW-BR10RB-030508	SAIC	3/5/2008	BR-10-RB	864343.184	828681.054
GW-BR10RB-031609	SAIC	3/16/2009	BR-10-RB	864343.184	828681.054
GW-BR10RB-062408	SAIC	6/24/2008	BR-10-RB	864343.184	828681.054
GW-BR10RB-062707	SAIC	6/27/2007	BR-10-RB	864343.184	828681.054
GW-BR10RB-091807	SAIC	9/18/2007	BR-10-RB	864343.184	828681.054
GW-BR10RB-091808	SAIC	9/18/2008	BR-10-RB	864343.184	828681.054
GW-BR10RB-120407	SAIC	12/4/2007	BR-10-RB	864343.184	828681.054
GW-BR10RB-120908	SAIC	12/9/2008	BR-10-RB	864343.184	828681.054
GW-BR10RB-121304	SAIC	12/6/2004	BR-10-RB	864343.184	828681.054
GW-BR11JC-030608	SAIC	3/6/2008	BR-11-JC	865466.9942	829711.6939
GW-BR11JC-032309	SAIC	3/23/2009	BR-11-JC	865466.9942	829711.6939
GW-BR11JC-062508	SAIC	6/25/2008	BR-11-JC	865466.9942	829711.6939
GW-BR11JC-062807	SAIC	6/28/2007	BR-11-JC	865466.9942	829711.6939
GW-BR11JC-092007	SAIC	9/20/2007	BR-11-JC	865466.9942	829711.6939
GW-BR11JC-092208	SAIC	9/22/2008	BR-11-JC	865466.9942	829711.6939
GW-BR11JC-120607	SAIC	12/6/2007	BR-11-JC	865466.9942	829711.6939
GW-BR11JC-121008	SAIC	12/10/2008	BR-11-JC	865466.9942	829711.6939
GW-BR11JC-121304	SAIC	12/6/2004	BR-11-JC	865466.9942	829711.6939
GW-BR12JC-030308	SAIC	3/3/2008	BR-12-JC	865546.37	826970.007
GW-BR12JC-032409	SAIC	3/24/2009	BR-12-JC	865546.37	826970.007
GW-BR12JC-062508	SAIC	6/25/2008	BR-12-JC	865546.37	826970.007
GW-BR12JC-062707	SAIC	6/27/2007	BR-12-JC	865546.37	826970.007

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-BR12JC-091508	SAIC	9/15/2008	BR-12-JC	865546.37	826970.007
GW-BR12JC-091907	SAIC	9/19/2007	BR-12-JC	865546.37	826970.007
GW-BR12JC-120307	SAIC	12/3/2007	BR-12-JC	865546.37	826970.007
GW-BR12JC-120804	SAIC	12/6/2004	BR-12-JC	865546.37	826970.007
GW-BR12JC-120808	SAIC	12/8/2008	BR-12-JC	865546.37	826970.007
GW-BR12RB-030308	SAIC	3/3/2008	BR-12-RB	865539.644	826977.255
GW-BR12RB-032409	SAIC	3/24/2009	BR-12-RB	865539.644	826977.255
GW-BR12RB-062508	SAIC	6/25/2008	BR-12-RB	865539.644	826977.255
GW-BR12RB-062707	SAIC	6/27/2007	BR-12-RB	865539.644	826977.255
GW-BR12RB-091508	SAIC	9/15/2008	BR-12-RB	865539.644	826977.255
GW-BR12RB-091907	SAIC	9/19/2007	BR-12-RB	865539.644	826977.255
GW-BR12RB-120307	SAIC	12/3/2007	BR-12-RB	865539.644	826977.255
GW-BR12RB-120804	SAIC	12/6/2004	BR-12-RB	865539.644	826977.255
GW-BR12RB-120808	SAIC	12/8/2008	BR-12-RB	865539.644	826977.255
GW-BR1JC-121704	SAIC	12/6/2004	BR-01-JC	864376.00559	826535.694357
GW-BR1RB-120704	SAIC	12/6/2004	BR-01-RB	864405.8982	826496.9207
GW-BR2JC-120804	SAIC	12/6/2004	BR-02-JC	865551.4478	830590.2374
GW-BR2RB-120804	SAIC	12/6/2004	BR-02-RB	865531.4954	830549.2555
GW-BR3JC-120904	SAIC	12/6/2004	BR-03-JC	863896.283	828126.329
GW-BR3RB-120904	SAIC	12/6/2004	BR-03-RB	863885.718	828112.273
GW-BR4JC-121404	SAIC	12/6/2004	BR-04-JC	865741.254113	828009.2628
GW-BR4RB-121004	SAIC	12/6/2004	BR-04-RB	865781.5246	828096.5211
GW-BR5JC-121304	SAIC	12/6/2004	BR-05-JC	866396.7674	828849.8994

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-BR5RB-121004	SAIC	12/6/2004	BR-05-RB	866422.6343	828840.0698
GW-BR6RB-120704	SAIC	12/6/2004	BR-06-RB	863687.916	827467.843
GW-BR7JC-121504	SAIC	12/6/2004	BR-07-JC	864147.098129	829606.266411
GW-BR7RB-121404	SAIC	12/6/2004	BR-07-RB	864152.4167	829600.8588
GW-BR8JC-120604	SAIC	12/6/2004	BR-08-JC	864793.1723	828597.7762
GW-BR8RB-120704	SAIC	12/6/2004	BR-08-RB	864793.0701	828603.5976
GW-BR9JC-121404	SAIC	12/6/2004	BR-09-JC	865335.211645	828731.744452
GW-FD2-121304	SAIC	12/6/2004	BR-05-JC	866396.7674	828849.8994
GW-FD4-121404	SAIC	12/6/2004	BR-09-JC	865335.211645	828731.744452
GW-FD6-121304	SAIC	12/6/2004	BR-10-JC	864347.99	828685.386
GW-PW03JC-092107	SAIC	9/21/2007	PW-03-JC	865984.069	828298.807
GW-PW03JC-120607	SAIC	12/6/2007	PW-03-JC	865984.069	828298.807
GW-PW03RB-030608	SAIC	3/6/2008	PW-03-RB	865984.34	828298.714
GW-PW03RB-032309	SAIC	3/23/2009	PW-03-RB	865984.34	828298.714
GW-PW03RB-062608	SAIC	6/26/2008	PW-03-RB	865984.34	828298.714
GW-PW03RB-062707	SAIC	6/27/2007	PW-03-RB	865984.34	828298.714
GW-PW03RB-091608	SAIC	9/16/2008	PW-03-RB	865984.34	828298.714
GW-PW03RB-091907	SAIC	9/19/2007	PW-03-RB	865984.34	828298.714
GW-PW03RB-120607	SAIC	12/6/2007	PW-03-RB	865984.34	828298.714
GW-PW03RB-121008	SAIC	12/10/2008	PW-03-RB	865984.34	828298.714
GW-PW06JC-030508	SAIC	3/5/2008	PW-06-JC	864472.86	830216.92
GW-PW06JC-031309	SAIC	3/13/2009	PW-06-JC	864472.86	830216.92
GW-PW06JC-062608	SAIC	6/26/2008	PW-06-JC	864472.86	830216.92

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-PW06JC-062807	SAIC	6/28/2007	PW-06-JC	864472.86	830216.92
GW-PW06JC-091907	SAIC	9/19/2007	PW-06-JC	864472.86	830216.92
GW-PW06JC-092308	SAIC	9/23/2008	PW-06-JC	864472.86	830216.92
GW-PW06JC-120507	SAIC	12/5/2007	PW-06-JC	864472.86	830216.92
GW-PW06JC-121208	SAIC	12/12/2008	PW-06-JC	864472.86	830216.92
GW-PW06RB-031309	SAIC	3/13/2009	PW-06-RB	864472.86	830216.92
GW-PW06RB-062608	SAIC	6/26/2008	PW-06-RB	864472.86	830216.92
GW-PW06RB-062807	SAIC	6/28/2007	PW-06-RB	864472.86	830216.92
GW-PW06RB-091708	SAIC	9/17/2008	PW-06-RB	864472.86	830216.92
GW-PW06RB-091907	SAIC	9/19/2007	PW-06-RB	864472.86	830216.92
GW-PW06RB-120507	SAIC	12/5/2007	PW-06-RB	864472.86	830216.92
GW-PW06RB-121208	SAIC	12/12/2008	PW-06-RB	864472.86	830216.92
GW-PW16JC-030508	SAIC	3/5/2008	PW-16-JC	863715.42	830048.78
GW-PW16JC-032609	SAIC	3/26/2009	PW-16-JC	863715.42	830048.78
GW-PW16JC-062608	SAIC	6/26/2008	PW-16-JC	863715.42	830048.78
GW-PW16JC-062807	SAIC	6/28/2007	PW-16-JC	863715.42	830048.78
GW-PW16JC-092007	SAIC	9/20/2007	PW-16-JC	863715.42	830048.78
GW-PW16JC-092208	SAIC	9/22/2008	PW-16-JC	863715.42	830048.78
GW-PW16JC-120507	SAIC	12/5/2007	PW-16-JC	863715.42	830048.78
GW-PW16JC-121208	SAIC	12/12/2008	PW-16-JC	863715.42	830048.78
GW-PW16RB-030508	SAIC	3/5/2008	PW-16-RB	863715.42	830048.78
GW-PW16RB-032609	SAIC	3/26/2009	PW-16-RB	863715.42	830048.78
GW-PW16RB-062608	SAIC	6/26/2008	PW-16-RB	863715.42	830048.78

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-PW16RB-062807	SAIC	6/28/2007	PW-16-RB	863715.42	830048.78
GW-PW16RB-091708	SAIC	9/17/2008	PW-16-RB	863715.42	830048.78
GW-PW16RB-092007	SAIC	9/20/2007	PW-16-RB	863715.42	830048.78
GW-PW16RB-120507	SAIC	12/5/2007	PW-16-RB	863715.42	830048.78
GW-PW16RB-121108	SAIC	12/11/2008	PW-16-RB	863715.42	830048.78
GW-PW19JC-030508	SAIC	3/5/2008	PW-19-JC	864365.935	829487.36
GW-PW19JC-032509	SAIC	3/25/2009	PW-19-JC	864365.935	829487.36
GW-PW19JC-062608	SAIC	6/26/2008	PW-19-JC	864365.935	829487.36
GW-PW19JC-062807	SAIC	6/28/2007	PW-19-JC	864365.935	829487.36
GW-PW19JC-091708	SAIC	9/17/2008	PW-19-JC	864365.935	829487.36
GW-PW19JC-091907	SAIC	9/19/2007	PW-19-JC	864365.935	829487.36
GW-PW19JC-120407	SAIC	12/4/2007	PW-19-JC	864365.935	829487.36
GW-PW19JC-121108	SAIC	12/11/2008	PW-19-JC	864365.935	829487.36
GW-PW19RB-030508	SAIC	3/5/2008	PW-19-RB	864365.935	829487.36
GW-PW19RB-032509	SAIC	3/25/2009	PW-19-RB	864365.935	829487.36
GW-PW19RB-062608	SAIC	6/26/2008	PW-19-RB	864365.935	829487.36
GW-PW19RB-062807	SAIC	6/28/2007	PW-19-RB	864365.935	829487.36
GW-PW19RB-091708	SAIC	9/17/2008	PW-19-RB	864365.935	829487.36
GW-PW19RB-091907	SAIC	9/19/2007	PW-19-RB	864365.935	829487.36
GW-PW19RB-120407	SAIC	12/4/2007	PW-19-RB	864365.935	829487.36
GW-PW19RB-121108	SAIC	12/11/2008	PW-19-RB	864365.935	829487.36
GW-PZ03-030508	SAIC	3/5/2008	PZ-03	864802.197	827546.505
GW-PZ03-031909	SAIC	3/19/2009	PZ-03	864802.197	827546.505

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-PZ03-062608	SAIC	6/26/2008	PZ-03	864802.197	827546.505
GW-PZ03-062807	SAIC	6/28/2007	PZ-03	864802.197	827546.505
GW-PZ03-091508	SAIC	9/15/2008	PZ-03	864802.197	827546.505
GW-PZ03-091807	SAIC	9/18/2007	PZ-03	864802.197	827546.505
GW-PZ03-120407	SAIC	12/4/2007	PZ-03	864802.197	827546.505
GW-PZ03-120808	SAIC	12/8/2008	PZ-03	864802.197	827546.505
GW-PZ04-030608	SAIC	3/6/2008	PZ-04	865284.136	827227.818
GW-PZ04-031209	SAIC	3/12/2009	PZ-04	865284.136	827227.818
GW-PZ04-062508	SAIC	6/25/2008	PZ-04	865284.136	827227.818
GW-PZ04-062807	SAIC	6/28/2007	PZ-04	865284.136	827227.818
GW-PZ04-091508	SAIC	9/15/2008	PZ-04	865284.136	827227.818
GW-PZ04-091907	SAIC	9/19/2007	PZ-04	865284.136	827227.818
GW-PZ04-120507	SAIC	12/5/2007	PZ-04	865284.136	827227.818
GW-PZ04-120908	SAIC	12/9/2008	PZ-04	865284.136	827227.818
GW-PZ3-121704	SAIC	12/6/2004	PZ-03	864802.197	827546.505
GW-PZ4-121304	SAIC	12/6/2004	PZ-04	865284.136	827227.818
GW-WS30-121604	SAIC	12/6/2004	WS-30	865041.273158	827862.685738
GW-WS31-030408	SAIC	3/4/2008	WS-31	865045.977	827868.974
GW-WS31-032009	SAIC	3/20/2009	WS-31	865045.977	827868.974
GW-WS31-062608	SAIC	6/26/2008	WS-31	865045.977	827868.974
GW-WS31-062807	SAIC	6/28/2007	WS-31	865045.977	827868.974
GW-WS31-091907	SAIC	9/19/2007	WS-31	865045.977	827868.974
GW-WS31-091908	SAIC	9/19/2008	WS-31	865045.977	827868.974

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-WS31-120307	SAIC	12/3/2007	WS-31	865045.977	827868.974
GW-WS31-120908	SAIC	12/9/2008	WS-31	865045.977	827868.974
GW-WS31-121604	SAIC	12/6/2004	WS-31	865045.977	827868.974
Sand/Gravel Aquifer					
GW-BR03OB-030408	SAIC	3/3/2008	BR-03-OB	863907.6538	828162.7794
GW-BR03OB-031609	SAIC	3/16/2009	BR-03-OB	863907.6538	828162.7794
GW-BR03OB-062607	SAIC	6/26/2007	BR-03-OB	863907.6538	828162.7794
GW-BR03OB-091807	SAIC	9/18/2007	BR-03-OB	863907.6538	828162.7794
GW-BR03OB-091908	SAIC	9/19/2008	BR-03-OB	863907.6538	828162.7794
GW-BR03OB-120908	SAIC	12/9/2008	BR-03-OB	863907.6538	828162.7794
GW-BR06OB-030408	SAIC	3/3/2008	BR-06-OB	863681.1098	827465.7528
GW-BR06OB-031209	SAIC	3/12/2009	BR-06-OB	863681.1098	827465.7528
GW-BR06OB-062508	SAIC	6/25/2008	BR-06-OB	863681.1098	827465.7528
GW-BR06OB-062607	SAIC	6/26/2007	BR-06-OB	863681.1098	827465.7528
GW-BR06OB-091807	SAIC	9/18/2007	BR-06-OB	863681.1098	827465.7528
GW-BR06OB-091808	SAIC	9/18/2008	BR-06-OB	863681.1098	827465.7528
GW-BR06OB-120407	SAIC	12/4/2007	BR-06-OB	863681.1098	827465.7528
GW-BR06OB-120908	SAIC	12/9/2008	BR-06-OB	863681.1098	827465.7528
GW-BR08OB-030508	SAIC	3/5/2008	BR-08-OB	864793.437	828593.2184
GW-BR08OB-031109	SAIC	3/11/2009	BR-08-OB	864793.437	828593.2184
GW-BR08OB-062408	SAIC	6/24/2008	BR-08-OB	864793.437	828593.2184
GW-BR08OB-062807	SAIC	6/28/2007	BR-08-OB	864793.437	828593.2184
GW-BR08OB-091807	SAIC	9/18/2007	BR-08-OB	864793.437	828593.2184

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-BR08OB-091808	SAIC	9/18/2008	BR-08-OB	864793.437	828593.2184
GW-BR08OB-120407	SAIC	12/4/2007	BR-08-OB	864793.437	828593.2184
GW-BR08OB-120808	SAIC	12/8/2008	BR-08-OB	864793.437	828593.2184
GW-BR10OB-030508	SAIC	3/5/2008	BR-10-OB	864343.1843	828681.0543
GW-BR10OB-031609	SAIC	3/16/2009	BR-10-OB	864343.1843	828681.0543
GW-BR10OB-062408	SAIC	6/24/2008	BR-10-OB	864343.1843	828681.0543
GW-BR10OB-062707	SAIC	6/27/2007	BR-10-OB	864343.1843	828681.0543
GW-BR10OB-091807	SAIC	9/18/2007	BR-10-OB	864343.1843	828681.0543
GW-BR10OB-091808	SAIC	9/18/2008	BR-10-OB	864343.1843	828681.0543
GW-BR10OB-120407	SAIC	12/4/2007	BR-10-OB	864343.1843	828681.0543
GW-BR10OB-120804	SAIC	12/6/2004	BR-10-OB	864343.1843	828681.0543
GW-BR10OB-120908	SAIC	12/9/2008	BR-10-OB	864343.1843	828681.0543
GW-BR3OB-120804	SAIC	12/6/2004	BR-03-OB	863907.6538	828162.7794
GW-BR6OB-120704	SAIC	12/6/2004	BR-06-OB	863681.1098	827465.7528
GW-BR8OB-120604	SAIC	12/6/2004	BR-08-OB	864793.437	828593.2184
GW-NB44-030508	SAIC	3/5/2008	NB-44	864098.797	827415.662
GW-NB44-031009	SAIC	3/10/2009	NB-44	864098.797	827415.662
GW-NB44-062408	SAIC	6/24/2008	NB-44	864098.797	827415.662
GW-NB44-062607	SAIC	6/26/2007	NB-44	864098.797	827415.662
GW-NB44-091708	SAIC	9/17/2008	NB-44	864098.797	827415.662
GW-NB44-092007	SAIC	9/20/2007	NB-44	864098.797	827415.662
GW-NB44-120507	SAIC	12/5/2007	NB-44	864098.797	827415.662
GW-NB44-120604	SAIC	12/6/2004	NB-44	864098.797	827415.662

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-NB44-121108	SAIC	12/11/2008	NB-44	864098.797	827415.662
GW-NB63-120704	SAIC	12/6/2004	NB-63	863845.204	827882.351
GW-NB64-030408	SAIC	3/4/2008	NB-64	864520.971	828346.252
GW-NB64-030909	SAIC	3/9/2009	NB-64	864520.971	828346.252
GW-NB64-062508	SAIC	6/25/2008	NB-64	864520.971	828346.252
GW-NB64-062607	SAIC	6/26/2007	NB-64	864520.971	828346.252
GW-NB64-091808	SAIC	9/18/2008	NB-64	864520.971	828346.252
GW-NB64-091907	SAIC	9/19/2007	NB-64	864520.971	828346.252
GW-NB64-120407	SAIC	12/4/2007	NB-64	864520.971	828346.252
GW-NB64-121008	SAIC	12/10/2008	NB-64	864520.971	828346.252
GW-NB64-122104	SAIC	12/6/2004	NB-64	864520.971	828346.252
GW-NB66-120604	SAIC	12/6/2004	NB-66	863788.346	827700.13
GW-NB67-120704	SAIC	12/6/2004	NB-67	863908.429	827392.664
GW-NB72-030408	SAIC	3/4/2008	NB-72	864455.473387	828007.64548
GW-NB72-030909	SAIC	3/9/2009	NB-72	864455.473387	828007.64548
GW-NB72-062508	SAIC	6/25/2008	NB-72	864455.473387	828007.64548
GW-NB72-062707	SAIC	6/27/2007	NB-72	864455.473387	828007.64548
GW-NB72-091808	SAIC	9/18/2008	NB-72	864455.473387	828007.64548
GW-NB72-091907	SAIC	9/19/2007	NB-72	864455.473387	828007.64548
GW-NB72-120507	SAIC	12/5/2007	NB-72	864455.473387	828007.64548
GW-NB72-121008	SAIC	12/10/2008	NB-72	864455.473387	828007.64548
GW-NB72-122104	SAIC	12/6/2004	NB-72	864455.473387	828007.64548
GW-NB73-030508	SAIC	3/5/2008	NB-73	864174.7348	828027.8254

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-NB73-030909	SAIC	3/9/2009	NB-73	864174.7348	828027.8254
GW-NB73-062408	SAIC	6/24/2008	NB-73	864174.7348	828027.8254
GW-NB73-062707	SAIC	6/27/2007	NB-73	864174.7348	828027.8254
GW-NB73-091808	SAIC	9/18/2008	NB-73	864174.7348	828027.8254
GW-NB73-091907	SAIC	9/19/2007	NB-73	864174.7348	828027.8254
GW-NB73-120407	SAIC	12/4/2007	NB-73	864174.7348	828027.8254
GW-NB73-121008	SAIC	12/10/2008	NB-73	864174.7348	828027.8254
GW-NB73-122004	SAIC	12/6/2004	NB-73	864174.7348	828027.8254
GW-NB74-030408	SAIC	3/4/2008	NB-74	864656.106	827378.059
GW-NB74-032609	SAIC	3/26/2009	NB-74	864656.106	827378.059
GW-NB74-062607	SAIC	6/26/2007	NB-74	864656.106	827378.059
GW-NB74-062708	SAIC	6/27/2008	NB-74	864656.106	827378.059
GW-NB74-092007	SAIC	9/20/2007	NB-74	864656.106	827378.059
GW-NB74-120507	SAIC	12/5/2007	NB-74	864656.106	827378.059
GW-NB74-121304	SAIC	12/6/2004	NB-74	864656.106	827378.059
GW-NB77-122004	SAIC	12/6/2004	NB-77	864250.641	828279.422
GW-NB82-030408	SAIC	3/4/2008	NB-82	864736.017	829026.331
GW-NB82-030909	SAIC	3/9/2009	NB-82	864736.017	829026.331
GW-NB82-062508	SAIC	6/25/2008	NB-82	864736.017	829026.331
GW-NB82-062607	SAIC	6/26/2007	NB-82	864736.017	829026.331
GW-NB82-091708	SAIC	9/17/2008	NB-82	864736.017	829026.331
GW-NB82-092007	SAIC	9/20/2007	NB-82	864736.017	829026.331
GW-NB82-120407	SAIC	12/4/2007	NB-82	864736.017	829026.331

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-NB82-121004	SAIC	12/6/2004	NB-82	864736.017	829026.331
GW-NB82-121008	SAIC	12/10/2008	NB-82	864736.017	829026.331
GW-NB83-120904	SAIC	12/6/2004	NB-83	864972.265	828838.715
GW-NB84-030508	SAIC	3/5/2008	NB-84	864244.677	827168.1332
GW-NB84-031709	SAIC	3/17/2009	NB-84	864244.677	827168.1332
GW-NB84-062408	SAIC	6/24/2008	NB-84	864244.677	827168.1332
GW-NB84-062607	SAIC	6/26/2007	NB-84	864244.677	827168.1332
GW-NB84-091708	SAIC	9/17/2008	NB-84	864244.677	827168.1332
GW-NB84-092007	SAIC	9/20/2007	NB-84	864244.677	827168.1332
GW-NB84-120507	SAIC	12/5/2007	NB-84	864244.677	827168.1332
GW-NB84-120804	SAIC	12/6/2004	NB-84	864244.677	827168.1332
GW-NB84-121008	SAIC	12/10/2008	NB-84	864244.677	827168.1332
Overburden Clay					
EP-20-20-30-OL-GW	SAIC	12/6/2004	EP-20	864615.378	827331.564
GW-BD06-030308	SAIC	3/3/2008	BD-06	865102.655319	827277.427433
GW-BD06-062308	SAIC	6/23/2008	BD-06	865102.655319	827277.427433
GW-BD06-062707	SAIC	6/27/2007	BD-06	865102.655319	827277.427433
GW-BD06-091807	SAIC	9/18/2007	BD-06	865102.655319	827277.427433
GW-BD06-091908	SAIC	9/19/2008	BD-06	865102.655319	827277.427433
GW-BD06-120307	SAIC	12/3/2007	BD-06	865102.655319	827277.427433
GW-BD08-030308	SAIC	3/3/2008	BD-08	865021.248391	827340.370934
GW-BD08-062707	SAIC	6/27/2007	BD-08	865021.248391	827340.370934
GW-BD08-062708	SAIC	6/27/2008	BD-08	865021.248391	827340.370934

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-BD08-091807	SAIC	9/18/2007	BD-08	865021.248391	827340.370934
GW-BD08-120307	SAIC	12/3/2007	BD-08	865021.248391	827340.370934
GW-BD6-121404	SAIC	12/6/2004	BD-06	865102.655319	827277.427433
GW-BD8-122804	SAIC	12/6/2004	BD-08	865021.248391	827340.370934
GW-BP20B-030508	SAIC	3/5/2008	BP-20B	865059.59	827831.53
GW-BP20B-031909	SAIC	3/19/2009	BP-20B	865059.59	827831.53
GW-BP20B-033109	SAIC	3/31/2009	BP-20B	865059.59	827831.53
GW-BP20B-062308	SAIC	6/23/2008	BP-20B	865059.59	827831.53
GW-BP20B-062707	SAIC	6/27/2007	BP-20B	865059.59	827831.53
GW-BP20B-091508	SAIC	9/15/2008	BP-20B	865059.59	827831.53
GW-BP20B-121108	SAIC	12/11/2008	BP-20B	865059.59	827831.53
GW-BP22B-030608	SAIC	3/6/2008	BP-22B	864912.696	827737.562
GW-BP22B-033009	SAIC	3/30/2009	BP-22B	864912.696	827737.562
GW-BP22B-062608	SAIC	6/26/2008	BP-22B	864912.696	827737.562
GW-BP22B-062807	SAIC	6/28/2007	BP-22B	864912.696	827737.562
GW-BP22B-122804	SAIC	12/6/2004	BP-22B	864912.696	827737.562
GW-CB02-121404	SAIC	12/6/2004	CB-02	864606.528	826640.415
GW-EP20-030408	SAIC	3/4/2008	EP-20	864615.378	827331.564
GW-EP20-032609	SAIC	3/26/2009	EP-20	864615.378	827331.564
GW-EP20-062708	SAIC	6/27/2008	EP-20	864615.378	827331.564
GW-EP20-062807	SAIC	6/28/2007	EP-20	864615.378	827331.564
GW-EP20-092007	SAIC	9/20/2007	EP-20	864615.378	827331.564
GW-EP20-120507	SAIC	12/5/2007	EP-20	864615.378	827331.564

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-EP20-121504	SAIC	12/6/2004	EP-20	864615.378	827331.564
GW-NB32-122004	SAIC	12/6/2004	NB-32	864580.461	827466.768
GW-NB33-030508	SAIC	3/5/2008	NB-33	864489.206	827369.678
GW-NB33-031009	SAIC	3/10/2009	NB-33	864489.206	827369.678
GW-NB33-062408	SAIC	6/24/2008	NB-33	864489.206	827369.678
GW-NB33-062707	SAIC	6/27/2007	NB-33	864489.206	827369.678
GW-NB33-091708	SAIC	9/17/2008	NB-33	864489.206	827369.678
GW-NB33-092007	SAIC	9/20/2007	NB-33	864489.206	827369.678
GW-NB33-120507	SAIC	12/5/2007	NB-33	864489.206	827369.678
GW-NB33-121008	SAIC	12/10/2008	NB-33	864489.206	827369.678
GW-NB33-122104	SAIC	12/6/2004	NB-33	864489.206	827369.678
GW-NB36-122204	SAIC	12/6/2004	NB-36	864438.843	827721.235
GW-NB38-120904	SAIC	12/6/2004	NB-38	864750.261	828124.602
GW-NB79-121704	SAIC	12/6/2004	NB-79	865345.368	827530.709
GW-RR05-120904	SAIC	12/6/2004	RR-05	864636	826660
GW-SW07-121004	SAIC	12/6/2004	SW-07	864243.995	826792.123
GW-WS22-032609	SAIC	3/26/2009	WS-22	865301.7611	827220.4049
GW-WS22-121304	SAIC	12/6/2004	WS-22	865301.7611	827220.4049
GW-WS24-030408	SAIC	3/4/2008	WS-24	865365.842849	827403.396939
GW-WS24-033009	SAIC	3/30/2009	WS-24	865365.842849	827403.396939
GW-WS24-062708	SAIC	6/27/2008	WS-24	865365.842849	827403.396939
GW-WS24-062907	SAIC	6/29/2007	WS-24	865365.842849	827403.396939
GW-WS24-092107	SAIC	9/21/2007	WS-24	865365.842849	827403.396939

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-WS24-121504	SAIC	12/6/2004	WS-24	865365.842849	827403.396939
GW-WS26-033009	SAIC	3/30/2009	WS-26	865104.939735	827670.681341
GW-WS26-121504	SAIC	12/6/2004	WS-26	865104.939735	827670.681341
GW-WS28-033109	SAIC	3/31/2009	WS-28	865037.219061	827867.372795
GW-WS28-121604	SAIC	12/6/2004	WS-28	865037.219061	827867.372795
GW-WS33-032509	SAIC	3/25/2009	WS-33	864371.255	826922.089
NB-32-24-34-OL-GW	SAIC	7/1/2004	NB-32	864580.461	827466.768
Overburden Hybrid Screen					
GW-BD02-030308	SAIC	3/3/2008	BD-02	864855.916794	827149.861937
GW-BD02-062708	SAIC	6/27/2008	BD-02	864855.916794	827149.861937
GW-BD02-062907	SAIC	6/29/2007	BD-02	864855.916794	827149.861937
GW-BD02-091807	SAIC	9/18/2007	BD-02	864855.916794	827149.861937
GW-BD02-120307	SAIC	12/3/2007	BD-02	864855.916794	827149.861937
GW-BD03-030308	SAIC	3/3/2008	BD-03	864857.595288	827086.079189
GW-BD03-062308	SAIC	6/23/2008	BD-03	864857.595288	827086.079189
GW-BD03-062807	SAIC	6/28/2007	BD-03	864857.595288	827086.079189
GW-BD03-091807	SAIC	9/18/2007	BD-03	864857.595288	827086.079189
GW-BD03-091908	SAIC	9/19/2008	BD-03	864857.595288	827086.079189
GW-BD03-120307	SAIC	12/3/2007	BD-03	864857.595288	827086.079189
GW-BD04-030308	SAIC	3/3/2008	BD-04	864818.150693	827167.486117
GW-BD04-062308	SAIC	6/23/2008	BD-04	864818.150693	827167.486117
GW-BD04-062707	SAIC	6/27/2007	BD-04	864818.150693	827167.486117
GW-BD04-091807	SAIC	9/18/2007	BD-04	864818.150693	827167.486117

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-BD04-091908	SAIC	9/19/2008	BD-04	864818.150693	827167.486117
GW-BD04-120307	SAIC	12/3/2007	BD-04	864818.150693	827167.486117
GW-BD1-121704	SAIC	12/6/2004	BD-01	864846.685081	827136.43399
GW-BD13-030308	SAIC	3/3/2008	BD-13	864668.281	827189.72
GW-BD13-031909	SAIC	3/19/2009	BD-13	864668.281	827189.72
GW-BD13-032709	SAIC	3/27/2009	BD-13	864668.281	827189.72
GW-BD13-062308	SAIC	6/23/2008	BD-13	864668.281	827189.72
GW-BD13-062507	SAIC	6/25/2007	BD-13	864668.281	827189.72
GW-BD13-091508	SAIC	9/15/2008	BD-13	864668.281	827189.72
GW-BD13-091807	SAIC	9/18/2007	BD-13	864668.281	827189.72
GW-BD13-120407	SAIC	12/4/2007	BD-13	864668.281	827189.72
GW-BD13-120808	SAIC	12/8/2008	BD-13	864668.281	827189.72
GW-BD13-122804	SAIC	12/6/2004	BD-13	864668.281	827189.72
GW-BD14-030308	SAIC	3/3/2008	BD-14	864736	827250
GW-BD14-032709	SAIC	3/27/2009	BD-14	864736	827250
GW-BD14-062507	SAIC	6/25/2007	BD-14	864736	827250
GW-BD14-062608	SAIC	6/26/2008	BD-14	864736	827250
GW-BD14-091707	SAIC	9/17/2007	BD-14	864736	827250
GW-BD14-120407	SAIC	12/4/2007	BD-14	864736	827250
GW-BD14-122904	SAIC	12/6/2004	BD-14	864736	827250
GW-BD16-122204	SAIC	12/6/2004	BD-16	864876.268	827382.82
GW-BD2-121604	SAIC	12/6/2004	BD-02	864855.916794	827149.861937
GW-BD3-121704	SAIC	12/6/2004	BD-03	864857.595288	827086.079189

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-BD4-121704	SAIC	12/6/2004	BD-04	864818.150693	827167.486117
GW-BD5-121504	SAIC	12/6/2004	BD-05	864818.150693	827167.486117
GW-BP17-030308	SAIC	3/3/2008	BP-17	865168.429	827549.51
GW-BP17-031809	SAIC	3/18/2009	BP-17	865168.429	827549.51
GW-BP17-033009	SAIC	3/30/2009	BP-17	865168.429	827549.51
GW-BP17-062308	SAIC	6/23/2008	BP-17	865168.429	827549.51
GW-BP17-062807	SAIC	6/28/2007	BP-17	865168.429	827549.51
GW-BP17-091508	SAIC	9/15/2008	BP-17	865168.429	827549.51
GW-BP17-092107	SAIC	9/21/2007	BP-17	865168.429	827549.51
GW-BP17-120307	SAIC	12/3/2007	BP-17	865168.429	827549.51
GW-BP17-120908	SAIC	12/9/2008	BP-17	865168.429	827549.51
GW-BP17-122204	SAIC	12/6/2004	BP-17	865168.429	827549.51
GW-BP20A-030408	SAIC	3/4/2008	BP-20A	865068	827833
GW-BP20A-031909	SAIC	3/19/2009	BP-20A	865068	827833
GW-BP20A-033109	SAIC	3/31/2009	BP-20A	865068	827833
GW-BP20A-062308	SAIC	6/23/2008	BP-20A	865068	827833
GW-BP20A-062607	SAIC	6/26/2007	BP-20A	865068	827833
GW-BP20A-091508	SAIC	9/15/2008	BP-20A	865068	827833
GW-BP20A-091807	SAIC	9/18/2007	BP-20A	865068	827833
GW-BP20A-120307	SAIC	12/3/2007	BP-20A	865068	827833
GW-BP20A-120908	SAIC	12/9/2008	BP-20A	865068	827833
GW-BP21-030508	SAIC	3/5/2008	BP-21	864954.393	827824.823
GW-BP21-031809	SAIC	3/18/2009	BP-21	864954.393	827824.823

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-BP21-033109	SAIC	3/31/2009	BP-21	864954.393	827824.823
GW-BP21-062308	SAIC	6/23/2008	BP-21	864954.393	827824.823
GW-BP21-062607	SAIC	6/26/2007	BP-21	864954.393	827824.823
GW-BP21-091608	SAIC	9/16/2008	BP-21	864954.393	827824.823
GW-BP21-092007	SAIC	9/20/2007	BP-21	864954.393	827824.823
GW-BP21-120307	SAIC	12/3/2007	BP-21	864954.393	827824.823
GW-BP21-120808	SAIC	12/8/2008	BP-21	864954.393	827824.823
GW-BP22A-030508	SAIC	3/5/2008	BP-22A	864898	827738
GW-BP22A-033009	SAIC	3/30/2009	BP-22A	864898	827738
GW-BP22A-062507	SAIC	6/25/2007	BP-22A	864898	827738
GW-BP22A-062608	SAIC	6/26/2008	BP-22A	864898	827738
GW-BP22A-091807	SAIC	9/18/2007	BP-22A	864898	827738
GW-BP22A-120307	SAIC	12/3/2007	BP-22A	864898	827738
GW-BP22A-122804	SAIC	12/6/2004	BP-22A	864898	827738
GW-DM02-030408	SAIC	3/4/2008	DM-02	864942.421	827469.872
GW-DM02-033009	SAIC	3/30/2009	DM-02	864942.421	827469.872
GW-DM02-062608	SAIC	6/26/2008	DM-02	864942.421	827469.872
GW-DM02-062807	SAIC	6/28/2007	DM-02	864942.421	827469.872
GW-DM02-091907	SAIC	9/19/2007	DM-02	864942.421	827469.872
GW-DM02-120607	SAIC	12/6/2007	DM-02	864942.421	827469.872
GW-DM02-122204	SAIC	12/6/2004	DM-02	864942.421	827469.872
GW-EP14-030308	SAIC	3/3/2008	EP-14	864604.823	827237.136
GW-EP14-031909	SAIC	3/19/2009	EP-14	864604.823	827237.136

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-EP14-032709	SAIC	3/27/2009	EP-14	864604.823	827237.136
GW-EP14-062408	SAIC	6/24/2008	EP-14	864604.823	827237.136
GW-EP14-062807	SAIC	6/28/2007	EP-14	864604.823	827237.136
GW-EP14-091508	SAIC	9/15/2008	EP-14	864604.823	827237.136
GW-EP14-091907	SAIC	9/19/2007	EP-14	864604.823	827237.136
GW-EP14-120607	SAIC	12/6/2007	EP-14	864604.823	827237.136
GW-EP14-120808	SAIC	12/8/2008	EP-14	864604.823	827237.136
GW-EP15-121004	SAIC	12/6/2004	EP-15	864513.27	827215.815
GW-EP16-030508	SAIC	3/5/2008	EP-16	864542.36	827246.654
GW-EP16-032509	SAIC	3/25/2009	EP-16	864542.36	827246.654
GW-EP16-062607	SAIC	6/26/2007	EP-16	864542.36	827246.654
GW-EP16-062708	SAIC	6/27/2008	EP-16	864542.36	827246.654
GW-EP16-091608	SAIC	9/16/2008	EP-16	864542.36	827246.654
GW-EP16-091907	SAIC	9/19/2007	EP-16	864542.36	827246.654
GW-EP16-120407	SAIC	12/4/2007	EP-16	864542.36	827246.654
GW-EP16-121304	SAIC	12/6/2004	EP-16	864542.36	827246.654
GW-FD1-120704	SAIC	12/6/2004	NB-34	864377.178	827314.415
GW-FD3-121304	SAIC	12/6/2004	EP-16	864542.36	827246.654
GW-FD5-121604	SAIC	12/6/2004	WS-23	865305.2233	827216.0957
GW-FD7-122004	SAIC	12/6/2004	LF-09	864561.931816	827117.530973
GW-LF08-122104	SAIC	12/6/2004	LF-08	864522.948	827159.971
GW-LF09-030508	SAIC	3/5/2008	LF-09	864561.931816	827117.530973
GW-LF09-032609	SAIC	3/26/2009	LF-09	864561.931816	827117.530973

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-LF09-062507	SAIC	6/25/2007	LF-09	864561.931816	827117.530973
GW-LF09-062708	SAIC	6/27/2008	LF-09	864561.931816	827117.530973
GW-LF09-091907	SAIC	9/19/2007	LF-09	864561.931816	827117.530973
GW-LF09-120407	SAIC	12/4/2007	LF-09	864561.931816	827117.530973
GW-LF09-122004	SAIC	12/6/2004	LF-09	864561.931816	827117.530973
GW-NB31-030508	SAIC	3/5/2008	NB-31	864713.584	827582.733
GW-NB31-031009	SAIC	3/10/2009	NB-31	864713.584	827582.733
GW-NB31-062408	SAIC	6/24/2008	NB-31	864713.584	827582.733
GW-NB31-062707	SAIC	6/27/2007	NB-31	864713.584	827582.733
GW-NB31-091608	SAIC	9/16/2008	NB-31	864713.584	827582.733
GW-NB31-092007	SAIC	9/20/2007	NB-31	864713.584	827582.733
GW-NB31-120507	SAIC	12/5/2007	NB-31	864713.584	827582.733
GW-NB31-121008	SAIC	12/10/2008	NB-31	864713.584	827582.733
GW-NB31-122104	SAIC	12/6/2004	NB-31	864713.584	827582.733
GW-NB34-030508	SAIC	3/5/2008	NB-34	864377.178	827314.415
GW-NB34-031009	SAIC	3/10/2009	NB-34	864377.178	827314.415
GW-NB34-062408	SAIC	6/24/2008	NB-34	864377.178	827314.415
GW-NB34-062707	SAIC	6/27/2007	NB-34	864377.178	827314.415
GW-NB34-091708	SAIC	9/17/2008	NB-34	864377.178	827314.415
GW-NB34-092007	SAIC	9/20/2007	NB-34	864377.178	827314.415
GW-NB34-120507	SAIC	12/5/2007	NB-34	864377.178	827314.415
GW-NB34-120704	SAIC	12/6/2004	NB-34	864377.178	827314.415
GW-NB34-121008	SAIC	12/10/2008	NB-34	864377.178	827314.415

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-NB35-030508	SAIC	3/5/2008	NB-35	864511.756	827553.94
GW-NB35-031009	SAIC	3/10/2009	NB-35	864511.756	827553.94
GW-NB35-062408	SAIC	6/24/2008	NB-35	864511.756	827553.94
GW-NB35-062707	SAIC	6/27/2007	NB-35	864511.756	827553.94
GW-NB35-091808	SAIC	9/18/2008	NB-35	864511.756	827553.94
GW-NB35-092007	SAIC	9/20/2007	NB-35	864511.756	827553.94
GW-NB35-120507	SAIC	12/5/2007	NB-35	864511.756	827553.94
GW-NB35-121008	SAIC	12/10/2008	NB-35	864511.756	827553.94
GW-NB35-122104	SAIC	12/6/2004	NB-35	864511.756	827553.94
GW-NB39-121504	SAIC	12/6/2004	NB-39	864704.942	827440.549
GW-NB46-121004	SAIC	12/6/2004	NB-46	865595.034	827912.328
GW-NB50-030608	SAIC	3/6/2008	NB-50	865103.731	827079.22
GW-NB50-031709	SAIC	3/17/2009	NB-50	865103.731	827079.22
GW-NB50-032609	SAIC	3/26/2009	NB-50	865103.731	827079.22
GW-NB50-062308	SAIC	6/23/2008	NB-50	865103.731	827079.22
GW-NB50-062507	SAIC	6/25/2007	NB-50	865103.731	827079.22
GW-NB50-091608	SAIC	9/16/2008	NB-50	865103.731	827079.22
GW-NB50-091807	SAIC	9/18/2007	NB-50	865103.731	827079.22
GW-NB50-120407	SAIC	12/4/2007	NB-50	865103.731	827079.22
GW-NB50-120908	SAIC	12/9/2008	NB-50	865103.731	827079.22
GW-NB50-121604	SAIC	12/6/2004	NB-50	865103.731	827079.22
GW-NB54-030508	SAIC	3/5/2008	NB-54	864661.448	826838.588
GW-NB54-032609	SAIC	3/26/2009	NB-54	864661.448	826838.588

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-NB54-062507	SAIC	6/25/2007	NB-54	864661.448	826838.588
GW-NB54-062608	SAIC	6/26/2008	NB-54	864661.448	826838.588
GW-NB54-091907	SAIC	9/19/2007	NB-54	864661.448	826838.588
GW-NB54-120407	SAIC	12/4/2007	NB-54	864661.448	826838.588
GW-NB54-122004	SAIC	12/6/2004	NB-54	864661.448	826838.588
GW-NB56-121604	SAIC	12/6/2004	NB-56	864934.422	827046.379
GW-NB57A-030608	SAIC	3/6/2008	NB-57A	864923.738	826896.134
GW-NB57A-031809	SAIC	3/18/2009	NB-57A	864923.738	826896.134
GW-NB57A-032609	SAIC	3/26/2009	NB-57A	864923.738	826896.134
GW-NB57A-062308	SAIC	6/23/2008	NB-57A	864923.738	826896.134
GW-NB57A-062507	SAIC	6/25/2007	NB-57A	864923.738	826896.134
GW-NB57A-091608	SAIC	9/16/2008	NB-57A	864923.738	826896.134
GW-NB57A-091907	SAIC	9/19/2007	NB-57A	864923.738	826896.134
GW-NB57A-120407	SAIC	12/4/2007	NB-57A	864923.738	826896.134
GW-NB57A-121108	SAIC	12/11/2008	NB-57A	864923.738	826896.134
GW-NB57A-121404	SAIC	12/6/2004	NB-57A	864923.738	826896.134
GW-NB57B-121504	SAIC	12/6/2004	NB-57B	864922.138	826897.328
GW-NB61-122204	SAIC	12/6/2004	NB-61	864995.633	827917.115
GW-NB65-122004	SAIC	12/6/2004	NB-65	864180.227	828422.675
GW-NB71-121304	SAIC	12/6/2004	NB-71	865308.273861	827948.610382
GW-NB78-122104	SAIC	12/6/2004	NB-78	864598.898	828218.506
GW-NB80-030608	SAIC	3/6/2008	NB-80	865280.146	827571.825
GW-NB54-062507	SAIC	6/25/2007	NB-54	864661.448	826838.588

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-NB80-032709	SAIC	3/27/2009	NB-80	865280.146	827571.825
GW-NB80-062308	SAIC	6/23/2008	NB-80	865280.146	827571.825
GW-NB80-062807	SAIC	6/28/2007	NB-80	865280.146	827571.825
GW-NB80-091808	SAIC	9/18/2008	NB-80	865280.146	827571.825
GW-NB80-092007	SAIC	9/20/2007	NB-80	865280.146	827571.825
GW-NB80-120507	SAIC	12/5/2007	NB-80	865280.146	827571.825
GW-NB80-121208	SAIC	12/12/2008	NB-80	865280.146	827571.825
GW-NB80-121704	SAIC	12/6/2004	NB-80	865280.146	827571.825
GW-NB81-030408	SAIC	3/4/2008	NB-81	864884.498053	827967.425431
GW-NB81-030909	SAIC	3/9/2009	NB-81	864884.498053	827967.425431
GW-NB81-062508	SAIC	6/25/2008	NB-81	864884.498053	827967.425431
GW-NB81-062707	SAIC	6/27/2007	NB-81	864884.498053	827967.425431
GW-NB81-091808	SAIC	9/18/2008	NB-81	864884.498053	827967.425431
GW-NB81-091907	SAIC	9/19/2007	NB-81	864884.498053	827967.425431
GW-NB81-120507	SAIC	12/5/2007	NB-81	864884.498053	827967.425431
GW-NB81-120904	SAIC	12/6/2004	NB-81	864884.498053	827967.425431
GW-NB81-121108	SAIC	12/11/2008	NB-81	864884.498053	827967.425431
GW-NB85-030508	SAIC	3/5/2008	NB-85	863905.759	826970.43
GW-NB85-031709	SAIC	3/17/2009	NB-85	863905.759	826970.43
GW-NB85-062408	SAIC	6/24/2008	NB-85	863905.759	826970.43
GW-NB85-062607	SAIC	6/26/2007	NB-85	863905.759	826970.43
GW-NB85-091708	SAIC	9/17/2008	NB-85	863905.759	826970.43
GW-NB85-092007	SAIC	9/20/2007	NB-85	863905.759	826970.43

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-NB85-120507	SAIC	12/5/2007	NB-85	863905.759	826970.43
GW-NB85-120804	SAIC	12/6/2004	NB-85	863905.759	826970.43
GW-NB85-121108	SAIC	12/11/2008	NB-85	863905.759	826970.43
GW-NB86-120804	SAIC	12/6/2004	NB-86	863782.77	827096.9
GW-OA19-122104	SAIC	12/6/2004	OA-19	864975.909	827431.471
GW-OB01-030608	SAIC	3/6/2008	OB-01	863749.52863	826667.870646
GW-OB01-032009	SAIC	3/20/2009	OB-01	863749.52863	826667.870646
GW-OB01-062508	SAIC	6/25/2008	OB-01	863749.52863	826667.870646
GW-OB01-062707	SAIC	6/27/2007	OB-01	863749.52863	826667.870646
GW-OB01-091508	SAIC	9/15/2008	OB-01	863749.52863	826667.870646
GW-OB01-092007	SAIC	9/20/2007	OB-01	863749.52863	826667.870646
GW-OB01-121208	SAIC	12/12/2008	OB-01	863749.52863	826667.870646
GW-OB1-121404	SAIC	12/6/2004	OB-01	863749.52863	826667.870646
GW-OB2-121404	SAIC	12/6/2004	OB-02	865862.215225	830379.84123
GW-PL04-122204	SAIC	12/6/2004	PL-04	864818.811	827578.136
GW-PL06-030508	SAIC	3/5/2008	PL-06	864400.71	827110.638
GW-PL06-032509	SAIC	3/25/2009	PL-06	864400.71	827110.638
GW-PL06-062707	SAIC	6/27/2007	PL-06	864400.71	827110.638
GW-PL06-062708	SAIC	6/27/2008	PL-06	864400.71	827110.638
GW-PL06-091907	SAIC	9/19/2007	PL-06	864400.71	827110.638
GW-PL06-120407	SAIC	12/4/2007	PL-06	864400.71	827110.638
GW-PL06-120808	SAIC	12/8/2008	PL-06	864400.71	827110.638
GW-PL06-121504	SAIC	12/6/2004	PL-06	864400.71	827110.638

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-WS23-032709	SAIC	3/27/2009	WS-23	865305.2233	827216.0957
GW-WS23-121304	SAIC	12/6/2004	WS-23	865305.2233	827216.0957
GW-WS25-033009	SAIC	3/30/2009	WS-25	865368.537784	827398.207354
GW-WS25-121504	SAIC	12/6/2004	WS-25	865368.537784	827398.207354
GW-WS27-033009	SAIC	3/30/2009	WS-27	865109.024953	827662.626001
GW-WS27-121504	SAIC	12/6/2004	WS-27	865109.024953	827662.626001
GW-WS29-033109	SAIC	3/31/2009	WS-29	865041.261615	827870.790041
GW-WS29-121604	SAIC	12/6/2004	WS-29	865041.261615	827870.790041
GW-WS32-033009	SAIC	3/30/2009	WS-32	864826.25	827534
GW-WS32-121704	SAIC	12/6/2004	WS-32	864826.25	827534
GW-WS34-032509	SAIC	3/25/2009	WS-34	864375.041	826918.8376
GW-WS34-121404	SAIC	12/6/2004	WS-34	864375.041	826918.8376
NB-30-27-32-OL-GW	SAIC	7/1/2004	NB-30	864720.304	827695.04
NB-34-22-32-OL-GW	SAIC	7/1/2004	NB-34	864377.178	827314.415
NB-35-24-29-OL-GW	SAIC	6/29/2004	NB-35	864511.756	827553.94
Overburden Unknown Screen Depth					
GW-BP15-033109	SAIC	3/31/2009	BP-15	865286.141	827405.16
GW-BP2A-040109	SAIC	4/1/2009	BP-02A	864998.079	827641.135
GW-BP2-XX	Cabrera	11/16/2006	–	864998.079	827641.135
GW-BP2-XX-D	Cabrera	11/16/2006	–	864998.079	827641.135
GW-BP40-033109	SAIC	3/31/2009	BP-40	865152.428	827557.896
GW-BP55-040109	SAIC	4/1/2009	BP-55	865022.423	827680.691
GW-BP5A-040109	SAIC	4/1/2009	BP-05A	865016.973	827758.066

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-BP5A-XX	Cabrera	11/17/2006	–	865016.973	827758.066
GW-BP7A-033109	SAIC	3/31/2009	BP-07A	865032.67	827777.058
GW-BP7A-XX	Cabrera	11/18/2006	–	865032.67	827777.058
GW-BP9A-XX	Cabrera	11/18/2006	–	865297.327	827437.841
GW-RMC9-033009	SAIC	3/30/2009	RMC-9	864834.609	827527.515
GW-WS07-032509	SAIC	3/25/2009	WS-07	864565.427358	827291.599516
GW-WS13-032709	SAIC	3/27/2009	WS-13	864784.25	827319
GW-WS14-033009	SAIC	3/30/2009	WS-14	864942.734597	827677.846848
GW-WS14-121604	SAIC	12/6/2004	WS-14	864942.734597	827677.846848
GW-WS15-033009	SAIC	3/30/2009	WS-15	865099.807041	827623.15812
GW-WS15-121604	SAIC	12/6/2004	WS-15	865099.807041	827623.15812
GW-WS16-030508	SAIC	3/5/2008	WS-16	865005.101899	827834.838726
GW-WS16-033109	SAIC	3/31/2009	WS-16	865005.101899	827834.838726
GW-WS16-062608	SAIC	6/26/2008	WS-16	865005.101899	827834.838726
GW-WS16-062907	SAIC	6/29/2007	WS-16	865005.101899	827834.838726
GW-WS16-091807	SAIC	9/18/2007	WS-16	865005.101899	827834.838726
GW-WS16-120407	SAIC	12/4/2007	WS-16	865005.101899	827834.838726
GW-WS16-121604	SAIC	12/6/2004	WS-16	865005.101899	827834.838726
GW-WS17B-030508	SAIC	3/5/2008	WS-17B	864810.009866	827553.822286
GW-WS17B-033109	SAIC	3/31/2009	WS-17B	864810.009866	827553.822286
GW-WS17B-062608	SAIC	6/26/2008	WS-17B	864810.009866	827553.822286
GW-WS17B-062907	SAIC	6/29/2007	WS-17B	864810.009866	827553.822286
GW-WS17B-091508	SAIC	9/15/2008	WS-17B	864810.009866	827553.822286

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
GW-WS17B-091807	SAIC	9/18/2007	WS-17B	864810.009866	827553.822286
GW-WS17B-121704	SAIC	12/6/2004	WS-17B	864810.009866	827553.822286
GW-WS7-121304	SAIC	12/6/2004	WS-07	864565	827292
GW-WS8-120904	SAIC	12/6/2004	WS-08	864526	827434
L20802-1	SAIC	4/9/2003	WS-10	864870	827131
L21048-14	SAIC	5/16/2003	WS-10	864870	827131
L21048-5	SAIC	5/16/2003	WS-08	864526.057	827434.3335
L21048-6	SAIC	5/16/2003	WS-09	864406.9382	827302.6836
L21048-7	SAIC	5/16/2003	WS-13	864784.25	827319
L21048-9	SAIC	5/16/2003	WS-16	865005.101899	827834.838726
L21054-1	SAIC	5/16/2003	WS-07	864565.427358	827291.599516
L21054-2	SAIC	5/16/2003	WS-15	865099.807041	827623.15812
L21054-3	SAIC	5/16/2003	WS-17B	864810.009866	827553.822286
L21203-1	SAIC	6/6/2003	WS-10	864870	827131
L21475-1	SAIC	7/10/2003	WS-10	864870	827131
L21835-1	SAIC	8/22/2003	WS-10	864870	827131
L22035-10	SAIC	9/22/2003	WS-17B	864810.009866	827553.822286
L22035-4	SAIC	9/22/2003	WS-07	864565.427358	827291.599516
L22035-5	SAIC	9/22/2003	WS-08	864526.057	827434.3335
L22035-6	SAIC	9/22/2003	WS-09	864406.9382	827302.6836
L22035-7	SAIC	9/22/2003	WS-13	864784.25	827319
L22035-8	SAIC	9/22/2003	WS-15	865099.807041	827623.15812
L22035-9	SAIC	9/22/2003	WS-16	865005.101899	827834.838726

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
L22276-1	SAIC	10/17/2003	WS-10	864870	827131
L22415-1	SAIC	11/7/2003	WS-10	864870	827131
L22502-10	SAIC	11/25/2003	WS-17B	864810.009866	827553.822286
L22502-4	SAIC	11/25/2003	WS-07	864565.427358	827291.599516
L22502-5	SAIC	11/25/2003	WS-08	864526.057	827434.3335
L22502-6	SAIC	11/25/2003	WS-09	864406.9382	827302.6836
L22502-7	SAIC	11/25/2003	WS-13	864784.25	827319
L22502-8	SAIC	11/25/2003	WS-15	865099.807041	827623.15812
L22502-9	SAIC	11/25/2003	WS-16	865005.101899	827834.838726
L22565-1	SAIC	12/9/2003	WS-10	864870	827131
L22742-1	SAIC	1/9/2004	WS-10	864870	827131
L22919-1	SAIC	2/9/2004	WS-10	864870	827131
L23210-1	SAIC	4/1/2004	WS-10	864870	827131
L23211-10	SAIC	4/1/2004	WS-17B	864810.009866	827553.822286
L23211-4	SAIC	4/1/2004	WS-07	864565.427358	827291.599516
L23211-5	SAIC	4/1/2004	WS-08	864526.057	827434.3335
L23211-6	SAIC	4/1/2004	WS-09	864406.9382	827302.6836
L23211-7	SAIC	4/1/2004	WS-13	864784.25	827319
L23211-8	SAIC	4/1/2004	WS-15	865099.807041	827623.15812
L23211-9	SAIC	4/1/2004	WS-16	865005.101899	827834.838726
L23290-1	SAIC	4/12/2004	WS-10	864870	827131
L23622-1	SAIC	6/1/2004	WS-10	864870	827131
L23716-1	SAIC	6/15/2004	WS-10	864870	827131

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
L23797-10	SAIC	6/30/2004	WS-17B	864810.009866	827553.822286
L23797-4	SAIC	6/30/2004	WS-07	864565.427358	827291.599516
L23797-5	SAIC	6/30/2004	WS-08	864526.057	827434.3335
L23797-6	SAIC	6/30/2004	WS-09	864406.9382	827302.6836
L23797-7	SAIC	6/30/2004	WS-13	864784.25	827319
L23797-8	SAIC	6/30/2004	WS-15	865099.807041	827623.15812
L23797-9	SAIC	6/30/2004	WS-16	865005.101899	827834.838726
L24111-1	SAIC	8/20/2004	WS-10	864870	827131
L24234-1	SAIC	9/7/2004	WS-10	864870	827131
L24336-1	SAIC	9/24/2004	WS-10	864870	827131
L24369-10	SAIC	10/1/2004	WS-17B	864810.009866	827553.822286
L24369-4	SAIC	10/1/2004	WS-07	864565.427358	827291.599516
L24369-5	SAIC	10/1/2004	WS-08	864526.057	827434.3335
L24369-6	SAIC	10/1/2004	WS-09	864406.9382	827302.6836
L24369-7	SAIC	10/1/2004	WS-13	864784.25	827319
L24369-8	SAIC	10/1/2004	WS-15	865099.807041	827623.15812
L24369-9	SAIC	10/1/2004	WS-16	865005.101899	827834.838726
L24526-1	SAIC	10/27/2004	WS-10	864870	827131
L24696-1	SAIC	11/29/2004	WS-10	864870	827131
L24832-1	SAIC	12/17/2004	WS-10	864870	827131
L24860-10	SAIC	12/27/2004	WS-17B	864810.009866	827553.822286
L24860-10R1	SAIC	12/27/2004	WS-17B	864810.009866	827553.822286
L24860-4	SAIC	12/27/2004	WS-07	864565.427358	827291.599516

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
L24860-4R1	SAIC	12/27/2004	WS-07	864565.427358	827291.599516
L24860-5	SAIC	12/27/2004	WS-08	864526.057	827434.3335
L24860-5R1	SAIC	12/27/2004	WS-08	864526.057	827434.3335
L24860-6	SAIC	12/27/2004	WS-09	864406.9382	827302.6836
L24860-6R1	SAIC	12/27/2004	WS-09	864406.9382	827302.6836
L24860-7	SAIC	12/27/2004	WS-13	864784.25	827319
L24860-7R1	SAIC	12/27/2004	WS-13	864784.25	827319
L24860-8	SAIC	12/27/2004	WS-15	865099.807041	827623.15812
L24860-8R1	SAIC	12/27/2004	WS-15	865099.807041	827623.15812
L24860-9	SAIC	12/27/2004	WS-16	865005.101899	827834.838726
L24860-9R1	SAIC	12/27/2004	WS-16	865005.101899	827834.838726
L24927-1	SAIC	1/7/2005	WS-10	864870	827131
L25059-10	SAIC	1/31/2005	WS-17B	864810.009866	827553.822286
L25059-4	SAIC	1/31/2005	WS-07	864565.427358	827291.599516
L25059-5	SAIC	1/31/2005	WS-08	864526.057	827434.3335
L25059-6	SAIC	1/31/2005	WS-09	864406.9382	827302.6836
L25059-7	SAIC	1/31/2005	WS-13	864784.25	827319
L25059-8	SAIC	1/31/2005	WS-15	865099.807041	827623.15812
L25059-9	SAIC	1/31/2005	WS-16	865005.101899	827834.838726
L25136-1	SAIC	2/14/2005	WS-10	864870	827131
L25289-1	SAIC	3/15/2005	WS-10	864870	827131
L25382-1	SAIC	4/4/2005	WS-10	864870	827131
L25505-10	SAIC	4/25/2005	WS-17B	864810.009866	827553.822286

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
L25505-4	SAIC	4/25/2005	WS-07	864565.427358	827291.599516
L25505-5	SAIC	4/25/2005	WS-08	864526.057	827434.3335
L25505-6	SAIC	4/25/2005	WS-09	864406.9382	827302.6836
L25505-7	SAIC	4/25/2005	WS-13	864784.25	827319
L25505-8	SAIC	4/25/2005	WS-15	865099.807041	827623.15812
L25505-9	SAIC	4/25/2005	WS-16	865005.101899	827834.838726
L25710-1	SAIC	5/25/2005	WS-10	864870	827131
L25833-1	SAIC	6/14/2005	WS-10	864870	827131
L26006-1	SAIC	7/14/2005	WS-10	864870	827131
L26212-10	SAIC	8/5/2005	WS-17B	864810.009866	827553.822286
L26212-4	SAIC	8/5/2005	WS-07	864565.427358	827291.599516
L26212-5	SAIC	8/5/2005	WS-08	864526.057	827434.3335
L26212-6	SAIC	8/5/2005	WS-09	864406.9382	827302.6836
L26212-7	SAIC	8/5/2005	WS-13	864784.25	827319
L26212-8	SAIC	8/5/2005	WS-15	865099.807041	827623.15812
L26212-9	SAIC	8/5/2005	WS-16	865005.101899	827834.838726
L26371-1	SAIC	8/25/2005	WS-10	864870	827131
L26460-1	SAIC	9/7/2005	WS-10	864870	827131
L26694-1	SAIC	10/4/2005	WS-10	864870	827131
L26847-10	SAIC	10/14/2005	WS-17B	864810.009866	827553.822286
L26847-4	SAIC	10/14/2005	WS-07	864565.427358	827291.599516
L26847-5	SAIC	10/14/2005	WS-08	864526.057	827434.3335
L26847-6	SAIC	10/14/2005	WS-09	864406.9382	827302.6836

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
L26847-7	SAIC	10/14/2005	WS-13	864784.25	827319
L26847-8	SAIC	10/14/2005	WS-15	865099.807041	827623.15812
L26847-9	SAIC	10/14/2005	WS-16	865005.101899	827834.838726
L27001-1	SAIC	11/3/2005	WS-10	864870	827131
L28108-10	SAIC	3/22/2006	WS-17B	864810.009866	827553.822286
L28108-4	SAIC	3/22/2006	WS-07	864565.427358	827291.599516
L28108-5	SAIC	3/22/2006	WS-08	864526.057	827434.3335
L28108-6	SAIC	3/22/2006	WS-09	864406.9382	827302.6836
L28108-7	SAIC	3/22/2006	WS-13	864784.25	827319
L28108-8	SAIC	3/22/2006	WS-15	865099.807041	827623.15812
L28108-9	SAIC	3/22/2006	WS-16	865005.101899	827834.838726
L29059-10	SAIC	6/23/2006	WS-17B	864810.009866	827553.822286
L29059-4	SAIC	6/23/2006	WS-07	864565.427358	827291.599516
L29059-5	SAIC	6/23/2006	WS-08	864526.057	827434.3335
L29059-6	SAIC	6/23/2006	WS-09	864406.9382	827302.6836
L29059-7	SAIC	6/23/2006	WS-13	864784.25	827319
L29059-8	SAIC	6/23/2006	WS-15	865099.807041	827623.15812
L29059-9	SAIC	6/23/2006	WS-16	865005.101899	827834.838726
L29927-10	SAIC	9/18/2006	WS-17B	864810.009866	827553.822286
L29927-4	SAIC	9/18/2006	WS-07	864565.427358	827291.599516
L29927-5	SAIC	9/18/2006	WS-08	864526.057	827434.3335
L29927-6	SAIC	9/18/2006	WS-09	864406.9382	827302.6836
L29927-7	SAIC	9/18/2006	WS-13	864784.25	827319

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
L29927-8	SAIC	9/18/2006	WS-15	865099.807041	827623.15812
L29927-9	SAIC	9/18/2006	WS-16	865005.101899	827834.838726
L30517-10	SAIC	11/9/2006	WS-17B	864810.009866	827553.822286
L30517-4	SAIC	11/9/2006	WS-07	864565.427358	827291.599516
L30517-5	SAIC	11/9/2006	WS-08	864526.057	827434.3335
L30517-6	SAIC	11/9/2006	WS-09	864406.9382	827302.6836
L30517-7	SAIC	11/9/2006	WS-13	864784.25	827319
L30517-8	SAIC	11/9/2006	WS-15	865099.807041	827623.15812
L30517-9	SAIC	11/9/2006	WS-16	865005.101899	827834.838726
L31288-10	SAIC	2/23/2007	WS-17B	864810.009866	827553.822286
L31288-4	SAIC	2/23/2007	WS-07	864565.427358	827291.599516
L31288-5	SAIC	2/23/2007	WS-08	864526.057	827434.3335
L31288-6	SAIC	2/23/2007	WS-09	864406.9382	827302.6836
L31288-7	SAIC	2/23/2007	WS-13	864784.25	827319
L31288-8	SAIC	2/23/2007	WS-15	865099.807041	827623.15812
L31288-9	SAIC	2/23/2007	WS-16	865005.101899	827834.838726
L31925-10	SAIC	5/10/2007	WS-17B	864810.009866	827553.822286
L31925-4	SAIC	5/10/2007	WS-07	864565.427358	827291.599516
L31925-5	SAIC	5/10/2007	WS-08	864526.057	827434.3335
L31925-6	SAIC	5/10/2007	WS-09	864406.9382	827302.6836
L31925-7	SAIC	5/10/2007	WS-13	864784.25	827319
L31925-8	SAIC	5/10/2007	WS-15	865099.807041	827623.15812
L31925-9	SAIC	5/10/2007	WS-16	865005.101899	827834.838726

Table 4-2 (continued)

Ground Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
L32916-1	SAIC	8/30/2007	WS-15	865099.807041	827623.15812
L32916-5	SAIC	8/30/2007	WS-07	864565.427358	827291.599516
L32916-6	SAIC	8/30/2007	WS-08	864526.057	827434.3335
L32916-7	SAIC	8/30/2007	WS-09	864406.9382	827302.6836
L32916-8	SAIC	8/30/2007	WS-13	864784.25	827319
L33110-1	SAIC	9/21/2007	WS-16	865005.101899	827834.838726
L33110-2	SAIC	9/21/2007	WS-17B	864810.009866	827553.822286
L33682-4	SAIC	11/12/2007	WS-07	864565.427358	827291.599516
L33682-5	SAIC	11/12/2007	WS-09	864406.9382	827302.6836
L33682-6	SAIC	11/12/2007	WS-13	864784.25	827319
L33682-7	SAIC	11/12/2007	WS-15	865099.807041	827623.15812
L33682-7C1	SAIC	11/12/2007	WS-15	865099.807041	827623.15812
L33682-8	SAIC	11/12/2007	WS-16	865005.101899	827834.838726
L33682-8R1	SAIC	11/12/2007	WS-16	865005.101899	827834.838726

Table 4-3

Ground Water – Summary of Radiological Characterization Data by Location of the Well Screen

Description		**No Well Construction Record**										
# of Wells	1	**Gross α**	**Gross β**	**Am-241**	**Np-237**	**Pu-239/240**	**Ra-226**	**Tc-99**	**Th-232**	**U-234**	**U-235**	**U-238**
Total # of Samples	13											
Samples Analyzed		12	12	0	0	0	5	12	4	5	5	5
# of Samples >MDC		1	4	0	0	0	0	0	0	5	0	5
Mean Activity		5.736	6.138	0	0	0	0	0	0	1.305	0	0.744
Median Activity		5.736	5.372	0	0	0	0	0	0	1.132	0	0.804
Min Activity		5.736	4.630	0	0	0	0	0	0	1.086	0	0.415
Max Activity		5.736	9.180	0	0	0	0	0	0	1.903	0	1.098
Standard Deviation		0	2.078	0	0	0	0	0	0	0.342	0	0.270

Description		**Overburden Unknown Screen Depth**										
# of Wells	9	**Gross α**	**Gross β**	**Am-241**	**Np-237**	**Pu-239/240**	**Ra-226**	**Tc-99**	**Th-232**	**U-234**	**U-235**	**U-238**
Total # of Samples	115											
Samples Analyzed		102	102	3	3	3	37	106	43	61	62	62
# of Samples >MDC		78	100	0	1	0	2	71	21	43	14	34
Mean Activity		17.376	443	0	8.100	0	223	960	0.544	3.899	0.339	2.713
Median Activity		9.520	46.050	0	8.100	0	223	210	0.337	1.298	0.332	0.533
Min Activity		1.930	3.764	0	8.100	0	153	9.480	0.072	0.073	0.027	0.102
Max Activity		149	3,275	0	8.100	0	294	5,330	4.511	35.030	1.563	51.680
Standard Deviation		26.368	825	0	0	0	100	1,440	0.936	6.586	0.396	8.783

Table 4-3 (continued)

Ground Water – Summary of Radiological Characterization Data by Location of the Well Screen

Description		**Overburden Clay**										
# of Wells	17	**Gross α**	**Gross β**	**Am-241**	**Np-237**	**Pu-239/240**	**Ra-226**	**Tc-99**	**Th-232**	**U-234**	**U-235**	**U-238**
Total # of Samples	55											
Samples Analyzed		53	53	4	4	4	2	55	18	55	55	55
# of Samples >MDC		31	45	0	0	0	2	29	2	51	22	48
Mean Activity		38.390	124	0	0	0	1.740	378	0.066	17.555	1.482	3.096
Median Activity		13.900	12.600	0	0	0	1.740	38.500	0.066	0.799	0.807	0.365
Min Activity		1.730	2.370	0	0	0	0.759	2.400	0.039	0.067	0.033	0.043
Max Activity		305	1,090	0	0	0	2.720	2,280	0.094	172	7.570	26.600
Standard Deviation		62.864	267	0	0	0	1.387	660	0.039	36.882	1.896	5.772

Description		**Sand/Gravel Aquifer**										
# of Wells	17	**Gross α**	**Gross β**	**Am-241**	**Np-237**	**Pu-239/240**	**Ra-226**	**Tc-99**	**Th-232**	**U-234**	**U-235**	**U-238**
Total # of Samples	100											
Samples Analyzed		100	100	5	5	5	3	100	17	100	100	100
# of Samples >MDC		28	75	1	0	0	1	7	6	85	23	76
Mean Activity		5.199	6.702	0.029	0	0	0.820	2.730	0.068	0.863	0.144	0.462
Median Activity		2.965	5.140	0.029	0	0	0.820	1.970	0.065	0.498	0.093	0.342
Min Activity		0.982	1.210	0.029	0	0	0.820	1.150	0.013	0.042	0.017	0.043
Max Activity		26.000	37.800	0.029	0	0	0.820	5.950	0.124	6.780	0.440	3.105
Standard Deviation		5.191	6.488	0	0	0	0	1.646	0.037	1.112	0.118	0.470

Table 4-3 (continued)

Ground Water – Summary of Radiological Characterization Data by Location of the Well Screen

Description		**Overburden Hybrid Screen**										
# of Wells	47	**Gross α**	**Gross β**	**Am-241**	**Np-237**	**Pu-239/240**	**Ra-226**	**Tc-99**	**Th-232**	**U-234**	**U-235**	**U-238**
Total # of Samples	214											
Samples Analyzed		210	210	17	17	17	3	213	49	213	213	213
# of Samples >MDC		76	159	0	3	0	1	78	18	171	60	149
Mean Activity		36.010	150	0	0.041	0	0.903	477	0.140	9.269	1.045	2.169
Median Activity		6.785	10.600	0	0.018	0	0.903	103	0.082	0.448	0.075	0.269
Min Activity		0.982	1.170	0	0.018	0	0.903	1.550	0.020	0.041	0.022	0.039
Max Activity		345	4,250	0	0.087	0	0.903	6,400	0.586	315	16.500	56.300
Standard Deviation		77.158	519	0	0.040	0	0.000	1163	0.140	40.103	2.836	7.695

Description		**Bedrock Aquifer**										
# of Wells	25	**Gross α**	**Gross β**	**Am-241**	**Np-237**	**Pu-239/240**	**Ra-226**	**Tc-99**	**Th-232**	**U-234**	**U-235**	**U-238**
Total # of Samples	128											
Samples Analyzed		128	128	9	9	9	3	128	29	128	128	128
# of Samples >MDC		87	117	0	0	0	3	4	4	121	35	114
Mean Activity		11.870	11.960	0	0	0	1.250	14.283	0.240	2.594	0.080	0.483
Median Activity		7.900	8.250	0	0	0	1.100	3.100	0.091	2.514	0.068	0.390
Min Activity		2.100	3.000	0	0	0	1.030	2.030	0.041	0.087	0.011	0.060
Max Activity		277	224	0	0	0	1.620	48.900	0.736	12.400	0.230	1.720
Standard Deviation		29.126	21.773	0	0	0	0.322	23.089	0.333	1.778	0.045	0.330

Table 4-4

Surface Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium (pCi/L)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Background Surface Water – Statistical Data Analyses																																
No. of Detects	0			2			0			0			0			0			0			5			1			5			1	1
No. of Non-Detects	5			3			0			0			0			5			5			0			4			0			4	4
Detection Freq.	0.0%			40.0%			NA			NA			NA			0.0%			0.0%			100.0%			20.0%			100.0%			20.0%	20.0%
Max. Conc.	1.1			3.3			NA			NA			NA			3.2			0.03			0.68			0.06			0.74			1.5	1.7%
Min. Conc.	0.21			0.76			NA			NA			NA			-2.3			-0.01			0.44			0.01			0.22			0.67	1.7%
Mean Conc.	0.81			2.3			NA			NA			NA			0.77			0.01			0.53			0.04			0.36			0.93	1.7%
Std. Deviation	0.35			0.93			NA			NA			NA			2.1			0.02			0.09			0.02			0.22			0.31	NA
Background Surface Water – Analytical Data Results																																
US-01-SW	**1.0**	0.96	1.8	**0.76**	1.3	2.8	–	–	–	–	–	–	–	–	–	**1.0**	2.9	4.8	***0.02***	*0.02*	*0.04*	*0.49*	*0.14*	*0.06*	*0.03*	*0.03*	*0.02*	*0.28*	*0.10*	*0.06*	0.80	1.7%
US-02-SW	**0.83**	0.85	1.6	**2.3**	1.5	2.9	–	–	–	–	–	–	–	–	–	**3.2**	3.9	6.3	***0.01***	*0.03*	*0.05*	*0.68*	*0.22*	*0.17*	***0.05***	*0.07*	*0.12*	*0.74*	*0.22*	*0.11*	**1.5**	**<MDC**
US-03-SW	**0.90**	0.82	1.5	3.3	1.5	2.7	–	–	–	–	–	–	–	–	–	**-2.3**	3.6	6.3	***0.03***	*0.03*	*0.06*	*0.54*	*0.16*	*0.07*	***0.05***	*0.06*	*0.09*	*0.22*	*0.09*	*0.07*	**0.81**	**<MDC**
US-04-SW	**0.21**	0.79	1.8	**2.4**	1.5	2.9	–	–	–	–	–	–	–	–	–	**2.0**	2.9	4.7	***0.00***	*0.03*	*0.05*	*0.52*	*0.14*	*0.03*	***0.06***	*0.05*	*0.06*	*0.33*	*0.11*	*0.05*	**0.90**	**<MDC**
US-05-SW	**1.1**	0.69	1.1	2.7	1.4	2.6	–	–	–	–	–	–	–	–	–	**0.03**	3.5	6.1	***-0.01***	*0.03*	*0.07*	*0.44*	*0.13*	*0.05*	***0.01***	*0.03*	*0.06*	*0.22*	*0.09*	*0.07*	**0.67**	**<MDC**

Table 4-4 (continued)

Surface Water – Statistical And Analytical Sample Results

Sample ID	Gross Alpha (pCi/L)			Gross Beta (pCi/L)			Am-241 (pCi/L)			Np-237 (pCi/L)			Pu-239/240 (pCi/L)			Tc-99 (pCi/L)			Th-232 (pCi/L)			U-234 (pCi/L)			U-235 (pCi/L)			U-238 (pCi/L)			Total Uranium (pCi/L)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Surface Water – Statistical Data Analyses																																
No. of Detects	3			5			0			0			0			0			0			8			7			8			7	7
No. of Non-Detects	5			3			0			0			0			8			8			0			1			0			1	1
Detection Freq.	37.5%			62.5%			NA			NA			NA			0.0%			0.0%			100.0%			87.5%			100.0%			87.5%	87.5%
Max. Conc.	38.9			34.7			NA			NA			NA			2.4			0.03			29.6			1.2			1.1			32.0	14.5%
Min. Conc.	0.09			2.1			NA			NA			NA			-0.98			-0.01			0.48			0.00			0.15			0.64	1.3%
Mean Conc.	5.8			7.1			NA			NA			NA			0.94			0.01			4.5			0.22			0.48			5.2	4.6%
Std. Deviation	13.4			11.2			NA			NA			NA			1.1			0.01			10.1			0.42			0.33			10.8	4.5%
Surface Water – Analytical Data Results																																
SW-01-SW	38.9	8.1	3.0	34.7	7.0	6.0	–	–	–	–	–	–	–	–	–	**1.3**	3.7	6.2	***-0.01***	*0.03*	*0.08*	*29.6*	*4.7*	*0.04*	*1.2*	*0.27*	*0.05*	*1.1*	*0.27*	*0.06*	32.0	14.5%
SW-02-SW	2.4	0.88	1.1	4.9	1.5	2.2	–	–	–	–	–	–	–	–	–	**1.3**	3.7	6.2	***0.03***	*0.03*	*0.05*	*1.5*	*0.34*	*0.08*	*0.14*	*0.09*	*0.07*	*0.42*	*0.15*	*0.08*	2.0	5.0%
SW-08-SW	**0.77**	0.90	1.8	**2.7**	1.5	2.8	–	–	–	–	–	–	–	–	–	**1.5**	3.7	6.1	***-0.01***	*0.02*	*0.05*	*0.84*	*0.23*	*0.09*	*0.08*	*0.06*	*0.03*	*0.36*	*0.13*	*0.07*	1.3	3.3%
SW-08-SW-FD	**1.3**	0.98	1.7	2.8	1.5	2.8	–	–	–	–	–	–	–	–	–	**1.1**	3.6	6.1	***0.01***	*0.03*	*0.05*	*0.80*	*0.21*	*0.06*	*0.03*	*0.04*	*0.03*	*0.37*	*0.13*	*0.06*	1.2	1.3%
SW-09-SW	2.6	1.2	1.8	4.2	1.6	2.8	–	–	–	–	–	–	–	–	–	**2.4**	3.0	4.8	***0.02***	*0.03*	*0.04*	*1.8*	*0.36*	*0.05*	*0.11*	*0.06*	*0.02*	*0.82*	*0.20*	*0.02*	2.7	2.0%
SW-14-SW	**0.19**	0.65	1.5	**2.1**	1.5	2.9	–	–	–	–	–	–	–	–	–	**-0.98**	3.5	6.1	***0.02***	*0.03*	*0.05*	*0.55*	*0.15*	*0.05*	*0.05*	*0.04*	*0.05*	*0.28*	*0.09*	*0.04*	0.88	3.0%
SW-15-SW	**0.18**	0.68	1.6	**2.2**	1.4	2.7	–	–	–	–	–	–	–	–	–	**-0.28**	3.5	6.0	***0.01***	*0.02*	*0.04*	*0.59*	*0.16*	*0.03*	*0.06*	*0.05*	*0.05*	*0.32*	*0.11*	*0.05*	0.98	3.0%
SW-16-SW	**0.09**	0.80	1.9	3.6	1.7	3.0	–	–	–	–	–	–	–	–	–	**1.3**	3.6	6.0	***0.01***	*0.02*	*0.04*	*0.48*	*0.14*	*0.04*	***0.00***	*0.03*	*0.07*	*0.15*	*0.07*	*0.05*	**0.64**	**<MDC**

NOTE 1 – Bolded values indicate analytical result is less than the MDC value, italicized values indicate an alpha spectroscopy versus gamma spectroscopy result, and cells with "–" indicate that no analysis was performed.
NOTE 2 – The total Uranium calculation uses actual analytical data for U-235 and U-238; however, when U-234 was not reported, it was calculated as discussed in Section 4.0 . Using the individual analytical values reported in the table above, which are rounded, may yield a slightly different value for total Uranium.
NOTE 3 – The reported total Uranium value was bolded when any of the Uranium isotope analytical results were less than MDC.
NOTE 4 – A value was not calculated for U-235 percent enrichment (by weight) if the total Uranium value was less than MDC.

Table 4-5

Surface Water – GPS

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates	
				Northing	Easting
Background Surface Water					
US-01-SW	SAIC	5/10/2004	US-01-SW	865494.25	827343.93
US-02-SW	SAIC	5/11/2004	US-02-SW	863611.944391	826213.583742
US-03-SW	SAIC	5/12/2004	US-03-SW	864533.289	826645.127
US-04-SW	SAIC	5/13/2004	US-04-SW	865345.214	828706.209
US-05-SW	SAIC	5/14/2004	US-05-SW	860959.95	826421.27
Surface Water					
SW-01-SW	SAIC	4/28/2004	SW-01-SW	864154.705923	826772.280739
SW-02-SW	SAIC	4/30/2004	SW-02-SW	863553.273	827438.387
SW-08-SW	SAIC	5/1/2004	SW-08-SW	864764.774904	829514.088916
SW-08-SW-FD	SAIC	5/2/2004	SW-08-SW	864764.774904	829514.088916
SW-09-SW	SAIC	5/3/2004	SW-09-SW	865065.230598	827945.805263
SW-14-SW	SAIC	5/5/2004	SW-14-SW	863975.898	828366.914
SW-15-SW	SAIC	5/7/2004	SW-15-SW	862121.45	827179.44
SW-16-SW	SAIC	5/9/2004	SW-16-SW	865308.6	831025.8

Table 4-6

Site Pond – Soil And Sediment – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Surface – Stream Sediment – Statistical Data Analyses																																
No. of Detects	0			2			0			4			0			4			4			4			4			4			4	4
No. of Non-Detects	4			0			2			0			0			0			0			0			0			0			0	0
Detection Freq.	0.0%			100.0%			0.0%			100.0%			NA			100.0%			100.0%			100.0%			100.0%			100.0%			100.0%	100.0%
Max. Conc.	0.22			0.03			0.01			1.5			NA			284.0			4.6			937.0			41.7			84.6			1,063	7.1%
Min. Conc.	-0.49			0.03			0.00			1.1			NA			16.8			0.94			19.1			0.79			3.3			23.2	3.5%
Mean Conc.	-0.08			0.03			0.00			1.3			NA			148.0			2.1			370.8			16.8			39.7			427.3	5.2%
Std. Deviation	0.32			0.00			0.00			0.17			NA			141.0			1.7			395.3			17.5			33.9			446.2	1.5%
Surface – Stream Sediment – Analytical Data Results																																
SW-01-SS	**0.13**	0.32	0.53	*0.03*	*0.03*	*0.02*	***0.01***	*0.01*	*0.01*	1.4	0.30	0.33	–	–	–	255.0	40.8	0.89	1.6	0.45	0.80	*236.0*	*37.0*	*0.13*	*10.6*	*1.8*	*0.04*	*29.5*	*4.8*	*0.11*	276.1	5.3%
SW-05-SS	**-0.49**	0.56	1.2	–	–	–	–	–	–	1.2	0.38	0.52	–	–	–	16.8	2.9	1.0	*0.94*	*0.22*	*0.05*	*19.1*	*3.0*	*0.03*	*0.79*	*0.17*	*0.03*	*3.3*	*0.57*	*0.03*	23.2	3.5%
SW-06-SS	**0.22**	0.46	0.77	–	–	–	–	–	–	1.1	0.38	0.61	–	–	–	284.0	45.4	0.83	4.6	1.1	1.1	*937.0*	*156.0*	*0.03*	*41.7*	*7.1*	*0.04*	*84.6*	*14.2*	*0.03*	1,063	7.1%
SW-07-SS	**-0.18**	0.91	1.6	*0.03*	*0.02*	*0.02*	***0.00***	*0.01*	*0.01*	1.5	0.35	0.41	–	–	–	36.3	6.0	0.99	1.3	0.51	0.74	*291.0*	*45.6*	*0.05*	*14.1*	*2.3*	*0.02*	*41.4*	*6.6*	*0.05*	346.5	5.0%

Table 4-6 (continued)

Site Pond – Soil And Sediment – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Surface – Surface soil – Statistical Data Analyses																																
No. of Detects	0			0			0			4			0			2			3			0			2			2			2	2
No. of Non-Detects	4			1			1			0			0			2			1			0			2			2			2	2
Detection Freq.	0.0%			0.0%			0.0%			100.0%			NA			50.0%			75.0%			NA			50.0%			50.0%			50.0%	50.0%
Max. Conc.	0.01			0.02			0.01			1.3			NA			22.3			1.6			NA			11.8			32.0			257.9	5.5%
Min. Conc.	-0.29			0.02			0.01			0.92			NA			0.37			0.73			NA			0.25			1.3			6.6	4.4%
Mean Conc.	-0.15			0.02			0.01			1.2			NA			10.5			1.3			NA			3.8			11.2			84.2	5.0%
Std. Deviation	0.15			NA			NA			0.17			NA			11.5			0.39			NA			5.5			14.4			118.9	0.8%
Surface – Surface Soil – Analytical Data Results																																
SW-01-00-SL	**-0.28**	0.60	1.1	***0.02***	*0.02*	*0.03*	***0.01***	*0.01*	*0.01*	1.1	0.35	0.47	–	–	–	22.3	3.7	0.87	1.5	0.81	1.0	–	–	–	2.9	0.73	0.95	9.8	2.9	3.8	64.4	4.4%
SW-02-00-SL	**0.01**	0.32	0.55	–	–	–	–	–	–	1.3	0.59	0.71	–	–	–	18.4	3.1	0.81	1.6	0.76	1.5	–	–	–	11.8	2.4	3.7	32.0	4.9	4.5	257.9	5.5%
SW-03-00-SL	**-0.29**	0.48	0.95	–	–	–	–	–	–	0.92	0.29	0.36	–	–	–	**0.81**	0.53	0.81	1.2	0.74	1.00	–	–	–	**0.35**	0.51	0.85	**1.3**	1.7	2.8	**7.9**	**<MDC**
SW-04-00-SL	**-0.07**	0.20	0.37	–	–	–	–	–	–	1.3	0.54	0.60	–	–	–	**0.37**	0.50	0.82	**0.73**	0.93	1.5	–	–	–	**0.25**	0.62	1.1	**1.7**	1.3	2.8	**6.6**	**<MDC**

Table 4-6 (continued)

Site Pond – Soil And Sediment – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Root – Sub-Surface Soil – Statistical Data Analyses																																
No. of Detects	0			1			0			6			1			1			3			2			2			2			2	2
No. of Non-Detects	6			0			1			0			0			5			3			0			4			4			4	4
Detection Freq.	0.0%			100.0%			0.0%			100.0%			100.0%			16.7%			50.0%			100.0%			33.3%			33.3%			33.3%	33.3%
Max. Conc.	0.31			0.15			0.01			1.1			1.1			3.0			2.5			240.0			12.8			20.1			272.9	9.0%
Min. Conc.	-0.47			0.15			0.01			0.79			1.1			0.11			0.88			0.87			-0.42			0.33			0.72	0.8%
Mean Conc.	0.02			0.15			0.01			0.97			1.1			0.84			1.2			120.4			2.2			4.0			48.5	4.9%
Std. Deviation	0.28			NA			NA			0.12			NA			1.1			0.63			169.1			5.2			7.9			110.0	5.8%
Root – Sub-Surface Soil – Analytical Data Results																																
SW-02-01-SL	**0.31**	0.71	1.2	*0.15*	*0.08*	*0.02*	***0.01***	*0.01*	*0.02*	0.93	0.40	0.52	–	–	–	3.0	0.78	0.83	*2.5*	*0.49*	*0.05*	*240.0*	*37.4*	*0.08*	*12.8*	*2.1*	*0.06*	*20.1*	*3.2*	*0.06*	272.9	9.0%
SW-06-05-SL	**0.24**	0.68	1.2	–	–	–	–	–	–	0.79	0.27	0.42	–	–	–	**0.11**	0.52	0.88	1.1	0.49	0.77	–	–	–	**0.53**	0.45	0.70	**1.1**	1.3	2.1	**11.4**	**<MDC**
SW-06-05-SL-FD	**0.01**	0.41	0.76	–	–	–	–	–	–	1.0	0.28	0.35	–	–	–	**0.56**	0.49	0.79	**0.91**	0.75	1.1	–	–	–	**0.02**	0.36	0.66	**0.33**	1.4	2.5	**0.72**	**<MDC**
SW-07-05-SL	**-0.47**	0.36	0.79	–	–	–	–	–	–	1.1	0.38	0.40	1.1	0.25	0.20	**0.58**	0.53	0.86	**0.89**	0.53	0.96	*0.87*	*0.17*	*0.02*	*0.04*	*0.02*	*0.02*	*0.83*	*0.16*	*0.01*	1.7	0.8%
SW-08-03-SL	**-0.06**	0.14	0.26	–	–	–	–	–	–	1.00	0.31	0.41	–	–	–	**0.20**	0.46	0.77	1.2	0.57	0.89	–	–	–	**-0.42**	0.50	0.98	**0.61**	1.1	1.9	**1.2**	**<MDC**
SW-08-05-SL	**0.09**	0.56	0.99	–	–	–	–	–	–	0.96	0.29	0.40	–	–	–	**0.58**	0.50	0.79	**0.88**	0.46	0.88	–	–	–	**0.11**	0.51	0.89	**0.94**	1.7	2.8	**3.1**	**<MDC**

Table 4-6 (continued)

Site Pond – Soil And Sediment – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Deep – Sub-Surface Soil – Statistical Data Analyses																																
No. of Detects	0			0			0			10			0			1			7			0			0			1			0	0
No. of Non-Detects	11			0			0			1			0			10			4			0			11			10			11	11
Detection Freq.	0.0%			NA			NA			90.9%			NA			9.1%			63.6%			NA			0.0%			9.1%			0.0%	NA
Max. Conc.	0.13			NA			NA			1.2			NA			0.91			1.4			NA			0.49			3.0			12.4	NA
Min. Conc.	-0.35			NA			NA			0.30			NA			0.01			-0.16			NA			-0.15			-0.52			0.00	NA
Mean Conc.	-0.06			NA			NA			0.89			NA			0.39			1.0			NA			0.16			1.1			6.2	NA
Std. Deviation	0.15			NA			NA			0.23			NA			0.26			0.44			NA			0.23			1.2			4.7	NA
Deep – Sub-Surface Soil – Analytical Data Results																																
SW-02-09-SL	**-0.09**	0.40	0.76	–	–	–	–	–	–	0.80	0.35	0.43	–	–	–	0.91	0.56	0.86	**0.85**	0.48	1.0	–	–	–	**-0.04**	0.40	0.73	**2.1**	2.0	3.2	**4.1**	<MDC
SW-02-15-SL	**-0.35**	0.67	1.3	–	–	–	–	–	–	1.0	0.34	0.49	–	–	–	**0.57**	0.52	0.83	1.4	0.60	1.1	–	–	–	**0.49**	0.54	0.88	**2.6**	2.2	3.4	**12.0**	<MDC
SW-02-23-SL	**0.13**	0.45	0.78	–	–	–	–	–	–	0.94	0.26	0.34	–	–	–	**0.55**	0.54	0.86	1.3	0.46	0.74	–	–	–	**0.37**	0.38	0.61	**-0.39**	1.5	2.7	**12.4**	<MDC
SW-05-08-SL	**-0.07**	0.69	1.2	–	–	–	–	–	–	1.2	0.42	0.43	–	–	–	**0.36**	0.50	0.82	1.4	0.76	0.97	–	–	–	**0.14**	0.44	0.76	**1.6**	1.6	2.6	**4.5**	<MDC
SW-05-12-SL	**0.05**	0.42	0.76	–	–	–	–	–	–	0.91	0.27	0.33	–	–	–	**0.01**	0.51	0.88	0.88	0.61	0.84	–	–	–	**0.34**	0.39	0.64	**-0.16**	1.5	2.7	**11.2**	<MDC
SW-06-13-SL	**0.04**	0.14	0.25	–	–	–	–	–	–	0.91	0.32	0.45	–	–	–	**0.15**	0.50	0.84	**1.1**	0.61	1.2	–	–	–	**0.49**	0.50	0.79	**1.3**	0.87	1.8	**10.7**	<MDC
SW-06-23-SL	**0.02**	0.24	0.42	–	–	–	–	–	–	0.89	0.27	0.43	–	–	–	**0.45**	0.51	0.83	1.0	0.40	0.79	–	–	–	**-0.02**	0.42	0.73	3.0	1.1	2.0	**5.9**	<MDC
SW-07-15-SL	**-0.17**	0.16	0.31	–	–	–	–	–	–	0.93	0.35	0.50	–	–	–	**0.40**	0.52	0.86	1.4	0.83	1.1	–	–	–	**0.20**	0.49	0.86	**1.9**	1.6	2.5	**5.8**	<MDC
SW-07-23-SL	**-0.05**	0.25	0.44	–	–	–	–	–	–	0.76	0.25	0.41	–	–	–	**0.59**	0.55	0.89	0.92	0.45	0.85	–	–	–	**-0.15**	0.47	0.82	**0.49**	1.3	2.1	**0.98**	<MDC
SW-08-15-SL	**0.07**	0.15	0.25	–	–	–	–	–	–	1.1	0.35	0.46	–	–	–	**0.28**	0.50	0.82	**1.1**	0.65	1.2	–	–	–	**-0.03**	0.51	0.94	**0.38**	1.3	2.2	**0.75**	<MDC
SW-08-25-SL	**-0.25**	0.38	0.81	–	–	–	–	–	–	**0.30**	0.22	0.33	–	–	–	**0.06**	0.46	0.79	**-0.16**	0.32	0.69	–	–	–	**-0.05**	0.28	0.54	**-0.52**	1.1	2.1	**0**	<MDC

NOTE 1 – Bolded values indicate analytical result is less than the MDC value, italicized values indicate an alpha spectroscopy versus gamma spectroscopy result, and blank cells indicate that no analysis was performed.
NOTE 2 – For data reported as "Ra-226 [Gamma Spec]," the result may be inferred using the the "Bi-214 [Gamma Spec]" or "Pb-214 [Gamma Spec]" reported data or may be a direct measurement of gammas emitted by Ra-226. When the Ra-226 value is inferred using either Bi-214 or Pb-214, the sample is not known to be in secular equilibrium.
NOTE 3 – The greatest of the "Bi-214 [Gamma Spec],""Pb-214 [Gamma Spec]," and "Ra-226 [Gamma Spec]" is reported as "Ra-226".
NOTE 4 – For data reported as "Ra-226 by Bi-214 [Gamma Spec]" and "Ra-226 by Pb-214 [Gamma Spec]," the sample was sealed and the radium decay chain was allowed to achieve secular equilibrium prior to measurement of the progeny Bi-214 or Pb-214.
NOTE 5 – The reported total Uranium value was bolded when any of the Uranium isotope analytical results were less than MDC.
NOTE 6 – The greatest of the "Ra-226 by Bi-214 [Gamma Spec]," "Ra-226 by Pb-214 [Gamma Spec]," and "Ra-226 [Chemical Spec]" is reported as "Ra-226 with Ingrowth.

Table 4-7

Site Pond – Soil And Sediment – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Surface – Steam Sediment							
SW-01-SS	SAIC	4/28/2004	SW-01-SS	864154.705923	826772.280739	*2.31*	*2.31*
SW-05-SS	SAIC	4/27/2004	SW-05-SS	864516.219	826715.932	0.14	0.16
SW-06-SS	SAIC	4/27/2004	SW-06-SS	864369.411	826715.127	4.83	4.83
SW-07-SS	SAIC	4/28/2004	SW-07-SS	864477.743202	826705.459259	*1.07*	*1.07*
Surface – Surface Soil							
SW-01-00-SL	SAIC	4/27/2004	SW-01	864552.092345	826646.577799	*0.38*	*0.38*
SW-02-00-SL	SAIC	4/27/2004	SW-02	864488.777902	826653.513294	0.84	0.84
SW-03-00-SL	SAIC	4/27/2004	SW-03	864105.65637	826796.734396	0.07	0.07
SW-04-00-SL	SAIC	4/27/2004	SW-04	864112.101543	826732.351442	-0.03	0.02
Root – Sub - Surface Soil							
SW-02-01-SL	SAIC	6/14/2004	SW-02	864488.777902	826653.513294	*1.99*	*1.99*
SW-06-05-SL	SAIC	5/27/2004	SW-06	864372	826717	0.06	0.06
SW-06-05-SL-FD	SAIC	5/27/2004	SW-06	864372	826717	0.02	0.02
SW-07-05-SL	SAIC	5/27/2004	SW-07	864243.995	826792.123	0.02	0.03
SW-08-03-SL	SAIC	6/1/2004	SW-08	864110	826739	0.01	0.01
SW-08-05-SL	SAIC	6/1/2004	SW-08	864110	826739	0.03	0.03
Deep – Sub - Surface Soil							
SW-02-09-SL	SAIC	6/14/2004	SW-02	864488.777902	826653.513294	0.02	0.02
SW-02-15-SL	SAIC	6/14/2004	SW-02	864488.777902	826653.513294	0.02	0.02
SW-02-23-SL	SAIC	6/14/2004	SW-02	864488.777902	826653.513294	0.02	0.02
SW-05-08-SL	SAIC	5/25/2004	SW-05	864520	826715	0.01	0.01
SW-05-12-SL	SAIC	5/25/2004	SW-05	864520	826715	0.01	0.01

Table 4-7 (continued)

Site Pond – Soil And Sediment – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
SW-06-13-SL	SAIC	5/27/2004	SW-06	864372	826717	0.02	0.02
SW-06-23-SL	SAIC	5/27/2004	SW-06	864372	826717	0.01	0.01
SW-07-15-SL	SAIC	5/27/2004	SW-07	864243.995	826792.123	0.01	0.01
SW-07-23-SL	SAIC	5/27/2004	SW-07	864243.995	826792.123	0.01	0.01
SW-08-15-SL	SAIC	6/1/2004	SW-08	864110	826739	0.00	0.00
SW-08-25-SL	SAIC	6/1/2004	SW-08	864110	826739	0.00	0.00

NOTE 1 – The analytical results as provided by the laboratory, including negative values, were used in the sum-of-fractions (SOF) calculation.
NOTE 2 – Negative analytical results were set to zero (0) in the SOF calculation.
NOTE 3 – The SOF value is italicized when all radionuclides of concern are represented in the SOF calculation.
NOTE 4 – This area was determined to have Th-232 distinguishable in Surface soil.
NOTE 5 – When Th-232 was included in the SOF calculation, a background of 1 pCi/g was subtracted from the analytical result.
NOTE 6 – Samples with a result exceeding the BTV of 1.7 pCi/g Th-232 were always included in the SOF calculation.
NOTE 7 – Ra-226 was not included in the SOF calculations because the area is not considered impacted by Ra-226.

Table 4-8

Site Creek – Soil And Sediment – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Surface – Stream Sediment – Statistical Data Analyses																																
No. of Detects	0			0			0			3			0			3			3			3			3			3			3	3
No. of Non-Detects	3			1			1			0			0			0			0			0			0			0			0	0
Detection Freq.	0.0%			0.0%			0.0%			100.0%			NA			100.0%			100.0%			100.0%			100.0%			100.0%			100.0%	100.0%
Max. Conc.	-0.02			0.00			0.00			0.99			NA			2.8			0.77			7.9			0.40			1.4			9.7	4.3%
Min. Conc.	-0.12			0.00			0.00			0.57			NA			1.4			0.55			2.8			0.09			0.84			3.8	1.5%
Mean Conc.	-0.08			0.00			0.00			0.80			NA			2.0			0.64			4.6			0.22			1.1			5.9	2.9%
Std. Deviation	0.06			NA			NA			0.21			NA			0.73			0.11			2.9			0.16			0.29			3.3	1.4%
Surface – Stream Sediment – Analytical Data Results																																
SW-02-SS	**-0.12**	0.41	0.73	***0.00***	*0.01*	*0.01*	***0.00***	*0.01*	*0.01*	0.57	0.21	0.27	–	–	–	1.4	0.62	0.89	*0.55*	*0.14*	*0.04*	*3.0*	*0.50*	*0.03*	*0.16*	*0.05*	*0.03*	*0.84*	*0.16*	*0.03*	4.0	2.9%
SW-03-SS	**-0.02**	0.18	0.33	–	–	–	–	–	–	0.83	0.51	0.73	–	–	–	2.8	0.79	0.89	*0.61*	*0.15*	*0.03*	*7.9*	*1.3*	*0.03*	*0.40*	*0.11*	*0.03*	*1.4*	*0.26*	*0.02*	9.7	4.3%
SW-04-SS	**-0.11**	0.44	0.78	–	–	–	–	–	–	0.99	0.29	0.34	–	–	–	1.9	0.62	0.78	*0.77*	*0.19*	*0.06*	*2.8*	*0.50*	*0.03*	*0.09*	*0.05*	*0.03*	*0.95*	*0.20*	*0.03*	3.8	1.5%

Table 4-8 (continued)

Site Creek – Soil And Sediment – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Surface – Surface Soil – Statistical Data Analyses																																
No. of Detects	0			0			0			7			0			5			6			3			4			4			4	4
No. of Non-Detects	7			4			4			0			0			2			1			0			3			3			3	3
Detection Freq.	0.0%			0.0%			0.0%			100.0%			NA			71.4%			85.7%			100.0%			57.1%			57.1%			57.1%	57.1%
Max. Conc.	0.37			0.07			0.01			1.4			NA			12.7			1.4			52.3			3.0			9.9			67.2	8.0%
Min. Conc.	-0.63			0.00			-0.03			0.30			NA			0.15			0.05			1.5			-0.04			0.63			2.4	1.4%
Mean Conc.	-0.03			0.02			0.00			1.1			NA			3.5			0.91			18.9			0.80			2.9			21.0	4.4%
Std. Deviation	0.30			0.03			0.02			0.36			NA			4.8			0.44			29.0			1.2			3.2			28.6	2.8%
Surface – Surface Soil – Analytical Data Results																																
NB-10-00-SL	**-0.10**	0.16	0.29	–	–	–	–	–	–	1.2	0.35	0.31	–	–	–	**0.15**	0.53	0.90	1.2	0.43	0.60	–	–	–	**0.31**	0.40	0.65	**1.7**	1.3	2.0	**7.7**	**<MDC**
NB-11-00-SL	**0.06**	0.19	0.32	***0.00***	*0.01*	*0.03*	***0.01***	*0.01*	*0.01*	1.1	0.25	0.24	–	–	–	12.7	2.3	1.1	0.98	0.34	0.47	–	–	–	3.0	0.63	0.78	9.9	1.9	2.7	67.2	4.6%
NB-12-00-SL	**0.01**	0.17	0.30	***0.00***	*0.01*	*0.02*	***0.01***	*0.01*	*0.01*	1.2	0.29	0.37	–	–	–	**0.41**	0.57	0.95	1.4	0.49	0.70	*1.5*	*0.26*	*0.02*	*0.08*	*0.04*	*0.02*	*0.90*	*0.18*	*0.02*	2.4	1.4%
NB-13-00-SL	**0.07**	0.16	0.27	–	–	–	–	–	–	1.2	0.27	0.29	–	–	–	1.2	0.68	1.0	1.1	0.34	0.67	–	–	–	**-0.04**	0.38	0.69	**1.7**	1.2	1.9	**3.3**	**<MDC**
NB-14-00-SL	**-0.63**	0.68	1.2	***0.00***	*0.01*	*0.02*	***0.00***	*0.01*	*0.01*	1.1	0.32	0.44	–	–	–	7.4	2.6	3.3	*0.65*	*0.15*	*0.04*	*52.3*	*8.2*	*0.02*	*2.0*	*0.36*	*0.01*	*3.5*	*0.59*	*0.01*	57.8	8.0%
NB-144-0.5-SL	**-0.01**	0.08	0.13	***0.07***	*0.06*	*0.07*	***-0.03***	*0.02*	*0.12*	0.30	0.11	0.11	–	–	–	0.83	0.44	0.70	**0.05**	0.13	0.23	*2.9*	*0.49*	*0.06*	*0.15*	*0.09*	*0.03*	*0.63*	*0.18*	*0.05*	3.6	3.7%
NB-15-00-SL	**0.37**	0.39	0.62	–	–	–	–	–	–	1.4	0.26	0.21	–	–	–	1.8	0.76	1.1	1.1	0.36	0.75	–	–	–	**0.14**	0.35	0.60	**1.8**	1.7	2.8	**4.6**	**<MDC**

Table 4-8 (continued)

Site Creek – Soil And Sediment – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Root – Sub-Surface Soil – Statistical Data Analyses																																
No. of Detects	0			0			0			1			0			0			1			1			1			1			1	1
No. of Non-Detects	1			1			1			0			0			0			0			0			0			0			0	0
Detection Freq.	0.0%			0.0%			0.0%			100.0%			NA			NA			100.0%			100.0%			100.0%			100.0%			100.0%	100.0%
Max. Conc.	-0.03			-0.01			0.00			0.73			NA			NA			0.49			1.4			0.07			0.98			2.4	1.1%
Min. Conc.	-0.03			-0.01			0.00			0.73			NA			NA			0.49			1.4			0.07			0.98			2.4	1.1%
Mean Conc.	-0.03			-0.01			0.00			0.73			NA			NA			0.49			1.4			0.07			0.98			2.4	1.1%
Std. Deviation	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA	NA
Root – Sub-Surface Soil – Analytical Data Results																																
NB-144-4.5-SL	**-0.03**	0.81	0.25	***-0.01***	*0.01*	*0.07*	***0.00***	*0.01*	*0.07*	0.73	0.21	0.20	–	–	–	–	–	–	0.49	0.23	0.40	*1.4*	*0.29*	*0.06*	*0.07*	*0.06*	*0.03*	*0.98*	*0.24*	*0.03*	2.4	1.1%

Table 4-8 (continued)

Site Creek – Soil And Sediment – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Deep – Sub-Surface Soil – Statistical Data Analyses																																
No. of Detects	0			0			0			1			0			0			1			0			0			1			0	0
No. of Non-Detects	1			0			0			0			0			0			0			0			1			0			1	1
Detection Freq.	0.0%			NA			NA			100.0%			NA			NA			100.0%			NA			0.0%			100.0%			0.0%	NA
Max. Conc.	0.05			NA			NA			1.2			NA			NA			1.6			NA			0.06			1.2			2.5	NA
Min. Conc.	0.05			NA			NA			1.2			NA			NA			1.6			NA			0.06			1.2			2.5	NA
Mean Conc.	0.05			NA			NA			1.2			NA			NA			1.6			NA			0.06			1.2			2.5	NA
Std. Deviation	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA	NA
Deep – Sub-Surface Soil – Analytical Data Results																																
NB-144-7-SL	**0.05**	0.09	0.15	–	–	–	–	–	–	1.2	0.15	0.11	–	–	–	–	–	–	1.6	0.25	0.18	–	–	–	**0.06**	0.20	0.34	1.2	0.44	1.0	**2.5**	**<MDC**

NOTE 1 – Bolded values indicate analytical result is less than the MDC value, italicized values indicate an alpha spectroscopy versus gamma spectroscopy result, and cells with "–" indicate that no analysis was performed.
NOTE 2 – For data reported as "Ra-226," the decay chain was not known to be in secular equilibrium.
NOTE 3 – For data reported as "Ra-226 w/Ingrowth," the sample was sealed and the decay chain was allowed to achieve secular equilibrium prior to measurement of progeny by gamma spectroscopy.
NOTE 4 – The total Uranium calculation uses actual analytical data for U-235 and U-238; however, when U-234 was not reported, it was calculated as discussed in Section 4.0 . Using the individual analytical values reported in the table above, which are rounded, may yield a slightly different value for total Uranium.
NOTE 5 – The reported total Uranium value was bolded when any of the Uranium isotope analytical results were less than MDC.
NOTE 6 – A value was not calculated for U-235 percent enrichment (by weight) if the total Uranium value was less than MDC.

Table 4-9

Site Creek – Soil And Sediment – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Surface – Steam Sediment							
SW-02-SS	SAIC	4/27/2004	SW-02-SS	863553.273	827438.387	*0.02*	*0.02*
SW-03-SS	SAIC	4/27/2004	SW-03-SS	863477.04903	826930.31967	0.04	0.04
SW-04-SS	SAIC	4/27/2004	SW-04-SS	863770.596054	826821.65948	0.02	0.02
Surface – Surface Soil							
NB-10-00-SL	SAIC	5/3/2004	NB-10	863427.976264	826860.436477	0.02	0.02
NB-11-00-SL	SAIC	5/3/2004	NB-11	863474.526649	826859.685664	*0.24*	*0.24*
NB-12-00-SL	SAIC	5/3/2004	NB-12	863548.106291	826855.931601	*0.01*	*0.01*
NB-13-00-SL	SAIC	5/3/2004	NB-13	863807.136662	826839.413722	0.02	0.02
NB-14-00-SL	SAIC	5/3/2004	NB-14	863867.201675	826837.912097	*0.17*	*0.17*
NB-144-0.5-SL	Energy*Solutions*	11/14/2007	–	863994.014	826802.775	*0.02*	*0.02*
NB-15-00-SL	SAIC	5/3/2004	NB-15	863925.765064	826833.407221	0.02	0.02
Root – Sub - Surface Soil							
NB-144-4.5-SL	Energy*Solutions*	11/14/2007	–	863994.014	826802.775	0.01	0.01
Deep – Sub - Surface Soil							
NB-144-7-SL	Energy*Solutions*	11/14/2007	–	863994.014	826802.775	0.00	0.00

NOTE 1 – The analytical results as provided by the laboratory, including negative values, were used in the sum-of-fractions (SOF) calculation.
NOTE 2 – Negative analytical results were set to zero (0) in the SOF calculation.
NOTE 3 – The SOF value is italicized when all radionuclides of concern are represented in the SOF calculation.
NOTE 4 – Th-232 was not included in the SOF calculations because the area is not considered impacted by Th-232.
NOTE 5 – Ra-226 was not included in the SOF calculations because the area is not considered impacted by Ra-226.
NOTE 6 – Cells with "–" indicate that no data was available.

Table 4-10

Northeast Site Creek – Soil And Sediment – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Surface – Background Stream Sediment – Statistical Data Analyses																																
No. of Detects	0			0			0			1			0			0			1			1			1			1			1	1
No. of Non-Detects	1			0			0			0			0			1			0			0			0			0			0	0
Detection Freq.	0.0%			NA			NA			100.0%			NA			0.0%			100.0%			100.0%			100.0%			100.0%			100.0%	100.0%
Max. Conc.	0.00			NA			NA			0.52			NA			-0.17			0.61			0.27			0.03			0.32			0.61	1.3%
Min. Conc.	0.00			NA			NA			0.52			NA			-0.17			0.61			0.27			0.03			0.32			0.61	1.3%
Mean Conc.	0.00			NA			NA			0.52			NA			-0.17			0.61			0.27			0.03			0.32			0.61	1.3%
Std. Deviation	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA	NA
Surface – Background Stream Sediment – Analytical Data Results																																
US-04-SS	**0.00**	0.11	0.20	–	–	–	–	–	–	0.52	0.17	0.25	–	–	–	**-0.17**	0.46	0.81	0.61	0.25	0.45	*0.27*	*0.07*	*0.03*	*0.03*	*0.02*	*0.03*	*0.32*	*0.08*	*0.02*	0.61	1.3%

Table 4-10 (continued)

Northeast Site Creek – Soil And Sediment – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Surface – Stream Sediment – Statistical Data Analyses																																
No. of Detects	0			0			0			4			0			2			4			4			2			4			2	2
No. of Non-Detects	4			1			1			0			0			2			0			0			2			0			2	2
Detection Freq.	0.0%			0.0%			0.0%			100.0%			NA			50.0%			100.0%			100.0%			50.0%			100.0%			50.0%	50.0%
Max. Conc.	0.14			0.00			0.01			1.0			NA			4.4			1.1			1.5			0.08			0.60			2.1	2.0%
Min. Conc.	-0.09			0.00			0.01			0.49			NA			-0.21			0.59			0.47			0.02			0.52			1.0	1.3%
Mean Conc.	0.04			0.00			0.01			0.73			NA			1.5			0.74			1.0			0.04			0.57			1.6	1.7%
Std. Deviation	0.10			NA			NA			0.21			NA			2.1			0.22			0.42			0.03			0.04			0.46	0.6%
Surface – Stream Sediment – Analytical Data Results																																
SW-10-SS	**0.07**	0.11	0.19	–	–	–	–	–	–	0.75	0.20	0.27	–	–	–	**-0.21**	0.51	0.90	0.59	0.39	0.55	*0.47*	*0.11*	*0.02*	***0.02***	*0.02*	*0.03*	*0.52*	*0.12*	*0.02*	**1.0**	**<MDC**
SW-11-SS	**0.03**	0.12	0.21	–	–	–	–	–	–	0.68	0.19	0.25	–	–	–	**0.19**	0.49	0.83	1.1	0.33	0.44	*1.1*	*0.21*	*0.02*	***0.02***	*0.02*	*0.02*	*0.60*	*0.13*	*0.01*	**1.7**	**<MDC**
SW-12-SS	**-0.09**	0.12	0.23	–	–	–	–	–	–	0.49	0.23	0.29	–	–	–	4.4	1.0	0.98	0.67	0.29	0.45	*1.5*	*0.26*	*0.03*	*0.08*	*0.03*	*0.02*	*0.57*	*0.12*	*0.02*	2.1	2.0%
SW-13-SS	**0.14**	0.38	0.66	***0.00***	*0.01*	*0.02*	***0.01***	*0.01*	*0.01*	1.0	0.29	0.29	–	–	–	1.5	0.76	1.1	0.63	0.31	0.44	*0.99*	*0.19*	*0.02*	*0.05*	*0.03*	*0.02*	*0.59*	*0.13*	*0.02*	1.6	1.3%

Table 4-10 (continued)

Northeast Site Creek – Soil And Sediment – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Surface – Surface soil – Statistical Data Analyses																																
No. of Detects	0			0			1			8			3			4			7			1			1			1			1	1
No. of Non-Detects	8			1			0			0			0			4			1			0			7			7			7	7
Detection Freq.	0.0%			0.0%			100.0%			100.0%			100.0%			50.0%			87.5%			100.0%			12.5%			12.5%			12.5%	12.5%
Max. Conc.	0.03			0.00			0.01			1.2			1.2			1.6			1.2			1.9			0.40			1.8			8.8	1.8%
Min. Conc.	-0.43			0.00			0.01			0.71			0.86			0.28			0.38			1.9			0.06			0.47			2.2	1.8%
Mean Conc.	-0.11			0.00			0.01			0.99			1.0			1.1			0.91			1.9			0.22			1.1			5.4	1.8%
Std. Deviation	0.16			NA			NA			0.16			0.18			0.46			0.28			NA			0.15			0.44			2.8	NA
Surface – Surface Soil – Analytical Data Results																																
BP-02-00-SL	**-0.08**	0.35	0.65	–	–	–	–	–	–	0.93	0.21	0.25	–	–	–	1.1	0.73	1.1	0.59	0.32	0.54	–	–	–	**0.40**	0.33	0.52	**1.0**	1.0	1.6	**8.8**	**<MDC**
OA-34-00-SL	**-0.26**	0.38	0.73	–	–	–	–	–	–	1.0	0.24	0.29	–	–	–	**0.90**	0.60	0.92	1.2	0.40	0.55	–	–	–	**0.34**	0.38	0.62	**1.8**	1.6	2.6	**8.3**	**<MDC**
OA-35-00-SL	**-0.43**	0.60	1.1	–	–	–	–	–	–	0.71	0.24	0.34	–	–	–	1.6	0.69	0.97	**0.38**	0.56	0.94	–	–	–	**0.06**	0.64	1.1	**0.94**	2.0	3.3	**2.2**	**<MDC**
OA-36-00-SL	**-0.06**	0.16	0.29	–	–	–	–	–	–	0.90	0.25	0.30	–	–	–	1.6	0.65	0.91	1.0	0.44	0.64	–	–	–	**0.07**	0.47	0.81	**1.7**	1.4	2.2	**3.2**	**<MDC**
OA-37-00-SL	**-0.07**	0.72	1.3	***0.00***	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	1.2	0.46	0.54	1.0	0.23	0.18	**0.28**	0.49	0.82	*1.1*	*0.22*	*0.02*	*1.9*	*0.34*	*0.03*	*0.13*	*0.05*	*0.03*	*1.1*	*0.20*	*0.03*	3.1	1.8%
OA-38-00-SL	**0.00**	0.16	0.28	–	–	–	–	–	–	1.1	0.32	0.33	0.86	0.23	0.18	**0.93**	0.61	0.93	0.94	0.36	0.65	–	–	–	**0.07**	0.39	0.69	**1.3**	1.1	1.8	**2.8**	**<MDC**
OA-39-00-SL	**0.01**	0.37	0.67	–	–	–	–	–	–	1.1	0.25	0.25	1.2	0.27	0.21	1.5	0.64	0.91	1.1	0.37	0.63	–	–	–	**0.33**	0.37	0.59	**0.47**	1.2	2.0	**6.8**	**<MDC**
OA-40-00-SL	**0.03**	0.16	0.27	–	–	–	–	–	–	0.93	0.26	0.33	–	–	–	**0.70**	0.55	0.86	0.96	0.39	0.49	–	–	–	**0.35**	0.44	0.72	**0.86**	1.2	1.9	**7.6**	**<MDC**

Table 4-10 (continued)

Northeast Site Creek – Soil And Sediment – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Root – Sub-Surface soil – Statistical Data Analyses																																
No. of Detects	0			0			0			3			0			0			3			0			0			0			0	0
No. of Non-Detects	3			0			0			0			0			3			0			0			3			3			3	3
Detection Freq.	0.0%			NA			NA			100.0%			NA			0.0%			100.0%			NA			0.0%			0.0%			0.0%	NA
Max. Conc.	0.09			NA			NA			0.81			NA			0.41			1.1			NA			0.25			0.64			8.0	NA
Min. Conc.	0.01			NA			NA			0.50			NA			-0.19			0.95			NA			-0.14			-0.35			0.83	NA
Mean Conc.	0.04			NA			NA			0.71			NA			0.11			1.0			NA			0.12			0.23			4.7	NA
Std. Deviation	0.04			NA			NA			0.18			NA			0.30			0.07			NA			0.22			0.52			3.6	NA
Root – Sub-Surface Soil – Analytical Data Results																																
NB-79-05-SL	**0.01**	0.15	0.26	–	–	–	–	–	–	0.80	0.28	0.40	–	–	–	**0.11**	0.86	1.5	0.95	0.59	0.68	–	–	–	**0.24**	0.45	0.76	**-0.35**	0.95	1.8	**8.0**	<MDC
NB-79-05-SL-FD	**0.09**	0.62	1.1	–	–	–	–	–	–	0.81	0.26	0.36	–	–	–	**0.41**	0.87	1.5	1.1	0.47	0.82	–	–	–	**0.25**	0.34	0.56	**0.64**	1.5	2.6	**5.4**	<MDC
NB-80-05-SL	**0.01**	0.12	0.21	–	–	–	–	–	–	0.50	0.33	0.47	–	–	–	**-0.19**	0.84	1.5	0.99	0.56	0.57	–	–	–	**-0.14**	0.49	0.91	**0.42**	1.2	2.0	**0.83**	<MDC

Table 4-10 (continued)

Northeast Site Creek – Soil And Sediment – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Deep – Sub-Surface soil – Statistical Data Analyses																																
No. of Detects	0			0			0			4			0			0			1			0			0			0			0	0
No. of Non-Detects	4			0			0			0			0			4			3			0			4			4			4	4
Detection Freq.	0.0%			NA			NA			100.0%			NA			0.0%			25.0%			NA			0.0%			0.0%			0.0%	NA
Max. Conc.	0.41			NA			NA			0.63			NA			0.19			1.1			NA			0.37			0.79			11.1	NA
Min. Conc.	-0.17			NA			NA			0.48			NA			-0.07			0.33			NA			-0.02			-0.20			0.00	NA
Mean Conc.	0.14			NA			NA			0.56			NA			0.05			0.70			NA			0.20			0.32			5.2	NA
Std. Deviation	0.27			NA			NA			0.07			NA			0.11			0.31			NA			0.16			0.49			4.6	NA
Deep – Sub-Surface Soil – Analytical Data Results																																
NB-79-11-SL	**0.01**	0.13	0.23	–	–	–	–	–	–	0.48	0.27	0.32	–	–	–	**-0.07**	0.83	1.5	**0.70**	0.56	0.76	–	–	–	**0.24**	0.46	0.77	**0.69**	1.3	2.1	**5.2**	**<MDC**
NB-79-24-SL	**0.41**	0.34	0.51	–	–	–	–	–	–	0.63	0.20	0.24	–	–	–	**0.04**	0.79	1.4	1.1	0.61	0.80	–	–	–	**0.20**	0.33	0.56	**0.79**	1.3	2.1	**4.6**	**<MDC**
NB-80-11-SL	**-0.17**	0.21	0.38	–	–	–	–	–	–	0.53	0.22	0.39	–	–	–	**0.05**	0.86	1.5	**0.33**	0.31	0.58	–	–	–	**-0.02**	0.39	0.68	**-0.20**	0.77	1.4	**0**	**<MDC**
NB-80-27-SL	**0.31**	0.59	1.0	–	–	–	–	–	–	0.60	0.32	0.44	–	–	–	**0.19**	0.85	1.5	**0.67**	0.65	1.00	–	–	–	**0.37**	0.39	0.62	**0.01**	1.6	2.7	**11.1**	**<MDC**

NOTE 1 – Bolded values indicate analytical result is less than the MDC value, italicized values indicate an alpha spectroscopy versus gamma spectroscopy result, and cells with "–" indicate that no analysis was performed.
NOTE 2 – For data reported as "Ra-226," the decay chain was not known to be in secular equilibrium.
NOTE 3 – For data reported as "Ra-226 w/Ingrowth," the sample was sealed and the decay chain was allowed to achieve secular equilibrium prior to measurement of progeny by gamma spectroscopy.
NOTE 4 – The total Uranium calculation uses actual analytical data for U-235 and U-238; however, when U-234 was not reported, it was calculated as discussed in Section 4.0. Using the individual analytical values reported in the table above, which are rounded, may yield a slightly different value for total Uranium.
NOTE 5 – The reported total Uranium value was bolded when any of the Uranium isotope analytical results were less than MDC.
NOTE 6 – A value was not calculated for U-235 percent enrichment (by weight) if the total Uranium value was less than MDC.

Table 4-11

Northeast Site Creek – Soil And Sediment – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Surface – Background Stream Sediment							
US-04-SS	SAIC	4/30/2004	US-04-SS	865345.214	828706.209	0.00	0.00
Surface – Stream Sediment							
SW-10-SS	SAIC	4/30/2004	SW-10-SS	865157.776693	828690.344739	0.00	0.00
SW-11-SS	SAIC	4/30/2004	SW-11-SS	865358.866	827476.929	0.01	0.01
SW-12-SS	SAIC	4/30/2004	SW-12-SS	865195.346588	827632.480733	0.03	0.03
SW-13-SS	SAIC	4/30/2004	SW-13-SS	865080.308972	827877.074105	*0.01*	*0.01*
Surface – Surface Soil							
BP-02-00-SL	SAIC	5/3/2004	BP-02	865365.501633	827474.13659	0.03	0.03
OA-34-00-SL	SAIC	4/29/2004	OA-34	865095.472111	827789.171032	0.02	0.03
OA-35-00-SL	SAIC	4/29/2004	OA-35	865095.472111	827879.180873	0.01	0.02
OA-36-00-SL	SAIC	4/29/2004	OA-36	865095.472111	827969.190713	0.02	0.02
OA-37-00-SL	SAIC	4/29/2004	OA-37	865095.472111	828059.200554	*0.01*	*0.01*
OA-38-00-SL	SAIC	4/29/2004	OA-38	865185.481952	828284.225155	0.01	0.01
OA-39-00-SL	SAIC	4/29/2004	OA-39	865185.481952	828194.215314	0.02	0.02
OA-40-00-SL	SAIC	4/29/2004	OA-40	865185.481952	828104.205474	0.02	0.02
Root – Sub - Surface Soil							
NB-79-05-SL	SAIC	7/23/2004	NB-79	865345.368	827530.709	0.03	0.04
NB-79-05-SL-FD	SAIC	7/23/2004	NB-79	865345.368	827530.709	0.04	0.04
NB-80-05-SL	SAIC	7/23/2004	NB-80	865280.146	827571.825	0.00	0.00
NB-79-05-SL	SAIC	7/23/2004	NB-79	865345.368	827530.709	0.03	0.04

Table 4-11 (continued)

Northeast Site Creek – Soil And Sediment – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Deep – Sub - Surface Soil							
NB-79-11-SL	SAIC	7/23/2004	NB-79	865345.368	827530.709	0.01	0.01
NB-79-24-SL	SAIC	7/23/2004	NB-79	865345.368	827530.709	0.01	0.01
NB-80-11-SL	SAIC	7/23/2004	NB-80	865280.146	827571.825	0.00	0.00
NB-80-27-SL	SAIC	7/23/2004	NB-80	865280.146	827571.825	0.02	0.02

NOTE 1 – The analytical results as provided by the laboratory, including negative values, were used in the sum-of-fractions (SOF) calculation.
NOTE 2 – Negative analytical results were set to zero (0) in the SOF calculation.
NOTE 3 – The SOF value is italicized when all radionuclides of concern are represented in the SOF calculation.
NOTE 4 – Th-232 was not included in the SOF calculations because the area is not considered impacted by Th-232.
NOTE 5 – Ra-226 was not included in the SOF calculations because the area is not considered impacted by Ra-226.

Table 4-12

Joachim Creek – Soil And Sediment – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Surface – Background Stream Sediment – Statistical Data Analyses																																
No. of Detects	0			0			0			0			0			0			0			1			0			1			0	0
No. of Non-Detects	1			0			0			1			0			1			1			0			1			0			1	1
Detection Freq.	0.0%			NA			NA			0.0%			NA			0.0%			0.0%			100.0%			0.0%			100.0%			0.0%	NA
Max. Conc.	0.06			NA			NA			0.19			NA			-0.02			0.14			0.23			0.02			0.26			0.51	NA
Min. Conc.	0.06			NA			NA			0.19			NA			-0.02			0.14			0.23			0.02			0.26			0.51	NA
Mean Conc.	0.06			NA			NA			0.19			NA			-0.02			0.14			0.23			0.02			0.26			0.51	NA
Std. Deviation	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA	NA
Surface – Background Stream Sediment – Analytical Data Results																																
US-05-SS	**0.06**	0.09	0.14	–	–	–	–	–	–	**0.19**	0.15	0.23	–	–	–	**-0.02**	0.48	0.83	**0.14**	0.25	0.43	*0.23*	*0.06*	*0.02*	***0.02***	*0.02*	*0.02*	*0.26*	*0.07*	*0.03*	**0.51**	**<MDC**

Table 4-12 (continued)

Joachim Creek – Soil And Sediment – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Surface – Stream Sediment – Statistical Data Analyses																																
No. of Detects	0			0			0			5			0			0			1			5			2			5			2	2
No. of Non-Detects	5			0			0			0			0			5			4			0			3			0			3	3
Detection Freq.	0.0%			NA			NA			100.0%			NA			0.0%			20.0%			100.0%			40.0%			100.0%			40.0%	40.0%
Max. Conc.	0.12			NA			NA			0.96			NA			0.35			0.58			0.55			0.03			0.62			1.2	1.5%
Min. Conc.	-0.22			NA			NA			0.30			NA			-0.23			0.01			0.25			0.00			0.24			0.52	0.7%
Mean Conc.	-0.01			NA			NA			0.46			NA			0.07			0.19			0.35			0.02			0.34			0.71	1.1%
Std. Deviation	0.13			NA			NA			0.28			NA			0.21			0.23			0.12			0.01			0.16			0.28	0.6%
Surface – Stream Sediment – Analytical Data Results																																
SW-08-SS	**0.05**	0.07	0.12	–	–	–	–	–	–	0.31	0.15	0.19	–	–	–	**0.02**	0.42	0.72	**0.08**	0.20	0.35	*0.33*	*0.09*	*0.02*	***0.01***	*0.02*	*0.03*	*0.30*	*0.08*	*0.02*	**0.64**	**<MDC**
SW-08-SS-FD	**0.12**	0.24	0.40	–	–	–	–	–	–	0.43	0.12	0.15	–	–	–	**0.02**	0.45	0.77	**0.23**	0.17	0.36	*0.32*	*0.08*	*0.02*	***0.00***	*0.01*	*0.02*	*0.28*	*0.07*	*0.03*	**0.61**	**<MDC**
SW-14-SS	**0.00**	0.07	0.13	–	–	–	–	–	–	0.31	0.11	0.15	–	–	–	**-0.23**	0.45	0.79	**0.01**	0.22	0.42	*0.25*	*0.07*	*0.02*	*0.02*	*0.02*	*0.02*	*0.24*	*0.07*	*0.02*	0.52	1.5%
SW-15-SS	**-0.22**	0.30	0.59	–	–	–	–	–	–	0.96	0.22	0.25	–	–	–	**0.17**	0.53	0.89	0.58	0.27	0.47	*0.55*	*0.12*	*0.02*	*0.03*	*0.02*	*0.02*	*0.62*	*0.13*	*0.02*	1.2	0.7%
SW-16-SS	**0.00**	0.08	0.14	–	–	–	–	–	–	0.30	0.11	0.17	–	–	–	**0.35**	0.48	0.78	**0.05**	0.28	0.50	*0.28*	*0.07*	*0.02*	***0.02***	*0.02*	*0.03*	*0.26*	*0.07*	*0.03*	**0.56**	**<MDC**

NOTE 1 – Bolded values indicate analytical result is less than the MDC value, italicized values indicate an alpha spectroscopy versus gamma spectroscopy result, and cells with "–" indicate that no analysis was performed.
NOTE 2 – For data reported as "Ra-226," the decay chain was not known to be in secular equilibrium.
NOTE 3 – For data reported as "Ra-226 w/Ingrowth," the sample was sealed and the decay chain was allowed to achieve secular equilibrium prior to measurement of progeny by gamma spectroscopy.
NOTE 4 – The total Uranium calculation uses actual analytical data for U-235 and U-238; however, when U-234 was not reported, it was calculated as discussed in Section 4.0. Using the individual analytical values reported in the table above, which are rounded, may yield a slightly different value for total Uranium.
NOTE 5 – The reported total Uranium value was bolded when any of the Uranium isotope analytical results were less than MDC.
NOTE 6 – A value was not calculated for U-235 percent enrichment (by weight) if the total Uranium value was less than MDC.

Table 4-13

Joachim Creek – Soil And Sediment – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Surface – Background Stream Sediment							
US-05-SS	SAIC	4/29/2004	US-05-SS	860959.95	826421.27	0.00	0.00
Surface – Stream Sediment							
SW-08-SS	SAIC	4/28/2004	SW-08-SS	864764.774904	829514.088916	0.00	0.00
SW-08-SS-FD	SAIC	4/28/2004	SW-08-SS	864764.774904	829514.088916	0.00	0.00
SW-14-SS	SAIC	4/29/2004	SW-14-SS	863975.898	828366.914	0.00	0.00
SW-15-SS	SAIC	4/29/2004	SW-15-SS	862121.45	827179.44	0.00	0.00
SW-16-SS	SAIC	4/29/2004	SW-16-SS	865308.6	831025.8	0.00	0.00

NOTE 1 – The analytical results as provided by the laboratory, including negative values, were used in the sum-of-fractions (SOF) calculation.
NOTE 2 – Negative analytical results were set to zero (0) in the SOF calculation.
NOTE 3 – The SOF value is italicized when all radionuclides of concern are represented in the SOF calculation.
NOTE 4 – Th-232 was not included in the SOF calculations because the area is not considered impacted by Th-232.
NOTE 5 – Ra-226 was not included in the SOF calculations because the area is not considered impacted by Ra-226.

Table 4-14

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Surface – Surface Soil – Statistical Data Analyses																																
No. of Detects	0			2			1			81			5			44			75			8			38			61			34	34
No. of Non-Detects	81			7			8			0			0			37			6			0			43			20			47	47
Detection Freq.	0.0%			22.2%			11.1%			100.0%			100.0%			54.3%			92.6%			100.0%			46.9%			75.3%			42.0%	42.0%
Max. Conc.	0.57			0.07			0.01			1.6			1.2			68.3			36.4			1,750			134.0			659.0			2,543	54.9%
Min. Conc.	-0.19			-0.01			0.00			0.23			0.92			-0.19			0.17			2.0			-0.22			0.48			1.9	1.2%
Mean Conc.	0.02			0.02			0.00			0.96			1.1			2.6			1.6			225.1			3.8			11.8			81.3	6.1%
Std. Deviation	0.09			0.03			0.00			0.24			0.13			8.4			4.7			616.2			16.8			73.2			330.1	9.6%
Surface – Surface Soil – Analytical Data Results																																
BP-01-00-SL	**0.04**	0.14	0.25	–	–	–	–	–	–	0.79	0.30	0.45	–	–	–	**0.59**	0.50	0.80	**0.98**	0.61	1.1	–	–	–	**0.24**	0.51	0.88	2.3	1.2	2.3	**7.0**	<MDC
BP-03-00-SL	**0.26**	0.34	0.55	*0.04*	*0.03*	*0.02*	*0.01*	*0.01*	*0.01*	1.0	0.32	0.35	–	–	–	8.8	1.7	0.90	0.87	0.34	0.61	–	–	–	35.3	4.4	1.8	27.0	4.2	4.7	753.3	16.9%
BP-04-00-SL	**0.01**	0.16	0.27	***0.00***	*0.01*	*0.02*	***0.00***	*0.01*	*0.01*	0.80	0.28	0.30	–	–	–	68.3	11.0	0.86	0.92	0.48	0.61	–	–	–	1.2	0.61	1.0	4.4	1.2	2.0	27.4	4.1%
BP-05-00-SL	**-0.04**	0.35	0.65	–	–	–	–	–	–	1.3	0.26	0.27	–	–	–	2.8	0.79	0.90	1.3	0.40	0.55	–	–	–	**0.19**	1.2	1.6	**2.0**	1.4	2.1	**5.7**	<MDC
BP-06-00-SL	**0.08**	0.15	0.25	–	–	–	–	–	–	1.1	0.24	0.25	–	–	–	6.4	1.3	0.81	0.79	0.29	0.38	–	–	–	**0.46**	0.67	1.1	2.3	0.86	1.7	**11.1**	<MDC
BP-07-00-SL	**0.57**	0.38	0.60	*0.07*	*0.04*	*0.02*	***0.01***	*0.01*	*0.02*	0.99	0.32	0.33	–	–	–	26.3	4.4	0.98	1.3	0.42	0.66	–	–	–	53.5	6.5	2.0	53.9	7.2	6.2	1,128	13.4%
BP-08-00-SL	**-0.09**	0.50	0.85	–	–	–	–	–	–	1.6	0.44	0.62	–	–	–	**0.03**	0.46	0.79	36.4	4.5	1.1	–	–	–	**0.87**	1.1	1.8	31.4	5.2	5.0	**52.0**	<MDC
BP-09-00-SL	**0.14**	0.17	0.27	–	–	–	–	–	–	1.2	0.26	0.26	–	–	–	**0.50**	0.51	0.82	1.2	0.38	0.61	–	–	–	**0.22**	0.39	0.65	2.0	1.0	1.9	**6.3**	<MDC
BP-10-00-SL	**0.17**	0.42	0.71	–	–	–	–	–	–	1.4	0.30	0.33	–	–	–	**0.55**	0.55	0.89	1.2	0.40	0.60	–	–	–	**-0.22**	0.38	0.71	**2.1**	1.6	2.4	**4.2**	<MDC
BP-11-00-SL	**-0.19**	0.18	0.33	–	–	–	–	–	–	1.3	0.29	0.32	–	–	–	**0.30**	0.49	0.81	1.5	0.49	0.63	–	–	–	**0.18**	0.47	0.80	**1.8**	1.2	1.9	**5.4**	<MDC
BP-12-00-SL	**-0.14**	0.15	0.28	–	–	–	–	–	–	1.4	0.30	0.29	1.0	0.25	0.20	**0.18**	0.49	0.83	1.4	0.43	0.52	*2.2*	*0.38*	*0.03*	*0.08*	*0.04*	*0.03*	*1.0*	*0.19*	*0.02*	3.3	1.2%
NB-89-0.5-SL	**0.07**	0.09	0.15	***0.04***	*0.05*	*0.07*	***0.01***	*0.02*	*0.05*	0.62	0.15	0.09	–	–	–	0.69	0.37	0.59	0.45	0.17	0.28	*2.0*	*0.37*	*0.04*	***0.02***	*0.04*	*0.05*	*0.82*	*0.21*	*0.04*	**2.8**	<MDC
NB-91-0.5-SL	**0.00**	0.11	0.20	***0.02***	*0.04*	*0.06*	***0.00***	*0.01*	*0.05*	0.62	0.17	0.18	–	–	–	1.6	0.44	0.64	**0.30**	0.26	0.40	*3.5*	*0.48*	*0.06*	*0.16*	*0.09*	*0.06*	*0.92*	*0.21*	*0.06*	4.5	2.6%
NB-93-0.5-SL	**0.04**	0.10	0.17	***0.01***	*0.03*	*0.06*	***0.00***	*0.02*	*0.06*	0.59	0.16	0.14	–	–	–	3.6	0.55	0.64	**0.37**	0.21	0.43	*6.7*	*0.78*	*0.07*	*0.27*	*0.12*	*0.04*	*1.5*	*0.29*	*0.05*	8.4	2.7%
NB-96-0.5-SL	**0.00**	0.07	0.12	***-0.01***	*0.02*	*0.07*	***0.00***	*0.02*	*0.06*	0.33	0.13	0.16	–	–	–	0.89	0.40	0.62	**0.17**	0.18	0.27	*2.3*	*0.37*	*0.06*	*0.18*	*0.10*	*0.06*	*0.63*	*0.17*	*0.04*	3.1	4.3%
NB-97-0.5-SL	**-0.09**	0.18	0.31	***-0.01***	*0.01*	*0.06*	***0.01***	*0.02*	*0.05*	1.0	0.25	0.24	–	–	–	1.4	0.42	0.61	0.78	0.28	0.59	*8.9*	*1.0*	*0.08*	*0.46*	*0.17*	*0.04*	*1.6*	*0.31*	*0.06*	10.9	4.4%
OA-16-00-SL	**-0.19**	0.44	0.86	***0.01***	*0.01*	*0.02*	***0.00***	*0.01*	*0.01*	0.78	0.27	0.33	–	–	–	21.3	3.6	0.87	**0.61**	0.62	0.96	–	–	–	1.0	0.52	0.68	**3.4**	2.0	3.5	**23.1**	<MDC
SS-BP-008-SF	**0.05**	0.14	0.24	–	–	–	–	–	–	1.0	0.21	0.17	–	–	–	**0.05**	0.37	0.62	0.90	0.27	0.37	–	–	–	1.1	0.36	0.49	4.5	1.1	2.3	25.7	3.7%
SS-BP-009-SF	**-0.01**	0.13	0.22	–	–	–	–	–	–	0.82	0.22	0.19	–	–	–	**0.37**	0.36	0.58	**0.38**	0.31	0.47	–	–	–	**0.42**	0.33	0.51	**0.70**	1.3	2.2	**8.9**	<MDC
SS-BP-010-SF	**0.05**	0.09	0.16	–	–	–	–	–	–	0.81	0.14	0.14	–	–	–	0.79	0.42	0.65	0.54	0.19	0.33	–	–	–	**0.14**	0.27	0.46	**1.0**	1.2	2.1	**3.7**	<MDC

Table 4-14 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Surface – Surface Soil – Analytical Data Results																																
SS-BP-011-SF	**0.04**	0.13	0.22	–	–	–	–	–	–	0.76	0.17	0.08	–	–	–	0.78	0.44	0.69	0.43	0.24	0.31	–	–	–	**0.38**	0.25	0.39	**1.4**	0.72	2.2	**8.7**	**<MDC**
SS-BP-012-SF	**0.04**	0.15	0.26	–	–	–	–	–	–	0.92	0.18	0.19	–	–	–	1.2	0.47	0.72	0.86	0.23	0.32	–	–	–	**0.15**	0.31	0.53	**1.3**	0.80	2.4	**4.3**	**<MDC**
SS-BP-014-SF	**0.00**	0.02	0.04	–	–	–	–	–	–	0.23	0.04	0.04	–	–	–	0.48	0.21	0.28	0.18	0.04	0.06	–	–	–	0.09	0.05	0.08	0.48	0.16	0.35	2.1	2.7%
SS-BP-017-SF	**0.11**	0.17	0.28	–	–	–	–	–	–	0.79	0.19	0.21	–	–	–	0.79	0.39	0.62	1.1	0.34	0.36	–	–	–	0.75	0.39	0.60	3.3	1.0	2.6	17.7	3.5%
SS-BP-024-SF	**0.00**	0.10	0.17	–	–	–	–	–	–	0.44	0.12	0.12	–	–	–	1.8	0.44	0.62	0.49	0.18	0.31	–	–	–	**0.21**	0.22	0.36	**0.54**	0.91	1.6	**4.6**	**<MDC**
SS-BP-025-SF	**0.01**	0.05	0.08	–	–	–	–	–	–	0.69	0.07	0.05	–	–	–	0.46	0.20	0.27	0.63	0.12	0.08	–	–	–	1.1	0.16	0.19	2.4	0.64	0.68	23.0	6.6%
SS-BP-026-SF	**0.02**	0.10	0.17	–	–	–	–	–	–	1.4	0.15	0.09	–	–	–	1.0	0.29	0.33	1.2	0.18	0.22	–	–	–	2.9	0.43	0.39	5.1	0.82	1.4	61.1	8.2%
SS-BP-027-SF	**0.09**	0.09	0.14	–	–	–	–	–	–	0.44	0.09	0.11	–	–	–	10.2	1.0	0.60	0.24	0.16	0.23	–	–	–	**0.31**	0.21	0.34	**1.4**	0.63	1.5	**7.4**	**<MDC**
SS-BP-031-SF	**-0.04**	0.18	0.31	–	–	–	–	–	–	0.86	0.19	0.23	–	–	–	0.94	0.43	0.66	1.2	0.29	0.43	–	–	–	**0.62**	0.42	0.67	4.6	1.3	2.8	**16.7**	**<MDC**
SS-BP-032-SF	**0.00**	0.04	0.07	–	–	–	–	–	–	0.29	0.04	0.03	–	–	–	**0.23**	0.17	0.26	0.27	0.05	0.04	–	–	–	**0.06**	0.06	0.10	0.73	0.57	0.65	**1.9**	**<MDC**
SS-BP-033-SF	**-0.03**	0.17	0.30	–	–	–	–	–	–	0.81	0.22	0.17	–	–	–	2.6	0.53	0.70	0.91	0.34	0.57	–	–	–	**0.44**	0.35	0.54	2.4	0.85	2.3	**10.9**	**<MDC**
SS-BP-037-SF	**0.00**	0.15	0.27	–	–	–	–	–	–	0.82	0.18	0.20	–	–	–	1.5	0.47	0.69	0.63	0.24	0.39	–	–	–	1.3	0.44	0.62	3.7	1.2	2.8	29.3	5.4%
SS-BP-038-SF	**0.00**	0.18	0.31	–	–	–	–	–	–	0.87	0.23	0.19	0.92	0.19	0.16	**0.45**	0.40	0.66	0.45	0.29	0.38	–	–	–	**0.42**	0.35	0.56	2.9	1.1	2.5	**11.0**	**<MDC**
SS-BP-039-SF	**0.00**	0.41	0.72	–	–	–	–	–	–	0.76	0.14	0.12	1.1	0.18	0.11	1.8	0.47	0.67	0.69	0.17	0.24	–	–	–	0.63	0.33	0.51	**1.6**	2.9	5.0	**13.7**	**<MDC**
SS-BP-040-SF	**0.06**	0.15	0.25	–	–	–	–	–	–	0.82	0.19	0.21	–	–	–	**0.47**	0.33	0.53	0.79	0.27	0.45	–	–	–	**0.10**	0.36	0.62	2.6	0.97	2.3	**4.8**	**<MDC**
SS-BP-041-SF	**-0.01**	0.18	0.31	–	–	–	–	–	–	0.99	0.21	0.20	–	–	–	1.9	0.48	0.68	0.78	0.27	0.43	–	–	–	**0.19**	0.36	0.62	**1.1**	1.8	3.1	**4.8**	**<MDC**
SS-BP-042-SF	**0.09**	0.15	0.26	–	–	–	–	–	–	1.1	0.22	0.11	–	–	–	1.7	0.50	0.73	1.0	0.31	0.22	–	–	–	**0.46**	0.32	0.49	2.7	1.4	1.9	**11.6**	**<MDC**
SS-BP-044-SF	**0.06**	0.41	0.71	–	–	–	–	–	–	0.78	0.13	0.14	–	–	–	1.9	0.43	0.58	0.93	0.18	0.16	–	–	–	**0.43**	0.29	0.45	**0.76**	0.43	5.7	**9.1**	**<MDC**
SS-BP-045-SF	**0.02**	0.05	0.08	–	–	–	–	–	–	1.1	0.11	0.08	–	–	–	0.61	0.21	0.25	1.1	0.17	0.14	–	–	–	**0.19**	0.13	0.20	1.5	0.58	0.76	**5.3**	**<MDC**
SS-BP-046-SF	**0.02**	0.05	0.08	–	–	–	–	–	–	1.1	0.09	0.05	–	–	–	1.5	0.44	0.65	1.2	0.14	0.11	–	–	–	**0.14**	0.12	0.20	1.4	0.50	0.65	**4.1**	**<MDC**
SS-BP-047-SF	**0.00**	0.17	0.29	–	–	–	–	–	–	1.0	0.19	0.18	–	–	–	2.0	0.37	0.33	0.86	0.29	0.31	–	–	–	**0.45**	0.36	0.56	**1.6**	1.6	2.6	**10.2**	**<MDC**
SS-BP-048-SF	**-0.07**	0.17	0.29	–	–	–	–	–	–	1.0	0.19	0.18	–	–	–	2.0	0.36	0.32	0.86	0.25	0.34	–	–	–	**0.56**	0.38	0.60	**2.2**	0.87	2.5	**12.9**	**<MDC**
SS-BP-049-SF	**0.13**	0.15	0.25	–	–	–	–	–	–	1.2	0.22	0.12	–	–	–	10.5	1.1	0.80	0.83	0.22	0.28	–	–	–	0.63	0.39	0.61	4.5	1.7	2.0	16.7	2.2%
SS-BP-052-SF	**0.01**	0.05	0.09	–	–	–	–	–	–	1.0	0.12	0.07	–	–	–	**-0.15**	0.18	0.33	1.1	0.14	0.06	–	–	–	0.27	0.14	0.21	1.9	0.60	0.75	7.2	2.2%
SS-BP-053-SF	**-0.02**	0.06	0.10	–	–	–	–	–	–	1.1	0.14	0.08	–	–	–	**0.08**	0.17	0.29	1.2	0.16	0.14	–	–	–	**0.18**	0.15	0.24	2.0	0.88	0.93	**5.6**	**<MDC**
SS-BP-054-SF	**0.00**	0.05	0.08	–	–	–	–	–	–	1.1	0.10	0.06	–	–	–	**0.03**	0.16	0.27	1.1	0.14	0.10	–	–	–	**0.17**	0.12	0.19	1.4	0.56	0.68	**4.8**	**<MDC**
SS-BP-055-SF	**0.08**	0.18	0.30	–	–	–	–	–	–	1.2	0.24	0.18	–	–	–	**0.51**	0.39	0.62	1.1	0.29	0.45	–	–	–	**0.31**	0.40	0.66	**1.9**	0.79	2.7	**7.8**	**<MDC**
SS-BP-056-SF	**-0.01**	0.06	0.09	–	–	–	–	–	–	1.1	0.11	0.07	–	–	–	0.36	0.20	0.28	0.85	0.12	0.12	–	–	–	1.1	0.19	0.20	2.9	0.72	0.84	24.0	5.6%
SS-BP-057-SF	**0.27**	0.47	0.79	–	–	–	–	–	–	0.75	0.14	0.15	–	–	–	2.9	0.52	0.65	0.86	0.23	0.20	–	–	–	0.90	0.38	0.55	**1.8**	1.0	6.1	**19.2**	**<MDC**

Table 4-14 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/g)	(U-235)
Surface – Surface Soil – Analytical Data Results																																
SS-BP-058-SF	**-0.03**	0.15	0.26	–	–	–	–	–	–	0.92	0.18	0.18	–	–	–	0.95	0.44	0.68	0.99	0.24	0.30	–	–	–	**0.27**	0.35	0.59	2.3	0.87	2.2	**7.5**	<MDC
SS-BP-060-SF	**0.02**	0.42	0.73	–	–	–	–	–	–	0.92	0.14	0.14	–	–	–	**0.10**	0.18	0.31	0.70	0.22	0.26	–	–	–	**0.23**	0.27	0.43	**1.1**	3.1	5.4	**5.5**	<MDC
SS-BP-061-SF	**0.02**	0.05	0.09	–	–	–	–	–	–	1.1	0.11	0.06	–	–	–	**0.08**	0.15	0.25	1.0	0.13	0.10	–	–	–	**0.09**	0.14	0.23	2.4	0.86	0.87	**4.4**	<MDC
SS-BP-062-SF	**0.00**	0.05	0.09	–	–	–	–	–	–	1.1	0.12	0.07	–	–	–	**0.13**	0.18	0.30	1.0	0.13	0.09	–	–	–	**0.19**	0.13	0.21	1.6	0.58	0.74	**5.3**	<MDC
SS-BP-063-SF	**-0.02**	0.05	0.09	–	–	–	–	–	–	1.1	0.11	0.08	–	–	–	0.32	0.18	0.26	1.1	0.13	0.14	–	–	–	**0.09**	0.13	0.21	1.9	0.61	0.75	**3.9**	<MDC
SS-BP-064-SF	**0.01**	0.05	0.09	–	–	–	–	–	–	1.0	0.10	0.07	–	–	–	**0.21**	0.15	0.23	1.1	0.18	0.12	–	–	–	0.54	0.12	0.17	2.5	0.78	0.85	12.8	3.4%
SS-BP-065-SF	**0.01**	0.06	0.10	–	–	–	–	–	–	1.0	0.10	0.07	–	–	–	**0.11**	0.16	0.26	1.3	0.16	0.10	–	–	–	0.23	0.13	0.21	2.0	0.67	0.77	6.6	1.8%
SS-BP-066-SF	**-0.02**	0.05	0.08	–	–	–	–	–	–	1.0	0.09	0.07	–	–	–	**-0.13**	0.11	0.24	0.93	0.11	0.13	–	–	–	0.22	0.11	0.18	1.7	0.33	0.67	6.0	2.0%
SS-BP-067-SF	**-0.01**	0.05	0.08	–	–	–	–	–	–	1.1	0.10	0.07	–	–	–	**0.52**	0.38	0.61	1.2	0.15	0.07	–	–	–	0.20	0.12	0.20	1.9	0.52	0.63	5.8	1.7%
SS-BP-068-SF	**-0.02**	0.05	0.08	–	–	–	–	–	–	1.1	0.11	0.06	–	–	–	**0.37**	0.37	0.61	1.1	0.15	0.12	–	–	–	**0.16**	0.11	0.18	1.5	0.45	0.57	**4.6**	<MDC
SS-BP-069-SF	**0.00**	0.05	0.09	–	–	–	–	–	–	0.99	0.11	0.06	–	–	–	**-0.02**	0.13	0.25	1.1	0.14	0.13	–	–	–	**0.13**	0.13	0.21	1.4	0.52	0.68	**4.0**	<MDC
SS-BP-070-SF	**0.02**	0.06	0.09	–	–	–	–	–	–	0.99	0.11	0.08	1.2	0.14	0.08	**0.08**	0.18	0.31	1.1	0.15	0.11	–	–	–	0.39	0.14	0.22	4.7	0.93	0.97	12.6	1.3%
SS-BP-071-SF	**-0.03**	0.09	0.16	–	–	–	–	–	–	1.1	0.11	0.07	1.2	0.13	0.06	**0.04**	0.17	0.29	1.1	0.16	0.10	–	–	–	**0.11**	0.14	0.24	2.4	1.3	1.4	**4.8**	<MDC
SS-BP-072-SF	**0.01**	0.06	0.11	–	–	–	–	–	–	1.1	0.10	0.07	–	–	–	**-0.19**	0.15	0.30	0.94	0.12	0.14	–	–	–	0.25	0.14	0.23	2.4	0.49	0.88	7.3	1.7%
SS-BP-073-SF	**-0.02**	0.09	0.14	–	–	–	–	–	–	1.1	0.11	0.07	–	–	–	0.56	0.34	0.55	1.1	0.18	0.12	–	–	–	**0.18**	0.14	0.22	2.3	1.2	1.3	**5.9**	<MDC
SS-BP-074-SF	**0.00**	0.10	0.16	–	–	–	–	–	–	1.1	0.11	0.06	–	–	–	**-0.01**	0.17	0.31	1.0	0.17	0.12	–	–	–	0.26	0.16	0.26	2.9	0.93	1.2	8.1	1.4%
SS-BP-075-SF	**0.00**	0.08	0.14	–	–	–	–	–	–	1.1	0.11	0.07	–	–	–	**-0.03**	0.19	0.34	1.2	0.17	0.09	–	–	–	0.36	0.16	0.24	2.8	1.3	1.4	9.8	2.0%
SS-BP-076-SF	**0.05**	0.06	0.09	–	–	–	–	–	–	1.1	0.12	0.07	–	–	–	**0.15**	0.16	0.26	0.87	0.12	0.14	–	–	–	**0.17**	0.14	0.23	2.2	0.44	0.78	**5.7**	<MDC
SS-BP-106-SF	**0.02**	0.05	0.08	–	–	–	–	–	–	1.1	0.10	0.06	–	–	–	**0.09**	0.14	0.24	1.1	0.15	0.11	–	–	–	0.19	0.12	0.19	1.5	0.52	0.64	5.3	1.9%
SS-BP-108B-SF	**0.00**	0.46	0.81	–	–	–	–	–	–	0.80	0.14	0.15	–	–	–	1.8	0.46	0.65	0.78	0.21	0.31	–	–	–	0.92	0.40	0.58	**2.6**	1.4	6.2	**20.2**	<MDC
SS-BP-108-SF	**-0.03**	0.17	0.30	–	–	–	–	–	–	0.68	0.21	0.21	–	–	–	1.7	0.51	0.74	0.72	0.28	0.41	–	–	–	1.3	0.47	0.66	4.3	1.1	2.5	29.3	4.6%
SS-BP-110-SF	**0.07**	0.14	0.23	–	–	–	–	–	–	0.91	0.19	0.18	–	–	–	1.3	0.39	0.57	0.87	0.22	0.31	–	–	–	0.78	0.33	0.49	3.6	1.1	2.5	18.5	3.3%
SS-BP-111-SF	**-0.05**	0.18	0.31	–	–	–	–	–	–	1.1	0.27	0.21	–	–	–	2.1	0.49	0.68	1.0	0.33	0.32	–	–	–	**0.26**	0.32	0.52	**1.3**	1.7	2.8	**6.3**	<MDC
SS-GC-008-SF	**0.01**	0.04	0.06	–	–	–	–	–	–	1.1	0.09	0.06	–	–	–	0.37	0.20	0.30	0.99	0.11	0.10	–	–	–	**0.12**	0.09	0.15	1.6	0.58	0.63	**4.1**	<MDC
SS-GL-028-SF	**-0.01**	0.05	0.08	–	–	–	–	–	–	1.0	0.10	0.05	–	–	–	**0.00**	0.36	0.61	0.86	0.14	0.09	–	–	–	0.22	0.12	0.19	0.90	0.27	0.68	5.1	3.7%
SS-GL-029-SF	**-0.02**	0.05	0.09	–	–	–	–	–	–	0.97	0.10	0.06	–	–	–	**0.40**	0.38	0.63	0.93	0.12	0.09	–	–	–	0.20	0.12	0.19	1.0	0.27	0.69	4.8	3.0%
SS-GL-030-SF	**0.00**	0.04	0.07	–	–	–	–	–	–	1.1	0.10	0.07	–	–	–	**0.10**	0.17	0.28	1.0	0.13	0.13	–	–	–	**0.19**	0.12	0.20	1.8	0.54	0.67	**5.6**	<MDC
SS-GL-031-SF	**0.00**	0.06	0.10	–	–	–	–	–	–	1.1	0.15	0.08	–	–	–	**0.10**	0.16	0.27	1.1	0.18	0.15	–	–	–	**0.15**	0.14	0.24	2.6	0.74	0.81	**5.8**	<MDC
SS-HS-003-SF	**-0.01**	0.14	0.23	–	–	–	–	–	–	0.86	0.12	0.08	–	–	–	1.9	0.32	0.34	1.4	0.19	0.09	–	–	–	37.6	2.4	0.80	24.7	3.0	2.4	811.1	19.2%

Table 4-14 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Surface Soil – Analytical Data Results																																
SS-HS-004-SF	**-0.03**	0.10	0.16	–	–	–	–	–	–	0.93	0.09	0.07	–	–	–	0.55	0.23	0.35	1.1	0.13	0.09	–	–	–	19.6	1.3	0.40	2.5	0.72	1.4	520.5	54.9%
SS-HS-005-SF	**0.00**	0.26	0.25	–	–	–	–	–	–	1.2	0.24	0.21	–	–	–	**0.42**	0.38	0.62	23.8	1.5	0.20	*25.7*	*3.3*	*0.40*	*0.97*	*0.54*	*0.38*	*1.4*	*0.58*	*0.31*	28.0	10.0%
SS-HS-006-SF	**0.08**	0.41	0.68	–	–	–	–	–	–	1.1	0.20	0.19	–	–	–	**0.62**	0.42	0.67	1.3	0.25	0.22	*1,750*	*170.0*	*6.0*	*134.0*	*29.0*	*7.0*	*659.0*	*77.0*	*6.0*	2,543	3.1%

Table 4-14 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Root – Limestone Fill – Statistical Data Analyses																																
No. of Detects	0			0			0			1			0			1			1			0			1			1			1	1
No. of Non-Detects	1			0			0			0			0			0			0			0			0			0			0	0
Detection Freq.	0.0%			NA			NA			100.0%			NA			100.0%			100.0%			NA			100.0%			100.0%			100.0%	100.0%
Max. Conc.	0.00			NA			NA			0.86			NA			22.7			0.71			NA			1.7			4.5			36.5	5.5%
Min. Conc.	0.00			NA			NA			0.86			NA			22.7			0.71			NA			1.7			4.5			36.5	5.5%
Mean Conc.	0.00			NA			NA			0.86			NA			22.7			0.71			NA			1.7			4.5			36.5	5.5%
Std. Deviation	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA	NA
Root – Limestone Fill – Analytical Data Results																																
LS-03-00-SL	**0.00**	0.16	0.29	–	–	–	–	–	–	0.86	0.29	0.31	–	–	–	22.7	3.8	0.86	0.71	0.34	0.58	–	–	–	1.7	0.50	0.81	4.5	1.2	1.9	36.5	5.5%

Table 4-14 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Root – Sub-Surface Soil – Statistical Data Analyses																																
No. of Detects	0			0			0			83			2			25			82			7			26			50			20	20
No. of Non-Detects	82			0			0			0			1			58			1			0			57			33			63	63
Detection Freq.	0.0%			NA			NA			100.0%			66.7%			30.1%			98.8%			100.0%			31.3%			60.2%			24.1%	24.1%
Max. Conc.	0.24			NA			NA			4.3			3.4			14.8			6,870			38,600			970.0			4,480			39,660	15.5%
Min. Conc.	-11.5			NA			NA			0.40			1.2			-0.72			0.26			4.2			-0.11			0.27			1.1	0.1%
Mean Conc.	-0.21			NA			NA			1.1			2.3			1.1			99.4			7,304			23.2			57.1			709.8	4.9%
Std. Deviation	1.3			NA			NA			0.48			1.1			2.5			756.9			14,523			144.3			491.5			4,738	3.5%
Root – Sub-Surface Soil – Analytical Data Results																																
BP-17-05-SL	**-0.03**	0.14	0.26	–	–	–	–	–	–	0.64	0.27	0.40	–	–	–	4.3	1.3	1.3	*1.2*	*0.23*	*0.02*	–	–	–	**0.35**	0.52	0.86	**1.5**	1.1	2.4	**8.2**	**<MDC**
BP-18-05-SL	**-0.30**	0.61	1.2	–	–	–	–	–	–	0.77	0.41	0.56	1.2	0.31	0.25	**0.04**	0.75	1.3	**1.1**	0.75	1.1	–	–	–	**0.18**	0.50	0.87	**0.27**	1.6	2.8	**3.7**	**<MDC**
BP-19-05-SL	**-0.36**	0.35	0.72	–	–	–	–	–	–	0.87	0.24	0.29	–	–	–	**-0.23**	0.71	1.3	0.81	0.37	0.58	–	–	–	**0.15**	0.37	0.63	**0.95**	1.3	2.2	**3.8**	**<MDC**
BP-20-03-SL	**-0.10**	0.13	0.25	–	–	–	–	–	–	1.0	0.31	0.47	–	–	–	**-0.72**	0.77	1.5	1.0	0.49	0.88	–	–	–	**-0.11**	0.47	0.86	**1.1**	1.1	1.8	**2.2**	**<MDC**
NB-89-4.5-SL	**-0.04**	0.12	0.20	–	–	–	–	–	–	0.59	0.14	0.17	–	–	–	**0.32**	0.46	0.68	0.61	0.19	0.27	–	–	–	**0.07**	0.29	0.49	2.0	1.3	1.5	**3.6**	**<MDC**
NB-91-4.5-SL	**0.04**	0.14	0.25	–	–	–	–	–	–	0.76	0.15	0.18	–	–	–	4.6	0.63	0.65	0.49	0.21	0.38	–	–	–	1.1	0.40	0.59	2.9	1.1	2.2	24.0	5.6%
NB-93-4.5-SL	**0.04**	0.15	0.25	–	–	–	–	–	–	1.2	0.22	0.21	–	–	–	3.4	0.57	0.69	0.62	0.21	0.37	–	–	–	0.95	0.36	0.45	**1.2**	0.69	2.3	**19.9**	**<MDC**
NB-96-4.5-SL	**-0.06**	0.18	0.30	–	–	–	–	–	–	1.0	0.21	0.17	–	–	–	1.6	0.44	0.63	0.52	0.21	0.45	–	–	–	**0.61**	0.40	0.63	3.2	1.3	2.4	**14.9**	**<MDC**
NB-96-5-SL	**-0.05**	0.10	0.17	–	–	–	–	–	–	0.78	0.17	0.18	–	–	–	2.0	0.49	0.68	0.87	0.24	0.34	–	–	–	0.52	0.27	0.41	2.0	0.69	1.3	11.9	4.0%
NB-97-4.5-SL	**0.13**	0.16	0.26	–	–	–	–	–	–	1.3	0.27	0.26	–	–	–	2.6	0.51	0.67	1.0	0.36	0.62	–	–	–	**0.22**	0.46	0.77	**2.2**	1.7	2.7	**6.6**	**<MDC**
SO-BP4A-04	–	–	–	–	–	–	–	–	–	0.79	0.14	0.16	–	–	–	**0.52**	0.41	0.66	*1.1*	*0.25*	*0.04*	*4.2*	*0.71*	*0.06*	*0.21*	*0.11*	*0.06*	*1.4*	*0.32*	*0.06*	5.9	2.2%
SS-BP008-SV	**0.00**	0.14	0.25	–	–	–	–	–	–	0.85	0.20	0.15	–	–	–	**-0.10**	0.40	0.67	0.90	0.27	0.31	–	–	–	0.49	0.30	0.46	**1.5**	0.78	2.3	**10.8**	**<MDC**
SS-BP-009-SV	**0.09**	0.47	0.80	–	–	–	–	–	–	0.78	0.16	0.13	–	–	–	**0.36**	0.36	0.59	0.78	0.19	0.25	–	–	–	1.4	0.40	0.47	**4.3**	1.6	6.2	**31.3**	**<MDC**
SS-BP-010-SV	**-0.01**	0.16	0.27	–	–	–	–	–	–	0.96	0.21	0.15	–	–	–	4.0	0.58	0.64	0.91	0.23	0.28	–	–	–	**0.49**	0.35	0.55	3.3	1.7	2.1	**12.8**	**<MDC**
SS-BP-011-SV	**0.00**	0.12	0.21	–	–	–	–	–	–	0.69	0.14	0.09	–	–	–	0.64	0.40	0.63	0.48	0.24	0.30	–	–	–	**0.26**	0.28	0.46	**1.2**	0.62	2.2	**6.1**	**<MDC**
SS-BP-012-SV	**0.00**	0.13	0.23	–	–	–	–	–	–	0.61	0.18	0.15	–	–	–	4.5	0.63	0.67	0.50	0.28	0.36	–	–	–	**0.08**	0.19	0.32	**1.2**	1.2	2.0	**2.8**	**<MDC**
SS-BP-014-SV	**0.02**	0.07	0.12	–	–	–	–	–	–	0.78	0.08	0.05	–	–	–	**0.24**	0.18	0.27	0.79	0.10	0.09	–	–	–	0.59	0.15	0.17	2.1	0.37	0.86	13.4	4.2%
SS-BP-017-SV	**-0.02**	0.14	0.24	–	–	–	–	–	–	0.81	0.17	0.16	–	–	–	**0.07**	0.38	0.63	0.84	0.22	0.27	–	–	–	**0.49**	0.35	0.55	**1.7**	0.79	2.3	**11.0**	**<MDC**
SS-BP-024-SV	**0.02**	0.17	0.29	–	–	–	–	–	–	1.1	0.18	0.05	–	–	–	13.8	1.3	0.60	0.77	0.25	0.31	–	–	–	3.7	0.60	0.67	9.3	1.7	2.9	80.6	5.9%
SS-BP-025-SV	**0.00**	0.07	0.12	–	–	–	–	–	–	0.79	0.08	0.04	–	–	–	**0.25**	0.19	0.28	0.88	0.13	0.07	–	–	–	**0.12**	0.11	0.18	**0.88**	0.30	0.90	**3.2**	**<MDC**

Table 4-14 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/g)	(U-235)
Root – Sub-Surface Soil – Analytical Data Results																																
SS-BP-026-SV	**0.00**	0.03	0.05	–	–	–	–	–	–	0.40	0.05	0.03	–	–	–	1.1	0.25	0.25	0.26	0.06	0.09	–	–	–	**0.05**	0.07	0.12	0.70	0.19	0.42	**1.8**	<MDC
SS-BP-027-SV	**0.00**	0.12	0.20	–	–	–	–	–	–	0.74	0.13	0.13	–	–	–	14.8	1.4	0.70	0.66	0.19	0.27	–	–	–	1.3	0.32	0.44	3.5	0.95	2.1	27.8	5.3%
SS-BP-031-SV	**0.01**	0.19	0.33	–	–	–	–	–	–	0.97	0.20	0.14	–	–	–	**0.10**	0.44	0.73	1.0	0.25	0.38	–	–	–	1.7	0.45	0.61	8.1	1.4	3.0	40.9	3.2%
SS-BP-032-SV	**-0.01**	0.04	0.06	–	–	–	–	–	–	0.71	0.09	0.05	–	–	–	**0.06**	0.15	0.26	0.65	0.09	0.10	–	–	–	**0.13**	0.09	0.15	0.66	0.22	0.55	**3.2**	<MDC
SS-BP-033-SV	**0.00**	0.42	0.73	–	–	–	–	–	–	0.88	0.15	0.12	–	–	–	1.8	0.46	0.64	0.91	0.19	0.20	–	–	–	**0.25**	0.30	0.49	**1.0**	3.2	5.6	**5.8**	<MDC
SS-BP-037-SV	**0.00**	0.16	0.27	–	–	–	–	–	–	0.83	0.17	0.20	–	–	–	**0.43**	0.45	0.73	1.6	0.31	0.28	–	–	–	**0.34**	0.34	0.55	**1.6**	1.5	2.3	**8.1**	<MDC
SS-BP-038-SV	**-0.04**	0.45	0.77	–	–	–	–	–	–	0.97	0.15	0.15	–	–	–	**0.68**	0.47	0.76	1.2	0.24	0.19	–	–	–	**0.37**	0.32	0.51	**1.6**	3.3	5.6	**8.7**	<MDC
SS-BP-039-SV	**0.00**	0.15	0.25	–	–	–	–	–	–	0.94	0.22	0.15	–	–	–	3.7	0.59	0.70	1.0	0.24	0.35	–	–	–	1.4	0.39	0.50	**2.1**	1.4	2.3	**30.1**	<MDC
SS-BP-039-SV-QC	**-0.01**	0.12	0.21	–	–	–	–	–	–	0.90	0.16	0.13	–	–	–	4.1	0.66	0.79	0.84	0.21	0.25	–	–	–	2.5	0.45	0.51	2.1	0.88	1.9	53.0	15.5%
SS-BP-040-SV	**0.04**	0.38	0.66	–	–	–	–	–	–	0.93	0.15	0.10	–	–	–	3.7	0.55	0.62	0.81	0.20	0.23	–	–	–	**0.33**	0.29	0.47	**1.9**	3.0	5.2	**8.3**	<MDC
SS-BP-041-SV	**0.03**	0.13	0.22	–	–	–	–	–	–	0.94	0.15	0.15	–	–	–	0.75	0.41	0.64	0.80	0.24	0.27	–	–	–	**0.42**	0.29	0.46	**1.9**	0.79	2.0	**9.9**	<MDC
SS-BP-042-SV	**0.01**	0.18	0.30	–	–	–	–	–	–	0.83	0.16	0.16	–	–	–	**0.21**	0.42	0.69	0.86	0.25	0.37	–	–	–	**0.17**	0.30	0.51	**0.80**	1.6	2.8	**4.1**	<MDC
SS-BP-043-SV	**-0.01**	0.11	0.19	–	–	–	–	–	–	0.79	0.16	0.13	–	–	–	**0.48**	0.51	0.83	0.84	0.20	0.28	–	–	–	**0.22**	0.26	0.43	**1.4**	1.1	1.9	**5.7**	<MDC
SS-BP-044-SV	**-0.06**	0.16	0.26	–	–	–	–	–	–	0.98	0.17	0.14	–	–	–	**0.62**	0.43	0.69	0.91	0.23	0.26	–	–	–	**0.42**	0.31	0.49	**1.7**	0.79	2.3	**9.7**	<MDC
SS-BP-045-SV	**0.01**	0.05	0.08	–	–	–	–	–	–	1.1	0.10	0.06	–	–	–	1.5	0.29	0.27	1.1	0.14	0.10	–	–	–	0.23	0.12	0.18	1.8	0.68	0.74	6.3	2.0%
SS-BP-046-SV	**0.02**	0.05	0.08	–	–	–	–	–	–	1.00	0.09	0.06	–	–	–	3.1	0.49	0.57	0.97	0.11	0.10	–	–	–	0.44	0.13	0.16	2.1	0.68	0.72	10.6	3.2%
SS-BP-047-SV	**0.07**	0.15	0.25	–	–	–	–	–	–	0.93	0.22	0.17	–	–	–	**0.09**	0.20	0.33	1.0	0.27	0.44	–	–	–	**0.18**	0.33	0.56	**1.3**	0.73	2.5	**4.8**	<MDC
SS-BP-048-SV	**0.04**	0.14	0.24	–	–	–	–	–	–	0.84	0.20	0.17	–	–	–	0.84	0.27	0.33	0.90	0.30	0.43	–	–	–	**0.38**	0.36	0.58	**1.1**	1.6	2.6	**8.4**	<MDC
SS-BP-049-SV	**0.24**	0.40	0.66	–	–	–	–	–	–	0.68	0.14	0.14	–	–	–	**0.64**	0.46	0.74	0.97	0.20	0.26	–	–	–	**0.16**	0.26	0.43	**1.8**	2.9	5.0	**5.0**	<MDC
SS-BP-049-SV-QC	**-0.01**	0.16	0.27	–	–	–	–	–	–	1.1	0.21	0.20	–	–	–	**0.10**	0.43	0.72	0.91	0.35	0.37	–	–	–	**0.19**	0.33	0.56	**1.5**	1.6	2.7	**5.2**	<MDC
SS-BP-052-SV	**0.00**	0.05	0.08	–	–	–	–	–	–	1.1	0.12	0.07	–	–	–	**-0.17**	0.15	0.28	1.2	0.13	0.10	–	–	–	**0.10**	0.12	0.19	1.9	0.69	0.76	**4.1**	<MDC
SS-BP-053-SV	**0.00**	0.07	0.12	–	–	–	–	–	–	1.1	0.10	0.07	–	–	–	**-0.21**	0.13	0.28	1.1	0.16	0.09	–	–	–	**0.01**	0.14	0.24	**0.92**	0.33	1.1	**1.2**	<MDC
SS-BP-054-SV	**0.00**	0.06	0.09	–	–	–	–	–	–	1.2	0.12	0.06	–	–	–	**-0.22**	0.19	0.38	1.2	0.16	0.12	–	–	–	0.50	0.15	0.23	2.6	0.82	0.87	12.2	2.9%
SS-BP-055-SV	**-0.02**	0.14	0.25	–	–	–	–	–	–	1.0	0.22	0.16	–	–	–	**0.17**	0.34	0.57	1.1	0.39	0.46	–	–	–	**0.14**	0.30	0.50	**0.70**	1.5	2.6	**3.4**	<MDC
SS-BP-056-SV	**0.01**	0.06	0.09	–	–	–	–	–	–	1.1	0.13	0.07	–	–	–	**-0.12**	0.16	0.31	1.1	0.14	0.11	–	–	–	0.86	0.17	0.19	5.6	0.97	0.91	22.3	2.4%
SS-BP-057-SV	**0.01**	0.15	0.25	–	–	–	–	–	–	0.97	0.18	0.08	–	–	–	**0.15**	0.44	0.73	0.95	0.23	0.34	–	–	–	**0.23**	0.29	0.48	2.8	1.9	2.2	**7.5**	<MDC
SS-BP-058-SV	**-0.07**	0.15	0.26	–	–	–	–	–	–	0.96	0.18	0.15	–	–	–	**0.34**	0.40	0.65	0.85	0.23	0.36	–	–	–	**0.01**	0.30	0.53	**1.4**	1.6	2.6	**1.7**	<MDC
SS-BP-060-SV	**-0.03**	0.15	0.26	–	–	–	–	–	–	0.91	0.17	0.22	–	–	–	**-0.06**	0.14	0.27	0.89	0.24	0.33	–	–	–	**0.20**	0.33	0.57	**0.90**	1.6	2.7	**4.7**	<MDC
SS-BP-061-SV	**0.01**	0.06	0.09	–	–	–	–	–	–	1.0	0.10	0.06	–	–	–	**-0.14**	0.11	0.24	1.1	0.14	0.12	–	–	–	**0.12**	0.13	0.21	1.5	0.62	0.72	**3.9**	<MDC

Table 4-14 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/g)	(U-235)
Root – Sub-Surface Soil – Analytical Data Results																																
SS-BP-062-SV	**-0.01**	1.2	0.07	–	–	–	–	–	–	1.1	0.10	0.05	–	–	–	**0.03**	0.14	0.25	1.3	0.16	0.11	–	–	–	**0.15**	0.12	0.19	1.6	0.64	0.74	**4.6**	<MDC
SS-BP-063-SV	**0.01**	0.05	0.08	–	–	–	–	–	–	1.1	0.10	0.06	–	–	–	**0.11**	0.15	0.25	1.2	0.14	0.11	–	–	–	**0.10**	0.11	0.18	1.4	0.54	0.67	**3.5**	<MDC
SS-BP-064-SV	**0.01**	0.05	0.09	–	–	–	–	–	–	1.0	0.10	0.06	–	–	–	**0.05**	0.13	0.23	1.1	0.13	0.12	–	–	–	**0.09**	0.12	0.20	1.1	0.30	0.73	**2.9**	<MDC
SS-BP-065-SV	**0.01**	0.09	0.15	–	–	–	–	–	–	1.0	0.10	0.06	–	–	–	**0.11**	0.14	0.23	1.1	0.12	0.09	–	–	–	**0.13**	0.14	0.22	2.1	1.1	1.2	**4.8**	<MDC
SS-BP-066-SV	**0.02**	0.05	0.09	–	–	–	–	–	–	1.0	0.09	0.06	–	–	–	**0.01**	0.14	0.25	1.1	0.13	0.10	–	–	–	**0.15**	0.12	0.20	1.0	0.55	0.73	**4.0**	<MDC
SS-BP-067-SV	**0.04**	0.06	0.10	–	–	–	–	–	–	1.2	0.12	0.06	–	–	–	**0.52**	0.38	0.61	1.0	0.16	0.10	–	–	–	**0.12**	0.13	0.22	1.4	0.49	0.64	**3.8**	<MDC
SS-BP-068-SV	**0.03**	0.06	0.09	–	–	–	–	–	–	1.1	0.13	0.07	–	–	–	**0.16**	0.33	0.56	1.1	0.13	0.11	–	–	–	**0.05**	0.13	0.22	1.6	0.57	0.70	**2.8**	<MDC
SS-BP-069-SV	**0.06**	0.13	0.22	–	–	–	–	–	–	1.4	0.22	0.16	–	–	–	**-0.09**	0.11	0.22	1.6	0.31	0.21	–	–	–	**0.29**	0.30	0.49	2.6	1.5	1.9	**8.3**	<MDC
SS-BP-070-SV	**0.02**	0.05	0.08	–	–	–	–	–	–	1.0	0.11	0.06	–	–	–	**-0.10**	0.16	0.31	1.2	0.14	0.10	–	–	–	**0.18**	0.12	0.19	1.7	0.64	0.77	**5.2**	<MDC
SS-BP-071-SV	**0.03**	0.05	0.08	–	–	–	–	–	–	1.0	0.10	0.07	–	–	–	**-0.20**	0.15	0.29	0.33	0.18	0.29	–	–	–	**0.13**	0.12	0.19	1.3	0.56	0.73	**3.9**	<MDC
SS-BP-072-SV	**0.00**	0.07	0.12	–	–	–	–	–	–	1.1	0.11	0.08	–	–	–	**-0.10**	0.17	0.32	1.2	0.14	0.09	–	–	–	**0.10**	0.15	0.25	2.0	1.0	1.2	**4.2**	<MDC
SS-BP-073-SV	**0.00**	0.09	0.16	–	–	–	–	–	–	1.2	0.10	0.07	–	–	–	**0.31**	0.32	0.52	1.1	0.14	0.12	–	–	–	**0.06**	0.14	0.24	1.7	1.1	1.3	**3.1**	<MDC
SS-BP-074-SV	**0.05**	0.05	0.09	–	–	–	–	–	–	1.1	0.11	0.06	–	–	–	**-0.19**	0.16	0.31	1.1	0.14	0.11	–	–	–	**0.14**	0.13	0.21	1.8	0.68	0.83	**4.7**	<MDC
SS-BP-075-SV	**0.02**	0.05	0.08	–	–	–	–	–	–	1.1	0.12	0.07	–	–	–	**0.19**	0.33	0.54	1.1	0.14	0.10	–	–	–	0.42	0.12	0.16	2.8	0.65	0.74	11.0	2.3%
SS-BP-076-SV	**-0.05**	0.09	0.15	–	–	–	–	–	–	1.0	0.10	0.06	–	–	–	**-0.16**	0.15	0.29	1.1	0.14	0.09	–	–	–	**0.14**	0.13	0.22	**1.0**	0.37	1.2	**3.7**	<MDC
SS-BP-106-SV	**0.00**	0.05	0.08	–	–	–	–	–	–	1.0	0.11	0.06	–	–	–	**0.04**	0.12	0.22	1.1	0.14	0.09	–	–	–	**0.10**	0.12	0.20	1.6	0.83	0.86	**3.7**	<MDC
SS-BP-108B-SV	**0.04**	0.18	0.31	–	–	–	–	–	–	0.89	0.16	0.16	–	–	–	0.65	0.40	0.64	1.0	0.23	0.30	–	–	–	3.6	0.58	0.52	10.5	1.7	3.0	80.1	5.2%
SS-BP-108-SV	**0.04**	0.13	0.23	–	–	–	–	–	–	0.86	0.18	0.16	–	–	–	**0.57**	0.40	0.64	1.0	0.22	0.35	–	–	–	**0.18**	0.32	0.54	2.3	0.90	2.1	**5.9**	<MDC
SS-BP-110-SV	**-0.04**	0.14	0.23	–	–	–	–	–	–	0.98	0.19	0.14	–	–	–	**0.54**	0.38	0.61	0.80	0.20	0.31	–	–	–	**0.45**	0.37	0.59	2.3	1.4	1.8	**10.9**	<MDC
SS-BP-111-SV	**0.02**	0.43	0.74	–	–	–	–	–	–	0.89	0.13	0.16	–	–	–	1.6	0.47	0.69	0.98	0.21	0.24	–	–	–	**0.01**	0.24	0.43	**0.80**	3.2	5.5	**1.1**	<MDC
SS-GC-008-SV	**0.01**	0.10	0.16	–	–	–	–	–	–	1.2	0.12	0.08	–	–	–	**-0.11**	0.16	0.31	1.3	0.14	0.12	–	–	–	**0.11**	0.14	0.23	1.8	0.99	1.2	**4.1**	<MDC
SS-GL-028-SV	**-0.01**	0.04	0.07	–	–	–	–	–	–	1.1	0.12	0.07	–	–	–	**-0.04**	0.35	0.59	1.0	0.12	0.13	–	–	–	**0.12**	0.12	0.20	1.3	0.57	0.73	**3.7**	<MDC
SS-GL-029-SV	**-0.01**	0.05	0.08	–	–	–	–	–	–	1.1	0.11	0.06	–	–	–	**-0.10**	0.34	0.58	1.1	0.14	0.13	–	–	–	**0.01**	0.12	0.20	1.4	0.59	0.70	**1.8**	**0.1%**
SS-GL-030-SV	**0.01**	0.05	0.08	–	–	–	–	–	–	1.2	0.11	0.06	–	–	–	**0.01**	0.14	0.26	1.3	0.19	0.10	–	–	–	**0.00**	0.12	0.20	1.5	0.67	0.76	**3.0**	<MDC
SS-GL-031-SV	**0.01**	0.10	0.16	–	–	–	–	–	–	1.1	0.12	0.06	–	–	–	**-0.23**	0.12	0.26	1.2	0.13	0.09	–	–	–	**0.13**	0.14	0.23	2.0	0.84	1.1	**4.6**	<MDC
SS-GL-031-SV-QC	**0.03**	0.05	0.08	–	–	–	–	–	–	1.1	0.12	0.07	–	–	–	**0.05**	0.18	0.32	1.1	0.13	0.08	–	–	–	**0.11**	0.12	0.20	0.94	0.26	0.74	**3.1**	<MDC
SS-HS-003-SV	**-0.03**	0.12	0.19	–	–	–	–	–	–	0.89	0.09	0.07	–	–	–	0.37	0.20	0.32	1.1	0.14	0.11	–	–	–	3.3	0.38	0.31	4.8	1.6	1.7	70.2	9.8%
SS-HS-004-EL-1.0	**-1.3**	0.68	1.1	–	–	–	–	–	–	1.1	0.15	0.20	–	–	–	**0.09**	0.44	0.73	1.1	0.17	0.12	*38,600*	*4,000*	*200.0*	*970.0*	*410.0*	*190.0*	***90.0***	*120.0*	*150.0*	**39,660**	<MDC
SS-HS-004-SV	**0.12**	0.15	0.25	–	–	–	–	–	–	0.96	0.11	0.06	–	–	–	**-0.09**	0.16	0.28	1.1	0.15	0.09	–	–	–	16.4	1.1	0.60	**1.1**	1.6	2.6	**472.1**	<MDC

Table 4-14 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Root – Sub-Surface Soil – Analytical Data Results																																
SS-HS-005EL-0.75-1.0	**-2.5**	2.3	3.7	–	–	–	–	–	–	4.3	2.5	4.0	**3.4**	5.5	5.6	6.5	0.80	0.72	6,870	400.0	10.0	*257.0*	*30.0*	*3.0*	*4.6*	*3.2*	*2.4*	*6.1*	*3.5*	*3.0*	267.7	10.5%
SS-HS-005-EL-1.0-1.5	**-1.4**	1.2	1.9	–	–	–	–	–	–	2.3	0.64	0.78	–	–	–	**0.18**	0.43	0.72	498.0	29.0	1.0	*32.7*	*4.2*	*0.50*	*1.1*	*0.65*	*0.26*	*2.0*	*0.82*	*0.42*	35.8	7.7%
SS-HS-005-EL-4.5-5.0	**-0.12**	0.52	0.86	–	–	–	–	–	–	2.1	0.57	0.65	–	–	–	**0.03**	0.42	0.71	252.0	15.0	0.90	*7.9*	*0.99*	*0.10*	*0.43*	*0.20*	*0.06*	*1.4*	*0.34*	*0.08*	9.8	4.5%
SS-HS-005-SV	**-0.17**	0.67	1.1	–	–	–	–	–	–	2.6	0.75	0.85	2.2	0.81	1.0	**0.05**	0.42	0.71	543.0	32.0	1.0	*25.0*	*3.4*	*0.30*	*0.64*	*0.49*	*0.25*	*3.0*	*0.97*	*0.33*	28.6	3.2%
SS-HS-006-EL-0.5-1.0	**-11.5**	1.3	1.5	–	–	–	–	–	–	1.4	0.46	0.51	–	–	–	2.3	0.49	0.66	13.2	0.92	0.59	*12,200*	*1,100*	*20.0*	*900.0*	*120.0*	*10.0*	*4,480*	*420.0*	*10.0*	17,580	3.0%

Table 4-14 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Deep – Sub-Surface Soil – Statistical Data Analyses																																
No. of Detects	0			2			0			113			0			25			107			22			44			74			41	41
No. of Non-Detects	95			0			2			0			0			87			6			0			69			39			72	72
Detection Freq.	0.0%			100.0%			0.0%			100.0%			NA			22.3%			94.7%			100.0%			38.9%			65.5%			36.3%	36.3%
Max. Conc.	0.58			0.22			0.01			1.6			NA			38.0			15.9			1,480			429.0			4,260			12,771	35.6%
Min. Conc.	-0.35			0.08			0.00			0.47			NA			-0.83			0.17			0.83			-0.26			-1.3			0.00	1.0%
Mean Conc.	0.00			0.15			0.00			1.0			NA			0.92			1.2			102.4			7.0			47.7			193.1	5.9%
Std. Deviation	0.12			0.10			0.01			0.19			NA			3.9			1.4			316.1			42.1			401.8			1,233	8.6%
Deep – Sub-Surface Soil – Analytical Data Results																																
BP-17-15-SL	**-0.20**	0.37	0.72	–	–	–	–	–	–	0.89	0.30	0.29	–	–	–	2.5	1.0	1.3	1.2	0.45	0.70	–	–	–	**0.29**	0.37	0.60	**0.49**	1.4	2.3	**6.1**	**<MDC**
BP-17-23-SL	**-0.35**	0.39	0.81	–	–	–	–	–	–	0.89	0.26	0.34	–	–	–	1.7	0.89	1.3	1.4	0.55	0.92	–	–	–	**-0.26**	0.38	0.76	**1.0**	1.5	2.5	**2.0**	**<MDC**
BP-17-31-SL	**-0.05**	0.14	0.27	–	–	–	–	–	–	0.95	0.35	0.39	–	–	–	**0.31**	0.76	1.3	**0.85**	0.67	0.96	–	–	–	**-0.15**	0.50	0.94	**1.3**	1.5	2.4	**2.5**	**<MDC**
BP-18-15-SL	**0.00**	0.16	0.28	–	–	–	–	–	–	1.1	0.34	0.43	–	–	–	**-0.05**	0.74	1.3	1.3	0.78	0.96	–	–	–	**0.72**	0.57	0.87	**1.1**	1.1	2.3	**15.1**	**<MDC**
BP-18-25-SL	**0.45**	0.65	1.1	–	–	–	–	–	–	1.00	0.43	0.54	–	–	–	**0.34**	0.78	1.3	1.2	0.70	0.88	–	–	–	**0.09**	0.50	0.89	**1.1**	2.1	3.5	**3.0**	**<MDC**
BP-18-31-SL	**-0.17**	0.27	0.56	–	–	–	–	–	–	0.47	0.24	0.31	–	–	–	**0.39**	0.74	1.3	**0.17**	0.27	0.46	–	–	–	**-0.12**	0.27	0.52	**0.20**	1.1	1.9	**0.40**	**<MDC**
BP-19-13-SL	**0.58**	0.54	0.85	–	–	–	–	–	–	1.0	0.36	0.40	–	–	–	**-0.20**	0.72	1.3	1.1	0.45	0.83	–	–	–	**0.10**	0.43	0.76	**-1.3**	1.5	2.8	**3.2**	**<MDC**
BP-19-25-SL	**-0.12**	0.40	0.76	–	–	–	–	–	–	1.0	0.27	0.34	–	–	–	**0.22**	0.77	1.3	1.2	0.50	0.90	–	–	–	**0.16**	0.37	0.63	**-0.21**	1.3	2.4	**5.2**	**<MDC**
BP-19-29-SL	**-0.05**	0.12	0.23	–	–	–	–	–	–	0.83	0.30	0.45	–	–	–	**0.00**	0.72	1.3	1.3	0.79	1.1	–	–	–	**0.57**	0.44	0.65	**0.31**	0.85	1.5	**12.5**	**<MDC**
BP-20-19-SL	**-0.19**	0.58	1.1	–	–	–	–	–	–	0.74	0.38	0.52	–	–	–	**-0.08**	0.83	1.5	1.0	0.50	0.95	–	–	–	**0.11**	0.51	0.89	**0.78**	1.6	2.7	**2.9**	**<MDC**
BP-20-27-SL	**-0.10**	0.30	0.58	–	–	–	–	–	–	0.55	0.19	0.28	–	–	–	**-0.43**	0.82	1.5	**0.72**	0.42	0.85	–	–	–	**-0.02**	0.30	0.56	**-0.38**	1.1	2.0	**0**	**<MDC**
BP-21-07-SL	**-0.09**	0.16	0.29	–	–	–	–	–	–	0.85	0.29	0.40	–	–	–	**-0.29**	0.81	1.5	**1.1**	0.81	1.2	–	–	–	**0.12**	0.41	0.73	**1.2**	1.1	1.8	**3.6**	**<MDC**
BP-21-07-SL-FD	**0.18**	0.62	1.1	–	–	–	–	–	–	1.0	0.39	0.47	–	–	–	**-0.58**	0.76	1.4	1.2	0.51	0.94	–	–	–	**-0.05**	0.49	0.89	**0.15**	1.6	2.8	**0.29**	**<MDC**
BP-21-13-SL	**0.07**	0.39	0.70	–	–	–	–	–	–	0.96	0.34	0.37	–	–	–	**-0.52**	0.78	1.5	0.86	0.45	0.66	–	–	–	**0.08**	0.37	0.66	**0.75**	1.4	2.3	**2.4**	**<MDC**
BP-21-24-SL	**0.06**	0.15	0.26	–	–	–	–	–	–	1.0	0.44	0.54	–	–	–	**-0.83**	0.77	1.5	1.2	0.82	1.2	–	–	–	**0.18**	0.51	0.88	**1.7**	1.1	2.1	**5.1**	**<MDC**
BP-21-34-SL	**0.11**	0.43	0.77	–	–	–	–	–	–	0.57	0.25	0.31	–	–	–	**-0.41**	0.79	1.5	**0.40**	0.43	0.67	–	–	–	**0.47**	0.37	0.55	**0.27**	1.3	2.3	**10.2**	**<MDC**
NB-89-19.5-SL	**-0.11**	0.32	0.54	–	–	–	–	–	–	0.58	0.16	0.18	–	–	–	–	–	–	0.40	0.17	0.27	–	–	–	28.5	2.6	1.8	9.8	2.3	4.1	657.5	31.1%
NB-91-6.5-SL	**0.00**	0.09	0.15	–	–	–	–	–	–	0.54	0.11	0.09	–	–	–	38.0	3.3	0.60	0.45	0.18	0.26	–	–	–	2.9	0.41	0.35	5.9	0.73	1.1	61.2	7.1%
NB-93-15-SL	**0.08**	0.20	0.34	–	–	–	–	–	–	1.1	0.21	0.29	–	–	–	**0.39**	0.37	0.60	1.2	0.32	0.47	–	–	–	**-0.19**	0.60	0.73	3.1	1.1	2.3	**6.2**	**<MDC**
NB-97-9.5-SL	**-0.08**	0.31	0.31	–	–	–	–	–	–	1.6	0.33	0.24	–	–	–	11.0	1.1	0.60	1.1	0.36	0.60	–	–	–	**-0.05**	17.0	0.70	**0.80**	1.4	2.4	**1.6**	**<MDC**

Table 4-14 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/g)	(U-235)
Deep – Sub-Surface Soil – Analytical Data Results																																
SO-BP1D-12	–	–	–	–	–	–	–	–	–	0.92	0.17	0.15	–	–	–	5.4	0.76	0.69	*0.74*	*0.26*	*0.08*	*2.2*	*0.45*	*0.07*	*0.16*	*0.11*	*0.08*	*2.6*	*0.50*	*0.06*	4.9	1.0%
SO-BP2B-12	–	–	–	–	–	–	–	–	–	0.96	0.17	0.19	–	–	–	**-0.01**	0.00	0.60	*0.98*	*0.23*	*0.04*	*1.2*	*0.28*	*0.06*	***0.02***	*0.04*	*0.07*	*1.1*	*0.27*	*0.05*	**2.3**	**<MDC**
SO-BP2C-12	–	–	–	–	–	–	–	–	–	0.94	0.22	0.19	–	–	–	**-0.22**	0.41	0.66	*1.1*	*0.27*	*0.03*	*0.96*	*0.24*	*0.05*	***0.01***	*0.03*	*0.07*	*1.1*	*0.26*	*0.06*	**2.0**	**<MDC**
SO-BP2D-05	–	–	–	–	–	–	–	–	–	1.1	0.18	0.15	–	–	–	**0.06**	0.34	0.66	*0.94*	*0.23*	*0.05*	*1.1*	*0.27*	*0.05*	***0.02***	*0.04*	*0.04*	*0.98*	*0.26*	*0.06*	**2.0**	**<MDC**
SO-BP2D-05-D	–	–	–	–	–	–	–	–	–	1.1	0.22	0.15	–	–	–	**0.20**	0.38	0.67	*1.1*	*0.26*	*0.03*	*1.2*	*0.27*	*0.06*	***0.05***	*0.06*	*0.06*	*0.96*	*0.24*	*0.03*	**2.2**	**<MDC**
SO-BP2E-07	–	–	–	–	–	–	–	–	–	1.0	0.23	0.20	–	–	–	**0.27**	0.38	0.64	*0.99*	*0.24*	*0.04*	*0.83*	*0.22*	*0.06*	***0.01***	*0.04*	*0.04*	*1.0*	*0.25*	*0.05*	**1.8**	**<MDC**
SO-BP4D-08	–	–	–	–	–	–	–	–	–	1.3	0.19	0.14	–	–	–	**-0.19**	0.38	0.63	*1.1*	*0.27*	*0.06*	*1.2*	*0.28*	*0.05*	***0.02***	*0.04*	*0.06*	*0.94*	*0.23*	*0.04*	**2.2**	**<MDC**
SO-BP4E-09	–	–	–	–	–	–	–	–	–	1.3	0.19	0.16	–	–	–	0.81	0.39	0.62	*1.1*	*0.25*	*0.05*	*10.6*	*1.5*	*0.06*	*0.51*	*0.17*	*0.03*	*1.2*	*0.26*	*0.06*	12.3	6.1%
SO-BP4F-08	–	–	–	–	–	–	–	–	–	1.3	0.23	0.23	–	–	–	0.86	0.41	0.63	*1.1*	*0.24*	*0.05*	*226.0*	*29.0*	*0.07*	*8.8*	*1.3*	*0.06*	*2.5*	*0.45*	*0.05*	237.3	35.6%
SO-BP5B-10	–	–	–	–	–	–	–	–	–	1.1	0.24	0.23	–	–	–	**0.18**	0.37	0.62	*1.0*	*0.24*	*0.05*	*1.6*	*0.33*	*0.06*	***0.05***	*0.05*	*0.06*	*1.2*	*0.27*	*0.04*	**2.8**	**<MDC**
SO-BP5C-08	–	–	–	–	–	–	–	–	–	1.0	0.22	0.20	–	–	–	**-0.15**	0.40	0.64	*0.71*	*0.19*	*0.03*	*2.8*	*0.50*	*0.07*	*0.11*	*0.08*	*0.06*	*1.1*	*0.25*	*0.05*	4.0	1.6%
SO-BP5D-08	–	–	–	–	–	–	–	–	–	1.3	0.23	0.22	–	–	–	**0.00**	0.18	0.60	*1.1*	*0.26*	*0.06*	*0.94*	*0.24*	*0.08*	***0.02***	*0.04*	*0.06*	*0.87*	*0.22*	*0.06*	**1.8**	**<MDC**
SO-BP5E-10	–	–	–	–	–	–	–	–	–	1.3	0.20	0.16	–	–	–	**-0.13**	0.37	0.61	*0.97*	*0.26*	*0.06*	*5.4*	*0.85*	*0.07*	*0.32*	*0.14*	*0.04*	*1.5*	*0.32*	*0.06*	7.3	3.1%
SO-BP7B-08	–	–	–	–	–	–	–	–	–	1.1	0.18	0.15	–	–	–	**-0.16**	0.42	0.69	*1.1*	*0.25*	*0.06*	*4.2*	*0.69*	*0.05*	*0.16*	*0.10*	*0.06*	*0.87*	*0.23*	*0.05*	5.2	2.8%
SO-BP7C-12	–	–	–	–	–	–	–	–	–	1.2	0.19	0.18	–	–	–	**0.26**	0.38	0.65	*1.1*	*0.25*	*0.07*	*0.99*	*0.24*	*0.05*	*0.08*	*0.07*	*0.06*	*0.82*	*0.22*	*0.05*	1.9	1.4%
SO-BP9A-16	***-0.02***	*0.04*	*0.09*	*0.08*	*0.06*	*0.05*	***0.01***	*0.03*	*0.05*	0.87	0.22	0.17	–	–	–	**0.04**	0.30	0.53	*1.0*	*0.26*	*0.07*	*8.2*	*1.3*	*0.09*	*0.52*	*0.21*	*0.08*	*4.1*	*0.75*	*0.06*	12.8	2.0%
SS-BP-008-DV	**0.00**	0.15	0.26	–	–	–	–	–	–	1.1	0.21	0.19	–	–	–	**-0.29**	0.36	0.62	1.2	0.33	0.41	–	–	–	**0.10**	0.32	0.54	**0.70**	1.3	2.3	**2.6**	**<MDC**
SS-BP-009-DV	**0.02**	0.12	0.21	–	–	–	–	–	–	1.0	0.22	0.16	–	–	–	**-0.16**	0.38	0.65	1.2	0.32	0.39	–	–	–	**0.46**	0.33	0.52	3.0	1.1	2.3	**11.9**	**<MDC**
SS-BP-010-DV	**-0.15**	0.41	0.69	–	–	–	–	–	–	0.91	0.15	0.12	–	–	–	**0.45**	0.40	0.64	0.83	0.18	0.24	–	–	–	**0.26**	0.31	0.50	**2.7**	3.1	5.2	**7.9**	**<MDC**
SS-BP-011-DV	**0.01**	0.14	0.23	–	–	–	–	–	–	1.2	0.20	0.12	–	–	–	**0.05**	0.41	0.69	0.98	0.23	0.35	–	–	–	**0.27**	0.30	0.49	**1.9**	1.00	2.3	**7.1**	**<MDC**
SS-BP-012-DV	**-0.20**	0.47	0.79	–	–	–	–	–	–	0.87	0.16	0.14	–	–	–	1.3	0.46	0.69	0.90	0.20	0.23	–	–	–	0.68	0.33	0.49	**0.90**	3.4	5.9	**14.3**	**<MDC**
SS-BP-014-DV	**0.02**	0.05	0.08	–	–	–	–	–	–	0.75	0.08	0.04	–	–	–	0.41	0.21	0.30	0.75	0.12	0.07	–	–	–	2.0	0.21	0.17	9.9	1.2	0.90	47.3	3.0%
SS-BP-014-DV-QC	**-0.02**	0.06	0.10	–	–	–	–	–	–	0.70	0.07	0.04	–	–	–	0.29	0.19	0.29	0.88	0.12	0.07	–	–	–	1.6	0.20	0.18	7.8	1.1	0.90	38.7	3.2%
SS-BP-017-DV	**-0.08**	0.23	0.38	–	–	–	–	–	–	1.0	0.23	0.17	–	–	–	**-0.12**	0.40	0.68	0.94	0.25	0.39	–	–	–	3.4	0.62	0.69	14.5	1.9	2.9	78.6	3.5%
SS-BP-017-DV-EL-11	**0.04**	0.93	1.5	–	–	–	–	–	–	1.0	0.25	0.28	–	–	–	**0.27**	0.42	0.68	1.4	0.40	0.37	–	–	–	71.7	4.7	2.2	328.0	22.0	12.0	1,701	3.3%
SS-BP-024-DV	**-0.10**	0.18	0.31	–	–	–	–	–	–	0.88	0.18	0.14	–	–	–	4.3	0.62	0.68	1.0	0.24	0.32	–	–	–	0.84	0.41	0.63	8.2	1.5	2.6	24.9	1.6%
SS-BP-025-DV	**0.01**	0.04	0.07	–	–	–	–	–	–	0.89	0.08	0.06	–	–	–	5.0	0.61	0.29	0.87	0.10	0.07	–	–	–	**0.08**	0.10	0.16	1.3	0.42	0.54	**2.9**	**<MDC**
SS-BP-025-DV-QC	**0.03**	0.05	0.08	–	–	–	–	–	–	0.86	0.10	0.06	–	–	–	4.0	0.51	0.27	0.88	0.14	0.09	–	–	–	**0.06**	0.11	0.18	1.9	0.67	0.68	**3.3**	**<MDC**
SS-BP-026-DV	**-0.01**	0.05	0.08	–	–	–	–	–	–	0.94	0.09	0.06	–	–	–	1.3	0.28	0.27	0.87	0.12	0.12	–	–	–	0.43	0.13	0.19	2.1	0.67	0.79	10.4	3.1%

Table 4-14 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Deep – Sub-Surface Soil – Analytical Data Results																																
SS-BP-026-DV-QC	**0.00**	0.09	0.15	–	–	–	–	–	–	1.0	0.11	0.07	–	–	–	1.6	0.30	0.26	1.0	0.13	0.09	–	–	–	0.24	0.15	0.24	2.2	1.1	1.2	6.9	1.7%
SS-BP-027-DV	**0.08**	0.14	0.23	–	–	–	–	–	–	0.94	0.22	0.17	–	–	–	0.78	0.38	0.60	0.61	0.23	0.35	–	–	–	**0.24**	0.34	0.56	2.2	1.3	2.1	**6.9**	**<MDC**
SS-BP-031-DV	**-0.06**	0.16	0.27	–	–	–	–	–	–	0.91	0.18	0.18	–	–	–	**0.22**	0.37	0.61	1.0	0.24	0.36	–	–	–	0.75	0.34	0.50	4.8	1.2	2.6	19.3	2.4%
SS-BP-032-DV	**-0.02**	0.10	0.08	–	–	–	–	–	–	0.99	0.09	0.06	–	–	–	0.37	0.18	0.25	0.98	0.12	0.09	–	–	–	0.29	0.12	0.18	1.8	0.67	0.74	7.4	2.5%
SS-BP-033-DV	**-0.09**	0.14	0.24	–	–	–	–	–	–	1.1	0.20	0.15	–	–	–	**-0.02**	0.39	0.66	0.92	0.22	0.39	–	–	–	**0.13**	0.31	0.53	**0.40**	1.4	2.5	**2.9**	**<MDC**
SS-BP-037-DV	**-0.04**	0.15	0.26	–	–	–	–	–	–	0.78	0.18	0.12	–	–	–	**0.04**	0.38	0.63	1.2	0.25	0.31	–	–	–	2.0	0.44	0.47	2.7	1.0	2.0	42.2	10.4%
SS-BP-038-DV	**0.12**	0.45	0.76	–	–	–	–	–	–	1.1	0.17	0.11	–	–	–	**-0.02**	0.41	0.70	1.3	0.23	0.16	–	–	–	**-0.07**	0.31	0.53	**-0.20**	5.7	5.8	**0**	**<MDC**
SS-BP-039-DV	**-0.09**	0.16	0.26	–	–	–	–	–	–	0.95	0.18	0.16	–	–	–	10.1	1.0	0.70	0.55	0.25	0.30	–	–	–	**0.17**	0.28	0.48	**0.90**	1.5	2.7	**4.2**	**<MDC**
SS-BP-040-DV	**-0.03**	0.15	0.25	–	–	–	–	–	–	1.1	0.24	0.14	–	–	–	2.3	0.47	0.62	0.95	0.26	0.42	–	–	–	**0.02**	0.31	0.53	**1.3**	1.4	2.4	**1.9**	**<MDC**
SS-BP-041-DV	**0.02**	0.14	0.25	–	–	–	–	–	–	0.94	0.16	0.14	–	–	–	**-0.19**	0.40	0.68	1.1	0.24	0.34	–	–	–	**0.15**	0.31	0.53	**0.50**	1.4	2.4	**3.4**	**<MDC**
SS-BP-042-DV	**0.09**	0.12	0.20	–	–	–	–	–	–	1.1	0.19	0.16	–	–	–	**-0.03**	0.41	0.68	0.97	0.23	0.34	–	–	–	**0.07**	0.30	0.52	**1.5**	0.83	1.9	**3.1**	**<MDC**
SS-BP-043-DV	**-0.01**	0.16	0.28	–	–	–	–	–	–	0.97	0.19	0.17	–	–	–	**0.35**	0.41	0.68	1.2	0.29	0.46	–	–	–	0.80	0.39	0.58	**1.5**	1.6	2.6	**17.0**	**<MDC**
SS-BP-044-DV	**-0.01**	0.15	0.26	–	–	–	–	–	–	1.0	0.18	0.20	–	–	–	**0.17**	0.37	0.61	0.93	0.25	0.30	–	–	–	**0.00**	0.31	0.54	**1.8**	0.82	2.1	**3.5**	**<MDC**
SS-BP-045-DV	**0.02**	0.05	0.09	–	–	–	–	–	–	1.2	0.11	0.07	–	–	–	2.3	0.37	0.27	0.95	0.12	0.14	–	–	–	**0.10**	0.13	0.22	1.9	0.42	0.84	**4.0**	**<MDC**
SS-BP-045-DV-QC	**0.00**	0.12	0.07	–	–	–	–	–	–	1.0	0.09	0.05	–	–	–	3.0	0.44	0.28	1.1	0.13	0.09	–	–	–	**0.14**	0.11	0.18	1.4	0.48	0.59	**4.2**	**<MDC**
SS-BP-046-DV	**0.00**	0.04	0.07	–	–	–	–	–	–	0.98	0.09	0.07	–	–	–	1.4	0.39	0.56	0.91	0.12	0.10	–	–	–	**0.08**	0.10	0.17	1.4	0.47	0.60	**3.1**	**<MDC**
SS-BP-047-DV	**0.05**	0.12	0.21	–	–	–	–	–	–	1.2	0.22	0.18	–	–	–	**-0.08**	0.23	0.42	1.3	0.28	0.33	–	–	–	**0.00**	0.36	0.64	**0.20**	1.5	2.7	**0.30**	**<MDC**
SS-BP-048-DV	**0.06**	0.16	0.27	–	–	–	–	–	–	1.3	0.24	0.21	–	–	–	**0.04**	0.19	0.34	1.4	0.28	0.46	–	–	–	**0.06**	0.38	0.67	**0.70**	1.6	2.9	**1.9**	**<MDC**
SS-BP-049-DV	**-0.04**	0.16	0.26	–	–	–	–	–	–	1.1	0.21	0.11	–	–	–	**-0.12**	0.43	0.73	1.1	0.25	0.34	–	–	–	**0.12**	0.29	0.48	**1.5**	0.77	2.3	**3.9**	**<MDC**
SS-BP-052-DV	**0.02**	0.07	0.12	–	–	–	–	–	–	1.4	0.16	0.08	–	–	–	**-0.23**	0.14	0.28	1.3	0.19	0.12	–	–	–	0.34	0.17	0.27	3.9	0.97	0.99	10.7	1.4%
SS-BP-052-EL-6	**-0.04**	0.24	0.39	–	–	–	–	–	–	1.1	0.16	0.10	–	–	–	**-0.24**	0.13	0.26	1.2	0.19	0.12	–	–	–	10.9	0.83	0.58	66.3	5.2	3.6	276.8	2.5%
SS-BP-053-DV	**0.00**	0.05	0.09	–	–	–	–	–	–	1.2	0.11	0.08	–	–	–	**-0.08**	0.16	0.29	1.2	0.14	0.10	–	–	–	**-0.01**	0.14	0.23	1.3	0.57	0.74	**2.7**	**<MDC**
SS-BP-054-DV	**0.00**	0.10	0.17	–	–	–	–	–	–	1.1	0.11	0.07	–	–	–	**-0.13**	0.14	0.27	1.2	0.17	0.11	–	–	–	**0.23**	0.16	0.25	2.5	1.4	1.5	**7.1**	**<MDC**
SS-BP-055-DV	**0.01**	0.13	0.23	–	–	–	–	–	–	0.97	0.21	0.16	–	–	–	**0.28**	0.43	0.71	0.88	0.22	0.27	–	–	–	**0.12**	0.27	0.46	**0.70**	1.3	2.2	**3.0**	**<MDC**
SS-BP-056-DV	**0.00**	0.07	0.11	–	–	–	–	–	–	1.1	0.11	0.08	–	–	–	**-0.16**	0.14	0.28	0.84	0.15	0.15	–	–	–	0.55	0.16	0.24	4.4	0.65	1.1	15.2	1.9%
SS-BP-057-DV	**0.00**	0.16	0.27	–	–	–	–	–	–	0.98	0.18	0.21	–	–	–	**0.20**	0.47	0.78	0.90	0.25	0.32	–	–	–	**-0.10**	2.2	0.60	**0.10**	1.6	2.8	**0.20**	**<MDC**
SS-BP-058-DV	**0.14**	0.37	0.63	–	–	–	–	–	–	0.89	0.16	0.19	–	–	–	**0.03**	0.19	0.33	1.0	0.20	0.28	–	–	–	**0.13**	0.27	0.45	**1.2**	2.9	4.9	**3.8**	**<MDC**
SS-BP-060-DV	**0.02**	0.15	0.26	–	–	–	–	–	–	1.3	0.22	0.13	–	–	–	**0.00**	0.15	0.26	0.85	0.27	0.28	–	–	–	**0.26**	0.33	0.54	**1.2**	1.5	2.4	**6.2**	**<MDC**
SS-BP-061-DV	**0.00**	0.10	0.16	–	–	–	–	–	–	1.1	0.11	0.09	–	–	–	**0.11**	0.15	0.24	1.2	0.15	0.08	–	–	–	**0.10**	0.15	0.25	**1.1**	0.42	1.2	**3.1**	**<MDC**

Table 4-14 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/g)	(U-235)
Deep– Sub-Surface Soil – Analytical Data Results																																
SS-BP-062-DV	**0.00**	0.06	0.11	–	–	–	–	–	–	1.2	0.12	0.07	–	–	–	**0.00**	0.14	0.26	0.94	0.13	0.16	–	–	–	**0.11**	0.14	0.24	1.9	0.47	0.93	**4.2**	**<MDC**
SS-BP-062-DV-EL-10	**-0.12**	0.18	0.30	–	–	–	–	–	–	1.1	0.13	0.06	–	–	–	**0.06**	0.14	0.25	1.2	0.18	0.11	–	–	–	5.7	0.51	0.47	21.0	3.0	2.5	130.1	4.1%
SS-BP-063-DV	**0.03**	0.06	0.10	–	–	–	–	–	–	1.1	0.11	0.08	–	–	–	**-0.06**	0.12	0.24	1.1	0.16	0.08	–	–	–	**0.12**	0.14	0.23	1.2	0.31	0.74	**3.6**	**<MDC**
SS-BP-063-DV-QC	**-0.07**	0.11	0.18	–	–	–	–	–	–	1.2	0.11	0.06	–	–	–	**0.12**	0.14	0.24	1.4	0.20	0.11	–	–	–	**0.07**	0.16	0.26	3.4	1.5	1.6	**5.2**	**<MDC**
SS-BP-064-DV	**0.00**	0.05	0.08	–	–	–	–	–	–	1.0	0.10	0.07	–	–	–	**-0.13**	0.13	0.26	0.86	0.13	0.12	–	–	–	0.23	0.12	0.20	1.6	0.63	0.78	6.1	2.2%
SS-BP-064-DV-QC	**0.00**	0.04	0.06	–	–	–	–	–	–	1.00	0.09	0.06	–	–	–	**0.07**	0.14	0.23	0.97	0.12	0.10	–	–	–	0.26	0.12	0.19	1.3	0.27	0.62	6.3	3.1%
SS-BP-065-DV	**-0.01**	0.05	0.08	–	–	–	–	–	–	1.0	0.09	0.06	–	–	–	**-0.06**	0.12	0.23	1.1	0.16	0.11	–	–	–	**0.17**	0.12	0.20	1.1	0.26	0.64	**4.4**	**<MDC**
SS-BP-065-DV-EL-5	**0.11**	0.08	0.13	–	–	–	–	–	–	0.98	0.10	0.08	–	–	–	**-0.02**	0.13	0.23	1.1	0.14	0.12	–	–	–	10.0	0.68	0.33	34.2	3.0	1.4	225.2	4.4%
SS-BP-066-CUT-EL	**-0.17**	0.88	1.5	–	–	–	–	–	–	0.85	0.34	0.75	–	–	–	0.85	0.24	0.26	**0.76**	0.57	0.92	–	–	–	429.0	26.0	3.0	4,260	320.0	20.0	12,771	1.6%
SS-BP-066-DV	**0.01**	0.05	0.08	–	–	–	–	–	–	1.0	0.11	0.07	–	–	–	**-0.06**	0.11	0.22	1.2	0.18	0.11	–	–	–	0.28	0.13	0.20	1.8	0.75	0.82	7.2	2.5%
SS-BP-067-DV	**0.00**	0.08	0.13	–	–	–	–	–	–	1.1	0.10	0.05	–	–	–	**0.43**	0.38	0.62	1.2	0.13	0.10	–	–	–	**0.06**	0.15	0.24	1.8	1.3	1.4	**3.2**	**<MDC**
SS-BP-068-DV	**-0.01**	0.06	0.09	–	–	–	–	–	–	1.1	0.13	0.07	–	–	–	**0.15**	0.37	0.62	1.1	0.14	0.14	–	–	–	**0.13**	0.13	0.21	1.3	0.60	0.77	**3.9**	**<MDC**
SS-BP-069-DV	**0.04**	0.05	0.09	–	–	–	–	–	–	1.0	0.10	0.08	–	–	–	**-0.08**	0.12	0.24	1.2	0.16	0.13	–	–	–	0.23	0.14	0.23	1.7	0.79	0.84	6.1	2.1%
SS-BP-070-DV	**0.00**	0.04	0.06	–	–	–	–	–	–	0.96	0.09	0.06	–	–	–	**-0.27**	0.14	0.30	1.1	0.14	0.11	–	–	–	**0.09**	0.11	0.17	1.2	0.57	0.68	**3.1**	**<MDC**
SS-BP-070-DV-QC	**-0.01**	0.06	0.10	–	–	–	–	–	–	0.95	0.10	0.07	–	–	–	**-0.03**	0.16	0.29	1.1	0.15	0.08	–	–	–	**0.07**	0.13	0.22	1.9	0.96	0.94	**3.5**	**<MDC**
SS-BP-071-DV	**0.01**	0.09	0.15	–	–	–	–	–	–	1.0	0.11	0.08	–	–	–	**-0.27**	0.15	0.31	1.1	0.14	0.10	–	–	–	**-0.03**	3.7	0.20	1.6	0.84	1.1	**3.1**	**<MDC**
SS-BP-072-DV	**0.00**	0.05	0.08	–	–	–	–	–	–	1.1	0.09	0.06	–	–	–	**-0.35**	0.14	0.30	1.1	0.15	0.11	–	–	–	**0.07**	0.11	0.18	1.0	0.27	0.72	**2.5**	**<MDC**
SS-BP-073-DV	**0.01**	0.05	0.09	–	–	–	–	–	–	1.1	0.10	0.05	–	–	–	**0.11**	0.35	0.59	1.1	0.12	0.09	–	–	–	**0.15**	0.12	0.20	1.1	0.27	0.66	**4.0**	**<MDC**
SS-BP-074-DV	**0.00**	0.04	0.07	–	–	–	–	–	–	1.1	0.11	0.07	–	–	–	**-0.41**	0.14	0.32	1.0	0.14	0.11	–	–	–	**0.19**	0.13	0.20	1.4	0.56	0.71	**5.1**	**<MDC**
SS-BP-074-DV-QC	**0.01**	0.06	0.10	–	–	–	–	–	–	1.1	0.12	0.08	–	–	–	**-0.27**	0.15	0.32	1.1	0.18	0.14	–	–	–	**0.16**	0.15	0.24	1.1	0.34	0.79	**4.2**	**<MDC**
SS-BP-075-DV	**0.01**	0.06	0.09	–	–	–	–	–	–	1.1	0.11	0.07	–	–	–	**0.20**	0.32	0.53	0.95	0.14	0.15	–	–	–	0.34	0.15	0.24	2.1	0.54	0.98	8.6	2.6%
SS-BP-075-DV-EL-7	**0.05**	0.27	0.45	–	–	–	–	–	–	0.90	0.17	0.13	–	–	–	0.83	0.49	0.78	1.7	0.33	0.23	–	–	–	101.0	6.3	1.6	111.0	9.9	5.0	2,124	12.4%
SS-BP-076-DV	**0.03**	0.06	0.09	–	–	–	–	–	–	1.1	0.11	0.07	–	–	–	**-0.24**	0.13	0.28	1.1	0.16	0.11	–	–	–	0.54	0.15	0.23	2.4	0.78	0.82	12.8	3.4%
SS-BP-076-DV-QC	**-0.04**	0.09	0.15	–	–	–	–	–	–	1.1	0.10	0.07	–	–	–	**-0.05**	0.15	0.28	1.1	0.14	0.11	–	–	–	0.34	0.16	0.25	2.1	1.0	1.2	8.7	2.5%
SS-BP-106-DV	**0.00**	0.09	0.15	–	–	–	–	–	–	1.0	0.10	0.07	–	–	–	**-0.05**	0.12	0.23	1.1	0.15	0.10	–	–	–	**0.08**	0.13	0.22	1.2	0.68	1.1	**2.9**	**<MDC**
SS-BP-108B-DV	**-0.27**	0.50	0.82	–	–	–	–	–	–	1.3	0.39	0.35	–	–	–	**0.45**	0.40	0.65	1.6	0.48	0.51	–	–	–	15.6	1.6	1.3	100.0	8.7	6.7	401.8	2.4%
SS-BP-108B-DV-EL-6	**0.50**	1.3	2.2	–	–	–	–	–	–	0.73	0.16	0.19	–	–	–	**0.39**	0.39	0.64	0.71	0.19	0.27	*1,480*	*140.0*	*4.0*	*53.0*	*14.0*	*5.0*	*234.0*	*32.0*	*6.0*	1,767	3.4%
SS-BP-110-DV	**0.02**	0.16	0.28	–	–	–	–	–	–	0.90	0.19	0.16	–	–	–	**0.32**	0.36	0.59	1.4	0.32	0.35	–	–	–	7.6	0.87	0.76	**1.5**	2.1	3.6	**189.9**	**<MDC**
SS-BP-111-DV	**0.00**	0.13	0.22	–	–	–	–	–	–	1.2	0.23	0.16	–	–	–	**0.11**	0.49	0.81	1.1	0.25	0.34	–	–	–	**0.21**	0.31	0.51	**1.0**	1.5	2.5	**5.0**	**<MDC**

Table 4-14 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Deep – Sub-Surface Soil – Analytical Data Results																																
SS-GC-008-DV	**0.02**	0.06	0.10	–	–	–	–	–	–	1.3	0.12	0.06	–	–	–	**-0.08**	0.16	0.29	1.2	0.14	0.12	–	–	–	**0.05**	0.14	0.23	1.8	0.86	0.91	**2.9**	<MDC
SS-HS-005-DV	**-0.05**	0.12	0.21	–	–	–	–	–	–	1.3	0.17	0.17	–	–	–	**0.24**	0.42	0.69	15.9	0.99	0.25	*3.2*	*0.42*	*0.04*	*0.10*	*0.07*	*0.05*	*1.6*	*0.26*	*0.05*	4.9	1.0%
WS-BP2A-11	–	–	–	–	–	–	–	–	–	0.92	0.22	0.24	–	–	–	4.1	0.63	0.64	*0.90*	*0.28*	*0.04*	*161.0*	*27.0*	*2.0*	*9.3*	*4.7*	*2.4*	*36.8*	*9.9*	*2.9*	207.1	3.8%
WS-BP5A-07	–	–	–	–	–	–	–	–	–	0.97	0.24	0.23	–	–	–	**0.10**	0.35	0.64	*0.84*	*0.22*	*0.03*	*59.3*	*8.0*	*0.06*	*2.5*	*0.51*	*0.04*	*1.7*	*0.37*	*0.05*	63.5	18.2%
WS-BP7A-08	–	–	–	–	–	–	–	–	–	1.5	0.33	0.22	–	–	–	**0.03**	0.35	0.68	*1.1*	*0.29*	*0.04*	*44.0*	*5.8*	*0.07*	*2.0*	*0.41*	*0.07*	*6.2*	*0.95*	*0.05*	52.1	4.7%
WS-BP8A-10	***0.02***	*0.07*	*0.11*	*0.22*	*0.10*	*0.05*	***0.00***	*0.04*	*0.08*	1.1	0.23	0.20	–	–	–	**-0.08**	0.33	0.56	*1.2*	*0.28*	*0.07*	*236.0*	*32.0*	*0.07*	*9.8*	*1.6*	*0.09*	*2.9*	*0.57*	*0.06*	248.7	34.2%

NOTE 1 – Bolded values indicate analytical result is less than the MDC value, italicized values indicate an alpha spectroscopy versus gamma spectroscopy result, and cells with "–" indicate that no analysis was performed.
NOTE 2 – For data reported as "Ra-226," the decay chain was not known to be in secular equilibrium.
NOTE 3 – For data reported as "Ra-226 w/Ingrowth," the sample was sealed and the decay chain was allowed to achieve secular equilibrium prior to measurement of progeny by gamma spectroscopy.
NOTE 4 – The total Uranium calculation uses actual analytical data for U-235 and U-238; however, when U-234 was not reported, it was calculated as discussed in Section 4.0. Using the individual analytical values reported in the table above, which are rounded, may yield a slightly different value for total Uranium.
NOTE 5 – The reported total Uranium value was bolded when any of the Uranium isotope analytical results were less than MDC.
NOTE 6 – A value was not calculated for U-235 percent enrichment (by weight) if the total Uranium value was less than MDC.
NOTE 7 – Sample ID listed as SS-BP-040-DV was incorrectly identified as SS-BV-040-DV on the chain of custody.

Table 4-15

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Surface – Surface Soil							
BP-01-00-SL	SAIC	4/28/2004	BP-01	865275.491792	827339.12183	0.02	0.02
BP-03-00-SL	SAIC	5/3/2004	BP-03	865185.481952	827474.13659	*1.73*	*1.73*
BP-04-00-SL	SAIC	5/3/2004	BP-04	865275.491792	827519.141511	*0.49*	*0.49*
BP-05-00-SL	SAIC	5/3/2004	BP-05	865185.481952	827564.146431	0.03	0.03
BP-06-00-SL	SAIC	4/28/2004	BP-06	865095.472111	827609.151351	0.07	0.07
BP-07-00-SL	SAIC	4/29/2004	BP-07	865010.176425	827578.288895	*2.70*	*2.70*
BP-08-00-SL	SAIC	4/28/2004	BP-08	865005.462271	827677.727045	7.08	7.08
BP-09-00-SL	SAIC	4/28/2004	BP-09	865003.105193	827760.665654	0.02	0.02
BP-10-00-SL	SAIC	4/29/2004	BP-10	865005.462271	827834.175952	0.01	0.01
BP-11-00-SL	SAIC	4/29/2004	BP-11	865095.472111	827699.161192	0.01	0.02
BP-12-00-SL	SAIC	4/29/2004	BP-12	864915.45243	827699.161192	0.01	0.01
NB-89-0.5-SL	Energy*Solutions*	11/13/2007	–	865346.56	827400.623	*0.01*	*0.01*
NB-91-0.5-SL	Energy*Solutions*	11/16/2007	–	865282.231	827476.668	*0.02*	*0.02*
NB-93-0.5-SL	Energy*Solutions*	11/16/2007	–	865254.066	827450.002	*0.04*	*0.04*
NB-96-0.5-SL	Energy*Solutions*	11/16/2007	–	865210.052	827490.654	*0.01*	*0.01*
NB-97-0.5-SL	Energy*Solutions*	11/16/2007	–	865189.09	827531.558	*0.03*	*0.03*
OA-16-00-SL	SAIC	5/4/2004	OA-16	865095.472111	827540.355207	*0.19*	*0.19*
SS-BP-008-SF	WEC	5/28/2007	BP-008	865257.330711	827297.302665	0.06	0.06
SS-BP-009-SF	WEC	5/28/2007	BP-009	865274.513	827315.809	0.02	0.02
SS-BP-010-SF	WEC	5/29/2008	BP-010	865324.453707088	827353.183676496	0.01	0.01
SS-BP-011-SF	WEC	5/29/2008	BP-011	865326.648478139	827377.633162173	0.03	0.03
SS-BP-012-SF	WEC	5/29/2008	BP-012	865356.111969724	827407.550606611	0.02	0.02

Table 4-15 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Surface – Surface Soil							
SS-BP-025-SF	WEC	6/19/2008	BP-025	865293.727	827488.489	0.06	0.06
SS-BP-026-SF	WEC	6/18/2008	BP-026	865244.415701409	827482.457059025	0.15	0.15
SS-BP-027-SF	WEC	5/29/2008	BP-027	865245.05157304	827467.929183693	0.08	0.08
SS-BP-031-SF	WEC	6/3/2008	BP-031	865183.866434255	827440.560107061	0.05	0.05
SS-BP-032-SF	WEC	6/18/2008	BP-032	865211.132735242	827501.54191893	0.01	0.01
SS-BP-033-SF	WEC	6/4/2008	BP-033	865170.965366695	827484.329823983	0.04	0.04
SS-BP-037-SF	WEC	6/3/2008	BP-037	865122.432883771	827445.018471079	0.08	0.08
SS-BP-038-SF	WEC	6/5/2008	BP-038	865141.163445654	827469.908807366	0.03	0.03
SS-BP-039-SF	WEC	6/5/2008	BP-039	865172.864881258	827530.160258399	0.04	0.04
SS-BP-040-SF	WEC	5/23/2008	BP-040	865152.428170487	827557.896074516	0.02	0.02
SS-BP-041-SF	WEC	6/5/2008	BP-041	865139.173673376	827504.541860323	0.02	0.02
SS-BP-042-SF	WEC	6/5/2008	BP-042	865104.383	827469.945	0.04	0.04
SS-BP-044-SF	WEC	6/5/2008	BP-044	865114.658099725	827534.43916984	0.03	0.03
SS-BP-045-SF	WEC	6/18/2008	BP-045	865153.502937146	827583.048331724	0.02	0.02
SS-BP-046-SF	WEC	6/14/2008	BP-046	865136.498197855	827585.810821058	0.02	0.02
SS-BP-047-SF	WEC	6/7/2008	BP-047	865097.044664053	827602.798758803	0.04	0.04
SS-BP-048-SF	WEC	6/7/2008	BP-048	865090.233	827579.501	0.04	0.04
SS-BP-049-SF	WEC	6/6/2008	BP-049	865058.786514987	827523.388524653	0.11	0.11
SS-BP-052-SF	WEC	6/11/2008	BP-052	865060.747152575	827634.126367708	0.02	0.02
SS-BP-053-SF	WEC	6/12/2008	BP-053	865082.454166987	827683.822766674	0.01	0.01
SS-BP-054-SF	WEC	6/12/2008	BP-054	865053.846204574	827683.31914301	0.01	0.01
SS-BP-055-SF	WEC	5/27/2008	BP-055	865022.422582623	827680.690948655	0.02	0.02

Table 4-15 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Surface – Surface Soil							
SS-BP-056-SF	WEC	6/12/2008	BP-056	865009.370090712	827637.325088657	0.06	0.06
SS-BP-057-SF	WEC	6/6/2008	BP-057	865010.066758075	827578.632431495	0.06	0.06
SS-BP-058-SF	WEC	6/6/2008	BP-058	864991.364327256	827589.970042455	0.02	0.02
SS-BP-060-SF	WEC	6/7/2008	BP-060	864965.045085644	827619.649706967	0.01	0.01
SS-BP-061-SF	WEC	6/17/2008	BP-061	865003.877155279	827677.91389744	0.01	0.01
SS-BP-062-SF	WEC	6/18/2008	BP-062	864992.300086977	827706.268106821	0.01	0.01
SS-BP-063-SF	WEC	6/18/2008	BP-063	864996.030060102	827731.509374007	0.01	0.01
SS-BP-064-SF	WEC	6/17/2008	BP-064	865014.987430031	827743.953005047	0.03	0.03
SS-BP-065-SF	WEC	6/17/2008	BP-065	865032.634653867	827753.404425907	0.02	0.02
SS-BP-066-SF	WEC	6/17/2008	BP-066	865048.304761038	827775.329679024	0.01	0.01
SS-BP-067-SF	WEC	6/14/2008	BP-067	865083.502646473	827757.738758352	0.02	0.02
SS-BP-068-SF	WEC	6/14/2008	BP-068	865082.270395647	827782.767119066	0.01	0.01
SS-BP-069-SF	WEC	6/17/2008	BP-069	865063.202809627	827793.613228287	0.01	0.01
SS-BP-070-SF	WEC	6/13/2008	BP-070	865048.395407308	827845.381896423	0.03	0.03
SS-BP-071-SF	WEC	6/13/2008	BP-071	865013.349274372	827827.861260156	0.01	0.01
SS-BP-072-SF	WEC	6/13/2008	BP-072	864978.338639135	827810.348285567	0.02	0.02
SS-BP-073-SF	WEC	6/14/2008	BP-073	864978.311424172	827775.371126983	0.02	0.02
SS-BP-074-SF	WEC	6/14/2008	BP-074	864970.998659604	827784.652034608	0.02	0.02
SS-BP-075-SF	WEC	6/14/2008	BP-075	864974.7	827779.1	0.02	0.02
SS-BP-076-SF	WEC	6/17/2008	BP-076	864922.523272156	827707.82338929	0.02	0.02
SS-BP-106-SF	WEC	6/17/2008	BP-106	864974.674599252	827691.144663995	0.01	0.01
SS-BP-108B-SF	WEC	6/4/2008	BP-108B	865221.116	827325.414	0.06	0.06

Table 4-15 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Surface – Surface Soil							
SS-BP-108-SF	WEC	6/4/2008	BP-108	865220.812	827330.763	0.08	0.08
SS-BP-110-SF	WEC	6/4/2008	BP-110	865182.563	827356.29	0.05	0.05
SS-BP-111-SF	WEC	6/5/2008	BP-111	865155.879	827511.999	0.03	0.03
SS-GC-008-SF	WEC	6/19/2008	GC-008	864930.099	827773.653	0.01	0.01
SS-GL-028-SF	WEC	6/16/2008	GL-028	864907.712	827737.937	0.01	0.01
SS-GL-029-SF	WEC	6/16/2008	GL-029	864927.883	827778.491	0.01	0.01
SS-GL-030-SF	WEC	6/17/2008	GL-030	864953.718	827830.279	0.01	0.01
SS-GL-031-SF	WEC	6/17/2008	GL-031	864976.346	827878.953	0.02	0.02
SS-HS-003-SF	WEC	7/16/2008	HS-003	865021.435	827579.817	1.80	1.80
SS-HS-004-SF	WEC	7/16/2008	HS-004	864997.525	827664.195	1.10	1.10
SS-HS-005-SF	WEC	7/21/2008	HS-005	864992.553	827676.928	4.53	4.53
SS-HS-006-SF	WEC	7/21/2008	HS-006	864990.007	827668.435	6.50	6.50
Root – Limestone Fill							
LS-03-00-SL	SAIC	5/6/2004	LS-03	–	–	0.88	0.88
Root – Sub-Surface Soil							
BP-17-05-SL	SAIC	6/30/2004	BP-17	865168.429	827549.51	0.17	0.17
BP-18-05-SL	SAIC	6/30/2004	BP-18	865123	827671	0.01	0.02
BP-19-05-SL	SAIC	6/30/2004	BP-19	865074.052	827740.542	0.01	0.02
BP-20-03-SL	SAIC	6/29/2004	BP-20	865068	827833	-0.02	0.01

Table 4-15 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Root – Sub-Surface Soil							
NB-89-4.5-SL	Energy*Solutions*	11/13/2007	–	865346.56	827400.623	0.03	0.03
NB-91-4.5-SL	Energy*Solutions*	11/16/2007	–	865282.231	827476.668	0.25	0.25
NB-93-4.5-SL	Energy*Solutions*	11/16/2007	–	865254.066	827450.002	0.19	0.19
NB-96-4.5-SL	Energy*Solutions*	11/16/2007	–	865210.052	827490.654	0.12	0.12
NB-96-5-SL	Energy*Solutions*	11/16/2007	–	865210.052	827490.654	0.12	0.12
NB-97-4.5-SL	Energy*Solutions*	11/16/2007	–	865189.09	827531.558	0.11	0.11
SO-BP4A-04	Cabrera	11/1/2006	–	865143.683	827422.331	0.04	0.04
SS-BP008-SV	WEC	5/28/2007	BP-008	865257.330711	827297.302665	0.04	0.05
SS-BP-009-SV	WEC	5/28/2007	BP-009	865274.513	827315.809	0.15	0.15
SS-BP-010-SV	WEC	5/29/2008	BP-010	865324.453707088	827353.183676496	0.18	0.18
SS-BP-011-SV	WEC	5/29/2008	BP-011	865326.648478139	827377.633162173	0.05	0.05
SS-BP-012-SV	WEC	5/29/2008	BP-012	865356.111969724	827407.550606611	0.15	0.15
SS-BP-014-SV	WEC	6/19/2008	BP-014	865328.385080264	827460.307817967	0.07	0.07
SS-BP-017-SV	WEC	5/30/2008	BP-017	865223.270314567	827337.842435436	0.05	0.05
SS-BP-024-SV	WEC	5/29/2008	BP-024	865299.42128656	827449.766244954	0.79	0.79
SS-BP-025-SV	WEC	6/19/2008	BP-025	865293.727	827488.489	0.02	0.02
SS-BP-026-SV	WEC	6/18/2008	BP-026	865244.415701409	827482.457059025	0.04	0.04
SS-BP-027-SV	WEC	5/29/2008	BP-027	865245.05157304	827467.929183693	0.59	0.59
SS-BP-031-SV	WEC	6/3/2008	BP-031	865183.866434255	827440.560107061	0.18	0.18
SS-BP-032-SV	WEC	6/18/2008	BP-032	865211.132735242	827501.54191893	0.02	0.02
SS-BP-033-SV	WEC	6/4/2008	BP-033	865170.965366695	827484.329823983	0.08	0.08
SS-BP-037-SV	WEC	6/3/2008	BP-037	865122.432883771	827445.018471079	0.05	0.05

Table 4-15 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Root – Sub-Surface Soil							
SS-BP-038-SV	WEC	6/5/2008	BP-038	865141.163445654	827469.908807366	0.06	0.06
SS-BP-039-SV	WEC	6/5/2008	BP-039	865172.864881258	827530.160258399	0.25	0.25
SS-BP-039-SV-QC	WEC	6/5/2008	BP-039	865172.864881258	827530.160258399	0.36	0.36
SS-BP-040-SV	WEC	5/23/2008	BP-040	865152.428170487	827557.896074516	0.15	0.15
SS-BP-041-SV	WEC	6/5/2008	BP-041	865139.173673376	827504.541860323	0.07	0.07
SS-BP-042-SV	WEC	6/5/2008	BP-042	865104.383	827469.945	0.02	0.02
SS-BP-043-SV	WEC	6/5/2008	BP-043	865058.761448189	827495.291670499	0.04	0.04
SS-BP-044-SV	WEC	6/5/2008	BP-044	865114.658099725	827534.43916984	0.06	0.06
SS-BP-045-SV	WEC	6/18/2008	BP-045	865153.502937146	827583.048331724	0.08	0.08
SS-BP-046-SV	WEC	6/14/2008	BP-046	865136.498197855	827585.810821058	0.14	0.14
SS-BP-047-SV	WEC	6/7/2008	BP-047	865097.044664053	827602.798758803	0.02	0.02
SS-BP-048-SV	WEC	6/7/2008	BP-048	865090.233	827579.501	0.06	0.06
SS-BP-049-SV	WEC	6/6/2008	BP-049	865058.786514987	827523.388524653	0.05	0.05
SS-BP-049-SV-QC	WEC	6/6/2008	BP-049	865058.786514987	827523.388524653	0.03	0.03
SS-BP-052-SV	WEC	6/11/2008	BP-052	865060.747152575	827634.126367708	0.01	0.02
SS-BP-053-SV	WEC	6/12/2008	BP-053	865082.454166987	827683.822766674	0.00	0.01
SS-BP-054-SV	WEC	6/12/2008	BP-054	865053.846204574	827683.31914301	0.05	0.05
SS-BP-055-SV	WEC	5/27/2008	BP-055	865022.422582623	827680.690948655	0.02	0.02
SS-BP-056-SV	WEC	6/12/2008	BP-056	865009.370090712	827637.325088657	0.10	0.10
SS-BP-057-SV	WEC	6/6/2008	BP-057	865010.066758075	827578.632431495	0.04	0.04
SS-BP-058-SV	WEC	6/6/2008	BP-058	864991.364327256	827589.970042455	0.02	0.02
SS-BP-060-SV	WEC	6/7/2008	BP-060	864965.045085644	827619.649706967	0.02	0.02

Table 4-15 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Root – Sub-Surface Soil							
SS-BP-061-SV	WEC	6/17/2008	BP-061	865003.877155279	827677.91389744	0.01	0.02
SS-BP-062-SV	WEC	6/18/2008	BP-062	864992.300086977	827706.268106821	0.02	0.02
SS-BP-063-SV	WEC	6/18/2008	BP-063	864996.030060102	827731.509374007	0.02	0.02
SS-BP-064-SV	WEC	6/17/2008	BP-064	865014.987430031	827743.953005047	0.01	0.01
SS-BP-065-SV	WEC	6/17/2008	BP-065	865032.634653867	827753.404425907	0.03	0.03
SS-BP-066-SV	WEC	6/17/2008	BP-066	865048.304761038	827775.329679024	0.02	0.02
SS-BP-067-SV	WEC	6/14/2008	BP-067	865083.502646473	827757.738758352	0.03	0.03
SS-BP-068-SV	WEC	6/14/2008	BP-068	865082.270395647	827782.767119066	0.02	0.02
SS-BP-069-SV	WEC	6/17/2008	BP-069	865063.202809627	827793.613228287	0.04	0.04
SS-BP-070-SV	WEC	6/13/2008	BP-070	865048.395407308	827845.381896423	0.02	0.02
SS-BP-071-SV	WEC	6/13/2008	BP-071	865013.349274372	827827.861260156	0.01	0.02
SS-BP-072-SV	WEC	6/13/2008	BP-072	864978.338639135	827810.348285567	0.02	0.02
SS-BP-073-SV	WEC	6/14/2008	BP-073	864978.311424172	827775.371126983	0.02	0.02
SS-BP-074-SV	WEC	6/14/2008	BP-074	864970.998659604	827784.652034608	0.02	0.02
SS-BP-075-SV	WEC	6/14/2008	BP-075	864974.7	827779.1	0.06	0.06
SS-BP-076-SV	WEC	6/17/2008	BP-076	864922.523272156	827707.82338929	0.01	0.02
SS-BP-106-SV	WEC	6/17/2008	BP-106	864974.674599252	827691.144663995	0.02	0.02
SS-BP-108B-SV	WEC	6/4/2008	BP-108B	865221.116	827325.414	0.37	0.37
SS-BP-108-SV	WEC	6/4/2008	BP-108	865220.812	827330.763	0.05	0.05
SS-BP-110-SV	WEC	6/4/2008	BP-110	865182.563	827356.29	0.07	0.07
SS-BP-111-SV	WEC	6/5/2008	BP-111	865155.879	827511.999	0.06	0.06
SS-GC-008-SV	WEC	6/19/2008	GC-008	864930.099	827773.653	0.02	0.02

Table 4-15 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Root – Sub-Surface Soil							
SS-GL-028-SV	WEC	6/16/2008	GL-028	864907.712	827737.937	0.02	0.02
SS-GL-029-SV	WEC	6/16/2008	GL-029	864927.883	827778.491	0.01	0.01
SS-GL-030-SV	WEC	6/17/2008	GL-030	864953.718	827830.279	0.01	0.01
SS-GL-031-SV	WEC	6/17/2008	GL-031	864976.346	827878.953	0.01	0.02
SS-GL-031-SV-QC	WEC	6/17/2008	GL-031	864976.346	827878.953	0.02	0.02
SS-HS-003-SV	WEC	7/16/2008	HS-003	865021.435	827579.817	0.32	0.32
SS-HS-004-EL-1.0	WEC	7/16/2008	HS-004	864997.525	827664.195	162.52	162.53
SS-HS-004-SV	WEC	7/16/2008	HS-004	864997.525	827664.195	1.97	1.97
SS-HS-005EL-0.75-1.0	WEC	7/21/2008	HS-005	864992.553	827676.928	3123.55	3123.57
SS-HS-005-EL-1.0-1.5	WEC	7/21/2008	HS-005	864992.553	827676.928	226.05	226.06
SS-HS-005-EL-4.5-5.0	WEC	7/21/2008	HS-005	864992.553	827676.928	114.13	114.13
SS-HS-005-SV	WEC	7/21/2008	HS-005	864992.553	827676.928	246.48	246.49
SS-HS-006-EL-0.5-1.0	WEC	7/21/2008	HS-006	864990.007	827668.435	85.86	85.95
Deep – Sub-Surface Soil							
BP-17-15-SL	SAIC	6/30/2004	BP-17	865168.429	827549.51	0.04	0.04
BP-17-23-SL	SAIC	6/30/2004	BP-17	865168.429	827549.51	0.02	0.02
BP-17-31-SL	SAIC	6/30/2004	BP-17	865168.429	827549.51	0.01	0.01
BP-18-15-SL	SAIC	6/30/2004	BP-18	865123	827671	0.02	0.02
BP-18-25-SL	SAIC	6/30/2004	BP-18	865123	827671	0.01	0.01
BP-18-31-SL	SAIC	6/30/2004	BP-18	865123	827671	0.00	0.01
BP-19-13-SL	SAIC	6/30/2004	BP-19	865074.052	827740.542	0.00	0.01
BP-19-25-SL	SAIC	6/30/2004	BP-19	865074.052	827740.542	0.01	0.01

Table 4-15 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Deep – Sub-Surface Soil							
BP-19-29-SL	SAIC	6/30/2004	BP-19	865074.052	827740.542	0.02	0.02
BP-20-19-SL	SAIC	6/29/2004	BP-20	865068	827833	0.00	0.00
BP-20-27-SL	SAIC	6/29/2004	BP-20	865068	827833	-0.01	0.00
BP-21-07-SL	SAIC	6/28/2004	BP-21	864954.393	827824.823	0.00	0.01
BP-21-07-SL-FD	SAIC	6/28/2004	BP-21	864954.393	827824.823	-0.01	0.00
BP-21-13-SL	SAIC	6/28/2004	BP-21	864954.393	827824.823	0.00	0.00
BP-21-24-SL	SAIC	6/28/2004	BP-21	864954.393	827824.823	0.00	0.01
BP-21-34-SL	SAIC	6/28/2004	BP-21	864954.393	827824.823	0.01	0.01
NB-89-19.5-SL	Energy*Solutions*	11/13/2007	–	865346.56	827400.623	0.81	0.81
NB-91-6.5-SL	Energy*Solutions*	11/16/2007	–	865282.231	827476.668	0.56	0.56
NB-93-15-SL	Energy*Solutions*	11/16/2007	–	865254.066	827450.002	0.01	0.01
NB-97-9.5-SL	Energy*Solutions*	11/16/2007	–	865189.09	827531.558	0.14	0.14
SO-BP1D-12	Cabrera	11/1/2006	–	865197.17	827440.801	0.08	0.08
SO-BP2B-12	Cabrera	11/1/2006	–	865022.665	827630.622	0.00	0.00
SO-BP2C-12	Cabrera	11/1/2006	–	865014.257	827615.009	0.00	0.00
SO-BP2D-05	Cabrera	11/1/2006	–	864966.505	827656.827	0.00	0.00
SO-BP2D-05-D	Cabrera	11/1/2006	–	864966.505	827656.827	0.01	0.01
SO-BP2E-07	Cabrera	11/1/2006	–	864977.378	827673.529	0.01	0.01
SO-BP4D-08	Cabrera	11/1/2006	–	865112.849	827456.951	0.00	0.00
SO-BP4E-09	Cabrera	11/1/2006	–	865106.186	827450.297	0.03	0.03
SO-BP4F-08	Cabrera	11/1/2006	–	865100.339	827449.539	0.30	0.30
SO-BP5B-10	Cabrera	11/1/2006	–	865033.212	827737.368	0.01	0.01

Table 4-15 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Deep – Sub-Surface Soil							
SO-BP5C-08	Cabrera	11/1/2006	–	864994.234	827762.71	0.00	0.01
SO-BP5D-08	Cabrera	11/1/2006	–	865005.12	827780.698	0.00	0.00
SO-BP5E-10	Cabrera	11/1/2006	–	865044.9	827752.013	0.01	0.01
SO-BP7B-08	Cabrera	11/1/2006	–	865056.448	827765.486	0.00	0.01
SO-BP7C-12	Cabrera	11/1/2006	–	865016.445	827797.658	0.01	0.01
SO-BP9A-16	Cabrera	11/1/2006	–	865297.327	827437.841	*0.29*	*0.29*
SS-BP-008-DV	WEC	5/28/2007	BP-008	865257.330711	827297.302665	0.00	0.00
SS-BP-009-DV	WEC	5/28/2007	BP-009	865274.513	827315.809	0.01	0.02
SS-BP-010-DV	WEC	5/29/2008	BP-010	865324.453707088	827353.183676496	0.02	0.02
SS-BP-011-DV	WEC	5/29/2008	BP-011	865326.648478139	827377.633162173	0.01	0.01
SS-BP-012-DV	WEC	5/29/2008	BP-012	865356.111969724	827407.550606611	0.03	0.03
SS-BP-014-DV	WEC	6/19/2008	BP-014	865328.385080264	827460.307817967	0.07	0.07
SS-BP-014-DV-QC	WEC	6/19/2008	BP-014	865328.385080264	827460.307817967	0.06	0.06
SS-BP-017-DV	WEC	5/30/2008	BP-017	865223.270314567	827337.842435436	0.10	0.10
SS-BP-017-DV-EL-11	WEC	5/30/2008	BP-017	865223.270314567	827337.842435436	2.27	2.27
SS-BP-024-DV	WEC	5/29/2008	BP-024	865299.42128656	827449.766244954	0.09	0.09
SS-BP-025-DV	WEC	6/19/2008	BP-025	865293.727	827488.489	0.07	0.07
SS-BP-025-DV-QC	WEC	6/19/2008	BP-025	865293.727	827488.489	0.06	0.06
SS-BP-026-DV	WEC	6/18/2008	BP-026	865244.415701409	827482.457059025	0.03	0.03
SS-BP-026-DV-QC	WEC	6/18/2008	BP-026	865244.415701409	827482.457059025	0.03	0.03
SS-BP-027-DV	WEC	5/29/2008	BP-027	865245.05157304	827467.929183693	0.02	0.02
SS-BP-031-DV	WEC	6/3/2008	BP-031	865183.866434255	827440.560107061	0.03	0.03

Table 4-15 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Deep – Sub-Surface Soil							
SS-BP-032-DV	WEC	6/18/2008	BP-032	865211.132735242	827501.54191893	0.01	0.01
SS-BP-033-DV	WEC	6/4/2008	BP-033	865170.965366695	827484.329823983	0.00	0.00
SS-BP-037-DV	WEC	6/3/2008	BP-037	865122.432883771	827445.018471079	0.05	0.05
SS-BP-038-DV	WEC	6/5/2008	BP-038	865141.163445654	827469.908807366	0.00	0.00
SS-BP-039-DV	WEC	6/5/2008	BP-039	865172.864881258	827530.160258399	0.13	0.13
SS-BP-040-DV	WEC	5/23/2008	BP-040	865152.428170487	827557.896074516	0.03	0.03
SS-BP-041-DV	WEC	6/5/2008	BP-041	865139.173673376	827504.541860323	0.00	0.00
SS-BP-042-DV	WEC	6/5/2008	BP-042	865104.383	827469.945	0.00	0.00
SS-BP-043-DV	WEC	6/5/2008	BP-043	865058.761448189	827495.291670499	0.03	0.03
SS-BP-044-DV	WEC	6/5/2008	BP-044	865114.658099725	827534.43916984	0.01	0.01
SS-BP-045-DV	WEC	6/18/2008	BP-045	865153.502937146	827583.048331724	0.03	0.03
SS-BP-045-DV-QC	WEC	6/17/2008	BP-045	865153.502937146	827583.048331724	0.04	0.04
SS-BP-046-DV	WEC	6/14/2008	BP-046	865136.498197855	827585.810821058	0.02	0.02
SS-BP-047-DV	WEC	6/7/2008	BP-047	865097.044664053	827602.798758803	0.00	0.00
SS-BP-048-DV	WEC	6/7/2008	BP-048	865090.233	827579.501	0.00	0.00
SS-BP-049-DV	WEC	6/6/2008	BP-049	865058.786514987	827523.388524653	0.00	0.01
SS-BP-052-DV	WEC	6/11/2008	BP-052	865060.747152575	827634.126367708	0.01	0.02
SS-BP-052-EL-6	WEC	6/11/2008	BP-052	865060.747152575	827634.126367708	0.37	0.37
SS-BP-053-DV	WEC	6/12/2008	BP-053	865082.454166987	827683.822766674	0.00	0.00
SS-BP-054-DV	WEC	6/12/2008	BP-054	865053.846204574	827683.31914301	0.01	0.01
SS-BP-055-DV	WEC	5/27/2008	BP-055	865022.422582623	827680.690948655	0.01	0.01
SS-BP-056-DV	WEC	6/12/2008	BP-056	865009.370090712	827637.325088657	0.02	0.02

Table 4-15 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Deep – Sub-Surface Soil							
SS-BP-057-DV	WEC	6/6/2008	BP-057	865010.066758075	827578.632431495	0.00	0.00
SS-BP-058-DV	WEC	6/6/2008	BP-058	864991.364327256	827589.970042455	0.01	0.01
SS-BP-060-DV	WEC	6/7/2008	BP-060	864965.045085644	827619.649706967	0.01	0.01
SS-BP-061-DV	WEC	6/17/2008	BP-061	865003.877155279	827677.91389744	0.01	0.01
SS-BP-062-DV	WEC	6/18/2008	BP-062	864992.300086977	827706.268106821	0.01	0.01
SS-BP-062-DV-EL-10	WEC	6/18/2008	BP-062	864992.300086977	827706.268106821	0.17	0.17
SS-BP-063-DV	WEC	6/18/2008	BP-063	864996.030060102	827731.509374007	0.00	0.01
SS-BP-063-DV-QC	WEC	6/18/2008	BP-063	864996.030060102	827731.509374007	0.01	0.01
SS-BP-064-DV	WEC	6/17/2008	BP-064	865014.987430031	827743.953005047	0.01	0.01
SS-BP-064-DV-QC	WEC	6/17/2008	BP-064	865014.987430031	827743.953005047	0.01	0.01
SS-BP-065-DV	WEC	6/17/2008	BP-065	865032.634653867	827753.404425907	0.01	0.01
SS-BP-065-DV-EL-5	WEC	6/17/2008	BP-065	865032.634653867	827753.404425907	0.30	0.30
SS-BP-066-CUT-EL	WEC	6/17/2008	BP-066	865048.304761038	827775.329679024	17.78	17.78
SS-BP-066-DV	WEC	6/17/2008	BP-066	865048.304761038	827775.329679024	0.01	0.01
SS-BP-067-DV	WEC	6/14/2008	BP-067	865083.502646473	827757.738758352	0.01	0.01
SS-BP-068-DV	WEC	6/14/2008	BP-068	865082.270395647	827782.767119066	0.01	0.01
SS-BP-069-DV	WEC	6/17/2008	BP-069	865063.202809627	827793.613228287	0.01	0.01
SS-BP-070-DV	WEC	6/13/2008	BP-070	865048.395407308	827845.381896423	0.00	0.00
SS-BP-070-DV-QC	WEC	6/13/2008	BP-070	865048.395407308	827845.381896423	0.00	0.01
SS-BP-071-DV	WEC	6/13/2008	BP-071	865013.349274372	827827.861260156	0.00	0.00
SS-BP-072-DV	WEC	6/13/2008	BP-072	864978.338639135	827810.348285567	0.00	0.00
SS-BP-073-DV	WEC	6/14/2008	BP-073	864978.311424172	827775.371126983	0.01	0.01

Table 4-15 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Deep – Sub-Surface Soil							
SS-BP-074-DV	WEC	6/14/2008	BP-074	864970.998659604	827784.652034608	0.00	0.01
SS-BP-074-DV-QC	WEC	6/14/2008	BP-074	864970.998659604	827784.652034608	0.00	0.01
SS-BP-075-DV	WEC	6/14/2008	BP-075	864974.7	827779.1	0.01	0.01
SS-BP-075-DV-EL-7	WEC	6/14/2008	BP-075	864974.7	827779.1	2.69	2.69
SS-BP-076-DV	WEC	6/17/2008	BP-076	864922.523272156	827707.82338929	0.01	0.02
SS-BP-076-DV-QC	WEC	6/16/2008	BP-076	864922.523272156	827707.82338929	0.01	0.01
SS-BP-106-DV	WEC	6/17/2008	BP-106	864974.674599252	827691.144663995	0.00	0.00
SS-BP-108B-DV	WEC	6/4/2008	BP-108B	865221.116	827325.414	0.55	0.55
SS-BP-108B-DV-EL-6	WEC	6/4/2008	BP-108B	865221.116	827325.414	2.22	2.22
SS-BP-110-DV	WEC	6/4/2008	BP-110	865182.563	827356.29	0.23	0.23
SS-BP-111-DV	WEC	6/5/2008	BP-111	865155.879	827511.999	0.01	0.01
SS-GC-008-DV	WEC	6/19/2008	GC-008	864930.099	827773.653	0.00	0.00
SS-HS-005-DV	WEC	7/21/2008	HS-005	864992.553	827676.928	2.67	2.67
WS-BP2A-11	Cabrera	11/1/2006	–	864998.079	827641.135	0.33	0.33
WS-BP5A-07	Cabrera	11/1/2006	–	865016.973	827758.066	0.08	0.08
WS-BP7A-08	Cabrera	11/1/2006	–	865032.67	827777.058	0.07	0.07
WS-BP8A-10	Cabrera	11/1/2006	–	864971.364	827784.64	*1.03*	*1.03*

Table 4-15 (continued)

Burial Pits – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

NOTE 1 – The analytical results as provided by the laboratory, including negative values, were used in the sum-of-fractions (SOF) calculation.
NOTE 2 – Negative analytical results were set to zero (0) in the SOF calculation.
NOTE 3 – The SOF value is italicized when all radionuclides of concern are represented in the SOF calculation.
NOTE 4 – Samples with a result exceeding the BTV of 1.7 pCi/g Th-232 were always included in the SOF calculation.
NOTE 5 – When Th-232 was included in the SOF calculation, a background of 1 pCi/g was subtracted from the analytical result.
NOTE 6 – Ra-226 was not included in the SOF calculations because the area is not considered impacted by Ra-226.
NOTE 7 – Sample ID listed as SS-BP-040-DV was incorrectly identified as SS-BV-040-DV on the chain of custody.
NOTE 8 – Cells with "–" indicate that no data was available.

Table 4-16

Burial Pits Radium Impacted Area – Surface And Sub-Surface Soil – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Surface – Surface Soil – Statistical Data Analyses																																
No. of Detects	0			0			0			12			1			10			10			1			4			7			4	4
No. of Non-Detects	12			1			1			0			0			2			2			0			8			5			8	8
Detection Freq.	0.0%			0.0%			0.0%			100.0%			100.0%			83.3%			83.3%			100.0%			33.3%			58.3%			33.3%	33.3%
Max. Conc.	0.06			-0.01			0.03			1.1			0.27			1.6			1.0			8.3			0.84			3.8			19.8	3.4%
Min. Conc.	-0.06			-0.01			0.03			0.25			0.27			-0.03			0.18			8.3			0.15			0.10			3.2	2.1%
Mean Conc.	0.00			-0.01			0.03			0.75			0.27			0.88			0.77			8.3			0.41			1.9			10.2	2.8%
Std. Deviation	0.04			NA			NA			0.22			NA			0.42			0.27			NA			0.18			1.3			4.4	0.6%
Surface – Surface Soil – Analytical Data Results																																
NB-98-0.5-SL	**-0.06**	0.21	0.35	***-0.01***	*0.01*	*0.06*	***0.03***	*0.04*	*0.05*	1.1	0.20	0.24	–	–	–	1.0	0.40	0.62	1.0	0.31	0.39	*8.3*	*0.91*	*0.06*	*0.35*	*0.14*	*0.06*	*1.8*	*0.31*	*0.06*	10.4	3.0%
SS-BP-015-SF	**0.02**	0.11	0.19	–	–	–	–	–	–	0.54	0.14	0.13	–	–	–	0.69	0.43	0.68	**0.41**	0.31	0.45	–	–	–	**0.17**	0.26	0.43	**1.2**	1.1	1.8	**4.5**	**<MDC**
SS-BP-016-SF	**-0.02**	0.08	0.13	–	–	–	–	–	–	0.25	0.08	0.09	0.27	0.07	0.08	**-0.03**	0.38	0.64	**0.18**	0.13	0.20	–	–	–	**0.15**	0.15	0.25	**0.13**	0.80	1.5	**3.2**	**<MDC**
SS-BP-022-SF	**0.06**	0.14	0.24	–	–	–	–	–	–	0.97	0.17	0.15	–	–	–	1.6	0.44	0.64	0.85	0.22	0.34	–	–	–	**0.52**	0.35	0.55	3.1	0.90	2.0	**13.1**	**<MDC**
SS-BP-023-SF	**0.06**	0.15	0.25	–	–	–	–	–	–	0.64	0.15	0.19	–	–	–	0.83	0.46	0.73	0.63	0.23	0.31	–	–	–	**0.49**	0.33	0.52	**0.10**	1.4	2.5	**12.1**	**<MDC**
SS-BP-028A-SF	**0.01**	0.06	0.09	–	–	–	–	–	–	0.84	0.10	0.08	–	–	–	0.94	0.33	0.44	0.94	0.15	0.09	–	–	–	0.84	0.20	0.24	3.7	0.94	0.92	19.8	3.4%
SS-BP-028B-SF	**-0.01**	0.04	0.07	–	–	–	–	–	–	0.75	0.07	0.05	–	–	–	**0.44**	0.29	0.45	0.93	0.11	0.07	–	–	–	0.27	0.11	0.17	2.0	0.54	0.63	7.2	2.1%
SS-BP-028C-SF	**0.00**	0.04	0.07	–	–	–	–	–	–	0.75	0.08	0.06	–	–	–	0.98	0.32	0.42	0.80	0.11	0.08	–	–	–	0.35	0.12	0.19	2.1	0.47	0.59	8.8	2.6%
SS-BP-028-SF	**-0.05**	0.15	0.26	–	–	–	–	–	–	0.87	0.17	0.17	–	–	–	0.76	0.45	0.72	0.96	0.27	0.38	–	–	–	**0.54**	0.37	0.59	2.7	1.1	2.2	**13.1**	**<MDC**
SS-BP-030-SF	**0.04**	0.41	0.71	–	–	–	–	–	–	0.82	0.16	0.12	–	–	–	1.4	0.45	0.67	0.99	0.20	0.26	–	–	–	**0.40**	0.31	0.50	**1.4**	3.4	5.9	**9.0**	**<MDC**
SS-BP-034-SF	**-0.04**	0.16	0.28	–	–	–	–	–	–	0.72	0.16	0.17	–	–	–	1.1	0.51	0.79	0.99	0.24	0.29	–	–	–	**0.45**	0.35	0.56	3.8	1.0	2.2	**12.6**	**<MDC**
SS-BP-109-SF	**0.02**	0.51	0.89	–	–	–	–	–	–	0.66	0.13	0.14	–	–	–	0.90	0.37	0.57	0.56	0.18	0.29	–	–	–	**0.41**	0.28	0.43	**0.40**	3.5	6.1	**8.7**	**<MDC**

Table 4-16 (continued)

Burial Pits Radium Impacted Area – Surface And Sub-Surface Soil – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Root – Sub-Surface Soil – Statistical Data Analyses																																
No. of Detects	0			0			0			12			0			0			12			0			4			9			4	4
No. of Non-Detects	12			0			0			0			0			11			0			0			8			3			8	8
Detection Freq.	0.0%			NA			NA			100.0%			NA			0.0%			100.0%			NA			33.3%			75.0%			33.3%	33.3%
Max. Conc.	0.08			NA			NA			1.5			NA			0.53			1.3			NA			2.1			4.5			45.7	7.0%
Min. Conc.	-0.06			NA			NA			0.81			NA			-0.22			0.70			NA			-0.03			0.20			0.97	2.6%
Mean Conc.	0.00			NA			NA			0.97			NA			0.23			0.94			NA			0.44			2.2			10.8	4.0%
Std. Deviation	0.05			NA			NA			0.21			NA			0.21			0.16			NA			0.59			1.3			12.4	2.0%
Root – Sub-Surface Soil – Analytical Data Results																																
NB-98-4.5-SL	**0.08**	0.14	0.23	–	–	–	–	–	–	1.5	0.34	0.23	–	–	–	–	–	–	1.1	0.37	0.56	–	–	–	**-0.03**	0.41	0.72	**0.80**	1.6	2.8	**1.6**	<MDC
SS-BP-015-SV	**0.06**	0.14	0.23	–	–	–	–	–	–	0.90	0.17	0.17	–	–	–	**0.41**	0.39	0.63	0.71	0.20	0.29	–	–	–	0.69	0.36	0.54	3.4	0.96	1.9	16.7	3.1%
SS-BP-016-SV	**-0.05**	0.13	0.22	–	–	–	–	–	–	0.86	0.18	0.16	–	–	–	**0.11**	0.40	0.66	0.88	0.21	0.29	–	–	–	0.78	0.35	0.53	3.6	0.98	2.1	18.5	3.3%
SS-BP-022-SV	**0.08**	0.15	0.25	–	–	–	–	–	–	1.0	0.22	0.14	–	–	–	**0.40**	0.42	0.69	0.82	0.27	0.45	–	–	–	**0.48**	0.40	0.63	3.0	1.1	2.4	**12.3**	<MDC
SS-BP-023-SV	**-0.06**	0.18	0.30	–	–	–	–	–	–	1.3	0.21	0.09	–	–	–	**0.31**	0.42	0.68	1.3	0.27	0.34	–	–	–	**0.38**	0.34	0.56	3.0	0.90	2.1	**10.4**	<MDC
SS-BP-028A-SV	**0.01**	0.08	0.13	–	–	–	–	–	–	0.84	0.08	0.04	–	–	–	**0.23**	0.23	0.38	0.96	0.12	0.09	–	–	–	**0.17**	0.13	0.21	1.8	1.0	1.2	**5.2**	<MDC
SS-BP-028B-SV	**0.00**	0.05	0.07	–	–	–	–	–	–	0.81	0.08	0.06	–	–	–	**-0.22**	0.26	0.49	1.1	0.13	0.10	–	–	–	**0.08**	0.10	0.16	1.1	0.50	0.61	**2.7**	<MDC
SS-BP-028C-SV	**-0.02**	0.05	0.08	–	–	–	–	–	–	0.86	0.08	0.06	–	–	–	**0.19**	0.25	0.40	1.1	0.13	0.09	–	–	–	0.19	0.12	0.19	1.1	0.28	0.73	4.8	2.6%
SS-BP-028-SV	**0.03**	0.13	0.22	–	–	–	–	–	–	1.0	0.19	0.19	–	–	–	**0.20**	0.39	0.65	0.70	0.30	0.39	–	–	–	**0.20**	0.36	0.60	2.9	1.6	2.0	**7.0**	<MDC
SS-BP-030-SV	**-0.05**	0.14	0.23	–	–	–	–	–	–	0.87	0.16	0.12	–	–	–	**0.03**	0.38	0.64	0.92	0.23	0.35	–	–	–	2.1	0.51	0.46	4.5	0.92	2.6	45.7	7.0%
SS-BP-034-SV	**-0.05**	0.41	0.71	–	–	–	–	–	–	0.86	0.15	0.09	–	–	–	**0.36**	0.42	0.69	0.90	0.19	0.21	–	–	–	**0.04**	0.28	0.48	**0.20**	3.2	5.6	**0.97**	<MDC
SS-BP-109-SV	**0.01**	0.16	0.28	–	–	–	–	–	–	0.87	0.18	0.19	–	–	–	**0.53**	0.42	0.68	0.90	0.29	0.36	–	–	–	**0.11**	0.29	0.50	**1.5**	1.7	2.5	**3.7**	<MDC

Table 4-16 (continued)

Burial Pits Radium Impacted Area – Surface And Sub-Surface Soil – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Deep – Sub-Surface Soil – Statistical Data Analyses																																
No. of Detects	0			2			0			31			1			2			31			17			21			26			20	20
No. of Non-Detects	21			4			6			0			0			28			0			0			10			5			11	11
Detection Freq.	0.0%			33.3%			0.0%			100.0%			100.0%			6.7%			100.0%			100.0%			67.7%			83.9%			64.5%	64.5%
Max. Conc.	0.13			0.17			0.02			414.0			183.0			1.6			6.2			503.0			26.3			102.0			631.3	11.6%
Min. Conc.	-0.20			0.01			-0.01			0.79			183.0			-0.30			0.83			0.92			-0.10			0.96			2.0	1.0%
Mean Conc.	0.02			0.06			0.00			21.7			183.0			0.06			1.2			50.4			2.0			7.5			47.6	4.0%
Std. Deviation	0.07			0.06			0.01			80.4			NA			0.39			0.93			119.2			5.0			18.8			118.1	2.8%
Deep – Sub-Surface Soil – Analytical Data Results																																
NB-98-9-SL	**0.00**	0.07	0.12	–	–	–	–	–	–	0.96	0.17	0.19	–	–	–	–	–	–	0.83	0.21	0.37	–	–	–	**0.16**	0.24	0.40	1.0	0.47	0.99	**4.1**	**<MDC**
SO-BP1A-14	–	–	–	–	–	–	–	–	–	0.93	0.15	0.15	–	–	–	**0.01**	0.15	0.69	*1.1*	*0.30*	*0.06*	*45.7*	*5.0*	*0.10*	*2.0*	*0.44*	*0.08*	*3.3*	*0.56*	*0.07*	51.0	8.7%
SO-BP1B-09	–	–	–	–	–	–	–	–	–	0.96	0.16	0.16	–	–	–	**-0.08**	0.42	0.63	*1.2*	*0.28*	*0.06*	*1.6*	*0.34*	*0.08*	***0.03***	*0.06*	*0.09*	*0.96*	*0.26*	*0.06*	**2.6**	**<MDC**
SO-BP1C-10	–	–	–	–	–	–	–	–	–	0.92	0.25	0.23	–	–	–	**-0.05**	0.49	0.66	*0.89*	*0.23*	*0.05*	*28.7*	*3.2*	*0.08*	*1.8*	*0.40*	*0.05*	*2.1*	*0.41*	*0.06*	32.6	11.6%
SO-BP1C-10-D	–	–	–	–	–	–	–	–	–	0.91	0.22	0.18	–	–	–	1.6	0.46	0.65	*1.1*	*0.27*	*0.05*	*28.8*	*3.2*	*0.07*	*1.1*	*0.30*	*0.05*	*2.0*	*0.39*	*0.06*	31.9	7.8%
SO-BP1E-07	–	–	–	–	–	–	–	–	–	1.2	0.19	0.16	–	–	–	**-0.16**	0.37	0.62	*1.1*	*0.24*	*0.04*	*10.9*	*1.5*	*0.03*	*0.35*	*0.14*	*0.05*	*1.6*	*0.32*	*0.04*	12.8	3.4%
SO-BP1E-07-D	–	–	–	–	–	–	–	–	–	1.1	0.27	0.25	–	–	–	**-0.19**	0.40	0.67	*1.0*	*0.25*	*0.06*	*27.5*	*3.7*	*0.05*	*1.0*	*0.26*	*0.05*	*2.3*	*0.43*	*0.06*	30.8	6.2%
SO-BP1F-06	–	–	–	–	–	–	–	–	–	1.3	0.20	0.16	–	–	–	**-0.29**	0.37	0.62	*0.98*	*0.24*	*0.05*	*1.8*	*0.36*	*0.07*	*0.14*	*0.09*	*0.04*	*1.2*	*0.28*	*0.07*	3.1	1.7%
SO-BP4B-08	–	–	–	–	–	–	–	–	–	1.3	0.20	0.18	–	–	–	0.82	0.42	0.65	*1.0*	*0.25*	*0.06*	*9.9*	*1.4*	*0.05*	*0.46*	*0.16*	*0.06*	*3.0*	*0.51*	*0.04*	13.4	2.3%
SO-BP4C-10	–	–	–	–	–	–	–	–	–	1.3	0.26	0.20	–	–	–	**-0.19**	0.35	0.58	*1.1*	*0.25*	*0.05*	*0.92*	*0.23*	*0.07*	*0.06*	*0.06*	*0.06*	*0.97*	*0.24*	*0.05*	2.0	1.0%
SO-BP6A-06	***-0.01***	*0.04*	*0.09*	***0.06***	*0.05*	*0.06*	***0.01***	*0.06*	*0.10*	1.6	0.24	0.20	–	–	–	**0.07**	0.31	0.54	*1.0*	*0.25*	*0.05*	*101.0*	*14.0*	*0.10*	*6.3*	*1.1*	*0.08*	*19.8*	*3.0*	*0.08*	127.1	4.7%
SO-BP6B-09	–	–	–	–	–	–	–	–	–	1.1	0.18	0.15	–	–	–	**0.09**	0.35	0.61	*1.1*	*0.25*	*0.04*	*2.5*	*0.46*	*0.08*	*0.16*	*0.10*	*0.08*	*1.0*	*0.25*	*0.08*	3.7	2.4%
SO-BP6C-12	***0.03***	*0.06*	*0.09*	***0.02***	*0.04*	*0.07*	***-0.01***	*0.03*	*0.06*	414.0	44.0	2.0	–	–	–	**-0.12**	0.32	0.56	*6.2*	*1.00*	*0.03*	*6.2*	*0.91*	*0.04*	*0.36*	*0.13*	*0.05*	*4.8*	*0.73*	*0.05*	11.4	1.1%
SO-BP6D-12	***-0.01***	*0.04*	*0.09*	*0.17*	*0.09*	*0.07*	***0.01***	*0.04*	*0.07*	13.5	1.6	0.30	–	–	–	**-0.03**	0.30	0.54	*0.99*	*0.24*	*0.04*	*503.0*	*71.0*	*2.0*	*26.3*	*8.3*	*2.9*	*102.0*	*19.0*	*2.0*	631.3	3.9%
SO-BP6E-14	***0.02***	*0.06*	*0.10*	***0.01***	*0.05*	*0.09*	***0.02***	*0.03*	*0.05*	1.0	0.16	0.15	–	–	–	**-0.07**	0.34	0.55	*1.0*	*0.26*	*0.07*	*5.2*	*0.90*	*0.10*	*0.24*	*0.14*	*0.07*	*2.5*	*0.50*	*0.08*	7.9	1.5%
SO-BP6F-09	***0.03***	*0.07*	*0.10*	***0.02***	*0.04*	*0.06*	***-0.01***	*0.03*	*0.06*	6.2	0.77	0.26	–	–	–	**0.15**	0.31	0.54	*1.2*	*0.27*	*0.05*	*35.4*	*4.9*	*0.08*	*2.1*	*0.46*	*0.08*	*10.5*	*1.6*	*0.06*	48.0	3.0%
SO-BP6G-10	***0.05***	*0.07*	*0.09*	*0.08*	*0.06*	*0.05*	***0.00***	*0.03*	*0.05*	11.0	1.3	0.30	–	–	–	**0.34**	0.34	0.56	*1.0*	*0.25*	*0.05*	*31.4*	*4.5*	*0.09*	*2.2*	*0.50*	*0.05*	*8.0*	*1.3*	*0.09*	41.6	4.1%
SS-BP-015-DV	**0.01**	0.16	0.28	–	–	–	–	–	–	1.1	0.22	0.17	–	–	–	**0.10**	0.36	0.59	0.88	0.27	0.39	–	–	–	**0.17**	0.31	0.53	**1.9**	1.4	2.3	**5.3**	**<MDC**
SS-BP-016-DV	**0.05**	0.14	0.24	–	–	–	–	–	–	0.79	0.19	0.19	–	–	–	**-0.30**	0.38	0.64	1.1	0.25	0.33	–	–	–	0.59	0.32	0.50	4.2	1.1	2.1	15.7	2.2%
SS-BP-022-DV	**-0.20**	0.51	0.86	–	–	–	–	–	–	0.80	0.14	0.14	–	–	–	**0.08**	0.37	0.62	1.1	0.20	0.20	–	–	–	3.8	0.62	0.65	**3.8**	1.6	6.9	**80.8**	**<MDC**

Table 4-16 (continued)

Burial Pits Radium Impacted Area – Surface And Sub-Surface Soil – Statistical And Analytical Sample Results

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Deep – Sub-Surface Soil – Analytical Data Results																																
SS-BP-022-DV-EL-6	**-0.06**	0.30	0.51	–	–	–	–	–	–	1.1	0.20	0.20	–	–	–	**-0.30**	0.43	0.73	1.2	0.30	0.40	–	–	–	10.6	1.1	0.90	34.9	3.7	4.5	237.4	4.6%
SS-BP-023-DV	**0.05**	0.14	0.24	–	–	–	–	–	–	1.1	0.21	0.14	–	–	–	**-0.06**	0.34	0.58	0.93	0.27	0.42	–	–	–	**0.19**	0.33	0.56	**2.3**	0.92	2.5	**6.2**	**<MDC**
SS-BP-028A-DV	**0.00**	0.07	0.11	–	–	–	–	–	–	4.8	0.31	0.10	–	–	–	**-0.04**	0.23	0.40	1.1	0.15	0.14	–	–	–	0.31	0.18	0.29	2.1	0.76	0.98	8.1	2.3%
SS-BP-028B-DV	**-0.01**	0.06	0.10	–	–	–	–	–	–	0.92	0.09	0.06	–	–	–	**-0.22**	0.23	0.44	1.1	0.17	0.11	–	–	–	**0.14**	0.13	0.21	1.5	0.63	0.74	**4.3**	**<MDC**
SS-BP-028C-DV	**0.04**	0.07	0.12	–	–	–	–	–	–	3.6	0.24	0.10	–	–	–	**-0.15**	0.22	0.40	1.0	0.13	0.19	–	–	–	**0.24**	0.17	0.28	2.2	0.43	0.96	**7.0**	**<MDC**
SS-BP-028C-DV-QC	**0.00**	0.05	0.09	–	–	–	–	–	–	2.3	0.18	0.06	–	–	–	**-0.07**	0.24	0.43	1.1	0.18	0.14	–	–	–	0.23	0.13	0.21	2.0	0.69	0.79	6.5	1.8%
SS-BP-028-DV	**0.06**	0.16	0.28	–	–	–	–	–	–	2.8	0.34	0.19	–	–	–	**0.19**	0.40	0.66	*0.89*	*0.15*	*0.02*	–	–	–	**0.65**	0.43	0.67	2.8	1.7	2.7	**15.2**	**<MDC**
SS-BP-028-DV-EL-9	**0.09**	0.88	1.5	–	–	–	–	–	–	192.0	12.0	1.0	183.0	11.0	0.80	**0.21**	0.38	0.63	*1.2*	*0.18*	*0.03*	*16.5*	*1.6*	*0.06*	*0.67*	*0.18*	*0.05*	*1.8*	*0.30*	*0.05*	19.0	5.5%
SS-BP-030-DV	**0.10**	0.16	0.26	–	–	–	–	–	–	1.0	0.19	0.09	–	–	–	**0.07**	0.48	0.81	1.3	0.35	0.42	–	–	–	**-0.10**	3.3	0.50	**1.8**	1.6	2.4	**3.6**	**<MDC**
SS-BP-034-DV	**0.13**	0.13	0.22	–	–	–	–	–	–	0.90	0.23	0.16	–	–	–	**-0.15**	0.42	0.72	1.0	0.27	0.34	–	–	–	**0.00**	0.32	0.56	2.2	0.95	2.0	**4.4**	**<MDC**
SS-BP-109-DV	**-0.02**	0.14	0.24	–	–	–	–	–	–	0.95	0.19	0.17	–	–	–	**0.65**	0.46	0.73	1.1	0.28	0.26	–	–	–	**0.32**	0.33	0.53	**2.0**	1.4	2.3	**8.2**	**<MDC**

NOTE 1 – Bolded values indicate analytical result is less than the MDC value, italicized values indicate an alpha spectroscopy versus gamma spectroscopy result, and cells with "–" indicate that no analysis was performed.
NOTE 2 – For data reported as "Ra-226," the decay chain was not known to be in secular equilibrium.
NOTE 3 – For data reported as "Ra-226 w/Ingrowth," the sample was sealed and the decay chain was allowed to achieve secular equilibrium prior to measurement of progeny by gamma spectroscopy.
NOTE 4 – The total Uranium calculation uses actual analytical data for U-235 and U-238; however, when U-234 was not reported, it was calculated as discussed in Section 4.0. Using the individual analytical values reported in the table above, which are rounded, may yield a slightly different value for total Uranium.
NOTE 5 – The reported total Uranium value was bolded when any of the Uranium isotope analytical results were less than MDC.
NOTE 6 – A value was not calculated for U-235 percent enrichment (by weight) if the total Uranium value was less than MDC.

Table 4-17

Burial Pits Radium Impacted Area – Surface And Sub-Surface Soil – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Surface – Surface Soil							
NB-98-0.5-SL	Energy*Solutions*	11/16/2007	–	865172.048	827401.727	*0.05*	*0.05*
SS-BP-015-SF	WEC	5/22/2008	BP-015	865286.140575345	827405.160364945	-0.06	0.02
SS-BP-016-SF	WEC	5/30/2008	BP-016	865243.515618484	827365.10866836	-0.12	0.01
SS-BP-022-SF	WEC	5/30/2008	BP-022	865201.085908431	827358.614581112	0.04	0.04
SS-BP-023-SF	WEC	5/29/2008	BP-023	865251.139578499	827427.286498248	-0.03	0.03
SS-BP-028A-SF	WEC	7/11/2008	BP-028A	865197.493	827395.35	0.03	0.05
SS-BP-028B-SF	WEC	7/11/2008	BP-028B	865201.184	827401.831	-0.02	0.02
SS-BP-028C-SF	WEC	7/14/2008	BP-028C	865194.857	827401.551	-0.01	0.03
SS-BP-028-SF	WEC	6/3/2008	BP-028	865197.40116592	827398.678317067	0.01	0.04
SS-BP-030-SF	WEC	6/3/2008	BP-030	865164.532857452	827401.170574666	0.00	0.03
SS-BP-034-SF	WEC	6/3/2008	BP-034	865160.365849272	827435.44840221	-0.01	0.04
SS-BP-109-SF	WEC	6/4/2008	BP-109	865206.331	827429.5	-0.03	0.03
Root – Sub-Surface Soil							
NB-98-4.5-SL	Energy*Solutions*	11/16/2007	–	865172.048	827401.727	0.25	0.25
SS-BP-015-SV	WEC	5/22/2008	BP-015	865286.140575345	827405.160364945	0.04	0.09
SS-BP-016-SV	WEC	5/30/2008	BP-016	865243.515618484	827365.10866836	0.02	0.09
SS-BP-022-SV	WEC	5/30/2008	BP-022	865201.085908431	827358.614581112	0.08	0.08
SS-BP-023-SV	WEC	5/29/2008	BP-023	865251.139578499	827427.286498248	0.17	0.17
SS-BP-028A-SV	WEC	7/11/2008	BP-028A	865197.493	827395.35	-0.04	0.03
SS-BP-028B-SV	WEC	7/11/2008	BP-028B	865201.184	827401.831	-0.08	0.01
SS-BP-028C-SV	WEC	7/14/2008	BP-028C	865194.857	827401.551	-0.04	0.03
SS-BP-028-SV	WEC	6/3/2008	BP-028	865197.40116592	827398.678317067	0.04	0.04

Table 4-17 (continued)

Burial Pits Radium Impacted Area – Surface And Sub-Surface Soil – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Root – Sub-Surface Soil							
SS-BP-030-SV	WEC	6/3/2008	BP-030	865164.532857452	827401.170574666	0.14	0.20
SS-BP-034-SV	WEC	6/3/2008	BP-034	865160.365849272	827435.44840221	-0.05	0.02
SS-BP-109-SV	WEC	6/4/2008	BP-109	865206.331	827429.5	-0.03	0.03
Deep – Sub-Surface Soil							
NB-98-9-SL	Energy*Solutions*	11/16/2007	–	865172.048	827401.727	0.00	0.01
SO-BP1A-14	Cabrera	11/1/2006	–	865213.658	827416.16	0.05	0.06
SO-BP1B-09	Cabrera	11/1/2006	–	865241.178	827400.988	-0.01	0.00
SO-BP1C-10	Cabrera	11/1/2006	–	865230.022	827387.397	0.03	0.04
SO-BP1C-10-D	Cabrera	11/1/2006	–	865230.022	827387.397	0.04	0.06
SO-BP1E-07	Cabrera	11/1/2006	–	865184.936	827429.075	0.05	0.05
SO-BP1E-07-D	Cabrera	11/1/2006	–	865184.936	827429.075	0.05	0.06
SO-BP1F-06	Cabrera	11/1/2006	–	865188.421773	827417.273942	0.06	0.06
SO-BP4B-08	Cabrera	11/1/2006	–	865183.307	827396.48	0.08	0.08
SO-BP4C-10	Cabrera	11/1/2006	–	865170.538	827392.757	0.06	0.06
SO-BP6A-06	Cabrera	11/1/2006	–	865264.513	827397.352	*0.47*	*0.47*
SO-BP6B-09	Cabrera	11/1/2006	–	865248.117	827400.552	0.02	0.02
SO-BP6C-12	Cabrera	11/1/2006	–	865261.973	827385.212	*80.43*	*80.43*
SO-BP6D-12	Cabrera	11/1/2006	–	865280.307	827394.019	*3.78*	*3.78*
SO-BP6E-14	Cabrera	11/1/2006	–	865271.017	827409.025	*0.03*	*0.03*
SO-BP6F-09	Cabrera	11/1/2006	–	865261.991	827381.172	*1.14*	*1.14*
SO-BP6G-10	Cabrera	11/1/2006	–	865284.797	827389.452	*2.25*	*2.25*
SS-BP-015-DV	WEC	5/22/2008	BP-015	865286.140575345	827405.160364945	0.02	0.02

Table 4-17 (continued)

Burial Pits Radium Impacted Area – Surface And Sub-Surface Soil – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Deep – Sub-Surface Soil							
SS-BP-016-DV	WEC	5/30/2008	BP-016	865243.515618484	827365.10866836	-0.02	0.02
SS-BP-022-DV	WEC	5/30/2008	BP-022	865201.085908431	827358.614581112	0.06	0.10
SS-BP-022-DV-EL-6	WEC	5/30/2008	BP-022	865201.085908431	827358.614581112	0.33	0.34
SS-BP-023-DV	WEC	5/29/2008	BP-023	865251.139578499	827427.286498248	0.02	0.02
SS-BP-028A-DV	WEC	7/11/2008	BP-028A	865197.493	827395.35	0.74	0.74
SS-BP-028B-DV	WEC	7/11/2008	BP-028B	865201.184	827401.831	-0.01	0.01
SS-BP-028C-DV	WEC	7/14/2008	BP-028C	865194.857	827401.551	0.51	0.51
SS-BP-028C-DV-QC	WEC	7/14/2008	BP-028C	865194.857	827401.551	0.27	0.27
SS-BP-028-DV	WEC	6/3/2008	BP-028	865197.40116592	827398.678317067	0.37	0.37
SS-BP-028-DV-EL-9	WEC	6/3/2008	BP-028	865197.40116592	827398.678317067	35.03	35.03
SS-BP-030-DV	WEC	6/3/2008	BP-030	865164.532857452	827401.170574666	0.01	0.01
SS-BP-034-DV	WEC	6/3/2008	BP-034	865160.365849272	827435.44840221	-0.01	0.01
SS-BP-109-DV	WEC	6/4/2008	BP-109	865206.331	827429.5	0.01	0.02

NOTE 1 – The analytical results as provided by the laboratory, including negative values, were used in the sum-of-fractions (SOF) calculation.
NOTE 2 – Negative analytical results were set to zero (0) in the SOF calculation.
NOTE 3 – The SOF value is italicized when all radionuclides of concern are represented in the SOF calculation.
NOTE 4 – Samples with a result exceeding the BTV of 1.7 pCi/g Th-232 were always included in the SOF calculation.
NOTE 5 – When Th-232 was included in the SOF calculation, a background of 1 pCi/g was subtracted from the analytical result.
NOTE 6 – When available, "Ra-226 w/Ingrowth" was included in the SOF calculation, otherwise, "Ra-226" was included.
NOTE 7 – A background of 1 pCi/g was subtracted from the Ra-226 result prior to the SOF calculation.
NOTE 8 – Cells with "–" indicate that no data was available.

Table 4-18

Soil Area – Southeast Of Process Buildings – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results (Including the Former Deul's Mountain Area)

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Surface – Surface Soil – Statistical Data Analyses																																
No. of Detects	2			2			1			44			6			41			34			5			31			35			28	28
No. of Non-Detects	43			5			6			1			0			4			11			0			14			10			17	17
Detection Freq.	4.4%			28.6%			14.3%			97.8%			100.0%			91.1%			75.6%			100.0%			68.9%			77.8%			62.2%	62.2%
Max. Conc.	3.8			0.12			0.01			2.0			1.5			691.0			31.6			46,800			1,940			451.0			49,050	75.7%
Min. Conc.	-0.68			0.00			-0.01			0.34			0.75			-0.16			-0.05			0.44			0.02			0.38			0.97	1.0%
Mean Conc.	0.31			0.03			0.00			0.90			1.1			70.9			1.5			9,394			67.2			47.1			1,652	12.1%
Std. Deviation	0.86			0.04			0.01			0.28			0.28			160.2			4.6			20,911			292.1			114.9			7,362	18.3%
Surface – Surface Soil – Analytical Data Results																																
BD-09-00-SL	**0.03**	0.69	1.3	***0.01***	*0.01*	*0.02*	***0.00***	*0.01*	*0.01*	**0.34**	0.28	0.43	0.75	0.19	0.14	86.9	14.0	0.74	**0.24**	0.46	0.80	–	–	–	3.6	0.74	0.91	4.3	2.6	3.9	76.3	11.7%
BD-10-00-SL	**3.8**	2.7	4.3	–	–	–	–	–	–	0.69	0.23	0.32	–	–	–	176.0	28.7	3.3	**0.34**	0.41	0.67	–	–	–	104.0	12.4	3.0	389.0	46.6	13.3	2,376	4.0%
BD-11-00-SL	**1.7**	1.2	2.0	–	–	–	–	–	–	1.1	0.28	0.35	–	–	–	19.0	5.2	5.8	0.80	0.43	0.69	–	–	–	102.0	12.2	2.5	432.0	51.5	11.2	2,383	3.6%
BD-12-00-SL	**1.9**	1.4	2.2	*0.06*	*0.04*	*0.03*	*0.01*	*0.01*	*0.01*	0.63	0.39	0.56	–	–	–	574.0	91.4	0.85	1.8	0.85	0.99	–	–	–	20.2	2.8	1.8	36.2	6.6	7.7	427.4	8.0%
DM-01-00-SL	2.3	0.99	1.5	–	–	–	–	–	–	1.4	0.56	0.88	–	–	–	35.8	7.7	6.2	31.6	4.3	1.9	–	–	–	308.0	36.4	5.5	102.0	13.5	11.6	7,140	31.9%
DM-02-00-SL	2.9	1.4	2.3	–	–	–	–	–	–	0.68	0.37	0.63	–	–	–	154.0	26.1	6.6	**-0.05**	0.55	0.99	–	–	–	237.0	27.9	4.9	451.0	54.5	23.2	5,031	7.6%
DM-02-05-SL	**0.13**	0.27	0.45	***0.02***	*0.02*	*0.04*	***0.00***	*0.01*	*0.02*	0.78	0.29	0.48	–	–	–	13.9	2.7	1.3	0.89	0.47	0.83	–	–	–	9.2	1.7	2.3	36.3	4.9	3.3	212.9	3.9%
DM-02-17-SL	**-0.68**	0.42	0.92	–	–	–	–	–	–	1.1	0.30	0.39	–	–	–	**0.90**	0.83	1.3	**0.61**	0.47	1.1	–	–	–	**0.07**	0.41	0.73	**0.38**	1.6	2.8	**1.7**	**<MDC**
DM-02-22-SL	**0.10**	0.25	0.42	–	–	–	–	–	–	0.74	0.29	0.39	–	–	–	10.9	2.2	1.3	*1.6*	*0.38*	*0.05*	*157.0*	*26.9*	*0.06*	*6.4*	*1.2*	*0.06*	*27.2*	*4.7*	*0.06*	190.6	3.5%
DM-02-33-SL	**0.53**	0.56	0.90	***0.01***	*0.01*	*0.02*	***0.00***	*0.01*	*0.02*	0.73	0.23	0.29	–	–	–	**-0.16**	0.69	1.3	1.2	0.46	0.69	–	–	–	2.9	0.67	0.84	12.0	2.6	3.2	67.6	3.7%
DM-03-05-SL	**0.16**	0.44	0.77	–	–	–	–	–	–	0.72	0.35	0.48	–	–	–	2.5	1.1	1.5	*1.2*	*0.23*	*0.03*	*0.71*	*0.14*	*0.02*	*0.06*	*0.03*	*0.02*	*0.86*	*0.16*	*0.02*	1.6	1.0%
DM-03-05-SL-FD	**0.05**	0.16	0.27	–	–	–	–	–	–	1.5	0.47	0.35	–	–	–	6.2	1.6	1.5	*1.1*	*0.23*	*0.02*	*0.44*	*0.09*	*0.02*	***0.02***	*0.02*	*0.02*	*0.51*	*0.10*	*0.02*	**0.97**	**<MDC**
DM-03-13-SL	**0.00**	0.41	0.75	–	–	–	–	–	–	1.2	0.38	0.40	–	–	–	5.8	1.5	1.4	1.1	0.47	0.79	–	–	–	**0.12**	0.40	0.71	**0.59**	1.4	2.4	**2.9**	**<MDC**
DM-03-25-SL	**-0.02**	0.14	0.26	–	–	–	–	–	–	1.1	0.45	0.52	–	–	–	7.0	1.7	1.4	**0.34**	0.66	1.2	–	–	–	**0.28**	0.47	0.80	**1.2**	1.4	2.3	**6.5**	**<MDC**
DM-03-34-SL	**0.23**	0.40	0.67	–	–	–	–	–	–	0.84	0.28	0.30	–	–	–	**0.90**	0.94	1.5	0.84	0.54	0.72	–	–	–	**0.20**	0.33	0.56	**0.70**	1.3	2.1	**4.4**	**<MDC**
NB-119-0.5-SL	**0.03**	0.15	0.26	***0.02***	*0.03*	*0.06*	***-0.01***	*0.03*	*0.06*	0.90	0.24	0.20	–	–	–	8.2	1.0	0.70	**0.45**	0.24	0.48	*9.7*	*1.5*	*0.07*	*0.35*	*0.16*	*0.08*	*2.0*	*0.40*	*0.08*	12.0	2.7%
OA-20-00-SL	**0.28**	0.44	0.74	–	–	–	–	–	–	0.96	0.28	0.40	–	–	–	52.6	8.5	0.82	**0.12**	0.47	0.87	–	–	–	**0.58**	0.46	0.70	2.9	1.6	2.6	**14.0**	**<MDC**
OA-21-00-SL	**0.33**	0.76	1.3	–	–	–	–	–	–	0.95	0.37	0.42	–	–	–	640.0	102.0	0.77	**0.08**	0.51	0.94	–	–	–	2.9	0.72	1.1	17.6	3.6	4.0	73.2	2.5%
OA-22-00-SL	**0.08**	0.56	1.0	***0.00***	*0.01*	*0.04*	***0.00***	*0.01*	*0.01*	0.90	0.23	0.26	–	–	–	691.0	110.0	0.78	**0.22**	0.32	0.53	–	–	–	1.9	0.51	0.82	8.4	2.1	2.6	44.0	3.4%
OA-23-00-SL	**-0.05**	2.1	3.6	–	–	–	–	–	–	0.44	0.22	0.40	–	–	–	189.0	30.3	0.80	**0.51**	0.42	0.61	–	–	–	120.0	14.2	2.5	34.4	9.7	17.5	2,836	35.1%

Table 4-18 (continued)

Soil Area – Southeast Of Process Buildings – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results (Including the Former Deul's Mountain Area)

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/g)	(U-235)
Surface – Surface Soil – Analytical Data Results																																
OA-24-00-SL	**-0.46**	0.67	1.3	–	–	–	–	–	–	1.1	0.32	0.46	–	–	–	13.1	2.4	1.0	0.94	0.47	0.78	–	–	–	**0.17**	0.51	0.88	**1.5**	1.8	2.9	**4.9**	**<MDC**
OA-25-00-SL	**-0.13**	0.23	0.40	–	–	–	–	–	–	0.44	0.24	0.36	–	–	–	87.6	14.1	0.84	**0.47**	0.41	0.89	–	–	–	**1.3**	0.84	1.6	4.7	1.4	2.2	**28.8**	**<MDC**
OA-26-00-SL	**-0.11**	1.7	2.8	*0.12*	*0.06*	*0.03*	***0.00***	*0.01*	*0.01*	0.80	0.36	0.47	–	–	–	109.0	18.0	3.1	0.62	0.46	0.62	–	–	–	39.0	4.9	2.1	165.0	20.6	8.1	911.0	3.6%
SS-BP-051-SF	**0.00**	0.17	0.29	–	–	–	–	–	–	0.99	0.17	0.19	–	–	–	5.3	0.68	0.66	0.88	0.25	0.37	–	–	–	0.89	0.37	0.54	**0.80**	1.7	3.0	**18.8**	**<MDC**
SS-BP-077-SF	**0.03**	0.08	0.13	–	–	–	–	–	–	0.95	0.09	0.05	–	–	–	**0.10**	0.16	0.27	0.93	0.10	0.08	–	–	–	**0.09**	0.12	0.20	**0.87**	0.34	1.2	**2.7**	**<MDC**
SS-BP-078-SF	**-0.02**	0.45	0.78	–	–	–	–	–	–	0.95	0.17	0.17	–	–	–	0.55	0.20	0.26	1.3	0.24	0.25	–	–	–	**0.43**	0.34	0.55	**0.90**	3.6	6.2	**9.2**	**<MDC**
SS-BP-079-SF	**0.04**	0.07	0.11	–	–	–	–	–	–	1.3	0.13	0.09	–	–	–	1.7	0.32	0.29	1.3	0.19	0.12	–	–	–	0.28	0.16	0.25	2.4	0.74	0.86	7.8	1.9%
SS-BP-080-SF	**-0.02**	0.10	0.17	–	–	–	–	–	–	1.0	0.10	0.06	–	–	–	5.7	0.66	0.27	0.91	0.15	0.09	–	–	–	0.35	0.16	0.25	2.7	1.1	1.3	9.5	2.0%
SS-HS-001-SF	**0.01**	0.14	0.23	–	–	–	–	–	–	0.88	0.09	0.06	–	–	–	1.2	0.34	0.47	0.98	0.15	0.12	–	–	–	40.4	2.5	0.50	7.1	1.5	1.9	1,024	46.8%
SS-HS-002-EL-0.5	**0.80**	2.1	3.4	–	–	–	–	–	–	2.0	0.41	0.39	1.5	0.23	0.20	7.4	0.81	0.62	5.0	0.99	1.3	*46,800*	*4,900*	*300.0*	*1,940*	*680.0*	*150.0*	*310.0*	*240.0*	*210.0*	49,050	49.1%
SS-HS-002-SF	**-0.15**	0.17	0.27	–	–	–	–	–	–	0.87	0.09	0.06	–	–	–	1.9	0.30	0.30	1.2	0.15	0.10	–	–	–	65.9	4.0	0.70	3.2	1.5	2.1	1,960	75.7%
SS-LA-050-SF	**0.09**	0.14	0.23	–	–	–	–	–	–	0.85	0.19	0.19	–	–	–	7.0	0.79	0.33	1.1	0.24	0.26	–	–	–	1.4	0.44	0.58	4.0	1.1	2.3	30.2	5.1%
SS-LA-059-SF	**0.10**	0.13	0.22	–	–	–	–	–	–	0.68	0.14	0.15	–	–	–	9.5	1.0	0.30	0.65	0.19	0.25	–	–	–	3.0	0.54	0.52	6.1	1.3	2.3	63.1	7.1%
SS-LA-089-SF	**-0.09**	0.17	0.29	–	–	–	–	–	–	0.84	0.17	0.18	1.2	0.18	0.10	115.0	9.9	0.30	0.43	0.22	0.29	–	–	–	4.0	0.66	0.72	11.4	1.7	2.8	88.7	5.3%
SS-LA-090-SF	**0.00**	0.41	0.70	–	–	–	–	–	–	0.81	0.15	0.13	–	–	–	39.6	3.5	0.30	0.65	0.18	0.23	–	–	–	0.85	0.36	0.54	**2.4**	1.4	6.3	**18.7**	**<MDC**
SS-LA-091-SF	**-0.05**	0.13	0.22	–	–	–	–	–	–	0.72	0.15	0.09	0.89	0.14	0.08	13.3	1.3	0.30	0.45	0.22	0.29	–	–	–	0.61	0.32	0.48	2.3	0.86	2.1	13.9	4.1%
SS-LA-092-SF	**0.08**	0.13	0.21	–	–	–	–	–	–	0.96	0.21	0.14	–	–	–	0.47	0.19	0.26	0.58	0.26	0.33	–	–	–	**0.48**	0.32	0.50	2.3	0.74	1.8	**11.5**	**<MDC**
SS-LA-093-SF	**0.02**	0.18	0.31	–	–	–	–	–	–	0.89	0.18	0.15	–	–	–	11.3	1.1	0.60	0.91	0.21	0.31	–	–	–	2.7	0.48	0.45	10.1	2.4	2.5	61.9	4.1%
SS-LA-094-SF	**0.12**	0.49	0.84	–	–	–	–	–	–	0.87	0.16	0.18	–	–	–	5.8	0.70	0.62	0.86	0.26	0.28	–	–	–	0.62	0.35	0.53	**2.2**	4.0	6.8	**14.0**	**<MDC**
SS-LA-095-SF	**0.01**	0.05	0.08	–	–	–	–	–	–	0.88	0.09	0.06	0.93	0.11	0.07	5.4	0.65	0.33	0.87	0.11	0.10	–	–	–	0.88	0.15	0.15	3.2	0.62	0.68	20.0	4.2%
SS-LA-096-SF	**0.03**	0.08	0.14	–	–	–	–	–	–	0.95	0.10	0.06	–	–	–	11.1	1.1	0.30	0.83	0.17	0.12	–	–	–	**0.19**	0.14	0.22	1.3	0.39	1.1	**5.0**	**<MDC**
SS-LA-097-SF	**0.01**	0.03	0.05	–	–	–	–	–	–	0.50	0.06	0.03	–	–	–	11.8	1.2	0.40	0.15	0.04	0.07	–	–	–	**0.11**	0.07	0.12	0.83	0.22	0.46	**3.0**	**<MDC**
SS-LA-098-SF	**-0.01**	0.06	0.09	–	–	–	–	–	–	0.89	0.08	0.05	–	–	–	28.6	2.6	0.30	0.85	0.13	0.10	–	–	–	1.8	0.21	0.19	8.7	1.0	0.80	42.5	3.1%
SS-LA-099-SF	**-0.06**	0.16	0.26	–	–	–	–	–	–	0.94	0.16	0.17	1.2	0.17	0.09	23.7	2.1	0.60	0.94	0.21	0.28	–	–	–	**0.50**	0.34	0.53	2.7	0.82	2.2	**12.3**	**<MDC**
SS-LA-100-SF	**-0.01**	0.04	0.07	–	–	–	–	–	–	0.83	0.08	0.05	–	–	–	1.2	0.30	0.34	0.73	0.10	0.08	–	–	–	0.44	0.12	0.15	1.5	0.59	0.65	9.9	4.3%

Table 4-18 (continued)

Soil Area – Southeast Of Process Buildings – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results (Including the Former Deul's Mountain Area)

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Root – Limestone Fill – Statistical Data Analyses																																
No. of Detects	0			0			0			1			0			47			0			46			46			46			46	46
No. of Non-Detects	1			0			0			0			0			0			1			0			1			1			1	1
Detection Freq.	0.0%			NA			NA			100.0%			NA			100.0%			0.0%			100.0%			97.9%			97.9%			97.9%	97.9%
Max. Conc.	0.36			NA			NA			0.50			NA			433.0			0.17			50.0			2.8			11.7			60.6	5.3%
Min. Conc.	0.36			NA			NA			0.50			NA			5.4			0.17			1.7			-0.02			0.69			2.7	0.9%
Mean Conc.	0.36			NA			NA			0.50			NA			40.9			0.17			8.3			0.40			2.1			10.7	2.4%
Std. Deviation	NA			NA			NA			NA			NA			73.8			NA			11.1			0.61			2.2			13.7	1.0%
Root – Limestone Fill – Analytical Data Results																																
LB01R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	433.0	69.0	1.0	–	–	–	*45.2*	*7.3*	*0.00*	*2.8*	*0.52*	*0.03*	*11.2*	*1.9*	*0.00*	59.2	3.8%
LB02R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	260.0	41.0	1.0	–	–	–	*46.4*	*7.7*	*0.10*	*2.5*	*0.54*	*0.06*	*11.7*	*2.0*	*0.10*	60.6	3.2%
LB03R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	31.3	5.1	0.90	–	–	–	*6.4*	*1.1*	*0.00*	*0.31*	*0.10*	*0.02*	*1.2*	*0.25*	*0.02*	7.9	3.7%
LB04R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10.3	1.8	0.90	–	–	–	*3.0*	*0.54*	*0.03*	*0.16*	*0.07*	*0.03*	*1.3*	*0.27*	*0.01*	4.5	1.8%
LB05R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	91.0	14.0	1.0	–	–	–	*16.7*	*2.7*	*0.00*	*0.83*	*0.19*	*0.03*	*4.2*	*0.74*	*0.02*	21.8	3.0%
LB06R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	187.0	30.0	1.0	–	–	–	*50.0*	*8.1*	*0.00*	*2.3*	*0.44*	*0.05*	*6.4*	*1.1*	*0.00*	58.7	5.3%
LB0708C1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	30.6	5.0	0.90	–	–	–	*4.3*	*0.74*	*0.03*	*0.24*	*0.08*	*0.03*	*1.3*	*0.25*	*0.03*	5.8	2.9%
LB07R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	35.3	5.7	1.0	–	–	–	*2.6*	*0.48*	*0.03*	*0.09*	*0.05*	*0.04*	*1.1*	*0.24*	*0.03*	3.9	1.2%
LB08R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	12.1	2.1	1.0	–	–	–	*3.1*	*0.55*	*0.03*	*0.15*	*0.06*	*0.03*	*0.69*	*0.16*	*0.03*	3.9	3.3%
LB09R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	21.2	3.5	0.90	–	–	–	*4.2*	*0.76*	*0.04*	*0.14*	*0.07*	*0.02*	*1.0*	*0.23*	*0.03*	5.4	2.0%
LB10R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	8.2	1.5	0.90	–	–	–	*6.0*	*1.0*	*0.00*	*0.24*	*0.09*	*0.05*	*1.1*	*0.23*	*0.04*	7.3	3.4%
LB11R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	16.3	2.8	0.80	–	–	–	*2.8*	*0.51*	*0.05*	*0.12*	*0.06*	*0.05*	*0.70*	*0.17*	*0.04*	3.6	2.6%
LB12R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	32.3	5.3	0.70	–	–	–	*4.1*	*0.71*	*0.03*	*0.19*	*0.07*	*0.03*	*1.1*	*0.23*	*0.03*	5.4	2.6%
LB13R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	14.7	2.5	0.80	–	–	–	*1.7*	*0.33*	*0.02*	*0.10*	*0.05*	*0.02*	*0.93*	*0.20*	*0.03*	2.7	1.6%
LB14R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6.7	1.3	0.80	–	–	–	*2.4*	*0.47*	*0.04*	*0.11*	*0.06*	*0.02*	*1.4*	*0.29*	*0.04*	3.9	1.2%
LB15R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	11.7	2.1	0.80	–	–	–	*10.9*	*1.8*	*0.00*	*0.28*	*0.10*	*0.05*	*2.7*	*0.50*	*0.04*	13.9	1.6%
LB15RD	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	22.3	3.7	0.80	–	–	–	*4.0*	*0.70*	*0.02*	*0.24*	*0.08*	*0.03*	*1.3*	*0.25*	*0.02*	5.5	2.9%
LB1617C2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	24.7	4.1	0.70	–	–	–	*3.4*	*0.62*	*0.03*	*0.10*	*0.05*	*0.03*	*1.3*	*0.27*	*0.03*	4.8	1.2%
LB16R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	9.0	1.6	0.80	–	–	–	*3.7*	*0.66*	*0.03*	*0.24*	*0.09*	*0.03*	*1.3*	*0.27*	*0.02*	5.2	2.8%
LB17R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	15.4	2.6	0.80	–	–	–	*3.2*	*0.57*	*0.03*	*0.18*	*0.07*	*0.02*	*1.4*	*0.28*	*0.01*	4.8	1.9%

Table 4-18 (continued)

Soil Area – Southeast Of Process Buildings – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results (Including the Former Deul's Mountain Area)

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Root – Limestone Fill – Analytical Data Results																																
LB18R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	42.2	6.8	1.0	–	–	–	*15.1*	*2.5*	*0.00*	*0.66*	*0.16*	*0.04*	*2.8*	*0.50*	*0.04*	18.5	3.6%
LB19R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10.1	1.8	0.80	–	–	–	*5.6*	*0.96*	*0.03*	*0.17*	*0.07*	*0.03*	*1.0*	*0.22*	*0.03*	6.8	2.5%
LB20R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	21.3	3.6	0.80	–	–	–	*4.6*	*0.79*	*0.02*	*0.17*	*0.07*	*0.02*	*1.4*	*0.27*	*0.03*	6.1	2.0%
LB21R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	25.4	4.2	0.80	–	–	–	*7.1*	*1.2*	*0.00*	*0.31*	*0.11*	*0.02*	*1.6*	*0.34*	*0.04*	9.0	2.9%
LB22R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	29.0	4.8	0.80	–	–	–	*3.3*	*0.59*	*0.03*	*0.10*	*0.05*	*0.03*	*1.4*	*0.28*	*0.03*	4.7	1.1%
LB23R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	13.8	2.4	0.80	–	–	–	*5.0*	*0.90*	*0.04*	*0.23*	*0.09*	*0.02*	*1.3*	*0.28*	*0.04*	6.5	2.7%
LB2425C3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	18.2	3.1	0.80	–	–	–	*2.8*	*0.50*	*0.04*	*0.14*	*0.06*	*0.04*	*1.2*	*0.25*	*0.03*	4.1	1.8%
LB24R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	16.4	2.8	0.80	–	–	–	*3.9*	*0.68*	*0.01*	*0.19*	*0.07*	*0.03*	*1.5*	*0.29*	*0.02*	5.6	1.9%
LB25R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	31.4	5.1	1.0	–	–	–	*5.8*	*0.98*	*0.04*	*0.27*	*0.09*	*0.04*	*1.3*	*0.26*	*0.04*	7.3	3.3%
LB26R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	44.9	7.3	0.80	–	–	–	*3.1*	*0.56*	*0.03*	*0.13*	*0.06*	*0.03*	*1.0*	*0.22*	*0.04*	4.3	2.0%
LB27R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	46.6	7.6	0.80	–	–	–	*2.4*	*0.45*	*0.02*	*0.08*	*0.05*	*0.03*	*1.4*	*0.28*	*0.02*	3.9	0.9%
LB28R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	19.1	3.2	1.2	–	–	–	*7.0*	*1.2*	*0.00*	*0.28*	*0.10*	*0.03*	*2.0*	*0.37*	*0.02*	9.2	2.2%
LB29R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	8.0	1.5	0.90	–	–	–	*2.4*	*0.45*	*0.03*	*0.14*	*0.06*	*0.02*	*1.4*	*0.28*	*0.03*	3.9	1.6%
LB30R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	14.7	2.5	0.90	–	–	–	*4.0*	*0.71*	*0.03*	*0.19*	*0.07*	*0.02*	*1.5*	*0.30*	*0.02*	5.7	1.9%
LB31R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5.4	1.1	1.0	–	–	–	*2.2*	*0.42*	*0.01*	*0.08*	*0.05*	*0.02*	*1.2*	*0.25*	*0.03*	3.5	1.0%
LB3233C4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	15.6	2.6	1.0	–	–	–	*5.0*	*0.86*	*0.04*	*0.35*	*0.11*	*0.03*	*1.8*	*0.35*	*0.03*	7.1	2.9%
LB32R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	25.2	4.1	1.0	–	–	–	*12.1*	*2.0*	*0.00*	*0.54*	*0.15*	*0.03*	*3.0*	*0.55*	*0.03*	15.7	2.7%
LB33R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	15.7	2.6	0.90	–	–	–	*4.0*	*0.71*	*0.01*	*0.12*	*0.06*	*0.03*	*1.2*	*0.25*	*0.02*	5.3	1.6%
LB34R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	11.7	2.0	0.80	–	–	–	*3.1*	*0.56*	*0.05*	*0.18*	*0.07*	*0.05*	*1.3*	*0.27*	*0.04*	4.6	2.1%
LB35R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	29.3	4.8	0.90	–	–	–	*11.2*	*1.9*	*0.00*	*0.50*	*0.13*	*0.03*	*2.5*	*0.46*	*0.04*	14.2	3.0%
LB3637RC5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	23.4	3.8	0.90	–	–	–	*4.6*	*0.81*	*0.03*	*0.22*	*0.08*	*0.03*	*1.3*	*0.27*	*0.02*	6.1	2.5%
LB36R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	28.4	4.7	1.2	–	–	–	*12.6*	*2.1*	*0.00*	*0.79*	*0.19*	*0.03*	*3.1*	*0.56*	*0.03*	16.5	3.8%
LB36RD	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7.8	1.5	1.1	–	–	–	*3.9*	*0.70*	*0.03*	*0.13*	*0.06*	*0.03*	*1.4*	*0.28*	*0.03*	5.4	1.5%
LB37R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	15.1	2.6	1.1	–	–	–	*7.6*	*1.4*	*0.10*	*0.88*	*0.25*	*0.08*	*2.9*	*0.61*	*0.08*	11.4	4.4%
LB38R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	14.7	2.5	1.2	–	–	–	*16.1*	*2.7*	*0.00*	*0.74*	*0.18*	*0.03*	*3.6*	*0.63*	*0.03*	20.4	3.1%
LB39R	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	23.5	3.9	1.1	–	–	–	*2.6*	*0.48*	*0.03*	*0.09*	*0.05*	*0.02*	*1.2*	*0.26*	*0.01*	3.9	1.1%
LS-02-00-SL	**0.36**	0.45	0.72	–	–	–	–	–	–	0.50	0.23	0.28	–	–	–	93.6	15.1	0.81	**0.17**	0.30	0.51	–	–	–	**-0.02**	0.56	0.97	**1.9**	1.3	2.0	**3.8**	**<MDC**

Table 4-18 (continued)

Soil Area – Southeast Of Process Buildings – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results (Including the Former Deul's Mountain Area)

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Root – Sub-Surface Soil – Statistical Data Analyses																																
No. of Detects	0			0			0			30			0			21			29			4			10			13			8	8
No. of Non-Detects	30			1			1			0			0			9			1			0			20			17			22	22
Detection Freq.	0.0%			0.0%			0.0%			100.0%			NA			70.0%			96.7%			100.0%			33.3%			43.3%			26.7%	26.7%
Max. Conc.	0.12			0.01			0.00			1.3			NA			15.2			1.7			9.1			157.0			14.2			5,021	55.3%
Min. Conc.	-0.18			0.01			0.00			0.73			NA			-0.04			0.67			0.75			-0.13			-1.0			0.00	0.1%
Mean Conc.	0.00			0.01			0.00			0.98			NA			2.7			1.0			3.2			9.6			2.2			282.1	8.9%
Std. Deviation	0.06			NA			NA			0.15			NA			3.5			0.23			4.0			34.7			2.9			1,052	17.8%
Root – Sub-Surface Soil – Analytical Data Results																																
BD-14-05-SL	**0.05**	0.14	0.24	–	–	–	–	–	–	0.97	0.32	0.49	–	–	–	**1.4**	1.0	1.5	*1.1*	*0.23*	*0.03*	*1.2*	*0.22*	*0.01*	*0.08*	*0.03*	*0.02*	*0.92*	*0.17*	*0.01*	2.2	1.3%
BD-15-05-SL	**-0.18**	0.38	0.74	–	–	–	–	–	–	0.87	0.27	0.41	–	–	–	**0.13**	0.85	1.5	1.1	0.63	0.82	–	–	–	**-0.13**	0.39	0.74	**-0.25**	1.5	2.6	**0**	**<MDC**
BD-16-05-SL	**0.02**	0.15	0.26	***0.01***	*0.01*	*0.02*	***0.00***	*0.01*	*0.01*	0.88	0.30	0.42	–	–	–	1.6	1.0	1.5	**0.75**	0.71	1.1	*1.7*	*0.37*	*0.05*	*0.07*	*0.05*	*0.04*	*0.87*	*0.22*	*0.04*	2.7	1.3%
NB-119-2.5-SL	**0.05**	0.11	0.18	–	–	–	–	–	–	0.76	0.17	0.12	–	–	–	7.3	0.92	0.68	0.67	0.18	0.27	*9.1*	*1.4*	*0.08*	*0.38*	*0.17*	*0.04*	*2.0*	*0.42*	*0.06*	11.5	2.8%
NB-119-4.5-SL	**-0.05**	0.30	0.29	–	–	–	–	–	–	1.1	0.23	0.17	–	–	–	7.0	0.86	0.58	1.0	0.26	0.15	–	–	–	**0.27**	0.33	0.54	**0.30**	1.1	2.0	**5.7**	**<MDC**
OA-18-03-SL	**-0.07**	0.39	0.72	–	–	–	–	–	–	0.94	0.25	0.28	–	–	–	**0.59**	0.80	1.3	0.90	0.42	0.76	*0.75*	*0.15*	*0.03*	*0.02*	*0.02*	*0.01*	*0.79*	*0.16*	*0.02*	1.6	0.5%
OA-19-05-SL	**0.12**	0.14	0.23	–	–	–	–	–	–	1.0	0.32	0.44	–	–	–	1.7	0.91	1.3	1.3	0.76	0.99	–	–	–	**0.31**	0.49	0.83	**0.86**	0.89	1.8	**6.7**	**<MDC**
SS-BP-051-SV	**0.00**	0.12	0.20	–	–	–	–	–	–	1.1	0.18	0.14	–	–	–	**0.43**	0.43	0.70	0.90	0.23	0.29	–	–	–	**0.26**	0.29	0.48	**1.2**	1.3	2.2	**6.2**	**<MDC**
SS-BP-077-SV	**0.03**	0.06	0.10	–	–	–	–	–	–	1.2	0.12	0.07	–	–	–	**0.02**	0.16	0.28	1.2	0.12	0.10	–	–	–	0.30	0.14	0.23	1.3	0.52	0.66	7.0	3.5%
SS-BP-078-SV	**-0.05**	0.16	0.27	–	–	–	–	–	–	0.93	0.16	0.19	–	–	–	**0.17**	0.17	0.28	1.7	0.31	0.14	–	–	–	**0.32**	0.33	0.54	**-1.0**	180.0	4.0	**10.7**	**<MDC**
SS-BP-079-SV	**-0.01**	0.09	0.15	–	–	–	–	–	–	1.1	0.11	0.06	–	–	–	0.39	0.21	0.30	1.1	0.12	0.11	–	–	–	**0.08**	0.14	0.24	1.6	1.0	1.2	**3.3**	**<MDC**
SS-BP-080-SV	**0.02**	0.10	0.16	–	–	–	–	–	–	1.2	0.11	0.08	–	–	–	0.43	0.19	0.27	1.2	0.16	0.12	–	–	–	**0.05**	0.15	0.24	**1.0**	0.38	1.4	**2.1**	**<MDC**
SS-HS-001-SV	**-0.15**	0.34	0.56	–	–	–	–	–	–	0.86	0.10	0.07	–	–	–	0.41	0.21	0.32	1.1	0.14	0.10	–	–	–	114.0	6.9	1.2	14.2	4.4	5.2	3,034	55.3%
SS-HS-001-SV-A	**0.00**	0.08	0.13	–	–	–	–	–	–	0.88	0.09	0.06	–	–	–	**-0.04**	0.17	0.30	1.1	0.14	0.12	–	–	–	10.0	0.67	0.32	10.7	1.3	1.2	209.4	12.7%
SS-HS-002-SV	**0.06**	0.21	0.35	–	–	–	–	–	–	0.88	0.09	0.06	–	–	–	0.32	0.19	0.30	1.2	0.16	0.09	–	–	–	157.0	9.5	1.3	**2.4**	2.2	3.7	**5,021**	**<MDC**
SS-LA-050-SV	**0.06**	0.14	0.24	–	–	–	–	–	–	0.73	0.17	0.20	–	–	–	1.3	0.30	0.32	0.77	0.24	0.40	–	–	–	**0.39**	0.38	0.62	**1.5**	0.84	2.2	**9.0**	**<MDC**
SS-LA-050-SV-QC	**0.07**	0.14	0.23	–	–	–	–	–	–	0.78	0.17	0.10	–	–	–	1.1	0.29	0.34	0.90	0.27	0.36	–	–	–	**0.42**	0.31	0.50	**2.0**	0.83	2.3	**10.0**	**<MDC**
SS-LA-059-SV	**0.10**	0.17	0.28	–	–	–	–	–	–	0.73	0.18	0.17	–	–	–	8.2	0.88	0.32	0.76	0.27	0.43	–	–	–	2.6	0.55	0.64	**2.2**	1.0	3.0	**54.3**	**<MDC**
SS-LA-089-SV	**-0.01**	0.14	0.24	–	–	–	–	–	–	0.90	0.17	0.15	–	–	–	15.2	1.5	0.30	0.74	0.19	0.37	–	–	–	**0.41**	0.33	0.52	2.7	0.90	1.9	**10.6**	**<MDC**
SS-LA-089-SV-QC	**-0.02**	0.16	0.27	–	–	–	–	–	–	0.92	0.21	0.18	–	–	–	6.2	0.72	0.32	0.94	0.30	0.50	–	–	–	**0.23**	0.38	0.63	**2.2**	0.92	2.3	**6.7**	**<MDC**

Table 4-18 (continued)

Soil Area – Southeast Of Process Buildings – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results (Including the Former Deul's Mountain Area)

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium	Perc. Enrich.
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	(pCi/g)	(U-235)
Root – Sub-Surface Soil – Analytical Data Results																																
SS-LA-090-SV	**-0.05**	0.15	0.25	–	–	–	–	–	–	0.97	0.16	0.16	–	–	–	6.1	0.69	0.26	1.4	0.26	0.21	–	–	–	**0.07**	0.30	0.51	**1.2**	1.1	1.8	**2.7**	<MDC
SS-LA-091-SV	**-0.02**	0.15	0.25	–	–	–	–	–	–	1.0	0.18	0.12	–	–	–	1.1	0.26	0.26	0.77	0.24	0.36	–	–	–	**0.08**	0.29	0.50	**1.5**	1.5	2.5	**3.2**	<MDC
SS-LA-092-SV	**0.02**	0.11	0.20	–	–	–	–	–	–	1.1	0.20	0.12	–	–	–	**0.06**	0.16	0.28	1.3	0.31	0.17	–	–	–	**0.20**	0.32	0.54	**1.9**	1.6	2.3	**5.8**	<MDC
SS-LA-093-SV	**-0.06**	0.46	0.79	–	–	–	–	–	–	0.95	0.17	0.14	–	–	–	1.4	0.42	0.61	1.1	0.24	0.25	–	–	–	**0.23**	0.27	0.44	**2.7**	3.5	5.9	**7.3**	<MDC
SS-LA-094-SV	**0.03**	0.14	0.25	–	–	–	–	–	–	1.2	0.22	0.17	–	–	–	3.3	0.56	0.68	1.2	0.30	0.30	–	–	–	**0.18**	0.32	0.54	**1.9**	1.8	2.4	**5.5**	<MDC
SS-LA-095-SV	**-0.01**	0.04	0.06	–	–	–	–	–	–	0.95	0.13	0.08	–	–	–	2.3	0.41	0.37	0.93	0.14	0.09	–	–	–	0.30	0.12	0.18	2.2	0.63	0.68	8.1	2.1%
SS-LA-096-SV	**0.00**	0.05	0.08	–	–	–	–	–	–	1.1	0.10	0.07	–	–	–	2.5	0.43	0.39	1.0	0.12	0.16	–	–	–	**0.12**	0.12	0.19	1.5	0.37	0.77	**3.9**	<MDC
SS-LA-098-SV	**-0.02**	0.06	0.09	–	–	–	–	–	–	1.3	0.12	0.09	–	–	–	4.3	0.56	0.35	1.3	0.16	0.14	–	–	–	**0.00**	0.13	0.23	2.0	0.73	0.84	**2.1**	**0.1%**
SS-LA-099-SV	**-0.04**	0.17	0.29	–	–	–	–	–	–	0.99	0.19	0.18	–	–	–	6.3	0.74	0.64	0.85	0.34	0.36	–	–	–	**0.11**	0.34	0.59	**0.90**	1.6	2.8	**3.1**	<MDC
SS-LA-100-SV	**-0.01**	0.07	0.11	–	–	–	–	–	–	1.2	0.12	0.08	–	–	–	**0.08**	0.23	0.39	1.1	0.13	0.15	–	–	–	**0.20**	0.15	0.25	2.1	0.51	0.94	**6.1**	<MDC

Table 4-18 (continued)

Soil Area – Southeast Of Process Buildings – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results (Including the Former Deul's Mountain Area)

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Deep – Sub-Surface Soil – Statistical Data Analyses																																
No. of Detects	1			0			0			43			0			14			38			1			4			11			3	3
No. of Non-Detects	42			0			0			0			0			28			5			0			39			32			40	40
Detection Freq.	2.3%			NA			NA			100.0%			NA			33.3%			88.4%			100.0%			9.3%			25.6%			7.0%	7.0%
Max. Conc.	0.27			NA			NA			1.3			NA			18.8			1.6			1.1			0.63			3.2			14.5	3.9%
Min. Conc.	-0.17			NA			NA			0.40			NA			-0.44			0.39			1.1			-0.37			-0.30			0.65	0.1%
Mean Conc.	0.00			NA			NA			0.99			NA			1.5			1.1			1.1			0.14			1.2			4.5	1.8%
Std. Deviation	0.09			NA			NA			0.21			NA			3.5			0.25			NA			0.18			0.66			2.8	1.6%
Deep– Sub-Surface Soil – Analytical Data Results																																
BD-13-09-SL	**-0.17**	0.24	0.43	–	–	–	–	–	–	0.61	0.22	0.40	–	–	–	**0.68**	0.90	1.5	**0.63**	0.38	0.80	*1.1*	*0.20*	*0.02*	*0.09*	*0.04*	*0.03*	*0.89*	*0.17*	*0.02*	2.1	1.5%
BD-13-15-SL	**-0.14**	0.24	0.43	–	–	–	–	–	–	1.0	0.27	0.41	–	–	–	**0.74**	0.87	1.4	1.1	0.42	0.87	–	–	–	**-0.37**	0.47	0.84	**0.33**	1.3	2.2	**0.65**	**<MDC**
BD-13-23-SL	**0.19**	0.41	0.71	–	–	–	–	–	–	0.84	0.35	0.42	–	–	–	**0.81**	0.91	1.5	1.1	0.45	0.79	–	–	–	**-0.16**	0.43	0.81	**1.3**	1.5	2.5	**2.6**	**<MDC**
BD-13-30-SL	**0.02**	0.58	1.1	–	–	–	–	–	–	0.60	0.23	0.33	–	–	–	**1.0**	0.94	1.5	**0.63**	0.41	0.78	–	–	–	**0.20**	0.37	0.63	**1.2**	1.7	2.7	**4.9**	**<MDC**
BD-14-13-SL	**0.22**	0.41	0.69	–	–	–	–	–	–	0.66	0.23	0.37	–	–	–	**0.62**	0.88	1.5	0.94	0.39	0.67	–	–	–	**0.05**	0.38	0.69	**0.33**	1.4	2.5	**1.3**	**<MDC**
BD-14-25-SL	**-0.08**	0.14	0.26	–	–	–	–	–	–	0.89	0.35	0.36	–	–	–	**0.20**	0.85	1.5	1.1	0.57	1.1	–	–	–	**-0.17**	0.46	0.86	**1.2**	1.5	2.4	**2.3**	**<MDC**
BD-14-31-SL	**-0.01**	0.11	0.20	–	–	–	–	–	–	0.40	0.24	0.32	–	–	–	**-0.01**	0.83	1.5	**0.68**	0.59	0.85	–	–	–	**0.25**	0.40	0.66	**0.68**	1.1	1.8	**5.5**	**<MDC**
BD-15-17-SL	0.27	0.18	0.26	–	–	–	–	–	–	0.93	0.35	0.52	–	–	–	**0.21**	0.94	1.6	1.5	0.67	1.2	–	–	–	**0.32**	0.58	0.98	**1.5**	1.3	2.7	**7.6**	**<MDC**
BD-15-25-SL	**-0.03**	0.35	0.64	–	–	–	–	–	–	0.67	0.22	0.34	–	–	–	**0.92**	0.89	1.4	0.98	0.43	0.74	–	–	–	**0.25**	0.35	0.57	**1.3**	1.6	2.6	**6.1**	**<MDC**
BD-15-31-SL	**-0.03**	0.16	0.30	–	–	–	–	–	–	0.95	0.45	0.58	–	–	–	**0.32**	0.93	1.6	1.5	0.83	0.97	–	–	–	**0.13**	0.58	1.0	**0.93**	1.3	2.1	**3.4**	**<MDC**
BD-16-15-SL	**-0.15**	0.45	0.86	–	–	–	–	–	–	1.2	0.41	0.45	–	–	–	**0.01**	0.83	1.5	1.2	0.59	0.66	–	–	–	0.55	0.37	0.51	**0.39**	1.1	2.0	**11.9**	**<MDC**
BD-16-19-SL	**-0.12**	0.63	1.2	–	–	–	–	–	–	0.89	0.36	0.41	–	–	–	**0.08**	0.79	1.4	1.4	0.74	0.90	–	–	–	**0.27**	0.49	0.83	**2.2**	2.1	3.4	**7.5**	**<MDC**
BD-16-25-SL	**0.09**	0.17	0.28	–	–	–	–	–	–	1.1	0.46	0.54	–	–	–	**0.24**	0.85	1.5	1.4	0.72	1.2	–	–	–	**0.31**	0.56	0.95	**0.55**	0.88	1.7	**6.5**	**<MDC**
BD-16-34-SL	**-0.04**	0.46	0.85	–	–	–	–	–	–	1.1	0.29	0.32	–	–	–	**0.16**	0.85	1.5	0.97	0.50	0.93	–	–	–	**0.16**	0.42	0.73	**0.95**	1.1	1.7	**4.0**	**<MDC**
NB-119-13.5-SL	**0.05**	0.16	0.26	–	–	–	–	–	–	1.1	0.17	0.18	–	–	–	–	–	–	1.1	0.28	0.42	–	–	–	0.63	0.34	0.52	2.5	0.86	1.6	14.5	3.9%
OA-18-17-SL	**-0.15**	0.32	0.65	–	–	–	–	–	–	1.1	0.36	0.45	–	–	–	**0.94**	0.79	1.2	1.3	0.52	0.94	–	–	–	**0.32**	0.38	0.61	**2.1**	1.6	2.5	**8.2**	**<MDC**
OA-18-25-SL	**0.05**	0.15	0.26	–	–	–	–	–	–	0.86	0.31	0.41	–	–	–	**0.02**	0.72	1.3	**1.2**	0.88	1.3	–	–	–	**-0.25**	0.53	1.00	**0.65**	1.1	1.9	**1.3**	**<MDC**
OA-18-33-SL	**-0.10**	0.35	0.66	–	–	–	–	–	–	0.75	0.31	0.39	–	–	–	**0.84**	0.80	1.3	0.86	0.44	0.83	–	–	–	**0.05**	0.32	0.57	**1.9**	1.3	2.0	**3.1**	**<MDC**
OA-19-15-SL	**0.07**	0.42	0.76	–	–	–	–	–	–	1.2	0.38	0.39	–	–	–	**-0.44**	0.72	1.3	1.2	0.52	0.90	–	–	–	**0.14**	0.38	0.65	**0.74**	1.2	2.0	**3.5**	**<MDC**
OA-19-25-SL	**0.03**	0.14	0.25	–	–	–	–	–	–	0.95	0.41	0.50	–	–	–	**0.15**	0.76	1.3	1.6	0.62	0.97	–	–	–	**0.09**	0.49	0.86	**1.6**	1.3	2.1	**3.5**	**<MDC**

Table 4-18 (continued)

Soil Area – Southeast Of Process Buildings – Surface Soil, Sub-Surface Soil, And Limestone Fill – Statistical And Analytical Sample Results (Including the Former Deul's Mountain Area)

Sample ID	Am-241 (pCi/g)			Np-237 (pCi/g)			Pu-239/240 (pCi/g)			Ra-226 (pCi/g)			Ra-226 w/Ingrowth (pCi/g)			Tc-99 (pCi/g)			Th-232 (pCi/g)			U-234 (pCi/g)			U-235 (pCi/g)			U-238 (pCi/g)			Total Uranium (pCi/g)	Perc. Enrich. (U-235)
	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC	Conc.	±2σ	MDC		
Deep – Sub-Surface Soil – Analytical Data Results																																
OA-19-33-SL	**-0.05**	0.34	0.65	–	–	–	–	–	–	0.64	0.22	0.36	–	–	–	**-0.17**	0.73	1.3	**0.39**	0.47	0.75	–	–	–	**0.20**	0.30	0.50	**0.10**	1.1	2.0	**4.4**	**<MDC**
SS-BP-051-DV	**0.02**	0.17	0.29	–	–	–	–	–	–	1.2	0.23	0.13	–	–	–	**0.30**	0.44	0.73	1.0	0.28	0.39	–	–	–	**0.24**	0.34	0.56	**0.70**	1.6	2.8	**5.3**	**<MDC**
SS-BP-077-DV	**-0.01**	0.10	0.16	–	–	–	–	–	–	1.2	0.11	0.06	–	–	–	**-0.13**	0.14	0.27	1.1	0.14	0.11	–	–	–	0.34	0.15	0.24	3.2	1.5	1.5	9.9	1.7%
SS-BP-078-DV	**0.05**	0.14	0.23	–	–	–	–	–	–	1.1	0.19	0.17	–	–	–	**0.13**	0.17	0.28	0.95	0.21	0.29	–	–	–	**0.10**	0.30	0.52	**0.80**	1.4	2.4	**2.8**	**<MDC**
SS-BP-079-DV	**0.00**	0.06	0.10	–	–	–	–	–	–	1.1	0.13	0.07	–	–	–	0.69	0.23	0.29	1.3	0.15	0.16	–	–	–	**0.13**	0.14	0.23	1.7	0.77	0.85	**4.4**	**<MDC**
SS-BP-080-DV	**-0.02**	0.05	0.09	–	–	–	–	–	–	1.1	0.11	0.06	–	–	–	0.89	0.24	0.28	1.0	0.13	0.10	–	–	–	**0.01**	0.12	0.19	1.1	0.29	0.70	**1.3**	**0.1%**
SS-LA-050-DV	**-0.01**	0.44	0.77	–	–	–	–	–	–	0.80	0.13	0.13	–	–	–	**-0.05**	0.18	0.33	0.97	0.22	0.27	–	–	–	**0.25**	0.31	0.51	**1.2**	3.7	6.3	**6.0**	**<MDC**
SS-LA-059-DV	**-0.03**	0.53	0.91	–	–	–	–	–	–	1.0	0.17	0.17	–	–	–	1.2	0.28	0.31	1.3	0.25	0.25	–	–	–	**0.06**	0.31	0.54	**-0.30**	7.3	6.2	**2.0**	**<MDC**
SS-LA-089-DV	**0.08**	0.46	0.79	–	–	–	–	–	–	0.87	0.15	0.16	–	–	–	3.2	0.45	0.30	0.96	0.22	0.26	–	–	–	**0.24**	0.34	0.56	**1.8**	3.4	5.8	**6.5**	**<MDC**
SS-LA-090-DV	**0.06**	0.13	0.22	–	–	–	–	–	–	0.97	0.26	0.22	–	–	–	18.8	1.8	0.30	1.3	0.32	0.22	–	–	–	**0.05**	0.34	0.58	**0.70**	1.6	2.7	**1.7**	**<MDC**
SS-LA-091-DV	**0.03**	0.55	0.95	–	–	–	–	–	–	0.93	0.18	0.17	–	–	–	2.4	0.38	0.27	1.4	0.27	0.09	–	–	–	**0.18**	0.33	0.55	**1.3**	3.8	6.5	**4.8**	**<MDC**
SS-LA-092-DV	**-0.07**	0.15	0.25	–	–	–	–	–	–	1.1	0.22	0.14	–	–	–	**-0.12**	0.14	0.27	1.3	0.30	0.32	–	–	–	**0.11**	0.32	0.55	**1.3**	1.4	2.3	**3.5**	**<MDC**
SS-LA-092-DV-QC	**-0.03**	0.16	0.27	–	–	–	–	–	–	1.3	0.20	0.11	–	–	–	**0.06**	0.16	0.28	1.1	0.27	0.29	–	–	–	**0.12**	0.36	0.62	**1.4**	1.6	2.6	**3.8**	**<MDC**
SS-LA-093-DV	**-0.02**	0.12	0.20	–	–	–	–	–	–	1.1	0.20	0.16	–	–	–	**0.38**	0.37	0.60	1.1	0.26	0.31	–	–	–	**0.14**	0.30	0.50	**1.6**	0.66	1.7	**4.4**	**<MDC**
SS-LA-094-DV	**0.05**	0.12	0.20	–	–	–	–	–	–	1.1	0.19	0.11	–	–	–	0.95	0.40	0.61	1.0	0.25	0.46	–	–	–	**0.17**	0.31	0.52	**0.90**	1.4	2.4	**4.2**	**<MDC**
SS-LA-095-DV	**-0.02**	0.06	0.09	–	–	–	–	–	–	1.2	0.12	0.06	–	–	–	0.54	0.25	0.36	1.3	0.18	0.13	–	–	–	**0.09**	0.14	0.23	2.2	0.89	0.94	**4.1**	**<MDC**
SS-LA-096-DV	**-0.02**	0.05	0.09	–	–	–	–	–	–	1.1	0.11	0.08	–	–	–	2.2	0.39	0.36	1.3	0.14	0.13	–	–	–	**0.12**	0.12	0.20	1.1	0.30	0.74	**3.4**	**<MDC**
SS-LA-096-DV-QC	**0.01**	0.05	0.09	–	–	–	–	–	–	1.1	0.10	0.06	–	–	–	0.45	0.20	0.28	1.2	0.16	0.16	–	–	–	**0.10**	0.12	0.20	0.83	0.27	0.70	**2.8**	**<MDC**
SS-LA-097-DV	**-0.03**	0.05	0.09	–	–	–	–	–	–	1.1	0.11	0.07	–	–	–	1.9	0.35	0.33	1.0	0.14	0.15	–	–	–	**0.07**	0.12	0.21	1.1	0.49	0.68	**2.6**	**<MDC**
SS-LA-098-DV	**0.00**	0.10	0.16	–	–	–	–	–	–	1.2	0.11	0.07	–	–	–	11.5	1.2	0.40	1.2	0.17	0.11	–	–	–	**0.13**	0.15	0.25	**1.1**	0.44	1.4	**3.7**	**<MDC**
SS-LA-099-DV	**-0.08**	0.18	0.31	–	–	–	–	–	–	1.2	0.21	0.18	–	–	–	2.5	0.47	0.60	1.1	0.27	0.33	–	–	–	**-0.05**	0.37	0.64	**1.4**	1.7	2.8	**2.8**	**<MDC**
SS-LA-099-DV-QC	**-0.01**	0.05	0.09	–	–	–	–	–	–	1.2	0.11	0.08	–	–	–	9.1	0.97	0.36	1.0	0.15	0.12	–	–	–	**0.10**	0.13	0.21	1.5	0.58	0.75	**3.6**	**<MDC**
SS-LA-100-DV	**-0.02**	0.10	0.17	–	–	–	–	–	–	1.1	0.11	0.06	–	–	–	**0.15**	0.21	0.35	1.1	0.16	0.09	–	–	–	**0.18**	0.14	0.23	2.0	1.1	1.3	**5.6**	**<MDC**

NOTE 1 – Bolded values indicate analytical result is less than the MDC value, italicized values indicate an alpha spectroscopy versus gamma spectroscopy result, and cells with "–" indicate that no analysis was performed.
NOTE 2 – For data reported as "Ra-226," the decay chain was not known to be in secular equilibrium.
NOTE 3 – For data reported as "Ra-226 w/Ingrowth," the sample was sealed and the decay chain was allowed to achieve secular equilibrium prior to measurement of progeny by gamma spectroscopy.
NOTE 4 – The total Uranium calculation uses actual analytical data for U-235 and U-238; however, when U-234 was not reported, it was calculated as discussed in Section 4.0 . Using the individual analytical values reported in the table above, which are rounded, may yield a slightly different value for total Uranium.
NOTE 5 – The reported total Uranium value was bolded when any of the Uranium isotope analytical results were less than MDC.
NOTE 6 – A value was not calculated for U-235 percent enrichment (by weight) if the total Uranium value was less than MDC.

Table 4-19 **Page 1 of 8**

Soil Area – Southeast Of Process Buildings – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Surface – Surface Soil							
BD-09-00-SL	SAIC	5/5/2004	BD-09	864884.001556	827362.31364	*0.71*	*0.71*
BD-10-00-SL	SAIC	5/6/2004	BD-10	864804.601331	827296.806282	6.72	6.72
BD-11-00-SL	SAIC	5/6/2004	BD-11	864739.543479	827236.680766	5.80	5.80
BD-12-00-SL	SAIC	5/5/2004	BD-12	864678.172445	827191.052507	*4.69*	*4.69*
DM-01-00-SL	SAIC	5/6/2004	DM-01	864947.527279	827533.584875	21.69	21.69
DM-02-00-SL	SAIC	5/6/2004	DM-02	864942.421	827469.872	12.50	12.50
DM-02-05-SL	SAIC	7/1/2003	DM-02	864942.421	827469.872	*0.59*	*0.59*
DM-02-17-SL	SAIC	7/1/2004	DM-02	864942.421	827469.872	0.01	0.01
DM-02-22-SL	SAIC	7/1/2005	DM-02	864942.421	827469.872	0.50	0.50
DM-02-33-SL	SAIC	7/1/2006	DM-02	864942.421	827469.872	*0.16*	*0.16*
DM-03-05-SL	SAIC	7/2/2004	DM-03	864923	827576	0.02	0.02
DM-03-05-SL-FD	SAIC	7/2/2004	DM-03	864923	827576	0.04	0.04
DM-03-13-SL	SAIC	7/2/2004	DM-03	864923	827576	0.04	0.04
DM-03-25-SL	SAIC	7/2/2004	DM-03	864923	827576	0.06	0.06
DM-03-34-SL	SAIC	7/2/2004	DM-03	864923	827576	0.02	0.02
NB-119-0.5-SL	Energy*Solutions*	11/15/2007	–	864646.421	827123.523	*0.08*	*0.08*
OA-20-00-SL	SAIC	5/4/2004	OA-20	864908.381198	827583.2235	0.36	0.36
OA-21-00-SL	SAIC	5/4/2004	OA-21	864920.166585	827502.641969	4.13	4.13
OA-22-00-SL	SAIC	5/4/2004	OA-22	864915.45243	827429.13167	*4.37*	*4.37*
OA-23-00-SL	SAIC	5/4/2004	OA-23	864839.585054	827398.269214	7.28	7.28
OA-24-00-SL	SAIC	5/4/2004	OA-24	864825.44259	827474.13659	0.09	0.09
OA-25-00-SL	SAIC	5/5/2004	OA-25	864735.432749	827429.13167	0.61	0.61

Table 4-19 (continued)

Soil Area – Southeast Of Process Buildings – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Surface – Surface Soil							
OA-26-00-SL	SAIC	5/6/2004	OA-26	864735.432749	827339.12183	*2.85*	*2.85*
SS-BP-051-SF	WEC	6/6/2008	BP-051	865001.544	827551.687	0.07	0.07
SS-BP-077-SF	WEC	6/12/2008	BP-077	864910.94499504	827656.571302888	0.01	0.01
SS-BP-078-SF	WEC	6/7/2008	BP-078	864904.869098082	827628.347800391	0.02	0.02
SS-BP-079-SF	WEC	6/12/2008	BP-079	864874.308344767	827620.617343489	0.03	0.03
SS-BP-080-SF	WEC	6/12/2008	BP-080	864862.031283113	827604.535118636	0.06	0.06
SS-HS-001-SF	WEC	7/15/2008	HS-001	864986.21	827581.365	2.19	2.19
SS-HS-002-EL-0.5	WEC	7/16/2008	HS-002	864985.986	827572.23	105.27	105.27
SS-HS-002-SF	WEC	7/16/2008	HS-002	864985.986	827572.23	4.09	4.09
SS-LA-050-SF	WEC	6/6/2008	LA-050	864978.352090011	827530.350278639	0.11	0.11
SS-LA-059-SF	WEC	6/7/2008	LA-059	864942.263	827549.753	0.20	0.20
SS-LA-089-SF	WEC	6/7/2008	LA-089	864919.901743061	827502.363103723	0.92	0.92
SS-LA-090-SF	WEC	6/9/2008	LA-090	864913.482652083	827436.6167584	0.29	0.29
SS-LA-091-SF	WEC	6/9/2008	LA-091	864837.999934705	827396.785988635	0.11	0.12
SS-LA-092-SF	WEC	6/9/2008	LA-092	864807.596	827308.757	0.03	0.03
SS-LA-093-SF	WEC	6/9/2008	LA-093	864757.219271699	827312.759150438	0.22	0.22
SS-LA-094-SF	WEC	6/9/2008	LA-094	864735.092683398	827338.682691337	0.07	0.07
SS-LA-095-SF	WEC	6/10/2008	LA-095	864745.435	827396.908	0.08	0.08
SS-LA-096-SF	WEC	6/10/2008	LA-096	864756.364355466	827468.359935421	0.08	0.08
SS-LA-097-SF	WEC	6/10/2008	LA-097	864805.797	827521.686	0.08	0.08
SS-LA-098-SF	WEC	6/10/2008	LA-098	864709.57661282	827274.526209145	0.28	0.28
SS-LA-099-SF	WEC	6/9/2008	LA-099	864677.592117642	827295.775218511	0.18	0.18

Table 4-19 (continued)

Soil Area – Southeast Of Process Buildings – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Surface – Surface Soil							
SS-LA-100-SF	WEC	6/10/2008	LA-100	864677.774396651	827183.355086513	0.03	0.03
Root – Limestone Fill							
LB01R	CH2M HILL	10/10/2005	–	864869.137896	827510.873431	14.05	14.05
LB02R	CH2M HILL	10/10/2005	–	864858.227077	827527.312625	8.55	8.55
LB03R	CH2M HILL	10/10/2005	–	864861.217365	827462.754771	1.03	1.03
LB04R	CH2M HILL	10/10/2005	–	864851.258322	827481.614909	0.35	0.35
LB05R	CH2M HILL	10/10/2005	–	864846.986555	827498.856817	2.99	2.99
LB06R	CH2M HILL	10/10/2005	–	864844.094185	827457.731547	6.21	6.21
LB0708C1	CH2M HILL	10/10/2005	–	864834.788365	827482.777884	1.00	1.00
LB07R	CH2M HILL	10/10/2005	–	864835.102729	827472.352323	1.14	1.14
LB08R	CH2M HILL	10/10/2005	–	864830.425141	827491.256657	0.40	0.40
LB09R	CH2M HILL	10/10/2005	–	864827.358545	827508.826415	0.70	0.70
LB10R	CH2M HILL	10/10/2005	–	864827.460059	827447.963866	0.29	0.29
LB11R	CH2M HILL	10/11/2005	–	864819.866983	827464.262981	0.53	0.53
LB12R	CH2M HILL	10/11/2005	–	864814.110922	827481.79292	1.05	1.05
LB13R	CH2M HILL	10/11/2005	–	864806.969789	827498.366731	0.48	0.48
LB14R	CH2M HILL	10/11/2005	–	864811.747475	827435.661776	0.23	0.23
LB15R	CH2M HILL	10/11/2005	–	864804.443341	827454.626425	0.43	0.43
LB15RD	CH2M HILL	10/11/2005	–	864804.443341	827454.626425	0.73	0.73
LB1617C2	CH2M HILL	10/11/2005	–	864794.885013	827481.733067	0.81	0.81
LB16R	CH2M HILL	10/11/2005	–	864798.517119	827471.167425	0.31	0.31
LB17R	CH2M HILL	10/11/2005	–	864793.329124	827490.747016	0.51	0.51

Table 4-19 (continued)

Soil Area – Southeast Of Process Buildings – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Root – Limestone Fill							
LB18R	CH2M HILL	10/11/2005	–	864793.603375	827427.132965	1.42	1.42
LB19R	CH2M HILL	10/11/2005	–	864787.300577	827445.468427	0.35	0.35
LB20R	CH2M HILL	10/11/2005	–	864782.405848	827462.693513	0.70	0.70
LB21R	CH2M HILL	10/11/2005	–	864776.181486	827418.590847	0.85	0.85
LB22R	CH2M HILL	10/11/2005	–	864771.690834	827435.433108	0.94	0.94
LB23R	CH2M HILL	10/11/2005	–	864764.55504	827453.024222	0.47	0.47
LB2425C3	CH2M HILL	10/11/2005	–	864757.652968	827418.221714	0.60	0.60
LB24R	CH2M HILL	10/11/2005	–	864762.355553	827408.111529	0.55	0.55
LB25R	CH2M HILL	10/11/2005	–	864753.378368	827427.063809	1.03	1.03
LB26R	CH2M HILL	10/11/2005	–	864747.939559	827444.996055	1.45	1.45
LB27R	CH2M HILL	10/11/2005	–	864735.544407	827417.98558	1.50	1.50
LB28R	CH2M HILL	10/11/2005	–	864732.76669	827393.269143	0.65	0.65
LB29R	CH2M HILL	10/11/2005	–	864719.597469	827386.416824	0.27	0.27
LB30R	CH2M HILL	10/11/2005	–	864715.113927	827404.210811	0.49	0.49
LB31R	CH2M HILL	10/11/2005	–	864711.439881	827359.225483	0.19	0.19
LB3233C4	CH2M HILL	10/12/2005	–	864698.617826	827384.47217	0.53	0.53
LB32R	CH2M HILL	10/11/2005	–	864702.092216	827374.886611	0.87	0.87
LB33R	CH2M HILL	10/12/2005	–	864697.979078	827392.329676	0.52	0.52
LB34R	CH2M HILL	10/12/2005	–	864691.20388	827364.978799	0.39	0.39
LB35R	CH2M HILL	10/12/2005	–	864680.90897	827382.91115	1.00	1.00
LB3637RC5	CH2M HILL	10/12/2005	–	864929.720813	827572.357669	0.77	0.77
LB36R	CH2M HILL	10/12/2005	–	864937.229923	827566.457527	0.98	0.98

Table 4-19 (continued) **Page 5 of 8**

Soil Area – Southeast Of Process Buildings – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Root – Limestone Fill							
LB36RD	CH2M HILL	10/12/2005	–	864937.229923	827566.457527	0.27	0.27
LB37R	CH2M HILL	10/12/2005	–	864925.842267	827578.683973	0.54	0.54
LB38R	CH2M HILL	10/12/2005	–	864951.114367	827578.414943	0.56	0.56
LB39R	CH2M HILL	10/12/2005	–	864937.602705	827595.177633	0.77	0.77
LS-02-00-SL	SAIC	5/6/2004	LS-02	–	–	3.00	3.00
Root – Sub-Surface Soil							
BD-14-05-SL	SAIC	7/8/2004	BD-14	864736	827250	0.06	0.06
BD-15-05-SL	SAIC	7/8/2004	BD-15	864804	827309	0.00	0.00
BD-16-05-SL	SAIC	7/6/2004	BD-16	864876.268	827382.82	*0.07*	*0.07*
NB-119-2.5-SL	Energy*Solutions*	11/15/2007	–	864646.421	827123.523	0.28	0.28
NB-119-4.5-SL	Energy*Solutions*	11/15/2007	–	864646.421	827123.523	0.25	0.25
OA-18-03-SL	SAIC	7/1/2004	OA-18	865005.462271	827474.13659	0.03	0.03
OA-19-05-SL	SAIC	7/1/2004	OA-19	864975.909	827431.471	0.08	0.08
SS-BP-051-SV	WEC	6/6/2008	BP-051	865001.544	827551.687	0.04	0.04
SS-BP-077-SV	WEC	6/12/2008	BP-077	864910.94499504	827656.571302888	0.03	0.03
SS-BP-078-SV	WEC	6/7/2008	BP-078	864904.869098082	827628.347800391	0.04	0.05
SS-BP-079-SV	WEC	6/12/2008	BP-079	864874.308344767	827620.617343489	0.03	0.03
SS-BP-080-SV	WEC	6/12/2008	BP-080	864862.031283113	827604.535118636	0.02	0.02
SS-HS-001-SV	WEC	7/15/2008	HS-001	864986.21	827581.365	12.74	12.74
SS-HS-001-SV-A	WEC	7/16/2008	HS-001	864986.21	827581.365	0.90	0.90
SS-HS-002-SV	WEC	7/16/2008	HS-002	864985.986	827572.23	20.82	20.82
SS-LA-050-SV	WEC	6/6/2008	LA-050	864978.352090011	827530.350278639	0.08	0.08

Table 4-19 (continued)

Soil Area – Southeast Of Process Buildings – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Root – Sub-Surface Soil							
SS-LA-050-SV-QC	WEC	6/6/2008	LA-050	864978.352090011	827530.350278639	0.08	0.08
SS-LA-059-SV	WEC	6/7/2008	LA-059	864942.263	827549.753	0.49	0.49
SS-LA-089-SV	WEC	6/7/2008	LA-089	864919.901743061	827502.363103723	0.53	0.53
SS-LA-089-SV-QC	WEC	6/7/2008	LA-089	864919.901743061	827502.363103723	0.23	0.23
SS-LA-090-SV	WEC	6/9/2008	LA-090	864913.482652083	827436.6167584	0.21	0.21
SS-LA-091-SV	WEC	6/9/2008	LA-091	864837.999934705	827396.785988635	0.05	0.05
SS-LA-092-SV	WEC	6/9/2008	LA-092	864807.596	827308.757	0.03	0.03
SS-LA-093-SV	WEC	6/9/2008	LA-093	864757.219271699	827312.759150438	0.08	0.08
SS-LA-094-SV	WEC	6/9/2008	LA-094	864735.092683398	827338.682691337	0.13	0.13
SS-LA-095-SV	WEC	6/10/2008	LA-095	864745.435	827396.908	0.11	0.11
SS-LA-096-SV	WEC	6/10/2008	LA-096	864756.364355466	827468.359935421	0.10	0.10
SS-LA-098-SV	WEC	6/10/2008	LA-098	864709.57661282	827274.526209145	0.15	0.15
SS-LA-099-SV	WEC	6/9/2008	LA-099	864677.592117642	827295.775218511	0.21	0.21
SS-LA-100-SV	WEC	6/10/2008	LA-100	864677.774396651	827183.355086513	0.03	0.03
Deep – Sub-Surface Soil							
BD-13-09-SL	SAIC	7/6/2004	BD-13	864668.281	827189.72	0.01	0.01
BD-13-15-SL	SAIC	7/6/2004	BD-13	864668.281	827189.72	0.01	0.01
BD-13-23-SL	SAIC	7/6/2004	BD-13	864668.281	827189.72	0.01	0.01
BD-13-30-SL	SAIC	7/6/2004	BD-13	864668.281	827189.72	0.02	0.02
BD-14-13-SL	SAIC	7/8/2004	BD-14	864736	827250	0.01	0.01
BD-14-25-SL	SAIC	7/8/2004	BD-14	864736	827250	0.00	0.01
BD-14-31-SL	SAIC	7/8/2004	BD-14	864736	827250	0.01	0.01

Table 4-19 (continued)

Soil Area – Southeast Of Process Buildings – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Deep – Sub-Surface Soil							
BD-15-17-SL	SAIC	7/8/2004	BD-15	864804	827309	0.01	0.01
BD-15-25-SL	SAIC	7/8/2004	BD-15	864804	827309	0.02	0.02
BD-15-31-SL	SAIC	7/8/2004	BD-15	864804	827309	0.01	0.01
BD-16-15-SL	SAIC	7/6/2004	BD-16	864876.268	827382.82	0.01	0.01
BD-16-19-SL	SAIC	7/6/2004	BD-16	864876.268	827382.82	0.01	0.01
BD-16-25-SL	SAIC	7/6/2004	BD-16	864876.268	827382.82	0.01	0.01
BD-16-34-SL	SAIC	7/6/2004	BD-16	864876.268	827382.82	0.01	0.01
NB-119-13.5-SL	Energy*Solutions*	11/15/2007	–	864646.421	827123.523	0.02	0.02
OA-18-17-SL	SAIC	7/1/2004	OA-18	865005.462271	827474.13659	0.02	0.02
OA-18-25-SL	SAIC	7/1/2004	OA-18	865005.462271	827474.13659	0.00	0.00
OA-18-33-SL	SAIC	7/1/2004	OA-18	865005.462271	827474.13659	0.01	0.02
OA-19-15-SL	SAIC	7/1/2004	OA-19	864975.909	827431.471	0.00	0.00
OA-19-25-SL	SAIC	7/1/2004	OA-19	864975.909	827431.471	0.01	0.01
OA-19-33-SL	SAIC	7/1/2004	OA-19	864975.909	827431.471	0.00	0.01
SS-BP-051-DV	WEC	6/6/2008	BP-051	865001.544	827551.687	0.01	0.01
SS-BP-077-DV	WEC	6/12/2008	BP-077	864910.94499504	827656.571302888	0.01	0.01
SS-BP-078-DV	WEC	6/7/2008	BP-078	864904.869098082	827628.347800391	0.01	0.01
SS-BP-079-DV	WEC	6/12/2008	BP-079	864874.308344767	827620.617343489	0.01	0.01
SS-BP-080-DV	WEC	6/12/2008	BP-080	864862.031283113	827604.535118636	0.01	0.01
SS-LA-050-DV	WEC	6/6/2008	LA-050	864978.352090011	827530.350278639	0.01	0.01
SS-LA-059-DV	WEC	6/7/2008	LA-059	864942.263	827549.753	0.02	0.02
SS-LA-089-DV	WEC	6/7/2008	LA-089	864919.901743061	827502.363103723	0.05	0.05

Table 4-19 (continued)

Soil Area – Southeast Of Process Buildings – Surface Soil, Sub-Surface Soil, And Limestone Fill – GPS And SOF

Sample ID	Contractor	Sample Date	GPS Station ID	GPS Coordinates		Sum-of-Fractions	
				Northing	Easting	NOTE 1	NOTE 2
Deep – Sub-Surface Soil							
SS-LA-090-DV	WEC	6/9/2008	LA-090	864913.482652083	827436.6167584	0.24	0.24
SS-LA-091-DV	WEC	6/9/2008	LA-091	864837.999934705	827396.785988635	0.04	0.04
SS-LA-092-DV	WEC	6/9/2008	LA-092	864807.596	827308.757	0.00	0.00
SS-LA-092-DV-QC	WEC	6/9/2008	LA-092	864807.596	827308.757	0.01	0.01
SS-LA-093-DV	WEC	6/9/2008	LA-093	864757.219271699	827312.759150438	0.01	0.01
SS-LA-094-DV	WEC	6/9/2008	LA-094	864735.092683398	827338.682691337	0.02	0.02
SS-LA-095-DV	WEC	6/10/2008	LA-095	864745.435	827396.908	0.01	0.01
SS-LA-096-DV	WEC	6/10/2008	LA-096	864756.364355466	827468.359935421	0.03	0.03
SS-LA-096-DV-QC	WEC	6/10/2008	LA-096	864756.364355466	827468.359935421	0.01	0.01
SS-LA-097-DV	WEC	6/10/2008	LA-097	864805.797	827521.686	0.03	0.03
SS-LA-098-DV	WEC	6/10/2008	LA-098	864709.57661282	827274.526209145	0.15	0.15
SS-LA-099-DV	WEC	6/9/2008	LA-099	864677.592117642	827295.775218511	0.03	0.04
SS-LA-099-DV-QC	WEC	6/9/2008	LA-099	864677.592117642	827295.775218511	0.12	0.12
SS-LA-100-DV	WEC	6/10/2008	LA-100	864677.774396651	827183.355086513	0.01	0.01

NOTE 1 – The analytical results as provided by the laboratory, including negative values, were used in the sum-of-fractions (SOF) calculation.
NOTE 2 – Negative analytical results were set to zero (0) in the SOF calculation.
NOTE 3 – The SOF value is italicized when all radionuclides of concern are represented in the SOF calculation.
NOTE 4 – Samples with a result exceeding the BTV of 1.7 pCi/g Th-232 were always included in the SOF calculation.
NOTE 5 – When Th-232 was included in the SOF calculation, a background of 1 pCi/g was subtracted from the analytical result.
NOTE 6 – Ra-226 was not included in the SOF calculations because the area is not considered impacted by Ra-226.
NOTE 7 – Cells with "–" indicate that no data was available.