REVISION 0

POST-REMEDIAL ACTION REPORT FOR THE ACCESSIBLE SOILS WITHIN THE ST. LOUIS DOWNTOWN SITE HEINTZ STEEL AND MANUFACTURING VICINITY PROPERTY (DT-6) AND MIDWEST WASTE VICINITY PROPERTY (DT-7)

ST. LOUIS, MISSOURI

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U.S. Army Corps of Engineers
St. Louis District Office
Formerly Utilized Sites Remedial Action Program

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ACRONYMS AND ABBREVIATIONS

Ac-227	actinium-227
AD	averted dose
AEC	Atomic Energy Commission
ALARA	as low as reasonably achievable
ANSI	American National Standards Institute
ARAR	applicable or relevant and appropriate requirement
ASTM	American Society for Testing and Materials
B_{AD}	benefit from the averted dose
bgs	below ground surface
BNA	basic, neutral, acids
BRA	Baseline Risk Assessment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
cm	centimeter
cm^2	square centimeters
COC	contaminant of concern
CQCP	Contractor Quality Control Plan
DCGL	derived concentration guideline level
DoD	Department of Defense
DOE	Department of Energy
dpm	disintegrations per minute
DQA	data quality assessment
DQI	data quality investigation
DQO	data quality objective
DT-6	Heintz Steel and Manufacturing Vicinity Property
DT-7	Midwest Waste Vicinity Property
EMC	elevated measurement criteria
EPA	Environmental Protection Agency
EPC	exposure point concentration
FFA	Federal Facilities Agreement
FGR	Federal Guidance Report
FS	Feasibility Study
FSS	final status survey
FSSP	Final Status Survey Plan
ft	foot or feet
FUSRAP	Formerly Utilized Sites Remedial Action Program
FWV	field work variance
g/cm^3	grams per cubic centimeter
g/m^3	grams per cubic meter
g/yr	grams per year
HASL	Health and Safety Laboratory
HISS	Hazelwood Interim Storage Site
HTZ	biased soil sample collected in the final status survey process
IT	International Technology Corporation
IVC	Independent Verification Contractor
kg/yr	kilograms per year

ACRONYMS AND ABBREVIATIONS (Cont'd)

KPA	kinetic phosphorescence analyzer
LBGR	lower bound of the grey region
LCS	laboratory control sample
m	meter
m^2	square meters
m^3	cubic meters
m^3/hr	cubic meters per hour
m^3/yr	cubic meters per year
m/s	meters per second
m/yr	meters per year
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MDA	minimum detectable activity
MDC	minimum detectable concentration
MDNR	Missouri Department of Natural Resources
MED	Manhattan Engineer District
mg	milligrams
mg/day	milligrams per day
mg/m^3	milligrams per cubic meter
mrem	millirem
mrem/yr	millirem per year
MS	matrix spike
NA	not available
N/A	not applicable
NaI	sodium iodide
NAD	normalized absolute difference
NC	not calculated
NCP	National Oil and Hazardous Substances Contingency Plan
NRC	Nuclear Regulatory Commission
O&M	operation and maintenance
OU	operable unit
pCi/g	picoCuries per gram
Pa-231	protactinium-231
PCB	polychlorinated biphenyl
PDI	pre-design investigation
PE	performance evaluation
PRAR	Post-Remedial Action Report
PW	Present Worth
QAPP	Quality Assurance Project Plan
QA/QC	quality assurance/quality control
QCSR	Quality Control Summary Report
Ra-226	radium-226
Ra-228	radium-228
RA	remedial action
RAC	remedial action contractor
RAO	remedial action objective
RAS	Remedial Action Summary

ACRONYMS AND ABBREVIATIONS (Cont'd)

RAWD	Remedial Activity Work Description
RESRAD	Residual (RES) Radioactive (RAD)
RG	remediation goal
RI	Remedial Investigation
RPD	relative percent difference
ROD	Record of Decision
SAG	Sampling and Analysis Guide
SAIC	Science Applications International Corporation
SLAPS	St. Louis Airport Site
SLDS	St. Louis Downtown Site
SOR	sum of ratios
SOR_G	sum of ratios (gross)
SOR_N	sum of ratios (net)
SU	survey unit
SVOC	semi-volatile organic compound
TCLP	toxicity characteristic leaching procedure
TEDE	Total Effective Dose Equivalent
TERC	Total Environmental Restoration Contract
Th-230	thorium-230
Th-232	thorium-232
TOX	total organic halides
TSS	total suspended solids
U-235	uranium-235
U-238	uranium-238
UCL_{95}	95% upper confidence limit
UMTRCA	Uranium Mill Tailings Radiation Control Act
USEPA	United States Environmental Protection Agency
USACE	United States Army Corps of Engineers
VOC	volatile organic compound
VP	vicinity property
VQ	validation qualifier
WASD	Work Area-Specific Description
WRS	Wilcoxon Rank Sum
yr	year

PROJECT ABSTRACT

Site Name and Operable Unit:	St. Louis Downtown Site (SLDS) Accessible Soils and Ground water Operable Unit; DT-6 and DT-7
Location:	St. Louis, Missouri
Regulatory Oversight:	United States Environmental Protection Agency (EPA), Region 7 and Missouri Department of Natural Resources (MDNR)
Contractor Oversight:	United States Army Corps of Engineers (USACE), St. Louis District
Remedial Action Contractor: Verification Contractor:	Shaw Environmental, Inc. Science Applications International Corporation (SAIC)
Waste Source:	Manhattan Engineer District/ United States Atomic Energy Commission (MED/AEC) Operations
Contaminants:	Radiological. Radionuclides from the uranium (U)-238, thorium (Th)-232, and U-235 decay series.
Technology:	Remediation by excavation of MED/AEC contaminated soil
Remediation Type:	The *Record of Decision for the St. Louis Downtown Site, St. Louis, Missouri* (ROD) (USACE, 1998a) addresses contamination in accessible soils by excavation and out-of-state disposal and ground-water monitoring.
Purpose/Significance of Application:	Excavation of soils to reduce radionuclide concentrations below ROD remediation goals (RGs) and backfill with USACE approved off-site borrow material.
Type/Quantity of Media Treated:	Soil Removed: 5,571 bank cubic yards Water Treated: 10,980 gallons
Period of Operation:	Excavation & Restoration: 05/14/2001 to 09/16/2003 Ground-water monitoring: Ongoing.
Regulatory Requirements/ Remediation Goals:	In accordance with the ROD (USACE, 1998a), reduce radiological activity of Ra-226, Th-230, Ra-228, Th-232, and U-238, the major radionuclides of interest, in soils such that: 1) the sum of the ratios (SOR) for the above background concentrations in surface soils, averaged over any 100 m^2 area, is less than or equal to 1.0 when compared to 5 picoCuries per gram (pCi/g) for the greater of radium (Ra)-226 or Th-230, 5 picoCuries per gram (pCi/g) for the greater of Ra-228 or Th-232, and 50 pCi/g for U-238; 2) the SOR for the above background concentrations in subsurface soils, averaged over any 100 m^2 area, is less than or equal to 1.0 when compared to 15 pCi/g for the greater of Ra-226 or Th-230, 15 pCi/g for the greater of Ra-228 or Th-232, and 50 pCi/g for U-238; and 3) the total dose from residual activity in soils containing materials licensed by the United States Nuclear Regulatory Commission (NRC) commingled with MED/AEC - related wastes does not exceed 25 millirems per year (mrem/yr) to the average member of the critical group as required by 10 (Code of Federal Regulations) (CFR) 20 Subpart E for any Formerly Utilized Sites Remedial Action Program (FUSRAP) materials similar to licensable materials under the Atomic Energy Act. A monitoring program for ground water is required until discontinued pursuant to the five-year Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) review. Currently no ground water monitoring wells are located on DT-6 and DT-7.

PROJECT ABSTRACT (Cont'd)

Results:	The residual radioactivity in accessible soils at Heintz Steel and Manufacturing (DT-6) and Midwest Waste (DT-7) meets all requirements specified in the ROD. This conclusion is the result of comparison of ROD remediation goals (RGs) with the residual site concentrations in accessible areas. The concentration-based RGs for Th-230, Ra-226, Th-232, Ra-228, and U-238 are satisfied, noting that no sum of ratios (net) (SOR_N) value equals or exceeds the limit of 1.0 when averaged over the survey unit (SU). Residual radioactive material concentrations of Ra-226 averaged over any 100 m^2 areas did not exceed the background level by >5 pCi/g averaged over the surface soil and >15 pCi/g averaged over subsurface soil. The above criteria were also met by the residual radioactive material concentrations of Ra-228, Th-230, and Th-232. The dose-based applicable or relevant and appropriate requirement (ARAR) from 10 CFR 20 Subpart E, *Radiological Criteria for License Termination*, has been satisfied, noting that the highest residual dose calculated for DT-6 and DT-7 is <25 millirem per year (mrem/yr) for all modeled scenarios without regard to the existence of cover materials. The residual risk calculated for DT-6 and DT-7 meets the CERCLA target risk range of 10^{-6} to 10^{-4} for all modeled scenarios and is fully protective of human health and the environment without regard to the existence of cover materials. The SLDS DT-6 and DT-7 SUs also satisfy the *Multi-Agency Radiation Survey and Site Investigation Manual* (MARSSIM) (DoD, 2000) statistical requirements since they passed the Wilcoxon Rank Sum (WRS) statistical test as required. Soil concentrations comply with 40 CFR 192 unrestricted release criteria. All DT-6 and DT-7 SUs meet criteria for release without restrictions in accordance with the ROD. There are inaccessible areas on DT-6, as discussed in Section 5.1.2 and shown in Attachment C-1 on Figure C-1-2, that will be addressed by a subsequent CERCLA action.
Cost:	$1,874,050
Description:	From 1942 until 1957, Mallinckrodt Chemical Works was contracted by the MED and the AEC to process uranium ore for the production of uranium metal. Residuals of the process containing elevated levels of radium, thorium, and/or uranium were released into the environment via airborne dispersion and surface water run-off. At various times from 1942 to 1957, Plants 1, 2, 4 (now Plant 10), 6, and 7 were involved in the development of uranium-processing techniques or the processing of uranium compounds or uranium-bearing ores. Process residues from these operations were stored at the St. Louis Airport Site (SLAPS) and subsequently relocated to the Hazelwood Interim Storage Site (HISS). Mallinckrodt Plants 1 and 2 were decontaminated from 1948 through 1950 to the criteria then in effect, and the AEC released these plants for use without radiological restrictions in 1951. Plants 4, 6, and 7 were subsequently decontaminated and decommissioned by 1961 and returned to Mallinckrodt Chemical Works for unrestricted use. Soil characterization results indicated that the areas associated with MED/AEC activities were principally affected by radionuclides. Metals were also detected, but are generally co-located with the radionuclides. The ROD (USACE, 1998a), which addresses remediation of these MED/AEC wastes at the SLDS, was signed in August 1998. Excavation of accessible soils occurred throughout DT-6 and DT-7. Excavated soils were loaded into rail cars and shipped to a properly permitted out-of-state disposal facility. Inaccessible soils are beyond the scope of work specified by the ROD (USACE, 1998a), but will be addressed by a future CERCLA action. Remedial activities were performed from May 14, 2001 to September 16, 2003. As specified in the ROD, ground-water monitoring will continue until discontinued pursuant to the five-year CERCLA review.

1.0 INTRODUCTION

The remedial action contractor (RAC), under the direction of the United States Army Corps of Engineers (USACE), St. Louis District, Formerly Utilized Sites Remedial Action Program (FUSRAP), characterized, designed, and completed a remedial action (RA) at the Heintz Steel and Manufacturing Vicinity Property (VP) (DT-6) and the Midwest Waste VP (DT-7), located within the St. Louis Downtown Site (SLDS), St. Louis, Missouri. The SLDS consists of the Mallinckrodt Chemical Works property (Mallinckrodt Property), owned by Mallinckrodt, Inc (Mallinckrodt), and the surrounding VPs. The RA consisted of excavating soils at DT-6 and DT-7 to reduce contaminant concentrations associated with Manhattan Engineer District/Atomic Energy Commission (MED/AEC) operations to acceptable levels, and backfilling with USACE approved borrow material. The RA began in May 2001 and was completed in September 2003. This Post-Remedial Action Report (PRAR) summarizes the RAs, as well as the Final Status Survey (FSS) Evaluation, that were performed.

The remediation of DT-6 and DT-7 represents only a portion of the RA that will occur at the SLDS. Therefore, the general mobilization activities of establishing the project construction office, equipment/materials storage yard(s), water treatment plant, contaminated soils storage and load out facility, and other facilities common to the SLDS remediation activities are not discussed in this report.

Performance factors for the RAs completed at DT-6 and DT-7 are discussed in Appendix A of this PRAR. A summary of project costs is provided in Appendix B. Site figures related to the RAs, as well as a summary of the FSS Evaluation, are included in Appendix C.

1.1 SITE DESCRIPTION

DT-6 is adjacent to the western edge of DT-7, and both VPs lie south and east of the main Mallinckrodt Property located in St. Louis, Missouri. The VPs are bordered on the north by Angelrodt Street and on the south by Buchanan Street. DT-7 is bounded on the east by the Burlington Northern/Santa Fe Railroad tracks, and DT-6 is bounded on the west by Hall Street.

DT-6 includes a large fabrication building and a smaller storage building. A single Class 1 (i.e., areas that had radioactive contamination prior to remediation) survey unit (SU) was designated (SU-01) and divided into four areas: one large excavation located on the northwest corner and three smaller excavations on the eastern side of the property. DT-7 is currently covered by an asphalt/gravel parking lot that is occupied by trailers used to support USACE activities. During remediation, DT-7 had five Class 1 SUs designated (SU-01 through SU–05). The remainder of each of the two properties was designated as a Class 2 (i.e., areas that had a potential for radioactive contamination prior to remediation) SU (SU-02 at DT-6 and SU-06 at DT-7).

1.2 SITE HISTORY

1.2.1 Relevant Operations and Waste Management Practices

Mallinckrodt, Inc. has used, blended, and manufactured organic and inorganic chemicals since 1867. Mallinckrodt Chemical Works was contracted by MED and the AEC from 1942 until 1957 to process uranium ore for the production of uranium (U) metal. Residuals of the U metal production process, including spent pitchblende ore and process chemicals, were inadvertently released from the Mallinckrodt Property and into the environment through handling and disposal practices. Residuals from this process had elevated levels of radium (Ra), thorium (Th), and U, and impacted surface and subsurface soils at a variety of properties within the SLDS.

1.2.2 Regulatory History

Remedial actions at the SLDS are conducted under the FUSRAP. FUSRAP was executed by the United States Department of Energy (DOE) in 1974 to identify, remediate, or otherwise control sites where residual radioactivity remains from operations conducted for the MED and AEC during the early years of the nation's atomic energy program (USACE, 1998a).

In June 1990, the Environmental Protection Agency (EPA) Region VII and DOE entered into a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 120 Federal Facilities Agreement (FFA). In the FFA, DOE agreed to conduct response actions for all wastes, including but not limited to radiologically contaminated wastes and other chemical or radiological wastes that have been mixed or commingled with wastes resulting from or associated with MED/AEC uranium manufacturing or processing activities conducted at the SLDS.

In October 1997, the U.S. Congress transferred responsibility for FUSRAP from the DOE to the USACE through the 1998 Energy and Water Development Appropriations Act.

1.2.3 Previous Investigations

In 1977, a radiological survey was conducted at the SLDS, and major radionuclides of interest, including Ra-226, Th-230, and U-238, were found in subsurface soils at levels significantly above background, to a maximum depth of approximately six feet. In response to this survey, it was determined that further investigation of the SLDS was necessary to characterize the nature and extent of contamination, in addition to possible actions to mitigate associated threats to human health and the environment.

In 1994, a Remedial Investigation (RI) (DOE, 1994) was completed in accordance with CERCLA to determine the nature and extent of contamination in soil, sediment, and ground water at the SLDS. Sampling activities revealed radiological constituents present at detectable levels in soil, sediment, and ground water. Soil characterization activities, in particular, indicated that the areas associated with MED/AEC activities were contaminated with radionuclides, including Ra, Th, U, and their decay products.

In April 1998, a Feasibility Study (FS) (USACE, 1998b) for the SLDS was prepared and released for public comment to identify, develop, and evaluate remedial action alternatives for the site (in accordance with CERCLA guidance) based on the nature and extent of contamination documented in the RI. Six sitewide remedial action alternatives were evaluated for the SLDS.

In August 1998, the *Record of Decision for the St. Louis Downtown Site* (ROD) (USACE, 1998a) was signed by the USACE and the EPA and addressed contamination related to MED/AEC activities in accessible soils and ground water. The selected remedy for this Operable Unit (OU), Alternative 6 of the FS - Selective Excavation and Disposal, is the final RA for accessible soils and ground water beneath the SLDS for MED/AEC-related hazardous substances.

2.0 OPERABLE UNIT BACKGROUND

This OU consists of the accessible soils and ground water contaminated as a result of MED/AEC uranium manufacturing and processing activities at the SLDS. Inaccessible soils and associated building and structures will be addressed in a separate CERCLA action.

2.1 REMEDIAL ACTION OBJECTIVES

Remedial action objectives (RAOs) specify specific contaminants, media of concern, potential exposure pathways, and remediation goals (RGs). RAOs are based on the nature and extent of contamination, threatened resources, and the potential for human and environmental exposure.

Soils at the SLDS were characterized in the Baseline Risk Assessment (BRA) (completed as part of the RI) as posing potentially unacceptable risks to human health and the environment due to the following MED/AEC-related radiological contaminants of concern (COCs): Th-230, Th-232, Ra-226, Ra-228, U-235, U-238, and their respective radioactive decay products. Arsenic and cadmium are non-radiological COCs that may have been introduced by MED/AEC operations, but since DT-6 and DT-7 are not in uranium ore processing areas, non-radiological COCs are not of concern for the RA at DT-6 and DT-7. The primary contribution to risk from uranium at the VPs results from the radioactivity present. Remedial alternatives developed to address contamination in soils considered elimination or mitigation of the exposure pathways, as well as compliance with guidelines presented in Table 2-1.

Table 2-1. Remedial Action Objectives for Remediation of the SLDS Operable Unit

Medium	Remedial Action Objective
Soil	Prevent exposures from surface residual contamination in soils greater than the criteria prescribed in 40 CFR Part 192
	Eliminate or minimize the potential for humans or biota to contact, ingest, or inhale soil containing COCs
	Eliminate or minimize volume, toxicity, and mobility of impacted soil
	Eliminate or minimize the potential for migration of radioactive materials offsite
	Comply with applicable or relevant and appropriate requirements (ARARs)
	Eliminate or minimize potential exposure to external gamma radiation
Groundwater	Remove sources of COCs in the shallow groundwater
	Continue to maintain low concentrations of OU COCs in the deeper groundwater

2.2 SELECTED REMEDY

RGs were derived for the primary SLDS contaminants Ra-226, Th-230, Ra-228, Th-232, and U-238, as remediation of these radionuclides will assure that all radioactive contaminants are addressed concurrently. The selected remedy, Alternative 6 – Selective Excavation and Disposal as excerpted from the ROD (USACE, 1998a) for the Accessible Soils OU, consists of the following cleanup criteria:

1. *"Excavation of accessible soils according to the [applicable or relevant and appropriate requirement] ARAR-based composite cleanup criteria of 5/15 picoCuries per gram (pCi/g) (surface/subsurface) above background concentrations for Ra-226, Ra-228, Th-232, and Th-230, and 50 pCi/g above background concentrations for U-238 in the soil throughout the OU."*

2. *"Remediation goals for radiological contaminants are applied to soil concentrations above background consistent with the ARAR (40 [Code of Federal Regulations] CFR 192), from which they derive. However, addition of background concentrations to these goals would not alter any judgments regarding protectiveness."*
3. *"Compliance with soil contamination criteria will be verified by methods that are compatible with MARSSIM for soils being cleaned up in the OU effective with MARSSIM publication."*
4. *"A post-remedial action risk assessment will be performed to describe the level of risk remaining from MED/AEC contaminants following completion of remedial activities."*
5. *"Final determinations as to whether institutional controls and use restrictions are necessary will be based on calculations of post remedial action risk derived from actual residual conditions. Five-year reviews will be conducted per the [National Oil and Hazardous Substance Pollution Contingency Plan] NCP for residual conditions that are unsuitable for unrestricted use."*
6. *"Protactinium-231 (Pa-231) and actinium-227 (Ac-227) will be included in the analyses for the post-remedial action residual site risk."*

The selected remedial alternative includes excavation of accessible Mallinckrodt Property soils within the upper four or six ft below ground surface (bgs) to ARAR-based composite criteria. Only approved off-site borrow material may be used to fill the excavations at the perimeter VPs. Potential ground water degradation will be controlled by excavation of sources of soil contamination, implementing applicable institutional controls, and providing perimeter ground water monitoring to achieve post-remediation compliance.

As required by the ROD, FSSs were performed within DT-6 and DT-7 in accordance with the protocols established in the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) (U. S. Department of Defense [DOD], et al, 2000). The MARSSIM is a multi-agency document that describes a consistent approach for planning, performing and assessing final status surveys to meet established dose or risk-based release criteria. The USACE implemented FSSs at DT-6 and DT-7 in accordance with the *FSS Plan for Accessible Soil Within Mallinckrodt Property and the Vicinity Properties, Excluding Plants 1 and 2 and the City Property at the St. Louis Downtown Site, St. Louis, Missouri* (FSSP) (USACE, 2002a).

The presence of multiple contaminants at the SLDS required that the sum of ratios (SOR) criterion for soils be satisfied to meet the radionuclide guidelines specified in the ROD. To demonstrate compliance with this criterion, the above-background concentration of each of the primary contaminants is divided by the respective guideline level for that radionuclide to determine a ratio to the guideline. The combined contributions of the COC to the ratio must be less than or equal to one to meet the RG. The SOR equations for the surface and subsurface soils intervals, as well as the corresponding results for DT-6 and DT-7, are provided in Appendix C.

2.3 REMEDIAL DESIGN SUMMARY

The *Small Area Remediation Work Area-Specific Description, FUSRAP St. Louis Downtown Site, St. Louis Missouri*, (Small Area Remediation WASD) (IT, 2001a) describes the common aspects for all small area remediation activities at the SLDS. The *Midwest Waste Vicinity Property (DT-7) Remediation Activity Work Description(RAWD)* (Shaw, 2001a) and the *Heintz Steel and Manufacturing (DT-6) RAWD* (Shaw, 2001b) are appendices to the Small Area

Remediation WASD and describe the specific elements of the planned RAs required for these properties to supplement the Small Area Remediation WASD.

RA at DT-7 focused on fifteen areas of contaminant concentrations exceeding the RGs in soil that had been identified during the pre-design investigation (PDI). Based upon the PDI results, the areas appeared to be shallow, and only two widely separated areas were expected to extend as far as two feet bgs, so the excavation plan was designed to follow the contamination contours projected in the PDI report. Based upon preliminary estimates, approximately 580 cubic yards (yd^3) of soil were expected to be removed. The only utilities in the area were overhead power lines that had been de-energized and buried water lines, which were not expected to be impacted. There was no pavement in the affected areas. Little runoff due to precipitation was expected during the construction period, and the initial plans were to redirect it away from excavations by using shallow trenches and sand bags.

DT-7 was scheduled to become the primary SLDS support facility compound area following soil remediation. Excavated areas not impacted by relocation of the compound were to be backfilled to original grade with USACE approved borrow material. An additional six inches of clean fill was to be placed on top of the fill (i.e., ground surface) in the footprint of the planned SLDS support facility.

At DT-6, the PDI identified three shallow areas requiring remediation. Two of the areas were adjacent to an old foundation, but because of the shallow nature of soil contamination, the foundation was not expected to be impacted. Sixty yd^3 of soil were expected to be removed from DT-6.

Vehicular traffic control and potential impact to Heintz Steel and Manufacturing operations at their storage building were two considerations addressed during the remedial design of DT-6. Although some remediation was planned to occur on city streets, traffic control was generally restricted to the Heintz Steel and Manufacturing property; due to the relative isolation of the work zones, traffic control was to be maintained through the use of barricades. The second concern was the entrance to the storage building that would be impacted by one of the excavations. To maintain the ability to enter the building during remediation, an access ramp spanning the excavation was designed.

Following publication of the *Heintz Steel and Manufacturing (DT-6) RAWD* (Shaw, 2001b), three consruction support test pits, several hundred feet in length, were dug and sampled to 3 to 5 feet bgs. At DT-6, to determine whether additional subsurface contamination existed on the property an additional 13 test pits were dug and sampled to six feet bgs. The analytical results from these sampling efforts indicated subsurface radiological contamination was present at DT-6 at concentrations greater than the RGs. These additional results were used in the final excavation remedial design.

3.0 CONSTRUCTION ACTIVITIES

3.1 MOBILIZATION AND SITE PREPARATION

Portions of DT-6 covered with either blacktop, concrete or vegetation had to be removed prior to conducting the RA. Following removal of the interferences, gamma walkover surveys and biased sampling were performed to further delineate the limit of contamination for gross excavation. Figures detailing sample and excavation locations are included in Appendix C.

A civil survey of the two VPs, including utilities, buildings, foundations, and structures, was conducted to document site conditions prior to conducting the RA.

Exclusion zones, contamination reduction zones, traffic controls, and construction safeguards were established as required. Surface water controls were installed as needed.

3.2 SITE WORK

Soils having elevated radiological activity, as determined by remedial design soil sampling, were removed in accordance with the remedial design excavation depth and transported by truck to the soil load-out area at the Mallinckrodt Plant 7 soil storage and load-out facility. These contaminated soils were then either loaded directly into railcars or stockpiled for future load-out and transportation for final disposal at an out-of-state facility. Gamma walkover surveys and soil sampling at areas of elevated activity were performed to guide excavation by identifying locations of contaminated soil, and to identify when the SLDS concentration-based RGs had been met. If the analytical results from samples collected from the excavated areas indicated that the RGs were not met, then additional excavation, gamma walkovers, and re-sampling, if required, were performed. This sequence was repeated until the concentration-based RGs were met. After completing the excavation, a civil survey of the excavation limits and contours was performed. Also, preferential pathway analysis and sampling, if required, were performed.

A request for the FSS including as-built drawings, the most recent results of sampling and additional information about contaminated soil that was inaccessible for remediation, if applicable, was provided to the USACE. Following USACE authorization, a FSS was performed that consisted of a gamma walkover survey and soil sampling at biased locations within the excavation to verify that the SLDS ROD RGs had been met. FSS samples were collected at locations defined by a systematic grid in accordance with the FSSP (USACE, 2002a). After evaluation of the FSS sample results in accordance with MARSSIM, and evaluating that the cleanup criteria were met, USACE authorized backfill of the excavation. The exclusion and contamination reduction zone postings were removed, and traffic controls were established as required for the backfilling operation.

Excavations were backfilled with USACE-approved off-site borrow material. Backfilling of the excavations proceeded using specified compaction requirements as described in the Small Area Remediation WASD. Erosion and safety controls were removed, and the remediated locations were released after inspection and approval by the USACE. No health or safety problems were encountered during the DT-6 and DT-7 RAs.

During the excavation of these two VPs, approximately 10,980 gallons of water that collected in the excavations were treated and discharged to the Metropolitan St. Louis Sewer District.

3.3 SAMPLING ACTIVITIES

Soil sampling was performed in three phases. The first sampling phase was conducted prior to construction and consisted of gamma walkover surveys and biased soil sampling to delineate the limit of contamination on the two properties. Because of the subsurface radiological contamination encountered at DT-7 and Thomas and Proetz Lumber Company Vicinity Property (DT-10), additional characterization was performed at DT-6. This additional characterization information was used in the remedial design. The second sampling phase was conducted after excavation of contaminated soil to verify that the excavation areas met cleanup criteria and were ready for FSS. Preferential pathway analysis sampling was also performed during this phase to determine if there was a route for subsurface contamination migration. The third and final soil sampling phase was conducted during the FSS to confirm that the RAs were successfully completed and that the ROD RGs were met.

The samples were submitted to the Hazelwood Interim Storage Site (HISS) radiological laboratory, along with quality control (QC) samples, under chain-of-custody requirements per the FSSP. The sampling location coordinates were determined by a civil survey.

4.0 CHRONOLOGY OF EVENTS

The chronology of events significant to the RA at DT-6 and DT-7 is summarized in Table 4-1. The construction start dates and backfill authorization dates are indicated by SU since the backfill authorizations were requested and issued by SU.

Table 4-1. DT-6 and DT-7 Chronology of Significant Events

		DT-7					DT-6
Event	**Date Complete**	**SU-01**	**SU-02**	**SU-03**	**SU-04**	**SU-05**	**SU-01**
ROD signed	August 27, 1998	-	-	-	-	-	-
Small Area Remediation WASD	May 3, 2001	-	-	-	-	-	-
PDI Summary Report Complete	-	May 3, 2001	May 3, 2001	May 3, 2001	May 3, 2001	May 3, 2001	July 20, 2001
Start RA Excavation	-	May 14, 2001	May 14, 2001	May 23, 2001	May 22, 2001	May 30, 2001	August 6, 2003
FSS Complete	-	May 2002	August 2002	November 2002	October 2002	January 2003	September 2003
Backfill Authorization Approved	-	May 2002	August 2002	November 2002	October 2002	January 2003	September 2003
Final Inspection Complete	-	November 6, 2003	November 6, 2003	November 6, 2003	November 6, 2003	November 6, 2003	March 1, 2004

The majority of the excavation was completed in target areas identified during characterization in each VP. Excavation occurred in DT-6 outside the target areas as a result of supplemental sampling performed to verify the presence of radioactive contamination associated with a contaminated subsurface soil horizon identified on the adjacent DT-7 and DT-10. Two construction support test pits, several hundred feet in length, were excavated during April and May 2003 to a depth of 3 to 5 feet bgs to further estimate the extent of contamination on DT-6. Laboratory analysis indicated that concentrations exceeding RGs existed at five sample locations. An additional 13 test pits were excavated to six feet bgs in July 2003 and sampled. The sample results were used as input for the final excavation design. The final DT-6 excavation areas were combined into one SU as shown on Figure C-1-2 in Appendix C.

5.0 PERFORMANCE STANDARDS AND CONSTRUCTION QUALITY CONTROL

5.1 PERFORMANCE STANDARDS

5.1.1 Quantity of Material Treated

Approximately 8,700 square meters (m^2)(93,500 square feet (ft^2)) of surface area were affected by the DT-7 remediation activities. An estimated 3,910 bank (yd^3) of radiologically contaminated soils were excavated from DT-7. Approximately 1,480 m^2 (16,000 ft^2) of surface area was affected by the DT-6 remediation activities. An estimated 1,660 bank yd^3 of radiologically contaminated soils were removed from DT-6. The excavated radiologically contaminated material was shipped to US Ecology Idaho, Inc. (formerly Envirosafe of Idaho) in Grand View, Idaho for disposal.

A list of the excavation quantities by location is provided in Table 5-1.

Table 5-1. SU and Excavation Area Names with Excavation Areas and Volumes

Location & SU	Area Affected (square meters)	Bank Volume of Soil Removed (cubic yards)
DT-7, SU 1	2,167	978
DT-7, SU 2	2,028	1,214
DT-7, SU 3	2,153	343
DT-7, SU 4	1,834	466
DT-7, SU 5	510	910
DT-6, SU 1	1,476	1,660
Total	10,168	5,571

5.1.2 FSS Sampling and Results

FSS sampling strategy was based on MARSSIM guidance resulting in eight soil SU and one consolidated material SU on DT-6 and DT-7. Soil sampling and surface activity measurements were performed as described in the FSSP (USACE, 2002a). The ROD RGs for DT-6 and DT-7 were met in all areas by the excavation and disposal of radiologically contaminated soils at an out-of-state facility. The FSS sampling strategy, consolidated material surface activity measurements, and soil sampling results are discussed in detail in Appendix C. There are inaccessible areas on DT-6 as shown in Appendix C on Figure C-1-2. The inaccessibility for the area of soil between Hall Street and the structure was due to the presence of underground utilities and a railroad signal. The remaining inaccessible areas are beneath the structures. The inaccessible areas will be addressed by a subsequent CERCLA action.

5.2 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

5.2.1 Construction QA/QC Requirements

The purpose of the *Contractor Quality Control Plan, FUSRAP St. Louis Downtown Site, St. Louis, Missouri* (CQCP) (IT, 2001b) is to verify that remedial and construction activities are conducted in accordance with the specified requirements. The requirements for these activities are presented in the Small Area Remediation WASD, the DT-7 RAWD (Shaw, 2001a) and the DT-6 RAWD (Shaw, 2001b). QC was maintained through a three-phase field inspection process and associated checklists. The three-phase inspection process consisted of preparatory, initial, and follow-up inspections. Each definable feature of work falls under one of the following

categories: Site Preparation, Site Excavation, FSS/Sampling, Site Backfill and Surface Restoration.

The objective of the preparatory inspection was to establish and document that required preliminary activities necessary to start an activity had been completed. Preparatory inspections were documented on forms that are retained in the Total Environmental Restoration Contract (TERC) program office central files in Kansas City, Kansas maintained by Shaw Environmental

Initial inspections were conducted at the start of applicable definable features of work to document that the work was initiated in accordance with the specified requirements in accordance with the CQCP. Initial inspections documentation is retained in the project files.

Follow-up inspections on work activities were completed to document that work activities continued to be performed in accordance with specified requirements. Follow-up inspections were documented in the daily QC reports that are retained in the project files.

Upon receipt of written notification that the SU identified in the FSS request was authorized for backfill by the USACE, site restoration activities commenced to complete restoration of the location. Copies of the backfill authorization for each SU can be found in the project files.

The effect of any remedial design variance that occurred during the remedial and/or construction activities was evaluated.

Complete documentation was prepared and maintained during and after construction/remediation activities to demonstrate that the Small Area Remediation WASD and RAWD requirements were met.

Project plans and construction specifications affecting the quality of the project were incorporated by reference in the CQCP. In accordance with the CQCP, any variance to the original design included in the Small Area Remediation WASD and the RAWDs was documented and authorized by field work variances (FWVs).

5.2.2 Data QA/QC Requirements

A Quality Assurance Project Plan (QAPP) was developed for this project and is contained in the *Sampling and Analysis Guide for the St. Louis Sites* (SAG)(USACE, 2000). This document specifies the quantity and types of QA/QC samples to be used to evaluate the quality of the data.

Multiple activities were performed to achieve the desired data quality for this project. A QA program was established to standardize procedures, document activities, and provide a means to detect and correct deficiencies in the process. Data Quality Objectives (DQOs) were established to guide the implementation of the field sampling and laboratory analysis.

In the field, sampling was performed in accordance with the applicable sampling procedures approved for the SLDS. Survey personnel were responsible for verifying their instruments were operable and performing within established tolerances on a daily basis both prior to and following the survey measurements for that work shift. In addition, split and duplicate samples were collected for every 20 field samples or less of each matrix and analyte.

Samples were transferred to the FUSRAP laboratory where radiological analyses were performed as indicated in Appendix A, Table A-1. The laboratory complied with its QC program, which provided the rules and guidelines to ensure the reliability and validity of the work conducted at the laboratory. Compliance with the program was monitored by the laboratory's QA department, which was independent of the operating departments. Upon receipt

by the project team, data was subjected to verification and validation review, which identified and qualified problems related to the analysis.

The Quality Control Summary Report (QCSR) of the FSS sampling data is contained in Appendix C, Attachment C-2.

6.0 FINAL INSPECTION AND CERTIFICATIONS

6.1 INSPECTIONS

As required by the ROD, FSSs were performed within DT-6 and DT-7 using methods compatible with MARSSIM (DoD, 2000). The USACE implemented FSSs at these vicinity properties in accordance with the FSSP (USACE, 2002a).

A final inspection was conducted on November 6, 2003 for DT-7 and March 1, 2004 for DT-6 at the conclusion of site restoration and provided closure for the remediation activities. This inspection included Heintz Steel and Manufacturing acceptance of the condition of the DT-6. Since DT-7 continues to be used for the SLDS Support Compound via a lease agreement with the property owner, operation and maintenance (O&M) of the restored surfaces at DT-7 will be performed by the USACE contractor until the support compound is removed. The final inspection is documented on the final inspection form and is retained in the project files.

6.2 CERTIFICATION OF COMPLETION

The RAs described in this report are only a portion of the work required to satisfy the RA requirements specified in the ROD. The final inspection report for DT-6 and DT-7 serves as the documentation of completion of the RAs required to satisfy the ROD requirements for these properties. Upon completion of RAs at the SLDS, a final certification of completion will be issued.

6.3 PROBLEMS AND DEVIATIONS

The most significant delay was the result of damaging an unmarked fire hydrant water line at DT-7, causing temporary flooding of the construction area.

FWVs were utilized as the mechanism to implement and document changes to the Small Area Remediation WASD, and the DT-6 and DT-7 RAWDs and were reviewed and approved by the USACE before the change was implemented in the field. The FWV log is retained in the project files.

Six FWVs to the Small Area Remediation WASD and DT-6 and DT-7 RAWDs were submitted to the USACE and approved. They are documented in the FWV log as shown in Table 6-1.

Table 6-1. Field Work Variances Log

FWV No.	Affected Document	Subject	Date Submitted	Date Approved
85	Small Area Remediation WASD	Mechanical compaction equipment at DT-7	5/16/01	5/18/01
87	Small Area Remediation WASD, Appendix A.1.2 (DT-7 RAWD)	Backfill compaction; Excavation areas at DT-7	6/12/01	6/13/01
109	Small Area WASD	Backfill placement at DT-7	9/16/02	9/16/02
114	Small Area Remediation WASD, Appendix A.4.2, (DT-6 RAWD)	Excavation and sampling of delineation test pits at DT-6	4/10/03	4/14/03
121	Small Area Remediation WASD	Updating Vicinity Property ownership information and adoption of prescribed compaction procedures	7/9/03	7/14/03
122	Small Area Remediation WASD, Appendix A.4.2, DT-6 RAWD	Additional sampling and test pit excavations to extend Class 2 samples to deeper elevations at DT-6	7/14/03	7/16/03

6.4 INSTITUTIONAL CONTROLS

The dose and risk from actual residual conditions are acceptable to release DT-6 and DT-7 accessible areas without restrictions. Details of the dose and risk assessment can be found in Appendix C Section C.7. Inaccessible soils will be addressed by a future CERCLA action.

7.0 OPERATION AND MAINTENANCE ACTIVITIES

The O&M of the accessible areas remediated by the USACE or its contractors are not necessary because the areas were remediated to unrestricted use criteria with reference to Appendix C of this document. O&M of the restored surfaces (gravel and concrete) at DT-6 is the responsibility of the property owner by their acceptance of the Final Inspection Report. The property owner of DT-7 accepted the Final Inspection Report prior to leasing the property to USACE. Since DT-7 continues to be used for the SLDS Support Compound via a lease agreement with the owner of that property, O&M of the restored surfaces at DT-7 will be performed by the USACE contractor until the lease agreement is terminated and the support compound is removed.

8.0 SUMMARY OF PROJECT COSTS

A summary of project costs is provided in Table 8-1. A more detailed cost breakdown is provided in Appendix B.

Table 8-1. Cost Summary

Cost Item	ROD Estimate (1) (1998 $$)	ROD Estimate (2) (2003 $$)	Actual Cost (2003 $$)
RA Capital Cost	$6,875,420	$7,456,050	$ 1,874,050
RA Operating Costs	Not Applicable	Not Applicable	Not Applicable
Total Cost	$6,875,420	$7,456,050	$ 1,874,050
Projected Future O&M Cost	$3,240,840	$3,514,530	Not Available

[1] The ROD estimate is based on VPs portion of the SLDS RA assessment of $22.7 million for 18,390 bank yd^3 of soil excavated prorated for the actual volume of soil excavated at DT-6 and DT-7. Post RA O&M cost based on $10.7 million for VPs adjusted for actual volume of excavation (USACE, 1998b).

[2] FS cost was adjusted from 1998 dollars to 2003 dollars using average 1998 and average 2003 *Engineering News Record* building cost index factors for RA costs and projected O&M costs.

9.0 OBSERVATIONS AND LESSONS LEARNED

A more thorough and accurate record and information of previous land use and structures would have improved planning and expedited completion of the RA. Specifically, this would have helped avoid the flooding from the buried water line damage during excavation at DT-7.

A more thorough PDI would allow for a more accurate estimate of the extent of contamination. This should alleviate repeated cycles of FSS followed by further excavation needed to meet ROD criteria. A more thorough PDI would also result in better estimates of the volume of soil to be remediated; the original estimates of 580 yd^3 from DT-7 and 60 yd^3 from DT-6 increased to 3,911 yd^3 and 1,660 yd^3, respectively.

10.0 OPERABLE UNIT CONTACT INFORMATION

Below is a summary of the contact information for the project team participants:

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For the Government:
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Phone Number: (314) 260-3905
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For the Government:
Contract Number: DACW41-98-D-9006
Primary Contact Name and Title: Gerald Allen, Alternate Contracting Officer's Representative
Company Name: USACE, FUSRAP - SLDS
Address: #1 Angelrodt Street, St. Louis, MO 63147
Phone Number: 314-220-4108

Remedial Action Contractor:
Primary Contact Name and Title: Bruce Fox, Program Manager
Company Name: Shaw Environmental, Inc.
Address: 110 James S. McDonnell Blvd., Hazelwood, MO 63042
Phone Number: (314) 895-2137

Survey Contractor:
Primary Contact Name and Title: Sherry Gibson, Program Manager
Company Name: Science Applications International Corporation (SAIC)
Address: 8421 St. John Industrial Drive, Suite 200, St. Louis, MO 63114
Phone Number: (314) 770-3000

Analytical Laboratory:
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Lab QA/QC by Severn Trent Laboratory
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Phone Number: 314-298-8566

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APPENDIX A
PERFORMANCE FACTORS

Appendix A: Performance Factors

Performance of the RAs in DT-6 and DT-7 were affected by several general construction conditions including types of soil being removed, water handling, and construction logistics which were discussed previously. Other performance factors are summarized in Table A-1. Sampling and analysis must meet requirements of the SAG (USACE, 2000).

Table A-1. Other Performance Factors

Performance Topic	Type of Information
Types of samples collected:	
Pre-Design Samples:	
Radiological	• Radiological soil samples were analyzed for the SLDS radiological COCs.
Waste Characterization and toxicity characteristic leaching procedure (TCLP) Metals	• Waste characterization soil samples were analyzed for TCLP Pesticides, TCLP Volatiles, TCLP Herbicides, TCLP Metals, TCLP BNA, polychlorinated biphenyl (PCBs), Anions, pH, Paint Filter Test, Flashpoint, TOX, Reactivity, and Reactivity-Sulfide.
Class 1, Class 2, HTZ (i.e., biased sample), and Preferential Pathway samples	• Radiological soil samples were analyzed for the SLDS radiological COCs.
Sample frequency and protocol for:	
Pre-Design Samples:	• Pre-design samples were collected by the Remedial Action Contractor (RAC) during pre-design activities. These activities took place from October 2000 through December 2000. Samples were collected using a truck mounted-drill rig outfitted with 3-inch diameter 2-feet long split spoons or a Central Mine Equipment-type 5-feet long split barrel sampler or hand auger.
Radiological	• Radiological samples were collected in areas of the DT-6 and DT-7 to bound the extent of contamination in support of the remedial design.
Waste Characterization and TCLP Metals	• Waste characterization and TCLP Metals samples were collected to confirm that the waste falls within the waste acceptance criteria of the disposal facility.

Table A-1 Other Performance Factors (continued)

Performance Topic	Type of Information
HTZ Samples	• HTZ samples were collected by the Independent Verification Contractor (IVC) at locations that exhibited an elevated count rate during gamma walkover survey. Samples were collected using the hand scoop method or by using a hand auger.
Processed Ground-water Samples	• A ground-water sample was collected by the RAC after treatment at the SLDS water treatment plant located at Plant 7S. A 2-liter grab sample of the processed ground water was collected.
Class 1	• Class 1 samples were collected by either the IVC or the RAC to document compliance with the ROD remediation criteria.
Preferential Pathway Samples	• Preferential Pathway samples were collected by the RAC in excavation areas to determine if contamination above the ROD criteria had migrated outside of the excavation boundaries. Samples were collected by using the hand scoop or by using a hand auger.
Class 2 Samples	• Class 2 samples were collected by Shaw in DT-6 & DT-7 outside of Class 1 areas using a hand auger.
Quantity of material treated:	
Class 1 Excavation Areas	• Approximately 5,600 bank cubic yards of soil were excavated during the DT-6 and DT-7 remedial activities and transported for disposal.
Excavation water Treated	• Approximately 11,000 gallons of excavation water were treated during the DT-6 and DT-7 remedial activities and discharged to the Metropolitan St. Louis Sewer District facilities.
Cleanup goals and/or remediation objectives:	
Class 1, Class 2 and Preferential Pathway Samples	The remediation objectives for DT-6 and DT-7 soil samples are as follows: • For surface soils that are 0-6 inches in depth, the SOR of the above background concentration in soils averaged over any 100m^2 area is less than or equal to 1.0 when compared to 5 pCi/g for the greater of Ra-226 or Th-230, 5 pCi/g for the greater of Ra-228 or Th-232 and 50 pCi/g for U-238. • For subsurface soils that are greater than 6 inches in depth, the SOR of the concentration in soils averaged over any 100m^2 area, in any 6 inch layer, is less than or equal to 1.0 when compared to15 pCi/g for the greater of Ra-226 or Th-230, 15 pCi/g for the greater of Ra-228 or Th-232 and 50 pCi/g for U-238.

Table A-1 Other Performance Factors (continued)

Performance Topic	Type of Information
Comparison with cleanup goals/remediation objectives Class 1, Class 2, and Preferential Pathway Samples	Final Inspection Surveys for DT-6 and DT-7 and sample results confirmed that RGs had been met. Data from the Class 1, Class 2, and Preferential Pathway samples are included in Appendix C.
Method of analysis: Pre-Design Samples: Radiological	• The radiological samples were analyzed by methods prescribed in DOE Environmental Measurements Laboratory, Health and Safety Laboratory (HASL-300) and American Society for Testing and Materials (ASTM) C999-90 and C998-90.
Waste Characterization	• The waste characterization samples were analyzed by the following EPA methods: 8080 (TCLP Pesticides), 8260A (TCLP Volatiles), 8150 (TCLP Herbicides), 6010 (TCLP Metals), 8270 (TCLP BNA), 8082 (PCBs), 300 (Anions), 9015 (pH), 9095 (Paint Filter Test), 1010 (Flashpoint), 9020 (TOX), 9010 (Reactivity), and 9030 (Reactivity-Sulfide).
HTZ Samples, Class 1 , Class 2, and Preferential Pathway samples	• The radiological samples were analyzed by methods prescribed in U.S. DOE Environmental Measurements Laboratory, HASL-300 and ASTM C999-90 and C998-90.
Processed Ground-water Samples	• The processed ground-water samples were analyzed by Coprecipitation Method for Gross Alpha/Beta Radioactivity in Drinking Water (FUSRAP ML-018.1, EPA-600/4-80-032, Standard Methods for the Examination of Water and Wastewater) for gross alpha and beta activity. Total U is analyzed by KPA, total suspended solids is analyzed by Determination of TSS (FUSRAP ML-023.1, Method 2540D, TSS), isotopic Th is analyzed by alpha spectroscopy method FUSRAP ML-005.1 (Fusion and chemical separation), and isotopic U is analyzed by alpha spectroscopy method FUSRAP ML-015.1 (Fusion and chemical separation).
Quality assurance and quality control: Class 1 Samples and Class 2 Samples	• The DQOs established in the FSSP for Class 1 and Class 2 samples require that 5 percent of the total number of samples be duplicated and split with another laboratory.

APPENDIX B
PROJECT COSTS

Appendix B: Project Costs

A breakdown of project costs is provided in Table B-1.

Site: FUSRAP – SLDS
Location: St. Louis, MO
Phase: Final remedial action summary (RAS)
Date: 10/15/03
Description: Remediation of DT-6 and DT-7, Soils Adjacent to Mallinckrodt Facility in St. Louis, MO

Table B-1 Project Costs

Cost Element	Amount-2003 Dollars
Area preparation	$ 131,400
Excavation	$ 657,030
Engineering during construction	$ 65,700
Transportation and Disposal	$ 560,000
Sampling	$ 118,260
Restoration	$ 302,240
PRAR	$ 39,420
Total Project Costs	**$1,874,050**

APPENDIX C
FINAL STATUS SURVEY EVALUATION

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LIST OF ATTACHMENTS

C.1 INTRODUCTION

This appendix presents the survey design, data quality assessment (DQA), and results for the FSS of the SLDS DT-6 and DT-7 (Figure C-1-1). The FSS was performed in accordance with the requirements of CERCLA and the FSSP and using the guidance provided in the NRC's *NMSS Decommissioning Standard Review Plan* NUREG-1727 (NRC, 2000) and the MARSSIM. The purpose of the FSS was to determine whether the area satisfied concentration-based and dose-based RGs as defined in the ROD for the SLDS (USACE, 1998a).

Six Class 1 (i.e., areas that had radioactive contamination prior to remediation) and two Class 2 (i.e., areas that have, or had prior to remediation, a potential for radioactive contamination, but are not expected to exceed the remedial goal) land area SUs were selected for the DT-6 and DT-7 combined property as shown on Figures C-1-2 and C-1-3 in Attachment C-1. The FSSs consisted of a gamma walkover survey and the collection of 465 verification and 86 biased soil samples. During the FSS, alpha and beta scan surveys were performed and approximately 167 measurements were collected for total alpha and total beta activity measurements within the DT-6 Class 1 SU (i.e., SU-03).

Where multiple radiological contaminants are present, the concentration-based soil RGs are expressed and evaluated using a "unity rule". The result of a unity rule calculation is referred to as a SOR. Due to the potential presence of multiple radionuclides at the SLDS, concentration-based RGs are defined using SOR calculations for the major radionuclides of interest which are Ra-226, Ra-228, Th-230, Th-232, and U-238.

The SOR calculations for surface (upper 0.15 m or 0.5 ft) and subsurface (below 0.15 m or 0.5 ft) soils are provided in the expressions below.

$$SOR_{N\text{-less than }0.15\,m} = \frac{(\text{greater of Th - }230_N \text{ or Ra - }226_N)}{5\ pCi/g} + \frac{(\text{greater of Th - }232_N \text{ or Ra - }228_N)}{5\ pCi/g} + \frac{U\text{ - }238_N}{50\ pCi/g}$$

$$SOR_{N\text{-greater than }0.15\,m} = \frac{(\text{greater of Th - }230_N \text{ or Ra - }226_N)}{15\ pCi/g} + \frac{(\text{greater of Th - }232_N \text{ or Ra - }228_N)}{15\ pCi/g} + \frac{U\text{ - }238_N}{50\,pCi/g}$$

The subscript "N" in the SOR_N equations represents net concentration(s) above background. Background (i.e., reference area) was determined using 32 samples collected near the SLDS.

To demonstrate compliance with concentration-based RGs (i.e., SOR_N), the net concentration of the major radionuclide of interest is divided by the respective RG for that radionuclide to determine a ratio. To satisfy the concentration-based RG, the SOR_N value must be less than or equal to ($\leq$) 1 averaged over each SU.

The ROD specifies ARARs that pertain to the SLDS. 40 CFR 192.12 (a) establishes clean-up standards for land and requires that remedial actions shall be conducted so as to provide a reasonable assurance that the concentration of Ra-226 in land averaged over any area of 100 m^2 shall not exceed the background level by more than 5 pCi/g averaged over the first 15 centimeters (cm) of soil below the surface, and 15 pCi/g averaged over 15 cm thick layers of soil more than 15 cm below the surface.

The ROD specifies 10 CFR 20 Subpart E as an ARAR, which provides standards for determining the extent to which land area must be remediated before decommissioning of a site can be considered complete and the license terminated. The standard states that the residual dose for unrestricted use should not exceed 25 mrem/yr total effective dose equivalent (TEDE) and that the as low as reasonably achievable (ALARA) principle be applied.

Administrative limits for the DT-6 consolidated materials can be found in the FSSP and were adopted from the American National Standard Institute ANSI/HPS N13.12 – 1999, *Surface and Volume Radioactivity Standards for Clearance* (ANSI, 1999). The ANSI standard provides surface activity criteria that are protective of the public health and the environment for clearance of items and materials under unrestricted use conditions.

A DQA is a scientific and statistical evaluation that determines if property data are of the right type, quality, and quantity to support the intended use. The DQA process is based on guidance from Chapter 8 and Appendix E in MARSSIM and follows guidance from the EPA's *Guidance for Data Quality Assessment, Practical Methods for Data Analysis* (USEPA, 2000a). The five steps in the DQA process are repeated below.

1. Review the FSS design, including DQOs.
2. Conduct a preliminary data review.
3. Select a statistical test.
4. Verify the assumptions of the statistical test.
5. Draw conclusions from the data.

Each step in the DQA, as it applies to the DT-6 and DT-7 data, is discussed in the subsequent report sections. In summary, the DQA demonstrates that each DT-6 and DT-7 SU satisfied concentration-based RGs, dose and risk-based RGs, and statistical tests as outlined in the FSSP and supports releasing each SU without restriction.

C.2 FINAL STATUS SUs

In accordance with MARSSIM guidance, the DT-6 and DT-7 VPs were divided into Class 1 and Class 2 areas, resulting in nine SUs. The SUs are described in Table C-1.

Table C-1. SU Descriptions

SU	Class	Area (square meters)	Description
DT-6 SU-01	1	1,476	Surface and Subsurface Soils
DT-6 SU-02	2	9,288	Surface and Subsurface Soils
DT-6 SU-03	1	110	Consolidated Material Surfaces
DT-7 SU-01	1	2,167	Surface and Subsurface Soils
DT-7 SU-02	1	2,028	Surface and Subsurface Soils
DT-7 SU-03	1	2,153	Surface and Subsurface Soils
DT-7 SU-04	1	1,834	Surface and Subsurface Soils
DT-7 SU-05	1	510	Surface and Subsurface Soils
DT-7 SU-06	2	4,905	Surface and Subsurface Soils

Excavation of soils in excess of the RGs occurred in each of the six Class 1 soil SUs. All excavations were backfilled with six inches or more of USACE approved borrow material.

In addition to the systematic samples needed to perform MARSSIM statistical tests, subsurface samples were collected at specified depth intervals, up to 6 feet bgs, in an effort to confirm that no unexpected subsurface contamination was present. These are referred to as "subsurface samples" in this report. Guidance on the collection of subsurface samples is contained within the FSSP. Data from biased and subsurface samples were not included in MARSSIM statistical tests, but were included in evaluations of residual dose and risk.

C.2.1 Class 1 SUs

The Class 1 soil SUs for DT-6 (SU-01) and DT-7 (SU-01 through SU-05) consisted of remediated (i.e., excavated) and unremediated land areas, as shown in Attachment C-1, Figures C-1-2 and C-1-3. The Class 1 SUs also included the surface of consolidated materials (DT-6 SU-03) located within the remediated area. The remediated areas were subdivided into several SUs to comply with the maximum size limit specified in the FSSP. The land area SU sampling results were compared to the ROD RGs, as discussed in Sections C.5 and C.7.

DT-6 SU-03 consisted of consolidated material including concrete pads and a portion of walls from the storage building located next to the large excavation. The total area of DT-6 SU-03 is approximately 110 m^2. The consolidated materials SU-03 measurement results were compared to the surface activity guideline of 600 disintegrations/minute (dpm)/100 square centimeters (cm^2) total alpha and 6,000 dpm/100 cm^2 total beta radioactivity, as discussed in Section C.6.

C.2.2 Class 2 SUs

The Class 2 SUs for DT-6 (SU-02) and DT-7 (SU-06) consisted of accessible soils exclusive of the Class 1 areas and inaccessible areas, as shown on Figures C-1-2 and C-1-3. DT-6 and DT-7 each had a Class 2 SU to comply with the maximum Class 2 SU size limits specified in the FSSP. The Class 2 SUs sampling results were compared to ROD RGs, as discussed in Sections C.5 and C.7.

C.3 FINAL STATUS SURVEY MEASUREMENTS

Six types of measurements/samples were collected during the FSS to evaluate whether the property met the remedial action objectives. These consisted of the elements listed below:

1. Surface gamma scans of land areas to identify locations within the property that were above the investigation level.
2. Biased samples to investigate areas identified during the gamma scan.
3. Systematic samples to obtain the average radionuclide concentration across the SUs to the prescribed depth.
4. Surface alpha and beta radioactivity scans on potentially impacted consolidated material surfaces.
5. Biased total fixed point alpha and beta measurements to investigate any areas identified during the scan above the investigation level.
6. Systematic fixed point measurements of total alpha and total beta activity.

All of the measurements obtained, excluding samples that were excavated, were used to evaluate the property against the RGs. Areas that contained residual radioactivity above RGs were remediated. Preferential pathway samples (i.e., samples collected to evaluate potential migration pathways) and additional subsurface samples were obtained to support the investigation of the property and support the final data evaluation and comparison to the RG.

C.3.1 Surface Soil Gamma Scans

Gamma radiation scans (i.e., gamma walkover surveys) were performed over 100% of accessible Class 1 and approximately 90% of Class 2 SUs. Sodium iodide (NaI) radiation detection instruments were used to detect areas of elevated gamma radioactivity during the excavation of contaminated soils. The FSSP, following MARSSIM guidance, requires that gamma radiation scans be performed on 100% of Class 1 areas and 10-100% of Class 2 areas.

When a Class 1 SU was ready for FSS, a 100% gamma walkover survey was performed and documented prior to the collection of confirmation samples (see Attachment C-8, Figures C-8-1 and C-8-2). Locations exceeding the investigation level established in the FSSP were evaluated and remediated if observed above the RG, as appropriate. If additional remediation was necessary, then the area was re-scanned to demonstrate the effectiveness of the RA.

C.3.2 Field Instrument Detection Sensitivity

The field radiation detection survey instruments (and their functional and performance specifications) used during the surveys are listed in Table C-2. Detection sensitivities were determined following the guidance of NUREG-1507 (NRC, 1998) and are derived in the FSSP. The sensitivities presented were derived using typical instrument parameters and are well below the RGs for soil, with the exception of Th-230. Since Ra-226 and Th-230 are commingled and Ra-226 is a gamma emitter, Th-230 is detected through the presence of Ra-226.

Table C-2. Radiological Field Survey Instruments

Description	Application	Detection Sensitivity[1]
Ludlum Model 44-10; 2-inch × 2-inch NaI gamma scintillation detector	Gamma scans of all surfaces	Th-230 = 1120 pCi/g; Ra-226 = 1.2 pCi/g; and U-natural = 40 pCi/g.
Ludlum Model 2221; Scaler/ratemeter (with earphones)	Readout instrument for gamma scintillation detector	N/A

Ludlum Model 2360 coupled with a Ludlum 43-89 (ZnS plastic scintillator).	Beta surface scan on concrete.	1780 dpm/100cm^2 at 2 inches per second.
	Beta static measurement on concrete.	1111 dpm/100cm^2.
	Alpha surface scan on concrete.	342 dpm/100cm^2 at 2 inches per second.
	Alpha static measurement on concrete.	314 dpm/100cm^2.

[1] Minimum detectable concentrations (MDCs) shown in table were calculated for areas without surface cover (i.e., rock asphalt, concrete, etc.) based on increased knowledge of site-specific parameters.
Note: Field instrumentation is calibrated annually.

C.3.3 Soil Samples

Biased soil samples were collected at locations that exhibited an elevated count rate during the gamma walkover survey. The results of biased samples, if not excavated, were included in residual dose and risk calculations.

FSS soil samples were collected using a random-start systematic grid. The number and location of samples collected in each SU were derived using MARSSIM guidance as described in the FSSP.

The FSS incorporated systematic collection of representative soil samples in DT-6 and DT-7 areas at depth intervals of 18- to 24-inches to a maximum depth of 6 feet below pre-remediation grade. Sample borings at systematic sample locations were scanned to verify that subsurface pockets of contamination did not exist. Soil samples were collected at 18- to 24-inch depth intervals unless scanning indicated elevated contamination levels in other locations of the boring. If soil contamination in excess of the subsurface RG was identified, further investigation and/or remediation was conducted, as appropriate, to achieve compliance with the ROD RGs. The results of these samples, if not excavated, were also included in residual dose and risk calculations. Specific sampling details are provided below:

- In the DT-6 Class 1 SU, a sample was collected from an interval within the upper 6 inches of soil at all systematic sampling locations. Systematic sampling depths were extended to collect additional samples at 18- to 24-inch intervals until a total depth below original grade of 6 ft was reached. However, if the sample was collected from an excavation that was greater than 6 feet bgs, then only an excavation surface sample was collected at that location. One hundred percent (100%) of the Class 1 samples in the top 24-inch interval were subjected to laboratory analysis. Each of the samples collected from subsequent subsurface intervals was subjected to field screening and twenty percent (20%) of the samples collected were subjected to laboratory analysis.
- In the DT-7 Class 1 SUs, a sample was collected from an interval of the first 6 inches bgs at all systematic sampling locations. For unexcavated areas, systematic sampling depths were extended to collect additional samples at 18- to 24-inch intervals until a total depth of 6 ft bgs was reached. A sample was collected on the surface of the excavated areas in SU-01 through SU-05. In addition, in SU-03 through SU-05, systematic sampling depths were extended to collect additional samples at 18- to 24-inch intervals until a total depth of 6 ft bgs was reached. Each of the DT-7 Class 1 samples collected was subjected to laboratory analysis.
- Prior to completing the FSSs of the Class 1 areas, a professional geologist inspected the SU for potential migration pathways. If a means for potential contamination transport was identified (e.g., ash fill, utility lines) an additional subsurface sample (i.e., preferential pathway sample) was collected below the surface. In addition to the

preferential pathway samples, utility trenches, sewer lines, and other subsurface structures and areas accessible to workers were scanned and sampled (where material was available to sample). Each of the preferential pathway samples collected was subjected to laboratory analysis. Preferential pathway sample locations are shown on Figures C-1-2 and C-1-3. Results of preferential pathway samples are presented in Attachment C-5.

- Biased samples were collected in Class 1 and Class 2 areas that had elevated activity as indicated during the gamma walkover surveys. Biased samples were typically collected within the upper 6 inches of the surface soil. Each of the biased samples collected was subjected to laboratory analysis.
- In the Class 2 SUs, a sample was collected at each systematic location within the upper 6 inches below surface cover materials and in subsequent 18- to 24-inch intervals. Systematic sampling depths were extended to collect additional samples at 18- to 24-inch intervals until a maximum total depth of 6 ft bgs was attained at one of every three locations sampled. Each of the Class 2 samples collected was subjected to laboratory analysis.

C.3.4 Alpha and Beta Activity Scan and Fixed Point Measurements

Alpha and beta activity measurements were performed with Ludlum 43-89 scintillation detection instrumentation. When Class 1 areas were excavated and consolidated materials slated to remain in-place were exposed, a 100% alpha and beta scan survey was performed on the accessible surface. Fixed-point measurements were recorded from the locations having the maximum count rate detected during the alpha and beta consolidated material surface scans. At a minimum, one total alpha and one total beta activity fixed-point measurement were recorded for each approximate 1 m^2 area of the consolidated material. The measurements were used to demonstrate that the SU satisfied the surface activity guideline. Daily field performance checks were conducted in accordance with instrument use procedures. The performance checks were conducted prior to initiating the daily field activities, upon completion of daily field activities, and if the instrument response appeared questionable.

C.4 REVIEW FINAL STATUS SURVEY DESIGN

C.4.1 Final Status Survey Design for Soil

The FSSP specifies the design for the DT-6 and DT-7 FSS. The design estimated that approximately 18 samples per SU were needed for the WRS test. An evaluation of the scan MDC resulted in the conclusion that additional samples were not required for the identification of potential small areas of elevated activity.

Once property-specific FSS data (i.e., surface systematic sample data) were available, the calculation of the number of samples needed to support the WRS test was repeated for each SU to confirm that enough samples had been collected. The calculations use the surface systematic sample data standard deviations for Ra-226, U-238, Th-230, and Th-232 from the SU data summaries in Attachment C-4. An example of this process using DT-6 SU-01 is presented below.

The first step in determining the number of required samples was to estimate the standard deviation (σ), which represents the variability of the contaminant concentration. The specific net σ values for DT-6 SU-01 surface soils are as follows: Ra-226 = 1.27 pCi/g; U-238 = 8.57 pCi/g; Th-230 = 1.74 pCi/g and Th-232 = 0.23 pCi/g. Using these values, the weighted σ was calculated as shown below.

$$\sigma = \sqrt{\left(\frac{\sigma_{Ra-226}}{DCGL_{Ra-226}}\right)^2 + \left(\frac{\sigma_{U-238}}{DCGL_{U-238}}\right)^2 + \left(\frac{\sigma_{Th-230}}{DCGL_{Th-230}}\right)^2 + \left(\frac{\sigma_{Th-232}}{DCGL_{Th-232}}\right)^2} = \sqrt{\left(\frac{1.27}{15}\right)^2 + \left(\frac{8.57}{50}\right)^2 + \left(\frac{1.74}{15}\right)^2 + \left(\frac{0.23}{15}\right)^2} = 0.22$$

The next step was to calculate the relative shift (Δ/σ) using values for the SOR_N, lower bound of the gray region (LBGR), and the weighted σ. The SOR_N was set to 1.0, so the LBGR = SOR_N /2 = 0.5. The value for Δ was therefore, SOR_N - LBGR = (1.0) - (0.5) = 0.5. Using a σ value of 0.22 and a Δ = 0.5, the Δ/σ for the SU was calculated to be 2.28. This value is within the MARSSIM recommended range of 1 to 3 for Δ/σ.

The final step was to select the appropriate values from Table 5.3 in MARSSIM. Using 0.05 for the Type I error and 0.20 for the Type II error, the minimum number of surface systematic samples required for DT-6 SU-01 was estimated to be 7. Eighteen surface systematic samples were actually collected from DT-6 SU-01. This demonstrates that an adequate number of samples were collected to satisfy the WRS statistical test in DT-6 SU-01.

The process presented above was repeated for the remaining seven SUs. Table C-3 below lists the actual number of systematic samples collected and the minimum number of systematic samples required for each SU.

C.4.2 Final Status Survey Design for Consolidated Materials

The number of samples needed to complete the Sign Test for the consolidated surfaces in DT-6 SU-3 was determined using the standard deviation for alpha fixed point measurements. The standard deviation for alpha fixed point measurements was 140.

Table C-3. Number of Samples Required

SU[1]	Class	Minimum Systematic Samples Required	Number of Systematic Samples Collected
DT-6 SU-01	1	7	18
DT-6 SU-02	2	8	32
DT-6 SU-03	1	8	135

DT-7 SU-01	1	6	24
DT-7 SU-02	1	7	19
DT-7 SU-03	1	7	23
DT-7 SU-04	1	7	22
DT-7 SU-05	1	7	11
DT-7 SU-06	2	7	14

[1] SUs are described in Table C-1.

Using a σ value of 140 and a $\Delta = 300$, the Δ/σ for the SU was calculated to be 2.1. This value falls within the MARSSIM recommended range of 1 to 3 for Δ/σ. From Table 5.5 and equation 5-2 in MARSSIM and given 0.05 for the Type I error and 0.20 for the Type II error, the minimum number of systematic measurements required for the survey unit was estimated to be 8. One hundred thirty five systematic measurements were actually collected from the DT-6 SU-03. This demonstrates that an adequate number of measurements were collected to satisfy the Sign Test in DT-6 SU-03.

C.5 DATA EVALUATION

A data review provides a preliminary attempt to identify patterns, relationships, or potential anomalies in the data and may provide an early indication of whether a SU will pass or fail statistical tests (i.e., whether additional material should be removed). This review includes the following four components:

1. A review of data quality indicators.
2. A comparison of SU data to the concentration-based RGs.
3. A comparison of SU data to reference area data and a review of relevant parameters (e.g., mean, median, standard deviation, etc.); and,
4. A residual dose and risk assessment for the property as a whole.

The FSSP utilized City Property SU-09 data to estimate the number of data points needed for statistical testing (i.e., WRS test). Actual data collected from DT-6 and DT-7 and the 32 samples from the reference background areas located to the north and south of the SLDS were utilized to evaluate the FSS results.

C.5.1 Data Quality Indicators (DQIs)

FSS sample data were reviewed for precision, accuracy, representativeness, completeness, and comparability. These DQIs are summarized in Section 4.6 of the FSSP and are presented in detail in the QA section of the SAG (USACE, 2000).

Precision and accuracy are determined by the analysis of field duplicate samples and split samples. Precision is measured by comparing the analytical results of the field duplicates, which are samples collected at the same location as the field sample they duplicate and analyzed in the same laboratory. Accuracy is measured by comparing the results of split samples, which are aliquots of field samples analyzed by a separate laboratory. DT-6 and DT-7 split samples were analyzed by Severn-Trent Laboratories and the USACE-St. Louis District laboratory at the HISS.

The DQOs established in the FSSP require that 5% of the total number of samples be duplicated and split with another laboratory. A total of 26 splits and 28 duplicates were obtained from 429 systematic samples collected during the FSS and 22 samples collected during excavation of the test pits. Four of the duplicates and splits collected during the initial Class 2 sampling event were replaced with a Class 1 SU. Although these samples were not included in the final data set, the duplicates and splits are included in Attachment C-2, DT-6 and DT-7 QCSR.

Field duplicate and split sample results were evaluated to assess the general precision and accuracy obtained during the course of these investigations. Isotopic values for U-238, Th-230, Th-232, Ra-226, and Ra-228 were compared for the 28 field duplicate pairs and 26 QA split sample pairs. Evaluation criteria were set at a relative percent difference (RPD) of ± 30% or less at 50% of the RG or less than 1.96 for the normalized absolute difference (NAD). Based on these evaluation criteria, 96% of the field duplicate comparisons indicated acceptable precision, and 96% of the QA split sample comparisons indicated acceptable accuracy. Given the inherent heterogeneity of soils and the low levels of activity being measured (most values were determined at levels below 5 pCi/g), the precision and accuracy for this work are considered acceptable and the data are useable for their intended purpose.

Representativeness, comparability, and completeness are subjective decisions based on the sampling strategy and the ability of the data to meet requirements. Data were collected according to the FSSP using a MARSSIM random-start systematic grid sampling technique to

provide representativeness of the data to actual property conditions. The data were collected and analyzed according to the methods presented in the sampling and analysis plan. The data were verified and validated according to the QAPP. The detailed results of the QC analysis for the SLDS DT-6 and DT-7 data are provided in Attachment C-2 QCSR.

C.5.2 Comparison To Concentration-Based RGs

The RGs for the SLDS DT-6 and DT-7 are stated in Section C.1. Each SU was evaluated to determine that the average SOR_N over the entire SU did not exceed 1.0 and that the aerial average Ra-226 concentration over any 100 m^2 area did not exceed 15 pCi/g in any 15 cm (6 inch) thick layer of soil more than 15 cm below the surface and did not exceed 5 pCi/g in surface soil layer. Results from the systematic samples must also satisfy the WRS test.

The mean surface systematic sample SOR_N used for the MARSSIM evaluation for each SU was well below 1.0 (SOR_N values ranged between 0.09 – 0.26). The data are summarized in Attachment C-4.

DT-6 SU-01 and DT-7 SU- 03 each contain three sample results having an SOR_N greater than 1.0. Each of these areas complies with aerial average stated in the ARAR-based RG. The evaluation consisted of obtaining an area weighted average SOR_N of all the adjacent samples that fell within the surrounding 100 m^2 (see Attachment C-6). The area that a biased sample represents in Attachment C-4 may have been increased in order to determine a conservative 100 m^2 weighted average SOR value. All sample results including those areas that are elevated are incorporated into the residual dose and risk assessment (see Section C.7).

C.5.3 Statistical Tests

Statistical tests (e.g., WRS and Sign test) are designed to determine whether or not the level of residual activity uniformly distributed throughout the SU exceeds the release criteria. When the radionuclide contaminant of concern is present in background, the WRS test is selected as the appropriate statistical test for SUs consisting of soil. Per MARSSIM the completion of the WRS test is only required in SUs in which the highest gross SU measurement minus the lowest reference area measurement results in a SOR value > 1.0. Based on the above criteria, only DT-6 SU-01 requires the WRS test. DT-6 SU-01 passed the WRS test. Test results are provided in Attachment C-7.

Per the MARSSIM, for situations where the contaminant is not present in background or is present at such a small fraction of the criteria, as to be considered insignificant, a background reference area is not necessary. In this situation, the sign test replaces the WRS test. The sign test was used to assess DT-6 SU-03 (i.e., consolidated materials) surface activity measurements because the background alpha and beta activity of consolidated material is insignificant as compared to the guideline and therefore, no reference area measurements were required for the consolidated materials. The sign test is further discussed in Section C.6.

C.5.4 Comparison To The Reference Area And Evaluation Of Parameters

Attachment C-3 lists sample results for systematic soil sample data, biased soil sample data, and subsurface soil sample data. Reference area and FSS data are summarized in Attachment C-4. The data shows that U-238, Th-230, and Ra-226 are the primary contaminants of concern with U-238 having generally slightly greater concentrations than Ra-226 and Th-230 concentrations averaged over the each SU. Results of other radionuclides are generally within the range of background and contribute negligibly to the SOR_N calculations.

The reported radionuclide concentrations from the laboratory were used in this report even if below the minimum detection activity (MDA). The MARSSIM recommends that analytical methods should be capable of measuring levels at 10-50% of the established concentration based RG. MDAs for U-238, Th-230, Th-232, and Ra-226 achieved levels below 50% of the RG.

The comparison of FSS data to reference area data and evaluation of parameters confirm that data are sufficient to support the release of the DT-6 and DT-7 accessible areas.

C.6 CONSOLIDATED MATERIALS EVALUATION

The fixed-point measurements on consolidated materials were compared to guidelines contained in ANSI/HPS N13.12 – 1999. The guidelines for consolidated materials are 600 dpm/100cm^2 total alpha activity and 6000 dpm/100cm^2 total beta activity, as discussed in Section C.2.1. DT-6 SU-03 consisted of consolidated materials. The average of the surface measurements for DT-6 SU-03 was below the guidelines. The results of individual measurements are listed in Attachment C-9, Table 9-1.

Total surface activity measurements that indicated activity greater than the guidelines were subject to further evaluation. Each measurement above the guideline was averaged with the surrounding 1 m^2 area to verify that the average of the 1 m^2 area did not exceed the guidelines. The results of the elevated measurements and the average of the surrounding 1 m^2 area are presented in Attachment C-9, Table 9-3.

Although the FSS surface activity measurements satisfied the guidelines, a sign test was also performed as an additional verification that the SU measurements were below the guidelines. The results of the sign test are presented in Attachment C-9, Table 9-2.

C.7 RESIDUAL DOSE AND RISK ASSESSMENT

A conservative property-specific post-remedial action residual dose and risk assessment was performed for DT-6 and DT-7. This assessment was performed in accordance with the SLDS ROD to confirm that the site had been protectively remediated and to verify that the selected remedy had met the RAOs regarding dose and risk criteria so that the site could be released for use without any radiological restriction. The SLDS ROD established the CERCLA target risk range as the risk criteria, and the 10 CFR 20 Subpart E dose limit of 25 mrem/yr as the dose criteria for the SLDS (USACE 1998a). The EPA defines the CERCLA target risk range as 10^{-6} to 10^{-4} where "the upper boundary of the risk range is not a discrete line at 1E-04. A specific risk estimate around 10^{-4} may be considered acceptable if justified based on site-specific conditions" (USEPA, 1997a). Dose and risk scenarios for the SLDS ROD are based on the industrial/utility worker and industrial/construction worker exposure scenarios defined in the SLDS FS (USACE, 1998b). The assessments for the SLDS DT-6 and DT-7 were performed for each of these scenarios and an additional onsite residential scenario was considered at the request of regulators. Residual dose and risk assessment results that are within the ROD criteria stated above would show protectiveness and the property could be released for use without any land use restrictions. This assessment results in a conservative evaluation of residual dose and risk to all receptors since the existence of cover material is not taken into consideration. Considering cover material such as borrow, asphalt, or concrete in the dose/risk assessment would reduce the calculated onsite dose and risk.

In accordance with 40 CFR 192, Subpart A, control of residual radioactive materials from inactive uranium processing sites shall be designed to be effective for up to 1000 years, to the extent reasonably achievable, and, in any case, for at least 200 years. Therefore dose associated with the control (remedial action) is assessed for a 1000 year period. Risk is only required to be assessed for a 30-year period under the residential land use scenario in accordance with CERCLA. However, risk in this report was assessed for a 1000 year period as well as dose.

RESRAD (Version 6.22) was used during the dose and risk assessment to calculate dose and risk to the potential receptors. RESRAD is a computer code developed at Argonne National Laboratory for the DOE to determine site-specific residual radiation guidelines and dose to a future hypothetical on-site receptor at sites that are contaminated with residual radioactive materials. The use of RESRAD codes for modeling dose and risk has become an acceptable industry practice among prominent federal agencies. For example:

- The EPA used RESRAD in its "Reassessment of Radium and Thorium Soil Concentrations and Annual Dose Rates" that demonstrated the protectiveness of Uranium Mill Tailings Radiation Control Act (UMTRCA) soil criteria and in its rulemaking for cleanup of sites contaminated with radioactivity.
- Seven U.S. Cabinet-level agencies including EPA, DOE, NRC, and DOD, functioning as the Interagency Steering Committee on Radiation Standards formally accepted RESRAD-BIOTA.
- The EPA was also a signatory to the SLDS ROD that used RESRAD and is a participant in many other CERCLA actions involving RESRAD.

Residual dose and risk assessments in the SLDS ROD were performed using RESRAD version 5.62. RESRAD 5.62 incorporates the HEAST 1995 morbidity slope factors, whereas RESRAD 6.22 incorporates Federal Guidance Report (FGR) 13 morbidity slope factors. The newer FGR 13 slope factors are pathway specific and are more conservative for the SLDS COCs.

The input parameters selected for the utility and industrial worker scenarios are those defined in the SLDS FS (USACE, 1998b). The input parameters selected for the onsite residential receptor scenario are those defined for the onsite residential receptor in the *Post-Remedial Action Report for the St. Louis Downtown Site Plant 2 Property* (USACE, 2002b).

Each receptor scenario is summarized as follows:

1. Industrial Worker: The industrial worker is modeled as a typical site worker who spends most of their time indoors. The worker is at the property for 250 days per year for 25 years. During a standard year, the industrial worker is assumed to spend 1600 hours indoors and 400 hours outdoors plus 125 hours (0.5 hours per day) indoors to account for the possibility of eating lunch on the property, early daily arrival or late daily departure.
2. Utility Worker: The utility worker may participate in utility work or other intrusive outdoor activities at the property. It is assumed that the utility worker is exposed in a single event that takes place over an 80-hour period.
3. Onsite Residential Receptor: The onsite residential receptor is modeled as a potential future receptor in case the current land use areas being assessed changes to residential. The residential receptor is assumed to live on site for 350 days per year for 30 years (USEPA, 2000b). The resident is assumed to spend 16.4 hours indoors and 2.0 hours outdoors each day (USEPA, 1997b). Among outdoor activities, the resident is assumed to spend 0.2 hours each day for gardening.

Each receptor in the three scenarios is exposed to the radioactive contaminated soil through the following three exposure pathways – External gamma, Inhalation, and Soil Ingestion. The onsite resident scenario also includes plant ingestion pathways. Since groundwater is not a potential source of drinking water for the St. Louis sites, the drinking water pathway is not considered as a potential pathway for the property. The non-default RESRAD input parameters for the three receptors are presented in Table C-4.

Table C-4. RESRAD Non-Default Input Parameters

Category	Parameter	Values	
Physical Parameters	Area of Contaminated Zone (m^2)	DT-6, SU-01	1,476
		DT-6, Class 2	9,288
		DT-7, SU-01	2,167
		DT-7, SU-02	2,028
		DT-7, SU-03	2,153
		DT-7, SU-04	1,834
		DT-7, SU-05	510
		DT-7, Class 2	4,905
		Entire Property	24,361
Cover Parameters	Thickness of the Contaminated Zone [meters (m)]	2	
	Cover Depth	0	
	Density of the cover Material	Not Applicable	
	Cover Erosion Rate	Not Applicable	

Table C-4. RESRAD Non-Default Input Parameters (Cont'd)

Category	Parameter	Values		
Hydrological Data for Contaminated Zone	Density of Contaminated Zone [grams per cubic centimeters (g/cm^3)]	1.28 (Clay Loam)		
	Contaminated zone Total Porosity	0.42 (Clay Soil)		
	Contaminated zone Field Capacity	0.36		
	Contaminated zone Hydraulic Conductivity [meters per year (m/yr)]	3.048		
	Contaminated zone b parameter	10.4		
	Wind Speed [meters per second (m/s)]	4.17		
	Precipitation [meters per year (m/yr)]	0.92		
	Irrigation (m/yr)	0		
	Run off Coefficient	0.8 (Built-Up Area)		
	Contaminated zone Erosion Rate	0.00006		
Exposure Parameters		**Onsite Resident**	**Utility Worker**	**Industrial Worker**
	Inhalation Rate (m^3/yr)	8,400	10,550	10,550
	Mass Loading for Inhalation (g/m^3)	5.9E-06	0.0002	0.0002
	Exposure Duration [year (yr)]	30	1	25
	Indoor Dust Filtration Factor	0.5	0.5	0.5
	External Gamma Shielding Factor	0.7	0.7	0.7
	Indoor Time Fraction	0.655	0	0.1969
	Outdoor Time Fraction	0.0799	0.0091	0.04566
	Fruit, Vegetable, and Grain Consumption (kg/yr)	42.7	Not Applicable	Not Applicable
	Leafy Vegetable Consumption (kg/yr)	4.66	Not Applicable	Not Applicable
	Soil Ingestion (g/yr)	43.8	175.2	49.64

Dose and risk for DT-6 and DT-7 is determined by developing a source term and applying that source term to the three receptor scenarios using RESRAD. For these properties, the source terms are based upon exposure point concentrations (EPCs). EPCs for applicable COCs are calculated for each SU and the total property. The EPCs for each SU are determined by subtracting the average background concentration from the smaller of the 95 percent upper confidence limit (UCL_{95}) or the maximum detection concentration. The exposure point concentrations for the property are calculated by by performing an area-weighted average of the EPCs for all SUs.

Determination of the UCL_{95} for each radionuclide depends upon the distribution of the sampling results. EPA's designed software ProUCL (version 3.0) was used during the determination of distribution of sampling results. The software determines the UCL_{95} based on the distribution of the sampling results. DT-7 includes five Class 1 and one Class 2 SUs, whereas DT-6 includes one Class 1 and one Class 2 SUs. Since the Class 2 SU for DT-6 only included systematic samples, all sample results were given equal weighting (i.e., simple averaging) during the determination of the UCL_{95}. All other SUs of DT-6 and DT-7 included both systematic and biased samples. In each SU, a representative area equal to the SU area divided by the number of systematic sampling locations was established for each systematic sampling location. Systematic sample locations are those locations where samples were taken to perform the MARSSIM statistical tests. Then an area-weighted average concentration for each radionuclide COC was determined for each representative area based on the area and concentration results of both systematic and biased samples within that representative area. Representative area COC area-weighted average concentrations were used to determine the UCL_{95} values. Area weighting of samples for each representative area was calculated using the following equation.

$$C_{RA} = \frac{\sum\left(\frac{C_S \, x\left(R_A - \sum A_B\right)}{N_S}\right) + \sum\left(C_B \, x \, A_B\right)}{R_A}$$

Where;

C_{RA} = Concentration of the representative area
C_S = Concentration of the systematic sample
R_A = Representative area value
C_B = Concentration of the biased sample
A_B = Area of the biased sample
N_S = Number of samples per systematic sample location (e.g., samples at different depths)

The EPCs for each SU and for the entire property being assessed are presented in Table C-5. All statistics are based upon the representative area concentration values used to determine UCL_{95} values for each SU.

Table C-5. EPCs for Each SU and Entire Property

SU	Area (m^2)	Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)
DT-6 SU-01	1476	Background	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89
		Maximum	5.16	8.50	28.43	1.53	1.47	1.11	2.43	0.77	1.82
		Distribution	N	X	X	X	N	N	G	X	G
		UCL-95	3.74	4.41	11.16	0.43	1.19	0.98	1.71	0.24	0.45
		EPC	**0.96**	**2.47**	**9.72**	**0.34**	**0.10**	**0.03**	**0.56**	**0.10**	**0.00**
DT-6 SU-02 Class 2	9288	Background	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89
		Maximum	4.17	5.95	5.95	0.35	1.75	1.15	2.40	0.30	0.52
		Distribution	N	N	N	G	N	N	N	N	N
		UCL-95	2.33	3.90	3.35	0.24	1.10	0.77	1.21	0.16	0.16
		EPC	**0.00**	**1.96**	**1.92**	**0.15**	**0.01**	**0.00**	**0.05**	**0.02**	**0.00**
DT-7 SU-01	2167	Background	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89
		Maximum	6.62	4.98	6.61	0.33	1.63	1.34	2.13	0.26	0.49
		Distribution	N	N	N	N	N	N	N	N	N
		UCL-95	3.26	3.26	3.49	0.17	1.19	0.98	1.47	0.13	0.28
		EPC	**0.47**	**1.32**	**2.05**	**0.08**	**0.09**	**0.03**	**0.31**	**0.00**	**0.00**
DT-7 SU-02	2028	Background	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89
		Maximum	5.24	12.90	7.71	0.56	1.69	1.16	2.25	0.63	0.97
		Distribution	N	X	G	N	N	N	N	N	G
		UCL-95	3.50	6.51	4.28	0.23	1.26	0.96	1.70	0.29	0.37
		EPC	**0.72**	**4.57**	**2.85**	**0.14**	**0.17**	**0.01**	**0.54**	**0.15**	**0.00**
DT-7 SU-03	2153	Background	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89
		Maximum	4.68	5.83	8.96	0.59	1.57	1.27	2.12	0.45	0.62
		Distribution	N	G	G	G	N	N	N	N	N
		UCL-95	3.40	3.41	3.65	0.22	1.20	0.99	1.56	0.25	0.33
		EPC	**0.61**	**1.47**	**2.21**	**0.13**	**0.10**	**0.04**	**0.40**	**0.11**	**0.00**
DT-7 SU-04	1834	Background	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89
		Maximum	4.69	4.65	12.39	0.55	1.35	1.27	2.02	0.56	0.76
		Distribution	N	N	X	N	N	N	N	G	N
		UCL-95	3.40	3.32	5.48	0.23	1.16	0.97	1.49	0.21	0.28
		EPC	**0.62**	**1.38**	**4.04**	**0.14**	**0.07**	**0.03**	**0.34**	**0.07**	**0.00**

Table C-5. EPCs for Each SU and Entire Property (Cont'd)

SU	Area (m^2)	Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)
DT-7 SU-04	1834	Background	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89
		Maximum	4.69	4.65	12.39	0.55	1.35	1.27	2.02	0.56	0.76
		Distribution	N	N	X	N	N	N	N	G	N
		UCL-95	3.40	3.32	5.48	0.23	1.16	0.97	1.49	0.21	0.28
		EPC	**0.62**	**1.38**	**4.04**	**0.14**	**0.07**	**0.03**	**0.34**	**0.07**	**0.00**
DT-7 SU-05	510	Background	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89
		Maximum	5.18	5.23	5.26	0.39	1.24	1.07	1.69	0.40	0.55
		Distribution	N	N	N	N	N	N	N	N	X
		UCL-95	3.14	3.30	3.86	0.18	1.08	0.93	1.51	0.29	0.12
		EPC	**0.36**	**1.36**	**2.42**	**0.09**	**0.00**	**0.00**	**0.35**	**0.15**	**0.00**
DT-7 SU-06 Class 2	4905	Background	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89
		Maximum	4.26	6.16	5.37	0.45	1.77	1.04	2.75	0.26	0.46
		Distribution	N	N	N	N	N	N	G	N	N
		UCL-95	2.86	3.98	2.97	0.23	1.17	0.84	1.60	0.17	0.21
		EPC	**0.07**	**2.03**	**1.53**	**0.14**	**0.08**	**0.00**	**0.45**	**0.03**	**0.00**
Site	**24,361**	**EPC**	**0.28**	**2.07**	**2.60**	**0.15**	**0.06**	**0.01**	**0.28**	**0.05**	**0.00**

N – Normal G – Gamma X – Non-Parametric

Table C-6 summarizes the highest radiological dose and risk in a 1000 year period to each of the three receptors from exposure to the residual radionuclides present at DT-6 and DT-7 for each scenario.

Table C-6. Highest Dose and Risk for DT-6 and DT-7 to Different Receptors

Industrial Worker		Utility Worker		Onsite Resident	
Dose (mrem/yr)	Risk	Dose (mrem/yr)	Risk	Dose (mrem/yr)	Risk
2	3E-05	0.1	7E-08	7	1E-04

The RESRAD results indicate that the onsite residential receptor received the highest dose and risk among the three receptors. The highest residential dose and risk were 7 mrem/yr and 1E-04, respectively. The dose for all receptors is below 25 mrem/yr. The risk for the two scenarios required by the ROD (industrial and utility worker) and the onsite resident were within the CERCLA risk range. The actual property risk for all scenarios would be lower than the calculated risk since:

- Cover material was not taken into consideration. If a minimum cover backfill thickness of 0.15 meters is considered, the residual residential dose and risk are 4 mrem/yr and 7E-05, respectively.
- Assumptions used to calculate residual risk are much more conservative than conditions required for RA (USACE, 1998a)

Additionally, under CERCLA, onsite resident risk is only required to be assessed for 30 years. Onsite resident risk at year 30 was 9E-05. Therefore, based on the results of dose and risk assessments, it can be concluded that residual dose and risk at DT-6 and DT-7 are protective for all potential receptor scenarios and the property can be released for use without any land use restrictions.

EPC calculations (including Pro-UCL output files) and RESRAD output files for all modeled scenarios are on file as part of the St. Louis FUSRAP records/files for the SLDS.

C.8 CONCLUSIONS

The USACE and EPA determined that Selective Excavation and Disposal was the most appropriate remedy for groundwater and accessible soil at the SLDS based upon consideration of the requirements of CERCLA, a detailed analysis of the alternatives, and extensive public participation and comment. The remedy addressed soil contaminated with radioactivity related to MED/AEC uranium manufacturing and processing at the SLDS.

Comparison to ROD Criteria

The RAOs for DT-6 and DT-7 apply to areas affected by the MED/AEC uranium manufacturing and processing activities. This section lists (i.e., bullet/italicized items) each ROD RAO (i.e., RG) and describes how the USACE is demonstrating compliance with the RG.

- *Excavation of accessible soils according to the ARAR-based composite cleanup criteria (i.e., RG) of 5/15 pCi/g above background for Ra-226, Ra-228, Th-232, and Th-230, and 50 pCi/g above background for U-238 in the uppermost 1.8 m (6 ft) (USACE, 1998a).*

  The 5/5/50 RG was used for comparison against the data collected from surface soils in the first 0.5 ft below grade (i.e., DT-6 Class 2 SU). The 15/15/50 subsurface RG was used for comparison against the data collected in accessible soils below surface soils. In Class 1 SUs, soil samples were collected at the excavation surface and at 18-24 inch intervals until a depth of 6 ft below ground surface was reached. In Class 2 SUs, samples were collected in the first 6 inches of soil and then at 18-24 inch intervals until a depth of 6 ft below ground surface was reached. All DT-6 and DT-7 SUs have SOR_N values of less than 1.0 when averaged over the SU. Therefore, the SU data demonstrates compliance with this ROD RG. Details on the SOR_N results can be found in Section C.5.2.

  In addition, the 40 CFR 192 ARAR for surface/subsurface soils (5/15 pCi/g Ra-226 averaged over 100 m^2) was used for comparison against the data collected in accessible soils in Class 1 SUs. The aerial density of samples collected in Class 1 SUs met the 100 m^2 aerial requirement and the average Ra-226 concentration was less than the RG in all Class 1 SUs. Details on the 100 m^2 aerial average results can be found in Section C.5.2 of this report.

  On the portion of the Mallinckrodt property addressed in the OU, site-specific target removal levels of 50 pCi/g above background for Ra-226, 100 pCi/g above background for Th-230, and 150 pCi/g above background for U-238 (50/100/150 RGs) will be used as the deep-soil cleanup guidelines (RG) below 1.8 m (6 ft) as described in Section 7.3.6 of the ROD (USACE, 1998a).

  Per the ROD, deep soil RGs do not apply to VPs.

- *For arsenic and cadmium:*
  1) *within the upper 1.2 or 1.8 m (4 or 6 ft) of grade, soil concentrations of arsenic greater than 60 mg/kg and/or cadmium concentrations greater than 17 mg/kg will be removed, or*

  2) *below 1.2 or 1.8 m (4 or 6 ft) of grade, soil concentrations of arsenic greater that 2500 mg/kg and/or cadmium are greater than 400 mg/kg will be removed (USACE, 1998a).*

Per the ROD, arsenic and cadmium requirements are not applicable to DT-6 and DT-7.

- *Remediation goals for radiological contaminants are applied to soil concentration above background consistent with the ARAR (40 CFR 192) from which they derive. However, addition of background concentrations to these goals would not alter any judgments regarding protectiveness. Remediation goals for non-radiological RGs are applied to soil concentrations including background consistent with the NCP (USACE, 1998a).*

  This statement in the ROD is true for all DT-6 and DT-7 SUs. The SOR_G for all SUs (the raw data including background) is also less than 1.0 when averaged across the SU. SOR_G calculations for each SU can be found in Attachment C-4. Per the ROD, chemical RGs are not applicable to VPs DT-6 and DT-7.

- *Compliance with soil contamination criteria (i.e., RGs) will be verified by methods that are compatible with MARSSIM for soils being cleaned up in the OU effective with MARSSIM publication. (A representative number of samples obtained in the bottom of excavations will also be subjected to chemical analysis and comparison to chemical RGs.) (USACE, 1998a).*

  The FSSP was designed in accordance with MARSSIM methodology. Class 1 and Class 2 SU sizes were selected to be 2,000 m^2 ± 10 % and 10,000 m^2 ± 10 %, respectively, as recommended by the MARSSIM. Details on SU areas can be found in Section C.2 of this report.

  In SUs that had individual systematic samples with the highest gross SU measurement minus the lowest reference area measurement resulting in a SOR > 1.0, the SU was subjected to WRS statistical testing to ensure that the activity in the SU is less than or equal to the DCGL. The only SU that required WRS testing passed the WRS test. Details on the WRS test can be found in Section C.5.3 of this report.

  FSS data were used to ensure that enough samples were collected in each SU. All DT-6 and DT-7 SUs have enough samples to satisfy statistical testing requirements. Details on the required number of samples to satisfy statistical testing can be found in Section C.4 of this report.

  Per the ROD, chemical analysis is not required for DT-6 and DT-7.

  DQIs were reviewed for precision, accuracy, representativeness, completeness, and comparability. All DQIs are considered acceptable and the data are useable for their intended purpose. Details on DQIs can be found in Section C.5.1 of this report.

- *A post-remedial action risk assessment will be performed to describe the level of risk remaining from MED/AEC contaminants following completion of remedial activities (USACE, 1998a).*

  A post-remedial action risk and dose assessment was performed for the modeled scenarios outlined in the ROD. In addition, regulators requested that the USACE develop an on-site residential scenario in case the current land use for DT-6 and DT-7 areas changed from industrial to residential. The residual dose and risk calculated for DT-6 and DT-7 is less than or equal to 7 mrem/yr and 1 E-04, respectively for all modeled scenarios (i.e., Industrial Worker, Utility Worker, and On-site Resident) without regard to any cover material. The dose and risk from actual residual

conditions at DT-6 and DT-7 are considered acceptable to release the accessible areas without restrictions. Details of the dose and risk assessment can be found in Section C.7 of this report.

- *Final determinations as to whether institutional controls and use restrictions are necessary will be based on calculations of post remedial action risk derived from actual residual conditions. Five-year reviews will be conducted per the NCP for residual conditions that are unsuitable for release without restrictions (USACE, 1998a).*

  The dose and risk from actual residual conditions (without regard to cover materials) are considered acceptable to release DT-6 and DT-7 accessible areas without restrictions. There are no accessible areas at DT-6 and DT-7 where it is necessary to apply restrictions or institutional controls. Details of the dose and risk assessment can be found in Section C.7 of this report.

- *Institutional controls may include land use restrictions for those areas having residual concentrations of contaminants unsuitable for unrestricted use. This determination will be made based on risk analysis of the actual post-remedial action conditions. Until a decision is developed to address the ultimate disposition of inaccessible soils, steps will be taken to control uses inconsistent with current uses and to learn of anticipated changes in conditions that might make these soils accessible or increase the potential for exposure. Periodic reviews with affected property owners will be conducted throughout the duration of active site remediation. For residual conditions requiring use restrictions after the period of active remediation, coordination with property owners and local land use planning authorities will be necessary to implement deed restrictions or other mechanisms to maintain industrial/commercial land use (USACE, 1998a).*

  The dose and risk from actual residual conditions (without regard to cover materials) are acceptable to release DT-6 and DT-7 accessible areas without restrictions. Details of the dose and risk assessment can be found in Section C.7 of this report. There are no accessible areas at DT-6 and DT-7 where it is necessary to apply restrictions or institutional controls. Inaccessible soils at DT-6 and DT-7 are not within the scope of the SLDS ROD or this report and will be addressed in a future CERCLA action.

- *A long-term ground-water monitoring strategy will be implemented to confirm expectations that significant impacts to the Mississippi Alluvial Aquifer (B unit) will not occur. Although ground water use in this area is not anticipated, agreements will be proposed to state and local water authorities to prevent well drilling, which may be impacted by the surficially contaminated A unit (USACE, 1998a).*

  A long-term ground water monitoring strategy has been implemented to confirm expectations that significant impacts to the Mississippi Alluvial Aquifer (B unit) will not occur. An Environmental Monitoring Guide for the St. Louis Sites (USACE, 1999) has been written and is currently being implemented by the USACE through Environmental Monitoring Implementation Plans for each fiscal year.

- *Perimeter wells in the Mississippi Alluvial Aquifer will be monitored to determine if further action will be required with respect to ground water (USACE, 1998a).*

  Perimeter wells in the Mississippi Alluvial Aquifer are being monitored in accordance with the Environmental Monitoring Guide for the St. Louis Sites (SLS).

The requirements in the guide are currently being implemented by the USACE through Environmental Monitoring Implementation Plans for each fiscal year. These requirements include perimeter well ground-water monitoring.

- *Protactinium-231 (Pa-231) and actinium-227 (Ac-227) will be included in the analyses for the post-remedial action residual site risk (USACE, 1998a).*

  Pa-231 and Ac-227 were included in the post-remedial action dose and risk assessments. The average Pa-231 and Ac-227 concentrations were less than 0.5 pCi/g in all SUs and therefore did not significantly affect residual dose or risk. Details of the dose and risk assessment can be found in Section C.7 of this report.

- *Contaminated sediments in sewers and drains considered to be accessible will be remediated along with the soils (USACE, 1998a).*

  There were no accessible sewers and drains on DT-6 and DT-7. Inaccessible areas (including sediments in sewers and drains) are beyond the scope of the ROD and this report and will be addressed in a future CERCLA action.

The residual radioactivity in accessible areas at DT-6 and DT-7 meets all requirements specified in the ROD. This conclusion is the result of comparison of ROD requirements and the residual site conditions. The concentration based RGs for Th-230, Ra-226, Th-232, Ra-228, and U-238 are satisfied, noting that no SOR_N value exceeds the RG of 1.0 when averaged over the SU (the average SOR_N excluding background in Class 1 SUs and Class 2 SUs ranged from 0.09 to 0.26 and 0.13 to 0.26, respectively) and no Ra-226 concentration averaged over 100 m^2 exceeds 15 pCi/g. The dose-based ARAR from 10 CFR 20 Subpart E, "Radiological Criteria for License Termination" has been satisfied noting that the highest dose calculated is approximately 7 mrem/yr to an on-site resident using conservative exposure assumptions without regard to the existence of any cover material. The residual dose and risk calculated for DT-6 and DT-7 is less than or equal to 7 mrem/yr and 1.6 E-04, respectively for all modeled scenarios (i.e., Industrial Worker, Utility Worker, and On-site Resident) without regard to the existence of any cover material. The SUs also satisfy the statistical requirements with all SUs passing the WRS test. Soil concentrations comply with the 40 CFR 192 unrestricted release criteria. All DT-6 and DT-7 SUs are released without radiological restrictions in accordance with the ROD.

ATTACHMENT C-1
DT-6 AND DT-7 FINAL STATUS SURVEY UNITS AND SOIL SAMPLING LOCATIONS FIGURES

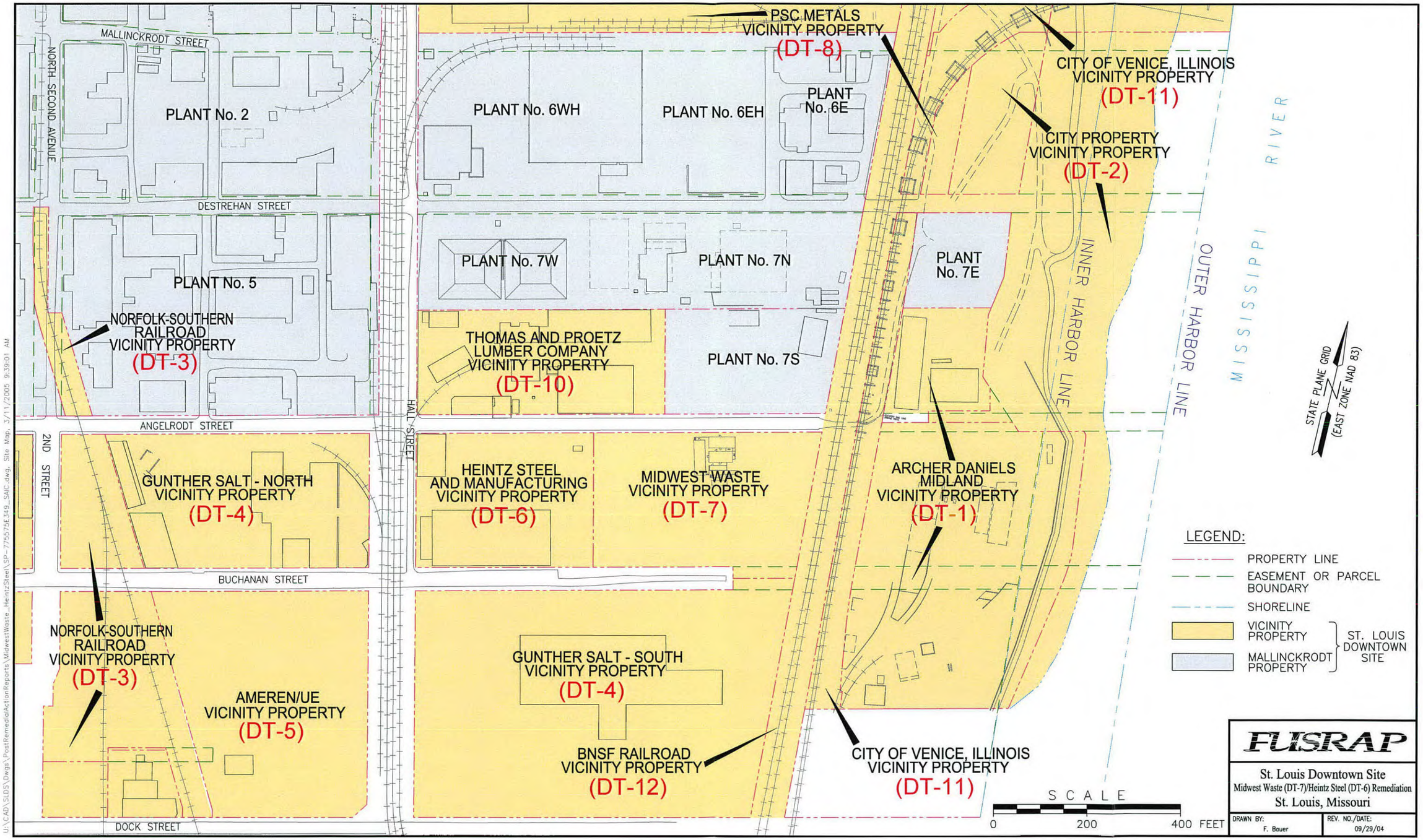


Figure C-1-1. Location Map

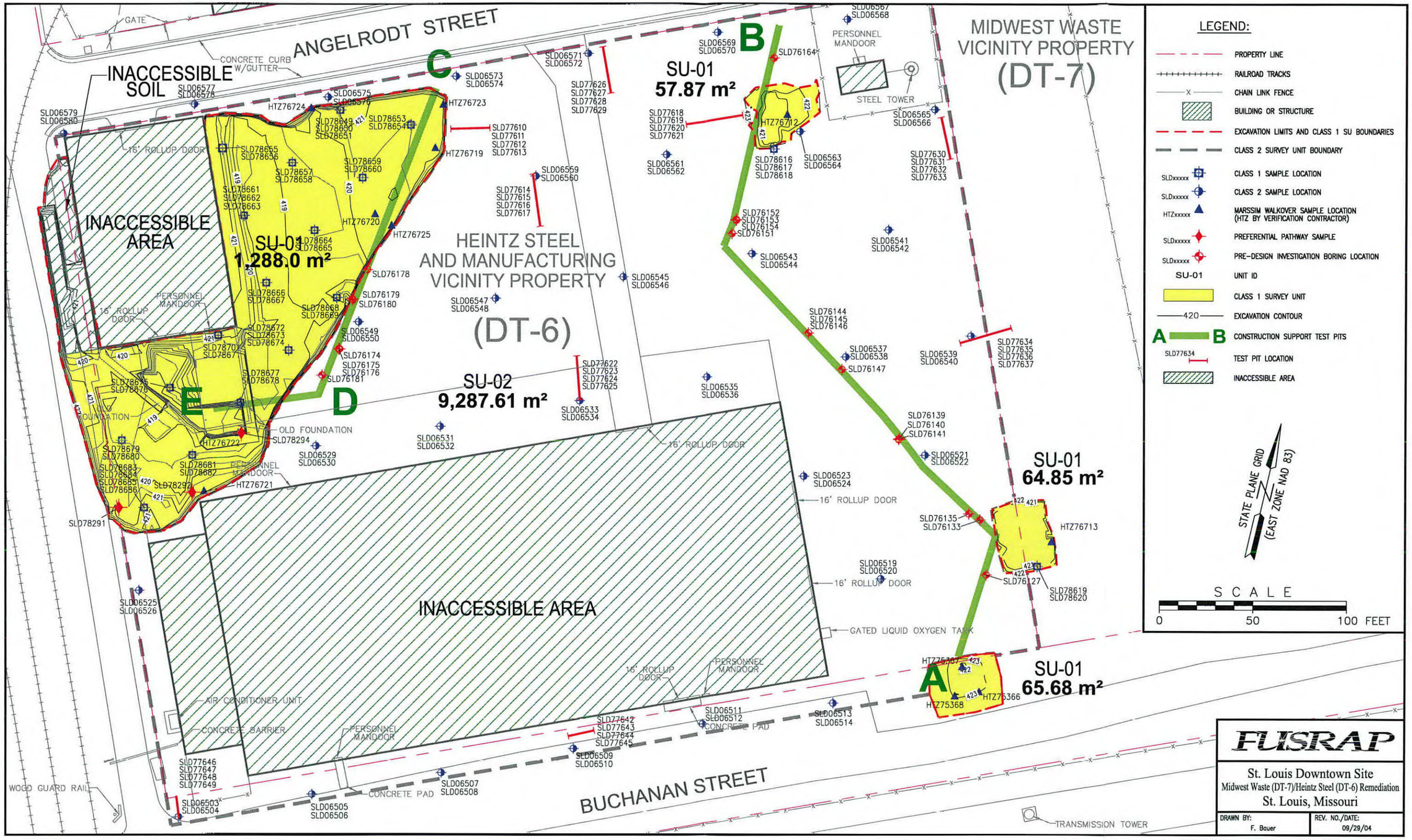
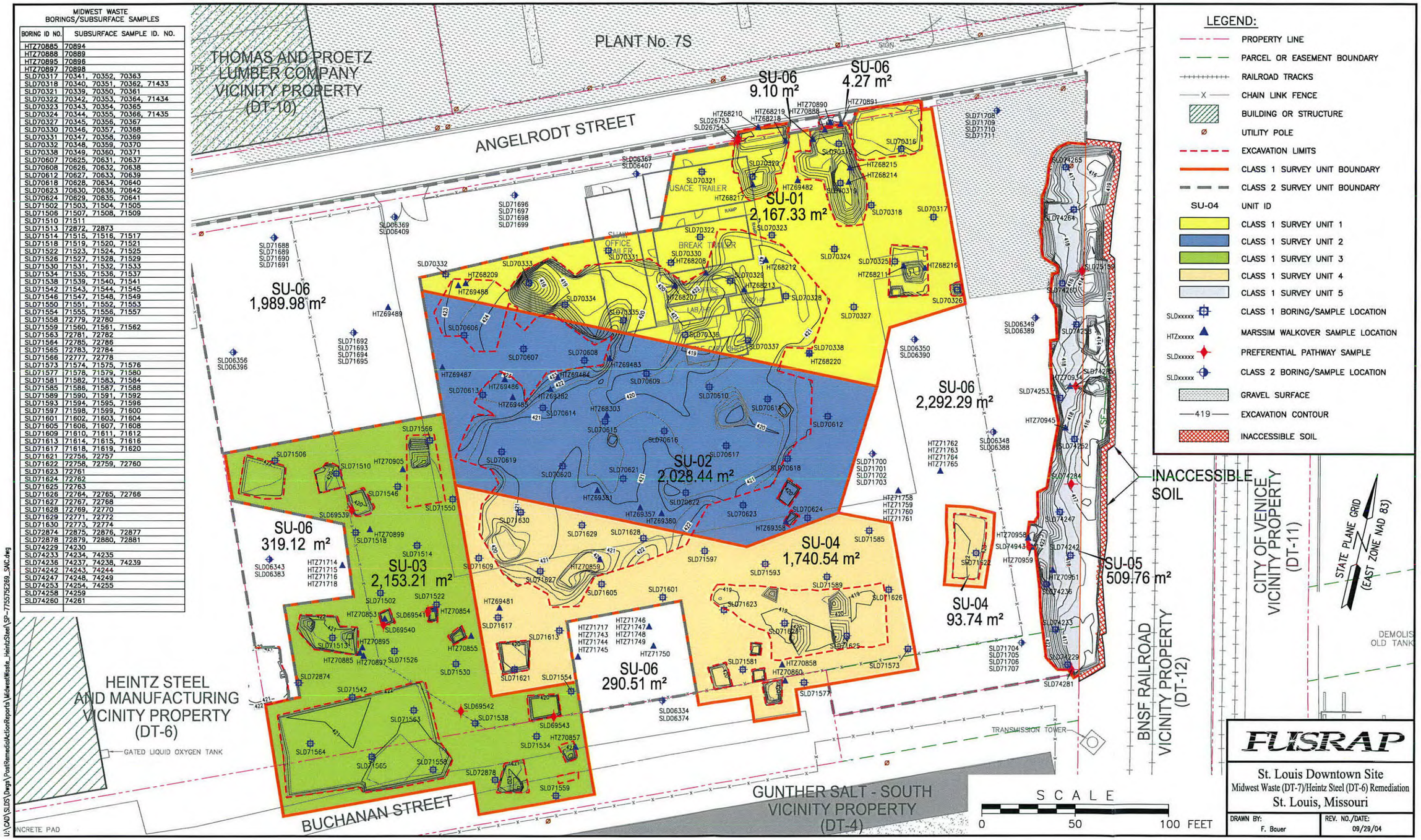


Figure C-1-2. As Built Excavation Areas and Survey Units, DT-6

MIDWEST WASTE
BORINGS/SUBSURFACE SAMPLES

BORING ID NO.	SUBSURFACE SAMPLE ID. NO.
HTZ70885	70894
HTZ70888	70889
HTZ70895	70896
HTZ70897	70898
SLD70317	70341, 70352, 70363
SLD70318	70340, 70351, 70362, 71433
SLD70321	70339, 70350, 70361
SLD70322	70342, 70353, 70364, 71434
SLD70323	70343, 70354, 70365
SLD70324	70344, 70355, 70366, 71435
SLD70327	70345, 70356, 70367
SLD70330	70346, 70357, 70368
SLD70331	70347, 70358, 70369
SLD70332	70348, 70359, 70370
SLD70338	70349, 70360, 70371
SLD70607	70625, 70631, 70637
SLD70608	70626, 70632, 70638
SLD70612	70627, 70633, 70639
SLD70618	70628, 70634, 70640
SLD70623	70630, 70636, 70642
SLD70624	70629, 70635, 70641
SLD71502	71503, 71504, 71505
SLD71506	71507, 71508, 71509
SLD71510	71511
SLD71513	72872, 72873
SLD71514	71515, 71516, 71517
SLD71518	71519, 71520, 71521
SLD71522	71523, 71524, 71525
SLD71526	71527, 71528, 71529
SLD71530	71531, 71532, 71533
SLD71534	71535, 71536, 71537
SLD71538	71539, 71540, 71541
SLD71542	71543, 71544, 71545
SLD71546	71547, 71548, 71549
SLD71550	71551, 71552, 71553
SLD71554	71555, 71556, 71557
SLD71558	72779, 72780
SLD71559	71560, 71561, 71562
SLD71563	72781, 72782
SLD71564	72785, 72786
SLD71565	72783, 72784
SLD71566	72777, 72778
SLD71573	71574, 71575, 71576
SLD71577	71578, 71579, 71580
SLD71581	71582, 71583, 71584
SLD71585	71586, 71587, 71588
SLD71589	71590, 71591, 71592
SLD71593	71594, 71595, 71596
SLD71597	71598, 71599, 71600
SLD71601	71602, 71603, 71604
SLD71605	71606, 71607, 71608
SLD71609	71610, 71611, 71612
SLD71613	71614, 71615, 71616
SLD71617	71618, 71619, 71620
SLD71621	72756, 72757
SLD71622	72758, 72759, 72760
SLD71623	72761
SLD71624	72762
SLD71625	72763
SLD71626	72764, 72765, 72766
SLD71627	72767, 72768
SLD71628	72769, 72770
SLD71629	72771, 72772
SLD71630	72773, 72774
SLD72874	72875, 72876, 72877
SLD72878	72879, 72880, 72881
SLD74229	74230
SLD74233	74234, 74235
SLD74236	74237, 74238, 74239
SLD74242	74243, 74244
SLD74247	74248, 74249
SLD74253	74254, 74255
SLD74258	74259
SLD74260	74261



LEGEND:

- PROPERTY LINE
- PARCEL OR EASEMENT BOUNDARY
- RAILROAD TRACKS
- CHAIN LINK FENCE
- BUILDING OR STRUCTURE
- UTILITY POLE
- EXCAVATION LIMITS
- CLASS 1 SURVEY UNIT BOUNDARY
- CLASS 2 SURVEY UNIT BOUNDARY
- SU-04 UNIT ID
- CLASS 1 SURVEY UNIT 1
- CLASS 1 SURVEY UNIT 2
- CLASS 1 SURVEY UNIT 3
- CLASS 1 SURVEY UNIT 4
- CLASS 1 SURVEY UNIT 5
- SLDxxxxx CLASS 1 BORING/SAMPLE LOCATION
- HTZxxxxx MARSSIM WALKOVER SAMPLE LOCATION
- SLDxxxxx PREFERENTIAL PATHWAY SAMPLE
- SLDxxxxx CLASS 2 BORING/SAMPLE LOCATION
- GRAVEL SURFACE
- 419 EXCAVATION CONTOUR
- INACCESSIBLE SOIL

FUSRAP

St. Louis Downtown Site
Midwest Waste (DT-7)/Heintz Steel (DT-6) Remediation
St. Louis, Missouri

DRAWN BY:	REV. NO./DATE:
F. Bauer	09/29/04

U:\CAD\SLDS\Dwgs\PostRemediationReports\MidwestWaste_HeintzSteel\SP-775755269_SMC.dwg

Figure C-1-3. As Built Excavation Areas and Survey Units, DT-7

ATTACHMENT C-2
DT-6 AND DT-7 QUALITY CONTROL SUMMARY REPORT

DT-6 and DT-7
QUALITY CONTROL SUMMARY REPORT

C-2.1 INTRODUCTION

C-2.1.1 Project Description

Class 1 and 2 FSS sampling was conducted for DT-6 and DT-7 at the SLDS. Sampling was conducted in accordance with MARSSIM protocols and the FSSP (USACE, 2002a).

C-2.1.2 Project Objectives

The intent of the FSS was to determine whether each SU satisfies concentration-based and dose-based criteria as defined in the SLDS ROD.

C-2.1.3 Project Implementation

The scope of work for this sampling was submitted to and authorized by the USACE in May 2001. The sampling was conducted from May 2001 until September 2003. Radiological analyses were conducted by the onsite FUSRAP laboratory at the HISS with QA split samples being analyzed by Severn-Trent Laboratories.

C-2.1.4 Purpose of this Report

The primary intent of this assessment is to illustrate that data generated for this sampling can withstand scientific scrutiny, are appropriate for their intended purpose, are technically defensible, and are of known and acceptable sensitivity, precision, and accuracy.

C-2.2 QUALITY ASSURANCE PROGRAM

A QAPP was developed for this project and is part of the SAG (USACE, 2000) for the St. Louis Sites. The QAPP established requirements for both field and laboratory QC procedures. In general, analytical laboratory QC duplicates, matrix spikes, laboratory control samples (LCS), method blanks were required for every 20 field samples or less of each matrix and analyte.

A primary goal of the QA program was to verify that the quality of results for all environmental measurements was appropriate for their intended use. To this end, a QAPP and standardized field procedures were compiled to guide the investigation. Through the process of readiness review, training, equipment calibration, QC implementation, and detailed documentation, the project has successfully accomplished the goals set by the QA Program.

EPA "definitive" data has been reported including the following basic information if applicable:

a. laboratory case narratives
b. sample results
c. laboratory method blank results
d. laboratory control standard results
e. laboratory sample matrix spike (MS) recoveries
f. laboratory duplicate results
g. surrogate recoveries
h. sample extraction dates
i. sample analysis dates

This information from the laboratory, along with field information, provides the basis for subsequent data evaluation relative to sensitivity, precision, accuracy, representativeness and completeness. These parameters have been presented in Section C-2.4.

C-2.3 DATA VALIDATION

This project implemented the use of data validation checklists to facilitate laboratory data validation. These checklists were completed by the project designated validation staff and were reviewed by the project laboratory coordinator. Data validation checklists for each laboratory sample delivery group (SDG) have been retained with laboratory data deliverables by SAIC.

C-2.3.1 Laboratory Data Validation

Analytical data generated for this project have been subjected to a process of data verification, validation, and review. Several criteria have been established against which the data are compared and from which a judgment is rendered regarding the acceptance and qualification of the data. Because it is beyond the scope of this report to cite those criteria, the reader is directed to the following documents for specific detail:

- *USACE Kansas City and St. Louis District Radionuclide Data Quality Evaluation Guidance for Alpha and Gamma Spectroscopy, December 17, 2002.* (USACE, 2002c)
- SAIC Technical Support Contractor QA Technical Procedure (TP-DM-300-7) *Data Verification and Validation* (SAIC, 2004).

Upon receipt of field and analytical data, verification staff performed a systematic examination of the reports, following standardized data package checklists, to verify the content, presentation, and administrative validity of the data. In conjunction with data package verification, laboratory electronic data diskettes were available. These diskette deliverables were subjected to review and verification against the hardcopy deliverable. Both a structural and technical assessment of the laboratory-delivered electronic reports was performed. The structural evaluation verified that all required data had been reported and contract specified requirements were met (i.e., analytical holding times, contractual turnaround times, etc.).

During the validation phase of the review and evaluation process, data were subjected to a systematic technical review by examining all field and analytical QC results and laboratory documentation, following appropriate guidelines for laboratory data validation. These data validation guidelines define the technical review criteria, methods for evaluation of the criteria, and actions to be taken resulting from the review of these criteria. The primary objective of this phase was to assess and summarize the quality and reliability of the data for the intended use and to document factors that may affect the usability of the data. Data verification/validation included, but was not necessarily limited to, the following parameters:

Method Requirements
Requirements for all methods:
- Holding time information and methods requested
- Discussion of laboratory analysis, including any laboratory problems
Radiochemical Analysis
- Sample results
- Initial calibration
- Efficiency check
- Background determinations
- Spike recovery results
- Internal standard results (tracers or carriers)
- Duplicate results
- Self-absorption factor (α,β)
- Cross-talk factor (α,β)
- LCS
- Run log

As an end result of this phase of the review, the data were qualified based on the technical assessment of the validation criteria. Qualifiers were applied to each field and analytical result to indicate the usability of the data for its intended purpose.

C-2.3.2 Definition of Data Qualifiers (Flags)

During the data validation process, the laboratory data were assigned appropriate data validation flags and reason codes. Validation flags are defined as follows:

"=" Positive Result.

"U" When the material was analyzed for, but not detected above the level of the associated value.

"J" When the associated value is an estimated quantity. Indicating there is cause to question accuracy or precision of the reported value.

"UJ" When the analyte was analyzed for, but not detected, above the associated value. However, the reported value is an estimate and demonstrates an decreased knowledge of its accuracy or precision.

"R" When the analyte value reported is unusable. The integrity of the analyte's identification, accuracy, precision, or sensitivity have raised significant question as to the reality of the information presented.

SAIC validation flagging codes and copies of validation checklists and qualified data forms are on-file with the analytical laboratory deliverable.

C-2.4 DATA EVALUATION

C-2.4.1 Accuracy

Accuracy provides a gauge or measure of the agreement between an observed result and the true value for an analysis. Analytical accuracy is evaluated by measuring the agreement between an analytical result and its known or true value. This is generally determined through use of LCSs, MS analysis, and performance evaluation (PE) samples. Accuracy, as measured through the use of LCSs, determines the methods implementation of accuracy independent of sample matrix, as well as document laboratory analytical process control. Accuracy determined by the MS is a function of both matrix and analytical process.

C-2.4.1.1 Radiological Parameters

Individual sample chemical yields and LCS recoveries were within the ± 25% criteria for the verification samples, as stated in the SAG. Therefore, the data can be used for its intended purpose.

C-2.4.1.2 Inter-Laboratory Accuracy

As a measure of analytical accuracy, RPD for split sample pairs for the two radiological analytical groups (i.e., alpha spectroscopy and gamma spectroscopy) were employed, using an independent contract laboratory. Sample homogeneity, analytical method performance, and the quantity of analyte being measured contribute to this measure of sample analytical accuracy.

As the RPD approaches zero, complete agreement is achieved between the split sample pairs. When one or both sample values were between the quantitation level and less than five times the analyte reporting level, the NAD was evaluated. If both samples were not detected for a given analyte, precision was considered acceptable.

The analytical accuracy (i.e., split precision) between the FUSRAP laboratory and the contract laboratory met the FSS goal of ensuring that 90% of the DT-6 and DT-7 verification samples were within either the ±30% criteria for RPD DQI or < 1.96 for the NAD DQI (Tables C-2-1 and C-2-2). Samples that are outside of the control limits are shaded and boldfaced. These samples and their associated field splits are considered usable since the analytical results for each analyte are below the RG. Analytical results can be found in Section C-2.6 Tables C-2-5 and C-2-6. The calculation for RPD and NAD are as follows:

$$RPD = (S - D) / [(S + D) / 2] * 100\%$$

Where: S = Parent Sample Result
D = Field Split Result

$$NAD = (S - D) / [(U_S)^2 + (U_D)^2]^{1/2}$$

Where: S = Parent Sample Result
D = Field Split Result
U_S = Parent Sample Uncertainty
U_D = Field Split Uncertainty

C-2.4.2 Precision

C-2.4.2.1 Laboratory Precision

To evaluate precision within the on-site laboratory, lab duplicate samples were employed at a frequency of one duplicate per sample batch (no more than one duplicate per thirteen samples). As a measure of analytical precision, the RPD for laboratory duplicate sample pairs for the two radiological analytical groups (i.e., alpha spectroscopy and gamma spectroscopy) were employed at the time of verification and validation.

RPD and/or NAD values for all analytes were within the ±30% window of acceptance for the verification samples. Data tables are not provided in this summary report, as the data is inspected and results are documented in the sample delivery group packages at the time of verification.

C-2.4.2.2 Field Precision

Field duplicate samples were collected to ascertain the contribution to variability (i.e., precision) due to the combination of environmental media, sampling consistency, and analytical precision. The field duplicates were collected from the same spatial and temporal conditions as the primary environmental sample. Soil samples were collected from the same sampling device, after homogenization for all analytes.

For the 28 field duplicate samples collected for the verification activities, the NAD and RPD values indicated good precision for the data. 2.6 % of the sample data exhibited poor precision with RPD and NAD greater than their respective acceptance limits, as indicated by the shading in Tables C-2-3 and C-2-4. These samples and their representative field duplicates are considered usable since the analytical results for each analyte in both samples were below the RG.

C-2.4.3 Sensitivity

Determination of minimum detectable values allows the investigation to assess the relative confidence which can be placed in a value in comparison to the magnitude or level of analyte concentration observed. The closer a measured value comes to the minimum detectable concentration, the less confidence and more variation the measurement will have. Project sensitivity goals were expressed as quantitation level goals in the FSSP (USACE, 2002a). These levels were achieved or exceeded throughout the analytical process.

Table C-2-1. Split Precision Among Alpha Spectroscopy Analyses

	Thorium-228		Thorium-230		Thorium-232	
SampleName	RPD	NAD	RPD	NAD	RPD	NAD
SLD06340/SLD06340-2	N/A	0.10	26.6%	N/A	NC	NC
SLD06360/SLD06360-2	N/A	0.15	NC	NC	NC	NC
SLD06380/SLD06380-2	N/A	1.51	28.3%	N/A	NC	NC
SLD06400/SLD06400-2	2.1%	N/A	7.4%	N/A	NC	NC
SLD06510/SLD06510-2	N/A	1.42	NC	NC	NC	NC
SLD06530/SLD06530-2	N/A	0.52	NC	NC	NC	NC
SLD06550/SLD06550-2	0.7%	N/A	5.9%	N/A	NC	NC
SLD06570/SLD06570-2	NC	NC	NC	NC	NC	NC
SLD70323/SLD70323-2	N/A	0.82	NC	NC	NC	NC
SLD70336/SLD70336-2	16.0%	N/A	NC	NC	NC	NC
SLD70366/SLD70366-2	20.5%	N/A	NC	NC	NC	NC
SLD70606/SLD70606-2	**66.7%**	N/A	8.1%	N/A	NC	NC
SLD70630/SLD70630-2	28.6%	N/A	NC	NC	NC	NC
SLD71522/SLD71522-2	**38.4%**	N/A	NC	NC	NC	NC
SLD71524/SLD71524-2	N/A	0.05	NC	NC	NC	NC
SLD71563/SLD71563-2	**87.6%**	N/A	NC	NC	NC	NC
SLD71573/SLD71573-2	N/A	0.68	NC	NC	NC	NC
SLD71620/SLD71620-2	N/A	0.31	NC	NC	NC	NC
SLD71630/SLD71630-2	14.9%	N/A	NC	NC	NC	NC
SLD71693/SLD71693-2	N/A	0.51	NC	NC	NC	NC
SLD72773/SLD72773-2	6.5%	N/A	NC	NC	NC	NC
SLD72786/SLD72786-2	**41.6%**	N/A	NC	NC	NC	NC
SLD76147/SLD76147-2	*	*	*	*	*	*
SLD76158/SLD76158-2	*	*	*	*	*	*
SLD76180/SLD76180-2	**52.2%**	N/A	NC	NC	NC	NC
SLD77633/SLD77633-2	N/A	1.15	NC	NC	NC	NC
SLD78650/SLD78650-2	N/A	0.02	NC	NC	NC	NC
SLD78680/SLD78680-2	N/A	0.32	NC	NC	NC	NC

NC – Value not calculated due to one or both of the results were non-detected.
N/A – Not applicable.
Boldface – Values exceed the control limits.
* – Analysis not conducted.

Table C-2-2. Split Precision Among Gamma Spectroscopy Analyses

	Actinium-227		Am-241		Cesium-137		Potassium-40		Protactinium-231		Radium-226		Radium-228		Uranium-235		Uranium-238	
SampleName	RPD	NAD	RPD	NAD	RPD	NAD	RPD	NAD	RPD	NAD	RPD	NAD	RPD	NAD	RPD	NAD	RPD	NAD
SLD06340/SLD06340-2	NC	NC	*	*	N/A	0.71	**38.2%**	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD06360/SLD06360-2	NC	NC	*	*	NC	NC	22.4%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD06380/SLD06380-2	NC	NC	*	*	NC	NC	**32.3%**	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD06400/SLD06400-2	NC	NC	*	*	NC	NC	17.1%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD06510/SLD06510-2	NC	NC	NC	NC	NC	NC	24.8%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD06530/SLD06530-2	NC	NC	NC	NC	NC	NC	15.6%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD06550/SLD06550-2	NC	NC	NC	NC	N/A	0.75	4.2%	N/A	NC	NC	NC	NC	NC	NC	N/A	0.35	NC	NC
SLD06570/SLD06570-2	NC	NC	NC	NC	NC	NC	9.2%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD70323/SLD70323-2	NC	NC	NC	NC	NC	NC	0.7%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD70336/SLD70336-2	NC	NC	NC	NC	NC	NC	13.5%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD70366/SLD70366-2	NC	NC	NC	NC	NC	NC	5.6%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD70606/SLD70606-2	NC	NC	NC	NC	NC	NC	22.7%	N/A	NC	NC	NC	NC	NC	NC	N/A	0.51	NC	NC
SLD70630/SLD70630-2	NC	NC	NC	NC	NC	NC	**33.1%**	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD71522/SLD71522-2	NC	NC	NC	NC	N/A	0.36	1.8%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD71524/SLD71524-2	NC	NC	NC	NC	NC	NC	**31.9%**	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD71563/SLD71563-2	NC	NC	NC	NC	NC	NC	**34.5%**	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD71573/SLD71573-2	NC	NC	NC	NC	NC	NC	N/A	0.19	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD71620/SLD71620-2	NC	NC	NC	NC	NC	NC	13.0%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD71630/SLD71630-2	NC	NC	NC	NC	NC	NC	21.2%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD71693/SLD71693-2	NC	NC	NC	NC	NC	NC	13.7%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD72773/SLD72773-2	NC	NC	NC	NC	NC	NC	14.7%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD72786/SLD72786-2	NC	NC	NC	NC	NC	NC	4.1%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD76147/SLD76147-2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
SLD76158/SLD76158-2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
SLD76180/SLD76180-2	NC	NC	NC	NC	NC	NC	24.0%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD77633/SLD77633-2	NC	NC	NC	NC	NC	NC	26.5%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD78650/SLD78650-2	NC	NC	NC	NC	NC	NC	27.7%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD78680/SLD78680-2	NC	NC	NC	NC	NC	NC	15.3%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

NC – Value not calculated due to one or both of the results were non-detected.
N/A – Not applicable.
Boldface – Values exceed the control limits.
* – Analysis not conducted.

C-2.4.4 Representativeness and Comparability

Representativeness expresses the degree to which data accurately reflect the analyte or parameter of interest for an environmental site and is the qualitative term most concerned with the proper design of a sampling program. Factors that affect the representativeness of analytical data include proper preservation, holding times, use of standard sampling and analytical methods, and determination of matrix or analyte interferences. Sample preservation, analytical methodologies, and soil sampling methodologies were documented to be adequate and consistently applied.

Comparability, like representativeness, is a qualitative term relative to a project data set as an individual. These investigations employed appropriate sampling methodologies, site surveillance, use of standard sampling devices, uniform training, documentation of sampling, standard analytical protocols/procedures, QC checks with standard control limits, and universally accepted data reporting units to verify comparability to other data sets. Through the proper implementation and documentation of these standard practices, the project has established the confidence that the data will be comparable to other project and programmatic information.

Table C-2-4 compares sample results from the Field Duplicate and Split Samples to the associated Parent Sample. Results from the Split Sample are corrected in this table by a factor of 1.5 for comparability to the Parent Sample and Field Duplicate. This correction factor represents the ingrowth necessary to conservatively report Ra-226, as reported by the St. Louis FUSRAP Radiological Laboratory.

C-2.4.5 Completeness

Usable data are defined as those data, which pass individual scrutiny during the verification and validation process and are accepted for use. The data quality objective of achieving 90% completeness, as defined in the FSSP was satisfied with the project producing valid results for 100 % of the sample analyses performed and successfully collected.

A total of 465 systematic verification and 86 biased soil samples were collected with approximately 6,600 discrete analyses (i.e., analytes) being obtained, reviewed, and used in the assessment.

C-2.5 DATA QUALITY ASSESSMENT SUMMARY

The overall quality of the DT-6 and DT-7 PRAR information meets or exceeds the established project objectives. Through proper implementation of the project data verification, validation, and assessment process, project information has been determined to be acceptable for use.

Data, as presented, have been qualified as usable, but estimated when necessary. Data that have been estimated have concentrations/activities that are below the quantitation limit or are indicative of accuracy, precision, or sensitivity being less than desired but adequate for interpretation.

Data produced for this evaluation demonstrates that it can withstand scientific scrutiny, is appropriate for its intended purpose, is technically defensible, and is of known and acceptable sensitivity, precision, and accuracy. Data integrity has been documented through proper implementation of QA and QC measures. The environmental information presented has an established confidence, which allows utilization for the project objectives and provides data for future needs.

Table C-2-3. Field Duplicate Precision Among Alpha Spectroscopy Analyses

	Thorium-228		Thorium-230		Thorium-232	
SampleName	RPD	NAD	RPD	NAD	RPD	NAD
SLD06340/SLD06340-1	N/A	0.09	24.8%	N/A	NC	NC
SLD06360/SLD06360-1	N/A	0.37	**35.8%**	N/A	NC	NC
SLD06380/SLD06380-1	N/A	1.09	NC	NC	NC	NC
SLD06400/SLD06400-1	N/A	0.31	8.2%	N/A	NC	NC
SLD06510/SLD06510-1	NC	NC	NC	NC	NC	NC
SLD06530/SLD06530-1	N/A	0.53	NC	NC	NC	NC
SLD06550/SLD06550-1	N/A	0.83	NC	NC	NC	NC
SLD06570/SLD06570-1	N/A	0.35	NC	NC	NC	NC
SLD70323/SLD70323-1	N/A	0.26	NC	NC	NC	NC
SLD70336/SLD70336-1	**40.4%**	N/A	NC	NC	NC	NC
SLD70366/SLD70366-1	N/A	0.65	NC	NC	NC	NC
SLD70606/SLD70606-1	8.8%	N/A	27.0%	N/A	NC	NC
SLD70630/SLD70630-1	**69.1%**	N/A	NC	NC	NC	NC
SLD71522/SLD71522-1	4.7%	N/A	NC	NC	NC	NC
SLD71524/SLD71524-1	N/A	0.40	NC	NC	NC	NC
SLD71563/SLD71563-1	**39.6%**	N/A	NC	NC	NC	NC
SLD71573/SLD71573-1	N/A	0.25	NC	NC	NC	NC
SLD71620/SLD71620-1	N/A	0.07	NC	NC	NC	NC
SLD71630/SLD71630-1	9.0%	N/A	NC	NC	NC	NC
SLD71693/SLD71693-1	N/A	0.03	NC	NC	NC	NC
SLD72773/SLD72773-1	19.9%	N/A	NC	NC	NC	NC
SLD72786/SLD72786-1	N/A	0.81	NC	NC	NC	NC
SLD76147/SLD76147-1	*	*	*	*	*	*
SLD76158/SLD76158-1	*	*	*	*	*	*
SLD76180/SLD76180-1	20.1%	N/A	3.8%	N/A	NC	NC
SLD77633/SLD77633-1	N/A	0.40	NC	NC	NC	NC
SLD78650/SLD78650-1	N/A	0.19	NC	NC	NC	NC
SLD78680/SLD78680-1	N/A	0.52	NC	NC	NC	NC

NC – Value not calculated due to one or both of the results were non-detected.
N/A – Not applicable.
Boldface – Values exceed the control limits.
* – Analysis not conducted.

Table C-2-4. Field Duplicate Precision Among Gamma Spectroscopy Analyses

	Actinium-227		Am-241		Cesium-137		Potassium-40		Protactinium-231		Radium-226		Radium-228		Uranium-235		Uranium-238	
SampleName	RPD	NAD	RPD	NAD	RPD	NAD	RPD	NAD	RPD	NAD	RPD	NAD	RPD	NAD	RPD	NAD	RPD	NAD
SLD06340/SLD06340-1	NC	NC	NC	NC	N/A	0.59	22.3%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD06360/SLD06360-1	NC	NC	NC	NC	N/A	0.45	10.2%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD06380/SLD06380-1	NC	NC	NC	NC	NC	NC	3.1%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD06400/SLD06400-1	NC	NC	NC	NC	NC	NC	1.5%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD06510/SLD06510-1	NC	NC	NC	NC	NC	NC	**171.4%**	**N/A**	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD06530/SLD06530-1	NC	NC	NC	NC	N/A	0.60	2.6%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD06550/SLD06550-1	NC	NC	NC	NC	**N/A**	**2.81**	14.9%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD06570/SLD06570-1	NC	NC	NC	NC	NC	NC	**30.5%**	**N/A**	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD70323/SLD70323-1	NC	NC	NC	NC	NC	NC	23.8%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD70336/SLD70336-1	NC	NC	NC	NC	N/A	0.47	5.4%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD70366/SLD70366-1	NC	NC	NC	NC	NC	NC	7.7%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD70606/SLD70606-1	N/A	1.08	NC	NC	N/A	0.28	5.2%	N/A	NC	NC	NC	NC	NC	NC	N/A	0.49	NC	NC
SLD70630/SLD70630-1	NC	NC	NC	NC	NC	NC	16.7%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD71522/SLD71522-1	NC	NC	NC	NC	20.2%	N/A	1.2%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD71524/SLD71524-1	NC	NC	NC	NC	NC	NC	8.5%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD71563/SLD71563-1	NC	NC	NC	NC	NC	NC	1.7%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD71573/SLD71573-1	NC	NC	NC	NC	N/A	0.60	**51.5%**	**N/A**	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD71620/SLD71620-1	NC	NC	NC	NC	NC	NC	6.3%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD71630/SLD71630-1	NC	NC	NC	NC	NC	NC	2.6%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD71693/SLD71693-1	NC	NC	NC	NC	NC	NC	19.5%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD72773/SLD72773-1	NC	NC	NC	NC	NC	NC	15.1%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD72786/SLD72786-1	NC	NC	NC	NC	NC	NC	9.4%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD76147/SLD76147-1	NC	NC	NC	NC	NC	NC	25.0%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD76158/SLD76158-1	NC	NC	NC	NC	NC	NC	0.8%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD76180/SLD76180-1	NC	NC	NC	NC	NC	NC	7.2%	N/A	NC	NC	3.7%	N/A	NC	NC	NC	NC	NC	NC
SLD77633/SLD77633-1	NC	NC	NC	NC	NC	NC	5.8%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD78650/SLD78650-1	NC	NC	NC	NC	NC	NC	14.9%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SLD78680/SLD78680-1	NC	NC	NC	NC	NC	NC	8.4%	N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

NC – Value not calculated due to one or both of the results were non-detected.
N/A – Not applicable.
Boldface – Values exceed the control limits.

Table C-2-5 Alpha Spec Results for Parent Samples and the Associated Field Duplicates and Field Splits

SampleName	Thorium-228	Thorium-230	Thorium-232
SLD06340	0.840	5.620	0.770
SLD06340-1	0.900	4.380	0.880
SLD06340-2	0.900	4.300	1.100
SLD06360	1.185	4.301	1.664
SLD06360-1	0.905	2.996	1.044
SLD06360-2	1.070	2.420	0.930
SLD06380	1.930	3.577	0.926
SLD06380-1	0.899	2.174	0.571
SLD06380-2	0.620	2.690	1.290
SLD06400	1.753	4.552	1.209
SLD06400-1	1.448	4.192	1.846
SLD06400-2	1.790	4.900	1.070
SLD06510	2.050	4.960	1.670
SLD06510-1	0.160	1.670	0.050
SLD06510-2	0.840	2.710	0.530
SLD06530	0.750	2.870	1.000
SLD06530-1	1.120	4.230	1.390
SLD06530-2	1.100	2.360	1.280
SLD06550	1.400	8.860	1.240
SLD06550-1	0.770	1.550	0.900
SLD06550-2	1.390	9.400	1.270
SLD06570	0.730	2.850	0.600
SLD06570-1	0.960	3.340	0.850
SLD06570-2	0.210	1.720	0.530
SLD70323	2.130	4.570	1.540
SLD70323-1	2.450	4.090	1.670
SLD70323-2	1.340	5.500	1.290
SLD70336	1.280	2.640	0.770
SLD70336-1	0.850	1.730	0.570
SLD70336-2	1.090	2.010	1.180
SLD70366	2.040	4.910	2.000
SLD70366-1	1.410	2.910	1.190
SLD70366-2	1.660	3.170	1.780
SLD70606	1.900	12.900	1.050
SLD70606-1	1.740	16.920	1.190
SLD70606-2	0.950	11.900	1.030
SLD70630	0.900	1.650	0.710
SLD70630-1	1.850	3.860	1.470
SLD70630-2	1.200	3.600	1.120
SLD71522	1.740	4.440	0.970
SLD71522-1	1.660	4.560	1.180
SLD71522-2	1.180	7.400	0.990
SLD71524	1.180	1.580	0.940
SLD71524-1	0.910	1.220	0.870
SLD71524-2	1.210	1.290	0.650

Table C-2-5 Alpha Spec Results for Parent Samples and the Associated Field Duplicates and Field Splits (Cont'd)

SampleName	Thorium-228	Thorium-230	Thorium-232
SLD71563	2.660	11.120	1.630
SLD71563-1	1.780	6.470	1.290
SLD71563-2	1.040	4.170	1.140
SLD71573	1.590	6.490	1.390
SLD71573-1	1.350	4.070	0.860
SLD71573-2	2.210	5.900	2.050
SLD71620	1.190	2.280	0.740
SLD71620-1	1.140	1.510	0.750
SLD71620-2	1.000	1.710	0.850
SLD71630	0.930	2.650	0.860
SLD71630-1	0.850	3.520	1.310
SLD71630-2	1.080	3.360	1.020
SLD71693	1.260	2.290	1.040
SLD71693-1	1.290	3.070	1.040
SLD71693-2	0.880	3.140	1.240
SLD72773	1.900	4.920	1.520
SLD72773-1	2.320	4.480	1.470
SLD72773-2	1.780	4.400	1.560
SLD72786	1.540	2.920	1.390
SLD72786-1	0.920	2.260	0.940
SLD72786-2	1.010	2.540	0.900
SLD76147	*	*	*
SLD76147-1	*	*	*
SLD76147-2	*	*	*
SLD76158	*	*	*
SLD76158-1	*	*	*
SLD76158-2	*	*	*
SLD76180	2.030	8.310	1.500
SLD76180-1	1.660	8.000	1.020
SLD76180-2	1.190	4.400	1.230
SLD77633	1.296	2.696	0.988
SLD77633-1	1.652	2.250	1.391
SLD77633-2	0.580	1.900	0.820
SLD78650	1.074	4.481	1.392
SLD78650-1	1.205	5.156	0.807
SLD78650-2	1.060	4.300	0.970
SLD78680	1.252	3.711	0.979
SLD78680-1	1.692	3.393	1.344
SLD78680-2	1.050	1.500	0.880

* -- Analysis not conducted.

Table C-2-6. Gamma Spec Results for Parent Samples and the Associated Field Duplicates and Field Splits

SampleName	Actinium-227	Am-241	Cesium-137	Potassium-40	Protactinium-231	Radium-226	Radium-228	Uranium-235	Uranium-238
SLD06340	0.150	0.000	0.360	6.520	-0.330	1.980	0.620	0.490	2.770
SLD06340-1	0.200	-0.020	0.280	8.160	0.720	2.360	0.950	0.280	2.950
SLD06340-2	0.460	*	0.210	9.600	-1.300	[a]4.440	0.550	0.400	2.400
SLD06360	0.286	-0.022	0.138	8.628	0.643	2.236	0.709	0.083	2.547
SLD06360-1	0.146	-0.034	0.108	7.794	0.257	2.043	0.693	0.051	3.226
SLD06360-2	0.270	*	0.161	10.800	0.400	[a]3.990	0.600	0.100	1.700
SLD06380	0.210	-0.060	-0.006	10.830	0.871	1.829	0.947	0.107	4.106
SLD06380-1	0.181	0.163	0.053	11.170	0.610	1.551	0.834	0.330	3.245
SLD06380-2	0.140	*	-0.033	15.000	-0.800	[a]4.800	0.970	0.160	2.400
SLD06400	0.237	-0.027	0.041	9.185	0.052	3.102	0.971	0.406	7.284
SLD06400-1	0.168	-0.011	0.018	9.048	0.331	2.458	0.789	0.248	4.971
SLD06400-2	0.100	*	-0.049	10.900	1.300	[a]5.805	0.990	0.630	4.300
SLD06510	0.210	0.090	-0.020	12.190	0.320	3.350	1.320	0.270	2.990
SLD06510-1	0.070	-0.020	-0.010	0.940	0.220	0.580	0.170	0.070	0.450
SLD06510-2	-0.060	0.029	0.062	9.500	-2.700	[a]3.795	1.510	0.340	5.800
SLD06530	0.180	0.030	0.110	9.070	-0.030	1.480	0.830	0.230	3.000
SLD06530-1	0.210	0.070	0.080	8.840	0.370	2.510	0.800	0.360	4.860
SLD06530-2	-0.320	-0.164	0.061	10.600	0.100	[a]2.475	0.910	0.100	1.300
SLD06550	0.250	0.120	0.510	7.720	-0.230	3.500	0.720	0.480	6.710
SLD06550-1	0.110	0.040	0.080	8.960	-0.020	0.970	0.490	0.110	1.490
SLD06550-2	0.310	-0.023	0.680	7.400	-1.400	[a]6.135	1.410	0.610	4.800
SLD06570	0.030	0.140	0.010	6.800	0.070	1.370	0.520	0.160	1.950
SLD06570-1	0.090	0.080	0.030	5.000	0.030	1.580	0.390	0.220	2.120
SLD06570-2	0.150	-0.170	-0.036	6.200	0.200	[a]1.710	0.450	0.140	-1.400
SLD70323	0.010	0.060	0.030	11.480	-0.200	6.620	1.340	0.120	5.180
SLD70323-1	0.420	0.080	0.010	14.580	0.720	7.320	1.420	0.610	6.210
SLD70323-2	0.590	0.065	-0.073	11.400	-1.400	[a]6.345	1.210	0.780	3.400
SLD70336	0.020	0.050	0.070	9.000	0.420	1.860	0.610	-0.180	1.870
SLD70336-1	0.090	0.060	0.050	8.530	0.000	1.720	0.680	0.130	1.620

* -- Analysis not conducted.
a – Value corrected by factor of 1.5 for comparability.

Table C-2-6 (cont.) Gamma Spec Results for Parent Samples and the Associated Field Duplicates and Field Splits

SampleName	Actinium-227	Am-241	Cesium-137	Potassium-40	Protactinium-231	Radium-226	Radium-228	Uranium-235	Uranium-238
SLD70336-2	0.200	-0.088	0.060	10.300	-1.300	[a]2.490	0.780	-0.920	-0.090
SLD70366	-0.020	0.090	-0.010	13.010	1.000	4.200	1.430	0.450	6.760
SLD70366-1	0.170	0.140	-0.010	12.050	1.160	3.530	1.340	0.110	4.070
SLD70366-2	0.340	-0.085	-0.007	12.300	-2.800	[a]3.105	1.200	-0.080	1.400
SLD70606	0.630	0.010	0.060	11.810	0.970	3.440	0.820	0.560	7.710
SLD70606-1	0.500	0.030	0.070	11.210	0.360	3.230	0.740	0.410	6.780
SLD70606-2	0.410	0.001	0.012	9.400	-1.200	[a]2.970	0.780	0.420	3.900
SLD70630	-0.010	0.020	-0.010	11.730	0.130	1.460	0.480	0.050	1.120
SLD70630-1	0.250	0.010	0.060	9.920	-2.630	4.630	1.120	0.200	3.430
SLD70630-2	0.200	0.030	-0.058	8.400	-0.300	[a]3.750	0.860	0.140	3.100
SLD71522	0.880	-0.040	0.400	10.590	0.770	5.500	1.130	0.780	9.430
SLD71522-1	0.270	0.110	0.490	10.720	-0.050	6.340	1.290	1.320	10.920
SLD71522-2	0.150	0.001	0.460	10.400	-2.300	[a]6.525	0.960	0.360	8.400
SLD71524	0.320	0.010	-0.030	16.970	-1.300	1.710	1.000	0.270	1.350
SLD71524-1	0.540	0.010	-0.010	15.590	0.500	1.610	0.920	0.070	0.640
SLD71524-2	0.520	0.020	0.012	12.300	0.500	[a]1.530	0.830	-0.360	1.000
SLD71563	0.640	-0.070	0.050	12.050	0.840	5.390	1.190	-0.240	6.560
SLD71563-1	0.150	0.080	0.050	11.850	-0.710	6.250	0.850	0.260	6.370
SLD71563-2	0.220	-0.005	-0.011	8.500	-1.800	[a]4.830	1.210	0.140	2.900
SLD71573	0.030	-0.020	0.060	5.690	0.620	2.690	0.670	0.260	4.020
SLD71573-1	0.070	0.120	0.090	9.640	-0.990	3.650	0.800	0.290	4.580
SLD71573-2	0.133	-0.026	0.032	6.100	-0.402	[a]2.505	0.711	-0.117	1.900
SLD71620	0.110	0.090	0.020	13.170	0.220	1.820	0.730	0.290	1.790
SLD71620-1	0.200	0.090	-0.020	12.370	-0.100	2.130	1.070	-0.220	1.510
SLD71620-2	0.125	-0.167	-0.039	15.000	0.462	[a]1.845	0.887	-0.341	0.585
SLD71630	0.100	0.020	0.010	13.110	0.390	3.090	0.910	-0.020	2.410
SLD71630-1	0.100	0.000	0.020	12.770	-0.090	3.170	0.930	0.010	2.400
SLD71630-2	-0.120	0.016	-0.022	10.600	0.300	[a]3.075	0.920	0.130	2.500
SLD71693	-0.060	0.020	-0.010	8.370	0.190	2.940	1.260	0.920	1.130

* -- Analysis not conducted.
a – Value corrected by factor of 1.5 for comparability.

Table C-2-6 (cont.) Gamma Spec Results for Parent Samples and the Associated Field Duplicates and Field Splits

SampleName	Actinium-227	Am-241	Cesium-137	Potassium-40	Protactinium-231	Radium-226	Radium-228	Uranium-235	Uranium-238
SLD71693-1	-0.040	0.100	-0.020	6.880	-0.470	2.330	0.750	-0.400	2.440
SLD71693-2	0.030	-0.106	-0.025	7.300	-1.600	[a]3.105	0.820	-0.420	1.100
SLD72773	0.310	0.100	-0.020	12.170	0.500	6.290	1.300	0.570	5.670
SLD72773-1	0.160	0.310	0.040	14.160	0.610	6.090	1.510	-0.110	5.090
SLD72773-2	0.060	-0.010	-0.069	10.500	-0.600	[a]5.865	1.180	0.300	4.600
SLD72786	0.140	0.130	0.000	11.130	0.020	2.600	0.960	0.100	2.000
SLD72786-1	0.260	0.060	0.010	12.230	0.460	2.740	0.970	0.050	1.350
SLD72786-2	0.180	0.008	0.019	11.600	-0.400	[a]3.060	0.790	-0.150	1.000
SLD76147	0.080	0.010	-0.020	3.050	0.030	1.130	0.500	0.120	0.770
SLD76147-1	0.110	0.030	0.004	3.920	0.240	1.290	0.650	-0.060	0.690
SLD76147-2	*	*	*	*	*	*	*	*	*
SLD76158	0.010	0.020	-0.010	1.310	-0.130	0.300	0.130	-0.100	0.330
SLD76158-1	0.050	0.002	-0.010	1.300	0.070	0.280	0.090	-0.020	0.110
SLD76158-2	*	*	*	*	*	*	*	*	*
SLD76180	4.450	-0.220	-0.002	13.740	1.270	8.780	1.410	0.870	2.200
SLD76180-1	4.290	-1.150	0.040	14.760	0.730	9.110	1.680	1.140	5.470
SLD76180-2	0.330	0.020	-0.033	10.800	-1.800	[a]6.720	1.300	0.340	5.100
SLD77633	0.147	0.012	0.007	15.010	0.192	2.016	0.902	0.103	1.575
SLD77633-1	-0.018	0.021	-0.009	14.160	0.123	1.823	0.907	0.125	1.690
SLD77633-2	0.350	-0.050	-0.035	11.500	-1.000	[a]2.010	0.740	0.460	0.400
SLD78650	0.262	0.007	0.003	8.196	0.474	3.723	0.750	0.310	3.939
SLD78650-1	0.411	0.039	0.005	7.063	0.451	2.946	0.680	0.501	4.313
SLD78650-2	0.320	-0.003	0.016	6.200	-0.100	[a]3.405	0.670	-0.190	2.500
SLD78680	0.118	0.093	-0.016	12.470	-0.104	1.866	0.780	0.260	1.210
SLD78680-1	0.110	0.061	-0.012	11.460	0.023	1.928	0.870	0.040	1.769
SLD78680-2	-0.070	0.010	-0.075	10.700	-1.000	[a]2.235	0.640	0.190	0.200

* -- Analysis not conducted.
a – Value corrected by factor of 1.5 for comparability.

ATTACHMENT C-3
DT-6 AND DT-7 FINAL STATUS SURVEY SOIL SAMPLE DATA

DT-6 AND DT-7 FINAL STATUS SURVEY SOIL SAMPLE DATA

Survey Unit	Sample Name	Actinium-227			Protactinium-231			Radium-226			Radium-228			Thorium-228			Thorium-230			Thorium-232			Uranium-235			Uranium-238		
		Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q
DT-6 (SU1)	HTZ75366	0.54	0.27	=	0.24	1.40	U	7.10	0.11	=	1.24	0.11	=	1.49	0.35	=	8.87	0.35	=	1.73	0.29	=	0.39	0.70	U	5.31	1.78	=
DT-6 (SU1)	HTZ75367	0.15	0.31	U	0.67	1.34	U	4.72	0.13	=	1.03	0.12	=	1.79	0.16	=	4.75	0.39	=	0.79	0.29	J	0.66	0.65	U	5.19	1.62	=
DT-6 (SU1)	HTZ75368	0.38	0.33	U	0.91	1.41	U	4.11	0.13	=	1.16	0.13	=	1.75	0.28	=	4.61	0.28	=	1.37	0.15	=	0.13	0.64	U	3.54	1.69	=
DT-6 (SU1)	HTZ76712	0.21	0.34	U	-0.76	1.53	UJ	7.41	0.13	=	1.06	0.13	=	1.94	0.28	=	5.96	0.15	=	1.04	0.28	=	0.49	0.78	U	10.42	1.88	=
DT-6 (SU1)	HTZ76713	0.18	0.34	UJ	-0.38	1.44	UJ	6.84	0.12	=	1.13	0.13	=	2.45	0.32	=	6.85	0.32	=	1.32	0.17	=	0.31	0.71	UJ	7.22	1.76	=
DT-6 (SU1)	HTZ76719	0.60	0.38	U	0.19	1.63	UJ	9.90	0.14	=	1.15	0.16	=	2.17	0.23	=	12.28	0.23	=	1.99	0.13	=	0.94	0.79	=	16.21	2.12	=
DT-6 (SU1)	HTZ76720	0.24	0.34	U	-0.66	1.40	UJ	6.09	0.12	=	1.22	0.13	=	1.60	0.31	=	5.57	0.26	=	1.09	0.14	=	0.16	0.69	UJ	4.50	1.70	=
DT-6 (SU1)	HTZ76721	0.35	0.40	U	0.75	1.73	UJ	10.86	0.15	=	1.27	0.15	=	2.09	0.36	=	8.35	0.14	=	2.34	0.14	=	0.51	0.85	U	6.94	2.13	=
DT-6 (SU1)	HTZ76722	0.24	0.37	U	0.72	1.73	UJ	2.81	0.15	=	0.90	0.17	=	2.11	0.32	=	4.30	0.27	=	1.43	0.14	=	5.76	0.86	=	131.40	3.44	=
DT-6 (SU1)	HTZ76723	0.64	0.26	=	0.14	1.36	UJ	7.73	0.12	=	0.73	0.12	=	1.85	0.31	=	11.12	0.26	=	1.14	0.14	=	0.86	0.67	=	13.22	1.77	=
DT-6 (SU1)	HTZ76724	0.20	0.36	UJ	0.16	1.67	UJ	6.39	0.14	=	1.23	0.15	=	1.65	0.35	=	5.04	0.27	=	1.35	0.26	=	0.51	0.78	U	9.97	2.12	=
DT-6 (SU1)	HTZ76725	0.23	0.26	U	0.64	1.14	UJ	4.92	0.09	=	0.77	0.10	=	1.21	0.31	=	4.61	0.31	=	1.07	0.26	=	0.22	0.56	UJ	3.59	1.38	=
DT-6 (SU1)	SLD78616	0.16	0.16	U	0.53	0.78	UJ	3.10	0.07	=	1.06	0.07	=	2.72	0.15	=	4.01	0.15	=	1.39	0.28	=	0.08	0.36	UJ	3.07	0.50	=
DT-6 (SU1)	SLD78617	0.01	0.15	UJ	0.28	0.71	UJ	1.86	0.06	=	1.08	0.06	=	2.55	0.25	=	2.70	0.13	=	1.42	0.13	=	0.11	0.32	UJ	1.28	0.48	=
DT-6 (SU1)	SLD78618	0.10	0.14	U	-0.08	0.65	UJ	1.46	0.06	=	0.93	0.06	=	2.11	0.13	=	2.77	0.13	=	1.08	0.24	=	-0.06	0.30	UJ	1.39	0.43	=
DT-6 (SU1)	SLD78619	0.06	0.19	UJ	0.28	0.86	UJ	4.25	0.07	=	0.87	0.07	=	1.56	0.30	=	4.52	0.30	=	1.33	0.16	=	0.18	0.41	UJ	3.31	0.59	=
DT-6 (SU1)	SLD78620	0.09	0.18	UJ	0.23	0.89	UJ	2.99	0.08	=	1.01	0.08	=	1.27	0.27	=	1.90	0.27	=	1.38	0.14	=	0.40	0.41	U	2.44	0.58	=
DT-6 (SU1)	SLD78649	0.39	0.17	=	0.68	0.95	U	6.40	0.08	=	0.98	0.08	=	1.37	0.24	=	5.56	0.24	=	1.57	0.13	=	0.62	0.44	=	10.45	0.65	=
DT-6 (SU1)	SLD78650	0.26	0.13	=	0.47	0.69	U	3.72	0.06	=	0.75	0.06	=	1.07	0.26	=	4.48	0.26	=	1.39	0.14	=	0.31	0.33	U	3.94	0.48	=
DT-6 (SU1)	SLD78651	0.00	0.12	U	-0.09	0.59	U	1.75	0.05	=	0.49	0.05	=	1.13	0.34	=	1.52	0.14	=	0.66	0.14	J	0.05	0.27	U	1.75	0.40	=
DT-6 (SU1)	SLD78653	0.14	0.16	U	0.15	0.71	U	2.86	0.07	=	0.85	0.07	=	1.29	0.14	=	1.83	0.31	=	0.98	0.14	=	0.20	0.36	U	3.63	0.50	=
DT-6 (SU1)	SLD78654	0.15	0.15	U	0.14	0.64	U	3.23	0.06	=	0.78	0.06	=	1.85	0.14	=	3.02	0.14	=	1.33	0.14	=	0.14	0.33	U	3.20	0.46	=
DT-6 (SU1)	SLD78655	0.35	0.23	U	-0.23	0.98	U	5.49	0.09	=	1.04	0.09	=	1.19	0.40	=	5.05	0.30	=	1.16	0.30	=	0.37	0.47	U	4.48	0.69	=
DT-6 (SU1)	SLD78656	0.20	0.17	U	0.08	0.73	U	2.16	0.07	=	0.90	0.07	=	1.59	0.37	=	3.26	0.37	=	1.04	0.31	J	0.06	0.35	U	1.65	0.51	=
DT-6 (SU1)	SLD78657	0.11	0.19	U	0.60	0.91	U	4.47	0.07	=	0.96	0.09	=	1.10	0.32	=	3.23	0.32	=	0.89	0.27	J	0.49	0.41	J	4.32	0.58	=
DT-6 (SU1)	SLD78658	0.05	0.18	U	0.09	0.81	U	4.62	0.07	=	0.93	0.08	=	1.58	0.16	=	4.37	0.16	=	1.08	0.31	=	0.23	0.40	U	3.47	0.57	=
DT-6 (SU1)	SLD78659	0.06	0.20	U	-0.24	0.89	U	4.18	0.09	=	1.21	0.09	=	1.28	0.27	=	3.54	0.15	=	1.87	0.14	=	0.08	0.44	U	3.92	0.61	=
DT-6 (SU1)	SLD78660	0.05	0.18	U	0.17	0.86	U	4.15	0.07	=	0.99	0.08	=	1.24	0.15	=	3.88	0.15	=	1.11	0.28	=	0.13	0.40	U	3.19	0.56	=
DT-6 (SU1)	SLD78661	0.00	0.14	U	-0.14	0.62	U	1.71	0.06	=	0.52	0.06	=	0.56	0.32	J	2.67	0.32	=	0.96	0.17	J	0.15	0.31	U	1.46	0.42	=
DT-6 (SU1)	SLD78662	0.02	0.18	U	-0.05	0.79	U	2.98	0.08	=	0.83	0.08	=	0.79	0.14	J	2.71	0.26	=	1.20	0.14	=	0.03	0.37	U	2.40	0.56	=
DT-6 (SU1)	SLD78663	0.27	0.28	U	-0.36	1.22	UJ	3.61	0.11	=	1.00	0.09	=	1.62	0.13	=	4.29	0.33	=	0.92	0.13	=	0.04	0.57	UJ	1.91	1.44	J
DT-6 (SU1)	SLD78664	0.16	0.22	U	0.12	1.00	U	3.14	0.09	=	0.82	0.09	=	2.32	0.30	J	3.54	0.26	=	0.76	0.14	J	0.00	0.47	U	4.61	0.67	=
DT-6 (SU1)	SLD78665	0.16	0.21	U	0.02	0.94	U	3.44	0.08	=	1.31	0.08	=	1.90	0.37	J	5.68	0.15	=	1.60	0.15	J	0.01	0.44	U	2.70	0.68	=
DT-6 (SU1)	SLD78666	-0.05	0.64	U	-0.08	3.19	U	4.48	0.30	=	1.08	0.33	=	1.51	0.14	J	3.77	0.31	=	1.25	0.14	J	0.19	1.38	U	5.53	2.03	=
DT-6 (SU1)	SLD78667	-0.17	0.67	U	-0.01	3.46	U	3.38	0.33	=	0.81	0.33	J	1.03	0.13	J	2.38	0.13	J	1.12	0.13	J	0.54	1.43	U	2.89	1.95	J
DT-6 (SU1)	SLD78668	0.17	0.29	U	0.57	1.29	U	5.14	0.12	=	1.36	0.11	=	1.33	0.28	J	4.17	0.23	=	1.44	0.13	J	0.50	0.59	UJ	6.74	0.92	=
DT-6 (SU1)	SLD78669	0.28	0.20	U	0.67	0.86	U	2.49	0.08	=	0.86	0.08	=	1.42	0.30	J	2.52	0.25	J	0.94	0.13	J	0.25	0.41	U	3.05	0.62	=
DT-6 (SU1)	SLD78671	0.28	0.31	UJ	0.70	1.30	U	5.96	0.12	=	1.06	0.11	=	1.63	0.35	J	7.12	0.35	=	1.28	0.30	J	1.18	0.62	=	17.57	1.03	=
DT-6 (SU1)	SLD78672	0.18	0.19	U	0.28	0.83	U	2.44	0.08	=	0.75	0.08	=	1.20	0.27	J	2.60	0.27	J	1.03	0.23	J	0.06	0.38	U	2.38	0.57	=
DT-6 (SU1)	SLD78673	0.10	0.14	U	-0.21	0.58	U	1.30	0.06	=	0.43	0.06	=	1.06	0.13	J	1.57	0.13	J	0.40	0.23	J	-0.02	0.28	U	0.88	0.44	=
DT-6 (SU1)	SLD78674	0.12	0.22	U	0.20	0.99	U	3.90	0.09	=	0.97	0.09	=	1.87	0.33	J	5.47	0.18	=	0.78	0.18	J	0.31	0.47	U	3.51	0.69	=
DT-6 (SU1)	SLD78675	0.01	0.18	U	0.18	0.82	U	1.98	0.08	=	0.76	0.09	=	1.02	0.31	J	2.32	0.17	J	1.08	0.31	J	0.06	0.38	U	1.41	0.57	=
DT-6 (SU1)	SLD78676	0.29	0.30	U	0.34	1.27	UJ	4.03	0.10	=	1.15	0.12	=	1.95	0.29	=	5.22	0.13	=	0.92	0.25	=	0.04	0.58	UJ	2.67	1.53	J
DT-6 (SU1)	SLD78677	0.14	0.26	UJ	0.04	1.14	UJ	2.27	0.10	=	0.77	0.11	=	2.78	0.39	=	4.62	0.16	=	1.58	0.16	=	0.49	0.55	U	10.15	1.56	=
DT-6 (SU1)	SLD78678	0.11	0.21	UJ	0.56	1.00	UJ	2.10	0.09	=	0.81	0.09	=	1.54	0.36	=	3.37	0.30	=	0.77	0.25	J	0.29	0.49	U	4.91	1.27	=
DT-6 (SU1)	SLD78679	0.16	0.21	U	0.00	0.87	UJ	3.06	0.09	=	0.67	0.08	=	1.61	0.27	=	4.39	0.32	=	1.13	0.15	=	0.53	0.46	U	3.29	1.16	=
DT-6 (SU1)	SLD78680	0.12	0.26	UJ	-0.10	1.21	UJ	1.87	0.10	=	0.78	0.10	=	1.25	0.32	=	3.71	0.14	=	0.98	0.32	=	0.26	0.50	UJ	1.21	1.55	U
DT-6 (SU1)	SLD78681	0.19	0.30	U	0.34	1.41	UJ	4.21	0.11	=	1.11	0.11	=	2.17	0.26	=	3.82	0.26	=	0.72	0.14	J	-0.16	0.66	UJ	3.45	1.62	=
DT-6 (SU1)	SLD78682	0.12	0.23	U	0.82	1.04	U	2.42	0.09	=	0.76	0.09	=	1.72	0.35	=	2.92	0.35	=	1.04	0.16	=	-0.01	0.45	UJ	2.04	1.18	J
DT-6 (SU1)	SLD78683	0.23	0.31	U	0.69	1.39	UJ	4.11	0.11	=	1.14	0.13	=	2.15	0.16	=	4.57	0.16	=	0.75	0.16	J	0.48	0.62	U	3.64	1.54	=
DT-6 (SU1)	SLD78684	0.16	0.21	U	0.28	0.96	UJ	1.57	0.09	=	0.79	0.09	=	1.49	0.32	=	2.30	0.27	=	1.07	0.15	=	-0.14	0.43	UJ	1.58	1.17	J
DT-6 (SU1)	SLD78685	0.22	0.22	U	0.39	0.94	UJ	2.10	0.08	=	0.98	0.09	=	1.22	0.16	=	2.48	0.16	=	0.75	0.16	J	-0.17	0.44	UJ	1.46	1.17	J
DT-6 (SU1)	SLD78686	0.30	0.25	U	0.21	1.10	UJ	2.60	0.09	=	0.93	0.10	=	1.53	0.36	=	3.49	0.15	=	1.07	0.15	=	0.13	0.52	UJ	2.84	1.32	=
DT-6 (SU1)	SLD78701	1.26	0.32	=	2.94	1.90	UJ	4.36	0.13	=	1.05	0.13	=	1.53	0.12	=	9.87	0.12	=	1.24	0.22	=	1.87	0.89	=	39.28	4.93	=
DT-6 (SU2)	SLD06503	0.11	0.13	U	-0.09	0.55	U	0.84	0.04	=	0.3	0.04	=	0.56	0.31	J	2.31	0.14	=	0.73	0.14	J	0.07	0.13	U	1.37	2.26	U
DT-6 (SU2)	SLD06504	0.25	0.23	J	0.35	1.01	U	1.95	0.07	=	0.75	0.09	=	1.48	0.33	=	2.87	0.28	=	1.3	0.33	=	0.22	0.25	U	2.73	4.42	U

Notes:
All Results are in picocurries/gram (pCi/g)
MDA = Minimum detectable activity
Q = Data validation qualifier. Qualifiers are defined in Attachment C-2 Section C-2.3.2

DT-6 AND DT-7 FINAL STATUS SURVEY SOIL SAMPLE DATA

Survey Unit	Sample Name	Actinium-227			Protactinium-231			Radium-226			Radium-228			Thorium-228			Thorium-230			Thorium-232			Uranium-235			Uranium-238		
		Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q
DT-6 (SU2)	SLD06505	0	0.13	U	-0.05	0.56	U	0.89	0.04	=	0.28	0.06	=	0.73	0.27	J	1.79	0.27	=	0.63	0.14	J	0.01	0.14	U	1.2	2.76	U
DT-6 (SU2)	SLD06506	0.27	0.37	U	0.5	1.71	U	7.46	0.1	=	1.35	0.15	=	1.25	0.28	=	6.78	0.28	=	1.96	0.28	=	0.69	0.38	=	8.97	6.41	=
DT-6 (SU2)	SLD06507	0.02	0.14	U	-0.23	0.61	U	1.08	0.05	=	0.28	0.06	=	0.55	0.28	J	3.82	0.33	=	0.67	0.15	J	0.03	0.15	U	1.74	3.33	U
DT-6 (SU2)	SLD06508	0.18	0.22	U	0.45	1	U	2.01	0.06	=	0.88	0.09	=	1.22	0.37	=	3.03	0.27	=	0.76	0.15	J	0.13	0.23	U	2.87	5.1	U
DT-6 (SU2)	SLD06509	0.03	0.09	U	0.25	0.43	U	0.62	0.03	=	0.18	0.04	=	0.25	0.14	J	1.09	0.3	=	0.4	0.14	J	0.06	0.1	U	0.47	1.73	U
DT-6 (SU2)	SLD06510	0.21	0.29	U	0.32	1.19	U	3.35	0.08	=	1.32	0.11	=	2.05	0.33	=	4.96	0.15	=	1.67	0.15	=	0.27	0.28	U	2.99	6.13	U
DT-6 (SU2)	SLD06511	0.02	0.08	U	-0.05	0.38	U	0.53	0.03	=	0.18	0.04	=	0.45	0.36	J	0.99	0.5	J	0.09	0.36	U	0	0.09	U	0.67	1.39	U
DT-6 (SU2)	SLD06512	0.27	0.23	J	0.55	1	U	2.22	0.06	=	0.93	0.09	=	1.12	0.12	=	2.57	0.12	=	0.62	0.12	J	0.26	0.22	J	2.87	3.4	U
DT-6 (SU2)	SLD06513	0.35	0.29	=	0.2	1.36	U	3.56	0.09	=	1.13	0.13	=	1.3	0.43	=	4.65	0.33	=	1.3	0.15	=	0.46	0.28	=	4.86	5.46	U
DT-6 (SU2)	SLD06514	0.2	0.25	U	0.16	1.15	U	2.83	0.08	=	1.18	0.11	=	1.57	0.54	=	3.36	0.19	=	0.75	0.19	J	0.23	0.26	U	3.06	4.98	U
DT-6 (SU2)	SLD06519	0.11	0.19	U	0.38	0.88	U	1.97	0.06	=	0.79	0.08	=	1.21	0.32	=	2.52	0.13	=	1.09	0.13	=	0.15	0.22	U	2.12	3.44	U
DT-6 (SU2)	SLD06520	0.34	0.29	J	0.09	1.18	U	3.19	0.08	=	1.25	0.11	=	1.42	0.48	=	4.08	0.27	=	1.39	0.27	=	0.12	0.29	U	3.9	5.38	U
DT-6 (SU2)	SLD06521	0.08	0.15	U	0.16	0.69	U	1.34	0.04	=	0.34	0.06	=	0.69	0.39	J	3.59	0.33	=	0.66	0.18	J	0.08	0.16	U	2.27	2.39	U
DT-6 (SU2)	SLD06522	0.18	0.44	U	-0.38	1.97	U	2.69	0.12	=	1.08	0.18	=	1.93	0.32	=	3.89	0.39	=	1.91	0.32	=	0.25	0.41	U	3	9.41	U
DT-6 (SU2)	SLD06523	-0.01	0.23	U	-0.42	1.03	U	2.53	0.06	=	1.02	0.09	=	1.07	0.24	=	3.98	0.13	=	1.07	0.13	=	0.18	0.25	U	4.46	3.73	=
DT-6 (SU2)	SLD06524	0.17	0.24	U	-0.16	1.02	U	2.23	0.07	=	1.06	0.1	=	0.96	0.31	J	2.92	0.26	=	1.34	0.14	=	0.16	0.23	U	3.53	4.02	U
DT-6 (SU2)	SLD06525	0.07	0.14	U	0.27	0.61	U	0.94	0.03	=	0.35	0.05	=	0.41	0.28	J	1.64	0.42	=	0.58	0.14	J	0.1	0.14	U	1.59	2.4	U
DT-6 (SU2)	SLD06526	0.04	0.42	U	-0.25	1.8	U	2.49	0.12	=	1.03	0.19	=	1.04	0.36	=	2.45	0.25	=	1.18	0.13	=	0.16	0.4	U	3.92	11.27	U
DT-6 (SU2)	SLD06529	0.12	0.3	U	0.16	1.27	U	3.35	0.08	=	1.08	0.12	=	1.55	0.18	=	5.52	0.4	=	1.14	0.18	J	0.31	0.3	U	6.88	5.67	=
DT-6 (SU2)	SLD06530	0.18	0.22	U	-0.03	1.01	U	1.48	0.06	=	0.83	0.09	=	0.75	0.25	J	2.87	0.25	=	1	0.25	=	0.23	0.23	U	3	4.83	U
DT-6 (SU2)	SLD06531	0.19	0.2	U	0	0.8	U	1.75	0.05	=	0.65	0.08	=	1.32	0.53	=	4.39	0.17	=	1.08	0.17	J	0.21	0.19	U	1.2	3.32	U
DT-6 (SU2)	SLD06532	0.42	0.32	U	0.64	1.34	U	3.56	0.09	=	1.38	0.11	=	1.43	0.15	=	3.76	0.28	=	1.64	0.15	=	0.36	0.34	U	6.83	4.19	=
DT-6 (SU2)	SLD06533	0.13	0.19	U	-0.17	0.8	U	1.41	0.06	=	0.56	0.08	=	0.87	0.28	J	1.94	0.23	=	0.86	0.28	J	0.09	0.2	U	2.34	3.98	U
DT-6 (SU2)	SLD06534	0.18	0.3	U	0.31	1.33	U	3.93	0.08	=	1.24	0.12	=	1.25	0.36	=	4.7	0.16	=	1.56	0.16	=	0.45	0.3	J	9.56	4.59	=
DT-6 (SU2)	SLD06535	0.11	0.22	U	0.03	0.98	U	2.37	0.06	=	0.79	0.09	=	1.26	0.28	=	4.03	0.37	=	0.55	0.15	J	0.39	0.22	=	4.45	3.79	=
DT-6 (SU2)	SLD06536	0.2	0.28	U	0.68	1.26	U	2.91	0.08	=	1.02	0.11	=	1.02	0.4	J	3.58	0.14	=	1.99	0.14	=	0.24	0.27	U	3.92	4.61	U
DT-6 (SU2)	SLD06537	0.02	0.13	U	0.43	0.64	U	1.03	0.04	=	0.24	0.05	=	0.45	0.48	U	2.1	0.15	=	0.21	0.15	U	0.04	0.15	U	1.28	2.32	U
DT-6 (SU2)	SLD06538	0.18	0.19	U	0.1	0.85	U	2.03	0.05	=	0.6	0.08	=	1.71	0.53	=	4.24	0.26	=	0.39	0.25	J	0.14	0.19	U	1.44	3.58	U
DT-6 (SU2)	SLD06539	0.08	0.13	U	0.09	0.6	U	1.13	0.04	=	0.29	0.04	=	0.15	0.1	U	0.96	0.1	=	0.15	0.1	U	0.07	0.15	U	1.07	1.89	U
DT-6 (SU2)	SLD06540	0.16	0.19	U	0.91	0.83	J	2.13	0.05	=	0.64	0.08	=	0.67	0.41	J	3.26	0.28	=	0.55	0.15	J	0.19	0.2	U	2.3	3.73	U
DT-6 (SU2)	SLD06541	0.18	0.17	J	0.21	0.76	U	1.45	0.05	=	0.52	0.06	=	1.3	0.3	=	4	0.36	=	1.42	0.16	=	0.33	0.19	J	0.66	3.29	U
DT-6 (SU2)	SLD06542	0.14	0.57	U	-0.5	2.68	U	1.78	0.18	=	0.91	0.33	=	1.25	0.34	=	2.79	0.12	=	1.24	0.12	=	0.28	0.57	U	2.38	15.64	U
DT-6 (SU2)	SLD06543	0.18	0.16	J	0.3	0.65	U	1.22	0.04	=	0.38	0.06	=	1.03	0.38	J	3.29	0.28	=	0.95	0.15	J	0.13	0.16	U	1.56	2.28	U
DT-6 (SU2)	SLD06544	0.31	0.32	U	-0.36	1.41	U	4.71	0.09	=	1.33	0.13	=	3.76	0.59	=	7.6	0.83	=	1.44	0.59	J	0.37	0.33	J	5.55	4.28	=
DT-6 (SU2)	SLD06545	0.1	0.22	U	-0.25	0.97	U	2.09	0.06	=	0.8	0.09	=	1.43	0.14	=	3.52	0.14	=	1.36	0.14	=	0.28	0.22	J	3.48	3.92	U
DT-6 (SU2)	SLD06546	0.17	0.28	U	-0.39	1.23	U	4.62	0.08	=	1.07	0.11	=	1.3	0.53	=	6.64	0.26	=	0.85	0.26	J	0.3	0.31	U	4.59	4.87	U
DT-6 (SU2)	SLD06547	0.09	0.12	U	0.38	0.55	U	0.66	0.03	=	0.17	0.05	=	0.15	0.27	U	1.27	0.14	=	0.3	0.27	J	-0.01	0.12	U	1.62	2.31	U
DT-6 (SU2)	SLD06548	0.35	0.41	U	-0.13	1.91	U	2.61	0.12	=	0.99	0.2	=	1.92	0.41	=	4.96	0.36	=	1.81	0.31	=	0.44	0.42	J	4.02	8.38	U
DT-6 (SU2)	SLD06549	0.1	0.16	U	0.3	0.73	U	0.9	0.05	=	0.6	0.07	=	1.03	0.37	J	1.61	0.17	=	0.68	0.17	J	0.1	0.17	U	1.96	3.43	U
DT-6 (SU2)	SLD06550	0.25	0.45	U	-0.23	1.98	U	3.5	0.13	=	0.72	0.19	=	1.4	0.14	=	8.86	0.31	=	1.24	0.14	=	0.48	0.46	J	6.71	7.62	U
DT-6 (SU2)	SLD06559	0.08	0.13	U	0.06	0.57	U	1.02	0.03	=	0.18	0.05	=	0.31	0.42	U	2.65	0.32	=	0.42	0.14	J	0.16	0.14	J	1.65	1.81	U
DT-6 (SU2)	SLD06560	0.24	0.25	U	0.18	1.06	U	3.26	0.07	=	0.69	0.09	=	0.68	0.45	J	9.25	0.15	=	0.68	0.15	J	0.26	0.25	J	4.78	5.09	U
DT-6 (SU2)	SLD06561	0.01	0.1	U	0.02	0.5	U	0.54	0.03	=	0.09	0.05	=	0.39	0.22	J	0.8	0.3	J	0.18	0.12	U	0.13	0.12	J	1.1	2.35	U
DT-6 (SU2)	SLD06562	0.39	0.31	U	0.33	1.34	U	3.59	0.08	=	1.41	0.13	=	1.51	0.44	=	4.91	0.25	=	1.32	0.25	=	0.4	0.31	J	5	5.41	U
DT-6 (SU2)	SLD06563	0.08	0.12	U	-0.39	0.51	U	0.8	0.03	=	0.12	0.05	=	0.34	0.36	U	2.23	0.14	=	0.32	0.14	J	0.07	0.12	U	1.24	2.13	U
DT-6 (SU2)	SLD06564	0.15	0.25	U	-0.26	1.05	U	2.23	0.07	=	0.99	0.11	=	1.09	0.32	=	5.06	0.14	=	1.58	0.14	=	0.17	0.25	U	4.1	4.41	U
DT-6 (SU2)	SLD06565	0.1	0.14	U	0.12	0.64	U	1.12	0.04	=	0.33	0.06	=	0.96	0.29	J	1.32	0.38	=	0.85	0.15	J	0.08	0.15	U	1.07	3.08	U
DT-6 (SU2)	SLD06566	0.24	0.3	U	0.26	1.23	U	3.27	0.08	=	1.19	0.11	=	1.36	0.45	=	3.48	0.26	=	1.53	0.26	=	0.3	0.3	U	3.47	5.49	U
DT-6 (SU2)	SLD06567	0.14	0.16	U	0.11	0.7	U	1.6	0.04	=	0.35	0.07	=	2.67	0.32	=	3.4	0.12	=	2.96	0.12	=	0.15	0.15	U	1.94	2.51	U
DT-6 (SU2)	SLD06568	0.1	0.21	U	0.52	0.96	U	2.12	0.06	=	0.5	0.09	=	0.94	0.27	=	3.37	0.23	=	0.55	0.12	J	0.19	0.22	U	2.67	3.81	U
DT-6 (SU2)	SLD06569	0.08	0.16	U	-0.06	0.71	U	1.33	0.04	=	0.47	0.06	=	0.77	0.37	J	3.18	0.31	=	0.81	0.14	J	0.16	0.16	U	2.7	2.59	J
DT-6 (SU2)	SLD06570	0.03	0.15	U	0.07	0.64	U	1.37	0.04	=	0.52	0.06	=	0.73	0.53	J	2.85	0.26	=	0.6	0.26	J	0.16	0.17	U	1.95	2.44	U
DT-6 (SU2)	SLD06571	0	0.12	U	-0.32	0.55	U	0.75	0.03	=	0.19	0.04	=	0.45	0.13	J	1.8	0.3	=	0.59	0.13	J	0.12	0.13	U	0.83	2.49	U
DT-6 (SU2)	SLD06572	0.04	0.12	U	-0.01	0.57	U	0.68	0.04	=	0.23	0.05	=	0.56	0.26	J	1.65	0.26	=	0.45	0.26	J	0.1	0.13	U	0.62	2.4	U
DT-6 (SU2)	SLD06573	0	0.13	U	0.14	0.63	U	0.85	0.04	=	0.29	0.06	=	0.4	0.37	J	2.06	0.27	=	0.38	0.15	J	0.07	0.14	U	0.74	2.63	U
DT-6 (SU2)	SLD06574	0.25	0.19	U	0.39	0.82	U	2.14	0.05	=	0.48	0.07	=	0.73	0.35	J	5.4	0.29	=	0.66	0.35	J	0.17	0.18	U	1.97	3.17	U
DT-6 (SU2)	SLD06575	0.15	0.26	U	-0.09	1.12	U	2.96	0.07	=	0.87	0.09	=	1.44	0.32	=	5.22	0.15	=	1.18	0.15	=	0.43	0.26	U	3.2	4.65	U
DT-6 (SU2)	SLD06576	0	0.16	U	0.07	0.74	U	1.37	0.05	=	0.42	0.07	=	1.27	0.28	=	3.53	0.33	=	1	0.15	J	0.22	0.16	J	2.25	2.84	U

Notes:
All Results are in picocurries/gram (pCi/g)
MDA = Minimum detectable activity
Q = Data validation qualifier. Qualifiers are defined in Attachment C-2 Section C-2.3.2

DT-6 AND DT-7 FINAL STATUS SURVEY SOIL SAMPLE DATA

Survey Unit	Sample Name	Actinium-227			Protactinium-231			Radium-226			Radium-228			Thorium-228			Thorium-230			Thorium-232			Uranium-235			Uranium-238		
		Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q
DT-6 (SU2)	SLD06577	0.19	0.2	U	0.45	1	U	2.11	0.06	=	0.7	0.1	=	1.18	0.3	=	4.12	0.12	=	1.12	0.12	=	0.22	0.2	J	1.84	4.1	U
DT-6 (SU2)	SLD06578	-0.01	0.21	U	0.59	1.01	U	1.73	0.06	=	0.74	0.09	=	0.41	0.29	J	2.64	0.13	=	1.39	0.13	=	0.2	0.21	U	3.79	4.62	U
DT-6 (SU2)	SLD06579	0.02	0.22	U	-0.48	0.97	U	2.47	0.07	=	0.73	0.09	=	1.15	0.4	J	5.64	0.3	=	0.89	0.16	J	0.26	0.21	J	2.6	3.58	U
DT-6 (SU2)	SLD06580	0.11	0.31	U	0.11	1.5	U	2.74	0.09	=	1.11	0.12	=	1.96	0.36	=	5.41	0.53	=	1.89	0.36	=	0.43	0.3	=	6.08	5.15	=
DT-7 (SU1)	HTZ68207	0.51	0.22	=	0.19	1.14	UJ	7.86	0.09	=	1.2	0.1	=	2.28	0.26	=	8.48	0.14	=	0.67	0.14	J	1.01	0.26	=	16.67	2.22	=
DT-7 (SU1)	HTZ68208	0.27	0.21	U	0.54	0.92	UJ	4.07	0.07	=	0.86	0.08	=	1.21	0.14	=	5.8	0.25	=	0.99	0.25	=	0.5	0.21	=	4.78	1.71	=
DT-7 (SU1)	HTZ68209	0.03	0.32	UJ	0.64	1.42	UJ	2.67	0.13	=	0.85	0.14	=	1.45	0.26	=	6.64	0.38	=	0.83	0.48	J	0.38	0.33	U	5.37	1.68	=
DT-7 (SU1)	HTZ68210	0.3	0.22	U	0.04	0.93	UJ	4.93	0.08	=	1.03	0.08	=	1.2	0.25	=	5.23	0.39	=	1.54	0.37	=	0.42	0.21	=	7.16	1.71	=
DT-7 (SU1)	HTZ68211	0.21	0.74	UJ	-0.09	3.44	UJ	10.62	0.31	=	1.59	0.28	=	1.37	0.24	=	6.07	0.13	=	1.49	0.24	=	0.97	0.66	=	12.23	3.97	=
DT-7 (SU1)	HTZ68212	0.06	0.28	UJ	0.39	1.26	UJ	5.61	0.11	=	1.19	0.11	=	2.04	0.27	=	6.24	0.27	=	1.92	0.14	=	0.64	0.27	=	8.83	1.59	=
DT-7 (SU1)	HTZ68213	0.32	0.26	U	0.38	1.11	UJ	3.51	0.1	=	1.23	0.1	=	1.98	0.37	=	4.61	0.15	=	1.93	0.28	=	0.31	0.24	J	3.81	1.42	=
DT-7 (SU1)	HTZ68214	0.19	0.23	U	0.31	1.01	UJ	5.13	0.09	=	1.22	0.09	=	2.24	0.3	=	4.94	0.14	=	1.17	0.14	=	0.31	0.23	J	4.34	1.83	=
DT-7 (SU1)	HTZ68215	0.08	0.27	UJ	0.55	1.22	UJ	5.36	0.11	=	1.5	0.11	=	1.38	0.22	=	4.09	0.3	=	1.42	0.12	=	0.27	0.28	U	5.04	2.05	=
DT-7 (SU1)	HTZ68216	0.07	0.27	UJ	0.37	1.26	UJ	3.36	0.1	=	1.04	0.11	=	2.11	0.41	=	5.02	0.33	=	1.81	0.13	=	0.07	0.26	UJ	1.63	1.46	J
DT-7 (SU1)	HTZ68217	0.25	0.19	=	0.05	0.97	UJ	4.88	0.08	=	1.15	0.08	=	1.36	0.32	=	5.72	0.14	=	1.8	0.14	=	0.33	0.23	U	3.57	1.74	=
DT-7 (SU1)	HTZ68218	0.05	0.29	UJ	0.94	1.3	U	6.97	0.11	=	1.16	0.11	=	1.51	0.24	=	6.82	0.24	=	1.51	0.13	=	0.62	0.27	=	9.29	1.61	=
DT-7 (SU1)	HTZ68219	0.43	0.28	U	0.98	1.28	U	7.49	0.1	=	1.08	0.11	=	1.42	0.26	=	6.91	0.14	=	0.91	0.14	J	0.53	0.28	=	12.72	1.56	=
DT-7 (SU1)	HTZ68220	0.25	0.24	U	1.33	0.94	U	5.76	0.07	=	1.1	0.07	=	1.02	0.37	J	6.44	0.17	=	1.16	0.17	J	0.57	0.21	=	11.64	2.17	=
DT-7 (SU1)	HTZ69482	0.38	0.27	U	0.66	1.21	UJ	5.36	0.09	=	1.01	0.11	=	1.7	0.31	J	5.86	0.11	=	1.36	0.11	=	0.39	0.58	U	6.32	1.38	=
DT-7 (SU1)	HTZ69488	0.12	0.25	UJ	0.31	1.08	UJ	3.84	0.08	=	0.82	0.09	=	1.29	0.1	J	5.7	0.2	=	0.73	0.1	=	0.18	0.54	UJ	4.74	1.31	=
DT-7 (SU1)	HTZ70888	0.37	0.19	=	0.27	1.03	U	7.27	0.08	=	1.09	0.09	=	1.68	0.25	=	6.29	0.13	=	1.29	0.13	=	0.76	0.48	=	10.77	0.71	=
DT-7 (SU1)	HTZ70889	0.22	0.17	U	0.22	0.72	U	2.58	0.06	=	0.97	0.07	=	1.47	0.21	=	2.96	0.11	=	1.55	0.21	=	0.08	0.35	U	1.99	0.48	=
DT-7 (SU1)	HTZ70890	0.19	0.17	U	-0.13	0.72	U	3.05	0.07	=	0.77	0.07	=	0.8	0.25	J	2.86	0.25	=	0.79	0.25	J	0.25	0.38	U	6.82	0.52	=
DT-7 (SU1)	HTZ70891	0.12	0.17	U	0.17	0.78	U	2.44	0.07	=	0.93	0.07	=	1.22	0.4	=	3.78	0.16	=	1.6	0.3	=	0.47	0.4	U	6.66	0.54	=
DT-7 (SU1)	SLD70315	0.14	0.24	UJ	0.41	1.13	UJ	2.15	0.1	=	0.85	0.1	=	1.03	0.13	=	1.62	0.24	=	0.97	0.23	=	-0.22	0.48	UJ	2.18	1.3	J
DT-7 (SU1)	SLD70316	0.13	0.15	U	0.36	0.64	UJ	1.23	0.06	=	0.84	0.06	=	1.39	0.3	=	1.82	0.14	=	1.26	0.14	=	0.04	0.28	UJ	1.03	0.43	J
DT-7 (SU1)	SLD70317	0.02	0.11	UJ	0.15	0.5	UJ	1.18	0.04	=	0.16	0.05	J	0.44	0.4	J	2.07	0.28	J	0.44	0.15	J	0.08	0.26	UJ	1.02	0.62	J
DT-7 (SU1)	SLD70318	0.14	0.22	U	0.1	0.91	U	2.68	0.08	=	0.78	0.08	=	1.19	0.14	=	3.25	0.27	=	0.96	0.14	J	0.27	0.47	U	2.82	1.18	=
DT-7 (SU1)	SLD70319	0.17	0.21	U	0	0.87	UJ	2.8	0.08	=	1.21	0.08	=	1.76	0.34	=	2.8	0.26	=	1.42	0.26	=	0.08	0.42	UJ	3.01	0.63	=
DT-7 (SU1)	SLD70320	0.27	0.31	U	-0.13	1.31	UJ	4.83	0.12	=	1.35	0.11	=	1.55	0.36	=	4.88	0.16	=	0.9	0.16	J	0.09	0.64	UJ	4.45	1.63	=
DT-7 (SU1)	SLD70321	0.2	0.22	U	0.13	0.94	U	3.62	0.08	=	0.74	0.09	=	1.71	0.38	=	3.59	0.26	=	1.18	0.14	=	0.58	0.49	U	2.27	1.72	J
DT-7 (SU1)	SLD70322	0.07	0.12	U	-0.1	0.58	U	1.18	0.05	=	0.3	0.05	=	0.46	0.29	J	1.52	0.16	=	0.55	0.35	J	0.09	0.31	U	0.56	1.18	U
DT-7 (SU1)	SLD70323	0.01	0.23	U	-0.2	1.01	U	6.62	0.09	=	1.34	0.08	=	2.13	0.51	=	4.57	0.43	=	1.54	0.33	=	0.12	0.52	U	5.18	1.87	=
DT-7 (SU1)	SLD70324	0.18	0.23	U	0.98	1.01	U	3.26	0.08	=	1.17	0.1	=	2.81	0.34	=	3.47	0.18	=	2.23	0.4	=	0.04	0.49	UJ	3.44	1.19	=
DT-7 (SU1)	SLD70325	0.16	0.13	U	-0.05	0.56	UJ	1.79	0.05	=	0.58	0.05	=	0.78	0.42	J	1.26	0.29	=	0.38	0.13	J	0.33	0.25	=	2.41	0.41	=
DT-7 (SU1)	SLD70326	0.03	0.14	UJ	0.1	0.66	UJ	0.95	0.05	=	0.32	0.06	=	0.56	0.31	J	1.24	0.12	=	0.4	0.23	J	0.05	0.3	UJ	0.81	0.75	J
DT-7 (SU1)	SLD70327	0.16	0.24	U	0.32	1.08	UJ	4.05	0.09	=	1.08	0.1	=	1.97	0.33	=	3.85	0.28	=	1.93	0.15	=	0.17	0.52	UJ	3.52	1.28	=
DT-7 (SU1)	SLD70328	0.18	0.16	U	0	0.65	UJ	2.23	0.06	=	0.84	0.06	=	0.75	0.29	J	2.01	0.13	=	1.29	0.13	=	0.14	0.32	UJ	2.9	0.46	=
DT-7 (SU1)	SLD70329	0.09	0.22	UJ	0.5	0.96	UJ	2.21	0.08	=	0.83	0.09	=	1.37	0.3	=	3.1	0.16	=	0.83	0.16	J	-0.09	0.46	UJ	4.21	1.17	=
DT-7 (SU1)	SLD70330	0	0.2	U	0.16	0.9	U	2.76	0.08	=	0.73	0.08	=	1.65	0.32	=	4.34	0.27	=	0.96	0.15	J	0.24	0.47	U	3.65	1.57	=
DT-7 (SU1)	SLD70331	-0.04	0.2	U	0.35	0.93	U	2.58	0.08	=	0.86	0.09	=	1.35	0.34	=	3.83	0.15	=	1.41	0.29	=	0.12	0.48	U	3.04	1.65	=
DT-7 (SU1)	SLD70332	0.05	0.16	U	0.14	0.74	U	1.32	0.06	=	0.53	0.07	=	1.04	0.46	J	2.44	0.39	=	0.97	0.29	J	0.09	0.34	U	0.78	0.88	U
DT-7 (SU1)	SLD70333	0.24	0.17	U	0.01	0.67	UJ	2.21	0.06	=	0.81	0.06	=	0.83	0.26	J	1.97	0.26	=	1.15	0.14	=	0.13	0.32	UJ	2.19	0.46	=
DT-7 (SU1)	SLD70334	0.04	0.22	UJ	-0.07	0.91	UJ	1.54	0.09	=	0.81	0.1	=	1.42	0.29	=	1.63	0.13	J	1.01	0.13	=	-0.09	0.45	UJ	1.13	1.88	U
DT-7 (SU1)	SLD70335	0.13	0.21	UJ	0.41	0.91	UJ	1.4	0.08	=	0.81	0.08	=	1.24	0.14	=	1.11	0.27	J	0.79	0.27	J	0.06	0.42	UJ	2.93	1.6	=
DT-7 (SU1)	SLD70336	0.02	0.21	UJ	0.42	0.96	UJ	1.86	0.07	=	0.61	0.09	=	1.28	0.15	=	2.64	0.28	=	0.77	0.15	J	-0.18	0.45	UJ	1.87	1.65	J
DT-7 (SU1)	SLD70337	0.1	0.22	UJ	0.45	0.99	UJ	2.91	0.09	=	1.2	0.09	=	0.98	0.27	=	2.4	0.12	=	1.17	0.12	=	0.33	0.48	U	3.79	1.79	=
DT-7 (SU1)	SLD70338	0.23	0.23	U	0.16	1.04	U	3.31	0.09	=	0.82	0.08	=	1.79	0.34	=	4.37	0.34	=	1.3	0.15	=	0.38	0.52	U	4.16	1.3	=
DT-7 (SU1)	SLD70339	0.03	0.21	U	0.01	0.95	U	2.48	0.09	=	0.69	0.08	=	1.43	0.35	=	3.42	0.26	=	1.03	0.26	=	0.19	0.48	U	2.1	1.75	J
DT-7 (SU1)	SLD70340	0.08	0.19	U	0.24	0.94	U	1.89	0.07	=	0.49	0.09	=	0.82	0.28	J	2.61	0.13	=	0.6	0.13	J	0.44	0.43	U	1.89	1.12	=
DT-7 (SU1)	SLD70341	0.16	0.23	U	0	0.95	UJ	3	0.09	=	0.66	0.09	=	1.08	0.33	=	3.64	0.15	J	0.65	0.28	=	0.28	0.48	UJ	1.27	1.21	J
DT-7 (SU1)	SLD70342	0.02	0.16	U	-0.23	0.68	U	1.62	0.06	=	0.45	0.06	=	0.76	0.31	J	2.07	0.14	=	0.9	0.31	J	0.02	0.34	U	1.67	1.22	J
DT-7 (SU1)	SLD70343	0.16	0.28	U	0.75	1.27	U	5.97	0.11	=	1.07	0.12	=	1.36	0.28	=	7.48	0.13	=	1.5	0.13	=	0.56	0.63	U	3.83	1.52	=
DT-7 (SU1)	SLD70344	0.09	0.24	UJ	-0.05	1.15	UJ	3.56	0.09	=	1.43	0.09	=	1.85	0.41	=	3.81	0.31	=	1.26	0.31	=	0.36	0.53	UJ	2.8	1.37	=
DT-7 (SU1)	SLD70345	0.14	0.22	U	0.62	1.02	UJ	2.74	0.08	=	1	0.09	=	1.29	0.38	=	3.31	0.26	=	1.57	0.26	=	0.08	0.48	UJ	2.2	1.17	=
DT-7 (SU1)	SLD70346	0.02	0.2	U	0.33	0.9	U	2.79	0.07	=	0.77	0.08	=	1.83	0.14	=	2.53	0.14	=	0.9	0.25	J	0.12	0.47	U	3.14	1.59	J
DT-7 (SU1)	SLD70347	0.09	0.11	U	0.11	0.44	UJ	1.26	0.04	=	0.55	0.04	=	1.13	0.36	J	2.61	0.16	J	0.77	0.3	J	-0.02	0.21	UJ	0.93	0.31	=
DT-7 (SU1)	SLD70348	0.09	0.21	U	0.58	0.92	U	3.36	0.08	=	0.7	0.08	=	1.34	0.34	=	1.4	0.28	=	1.11	0.16	=	0.47	0.46	J	5.6	1.7	=
DT-7 (SU1)	SLD70349	0.4	0.26	U	0.48	1.18	U	6.65	0.1	=	1.17	0.1	=	1.66	0.14	=	5.79	0.14	=	1.25	0.14	=	0.41	0.59	U	12.22	1.53	=
DT-7 (SU1)	SLD70350	0.07	0.16	U	-0.05	0.67	U	1.32	0.06	=	0.63	0.06	=	1.19	0.14	=	1.78	0.26	=	1.38	0.14	=	0.03	0.36	U	0.14	1.36	U

Notes:
All Results are in picoCuries/gram (pCi/g).
MDA = Minimum detectable activity
Q = Data validation qualifier. Qualifiers are defined in Attachment C-2 Section C-2.3.2

DT-6 AND DT-7 FINAL STATUS SURVEY SOIL SAMPLE DATA

Survey	Sample	Actinium-227			Protactinium-231			Radium-226			Radium-228			Thorium-228			Thorium-230			Thorium-232			Uranium-235			Uranium-238		
Unit	Name	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q
DT-7 (SU1)	SLD70351	0.1	0.26	U	0.35	1.23	U	3.14	0.1	=	0.93	0.11	=	1.15	0.28	=	3.44	0.28	=	1.26	0.15	=	0.21	0.56	U	2.7	1.42	J
DT-7 (SU1)	SLD70352	0	0.26	UJ	-0.11	1.14	UJ	3.82	0.1	=	0.94	0.12	=	1.71	0.29	=	4	0.24	=	1.96	0.13	=	0.38	0.58	UJ	2.72	1.43	=
DT-7 (SU1)	SLD70353	-0.03	0.23	U	0.09	0.97	U	1.4	0.09	=	0.32	0.1	=	0.66	0.37	J	1.31	0.17	=	0.42	0.31	J	0.05	0.49	U	1.25	1.65	U
DT-7 (SU1)	SLD70354	-0.11	0.27	U	0.14	1.26	U	4.43	0.11	=	1.05	0.11	=	1.32	0.14	=	3.7	0.14	=	1.25	0.14	=	-0.04	0.58	U	3.01	1.47	=
DT-7 (SU1)	SLD70355	0.23	0.19	U	0.05	0.83	UJ	2.21	0.07	=	0.87	0.07	=	1.46	0.34	=	2.45	0.15	=	1.45	0.34	=	0.03	0.41	UJ	2.09	0.99	=
DT-7 (SU1)	SLD70356	0.1	0.21	UJ	0.59	0.91	U	1.46	0.08	=	1.02	0.08	=	1.38	0.38	=	1.85	0.28	J	1.4	0.28	=	0.1	0.45	UJ	1.71	1.63	J
DT-7 (SU1)	SLD70357	0.21	0.19	U	0.12	0.84	U	1.68	0.07	=	0.72	0.08	=	1.15	0.3	=	2.18	0.14	=	0.86	0.14	J	0.12	0.41	U	3.48	1.45	=
DT-7 (SU1)	SLD70358	0.12	0.11	U	-0.13	0.47	UJ	1.35	0.04	=	0.58	0.04	=	1.74	0.34	=	2.05	0.25	J	1.35	0.25	=	-0.01	0.22	UJ	1.07	0.34	=
DT-7 (SU1)	SLD70359	0.08	0.2	U	0.11	0.84	U	1.41	0.08	=	0.83	0.08	=	1.29	0.35	=	2.17	0.17	=	0.43	0.17	J	0.05	0.42	U	1.05	1.61	U
DT-7 (SU1)	SLD70360	0.2	0.27	U	0.24	1.16	U	4.46	0.11	=	1.02	0.11	=	1.47	0.31	=	5.15	0.14	=	1.07	0.14	=	0.29	0.6	U	7.36	1.51	=
DT-7 (SU1)	SLD70361	-0.01	0.21	U	0.13	0.96	U	2.21	0.08	=	0.77	0.09	=	1.63	0.22	=	1.79	0.22	=	0.99	0.12	=	-0.01	0.46	U	1.93	1.66	J
DT-7 (SU1)	SLD70362	0.26	0.29	U	0.52	1.31	UJ	4.28	0.12	=	1.38	0.11	=	2.27	0.36	J	5.27	0.14	=	1.44	0.14	=	0.1	0.61	UJ	2.96	1.58	J
DT-7 (SU1)	SLD70363	0.32	0.26	U	0.84	1.13	U	6.32	0.09	=	1.23	0.09	=	1.85	0.37	=	6.21	0.25	=	1.83	0.25	=	0.1	0.56	UJ	3.83	1.98	J
DT-7 (SU1)	SLD70364	0.02	0.19	U	-0.21	0.88	U	1.53	0.08	=	0.98	0.08	=	1.36	0.28	=	1.63	0.28	=	1.26	0.15	=	0.23	0.43	U	1.65	1.79	U
DT-7 (SU1)	SLD70365	0.04	0.19	U	-0.06	0.84	U	1.52	0.08	=	0.81	0.08	=	0.98	0.28	=	1.27	0.24	=	1.28	0.13	=	-0.1	0.42	U	0.95	1.67	U
DT-7 (SU1)	SLD70366	-0.02	0.41	UJ	1	2	UJ	4.2	0.18	=	1.43	0.18	=	2.04	0.32	=	4.91	0.27	=	2	0.15	=	0.45	0.92	UJ	6.76	3.97	J
DT-7 (SU1)	SLD70367	0.05	0.2	UJ	0.21	0.92	UJ	1.54	0.08	=	0.86	0.08	=	1.31	0.14	=	1.56	0.14	J	0.94	0.25	J	-0.03	0.43	UJ	1.66	1.6	J
DT-7 (SU1)	SLD70368	0.09	0.18	U	0.16	0.78	U	1.31	0.07	=	0.72	0.07	=	1.63	0.16	=	1.56	0.16	=	1.19	0.29	=	-0.02	0.38	U	1.26	1.42	U
DT-7 (SU1)	SLD70369	0.05	0.18	UJ	0.34	0.81	UJ	3.77	0.07	=	0.68	0.08	=	0.92	0.39	J	3.1	0.27	=	0.52	0.27	J	0.34	0.38	U	2.8	0.55	=
DT-7 (SU1)	SLD70370	0.07	0.21	U	0.32	0.95	U	2.8	0.09	=	0.89	0.08	=	1.77	0.43	=	3.82	0.34	=	0.95	0.26	=	0.23	0.47	U	2.73	1.67	J
DT-7 (SU1)	SLD70371	0.02	0.2	UJ	0.3	0.9	UJ	1.65	0.08	=	0.99	0.08	=	1.19	0.25	J	2.11	0.25	J	1.04	0.13	=	0.05	0.42	UJ	1.51	1.08	J
DT-7 (SU1)	SLD71433	0.12	0.21	UJ	-0.06	0.93	UJ	2.63	0.08	=	0.79	0.08	=	1.06	0.41	J	3.44	0.15	=	0.61	0.15	J	0.28	0.46	UJ	2.73	1.12	=
DT-7 (SU1)	SLD71434	0.17	0.14	U	-0.13	0.56	UJ	2.12	0.05	=	0.64	0.05	=	0.75	0.27	J	2.66	0.12	=	0.67	0.12	J	0.08	0.28	UJ	2.19	0.39	=
DT-7 (SU1)	SLD71435	0.1	0.26	UJ	0.06	1.14	UJ	3.56	0.1	=	1.35	0.11	=	1.47	0.27	=	3.15	0.27	=	1.2	0.15	=	0.43	0.58	U	2.88	1.47	J
DT-7 (SU2)	HTZ68303	0.3	0.19	=	0.15	0.93	UJ	4.19	0.08	=	1.17	0.08	=	1.76	0.27	=	5.1	0.22	=	1.24	0.12	=	0.52	0.21	=	6.95	1.68	=
DT-7 (SU2)	HTZ69357	0.49	0.21	=	-0.18	1.07	UJ	10.71	0.09	=	1.07	0.09	=	1.74	0.36	=	10.2	0.15	=	1.77	0.15	=	0.55	0.25	=	6.85	1.99	=
DT-7 (SU2)	HTZ69358	0.1	0.28	UJ	0.25	1.22	UJ	3.92	0.11	=	1.27	0.11	=	1.26	0.25	=	3.28	0.13	=	0.97	0.25	=	0.26	0.3	UJ	4.28	2.23	J
DT-7 (SU2)	HTZ69380	0.46	0.19	=	0.14	0.98	U	8.73	0.08	=	1.35	0.08	=	1.3	0.24	=	8.01	0.13	=	1.76	0.24	=	0.56	0.2	=	6.7	0.68	=
DT-7 (SU2)	HTZ69381	0.5	0.2	U	0.07	0.81	U	5.96	0.07	=	1.1	0.07	=	1.6	0.14	=	5.36	0.14	=	1.47	0.14	=	1.01	0.18	=	16.07	0.64	=
DT-7 (SU2)	HTZ69382	0.3	0.15	=	0.22	0.75	U	5.53	0.06	=	1.07	0.07	=	1.93	0.54	=	6.25	0.19	=	1.51	0.19	=	0.43	0.16	=	4.55	0.54	=
DT-7 (SU2)	HTZ69483	0.81	0.23	=	0.92	1.33	U	4.47	0.1	=	0.76	0.11	=	0.93	0.21	J	13.45	0.21	=	1.18	0.11	=	0.56	0.58	U	10.75	1.59	=
DT-7 (SU2)	HTZ69484	0.37	0.28	U	0.69	1.25	UJ	6.81	0.1	=	1.06	0.11	=	0.84	0.38	J	5.51	0.23	=	1.78	0.12	=	0.55	0.6	U	15.92	1.58	=
DT-7 (SU2)	HTZ69485	0.35	0.25	U	0.41	1.07	UJ	2.91	0.09	=	2.76	0.1	=	5.65	0.36	=	4.5	0.22	=	5.68	0.22	=	0.21	0.53	UJ	7.16	1.31	=
DT-7 (SU2)	HTZ69486	0.34	0.28	U	0.85	1.21	U	4.21	0.1	=	1.06	0.11	=	1.54	0.33	J	5.74	0.27	=	1.41	0.14	=	0.25	0.61	UJ	4.9	1.48	=
DT-7 (SU2)	HTZ69487	0.31	0.29	U	-0.55	1.22	UJ	4.91	0.1	=	1.09	0.11	=	1.27	0.32	J	5.32	0.24	=	1.25	0.24	=	0.51	0.6	U	7.45	1.59	=
DT-7 (SU2)	SLD70606	0.63	0.15	=	0.97	0.83	U	3.44	0.06	=	0.82	0.07	=	1.9	0.31	=	12.9	0.12	=	1.05	0.12	=	0.56	0.38	=	7.71	0.59	=
DT-7 (SU2)	SLD70607	0.04	0.15	U	0.17	0.69	U	1.49	0.06	=	0.23	0.06	=	0.68	0.4	J	2.06	0.19	=	0.5	0.19	J	0.01	0.33	U	1.04	1.14	U
DT-7 (SU2)	SLD70608	0.04	0.17	U	0.44	0.78	U	1.68	0.06	=	0.48	0.06	=	1.11	0.41	=	3.83	0.28	=	1.17	0.15	=	-0.05	0.36	U	1.3	0.92	J
DT-7 (SU2)	SLD70609	0.51	0.19	U	-0.03	0.72	UJ	2.81	0.07	=	0.87	0.06	=	1.38	0.39	=	2.64	0.14	=	1.05	0.14	=	0.28	0.36	U	3.4	0.51	=
DT-7 (SU2)	SLD70610	0.31	0.16	U	0.36	0.66	UJ	5.24	0.06	=	1.16	0.06	=	1.97	0.34	=	3.21	0.34	=	1.69	0.29	=	0.04	0.31	UJ	3.88	0.44	=
DT-7 (SU2)	SLD70611	0.24	0.14	U	0.01	0.59	UJ	3.14	0.05	=	0.94	0.05	=	1.61	0.46	=	2.94	0.35	J	1.32	0.46	J	0.22	0.29	U	2.7	0.41	=
DT-7 (SU2)	SLD70612	0.16	0.2	U	0.49	0.93	U	2.42	0.08	=	0.73	0.08	=	1.62	0.29	=	2.79	0.16	=	1.66	0.35	=	0.3	0.44	U	3.31	1.11	=
DT-7 (SU2)	SLD70613	0.11	0.15	U	0.26	0.59	UJ	1.84	0.05	=	0.75	0.05	=	1.96	0.3	=	2.58	0.26	=	1.1	0.26	=	0.04	0.27	UJ	2.37	0.41	=
DT-7 (SU2)	SLD70614	0.25	0.21	U	0.1	0.88	UJ	4.92	0.08	=	1.04	0.08	=	1.55	0.27	=	3.55	0.15	=	1.07	0.15	=	0.21	0.44	UJ	6.27	0.62	=
DT-7 (SU2)	SLD70615	0.34	0.2	U	0.62	0.83	U	4.36	0.07	=	1.06	0.07	=	1.52	0.31	=	8.86	0.14	=	0.98	0.14	=	0.22	0.4	UJ	7.06	0.57	=
DT-7 (SU2)	SLD70616	0.35	0.18	U	0.09	0.72	UJ	3.02	0.06	=	0.87	0.06	=	1.61	0.33	=	2.89	0.15	=	1.14	0.15	=	0.22	0.34	U	2.02	0.49	=
DT-7 (SU2)	SLD70617	0.07	0.1	U	0.2	0.4	UJ	1.12	0.03	=	0.34	0.03	=	0.66	0.41	J	1.31	0.28	J	0.77	0.15	J	-0.02	0.19	UJ	0.84	0.26	=
DT-7 (SU2)	SLD70618	0.19	0.12	=	0.32	0.64	UJ	3.2	0.05	=	0.81	0.06	=	1.59	0.39	=	1.92	0.33	J	1.42	0.17	=	0.04	0.31	UJ	2.75	0.46	=
DT-7 (SU2)	SLD70619	0.17	0.17	U	0.22	0.69	UJ	2.15	0.06	=	0.86	0.06	=	1.3	0.3	=	2.56	0.16	J	0.89	0.16	J	0.05	0.31	UJ	1.78	0.44	=
DT-7 (SU2)	SLD70620	0.02	0.15	UJ	0.1	0.7	UJ	2.14	0.06	=	0.72	0.06	=	0.83	0.45	J	2.21	0.34	J	0.67	0.18	J	0.12	0.33	UJ	2.3	0.45	=
DT-7 (SU2)	SLD70621	0.2	0.19	U	0.86	0.84	U	3.88	0.07	=	1.12	0.08	=	2.28	0.16	=	3.59	0.16	=	1.43	0.16	=	0.16	0.39	UJ	4.12	0.56	=
DT-7 (SU2)	SLD70622	0.35	0.3	U	-0.15	1.23	U	4.54	0.11	=	1.13	0.11	=	1.26	0.3	=	4.13	0.3	=	1.44	0.16	=	0.25	0.6	U	4.22	1.52	=
DT-7 (SU2)	SLD70623	0.08	0.16	UJ	0.17	0.65	UJ	3.37	0.05	=	0.86	0.06	=	1.49	0.32	=	2.44	0.15	J	0.95	0.32	J	0.44	0.31	=	3.73	0.47	=
DT-7 (SU2)	SLD70624	0.11	0.25	U	0.92	1.13	U	3.44	0.11	=	1.26	0.1	=	2.4	0.16	=	4.54	0.16	=	1.55	0.29	=	0.3	0.54	U	3.81	1.42	=
DT-7 (SU2)	SLD70625	0.08	0.13	U	-0.06	0.57	U	1.08	0.05	=	0.17	0.05	=	1.59	0.21	=	4.81	0.21	=	1.26	0.21	J	0.19	0.28	U	0.96	1.02	U
DT-7 (SU2)	SLD70626	0.04	0.14	U	-0.02	0.61	U	1.3	0.06	=	0.38	0.05	=	0.48	0.3	J	2.21	0.25	=	0.45	0.14	J	-0.11	0.3	U	1.34	0.73	J
DT-7 (SU2)	SLD70627	0.12	0.25	U	0.2	1.05	U	3.97	0.09	=	0.86	0.09	=	1.31	0.31	=	3.59	0.14	=	0.5	0.26	J	0.38	0.54	U	3.22	1.32	=
DT-7 (SU2)	SLD70628	0.06	0.16	UJ	0.19	0.73	UJ	2.51	0.06	=	0.89	0.06	=	1.94	0.13	=	2.76	0.13	=	1.34	0.24	=	0.16	0.33	UJ	1.85	0.48	=
DT-7 (SU2)	SLD70629	0.13	0.21	U	-0.27	0.95	U	2.95	0.09	=	1	0.08	=	1.73	0.16	=	4.45	0.29	=	0.91	0.15	J	0.26	0.46	U	3.92	1.16	=

Notes:
All Results are in picoCuries/gram (pCi/g)
MDA = Minimum detectable activity
Q = Data validation qualifier. Qualifiers are defined in Attachment C-2 Section C-2.3.2

DT-6 AND DT-7 FINAL STATUS SURVEY SOIL SAMPLE DATA

Survey Unit	Sample Name	Actinium-227			Protactinium-231			Radium-226			Radium-228			Thorium-228			Thorium-230			Thorium-232			Uranium-235			Uranium-238		
		Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q
DT-7 (SU2)	SLD70630	-0.01	0.1	UJ	0.13	0.48	UJ	1.46	0.04	=	0.48	0.05	=	0.9	0.16	J	1.65	0.3	J	0.71	0.16	J	0.05	0.23	UJ	1.12	0.33	=
DT-7 (SU2)	SLD70631	0.1	0.19	U	0.09	0.86	U	1.91	0.07	=	0.67	0.08	=	1.85	0.33	=	2.87	0.33	=	1.1	0.19	J	-0.07	0.41	U	2.18	1.53	J
DT-7 (SU2)	SLD70632	0.07	0.19	U	0.26	0.9	U	2.33	0.07	=	0.69	0.08	=	1.84	0.38	=	3.35	0.29	=	1.18	0.29	=	-0.17	0.4	U	2.98	1	=
DT-7 (SU2)	SLD70633	0.14	0.22	U	0.33	0.93	U	1.67	0.08	=	1.01	0.09	=	2.27	0.37	=	1.95	0.25	=	1.24	0.25	=	0.09	0.44	U	1.37	1.15	J
DT-7 (SU2)	SLD70634	0.1	0.16	U	0.08	0.72	UJ	2	0.06	=	0.74	0.06	=	1.46	0.33	=	2.91	0.15	J	1.31	0.15	=	0.03	0.32	UJ	1.19	0.48	=
DT-7 (SU2)	SLD70635	0.26	0.25	U	0.28	1.07	U	4.48	0.09	=	1.07	0.1	=	1.89	0.32	=	5.92	0.32	=	1.62	0.32	=	0.04	0.55	U	3.52	1.35	=
DT-7 (SU2)	SLD70636	0.05	0.14	UJ	0.05	0.6	UJ	1.97	0.06	=	0.57	0.05	=	1.04	0.28	J	3.24	0.28	=	0.88	0.15	J	0	0.28	UJ	1.55	0.39	=
DT-7 (SU2)	SLD70637	0.16	0.27	UJ	0.62	1.17	UJ	3.44	0.1	=	1.14	0.1	=	1.89	0.4	J	4.62	0.16	=	2.14	0.3	=	0.6	0.58	U	3.12	1.35	=
DT-7 (SU2)	SLD70638	-0.11	0.26	U	0.31	1.25	U	2.88	0.11	=	1.33	0.11	=	2.26	0.33	=	3.49	0.28	=	1.61	0.15	=	-0.01	0.57	U	3.07	1.41	=
DT-7 (SU2)	SLD70639	0.11	0.18	U	0.16	0.79	U	1.38	0.08	=	0.91	0.08	=	1.02	0.3	=	1.49	0.13	=	0.47	0.3	J	0	0.38	U	0.25	1.05	U
DT-7 (SU2)	SLD70640	0.17	0.14	U	0.44	0.62	UJ	1.42	0.06	=	0.91	0.05	=	1	0.25	=	1.65	0.25	J	1.1	0.14	=	0.05	0.28	UJ	0.74	0.43	J
DT-7 (SU2)	SLD70641	0.09	0.24	UJ	-0.15	1.08	UJ	3.39	0.09	=	0.93	0.1	=	1.75	0.18	J	3.32	0.34	J	1.13	0.18	J	0.39	0.52	UJ	3.65	1.27	=
DT-7 (SU2)	SLD70642	0.09	0.14	U	0.18	0.58	UJ	1.27	0.05	=	0.68	0.05	=	1.44	0.15	J	1.27	0.15	J	1.14	0.28	=	0.02	0.27	UJ	1.13	0.39	=
DT-7 (SU3)	HTZ70853	0.59	0.23	U	0.08	0.85	U	3.01	0.08	=	2.4	0.08	=	5.28	0.29	=	3.81	0.25	=	4.6	0.13	=	-0.05	0.4	U	2.16	0.6	=
DT-7 (SU3)	HTZ70854	0.14	0.16	U	0.14	0.69	U	3.51	0.06	=	0.63	0.07	=	1.01	0.26	=	3.68	0.14	=	0.82	0.14	J	0.35	0.35	U	2.23	0.5	=
DT-7 (SU3)	HTZ70855	0.04	0.17	U	0.38	0.76	U	3.58	0.07	=	0.86	0.07	=	1.47	0.25	=	2.94	0.3	=	1.23	0.13	=	0.11	0.36	U	3	0.51	=
DT-7 (SU3)	HTZ70857	0.03	0.27	U	0.85	1.24	U	3.72	0.11	=	0.89	0.11	=	1.64	0.17	=	4.72	0.17	=	1.45	0.17	=	0.55	0.59	U	10.73	1.56	=
DT-7 (SU3)	HTZ70885	0.79	0.22	=	0.68	1.16	UJ	9.24	0.09	=	1.19	0.1	=	1.74	0.32	=	9.57	0.24	=	1	0.13	=	1.38	0.55	=	31.62	1.54	=
DT-7 (SU3)	HTZ70894	1.18	0.22	=	0.66	1.16	U	9	0.09	=	1.36	0.09	=	2.89	0.33	=	15.47	0.18	=	1.82	0.18	=	2.33	0.58	=	41.71	2.95	=
DT-7 (SU3)	HTZ70895	0.61	0.19	=	0.59	1	U	7.14	0.08	=	1.17	0.08	=	2.38	0.35	=	10.53	0.16	=	0.99	0.16	J	0.76	0.49	=	12.79	2.38	=
DT-7 (SU3)	HTZ70896	0.23	0.19	U	0.38	0.78	U	2.68	0.06	=	0.91	0.07	=	1.9	0.32	=	2.69	0.27	=	0.99	0.27	=	0.17	0.39	U	3.46	1.75	=
DT-7 (SU3)	HTZ70897	0.77	0.21	=	0.96	1.09	U	7.8	0.08	=	1.17	0.09	=	2.67	0.46	=	12.48	0.35	=	2.24	0.41	=	1.88	0.53	=	22.61	2.66	=
DT-7 (SU3)	HTZ70898	0.34	0.17	=	0.35	0.89	U	3.73	0.07	=	1.27	0.07	=	2.5	0.31	=	4.32	0.16	=	1.2	0.31	=	0.4	0.44	U	8.34	2.08	=
DT-7 (SU3)	HTZ70899	0.28	0.2	U	0.61	0.88	U	2.53	0.07	=	1.45	0.08	=	2.83	0.15	=	3.98	0.29	=	2.22	0.15	=	0.13	0.42	U	2.57	1.83	=
DT-7 (SU3)	HTZ70905	0.42	0.22	=	0.21	1.15	UJ	8.35	0.09	=	1.27	0.1	=	1.97	0.36	=	6.63	0.16	=	0.9	0.16	J	1.12	0.54	=	19.39	1.54	=
DT-7 (SU3)	SLD71502	0.29	0.2	U	0.05	0.83	UJ	4.44	0.07	=	0.92	0.07	=	0.92	0.32	J	2.93	0.24	=	0.76	0.13	J	-0.02	0.39	UJ	3.68	0.55	=
DT-7 (SU3)	SLD71503	0.32	0.25	U	0.12	1.02	UJ	2.12	0.09	=	1.05	0.1	=	2.4	0.27	=	3.55	0.33	=	1.68	0.15	=	0.21	0.5	UJ	1.39	1.28	J
DT-7 (SU3)	SLD71504	0.08	0.25	UJ	0.17	1.15	UJ	1.72	0.11	=	0.66	0.11	=	0.8	0.43	J	1.03	0.34	=	0.9	0.26	J	-0.02	0.54	UJ	2.44	1.28	J
DT-7 (SU3)	SLD71505	0.15	0.19	U	0.33	0.81	UJ	1.53	0.07	=	0.78	0.08	=	1.15	0.26	=	1.76	0.26	=	1.03	0.26	=	0.12	0.39	UJ	0.95	1.11	U
DT-7 (SU3)	SLD71506	0.03	0.13	UJ	0.28	0.57	UJ	1.36	0.05	=	0.17	0.05	J	0.93	0.28	=	1.32	0.21	=	0.27	0.25	J	0.13	0.28	UJ	0.69	0.67	J
DT-7 (SU3)	SLD71507	0.1	0.29	UJ	0.44	1.28	UJ	5.54	0.11	=	1.01	0.11	=	1.62	0.34	=	4.63	0.12	=	1.1	0.12	=	0.19	0.62	UJ	4.14	1.51	=
DT-7 (SU3)	SLD71508	0.34	0.28	U	0.15	1.15	UJ	3.12	0.1	=	0.89	0.1	=	1.37	0.33	=	3.03	0.15	=	0.99	0.15	J	-0.07	0.51	UJ	1.4	1.37	J
DT-7 (SU3)	SLD71509	0.21	0.17	U	0.05	0.66	UJ	2.36	0.06	=	0.91	0.06	=	1.56	0.3	=	1.99	0.12	=	0.99	0.12	=	0.02	0.32	UJ	2.03	0.48	=
DT-7 (SU3)	SLD71510	0.11	0.19	UJ	0.43	0.81	UJ	1.42	0.07	=	0.97	0.07	=	0.89	0.24	=	1.68	0.28	=	1.32	0.13	=	0.11	0.38	UJ	0.85	1.8	UJ
DT-7 (SU3)	SLD71511	0.19	0.18	U	0.24	0.77	UJ	2.82	0.06	=	1.02	0.06	=	1.39	0.4	=	3.87	0.32	=	0.69	0.24	J	0.17	0.38	UJ	2.42	1.74	=
DT-7 (SU3)	SLD71513	0.13	0.21	UJ	-0.34	0.82	UJ	3.16	0.08	=	0.77	0.08	=	0.81	0.26	J	4.89	0.26	=	0.77	0.14	J	0.09	0.42	UJ	2.26	0.6	=
DT-7 (SU3)	SLD71514	0.11	0.36	U	0.95	1.57	U	7.89	0.14	=	1.22	0.12	=	1.36	0.3	=	7.05	0.13	=	1.37	0.25	=	1.11	0.78	=	16.47	3.81	=
DT-7 (SU3)	SLD71515	0.16	0.36	U	0.3	1.57	U	6.42	0.15	=	1.05	0.14	=	2.09	0.4	=	5.53	0.3	=	1.18	0.16	=	1.08	0.8	=	14.99	3.89	=
DT-7 (SU3)	SLD71516	0.06	0.19	U	0.42	0.86	U	1.54	0.07	=	0.9	0.08	=	1.21	0.23	=	1.22	0.12	=	1.11	0.23	=	0.08	0.41	U	1.47	2.08	U
DT-7 (SU3)	SLD71517	0.03	0.19	U	0.8	0.9	U	2.49	0.07	=	0.82	0.07	=	0.99	0.24	=	2.65	0.24	=	1.09	0.13	=	0.1	0.42	U	2.92	2.05	J
DT-7 (SU3)	SLD71518	0.41	0.18	U	0.23	0.76	UJ	3.82	0.06	=	0.66	0.07	=	0.53	0.38	J	3.95	0.28	=	0.51	0.15	J	0.49	0.36	=	5.06	0.54	=
DT-7 (SU3)	SLD71519	0.4	0.21	U	-0.4	0.75	U	2.2	0.07	=	2.06	0.08	=	4.67	0.33	J	2.27	0.24	J	3.1	0.13	=	0.27	0.38	U	2.22	0.56	J
DT-7 (SU3)	SLD71520	0.41	0.19	U	0.17	0.74	U	2.78	0.07	=	1.55	0.07	=	2	0.35	J	2.62	0.26	J	1.44	0.14	=	0.22	0.36	U	1.87	0.53	J
DT-7 (SU3)	SLD71521	0.29	0.18	U	0.24	0.69	U	2.22	0.06	=	0.81	0.07	J	1.11	0.25	J	2.22	0.14	J	1.21	0.14	=	-0.09	0.32	U	1.33	0.48	J
DT-7 (SU3)	SLD71522	0.88	0.36	=	0.77	2	UJ	5.5	0.17	=	1.13	0.17	=	1.74	0.26	=	4.44	0.14	=	0.97	0.14	=	0.78	0.83	U	9.43	1.34	=
DT-7 (SU3)	SLD71523	0.31	0.26	U	0.47	1.06	UJ	3.59	0.09	=	0.95	0.1	=	0.8	0.24	J	4.95	0.24	=	1.51	0.13	=	0.09	0.55	UJ	4.06	1.42	=
DT-7 (SU3)	SLD71524	0.32	0.45	U	-1.3	1.89	U	1.71	0.17	=	1	0.19	J	1.18	0.24	J	1.58	0.28	J	0.94	0.13	=	0.27	0.79	U	1.35	1.16	J
DT-7 (SU3)	SLD71525	0.31	0.2	U	0.14	0.77	U	1.95	0.07	=	1.2	0.08	J	1.11	0.21	J	1.6	0.21	J	1.01	0.21	=	0.07	0.37	U	0.97	0.56	J
DT-7 (SU3)	SLD71526	0.29	0.24	U	0.72	0.96	U	6.59	0.08	=	1.19	0.08	=	1.7	0.43	=	4.86	0.35	=	1.07	0.26	=	0.71	0.47	U	4.61	0.67	=
DT-7 (SU3)	SLD71527	0.26	0.19	U	0.45	0.78	U	3.24	0.07	=	0.89	0.07	J	1.45	0.22	J	2.27	0.12	J	0.74	0.12	J	0.08	0.37	U	1.92	0.52	J
DT-7 (SU3)	SLD71528	0.28	0.17	U	0.03	0.66	U	3.06	0.06	=	0.87	0.06	J	1.63	0.34	J	3.68	0.3	J	0.8	0.14	J	0.16	0.33	U	1.82	0.44	J
DT-7 (SU3)	SLD71529	0.28	0.15	U	0.17	0.59	U	1.5	0.05	=	0.97	0.05	J	1.23	0.31	=	1.49	0.13	J	0.98	0.13	=	0.07	0.28	U	1.27	0.4	J
DT-7 (SU3)	SLD71530	0.33	0.23	U	0.23	0.91	UJ	4.71	0.08	=	1.15	0.08	=	1.36	0.28	=	6.24	0.25	=	1.17	0.11	=	0.26	0.45	U	4.32	0.61	=
DT-7 (SU3)	SLD71531	0.32	0.27	U	0.09	1.13	UJ	3.18	0.09	=	0.85	0.1	=	1.36	0.33	=	2.73	0.3	=	0.79	0.13	J	0.1	0.55	UJ	3.23	1.33	=
DT-7 (SU3)	SLD71532	0.28	0.25	U	0.27	1.08	UJ	2.42	0.09	=	0.78	0.08	=	1.31	0.37	=	2.09	0.14	=	0.5	0.13	J	0.15	0.47	UJ	2.03	1.25	J
DT-7 (SU3)	SLD71533	0.18	0.23	U	0.69	1	U	2.13	0.09	=	0.88	0.09	=	1.16	0.14	=	1.8	0.31	=	1.23	0.31	=	0.37	0.45	U	1.59	1.16	J
DT-7 (SU3)	SLD71534	0	0.21	U	0.21	0.95	U	6.33	0.08	=	1.1	0.08	J	1.35	0.2	=	4.86	0.11	=	1.41	0.2	=	0.48	0.48	J	5.07	1.69	=
DT-7 (SU3)	SLD71535	0.26	0.24	U	0.56	1.04	U	5.3	0.09	=	0.96	0.09	J	1.17	0.3	=	4.53	0.12	=	1.4	0.12	=	0.26	0.53	U	2.36	1.88	J
DT-7 (SU3)	SLD71536	0.26	0.21	U	0.25	0.88	UJ	1.46	0.08	=	0.79	0.08	=	0.93	0.21	=	1.53	0.11	=	0.88	0.21	=	0.09	0.4	UJ	0.82	1.15	U

Notes:
All Results are in picoCuries/gram (pCi/g)
MDA = Minimum detectable activity
Q = Data validation qualifier. Qualifiers are defined in Attachment C-2 Section C-2.3.2

DT-6 AND DT-7 FINAL STATUS SURVEY SOIL SAMPLE DATA

Survey Unit	Sample Name	Actinium-227			Protactinium-231			Radium-226			Radium-228			Thorium-228			Thorium-230			Thorium-232			Uranium-235			Uranium-238		
		Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q
DT-7 (SU3)	SLD71537	0.18	0.26	U	0.59	1.1	UJ	2.47	0.1	=	0.94	0.1	=	1.45	0.34	=	2.29	0.34	=	1.56	0.25	=	-0.07	0.51	UJ	2.38	1.29	J
DT-7 (SU3)	SLD71538	0.25	0.2	U	0.36	0.86	U	4.56	0.07	=	0.97	0.08	J	1.84	0.33	J	3.69	0.15	=	1.4	0.27	=	0.35	0.39	U	4.85	0.59	=
DT-7 (SU3)	SLD71539	0.18	0.15	U	0.36	0.59	U	2.14	0.05	=	0.67	0.06	J	1.59	0.13	J	1.82	0.13	J	0.83	0.13	J	0	0.27	U	1.4	0.38	J
DT-7 (SU3)	SLD71540	0.14	0.13	U	0.18	0.52	U	2.03	0.05	=	0.49	0.05	J	1.59	0.16	J	1.85	0.36	J	0.58	0.36	J	0.11	0.26	U	1.45	0.37	J
DT-7 (SU3)	SLD71541	0.18	0.18	U	0.26	0.76	UJ	1.86	0.07	=	0.93	0.07	=	1.34	0.2	=	1.73	0.2	=	1.14	0.2	=	-0.12	0.36	UJ	1.72	1.72	U
DT-7 (SU3)	SLD71542	0.32	0.16	U	0.1	0.63	U	3.59	0.05	=	0.72	0.06	J	1.88	0.27	=	3	0.27	=	1.17	0.27	=	0.37	0.32	U	2.69	0.45	=
DT-7 (SU3)	SLD71543	-0.05	0.2	U	0.84	0.97	U	3.9	0.08	=	0.98	0.09	J	1.19	0.26	=	3.89	0.22	=	1.16	0.12	=	-0.05	0.46	U	3.37	1.7	=
DT-7 (SU3)	SLD71544	0.06	0.21	U	0.28	0.93	U	2.38	0.08	=	0.82	0.09	J	1.76	0.15	=	2.8	0.15	=	0.95	0.15	J	0	0.43	U	1.75	1.7	J
DT-7 (SU3)	SLD71545	0.04	0.21	U	-0.12	0.89	U	1.99	0.08	=	1.01	0.08	J	1.78	0.25	=	2.5	0.25	=	1.28	0.13	=	0.32	0.46	U	1.25	1.75	U
DT-7 (SU3)	SLD71546	0.27	0.25	U	0.52	1.01	UJ	6.36	0.09	=	1.14	0.09	=	1.73	0.33	=	6.56	0.13	=	1.5	0.13	=	0.42	0.48	U	7.66	0.66	=
DT-7 (SU3)	SLD71547	0.34	0.23	U	0.1	0.9	UJ	4.5	0.08	=	1.32	0.08	=	1.83	0.25	=	3.97	0.13	=	1.49	0.13	=	0.39	0.48	U	5.63	2.11	=
DT-7 (SU3)	SLD71548	0.4	0.22	U	0.33	0.84	UJ	2.38	0.07	=	1.09	0.08	=	1.29	0.33	=	2.41	0.29	=	1.36	0.13	=	0.1	0.43	UJ	2.41	1.98	J
DT-7 (SU3)	SLD71549	0.35	0.19	U	0.38	0.77	UJ	3.07	0.06	=	1.09	0.07	=	2.25	0.38	=	2.56	0.14	=	1.3	0.14	=	-0.07	0.39	UJ	4	1.75	=
DT-7 (SU3)	SLD71550	0.2	0.3	U	0.31	1.28	U	4.38	0.11	=	1.22	0.11	=	1.74	0.33	=	4.5	0.25	=	1.07	0.25	=	0.02	0.64	U	4.99	2.94	=
DT-7 (SU3)	SLD71551	0.06	0.24	U	0.22	1.07	U	2.84	0.1	=	0.81	0.09	=	1.09	0.2	=	2.22	0.11	=	0.73	0.11	=	0.35	0.53	U	2.27	2.56	U
DT-7 (SU3)	SLD71552	0.14	0.21	U	0.29	0.87	U	1.82	0.09	=	0.95	0.08	=	0.86	0.38	J	1.62	0.24	=	0.67	0.13	J	0.05	0.45	U	1.98	2.11	U
DT-7 (SU3)	SLD71553	-0.05	0.29	U	0.02	1.33	U	4.44	0.12	=	1.13	0.12	=	1.14	0.13	=	3.66	0.13	=	1.03	0.25	=	-0.01	0.66	U	4.89	3.13	J
DT-7 (SU3)	SLD71554	0.93	0.26	U	0.03	0.87	UJ	4.14	0.07	=	1.15	0.08	=	1.79	0.13	=	3.23	0.29	=	1.31	0.29	=	-0.15	0.4	UJ	3.31	0.59	=
DT-7 (SU3)	SLD71555	0.1	0.16	U	-0.43	0.67	UJ	1.32	0.06	=	0.41	0.07	=	1.05	0.3	=	1.45	0.25	=	0.75	0.14	J	-0.1	0.32	UJ	0.72	0.81	U
DT-7 (SU3)	SLD71556	0.14	0.18	U	0.28	0.76	UJ	2.55	0.06	=	0.77	0.06	=	1.01	0.13	=	2.13	0.29	=	0.6	0.29	J	0.14	0.37	UJ	3.92	1.72	=
DT-7 (SU3)	SLD71557	0.31	0.18	U	0.61	0.75	U	3.51	0.07	=	1.05	0.07	=	1.96	0.28	=	2.15	0.24	=	1.08	0.13	=	0.28	0.37	U	2.15	1.78	J
DT-7 (SU3)	SLD71558	0.04	0.14	U	0.25	0.63	U	3.14	0.05	=	0.64	0.06	=	1.51	0.4	=	3.51	0.34	=	1.06	0.18	J	0.03	0.3	U	2.21	0.43	=
DT-7 (SU3)	SLD71559	0.36	0.19	=	-0.07	0.93	U	7.15	0.08	=	0.9	0.08	J	1.69	0.25	=	5.78	0.13	=	0.53	0.25	J	0.26	0.49	U	5.75	1.77	=
DT-7 (SU3)	SLD71560	0.27	0.18	=	0.57	0.92	U	5.56	0.08	=	1.01	0.08	J	1.31	0.23	=	5.1	0.28	=	1.06	0.23	=	0.43	0.44	U	5.41	1.68	=
DT-7 (SU3)	SLD71561	0.08	0.22	U	0.72	0.98	U	4.37	0.08	=	1.09	0.09	J	1.64	0.36	=	2.89	0.15	=	1.34	0.14	=	0.26	0.48	U	3.41	1.74	=
DT-7 (SU3)	SLD71562	0	0.21	U	0.41	0.96	U	1.64	0.08	=	1	0.08	J	0.9	0.26	=	1.26	0.12	=	1.31	0.12	=	0.16	0.46	U	1.64	1.64	J
DT-7 (SU3)	SLD71563	0.64	0.47	U	0.84	2.05	U	5.39	0.2	=	1.19	0.19	=	2.66	0.34	=	11.12	0.18	=	1.63	0.18	=	-0.24	0.88	U	6.56	1.41	=
DT-7 (SU3)	SLD71564	0.05	0.13	U	0.29	0.55	U	1.83	0.05	=	0.87	0.05	=	3.13	0.21	=	3.39	0.38	=	1.78	0.45	=	0.14	0.28	U	2.15	0.4	=
DT-7 (SU3)	SLD71565	0.07	0.14	U	-0.01	0.6	U	2.21	0.05	=	0.78	0.05	=	0.93	0.47	J	2.62	0.39	=	1.31	0.32	=	0.04	0.3	U	1.77	0.42	=
DT-7 (SU3)	SLD71566	0	0.13	U	-0.05	0.56	U	1.73	0.05	=	0.69	0.05	=	1.23	0.41	=	2.53	0.3	=	0.72	0.16	J	-0.05	0.27	U	2.26	0.41	=
DT-7 (SU3)	SLD72777	0.07	0.17	UJ	-0.05	0.73	UJ	1.15	0.07	=	0.88	0.08	=	1.13	0.13	=	1.8	0.25	=	1.32	0.13	=	-0.04	0.38	UJ	0.85	1.04	U
DT-7 (SU3)	SLD72778	0.05	0.29	UJ	0.26	1.22	UJ	3.92	0.11	=	1.18	0.1	=	1.65	0.25	=	3.69	0.25	=	1.19	0.25	=	0.1	0.6	UJ	3.34	1.52	=
DT-7 (SU3)	SLD72779	0.05	0.22	UJ	0.38	1.06	UJ	2.6	0.09	=	0.93	0.1	=	1.23	0.13	=	1.41	0.13	=	1.21	0.24	=	0.1	0.5	UJ	0.88	1.37	U
DT-7 (SU3)	SLD72780	0.06	0.19	UJ	0.17	0.92	UJ	1.51	0.09	=	0.93	0.09	=	1.32	0.23	=	1.69	0.12	=	1.05	0.12	=	0.1	0.42	UJ	1.68	1.05	J
DT-7 (SU3)	SLD72781	0.24	0.24	U	0.61	1.11	UJ	2.67	0.11	=	0.74	0.1	=	1.47	0.33	=	3.99	0.15	=	0.99	0.15	J	0.1	0.5	UJ	2.1	1.31	=
DT-7 (SU3)	SLD72782	0.01	0.21	UJ	0.17	0.93	UJ	1.91	0.09	=	1.01	0.09	=	0.92	0.38	=	2.37	0.23	=	1.29	0.23	=	0.11	0.44	UJ	1.73	1.19	J
DT-7 (SU3)	SLD72783	-0.01	0.21	UJ	0.08	0.92	UJ	2.79	0.09	=	0.76	0.09	=	0.86	0.28	J	2.64	0.13	=	1.24	0.23	=	-0.05	0.46	UJ	2.68	1.15	=
DT-7 (SU3)	SLD72784	0.13	0.22	UJ	0.37	0.93	UJ	1.7	0.09	=	0.94	0.09	=	1.33	0.3	=	1.84	0.23	=	1.22	0.12	=	0	0.44	UJ	1.41	1.12	J
DT-7 (SU3)	SLD72785	0.1	0.21	U	0.67	1.05	U	2.33	0.09	=	0.96	0.08	=	1.69	0.33	=	3.42	0.15	=	1.4	0.33	=	0.16	0.48	UJ	1.9	1.2	J
DT-7 (SU3)	SLD72786	0.14	0.24	UJ	0.02	1.02	UJ	2.6	0.1	=	0.96	0.09	=	1.54	0.25	=	2.92	0.25	=	1.39	0.13	=	0.1	0.5	UJ	2	1.21	J
DT-7 (SU3)	SLD72872	0.23	0.18	U	0.18	0.73	UJ	3.94	0.06	=	0.97	0.07	=	1.72	0.16	=	3.1	0.16	=	1.05	0.16	J	0.26	0.37	U	2.75	0.52	=
DT-7 (SU3)	SLD72873	0.35	0.18	U	0.49	0.7	U	3.32	0.06	=	1.01	0.06	=	1.03	0.19	=	2.46	0.19	=	1.03	0.1	=	0.16	0.33	UJ	2.51	0.47	=
DT-7 (SU3)	SLD72874	0.09	0.15	U	0.11	0.65	UJ	2	0.06	=	0.33	0.05	=	1.62	0.29	=	3.01	0.13	=	1.19	0.13	=	0.09	0.33	UJ	2.32	0.81	=
DT-7 (SU3)	SLD72875	0.18	0.3	UJ	0.53	1.34	UJ	3.24	0.12	=	1.26	0.12	=	0.75	0.27	J	2.09	0.15	=	0.15	0.27	UJ	0.39	0.61	U	3.06	1.57	=
DT-7 (SU3)	SLD72876	0.34	0.27	U	0.01	1.15	UJ	2.35	0.1	=	1.27	0.1	=	2.28	0.37	=	2.35	0.15	=	1.63	0.15	=	0.07	0.51	UJ	2.46	1.34	J
DT-7 (SU3)	SLD72877	0.26	0.26	U	1.07	1.11	U	5.48	0.1	=	1.03	0.09	=	1.58	0.28	=	4.36	0.23	=	1.02	0.13	=	0.12	0.57	UJ	5.27	1.39	=
DT-7 (SU3)	SLD72878	0.59	0.29	U	-0.09	1.18	UJ	5.98	0.1	=	0.98	0.11	=	1.34	0.13	=	5.93	0.13	=	1.66	0.13	=	0.66	0.58	J	6.1	1.53	=
DT-7 (SU3)	SLD72879	0.38	0.27	U	0.78	1.18	U	3.79	0.1	=	1.06	0.11	=	1.39	0.23	=	2.85	0.23	=	0.46	0.13	J	0.23	0.58	UJ	3.67	1.42	=
DT-7 (SU3)	SLD72880	0.09	0.16	UJ	-0.13	0.66	UJ	1.11	0.06	=	0.45	0.07	=	1.31	0.24	=	0.82	0.13	J	1.39	0.24	=	-0.04	0.32	UJ	1.27	0.86	J
DT-7 (SU3)	SLD72881	0.3	0.2	U	0.5	0.85	UJ	1.45	0.08	=	0.84	0.08	=	1.08	0.2	=	1.1	0.24	=	0.75	0.2	=	0.22	0.4	UJ	1.73	1.02	J
DT-7 (SU4)	HTZ69481	0.4	0.3	U	0.55	1.31	UJ	5.36	0.11	=	1.1	0.11	=	1.08	0.2	J	5.2	0.1	=	1.23	0.1	=	0.56	0.66	U	8.26	1.61	=
DT-7 (SU4)	HTZ70858	0.28	0.2	U	0.16	0.92	U	6.99	0.08	=	1.05	0.08	=	2.54	0.43	=	6.85	0.4	=	1.91	0.35	=	0.24	0.45	U	5.22	0.64	=
DT-7 (SU4)	HTZ70859	0.4	0.25	U	0.54	1.12	U	7.89	0.09	=	1.06	0.1	=	1.71	0.18	=	6.86	0.33	=	1.37	0.18	=	0.24	0.52	U	5.86	0.78	=
DT-7 (SU4)	HTZ70860	0.5	0.2	=	0.21	1.04	U	10.12	0.08	=	1.08	0.08	=	2.78	0.37	=	6.64	0.15	=	1.49	0.15	=	0.63	0.5	=	10.55	0.75	=
DT-7 (SU4)	SLD71573	0.03	0.24	U	0.62	1.09	U	2.69	0.09	=	0.67	0.09	=	1.59	0.32	=	6.49	0.32	=	1.39	0.32	=	0.26	0.54	U	4.02	1.89	=
DT-7 (SU4)	SLD71574	0.29	0.5	U	0.13	2.2	U	5.4	0.2	=	1.09	0.21	=	1.41	0.3	=	7.87	0.16	=	1.11	0.16	=	-0.03	0.99	U	6.06	1.52	=
DT-7 (SU4)	SLD71575	0.27	0.21	U	-0.11	0.94	U	5.13	0.08	=	0.99	0.08	=	1.41	0.3	=	3.36	0.14	=	1.66	0.26	=	0.53	0.45	=	9.44	0.65	=
DT-7 (SU4)	SLD71576	0.09	0.21	U	0.65	1.01	U	1.32	0.09	=	0.86	0.09	=	1.46	0.35	=	0.9	0.24	J	1.08	0.29	=	0.06	0.45	U	0.2	1.84	U
DT-7 (SU4)	SLD71577	0.17	0.19	U	0.76	0.84	U	3.88	0.07	=	1.4	0.07	=	1.71	0.14	=	4.05	0.27	=	1.42	0.14	=	0.45	0.41	U	3.17	0.6	=

Notes:
All Results are in picoCuries/gram (pCi/g)
MDA = Minimum detectable activity
Q = Data validation qualifier. Qualifiers are defined in Attachment C-2 Section C-2.3.7

DT-6 AND DT-7 FINAL STATUS SURVEY SOIL SAMPLE DATA

Survey Unit	Sample Name	Actinium-227			Protactinium-231			Radium-226			Radium-228			Thorium-228			Thorium-230			Thorium-232			Uranium-235			Uranium-238		
		Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q
DT-7 (SU4)	SLD71578	0.3	0.3	U	-0.84	1.21	U	3.65	0.12	=	0.88	0.12	=	1.27	0.25	=	2.98	0.13	=	1.07	0.13	=	0.1	0.66	U	2.26	2.33	U
DT-7 (SU4)	SLD71579	0.06	0.19	U	0.48	0.91	U	1.11	0.08	=	0.71	0.08	=	1.16	0.37	J	0.79	0.31	J	0.87	0.17	J	0.08	0.41	U	-0.24	1.62	U
DT-7 (SU4)	SLD71580	0.08	0.22	U	0.12	0.97	U	1.57	0.09	=	0.68	0.09	=	1.05	0.3	J	2.59	0.16	=	0.65	0.16	J	-0.21	0.43	U	0.13	1.83	U
DT-7 (SU4)	SLD71581	0.05	0.24	UJ	-0.09	1.07	UJ	2.46	0.1	=	0.79	0.1	=	1.01	0.27	J	2.69	0.27	=	1.1	0.27	=	0.08	0.52	UJ	3.67	1.33	=
DT-7 (SU4)	SLD71582	0.27	0.28	U	0.31	1.26	UJ	5.02	0.11	=	0.97	0.11	=	1.04	0.27	J	4.76	0.15	=	1.42	0.15	=	-0.07	0.61	UJ	4.22	1.55	=
DT-7 (SU4)	SLD71583	0.18	0.23	U	0.25	0.99	UJ	2.13	0.09	=	0.96	0.09	=	1.28	0.3	J	1.79	0.13	=	0.83	0.25	J	0.09	0.47	UJ	2.93	1.19	=
DT-7 (SU4)	SLD71584	0.1	0.23	UJ	0.23	1.02	UJ	2.02	0.1	=	0.91	0.1	=	1.59	0.13	J	2.25	0.25	=	0.93	0.13	=	-0.14	0.47	UJ	1.46	1.24	J
DT-7 (SU4)	SLD71585	0.35	0.6	U	1.25	2.63	U	4.27	0.25	=	1.25	0.26	=	1.73	0.38	=	4.34	0.26	=	1.32	0.31	=	1.02	1.24	U	7	1.85	=
DT-7 (SU4)	SLD71586	0.13	0.16	U	0.53	0.69	U	1.8	0.06	=	0.92	0.07	=	1.25	0.22	=	1.99	0.12	=	0.99	0.12	=	0.05	0.32	U	1.38	0.49	=
DT-7 (SU4)	SLD71587	0.06	0.14	U	0.32	0.6	U	1.3	0.06	=	0.79	0.06	=	0.88	0.28	J	1.35	0.24	=	0.89	0.13	=	0.05	0.28	U	0.82	0.41	J
DT-7 (SU4)	SLD71588	0.12	0.16	U	0.21	0.63	U	1.4	0.06	=	0.83	0.06	=	0.82	0.14	J	1.2	0.25	=	0.78	0.3	J	0.07	0.3	U	0.89	0.46	=
DT-7 (SU4)	SLD71589	0.29	0.25	U	-0.22	1.1	U	3.45	0.09	=	0.79	0.1	=	1.27	0.16	=	4.58	0.36	=	1.13	0.16	=	0.39	0.58	U	6.59	2.14	=
DT-7 (SU4)	SLD71590	-0.06	0.3	U	0.35	1.35	U	3.74	0.12	=	0.97	0.12	=	1.83	0.19	=	4.09	0.35	=	1.65	0.35	=	-0.06	0.67	U	4.03	2.33	J
DT-7 (SU4)	SLD71591	0	0.27	U	-0.04	1.13	U	3.25	0.1	=	0.85	0.1	=	0.82	0.36	J	3.03	0.14	=	0.89	0.27	J	0.01	0.56	U	2.13	2.07	J
DT-7 (SU4)	SLD71592	-0.01	0.24	U	0.62	1.13	U	2.57	0.1	=	0.89	0.1	=	1.19	0.16	=	1.95	0.16	=	1.06	0.16	J	0.2	0.54	U	2.77	2.06	=
DT-7 (SU4)	SLD71593	0.19	0.21	U	0.29	0.88	U	4.55	0.08	=	0.96	0.08	=	1.57	0.4	=	4.09	0.16	=	1.11	0.3	J	0.41	0.41	J	4.82	0.63	=
DT-7 (SU4)	SLD71594	0.51	0.53	U	-0.41	2.34	U	4	0.21	=	1.38	0.21	=	1.94	0.14	=	3.31	0.14	=	1.6	0.14	=	0.12	1.01	U	3.16	1.48	=
DT-7 (SU4)	SLD71595	0.16	0.17	U	-0.01	0.67	U	2.05	0.06	=	1.08	0.07	=	0.87	0.2	=	1.23	0.11	=	0.67	0.2	J	-0.01	0.33	U	1.5	0.49	=
DT-7 (SU4)	SLD71596	0.08	0.12	U	-0.06	0.55	U	0.91	0.05	=	0.52	0.05	=	1.07	0.14	=	0.65	0.14	J	0.4	0.14	J	0.08	0.25	U	0.63	0.37	J
DT-7 (SU4)	SLD71597	0.24	0.63	U	0.53	2.83	U	3.71	0.29	=	1.34	0.27	=	1.46	0.31	=	2.73	0.14	=	1	0.14	=	0.04	1.15	U	4.3	1.78	J
DT-7 (SU4)	SLD71598	0.07	0.16	UJ	-0.66	0.7	UJ	0.84	0.06	=	0.48	0.07	=	0.7	0.39	J	1.21	0.27	=	1.03	0.32	=	-0.09	0.33	UJ	0.58	0.99	U
DT-7 (SU4)	SLD71599	0.2	0.57	UJ	-0.16	2.76	UJ	1.81	0.26	=	0.66	0.18	=	1.42	0.24	J	2.6	0.13	=	0.76	0.13	J	2.29	1.31	=	43.41	4.66	=
DT-7 (SU4)	SLD71600	0.05	0.25	UJ	0.33	1.12	UJ	1.47	0.1	=	1.08	0.1	=	1.7	0.29	J	1.79	0.24	=	1.7	0.13	=	-0.05	0.5	UJ	1.25	1.33	U
DT-7 (SU4)	SLD71601	0.32	0.67	UJ	-0.89	3.01	UJ	5.68	0.27	=	1.17	0.28	=	2.67	0.3	=	5.72	0.16	=	1.12	0.16	=	0.18	1.28	UJ	5.13	3.55	J
DT-7 (SU4)	SLD71602	0.17	0.24	U	0.17	1.06	UJ	2.33	0.09	=	0.98	0.1	=	1.52	0.14	J	2.67	0.31	=	1.35	0.14	=	0.23	0.5	UJ	1.08	1.3	U
DT-7 (SU4)	SLD71603	0.13	0.32	UJ	-0.03	1.45	UJ	3.35	0.12	=	1.92	0.12	=	2.49	0.17	J	4.47	0.31	=	1.89	0.31	=	0.03	0.65	UJ	4.01	1.66	=
DT-7 (SU4)	SLD71604	0.06	0.2	UJ	0.13	0.86	UJ	1.49	0.08	=	0.99	0.09	=	1.38	0.31	J	2.1	0.13	=	0.92	0.23	=	0	0.42	UJ	1.09	1.06	J
DT-7 (SU4)	SLD71605	0.67	0.6	U	0.54	2.76	UJ	6.59	0.26	=	1.08	0.29	=	1.91	0.15	J	5.35	0.15	=	1.03	0.15	=	0.3	1.3	UJ	5.34	3.58	J
DT-7 (SU4)	SLD71606	0.14	0.31	UJ	0.14	1.28	UJ	3.17	0.11	=	1.34	0.12	=	2.22	0.3	J	4.6	0.16	=	1.84	0.3	=	0.07	0.65	UJ	3.83	1.65	=
DT-7 (SU4)	SLD71607	0.08	0.22	UJ	0.57	1.03	UJ	1.85	0.08	=	0.99	0.09	=	1.16	0.28	=	1.84	0.13	J	0.94	0.13	=	0.01	0.5	UJ	1.67	1.76	U
DT-7 (SU4)	SLD71608	-0.08	0.23	UJ	0.31	1.09	UJ	2.34	0.1	=	1.02	0.09	=	1.2	0.33	=	3.14	0.33	=	1.5	0.15	=	0.04	0.51	UJ	1.84	1.92	U
DT-7 (SU4)	SLD71609	0.1	0.47	UJ	-0.14	2.27	UJ	4.33	0.19	=	0.89	0.18	=	1.53	0.36	=	4.62	0.3	=	1.01	0.16	J	0.12	1.01	UJ	5.03	2.63	=
DT-7 (SU4)	SLD71610	0.07	0.25	UJ	0.14	1.18	UJ	2.45	0.11	=	1.09	0.12	=	1.91	0.32	=	2.93	0.17	=	1.59	0.17	=	0.19	0.55	UJ	1.53	1.38	J
DT-7 (SU4)	SLD71611	0.21	0.34	U	0.04	1.55	UJ	4.32	0.13	=	0.95	0.13	=	1.9	0.17	=	3.35	0.38	=	1.31	0.17	=	0.33	0.72	UJ	3.78	1.77	=
DT-7 (SU4)	SLD71612	0.07	0.21	UJ	0.17	0.99	UJ	1.54	0.09	=	0.88	0.08	=	1.43	0.13	=	1.06	0.25	=	0.91	0.25	=	0.03	0.45	UJ	1.5	1.16	J
DT-7 (SU4)	SLD71613	0.08	0.21	UJ	0.02	0.91	UJ	2.01	0.08	=	0.41	0.08	=	0.47	0.5	U	3.03	0.2	=	0.35	0.37	U	0.28	0.45	U	2.44	1.13	=
DT-7 (SU4)	SLD71614	0.1	0.65	UJ	-0.19	2.99	UJ	5.01	0.3	=	1.32	0.32	=	2.61	0.17	=	5.29	0.17	=	1.97	0.17	=	0.61	1.39	UJ	6.16	3.61	J
DT-7 (SU4)	SLD71615	0.21	0.23	U	0.07	1.03	UJ	2.03	0.09	=	0.87	0.09	=	1.74	0.27	=	2.74	0.14	=	1.46	0.26	=	-0.02	0.48	UJ	1.84	1.25	J
DT-7 (SU4)	SLD71616	-0.02	0.21	UJ	0.05	0.98	UJ	1.82	0.09	=	0.91	0.08	=	1.62	0.13	=	2.11	0.29	=	1.02	0.13	=	0.15	0.47	UJ	2.19	1.13	=
DT-7 (SU4)	SLD71617	0.37	0.31	U	0.26	1.32	UJ	4.06	0.12	=	0.89	0.11	=	1.75	0.35	=	4.41	0.16	=	1.17	0.16	=	0.14	0.63	UJ	4.65	1.58	=
DT-7 (SU4)	SLD71618	0.57	0.61	U	1.54	2.79	UJ	5.94	0.22	=	1.12	0.27	=	2.15	0.23	=	2.93	0.13	=	1.15	0.23	=	0.85	1.24	UJ	3.8	3.79	U
DT-7 (SU4)	SLD71619	-0.03	0.61	UJ	1.04	3.43	UJ	3.03	0.24	=	1.25	0.28	=	1.44	0.3	=	3.53	0.3	=	1.12	0.3	J	0.37	1.31	UJ	3.35	3.32	J
DT-7 (SU4)	SLD71620	0.11	0.2	UJ	0.22	0.88	UJ	1.82	0.08	=	0.73	0.08	=	1.19	0.25	=	2.28	0.13	=	0.74	0.13	J	0.29	0.42	U	1.79	1.06	J
DT-7 (SU4)	SLD71621	0.14	0.16	U	-0.04	0.67	U	2.81	0.06	=	0.89	0.06	=	1.67	0.37	=	3.88	0.17	=	1.44	0.17	=	0.26	0.34	U	2.64	0.47	=
DT-7 (SU4)	SLD71622	0.06	0.1	U	-0.08	0.44	U	1.51	0.03	=	0.38	0.04	=	1.1	0.35	J	2.59	0.16	=	0.59	0.16	J	0.04	0.21	U	1.12	0.3	=
DT-7 (SU4)	SLD71623	0.04	0.13	U	0.41	0.58	U	1.78	0.05	=	0.65	0.05	=	1.48	0.35	=	2.14	0.16	=	0.85	0.29	J	0.22	0.28	U	1.33	0.4	=
DT-7 (SU4)	SLD71624	0.21	0.23	U	0.53	1.05	UJ	3.32	0.09	=	0.79	0.08	=	1.46	0.37	J	3.82	0.2	J	1.17	0.2	J	0	0.49	UJ	3.38	1.29	=
DT-7 (SU4)	SLD71625	0.06	0.15	UJ	-0.53	0.66	UJ	0.75	0.07	=	0.32	0.07	=	0.42	0.31	J	0.99	0.17	J	0.31	0.17	J	0.05	0.3	UJ	0.74	0.74	J
DT-7 (SU4)	SLD71626	0.02	0.24	UJ	-0.05	1.04	UJ	3.56	0.09	=	0.7	0.09	=	0.88	0.18	J	2.91	0.18	J	0.59	0.34	J	-0.06	0.49	UJ	3.21	1.26	=
DT-7 (SU4)	SLD71627	0.29	0.18	=	0.03	0.91	U	5.72	0.08	=	1.22	0.08	=	2.06	0.32	=	3.99	0.17	=	1.67	0.17	=	0.05	0.45	U	3.84	0.63	=
DT-7 (SU4)	SLD71628	0.08	0.26	UJ	-0.43	1.12	UJ	4.11	0.1	=	1.08	0.1	=	2.14	0.21	J	5.33	0.21	J	1.52	0.21	=	0.33	0.58	UJ	3.54	1.44	=
DT-7 (SU4)	SLD71629	0.15	0.16	U	0.75	0.76	U	4.48	0.06	=	0.97	0.07	=	1.9	0.31	=	2.83	0.17	=	1.23	0.17	=	0.16	0.35	U	3.3	0.52	=
DT-7 (SU4)	SLD71630	0.1	0.18	U	0.39	0.78	U	3.09	0.07	=	0.91	0.07	=	0.93	0.16	J	2.65	0.16	=	0.86	0.16	J	-0.02	0.36	U	2.41	0.52	=
DT-7 (SU4)	SLD72756	0.73	0.21	U	0.11	0.68	UJ	2.31	0.06	=	0.78	0.06	=	1.34	0.28	=	3.1	0.23	=	0.83	0.13	J	0.23	0.3	U	1.7	0.47	=
DT-7 (SU4)	SLD72757	0.8	0.21	U	0.05	0.62	UJ	2.22	0.06	=	0.9	0.06	=	0.68	0.3	J	1.93	0.13	=	0.78	0.25	J	0.24	0.31	U	1.6	0.45	=
DT-7 (SU4)	SLD72758	0.21	0.2	U	-0.42	0.9	U	2.19	0.08	=	0.54	0.08	=	1.1	0.28	=	2.56	0.13	=	0.41	0.23	J	-0.06	0.42	U	3.47	2.03	=
DT-7 (SU4)	SLD72759	0.1	0.28	U	0.23	1.36	U	3.4	0.12	=	1.12	0.11	=	1.54	0.39	=	2.85	0.29	=	1.29	0.16	=	0.49	0.65	U	5.45	3.13	=
DT-7 (SU4)	SLD72760	0.26	0.18	U	0.47	0.76	U	1.86	0.07	=	1.01	0.06	J	1.46	0.41	=	1.16	0.15	=	1.1	0.15	=	0.15	0.37	UJ	0.87	1.88	UJ
DT-7 (SU4)	SLD72761	0.11	0.18	U	-0.2	0.84	U	1.73	0.08	=	0.84	0.07	=	1.1	0.29	=	1.27	0.13	=	0.96	0.25	=	0.2	0.42	U	2.28	1.85	J

Notes:
All Results are in picoCuries/gram (pCi/g).
MDA = Minimum detectable activity
Q = Data validation qualifier. Qualifiers are defined in Attachment C-2 Section C-2.3.2

DT-6 AND DT-7 FINAL STATUS SURVEY SOIL SAMPLE DATA

Survey Unit	Sample Name	Actinium-227			Protactinium-231			Radium-226			Radium-228			Thorium-228			Thorium-230			Thorium-232			Uranium-235			Uranium-238		
		Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q
DT-7 (SU4)	SLD72762	0.13	0.21	U	-0.01	0.83	U	1.79	0.08	=	1	0.08	=	1.29	0.24	=	1.71	0.24	=	1.05	0.13	=	0.04	0.43	U	1.55	2.27	U
DT-7 (SU4)	SLD72763	0.09	0.19	U	0.4	0.91	U	1.89	0.08	=	0.63	0.07	=	1.5	0.37	=	2.17	0.28	=	0.8	0.27	J	0.31	0.45	U	-0.18	2.11	U
DT-7 (SU4)	SLD72764	0.19	0.24	U	0.07	0.82	UJ	4.17	0.07	=	0.68	0.08	=	0.99	0.13	=	3.55	0.13	=	1.07	0.13	=	0.31	0.4	U	5	0.55	=
DT-7 (SU4)	SLD72765	0.22	0.23	U	0.44	0.78	UJ	4.08	0.06	=	1.03	0.07	=	1.65	0.16	=	3.29	0.35	=	1.43	0.35	=	0.18	0.38	UJ	2.91	0.54	=
DT-7 (SU4)	SLD72766	0.25	0.29	U	0.14	1.02	UJ	6.74	0.09	=	1.15	0.1	=	1.51	0.27	=	4.77	0.27	=	0.9	0.27	J	0.35	0.5	U	4.97	0.73	=
DT-7 (SU4)	SLD72767	0.16	0.34	U	0.67	1.53	U	5.02	0.13	=	1.18	0.14	=	1.29	0.23	=	3.54	0.12	=	1.03	0.12	=	0.47	0.73	U	6.95	3.44	=
DT-7 (SU4)	SLD72768	0.38	0.28	U	0.22	1.12	UJ	2.5	0.11	=	1.03	0.1	=	1.79	0.3	=	2.27	0.26	J	1.18	0.22	=	0.23	0.54	UJ	2.59	1.36	J
DT-7 (SU4)	SLD72769	0.08	0.2	U	0.37	0.9	U	2.67	0.08	=	0.42	0.07	=	0.8	0.13	J	4.19	0.25	=	0.74	0.13	J	-0.25	0.44	U	2.23	2.02	J
DT-7 (SU4)	SLD72770	0.18	0.24	U	0.23	1.04	U	2.6	0.1	=	0.64	0.09	=	1.17	0.14	=	1.72	0.25	=	1.21	0.14	=	0.08	0.53	U	2.19	2.31	U
DT-7 (SU4)	SLD72771	0.05	0.2	U	-0.04	0.92	U	2.42	0.08	=	0.86	0.08	=	1.03	0.14	=	1.95	0.14	=	1.58	0.26	=	-0.08	0.46	U	1.93	2.32	U
DT-7 (SU4)	SLD72772	-0.04	0.31	U	0.24	1.37	U	5.1	0.12	=	0.95	0.12	=	1.2	0.26	=	5.5	0.14	=	1.25	0.14	=	0.21	0.65	U	4.84	1.59	=
DT-7 (SU4)	SLD72773	0.31	0.59	U	0.5	2.64	U	6.29	0.26	=	1.3	0.24	=	1.9	0.29	=	4.92	0.13	=	1.52	0.13	=	0.57	1.2	U	5.67	1.74	=
DT-7 (SU4)	SLD72774	0.08	0.35	UJ	0.99	1.64	U	4.69	0.16	=	0.89	0.14	=	1.22	0.44	=	3.83	0.28	J	0.83	0.15	J	0.03	0.72	UJ	3.66	1.83	J
DT-7 (SU5)	HTZ70934	0.21	0.24	U	-0.07	1.02	U	6.45	0.09	=	1.14	0.09	=	1.47	0.14	=	6.21	0.14	=	1.3	0.26	=	0.34	0.5	U	5.12	0.73	=
DT-7 (SU5)	HTZ70945	0.31	0.25	U	0.01	1.04	U	4.68	0.1	=	1.09	0.1	=	1.89	0.37	=	3.89	0.17	=	1.29	0.17	=	0.42	0.54	U	4.27	0.71	=
DT-7 (SU5)	HTZ70951	0.13	0.17	U	0.34	0.78	U	4.06	0.06	=	1.22	0.07	=	3.19	0.4	=	4.53	0.3	=	1.19	0.16	=	0.3	0.37	U	3.87	0.54	=
DT-7 (SU5)	HTZ70958	0.6	0.25	U	0.9	0.97	U	6.8	0.08	=	1.32	0.09	=	1.3	0.3	=	11.03	0.14	=	1.51	0.26	=	0.78	0.46	=	11.31	0.7	=
DT-7 (SU5)	HTZ70959	0.24	0.22	U	-0.04	0.81	U	4.88	0.07	=	0.99	0.07	=	1.34	0.33	=	5.71	0.33	=	1.42	0.13	=	0.36	0.41	U	5.83	0.58	=
DT-7 (SU5)	SLD74229	0.4	0.16	U	-0.1	0.58	U	1.85	0.05	=	0.87	0.06	=	1.76	0.4	=	2.19	0.18	=	1.19	0.18	J	0	0.28	U	1.53	0.4	=
DT-7 (SU5)	SLD74230	0.26	0.17	U	0.37	0.7	U	2.7	0.06	=	0.92	0.06	=	1.15	0.16	=	3.21	0.16	=	1.2	0.16	=	0.11	0.32	U	2.26	0.44	=
DT-7 (SU5)	SLD74233	0.07	0.1	U	0.31	0.44	U	1.35	0.04	=	0.21	0.04	=	0.43	0.3	J	2.14	0.25	=	0.4	0.14	J	0.13	0.21	U	0.73	0.29	=
DT-7 (SU5)	SLD74234	0.13	0.12	U	-0.05	0.47	U	1.17	0.04	=	0.62	0.05	=	0.99	0.25	=	1.56	0.14	=	0.45	0.14	J	0.07	0.23	U	0.99	0.33	=
DT-7 (SU5)	SLD74235	0.22	0.14	U	0.02	0.56	U	1.25	0.05	=	0.83	0.05	=	1.84	0.42	=	1.74	0.32	=	1.13	0.17	J	0.09	0.27	U	1.17	0.38	=
DT-7 (SU5)	SLD74236	0.1	0.14	U	0.12	0.56	U	2.28	0.05	=	0.54	0.05	=	0.77	0.3	J	1.85	0.3	=	0.78	0.16	J	0.01	0.28	U	1.94	0.41	=
DT-7 (SU5)	SLD74237	0.33	0.21	U	-0.16	0.86	U	5.15	0.07	=	1	0.07	=	1.64	0.17	=	5.33	0.32	=	1.63	0.17	=	-0.02	0.42	U	7.83	0.62	=
DT-7 (SU5)	SLD74238	0.23	0.17	U	0.09	0.69	U	3.59	0.06	=	0.71	0.06	=	1.61	0.41	=	3.23	0.14	=	0.88	0.14	J	0.29	0.35	U	5.07	0.47	=
DT-7 (SU5)	SLD74239	0.32	0.15	U	0.1	0.63	U	1.62	0.05	=	1.02	0.05	=	1.7	0.15	=	1.95	0.33	=	0.82	0.15	J	0.25	0.3	U	2.87	0.42	=
DT-7 (SU5)	SLD74242	0.28	0.21	U	0.32	0.91	U	3.36	0.08	=	0.89	0.08	=	1.11	0.37	=	4.37	0.34	=	1.1	0.14	=	0.37	0.42	U	3.3	0.66	=
DT-7 (SU5)	SLD74243	0.14	0.17	U	0.09	0.69	U	1.32	0.06	=	0.73	0.06	=	1.35	0.32	=	1	0.14	=	0.79	0.14	J	-0.11	0.31	U	1.31	0.51	=
DT-7 (SU5)	SLD74244	0.25	0.17	U	-0.31	0.7	U	1.26	0.07	=	0.86	0.07	=	1.64	0.25	=	1.35	0.14	=	1.19	0.13	=	-0.04	0.32	U	0.87	0.55	J
DT-7 (SU5)	SLD74247	0.13	0.18	U	0.05	0.72	U	1.85	0.07	=	0.84	0.07	=	1.51	0.36	=	2.92	0.14	=	1.31	0.27	=	-0.11	0.34	U	1.57	0.54	=
DT-7 (SU5)	SLD74248	0.17	0.15	U	0.21	0.63	U	1.04	0.05	=	0.66	0.06	=	1.22	0.29	=	1.28	0.22	=	0.86	0.12	=	-0.02	0.29	U	1.11	0.44	=
DT-7 (SU5)	SLD74249	0.19	0.17	U	0.32	0.72	U	1.54	0.07	=	0.89	0.06	=	1.79	0.34	=	1.3	0.26	=	1.25	0.25	=	0.12	0.34	U	1.48	0.52	=
DT-7 (SU5)	SLD74252	0.11	0.23	U	0.08	0.88	U	1.46	0.08	=	0.97	0.08	=	1.69	0.39	=	1.58	0.36	=	1.24	0.15	=	0.23	0.44	U	1.99	1.12	J
DT-7 (SU5)	SLD74253	0.27	0.23	U	0.01	0.98	U	1.72	0.09	=	0.86	0.1	=	1.05	0.3	=	1.97	0.14	=	0.96	0.14	=	-0.1	0.44	U	2.64	1.19	=
DT-7 (SU5)	SLD74254	0.3	0.28	U	0.47	1.19	U	3.44	0.11	=	1.03	0.11	=	2.19	0.31	=	3.13	0.17	=	1.06	0.17	J	0.03	0.54	U	3.11	1.5	=
DT-7 (SU5)	SLD74255	0.26	0.3	U	0.26	1.24	U	4.9	0.12	=	1.01	0.12	=	1.43	0.3	=	3.62	0.3	=	0.69	0.35	J	0.22	0.62	U	4.36	1.47	=
DT-7 (SU5)	SLD74258	0.22	0.22	U	-0.19	0.91	U	1.95	0.09	=	0.85	0.08	=	1.85	0.4	=	1.87	0.3	=	0.97	0.16	J	0.2	0.47	U	6.52	1.27	=
DT-7 (SU5)	SLD74259	0.22	0.22	U	0.23	0.88	U	2.07	0.08	=	0.76	0.09	=	0.98	0.37	J	2.18	0.28	=	1	0.28	J	0.15	0.44	U	3.99	1.14	=
DT-7 (SU5)	SLD74260	0.08	0.14	U	0.11	0.62	U	1.2	0.06	=	0.38	0.06	=	0.36	0.23	J	1.03	0.13	=	0.56	0.13	J	-0.04	0.29	U	0.65	0.86	U
DT-7 (SU5)	SLD74261	0.42	0.3	U	0.99	1.29	U	3.28	0.11	=	0.99	0.11	=	2.03	0.3	=	3.8	0.35	=	1.02	0.16	J	0.08	0.58	U	3.28	1.54	=
DT-7 (SU5)	SLD74264	0.32	0.48	U	-0.16	2	U	5.18	0.18	=	1.07	0.2	=	0.8	0.1	=	5.23	0.19	=	0.78	0.19	=	-0.15	0.88	U	5.21	1.41	=
DT-7 (SU5)	SLD74265	0.4	0.27	U	-1.03	1.05	U	2.83	0.09	=	0.88	0.09	=	1.56	0.39	=	3.55	0.18	=	0.9	0.33	J	0.39	0.52	U	4.22	1.33	=
DT-7 (SU6)	HTZ69489	0.76	0.24	=	0.29	1.27	UJ	5.70	0.10	=	1.10	0.10	=	1.15	0.24	J	7.64	0.29	=	1.70	0.12	=	0.92	0.61	=	9.02	1.60	=
DT-7 (SU6)	HTZ71714	0.44	0.27	U	0.56	1.20	UJ	7.12	0.10	=	0.89	0.10	=	1.11	0.47	J	9.32	0.37	J	1.27	0.28	=	0.80	0.60	=	17.88	1.51	=
DT-7 (SU6)	HTZ71715	0.14	0.22	U	-0.30	0.98	U	4.05	0.09	=	1.14	0.09	=	2.15	0.57	=	3.62	0.23	=	1.91	0.42	=	0.21	0.51	U	3.08	1.82	J
DT-7 (SU6)	HTZ71716	0.06	0.35	U	-0.24	1.79	U	1.73	0.18	=	1.02	0.17	=	1.62	0.27	=	1.61	0.27	=	1.22	0.12	=	0.32	0.83	U	-1.88	4.07	U
DT-7 (SU6)	HTZ71717	0.38	0.24	U	0.68	1.04	UJ	6.10	0.08	=	1.04	0.09	=	1.47	0.26	J	5.13	0.26	J	1.18	0.26	=	0.48	0.53	U	9.08	1.82	=
DT-7 (SU6)	HTZ71718	0.17	0.2	U	-0.07	0.85	U	1.59	0.08	=	0.87	0.08	=	0.72	0.26	J	2.02	0.14	=	1.29	0.14	=	-0.1	0.44	U	-0.18	1.68	U
DT-7 (SU6)	HTZ71743	0.07	0.24	UJ	0.24	1.04	UJ	6.71	0.09	=	1.06	0.10	=	1.36	0.28	J	4.72	0.15	J	1.35	0.15	=	0.37	0.54	UJ	5.29	1.89	=
DT-7 (SU6)	HTZ71744	0.05	0.36	UJ	-1.91	1.53	UJ	5.36	0.14	=	0.89	0.14	=	1.80	0.33	J	4.86	0.15	J	1.78	0.27	=	0.41	0.79	UJ	4.73	2.71	=
DT-7 (SU6)	HTZ71745	0.05	0.20	UJ	0.22	0.87	UJ	1.57	0.08	=	0.79	0.08	=	1.32	0.14	J	1.65	0.26	J	0.93	0.14	J	0.01	0.45	UJ	1.06	1.79	UJ

Notes:
All Results are in picoCuries/gram (pCi/g)
MDA = Minimum detectable activity
Q = Data validation qualifier. Qualifiers are defined in Attachment C-2 Section C-2.3.7

DT-6 AND DT-7 FINAL STATUS SURVEY SOIL SAMPLE DATA

Survey Unit	Sample Name	Actinium-227			Protactinium-231			Radium-226			Radium-228			Thorium-228			Thorium-230			Thorium-232			Uranium-235			Uranium-238		
		Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q
DT-7 (SU6)	HTZ71746	0.24	0.21	U	0.14	0.92	UJ	3.62	0.07	=	0.99	0.08	=	2.12	0.49	J	5.76	0.34	J	1.71	0.40	=	0.07	0.47	UJ	3.68	1.60	=
DT-7 (SU6)	HTZ71747	0.09	0.18	UJ	-0.40	0.77	UJ	1.38	0.07	=	0.74	0.07	=	0.95	0.24	J	1.84	0.13	J	1.08	0.13	=	-0.16	0.39	UJ	0.40	1.53	UJ
DT-7 (SU6)	HTZ71748	0.08	0.22	UJ	-0.33	0.90	UJ	2.76	0.08	=	0.68	0.09	=	0.72	0.34	J	2.94	0.29	J	1.02	0.15	J	-0.08	0.48	UJ	1.71	1.71	U
DT-7 (SU6)	HTZ71749	0.07	0.21	U	0.49	1.03	UJ	1.49	0.09	=	1.01	0.09	=	1.42	0.24	J	2.30	0.13	J	0.75	0.13	J	0.20	0.48	UJ	2.84	1.71	J
DT-7 (SU6)	HTZ71750	0.24	0.20	U	0.68	0.89	U	4.48	0.07	=	1.03	0.08	=	1.06	0.13	J	5.01	0.30	J	0.94	0.13	=	-0.01	0.46	UJ	5.01	1.68	=
DT-7 (SU6)	HTZ71758	0.26	0.24	U	0.18	1.05	UJ	6.46	0.08	=	1.34	0.09	=	2.40	0.40	J	6.79	0.16	J	1.30	0.30	=	0.70	0.52	=	12.05	2.04	=
DT-7 (SU6)	HTZ71759	0.18	0.34	U	-1.17	1.55	U	4.00	0.14	=	1.17	0.13	=	1.42	0.32	=	5.33	0.32	=	1.43	0.14	=	0.50	0.75	U	4.33	2.62	J
DT-7 (SU6)	HTZ71760	0.14	0.25	U	0.21	1.13	U	1.95	0.10	=	1.02	0.11	=	1.84	0.24	=	1.35	0.13	=	1.35	0.13	=	-0.04	0.51	U	0.97	2.07	U
DT-7 (SU6)	HTZ71761	0.15	0.22	U	-0.50	0.84	U	1.72	0.08	=	0.86	0.08	=	1.17	0.31	=	1.51	0.23	=	1.01	0.12	=	0.22	0.43	U	1.30	1.09	J
DT-7 (SU6)	HTZ71762	0.56	0.26	UJ	-0.22	1.12	U	4.17	0.11	=	1.00	0.11	=	1.67	0.31	=	3.97	0.26	=	0.99	0.14	=	0.45	0.57	U	4.67	1.43	=
DT-7 (SU6)	HTZ71763	0.35	0.30	U	-0.06	1.34	U	5.47	0.12	=	1.48	0.12	=	1.88	0.26	=	3.81	0.14	=	1.57	0.14	=	0.58	0.70	U	5.04	2.47	=
DT-7 (SU6)	HTZ71764	0.11	0.17	U	-0.05	0.73	U	1.62	0.06	=	0.71	0.07	=	1.30	0.14	=	1.48	0.26	=	0.82	0.14	J	0.23	0.35	U	1.13	0.51	=
DT-7 (SU6)	HTZ71765	0.08	0.19	U	0.32	0.87	U	1.57	0.08	=	0.94	0.08	=	1.26	0.29	=	1.86	0.13	=	1.17	0.13	=	0.03	0.41	U	1.46	1.06	J
DT-7 (SU6)	SLD06334	0.36	0.30	U	0.09	1.31	U	5.16	0.08	=	1.09	0.12	=	0.94	0.15	J	5.31	0.27	=	0.65	0.15	J	0.55	0.30	=	10.54	4.95	=
DT-7 (SU6)	SLD06343	0.10	0.10	U	0.02	0.42	U	0.92	0.03	=	0.19	0.04	=	0.29	0.38	U	2.03	0.17	=	0.70	0.17	J	0.04	0.10	U	0.81	2.04	U
DT-7 (SU6)	SLD06348	0.02	0.17	U	-0.13	0.76	U	1.65	0.05	=	0.51	0.07	=	0.58	0.30	J	4.47	0.30	=	0.44	0.13	J	0.10	0.19	U	2.88	2.68	J
DT-7 (SU6)	SLD06349	0.08	0.15	U	0.45	0.66	U	1.82	0.04	=	0.50	0.06	=	0.64	0.27	J	2.89	0.15	=	0.59	0.15	J	0.12	0.14	U	2.08	2.54	U
DT-7 (SU6)	SLD06350	0.14	0.12	U	0.15	0.52	U	0.85	0.03	=	0.44	0.05	=	0.89	0.16	J	1.46	0.16	=	0.41	0.16	J	0.01	0.11	U	1.10	2.25	U
DT-7 (SU6)	SLD06356	0.20	0.18	U	0.22	0.79	U	1.76	0.05	=	0.54	0.07	=	1.30	0.30	=	2.21	0.14	=	0.55	0.14	J	0.15	0.19	U	2.28	2.90	U
DT-7 (SU6)	SLD06367	0.13	0.19	U	0.16	0.81	U	1.79	0.05	=	0.64	0.08	=	1.23	0.17	=	3.32	0.17	=	1.15	0.17	J	0.30	0.18	U	2.12	3.41	U
DT-7 (SU6)	SLD06369	0.26	0.16	U	0.50	0.72	U	1.85	0.04	=	0.71	0.06	=	1.18	0.14	=	3.88	0.26	=	0.46	0.26	J	0.21	0.14	J	1.69	2.71	U
DT-7 (SU6)	SLD06374	-0.06	0.37	U	0.40	1.90	U	3.37	0.13	=	0.99	0.19	=	1.39	0.35	=	7.04	0.29	=	1.25	0.35	=	0.36	0.34	J	0.23	9.86	U
DT-7 (SU6)	SLD06383	0.10	0.11	U	0.06	0.52	U	0.62	0.03	=	0.21	0.05	=	1.99	0.17	=	5.64	0.31	=	1.46	0.31	=	0.05	0.09	U	0.57	2.58	U
DT-7 (SU6)	SLD06388	0.10	0.15	U	0.07	0.67	U	1.05	0.04	=	0.88	0.06	=	4.94	0.93	=	4.49	0.42	=	3.09	0.42	J	0.08	0.15	U	1.41	2.97	U
DT-7 (SU6)	SLD06389	0.07	0.14	U	0.46	0.61	U	0.45	0.04	=	0.46	0.06	=	0.73	0.22	J	1.83	0.40	=	0.86	0.40	J	0.07	0.12	U	1.41	2.92	U
DT-7 (SU6)	SLD06390	0.25	0.19	U	-0.02	0.78	U	1.07	0.05	=	1.00	0.07	=	1.17	0.38	=	1.31	0.15	=	1.31	0.15	=	0.08	0.15	U	1.02	3.58	U
DT-7 (SU6)	SLD06396	0.31	0.24	=	0.14	1.01	U	2.23	0.06	=	1.05	0.09	=	2.50	0.29	=	3.97	0.16	=	2.24	0.16	=	0.11	0.24	U	2.25	3.42	U
DT-7 (SU6)	SLD06407	0.17	0.17	U	0.26	0.73	U	1.83	0.04	=	0.58	0.06	=	1.29	0.35	=	4.01	0.30	=	0.59	0.16	J	0.21	0.17	U	3.82	3.36	=
DT-7 (SU6)	SLD06409	0.09	0.15	U	0.10	0.65	U	1.86	0.04	=	0.61	0.06	=	1.66	0.29	=	3.44	0.34	=	0.79	0.15	J	0.19	0.14	J	1.94	2.54	U
DT-7 (SU6)	SLD71688	0.16	0.16	U	-0.08	0.69	UJ	2.22	0.06	=	0.50	0.07	=	1.22	0.14	=	2.13	0.26	J	1.10	0.14	=	-0.05	0.35	UJ	1.05	0.86	J
DT-7 (SU6)	SLD71689	0.17	0.21	U	0.38	0.92	UJ	3.58	0.08	=	0.63	0.08	=	0.71	0.38	J	4.58	0.13	=	0.52	0.13	J	0.20	0.49	UJ	2.94	1.18	=
DT-7 (SU6)	SLD71690	0.24	0.33	U	-0.41	1.45	UJ	7.12	0.13	=	0.78	0.13	=	1.08	0.33	J	5.72	0.15	=	0.77	0.15	J	0.18	0.73	UJ	8.05	1.76	=
DT-7 (SU6)	SLD71691	0.20	0.27	U	0.25	1.08	UJ	3.87	0.11	=	1.01	0.11	=	1.16	0.32	=	2.86	0.27	=	1.33	0.14	=	0.12	0.57	UJ	3.42	1.47	=
DT-7 (SU6)	SLD71692	0.03	0.16	UJ	-0.32	0.72	UJ	1.64	0.06	=	0.59	0.07	=	0.66	0.29	J	1.65	0.13	J	0.77	0.13	J	0.19	0.36	UJ	1.86	0.87	=
DT-7 (SU6)	SLD71693	-0.06	0.54	UJ	0.19	2.49	UJ	2.94	0.21	=	1.26	0.27	=	1.26	0.38	J	2.29	0.38	=	1.04	0.20	J	0.92	1.14	U	1.13	3.47	UJ
DT-7 (SU6)	SLD71694	0.12	0.19	J	0.16	0.83	UJ	2.27	0.06	=	0.72	0.07	=	1.27	0.39	=	2.35	0.26	=	0.76	0.31	J	-0.02	0.38	UJ	1.08	0.94	J
DT-7 (SU6)	SLD71695	0.18	0.29	UJ	-0.31	1.26	UJ	4.58	0.12	=	1.06	0.12	=	1.58	0.46	=	4.01	0.17	=	1.38	0.17	=	0.17	0.63	UJ	2.71	1.53	=
DT-7 (SU6)	SLD71696	0.15	0.16	U	0.31	0.76	UJ	2.33	0.05	=	0.53	0.06	=	0.94	0.31	J	4.88	0.26	J	1.10	0.14	=	-0.17	0.35	UJ	2.00	0.89	=
DT-7 (SU6)	SLD71697	0.12	0.17	U	-0.05	0.71	UJ	3.23	0.06	=	0.87	0.07	=	2.06	0.38	=	4.01	0.17	=	1.05	0.32	J	0.31	0.36	U	2.94	0.52	=
DT-7 (SU6)	SLD71698	0.11	0.16	U	-0.17	0.69	UJ	3.09	0.06	=	0.89	0.06	=	1.31	0.16	=	2.86	0.30	=	1.06	0.16	J	0.26	0.34	U	2.73	0.49	=
DT-7 (SU6)	SLD71699	0.19	0.27	U	-0.24	1.14	UJ	5.26	0.10	=	0.91	0.10	=	2.29	0.52	=	7.55	0.36	=	1.68	0.36	=	0.01	0.58	UJ	3.63	0.79	=
DT-7 (SU6)	SLD71700	0.08	0.23	UJ	0.30	1.04	UJ	2.72	0.09	=	0.94	0.09	=	0.91	0.29	J	3.13	0.24	J	1.35	0.13	=	0.29	0.50	UJ	2.71	1.30	=
DT-7 (SU6)	SLD71701	0.11	0.14	U	0.12	0.62	UJ	1.64	0.05	=	1.04	0.05	=	1.12	0.24	=	1.94	0.13	J	1.21	0.13	=	-0.04	0.29	UJ	0.86	0.45	J
DT-7 (SU6)	SLD71702	0.03	0.27	UJ	0.18	1.13	UJ	4.06	0.10	=	0.96	0.11	=	1.73	0.33	=	3.34	0.28	=	0.73	0.15	J	0.12	0.53	UJ	3.09	0.78	=
DT-7 (SU6)	SLD71703	0.05	0.14	UJ	0.50	0.64	U	1.77	0.05	=	0.96	0.05	=	1.80	0.21	=	1.53	0.12	J	0.64	0.12	J	0.03	0.28	UJ	1.25	0.43	=
DT-7 (SU6)	SLD71704	0.15	0.17	U	0.23	0.73	UJ	1.88	0.07	=	0.46	0.07	=	0.73	0.14	J	1.89	0.14	J	0.46	0.14	J	0.05	0.39	UJ	0.71	1.48	UJ
DT-7 (SU6)	SLD71705	-0.02	0.07	UJ	0.10	0.36	UJ	0.98	0.03	=	0.19	0.03	=	0.41	0.37	J	0.89	0.82	J	0.27	0.37	UJ	0.09	0.17	UJ	0.67	0.24	=
DT-7 (SU6)	SLD71706	0.06	0.17	UJ	0.20	0.74	UJ	3.99	0.06	=	0.98	0.07	=	1.13	0.13	=	3.62	0.24	=	1.00	0.24	=	0.53	0.38	U	2.71	0.51	=
DT-7 (SU6)	SLD71707	0.07	0.13	UJ	0.27	0.59	UJ	2.01	0.05	=	0.76	0.06	=	0.51	0.42	J	3.00	0.15	=	0.83	0.28	J	-0.08	0.27	UJ	1.74	0.41	=
DT-7 (SU6)	SLD71708	0.18	0.20	U	-0.22	0.87	UJ	3.13	0.08	=	0.76	0.07	=	1.59	0.25	J	5.16	0.13	J	1.41	0.25	=	0.35	0.46	U	7.66	1.68	=
DT-7 (SU6)	SLD71709	0.13	0.14	U	-0.12	0.54	UJ	1.34	0.05	=	0.75	0.05	=	1.24	0.13	=	1.03	0.13	J	1.55	0.13	=	0.08	0.27	UJ	0.94	0.41	=
DT-7 (SU6)	SLD71710	0.24	0.55	UJ	0.12	2.42	UJ	4.77	0.23	=	1.46	0.24	=	1.74	0.25	=	2.78	0.13	=	1.62	0.25	=	0.69	1.12	UJ	2.85	1.66	J
DT-7 (SU6)	SLD71711	0.25	0.19	U	0.21	0.79	UJ	2.75	0.07	=	1.12	0.07	=	1.07	0.38	J	2.44	0.17	J	0.64	0.17	J	0.06	0.38	UJ	2.51	0.55	=
DT-7 (PP)	SLD26753	0.48	0.45	U	-0.3	1.99	U	4.3	1.15	=	0.94	0.19	J	1.23	0.37	=	7.17	0.15	=	0.94	0.19	J	0.54	0.39	J	3.96	10.33	U
DT-7 (PP)	SLD26754	0.37	0.38	U	-0.65	1.75	U	1.84	0.99	=	0.7	0.16	J	1.37	0.38	=	2.81	0.38	=	0.7	0.16	J	0.24	0.39	U	2.03	9.5	U
DT-7 (PP)	SLD69539	0.23	0.28	U	0.02	1.24	U	7.38	0.11	=	1.16	0.11	=	2.11	0.31	=	5.21	0.31	=	1.16	0.11	=	0.66	0.28	=	8.23	2.38	=
DT-7 (PP)	SLD69540	0.15	0.21	U	-0.17	0.92	U	3.99	0.09	=	1.24	0.09	=	1.48	0.28	=	2.55	0.24	=	1.24	0.09	=	-0.15	0.23	U	3.51	1.72	=
DT-7 (PP)	SLD69541	0.02	0.2	U	0	0.89	U	3.07	0.08	=	0.98	0.08	=	1.43	0.15	=	3.45	0.15	=	0.98	0.08	=	0.02	0.2	U	2.73	1.65	=
DT-7 (PP)	SLD69542	0.03	0.1	U	0.13	0.5	U	0.69	0.04	=	0.37	0.05	=	0.97	0.37	J	0.97	0.34	=	0.37	0.05	=	0.05	0.11	U	0.35	0.9	U

Notes:
All Results are in picoCuries/gram (pCi/g)
MDA = Minimum detectable activity
Q = Data validation qualifier. Qualifiers are defined in Attachment C-2 Section C-2.3.7

DT-6 AND DT-7 FINAL STATUS SURVEY SOIL SAMPLE DATA

Survey Unit	Sample Name	Actinium-227			Protactinium-231			Radium-226			Radium-228			Thorium-228			Thorium-230			Thorium-232			Uranium-235			Uranium-238		
		Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q	Result	MDA	Q
DT-7 (PP)	SLD69543	0.01	0.2	U	0.22	0.9	U	1.63	0.08	=	0.62	0.08	=	1.23	0.16	=	2.58	0.16	=	0.62	0.08	=	0.02	0.2	U	1.63	1.55	J
DT-7 (PP)	SLD74281	0.24	0.25	U	0.17	1.07	U	2.18	0.09	=	0.95	0.11	=	2.08	0.35	=	2.3	0.26	=	0.95	0.11	=	0.43	0.5	U	0.71	1.39	U
DT-7 (PP)	SLD74284	0.31	0.24	U	0.79	1.04	U	2.98	0.08	=	0.8	0.09	=	1.09	0.29	=	11.18	0.35	=	0.8	0.09	=	0.25	0.49	U	2.11	1.24	J
DT-7 (PP)	SLD74285	3.25	0.44	U	1.4	1.28	J	4.18	0.09	=	1.45	0.1	=	1.54	0.39	=	3.55	0.16	=	1.45	0.1	=	0.3	0.59	U	5.4	3.19	=
DT-7 (PP)	SLD74943	0.13	0.15	U	0.19	0.65	U	2.51	0.06	=	0.57	0.06	=	1.09	0.14	=	1.29	0.26	=	0.57	0.06	=	0.17	0.31	U	1.88	0.45	=
DT-7 (PP)	SLD75159	0.13	0.2	U	0.2	0.82	U	1.79	0.08	=	0.52	0.08	=	1.14	0.12	=	7.76	0.23	=	0.52	0.08	=	-0.07	0.39	U	2.51	1.03	=
DT-6 (PP)	SLD78291	0.03	0.12	UJ	0.11	0.53	UJ	1.40	0.04	=	0.33	0.04	=	0.86	0.26	J	2.16	0.14	=	0.33	0.04	=	0.10	0.25	UJ	0.98	0.35	=
DT-6 (PP)	SLD78292	0.09	0.19	UJ	0.50	0.86	UJ	3.67	0.07	=	0.85	0.07	=	1.09	0.30	=	4.33	0.14	=	0.85	0.07	=	0.31	0.41	U	5.99	0.62	=
DT-6 (PP)	SLD78294	0.38	0.76	UJ	2.37	3.30	U	5.05	0.29	=	1.07	0.30	=	1.67	0.29	=	5.39	0.16	=	1.07	0.30	=	1.83	1.53	U	15.85	2.25	=
DT-6 (T. pits)	SLD77610	0.04	0.09	UJ	-0.09	0.38	UJ	1.35	0.03	=	0.24	0.03	=	0.45	0.29	J	2.23	0.24	=	0.37	0.24	J	0.07	0.19	UJ	1.16	0.26	=
DT-6 (T. pits)	SLD77611	0.27	0.15	=	0.26	0.79	UJ	4.68	0.07	=	1.10	0.07	=	1.31	0.38	=	3.51	0.14	=	1.75	0.31	=	0.30	0.39	U	5.49	0.54	=
DT-6 (T. pits)	SLD77612	0.08	0.22	UJ	-0.27	0.87	UJ	3.96	0.09	=	1.08	0.08	=	1.62	0.34	=	3.73	0.15	=	1.36	0.15	=	0.10	0.44	UJ	3.30	0.62	=
DT-6 (T. pits)	SLD77613	0.04	0.18	UJ	-0.03	0.82	UJ	3.34	0.07	=	1.07	0.08	=	1.73	0.18	=	3.71	0.33	=	1.06	0.18	J	0.22	0.40	UJ	4.00	0.57	=
DT-6 (T. pits)	SLD77614	0.04	0.08	UJ	0.11	0.38	UJ	1.08	0.03	=	0.13	0.03	=	0.20	0.49	UJ	2.56	0.45	=	0.02	0.45	UJ	0.07	0.17	UJ	1.03	0.23	=
DT-6 (T. pits)	SLD77615	0.33	0.14	=	0.56	0.73	U	3.64	0.06	=	1.08	0.07	=	1.72	0.29	=	5.36	0.16	=	1.99	0.35	=	0.28	0.34	U	4.71	0.53	=
DT-6 (T. pits)	SLD77616	0.23	0.21	U	0.29	0.98	UJ	5.89	0.08	=	1.33	0.09	=	3.99	0.28	=	6.28	0.28	=	2.83	0.23	=	0.51	0.45	J	4.39	0.60	=
DT-6 (T. pits)	SLD77617	0.07	0.20	UJ	0.33	0.92	UJ	4.68	0.08	=	1.00	0.08	=	1.37	0.40	=	3.71	0.34	=	0.71	0.33	J	0.32	0.42	U	3.05	0.60	=
DT-6 (T. pits)	SLD77618	0.06	0.17	UJ	0.24	0.80	UJ	3.45	0.07	=	0.89	0.06	=	1.51	0.20	=	3.21	0.38	=	0.81	0.38	J	0.27	0.37	U	4.77	0.56	=
DT-6 (T. pits)	SLD77619	0.37	0.20	U	0.26	0.95	UJ	4.47	0.08	=	1.74	0.08	=	1.96	0.14	=	3.59	0.14	=	2.69	0.14	=	-0.03	0.44	UJ	3.61	0.64	=
DT-6 (T. pits)	SLD77620	0.03	0.14	UJ	0.22	0.63	UJ	1.60	0.06	=	0.91	0.06	=	1.60	0.26	=	2.03	0.35	=	1.14	0.14	=	0.16	0.29	UJ	0.76	0.43	J
DT-6 (T. pits)	SLD77621	0.05	0.22	UJ	-0.01	1.07	UJ	5.24	0.09	=	1.05	0.10	=	0.75	0.53	J	4.93	0.24	=	1.58	0.24	J	0.28	0.49	U	3.96	0.67	=
DT-6 (T. pits)	SLD77622	0.22	0.15	U	-0.06	0.66	U	3.00	0.06	=	1.00	0.06	=	1.11	0.22	=	2.85	0.23	=	0.84	0.22	=	0.04	0.33	U	2.72	0.46	=
DT-6 (T. pits)	SLD77623	0.08	0.19	U	0.53	0.89	U	4.54	0.08	=	0.88	0.08	=	1.60	0.15	=	5.80	0.29	=	0.97	0.15	J	0.63	0.41	=	9.62	0.63	=
DT-6 (T. pits)	SLD77624	0.22	0.53	U	-1.21	2.60	U	8.04	0.23	=	1.25	0.24	=	1.53	0.48	=	7.09	0.39	=	1.57	0.39	=	0.05	1.13	U	4.75	1.67	J
DT-6 (T. pits)	SLD77625	0.05	0.20	U	0.19	0.90	U	5.94	0.08	=	1.12	0.08	=	1.44	0.14	=	5.89	0.39	=	1.75	0.14	=	0.40	0.45	U	4.12	0.61	=
DT-6 (T. pits)	SLD77626	0.11	0.10	U	-0.04	0.45	U	1.60	0.04	=	0.40	0.04	=	0.98	0.30	=	2.81	0.14	=	0.60	0.14	J	0.05	0.22	U	1.71	0.31	=
DT-6 (T. pits)	SLD77627	0.38	0.15	=	0.66	0.82	UJ	5.19	0.06	=	0.88	0.07	=	1.55	0.24	=	6.56	0.13	=	0.87	0.28	=	0.41	0.37	J	5.66	0.54	=
DT-6 (T. pits)	SLD77628	0.06	0.19	U	0.39	0.86	U	5.31	0.08	=	1.04	0.08	=	1.58	0.40	=	3.28	0.30	=	0.90	0.16	J	0.06	0.41	U	3.93	0.58	=
DT-6 (T. pits)	SLD77629	-0.03	0.17	U	-0.24	0.83	U	3.16	0.08	=	1.04	0.08	=	1.48	0.33	=	3.55	0.28	=	1.16	0.28	=	0.16	0.38	U	2.28	0.55	=
DT-6 (T. pits)	SLD77630	0.02	0.09	U	0.12	0.44	U	1.72	0.04	=	0.36	0.04	=	2.20	0.17	=	3.21	0.33	J	1.08	0.32	J	0.11	0.22	U	1.48	0.29	=
DT-6 (T. pits)	SLD77631	0.05	0.16	U	0.10	0.75	U	4.08	0.07	=	0.97	0.06	=	1.48	0.14	=	4.32	0.14	=	1.21	0.14	=	0.30	0.38	U	3.82	0.53	=
DT-6 (T. pits)	SLD77632	0.11	0.21	U	0.81	0.99	U	5.33	0.08	=	1.26	0.09	=	1.35	0.26	=	6.32	0.35	=	2.34	0.14	=	0.30	0.45	U	4.32	0.64	=
DT-6 (T. pits)	SLD77633	0.15	0.14	U	0.19	0.66	U	2.02	0.06	=	0.90	0.06	=	1.30	0.33	=	2.70	0.15	J	0.99	0.15	J	0.10	0.30	U	1.58	0.44	J
DT-6 (T. pits)	SLD77634	0.10	0.18	U	0.34	0.73	U	4.14	0.06	=	0.60	0.06	=	1.27	0.31	=	2.68	0.14	=	0.77	0.14	J	0.22	0.37	U	2.45	0.54	=
DT-6 (T. pits)	SLD77635	0.20	0.18	U	0.31	0.80	U	3.60	0.07	=	0.75	0.07	=	3.49	0.37	=	4.08	0.38	=	1.56	0.20	=	0.25	0.40	U	3.83	0.58	=
DT-6 (T. pits)	SLD77636	0.21	0.29	U	0.48	1.26	U	4.63	0.11	=	1.12	0.11	=	1.46	0.48	=	5.16	0.39	=	1.04	0.38	J	0.14	0.59	U	4.90	0.88	=
DT-6 (T. pits)	SLD77637	0.09	0.15	U	0.07	0.69	U	1.43	0.06	=	0.91	0.07	=	1.07	0.13	=	1.98	0.36	=	0.92	0.13	=	-0.01	0.31	U	0.99	0.49	J
DT-6 (T. pits)	SLD77642	0.01	0.13	U	-0.25	0.55	U	0.78	0.06	=	0.13	0.06	J	0.56	0.32	J	1.67	0.27	=	0.21	0.14	J	0.02	0.28	U	0.49	0.65	U
DT-6 (T. pits)	SLD77643	0.18	0.26	U	0.61	1.21	U	3.47	0.10	=	0.96	0.11	=	1.80	0.14	J	5.98	0.32	=	1.42	0.14	=	0.42	0.57	U	3.51	1.45	=
DT-6 (T. pits)	SLD77644	0.16	0.27	U	-0.11	1.30	U	3.66	0.11	=	1.10	0.12	=	1.52	0.35	J	3.71	0.14	=	0.93	0.14	=	0.49	0.61	U	3.51	1.55	=
DT-6 (T. pits)	SLD77645	0.19	0.22	U	0.15	0.96	U	3.34	0.08	=	0.77	0.09	=	1.11	0.41	J	2.94	0.30	J	1.57	0.16	=	0.09	0.47	U	2.06	1.13	J
DT-6 (T. pits)	SLD77646	0.04	0.10	U	0.12	0.48	U	1.45	0.04	=	0.48	0.04	=	1.12	0.30	J	1.92	0.13	=	0.74	0.13	J	0.13	0.22	U	1.12	0.31	=
DT-6 (T. pits)	SLD77647	0.46	0.23	U	0.67	1.07	U	8.41	0.09	=	1.10	0.09	=	1.80	0.16	J	6.70	0.35	=	1.44	0.16	=	0.64	0.50	=	7.84	0.73	=
DT-6 (T. pits)	SLD77648	0.15	0.17	U	-0.17	0.79	U	3.30	0.07	=	0.94	0.07	=	0.94	0.37	J	2.94	0.15	=	0.60	0.15	J	-0.06	0.36	U	3.58	0.55	=
DT-6 (T. pits)	SLD77649	0.02	0.14	U	0.15	0.67	U	1.99	0.06	=	0.89	0.06	=	1.55	0.37	J	2.06	0.27	=	0.76	0.15	J	0.04	0.30	U	1.33	0.45	=
DT-6 (Cons. Support T. pits)	SLD76127	0.13	0.4	U	-0.19	1.9	U	2.43	0.16	=	0.63	0.17	=	0.93	0.25	J	2.18	10.89	U	0.74	0.17	J	-0.31	0.75	U	1.29	1.2	J
DT-6 (Cons. Support T. pits)	SLD76133	0.32	0.28	J	1.11	1.49	U	8.24	0.11	=	1.14	0.11	=	1.8	0.52	=	6.09	28.16	UJ	1.47	0.16	=	0.49	0.73	U	6.19	3.54	=
DT-6 (Cons. Support T. pits)	SLD76135	0.36	0.29	U	-0.24	1.23	U	5.88	0.11	=	1.1	0.11	=	1.87	0.31	=	7.65	8.98	U	1.1	0.14	J	0.34	0.63	U	5.16	0.93	=
DT-6 (Cons. Support T. pits)	SLD76139	0.23	0.28	U	0.26	1.19	U	3.53	0.1	J	1.01	0.11	=	1.36	0.27	=	4.78	13.4	U	1.01	0.33	=	0.36	0.59	U	3.52	1.44	J
DT-6 (Cons. Support T. pits)	SLD76140	0.66	0.6	U	0.6	2.55	U	5	0.25	J	2.24	0.24	=	3.28	0.36	=	6.22	28.77	U	3.65	0.24	=	0.78	1.09	U	4.57	3.17	J
DT-6 (Cons. Support T. pits)	SLD76141	0.22	0.19	U	-0.04	0.86	U	1.34	0.07	J	0.97	0.07	=	1.67	0.19	=	1.57	9.29	U	0.97	0.35	J	0.1	0.4	U	1.27	1.04	J
DT-6 (Cons. Support T. pits)	SLD76144	0.28	0.58	U	0.87	2.76	U	9.2	0.22	J	1.11	0.23	=	1.75	0.23	=	8.3	32.12	U	1.81	0.23	=	0.33	1.29	U	6.32	3.41	J
DT-6 (Cons. Support T. pits)	SLD76145	0.35	0.22	U	-0.1	0.85	U	1.79	0.08	J	1.04	0.07	=	1.27	0.31	J	2.29	9.85	U	1.23	0.57	J	0.16	0.42	U	0.86	1.17	U
DT-6 (Cons. Support T. pits)	SLD76146	0.27	0.23	U	0.26	0.94	U	1.55	0.09	J	0.94	0.1	=	0.94	0.4	J	1.98	10.38	U	1.14	0.47	J	0.00458	0.44	U	1.55	1.15	J
DT-6 (Cons. Support T. pits)	SLD76147	0.08	0.14	U	0.03	0.62	U	1.13	0.06	=	0.5	0.06	=	0.5	0.06	=	2.76	3.84	U	0.5	0.06	=	0.12	0.3	U	0.77	0.37	=
DT-6 (Cons. Support T. pits)	SLD76151	3.21	0.85	U	0.34	2.8	U	7.45	0.21	=	1.34	0.23	=	1.97	0.32	=	13.59	58.55	U	1.6	0.23	=	-0.06	1.28	UJ	9.98	7.74	J
DT-6 (Cons. Support T. pits)	SLD76152	0.21	0.23	U	-0.1	0.95	U	5.71	0.09	=	1.22	0.09	=	1.98	0.32	=	4.66	7.07	U	1.22	0.15	=	0.1	0.47	U	4.34	0.68	=
DT-6 (Cons. Support T. pits)	SLD76153	0.2	0.19	U	0.23	0.81	U	5.09	0.07	=	0.93	0.07	=	1.08	0.38	=	6.07	5.49	J	1.14	0.14	=	0.3	0.41	U	3.47	0.53	=
DT-6 (Cons. Support T. pits)	SLD76154	-0.01	0.19	U	0.54	0.88	U	3.72	0.08	=	0.83	0.08	=	1.94	0.15	=	5.06	5.92	U	1.43	0.15	=	0.27	0.41	U	2.69	0.57	=
DT-6 (Cons. Support T. pits)	SLD76164	0.07	0.15	U	0.33	0.7	U	2.44	0.06	=	0.92	0.06	=	1.15	0.14	=	2.72	4.78	U	1.19	0.13	=	0.16	0.32	U	1.55	0.47	=
DT-6 (Cons. Support T. pits)	SLD76174	0.26	0.19	U	0.06	0.85	U	3.59	0.07	=	0.63	0.07	=	0.63	0.07	=	4.44	6.03	U	0.63	0.07	=	0.12	0.41	U	3.05	0.61	=
DT-6 (Cons. Support T. pits)	SLD76175	0.62	0.57	U	0.57	2.5	U	3.44	0.23	=	1.65	0.24	=	2.21	0.53	=	2.62	16.05	U	1.72	0.24	=	0.48	1.07	U	3.14	1.66	=
DT-6 (Cons. Support T. pits)	SLD76176	0.41	0.59	U	-0.87	2.61	U	3.76	0.26	=	0.98	0.28	=	1.7	0.29	=	3.89	16.27	U	1.4	0.28	=	0.76	1.16	U	3.64	1.64	=
DT-6 (Cons. Support T. pits)	SLD76178	2.46	0.39	U	1.5	1.27	U	6.48	0.1	=	0.99	0.1	=	1.43	0.27	=	6.53	24.36	U	1.06	0.27	=	0.4	0.61	U	3.89	2.99	J
DT-6 (Cons. Support T. pits)	SLD76179	0.2031	0.2418	U	0.6509	1.053	U	3.1245	0.092325	=	0.6798	0.08505	=	0.8148	0.3074	J	3.989	11.69	U	1.229	0.1388	=	0.148	0.4972	U	4.822	1.211	J
DT-6 (Cons. Support T. pits)	SLD76180	4.45	1.14	U	1.27	3.42	U	8.78	0.27	=	1.41	0.29	=	2.03	0.29	=	8.31	72.24	U	1.5	0.29	=	0.87	1.62	U	2.2	10.1	U
DT-6 (Cons. Support T. pits)	SLD76181	0.3714	0.3095	U	0.6058	1.288	U	3.0405	0.12213	=	1.496	0.1275	=	2.109	0.1579	J	3.588	14.86	U	2.271	0.1578	=	0.1176	0.6108	U	3.638	1.645	J

Notes:
All Results are in picoCuries/gram (pCi/g).
MDA = Minimum detectable activity
Q = Data validation qualifier. Qualifiers are defined in Attachment C-2 Section C-2.3.2

ATTACHMENT C-4
DT-6 AND DT-7 FINAL STATUS SURVEY SOIL SAMPLE DATA SUMMARY

DT-6 Survey Unit 1 Surface Data Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-6 Survey Unit 1 Class 1 Surface Data Summary											
Statistic	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
Mean	Systematic	3.76	4.11	6.40	0.34	1.17	0.94	1.59	0.21	0.37	0.51	0.26
Median	Systematic	4.15	3.91	3.78	0.20	1.14	0.97	1.44	0.16	0.23	0.45	0.21
Standard Deviation	Systematic	1.27	1.74	8.57	0.44	0.32	0.21	0.60	0.29	0.71	0.28	0.28
Number of samples	Systematic	18	18	18	18	18	18	18	18	18	18	18
Maximum	All	10.86	12.28	131.40	5.76	2.34	1.36	2.78	1.26	2.94	3.01	2.78
Range	All	9.15	10.45	129.99	5.76	1.62	0.84	2.22	1.26	2.94	2.76	2.75

SampleID	HTZ Area (m^2)	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
HTZ75366	1	Biased	7.10	8.87	5.31	0.39	1.73	1.24	1.49	0.54	0.24	0.81	0.58
HTZ75367	1	Biased	4.72	4.75	5.19	0.66	0.79	1.03	1.79	0.15	0.67	0.49	0.27
HTZ75368	1	Biased	4.11	4.61	3.54	0.13	1.37	1.16	1.75	0.38	0.91	0.47	0.24
HTZ76712	5	Biased	7.41	5.96	10.42	0.49	1.04	1.06	1.94	0.21	-0.76	0.77	0.50
HTZ76713	2	Biased	6.84	6.85	7.22	0.31	1.32	1.13	2.45	0.18	-0.38	0.69	0.46
HTZ76719	2	Biased	9.90	12.28	16.21	0.94	1.99	1.15	2.17	0.60	0.19	1.28	1.04
HTZ76720	2	Biased	6.09	5.57	4.50	0.16	1.09	1.22	1.60	0.24	-0.66	0.58	0.32
HTZ76721	0.3	Biased	10.86	8.35	6.94	0.51	2.34	1.27	2.09	0.35	0.75	1.02	0.73
HTZ76722	1	Biased	2.81	4.30	131.40	5.76	1.43	0.90	2.11	0.24	0.72	3.01	2.78
HTZ76723	2	Biased	7.73	11.12	13.22	0.86	1.14	0.73	1.85	0.64	0.14	1.08	0.85
HTZ76724	2	Biased	6.39	5.04	9.97	0.51	1.35	1.23	1.65	0.20	0.16	0.72	0.43
HTZ76725	2	Biased	4.92	4.61	3.59	0.22	1.07	0.77	1.21	0.23	0.64	0.47	0.22
SLD78616	--	Systematic	3.10	4.00	3.07	0.08	1.39	1.06	2.72	0.16	0.53	0.42	0.19
SLD78619	--	Systematic	4.25	4.52	3.31	0.18	1.33	0.87	1.56	0.06	0.28	0.46	0.22
SLD78649	--	Systematic	6.40	5.56	10.45	0.62	1.57	0.98	1.37	0.39	0.68	0.74	0.45
SLD78653	--	Systematic	2.86	1.83	3.63	0.20	0.98	0.85	1.29	0.14	0.15	0.33	0.05
SLD78655	--	Systematic	5.49	5.05	4.48	0.37	1.16	1.04	1.19	0.35	-0.23	0.53	0.27
SLD78657	--	Systematic	4.47	3.23	4.32	0.49	0.89	0.96	1.10	0.11	0.60	0.45	0.17
SLD78659	--	Systematic	4.18	3.54	3.92	0.08	1.87	1.21	1.28	0.06	-0.24	0.48	0.21
SLD78661	--	Systematic	1.71	2.67	1.46	0.15	0.96	0.52	0.56	0.00	-0.14	0.27	0.05
SLD78664	--	Systematic	3.14	3.54	4.61	0.00	0.76	0.82	2.32	0.16	0.12	0.38	0.17
SLD78666	--	Systematic	4.48	3.77	5.53	0.19	1.25	1.08	1.51	-0.05	-0.08	0.49	0.21
SLD78668	--	Systematic	5.14	4.17	6.74	0.50	1.44	1.36	1.33	0.17	0.57	0.57	0.29
SLD78672	--	Systematic	2.44	2.60	2.38	0.06	1.03	0.75	1.20	0.18	0.28	0.29	0.06
SLD78675	--	Systematic	1.98	2.32	1.41	0.06	1.08	0.76	1.02	0.01	0.18	0.25	0.03
SLD78677	--	Systematic	2.27	4.62	10.15	0.49	1.58	0.77	2.78	0.14	0.04	0.62	0.39
SLD78679	--	Systematic	3.06	4.39	3.29	0.53	1.13	0.67	1.61	0.16	0.00	0.43	0.20
SLD78681	--	Systematic	4.21	3.82	3.45	-0.16	0.72	1.11	2.17	0.19	0.34	0.42	0.18
SLD78683	--	Systematic	4.11	4.57	3.64	0.48	0.75	1.14	2.15	0.23	0.69	0.45	0.23
SLD78701	--	Systematic	4.36	9.87	39.28	1.87	1.24	1.05	1.53	1.26	2.94	1.53	1.29

Notes:

SOR_B = sum of ratios for the background soils.

Surface soil samples were collected within the upper 6 inches of the exposed ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

DT-6 Survey Unit 1 Subsurface Data Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-6 Survey Unit 1 Class 1 Subsurface Data Summary											
Statistic	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
Mean	2.90	3.46	3.08	0.17	1.06	0.89	1.52	0.14	0.20	0.37	0.14
Median	2.79	3.14	2.55	0.12	1.07	0.92	1.53	0.12	0.18	0.35	0.10
Standard Deviation	1.15	1.39	3.24	0.27	0.27	0.19	0.40	0.11	0.30	0.15	0.14
Number of samples	24	24	24	24	24	24	24	24	24	24	24
Maximum	5.96	7.12	17.57	1.18	1.60	1.31	2.55	0.30	0.82	0.91	0.68
Range	4.66	5.60	16.69	1.18	1.20	0.89	1.76	0.30	0.82	0.76	0.68

SampleID	Station Name	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
SLD78617	SLD71616	1.86	2.70	1.28	0.11	1.42	1.08	2.55	0.01	0.28	0.30	0.07
SLD78618	SLD71616	1.46	2.77	1.39	-0.06	1.08	0.93	2.11	0.10	-0.08	0.28	0.06
SLD78620	SLD71619	2.99	1.90	2.44	0.40	1.38	1.01	1.27	0.09	0.23	0.34	0.05
SLD78650	SLD71649	3.72	4.48	3.94	0.31	1.39	0.75	1.07	0.26	0.47	0.47	0.24
SLD78651	SLD71649	1.75	1.52	1.75	0.05	0.66	0.49	1.13	0.00	-0.09	0.20	0.01
SLD78654	SLD71653	3.23	3.02	3.20	0.14	1.33	0.78	1.85	0.15	0.14	0.37	0.12
SLD78656	SLD71655	2.16	3.26	1.65	0.06	1.04	0.90	1.59	0.20	0.08	0.32	0.09
SLD78658	SLD71657	4.62	4.37	3.47	0.23	1.08	0.93	1.58	0.05	0.09	0.45	0.20
SLD78660	SLD71659	4.15	3.88	3.19	0.13	1.11	0.99	1.24	0.05	0.17	0.41	0.17
SLD78662	SLD71661	2.98	2.71	2.40	0.03	1.20	0.83	0.79	0.02	-0.05	0.33	0.08
SLD78663	SLD71661	3.61	4.29	1.91	0.04	0.92	1.00	1.62	0.27	-0.36	0.39	0.17
SLD78665	SLD71664	3.44	5.68	2.70	0.01	1.60	1.31	1.90	0.16	0.02	0.54	0.31
SLD78667	SLD71666	3.38	2.38	2.89	0.54	1.12	0.81	1.03	-0.17	-0.01	0.36	0.07
SLD78669	SLD71668	2.49	2.52	3.05	0.25	0.94	0.86	1.42	0.28	0.67	0.29	0.07
SLD78671	SLD71701	5.96	7.12	17.57	1.18	1.28	1.06	1.63	0.28	0.70	0.91	0.68
SLD78673	SLD71672	1.30	1.57	0.88	-0.02	0.40	0.43	1.06	0.10	-0.21	0.15	0.00
SLD78674	SLD71672	3.90	5.47	3.51	0.31	0.78	0.97	1.87	0.12	0.20	0.50	0.28
SLD78676	SLD71675	4.03	5.22	2.67	0.04	0.92	1.15	1.95	0.29	0.34	0.48	0.26
SLD78678	SLD71677	2.10	3.37	4.91	0.29	0.77	0.81	1.54	0.11	0.56	0.38	0.16
SLD78680	SLD71679	1.87	3.71	1.21	0.26	0.98	0.78	1.25	0.12	-0.10	0.34	0.12
SLD78682	SLD71681	2.42	2.92	2.04	-0.01	1.04	0.76	1.72	0.12	0.82	0.30	0.08
SLD78684	SLD71683	1.57	2.30	1.58	-0.14	1.07	0.79	1.49	0.16	0.28	0.26	0.03
SLD78685	SLD71683	2.10	2.48	1.46	-0.17	0.75	0.98	1.22	0.22	0.39	0.26	0.04
SLD78686	SLD71683	2.60	3.49	2.84	0.13	1.07	0.93	1.53	0.30	0.21	0.36	0.13

Notes:

SOR_B = sum of ratios for the background soils.

Subsurface soil samples were collected below the upper 6 inches of the exposed ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

DT-6 Survey Unit 2 Class 2 Surface Data Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-6 Survey Unit 2 Class 2 Surface Data Summary											
Statistic	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
Mean	Systematic	1.47	2.86	2.07	0.15	0.80	0.48	0.87	0.09	0.05	0.78	0.26
Median	Systematic	1.17	2.59	1.64	0.13	0.71	0.35	0.82	0.09	0.07	0.71	0.14
Standard Deviation	Systematic	0.82	1.41	1.43	0.12	0.54	0.30	0.54	0.08	0.25	0.37	0.28
Number of samples	Systematic	32	32	32	32	32	32	32	32	32	32	32
Maximum	All	3.56	5.64	6.88	0.46	2.96	1.13	2.67	0.35	0.45	1.47	0.85
Range	All	3.03	4.84	6.40	0.46	2.87	1.03	2.52	0.35	0.45	1.25	0.85

Sample ID	HTZ Area (m^2)	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
SLD06503	--	Systematic	0.84	2.31	1.37	0.07	0.73	0.30	0.56	0.11	-0.09	0.64	0.07
SLD06505	--	Systematic	0.89	1.79	1.20	0.01	0.63	0.28	0.73	0.00	-0.05	0.51	0.00
SLD06507	--	Systematic	1.08	3.82	1.74	0.03	0.67	0.28	0.55	0.02	-0.23	0.93	0.38
SLD06509	--	Systematic	0.62	1.09	0.47	0.06	0.40	0.18	0.25	0.03	0.25	0.31	0.00
SLD06511	--	Systematic	0.53	0.99	0.67	0.00	0.09	0.18	0.45	0.02	-0.05	0.25	0.00
SLD06513	--	Systematic	3.56	4.65	4.86	0.46	1.30	1.13	1.30	0.35	0.20	1.29	0.65
SLD06519	--	Systematic	1.97	2.52	2.12	0.15	1.09	0.79	1.21	0.11	0.38	0.77	0.13
SLD06521	--	Systematic	1.34	3.59	2.27	0.08	0.66	0.34	0.69	0.08	0.16	0.90	0.35
SLD06523	--	Systematic	2.53	3.98	4.46	0.18	1.07	1.02	1.07	-0.01	-0.42	1.10	0.48
SLD06525	--	Systematic	0.94	1.64	1.59	0.10	0.58	0.35	0.41	0.07	0.27	0.48	0.00
SLD06529	--	Systematic	3.35	5.52	6.88	0.31	1.14	1.08	1.55	0.12	0.16	1.47	0.85
SLD06531	--	Systematic	1.75	4.39	1.20	0.21	1.08	0.65	1.32	0.19	0.00	1.12	0.49
SLD06533	--	Systematic	1.41	1.94	2.34	0.09	0.86	0.56	0.87	0.13	-0.17	0.61	0.02
SLD06535	--	Systematic	2.37	4.03	4.45	0.39	0.55	0.79	1.26	0.11	0.03	1.05	0.48
SLD06537	--	Systematic	1.03	2.10	1.28	0.04	0.21	0.24	0.45	0.02	0.43	0.49	0.03
SLD06539	--	Systematic	1.13	0.96	1.07	0.07	0.15	0.29	0.15	0.08	0.09	0.30	0.00
SLD06541	--	Systematic	1.45	4.00	0.66	0.33	1.42	0.52	1.30	0.18	0.21	1.10	0.48
SLD06543	--	Systematic	1.22	3.29	1.56	0.13	0.95	0.38	1.03	0.18	0.30	0.88	0.27
SLD06545	--	Systematic	2.09	3.52	3.48	0.28	1.36	0.80	1.43	0.10	-0.25	1.05	0.41
SLD06547	--	Systematic	0.66	1.27	1.62	-0.01	0.30	0.17	0.15	0.09	0.38	0.35	0.00
SLD06549	--	Systematic	0.90	1.61	1.96	0.10	0.68	0.60	1.03	0.10	0.30	0.50	0.01
SLD06559	--	Systematic	1.02	2.65	1.65	0.16	0.42	0.18	0.31	0.08	0.06	0.65	0.15
SLD06561	--	Systematic	0.54	0.80	1.10	0.13	0.18	0.09	0.39	0.01	0.02	0.22	0.00
SLD06563	--	Systematic	0.80	2.23	1.24	0.07	0.32	0.12	0.34	0.08	-0.39	0.53	0.06
SLD06565	--	Systematic	1.12	1.32	1.07	0.08	0.85	0.33	0.96	0.10	0.12	0.46	0.00
SLD06567	--	Systematic	1.60	3.40	1.94	0.15	2.96	0.35	2.67	0.14	0.11	1.31	0.67
SLD06569	--	Systematic	1.33	3.18	2.70	0.16	0.81	0.47	0.77	0.08	-0.06	0.85	0.27
SLD06571	--	Systematic	0.75	1.80	0.83	0.12	0.59	0.19	0.45	0.00	-0.32	0.49	0.00
SLD06573	--	Systematic	0.85	2.06	0.74	0.07	0.38	0.29	0.40	0.00	0.14	0.50	0.02
SLD06575	--	Systematic	2.96	5.22	3.20	0.43	1.18	0.87	1.44	0.15	-0.09	1.34	0.71
SLD06577	--	Systematic	2.11	4.12	1.84	0.22	1.12	0.70	1.18	0.19	0.45	1.08	0.45
SLD06579	--	Systematic	2.47	5.64	2.60	0.26	0.89	0.73	1.15	0.02	-0.48	1.36	0.76

Notes:

SOR_B = sum of ratios for the background soils.

Surface soil samples were collected within the upper 6 inches of the exposed ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

DT-6 Survey Unit 2 Class 2 Subsurface Data Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-6 Survey Unit 2 Class 2 Subsurface Data Summary											
Statistic	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
Mean	2.76	4.30	3.90	0.27	1.19	0.93	1.30	0.19	0.15	0.45	0.23
Median	2.55	3.67	3.50	0.24	1.27	0.99	1.25	0.18	0.13	0.42	0.19
Standard Deviation	1.26	1.84	2.01	0.13	0.49	0.31	0.62	0.11	0.36	0.16	0.15
Number of samples	32	32	32	32	32	32	32	32	32	32	32
Maximum	7.46	9.25	9.56	0.69	1.99	1.41	3.76	0.42	0.91	0.81	0.58
Range	6.78	7.60	8.94	0.59	1.60	1.18	3.35	0.42	0.91	0.66	0.58

Sample ID	Station Name	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SORg	SORn
SLD06504	SLD06503	1.95	2.87	2.73	0.22	1.30	0.75	1.48	0.25	0.35	0.33	0.10
SLD06506	SLD06505	7.46	6.78	8.97	0.69	1.96	1.35	1.25	0.27	0.50	0.81	0.53
SLD06508	SLD06507	2.01	3.03	2.87	0.13	0.76	0.88	1.22	0.18	0.45	0.32	0.10
SLD06510	SLD06509	3.35	4.96	2.99	0.27	1.67	1.32	2.05	0.21	0.32	0.50	0.27
SLD06512	SLD06511	2.22	2.57	2.87	0.26	0.62	0.93	1.12	0.27	0.55	0.29	0.07
SLD06514	SLD06513	2.83	3.36	3.06	0.23	0.75	1.18	1.57	0.20	0.16	0.36	0.14
SLD06520	SLD06519	3.19	4.08	3.90	0.12	1.39	1.25	1.42	0.34	0.09	0.44	0.21
SLD06522	SLD06521	2.69	3.89	3.00	0.25	1.91	1.08	1.93	0.18	-0.38	0.45	0.22
SLD06524	SLD06523	2.23	2.92	3.53	0.16	1.34	1.06	0.96	0.17	-0.16	0.35	0.12
SLD06526	SLD06525	2.49	2.45	3.92	0.16	1.18	1.03	1.04	0.04	-0.25	0.32	0.09
SLD06530	SLD06529	1.48	2.87	3.00	0.23	1.00	0.83	0.75	0.18	-0.03	0.32	0.09
SLD06532	SLD06531	3.56	3.76	6.83	0.36	1.64	1.38	1.43	0.42	0.64	0.50	0.26
SLD06534	SLD06533	3.93	4.70	9.56	0.45	1.56	1.24	1.25	0.18	0.31	0.61	0.38
SLD06536	SLD06535	2.91	3.58	3.92	0.24	1.99	1.02	1.02	0.20	0.68	0.45	0.22
SLD06538	SLD06537	2.03	4.24	1.44	0.14	0.39	0.60	1.71	0.18	0.10	0.35	0.15
SLD06540	SLD06539	2.13	3.26	2.30	0.19	0.55	0.64	0.67	0.16	0.91	0.31	0.11
SLD06542	SLD06541	1.78	2.79	2.38	0.28	1.24	0.91	1.25	0.14	-0.50	0.32	0.08
SLD06544	SLD06543	4.71	7.60	5.55	0.37	1.44	1.33	3.76	0.31	-0.36	0.71	0.49
SLD06546	SLD06545	4.62	6.64	4.59	0.30	0.85	1.07	1.30	0.17	-0.39	0.61	0.38
SLD06548	SLD06547	2.61	4.96	4.02	0.44	1.81	0.99	1.92	0.35	-0.13	0.53	0.30
SLD06550	SLD06549	3.50	8.86	6.71	0.48	1.24	0.72	1.40	0.25	-0.23	0.81	0.58
SLD06560	SLD06559	3.26	9.25	4.78	0.26	0.68	0.69	0.68	0.24	0.18	0.76	0.55
SLD06562	SLD06561	3.59	4.91	5.00	0.40	1.32	1.41	1.51	0.39	0.33	0.52	0.30
SLD06564	SLD06563	2.23	5.06	4.10	0.17	1.58	0.99	1.09	0.15	-0.26	0.52	0.29
SLD06566	SLD06565	3.27	3.48	3.47	0.30	1.53	1.19	1.36	0.24	0.26	0.40	0.17
SLD06568	SLD06567	2.12	3.37	2.67	0.19	0.55	0.50	0.94	0.10	0.52	0.31	0.12
SLD06570	SLD06569	1.37	2.85	1.95	0.16	0.60	0.52	0.73	0.03	0.07	0.27	0.07
SLD06572	SLD06571	0.68	1.65	0.62	0.10	0.45	0.23	0.56	0.04	-0.01	0.15	0.00
SLD06574	SLD06573	2.14	5.40	1.97	0.17	0.66	0.48	0.73	0.25	0.39	0.44	0.24
SLD06576	SLD06575	1.37	3.53	2.25	0.22	1.00	0.42	1.27	0.00	0.07	0.35	0.12
SLD06578	SLD06577	1.73	2.64	3.79	0.20	1.39	0.74	0.41	-0.01	0.59	0.34	0.11
SLD06580	SLD06579	2.74	5.41	6.08	0.43	1.89	1.11	1.96	0.11	0.11	0.61	0.38

Notes:

SOR_B = sum of ratios for the background soils.

Subsurface soil samples were collected below the upper 6 inches of the exposed ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

DT-7 Survey Unit 1 Surface Data Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-7 Survey Unit 1 Surface Data Summary											
Statistic	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
Mean	Systematic	2.53	2.74	2.64	0.12	1.08	0.82	1.31	0.11	0.19	0.32	0.11
Median	Systematic	2.22	2.54	2.86	0.09	0.99	0.81	1.32	0.13	0.15	0.31	0.07
Standard Deviation	Systematic	1.32	1.16	1.29	0.18	0.45	0.31	0.56	0.08	0.26	0.13	0.10
Number of samples	Systematic	24	24	24	24	24	24	24	24	24	24	24
Maximum	All	10.62	8.48	16.67	1.01	2.23	1.59	2.81	0.51	1.33	1.06	0.78
Range	All	9.67	7.37	16.11	1.01	1.85	1.43	2.37	0.51	1.33	0.93	0.78

Sample ID	HTZ Area (m^2)	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
HTZ68207	10	Biased	7.86	8.48	16.67	1.01	0.67	1.20	2.28	0.51	0.19	0.98	0.76
HTZ68208	10	Biased	4.07	5.80	4.78	0.50	0.99	0.86	1.21	0.27	0.54	0.55	0.32
HTZ68209	1	Biased	2.67	6.64	5.37	0.38	0.83	0.85	1.45	0.03	0.64	0.61	0.39
HTZ68210	2	Biased	4.93	5.23	7.16	0.42	1.54	1.03	1.20	0.30	0.04	0.59	0.36
HTZ68211	1	Biased	10.62	6.07	12.23	0.97	1.49	1.59	1.37	0.21	-0.09	1.06	0.78
HTZ68212	0.3	Biased	5.61	6.24	8.83	0.64	1.92	1.19	2.04	0.06	0.39	0.72	0.49
HTZ68213	10	Biased	3.51	4.61	3.81	0.31	1.93	1.23	1.98	0.32	0.38	0.51	0.28
HTZ68214	10	Biased	5.13	4.94	4.34	0.31	1.17	1.22	2.24	0.19	0.31	0.51	0.28
HTZ68215	2	Biased	5.36	4.09	5.04	0.27	1.42	1.50	1.38	0.08	0.55	0.56	0.28
HTZ68216	5	Biased	3.36	5.02	1.63	0.07	1.81	1.04	2.11	0.07	0.37	0.49	0.26
HTZ68217	5	Biased	4.88	5.72	3.57	0.33	1.80	1.15	1.36	0.25	0.05	0.57	0.34
HTZ68218	2	Biased	6.97	6.82	9.29	0.62	1.51	1.16	1.51	0.05	0.94	0.75	0.51
HTZ68219	5	Biased	7.49	6.91	12.72	0.53	0.91	1.08	1.42	0.43	0.98	0.83	0.57
HTZ68220	5	Biased	5.76	6.44	11.64	0.57	1.16	1.10	1.02	0.25	1.33	0.74	0.51
HTZ69482	1	Biased	5.36	5.86	6.32	0.39	1.36	1.01	1.70	0.38	0.66	0.61	0.38
HTZ69488	1	Biased	3.84	5.70	4.74	0.18	0.73	0.82	1.29	0.12	0.31	0.53	0.32
HTZ70888	0.5	Biased	7.27	6.29	10.77	0.76	1.29	1.09	1.68	0.37	0.27	0.79	0.50
HTZ70890	1	Biased	3.05	2.86	6.82	0.25	0.79	0.77	0.80	0.19	-0.13	0.39	0.17
HTZ70891	1	Biased	2.44	3.78	6.66	0.47	1.60	0.93	1.22	0.12	0.17	0.49	0.26
SLD70315	--	Systematic	2.15	1.62	2.18	-0.22	0.97	0.85	1.03	0.14	0.41	0.25	0.01
SLD70316	--	Systematic	1.23	1.82	1.03	0.04	1.26	0.84	1.39	0.13	0.36	0.23	0.01
SLD70317	--	Systematic	1.18	2.07	1.02	0.08	0.44	0.16	0.44	0.02	0.15	0.19	0.01
SLD70318	--	Systematic	2.68	3.25	2.82	0.27	0.96	0.78	1.19	0.14	0.10	0.34	0.11
SLD70319	--	Systematic	2.80	2.80	3.01	0.08	1.42	1.21	1.76	0.17	0.00	0.34	0.11
SLD70320	--	Systematic	4.83	4.88	4.45	0.09	0.90	1.35	1.55	0.27	-0.13	0.50	0.28
SLD70321	--	Systematic	3.62	3.59	2.27	0.58	1.18	0.74	1.71	0.20	0.13	0.37	0.13
SLD70322	--	Systematic	1.18	1.52	0.56	0.09	0.55	0.30	0.46	0.07	-0.10	0.15	0.00
SLD70323	--	Systematic	6.62	4.57	5.18	0.12	1.54	1.34	2.13	0.01	-0.20	0.65	0.36
SLD70324	--	Systematic	3.26	3.47	3.44	0.04	2.23	1.17	2.81	0.18	0.98	0.45	0.22
SLD70325	--	Systematic	1.79	1.26	2.41	0.33	0.38	0.58	0.78	0.16	-0.05	0.21	0.02
SLD70326	--	Systematic	0.95	1.24	0.81	0.05	0.40	0.32	0.56	0.03	0.10	0.13	0.00
SLD70327	--	Systematic	4.05	3.85	3.52	0.17	1.93	1.08	1.97	0.16	0.32	0.47	0.22
SLD70328	--	Systematic	2.23	2.01	2.90	0.14	1.29	0.84	0.75	0.18	0.00	0.29	0.05
SLD70329	--	Systematic	2.21	3.10	4.21	-0.09	0.83	0.83	1.37	0.09	0.50	0.35	0.13
SLD70330	--	Systematic	2.76	4.34	3.65	0.24	0.96	0.73	1.65	0.00	0.16	0.43	0.20
SLD70331	--	Systematic	2.58	3.83	3.04	0.12	1.41	0.86	1.35	-0.04	0.35	0.41	0.18
SLD70332	--	Systematic	1.32	2.44	0.78	0.09	0.97	0.53	1.04	0.05	0.14	0.24	0.03
SLD70333	--	Systematic	2.21	1.97	2.19	0.13	1.15	0.81	0.83	0.24	0.01	0.27	0.02
SLD70334	--	Systematic	1.54	1.63	1.13	-0.09	1.01	0.81	1.42	0.04	-0.07	0.20	0.00
SLD70335	--	Systematic	1.40	1.11	2.93	0.06	0.79	0.81	1.24	0.13	0.41	0.21	0.03
SLD70336	--	Systematic	1.86	2.64	1.87	-0.18	0.77	0.61	1.28	0.02	0.42	0.26	0.06
SLD70337	--	Systematic	2.91	2.40	3.79	0.33	1.17	1.20	0.98	0.10	0.45	0.35	0.09
SLD70338	--	Systematic	3.31	4.37	4.16	0.38	1.30	0.82	1.79	0.23	0.16	0.46	0.23

Notes:

SOR_B = sum of ratios for the background soils.

Surface soil samples were collected within the upper 6 inches of the exposed ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

DT-7 Survey Unit 1 Subsurface Data Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-7 Survey Unit 1 Subsurface Data Summary											
Statistic	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
Mean	2.81	3.09	2.76	0.17	1.13	0.88	1.37	0.10	0.21	0.35	0.13
Median	2.58	2.66	2.19	0.10	1.19	0.86	1.36	0.09	0.14	0.31	0.10
Standard Deviation	1.45	1.48	2.20	0.18	0.40	0.27	0.37	0.10	0.30	0.15	0.13
Number of samples	37	37	37	37	37	37	37	37	37	37	37
Maximum	6.65	7.48	12.22	0.56	2.00	1.43	2.27	0.40	1.00	0.77	0.49
Range	5.39	6.21	12.08	0.56	1.58	1.11	1.61	0.40	1.00	0.62	0.49

Sample ID	Station Name	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
HTZ70889	HTZ70888	2.58	2.96	1.99	0.08	1.55	0.97	1.47	0.22	0.22	0.34	0.11
SLD70339	SLD70321	2.48	3.42	2.10	0.19	1.03	0.69	1.43	0.03	0.01	0.34	0.11
SLD70340	SLD70318	1.89	2.61	1.89	0.44	0.60	0.49	0.82	0.08	0.24	0.25	0.05
SLD70341	SLD70317	3.00	3.64	1.27	0.28	0.65	0.66	1.08	0.16	0.00	0.31	0.11
SLD70342	SLD70322	1.62	2.07	1.67	0.02	0.90	0.45	0.76	0.02	-0.23	0.23	0.01
SLD70343	SLD70323	5.97	7.48	3.83	0.56	1.50	1.07	1.36	0.16	0.75	0.68	0.44
SLD70344	SLD70324	3.56	3.81	2.80	0.36	1.26	1.43	1.85	0.09	-0.05	0.41	0.18
SLD70345	SLD70327	2.74	3.31	2.20	0.08	1.57	1.00	1.29	0.14	0.62	0.37	0.14
SLD70346	SLD70330	2.79	2.53	3.14	0.12	0.90	0.77	1.83	0.02	0.33	0.31	0.07
SLD70347	SLD70331	1.26	2.61	0.93	-0.02	0.77	0.55	1.13	0.09	0.11	0.24	0.04
SLD70348	SLD70332	3.36	1.40	5.60	0.47	1.11	0.70	1.34	0.09	0.58	0.41	0.12
SLD70349	SLD70338	6.65	5.79	12.22	0.41	1.25	1.17	1.66	0.40	0.48	0.77	0.49
SLD70350	SLD70321	1.32	1.78	0.14	0.03	1.38	0.63	1.19	0.07	-0.05	0.21	0.02
SLD70351	SLD70318	3.14	3.44	2.70	0.21	1.26	0.93	1.15	0.10	0.35	0.37	0.14
SLD70352	SLD70317	3.82	4.00	2.72	0.38	1.96	0.94	1.71	0.00	-0.11	0.45	0.22
SLD70353	SLD70322	1.40	1.31	1.25	0.05	0.42	0.32	0.66	-0.03	0.09	0.15	0.00
SLD70354	SLD70323	4.43	3.70	3.01	-0.04	1.25	1.05	1.32	-0.11	0.14	0.44	0.16
SLD70355	SLD70324	2.21	2.45	2.09	0.03	1.45	0.87	1.46	0.23	0.05	0.30	0.07
SLD70356	SLD70327	1.46	1.85	1.71	0.10	1.40	1.02	1.38	0.10	0.59	0.25	0.03
SLD70357	SLD70330	1.68	2.18	3.48	0.12	0.86	0.72	1.15	0.21	0.12	0.27	0.06
SLD70358	SLD70331	1.35	2.05	1.07	-0.01	1.35	0.58	1.74	0.12	-0.13	0.25	0.02
SLD70359	SLD70332	1.41	2.17	1.05	0.05	0.43	0.83	1.29	0.08	0.11	0.22	0.02
SLD70360	SLD70338	4.46	5.15	7.36	0.29	1.07	1.02	1.47	0.20	0.24	0.56	0.34
SLD70361	SLD70321	2.21	1.79	1.93	-0.01	0.99	0.77	1.63	-0.01	0.13	0.25	0.01
SLD70362	SLD70318	4.28	5.27	2.96	0.10	1.44	1.38	2.27	0.26	0.52	0.51	0.28
SLD70363	SLD70317	6.32	6.21	3.83	0.10	1.83	1.23	1.85	0.32	0.84	0.62	0.38
SLD70364	SLD70322	1.53	1.63	1.65	0.23	1.26	0.98	1.36	0.02	-0.21	0.23	0.02
SLD70365	SLD70323	1.52	1.27	0.95	-0.10	1.28	0.81	0.98	0.04	-0.06	0.21	0.01
SLD70366	SLD70324	4.20	4.91	6.76	0.45	2.00	1.43	2.04	-0.02	1.00	0.60	0.36
SLD70367	SLD70327	1.54	1.56	1.66	-0.03	0.94	0.86	1.31	0.05	0.21	0.20	0.00
SLD70368	SLD70330	1.31	1.56	1.26	-0.02	1.19	0.72	1.63	0.09	0.16	0.21	0.01
SLD70369	SLD70331	3.77	3.10	2.80	0.34	0.52	0.68	0.92	0.05	0.34	0.35	0.10
SLD70370	SLD70332	2.80	3.82	2.73	0.23	0.95	0.89	1.77	0.07	0.32	0.37	0.15
SLD70371	SLD70338	1.65	2.11	1.51	0.05	1.04	0.99	1.19	0.02	0.30	0.24	0.02
SLD71433	SLD70318	2.63	3.44	2.73	0.28	0.61	0.79	1.06	0.12	-0.06	0.34	0.13
SLD71434	SLD70322	2.12	2.66	2.19	0.08	0.67	0.64	0.75	0.17	-0.13	0.27	0.06
SLD71435	SLD70324	3.56	3.15	2.88	0.43	1.20	1.35	1.47	0.10	0.06	0.38	0.14

Notes:

SOR_B = sum of ratios for the background soils.

Subsurface soil samples were collected below the upper 6 inches of the exposed ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

DT-7 Survey Unit 2 Surface Data Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-7 Survey Unit 2 Surface Data Summary											
Statistic	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
Mean	Systematic	3.06	3.73	3.40	0.18	1.15	0.84	1.51	0.22	0.32	0.42	0.18
Median	Systematic	3.14	2.89	3.31	0.21	1.10	0.86	1.55	0.19	0.22	0.36	0.11
Standard Deviation	Systematic	1.18	2.72	1.92	0.16	0.33	0.27	0.48	0.16	0.32	0.22	0.21
Number of samples	Systematic	19	19	19	19	19	19	19	19	19	19	19
Maximum	All	10.71	13.45	16.07	1.01	5.68	2.76	5.65	0.81	0.97	1.19	0.96
Range	All	9.59	12.14	15.23	1.01	5.18	2.53	4.99	0.79	0.97	1.03	0.96

Sample ID	HTZ Area (m^2)	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
HTZ68303	2	Biased	4.19	5.10	6.95	0.52	1.24	1.17	1.76	0.30	0.15	0.56	0.34
HTZ69357	2	Biased	10.71	10.20	6.85	0.55	1.77	1.07	1.74	0.49	-0.18	0.97	0.70
HTZ69358	2	Biased	3.92	3.28	4.28	0.26	0.97	1.27	1.26	0.10	0.25	0.43	0.17
HTZ69380	2	Biased	8.73	8.01	6.70	0.56	1.76	1.35	1.30	0.46	0.14	0.83	0.55
HTZ69381	10	Biased	5.96	5.36	16.07	1.01	1.47	1.10	1.60	0.50	0.07	0.82	0.55
HTZ69382	2	Biased	5.53	6.25	4.55	0.43	1.51	1.07	1.93	0.30	0.22	0.61	0.38
HTZ69483	2	Biased	4.47	13.45	10.75	0.56	1.18	0.76	0.93	0.81	0.92	1.19	0.96
HTZ69484	2	Biased	6.81	5.51	15.92	0.55	1.78	1.06	0.84	0.37	0.69	0.89	0.60
HTZ69485	10	Biased	2.91	4.50	7.16	0.21	5.68	2.76	5.65	0.35	0.41	0.82	0.59
HTZ69486	10	Biased	4.21	5.74	4.90	0.25	1.41	1.06	1.54	0.34	0.85	0.57	0.34
HTZ69487	2	Biased	4.91	5.32	7.45	0.51	1.25	1.09	1.27	0.31	-0.55	0.59	0.36
SLD70606	--	Systematic	3.44	12.90	7.71	0.56	1.05	0.82	1.90	0.63	0.97	1.08	0.86
SLD70607	--	Systematic	1.49	2.06	1.04	0.01	0.50	0.23	0.68	0.04	0.17	0.19	0.01
SLD70608	--	Systematic	1.68	3.83	1.30	-0.05	1.17	0.48	1.11	0.04	0.44	0.36	0.13
SLD70609	--	Systematic	2.81	2.64	3.40	0.28	1.05	0.87	1.38	0.51	-0.03	0.33	0.09
SLD70610	--	Systematic	5.24	3.21	3.88	0.04	1.69	1.16	1.97	0.31	0.36	0.54	0.25
SLD70611	--	Systematic	3.14	2.94	2.70	0.22	1.32	0.94	1.61	0.24	0.01	0.35	0.11
SLD70612	--	Systematic	2.42	2.79	3.31	0.30	1.66	0.73	1.62	0.16	0.49	0.36	0.13
SLD70613	--	Systematic	1.84	2.58	2.37	0.04	1.10	0.75	1.96	0.11	0.26	0.29	0.06
SLD70614	--	Systematic	4.92	3.55	6.27	0.21	1.07	1.04	1.55	0.25	0.10	0.52	0.25
SLD70615	--	Systematic	4.36	8.86	7.06	0.22	0.98	1.06	1.52	0.34	0.62	0.80	0.58
SLD70616	--	Systematic	3.02	2.89	2.02	0.22	1.14	0.87	1.61	0.35	0.09	0.32	0.08
SLD70617	--	Systematic	1.12	1.31	0.84	-0.02	0.77	0.34	0.66	0.07	0.20	0.16	0.00
SLD70618	--	Systematic	3.20	1.92	2.75	0.04	1.42	0.81	1.59	0.19	0.32	0.36	0.08
SLD70619	--	Systematic	2.15	2.56	1.78	0.05	0.89	0.86	1.30	0.17	0.22	0.27	0.05
SLD70620	--	Systematic	2.14	2.21	2.30	0.12	0.67	0.72	0.83	0.02	0.10	0.24	0.04
SLD70621	--	Systematic	3.88	3.59	4.12	0.16	1.43	1.12	2.28	0.20	0.86	0.44	0.19
SLD70622	--	Systematic	4.54	4.13	4.22	0.25	1.44	1.13	1.26	0.35	-0.15	0.48	0.22
SLD70623	--	Systematic	3.37	2.44	3.73	0.44	0.95	0.86	1.49	0.08	0.17	0.36	0.08
SLD70624	--	Systematic	3.44	4.54	3.81	0.30	1.55	1.26	2.40	0.11	0.92	0.48	0.25

Notes:

SOR_B = sum of ratios for the background soils.

Surface soil samples were collected within the upper 6 inches of the exposed ground surface

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

DT-7 Survey Unit 2 Subsurface Data Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-7 Survey Unit 2 Subsurface Data Summary											
Statistic	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
Mean	2.30	3.09	2.06	0.11	1.12	0.80	1.54	0.09	0.16	0.33	0.11
Median	1.99	3.08	1.70	0.05	1.14	0.88	1.66	0.10	0.17	0.31	0.08
Standard Deviation	1.01	1.28	1.15	0.20	0.43	0.29	0.49	0.08	0.21	0.12	0.10
Number of samples	18	18	18	18	18	18	18	18	18	18	18
Maximum	4.48	5.92	3.92	0.60	2.14	1.33	2.27	0.26	0.62	0.57	0.34
Range	3.40	4.65	3.67	0.60	1.69	1.16	1.79	0.26	0.62	0.41	0.34

Sample ID	Station Name	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
SLD70625	SLD70607	1.08	4.81	0.96	0.19	1.26	0.17	1.59	0.08	-0.06	0.42	0.20
SLD70626	SLD70608	1.30	2.21	1.34	-0.11	0.45	0.38	0.48	0.04	-0.02	0.20	0.02
SLD70627	SLD70612	3.97	3.59	3.22	0.38	0.50	0.86	1.31	0.12	0.20	0.39	0.15
SLD70628	SLD70618	2.51	2.76	1.85	0.16	1.34	0.89	1.94	0.06	0.19	0.31	0.08
SLD70629	SLD70624	2.95	4.45	3.92	0.26	0.91	1.00	1.73	0.13	-0.27	0.44	0.22
SLD70630	SLD70623	1.46	1.65	1.12	0.05	0.71	0.48	0.90	-0.01	0.13	0.18	0.00
SLD70631	SLD70607	1.91	2.87	2.18	-0.07	1.10	0.67	1.85	0.10	0.09	0.31	0.08
SLD70632	SLD70608	2.33	3.35	2.98	-0.17	1.18	0.69	1.84	0.07	0.26	0.36	0.13
SLD70633	SLD70612	1.67	1.95	1.37	0.09	1.24	1.01	2.27	0.14	0.33	0.24	0.01
SLD70634	SLD70618	2.00	2.91	1.19	0.03	1.31	0.74	1.46	0.10	0.08	0.31	0.08
SLD70635	SLD70624	4.48	5.92	3.52	0.04	1.62	1.07	1.89	0.26	0.28	0.57	0.34
SLD70636	SLD70623	1.97	3.24	1.55	0.00	0.88	0.57	1.04	0.05	0.05	0.31	0.09
SLD70637	SLD70607	3.44	4.62	3.12	0.60	2.14	1.14	1.89	0.16	0.62	0.51	0.28
SLD70638	SLD70608	2.88	3.49	3.07	-0.01	1.61	1.33	2.26	-0.11	0.31	0.40	0.17
SLD70639	SLD70612	1.38	1.49	0.25	0.00	0.47	0.91	1.02	0.11	0.16	0.17	0.00
SLD70640	SLD70618	1.42	1.65	0.74	0.05	1.10	0.91	1.00	0.17	0.44	0.20	0.00
SLD70641	SLD70624	3.39	3.32	3.65	0.39	1.13	0.93	1.75	0.09	-0.15	0.37	0.14
SLD70642	SLD70623	1.27	1.27	1.13	0.02	1.14	0.68	1.44	0.09	0.18	0.18	0.00

Notes:

SOR_B = sum of ratios for the background soils.

Subsurface soil samples were collected below the upper 6 inches of the exposed ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

DT-7 Survey Unit 3 Surface Data Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-7 Survey Unit 3 Surface Data Summary											
Statistic	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
Mean	Systematic	4.25	4.40	4.57	0.26	1.13	0.91	1.51	0.28	0.27	0.49	0.25
Median	Systematic	4.38	3.95	4.32	0.14	1.17	0.97	1.51	0.25	0.23	0.43	0.21
Standard Deviation	Systematic	1.94	2.12	3.39	0.33	0.39	0.28	0.59	0.26	0.32	0.21	0.19
Number of samples	Systematic	23	23	23	23	23	23	23	23	23	23	23
Maximum	All	9.24	12.48	31.62	1.88	4.60	2.40	5.28	0.93	0.96	1.43	1.20
Range	All	7.88	11.16	30.93	1.88	4.33	2.23	4.75	0.93	0.96	1.31	1.20

Sample ID	HTZ Area (m^2)	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
HTZ70853	4	Biased	3.01	3.81	2.16	-0.05	4.60	2.40	5.28	0.59	0.08	0.60	0.37
HTZ70854	4	Biased	3.51	3.68	2.23	0.35	0.82	0.63	1.01	0.14	0.14	0.34	0.13
HTZ70855	4	Biased	3.58	2.94	3.00	0.11	1.23	0.86	1.47	0.04	0.38	0.38	0.11
HTZ70857	4	Biased	3.72	4.72	10.73	0.55	1.45	0.89	1.64	0.03	0.85	0.63	0.39
HTZ70885	2	Biased	9.24	9.57	31.62	1.38	1.00	1.19	1.74	0.79	0.68	1.35	1.13
HTZ70905	1	Biased	8.35	6.63	19.39	1.12	0.90	1.27	1.97	0.42	0.21	1.03	0.75
HTZ70895	2	Biased	7.14	10.53	12.79	0.76	0.99	1.17	2.38	0.61	0.59	1.04	0.81
HTZ70897	2	Biased	7.8	12.48	22.61	1.88	2.24	1.17	2.67	0.77	0.96	1.43	1.20
HTZ70899	1	Biased	2.53	3.98	2.57	0.13	2.22	1.45	2.83	0.28	0.61	0.46	0.23
SLD71502	--	Systematic	4.44	2.93	3.68	-0.02	0.76	0.92	0.92	0.29	0.05	0.43	0.16
SLD71506	--	Systematic	1.36	1.32	0.69	0.13	0.27	0.17	0.93	0.03	0.28	0.12	0.00
SLD71510	--	Systematic	1.42	1.68	0.85	0.11	1.32	0.97	0.89	0.11	0.43	0.22	0.02
SLD71513	--	Systematic	3.16	4.89	2.26	0.09	0.77	0.77	0.81	0.13	-0.34	0.42	0.21
SLD71514	--	Systematic	7.89	7.05	16.47	1.11	1.37	1.22	1.36	0.11	0.95	0.95	0.66
SLD71518	--	Systematic	3.82	3.95	5.06	0.49	0.51	0.66	0.53	0.41	0.23	0.41	0.21
SLD71522	--	Systematic	5.50	4.44	9.43	0.78	0.97	1.13	1.74	0.88	0.77	0.63	0.35
SLD71526	--	Systematic	6.59	4.86	4.61	0.71	1.07	1.19	1.70	0.29	0.72	0.61	0.33
SLD71530	--	Systematic	4.71	6.24	4.32	0.26	1.17	1.15	1.36	0.33	0.23	0.58	0.36
SLD71534	--	Systematic	6.33	4.86	5.07	0.48	1.41	1.10	1.35	0.00	0.21	0.62	0.33
SLD71538	--	Systematic	4.56	3.69	4.85	0.35	1.40	0.97	1.84	0.25	0.36	0.49	0.21
SLD71542	--	Systematic	3.59	3.00	2.69	0.37	1.17	0.72	1.88	0.32	0.10	0.37	0.10
SLD71546	--	Systematic	6.36	6.56	7.66	0.42	1.50	1.14	1.73	0.27	0.52	0.69	0.46
SLD71550	--	Systematic	4.38	4.50	4.99	0.02	1.07	1.22	1.74	0.20	0.31	0.48	0.26
SLD71554	--	Systematic	4.14	3.23	3.31	-0.15	1.31	1.15	1.79	0.93	0.03	0.43	0.14
SLD71558	--	Systematic	3.14	3.51	2.21	0.03	1.06	0.64	1.51	0.04	0.25	0.35	0.12
SLD71559	--	Systematic	7.15	5.78	5.75	0.26	0.53	0.90	1.69	0.36	-0.07	0.65	0.38
SLD71563	--	Systematic	5.39	11.12	6.56	-0.24	1.63	1.19	2.66	0.64	0.84	0.98	0.75
SLD71564	--	Systematic	1.83	3.39	2.15	0.14	1.78	0.87	3.13	0.05	0.29	0.39	0.16
SLD71565	--	Systematic	2.21	2.62	1.77	0.04	1.31	0.78	0.93	0.07	-0.01	0.30	0.07
SLD71566	--	Systematic	1.73	2.53	2.26	-0.05	0.72	0.69	1.23	0.00	-0.05	0.26	0.06
SLD72874	--	Systematic	2.00	3.01	2.32	0.09	1.19	0.33	1.62	0.09	0.11	0.33	0.10
SLD72878	--	Systematic	5.98	5.93	6.10	0.66	1.66	0.98	1.34	0.59	-0.09	0.63	0.40

Notes:

SOR_B = sum of ratios for the background soils.

Surface soil samples were collected within the upper 6 inches of the exposed ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

DT-7 Survey Unit 3 Subsurface Data Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-7 Survey Unit 3 Subsurface Data Summary											
Statistic	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
Mean	2.88	2.82	3.24	0.17	1.11	0.97	1.47	0.21	0.29	0.35	0.12
Median	2.52	2.39	2.06	0.11	1.09	0.95	1.34	0.19	0.28	0.31	0.07
Standard Deviation	1.42	1.94	5.31	0.33	0.40	0.24	0.60	0.17	0.34	0.24	0.23
Number of samples	64	64	64	64	64	64	64	64	64	64	64
Maximum	9.00	15.47	41.71	2.33	3.10	2.06	4.67	1.18	1.07	1.99	1.76
Range	7.89	14.65	40.99	2.33	2.95	1.65	3.92	1.18	1.07	1.83	1.76

Sample ID	Station Name	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
HTZ70894	HTZ70885	9.00	15.47	41.71	2.33	1.82	1.36	2.89	1.18	0.66	1.99	1.76
HTZ70896	HTZ70895	2.68	2.69	3.46	0.17	0.99	0.91	1.90	0.23	0.38	0.31	0.09
HTZ70898	HTZ70897	3.73	4.32	8.34	0.40	1.20	1.27	2.50	0.34	0.35	0.54	0.32
SLD71503	SLD71502	2.12	3.55	1.39	0.21	1.68	1.05	2.40	0.32	0.12	0.38	0.15
SLD71504	SLD71502	1.72	1.03	2.44	-0.02	0.90	0.66	0.80	0.08	0.17	0.22	0.02
SLD71505	SLD71502	1.53	1.76	0.95	0.12	1.03	0.78	1.15	0.15	0.33	0.20	0.00
SLD71507	SDL71506	5.54	4.63	4.14	0.19	1.10	1.01	1.62	0.10	0.44	0.53	0.24
SLD71508	SDL71506	3.12	3.03	1.40	-0.07	0.99	0.89	1.37	0.34	0.15	0.30	0.07
SLD71509	SDL71506	2.36	1.99	2.03	0.02	0.99	0.91	1.56	0.21	0.05	0.26	0.02
SLD71511	SLD71510	2.82	3.87	2.42	0.17	0.69	1.02	1.39	0.19	0.24	0.37	0.15
SLD71515	SLD71514	6.42	5.53	14.99	1.08	1.18	1.05	2.09	0.16	0.30	0.81	0.52
SLD71516	SLD71514	1.54	1.22	1.47	0.08	1.11	0.90	1.21	0.06	0.42	0.21	0.00
SLD71517	SLD71514	2.49	2.65	2.92	0.10	1.09	0.82	0.99	0.03	0.80	0.31	0.08
SLD71519	SLD71518	2.20	2.27	2.22	0.27	3.10	2.06	4.67	0.40	-0.40	0.40	0.17
SLD71520	SLD71518	2.78	2.62	1.87	0.22	1.44	1.55	2.00	0.41	0.17	0.33	0.09
SLD71521	SLD71518	2.22	2.22	1.33	-0.09	1.21	0.81	1.11	0.29	0.24	0.26	0.03
SLD71523	SLD71522	3.59	4.95	4.06	0.09	1.51	0.95	0.80	0.31	0.47	0.51	0.28
SLD71524	SLD71522	1.71	1.58	1.35	0.27	0.94	1.00	1.18	0.32	-1.30	0.21	0.00
SLD71525	SLD71522	1.95	1.60	0.97	0.07	1.01	1.20	1.11	0.31	0.14	0.23	0.02
SLD71527	SLD71526	3.24	2.27	1.92	0.08	0.74	0.89	1.45	0.26	0.45	0.31	0.04
SLD71528	SLD71526	3.06	3.68	1.82	0.16	0.80	0.87	1.63	0.28	0.03	0.34	0.12
SLD71529	SLD71526	1.50	1.49	1.27	0.07	0.98	0.97	1.23	0.28	0.17	0.19	0.00
SLD71531	SLD71530	3.18	2.73	3.23	0.10	0.79	0.85	1.36	0.32	0.09	0.33	0.09
SLD71532	SLD71530	2.42	2.09	2.03	0.15	0.50	0.78	1.31	0.28	0.27	0.25	0.02
SLD71533	SLD71530	2.13	1.80	1.59	0.37	1.23	0.88	1.16	0.18	0.69	0.26	0.01
SLD71535	SLD71534	5.30	4.53	2.36	0.26	1.40	0.96	1.17	0.26	0.56	0.49	0.21
SLD71536	SLD71534	1.46	1.53	0.82	0.09	0.88	0.79	0.93	0.26	0.25	0.18	0.00
SLD71537	SLD71534	2.47	2.29	2.38	-0.07	1.56	0.94	1.45	0.18	0.59	0.32	0.07
SLD71539	SLD71538	2.14	1.82	1.40	0.00	0.83	0.67	1.59	0.18	0.36	0.23	0.00
SLD71540	SLD71538	2.03	1.85	1.45	0.11	0.58	0.49	1.59	0.14	0.18	0.20	0.00
SLD71541	SLD71538	1.86	1.73	1.72	-0.12	1.14	0.93	1.34	0.18	0.26	0.23	0.01
SLD71543	SLD71542	3.90	3.89	3.37	-0.05	1.16	0.98	1.19	-0.05	0.84	0.40	0.17
SLD71544	SLD71542	2.38	2.80	1.75	0.00	0.95	0.82	1.76	0.06	0.28	0.28	0.06
SLD71545	SLD71542	1.99	2.50	1.25	0.32	1.28	1.01	1.78	0.04	-0.12	0.28	0.05
SLD71547	SDL71546	4.50	3.97	5.63	0.39	1.49	1.32	1.83	0.34	0.10	0.51	0.25
SLD71548	SDL71546	2.38	2.41	2.41	0.10	1.36	1.09	1.29	0.40	0.33	0.30	0.07
SLD71549	SDL71546	3.07	2.56	4.00	-0.07	1.30	1.09	2.25	0.35	0.38	0.37	0.11
SLD71551	SLD71550	2.84	2.22	2.27	0.35	0.73	0.81	1.09	0.06	0.22	0.29	0.04
SLD71552	SLD71550	1.82	1.62	1.98	0.05	0.67	0.95	0.86	0.14	0.29	0.22	0.01
SLD71553	SLD71550	4.44	3.66	4.89	-0.01	1.03	1.13	1.14	-0.05	0.02	0.47	0.20
SLD71555	SLD71554	1.32	1.45	0.72	-0.10	0.75	0.41	1.05	0.10	-0.43	0.16	0.00
SLD71556	SLD71554	2.55	2.13	3.92	0.14	0.60	0.77	1.01	0.14	0.28	0.30	0.06
SLD71557	SLD71554	3.51	2.15	2.15	0.28	1.08	1.05	1.96	0.31	0.61	0.35	0.07
SLD71560	SLD71559	5.56	5.10	5.41	0.43	1.06	1.01	1.31	0.27	0.57	0.55	0.29
SLD71561	SLD71559	4.37	2.89	3.41	0.26	1.34	1.09	1.64	0.08	0.72	0.45	0.16
SLD71562	SLD71559	1.64	1.26	1.64	0.16	1.31	1.00	0.90	0.00	0.41	0.23	0.02
SLD72777	SLD71566	1.15	1.80	0.85	-0.04	1.32	0.88	1.13	0.07	-0.05	0.23	0.02
SLD72778	SLD71566	3.92	3.69	3.34	0.10	1.19	1.18	1.65	0.05	0.26	0.41	0.17
SLD72779	SLD71558	2.60	1.41	0.88	0.10	1.21	0.93	1.23	0.05	0.38	0.27	0.01
SLD72780	SLD71558	1.51	1.69	1.68	0.10	1.05	0.93	1.32	0.06	0.17	0.22	0.00
SLD72781	SLD71563	2.67	3.99	2.10	0.10	0.99	0.74	1.47	0.24	0.61	0.37	0.15
SLD72782	SLD71563	1.91	2.37	1.73	0.11	1.29	1.01	0.92	0.01	0.17	0.28	0.05
SLD72783	SLD71565	2.79	2.64	2.68	-0.05	1.24	0.76	0.86	-0.01	0.08	0.32	0.08
SLD72784	SLD71565	1.70	1.84	1.41	0.00	1.22	0.94	1.33	0.13	0.37	0.23	0.01
SLD72785	SLD71564	2.33	3.42	1.90	0.16	1.40	0.96	1.69	0.10	0.67	0.36	0.13
SLD72786	SLD71564	2.60	2.92	2.00	0.10	1.39	0.96	1.54	0.14	0.02	0.33	0.10
SLD72872	SLD71513	3.94	3.10	2.75	0.26	1.05	0.97	1.72	0.23	0.18	0.39	0.11
SLD72873	SLD71513	3.32	2.46	2.51	0.16	1.03	1.01	1.03	0.35	0.49	0.34	0.06
SLD72875	SLD72874	3.24	2.09	3.06	0.39	0.15	1.26	0.75	0.18	0.53	0.36	0.08
SLD72876	SLD72874	2.35	2.35	2.46	0.07	1.63	1.27	2.28	0.34	0.01	0.31	0.08
SLD72877	SLD72874	5.48	4.36	5.27	0.12	1.02	1.03	1.58	0.26	1.07	0.54	0.26
SLD72879	SLD72878	3.79	2.85	3.67	0.23	0.46	1.06	1.39	0.38	0.78	0.40	0.12
SLD72880	SLD72878	1.11	0.82	1.27	-0.04	1.39	0.45	1.31	0.09	-0.13	0.19	0.02
SLD72881	SLD72878	1.45	1.10	1.73	0.22	0.75	0.84	1.08	0.30	0.50	0.19	0.01

Notes:

SOR_B = sum of ratios for the background soils.

Subsurface soil samples were collected below the upper 6 inches of the exposed ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

DT-7 Survey Unit 4 Surface Data Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-7 Survey Unit 4 Surface Data Summary											
Statistic	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
Mean	Systematic	3.58	3.78	3.71	0.21	1.06	0.89	1.49	0.18	0.18	0.42	0.19
Median	Systematic	3.63	3.94	3.61	0.17	1.12	0.89	1.55	0.15	0.14	0.44	0.19
Standard Deviation	Systematic	1.42	1.31	1.61	0.23	0.36	0.30	0.54	0.15	0.49	0.13	0.11
Number of samples	Systematic	22	22	22	22	22	22	22	22	22	22	22
Maximum	All	10.12	6.86	10.55	1.02	1.91	1.40	2.78	0.67	1.25	0.99	0.70
Range	All	9.37	5.87	9.81	1.08	1.60	1.08	2.36	0.65	2.14	0.88	0.70

Sample ID	HTZ Area (m^2)	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
HTZ69481	2	Biased	5.36	5.20	8.26	0.56	1.23	1.10	1.08	0.40	0.55	0.60	0.36
HTZ70858	3	Biased	6.99	6.85	5.22	0.24	1.91	1.05	2.54	0.28	0.16	0.70	0.46
HTZ70859	3	Biased	7.89	6.86	5.86	0.24	1.37	1.06	1.71	0.40	0.54	0.73	0.45
HTZ70860	3	Biased	10.12	6.64	10.55	0.63	1.49	1.08	2.78	0.50	0.21	0.99	0.70
SLD71573	--	Systematic	2.69	6.49	4.02	0.26	1.39	0.67	1.59	0.03	0.62	0.61	0.37
SLD71577	--	Systematic	3.88	4.05	3.17	0.45	1.42	1.40	1.71	0.17	0.76	0.43	0.21
SLD71581	--	Systematic	2.46	2.69	3.67	0.08	1.10	0.79	1.01	0.05	-0.09	0.33	0.09
SLD71585	--	Systematic	4.27	4.34	7.00	1.02	1.32	1.25	1.73	0.35	1.25	0.52	0.29
SLD71589	--	Systematic	3.45	4.58	6.59	0.39	1.13	0.79	1.27	0.29	-0.22	0.51	0.28
SLD71593	--	Systematic	4.55	4.09	4.82	0.41	1.11	0.96	1.57	0.19	0.29	0.47	0.21
SLD71597	--	Systematic	3.71	2.73	4.30	0.04	1.00	1.34	1.46	0.24	0.53	0.42	0.15
SLD71601	--	Systematic	5.68	5.72	5.13	0.18	1.12	1.17	2.67	0.32	-0.89	0.56	0.34
SLD71605	--	Systematic	6.59	5.35	5.34	0.30	1.03	1.08	1.91	0.67	0.54	0.62	0.34
SLD71609	--	Systematic	4.33	4.62	5.03	0.12	1.01	0.89	1.53	0.10	-0.14	0.48	0.25
SLD71613	--	Systematic	2.01	3.03	2.44	0.28	0.35	0.41	0.47	0.08	0.02	0.28	0.09
SLD71617	--	Systematic	4.06	4.41	4.65	0.14	1.17	0.89	1.75	0.37	0.26	0.46	0.23
SLD71621	--	Systematic	2.81	3.88	2.64	0.26	1.44	0.89	1.67	0.14	-0.04	0.41	0.18
SLD71622	--	Systematic	1.51	2.59	1.12	0.04	0.59	0.38	1.10	0.06	-0.08	0.23	0.04
SLD71623	--	Systematic	1.78	2.14	1.33	0.22	0.85	0.65	1.48	0.04	0.41	0.23	0.01
SLD71624	--	Systematic	3.32	3.82	3.38	0.00	1.17	0.79	1.46	0.21	0.53	0.40	0.17
SLD71625	--	Systematic	0.75	0.99	0.74	0.05	0.31	0.32	0.42	0.06	-0.53	0.10	0.00
SLD71626	--	Systematic	3.56	2.91	3.21	-0.06	0.59	0.70	0.88	0.02	-0.05	0.35	0.10
SLD71627	--	Systematic	5.72	3.99	3.84	0.05	1.67	1.22	2.06	0.29	0.03	0.57	0.28
SLD71628	--	Systematic	4.11	5.33	3.54	0.33	1.52	1.08	2.14	0.08	-0.43	0.53	0.30
SLD71629	--	Systematic	4.48	2.83	3.30	0.16	1.23	0.97	1.90	0.15	0.75	0.45	0.16
SLD71630	--	Systematic	3.09	2.65	2.41	-0.02	0.86	0.91	0.93	0.10	0.39	0.31	0.07

Notes:

SOR_B = sum of ratios for the background soils.

Surface soil samples were collected within the upper 6 inches of the exposed ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

DT-7 Survey Unit 4 Subsurface Data Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-7 Survey Unit 4 Subsurface Data Summary											
Statistic	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
Mean	2.88	2.78	3.42	0.18	1.12	0.94	1.39	0.16	0.20	0.36	0.13
Median	2.34	2.60	2.19	0.08	1.06	0.95	1.34	0.12	0.17	0.30	0.08
Standard Deviation	1.48	1.40	5.82	0.36	0.36	0.25	0.42	0.17	0.39	0.18	0.16
Number of samples	55	55	55	55	55	55	55	55	55	55	55
Maximum	6.74	7.87	43.41	2.29	1.97	1.92	2.61	0.80	1.54	1.09	0.88
Range	5.90	7.22	43.41	2.29	1.57	1.50	1.93	0.80	1.54	0.98	0.88

Sample ID	Station Name	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
SLD71574	SLD71573	5.40	7.87	6.06	-0.03	1.11	1.09	1.41	0.29	0.13	0.72	0.50
SLD71575	SLD71573	5.13	3.36	9.44	0.53	1.66	0.99	1.41	0.27	-0.11	0.64	0.35
SLD71576	SLD71573	1.32	0.90	0.20	0.06	1.08	0.86	1.46	0.09	0.65	0.16	0.00
SLD71578	SLD71577	3.65	2.98	2.26	0.10	1.07	0.88	1.27	0.30	-0.84	0.36	0.09
SLD71579	SLD71577	1.11	0.79	-0.24	0.08	0.87	0.71	1.16	0.06	0.48	0.13	0.00
SLD71580	SLD71577	1.57	2.59	0.13	-0.21	0.65	0.68	1.05	0.08	0.12	0.22	0.04
SLD71582	SLD71581	5.02	4.76	4.22	-0.07	1.42	0.97	1.04	0.27	0.31	0.51	0.27
SLD71583	SLD71581	2.13	1.79	2.93	0.09	0.83	0.96	1.28	0.18	0.25	0.26	0.03
SLD71584	SLD71581	2.02	2.25	1.46	-0.14	0.93	0.91	1.59	0.10	0.23	0.24	0.02
SLD71586	SLD71585	1.80	1.99	1.38	0.05	0.99	0.92	1.25	0.13	0.53	0.23	0.00
SLD71587	SLD71585	1.30	1.35	0.82	0.05	0.89	0.79	0.88	0.06	0.32	0.17	0.00
SLD71588	SLD71585	1.40	1.20	0.89	0.07	0.78	0.83	0.82	0.12	0.21	0.17	0.00
SLD71590	SLD71589	3.74	4.09	4.03	-0.06	1.65	0.97	1.83	-0.06	0.35	0.46	0.23
SLD71591	SLD71589	3.25	3.03	2.13	0.01	0.89	0.85	0.82	0.00	-0.04	0.32	0.09
SLD71592	SLD71589	2.57	1.95	2.77	0.20	1.06	0.89	1.19	-0.01	0.62	0.30	0.03
SLD71594	SLD71593	4.00	3.31	3.16	0.12	1.60	1.38	1.94	0.51	-0.41	0.44	0.16
SLD71595	SLD71593	2.05	1.23	1.50	-0.01	0.67	1.08	0.87	0.16	-0.01	0.24	0.01
SLD71596	SLD71593	0.91	0.65	0.63	0.08	0.40	0.52	1.07	0.08	-0.06	0.11	0.00
SLD71598	SLD71597	0.84	1.21	0.58	-0.09	1.03	0.48	0.70	0.07	-0.66	0.16	0.00
SLD71599	SLD71597	1.81	2.60	43.41	2.29	0.76	0.66	1.42	0.20	-0.16	1.09	0.88
SLD71600	SLD71597	1.47	1.79	1.25	-0.05	1.70	1.08	1.70	0.05	0.33	0.26	0.04
SLD71602	SLD71601	2.33	2.67	1.08	0.23	1.35	0.98	1.52	0.17	0.17	0.29	0.07
SLD71603	SLD71601	3.35	4.47	4.01	0.03	1.89	1.92	2.49	0.13	-0.03	0.51	0.28
SLD71604	SLD71601	1.49	2.10	1.09	0.00	0.92	0.99	1.38	0.06	0.13	0.23	0.01
SLD71606	SLD71605	3.17	4.60	3.83	0.07	1.84	1.34	2.22	0.14	0.14	0.51	0.27
SLD71607	SLD71605	1.85	1.84	1.67	0.01	0.94	0.99	1.16	0.08	0.57	0.22	0.01
SLD71608	SLD71605	2.34	3.14	1.84	0.04	1.50	1.02	1.20	-0.08	0.31	0.35	0.11
SLD71610	SLD71609	2.45	2.93	1.53	0.19	1.59	1.09	1.91	0.07	0.14	0.33	0.10
SLD71611	SLD71609	4.32	3.35	3.78	0.33	1.31	0.95	1.90	0.21	0.04	0.45	0.16
SLD71612	SLD71609	1.54	1.06	1.50	0.03	0.91	0.88	1.43	0.07	0.17	0.19	0.00
SLD71614	SLD71613	5.01	5.29	6.16	0.61	1.97	1.32	2.61	0.10	-0.19	0.61	0.38
SLD71615	SLD71613	2.03	2.74	1.84	-0.02	1.46	0.87	1.74	0.21	0.07	0.32	0.09
SLD71616	SLD71613	1.82	2.11	2.19	0.15	1.02	0.91	1.62	-0.02	0.05	0.25	0.03
SLD71618	SLD71617	5.94	2.93	3.80	0.85	1.15	1.12	2.15	0.57	1.54	0.55	0.27
SLD71619	SLD71617	3.03	3.53	3.35	0.37	1.12	1.25	1.44	-0.03	1.04	0.39	0.16
SLD71620	SLD71617	1.82	2.28	1.79	0.29	0.74	0.73	1.19	0.11	0.22	0.24	0.03
SLD72756	SLD71621	2.31	3.10	1.70	0.23	0.83	0.78	1.34	0.73	0.11	0.30	0.08
SLD72757	SLD71621	2.22	1.93	1.60	0.24	0.78	0.90	0.68	0.80	0.05	0.24	0.00
SLD72758	SLD71622	2.19	2.56	3.47	-0.06	0.41	0.54	1.10	0.21	-0.42	0.28	0.08
SLD72759	SLD71622	3.40	2.85	5.45	0.49	1.29	1.12	1.54	0.10	0.23	0.42	0.15
SLD72760	SLD71622	1.86	1.16	0.87	0.15	1.10	1.01	1.46	0.26	0.47	0.21	0.00
SLD72761	SLD71623	1.73	1.27	2.28	0.20	0.96	0.84	1.10	0.11	-0.20	0.22	0.02
SLD72762	SLD71624	1.79	1.71	1.55	0.04	1.05	1.00	1.29	0.13	-0.01	0.22	0.01
SLD72763	SLD71625	1.89	2.17	-0.18	0.31	0.80	0.63	1.50	0.09	0.40	0.19	0.02
SLD72764	SLD71626	4.17	3.55	5.00	0.31	1.07	0.68	0.99	0.19	0.07	0.45	0.18
SLD72765	SLD71626	4.08	3.29	2.91	0.18	1.43	1.03	1.65	0.22	0.44	0.43	0.14
SLD72766	SLD71626	6.74	4.77	4.97	0.35	0.90	1.15	1.51	0.25	0.14	0.63	0.35
SLD72767	SLD71627	5.02	3.54	6.95	0.47	1.03	1.18	1.29	0.16	0.67	0.55	0.27
SLD72768	SLD71627	2.50	2.27	2.59	0.23	1.18	1.03	1.79	0.38	0.22	0.30	0.05
SLD72769	SLD71628	2.67	4.19	2.23	-0.25	0.74	0.42	0.80	0.08	0.37	0.37	0.17
SLD72770	SLD71628	2.60	1.72	2.19	0.08	1.21	0.64	1.17	0.18	0.23	0.30	0.02
SLD72771	SLD71629	2.42	1.95	1.93	-0.08	1.58	0.86	1.03	0.05	-0.04	0.31	0.04
SLD72772	SLD71629	5.10	5.50	4.84	0.21	1.25	0.95	1.20	-0.04	0.24	0.55	0.32
SLD72773	SLD71630	6.29	4.92	5.67	0.57	1.52	1.30	1.90	0.31	0.50	0.63	0.35
SLD72774	SLD71630	4.69	3.83	3.66	0.03	0.83	0.89	1.22	0.08	0.99	0.45	0.17

Notes:

SOR_B = sum of ratios for the background soils.

Subsurface soil samples were collected below the upper 6 inches of the exposed ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

DT-7 Survey Unit 5 Surface Data Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-7 Survey Unit 5 Surface Data Summary											
Statistic	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
Mean	Systematic	2.28	2.61	2.75	0.08	0.93	0.76	1.17	0.22	-0.04	0.30	0.09
Median	Systematic	1.85	2.14	1.99	0.01	0.96	0.86	1.11	0.22	0.05	0.26	0.03
Standard Deviation	Systematic	1.16	1.28	1.88	0.19	0.28	0.27	0.54	0.13	0.37	0.11	0.10
Number of samples	Systematic	11	11	11	11	11	11	11	11	11	11	11
Maximum	All	6.80	11.03	11.31	0.78	1.51	1.32	3.19	0.60	0.90	1.06	0.83
Range	All	5.60	10.00	10.66	0.78	1.11	1.11	2.83	0.53	0.90	0.93	0.83

Sample ID	HTZ Area (m^2)	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
HTZ70934	2	Biased	6.45	6.21	5.12	0.34	1.30	1.14	1.47	0.21	-0.07	0.62	0.37
HTZ70945	1	Biased	4.68	3.89	4.27	0.42	1.29	1.09	1.89	0.31	0.01	0.48	0.20
HTZ70951	1	Biased	4.06	4.53	3.87	0.30	1.19	1.22	3.19	0.13	0.34	0.46	0.24
HTZ70958	2	Biased	6.80	11.03	11.31	0.78	1.51	1.32	1.30	0.60	0.90	1.06	0.83
HTZ70959	2	Biased	4.88	5.71	5.83	0.36	1.42	0.99	1.34	0.24	-0.04	0.59	0.36
SLD74264	--	Systematic	5.18	5.23	5.21	-0.15	0.78	1.07	0.80	0.32	-0.16	0.52	0.30
SLD74229	--	Systematic	1.85	2.19	1.53	0.00	1.19	0.87	1.76	0.40	-0.10	0.26	0.02
SLD74233	--	Systematic	1.35	2.14	0.73	0.13	0.40	0.21	0.43	0.07	0.31	0.18	0.01
SLD74236	--	Systematic	2.28	1.85	1.94	0.01	0.78	0.54	0.77	0.10	0.12	0.24	0.01
SLD74242	--	Systematic	3.36	4.37	3.30	0.37	1.10	0.89	1.11	0.28	0.32	0.43	0.20
SLD74247	--	Systematic	1.85	2.92	1.57	-0.11	1.31	0.84	1.51	0.13	0.05	0.31	0.08
SLD74252	--	Systematic	1.46	1.58	1.99	0.23	1.24	0.97	1.69	0.11	0.08	0.23	0.02
SLD74253	--	Systematic	1.72	1.97	2.64	-0.10	0.96	0.86	1.05	0.27	0.01	0.25	0.03
SLD74258	--	Systematic	1.95	1.87	6.52	0.20	0.97	0.85	1.85	0.22	-0.19	0.33	0.10
SLD74260	--	Systematic	1.20	1.03	0.65	-0.04	0.56	0.38	0.36	0.08	0.11	0.13	0.00
SLD74265	--	Systematic	2.83	3.55	4.22	0.39	0.90	0.88	1.56	0.40	-1.03	0.38	0.16

Notes:

SOR_B = sum of ratios for the background soils.

Surface soil samples were collected within the upper 6 inches of the exposed ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

DT-7 Survey Unit 5 Subsurface Data Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-7 Survey Unit 5 Subsurface Data Summary										
Statistic	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
Mean	2.45	2.48	2.84	0.09	1.00	0.86	1.54	0.25	0.19	0.30	0.09
Median	1.84	2.07	2.56	0.09	1.01	0.88	1.63	0.24	0.15	0.27	0.05
Standard Deviation	1.41	1.26	1.99	0.12	0.29	0.14	0.37	0.08	0.31	0.14	0.11
Number of samples	14	14	14	14	14	14	14	14	14	14	14
Maximum	5.15	5.33	7.83	0.29	1.63	1.03	2.19	0.42	0.99	0.62	0.39
Range	4.11	4.33	6.96	0.29	1.18	0.41	1.21	0.29	0.99	0.46	0.39

Sample ID	Station Name	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
SLD74230	SLD74229	2.70	3.21	2.26	0.11	1.20	0.92	1.15	0.26	0.37	0.34	0.11
SLD74234	SLD74233	1.17	1.56	0.99	0.07	0.45	0.62	0.99	0.13	-0.05	0.17	0.00
SLD74235	SLD74233	1.25	1.74	1.17	0.09	1.13	0.83	1.84	0.22	0.02	0.21	0.00
SLD74237	SLD74236	5.15	5.33	7.83	-0.02	1.63	1.00	1.64	0.33	-0.16	0.62	0.39
SLD74238	SLD74236	3.59	3.23	5.07	0.29	0.88	0.71	1.61	0.23	0.09	0.40	0.16
SLD74239	SLD74236	1.62	1.95	2.87	0.25	0.82	1.02	1.70	0.32	0.10	0.26	0.03
SLD74243	SLD74242	1.32	1.00	1.31	-0.11	0.79	0.73	1.35	0.14	0.09	0.17	0.00
SLD74244	SLD74242	1.26	1.35	0.87	-0.04	1.19	0.86	1.64	0.25	-0.31	0.19	0.01
SLD74248	SLD74247	1.04	1.28	1.11	-0.02	0.86	0.66	1.22	0.17	0.21	0.16	0.00
SLD74249	SLD74247	1.54	1.30	1.48	0.12	1.25	0.89	1.79	0.19	0.32	0.22	0.01
SLD74254	SLD74253	3.44	3.13	3.11	0.03	1.06	1.03	2.19	0.30	0.47	0.36	0.12
SLD74255	SLD74253	4.90	3.62	4.36	0.22	0.69	1.01	1.43	0.26	0.26	0.48	0.20
SLD74259	SLD74258	2.07	2.18	3.99	0.15	1.00	0.76	0.98	0.22	0.23	0.29	0.07
SLD74261	SLD74260	3.28	3.80	3.28	0.08	1.02	0.99	2.03	0.42	0.99	0.39	0.16

Notes:

SOR_B = sum of ratios for the background soils.

Subsurface soil samples were collected below the upper 6 inches of the exposed ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

DT-7 Survey Unit 6 Class 2 Surface Data Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-7 Survey Unit 6 Class 2 Surface Data Summary											
Statistic	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
Mean	Systematic	2.12	3.17	2.82	0.15	0.80	0.60	0.93	0.15	0.12	0.33	0.13
Median	Systematic	1.84	3.01	2.04	0.13	0.67	0.54	0.92	0.15	0.16	0.31	0.11
Standard Deviation	Systematic	1.06	1.36	2.80	0.18	0.35	0.22	0.34	0.09	0.24	0.15	0.14
Number of samples	Systematic	14	14	14	14	14	14	14	14	14	14	14
Maximum	All	7.12	9.32	17.88	0.92	1.71	1.34	2.40	0.76	0.68	1.06	0.83
Range	All	6.27	7.86	17.17	0.92	1.30	1.15	2.11	0.74	0.68	0.91	0.83

SampleID	HTZ Area (m^2)	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
HTZ69489	1	Biased	5.70	7.64	9.02	0.92	1.70	1.10	1.15	0.76	0.29	0.80	0.57
HTZ71714	0.25	Biased	7.12	9.32	17.88	0.80	1.27	0.89	1.11	0.44	0.56	1.06	0.83
HTZ71717	0.25	Biased	6.10	5.13	9.08	0.48	1.18	1.04	1.47	0.38	0.68	0.67	0.38
HTZ71746	0.25	Biased	3.62	5.76	3.68	0.07	1.71	0.99	2.12	0.24	0.14	0.57	0.34
HTZ71750	1	Biased	4.48	5.01	5.01	-0.01	0.94	1.03	1.06	0.24	0.68	0.50	0.28
HTZ71758	0.25	Biased	6.46	6.79	12.05	0.70	1.30	1.34	2.40	0.26	0.18	0.78	0.56
HTZ71762	0.25	Biased	4.17	3.97	4.67	0.45	0.99	1.00	1.67	0.56	-0.22	0.44	0.20
SLD06334	--	Systematic	5.16	5.31	10.54	0.55	0.65	1.09	0.94	0.36	0.09	0.64	0.42
SLD06343	--	Systematic	0.92	2.03	0.81	0.04	0.70	0.19	0.29	0.10	0.02	0.20	0.01
SLD06348	--	Systematic	1.65	4.47	2.88	0.10	0.44	0.51	0.58	0.02	-0.13	0.39	0.20
SLD06349	--	Systematic	1.82	2.89	2.08	0.12	0.59	0.50	0.64	0.08	0.45	0.27	0.08
SLD06350	--	Systematic	0.85	1.46	1.10	0.01	0.41	0.44	0.89	0.14	0.15	0.15	0.00
SLD06356	--	Systematic	1.76	2.21	2.28	0.15	0.55	0.54	1.30	0.20	0.22	0.23	0.03
SLD06367	--	Systematic	1.79	3.32	2.12	0.30	1.15	0.64	1.23	0.13	0.16	0.34	0.14
SLD06369	--	Systematic	1.85	3.88	1.69	0.21	0.46	0.71	1.18	0.26	0.50	0.34	0.16
SLD71688	--	Systematic	2.22	2.13	1.05	-0.05	1.10	0.50	1.22	0.16	-0.08	0.24	0.01
SLD71692	--	Systematic	1.64	1.65	1.86	0.19	0.77	0.59	0.66	0.03	-0.32	0.20	0.01
SLD71696	--	Systematic	2.33	4.88	2.00	-0.17	1.10	0.53	0.94	0.15	0.31	0.44	0.23
SLD71700	--	Systematic	2.72	3.13	2.71	0.29	1.35	0.94	0.91	0.08	0.30	0.35	0.15
SLD71704	--	Systematic	1.88	1.89	0.71	0.05	0.46	0.46	0.73	0.15	0.23	0.17	0.00
SLD71708	--	Systematic	3.13	5.16	7.66	0.35	1.41	0.76	1.59	0.18	-0.22	0.59	0.36

Notes:

SOR_B = sum of ratios for the background soils.

Surface soil samples were collected within the upper 6 inches of the exposed ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

DT-7 Survey Unit 6 Class 2 Subsurface Data Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-7 Survey Unit 6 Subsurface Data Summary											
Statistic	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SORG	SORN
Mean	2.80	3.16	2.18	0.18	1.18	0.89	1.47	0.12	-0.02	0.36	0.13
Median	2.23	2.86	1.74	0.12	1.08	0.91	1.31	0.11	0.10	0.32	0.09
Standard Deviation	1.65	1.62	1.75	0.23	0.51	0.26	0.73	0.09	0.44	0.16	0.13
Number of samples	41	41	41	41	41	41	41	41	41	41	41
Maximum	7.12	7.55	8.05	0.92	3.09	1.48	4.94	0.35	0.50	0.69	0.46
Range	6.67	6.66	8.05	0.92	2.82	1.29	4.53	0.35	0.50	0.59	0.46

Sample ID	Station Name	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SORG	SORN
HTZ71715	HTZ71714	4.05	3.62	3.08	0.21	1.91	1.14	2.15	0.14	-0.30	0.46	0.20
HTZ71716	HTZ71714	1.73	1.61	-1.88	0.32	1.22	1.02	1.62	0.06	-0.24	0.16	0.01
HTZ71718	HTZ71714	1.59	2.02	-0.18	-0.1	1.29	0.87	0.72	0.17	-0.07	0.22	0.02
HTZ71743	HTZ74717	6.71	4.72	5.29	0.37	1.35	1.06	1.36	0.07	0.24	0.64	0.36
HTZ71744	HTZ74717	5.36	4.86	4.73	0.41	1.78	0.89	1.80	0.05	-1.91	0.57	0.31
HTZ71745	HTZ74717	1.57	1.65	1.06	0.01	0.93	0.79	1.32	0.05	0.22	0.19	0.00
HTZ71747	HTZ71746	1.38	1.84	0.40	-0.16	1.08	0.74	0.95	0.09	-0.40	0.20	0.00
HTZ71748	HTZ71746	2.76	2.94	1.71	-0.08	1.02	0.68	0.72	0.08	-0.33	0.30	0.07
HTZ71749	HTZ71746	1.49	2.30	2.84	0.20	0.75	1.01	1.42	0.07	0.49	0.28	0.06
HTZ71759	HTZ71758	4.00	5.33	4.33	0.50	1.43	1.17	1.42	0.18	-1.17	0.54	0.31
HTZ71760	HTZ71758	1.95	1.35	0.97	-0.04	1.35	1.02	1.84	0.14	0.21	0.24	0.02
HTZ71761	HTZ71758	1.72	1.51	1.30	0.22	1.01	0.86	1.17	0.15	-0.50	0.21	0.00
HTZ71763	HTZ71762	5.47	3.81	5.04	0.58	1.57	1.48	1.88	0.35	-0.06	0.57	0.29
HTZ71764	HTZ71762	1.62	1.48	1.13	0.23	0.82	0.71	1.30	0.11	-0.05	0.19	0.00
HTZ71765	HTZ71762	1.57	1.86	1.46	0.03	1.17	0.94	1.26	0.08	0.32	0.23	0.01
SLD06374	SLD06334	3.37	7.04	0.23	0.36	1.25	0.99	1.39	-0.06	0.40	0.56	0.35
SLD06383	SLD06343	0.62	5.64	0.57	0.05	1.46	0.21	1.99	0.10	0.06	0.48	0.27
SLD06388	SLD06348	1.05	4.49	1.41	0.08	3.09	0.88	4.94	0.10	0.07	0.53	0.30
SLD06389	SLD06349	0.45	1.83	1.41	0.07	0.86	0.46	0.73	0.07	0.46	0.21	0.00
SLD06390	SLD06350	1.07	1.31	1.02	0.08	1.31	1.00	1.17	0.25	-0.02	0.20	0.01
SLD06396	SLD06356	2.23	3.97	2.25	0.11	2.24	1.05	2.50	0.31	0.14	0.46	0.23
SLD06407	SLD06367	1.83	4.01	3.82	0.21	0.59	0.58	1.29	0.17	0.26	0.38	0.19
SLD06409	SLD06369	1.86	3.44	1.94	0.19	0.79	0.61	1.66	0.09	0.10	0.32	0.11
SLD71689	SLD71688	3.58	4.58	2.94	0.20	0.52	0.63	0.71	0.17	0.38	0.41	0.21
SLD71690	SLD71688	7.12	5.72	8.05	0.18	0.77	0.78	1.08	0.24	-0.41	0.69	0.42
SLD71691	SLD71688	3.87	2.86	3.42	0.12	1.33	1.01	1.16	0.20	0.25	0.42	0.13
SLD71693	SLD71692	2.94	2.29	1.13	0.92	1.04	1.26	1.26	-0.06	0.19	0.30	0.04
SLD71694	SLD71692	2.27	2.35	1.08	-0.02	0.76	0.72	1.27	0.12	0.16	0.23	0.03
SLD71695	SLD71692	4.58	4.01	2.71	0.17	1.38	1.06	1.58	0.18	-0.31	0.45	0.18
SLD71697	SLD71696	3.23	4.01	2.94	0.31	1.05	0.87	2.06	0.12	-0.05	0.40	0.17
SLD71698	SLD71696	3.09	2.86	2.73	0.26	1.06	0.89	1.31	0.11	-0.17	0.33	0.09
SLD71699	SLD71696	5.26	7.55	3.63	0.01	1.68	0.91	2.29	0.19	-0.24	0.69	0.46
SLD71701	SLD71700	1.64	1.94	0.86	-0.04	1.21	1.04	1.12	0.11	0.12	0.23	0.01
SLD71702	SLD71700	4.06	3.34	3.09	0.12	0.73	0.96	1.73	0.03	0.18	0.40	0.13
SLD71703	SLD71700	1.77	1.53	1.25	0.03	0.64	0.96	1.80	0.05	0.50	0.21	0.00
SLD71705	SLD71704	0.98	0.89	0.67	0.09	0.27	0.19	0.41	-0.02	0.10	0.10	0.00
SLD71706	SLD71704	3.99	3.62	2.71	0.53	1.00	0.98	1.13	0.06	0.20	0.39	0.14
SLD71707	SLD71704	2.01	3.00	1.74	-0.08	0.83	0.76	0.51	0.07	0.27	0.29	0.08
SLD71709	SLD71708	1.35	1.03	0.94	0.08	1.55	0.75	1.24	0.13	-0.12	0.21	0.03
SLD71710	SLD71708	4.77	2.78	2.85	0.69	1.62	1.46	1.74	0.24	0.12	0.48	0.20
SLD71711	SLD71708	2.75	2.44	2.51	0.06	0.64	1.12	1.07	0.25	0.21	0.31	0.07

Notes:

SOR_B = sum of ratios for the background soils.

Subsurface soil samples were collected below the upper 6 inches of the exposed ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

ATTACHMENT C-5
PREFERENTIAL PATHWAY AND TEST PIT SOIL SAMPLE DATA

Preferential Pathway Data Summary Heintz Steel/Midwest Waste

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

Preferential Pathway Data Summary											
Statistic	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SORG	SORN
Mean	3.11	4.18	3.86	0.31	1.05	0.84	1.36	0.39	0.33	0.45	0.23
Median	2.98	3.45	2.51	0.24	1.08	0.85	1.23	0.15	0.17	0.43	0.15
Standard Deviation	1.72	2.77	3.95	0.47	0.41	0.32	0.37	0.80	0.73	0.23	0.21
Number of samples	15	15	15	15	15	15	15	15	15	15	15
Maximum	7.38	11.18	15.85	1.83	1.77	1.45	2.11	3.25	2.37	0.84	0.63
Range	6.69	10.21	15.50	1.83	1.42	1.12	1.25	3.24	2.37	0.74	0.63

Preferential Pathway Data											
SampleID	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SORG	SORN
SLD26753 (DT-7)	Biased	4.3	7.17	3.96	0.54	1.24	0.94	1.23	0.48	-0.3	0.64	0.41
SLD26754 (DT-7)	Biased	1.84	2.81	2.03	0.24	0.68	0.7	1.37	0.37	-0.65	0.27	0.07
SLD69539 (DT-7)	Biased	7.38	5.21	8.23	0.66	1.4	1.16	2.11	0.23	0.02	0.75	0.46
SLD69540 (DT-7)	Biased	3.99	2.55	3.51	-0.15	1.46	1.24	1.48	0.15	-0.17	0.43	0.15
SLD69541 (DT-7)	Biased	3.07	3.45	2.73	0.02	1.24	0.98	1.43	0.02	0	0.37	0.14
SLD69542 (DT-7)	Biased	0.69	0.97	0.35	0.05	0.35	0.37	0.97	0.03	0.13	0.10	0.00
SLD69543 (DT-7)	Biased	1.63	2.58	1.63	0.02	0.92	0.62	1.23	0.01	0.22	0.27	0.05
SLD74281 (DT-7)	Biased	2.18	2.3	0.71	0.43	1.08	0.95	2.08	0.24	0.17	0.24	0.02
SLD74284 (DT-7)	Biased	2.98	11.18	2.11	0.25	0.75	0.8	1.09	0.31	0.79	0.84	0.63
SLD74285 (DT-7)	Biased	4.18	3.55	5.4	0.3	1.77	1.45	1.54	3.25	1.4	0.50	0.23
SLD74943 (DT-7)	Biased	2.51	1.29	1.88	0.17	0.67	0.57	1.09	0.13	0.19	0.25	0.01
SLD75159 (DT-7)	Biased	1.79	7.76	2.51	-0.07	0.86	0.52	1.14	0.13	0.2	0.62	0.41
SLD78291 (DT-6)	Biased	1.40	2.16	0.98	0.10	0.50	0.33	0.86	0.03	0.11	0.20	0.01
SLD78292 (DT-6)	Biased	3.67	4.33	5.99	0.31	1.21	0.85	1.09	0.09	0.50	0.49	0.26
SLD78294 (DT-6)	Biased	5.05	5.39	15.85	1.83	1.56	1.07	1.67	0.38	2.37	0.78	0.55

NOTE: Preferential pathway samples are taken to investigate locations where a pathway for contaminant migration might be present. The data are not used in MARSSIM statistical tests.

SOR_B = sum of ratios for the background soils.

DT-6 Class 2 Test Pit Sample Summary

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-6 Class 2 Test Pit Surface Data Summary											
Statistic	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SORG	SORN
Mean	3.71	3.92	3.38	0.21	1.18	0.90	1.49	0.13	0.16	0.54	0.22
Median	3.62	3.57	3.55	0.16	1.05	0.97	1.48	0.10	0.17	0.54	0.22
Standard Deviation	1.82	1.57	1.97	0.18	0.62	0.34	0.69	0.12	0.36	0.20	0.15
Number of samples	36	36	36	36	36	36	36	36	36	36	36
Maximum	8.41	7.09	9.62	0.64	2.83	1.74	3.99	0.46	0.81	1.03	0.53
Range	7.63	5.42	9.13	0.64	2.81	1.61	3.79	0.46	0.81	0.82	0.53

SampleID	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SORG	SORN
SURFACE SAMPLES												
SLD77610	test pit	1.34	2.23	1.16	0.07	0.37	0.24	0.45	0.04	-0.09	0.54	0.06
SLD77614	test pit	1.08	2.56	1.03	0.07	0.02	0.13	0.20	0.04	0.11	0.56	0.12
SLD77618	test pit	3.45	3.21	4.77	0.27	0.81	0.89	1.51	0.06	0.24	0.96	0.32
SLD77622	test pit	3.00	2.85	2.72	0.04	0.84	1.00	1.11	0.22	-0.06	0.85	0.22
SLD77626	test pit	1.60	2.81	1.71	0.05	0.60	0.40	0.98	0.11	-0.04	0.72	0.18
SLD77630	test pit	1.72	3.21	1.48	0.11	1.08	0.36	2.20	0.02	0.12	0.89	0.25
SLD77634	test pit	4.14	2.68	2.44	0.22	0.77	0.60	1.27	0.10	0.34	1.03	0.29
SLD77642	test pit	0.78	1.67	0.49	0.02	0.21	0.13	0.56	0.01	-0.25	0.39	0.00
SLD77646	test pit	1.45	1.92	1.12	0.13	0.74	0.48	1.12	0.04	0.12	0.55	0.00
SUBSURFACE SAMPLES												
SLD77611	test pit	4.68	3.51	5.49	0.30	1.75	1.10	1.31	0.27	0.26	0.54	0.25
SLD77612	test pit	3.96	3.73	3.30	0.10	1.36	1.08	1.62	0.08	-0.27	0.47	0.17
SLD77613	test pit	3.34	3.71	4.00	0.22	1.06	1.07	1.73	0.04	-0.03	0.40	0.18
SLD77615	test pit	3.64	5.36	4.71	0.28	1.99	1.08	1.72	0.33	0.56	0.58	0.35
SLD77616	test pit	5.89	6.28	4.39	0.51	2.83	1.33	3.99	0.23	0.29	0.70	0.46
SLD77617	test pit	4.68	3.71	3.05	0.32	0.71	1.00	1.37	0.07	0.33	0.44	0.16
SLD77619	test pit	4.47	3.59	3.61	-0.03	2.69	1.74	1.96	0.37	0.26	0.55	0.26
SLD77620	test pit	1.60	2.03	0.76	0.16	1.14	0.91	1.60	0.03	0.22	0.23	0.01
SLD77621	test pit	5.24	4.93	3.96	0.28	1.58	1.05	0.75	0.05	-0.01	0.53	0.28
SLD77623	test pit	4.54	5.80	9.62	0.63	0.97	0.88	1.60	0.08	0.53	0.64	0.42
SLD77624	test pit	8.04	7.09	4.75	0.05	1.57	1.25	1.53	0.22	-1.21	0.74	0.45
SLD77625	test pit	5.94	5.89	4.12	0.40	1.75	1.12	1.44	0.05	0.19	0.60	0.36
SLD77627	test pit	5.19	6.56	5.66	0.41	0.87	0.88	1.55	0.38	0.66	0.61	0.39
SLD77628	test pit	5.31	3.28	3.93	0.06	0.90	1.04	1.58	0.06	0.39	0.50	0.22
SLD77629	test pit	3.16	3.55	2.28	0.16	1.16	1.04	1.48	-0.03	-0.24	0.36	0.13
SLD77631	test pit	4.08	4.32	3.82	0.30	1.21	0.97	1.48	0.05	0.10	0.44	0.21
SLD77632	test pit	5.33	6.32	4.32	0.30	2.34	1.26	1.35	0.11	0.81	0.66	0.43
SLD77633	test pit	2.02	2.70	1.58	0.10	0.99	0.90	1.30	0.15	0.19	0.28	0.05
SLD77635	test pit	3.60	4.08	3.83	0.25	1.56	0.75	3.49	0.20	0.31	0.45	0.22
SLD77636	test pit	4.63	5.16	4.90	0.14	1.04	1.12	1.46	0.21	0.48	0.52	0.30
SLD77637	test pit	1.43	1.98	0.99	-0.01	0.92	0.91	1.07	0.09	0.07	0.21	0.00
SLD77643	test pit	3.47	5.98	3.51	0.42	1.42	0.96	1.80	0.18	0.61	0.56	0.33
SLD77644	test pit	3.66	3.71	3.51	0.49	0.93	1.10	1.52	0.16	-0.11	0.39	0.17
SLD77645	test pit	3.34	2.94	2.06	0.09	1.57	0.77	1.11	0.19	0.15	0.37	0.11
SLD77647	test pit	8.41	6.70	7.84	0.64	1.44	1.10	1.80	0.46	0.67	0.81	0.53
SLD77648	test pit	3.30	2.94	3.58	-0.06	0.60	0.94	0.94	0.15	-0.17	0.35	0.11
SLD77649	test pit	1.99	2.06	1.33	0.04	0.76	0.89	1.55	0.02	0.15	0.22	0.01

Notes:

SOR_B = sum of ratios for the background soils.

Surface soil samples were collected within the upper 6 inches of the ground surface.

Subsurface soil samples were collected below the upper 6 inches of the ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

DT-6 Construction Support Test Pits

Reference Area Data Summary											
Statistic	Ra-226 (pCi/g)	Th-230 (pCi/g)	U-238 (pCi/g)	U-235 (pCi/g)	Th-232 (pCi/g)	Ra-228 (pCi/g)	Th-228 (pCi/g)	Ac-227 (pCi/g)	Pa-231 (pCi/g)	SOR_B (5/5/50)	SOR_B (15/15/50)
Mean	2.78	1.94	1.44	0.09	1.09	0.95	1.16	0.14	0.89	0.82	0.29
Median	2.53	1.66	1.16	0.08	1.07	0.97	1.10	0.11	0.98	0.76	0.27
UCL-95	3.04	2.18	1.67	0.12	1.18	1.00	1.26	0.18	1.12	-	-
St. Dev	0.89	0.76	0.75	0.08	0.29	0.17	0.35	0.14	0.76	0.21	0.08
Range	3.93	3.19	3.19	0.33	1.25	0.82	1.59	0.80	2.55	0.95	0.35
Detects	32	32	32	0	32	32	32	7	13	-	-
No. Samples	32	32	32	32	32	32	32	32	32	32	32

DT-6 Construction Suport Test Pit Subsurface Data Summary											
Statistic	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
Mean	4.40	4.97	3.54	0.27	1.36	1.08	1.56	0.70	0.35	0.51	0.28
Median	3.66	4.55	3.50	0.22	1.22	1.00	1.69	0.28	0.30	0.46	0.23
Standard Deviation	2.44	2.81	2.16	0.28	0.65	0.39	0.64	1.14	0.54	0.25	0.24
Number of samples	22	22	22	22	22	22	22	22	22	22	22
Maximum	9.20	13.59	9.98	0.87	3.65	2.24	3.28	4.45	1.50	1.21	0.98
Range	8.07	12.02	9.21	0.87	3.15	1.74	2.78	4.45	1.50	1.02	0.98

Sample Name	Sample Type	Ra-226	Th-230	U-238	U-235	Th-232	Ra-228	Th-228	Ac-227	Pa-231	SOR_G	SOR_N
SLD76127	Subsurface	2.43	2.18	1.29	-0.31	0.74	0.63	0.93	0.13	-0.19	0.24	0.02
SLD76133	Subsurface	8.24	6.09	6.19	0.49	1.47	1.14	1.80	0.32	1.11	0.77	0.48
SLD76135	Subsurface	5.88	7.65	5.16	0.34	1.10	1.10	1.87	0.36	-0.24	0.69	0.47
SLD76139	Subsurface	3.53	4.78	3.52	0.36	1.01	1.01	1.36	0.23	0.26	0.46	0.24
SLD76140	Subsurface	5.00	6.22	4.57	0.78	3.65	2.24	3.28	0.66	0.60	0.75	0.52
SLD76141	Subsurface	1.34	1.57	1.27	0.10	0.97	0.97	1.67	0.22	-0.04	0.19	0.00
SLD76144	Subsurface	9.20	8.30	6.32	0.33	1.81	1.11	1.75	0.28	0.87	0.86	0.57
SLD76145	Subsurface	1.79	2.29	0.86	0.16	1.23	1.04	1.27	0.35	-0.10	0.25	0.03
SLD76146	Subsurface	1.55	1.98	1.55	0.00	1.14	0.94	0.94	0.27	0.26	0.24	0.01
SLD76147	Subsurface	1.13	2.76	0.77	0.12	0.50	0.50	0.50	0.08	0.03	0.23	0.05
SLD76151	Subsurface	7.45	13.59	9.98	-0.06	1.60	1.34	1.97	3.21	0.34	1.21	0.98
SLD76152	Subsurface	5.71	4.66	4.34	0.10	1.22	1.22	1.98	0.21	-0.10	0.55	0.27
SLD76153	Subsurface	5.09	6.07	3.47	0.30	1.14	0.93	1.08	0.20	0.23	0.55	0.32
SLD76154	Subsurface	3.72	5.06	2.69	0.27	1.43	0.83	1.94	-0.01	0.54	0.49	0.26
SLD76164	Subsurface	2.44	2.72	1.55	0.16	1.19	0.92	1.15	0.07	0.33	0.29	0.06
SLD76174	Subsurface	3.59	4.44	3.05	0.12	0.63	0.63	0.63	0.26	0.06	0.40	0.20
SLD76175	Subsurface	3.44	2.62	3.14	0.48	1.72	1.65	2.21	0.62	0.57	0.41	0.13
SLD76176	Subsurface	3.76	3.89	3.64	0.76	1.40	0.98	1.70	0.41	-0.87	0.43	0.19
SLD76178	Subsurface	6.48	6.53	3.89	0.40	1.06	0.99	1.43	2.46	1.50	0.58	0.36
SLD76179	Subsurface	3.12	3.99	4.82	0.15	1.23	0.68	0.81	0.20	0.65	0.44	0.21
SLD76180	Subsurface	8.78	8.31	2.20	0.87	1.50	1.41	2.03	4.45	1.27	0.73	0.47
SLD76181	Subsurface	3.04	3.59	3.64	0.12	2.27	1.50	2.11	0.37	0.61	0.46	0.23

Notes:

SOR_B = sum of ratios for the background soils.

Subsurface soil samples were collected below the upper 6 inches of the ground surface.

Results are expressed in picoCuries/gram (pCi/g); SOR values are unitless.

ATTACHMENT C-6
DT-6 AND DT-7 EVALUATION OF 100 m^2 REMEDIATION GOAL

Evaluation of 100 m^2 Aerial Average Remediation Goal					
Vicinity Property	**Survey Unit**	**Sample Number**	**SOR_N**	**Effective Surface Area (m^2)**	**Area Weighted Average SOR**
DT-6	SU-1	**HTZ76722**	**2.78**	1.0	0.60
		SLD78701	**1.29**	33.0	
		SLD78677	0.39	33.0	
		SLD78672	0.06	33.0	
DT-6	SU-1	**HTZ76719**	**1.04**	2.0	0.30
		HTZ76723	0.85	5.0	
		HTZ76724	0.43	0.5	
		SLD78649	0.45	46.3	
		SLD78653	0.05	46.3	
DT-7	SU-3	**HTZ70885**	**1.13**	4.0	0.32
		HTZ70897	**1.20**	4.0	
		HTZ70895	0.81	4.0	
		SLD71513	0.21	30.0	
		SLD71526	0.33	30.0	
		SLD71542	0.10	28.0	
DT-7	SU-3	**HTZ70894**	**1.76**	4.0	0.18
		HTZ70896	0.09	4.0	
		HTZ70898	0.32	4.0	
		SLD72872	0.11	30.0	
		SLD71527	0.04	30.0	
		SLD71543	0.17	28.0	

The area weighted average with SOR_N >1 = 1.33

Bold font indicates SOR_N >1

ATTACHMENT C-7
DT-6 AND DT-7 WRS TESTS

DT-6 Survey Unit 1
WRS Test

Sample No.	Sample ID	Data[1]	Area	Adjusted Data	Ranks	Reference Area Ranks (W_r)
1	SLD00001	0.25	R	1.245	27	27
2	SLD00002	0.25	R	1.246	28	28
3	SLD00022	0.30	R	1.298	37	37
4	SLD00023	0.29	R	1.292	35	35
5	SLD00041	0.27	R	1.272	34	34
6	SLD00042	0.31	R	1.309	40	40
7	SLD00043	0.31	R	1.314	41	41
8	SLD00044	0.34	R	1.337	44	44
9	SLD00061	0.33	R	1.332	43	43
10	SLD00062	0.30	R	1.297	36	36
11	SLD00063	0.22	R	1.224	22	22
12	SLD00081	0.27	R	1.270	33	33
13	SLD00082	0.30	R	1.304	39	39
14	SLD00083	0.23	R	1.226	23	23
15	SLD00101	0.41	R	1.405	47	47
16	SLD00102	0.38	R	1.380	46	46
17	SLD00103	0.30	R	1.300	38	38
18	SLD00121	0.35	R	1.347	45	45
19	SLD00122	0.26	R	1.264	31	31
20	SLD00123	0.33	R	1.325	42	42
21	SLD00141	0.54	R	1.544	50	50
22	SLD00142	0.49	R	1.491	48	48
23	SLD00143	0.24	R	1.242	25	25
24	SLD00144	0.25	R	1.252	29	29
25	SLD00161	0.19	R	1.194	18	18
26	SLD00162	0.23	R	1.227	24	24
27	SLD00181	0.22	R	1.220	21	21
28	SLD00201	0.26	R	1.255	30	30
29	SLD00202	0.26	R	1.265	32	32
30	SLD00241	0.20	R	1.201	19	19
31	SLD00242	0.24	R	1.244	26	26
32	SLD00243	0.21	R	1.209	20	20
33	SLD78616	0.42	S	0.420	7	0
34	SLD78619	0.46	S	0.460	11	0
35	SLD78649	0.74	S	0.740	17	0
36	SLD78653	0.33	S	0.330	4	0
37	SLD78655	0.53	S	0.530	14	0
38	SLD78657	0.45	S	0.450	10	0
39	SLD78659	0.48	S	0.480	12	0
40	SLD78661	0.27	S	0.270	2	0
41	SLD78664	0.38	S	0.380	5	0
42	SLD78666	0.49	S	0.490	13	0
43	SLD78668	0.57	S	0.570	15	0
44	SLD78672	0.29	S	0.290	3	0
45	SLD78675	0.25	S	0.250	1	0
46	SLD78677	0.62	S	0.620	16	0
47	SLD78679	0.43	S	0.430	8	0
48	SLD78681	0.42	S	0.420	7	0
49	SLD78683	0.45	S	0.450	10	0
50	SLD78701	1.53	S	1.526	49	0

Number of Reference Area Measurements	32	W_r	1073
Number of Systematics Measurements	18	Crit Value	897
			Pass

1 Data points for the SU(s) are gross values (includes background).
Data points for the Reference Area (R) are background values.

ATTACHMENT C-8
DT-6 AND DT-7 FINAL STATUS SURVEY GAMMA WALKOVER SURVEY MAPS

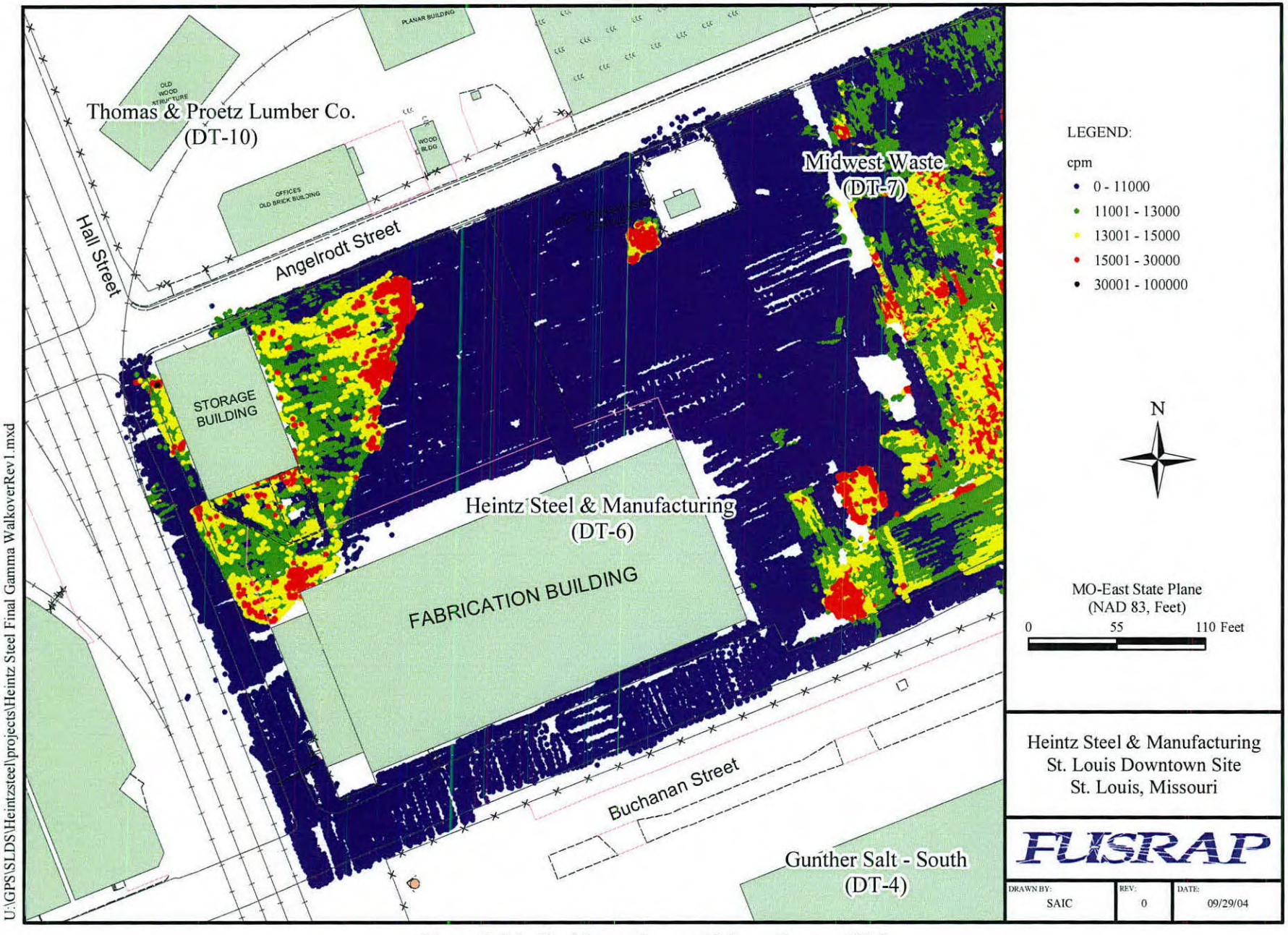


Figure C-8-1 Final Status Gamma Walkover Survey, DT-6

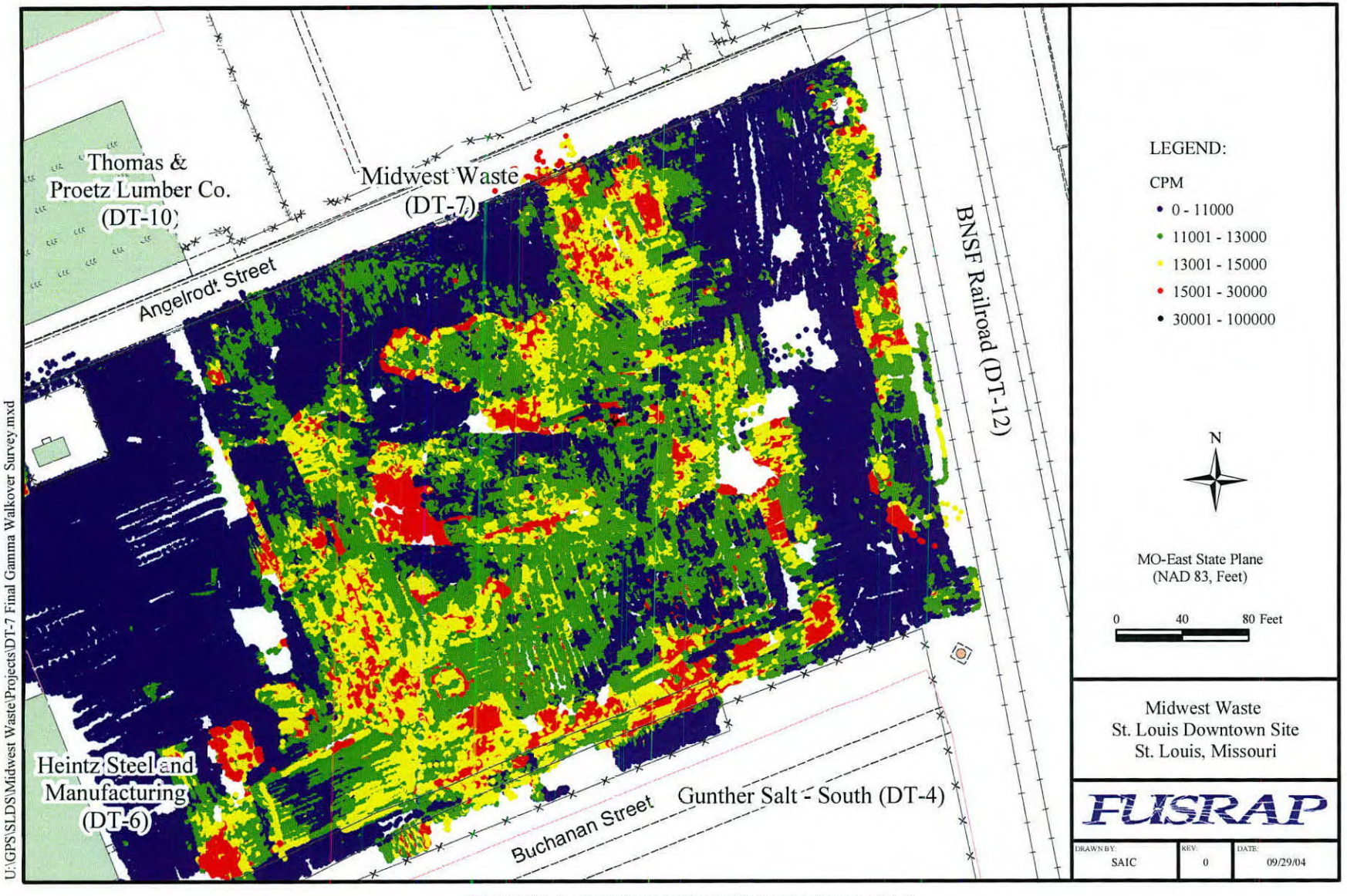


Figure C-8-2 Final Status Gamma Walkover Survey, DT-7

ATTACHMENT C-9
DT-6 AND DT-7 FINAL STATUS SURVEY FIXED POINT MEASUREMENTS DATA ON CONSOLIDATED MATERIAL SURFACES

Table 9-2
DT-6 Sign Tests

Survey Area	Measurement No.	ALPHA dpm/100cm^2	Alpha Difference[1]	BETA dpm/100cm^2	Beta Difference[2]
Heintz Steel	1	144	456	1,787	4,213
Heintz Steel	2	48	552	933	5,067
Heintz Steel	3	48	552	2,320	3,680
Heintz Steel	4	96	504	1,147	4,853
Heintz Steel	5	96	504	987	5,013
Heintz Steel	6	60	540	1,108	4,892
Heintz Steel	7	60	540	1,518	4,482
Heintz Steel	8	60	540	1,791	4,209
Heintz Steel	9	179	421	1,764	4,236
Heintz Steel	10	60	540	1,846	4,154
Heintz Steel	11	241	359	1,013	4,987
Heintz Steel	12	192	408	720	5,280
Heintz Steel	13	144	456	827	5,173
Heintz Steel	14	96	504	1,120	4,880
Heintz Steel	15	241	359	1,173	4,827
Heintz Steel	16	179	421	1,108	4,892
Heintz Steel	17	239	361	1,737	4,263
Heintz Steel	18	299	301	2,147	3,853
Heintz Steel	19	120	480	3,405	2,595
Heintz Steel	20	179	421	3,624	2,376
Heintz Steel	21	48	552	1,413	4,587
Heintz Steel	22	192	408	1,520	4,480
Heintz Steel	23	96	504	987	5,013
Heintz Steel	24	192	408	1,333	4,667
Heintz Steel	25	337	263	2,533	3,467
Heintz Steel	26	299	301	1,901	4,099
Heintz Steel	27	299	301	1,928	4,072
Heintz Steel	28	299	301	2,995	3,005
Heintz Steel	29	179	421	1,217	4,783
Heintz Steel	30	120	480	1,709	4,291
Heintz Steel	31	120	480	2,612	3,388
Heintz Steel	32	718	-118	4,773	1,227
Heintz Steel	33	179	421	1,956	4,044
Heintz Steel	34	60	540	1,791	4,209
Heintz Steel	35	60	540	916	5,084
Heintz Steel	36	299	301	1,928	4,072
Heintz Steel	37	60	540	1,901	4,099
Heintz Steel	38	60	540	2,393	3,607
Heintz Steel	39	96	504	907	5,093
Heintz Steel	40	120	480	3,542	2,458
Heintz Steel	41	48	552	1,067	4,933
Heintz Steel	42	0	600	4,581	1,419
Heintz Steel	43	144	456	693	5,307
Heintz Steel	44	120	480	3,597	2,403
Heintz Steel	45	241	359	533	5,467
Heintz Steel	46	120	480	3,788	2,212
Heintz Steel	47	48	552	693	5,307
Heintz Steel	48	179	421	3,815	2,185
Heintz Steel	49	48	552	1,573	4,427
Heintz Steel	50	0	600	4,499	1,501
Heintz Steel	51	144	456	800	5,200
Heintz Steel	52	120	480	4,253	1,747
Heintz Steel	53	48	552	480	5,520
Heintz Steel	54	239	361	7,480	-1,480
Heintz Steel	55	96	504	1,013	4,987
Heintz Steel	56	837	-237	7,070	-1,070
Heintz Steel	57	144	456	1,573	4,427
Heintz Steel	58	299	301	6,468	-468
Heintz Steel	59	144	456	960	5,040
Heintz Steel	60	96	504	800	5,200
Heintz Steel	61	192	408	960	5,040
Heintz Steel	62	239	361	5,019	981
Heintz Steel	63	241	359	1,227	4,773
Heintz Steel	64	479	121	7,207	-1,207
Heintz Steel	65	48	552	1,493	4,507
Heintz Steel	66	120	480	10,926	-4,926

Table 9-2
DT-6 Sign Tests

Survey Area	Measurement No.	ALPHA dpm/100cm^2	Alpha Difference[1]	BETA dpm/100cm^2	Beta Difference[2]
Heintz Steel	67	192	408	1,707	4,293
Heintz Steel	68	658	-58	8,711	-2,711
Heintz Steel	69	144	456	373	5,627
Heintz Steel	70	718	-118	10,735	-4,735
Heintz Steel	71	48	552	453	5,547
Heintz Steel	72	299	301	7,644	-1,644
Heintz Steel	73	96	504	933	5,067
Heintz Steel	74	239	361	7,918	-1,918
Heintz Steel	75	96	504	2,320	3,680
Heintz Steel	76	0	600	1,040	4,960
Heintz Steel	77	120	480	4,991	1,009
Heintz Steel	78	0	600	427	5,573
Heintz Steel	79	0	600	5,374	626
Heintz Steel	80	241	359	400	5,600
Heintz Steel	81	179	421	6,003	-3
Heintz Steel	82	0	600	480	5,520
Heintz Steel	83	60	540	6,058	-58
Heintz Steel	84	289	311	187	5,813
Heintz Steel	85	120	480	6,304	-304
Heintz Steel	86	289	311	640	5,360
Heintz Steel	87	239	361	8,711	-2,711
Heintz Steel	88	144	456	1,093	4,907
Heintz Steel	89	60	540	7,644	-1,644
Heintz Steel	90	96	504	987	5,013
Heintz Steel	91	179	421	9,368	-3,368
Heintz Steel	92	24	576	937	5,063
Heintz Steel	93	114	486	1,613	4,387
Heintz Steel	94	24	576	1,071	4,929
Heintz Steel	95	114	486	1,427	4,573
Heintz Steel	96	71	529	1,500	4,500
Heintz Steel	97	171	429	1,213	4,787
Heintz Steel	98	71	529	1,285	4,715
Heintz Steel	99	286	314	1,373	4,627
Heintz Steel	100	343	257	973	5,027
Heintz Steel	101	71	529	1,259	4,741
Heintz Steel	102	24	576	723	5,277
Heintz Steel	103	46	554	1,192	4,808
Heintz Steel	104	0	600	1,299	4,701
Heintz Steel	105	93	507	1,213	4,787
Heintz Steel	106	93	507	1,278	4,722
Heintz Steel	107	46	554	1,085	4,915
Heintz Steel	108	46	554	1,278	4,722
Heintz Steel	109	232	368	1,364	4,636
Heintz Steel	110	0	600	977	5,023
Heintz Steel	111	46	554	870	5,130
Heintz Steel	112	171	429	1,400	4,600
Heintz Steel	113	114	486	813	5,187
Heintz Steel	114	46	554	923	5,077
Heintz Steel	115	114	486	1,720	4,280
Heintz Steel	116	114	486	1,560	4,440
Heintz Steel	117	46	554	1,278	4,722
Heintz Steel	118	93	507	2,072	3,928
Heintz Steel	119	0	600	1,085	4,915
Heintz Steel	120	46	554	1,643	4,357
Heintz Steel	121	71	529	-536	6,536
Heintz Steel	122	24	576	-683	6,683
Heintz Steel	123	95	505	-897	6,897
Heintz Steel	124	71	529	-870	6,870
Heintz Steel	125	0	600	-375	6,375
Heintz Steel	126	171	429	1,480	4,520
Heintz Steel	127	114	486	1,773	4,227
Heintz Steel	128	0	600	1,240	4,760
Heintz Steel	129	171	429	1,613	4,387
Heintz Steel	130	57	543	2,040	3,960
Heintz Steel	131	0	600	1,836	4,164
Heintz Steel	132	93	507	1,407	4,593

Table 9-2
DT-6 Sign Tests

Survey Area	Measurement No.	ALPHA dpm/100cm^2	Alpha Difference[1]	BETA dpm/100cm^2	Beta Difference[2]
Heintz Steel	133	0	600	1,085	4,915
Heintz Steel	134	0	600	977	5,023
Heintz Steel	135	0	600	1,428	4,572
Heintz Steel	32-1	373	227	5,493	507
Heintz Steel	32-2	107	493	1,749	4,251
Heintz Steel	32-3	213	387	1,425	4,575
Heintz Steel	54-1	160	440	777	5,223
Heintz Steel	54-2	187	413	985	5,015
Heintz Steel	54-3	213	387	5,143	857
Heintz Steel	56-1	80	520	1,568	4,432
Heintz Steel	56-2	107	493	1,477	4,523
Heintz Steel	56-3	373	227	2,747	3,253
Heintz Steel	58-1	0	600	1,632	4,368
Heintz Steel	58-2	587	13	2,487	3,513
Heintz Steel	58-3	373	227	2,436	3,564
Heintz Steel	64-1	200	400	1,187	4,813
Heintz Steel	64-2	400	200	747	5,253
Heintz Steel	64-3	286	314	827	5,173
Heintz Steel	66-1	286	314	1,240	4,760
Heintz Steel	66-2	114	486	640	5,360
Heintz Steel	66-3	229	371	373	5,627
Heintz Steel	68-1	320	280	4,664	1,336
Heintz Steel	68-2	800	-200	5,286	714
Heintz Steel	68-3	267	333	4,042	1,958
Heintz Steel	70-1	474	126	723	5,277
Heintz Steel	70-2	284	316	2,691	3,309
Heintz Steel	70-3	1,327	-727	2,089	3,911
Heintz Steel	70-4	1,754	-1,154	2,370	3,630
Heintz Steel	70-5	332	268	348	5,652
Heintz Steel	70-6	237	363	2,531	3,469
Heintz Steel	70-7	237	363	-308	6,308
Heintz Steel	70-8	47	553	-94	6,094
Heintz Steel	72-1	160	440	1,995	4,005
Heintz Steel	72-2	107	493	2,280	3,720
Heintz Steel	72-3	213	387	2,876	3,124
Heintz Steel	74-1	143	457	627	5,373
Heintz Steel	74-2	257	343	1,293	4,707
Heintz Steel	74-3	114	486	1,240	4,760
Heintz Steel	85-1	53	547	803	5,197
Heintz Steel	85-2	0	600	518	5,482
Heintz Steel	85-3	53	547	1,036	4,964
Heintz Steel	87-1	213	387	959	5,041
Heintz Steel	87-2	0	600	492	5,508
Heintz Steel	87-3	160	440	959	5,041
Heintz Steel	89-1	0	600	829	5,171
Heintz Steel	89-2	53	547	104	5,896
Heintz Steel	89-3	53	547	1,529	4,471
Heintz Steel	91-1	53	547	1,218	4,782
Heintz Steel	91-2	53	547	855	5,145
Heintz Steel	91-3	0	600	1,736	4,264
Test Statistics		**Alpha**		**Beta**	
s+			*175*		*167*
n			*182*		*182*
$k_{critical}$			*102*		*102*
Result			***Pass***		***Pass***

[1] Alpha Difference is equal to difference between DCGL and the alpha results.
[2] Beta Difference is equal to the difference between DCGL and the beta results.

ATTACHMENT C-10
DT-6 AND DT-7 ALARA EVALUATION

ALARA ANALYSIS

10 CFR 20 Subpart E ARAR pertains to the extent to which lands must be remediated before decommissioning of a site can be considered complete and the license terminated. The standards are for unrestricted use, 25 mrem/yr TEDE and ALARA and for unrestricted use, 25mrem/yr TEDE, 100 mrem/yr with loss of controls, and ALARA. Soils containing small areas of elevated activity (i.e. having a SOR value >1) that meet the RG may be left in place. Areas of elevated activity meet the RGs by demonstrating that the 40 CFR 192 ARAR is met and by showing that residual risks for DT-6 and DT-7 does not exceed the CERCLA target risk range.

An ALARA evaluation was performed consistent with NUREG-1727 (NRC, 2000) as a measure of the cost effectiveness of leaving small elevated areas of soils in place verses the benefit of remediation. Soil samples with a SOR value in excess of 1.0 are listed in Attachment C-4.

NUREG-1727 gives the formula for calculating the benefit from averted dose (AD) as provided below.

$$B_{AD} = \$2{,}000 \times PW(AD_{collective})$$

Where:

B_{AD}	=	benefit from averted dose for a RA
\$2,000	=	value in dollars of a person-rem averted
$PW(AD_{collective})$	=	present worth of future collective averted dose.

The present worth of the future averted collective dose can be calculated from the equation shown below.

$$PW(AD_{collective}) = P_D \times A \times 0.025 \times F \times \frac{Conc}{DCGL_W} \times \frac{1 - e^{-(r+\lambda)N}}{r + \lambda}$$

Where:

P_D	=	population density for the critical group scenario in people/m^2, 0.0004.
A	=	area being evaluated in m^2, 48 m^2 is used as the sum of the areas exceeding an SOR_N value of 1.
0.025	=	annual dose to an average member of the critical group from residual radioactivity at the concentration-based RG in rem/yr.
F	=	fraction of the residual activity removed by the RA; in this case F = 1 to represent areas exceeding an SOR_N valuc of 1.
Conc	=	average concentration of residual radioactivity in the area being evaluated. The area weighted SOR_N for the elevated accessible soil areas of DT-6 and DT-7 is 1.33.
$DCGL_W$	=	derived concentration guideline limit; in this case, SOR_N= 1.
r	=	monetary discount rate; 0.03/yr as recommended by NUREG-1727.
λ	=	radiological decay constant. U-238 was chosen as the representative decay constant because this would give the most conservative result (highest present worth factor) = 1.55 E-10/yr.
N	=	number of years over which the collective dose will be calculated; 1000 as recommended by NUREG-1727.

Although the SOR value of 1 that was used as the concentration-based RG for DT-6 and DT-7 is not based on the 25 mrem, using 0.025 rem/yr (i.e., 25 mrem/yr) in the equation is a conservative approach because the calculated doses from the elevated areas are all less than 25 mrem/yr. Using these equations, the B_{AD} was calculated to be approximately $40.

The cost of remediating the remaining areas was based on actual costs incurred by remediation contractors during the DT-6 and DT-7 project, but does not include overhead, mobilization, and other related costs that NUREG-1727 allows to be considered in an ALARA analysis. The estimated cost of excavation, transportation, and disposal of the remaining elevated areas is approximately $6,200. This cost assumes that a surface area of 48 m^2 would be excavated to a depth of 1 foot below ground surface at a unit cost of $330/cubic yard. The unit cost is based on the cost elements included in Appendix B excluding the cost for PRAR preparation and using the total soil removed (i.e., 5571 yd^3). The cost of further remediation greatly exceeds the economic benefit of the averted dose, therefore the action is considered ALARA.

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