590108-0605150013

CH2M HILL
Mound, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, OH
45343-3030

CH2MHILL

SMO-375/05
October 10, 2005

Ms. Margaret L. Marks, Director
Miamisburg Closure Project
U. S. Department of Energy
175 Tri-County Parkway
Springdale, OH 45246

ATTENTION: Paul Lucas

SUBJECT: **Contract No. DE-AC24-03OH20152:** Deliverable #39 Potential release site and removal action documentation; Section C.2.3.1.3 Remaining Response Actions; UGL Partial II OSC Report, Final

Dear Ms. Marks:

Attached is the following Final document for your records:

- UGL Partial II OSC Report, Final

If you or members of your staff have any questions regarding the document, or if additional support is needed, please contact Dave Rakel at 937-865-4203.

Sincerely,

John Lehew
Site Manager

JL/ms

Enclosures

cc: T. Fischer, USEPA, (1) w/attachments
B. Nickel, OEPA, (1) w/attachments
R. Vandegrift, ODH, (1) w/attachments
J. Webb, ODH, (1) w/attachments
M. Wojciechowski, Tetra Tech, (1) w/attach
G. Gorsuch, DOE/MCP, (1) w/attachments
W Taylor, DOE/MCP, w/o attachments
R. Tormey, DOE/OH, (1) w/attachments
G. Desai, DOE/HQ, (1) w/attachments
S. Davis, CH2M Hill, (1) w/attachments
F. Bullock, MMCIC (3) w/attachments
Public Reading Room (4) w/attachments
ER Records, CH2M Hill, (1) w/attachs
DCC (1) w/attachments
J. Lehew, CH2M Hill, w/o attachments
K. Armstrong, CH2M Hill, w/o attachments
D. Rakel, CH2M Hill, w/o attachments
D. Kramer, CH2M Hill, w/o attachments
B. Wier, CH2M Hill, w/o attachments
A. Upshaw, CH2M Hill, w/o attachments
MOAT Coordinator, CH2M Hill, w/o attachs
W. Webb, CH2M Hill, w/o attachments
M. McDougal, CH2M Hill, w/o attachments
file, CH2M Hill, w/o attachments

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UGL PARTIAL II OSC REPORT

REMOVAL ACTION OF SOIL & UNDERGROUND WASTE TRANSFER LINES LEADING TO WD BUILDING

This Report Closes PRSs 123, 415, & 429-436

September 2005

Final

Department of Energy
Miamisburg Closure Project

CH2MHILL

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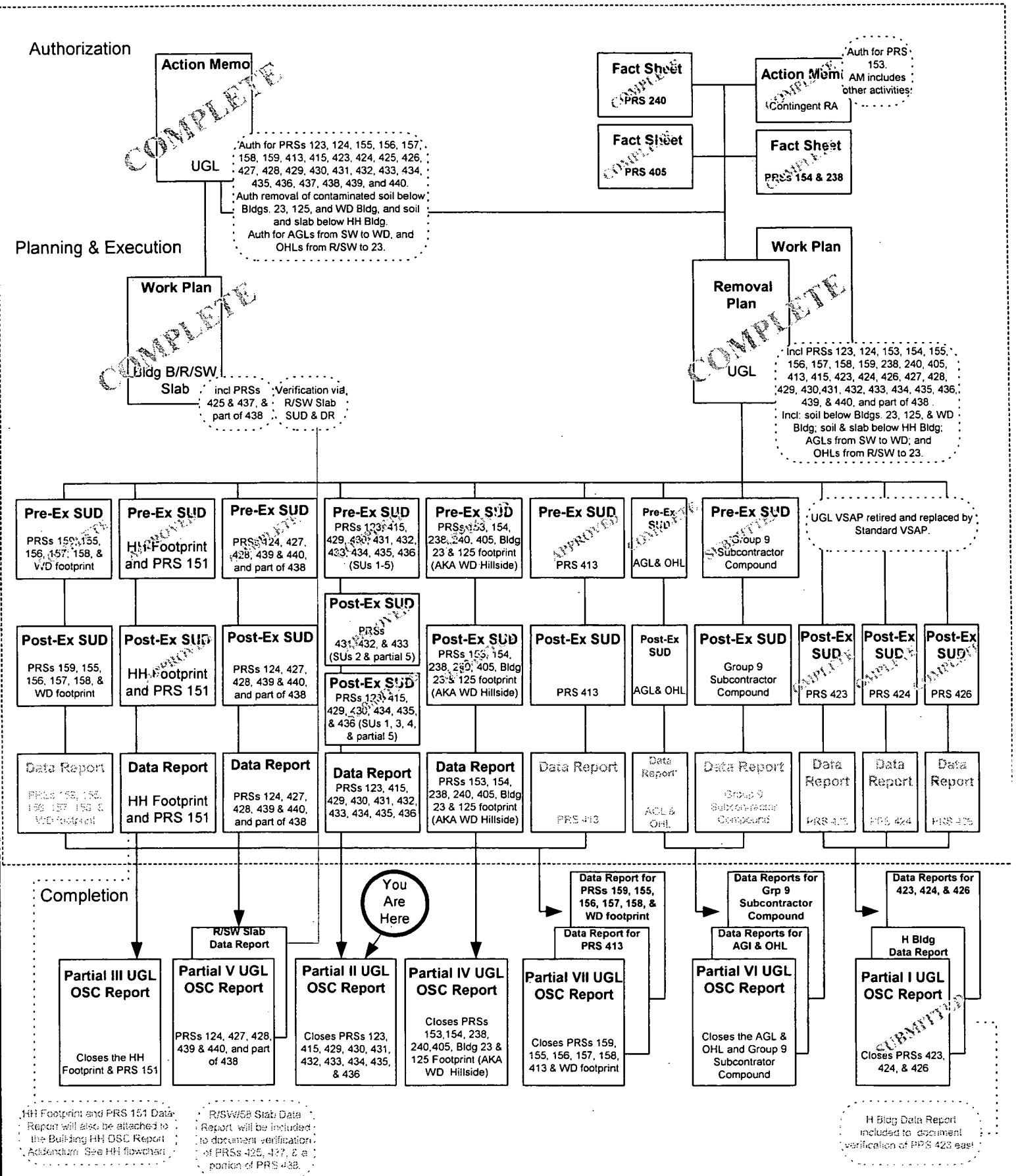
10/04/05 @ 10:00 AM

UGL (Underground Waste Transfer Lines) (AKA Group 9):

PRSs 123, 124, 153, 154, 155, 156, 157, 158, 159, 238, 240, 405, 413, 415, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, and 440

Includes soil below Bldgs 23, 125, HH, and WD.



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Acronyms

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CO	cleanup objective
COC	contaminant of concern
CRA	contingent removal action
DOE	Department of Energy
FFA	Federal Facilities Agreement
MCP	Miamisburg Closure Project
OEPA	Ohio Environmental Protection Agency
OSC	On-Scene Coordinator
pCi/g	picoCuries per gram
PRS	Potential Release Site
RA	Removal Action
RASS	Remedial Action Survey Sample
SD	sanitary disposal
SUD	Survey Unit Design
UGL	underground line
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

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RECOMMENDATION

This OSC Report documents successful removal of the underground lines (UGLs) associated with Potential Release Sites (PRSs) 123, 415, and 429 through 436.

Per the associated **Action Memorandum** (UGL Action Memo, Removal Action of Soil & Underground Waste Transfer Lines Leading to WD Building, Final, September, 2003) [authorized by the Core Team August 11, 2003] and **Work Plan** (UGLs (Including Grp 9 PRS's 123-124, 153-159, 238, 240, 405, 413, 415, 423-430, 433-440; Grp 17 PRSs 431-432; Grp 21 PRS 131; Bldg HH Soil & Slab; Bldgs 23, 125, and WD Soil; SW-WD AGLs; and R/SW-23 OHLs.) Removal Plan, Final, April 2004), the contaminated lines and soil associated with PRSs 123, 415, and 429 through 436 were excavated. Verification sampling was performed in accordance with the Standard **VSAP**, Soils Verification Sampling & Analysis Plan, Final, August 2004 and PRS 123, 415, and 429 through 436 Removal Action Post-Excavation Survey Unit Designs (**SUDs**). This portion of the RA was successfully completed and resulted in the excavation and disposal of approximately 3,756 cubic yards of soil from October 2004 to March 2005. The material was shipped via rail to Envirocare in Utah for disposition. The contaminants of concern (COCs) for the UGL RA and associated cleanup objectives (COs) that apply to PRSs 123, 415, and 429 through 436 were Bismuth-207 at 1.2 pCi/g, Bismuth-210m at 8.3 pCi/g, Cesium-137+D at 3.8 pCi/g, Cobalt-60 at 0.7 pCi/g, Plutonium-238 at 55 pCi/g, Thorium-228+D at 2.6 pCi/g, and Thorium-232+D at 2.1 pCi/g. All final verification results for this portion of the UGL RA were below the COs, with the exception of three sample results for Co-60 at 1.01, 0.89, and 0.81 pCi/g; however, the effected survey units passed the statistical tests.

After a thorough review of this partial UGL On-Scene Coordinator (OSC) Report, the Core Team agrees that the Removal Action for PRSs 123, 415, and 429 through 436 is complete, and that all previously existing environmental issues associated with the UGL Removal Action for PRSs 123, 415, and 429 through 436 have been resolved.

Paul Lucas 9/29/05

Paul Lucas, OSC
U.S. Department of Energy
Springdale, Ohio

Timothy J. Fischer 9/29/05

Timothy J. Fischer/Remedial Project Manager
USEPA
Chicago, Illinois

9/29/05

Brian K. Nickel, Project Manager
OEPA
Dayton, Ohio

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1.0 SUMMARY OF EVENTS

This section describes the site background and events leading up to the Removal Action (RA), parties involved in responding to the RA, contaminant of concern (COC) determination, chronological narrative of the RA, and resources committed to complete the project.

1.1 Site Conditions and Background

Background. The locations of the underground line (UGL) Potential Release Sites (PRSs) 123, 415, and 429 through 436 are highlighted on Figure 1 (on page 2 of 9). Other PRSs not included in this partial On-Scene Coordinator (OSC) Report, but associated with the UGL RA, are shown, but not highlighted. The descriptions of the UGL PRSs 123, 415, and 429-436 are bolded in Table 1 (on page 3 of 9). Other PRSs not included in this partial OSC Report, but associated with the UGL RA, are shown, but not bolded.

The UGL RA was authorized by the Core Team (August 11, 2003), as documented in the associated Action Memo (UGL Action Memo, Removal Action of Soil & Underground Waste Transfer Lines Leading to WD Building, Final, September 2003). The RA for PRS 153 was authorized by the associated Action Memo (Action Memorandum/Engineering Evaluation/Cost Analysis, Contingent Removal Action (CRA) for Contaminated Soil, June 2002, Final). The RA for PRSs 154 and 238 was authorized by Fact Sheet (PRS 154 and 238: Area 23 and Potential Hot Spot S1092, Final, October 2003). The RA for PRS 240 was authorized by Fact Sheet (PRS 240: Potential Hot Spot Location S0472, Final, October 2003). The RA for PRS 405 was authorized by Fact Sheet (PRS 405: Soil Contamination – Building 23, Final, March 2004).

The level of soil radiological and volatile organic compound (VOC) contamination present warranted a RA under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act). This OSC Report documents the completion of the PRS 123, 415, and 429-436 RA activities authorized via the Action Memo, including removal of soil contaminated above the cleanup objective (CO). Verification sampling and analysis was performed in accordance with the Standard VSAP, Soils Verification Sampling & Analysis Plan, Final, August 2004 and Post-Excavation Survey Unit Designs (SUDs). The SUDs are included in Appendix C of Attachment A to this OSC Report. Verification results demonstrate that the remaining soil meets the CO, with the exception of three sample results for Co-60 at 1.01, 0.89, and 0.81 pCi/g; however, the effected survey units passed the statistical tests.

Removal Action. The UGLs were used to connect sumps and process lines from within T, R, SW, and H Buildings to the WD process treatment facility for treatment of generated radiologically contaminated liquid and sediment waste. See Table 1 (on page 3 of 9) for a listing of PRSs associated with these lines. For PRSs 123, 415, and 429 through 436, lines were removed, soil was remediated, and the surface verified, as required. PRSs 123, 415, and 429-436 are closed by this OSC Report.

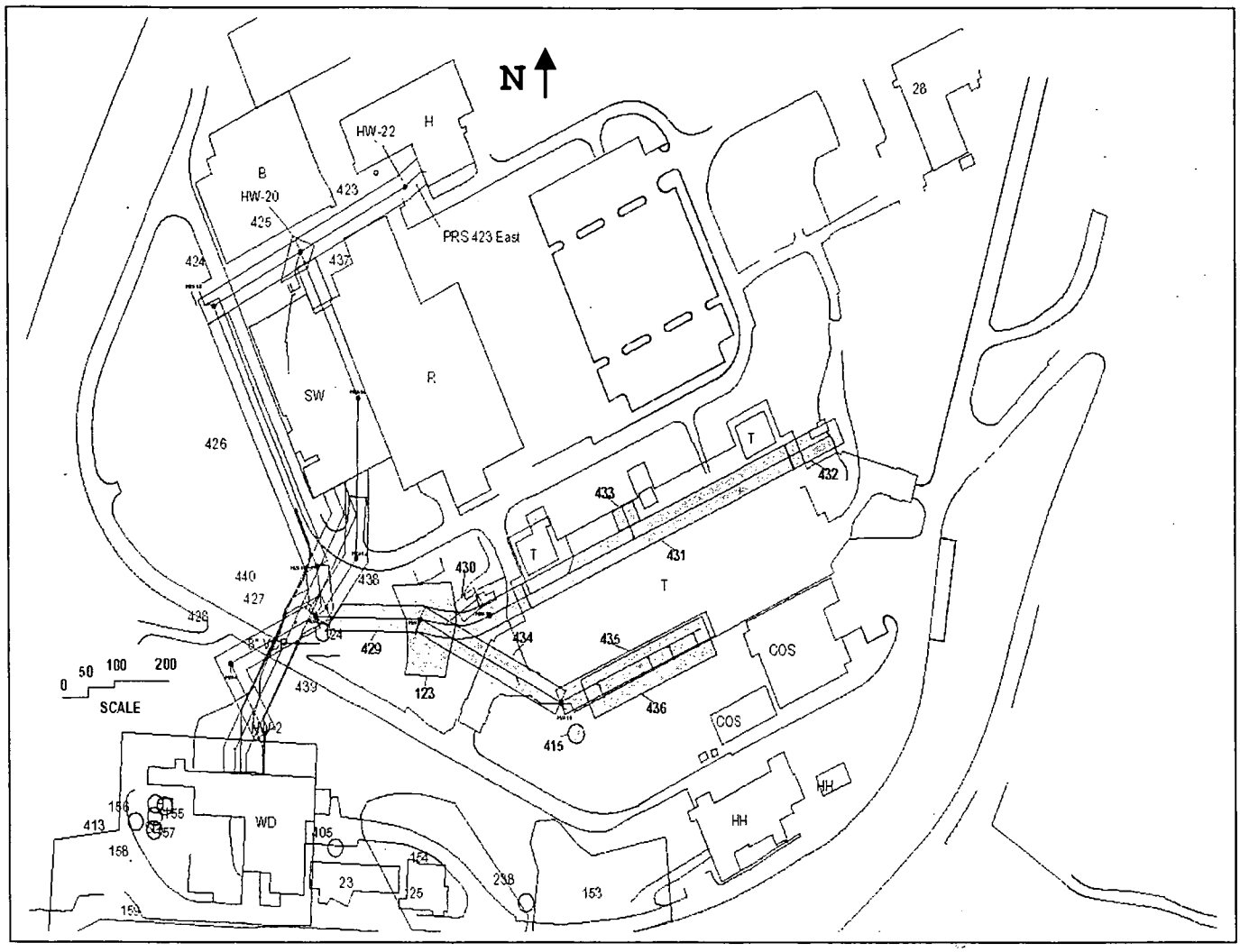

Figure 1: UGL RA PRSs

(shaded PRSs closed via this OSC Report)

Table 1: UGL RA PRSs

(bold PRSs closed via this OSC Report)

PRS	Description/Comment
123	**Area 5, radioactive waste line break**
124	Building 48 Hillside
153	Area 20, Radioactive waste line break
154	Area 23, Th contaminated soils
155	Old sanitary disposal (SD) plant (aka Old sanitary waste treatment plant) / removed 1997
156	Old SD Plant Tank (tank 205) / removed 1997
157	Old SD Plant Tank (tank 206) / removed 1997
158	Old SD Plant Tank (tank 207) / removed 1997
159	Area 4A, Sewage Sludge Drying Pits / removed 1997
238	Potential hot spot location S1092
405	Building 23 Oil Contaminated Soil
413	Soil contamination – creosote / removed 1996
415	**Soil contamination – Radiological SCR307**
423	Hot waste line, segment 1A
424	Hot waste line, segment 1B
425	Hot waste line, segment 2
426	Hot waste line, segment 5
427	Hot waste line, segment 6
428	Hot waste line, segment 7
429	**Hot waste line, segment 9**
430	**Hot waste line, segment 9b**
431	**Hot waste line, segment 10**
432	**Hot waste line, segment 11**
433	**Hot waste line, segment 12**
434	**Hot waste line, segment 13A**
435	**Hot waste line, segment 13B**
436	**Hot waste line, segment 14**
437	Hot waste line, segment 3
438	Hot waste line, segment 4
439	Hot waste line, segment 4A
440	Hot waste line, segment 8

1.2 Organization of the Removal Actions

Table 2 lists the parties responding to the removal action, and their responsibilities.

Table 2: Organization of the Removal Action

US Environmental Protection Agency SFR-5J 77 W. Jackson Street Chicago, IL 60604 312-353-2000	Timothy J. Fischer	Federal agency responsible for oversight
Ohio Environmental Protection Agency 401 E. Fifth Street Dayton, OH 45402-2911 937-285-6357	Brian K. Nickel	State agency responsible for oversight
Department of Energy, Miamisburg Closure Project 175 Tri-County Parkway Springdale, OH 45246 513-246-0071	Paul Lucas	On-scene Coordinator responsible for oversight and success
CH2M HILL Mound, Inc., Environmental Restoration Project 1 Mound Road, P. O. Box 3030 Miamisburg, OH 45342-3030 937-608-8220	Jim Fontaine	Provide OSC with technical assistance, administrative support, field oversight, sample management, site safety, photo, site documentation, and preparation of the OSC Report

1.3 Objectives

Documentation Objective. The objectives of this OSC Report are to describe the RA fieldwork and document successful completion of the project. Material quantities and disposition locations are presented in Table 3. Because this is a partial OSC Report, complete costs are not available to report. Total project cost for the UGL Removal Action will be reported in the last of the OSC Reports associated with the UGL Removal Action.

Table 3: Materials and Disposition

Type of Material	Date	Quantity	Disposal Method	Disposal Location
Contaminated soil and asphalt	October 2004 - March 2005	3,756 yd^3	Rail shipments to Envirocare	Clive, Utah

Cleanup Objective. Contaminants and COs identified in the UGL Action Memo, the CRA for PRS 153, and Fact Sheets for PRSs 154, 238, 240, and 405 are as follows:

Table 4: Soil Cleanup Objectives (pCi/g unless otherwise specified)

Contaminant (per PRS Package)	**Bkgd.**	**Screening Level**(2)	**Cleanup Objective**(3)	**PRSs**
Actinium-227 +D	0.11	0.56	4.6	154, 238, 423-428, 440
Americium-241	ND	6.3	63	423-428, 440
Beryllium (mg/kg)	1.3	43.4(5)	43.4(5)	437-439
Bismuth-207	ND	.16	1.6	440
Cesium-137 +D	0.42	.76	3.8	123, 423-436, 440
Cobalt-60	NC	0.07	0.7	123, 423-436
Lead-210 +D	1.2	1.8	7.4	440
Plutonium-238	0.13	6.2	55(1)	123, 124, 153, 154, 240, 405, 415, 423-440
Plutonium-239/240	0.18	6.3	61.2	440
Protactinium-231 +D	0.11	0.5	4.1	440
Radium-226 +D	2.0	2.1	2.9	154, 238, 240, 423-428, 440
Strontium-90 +D	0.72	10.1	94.72	440
Thorium-228 +D	1.5	1.6	2.6	429-433, 440
Thorium-230 +D	1.9	2(6)	2.8	124, 153, 154, 238, 423-428, 440
Thorium-232 +D	1.4	1.5	2.1	123, 124, 153, 154, 238, 240, 405, 415, 423-440
Tritium	1.6	7582	see note (4)	437-440
Uranium-233 +D	NE	0.48	4.8	440
Uranium-234	1.1	11.6(7)	106.1	440
Uranium-238 +D	1.2	1.3	2.2	154, 238, 240, 440
Arsenic (mg/kg)	8.6	10.6	28.5	240
Ethylbenzene (mg/kg)	NE	0.48(5)	0.48(5)	413
Benzo(a)anthracene (mg/kg)	NE	4.10	41	413
Benzo(b)fluoranthene (mg/kg)	NE	4.10	41	413
Benzo(a)pyrene (mg/kg)	NE	0.41	4.1	413
Indeno(1,2,3-c,d)pyrene (mg/kg)	NE	4.10	41	413
Dibenz(a,h)anthracene (mg/kg)	NE	0.41	4.1	413
TPH (ppm)	N/a	N/a	105	405

Radionuclides labeled with a "+D" indicate that pertinent daughters are included within the risk calculation.
ND – non detect NC – not calculated
NE – not evaluated as part of the OU9 Background Soils Investigation
(1) Value of 55 pCi/g was based on Core Team decision.
(2) more stringent of 10^{-6} RBGV + background or HI=1 value

(3) more stringent of 10^{-5} RBGV + background or HI=1 value

(4) The 10^{-6} RBGV is 7580 pCi/g. This value represents the cleanup objective for tritium in soil. A conservative model was developed to account for the potential for tritium in soil to "leach" to groundwater at unacceptable levels. The model used is described in draft information shared with Ohio EPA, i.e. Draft Soil Screening Level for Tritium Migration to Groundwater at the Mound Facility, facsimile dated 3 December 2002 (Darnell to Nickel). The resulting value of 75 pCi/g is comparable to a screening level that represents the activity of tritium in soil that, if transported via groundwater to the Buried Valley Aquifer (BVA), could pose unacceptable risk (exceed the MCL). If the 95% upper confidence limit (UCL) of the measurements of tritium in soil is less than the screening level of 75 pCi/g, removal is not required. If the 95% UCL is greater than 75 pCi/g, further evaluation is required.

(5) based on HI = 1

(6)In areas where Th-230 is not a contaminant of potential concern, Mound will use our normal sample analysis process through gamma spectroscopy and will assure that the result and MDA are less than 10pCi/g. If the detected value for Th-230 is greater than MDA, Mound will reanalyze the sample. If Th-230 is a contaminant of potential concern the detection limits of the analysis will be at or below the listed guideline value of 0.09 pCi/g above background.

(7)The screening level is reflective of onsite Gamma Spec Laboratory capabilities and will be used to determine if additional characterization or removal may be necessary. Soil Screening is not an appropriate technique for U-234. However, detection of U-235 or U-238 is anticipated in conjunction with U-234 contamination. Positive detection of either U-235 or U-238 (above guideline values) will trigger alpha spectroscopic analysis of the sample.

Additional COCs found at PRS 429 during Remedial Action Survey Sample (RASS) sampling that were included in the Post-Ex Survey Unit Design (SUD) for PRS 429 are:

Contaminant (per PRS Package)	**Bkgd.**	**Screening Level**(2)	**Cleanup Objective**(3)	**PRSs**
Bismuth-207	ND	0.12	1.2	429
Bismuth-210m	ND	0.83	8.3	429

All final verification results (see Attachment A [A15/114]) for PRSs 123, 415, and 429 through 436 are below their respective COs, with the exception of three sample results for Co-60 at 1.01, 0.89, and 0.81 pCi/g; however, the effected survey units passed the statistical tests.

Removal Action Objectives: The objectives of the removal action included:

- Project Planning,
- Public Notification,
- Establish Work Zones,
- Removal of UGLs and Soil,
- Verification/Confirmation,
- Site Restoration, and
- Documentation of Completion.

1.4 Chronological Narrative of the Removal Actions

The following is a chronological narrative of events involving the UGL RA for PRSs 123, 415, and 429 through 436:

Table 5: Chronology of RA

Timeframe	Activity
August 2003	UGL RA authorized.
April 2004	Work Plan approved for PRSs 123, 415, and 429 through 436.
October 2004 - March 2005	RA for PRSs 123, 415, and 429 through 436 performed.
January 2005	Pre-Ex SUD approved.
February 2005	Post-Excavation SUD for PRSs 431-433 approved.
February 2005 - March 2005	Verification sampling for PRSs 431-433 performed.
March 2005	PRS 431-433 Backfill Package submitted to regulators and backfill performed.
May 2005	Post-Excavation SUD for PRSs 123, 415, 429, 430, and 434-436 approved.
April 2005 – May 2005	Verification sampling for PRSs 123, 415, 429, 430, and 434-436 performed.
May 2005	PRS 123, 415, 429, 430, and 434-436 Backfill Package submitted to regulators and backfill performed.
September 2005	UGL Partial II OSC Report for PRSs 123, 415, and 429-436 issued.

2.0 EFFECTIVENESS OF THE REMOVAL ACTION

Verification sample results for the UGL RA for PRSs 123, 415, and 429 through 436 are presented in Attachment A (A15/114). All results are below their respective COs, with the exception of three sample results for Co-60 at 1.01, 0.89, and 0.81 pCi/g; however, the effected survey units passed the statistical tests. All results are below hot spot criteria.

Given that two of the verification samples that exceeded the CO for Co-60 were at the edge of the excavation, two samples were collected as part of the backfill request for onsite gamma spec analysis to ensure contamination did not exceed the boundaries of the excavation. Results of both samples were below the CO and are included in Attachment A.

2.1 Actions Taken by Site Contractor

CH2M Hill Mound, Inc. performed oversight, monitoring, and documentation. Site restoration will be performed at a later date and will be documented in the last of the OSC Reports associated with the UGL RA.

Photographic documentation of the removal action is presented in Attachment C.

The project met the removal action objectives as outlined in the approved Action Memo. CH2M Hill Mound, Inc. personnel prepared this OSC Report, which shows that the

Removal Action objectives for PRSs 123, 415, and 429 through 436 were achieved, except for site restoration, which will be performed and documented at a later date.

2.2 Actions Taken by Local, State, and Federal Agencies

The Department of Energy (DOE)/Miamisburg Closure Project (MCP), the United States Environmental Protection Agency (USEPA), and Ohio EPA (OEPA) had oversight responsibility for the removal action. The DOE/MCP was the lead agency for the RA and provided the funding and oversight for the RA. The USEPA and OEPA had oversight responsibility for the RA and review of the Action Memorandum and OSC Report to ensure that the objectives were met.

2.3 Actions Taken by Subcontractors

Subcontractors involved in the project included the following:

- Earthline Technologies, Inc. (Ashtabula, OH) performed the excavation, staging (adjacent to dig site), and transportation of contaminated soil and debris to the onsite rail spur.
- Severn Trent (STL St. Louis) (St. Louis, MO) performed analysis of verification samples.
- Envirocare (Clive, UT) received contaminated waste.
- Terran (Beavercreek, OH) performed verification sampling and data validation.

3.0 DIFFICULTIES ENCOUNTERED

3.1 Items that Affect the Removal Actions

No difficulties were encountered during the removal.

3.2 Issues of Intergovernmental Coordination

All DOE/USEPA/OEPA interactions were good. The agencies were updated informally on a regular basis, and formally at monthly Federal Facilities Agreement (FFA) meetings. The Mound 2000 Process worked well.

4.0 RECOMMENDATIONS

4.1 Means to Prevent a Recurrence

The waste and contaminated soil were removed. Mound Removal Actions have regulator approved work plans, each of which has a section that addresses runon/runoff controls. In addition, the site Storm Water Pollution Prevention Plan applies to the entire site and is monitored by the Environmental Compliance and Analytical Services group.

As a result of the removal and runon/runoff protection, spread of contamination is

prevented. After the removal action and the CERCLA process for the parcel are complete, the area will be transferred from Federal to private ownership. All State and Federal disposal rules will apply.

ATTACHMENT A

DATA REPORT

UGL Partial II
DATA REPORT

PRSs 123, 415, & 429-436

September 2005

Rev. 1

Department of Energy

Miamisburg Closure Project

CH2MHILL

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Acronyms

CO	cleanup objective
COC	contaminant of concern
Ex	Excavation
PRS	Potential Release Site
QC	quality control
RA	removal action
R&V	review and validation
SUD	Survey Unit Design
UGL	underground lines
VSAP	Verification Sampling and Analysis Plan

1.0 PURPOSE

This Data Report provides documentation of sampling activities conducted in accordance with the Standard VSAP [Verification Sampling and Analysis Plan] Soils Verification Sampling and Analysis Plan, Final, August 2004; required to closeout Potential Release Sites (PRSs) 123, 415, and 429- 436 (shown on Figure 1).

The purposes of this Data Report are to:

- document any variances to the VSAP/Post-Excavation (Ex) Survey Unit Design (SUD),
- present statistical and bias data (separately), and
- present summary statistics and statistical analyses of the applicable data, including retrospective power curve, and
- documentation of data review and validation.

2.0 DOCUMENT ORGANIZATION / SUMMARY

The Underground Lines (UGL) removal action (RA) consists of multiple sample events, each known as a "UGL Partial". This Data Report is for UGL Partial II, which covers two Sample Events (1 and 2 as described below).

Unless otherwise specified as a variance, sampling and analyses were conducted in accordance with the VSAP and Post-Ex SUDs. The following variances occurred:

1. In some cases, a rock hammer was used to loosen the soil prior to sample collection.

2. Several locations were submerged within standing pools of water or located within an area deemed physically hazardous for sampling personnel to enter. Samples from these locations were collected using a trackhoe and composited using stainless steel trowels and bowls.

3. Four sample locations were adjusted within several feet of the original location in order to obtain a sample of soil.

3.0 FIELD ACTIVITIES

3.1 SAMPLE EVENT 1

Sample Event 1 occurred in February 2005 and included verification of all of Survey

Unit 2 (SU2) and part of SU5. Contaminants of concern (COCs) are shown in the Core Team-approved Post-Ex SUD for Sample Event 1 (excerpt included in Appendix C). A 100% walkover survey was performed (in all accessible areas) as required in the Post-Ex SUD. Documentation of the walkover survey is provided in Appendix E. Per the Post-Ex SUD, 63 verification samples were collected and analyzed offsite by gamma spec (Mound Compendium Method A-015), isotopic thorium (Compendium Method A-012), and isotopic plutonium (Compendium Method A-012). Results for Sample Event 1 are presented in Table 1. All results are below cleanup objectives (COs) with the exception of one Co-60 result of 0.89 pCi/g.

3.2 SAMPLE EVENT 2

Sample Event 2 occurred between March and April 2005 and included verification of the remainder of SU5 and all of SUs 1, 3, and 4. COCs are shown in the Core Team-approved Post-Ex SUD for Sample Event 2 (excerpt included in Appendix C). Bismuth-207 and Bi-210M were added as COCs. A 100% walkover survey was performed (in all accessible areas) as required in the Post-Ex SUD. Documentation of the walkover survey is provided in Appendix E. Per the Post-Ex SUD, 75 verification samples were collected and analyzed offsite by gamma spec (Mound Compendium Method A-015), isotopic thorium (Compendium Method A-012), and isotopic plutonium (Compendium Method A-012). Results for Sample Event 2 are presented in Table 2. All results are below COs with the exception of two Co-60 results of 0.81 pCi/g and 1.01 pCi/g.

4.0 DATA REVIEW / VALIDATION

All data were reviewed and 10% of offsite data were validated.

Field and laboratory QC (quality control) were assessed as part of the data review and validation (R&V) process.

Documentation of review and validation (and related variances) is provided Appendix F. Review and validation supports that the data are usable.

APPENDIX A

FIGURES

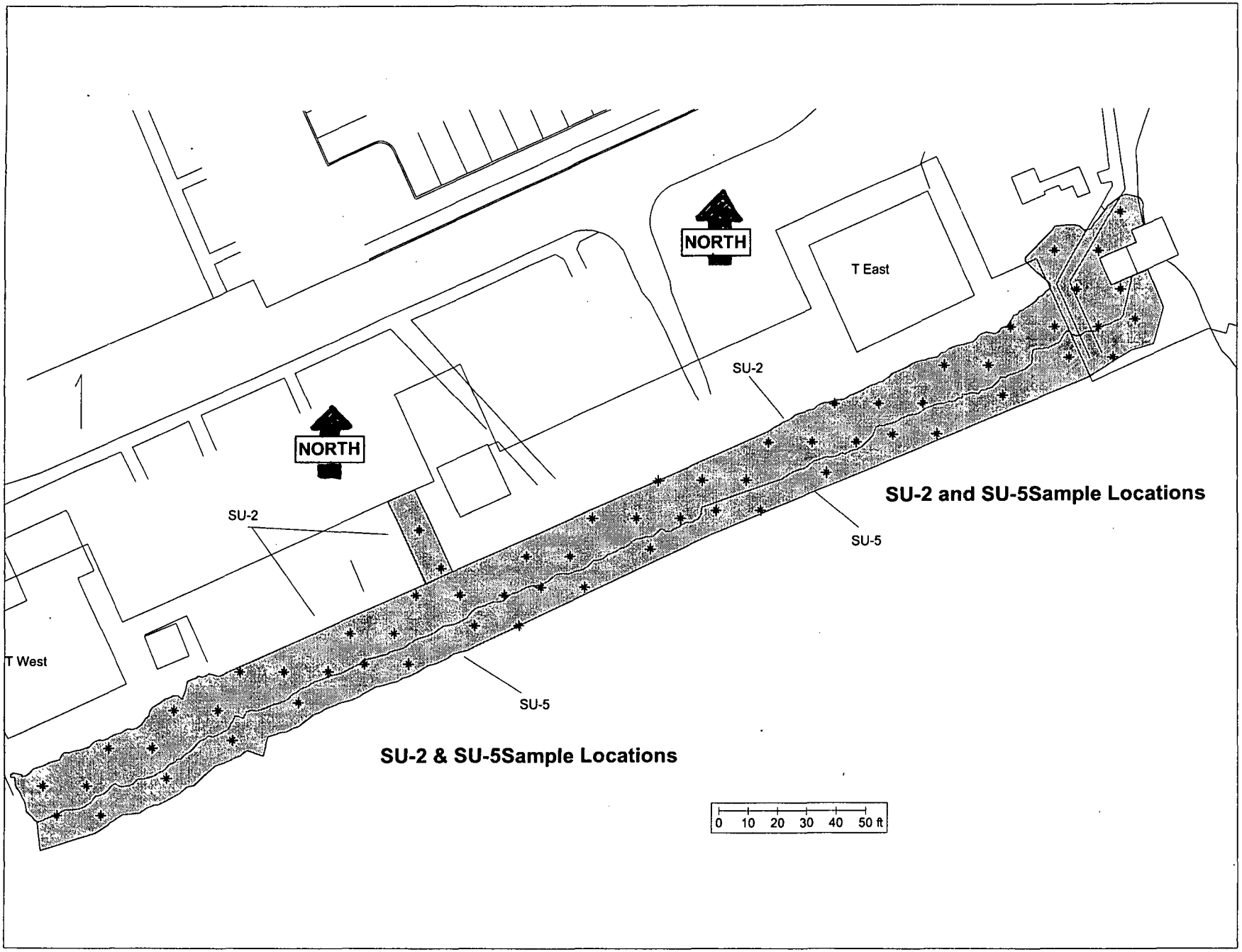

Figure 1: Sample Event 1 Overview

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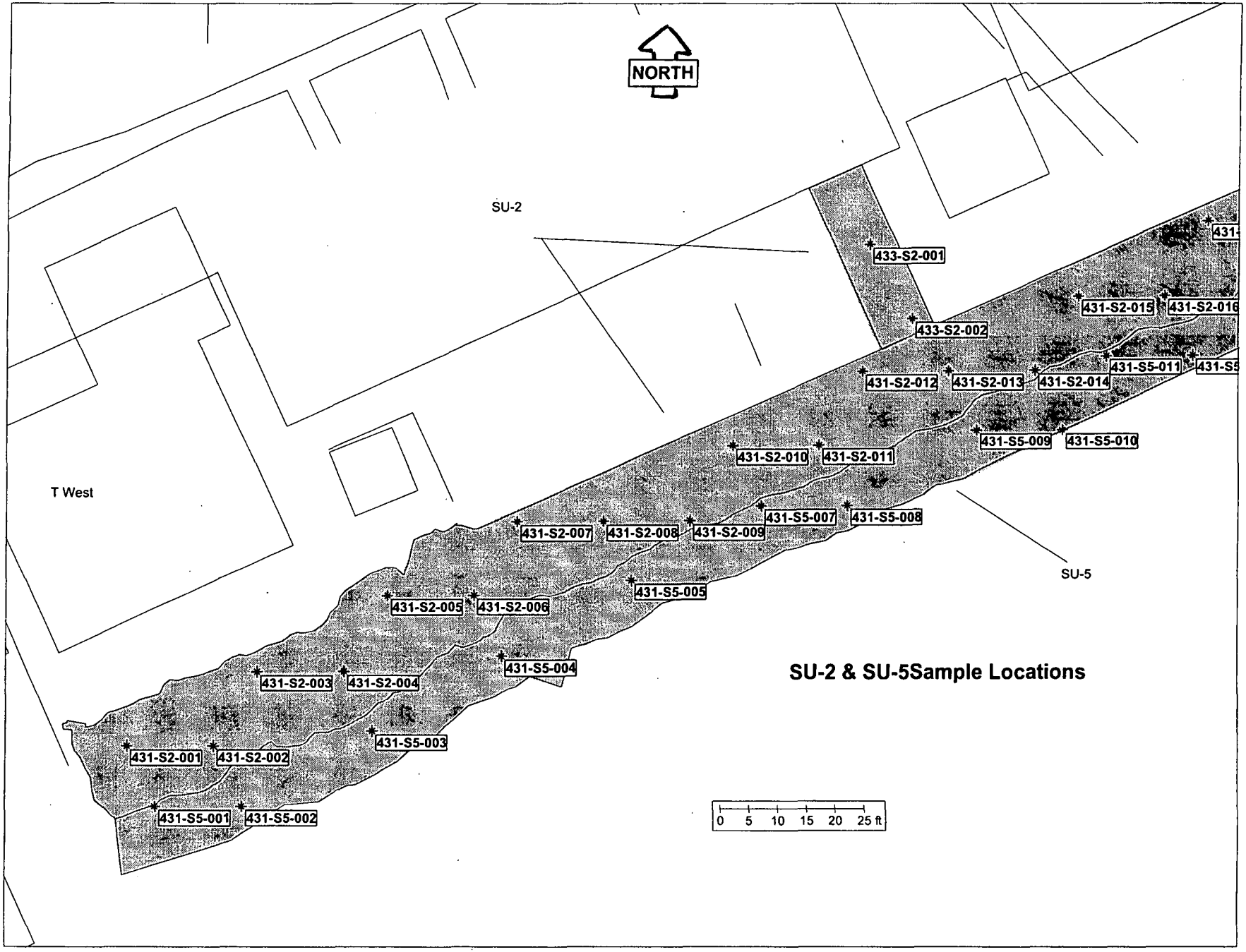

Figure 2: Sample Event 1 Western Sample Locations

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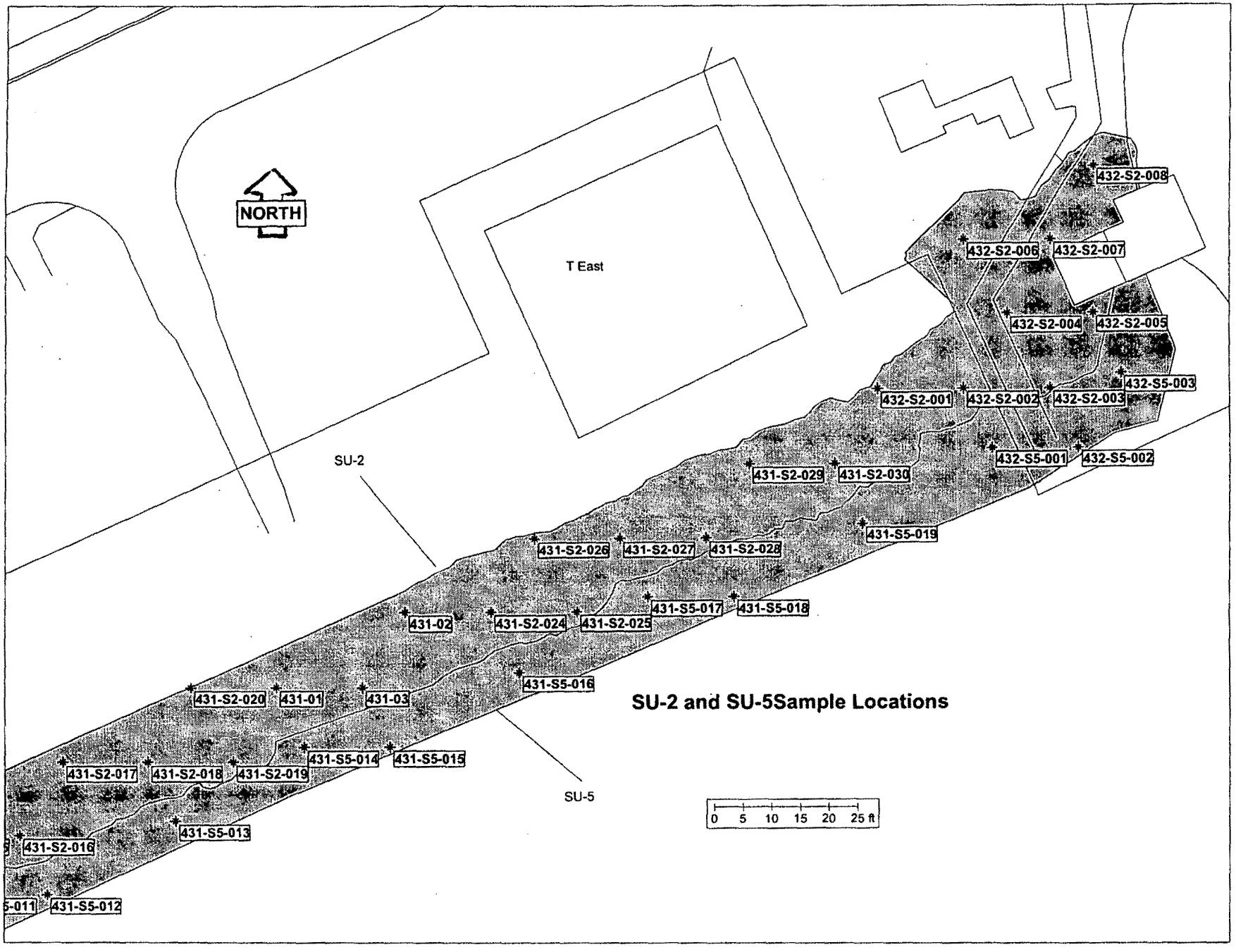

Figure 3: Sample Event 1 Eastern Sample Locations

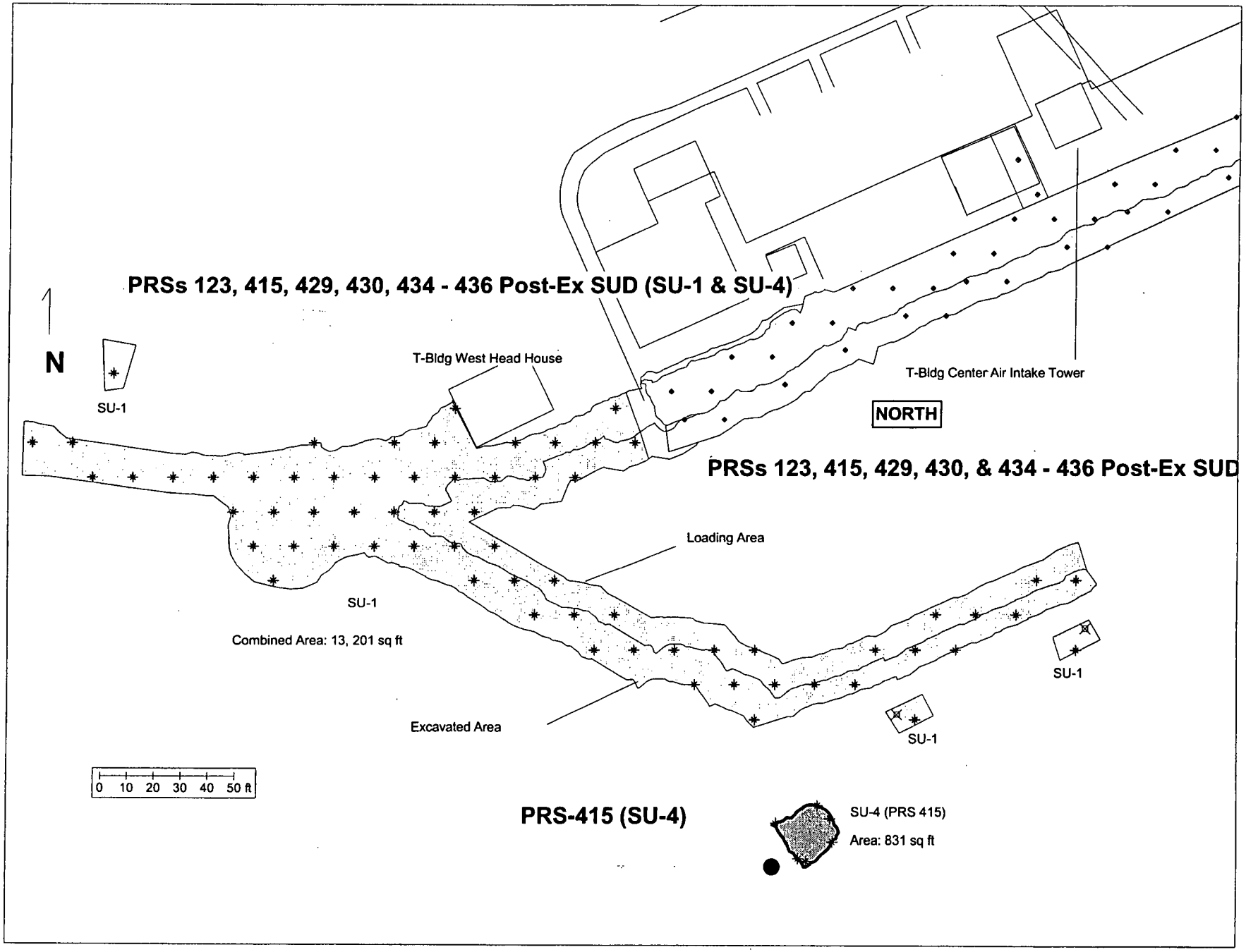

Figure 4: Sample Event 2 Overview

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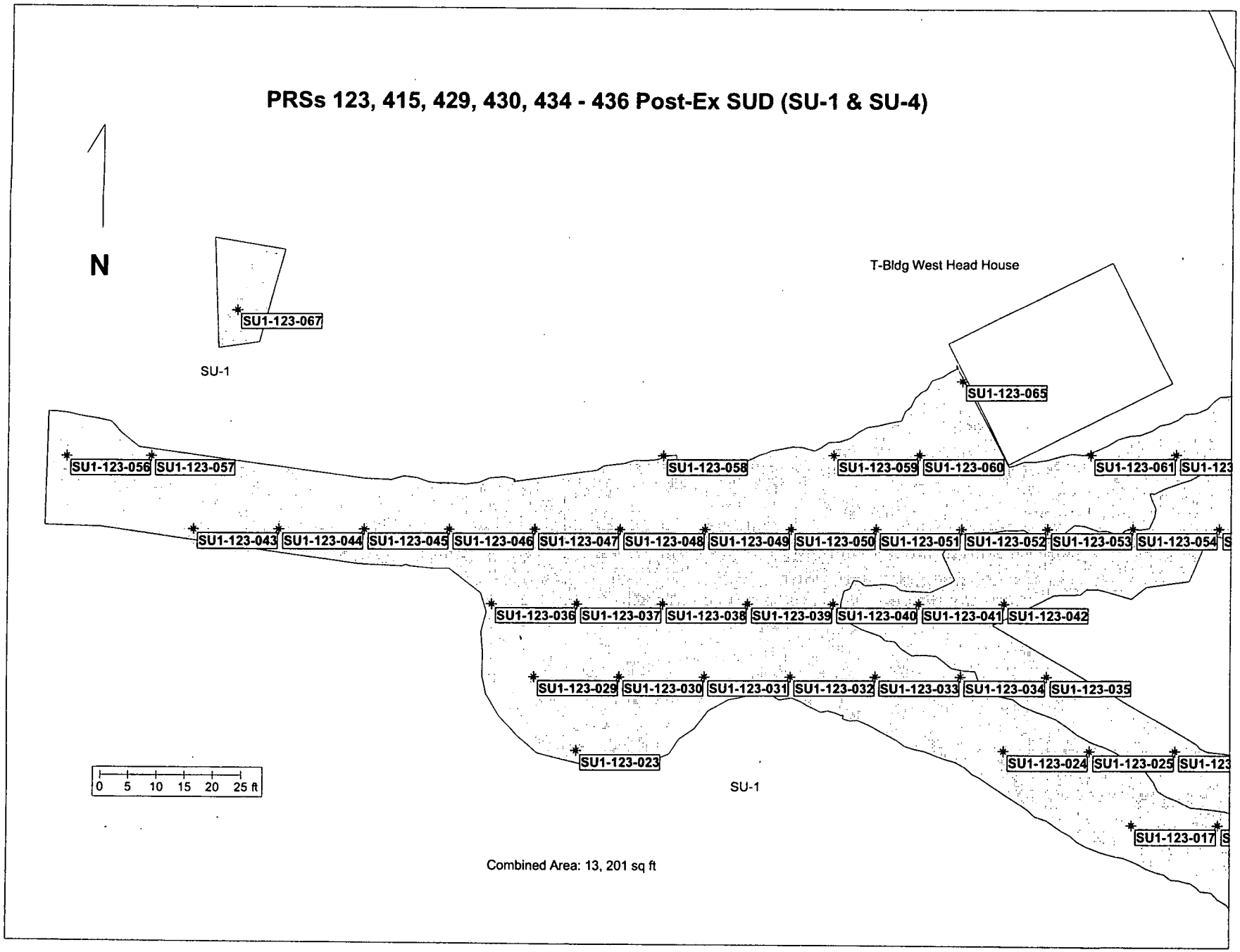

Figure 5: Sample Event 2 Western Sample Locations

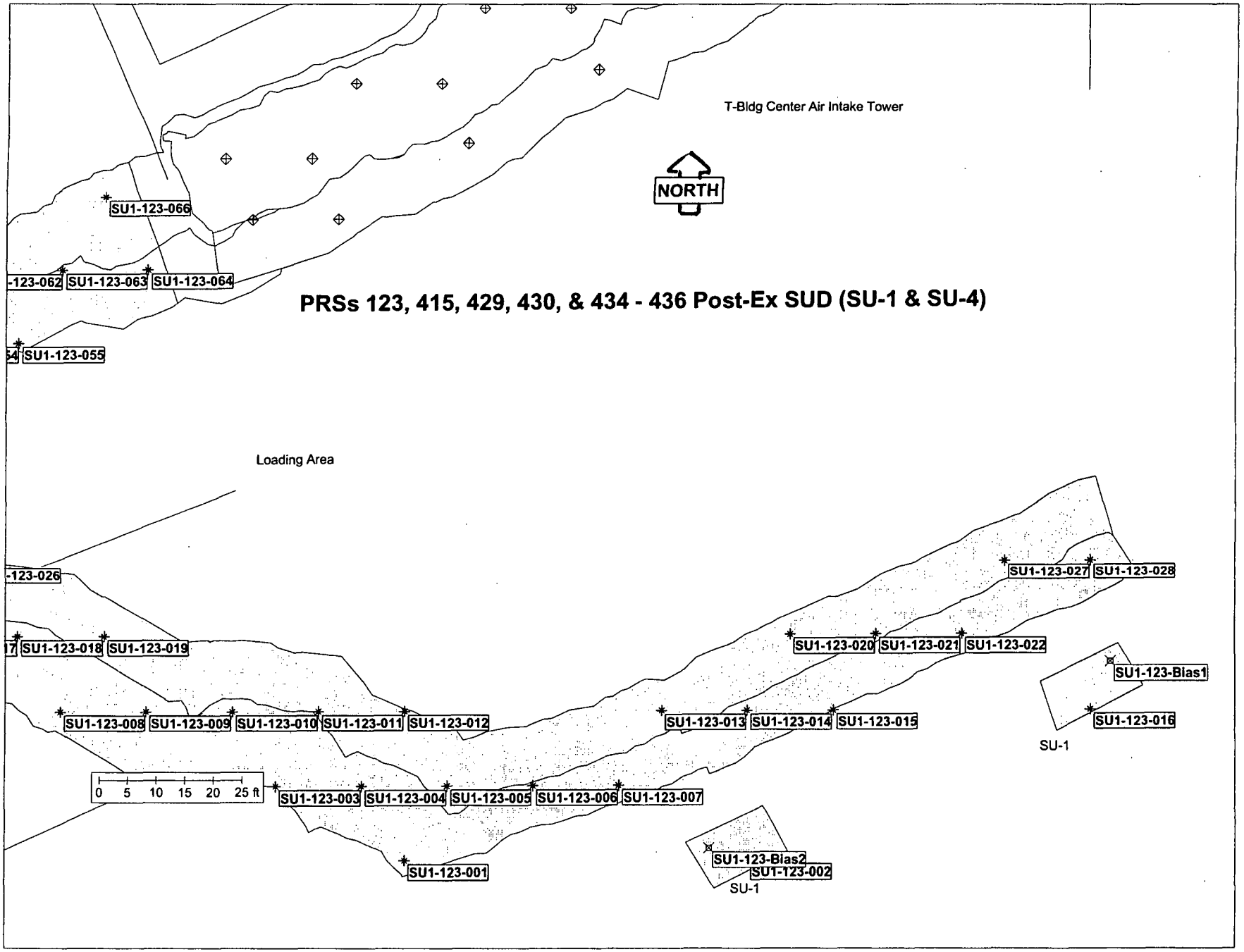

Figure 6: Sample Event 2 Eastern Sample Locations

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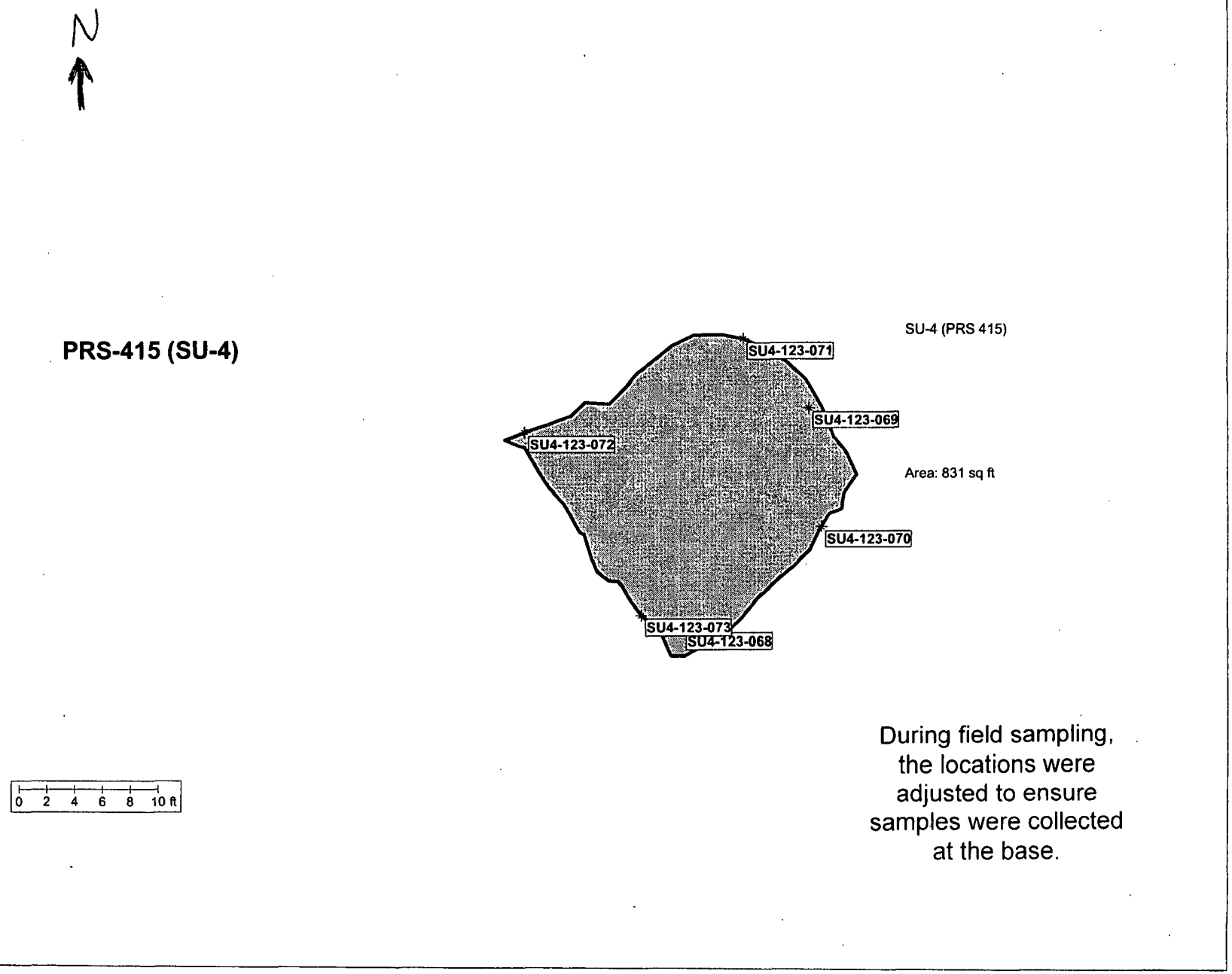

Figure 7: Sample Event 2 Southern Sample Locations

APPENDIX B

TABLES

Table 1: Sample Event 1 (PRSs 431-433) A15/114
Table 2: Sample Event 2 (PRSs 123, 415, 430, and 434-436) A35/114

Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
431-01	02/02/2005	000069	Actinium-227	0.030	0.480	PCI/G	4.6	U	UJ
431-01	02/02/2005	000069	Actinium-228	0.520	0.400	PCI/G	1.93		
431-01	02/02/2005	000069	Americium-241	-0.008	0.170	PCI/G	63	U	UJ
431-01	02/02/2005	000069	Bismuth-207	0.039	0.093	PCI/G	1.2	U	UJ
431-01	02/02/2005	000069	Bismuth-210M	-0.006	0.110	PCI/G	8.34	U	UJ
431-01	02/02/2005	000069	Bismuth-214	0.770	0.120	PCI/G	9.87		
431-01	02/02/2005	000069	Cesium-137	-0.026	0.100	PCI/G	3.8	U	UJ
431-01	02/02/2005	000069	Cobalt-60	0.023	0.140	PCI/G	0.7	U	UJ
431-01	02/02/2005	000069	Lead-210	1.100	2.500	PCI/G	7.4	U	UJ
431-01	02/02/2005	000069	Lead-212	0.510	0.160	PCI/G	16.6		
431-01	02/02/2005	000069	Lead-214	0.650	0.160	PCI/G	8.92		
431-01	02/02/2005	000069	Plutonium-238	0.080	0.080	PCI/G	55	U	U
431-01	02/02/2005	000069	Plutonium-239/240	0.070	0.070	PCI/G	61.2	U	U
431-01	02/02/2005	000069	Potassium-40	13.100	0.200	PCI/G	47.8		
431-01	02/02/2005	000069	Protactinium-231	1.100	2.700	PCI/G	4.1	U	UJ
431-01	02/02/2005	000069	Radium-226	0.770	0.120	PCI/G	2.9		J
431-01	02/02/2005	000069	Radium-228	0.520	0.440	PCI/G	3.06		
431-01	02/02/2005	000069	Thorium-228	0.670	0.040	PCI/G	2.6		
431-01	02/02/2005	000069	Thorium-230	0.940	0.020	PCI/G	2.8		
431-01	02/02/2005	000069	Thorium-232	0.630	0.020	PCI/G	2.1		
431-01	02/02/2005	000069	Thorium-232	0.520	0.440	PCI/G	2.1		
431-02	02/02/2005	000070	Actinium-227	0.150	0.460	PCI/G	4.6	U	UJ
431-02	02/02/2005	000070	Actinium-228	0.650	0.370	PCI/G	1.93		
431-02	02/02/2005	000070	Americium-241	0.059	0.170	PCI/G	63	U	UJ
431-02	02/02/2005	000070	Bismuth-207	-0.025	0.063	PCI/G	1.2	U	UJ
431-02	02/02/2005	000070	Bismuth-210M	-0.010	0.092	PCI/G	8.34	U	UJ
431-02	02/02/2005	000070	Bismuth-214	0.860	0.150	PCI/G	9.87		
431-02	02/02/2005	000070	Cesium-137	-0.011	0.089	PCI/G	3.8	U	UJ
431-02	02/02/2005	000070	Cobalt-60	-0.026	0.069	PCI/G	0.7	U	UJ
431-02	02/02/2005	000070	Lead-210	0.500	2.100	PCI/G	7.4	U	UJ
431-02	02/02/2005	000070	Lead-212	0.300	0.160	PCI/G	16.6		
431-02	02/02/2005	000070	Lead-214	0.790	0.140	PCI/G	8.92		
431-02	02/02/2005	000070	Plutonium-238	0.070	0.070	PCI/G	55	U	U
431-02	02/02/2005	000070	Plutonium-239/240	0.060	0.060	PCI/G	61.2	U	U
431-02	02/02/2005	000070	Potassium-40	12.600	1.100	PCI/G	47.8		
431-02	02/02/2005	000070	Protactinium-231	0.900	2.200	PCI/G	4.1	U	UJ
431-02	02/02/2005	000070	Radium-226	0.860	0.150	PCI/G	2.9		J
431-02	02/02/2005	000070	Radium-228	0.650	0.370	PCI/G	3.06		
431-02	02/02/2005	000070	Thallium-208	0.250	0.082	PCI/G	0.498		
431-02	02/02/2005	000070	Thorium-228	0.720	0.050	PCI/G	2.6		
431-02	02/02/2005	000070	Thorium-230	1.110	0.030	PCI/G	2.8		
431-02	02/02/2005	000070	Thorium-232	0.650	0.370	PCI/G	2.1		
431-02	02/02/2005	000070	Thorium-232	0.590	0.030	PCI/G	2.1		
431-03	02/02/2005	000071	Actinium-227	-0.030	0.390	PCI/G	4.6	U	UJ
431-03	02/02/2005	000071	Americium-241	-0.087	0.160	PCI/G	63	U	UJ
431-03	02/02/2005	000071	Bismuth-207	0.000	0.074	PCI/G	1.2	U	UJ
431-03	02/02/2005	000071	Bismuth-210M	-0.001	0.110	PCI/G	8.34	U	UJ
431-03	02/02/2005	000071	Bismuth-214	0.570	0.180	PCI/G	9.87		
431-03	02/02/2005	000071	Cesium-137	0.016	0.100	PCI/G	3.8	U	UJ
431-03	02/02/2005	000071	Cobalt-60	0.015	0.097	PCI/G	0.7	U	UJ
431-03	02/02/2005	000071	Lead-210	1.000	2.100	PCI/G	7.4	U	UJ
431-03	02/02/2005	000071	Lead-212	0.490	0.140	PCI/G	16.6		
431-03	02/02/2005	000071	Lead-214	0.680	0.150	PCI/G	8.92		
431-03	02/02/2005	000071	Plutonium-238	0.005	0.051	PCI/G	55	U	UJ
431-03	02/02/2005	000071	Plutonium-239/240	0.050	0.050	PCI/G	61.2	U	U
431-03	02/02/2005	000071	Potassium-40	12.200	0.800	PCI/G	47.8		
431-03	02/02/2005	000071	Protactinium-231	1.500	2.600	PCI/G	4.1	U	U
431-03	02/02/2005	000071	Radium-226	0.570	0.180	PCI/G	2.9		J
431-03	02/02/2005	000071	Radium-228	0.260	0.480	PCI/G	3.06	U	U
431-03	02/02/2005	000071	Thallium-208	0.217	0.075	PCI/G	0.498		
431-03	02/02/2005	000071	Thorium-228	0.520	0.030	PCI/G	2.6		
431-03	02/02/2005	000071	Thorium-230	0.920	0.030	PCI/G	2.8		
431-03	02/02/2005	000071	Thorium-232	0.490	0.020	PCI/G	2.1		
431-04	02/02/2005	000072	Actinium-227	-0.220	0.420	PCI/G	4.6	U	UJ
431-04	02/02/2005	000072	Americium-241	-0.055	0.140	PCI/G	63	U	UJ
431-04	02/02/2005	000072	Bismuth-207	-0.008	0.070	PCI/G	1.2	U	UJ
431-04	02/02/2005	000072	Bismuth-210M	-0.006	0.098	PCI/G	8.34	U	UJ
431-04	02/02/2005	000072	Bismuth-214	0.640	0.170	PCI/G	9.87		

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Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
431-04	02/02/2005	000072	Cesium-137	-0.029	0.096	PCI/G	3.8	U	UJ
431-04	02/02/2005	000072	Cobalt-60	-0.010	0.120	PCI/G	0.7	U	UJ
431-04	02/02/2005	000072	Lead-210	1.800	1.500	PCI/G	7.4		
431-04	02/02/2005	000072	Lead-212	0.480	0.150	PCI/G	16.6		
431-04	02/02/2005	000072	Lead-214	0.750	0.130	PCI/G	8.92		
431-04	02/02/2005	000072	Plutonium-238	0.040	0.040	PCI/G	55	U	U
431-04	02/02/2005	000072	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
431-04	02/02/2005	000072	Potassium-40	11.400	0.900	PCI/G	47.8		
431-04	02/02/2005	000072	Protactinium-231	0.800	2.200	PCI/G	4.1	U	UJ
431-04	02/02/2005	000072	Radium-226	0.640	0.170	PCI/G	2.9		J
431-04	02/02/2005	000072	Radium-228	0.640	0.580	PCI/G	3.06		
431-04	02/02/2005	000072	Thallium-208	0.142	0.075	PCI/G	0.498		
431-04	02/02/2005	000072	Thorium-228	0.510	0.040	PCI/G	2.6		
431-04	02/02/2005	000072	Thorium-230	0.940	0.030	PCI/G	2.8		
431-04	02/02/2005	000072	Thorium-232	0.420	0.020	PCI/G	2.1		
431-05	02/02/2005	000073	Actinium-227	-0.060	0.390	PCI/G	4.6	U	UJ
431-05	02/02/2005	000073	Americium-241	-0.001	0.170	PCI/G	63	U	UJ
431-05	02/02/2005	000073	Bismuth-207	0.000	0.077	PCI/G	1.2	U	UJ
431-05	02/02/2005	000073	Bismuth-210M	0.007	0.110	PCI/G	8.34	U	UJ
431-05	02/02/2005	000073	Bismuth-214	0.700	0.190	PCI/G	9.87		
431-05	02/02/2005	000073	Cesium-137	0.034	0.120	PCI/G	3.8	U	UJ
431-05	02/02/2005	000073	Cobalt-60	-0.015	0.110	PCI/G	0.7	U	UJ
431-05	02/02/2005	000073	Lead-210	1.400	2.900	PCI/G	7.4	U	U
431-05	02/02/2005	000073	Lead-212	0.550	0.170	PCI/G	16.6		
431-05	02/02/2005	000073	Lead-214	0.820	0.160	PCI/G	8.92		
431-05	02/02/2005	000073	Plutonium-238	0.020	0.020	PCI/G	55	U	U
431-05	02/02/2005	000073	Plutonium-239/240	0.140	0.021	PCI/G	61.2		
431-05	02/02/2005	000073	Potassium-40	10.200	1.200	PCI/G	47.8		
431-05	02/02/2005	000073	Protactinium-231	1.500	2.900	PCI/G	4.1	U	U
431-05	02/02/2005	000073	Radium-226	0.700	0.190	PCI/G	2.9		J
431-05	02/02/2005	000073	Radium-228	0.630	0.670	PCI/G	3.06	U	U
431-05	02/02/2005	000073	Thallium-208	0.207	0.110	PCI/G	0.498		
431-05	02/02/2005	000073	Thorium-228	0.520	0.030	PCI/G	2.6		
431-05	02/02/2005	000073	Thorium-230	0.920	0.030	PCI/G	2.8		
431-05	02/02/2005	000073	Thorium-232	0.710	0.030	PCI/G	2.1		
431-S2-001	02/17/2005	000001	Actinium-227	0.080	0.260	PCI/G	4.6	U	UJ
431-S2-001	02/17/2005	000001	Americium-241	-0.008	0.096	PCI/G	63	U	UJ
431-S2-001	02/17/2005	000001	Bismuth-207	-0.002	0.043	PCI/G	1.2	U	UJ
431-S2-001	02/17/2005	000001	Bismuth-210M	0.035	0.068	PCI/G	8.34	U	U
431-S2-001	02/17/2005	000001	Bismuth-214	0.300	0.110	PCI/G	9.87		
431-S2-001	02/17/2005	000001	Cesium-137	-0.011	0.062	PCI/G	3.8	U	UJ
431-S2-001	02/17/2005	000001	Cobalt-60	-0.008	0.052	PCI/G	0.7	U	UJ
431-S2-001	02/17/2005	000001	Lead-210	0.800	1.400	PCI/G	7.4	U	U
431-S2-001	02/17/2005	000001	Lead-212	0.140	0.100	PCI/G	16.6		
431-S2-001	02/17/2005	000001	Plutonium-238	0.070	0.035	PCI/G	55	J	U
431-S2-001	02/17/2005	000001	Plutonium-239/240	0.004	0.023	PCI/G	61.2	U	UJ
431-S2-001	02/17/2005	000001	Potassium-40	4.900	0.700	PCI/G	47.8		
431-S2-001	02/17/2005	000001	Protactinium-231	-1.040	1.100	PCI/G	4.1	U	UJ
431-S2-001	02/17/2005	000001	Radium-226	0.300	0.110	PCI/G	2.9		J
431-S2-001	02/17/2005	000001	Radium-228	0.250	0.350	PCI/G	3.06	U	U
431-S2-001	02/17/2005	000001	Thorium-228	0.265	0.040	PCI/G	2.6		
431-S2-001	02/17/2005	000001	Thorium-230	0.540	0.040	PCI/G	2.8		
431-S2-001	02/17/2005	000001	Thorium-232	0.275	0.027	PCI/G	2.1		
431-S2-002	02/18/2005	000002	Actinium-227	0.070	0.230	PCI/G	4.6	U	UJ
431-S2-002	02/18/2005	000002	Americium-241	-0.038	0.068	PCI/G	63	U	UJ
431-S2-002	02/18/2005	000002	Bismuth-207	0.014	0.044	PCI/G	1.2	U	UJ
431-S2-002	02/18/2005	000002	Bismuth-210M	0.024	0.062	PCI/G	8.34	U	UJ
431-S2-002	02/18/2005	000002	Bismuth-214	0.410	0.090	PCI/G	9.87		
431-S2-002	02/18/2005	000002	Cesium-137	-0.012	0.065	PCI/G	3.8	U	UJ
431-S2-002	02/18/2005	000002	Cobalt-60	0.003	0.062	PCI/G	0.7	U	UJ
431-S2-002	02/18/2005	000002	Lead-210	0.260	1.100	PCI/G	7.4	U	UJ
431-S2-002	02/18/2005	000002	Lead-214	0.400	0.090	PCI/G	8.92		
431-S2-002	02/18/2005	000002	Plutonium-238	0.048	0.023	PCI/G	55	J	U
431-S2-002	02/18/2005	000002	Plutonium-239/240	0.030	0.030	PCI/G	61.2	U	U
431-S2-002	02/18/2005	000002	Potassium-40	4.400	0.800	PCI/G	47.8		
431-S2-002	02/18/2005	000002	Protactinium-231	0.440	1.400	PCI/G	4.1	U	UJ
431-S2-002	02/18/2005	000002	Radium-226	0.410	0.090	PCI/G	2.9		J
431-S2-002	02/18/2005	000002	Radium-228	0.220	0.300	PCI/G	3.06	U	U

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Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
431-S2-002	02/18/2005	000002	Thorium-228	0.200	0.042	PCI/G	2.6		
431-S2-002	02/18/2005	000002	Thorium-230	0.710	0.020	PCI/G	2.8		
431-S2-002	02/18/2005	000002	Thorium-232	0.243	0.016	PCI/G	2.1		
431-S2-003	02/17/2005	000003	Actinium-227	0.070	0.280	PCI/G	4.6	U	UJ
431-S2-003	02/17/2005	000003	Americium-241	-0.026	0.099	PCI/G	63	U	UJ
431-S2-003	02/17/2005	000003	Bismuth-207	-0.007	0.042	PCI/G	1.2	U	UJ
431-S2-003	02/17/2005	000003	Bismuth-210M	0.025	0.071	PCI/G	8.34	U	UJ
431-S2-003	02/17/2005	000003	Bismuth-214	0.300	0.120	PCI/G	9.87		
431-S2-003	02/17/2005	000003	Cesium-137	-0.005	0.061	PCI/G	3.8	U	UJ
431-S2-003	02/17/2005	000003	Cobalt-60	0.027	0.081	PCI/G	0.7	U	UJ
431-S2-003	02/17/2005	000003	Lead-210	0.310	1.600	PCI/G	7.4	U	UJ
431-S2-003	02/17/2005	000003	Lead-212	0.153	0.077	PCI/G	16.6		
431-S2-003	02/17/2005	000003	Lead-214	0.310	0.090	PCI/G	8.92		
431-S2-003	02/17/2005	000003	Plutonium-238	0.022	0.034	PCI/G	55	U	UJ
431-S2-003	02/17/2005	000003	Plutonium-239/240	0.005	0.015	PCI/G	61.2	U	UJ
431-S2-003	02/17/2005	000003	Potassium-40	4.200	0.200	PCI/G	47.8		
431-S2-003	02/17/2005	000003	Protactinium-231	0.460	1.400	PCI/G	4.1	U	UJ
431-S2-003	02/17/2005	000003	Radium-226	0.300	0.120	PCI/G	2.9		J
431-S2-003	02/17/2005	000003	Radium-228	0.120	0.310	PCI/G	3.06	U	UJ
431-S2-003	02/17/2005	000003	Thorium-228	0.187	0.047	PCI/G	2.6		
431-S2-003	02/17/2005	000003	Thorium-230	0.610	0.030	PCI/G	2.8		
431-S2-003	02/17/2005	000003	Thorium-232	0.160	0.017	PCI/G	2.1		
431-S2-004	02/17/2005	000004	Actinium-227	0.070	0.280	PCI/G	4.6	U	UJ
431-S2-004	02/17/2005	000004	Americium-241	0.028	0.120	PCI/G	63	U	UJ
431-S2-004	02/17/2005	000004	Bismuth-207	0.004	0.050	PCI/G	1.2	U	UJ
431-S2-004	02/17/2005	000004	Bismuth-210M	0.097	0.094	PCI/G	8.34		
431-S2-004	02/17/2005	000004	Bismuth-214	0.540	0.140	PCI/G	9.87		
431-S2-004	02/17/2005	000004	Cesium-137	0.011	0.080	PCI/G	3.8	U	UJ
431-S2-004	02/17/2005	000004	Cobalt-60	0.049	0.110	PCI/G	0.7	U	U
431-S2-004	02/17/2005	000004	Lead-210	0.830	1.500	PCI/G	7.4	U	U
431-S2-004	02/17/2005	000004	Lead-212	0.225	0.100	PCI/G	16.6		
431-S2-004	02/17/2005	000004	Plutonium-238	0.074	0.027	PCI/G	55	J	U
431-S2-004	02/17/2005	000004	Plutonium-239/240	0.030	0.030	PCI/G	61.2	U	U
431-S2-004	02/17/2005	000004	Potassium-40	7.200	0.500	PCI/G	47.8		
431-S2-004	02/17/2005	000004	Protactinium-231	-0.470	1.600	PCI/G	4.1	U	UJ
431-S2-004	02/17/2005	000004	Radium-226	0.540	0.140	PCI/G	2.9		J
431-S2-004	02/17/2005	000004	Radium-228	0.210	0.320	PCI/G	3.06	U	U
431-S2-004	02/17/2005	000004	Thallium-208	0.143	0.065	PCI/G	0.498		
431-S2-004	02/17/2005	000004	Thorium-228	0.450	0.050	PCI/G	2.6		
431-S2-004	02/17/2005	000004	Thorium-230	0.880	0.030	PCI/G	2.8		
431-S2-004	02/17/2005	000004	Thorium-232	0.610	0.030	PCI/G	2.1		
431-S2-005D	02/17/2005	000031	Actinium-227	-0.020	0.270	PCI/G	4.6	U	UJ
431-S2-005	02/17/2005	000005	Actinium-227	-0.050	0.220	PCI/G	4.6	U	UJ
431-S2-005D	02/17/2005	000031	Americium-241	0.006	0.110	PCI/G	63	U	UJ
431-S2-005	02/17/2005	000005	Americium-241	-0.002	0.100	PCI/G	63	U	UJ
431-S2-005D	02/17/2005	000031	Bismuth-207	0.028	0.063	PCI/G	1.2	U	U
431-S2-005	02/17/2005	000005	Bismuth-207	0.024	0.053	PCI/G	1.2	U	U
431-S2-005	02/17/2005	000005	Bismuth-210M	0.010	0.062	PCI/G	8.34	U	UJ
431-S2-005D	02/17/2005	000031	Bismuth-210M	0.005	0.065	PCI/G	8.34	U	UJ
431-S2-005D	02/17/2005	000031	Bismuth-214	0.390	0.100	PCI/G	9.87		
431-S2-005	02/17/2005	000005	Bismuth-214	0.160	0.100	PCI/G	9.87		
431-S2-005	02/17/2005	000005	Cesium-137	0.013	0.061	PCI/G	3.8	U	UJ
431-S2-005D	02/17/2005	000031	Cesium-137	-0.064	0.036	PCI/G	3.8	U	UJ
431-S2-005	02/17/2005	000005	Cobalt-60	0.005	0.050	PCI/G	0.7	U	UJ
431-S2-005D	02/17/2005	000031	Cobalt-60	-0.018	0.043	PCI/G	0.7	U	UJ
431-S2-005	02/17/2005	000005	Lead-210	0.460	1.200	PCI/G	7.4	U	UJ
431-S2-005D	02/17/2005	000031	Lead-210	0.180	1.500	PCI/G	7.4	U	UJ
431-S2-005	02/17/2005	000005	Lead-212	0.103	0.086	PCI/G	16.6		
431-S2-005D	02/17/2005	000031	Lead-214	0.460	0.100	PCI/G	8.92		
431-S2-005	02/17/2005	000005	Lead-214	0.380	0.080	PCI/G	8.92		
431-S2-005D	02/17/2005	000031	Plutonium-238	0.042	0.044	PCI/G	55	U	U
431-S2-005	02/17/2005	000005	Plutonium-238	0.035	0.036	PCI/G	55	U	U
431-S2-005D	02/17/2005	000031	Plutonium-239/240	0.005	0.015	PCI/G	61.2	U	UJ
431-S2-005	02/17/2005	000005	Plutonium-239/240	0.004	0.022	PCI/G	61.2	U	UJ
431-S2-005D	02/17/2005	000031	Potassium-40	4.700	0.700	PCI/G	47.8		
431-S2-005	02/17/2005	000005	Potassium-40	3.900	0.500	PCI/G	47.8		
431-S2-005D	02/17/2005	000031	Protactinium-231	0.020	1.400	PCI/G	4.1	U	UJ
431-S2-005	02/17/2005	000005	Protactinium-231	-0.050	1.300	PCI/G	4.1	U	UJ

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Table 1: Sample Event 1 Verification Sample Results
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SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
431-S2-005D	02/17/2005	000031	Radium-226	0.390	0.100	PCI/G	2.9		J
431-S2-005	02/17/2005	000005	Radium-226	0.160	0.100	PCI/G	2.9		J
431-S2-005D	02/17/2005	000031	Radium-228	0.090	0.300	PCI/G	3.06	U	UJ
431-S2-005	02/17/2005	000005	Radium-228	0.080	0.240	PCI/G	3.06	U	UJ
431-S2-005	02/17/2005	000005	Thorium-228	0.236	0.030	PCI/G	2.6		
431-S2-005D	02/17/2005	000031	Thorium-228	0.188	0.035	PCI/G	2.6		
431-S2-005	02/17/2005	000005	Thorium-230	0.550	0.030	PCI/G	2.8		
431-S2-005D	02/17/2005	000031	Thorium-230	0.550	0.020	PCI/G	2.8		
431-S2-005D	02/17/2005	000031	Thorium-232	0.214	0.024	PCI/G	2.1		
431-S2-005	02/17/2005	000005	Thorium-232	0.201	0.016	PCI/G	2.1		
431-S2-006	02/17/2005	000006	Actinium-227	0.020	0.260	PCI/G	4.6	U	UJ
431-S2-006	02/17/2005	000006	Americium-241	0.055	0.130	PCI/G	63	U	UJ
431-S2-006	02/17/2005	000006	Bismuth-207	0.005	0.054	PCI/G	1.2	U	UJ
431-S2-006	02/17/2005	000006	Bismuth-210M	0.095	0.110	PCI/G	8.34	U	U
431-S2-006	02/17/2005	000006	Bismuth-214	0.380	0.080	PCI/G	9.87		
431-S2-006	02/17/2005	000006	Cesium-137	0.016	0.084	PCI/G	3.8	U	UJ
431-S2-006	02/17/2005	000006	Cobalt-60	0.020	0.096	PCI/G	0.7	U	UJ
431-S2-006	02/17/2005	000006	Lead-210	0.270	1.700	PCI/G	7.4	U	UJ
431-S2-006	02/17/2005	000006	Lead-212	0.213	0.090	PCI/G	16.6		
431-S2-006	02/17/2005	000006	Plutonium-238	0.073	0.017	PCI/G	55	J	U
431-S2-006	02/17/2005	000006	Plutonium-239/240	0.012	0.017	PCI/G	61.2	U	UJ
431-S2-006	02/17/2005	000006	Potassium-40	5.200	0.700	PCI/G	47.8		
431-S2-006	02/17/2005	000006	Protactinium-231	-0.250	1.600	PCI/G	4.1	U	UJ
431-S2-006	02/17/2005	000006	Radium-226	0.380	0.080	PCI/G	2.9		J
431-S2-006	02/17/2005	000006	Radium-228	0.200	0.350	PCI/G	3.06	U	U
431-S2-006	02/17/2005	000006	Thallium-208	0.079	0.054	PCI/G	0.498		
431-S2-006	02/17/2005	000006	Thorium-228	0.370	0.070	PCI/G	2.6		
431-S2-006	02/17/2005	000006	Thorium-230	0.730	0.030	PCI/G	2.8		
431-S2-006	02/17/2005	000006	Thorium-232	0.370	0.030	PCI/G	2.1		
431-S2-007	02/18/2005	000007	Actinium-227	0.020	0.270	PCI/G	4.6	U	UJ
431-S2-007	02/18/2005	000007	Americium-241	-0.038	0.096	PCI/G	63	U	UJ
431-S2-007	02/18/2005	000007	Bismuth-207	0.027	0.053	PCI/G	1.2	U	U
431-S2-007	02/18/2005	000007	Bismuth-210M	0.340	0.060	PCI/G	8.34		
431-S2-007	02/18/2005	000007	Bismuth-214	0.360	0.110	PCI/G	9.87		
431-S2-007	02/18/2005	000007	Cesium-137	0.020	0.065	PCI/G	3.8	U	UJ
431-S2-007	02/18/2005	000007	Cobalt-60	0.164	0.140	PCI/G	0.7		
431-S2-007	02/18/2005	000007	Lead-210	0.290	1.300	PCI/G	7.4	U	UJ
431-S2-007	02/18/2005	000007	Lead-214	0.374	0.088	PCI/G	8.92		
431-S2-007	02/18/2005	000007	Plutonium-238	0.035	0.019	PCI/G	55	J	U
431-S2-007	02/18/2005	000007	Plutonium-239/240	0.030	0.030	PCI/G	61.2	U	U
431-S2-007	02/18/2005	000007	Potassium-40	4.900	0.600	PCI/G	47.8		
431-S2-007	02/18/2005	000007	Protactinium-231	0.780	1.400	PCI/G	4.1	U	UJ
431-S2-007	02/18/2005	000007	Radium-226	0.360	0.110	PCI/G	2.9		J
431-S2-007	02/18/2005	000007	Radium-228	0.190	0.320	PCI/G	3.06	U	U
431-S2-007	02/18/2005	000007	Thallium-208	0.057	0.052	PCI/G	0.498		
431-S2-007	02/18/2005	000007	Thorium-228	0.196	0.074	PCI/G	2.6		
431-S2-007	02/18/2005	000007	Thorium-230	0.650	0.030	PCI/G	2.8		
431-S2-007	02/18/2005	000007	Thorium-232	0.275	0.033	PCI/G	2.1		
431-S2-008	02/22/2005	000008	Actinium-227	0.060	0.400	PCI/G	4.6	U	UJ
431-S2-008	02/22/2005	000008	Americium-241	-0.020	0.180	PCI/G	63	U	UJ
431-S2-008	02/22/2005	000008	Bismuth-207	0.153	0.120	PCI/G	1.2		
431-S2-008	02/22/2005	000008	Bismuth-210M	2.410	0.110	PCI/G	8.34		
431-S2-008	02/22/2005	000008	Bismuth-214	0.340	0.160	PCI/G	9.87		
431-S2-008	02/22/2005	000008	Cesium-137	0.083	0.090	PCI/G	3.8	U	U
431-S2-008	**02/22/2005**	**000008**	**Cobalt-60**	**0.890**	**0.100**	**PCI/G**	**0.7**		
431-S2-008	02/22/2005	000008	Lead-210	0.500	2.200	PCI/G	7.4	U	UJ
431-S2-008	02/22/2005	000008	Lead-212	0.300	0.130	PCI/G	16.6		
431-S2-008	02/22/2005	000008	Lead-214	0.500	0.130	PCI/G	8.92		
431-S2-008	02/22/2005	000008	Plutonium-238	0.076	0.025	PCI/G	55	J	U
431-S2-008	02/22/2005	000008	Plutonium-239/240	0.016	0.014	PCI/G	61.2	J	UJ
431-S2-008	02/22/2005	000008	Potassium-40	6.800	0.600	PCI/G	47.8		
431-S2-008	02/22/2005	000008	Protactinium-231	0.400	2.000	PCI/G	4.1	U	UJ
431-S2-008	02/22/2005	000008	Radium-226	0.340	0.160	PCI/G	2.9		J
431-S2-008	02/22/2005	000008	Radium-228	0.320	0.510	PCI/G	3.06	U	U
431-S2-008	02/22/2005	000008	Thallium-208	0.127	0.083	PCI/G	0.498		
431-S2-008	02/22/2005	000008	Thorium-228	0.560	0.050	PCI/G	2.6		
431-S2-008	02/22/2005	000008	Thorium-230	0.840	0.040	PCI/G	2.8		
431-S2-008	02/22/2005	000008	Thorium-232	0.480	0.020	PCI/G	2.1		

Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
431-S2-009	02/18/2005	000009	Actinium-227	-0.010	0.270	PCI/G	4.6	U	UJ
431-S2-009	02/18/2005	000009	Actinium-228	0.470	0.200	PCI/G	1.93		
431-S2-009	02/18/2005	000009	Americium-241	0.023	0.100	PCI/G	63	U	UJ
431-S2-009	02/18/2005	000009	Bismuth-207	0.012	0.049	PCI/G	1.2	U	UJ
431-S2-009	02/18/2005	000009	Bismuth-210M	-0.006	0.060	PCI/G	8.34	U	UJ
431-S2-009	02/18/2005	000009	Bismuth-214	0.450	0.090	PCI/G	9.87		
431-S2-009	02/18/2005	000009	Cesium-137	0.004	0.081	PCI/G	3.8	U	UJ
431-S2-009	02/18/2005	000009	Cobalt-60	0.023	0.083	PCI/G	0.7	U	UJ
431-S2-009	02/18/2005	000009	Lead-210	-0.250	1.300	PCI/G	7.4	U	UJ
431-S2-009	02/18/2005	000009	Lead-212	0.283	0.083	PCI/G	16.6		
431-S2-009	02/18/2005	000009	Lead-214	0.470	0.090	PCI/G	8.92		
431-S2-009	02/18/2005	000009	Plutonium-238	0.060	0.028	PCI/G	55	J	U
431-S2-009	02/18/2005	000009	Plutonium-239/240	0.005	0.024	PCI/G	61.2	U	UJ
431-S2-009	02/18/2005	000009	Potassium-40	7.500	0.500	PCI/G	47.8		
431-S2-009	02/18/2005	000009	Protactinium-231	-0.430	1.400	PCI/G	4.1	U	UJ
431-S2-009	02/18/2005	000009	Radium-226	0.450	0.090	PCI/G	2.9		J
431-S2-009	02/18/2005	000009	Radium-228	0.470	0.200	PCI/G	3.06		
431-S2-009	02/18/2005	000009	Thorium-228	0.490	0.030	PCI/G	2.6		
431-S2-009	02/18/2005	000009	Thorium-230	0.830	0.020	PCI/G	2.8		
431-S2-009	02/18/2005	000009	Thorium-232	0.590	0.030	PCI/G	2.1		
431-S2-009	02/18/2005	000009	Thorium-232	0.470	0.200	PCI/G	2.1		
431-S2-010	02/22/2005	000010	Actinium-227	0.004	0.370	PCI/G	4.6	U	UJ
431-S2-010	02/22/2005	000010	Americium-241	0.107	0.170	PCI/G	63	U	U
431-S2-010	02/22/2005	000010	Bismuth-207	0.111	0.110	PCI/G	1.2		
431-S2-010	02/22/2005	000010	Bismuth-210M	1.890	0.100	PCI/G	8.34		
431-S2-010	02/22/2005	000010	Bismuth-214	0.440	0.130	PCI/G	9.87		
431-S2-010	02/22/2005	000010	Cesium-137	0.074	0.120	PCI/G	3.8	U	U
431-S2-010	02/22/2005	000010	Cobalt-60	0.580	0.020	PCI/G	0.7		
431-S2-010	02/22/2005	000010	Lead-210	0.080	2.000	PCI/G	7.4	U	UJ
431-S2-010	02/22/2005	000010	Lead-212	0.267	0.110	PCI/G	16.6		
431-S2-010	02/22/2005	000010	Lead-214	0.460	0.100	PCI/G	8.92		
431-S2-010	02/22/2005	000010	Plutonium-238	0.078	0.022	PCI/G	55	J	U
431-S2-010	02/22/2005	000010	Plutonium-239/240	0.016	0.014	PCI/G	61.2	J	UJ
431-S2-010	02/22/2005	000010	Potassium-40	5.400	0.900	PCI/G	47.8		
431-S2-010	02/22/2005	000010	Protactinium-231	-0.030	1.900	PCI/G	4.1	U	UJ
431-S2-010	02/22/2005	000010	Radium-226	0.440	0.130	PCI/G	2.9		J
431-S2-010	02/22/2005	000010	Radium-228	0.180	0.390	PCI/G	3.06	U	U
431-S2-010	02/22/2005	000010	Thorium-228	0.410	0.030	PCI/G	2.6		
431-S2-010	02/22/2005	000010	Thorium-230	0.630	0.020	PCI/G	2.8		
431-S2-010	02/22/2005	000010	Thorium-232	0.460	0.020	PCI/G	2.1		
431-S2-011	02/18/2005	000011	Actinium-227	0.030	0.270	PCI/G	4.6	U	UJ
431-S2-011	02/18/2005	000011	Americium-241	0.003	0.100	PCI/G	63	U	UJ
431-S2-011	02/18/2005	000011	Bismuth-207	0.020	0.052	PCI/G	1.2	U	UJ
431-S2-011	02/18/2005	000011	Bismuth-210M	0.432	0.060	PCI/G	8.34		
431-S2-011	02/18/2005	000011	Bismuth-214	0.360	0.090	PCI/G	9.87		
431-S2-011	02/18/2005	000011	Cesium-137	0.001	0.067	PCI/G	3.8	U	UJ
431-S2-011	02/18/2005	000011	Cobalt-60	0.236	0.012	PCI/G	0.7		
431-S2-011	02/18/2005	000011	Lead-210	-0.030	1.200	PCI/G	7.4	U	UJ
431-S2-011	02/18/2005	000011	Lead-214	0.310	0.080	PCI/G	8.92		
431-S2-011	02/18/2005	000011	Plutonium-238	0.032	0.024	PCI/G	55	J	U
431-S2-011	02/18/2005	000011	Plutonium-239/240	0.030	0.030	PCI/G	61.2	U	U
431-S2-011	02/18/2005	000011	Potassium-40	4.100	0.900	PCI/G	47.8		
431-S2-011	02/18/2005	000011	Protactinium-231	-0.300	1.400	PCI/G	4.1	U	UJ
431-S2-011	02/18/2005	000011	Radium-226	0.360	0.090	PCI/G	2.9		J
431-S2-011	02/18/2005	000011	Radium-228	0.160	0.290	PCI/G	3.06	U	U
431-S2-011	02/18/2005	000011	Thorium-228	0.310	0.049	PCI/G	2.6		
431-S2-011	02/18/2005	000011	Thorium-230	0.500	0.030	PCI/G	2.8		
431-S2-011	02/18/2005	000011	Thorium-232	0.157	0.033	PCI/G	2.1		
431-S2-012	02/23/2005	000012	Actinium-227	0.210	0.500	PCI/G	4.6	U	UJ
431-S2-012	02/23/2005	000012	Americium-241	0.030	0.190	PCI/G	63	U	UJ
431-S2-012	02/23/2005	000012	Bismuth-207	0.088	0.100	PCI/G	1.2	U	U
431-S2-012	02/23/2005	000012	Bismuth-210M	0.820	0.120	PCI/G	8.34		
431-S2-012	02/23/2005	000012	Bismuth-214	0.360	0.200	PCI/G	9.87		
431-S2-012	02/23/2005	000012	Cesium-137	0.028	0.120	PCI/G	3.8	U	UJ
431-S2-012	02/23/2005	000012	Cobalt-60	0.370	0.100	PCI/G	0.7		
431-S2-012	02/23/2005	000012	Lead-210	0.500	2.200	PCI/G	7.4	U	UJ
431-S2-012	02/23/2005	000012	Lead-212	0.460	0.170	PCI/G	16.6		
431-S2-012	02/23/2005	000012	Lead-214	0.590	0.160	PCI/G	8.92		

Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
431-S2-012	02/23/2005	000012	Plutonium-238	0.104	0.031	PCI/G	55		U
431-S2-012	02/23/2005	000012	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
431-S2-012	02/23/2005	000012	Potassium-40	13.300	0.600	PCI/G	47.8		
431-S2-012	02/23/2005	000012	Protactinium-231	0.500	2.500	PCI/G	4.1	U	UJ
431-S2-012	02/23/2005	000012	Radium-226	0.360	0.200	PCI/G	2.9		J
431-S2-012	02/23/2005	000012	Radium-228	0.470	0.570	PCI/G	3.06	U	U
431-S2-012	02/23/2005	000012	Thallium-208	0.164	0.087	PCI/G	0.498		
431-S2-012	02/23/2005	000012	Thorium-228	0.710	0.040	PCI/G	2.6		
431-S2-012	02/23/2005	000012	Thorium-230	0.860	0.030	PCI/G	2.8		
431-S2-012	02/23/2005	000012	Thorium-232	0.590	0.040	PCI/G	2.1		
431-S2-013	02/18/2005	000013	Actinium-227	-0.020	0.400	PCI/G	4.6	U	UJ
431-S2-013	02/18/2005	000013	Actinium-228	0.520	0.280	PCI/G	1.93		
431-S2-013	02/18/2005	000013	Americium-241	0.006	0.140	PCI/G	63	U	UJ
431-S2-013	02/18/2005	000013	Bismuth-207	0.035	0.077	PCI/G	1.2	U	UJ
431-S2-013	02/18/2005	000013	Bismuth-210M	0.149	0.140	PCI/G	8.34		
431-S2-013	02/18/2005	000013	Bismuth-214	0.400	0.170	PCI/G	9.87		
431-S2-013	02/18/2005	000013	Cesium-137	0.029	0.100	PCI/G	3.8	U	UJ
431-S2-013	02/18/2005	000013	Cobalt-60	0.085	0.150	PCI/G	0.7	U	U
431-S2-013	02/18/2005	000013	Lead-210	-0.250	1.600	PCI/G	7.4	U	UJ
431-S2-013	02/18/2005	000013	Lead-212	0.500	0.140	PCI/G	16.6		
431-S2-013	02/18/2005	000013	Lead-214	0.620	0.110	PCI/G	8.92		
431-S2-013	02/18/2005	000013	Plutonium-238	0.088	0.030	PCI/G	55	J	U
431-S2-013	02/18/2005	000013	Plutonium-239/240	0.019	0.022	PCI/G	61.2	U	UJ
431-S2-013	02/18/2005	000013	Potassium-40	13.400	0.800	PCI/G	47.8		
431-S2-013	02/18/2005	000013	Protactinium-231	1.300	2.300	PCI/G	4.1	U	U
431-S2-013	02/18/2005	000013	Radium-226	0.400	0.170	PCI/G	2.9		J
431-S2-013	02/18/2005	000013	Radium-228	0.520	0.260	PCI/G	3.06		
431-S2-013	02/18/2005	000013	Thallium-208	0.114	0.072	PCI/G	0.498		
431-S2-013	02/18/2005	000013	Thorium-228	0.640	0.040	PCI/G	2.6		
431-S2-013	02/18/2005	000013	Thorium-230	0.700	0.020	PCI/G	2.8		
431-S2-013	02/18/2005	000013	Thorium-232	0.530	0.010	PCI/G	2.1		
431-S2-013	02/18/2005	000013	Thorium-232	0.520	0.260	PCI/G	2.1		
431-S2-014	02/18/2005	000014	Actinium-227	-0.140	0.390	PCI/G	4.6	U	UJ
431-S2-014	02/18/2005	000014	Americium-241	-0.035	0.160	PCI/G	63	U	UJ
431-S2-014	02/18/2005	000014	Bismuth-207	0.049	0.097	PCI/G	1.2	U	U
431-S2-014	02/18/2005	000014	Bismuth-210M	-0.032	0.110	PCI/G	8.34	U	UJ
431-S2-014	02/18/2005	000014	Bismuth-214	0.650	0.220	PCI/G	9.87		
431-S2-014	02/18/2005	000014	Cesium-137	0.005	0.100	PCI/G	3.8	U	UJ
431-S2-014	02/18/2005	000014	Cobalt-60	0.007	0.110	PCI/G	0.7	U	UJ
431-S2-014	02/18/2005	000014	Lead-210	1.000	2.500	PCI/G	7.4	U	UJ
431-S2-014	02/18/2005	000014	Lead-212	0.510	0.100	PCI/G	16.6		
431-S2-014	02/18/2005	000014	Lead-214	0.650	0.140	PCI/G	8.92		
431-S2-014	02/18/2005	000014	Plutonium-238	0.051	0.014	PCI/G	55	J	UJ
431-S2-014	02/18/2005	000014	Plutonium-239/240	0.004	0.022	PCI/G	61.2	U	UJ
431-S2-014	02/18/2005	000014	Potassium-40	14.500	1.200	PCI/G	47.8		
431-S2-014	02/18/2005	000014	Protactinium-231	0.800	2.300	PCI/G	4.1	U	UJ
431-S2-014	02/18/2005	000014	Radium-226	0.650	0.220	PCI/G	2.9		J
431-S2-014	02/18/2005	000014	Radium-228	0.550	0.630	PCI/G	3.06	U	U
431-S2-014	02/18/2005	000014	Thorium-228	0.730	0.040	PCI/G	2.6		
431-S2-014	02/18/2005	000014	Thorium-230	0.760	0.020	PCI/G	2.8		
431-S2-014	02/18/2005	000014	Thorium-232	0.580	0.030	PCI/G	2.1		
431-S2-015	02/18/2005	000015	Actinium-227	0.140	0.290	PCI/G	4.6	U	UJ
431-S2-015	02/18/2005	000015	Americium-241	0.032	0.110	PCI/G	63	U	UJ
431-S2-015	02/18/2005	000015	Bismuth-207	0.036	0.063	PCI/G	1.2	U	U
431-S2-015	02/18/2005	000015	Bismuth-210M	0.488	0.064	PCI/G	8.34		
431-S2-015	02/18/2005	000015	Bismuth-214	0.300	0.120	PCI/G	9.87		
431-S2-015	02/18/2005	000015	Cesium-137	-0.001	0.063	PCI/G	3.8	U	UJ
431-S2-015	02/18/2005	000015	Cobalt-60	0.042	0.095	PCI/G	0.7	U	UJ
431-S2-015	02/18/2005	000015	Lead-210	0.160	1.400	PCI/G	7.4	U	UJ
431-S2-015	02/18/2005	000015	Lead-212	0.155	0.095	PCI/G	16.6		
431-S2-015	02/18/2005	000015	Lead-214	0.322	0.100	PCI/G	8.92		
431-S2-015	02/18/2005	000015	Plutonium-238	0.087	0.022	PCI/G	55	J	U
431-S2-015	02/18/2005	000015	Plutonium-239/240	0.010	0.014	PCI/G	61.2	U	UJ
431-S2-015	02/18/2005	000015	Potassium-40	4.700	0.500	PCI/G	47.8		
431-S2-015	02/18/2005	000015	Protactinium-231	0.500	1.300	PCI/G	4.1	U	UJ
431-S2-015	02/18/2005	000015	Radium-226	0.300	0.120	PCI/G	2.9		J
431-S2-015	02/18/2005	000015	Radium-228	0.140	0.280	PCI/G	3.06	U	U
431-S2-015	02/18/2005	000015	Thorium-228	0.420	0.050	PCI/G	2.6		

Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
431-S2-015	02/18/2005	000015	Thorium-230	0.730	0.040	PCI/G	2.8		
431-S2-015	02/18/2005	000015	Thorium-232	0.341	0.015	PCI/G	2.1		
431-S2-016	02/18/2005	000016	Actinium-227	0.180	0.330	PCI/G	4.6	U	UJ
431-S2-016D	02/17/2005	000032	Actinium-227	0.002	0.260	PCI/G	4.6	U	UJ
431-S2-016	02/18/2005	000016	Americium-241	0.014	0.130	PCI/G	63	U	UJ
431-S2-016D	02/17/2005	000032	Americium-241	-0.032	0.084	PCI/G	63	U	UJ
431-S2-016D	02/17/2005	000032	Bismuth-207	0.004	0.046	PCI/G	1.2	U	UJ
431-S2-016	02/18/2005	000016	Bismuth-207	0.003	0.059	PCI/G	1.2	U	UJ
431-S2-016	02/18/2005	000016	Bismuth-210M	0.007	0.081	PCI/G	8.34	U	UJ
431-S2-016D	02/17/2005	000032	Bismuth-210M	-0.013	0.050	PCI/G	8.34	U	UJ
431-S2-016D	02/17/2005	000032	Bismuth-214	0.450	0.090	PCI/G	9.87		
431-S2-016	02/18/2005	000016	Bismuth-214	0.400	0.120	PCI/G	9.87		
431-S2-016D	02/17/2005	000032	Cesium-137	0.031	0.070	PCI/G	3.8	U	UJ
431-S2-016	02/18/2005	000016	Cesium-137	0.008	0.090	PCI/G	3.8	U	UJ
431-S2-016	02/18/2005	000016	Cobalt-60	0.036	0.110	PCI/G	0.7	U	UJ
431-S2-016D	02/17/2005	000032	Cobalt-60	0.025	0.063	PCI/G	0.7	U	U
431-S2-016D	02/17/2005	000032	Lead-210	0.800	1.300	PCI/G	7.4	U	U
431-S2-016	02/18/2005	000016	Lead-210	-0.080	1.500	PCI/G	7.4	U	UJ
431-S2-016	02/18/2005	000016	Lead-212	0.240	0.130	PCI/G	16.6		
431-S2-016D	02/17/2005	000032	Lead-212	0.171	0.070	PCI/G	16.6		
431-S2-016	02/18/2005	000016	Lead-214	0.560	0.110	PCI/G	8.92		
431-S2-016D	02/17/2005	000032	Lead-214	0.390	0.100	PCI/G	8.92		
431-S2-016	02/18/2005	000016	Plutonium-238	0.072	0.021	PCI/G	55	J	U
431-S2-016D	02/17/2005	000032	Plutonium-238	0.023	0.031	PCI/G	55	U	UJ
431-S2-016D	02/17/2005	000032	Plutonium-239/240	0.005	0.013	PCI/G	61.2	U	UJ
431-S2-016	02/18/2005	000016	Plutonium-239/240	0.004	0.021	PCI/G	61.2	U	UJ
431-S2-016	02/18/2005	000016	Potassium-40	6.100	0.700	PCI/G	47.8		
431-S2-016D	02/17/2005	000032	Potassium-40	4.100	0.100	PCI/G	47.8		
431-S2-016	02/18/2005	000016	Protactinium-231	0.600	1.900	PCI/G	4.1	U	UJ
431-S2-016D	02/17/2005	000032	Protactinium-231	0.080	1.100	PCI/G	4.1	U	UJ
431-S2-016D	02/17/2005	000032	Radium-226	0.450	0.090	PCI/G	2.9		J
431-S2-016	02/18/2005	000016	Radium-226	0.400	0.120	PCI/G	2.9		J
431-S2-016	02/18/2005	000016	Radium-228	0.210	0.380	PCI/G	3.06	U	U
431-S2-016D	02/17/2005	000032	Radium-228	0.140	0.280	PCI/G	3.06	U	U
431-S2-016	02/18/2005	000016	Thorium-228	0.510	0.040	PCI/G	2.6		
431-S2-016D	02/17/2005	000032	Thorium-228	0.270	0.043	PCI/G	2.6		
431-S2-016D	02/17/2005	000032	Thorium-230	0.800	0.040	PCI/G	2.8		
431-S2-016	02/18/2005	000016	Thorium-230	0.700	0.030	PCI/G	2.8		
431-S2-016	02/18/2005	000016	Thorium-232	0.480	0.020	PCI/G	2.1		
431-S2-016D	02/17/2005	000032	Thorium-232	0.151	0.016	PCI/G	2.1		
431-S2-017	02/22/2005	000017	Actinium-227	0.001	0.350	PCI/G	4.6	U	UJ
431-S2-017	02/22/2005	000017	Actinium-228	0.300	0.270	PCI/G	1.93		
431-S2-017	02/22/2005	000017	Americium-241	0.073	0.150	PCI/G	63	U	UJ
431-S2-017	02/22/2005	000017	Bismuth-207	0.023	0.080	PCI/G	1.2	U	UJ
431-S2-017	02/22/2005	000017	Bismuth-210M	0.390	0.090	PCI/G	8.34		
431-S2-017	02/22/2005	000017	Bismuth-214	0.480	0.140	PCI/G	9.87		
431-S2-017	02/22/2005	000017	Cesium-137	-0.006	0.085	PCI/G	3.8	U	UJ
431-S2-017	02/22/2005	000017	Cobalt-60	0.184	0.094	PCI/G	0.7		
431-S2-017	02/22/2005	000017	Lead-210	0.520	1.800	PCI/G	7.4	U	UJ
431-S2-017	02/22/2005	000017	Lead-212	0.350	0.110	PCI/G	16.6		
431-S2-017	02/22/2005	000017	Lead-214	0.500	0.110	PCI/G	8.92		
431-S2-017	02/22/2005	000017	Plutonium-238	0.044	0.021	PCI/G	55	J	U
431-S2-017	02/22/2005	000017	Plutonium-239/240	0.010	0.013	PCI/G	61.2	U	UJ
431-S2-017	02/22/2005	000017	Potassium-40	11.200	0.800	PCI/G	47.8		
431-S2-017	02/22/2005	000017	Protactinium-231	-0.300	2.100	PCI/G	4.1	U	UJ
431-S2-017	02/22/2005	000017	Radium-226	0.480	0.140	PCI/G	2.9		J
431-S2-017	02/22/2005	000017	Radium-228	0.300	0.280	PCI/G	3.06		
431-S2-017	02/22/2005	000017	Thallium-208	0.156	0.075	PCI/G	0.498		
431-S2-017	02/22/2005	000017	Thorium-228	0.760	0.030	PCI/G	2.6		
431-S2-017	02/22/2005	000017	Thorium-230	1.060	0.030	PCI/G	2.8		
431-S2-017	02/22/2005	000017	Thorium-232	0.680	0.030	PCI/G	2.1		
431-S2-017	02/22/2005	000017	Thorium-232	0.300	0.280	PCI/G	2.1		
431-S2-018	02/18/2005	000018	Actinium-227	0.060	0.250	PCI/G	4.6	U	UJ
431-S2-018	02/18/2005	000018	Americium-241	0.022	0.110	PCI/G	63	U	UJ
431-S2-018	02/18/2005	000018	Bismuth-207	-0.017	0.049	PCI/G	1.2	U	UJ
431-S2-018	02/18/2005	000018	Bismuth-210M	0.004	0.069	PCI/G	8.34	U	UJ
431-S2-018	02/18/2005	000018	Bismuth-214	0.320	0.100	PCI/G	9.87		
431-S2-018	02/18/2005	000018	Cesium-137	-0.002	0.063	PCI/G	3.8	U	UJ

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Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
431-S2-018	02/18/2005	000018	Cobalt-60	0.005	0.068	PCI/G	0.7	U	UJ
431-S2-018	02/18/2005	000018	Lead-210	0.050	1.400	PCI/G	7.4	U	UJ
431-S2-018	02/18/2005	000018	Lead-212	0.172	0.079	PCI/G	16.6		
431-S2-018	02/18/2005	000018	Lead-214	0.440	0.090	PCI/G	8.92		
431-S2-018	02/18/2005	000018	Plutonium-238	0.115	0.061	PCI/G	55		U
431-S2-018	02/18/2005	000018	Plutonium-239/240	0.004	0.038	PCI/G	61.2	U	UJ
431-S2-018	02/18/2005	000018	Potassium-40	5.100	0.500	PCI/G	47.8		
431-S2-018	02/18/2005	000018	Protactinium-231	0.040	1.300	PCI/G	4.1	U	UJ
431-S2-018	02/18/2005	000018	Radium-226	0.320	0.100	PCI/G	2.9		J
431-S2-018	02/18/2005	000018	Radium-228	0.140	0.310	PCI/G	3.06	U	U
431-S2-018	02/18/2005	000018	Thorium-228	0.271	0.044	PCI/G	2.6		
431-S2-018	02/18/2005	000018	Thorium-230	0.660	0.020	PCI/G	2.8		
431-S2-018	02/18/2005	000018	Thorium-232	0.253	0.026	PCI/G	2.1		
431-S2-019	02/18/2005	000019	Actinium-227	0.030	0.240	PCI/G	4.6	U	UJ
431-S2-019	02/18/2005	000019	Americium-241	-0.005	0.094	PCI/G	63	U	UJ
431-S2-019	02/18/2005	000019	Bismuth-207	0.005	0.041	PCI/G	1.2	U	UJ
431-S2-019	02/18/2005	000019	Bismuth-210M	-0.029	0.054	PCI/G	8.34	U	UJ
431-S2-019	02/18/2005	000019	Bismuth-214	0.390	0.100	PCI/G	9.87		
431-S2-019	02/18/2005	000019	Cesium-137	0.014	0.076	PCI/G	3.8	U	UJ
431-S2-019	02/18/2005	000019	Cobalt-60	-0.003	0.056	PCI/G	0.7	U	UJ
431-S2-019	02/18/2005	000019	Lead-210	0.250	1.400	PCI/G	7.4	U	UJ
431-S2-019	02/18/2005	000019	Lead-212	0.165	0.067	PCI/G	16.6		
431-S2-019	02/18/2005	000019	Lead-214	0.460	0.090	PCI/G	8.92		
431-S2-019	02/18/2005	000019	Plutonium-238	0.114	0.045	PCI/G	55		U
431-S2-019	02/18/2005	000019	Plutonium-239/240	0.050	0.050	PCI/G	61.2	U	U
431-S2-019	02/18/2005	000019	Potassium-40	4.000	0.700	PCI/G	47.8		
431-S2-019	02/18/2005	000019	Protactinium-231	0.230	1.200	PCI/G	4.1	U	UJ
431-S2-019	02/18/2005	000019	Radium-226	0.390	0.100	PCI/G	2.9		J
431-S2-019	02/18/2005	000019	Radium-228	0.240	0.310	PCI/G	3.06	U	U
431-S2-019	02/18/2005	000019	Thorium-228	0.313	0.026	PCI/G	2.6		
431-S2-019	02/18/2005	000019	Thorium-230	0.660	0.040	PCI/G	2.8		
431-S2-019	02/18/2005	000019	Thorium-232	0.265	0.016	PCI/G	2.1		
431-S2-020	02/18/2005	000020	Actinium-227	0.100	0.300	PCI/G	4.6	U	UJ
431-S2-020	02/18/2005	000020	Americium-241	0.002	0.100	PCI/G	63	U	UJ
431-S2-020	02/18/2005	000020	Bismuth-207	0.000	0.051	PCI/G	1.2	U	UJ
431-S2-020	02/18/2005	000020	Bismuth-210M	-0.023	0.057	PCI/G	8.34	U	UJ
431-S2-020	02/18/2005	000020	Bismuth-214	0.400	0.130	PCI/G	9.87		
431-S2-020	02/18/2005	000020	Cesium-137	0.038	0.078	PCI/G	3.8	U	U
431-S2-020	02/18/2005	000020	Cobalt-60	-0.011	0.051	PCI/G	0.7	U	UJ
431-S2-020	02/18/2005	000020	Lead-210	0.007	1.300	PCI/G	7.4	U	UJ
431-S2-020	02/18/2005	000020	Lead-212	0.146	0.100	PCI/G	16.6		
431-S2-020	02/18/2005	000020	Lead-214	0.390	0.100	PCI/G	8.92		
431-S2-020	02/18/2005	000020	Plutonium-238	0.095	0.031	PCI/G	55	J	U
431-S2-020	02/18/2005	000020	Plutonium-239/240	0.007	0.031	PCI/G	61.2	U	UJ
431-S2-020	02/18/2005	000020	Potassium-40	4.700	0.500	PCI/G	47.8		
431-S2-020	02/18/2005	000020	Protactinium-231	0.670	1.700	PCI/G	4.1	U	UJ
431-S2-020	02/18/2005	000020	Radium-226	0.400	0.130	PCI/G	2.9		J
431-S2-020	02/18/2005	000020	Radium-228	0.280	0.370	PCI/G	3.06	U	U
431-S2-020	02/18/2005	000020	Thorium-228	0.190	0.100	PCI/G	2.6		
431-S2-020	02/18/2005	000020	Thorium-230	0.570	0.050	PCI/G	2.8		
431-S2-020	02/18/2005	000020	Thorium-232	0.360	0.060	PCI/G	2.1		
431-S2-024	02/18/2005	000024	Actinium-227	0.280	0.430	PCI/G	4.6	U	U
431-S2-024	02/18/2005	000024	Actinium-228	0.510	0.290	PCI/G	1.93		
431-S2-024	02/18/2005	000024	Americium-241	-0.021	0.140	PCI/G	63	U	UJ
431-S2-024	02/18/2005	000024	Bismuth-207	0.005	0.066	PCI/G	1.2	U	UJ
431-S2-024	02/18/2005	000024	Bismuth-210M	0.056	0.100	PCI/G	8.34	U	U
431-S2-024	02/18/2005	000024	Bismuth-214	0.620	0.120	PCI/G	9.87		
431-S2-024	02/18/2005	000024	Cesium-137	-0.018	0.079	PCI/G	3.8	U	UJ
431-S2-024	02/18/2005	000024	Cobalt-60	0.000	0.110	PCI/G	0.7	U	UJ
431-S2-024	02/18/2005	000024	Lead-210	1.090	2.000	PCI/G	7.4	U	U
431-S2-024	02/18/2005	000024	Lead-212	0.540	0.110	PCI/G	16.6		
431-S2-024	02/18/2005	000024	Lead-214	0.750	0.100	PCI/G	8.92		
431-S2-024	02/18/2005	000024	Plutonium-238	0.027	0.046	PCI/G	55	U	UJ
431-S2-024	02/18/2005	000024	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
431-S2-024	02/18/2005	000024	Potassium-40	12.800	0.800	PCI/G	47.8		
431-S2-024	02/18/2005	000024	Protactinium-231	2.200	2.300	PCI/G	4.1	U	U
431-S2-024	02/18/2005	000024	Radium-226	0.620	0.120	PCI/G	2.9		J
431-S2-024	02/18/2005	000024	Radium-228	0.510	0.260	PCI/G	3.06		

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Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
431-S2-024	02/18/2005	000024	Thallium-208	0.136	0.067	PCI/G	0.498		
431-S2-024	02/18/2005	000024	Thorium-228	0.580	0.040	PCI/G	2.6		
431-S2-024	02/18/2005	000024	Thorium-230	0.930	0.020	PCI/G	2.8		
431-S2-024	02/18/2005	000024	Thorium-232	0.540	0.030	PCI/G	2.1		
431-S2-024	02/18/2005	000024	Thorium-232	0.510	0.260	PCI/G	2.1		
431-S2-025	02/18/2005	000025	Actinium-227	0.170	0.310	PCI/G	4.6	U	UJ
431-S2-025	02/18/2005	000025	Americium-241	0.048	0.110	PCI/G	63	U	UJ
431-S2-025	02/18/2005	000025	Bismuth-207	0.005	0.042	PCI/G	1.2	U	UJ
431-S2-025	02/18/2005	000025	Bismuth-210M	0.021	0.063	PCI/G	8.34	U	UJ
431-S2-025	02/18/2005	000025	Bismuth-214	0.360	0.110	PCI/G	9.87		
431-S2-025	02/18/2005	000025	Cesium-137	0.022	0.078	PCI/G	3.8	U	UJ
431-S2-025	02/18/2005	000025	Cobalt-60	0.013	0.065	PCI/G	0.7	U	UJ
431-S2-025	02/18/2005	000025	Lead-210	-0.340	1.200	PCI/G	7.4	U	UJ
431-S2-025	02/18/2005	000025	Lead-212	0.138	0.110	PCI/G	16.6		
431-S2-025	02/18/2005	000025	Lead-214	0.370	0.120	PCI/G	8.92		
431-S2-025	02/18/2005	000025	Plutonium-238	0.022	0.036	PCI/G	55	U	U
431-S2-025	02/18/2005	000025	Plutonium-239/240	0.011	0.015	PCI/G	61.2	U	U
431-S2-025	02/18/2005	000025	Potassium-40	5.300	0.600	PCI/G	47.8		
431-S2-025	02/18/2005	000025	Protactinium-231	-0.420	1.400	PCI/G	4.1	U	UJ
431-S2-025	02/18/2005	000025	Radium-226	0.360	0.110	PCI/G	2.9		J
431-S2-025	02/18/2005	000025	Radium-228	0.160	0.260	PCI/G	3.06	U	U
431-S2-025	02/18/2005	000025	Thorium-228	0.330	0.050	PCI/G	2.6		
431-S2-025	02/18/2005	000025	Thorium-230	0.680	0.030	PCI/G	2.8		
431-S2-025	02/18/2005	000025	Thorium-232	0.254	0.035	PCI/G	2.1		
431-S2-026	02/18/2005	000026	Actinium-227	0.100	0.250	PCI/G	4.6	U	UJ
431-S2-026	02/18/2005	000026	Americium-241	0.014	0.100	PCI/G	63	U	UJ
431-S2-026	02/18/2005	000026	Bismuth-207	0.014	0.042	PCI/G	1.2	U	UJ
431-S2-026	02/18/2005	000026	Bismuth-210M	-0.014	0.048	PCI/G	8.34	U	UJ
431-S2-026	02/18/2005	000026	Bismuth-214	0.430	0.100	PCI/G	9.87		
431-S2-026	02/18/2005	000026	Cesium-137	0.016	0.072	PCI/G	3.8	U	UJ
431-S2-026	02/18/2005	000026	Cobalt-60	-0.002	0.067	PCI/G	0.7	U	UJ
431-S2-026	02/18/2005	000026	Lead-210	0.390	1.200	PCI/G	7.4	U	UJ
431-S2-026	02/18/2005	000026	Lead-212	0.283	0.073	PCI/G	16.6		
431-S2-026	02/18/2005	000026	Lead-214	0.500	0.090	PCI/G	8.92		
431-S2-026	02/18/2005	000026	Plutonium-238	0.049	0.033	PCI/G	55	J	U
431-S2-026	02/18/2005	000026	Plutonium-239/240	0.013	0.025	PCI/G	61.2	U	UJ
431-S2-026	02/18/2005	000026	Potassium-40	5.000	0.500	PCI/G	47.8		
431-S2-026	02/18/2005	000026	Protactinium-231	0.860	1.600	PCI/G	4.1	U	U
431-S2-026	02/18/2005	000026	Radium-226	0.430	0.100	PCI/G	2.9		J
431-S2-026	02/18/2005	000026	Radium-228	0.310	0.350	PCI/G	3.06	U	U
431-S2-026	02/18/2005	000026	Thorium-228	0.490	0.040	PCI/G	2.6		
431-S2-026	02/18/2005	000026	Thorium-230	0.770	0.030	PCI/G	2.8		
431-S2-026	02/18/2005	000026	Thorium-232	0.308	0.035	PCI/G	2.1		
431-S2-027	02/18/2005	000027	Actinium-227	0.050	0.300	PCI/G	4.6	U	UJ
431-S2-027	02/18/2005	000027	Americium-241	-0.025	0.110	PCI/G	63	U	UJ
431-S2-027	02/18/2005	000027	Bismuth-207	0.000	0.051	PCI/G	1.2	U	UJ
431-S2-027	02/18/2005	000027	Bismuth-210M	0.061	0.091	PCI/G	8.34	U	U
431-S2-027	02/18/2005	000027	Bismuth-214	0.500	0.110	PCI/G	9.87		
431-S2-027	02/18/2005	000027	Cesium-137	0.018	0.064	PCI/G	3.8	U	UJ
431-S2-027	02/18/2005	000027	Cobalt-60	0.107	0.140	PCI/G	0.7	U	U
431-S2-027	02/18/2005	000027	Lead-210	0.300	1.400	PCI/G	7.4	U	UJ
431-S2-027	02/18/2005	000027	Lead-212	0.222	0.080	PCI/G	16.6		
431-S2-027	02/18/2005	000027	Lead-214	0.470	0.100	PCI/G	8.92		
431-S2-027	02/18/2005	000027	Plutonium-238	0.066	0.044	PCI/G	55	J	U
431-S2-027	02/18/2005	000027	Plutonium-239/240	0.013	0.029	PCI/G	61.2	U	UJ
431-S2-027	02/18/2005	000027	Potassium-40	6.400	0.700	PCI/G	47.8		
431-S2-027	02/18/2005	000027	Protactinium-231	1.330	1.900	PCI/G	4.1	U	U
431-S2-027	02/18/2005	000027	Radium-226	0.500	0.110	PCI/G	2.9		J
431-S2-027	02/18/2005	000027	Radium-228	0.110	0.370	PCI/G	3.06	U	UJ
431-S2-027	02/18/2005	000027	Thorium-228	0.299	0.039	PCI/G	2.6		
431-S2-027	02/18/2005	000027	Thorium-230	0.570	0.020	PCI/G	2.8		
431-S2-027	02/18/2005	000027	Thorium-232	0.201	0.014	PCI/G	2.1		
431-S2-028	02/18/2005	000028	Actinium-227	0.060	0.250	PCI/G	4.6	U	UJ
431-S2-028	02/18/2005	000028	Americium-241	0.055	0.100	PCI/G	63	U	UJ
431-S2-028	02/18/2005	000028	Bismuth-207	-0.005	0.042	PCI/G	1.2	U	UJ
431-S2-028	02/18/2005	000028	Bismuth-210M	-0.043	0.055	PCI/G	8.34	U	UJ
431-S2-028	02/18/2005	000028	Bismuth-214	0.550	0.100	PCI/G	9.87		
431-S2-028	02/18/2005	000028	Cesium-137	0.038	0.078	PCI/G	3.8	U	U

Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
431-S2-028	02/18/2005	000028	Cobalt-60	0.016	0.074	PCI/G	0.7	U	UJ
431-S2-028	02/18/2005	000028	Lead-210	0.770	1.500	PCI/G	7.4	U	U
431-S2-028	02/18/2005	000028	Lead-212	0.160	0.093	PCI/G	16.6		
431-S2-028	02/18/2005	000028	Lead-214	0.530	0.090	PCI/G	8.92		
431-S2-028	02/18/2005	000028	Plutonium-238	0.035	0.041	PCI/G	55	U	U
431-S2-028	02/18/2005	000028	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
431-S2-028	02/18/2005	000028	Potassium-40	6.800	0.500	PCI/G	47.8		
431-S2-028	02/18/2005	000028	Protactinium-231	0.210	1.400	PCI/G	4.1	U	UJ
431-S2-028	02/18/2005	000028	Radium-226	0.550	0.100	PCI/G	2.9		J
431-S2-028	02/18/2005	000028	Radium-228	0.220	0.320	PCI/G	3.06	U	U
431-S2-028	02/18/2005	000028	Thallium-208	0.063	0.051	PCI/G	0.498		
431-S2-028	02/18/2005	000028	Thorium-228	0.400	0.040	PCI/G	2.6		
431-S2-028	02/18/2005	000028	Thorium-230	0.670	0.020	PCI/G	2.8		
431-S2-028	02/18/2005	000028	Thorium-232	0.345	0.028	PCI/G	2.1		
431-S2-029	02/18/2005	000029	Actinium-227	-0.090	0.290	PCI/G	4.6	U	UJ
431-S2-029	02/18/2005	000029	Americium-241	0.002	0.110	PCI/G	63	U	UJ
431-S2-029	02/18/2005	000029	Bismuth-207	0.002	0.045	PCI/G	1.2	U	UJ
431-S2-029	02/18/2005	000029	Bismuth-210M	0.021	0.071	PCI/G	8.34	U	UJ
431-S2-029	02/18/2005	000029	Bismuth-214	0.380	0.120	PCI/G	9.87		
431-S2-029	02/18/2005	000029	Cesium-137	0.013	0.068	PCI/G	3.8	U	UJ
431-S2-029	02/18/2005	000029	Cobalt-60	0.005	0.069	PCI/G	0.7	U	UJ
431-S2-029	02/18/2005	000029	Lead-210	0.470	1.300	PCI/G	7.4	U	UJ
431-S2-029	02/18/2005	000029	Lead-212	0.144	0.110	PCI/G	16.6		
431-S2-029	02/18/2005	000029	Lead-214	0.450	0.090	PCI/G	8.92		
431-S2-029	02/18/2005	000029	Plutonium-238	0.033	0.039	PCI/G	55	U	UJ
431-S2-029	02/18/2005	000029	Plutonium-239/240	0.017	0.016	PCI/G	61.2	J	J
431-S2-029	02/18/2005	000029	Potassium-40	4.500	0.700	PCI/G	47.8		
431-S2-029	02/18/2005	000029	Protactinium-231	-0.180	1.300	PCI/G	4.1	U	UJ
431-S2-029	02/18/2005	000029	Radium-226	0.380	0.120	PCI/G	2.9		J
431-S2-029	02/18/2005	000029	Radium-228	0.280	0.370	PCI/G	3.06	U	U
431-S2-029	02/18/2005	000029	Thallium-208	0.099	0.058	PCI/G	0.498		
431-S2-029	02/18/2005	000029	Thorium-228	0.333	0.046	PCI/G	2.6		
431-S2-029	02/18/2005	000029	Thorium-230	0.630	0.010	PCI/G	2.8		
431-S2-029	02/18/2005	000029	Thorium-232	0.327	0.023	PCI/G	2.1		
431-S2-030	02/18/2005	000030	Actinium-227	0.060	0.220	PCI/G	4.6	U	UJ
431-S2-030	02/18/2005	000030	Americium-241	-0.033	0.080	PCI/G	63	U	UJ
431-S2-030	02/18/2005	000030	Bismuth-207	0.004	0.043	PCI/G	1.2	U	UJ
431-S2-030	02/18/2005	000030	Bismuth-210M	-0.017	0.057	PCI/G	8.34	U	UJ
431-S2-030	02/18/2005	000030	Bismuth-214	0.237	0.088	PCI/G	9.87		
431-S2-030	02/18/2005	000030	Cesium-137	-0.047	0.052	PCI/G	3.8	U	UJ
431-S2-030	02/18/2005	000030	Cobalt-60	0.006	0.074	PCI/G	0.7	U	UJ
431-S2-030	02/18/2005	000030	Lead-210	0.420	1.200	PCI/G	7.4	U	UJ
431-S2-030	02/18/2005	000030	Lead-212	0.074	0.073	PCI/G	16.6		
431-S2-030	02/18/2005	000030	Lead-214	0.420	0.090	PCI/G	8.92		
431-S2-030	02/18/2005	000030	Plutonium-238	0.049	0.043	PCI/G	55	J	U
431-S2-030	02/18/2005	000030	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
431-S2-030	02/18/2005	000030	Potassium-40	5.500	0.500	PCI/G	47.8		
431-S2-030	02/18/2005	000030	Protactinium-231	-0.050	1.100	PCI/G	4.1	U	UJ
431-S2-030	02/18/2005	000030	Radium-226	0.237	0.088	PCI/G	2.9		J
431-S2-030	02/18/2005	000030	Radium-228	0.060	0.260	PCI/G	3.06	U	UJ
431-S2-030	02/18/2005	000030	Thorium-228	0.239	0.043	PCI/G	2.6		
431-S2-030	02/18/2005	000030	Thorium-230	0.440	0.040	PCI/G	2.8		
431-S2-030	02/18/2005	000030	Thorium-232	0.162	0.035	PCI/G	2.1		
431-S5-001	02/17/2005	000047	Actinium-227	-0.120	0.350	PCI/G	4.6	U	UJ
431-S5-001	02/17/2005	000047	Americium-241	0.008	0.140	PCI/G	63	U	UJ
431-S5-001	02/17/2005	000047	Bismuth-207	-0.025	0.063	PCI/G	1.2	U	UJ
431-S5-001	02/17/2005	000047	Bismuth-210M	-0.024	0.073	PCI/G	8.34	U	UJ
431-S5-001	02/17/2005	000047	Bismuth-214	0.490	0.150	PCI/G	9.87		
431-S5-001	02/17/2005	000047	Cesium-137	0.009	0.093	PCI/G	3.8	U	UJ
431-S5-001	02/17/2005	000047	Cobalt-60	-0.009	0.064	PCI/G	0.7	U	UJ
431-S5-001	02/17/2005	000047	Lead-210	0.520	1.900	PCI/G	7.4	U	UJ
431-S5-001	02/17/2005	000047	Lead-212	0.160	0.120	PCI/G	16.6		
431-S5-001	02/17/2005	000047	Lead-214	0.320	0.120	PCI/G	8.92		
431-S5-001	02/17/2005	000047	Plutonium-238	0.084	0.048	PCI/G	55	J	J
431-S5-001	02/17/2005	000047	Plutonium-239/240	0.003	0.044	PCI/G	61.2	U	UJ
431-S5-001	02/17/2005	000047	Potassium-40	6.900	0.600	PCI/G	47.8		
431-S5-001	02/17/2005	000047	Protactinium-231	0.120	1.800	PCI/G	4.1	U	UJ
431-S5-001	02/17/2005	000047	Radium-226	0.490	0.150	PCI/G	2.9		J

Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
431-S5-001	02/17/2005	000047	Radium-228	0.220	0.390	PCI/G	3.06	U	U
431-S5-001	02/17/2005	000047	Thorium-228	0.550	0.040	PCI/G	2.6		
431-S5-001	02/17/2005	000047	Thorium-230	0.670	0.020	PCI/G	2.8		
431-S5-001	02/17/2005	000047	Thorium-232	0.460	0.030	PCI/G	2.1		
431-S5-002	02/17/2005	000048	Actinium-227	0.140	0.270	PCI/G	4.6	U	UJ
431-S5-002	02/17/2005	000048	Americium-241	-0.075	0.091	PCI/G	63	U	UJ
431-S5-002	02/17/2005	000048	Bismuth-207	-0.001	0.039	PCI/G	1.2	U	UJ
431-S5-002	02/17/2005	000048	Bismuth-210M	-0.007	0.067	PCI/G	8.34	U	UJ
431-S5-002	02/17/2005	000048	Bismuth-214	0.350	0.090	PCI/G	9.87		
431-S5-002	02/17/2005	000048	Cesium-137	-0.024	0.051	PCI/G	3.8	U	UJ
431-S5-002	02/17/2005	000048	Cobalt-60	-0.018	0.062	PCI/G	0.7	U	UJ
431-S5-002	02/17/2005	000048	Lead-210	0.040	1.200	PCI/G	7.4	U	UJ
431-S5-002	02/17/2005	000048	Lead-212	0.124	0.090	PCI/G	16.6		
431-S5-002	02/17/2005	000048	Lead-214	0.330	0.070	PCI/G	8.92		
431-S5-002	02/17/2005	000048	Plutonium-238	0.048	0.042	PCI/G	55	J	J
431-S5-002	02/17/2005	000048	Plutonium-239/240	0.004	0.023	PCI/G	61.2	U	UJ
431-S5-002	02/17/2005	000048	Potassium-40	5.300	0.500	PCI/G	47.8		
431-S5-002	02/17/2005	000048	Protactinium-231	0.470	1.300	PCI/G	4.1	U	UJ
431-S5-002	02/17/2005	000048	Radium-226	0.350	0.090	PCI/G	2.9		J
431-S5-002	02/17/2005	000048	Radium-228	0.240	0.320	PCI/G	3.06	U	U
431-S5-002	02/17/2005	000048	Thorium-228	0.258	0.048	PCI/G	2.6		
431-S5-002	02/17/2005	000048	Thorium-230	0.610	0.030	PCI/G	2.8		
431-S5-002	02/17/2005	000048	Thorium-232	0.269	0.017	PCI/G	2.1		
431-S5-003	02/17/2005	000049	Actinium-227	0.020	0.360	PCI/G	4.6	U	UJ
431-S5-003	02/17/2005	000049	Americium-241	0.029	0.140	PCI/G	63	U	UJ
431-S5-003	02/17/2005	000049	Bismuth-207	0.011	0.068	PCI/G	1.2	U	UJ
431-S5-003	02/17/2005	000049	Bismuth-210M	0.003	0.084	PCI/G	8.34	U	UJ
431-S5-003	02/17/2005	000049	Bismuth-214	0.530	0.140	PCI/G	9.87		
431-S5-003	02/17/2005	000049	Cesium-137	0.016	0.100	PCI/G	3.8	U	UJ
431-S5-003	02/17/2005	000049	Cobalt-60	0.034	0.100	PCI/G	0.7	U	UJ
431-S5-003	02/17/2005	000049	Lead-210	0.290	1.700	PCI/G	7.4	U	UJ
431-S5-003	02/17/2005	000049	Lead-212	0.310	0.160	PCI/G	16.6		
431-S5-003	02/17/2005	000049	Lead-214	0.620	0.140	PCI/G	8.92		
431-S5-003	02/17/2005	000049	Plutonium-238	0.048	0.024	PCI/G	55	J	J
431-S5-003	02/17/2005	000049	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
431-S5-003	02/17/2005	000049	Potassium-40	11.000	0.800	PCI/G	47.8		
431-S5-003	02/17/2005	000049	Protactinium-231	0.300	2.100	PCI/G	4.1	U	UJ
431-S5-003	02/17/2005	000049	Radium-226	0.530	0.140	PCI/G	2.9		J
431-S5-003	02/17/2005	000049	Radium-228	0.370	0.450	PCI/G	3.06	U	U
431-S5-003	02/17/2005	000049	Thallium-208	0.119	0.080	PCI/G	0.498		J
431-S5-003	02/17/2005	000049	Thorium-228	0.380	0.040	PCI/G	2.6		
431-S5-003	02/17/2005	000049	Thorium-230	0.990	0.020	PCI/G	2.8		
431-S5-003	02/17/2005	000049	Thorium-232	0.410	0.030	PCI/G	2.1		
431-S5-004	02/17/2005	000050	Actinium-227	0.001	0.280	PCI/G	4.6	U	UJ
431-S5-004	02/17/2005	000050	Americium-241	0.035	0.100	PCI/G	63	U	UJ
431-S5-004	02/17/2005	000050	Bismuth-207	0.002	0.040	PCI/G	1.2	U	UJ
431-S5-004	02/17/2005	000050	Bismuth-210M	0.037	0.069	PCI/G	8.34	U	UJ
431-S5-004	02/17/2005	000050	Bismuth-214	0.290	0.100	PCI/G	9.87		
431-S5-004	02/17/2005	000050	Cesium-137	-0.017	0.058	PCI/G	3.8	U	UJ
431-S5-004	02/17/2005	000050	Cobalt-60	-0.020	0.061	PCI/G	0.7	U	UJ
431-S5-004	02/17/2005	000050	Lead-210	0.500	1.300	PCI/G	7.4	U	UJ
431-S5-004	02/17/2005	000050	Lead-212	0.252	0.076	PCI/G	16.6		
431-S5-004	02/17/2005	000050	Lead-214	0.300	0.100	PCI/G	8.92		
431-S5-004	02/17/2005	000050	Plutonium-238	0.029	0.032	PCI/G	55	U	U
431-S5-004	02/17/2005	000050	Plutonium-239/240	0.030	0.030	PCI/G	61.2	U	U
431-S5-004	02/17/2005	000050	Potassium-40	6.800	0.400	PCI/G	47.8		
431-S5-004	02/17/2005	000050	Protactinium-231	0.840	1.400	PCI/G	4.1	U	U
431-S5-004	02/17/2005	000050	Radium-226	0.290	0.100	PCI/G	2.9		J
431-S5-004	02/17/2005	000050	Radium-228	0.130	0.270	PCI/G	3.06	U	U
431-S5-004	02/17/2005	000050	Thallium-208	0.063	0.047	PCI/G	0.498		J
431-S5-004	02/17/2005	000050	Thorium-228	0.450	0.050	PCI/G	2.6		
431-S5-004	02/17/2005	000050	Thorium-230	0.860	0.020	PCI/G	2.8		
431-S5-004	02/17/2005	000050	Thorium-232	0.252	0.027	PCI/G	2.1		
431-S5-005	02/17/2005	000051	Actinium-227	0.240	0.370	PCI/G	4.6	U	UJ
431-S5-005	02/17/2005	000051	Americium-241	-0.001	0.110	PCI/G	63	U	UJ
431-S5-005	02/17/2005	000051	Bismuth-207	0.011	0.064	PCI/G	1.2	U	UJ
431-S5-005	02/17/2005	000051	Bismuth-210M	0.085	0.110	PCI/G	8.34	U	U
431-S5-005	02/17/2005	000051	Bismuth-214	0.370	0.110	PCI/G	9.87		

Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
431-S5-005	02/17/2005	000051	Cesium-137	-0.036	0.055	PCI/G	3.8	U	UJ
431-S5-005	02/17/2005	000051	Cobalt-60	0.007	0.084	PCI/G	0.7	U	UJ
431-S5-005	02/17/2005	000051	Lead-210	-0.310	1.500	PCI/G	7.4	U	UJ
431-S5-005	02/17/2005	000051	Lead-212	0.190	0.110	PCI/G	16.6		
431-S5-005	02/17/2005	000051	Lead-214	0.460	0.110	PCI/G	8.92		
431-S5-005	02/17/2005	000051	Plutonium-238	0.012	0.041	PCI/G	55	U	UJ
431-S5-005	02/17/2005	000051	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
431-S5-005	02/17/2005	000051	Potassium-40	7.700	0.900	PCI/G	47.8		
431-S5-005	02/17/2005	000051	Protactinium-231	0.160	1.700	PCI/G	4.1	U	UJ
431-S5-005	02/17/2005	000051	Radium-226	0.370	0.110	PCI/G	2.9		J
431-S5-005	02/17/2005	000051	Radium-228	0.400	0.440	PCI/G	3.06	U	U
431-S5-005	02/17/2005	000051	Thallium-208	0.075	0.062	PCI/G	0.498		J
431-S5-005	02/17/2005	000051	Thorium-228	0.430	0.040	PCI/G	2.6		
431-S5-005	02/17/2005	000051	Thorium-230	0.760	0.040	PCI/G	2.8		
431-S5-005	02/17/2005	000051	Thorium-232	0.430	0.040	PCI/G	2.1		
431-S5-007	02/17/2005	000053	Actinium-227	0.020	0.280	PCI/G	4.6	U	UJ
431-S5-007	02/17/2005	000053	Americium-241	0.037	0.110	PCI/G	63	U	UJ
431-S5-007	02/17/2005	000053	Bismuth-207	-0.005	0.042	PCI/G	1.2	U	UJ
431-S5-007	02/17/2005	000053	Bismuth-210M	0.020	0.083	PCI/G	8.34	U	UJ
431-S5-007	02/17/2005	000053	Bismuth-214	0.340	0.120	PCI/G	9.87		
431-S5-007	02/17/2005	000053	Cesium-137	0.024	0.081	PCI/G	3.8	U	UJ
431-S5-007	02/17/2005	000053	Cobalt-60	-0.022	0.015	PCI/G	0.7	U	UJ
431-S5-007	02/17/2005	000053	Lead-210	0.730	1.400	PCI/G	7.4	U	U
431-S5-007	02/17/2005	000053	Lead-212	0.133	0.086	PCI/G	16.6		
431-S5-007	02/17/2005	000053	Lead-214	0.420	0.120	PCI/G	8.92		
431-S5-007	02/17/2005	000053	Plutonium-238	0.016	0.042	PCI/G	55	U	UJ
431-S5-007	02/17/2005	000053	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
431-S5-007	02/17/2005	000053	Potassium-40	5.400	0.900	PCI/G	47.8		
431-S5-007	02/17/2005	000053	Protactinium-231	-0.100	1.400	PCI/G	4.1	U	UJ
431-S5-007	02/17/2005	000053	Radium-226	0.340	0.120	PCI/G	2.9		J
431-S5-007	02/17/2005	000053	Radium-228	0.210	0.340	PCI/G	3.06	U	U
431-S5-007	02/17/2005	000053	Thallium-208	0.145	0.047	PCI/G	0.498		J
431-S5-007	02/17/2005	000053	Thorium-228	0.260	0.042	PCI/G	2.6		
431-S5-007	02/17/2005	000053	Thorium-230	0.650	0.030	PCI/G	2.8		
431-S5-007	02/17/2005	000053	Thorium-232	0.268	0.016	PCI/G	2.1		
431-S5-008	02/17/2005	000054	Actinium-227	0.020	0.310	PCI/G	4.6	U	UJ
431-S5-008	02/17/2005	000054	Americium-241	0.034	0.120	PCI/G	63	U	UJ
431-S5-008	02/17/2005	000054	Bismuth-207	-0.017	0.049	PCI/G	1.2	U	UJ
431-S5-008	02/17/2005	000054	Bismuth-210M	0.001	0.082	PCI/G	8.34	U	UJ
431-S5-008	02/17/2005	000054	Bismuth-214	0.380	0.150	PCI/G	9.87		
431-S5-008	02/17/2005	000054	Cesium-137	0.012	0.095	PCI/G	3.8	U	UJ
431-S5-008	02/17/2005	000054	Cobalt-60	-0.020	0.055	PCI/G	0.7	U	UJ
431-S5-008	02/17/2005	000054	Lead-210	1.170	1.700	PCI/G	7.4	U	U
431-S5-008	02/17/2005	000054	Lead-212	0.260	0.110	PCI/G	16.6		
431-S5-008	02/17/2005	000054	Lead-214	0.450	0.120	PCI/G	8.92		
431-S5-008	02/17/2005	000054	Plutonium-238	0.054	0.039	PCI/G	55	J	J
431-S5-008	02/17/2005	000054	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
431-S5-008	02/17/2005	000054	Potassium-40	9.800	0.400	PCI/G	47.8		
431-S5-008	02/17/2005	000054	Protactinium-231	0.730	1.900	PCI/G	4.1	U	UJ
431-S5-008	02/17/2005	000054	Radium-226	0.380	0.150	PCI/G	2.9		J
431-S5-008	02/17/2005	000054	Radium-228	0.170	0.380	PCI/G	3.06	U	UJ
431-S5-008	02/17/2005	000054	Thallium-208	0.145	0.070	PCI/G	0.498		J
431-S5-008	02/17/2005	000054	Thorium-228	0.540	0.050	PCI/G	2.6		
431-S5-008	02/17/2005	000054	Thorium-230	0.730	0.040	PCI/G	2.8		
431-S5-008	02/17/2005	000054	Thorium-232	0.510	0.020	PCI/G	2.1		
431-S5-009	02/17/2005	000055	Actinium-227	0.040	0.310	PCI/G	4.6	U	UJ
431-S5-009	02/17/2005	000055	Americium-241	-0.040	0.110	PCI/G	63	U	UJ
431-S5-009	02/17/2005	000055	Bismuth-207	0.010	0.048	PCI/G	1.2	U	UJ
431-S5-009	02/17/2005	000055	Bismuth-210M	0.024	0.078	PCI/G	8.34	U	UJ
431-S5-009	02/17/2005	000055	Bismuth-214	0.360	0.150	PCI/G	9.87		
431-S5-009	02/17/2005	000055	Cesium-137	-0.001	0.077	PCI/G	3.8	U	UJ
431-S5-009	02/17/2005	000055	Cobalt-60	0.000	0.067	PCI/G	0.7	U	UJ
431-S5-009	02/17/2005	000055	Lead-210	0.900	1.700	PCI/G	7.4	U	U
431-S5-009	02/17/2005	000055	Lead-212	0.208	0.088	PCI/G	16.6		
431-S5-009	02/17/2005	000055	Plutonium-238	0.052	0.036	PCI/G	55	J	J
431-S5-009	02/17/2005	000055	Plutonium-239/240	0.005	0.014	PCI/G	61.2	U	UJ
431-S5-009	02/17/2005	000055	Potassium-40	5.600	0.600	PCI/G	47.8		
431-S5-009	02/17/2005	000055	Protactinium-231	0.260	1.600	PCI/G	4.1	U	UJ

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Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
431-S5-009	02/17/2005	000055	Radium-226	0.360	0.150	PCI/G	2.9		J
431-S5-009	02/17/2005	000055	Radium-228	0.270	0.390	PCI/G	3.06	U	U
431-S5-009	02/17/2005	000055	Thallium-208	0.124	0.042	PCI/G	0.498		J
431-S5-009	02/17/2005	000055	Thorium-228	0.244	0.049	PCI/G	2.6		
431-S5-009	02/17/2005	000055	Thorium-230	0.610	0.030	PCI/G	2.8		
431-S5-009	02/17/2005	000055	Thorium-232	0.286	0.027	PCI/G	2.1		
431-S5-010	02/17/2005	000056	Actinium-227	0.120	0.270	PCI/G	4.6	U	UJ
431-S5-010	02/17/2005	000056	Americium-241	-0.033	0.097	PCI/G	63	U	UJ
431-S5-010	02/17/2005	000056	Bismuth-207	-0.005	0.044	PCI/G	1.2	U	UJ
431-S5-010	02/17/2005	000056	Bismuth-210M	0.014	0.068	PCI/G	8.34	U	UJ
431-S5-010	02/17/2005	000056	Bismuth-214	0.310	0.090	PCI/G	9.87		
431-S5-010	02/17/2005	000056	Cesium-137	0.014	0.065	PCI/G	3.8	U	UJ
431-S5-010	02/17/2005	000056	Cobalt-60	0.021	0.089	PCI/G	0.7	U	UJ
431-S5-010	02/17/2005	000056	Lead-210	0.100	1.300	PCI/G	7.4	U	UJ
431-S5-010	02/17/2005	000056	Lead-212	0.161	0.091	PCI/G	16.6		
431-S5-010	02/17/2005	000056	Lead-214	0.330	0.080	PCI/G	8.92		
431-S5-010	02/17/2005	000056	Plutonium-238	0.074	0.046	PCI/G	55	J	J
431-S5-010	02/17/2005	000056	Plutonium-239/240	0.004	0.023	PCI/G	61.2	U	UJ
431-S5-010	02/17/2005	000056	Potassium-40	5.600	0.800	PCI/G	47.8		
431-S5-010	02/17/2005	000056	Protactinium-231	0.240	1.400	PCI/G	4.1	U	UJ
431-S5-010	02/17/2005	000056	Radium-226	0.310	0.090	PCI/G	2.9		J
431-S5-010	02/17/2005	000056	Radium-228	0.250	0.320	PCI/G	3.06	U	U
431-S5-010	02/17/2005	000056	Thallium-208	0.064	0.057	PCI/G	0.498		J
431-S5-010	02/17/2005	000056	Thorium-228	0.470	0.040	PCI/G	2.6		
431-S5-010	02/17/2005	000056	Thorium-230	0.590	0.020	PCI/G	2.8		
431-S5-010	02/17/2005	000056	Thorium-232	0.400	0.020	PCI/G	2.1		
431-S5-011	02/17/2005	000057	Actinium-227	0.160	0.300	PCI/G	4.6	U	UJ
431-S5-011	02/17/2005	000057	Americium-241	0.017	0.110	PCI/G	63	U	UJ
431-S5-011	02/17/2005	000057	Bismuth-207	0.013	0.053	PCI/G	1.2	U	UJ
431-S5-011	02/17/2005	000057	Bismuth-210M	0.052	0.087	PCI/G	8.34	U	U
431-S5-011	02/17/2005	000057	Bismuth-214	0.500	0.100	PCI/G	9.87		
431-S5-011	02/17/2005	000057	Cesium-137	0.002	0.086	PCI/G	3.8	U	UJ
431-S5-011	02/17/2005	000057	Cobalt-60	0.035	0.110	PCI/G	0.7	U	UJ
431-S5-011	02/17/2005	000057	Lead-210	1.150	1.200	PCI/G	7.4	U	U
431-S5-011	02/17/2005	000057	Lead-212	0.281	0.080	PCI/G	16.6		
431-S5-011	02/17/2005	000057	Lead-214	0.370	0.110	PCI/G	8.92		
431-S5-011	02/17/2005	000057	Plutonium-238	0.105	0.039	PCI/G	55		
431-S5-011	02/17/2005	000057	Plutonium-239/240	0.005	0.013	PCI/G	61.2	U	UJ
431-S5-011	02/17/2005	000057	Potassium-40	8.100	0.800	PCI/G	47.8		
431-S5-011	02/17/2005	000057	Protactinium-231	0.500	1.700	PCI/G	4.1	U	UJ
431-S5-011	02/17/2005	000057	Radium-226	0.500	0.100	PCI/G	2.9		J
431-S5-011	02/17/2005	000057	Radium-228	0.290	0.350	PCI/G	3.06	U	U
431-S5-011	02/17/2005	000057	Thorium-228	0.380	0.040	PCI/G	2.6		
431-S5-011	02/17/2005	000057	Thorium-230	0.710	0.040	PCI/G	2.8		
431-S5-011	02/17/2005	000057	Thorium-232	0.304	0.025	PCI/G	2.1		
431-S5-012	02/17/2005	000058	Actinium-227	-0.050	0.260	PCI/G	4.6	U	UJ
431-S5-012	02/17/2005	000058	Americium-241	0.033	0.120	PCI/G	63	U	UJ
431-S5-012	02/17/2005	000058	Bismuth-207	0.021	0.056	PCI/G	1.2	U	UJ
431-S5-012	02/17/2005	000058	Bismuth-210M	-0.013	0.065	PCI/G	8.34	U	UJ
431-S5-012	02/17/2005	000058	Bismuth-214	0.290	0.120	PCI/G	9.87		
431-S5-012	02/17/2005	000058	Cesium-137	-0.021	0.047	PCI/G	3.8	U	UJ
431-S5-012	02/17/2005	000058	Cobalt-60	-0.007	0.080	PCI/G	0.7	U	UJ
431-S5-012	02/17/2005	000058	Lead-210	-0.210	1.500	PCI/G	7.4	U	UJ
431-S5-012	02/17/2005	000058	Lead-212	0.098	0.095	PCI/G	16.6		
431-S5-012	02/17/2005	000058	Lead-214	0.310	0.100	PCI/G	8.92		
431-S5-012	02/17/2005	000058	Plutonium-238	0.077	0.031	PCI/G	55	J	J
431-S5-012	02/17/2005	000058	Plutonium-239/240	0.005	0.013	PCI/G	61.2	U	UJ
431-S5-012	02/17/2005	000058	Potassium-40	4.800	0.700	PCI/G	47.8		
431-S5-012	02/17/2005	000058	Protactinium-231	-0.250	1.300	PCI/G	4.1	U	UJ
431-S5-012	02/17/2005	000058	Radium-226	0.290	0.120	PCI/G	2.9		J
431-S5-012	02/17/2005	000058	Radium-228	0.150	0.350	PCI/G	3.06	U	UJ
431-S5-012	02/17/2005	000058	Thorium-228	0.241	0.037	PCI/G	2.6		
431-S5-012	02/17/2005	000058	Thorium-230	0.520	0.020	PCI/G	2.8		
431-S5-012	02/17/2005	000058	Thorium-232	0.380	0.030	PCI/G	2.1		
431-S5-013	02/17/2005	000059	Actinium-227	-0.008	0.260	PCI/G	4.6	U	UJ
431-S5-013	02/17/2005	000059	Americium-241	-0.025	0.094	PCI/G	63	U	UJ
431-S5-013	02/17/2005	000059	Bismuth-207	0.024	0.057	PCI/G	1.2	U	UJ
431-S5-013	02/17/2005	000059	Bismuth-210M	-0.033	0.052	PCI/G	8.34	U	UJ

Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
431-S5-013	02/17/2005	000059	Bismuth-214	0.390	0.100	PCI/G	9.87		
431-S5-013	02/17/2005	000059	Cesium-137	-0.017	0.056	PCI/G	3.8	U	UJ
431-S5-013	02/17/2005	000059	Cobalt-60	-0.003	0.046	PCI/G	0.7	U	UJ
431-S5-013	02/17/2005	000059	Lead-210	0.530	1.400	PCI/G	7.4	U	UJ
431-S5-013	02/17/2005	000059	Lead-212	0.107	0.091	PCI/G	16.6		
431-S5-013	02/17/2005	000059	Lead-214	0.390	0.090	PCI/G	8.92		
431-S5-013	02/17/2005	000059	Plutonium-238	0.042	0.035	PCI/G	55	J	J
431-S5-013	02/17/2005	000059	Plutonium-239/240	0.003	0.026	PCI/G	61.2	U	UJ
431-S5-013	02/17/2005	000059	Potassium-40	4.500	0.100	PCI/G	47.8		
431-S5-013	02/17/2005	000059	Protactinium-231	0.250	1.600	PCI/G	4.1	U	UJ
431-S5-013	02/17/2005	000059	Radium-226	0.390	0.100	PCI/G	2.9		J
431-S5-013	02/17/2005	000059	Radium-228	0.100	0.250	PCI/G	3.06	U	UJ
431-S5-013	02/17/2005	000059	Thallium-208	0.068	0.052	PCI/G	0.498		J
431-S5-013	02/17/2005	000059	Thorium-228	0.490	0.040	PCI/G	2.6		
431-S5-013	02/17/2005	000059	Thorium-230	1.270	0.020	PCI/G	2.8		
431-S5-013	02/17/2005	000059	Thorium-232	0.760	0.020	PCI/G	2.1		
431-S5-014	02/17/2005	000060	Actinium-227	0.004	0.220	PCI/G	4.6	U	UJ
431-S5-014	02/17/2005	000060	Americium-241	0.021	0.081	PCI/G	63	U	UJ
431-S5-014	02/17/2005	000060	Bismuth-207	-0.005	0.033	PCI/G	1.2	U	UJ
431-S5-014	02/17/2005	000060	Bismuth-210M	0.005	0.053	PCI/G	8.34	U	UJ
431-S5-014	02/17/2005	000060	Bismuth-214	0.380	0.070	PCI/G	9.87		
431-S5-014	02/17/2005	000060	Cesium-137	0.010	0.063	PCI/G	3.8	U	UJ
431-S5-014	02/17/2005	000060	Cobalt-60	-0.004	0.067	PCI/G	0.7	U	UJ
431-S5-014	02/17/2005	000060	Lead-210	0.180	1.100	PCI/G	7.4	U	UJ
431-S5-014	02/17/2005	000060	Lead-212	0.190	0.070	PCI/G	16.6		
431-S5-014	02/17/2005	000060	Lead-214	0.289	0.092	PCI/G	8.92		
431-S5-014	02/17/2005	000060	Plutonium-238	0.040	0.039	PCI/G	55	J	J
431-S5-014	02/17/2005	000060	Plutonium-239/240	0.011	0.025	PCI/G	61.2	U	UJ
431-S5-014	02/17/2005	000060	Potassium-40	5.200	0.400	PCI/G	47.8		
431-S5-014	02/17/2005	000060	Protactinium-231	-0.460	0.990	PCI/G	4.1	U	UJ
431-S5-014	02/17/2005	000060	Radium-226	0.380	0.070	PCI/G	2.9		J
431-S5-014	02/17/2005	000060	Radium-228	0.120	0.240	PCI/G	3.06	U	U
431-S5-014	02/17/2005	000060	Thorium-228	0.300	0.031	PCI/G	2.6		
431-S5-014	02/17/2005	000060	Thorium-230	0.660	0.020	PCI/G	2.8		
431-S5-014	02/17/2005	000060	Thorium-232	0.350	0.020	PCI/G	2.1		
431-S5-015	02/17/2005	000061	Actinium-227	0.180	0.290	PCI/G	4.6	U	U
431-S5-015	02/17/2005	000061	Americium-241	0.055	0.100	PCI/G	63	U	U
431-S5-015	02/17/2005	000061	Bismuth-207	0.018	0.057	PCI/G	1.2	U	UJ
431-S5-015	02/17/2005	000061	Bismuth-210M	-0.024	0.062	PCI/G	8.34	U	UJ
431-S5-015	02/17/2005	000061	Bismuth-214	0.350	0.120	PCI/G	9.87		
431-S5-015	02/17/2005	000061	Cesium-137	-0.007	0.061	PCI/G	3.8	U	UJ
431-S5-015	02/17/2005	000061	Cobalt-60	0.013	0.068	PCI/G	0.7	U	UJ
431-S5-015	02/17/2005	000061	Lead-210	0.470	1.300	PCI/G	7.4	U	UJ
431-S5-015	02/17/2005	000061	Lead-212	0.188	0.072	PCI/G	16.6		
431-S5-015	02/17/2005	000061	Lead-214	0.450	0.090	PCI/G	8.92		
431-S5-015	02/17/2005	000061	Plutonium-238	0.028	0.040	PCI/G	55	U	UJ
431-S5-015	02/17/2005	000061	Plutonium-239/240	0.010	0.013	PCI/G	61.2	U	UJ
431-S5-015	02/17/2005	000061	Potassium-40	5.800	0.400	PCI/G	47.8		
431-S5-015	02/17/2005	000061	Protactinium-231	0.380	1.400	PCI/G	4.1	U	UJ
431-S5-015	02/17/2005	000061	Radium-226	0.350	0.120	PCI/G	2.9		J
431-S5-015	02/17/2005	000061	Radium-228	0.370	0.380	PCI/G	3.06	U	U
431-S5-015	02/17/2005	000061	Thorium-228	0.330	0.050	PCI/G	2.6		
431-S5-015	02/17/2005	000061	Thorium-230	0.690	0.050	PCI/G	2.8		
431-S5-015	02/17/2005	000061	Thorium-232	0.410	0.040	PCI/G	2.1		
431-S5-016	02/17/2005	000062	Actinium-227	0.060	0.290	PCI/G	4.6	U	UJ
431-S5-016	02/17/2005	000062	Americium-241	-0.010	0.110	PCI/G	63	U	UJ
431-S5-016	02/17/2005	000062	Bismuth-207	0.001	0.043	PCI/G	1.2	U	UJ
431-S5-016	02/17/2005	000062	Bismuth-210M	-0.001	0.061	PCI/G	8.34	U	UJ
431-S5-016	02/17/2005	000062	Bismuth-214	0.310	0.140	PCI/G	9.87		
431-S5-016	02/17/2005	000062	Cesium-137	-0.002	0.065	PCI/G	3.8	U	UJ
431-S5-016	02/17/2005	000062	Cobalt-60	0.012	0.078	PCI/G	0.7	U	UJ
431-S5-016	02/17/2005	000062	Lead-210	0.060	1.400	PCI/G	7.4	U	UJ
431-S5-016	02/17/2005	000062	Lead-212	0.163	0.098	PCI/G	16.6		
431-S5-016	02/17/2005	000062	Lead-214	0.500	0.090	PCI/G	8.92		
431-S5-016	02/17/2005	000062	Plutonium-238	0.007	0.031	PCI/G	55	U	UJ
431-S5-016	02/17/2005	000062	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
431-S5-016	02/17/2005	000062	Potassium-40	5.600	0.800	PCI/G	47.8		
431-S5-016	02/17/2005	000062	Protactinium-231	0.130	1.600	PCI/G	4.1	U	UJ

Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
431-S5-016	02/17/2005	000062	Radium-226	0.310	0.140	PCI/G	2.9		J
431-S5-016	02/17/2005	000062	Radium-228	0.190	0.340	PCI/G	3.06	U	U
431-S5-016	02/17/2005	000062	Thorium-228	0.287	0.043	PCI/G	2.6		
431-S5-016	02/17/2005	000062	Thorium-230	0.970	0.020	PCI/G	2.8		
431-S5-016	02/17/2005	000062	Thorium-232	0.245	0.024	PCI/G	2.1		
431-S5-017	02/17/2005	000063	Actinium-227	-0.020	0.250	PCI/G	4.6	U	UJ
431-S5-017	02/17/2005	000063	Americium-241	0.043	0.110	PCI/G	63	U	UJ
431-S5-017	02/17/2005	000063	Bismuth-207	0.015	0.050	PCI/G	1.2	U	UJ
431-S5-017	02/17/2005	000063	Bismuth-210M	-0.019	0.054	PCI/G	8.34	U	UJ
431-S5-017	02/17/2005	000063	Bismuth-214	0.390	0.120	PCI/G	9.87		
431-S5-017	02/17/2005	000063	Cesium-137	0.069	0.061	PCI/G	3.8	J	J
431-S5-017	02/17/2005	000063	Cobalt-60	0.011	0.069	PCI/G	0.7	U	UJ
431-S5-017	02/17/2005	000063	Lead-210	0.160	1.400	PCI/G	7.4	U	UJ
431-S5-017	02/17/2005	000063	Lead-212	0.195	0.091	PCI/G	16.6		
431-S5-017	02/17/2005	000063	Lead-214	0.370	0.080	PCI/G	8.92		
431-S5-017	02/17/2005	000063	Plutonium-238	0.007	0.026	PCI/G	55	U	UJ
431-S5-017	02/17/2005	000063	Plutonium-239/240	0.003	0.023	PCI/G	61.2	U	UJ
431-S5-017	02/17/2005	000063	Potassium-40	5.000	0.700	PCI/G	47.8		
431-S5-017	02/17/2005	000063	Protactinium-231	0.030	1.300	PCI/G	4.1	U	UJ
431-S5-017	02/17/2005	000063	Radium-226	0.390	0.120	PCI/G	2.9		J
431-S5-017	02/17/2005	000063	Radium-228	0.140	0.270	PCI/G	3.06	U	U
431-S5-017	02/17/2005	000063	Thorium-228	0.225	0.033	PCI/G	2.6		
431-S5-017	02/17/2005	000063	Thorium-230	0.930	0.010	PCI/G	2.8		
431-S5-017	02/17/2005	000063	Thorium-232	0.239	0.023	PCI/G	2.1		
431-S5-018	02/17/2005	000064	Actinium-227	0.130	0.250	PCI/G	4.6	U	UJ
431-S5-018	02/17/2005	000064	Americium-241	-0.023	0.085	PCI/G	63	U	UJ
431-S5-018	02/17/2005	000064	Bismuth-207	-0.005	0.038	PCI/G	1.2	U	UJ
431-S5-018	02/17/2005	000064	Bismuth-210M	0.002	0.064	PCI/G	8.34	U	UJ
431-S5-018	02/17/2005	000064	Bismuth-214	0.380	0.100	PCI/G	9.87		
431-S5-018	02/17/2005	000064	Cesium-137	0.008	0.071	PCI/G	3.8	U	UJ
431-S5-018	02/17/2005	000064	Cobalt-60	0.008	0.074	PCI/G	0.7	U	UJ
431-S5-018	02/17/2005	000064	Lead-210	0.740	1.400	PCI/G	7.4	U	U
431-S5-018	02/17/2005	000064	Lead-212	0.211	0.100	PCI/G	16.6		
431-S5-018	02/17/2005	000064	Lead-214	0.460	0.100	PCI/G	8.92		
431-S5-018	02/17/2005	000064	Plutonium-238	0.012	0.030	PCI/G	55	U	UJ
431-S5-018	02/17/2005	000064	Plutonium-239/240	0.030	0.030	PCI/G	61.2	U	U
431-S5-018	02/17/2005	000064	Potassium-40	4.600	0.100	PCI/G	47.8		
431-S5-018	02/17/2005	000064	Protactinium-231	0.330	1.500	PCI/G	4.1	U	UJ
431-S5-018	02/17/2005	000064	Radium-226	0.380	0.100	PCI/G	2.9		J
431-S5-018	02/17/2005	000064	Radium-228	0.120	0.290	PCI/G	3.06	U	UJ
431-S5-018	02/17/2005	000064	Thorium-228	0.279	0.040	PCI/G	2.6		
431-S5-018	02/17/2005	000064	Thorium-230	0.820	0.040	PCI/G	2.8		
431-S5-018	02/17/2005	000064	Thorium-232	0.276	0.027	PCI/G	2.1		
431-S5-019	02/17/2005	000065	Actinium-227	0.320	0.350	PCI/G	4.6	U	U
431-S5-019	02/17/2005	000065	Americium-241	0.017	0.110	PCI/G	63	U	UJ
431-S5-019	02/17/2005	000065	Bismuth-207	0.013	0.058	PCI/G	1.2	U	UJ
431-S5-019	02/17/2005	000065	Bismuth-210M	-0.028	0.060	PCI/G	8.34	U	UJ
431-S5-019	02/17/2005	000065	Bismuth-214	0.380	0.090	PCI/G	9.87		
431-S5-019	02/17/2005	000065	Cesium-137	0.010	0.074	PCI/G	3.8	U	UJ
431-S5-019	02/17/2005	000065	Cobalt-60	0.000	0.074	PCI/G	0.7	U	UJ
431-S5-019	02/17/2005	000065	Lead-210	0.300	1.600	PCI/G	7.4	U	UJ
431-S5-019	02/17/2005	000065	Lead-212	0.138	0.100	PCI/G	16.6		
431-S5-019	02/17/2005	000065	Lead-214	0.380	0.120	PCI/G	8.92		
431-S5-019	02/17/2005	000065	Plutonium-238	0.018	0.037	PCI/G	55	U	UJ
431-S5-019	02/17/2005	000065	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
431-S5-019	02/17/2005	000065	Potassium-40	3.900	0.700	PCI/G	47.8		
431-S5-019	02/17/2005	000065	Protactinium-231	0.560	1.600	PCI/G	4.1	U	UJ
431-S5-019	02/17/2005	000065	Radium-226	0.380	0.090	PCI/G	2.9		J
431-S5-019	02/17/2005	000065	Radium-228	0.190	0.340	PCI/G	3.06	U	U
431-S5-019	02/17/2005	000065	Thorium-228	0.306	0.037	PCI/G	2.6		
431-S5-019	02/17/2005	000065	Thorium-230	0.680	0.020	PCI/G	2.8		
431-S5-019	02/17/2005	000065	Thorium-232	0.261	0.025	PCI/G	2.1		
432-S2-001	02/17/2005	000037	Actinium-227	0.030	0.250	PCI/G	4.6	U	UJ
432-S2-001	02/17/2005	000037	Americium-241	-0.060	0.085	PCI/G	63	U	UJ
432-S2-001	02/17/2005	000037	Bismuth-207	-0.010	0.034	PCI/G	1.2	U	UJ
432-S2-001	02/17/2005	000037	Bismuth-210M	0.019	0.056	PCI/G	8.34	U	UJ
432-S2-001	02/17/2005	000037	Bismuth-214	0.400	0.110	PCI/G	9.87		
432-S2-001	02/17/2005	000037	Cesium-137	-0.010	0.066	PCI/G	3.8	U	UJ

Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
432-S2-001	02/17/2005	000037	Cobalt-60	-0.015	0.060	PCI/G	0.7	U	UJ
432-S2-001	02/17/2005	000037	Lead-210	0.490	1.300	PCI/G	7.4	U	UJ
432-S2-001	02/17/2005	000037	Lead-212	0.136	0.088	PCI/G	16.6		
432-S2-001	02/17/2005	000037	Lead-214	0.380	0.100	PCI/G	8.92		
432-S2-001	02/17/2005	000037	Plutonium-238	0.030	0.045	PCI/G	55	U	UJ
432-S2-001	02/17/2005	000037	Plutonium-239/240	0.030	0.030	PCI/G	61.2	U	U
432-S2-001	02/17/2005	000037	Potassium-40	5.400	0.600	PCI/G	47.8		
432-S2-001	02/17/2005	000037	Protactinium-231	-0.140	1.100	PCI/G	4.1	U	UJ
432-S2-001	02/17/2005	000037	Radium-226	0.400	0.110	PCI/G	2.9		J
432-S2-001	02/17/2005	000037	Radium-228	0.160	0.280	PCI/G	3.06	U	U
432-S2-001	02/17/2005	000037	Thorium-228	0.245	0.049	PCI/G	2.6		
432-S2-001	02/17/2005	000037	Thorium-230	0.750	0.030	PCI/G	2.8		
432-S2-001	02/17/2005	000037	Thorium-232	0.274	0.027	PCI/G	2.1		
432-S2-002	02/17/2005	000038	Actinium-227	0.260	0.500	PCI/G	4.6	U	UJ
432-S2-002	02/17/2005	000038	Actinium-228	0.770	0.330	PCI/G	1.93		
432-S2-002	02/17/2005	000038	Americium-241	0.130	0.220	PCI/G	63	U	U
432-S2-002	02/17/2005	000038	Bismuth-207	0.010	0.085	PCI/G	1.2	U	UJ
432-S2-002	02/17/2005	000038	Bismuth-210M	0.054	0.130	PCI/G	8.34	U	UJ
432-S2-002	02/17/2005	000038	Bismuth-214	0.790	0.190	PCI/G	9.87		
432-S2-002	02/17/2005	000038	Cesium-137	0.068	0.160	PCI/G	3.8	U	UJ
432-S2-002	02/17/2005	000038	Cobalt-60	-0.054	0.094	PCI/G	0.7	U	UJ
432-S2-002	02/17/2005	000038	Lead-210	1.800	2.900	PCI/G	7.4	U	U
432-S2-002	02/17/2005	000038	Lead-212	0.560	0.180	PCI/G	16.6		
432-S2-002	02/17/2005	000038	Lead-214	0.740	0.140	PCI/G	8.92		
432-S2-002	02/17/2005	000038	Plutonium-238	0.052	0.046	PCI/G	55	J	U
432-S2-002	02/17/2005	000038	Plutonium-239/240	0.030	0.030	PCI/G	61.2	U	U
432-S2-002	02/17/2005	000038	Potassium-40	15.500	1.100	PCI/G	47.8		
432-S2-002	02/17/2005	000038	Protactinium-231	0.500	2.800	PCI/G	4.1	U	UJ
432-S2-002	02/17/2005	000038	Radium-226	0.790	0.190	PCI/G	2.9		J
432-S2-002	02/17/2005	000038	Radium-228	0.770	0.340	PCI/G	3.06		
432-S2-002	02/17/2005	000038	Thallium-208	0.330	0.090	PCI/G	0.498		
432-S2-002	02/17/2005	000038	Thorium-228	0.720	0.030	PCI/G	2.6		
432-S2-002	02/17/2005	000038	Thorium-230	1.230	0.010	PCI/G	2.8		
432-S2-002	02/17/2005	000038	Thorium-232	0.770	0.340	PCI/G	2.1		
432-S2-002	02/17/2005	000038	Thorium-232	0.670	0.020	PCI/G	2.1		
432-S2-003D	02/17/2005	000039	Actinium-227	0.150	0.430	PCI/G	4.6	U	UJ
432-S2-003	02/17/2005	000033	Actinium-227	0.110	0.490	PCI/G	4.6	U	UJ
432-S2-003	02/17/2005	000033	Actinium-228	0.730	0.230	PCI/G	1.93		
432-S2-003D	02/17/2005	000039	Actinium-228	0.530	0.290	PCI/G	1.93		
432-S2-003	02/17/2005	000033	Americium-241	0.009	0.180	PCI/G	63	U	UJ
432-S2-003D	02/17/2005	000039	Americium-241	-0.024	0.150	PCI/G	63	U	UJ
432-S2-003	02/17/2005	000033	Bismuth-207	0.003	0.079	PCI/G	1.2	U	UJ
432-S2-003D	02/17/2005	000039	Bismuth-207	-0.031	0.054	PCI/G	1.2	U	UJ
432-S2-003	02/17/2005	000033	Bismuth-210M	-0.006	0.097	PCI/G	8.34	U	UJ
432-S2-003D	02/17/2005	000039	Bismuth-210M	-0.018	0.090	PCI/G	8.34	U	UJ
432-S2-003	02/17/2005	000033	Bismuth-214	0.770	0.140	PCI/G	9.87		
432-S2-003D	02/17/2005	000039	Bismuth-214	0.730	0.170	PCI/G	9.87		
432-S2-003D	02/17/2005	000039	Cesium-137	0.019	0.094	PCI/G	3.8	U	UJ
432-S2-003	02/17/2005	000033	Cesium-137	-0.011	0.096	PCI/G	3.8	U	UJ
432-S2-003D	02/17/2005	000039	Cobalt-60	0.000	0.089	PCI/G	0.7	U	UJ
432-S2-003	02/17/2005	000033	Cobalt-60	-0.004	0.097	PCI/G	0.7	U	UJ
432-S2-003	02/17/2005	000033	Lead-210	1.000	2.000	PCI/G	7.4	U	U
432-S2-003D	02/17/2005	000039	Lead-210	0.030	2.000	PCI/G	7.4	U	UJ
432-S2-003	02/17/2005	000033	Lead-212	0.460	0.180	PCI/G	16.6		
432-S2-003D	02/17/2005	000039	Lead-212	0.410	0.130	PCI/G	16.6		
432-S2-003D	02/17/2005	000039	Lead-214	0.760	0.130	PCI/G	8.92		
432-S2-003	02/17/2005	000033	Lead-214	0.650	0.160	PCI/G	8.92		
432-S2-003	02/17/2005	000033	Plutonium-238	0.101	0.033	PCI/G	55		U
432-S2-003D	02/17/2005	000039	Plutonium-238	0.083	0.031	PCI/G	55	J	U
432-S2-003D	02/17/2005	000039	Plutonium-239/240	0.010	0.024	PCI/G	61.2	U	UJ
432-S2-003	02/17/2005	000033	Plutonium-239/240	0.003	0.025	PCI/G	61.2	U	UJ
432-S2-003	02/17/2005	000033	Potassium-40	13.900	1.000	PCI/G	47.8		
432-S2-003D	02/17/2005	000039	Potassium-40	12.600	0.900	PCI/G	47.8		
432-S2-003D	02/17/2005	000039	Protactinium-231	2.500	2.500	PCI/G	4.1	U	U
432-S2-003	02/17/2005	000033	Protactinium-231	1.300	2.300	PCI/G	4.1	U	U
432-S2-003	02/17/2005	000033	Radium-226	0.770	0.140	PCI/G	2.9		J
432-S2-003D	02/17/2005	000039	Radium-226	0.730	0.170	PCI/G	2.9		J
432-S2-003	02/17/2005	000033	Radium-228	0.730	0.230	PCI/G	3.06		
432-S2-003D	02/17/2005	000039	Radium-228	0.530	0.290	PCI/G	3.06		

Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
432-S2-003D	02/17/2005	000039	Thallium-208	0.230	0.080	PCI/G	0.498		
432-S2-003	02/17/2005	000033	Thallium-208	0.185	0.092	PCI/G	0.498		
432-S2-003	02/17/2005	000033	Thorium-228	0.780	0.050	PCI/G	2.6		
432-S2-003D	02/17/2005	000039	Thorium-228	0.710	0.040	PCI/G	2.6		
432-S2-003D	02/17/2005	000039	Thorium-230	1.170	0.040	PCI/G	2.8		
432-S2-003	02/17/2005	000033	Thorium-230	1.110	0.040	PCI/G	2.8		
432-S2-003D	02/17/2005	000039	Thorium-232	0.780	0.030	PCI/G	2.1		
432-S2-003	02/17/2005	000033	Thorium-232	0.730	0.230	PCI/G	2.1		
432-S2-003	02/17/2005	000033	Thorium-232	0.670	0.020	PCI/G	2.1		
432-S2-003D	02/17/2005	000039	Thorium-232	0.530	0.290	PCI/G	2.1		
432-S2-004	02/17/2005	000040	Actinium-227	-0.100	0.410	PCI/G	4.6	U	UJ
432-S2-004	02/17/2005	000040	Americium-241	-0.005	0.160	PCI/G	63	U	UJ
432-S2-004	02/17/2005	000040	Bismuth-207	-0.017	0.059	PCI/G	1.2	U	UJ
432-S2-004	02/17/2005	000040	Bismuth-210M	-0.004	0.100	PCI/G	8.34	U	UJ
432-S2-004	02/17/2005	000040	Bismuth-214	0.600	0.180	PCI/G	9.87		
432-S2-004	02/17/2005	000040	Cesium-137	-0.035	0.095	PCI/G	3.8	U	U
432-S2-004	02/17/2005	000040	Cobalt-60	-0.039	0.072	PCI/G	0.7	U	UJ
432-S2-004	02/17/2005	000040	Lead-210	1.100	2.200	PCI/G	7.4	U	U
432-S2-004	02/17/2005	000040	Lead-212	0.360	0.150	PCI/G	16.6		
432-S2-004	02/17/2005	000040	Lead-214	0.320	0.130	PCI/G	8.92		
432-S2-004	02/17/2005	000040	Plutonium-238	0.045	0.028	PCI/G	55	J	U
432-S2-004	02/17/2005	000040	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
432-S2-004	02/17/2005	000040	Potassium-40	11.200	1.100	PCI/G	47.8		
432-S2-004	02/17/2005	000040	Protactinium-231	1.000	2.300	PCI/G	4.1	U	UJ
432-S2-004	02/17/2005	000040	Radium-226	0.600	0.180	PCI/G	2.9		J
432-S2-004	02/17/2005	000040	Radium-228	0.520	0.580	PCI/G	3.06	U	U
432-S2-004	02/17/2005	000040	Thallium-208	0.084	0.076	PCI/G	0.498		
432-S2-004	02/17/2005	000040	Thorium-228	0.640	0.040	PCI/G	2.6		
432-S2-004	02/17/2005	000040	Thorium-230	1.060	0.020	PCI/G	2.8		
432-S2-004	02/17/2005	000040	Thorium-232	0.460	0.030	PCI/G	2.1		
432-S2-005	02/17/2005	000041	Actinium-227	0.110	0.410	PCI/G	4.6	U	UJ
432-S2-005	02/17/2005	000041	Actinium-228	0.660	0.310	PCI/G	1.93		
432-S2-005	02/17/2005	000041	Americium-241	0.046	0.180	PCI/G	63	U	UJ
432-S2-005	02/17/2005	000041	Bismuth-207	-0.005	0.070	PCI/G	1.2	U	UJ
432-S2-005	02/17/2005	000041	Bismuth-210M	-0.024	0.088	PCI/G	8.34	U	UJ
432-S2-005	02/17/2005	000041	Bismuth-212	0.700	0.520	PCI/G	9.87		
432-S2-005	02/17/2005	000041	Bismuth-214	0.770	0.160	PCI/G	9.87		
432-S2-005	02/17/2005	000041	Cesium-137	0.146	0.099	PCI/G	3.8	J	J
432-S2-005	02/17/2005	000041	Cobalt-60	0.043	0.140	PCI/G	0.7	U	UJ
432-S2-005	02/17/2005	000041	Lead-210	1.500	2.200	PCI/G	7.4	U	U
432-S2-005	02/17/2005	000041	Lead-212	0.570	0.130	PCI/G	16.6		
432-S2-005	02/17/2005	000041	Lead-214	0.640	0.180	PCI/G	8.92		
432-S2-005	02/17/2005	000041	Plutonium-238	0.077	0.024	PCI/G	55	J	J
432-S2-005	02/17/2005	000041	Plutonium-239/240	0.003	0.024	PCI/G	61.2	U	UJ
432-S2-005	02/17/2005	000041	Potassium-40	15.200	1.200	PCI/G	47.8		
432-S2-005	02/17/2005	000041	Protactinium-231	0.010	2.000	PCI/G	4.1	U	UJ
432-S2-005	02/17/2005	000041	Radium-226	0.770	0.160	PCI/G	2.9		J
432-S2-005	02/17/2005	000041	Radium-228	0.660	0.280	PCI/G	3.06		
432-S2-005	02/17/2005	000041	Thallium-208	0.211	0.110	PCI/G	0.498		J
432-S2-005	02/17/2005	000041	Thorium-228	0.690	0.100	PCI/G	2.6		
432-S2-005	02/17/2005	000041	Thorium-230	1.060	0.050	PCI/G	2.8		
432-S2-005	02/17/2005	000041	Thorium-232	0.660	0.280	PCI/G	2.1		
432-S2-005	02/17/2005	000041	Thorium-232	0.650	0.060	PCI/G	2.1		
432-S2-006	02/17/2005	000042	Actinium-227	0.140	0.290	PCI/G	4.6	U	UJ
432-S2-006	02/17/2005	000042	Americium-241	0.006	0.100	PCI/G	63	U	UJ
432-S2-006	02/17/2005	000042	Bismuth-207	0.003	0.044	PCI/G	1.2	U	UJ
432-S2-006	02/17/2005	000042	Bismuth-210M	0.002	0.059	PCI/G	8.34	U	UJ
432-S2-006	02/17/2005	000042	Bismuth-214	0.320	0.100	PCI/G	9.87		
432-S2-006	02/17/2005	000042	Cesium-137	0.012	0.071	PCI/G	3.8	U	UJ
432-S2-006	02/17/2005	000042	Cobalt-60	0.019	0.074	PCI/G	0.7	U	UJ
432-S2-006	02/17/2005	000042	Lead-210	0.290	1.400	PCI/G	7.4	U	UJ
432-S2-006	02/17/2005	000042	Lead-212	0.160	0.120	PCI/G	16.6		
432-S2-006	02/17/2005	000042	Lead-214	0.380	0.090	PCI/G	8.92		
432-S2-006	02/17/2005	000042	Plutonium-238	0.081	0.058	PCI/G	55	J	J
432-S2-006	02/17/2005	000042	Plutonium-239/240	0.040	0.040	PCI/G	61.2	U	U
432-S2-006	02/17/2005	000042	Potassium-40	6.100	0.100	PCI/G	47.8		
432-S2-006	02/17/2005	000042	Protactinium-231	0.450	1.400	PCI/G	4.1	U	UJ
432-S2-006	02/17/2005	000042	Radium-226	0.320	0.100	PCI/G	2.9		J

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Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
432-S2-006	02/17/2005	000042	Radium-228	0.190	0.300	PCI/G	3.06	U	U
432-S2-006	02/17/2005	000042	Thallium-208	0.083	0.061	PCI/G	0.498		J
432-S2-006	02/17/2005	000042	Thorium-228	0.267	0.049	PCI/G	2.6		
432-S2-006	02/17/2005	000042	Thorium-230	0.600	0.040	PCI/G	2.8		
432-S2-006	02/17/2005	000042	Thorium-232	0.225	0.016	PCI/G	2.1		
432-S2-007	02/17/2005	000043	Actinium-227	0.120	0.410	PCI/G	4.6	U	UJ
432-S2-007	02/17/2005	000043	Americium-241	-0.010	0.160	PCI/G	63	U	UJ
432-S2-007	02/17/2005	000043	Bismuth-207	-0.007	0.062	PCI/G	1.2	U	UJ
432-S2-007	02/17/2005	000043	Bismuth-210M	-0.039	0.086	PCI/G	8.34	U	UJ
432-S2-007	02/17/2005	000043	Bismuth-214	0.580	0.170	PCI/G	9.87		
432-S2-007	02/17/2005	000043	Cesium-137	0.027	0.110	PCI/G	3.8	U	UJ
432-S2-007	02/17/2005	000043	Cobalt-60	-0.024	0.120	PCI/G	0.7	U	UJ
432-S2-007	02/17/2005	000043	Lead-210	0.100	2.000	PCI/G	7.4	U	UJ
432-S2-007	02/17/2005	000043	Lead-212	0.560	0.130	PCI/G	16.6		
432-S2-007	02/17/2005	000043	Plutonium-238	0.007	0.077	PCI/G	55	U	UJ
432-S2-007	02/17/2005	000043	Plutonium-239/240	0.070	0.070	PCI/G	61.2	U	U
432-S2-007	02/17/2005	000043	Potassium-40	16.300	0.800	PCI/G	47.8		
432-S2-007	02/17/2005	000043	Protactinium-231	1.100	2.100	PCI/G	4.1	U	UJ
432-S2-007	02/17/2005	000043	Radium-226	0.580	0.170	PCI/G	2.9		J
432-S2-007	02/17/2005	000043	Radium-228	0.650	0.660	PCI/G	3.06	U	U
432-S2-007	02/17/2005	000043	Thallium-208	0.199	0.085	PCI/G	0.498		J
432-S2-007	02/17/2005	000043	Thorium-228	0.980	0.030	PCI/G	2.6		
432-S2-007	02/17/2005	000043	Thorium-230	1.180	0.030	PCI/G	2.8		
432-S2-007	02/17/2005	000043	Thorium-232	0.910	0.030	PCI/G	2.1		
432-S2-008	02/17/2005	000044	Actinium-227	0.060	0.300	PCI/G	4.6	U	UJ
432-S2-008	02/17/2005	000044	Americium-241	0.000	0.130	PCI/G	63	U	UJ
432-S2-008	02/17/2005	000044	Bismuth-207	0.016	0.071	PCI/G	1.2	U	UJ
432-S2-008	02/17/2005	000044	Bismuth-210M	-0.002	0.072	PCI/G	8.34	U	UJ
432-S2-008	02/17/2005	000044	Bismuth-214	0.480	0.120	PCI/G	9.87		
432-S2-008	02/17/2005	000044	Cesium-137	0.018	0.087	PCI/G	3.8	U	UJ
432-S2-008	02/17/2005	000044	Cobalt-60	-0.023	0.069	PCI/G	0.7	U	UJ
432-S2-008	02/17/2005	000044	Lead-210	0.250	1.900	PCI/G	7.4	U	UJ
432-S2-008	02/17/2005	000044	Lead-212	0.390	0.120	PCI/G	16.6		J
432-S2-008	02/17/2005	000044	Lead-214	0.410	0.120	PCI/G	8.92		
432-S2-008	02/17/2005	000044	Plutonium-238	0.053	0.065	PCI/G	55	U	U
432-S2-008	02/17/2005	000044	Plutonium-239/240	0.050	0.050	PCI/G	61.2	U	U
432-S2-008	02/17/2005	000044	Potassium-40	9.000	0.800	PCI/G	47.8		
432-S2-008	02/17/2005	000044	Protactinium-231	-1.000	1.600	PCI/G	4.1	U	UJ
432-S2-008	02/17/2005	000044	Radium-226	0.480	0.120	PCI/G	2.9		J
432-S2-008	02/17/2005	000044	Radium-228	0.260	0.460	PCI/G	3.06	U	U
432-S2-008	02/17/2005	000044	Thorium-228	0.560	0.030	PCI/G	2.6		
432-S2-008	02/17/2005	000044	Thorium-230	0.720	0.020	PCI/G	2.8		
432-S2-008	02/17/2005	000044	Thorium-232	0.560	0.030	PCI/G	2.1		
432-S5-001	02/17/2005	000066	Actinium-227	0.270	0.450	PCI/G	4.6	U	U
432-S5-001	02/17/2005	000066	Actinium-228	0.300	0.290	PCI/G	1.93		
432-S5-001	02/17/2005	000066	Americium-241	-0.045	0.150	PCI/G	63	U	UJ
432-S5-001	02/17/2005	000066	Bismuth-207	0.009	0.059	PCI/G	1.2	U	UJ
432-S5-001	02/17/2005	000066	Bismuth-210M	0.012	0.090	PCI/G	8.34	U	UJ
432-S5-001	02/17/2005	000066	Bismuth-214	0.690	0.120	PCI/G	9.87		
432-S5-001	02/17/2005	000066	Cesium-137	0.082	0.130	PCI/G	3.8	U	UJ
432-S5-001	02/17/2005	000066	Cobalt-60	-0.009	0.086	PCI/G	0.7	U	UJ
432-S5-001	02/17/2005	000066	Lead-210	0.500	1.900	PCI/G	7.4	U	UJ
432-S5-001	02/17/2005	000066	Lead-212	0.440	0.120	PCI/G	16.6		
432-S5-001	02/17/2005	000066	Lead-214	0.750	0.130	PCI/G	8.92		
432-S5-001	02/17/2005	000066	Plutonium-238	0.070	0.030	PCI/G	55	J	J
432-S5-001	02/17/2005	000066	Plutonium-239/240	0.005	0.024	PCI/G	61.2	U	UJ
432-S5-001	02/17/2005	000066	Potassium-40	13.300	0.800	PCI/G	47.8		
432-S5-001	02/17/2005	000066	Protactinium-231	-0.300	1.900	PCI/G	4.1	U	UJ
432-S5-001	02/17/2005	000066	Radium-226	0.690	0.120	PCI/G	2.9		J
432-S5-001	02/17/2005	000066	Radium-228	0.300	0.290	PCI/G	3.06		
432-S5-001	02/17/2005	000066	Thallium-208	0.239	0.065	PCI/G	0.498		
432-S5-001	02/17/2005	000066	Thorium-228	0.510	0.040	PCI/G	2.6		
432-S5-001	02/17/2005	000066	Thorium-230	1.100	0.020	PCI/G	2.8		
432-S5-001	02/17/2005	000066	Thorium-232	0.510	0.020	PCI/G	2.1		
432-S5-001	02/17/2005	000066	Thorium-232	0.300	0.290	PCI/G	2.1		
432-S5-002	02/17/2005	000067	Actinium-227	0.040	0.350	PCI/G	4.6	U	UJ
432-S5-002	02/17/2005	000067	Americium-241	0.007	0.110	PCI/G	63	U	UJ
432-S5-002	02/17/2005	000067	Bismuth-207	-0.008	0.047	PCI/G	1.2	U	UJ

Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
432-S5-002	02/17/2005	000067	Bismuth-210M	0.029	0.079	PCI/G	8.34	U	UJ
432-S5-002	02/17/2005	000067	Bismuth-214	0.490	0.140	PCI/G	9.87		
432-S5-002	02/17/2005	000067	Cesium-137	0.052	0.098	PCI/G	3.8	U	U
432-S5-002	02/17/2005	000067	Cobalt-60	0.009	0.076	PCI/G	0.7	U	UJ
432-S5-002	02/17/2005	000067	Lead-210	0.330	1.600	PCI/G	7.4	U	UJ
432-S5-002	02/17/2005	000067	Lead-212	0.216	0.110	PCI/G	16.6		
432-S5-002	02/17/2005	000067	Lead-214	0.420	0.120	PCI/G	8.92		
432-S5-002	02/17/2005	000067	Plutonium-238	0.018	0.042	PCI/G	55	U	UJ
432-S5-002	02/17/2005	000067	Plutonium-239/240	0.030	0.030	PCI/G	61.2	U	U
432-S5-002	02/17/2005	000067	Potassium-40	6.300	0.600	PCI/G	47.8		
432-S5-002	02/17/2005	000067	Protactinium-231	-0.210	1.600	PCI/G	4.1	U	UJ
432-S5-002	02/17/2005	000067	Radium-226	0.490	0.140	PCI/G	2.9		J
432-S5-002	02/17/2005	000067	Radium-228	0.290	0.380	PCI/G	3.06	U	U
432-S5-002	02/17/2005	000067	Thorium-228	0.370	0.030	PCI/G	2.6		
432-S5-002	02/17/2005	000067	Thorium-230	0.510	0.030	PCI/G	2.8		
432-S5-002	02/17/2005	000067	Thorium-232	0.254	0.025	PCI/G	2.1		
432-S5-003	02/17/2005	000068	Actinium-227	0.070	0.290	PCI/G	4.6	U	UJ
432-S5-003	02/17/2005	000068	Americium-241	0.008	0.110	PCI/G	63	U	UJ
432-S5-003	02/17/2005	000068	Bismuth-207	-0.023	0.035	PCI/G	1.2	U	UJ
432-S5-003	02/17/2005	000068	Bismuth-210M	-0.002	0.063	PCI/G	8.34	U	UJ
432-S5-003	02/17/2005	000068	Bismuth-214	0.290	0.120	PCI/G	9.87		
432-S5-003	02/17/2005	000068	Cesium-137	0.026	0.056	PCI/G	3.8	U	U
432-S5-003	02/17/2005	000068	Cobalt-60	-0.007	0.081	PCI/G	0.7	U	UJ
432-S5-003	02/17/2005	000068	Lead-210	-0.090	1.200	PCI/G	7.4	U	UJ
432-S5-003	02/17/2005	000068	Lead-212	0.188	0.095	PCI/G	16.6		
432-S5-003	02/17/2005	000068	Lead-214	0.490	0.080	PCI/G	8.92		
432-S5-003	02/17/2005	000068	Plutonium-238	0.017	0.041	PCI/G	55	U	UJ
432-S5-003	02/17/2005	000068	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
432-S5-003	02/17/2005	000068	Potassium-40	5.800	0.500	PCI/G	47.8		
432-S5-003	02/17/2005	000068	Protactinium-231	0.130	1.400	PCI/G	4.1	U	UJ
432-S5-003	02/17/2005	000068	Radium-226	0.290	0.120	PCI/G	2.9		J
432-S5-003	02/17/2005	000068	Radium-228	0.160	0.320	PCI/G	3.06	U	U
432-S5-003	02/17/2005	000068	Thallium-208	0.102	0.060	PCI/G	0.498		
432-S5-003	02/17/2005	000068	Thorium-228	0.390	0.040	PCI/G	2.6		
432-S5-003	02/17/2005	000068	Thorium-230	0.720	0.020	PCI/G	2.8		
432-S5-003	02/17/2005	000068	Thorium-232	0.350	0.030	PCI/G	2.1		
433-S2-001	02/18/2005	000045	Actinium-227	-0.060	0.470	PCI/G	4.6	U	UJ
433-S2-001	02/18/2005	000045	Actinium-228	0.510	0.310	PCI/G	1.93		
433-S2-001	02/18/2005	000045	Americium-241	-0.051	0.170	PCI/G	63	U	UJ
433-S2-001	02/18/2005	000045	Bismuth-207	-0.018	0.054	PCI/G	1.2	U	UJ
433-S2-001	02/18/2005	000045	Bismuth-210M	0.007	0.110	PCI/G	8.34	U	UJ
433-S2-001	02/18/2005	000045	Bismuth-214	0.660	0.170	PCI/G	9.87		
433-S2-001	02/18/2005	000045	Cesium-137	0.045	0.110	PCI/G	3.8	U	UJ
433-S2-001	02/18/2005	000045	Cobalt-60	0.000	0.100	PCI/G	0.7	U	UJ
433-S2-001	02/18/2005	000045	Lead-210	0.600	2.100	PCI/G	7.4	U	UJ
433-S2-001	02/18/2005	000045	Lead-212	0.610	0.170	PCI/G	16.6		
433-S2-001	02/18/2005	000045	Lead-214	0.700	0.140	PCI/G	8.92		
433-S2-001	02/18/2005	000045	Plutonium-238	0.165	0.051	PCI/G	55		
433-S2-001	02/18/2005	000045	Plutonium-239/240	0.050	0.050	PCI/G	61.2	U	U
433-S2-001	02/18/2005	000045	Potassium-40	18.500	0.800	PCI/G	47.8		
433-S2-001	02/18/2005	000045	Protactinium-231	0.800	2.500	PCI/G	4.1	U	UJ
433-S2-001	02/18/2005	000045	Radium-226	0.660	0.170	PCI/G	2.9		J
433-S2-001	02/18/2005	000045	Radium-228	0.510	0.310	PCI/G	3.06		
433-S2-001	02/18/2005	000045	Thallium-208	0.253	0.075	PCI/G	0.498		J
433-S2-001	02/18/2005	000045	Thorium-228	0.790	0.040	PCI/G	2.6		
433-S2-001	02/18/2005	000045	Thorium-230	0.770	0.020	PCI/G	2.8		
433-S2-001	02/18/2005	000045	Thorium-232	0.860	0.020	PCI/G	2.1		
433-S2-001	02/18/2005	000045	Thorium-232	0.510	0.310	PCI/G	2.1		
433-S2-002	02/18/2005	000046	Actinium-227	0.070	0.390	PCI/G	4.6	U	UJ
433-S2-002	02/18/2005	000046	Americium-241	0.049	0.140	PCI/G	63	U	UJ
433-S2-002	02/18/2005	000046	Bismuth-207	0.007	0.075	PCI/G	1.2	U	UJ
433-S2-002	02/18/2005	000046	Bismuth-210M	0.083	0.120	PCI/G	8.34	U	UJ
433-S2-002	02/18/2005	000046	Bismuth-214	0.530	0.210	PCI/G	9.87		
433-S2-002	02/18/2005	000046	Cesium-137	0.048	0.130	PCI/G	3.8	U	UJ
433-S2-002	02/18/2005	000046	Cobalt-60	0.023	0.120	PCI/G	0.7	U	UJ
433-S2-002	02/18/2005	000046	Lead-210	0.900	2.100	PCI/G	7.4	U	UJ
433-S2-002	02/18/2005	000046	Lead-212	0.320	0.140	PCI/G	16.6		
433-S2-002	02/18/2005	000046	Lead-214	0.620	0.140	PCI/G	8.92		

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Table 1: Sample Event 1 Verification Sample Results
(PRSs 431-433)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
433-S2-002	02/18/2005	000046	Plutonium-238	0.034	0.070	PCI/G	55	U	UJ
433-S2-002	02/18/2005	000046	Plutonium-239/240	0.050	0.050	PCI/G	61.2	U	U
433-S2-002	02/18/2005	000046	Potassium-40	10.300	0.800	PCI/G	47.8		
433-S2-002	02/18/2005	000046	Protactinium-231	0.800	2.100	PCI/G	4.1	U	UJ
433-S2-002	02/18/2005	000046	Radium-226	0.530	0.210	PCI/G	2.9		J
433-S2-002	02/18/2005	000046	Radium-228	0.330	0.470	PCI/G	3.06	U	U
433-S2-002	02/18/2005	000046	Thallium-208	0.169	0.076	PCI/G	0.498		J
433-S2-002	02/18/2005	000046	Thorium-228	0.580	0.050	PCI/G	2.6		
433-S2-002	02/18/2005	000046	Thorium-230	1.010	0.030	PCI/G	2.8		
433-S2-002	02/18/2005	000046	Thorium-232	0.690	0.030	PCI/G	2.1		

CO: cleanup objective
J: estimated
MEIMS: Mound Environmental Information Management System
PRS: Potential Release Site
Qual: qualifier
SU: Survey Unit
U: not detected
D: duplicate

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Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-001	04/14/2005	000081	Actinium-227	0.120	0.410	PCI/G	4.6	U	UJ
1-123-001	04/14/2005	000081	Actinium-228	0.450	0.260	PCI/G	1.93		
1-123-001	04/14/2005	000081	Americium-241	-0.043	0.150	PCI/G	63	U	UJ
1-123-001	04/14/2005	000081	Bismuth-207	-0.015	0.064	PCI/G	1.2	U	UJ
1-123-001	04/14/2005	000081	Bismuth-210M	0.046	0.110	PCI/G	8.34	U	UJ
1-123-001	04/14/2005	000081	Bismuth-214	0.620	0.160	PCI/G	9.87		
1-123-001	04/14/2005	000081	Cesium-137	0.076	0.083	PCI/G	3.8	U	U
1-123-001	04/14/2005	000081	Cobalt-60	0.009	0.120	PCI/G	0.7	U	UJ
1-123-001	04/14/2005	000081	Lead-210	0.100	1.700	PCI/G	7.4	U	UJ
1-123-001	04/14/2005	000081	Lead-212	0.640	0.120	PCI/G	16.6		
1-123-001	04/14/2005	000081	Lead-214	0.780	0.140	PCI/G	8.92		
1-123-001	04/14/2005	000081	Plutonium-238	0.065	0.038	PCI/G	55	J	J
1-123-001	04/14/2005	000081	Plutonium-239/240	0.006	0.029	PCI/G	61.2	U	UJ
1-123-001	04/14/2005	000081	Potassium-40	14.100	0.600	PCI/G	47.8		
1-123-001	04/14/2005	000081	Protactinium-231	0.100	2.300	PCI/G	4.1	U	UJ
1-123-001	04/14/2005	000081	Radium-226	0.620	0.160	PCI/G	2.9		J
1-123-001	04/14/2005	000081	Radium-228	0.450	0.350	PCI/G	3.06		
1-123-001	04/14/2005	000081	Thallium-208	0.285	0.064	PCI/G	0.498		
1-123-001	04/14/2005	000081	Thorium-228	0.630	0.050	PCI/G	2.6		
1-123-001	04/14/2005	000081	Thorium-230	1.100	0.050	PCI/G	2.8		
1-123-001	04/14/2005	000081	Thorium-232	0.600	0.040	PCI/G	2.1		
1-123-001	04/14/2005	000081	Thorium-232	0.450	0.350	PCI/G	2.1		
1-123-002	04/15/2005	000145	Actinium-227	0.150	0.610	PCI/G	4.6	U	UJ
1-123-002	04/15/2005	000145	Actinium-228	0.480	0.250	PCI/G	1.93		
1-123-002	04/15/2005	000145	Americium-241	0.100	0.220	PCI/G	63	U	UJ
1-123-002	04/15/2005	000145	Bismuth-207	-0.012	0.100	PCI/G	1.2	U	UJ
1-123-002	04/15/2005	000145	Bismuth-210M	-0.019	0.120	PCI/G	8.34	U	UJ
1-123-002	04/15/2005	000145	Bismuth-214	0.640	0.270	PCI/G	9.87		
1-123-002	04/15/2005	000145	Cesium-137	0.021	0.140	PCI/G	3.8	U	UJ
1-123-002	04/15/2005	000145	Cobalt-60	-0.049	0.090	PCI/G	0.7	U	UJ
1-123-002	04/15/2005	000145	Lead-210	1.400	3.200	PCI/G	7.4	U	UJ
1-123-002	04/15/2005	000145	Lead-212	1.050	0.200	PCI/G	16.6		
1-123-002	04/15/2005	000145	Plutonium-238	0.070	0.028	PCI/G	55	J	J
1-123-002	04/15/2005	000145	Plutonium-239/240	0.006	0.032	PCI/G	61.2	U	UJ
1-123-002	04/15/2005	000145	Potassium-40	25.100	1.000	PCI/G	47.8		
1-123-002	04/15/2005	000145	Protactinium-231	1.300	3.300	PCI/G	4.1	U	UJ
1-123-002	04/15/2005	000145	Radium-226	0.640	0.270	PCI/G	2.9		J
1-123-002	04/15/2005	000145	Radium-228	0.480	0.290	PCI/G	3.06		
1-123-002	04/15/2005	000145	Thallium-208	0.320	0.110	PCI/G	0.498		
1-123-002	04/15/2005	000145	Thorium-228	0.840	0.040	PCI/G	2.6		
1-123-002	04/15/2005	000145	Thorium-230	0.630	0.030	PCI/G	2.8		
1-123-002	04/15/2005	000145	Thorium-232	0.900	0.030	PCI/G	2.1		
1-123-002	04/15/2005	000145	Thorium-232	0.480	0.290	PCI/G	2.1		
1-123-003	04/14/2005	000083	Actinium-227	-0.050	0.430	PCI/G	4.6	U	UJ
1-123-003	04/14/2005	000083	Americium-241	-0.003	0.150	PCI/G	63	U	UJ
1-123-003	04/14/2005	000083	Bismuth-207	-0.025	0.069	PCI/G	1.2	U	UJ
1-123-003	04/14/2005	000083	Bismuth-210M	-0.022	0.087	PCI/G	8.34	U	UJ
1-123-003	04/14/2005	000083	Bismuth-214	0.400	0.180	PCI/G	9.87		
1-123-003	04/14/2005	000083	Cesium-137	0.009	0.098	PCI/G	3.8	U	UJ
1-123-003	04/14/2005	000083	Cobalt-60	0.059	0.130	PCI/G	0.7	U	U
1-123-003	04/14/2005	000083	Lead-210	0.080	2.100	PCI/G	7.4	U	UJ
1-123-003	04/14/2005	000083	Lead-212	0.610	0.170	PCI/G	16.6		
1-123-003	04/14/2005	000083	Lead-214	0.710	0.150	PCI/G	8.92		
1-123-003	04/14/2005	000083	Plutonium-238	0.004	0.032	PCI/G	55	U	UJ
1-123-003	04/14/2005	000083	Plutonium-239/240	-0.001	0.021	PCI/G	61.2	U	UJ
1-123-003	04/14/2005	000083	Potassium-40	16.700	1.000	PCI/G	47.8		
1-123-003	04/14/2005	000083	Protactinium-231	1.600	2.300	PCI/G	4.1	U	U
1-123-003	04/14/2005	000083	Radium-226	0.400	0.180	PCI/G	2.9		J
1-123-003	04/14/2005	000083	Radium-228	0.740	0.590	PCI/G	3.06		
1-123-003	04/14/2005	000083	Thallium-208	0.100	0.090	PCI/G	0.498		
1-123-003	04/14/2005	000083	Thorium-228	0.660	0.110	PCI/G	2.6		
1-123-003	04/14/2005	000083	Thorium-230	1.600	0.080	PCI/G	2.8		
1-123-003	04/14/2005	000083	Thorium-232	0.690	0.040	PCI/G	2.1		
1-123-004	04/14/2005	000082	Actinium-227	-0.020	0.330	PCI/G	4.6	U	UJ
1-123-004	04/14/2005	000082	Americium-241	0.003	0.140	PCI/G	63	U	UJ
1-123-004	04/14/2005	000082	Bismuth-207	0.014	0.070	PCI/G	1.2	U	UJ
1-123-004	04/14/2005	000082	Bismuth-210M	-0.025	0.073	PCI/G	8.34	U	UJ
1-123-004	04/14/2005	000082	Bismuth-214	0.470	0.110	PCI/G	9.87		

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-004	04/14/2005	000082	Cesium-137	0.031	0.098	PCI/G	3.8	U	UJ
1-123-004	04/14/2005	000082	Cobalt-60	0.014	0.110	PCI/G	0.7	U	UJ
1-123-004	04/14/2005	000082	Lead-210	-0.206	1.900	PCI/G	7.4	U	UJ
1-123-004	04/14/2005	000082	Lead-212	0.330	0.140	PCI/G	16.6		
1-123-004	04/14/2005	000082	Lead-214	0.530	0.120	PCI/G	8.92		
1-123-004	04/14/2005	000082	Plutonium-238	0.027	0.043	PCI/G	55	U	UJ
1-123-004	04/14/2005	000082	Plutonium-239/240	-0.004	0.032	PCI/G	61.2	U	UJ
1-123-004	04/14/2005	000082	Potassium-40	8.200	0.200	PCI/G	47.8		
1-123-004	04/14/2005	000082	Protactinium-231	0.330	1.800	PCI/G	4.1	U	UJ
1-123-004	04/14/2005	000082	Radium-226	0.470	0.110	PCI/G	2.9		J
1-123-004	04/14/2005	000082	Radium-228	0.290	0.460	PCI/G	3.06	U	U
1-123-004	04/14/2005	000082	Thallium-208	0.102	0.077	PCI/G	0.498		
1-123-004	04/14/2005	000082	Thorium-228	0.780	0.110	PCI/G	2.6		
1-123-004	04/14/2005	000082	Thorium-230	1.170	0.120	PCI/G	2.8		
1-123-004	04/14/2005	000082	Thorium-232	0.650	0.120	PCI/G	2.1		
1-123-005	04/14/2005	000085	Actinium-227	-0.020	0.340	PCI/G	4.6	U	UJ
1-123-005	04/14/2005	000085	Actinium-228	0.630	0.160	PCI/G	1.93		
1-123-005	04/14/2005	000085	Americium-241	0.015	0.130	PCI/G	63	U	UJ
1-123-005	04/14/2005	000085	Bismuth-207	-0.005	0.056	PCI/G	1.2	U	UJ
1-123-005	04/14/2005	000085	Bismuth-210M	-0.007	0.081	PCI/G	8.34	U	UJ
1-123-005	04/14/2005	000085	Bismuth-214	0.480	0.130	PCI/G	9.87		
1-123-005	04/14/2005	000085	Cesium-137	0.040	0.100	PCI/G	3.8	U	UJ
1-123-005	04/14/2005	000085	Cobalt-60	0.012	0.100	PCI/G	0.7	U	UJ
1-123-005	04/14/2005	000085	Lead-210	0.640	1.600	PCI/G	7.4	U	UJ
1-123-005	04/14/2005	000085	Lead-212	0.300	0.120	PCI/G	16.6		
1-123-005	04/14/2005	000085	Lead-214	0.350	0.120	PCI/G	8.92		
1-123-005	04/14/2005	000085	Plutonium-238	0.120	0.050	PCI/G	55		
1-123-005	04/14/2005	000085	Plutonium-239/240	0.001	0.034	PCI/G	61.2	U	UJ
1-123-005	04/14/2005	000085	Potassium-40	7.300	0.800	PCI/G	47.8		
1-123-005	04/14/2005	000085	Protactinium-231	0.230	1.800	PCI/G	4.1	U	UJ
1-123-005	04/14/2005	000085	Radium-226	0.480	0.130	PCI/G	2.9		J
1-123-005	04/14/2005	000085	Radium-228	0.630	0.200	PCI/G	3.06		
1-123-005	04/14/2005	000085	Thorium-228	0.390	0.060	PCI/G	2.6		
1-123-005	04/14/2005	000085	Thorium-230	0.920	0.020	PCI/G	2.8		
1-123-005	04/14/2005	000085	Thorium-232	0.630	0.200	PCI/G	2.1		
1-123-005	04/14/2005	000085	Thorium-232	0.390	0.040	PCI/G	2.1		
1-123-006	04/13/2005	000078	Actinium-227	0.050	0.410	PCI/G	4.6	U	UJ
1-123-006	04/13/2005	000078	Americium-241	-0.033	0.150	PCI/G	63	U	UJ
1-123-006	04/13/2005	000078	Bismuth-207	0.013	0.069	PCI/G	1.2	U	UJ
1-123-006	04/13/2005	000078	Bismuth-210M	-0.017	0.092	PCI/G	8.34	U	UJ
1-123-006	04/13/2005	000078	Bismuth-214	0.600	0.160	PCI/G	9.87		
1-123-006	04/13/2005	000078	Cesium-137	0.137	0.093	PCI/G	3.8	J	J
1-123-006	04/13/2005	000078	Cobalt-60	0.037	0.110	PCI/G	0.7	U	UJ
1-123-006	04/13/2005	000078	Lead-210	0.400	2.100	PCI/G	7.4	U	UJ
1-123-006	04/13/2005	000078	Lead-212	0.630	0.100	PCI/G	16.6		
1-123-006	04/13/2005	000078	Lead-214	0.770	0.150	PCI/G	8.92		
1-123-006	04/13/2005	000078	Plutonium-238	0.710	0.040	PCI/G	55		
1-123-006	04/13/2005	000078	Plutonium-239/240	-0.001	0.022	PCI/G	61.2	U	UJ
1-123-006	04/13/2005	000078	Potassium-40	11.900	1.200	PCI/G	47.8		
1-123-006	04/13/2005	000078	Protactinium-231	1.000	2.300	PCI/G	4.1	U	UJ
1-123-006	04/13/2005	000078	Radium-226	0.600	0.160	PCI/G	2.9		J
1-123-006	04/13/2005	000078	Radium-228	0.810	0.590	PCI/G	3.06		
1-123-006	04/13/2005	000078	Thallium-208	0.240	0.080	PCI/G	0.498		
1-123-006	04/13/2005	000078	Thorium-228	0.760	0.060	PCI/G	2.6		
1-123-006	04/13/2005	000078	Thorium-230	1.230	0.040	PCI/G	2.8		
1-123-006	04/13/2005	000078	Thorium-232	0.710	0.050	PCI/G	2.1		
1-123-007	04/13/2005	000079	Actinium-227	0.060	0.420	PCI/G	4.6	U	UJ
1-123-007	04/13/2005	000079	Americium-241	0.030	0.170	PCI/G	63	U	UJ
1-123-007	04/13/2005	000079	Bismuth-207	0.049	0.089	PCI/G	1.2	U	U
1-123-007	04/13/2005	000079	Bismuth-210M	-0.004	0.095	PCI/G	8.34	U	UJ
1-123-007	04/13/2005	000079	Bismuth-214	0.600	0.180	PCI/G	9.87		
1-123-007	04/13/2005	000079	Cesium-137	0.125	0.100	PCI/G	3.8	J	J
1-123-007	04/13/2005	000079	Cobalt-60	0.015	0.110	PCI/G	0.7	U	UJ
1-123-007	04/13/2005	000079	Lead-210	1.400	2.200	PCI/G	7.4	U	U
1-123-007	04/13/2005	000079	Lead-212	0.530	0.150	PCI/G	16.6		
1-123-007	04/13/2005	000079	Lead-214	0.670	0.140	PCI/G	8.92		
1-123-007	04/13/2005	000079	Plutonium-238	0.220	0.044	PCI/G	55		
1-123-007	04/13/2005	000079	Plutonium-239/240	0.016	0.029	PCI/G	61.2	U	UJ

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-007	04/13/2005	000079	Potassium-40	13.200	0.800	PCI/G	47.8		
1-123-007	04/13/2005	000079	Protactinium-231	0.400	2.300	PCI/G	4.1	U	UJ
1-123-007	04/13/2005	000079	Radium-226	0.600	0.180	PCI/G	2.9		J
1-123-007	04/13/2005	000079	Radium-228	0.510	0.560	PCI/G	3.06	U	U
1-123-007	04/13/2005	000079	Thallium-208	0.234	0.088	PCI/G	0.498		
1-123-007	04/13/2005	000079	Thorium-228	0.550	0.110	PCI/G	2.6		
1-123-007	04/13/2005	000079	Thorium-230	1.090	0.060	PCI/G	2.8		
1-123-007	04/13/2005	000079	Thorium-232	0.460	0.080	PCI/G	2.1		
1-123-008	04/14/2005	000086	Actinium-227	0.100	0.420	PCI/G	4.6	U	UJ
1-123-008	04/14/2005	000086	Americium-241	0.146	0.180	PCI/G	63	U	U
1-123-008	04/14/2005	000086	Bismuth-207	0.011	0.070	PCI/G	1.2	U	UJ
1-123-008	04/14/2005	000086	Bismuth-210M	0.046	0.097	PCI/G	8.34	U	UJ
1-123-008	04/14/2005	000086	Bismuth-214	0.670	0.120	PCI/G	9.87		
1-123-008	04/14/2005	000086	Cesium-137	0.040	0.110	PCI/G	3.8	U	UJ
1-123-008	04/14/2005	000086	Cobalt-60	0.030	0.110	PCI/G	0.7	U	UJ
1-123-008	04/14/2005	000086	Lead-210	0.300	2.200	PCI/G	7.4	U	UJ
1-123-008	04/14/2005	000086	Lead-212	0.430	0.140	PCI/G	16.6		
1-123-008	04/14/2005	000086	Lead-214	0.550	0.170	PCI/G	8.92		
1-123-008	04/14/2005	000086	Plutonium-238	0.093	0.034	PCI/G	55	J	J
1-123-008	04/14/2005	000086	Plutonium-239/240	0.020	0.022	PCI/G	61.2	U	UJ
1-123-008	04/14/2005	000086	Potassium-40	11.100	0.900	PCI/G	47.8		
1-123-008	04/14/2005	000086	Protactinium-231	1.000	2.200	PCI/G	4.1	U	UJ
1-123-008	04/14/2005	000086	Radium-226	0.670	0.120	PCI/G	2.9		J
1-123-008	04/14/2005	000086	Radium-228	0.550	0.550	PCI/G	3.06	U	U
1-123-008	04/14/2005	000086	Thallium-208	0.210	0.081	PCI/G	0.498		
1-123-008	04/14/2005	000086	Thorium-228	0.660	0.070	PCI/G	2.6		
1-123-008	04/14/2005	000086	Thorium-230	0.930	0.050	PCI/G	2.8		
1-123-008	04/14/2005	000086	Thorium-232	0.550	0.040	PCI/G	2.1		
1-123-009	04/14/2005	000095	Actinium-227	0.003	0.300	PCI/G	4.6	U	UJ
1-123-009	04/14/2005	000095	Americium-241	0.018	0.110	PCI/G	63	U	UJ
1-123-009	04/14/2005	000095	Bismuth-207	0.021	0.054	PCI/G	1.2	U	UJ
1-123-009	04/14/2005	000095	Bismuth-210M	-0.025	0.060	PCI/G	8.34	U	UJ
1-123-009	04/14/2005	000095	Bismuth-214	0.480	0.130	PCI/G	9.87		
1-123-009	04/14/2005	000095	Cesium-137	0.045	0.076	PCI/G	3.8	U	U
1-123-009	04/14/2005	000095	Cobalt-60	0.012	0.088	PCI/G	0.7	U	UJ
1-123-009	04/14/2005	000095	Lead-210	0.200	1.400	PCI/G	7.4	U	UJ
1-123-009	04/14/2005	000095	Lead-212	0.175	0.110	PCI/G	16.6		
1-123-009	04/14/2005	000095	Lead-214	0.420	0.090	PCI/G	8.92		
1-123-009	04/14/2005	000095	Plutonium-238	0.047	0.027	PCI/G	55	J	J
1-123-009	04/14/2005	000095	Plutonium-239/240	0.004	0.020	PCI/G	61.2	U	UJ
1-123-009	04/14/2005	000095	Potassium-40	5.700	0.700	PCI/G	47.8		
1-123-009	04/14/2005	000095	Protactinium-231	0.600	1.900	PCI/G	4.1	U	UJ
1-123-009	04/14/2005	000095	Radium-226	0.480	0.130	PCI/G	2.9		J
1-123-009	04/14/2005	000095	Radium-228	0.210	0.350	PCI/G	3.06	U	U
1-123-009	04/14/2005	000095	Thorium-228	0.321	0.031	PCI/G	2.6		
1-123-009	04/14/2005	000095	Thorium-230	0.650	0.030	PCI/G	2.8		
1-123-009	04/14/2005	000095	Thorium-232	0.261	0.015	PCI/G	2.1		
1-123-010	04/14/2005	000084	Actinium-227	0.010	0.360	PCI/G	4.6	U	UJ
1-123-010	04/14/2005	000084	Americium-241	-0.021	0.120	PCI/G	63	U	UJ
1-123-010	04/14/2005	000084	Bismuth-207	0.001	0.050	PCI/G	1.2	U	UJ
1-123-010	04/14/2005	000084	Bismuth-210M	-0.007	0.081	PCI/G	8.34	U	UJ
1-123-010	04/14/2005	000084	Bismuth-214	0.430	0.140	PCI/G	9.87		
1-123-010	04/14/2005	000084	Cesium-137	-0.001	0.073	PCI/G	3.8	U	UJ
1-123-010	04/14/2005	000084	Cobalt-60	0.001	0.079	PCI/G	0.7	U	UJ
1-123-010	04/14/2005	000084	Lead-210	0.490	1.500	PCI/G	7.4	U	UJ
1-123-010	04/14/2005	000084	Lead-212	0.226	0.130	PCI/G	16.6		
1-123-010	04/14/2005	000084	Lead-214	0.470	0.100	PCI/G	8.92		
1-123-010	04/14/2005	000084	Plutonium-238	0.206	0.050	PCI/G	55		
1-123-010	04/14/2005	000084	Plutonium-239/240	0.001	0.034	PCI/G	61.2	U	UJ
1-123-010	04/14/2005	000084	Potassium-40	6.400	1.000	PCI/G	47.8		
1-123-010	04/14/2005	000084	Protactinium-231	0.100	1.800	PCI/G	4.1	U	UJ
1-123-010	04/14/2005	000084	Radium-226	0.430	0.140	PCI/G	2.9		J
1-123-010	04/14/2005	000084	Radium-228	0.270	0.380	PCI/G	3.06	U	U
1-123-010	04/14/2005	000084	Thorium-228	0.410	0.100	PCI/G	2.6		
1-123-010	04/14/2005	000084	Thorium-230	0.820	0.100	PCI/G	2.8		
1-123-010	04/14/2005	000084	Thorium-232	0.360	0.040	PCI/G	2.1		
1-123-011	04/14/2005	000115	Actinium-227	0.040	0.270	PCI/G	4.6	U	UJ

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Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-011	04/14/2005	000115	Americium-241	0.031	0.110	PCI/G	63	U	UJ
1-123-011	04/14/2005	000115	Bismuth-207	0.017	0.054	PCI/G	1.2	U	UJ
1-123-011	04/14/2005	000115	Bismuth-210M	-0.017	0.057	PCI/G	8.34	U	UJ
1-123-011	04/14/2005	000115	Bismuth-214	0.320	0.130	PCI/G	9.87		
1-123-011	04/14/2005	000115	Cesium-137	0.029	0.075	PCI/G	3.8	U	UJ
1-123-011	04/14/2005	000115	Cobalt-60	0.013	0.057	PCI/G	0.7	U	UJ
1-123-011	04/14/2005	000115	Lead-210	-0.300	1.400	PCI/G	7.4	U	UJ
1-123-011	04/14/2005	000115	Lead-212	0.230	0.120	PCI/G	16.6		
1-123-011	04/14/2005	000115	Lead-214	0.420	0.100	PCI/G	8.92		
1-123-011	04/14/2005	000115	Plutonium-238	0.163	0.044	PCI/G	55		
1-123-011	04/14/2005	000115	Plutonium-239/240	0.001	0.030	PCI/G	61.2	U	UJ
1-123-011	04/14/2005	000115	Potassium-40	6.300	0.600	PCI/G	47.8		
1-123-011	04/14/2005	000115	Protactinium-231	0.840	1.500	PCI/G	4.1	U	U
1-123-011	04/14/2005	000115	Radium-226	0.320	0.130	PCI/G	2.9		J
1-123-011	04/14/2005	000115	Radium-228	0.330	0.370	PCI/G	3.06	U	U
1-123-011	04/14/2005	000115	Thallium-208	0.100	0.064	PCI/G	0.498		
1-123-011	04/14/2005	000115	Thorium-228	0.240	0.120	PCI/G	2.6		J
1-123-011	04/14/2005	000115	Thorium-230	0.630	0.050	PCI/G	2.8		
1-123-011	04/14/2005	000115	Thorium-232	0.320	0.060	PCI/G	2.1		J
1-123-012	04/14/2005	000102	Actinium-227	0.140	0.310	PCI/G	4.6	U	UJ
1-123-012	04/14/2005	000102	Americium-241	-0.013	0.097	PCI/G	63	U	UJ
1-123-012	04/14/2005	000102	Bismuth-207	0.001	0.038	PCI/G	1.2	U	UJ
1-123-012	04/14/2005	000102	Bismuth-210M	0.004	0.066	PCI/G	8.34	U	UJ
1-123-012	04/14/2005	000102	Bismuth-214	0.440	0.090	PCI/G	9.87		
1-123-012	04/14/2005	000102	Cesium-137	-0.005	0.062	PCI/G	3.8	U	UJ
1-123-012	04/14/2005	000102	Cobalt-60	-0.010	0.069	PCI/G	0.7	U	UJ
1-123-012	04/14/2005	000102	Lead-210	0.810	1.500	PCI/G	7.4	U	U
1-123-012	04/14/2005	000102	Lead-212	0.105	0.100	PCI/G	16.6		
1-123-012	04/14/2005	000102	Lead-214	0.340	0.100	PCI/G	8.92		
1-123-012	04/14/2005	000102	Plutonium-238	0.090	0.029	PCI/G	55	J	J
1-123-012	04/14/2005	000102	Plutonium-239/240	0.004	0.020	PCI/G	61.2	U	UJ
1-123-012	04/14/2005	000102	Potassium-40	6.500	1.000	PCI/G	47.8		
1-123-012	04/14/2005	000102	Protactinium-231	0.620	1.400	PCI/G	4.1	U	UJ
1-123-012	04/14/2005	000102	Radium-226	0.440	0.090	PCI/G	2.9		J
1-123-012	04/14/2005	000102	Radium-228	0.130	0.310	PCI/G	3.06	U	UJ
1-123-012	04/14/2005	000102	Thallium-208	0.102	0.042	PCI/G	0.498		J
1-123-012	04/14/2005	000102	Thorium-228	0.420	0.050	PCI/G	2.6		
1-123-012	04/14/2005	000102	Thorium-230	0.920	0.030	PCI/G	2.8		
1-123-012	04/14/2005	000102	Thorium-232	0.430	0.020	PCI/G	2.1		
1-123-013	04/13/2005	000077	Actinium-227	-0.006	0.450	PCI/G	4.6	U	UJ
1-123-013	04/13/2005	000077	Actinium-228	0.560	0.230	PCI/G	1.93		
1-123-013	04/13/2005	000077	Americium-241	0.040	0.190	PCI/G	63	U	UJ
1-123-013	04/13/2005	000077	Bismuth-207	0.004	0.086	PCI/G	1.2	U	UJ
1-123-013	04/13/2005	000077	Bismuth-210M	0.016	0.100	PCI/G	8.34	U	UJ
1-123-013	04/13/2005	000077	Bismuth-214	0.630	0.160	PCI/G	9.87		
1-123-013	04/13/2005	000077	Cesium-137	0.096	0.140	PCI/G	3.8	U	U
1-123-013	04/13/2005	000077	Cobalt-60	0.033	0.120	PCI/G	0.7	U	UJ
1-123-013	04/13/2005	000077	Lead-210	0.800	2.500	PCI/G	7.4	U	UJ
1-123-013	04/13/2005	000077	Lead-212	0.380	0.130	PCI/G	16.6		
1-123-013	04/13/2005	000077	Plutonium-238	0.224	0.041	PCI/G	55		
1-123-013	04/13/2005	000077	Plutonium-239/240	0.012	0.016	PCI/G	61.2	U	UJ
1-123-013	04/13/2005	000077	Potassium-40	11.400	0.900	PCI/G	47.8		
1-123-013	04/13/2005	000077	Protactinium-231	1.800	2.600	PCI/G	4.1	U	U
1-123-013	04/13/2005	000077	Radium-226	0.630	0.160	PCI/G	2.9		J
1-123-013	04/13/2005	000077	Radium-228	0.560	0.230	PCI/G	3.06		
1-123-013	04/13/2005	000077	Thallium-208	0.172	0.089	PCI/G	0.498		
1-123-013	04/13/2005	000077	Thorium-228	0.590	0.070	PCI/G	2.6		
1-123-013	04/13/2005	000077	Thorium-230	0.920	0.040	PCI/G	2.8		
1-123-013	04/13/2005	000077	Thorium-232	0.570	0.050	PCI/G	2.1		
1-123-013	04/13/2005	000077	Thorium-232	0.560	0.230	PCI/G	2.1		
1-123-014D	04/13/2005	000074	Actinium-227	0.010	0.390	PCI/G	4.6	U	UJ
1-123-014	04/13/2005	000073	Actinium-227	-0.050	0.390	PCI/G	4.6	U	UJ
1-123-014	04/13/2005	000073	Actinium-228	0.530	0.290	PCI/G	1.93		
1-123-014	04/13/2005	000073	Americium-241	0.001	0.150	PCI/G	63	U	UJ
1-123-014D	04/13/2005	000074	Americium-241	-0.002	0.170	PCI/G	63	U	UJ
1-123-014	04/13/2005	000073	Bismuth-207	0.021	0.075	PCI/G	1.2	U	UJ
1-123-014D	04/13/2005	000074	Bismuth-207	-0.008	0.067	PCI/G	1.2	U	UJ
1-123-014	04/13/2005	000073	Bismuth-210M	-0.006	0.080	PCI/G	8.34	U	UJ

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Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-014D	04/13/2005	000074	Bismuth-210M	-0.030	0.095	PCI/G	8.34	U	UJ
1-123-014D	04/13/2005	000074	Bismuth-214	0.740	0.150	PCI/G	9.87		
1-123-014	04/13/2005	000073	Bismuth-214	0.660	0.150	PCI/G	9.87		
1-123-014	04/13/2005	000073	Cesium-137	0.115	0.099	PCI/G	3.8	J	J
1-123-014D	04/13/2005	000074	Cesium-137	0.105	0.140	PCI/G	3.8	U	U
1-123-014D	04/13/2005	000074	Cobalt-60	0.040	0.130	PCI/G	0.7	U	UJ
1-123-014	04/13/2005	000073	Cobalt-60	0.009	0.097	PCI/G	0.7	U	UJ
1-123-014	04/13/2005	000073	Lead-210	1.100	2.100	PCI/G	7.4	U	U
1-123-014D	04/13/2005	000074	Lead-210	0.060	2.300	PCI/G	7.4	U	UJ
1-123-014	04/13/2005	000073	Lead-212	0.560	0.140	PCI/G	16.6		
1-123-014D	04/13/2005	000074	Lead-212	0.540	0.130	PCI/G	16.6		
1-123-014D	04/13/2005	000074	Lead-214	0.700	0.180	PCI/G	8.92		
1-123-014	04/13/2005	000073	Lead-214	0.690	0.140	PCI/G	8.92		
1-123-014	04/13/2005	000073	Plutonium-238	0.049	0.065	PCI/G	55	U	UJ
1-123-014D	04/13/2005	000074	Plutonium-238	0.019	0.061	PCI/G	55	U	UJ
1-123-014	04/13/2005	000073	Plutonium-239/240	0.002	0.048	PCI/G	61.2	U	UJ
1-123-014D	04/13/2005	000074	Plutonium-239/240	-0.011	0.041	PCI/G	61.2	U	UJ
1-123-014	04/13/2005	000073	Potassium-40	14.200	0.700	PCI/G	47.8		
1-123-014D	04/13/2005	000074	Potassium-40	13.400	0.700	PCI/G	47.8		
1-123-014	04/13/2005	000073	Protactinium-231	1.500	2.400	PCI/G	4.1	U	UJ
1-123-014D	04/13/2005	000074	Protactinium-231	0.070	2.300	PCI/G	4.1	U	UJ
1-123-014D	04/13/2005	000074	Radium-226	0.740	0.150	PCI/G	2.9		J
1-123-014	04/13/2005	000073	Radium-226	0.660	0.150	PCI/G	2.9		J
1-123-014D	04/13/2005	000074	Radium-228	0.630	0.640	PCI/G	3.06	U	U
1-123-014	04/13/2005	000073	Radium-228	0.530	0.320	PCI/G	3.06		
1-123-014D	04/13/2005	000074	Thallium-208	0.196	0.082	PCI/G	0.498		
1-123-014	04/13/2005	000073	Thallium-208	0.172	0.092	PCI/G	0.498		
1-123-014	04/13/2005	000073	Thorium-228	0.690	0.050	PCI/G	2.6		
1-123-014D	04/13/2005	000074	Thorium-228	0.680	0.050	PCI/G	2.6		
1-123-014	04/13/2005	000073	Thorium-230	1.180	0.050	PCI/G	2.8		
1-123-014D	04/13/2005	000074	Thorium-230	1.060	0.030	PCI/G	2.8		
1-123-014	04/13/2005	000073	Thorium-232	0.750	0.040	PCI/G	2.1		
1-123-014D	04/13/2005	000074	Thorium-232	0.590	0.020	PCI/G	2.1		
1-123-014	04/13/2005	000073	Thorium-232	0.530	0.320	PCI/G	2.1		
1-123-015	04/13/2005	000072	Actinium-227	0.130	0.460	PCI/G	4.6	U	UJ
1-123-015	04/13/2005	000072	Americium-241	-0.091	0.160	PCI/G	63	U	UJ
1-123-015	04/13/2005	000072	Bismuth-207	0.023	0.080	PCI/G	1.2	U	UJ
1-123-015	04/13/2005	000072	Bismuth-210M	0.006	0.100	PCI/G	8.34	U	UJ
1-123-015	04/13/2005	000072	Bismuth-214	0.610	0.190	PCI/G	9.87		
1-123-015	04/13/2005	000072	Cesium-137	0.046	0.120	PCI/G	3.8	U	UJ
1-123-015	04/13/2005	000072	Cobalt-60	0.011	0.120	PCI/G	0.7	U	UJ
1-123-015	04/13/2005	000072	Lead-210	0.700	2.200	PCI/G	7.4	U	UJ
1-123-015	04/13/2005	000072	Lead-212	0.650	0.190	PCI/G	16.6		
1-123-015	04/13/2005	000072	Lead-214	0.660	0.170	PCI/G	8.92		
1-123-015	04/13/2005	000072	Plutonium-238	-0.020	0.085	PCI/G	55	U	UJ
1-123-015	04/13/2005	000072	Plutonium-239/240	-0.017	0.063	PCI/G	61.2	U	UJ
1-123-015	04/13/2005	000072	Potassium-40	15.300	1.100	PCI/G	47.8		
1-123-015	04/13/2005	000072	Protactinium-231	-0.070	2.200	PCI/G	4.1	U	UJ
1-123-015	04/13/2005	000072	Radium-226	0.610	0.190	PCI/G	2.9		J
1-123-015	04/13/2005	000072	Radium-228	0.370	0.590	PCI/G	3.06	U	U
1-123-015	04/13/2005	000072	Thallium-208	0.214	0.110	PCI/G	0.498		
1-123-015	04/13/2005	000072	Thorium-228	0.710	0.080	PCI/G	2.6		
1-123-015	04/13/2005	000072	Thorium-230	1.010	0.050	PCI/G	2.8		
1-123-015	04/13/2005	000072	Thorium-232	0.820	0.050	PCI/G	2.1		
1-123-016	04/15/2005	000143	Actinium-227	0.120	0.420	PCI/G	4.6	U	UJ
1-123-016	04/15/2005	000143	Actinium-228	0.850	0.250	PCI/G	1.93		
1-123-016	04/15/2005	000143	Americium-241	0.004	0.140	PCI/G	63	U	UJ
1-123-016	04/15/2005	000143	Bismuth-207	0.015	0.064	PCI/G	1.2	U	UJ
1-123-016	04/15/2005	000143	Bismuth-210M	0.012	0.085	PCI/G	8.34	U	UJ
1-123-016	04/15/2005	000143	Bismuth-214	0.680	0.130	PCI/G	9.87		
1-123-016	04/15/2005	000143	Cesium-137	-0.001	0.110	PCI/G	3.8	U	UJ
1-123-016	04/15/2005	000143	Cobalt-60	-0.017	0.093	PCI/G	0.7	U	UJ
1-123-016	04/15/2005	000143	Lead-210	0.400	1.700	PCI/G	7.4	U	UJ
1-123-016	04/15/2005	000143	Lead-212	0.570	0.150	PCI/G	16.6		
1-123-016	04/15/2005	000143	Lead-214	0.420	0.140	PCI/G	8.92		
1-123-016	04/15/2005	000143	Plutonium-238	0.006	0.036	PCI/G	55	U	UJ
1-123-016	04/15/2005	000143	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
1-123-016	04/15/2005	000143	Potassium-40	19.600	0.900	PCI/G	47.8		

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-016	04/15/2005	000143	Protactinium-231	0.900	2.400	PCI/G	4.1	U	UJ
1-123-016	04/15/2005	000143	Radium-226	0.680	0.130	PCI/G	2.9		J
1-123-016	04/15/2005	000143	Radium-228	0.850	0.250	PCI/G	3.06		
1-123-016	04/15/2005	000143	Thallium-208	0.145	0.078	PCI/G	0.498		
1-123-016	04/15/2005	000143	Thorium-228	0.830	0.050	PCI/G	2.6		
1-123-016	04/15/2005	000143	Thorium-230	0.940	0.020	PCI/G	2.8		
1-123-016	04/15/2005	000143	Thorium-232	0.850	0.250	PCI/G	2.1		
1-123-016	04/15/2005	000143	Thorium-232	0.800	0.030	PCI/G	2.1		
1-123-017	04/14/2005	000088	Actinium-227	-0.130	0.440	PCI/G	4.6	U	UJ
1-123-017	04/14/2005	000088	Actinium-228	0.910	0.280	PCI/G	1.93		
1-123-017	04/14/2005	000088	Americium-241	0.010	0.190	PCI/G	63	U	UJ
1-123-017	04/14/2005	000088	Bismuth-207	0.012	0.087	PCI/G	1.2	U	UJ
1-123-017	04/14/2005	000088	Bismuth-210M	0.083	0.140	PCI/G	8.34	U	U
1-123-017	04/14/2005	000088	Bismuth-214	0.690	0.170	PCI/G	9.87		
1-123-017	04/14/2005	000088	Cesium-137	0.029	0.110	PCI/G	3.8	U	UJ
1-123-017	04/14/2005	000088	Cobalt-60	0.126	0.200	PCI/G	0.7	U	U
1-123-017	04/14/2005	000088	Lead-210	0.700	2.200	PCI/G	7.4	U	UJ
1-123-017	04/14/2005	000088	Lead-212	0.620	0.140	PCI/G	16.6		
1-123-017	04/14/2005	000088	Lead-214	0.690	0.160	PCI/G	8.92		
1-123-017	04/14/2005	000088	Plutonium-238	0.062	0.052	PCI/G	55	J	J
1-123-017	04/14/2005	000088	Plutonium-239/240	0.003	0.031	PCI/G	61.2	U	UJ
1-123-017	04/14/2005	000088	Potassium-40	16.400	0.700	PCI/G	47.8		
1-123-017	04/14/2005	000088	Protactinium-231	1.600	2.800	PCI/G	4.1	U	UJ
1-123-017	04/14/2005	000088	Radium-226	0.690	0.170	PCI/G	2.9		J
1-123-017	04/14/2005	000088	Radium-228	0.910	0.310	PCI/G	3.06		
1-123-017	04/14/2005	000088	Thallium-208	0.140	0.120	PCI/G	0.498		
1-123-017	04/14/2005	000088	Thorium-228	0.830	0.060	PCI/G	2.6		
1-123-017	04/14/2005	000088	Thorium-230	1.050	0.040	PCI/G	2.8		
1-123-017	04/14/2005	000088	Thorium-232	0.910	0.310	PCI/G	2.1		
1-123-017	04/14/2005	000088	Thorium-232	0.880	0.030	PCI/G	2.1		
1-123-018	04/14/2005	000087	Actinium-227	0.080	0.350	PCI/G	4.6	U	UJ
1-123-018	04/14/2005	000087	Americium-241	-0.033	0.130	PCI/G	63	U	UJ
1-123-018	04/14/2005	000087	Bismuth-207	-0.002	0.065	PCI/G	1.2	U	UJ
1-123-018	04/14/2005	000087	Bismuth-210M	0.115	0.092	PCI/G	8.34		
1-123-018	04/14/2005	000087	Bismuth-214	0.470	0.140	PCI/G	9.87		
1-123-018	04/14/2005	000087	Cesium-137	0.099	0.120	PCI/G	3.8	U	UJ
1-123-018	04/14/2005	000087	Cobalt-60	0.176	0.190	PCI/G	0.7	U	UJ
1-123-018	04/14/2005	000087	Lead-210	1.110	2.000	PCI/G	7.4	U	U
1-123-018	04/14/2005	000087	Lead-212	0.340	0.120	PCI/G	16.6		
1-123-018	04/14/2005	000087	Lead-214	0.580	0.110	PCI/G	8.92		
1-123-018	04/14/2005	000087	Plutonium-238	0.301	0.045	PCI/G	55		
1-123-018	04/14/2005	000087	Plutonium-239/240	0.009	0.027	PCI/G	61.2	U	UJ
1-123-018	04/14/2005	000087	Potassium-40	11.200	1.000	PCI/G	47.8		
1-123-018	04/14/2005	000087	Protactinium-231	-0.200	2.000	PCI/G	4.1	U	UJ
1-123-018	04/14/2005	000087	Radium-226	0.470	0.140	PCI/G	2.9		J
1-123-018	04/14/2005	000087	Radium-228	0.400	0.470	PCI/G	3.06	U	U
1-123-018	04/14/2005	000087	Thallium-208	0.186	0.078	PCI/G	0.498		
1-123-018	04/14/2005	000087	Thorium-228	0.840	0.040	PCI/G	2.6		
1-123-018	04/14/2005	000087	Thorium-230	1.200	0.030	PCI/G	2.8		
1-123-018	04/14/2005	000087	Thorium-232	0.750	0.020	PCI/G	2.1		
1-123-019	04/14/2005	000094	Actinium-227	-0.090	0.300	PCI/G	4.6	U	UJ
1-123-019	04/14/2005	000094	Americium-241	0.012	0.120	PCI/G	63	U	UJ
1-123-019	04/14/2005	000094	Bismuth-207	-0.012	0.053	PCI/G	1.2	U	UJ
1-123-019	04/14/2005	000094	Bismuth-210M	0.075	0.099	PCI/G	8.34	U	UJ
1-123-019	04/14/2005	000094	Bismuth-214	0.420	0.160	PCI/G	9.87		
1-123-019	04/14/2005	000094	Cesium-137	0.044	0.091	PCI/G	3.8	U	U
1-123-019	04/14/2005	000094	Cobalt-60	0.075	0.140	PCI/G	0.7	U	U
1-123-019	04/14/2005	000094	Lead-210	1.140	1.700	PCI/G	7.4	U	U
1-123-019	04/14/2005	000094	Lead-212	0.329	0.080	PCI/G	16.6		
1-123-019	04/14/2005	000094	Lead-214	0.480	0.110	PCI/G	8.92		
1-123-019	04/14/2005	000094	Plutonium-238	0.196	0.043	PCI/G	55		
1-123-019	04/14/2005	000094	Plutonium-239/240	0.014	0.026	PCI/G	61.2	U	UJ
1-123-019	04/14/2005	000094	Potassium-40	8.800	0.700	PCI/G	47.8		
1-123-019	04/14/2005	000094	Protactinium-231	0.040	1.700	PCI/G	4.1	U	UJ
1-123-019	04/14/2005	000094	Radium-226	0.420	0.160	PCI/G	2.9		J
1-123-019	04/14/2005	000094	Radium-228	0.410	0.420	PCI/G	3.06	U	U
1-123-019	04/14/2005	000094	Thorium-228	0.480	0.040	PCI/G	2.6		
1-123-019	04/14/2005	000094	Thorium-230	0.890	0.030	PCI/G	2.8		

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Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-019	04/14/2005	000094	Thorium-232	0.560	0.020	PCI/G	2.1		
1-123-020	04/13/2005	000076	Actinium-227	-0.020	0.310	PCI/G	4.6	U	UJ
1-123-020	04/13/2005	000076	Americium-241	0.107	0.150	PCI/G	63	U	U
1-123-020	04/13/2005	000076	Bismuth-207	-0.007	0.049	PCI/G	1.2	U	UJ
1-123-020	04/13/2005	000076	Bismuth-210M	-0.022	0.077	PCI/G	8.34	U	UJ
1-123-020	04/13/2005	000076	Bismuth-214	0.610	0.130	PCI/G	9.87		
1-123-020	04/13/2005	000076	Cesium-137	0.048	0.110	PCI/G	3.8	U	UJ
1-123-020	04/13/2005	000076	Cobalt-60	0.039	0.120	PCI/G	0.7	U	UJ
1-123-020	04/13/2005	000076	Lead-210	1.110	1.800	PCI/G	7.4	U	U
1-123-020	04/13/2005	000076	Lead-212	0.450	0.110	PCI/G	16.6		
1-123-020	04/13/2005	000076	Lead-214	0.510	0.130	PCI/G	8.92		
1-123-020	04/13/2005	000076	Plutonium-238	0.118	0.041	PCI/G	55		
1-123-020	04/13/2005	000076	Plutonium-239/240	0.005	0.024	PCI/G	61.2	U	UJ
1-123-020	04/13/2005	000076	Potassium-40	10.600	0.900	PCI/G	47.8		
1-123-020	04/13/2005	000076	Protactinium-231	0.900	2.000	PCI/G	4.1	U	UJ
1-123-020	04/13/2005	000076	Radium-226	0.610	0.130	PCI/G	2.9		J
1-123-020	04/13/2005	000076	Radium-228	0.330	0.430	PCI/G	3.06	U	U
1-123-020	04/13/2005	000076	Thallium-208	0.193	0.058	PCI/G	0.498		
1-123-020	04/13/2005	000076	Thorium-228	0.500	0.070	PCI/G	2.6		
1-123-020	04/13/2005	000076	Thorium-230	1.000	0.070	PCI/G	2.8		
1-123-020	04/13/2005	000076	Thorium-232	0.570	0.070	PCI/G	2.1		
1-123-021	04/13/2005	000075	Actinium-227	0.050	0.370	PCI/G	4.6	U	UJ
1-123-021	04/13/2005	000075	Actinium-228	0.420	0.250	PCI/G	1.93		
1-123-021	04/13/2005	000075	Americium-241	-0.009	0.150	PCI/G	63	U	UJ
1-123-021	04/13/2005	000075	Bismuth-207	-0.003	0.059	PCI/G	1.2	U	UJ
1-123-021	04/13/2005	000075	Bismuth-210M	0.009	0.095	PCI/G	8.34	U	UJ
1-123-021	04/13/2005	000075	Bismuth-214	0.570	0.140	PCI/G	9.87		
1-123-021	04/13/2005	000075	Cesium-137	0.017	0.100	PCI/G	3.8	U	UJ
1-123-021	04/13/2005	000075	Cobalt-60	0.022	0.110	PCI/G	0.7	U	UJ
1-123-021	04/13/2005	000075	Lead-210	1.600	2.100	PCI/G	7.4	U	U
1-123-021	04/13/2005	000075	Lead-212	0.380	0.130	PCI/G	16.6		
1-123-021	04/13/2005	000075	Lead-214	0.590	0.140	PCI/G	8.92		
1-123-021	04/13/2005	000075	Plutonium-238	0.123	0.048	PCI/G	55		
1-123-021	04/13/2005	000075	Plutonium-239/240	0.005	0.025	PCI/G	61.2	U	UJ
1-123-021	04/13/2005	000075	Potassium-40	11.500	0.800	PCI/G	47.8		
1-123-021	04/13/2005	000075	Protactinium-231	0.500	2.200	PCI/G	4.1	U	UJ
1-123-021	04/13/2005	000075	Radium-226	0.570	0.140	PCI/G	2.9		J
1-123-021	04/13/2005	000075	Radium-228	0.420	0.250	PCI/G	3.06		
1-123-021	04/13/2005	000075	Thallium-208	0.107	0.074	PCI/G	0.498		
1-123-021	04/13/2005	000075	Thorium-228	0.630	0.110	PCI/G	2.6		
1-123-021	04/13/2005	000075	Thorium-230	1.010	0.080	PCI/G	2.8		
1-123-021	04/13/2005	000075	Thorium-232	0.530	0.060	PCI/G	2.1		
1-123-021	04/13/2005	000075	Thorium-232	0.420	0.250	PCI/G	2.1		
1-123-022	04/13/2005	000071	Actinium-227	0.460	0.450	PCI/G	4.6		
1-123-022	04/13/2005	000071	Americium-241	0.007	0.140	PCI/G	63	U	UJ
1-123-022	04/13/2005	000071	Bismuth-207	-0.007	0.057	PCI/G	1.2	U	UJ
1-123-022	04/13/2005	000071	Bismuth-210M	0.000	0.093	PCI/G	8.34	U	UJ
1-123-022	04/13/2005	000071	Bismuth-214	0.710	0.140	PCI/G	9.87		
1-123-022	04/13/2005	000071	Cesium-137	0.137	0.130	PCI/G	3.8	J	J
1-123-022	04/13/2005	000071	Cobalt-60	0.020	0.110	PCI/G	0.7	U	UJ
1-123-022	04/13/2005	000071	Lead-210	0.720	1.900	PCI/G	7.4	U	UJ
1-123-022	04/13/2005	000071	Lead-212	0.390	0.140	PCI/G	16.6		
1-123-022	04/13/2005	000071	Lead-214	0.570	0.130	PCI/G	8.92		
1-123-022	04/13/2005	000071	Plutonium-238	0.206	0.031	PCI/G	55		
1-123-022	04/13/2005	000071	Plutonium-239/240	-0.001	0.023	PCI/G	61.2	U	UJ
1-123-022	04/13/2005	000071	Potassium-40	13.000	0.800	PCI/G	47.8		
1-123-022	04/13/2005	000071	Protactinium-231	0.800	2.100	PCI/G	4.1	U	UJ
1-123-022	04/13/2005	000071	Radium-226	0.710	0.140	PCI/G	2.9		J
1-123-022	04/13/2005	000071	Radium-228	0.580	0.500	PCI/G	3.06		
1-123-022	04/13/2005	000071	Thallium-208	0.202	0.065	PCI/G	0.498		
1-123-022	04/13/2005	000071	Thorium-228	0.750	0.050	PCI/G	2.6		
1-123-022	04/13/2005	000071	Thorium-230	1.060	0.020	PCI/G	2.8		
1-123-022	04/13/2005	000071	Thorium-232	0.750	0.030	PCI/G	2.1		
1-123-023	04/14/2005	000123	Actinium-227	-0.080	0.480	PCI/G	4.6	U	UJ
1-123-023	04/14/2005	000123	Americium-241	-0.130	0.190	PCI/G	63	U	UJ
1-123-023	04/14/2005	000123	Bismuth-207	0.045	0.100	PCI/G	1.2	U	UJ
1-123-023	04/14/2005	000123	Bismuth-210M	0.012	0.130	PCI/G	8.34	U	UJ

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-023	04/14/2005	000123	Bismuth-214	0.530	0.190	PCI/G	9.87		
1-123-023	04/14/2005	000123	Cesium-137	0.060	0.120	PCI/G	3.8	U	U
1-123-023	04/14/2005	000123	Cobalt-60	0.080	0.190	PCI/G	0.7	U	UJ
1-123-023	04/14/2005	000123	Lead-210	0.800	2.500	PCI/G	7.4	U	UJ
1-123-023	04/14/2005	000123	Lead-212	0.690	0.120	PCI/G	16.6		
1-123-023	04/14/2005	000123	Lead-214	0.530	0.170	PCI/G	8.92		
1-123-023	04/14/2005	000123	Plutonium-238	0.023	0.039	PCI/G	55	U	UJ
1-123-023	04/14/2005	000123	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
1-123-023	04/14/2005	000123	Potassium-40	23.600	0.200	PCI/G	47.8		
1-123-023	04/14/2005	000123	Protactinium-231	2.200	3.000	PCI/G	4.1	U	U
1-123-023	04/14/2005	000123	Radium-226	0.530	0.190	PCI/G	2.9		J
1-123-023	04/14/2005	000123	Radium-228	0.480	0.670	PCI/G	3.06	U	U
1-123-023	04/14/2005	000123	Thallium-208	0.320	0.110	PCI/G	0.498		
1-123-023	04/14/2005	000123	Thorium-228	0.930	0.080	PCI/G	2.6		J
1-123-023	04/14/2005	000123	Thorium-230	1.030	0.050	PCI/G	2.8		
1-123-023	04/14/2005	000123	Thorium-232	0.850	0.030	PCI/G	2.1		J
1-123-024	04/14/2005	000090	Actinium-227	0.130	0.480	PCI/G	4.6	U	UJ
1-123-024	04/14/2005	000090	Actinium-228	0.760	0.410	PCI/G	1.93		
1-123-024	04/14/2005	000090	Americium-241	0.100	0.220	PCI/G	63	U	UJ
1-123-024	04/14/2005	000090	Bismuth-207	-0.004	0.075	PCI/G	1.2	U	UJ
1-123-024	04/14/2005	000090	Bismuth-210M	0.250	0.200	PCI/G	8.34		J
1-123-024	04/14/2005	000090	Bismuth-214	0.810	0.210	PCI/G	9.87		
1-123-024	04/14/2005	000090	Cesium-137	0.078	0.140	PCI/G	3.8	U	U
1-123-024	04/14/2005	000090	Cobalt-60	0.210	0.270	PCI/G	0.7	U	U
1-123-024	04/14/2005	000090	Lead-210	-0.050	2.600	PCI/G	7.4	U	UJ
1-123-024	04/14/2005	000090	Lead-212	0.710	0.160	PCI/G	16.6		
1-123-024	04/14/2005	000090	Lead-214	0.790	0.170	PCI/G	8.92		
1-123-024	04/14/2005	000090	Plutonium-238	0.150	0.044	PCI/G	55		
1-123-024	04/14/2005	000090	Plutonium-239/240	0.009	0.027	PCI/G	61.2	U	UJ
1-123-024	04/14/2005	000090	Potassium-40	17.200	0.800	PCI/G	47.8		
1-123-024	04/14/2005	000090	Protactinium-231	0.700	2.500	PCI/G	4.1	U	UJ
1-123-024	04/14/2005	000090	Radium-226	0.810	0.210	PCI/G	2.9		J
1-123-024	04/14/2005	000090	Radium-228	0.760	0.450	PCI/G	3.06		
1-123-024	04/14/2005	000090	Thallium-208	0.360	0.120	PCI/G	0.498		J
1-123-024	04/14/2005	000090	Thorium-228	0.840	0.030	PCI/G	2.6		
1-123-024	04/14/2005	000090	Thorium-230	0.980	0.030	PCI/G	2.8		
1-123-024	04/14/2005	000090	Thorium-232	0.790	0.030	PCI/G	2.1		
1-123-024	04/14/2005	000090	Thorium-232	0.760	0.450	PCI/G	2.1		
1-123-025	04/14/2005	000089	Actinium-227	0.002	0.370	PCI/G	4.6	U	UJ
1-123-025	04/14/2005	000089	Americium-241	0.026	0.140	PCI/G	63	U	UJ
1-123-025	04/14/2005	000089	Bismuth-207	0.031	0.076	PCI/G	1.2	U	UJ
1-123-025	04/14/2005	000089	Bismuth-210M	0.370	0.090	PCI/G	8.34		
1-123-025	04/14/2005	000089	Bismuth-214	0.450	0.140	PCI/G	9.87		
1-123-025	04/14/2005	000089	Cesium-137	0.063	0.110	PCI/G	3.8	U	U
1-123-025	04/14/2005	000089	Cobalt-60	0.280	0.080	PCI/G	0.7		
1-123-025	04/14/2005	000089	Lead-210	0.370	1.700	PCI/G	7.4	U	UJ
1-123-025	04/14/2005	000089	Lead-212	0.360	0.120	PCI/G	16.6		
1-123-025	04/14/2005	000089	Lead-214	0.520	0.120	PCI/G	8.92		
1-123-025	04/14/2005	000089	Plutonium-238	0.103	0.046	PCI/G	55		
1-123-025	04/14/2005	000089	Plutonium-239/240	-0.002	0.027	PCI/G	61.2	U	UJ
1-123-025	04/14/2005	000089	Potassium-40	9.600	0.900	PCI/G	47.8		
1-123-025	04/14/2005	000089	Protactinium-231	-0.300	1.800	PCI/G	4.1	U	UJ
1-123-025	04/14/2005	000089	Radium-226	0.450	0.140	PCI/G	2.9		J
1-123-025	04/14/2005	000089	Radium-228	0.580	0.530	PCI/G	3.06		
1-123-025	04/14/2005	000089	Thallium-208	0.186	0.098	PCI/G	0.498		
1-123-025	04/14/2005	000089	Thorium-228	0.520	0.060	PCI/G	2.6		
1-123-025	04/14/2005	000089	Thorium-230	1.000	0.030	PCI/G	2.8		
1-123-025	04/14/2005	000089	Thorium-232	0.730	0.020	PCI/G	2.1		
1-123-026	04/14/2005	000093	Actinium-227	0.040	0.480	PCI/G	4.6	U	UJ
1-123-026	04/14/2005	000093	Americium-241	-0.050	0.190	PCI/G	63	U	UJ
1-123-026	04/14/2005	000093	Bismuth-207	0.009	0.100	PCI/G	1.2	U	UJ
1-123-026	04/14/2005	000093	Bismuth-210M	0.380	0.100	PCI/G	8.34		J
1-123-026	04/14/2005	000093	Bismuth-214	0.610	0.180	PCI/G	9.87		
1-123-026	04/14/2005	000093	Cesium-137	0.144	0.093	PCI/G	3.8	J	J
1-123-026	04/14/2005	000093	Cobalt-60	0.240	0.260	PCI/G	0.7	U	U
1-123-026	04/14/2005	000093	Lead-210	2.100	2.900	PCI/G	7.4	U	U
1-123-026	04/14/2005	000093	Lead-212	0.600	0.130	PCI/G	16.6		
1-123-026	04/14/2005	000093	Lead-214	0.620	0.190	PCI/G	8.92		

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-026	04/14/2005	000093	Plutonium-238	0.281	0.048	PCI/G	55		
1-123-026	04/14/2005	000093	Plutonium-239/240	-0.003	0.029	PCI/G	61.2	U	UJ
1-123-026	04/14/2005	000093	Potassium-40	13.200	1.000	PCI/G	47.8		
1-123-026	04/14/2005	000093	Protactinium-231	0.700	2.600	PCI/G	4.1	U	UJ
1-123-026	04/14/2005	000093	Radium-226	0.610	0.180	PCI/G	2.9		J
1-123-026	04/14/2005	000093	Radium-228	0.550	0.640	PCI/G	3.06	U	U
1-123-026	04/14/2005	000093	Thallium-208	0.197	0.082	PCI/G	0.498		J
1-123-026	04/14/2005	000093	Thorium-228	0.840	0.040	PCI/G	2.6		
1-123-026	04/14/2005	000093	Thorium-230	1.180	0.030	PCI/G	2.8		
1-123-026	04/14/2005	000093	Thorium-232	0.850	0.020	PCI/G	2.1		
1-123-027	04/13/2005	000069	Actinium-227	0.060	0.390	PCI/G	4.6	U	UJ
1-123-027	04/13/2005	000069	Americium-241	-0.008	0.160	PCI/G	63	U	UJ
1-123-027	04/13/2005	000069	Bismuth-207	0.009	0.078	PCI/G	1.2	U	UJ
1-123-027	04/13/2005	000069	Bismuth-210M	0.051	0.110	PCI/G	8.34	U	UJ
1-123-027	04/13/2005	000069	Bismuth-214	0.570	0.170	PCI/G	9.87		
1-123-027	04/13/2005	000069	Cesium-137	0.014	0.099	PCI/G	3.8	U	UJ
1-123-027	04/13/2005	000069	Cobalt-60	0.060	0.140	PCI/G	0.7	U	UJ
1-123-027	04/13/2005	000069	Lead-210	0.200	2.000	PCI/G	7.4	U	UJ
1-123-027	04/13/2005	000069	Lead-212	0.460	0.160	PCI/G	16.6		
1-123-027	04/13/2005	000069	Lead-214	0.630	0.150	PCI/G	8.92		
1-123-027	04/13/2005	000069	Plutonium-238	0.137	0.052	PCI/G	55		
1-123-027	04/13/2005	000069	Plutonium-239/240	0.007	0.048	PCI/G	61.2	U	UJ
1-123-027	04/13/2005	000069	Potassium-40	13.200	0.200	PCI/G	47.8		
1-123-027	04/13/2005	000069	Protactinium-231	1.100	2.600	PCI/G	4.1	U	UJ
1-123-027	04/13/2005	000069	Radium-226	0.570	0.170	PCI/G	2.9		J
1-123-027	04/13/2005	000069	Radium-228	0.450	0.590	PCI/G	3.06	U	U
1-123-027	04/13/2005	000069	Thallium-208	0.187	0.099	PCI/G	0.498		
1-123-027	04/13/2005	000069	Thorium-228	0.580	0.040	PCI/G	2.6		
1-123-027	04/13/2005	000069	Thorium-230	0.900	0.020	PCI/G	2.8		
1-123-027	04/13/2005	000069	Thorium-232	0.520	0.020	PCI/G	2.1		
1-123-028	04/13/2005	000070	Actinium-227	-0.010	0.380	PCI/G	4.6	U	UJ
1-123-028	04/13/2005	000070	Actinium-228	0.840	0.370	PCI/G	1.93		
1-123-028	04/13/2005	000070	Americium-241	-0.013	0.160	PCI/G	63	U	UJ
1-123-028	04/13/2005	000070	Bismuth-207	0.006	0.070	PCI/G	1.2	U	UJ
1-123-028	04/13/2005	000070	Bismuth-210M	0.042	0.110	PCI/G	8.34	U	UJ
1-123-028	04/13/2005	000070	Bismuth-214	0.710	0.130	PCI/G	9.87		
1-123-028	04/13/2005	000070	Cesium-137	0.133	0.099	PCI/G	3.8	J	J
1-123-028	04/13/2005	000070	Cobalt-60	0.218	0.220	PCI/G	0.7	U	U
1-123-028	04/13/2005	000070	Lead-210	0.850	2.000	PCI/G	7.4	U	UJ
1-123-028	04/13/2005	000070	Lead-212	0.570	0.130	PCI/G	16.6		
1-123-028	04/13/2005	000070	Lead-214	0.530	0.140	PCI/G	8.92		
1-123-028	04/13/2005	000070	Plutonium-238	0.059	0.043	PCI/G	55	J	J
1-123-028	04/13/2005	000070	Plutonium-239/240	0.003	0.025	PCI/G	61.2	U	UJ
1-123-028	04/13/2005	000070	Potassium-40	13.200	0.900	PCI/G	47.8		
1-123-028	04/13/2005	000070	Protactinium-231	1.100	2.400	PCI/G	4.1	U	UJ
1-123-028	04/13/2005	000070	Radium-226	0.710	0.130	PCI/G	2.9		J
1-123-028	04/13/2005	000070	Radium-228	0.830	0.370	PCI/G	3.06		
1-123-028	04/13/2005	000070	Thallium-208	0.178	0.078	PCI/G	0.498		
1-123-028	04/13/2005	000070	Thorium-228	0.660	0.060	PCI/G	2.6		
1-123-028	04/13/2005	000070	Thorium-230	1.110	0.040	PCI/G	2.8		
1-123-028	04/13/2005	000070	Thorium-232	0.830	0.370	PCI/G	2.1		
1-123-028	04/13/2005	000070	Thorium-232	0.630	0.040	PCI/G	2.1		
1-123-029	04/14/2005	000126	Actinium-227	-0.020	0.400	PCI/G	4.6	U	UJ
1-123-029	04/14/2005	000126	Americium-241	0.020	0.200	PCI/G	63	U	UJ
1-123-029	04/14/2005	000126	Bismuth-207	0.019	0.100	PCI/G	1.2	U	UJ
1-123-029	04/14/2005	000126	Bismuth-210M	-0.037	0.110	PCI/G	8.34	U	UJ
1-123-029	04/14/2005	000126	Bismuth-214	0.520	0.190	PCI/G	9.87		
1-123-029	04/14/2005	000126	Cesium-137	-0.031	0.110	PCI/G	3.8	U	UJ
1-123-029	04/14/2005	000126	Cobalt-60	0.020	0.150	PCI/G	0.7	U	UJ
1-123-029	04/14/2005	000126	Lead-210	0.200	2.500	PCI/G	7.4	U	UJ
1-123-029	04/14/2005	000126	Lead-212	0.660	0.130	PCI/G	16.6		
1-123-029	04/14/2005	000126	Lead-214	0.650	0.140	PCI/G	8.92		
1-123-029	04/14/2005	000126	Plutonium-238	0.011	0.035	PCI/G	55	U	UJ
1-123-029	04/14/2005	000126	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
1-123-029	04/14/2005	000126	Potassium-40	18.700	0.800	PCI/G	47.8		
1-123-029	04/14/2005	000126	Protactinium-231	0.200	2.700	PCI/G	4.1	U	UJ
1-123-029	04/14/2005	000126	Radium-226	0.520	0.190	PCI/G	2.9		J
1-123-029	04/14/2005	000126	Radium-228	0.720	0.740	PCI/G	3.06	U	U

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-029	04/14/2005	000126	Thallium-208	0.290	0.110	PCI/G	0.498		
1-123-029	04/14/2005	000126	Thorium-228	0.930	0.060	PCI/G	2.6		J
1-123-029	04/14/2005	000126	Thorium-230	1.060	0.050	PCI/G	2.8		
1-123-029	04/14/2005	000126	Thorium-232	0.860	0.040	PCI/G	2.1		J
1-123-030	04/14/2005	000124	Actinium-227	-0.040	0.330	PCI/G	4.6	U	UJ
1-123-030	04/14/2005	000124	Actinium-228	0.410	0.190	PCI/G	1.93		
1-123-030	04/14/2005	000124	Americium-241	-0.021	0.110	PCI/G	63	U	UJ
1-123-030	04/14/2005	000124	Bismuth-207	0.041	0.073	PCI/G	1.2	U	U
1-123-030	04/14/2005	000124	Bismuth-210M	0.063	0.099	PCI/G	8.34	U	U
1-123-030	04/14/2005	000124	Bismuth-214	0.350	0.130	PCI/G	9.87		
1-123-030	04/14/2005	000124	Cesium-137	0.034	0.061	PCI/G	3.8	U	UJ
1-123-030	04/14/2005	000124	Cobalt-60	0.041	0.120	PCI/G	0.7	U	UJ
1-123-030	04/14/2005	000124	Lead-210	0.240	1.500	PCI/G	7.4	U	UJ
1-123-030	04/14/2005	000124	Lead-212	0.224	0.110	PCI/G	16.6		
1-123-030	04/14/2005	000124	Lead-214	0.440	0.120	PCI/G	8.92		
1-123-030	04/14/2005	000124	Plutonium-238	0.124	0.034	PCI/G	55		
1-123-030	04/14/2005	000124	Plutonium-239/240	0.008	0.025	PCI/G	61.2	U	UJ
1-123-030	04/14/2005	000124	Potassium-40	9.500	3.600	PCI/G	47.8		
1-123-030	04/14/2005	000124	Protactinium-231	0.550	1.800	PCI/G	4.1	U	UJ
1-123-030	04/14/2005	000124	Radium-226	0.350	0.130	PCI/G	2.9		J
1-123-030	04/14/2005	000124	Radium-228	0.410	0.190	PCI/G	3.06		
1-123-030	04/14/2005	000124	Thallium-208	0.129	0.073	PCI/G	0.498		
1-123-030	04/14/2005	000124	Thorium-228	0.690	0.070	PCI/G	2.6		J
1-123-030	04/14/2005	000124	Thorium-230	0.790	0.020	PCI/G	2.8		
1-123-030	04/14/2005	000124	Thorium-232	0.780	0.030	PCI/G	2.1		J
1-123-030	04/14/2005	000124	Thorium-232	0.410	0.190	PCI/G	2.1		
1-123-031	04/14/2005	000121	Actinium-227	0.170	0.410	PCI/G	4.6	U	UJ
1-123-031D	04/14/2005	000122	Actinium-227	0.130	0.330	PCI/G	4.6	U	UJ
1-123-031	04/14/2005	000121	Actinium-228	0.440	0.330	PCI/G	1.93		
1-123-031D	04/14/2005	000122	Actinium-228	0.410	0.240	PCI/G	1.93		
1-123-031	04/14/2005	000121	Americium-241	0.024	0.150	PCI/G	63	U	UJ
1-123-031D	04/14/2005	000122	Americium-241	-0.012	0.120	PCI/G	63	U	UJ
1-123-031	04/14/2005	000121	Bismuth-207	0.015	0.069	PCI/G	1.2	U	UJ
1-123-031D	04/14/2005	000122	Bismuth-207	-0.012	0.057	PCI/G	1.2	U	UJ
1-123-031	04/14/2005	000121	Bismuth-210M	0.055	0.110	PCI/G	8.34	U	U
1-123-031D	04/14/2005	000122	Bismuth-210M	0.034	0.083	PCI/G	8.34	U	UJ
1-123-031	04/14/2005	000121	Bismuth-214	0.470	0.170	PCI/G	9.87		
1-123-031D	04/14/2005	000122	Bismuth-214	0.450	0.130	PCI/G	9.87		
1-123-031D	04/14/2005	000122	Cesium-137	0.026	0.076	PCI/G	3.8	U	UJ
1-123-031	04/14/2005	000121	Cesium-137	0.025	0.098	PCI/G	3.8	U	UJ
1-123-031	04/14/2005	000121	Cobalt-60	0.058	0.140	PCI/G	0.7	U	UJ
1-123-031D	04/14/2005	000122	Cobalt-60	0.052	0.100	PCI/G	0.7	U	U
1-123-031D	04/14/2005	000122	Lead-210	0.710	1.600	PCI/G	7.4	U	UJ
1-123-031	04/14/2005	000121	Lead-210	0.040	2.000	PCI/G	7.4	U	UJ
1-123-031	04/14/2005	000121	Lead-212	0.380	0.130	PCI/G	16.6		
1-123-031D	04/14/2005	000122	Lead-212	0.360	0.110	PCI/G	16.6		
1-123-031	04/14/2005	000121	Lead-214	0.490	0.140	PCI/G	8.92		
1-123-031D	04/14/2005	000122	Plutonium-238	0.100	0.035	PCI/G	55		
1-123-031	04/14/2005	000121	Plutonium-238	0.073	0.032	PCI/G	55	J	J
1-123-031	04/14/2005	000121	Plutonium-239/240	0.009	0.021	PCI/G	61.2	U	UJ
1-123-031D	04/14/2005	000122	Plutonium-239/240	0.009	0.013	PCI/G	61.2	U	UJ
1-123-031D	04/14/2005	000122	Potassium-40	9.200	0.700	PCI/G	47.8		
1-123-031	04/14/2005	000121	Potassium-40	8.200	0.700	PCI/G	47.8		
1-123-031	04/14/2005	000121	Protactinium-231	0.400	1.900	PCI/G	4.1	U	UJ
1-123-031D	04/14/2005	000122	Protactinium-231	-0.168	1.700	PCI/G	4.1	U	UJ
1-123-031	04/14/2005	000121	Radium-226	0.470	0.170	PCI/G	2.9		J
1-123-031D	04/14/2005	000122	Radium-226	0.450	0.130	PCI/G	2.9		J
1-123-031	04/14/2005	000121	Radium-228	0.440	0.320	PCI/G	3.06		
1-123-031D	04/14/2005	000122	Radium-228	0.410	0.240	PCI/G	3.06		
1-123-031D	04/14/2005	000122	Thallium-208	0.156	0.074	PCI/G	0.498		
1-123-031	04/14/2005	000121	Thallium-208	0.140	0.058	PCI/G	0.498		
1-123-031D	04/14/2005	000122	Thorium-228	0.650	0.060	PCI/G	2.6		J
1-123-031	04/14/2005	000121	Thorium-228	0.550	0.050	PCI/G	2.6		J
1-123-031	04/14/2005	000121	Thorium-230	0.960	0.030	PCI/G	2.8		
1-123-031D	04/14/2005	000122	Thorium-230	0.710	0.030	PCI/G	2.8		
1-123-031	04/14/2005	000121	Thorium-232	0.550	0.030	PCI/G	2.1		J
1-123-031D	04/14/2005	000122	Thorium-232	0.450	0.020	PCI/G	2.1		J
1-123-031	04/14/2005	000121	Thorium-232	0.440	0.320	PCI/G	2.1		

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-031D	04/14/2005	000122	Thorium-232	0.410	0.240	PCI/G	2.1		
1-123-032	04/14/2005	000120	Actinium-227	0.010	0.330	PCI/G	4.6	U	UJ
1-123-032	04/14/2005	000120	Americium-241	0.020	0.130	PCI/G	63	U	UJ
1-123-032	04/14/2005	000120	Bismuth-207	-0.032	0.054	PCI/G	1.2	U	UJ
1-123-032	04/14/2005	000120	Bismuth-210M	-0.016	0.084	PCI/G	8.34	U	UJ
1-123-032	04/14/2005	000120	Bismuth-214	0.470	0.140	PCI/G	9.87		
1-123-032	04/14/2005	000120	Cesium-137	0.010	0.100	PCI/G	3.8	U	UJ
1-123-032	04/14/2005	000120	Cobalt-60	0.082	0.130	PCI/G	0.7	U	UJ
1-123-032	04/14/2005	000120	Lead-210	1.300	1.000	PCI/G	7.4		
1-123-032	04/14/2005	000120	Lead-212	0.440	0.110	PCI/G	16.6		
1-123-032	04/14/2005	000120	Lead-214	0.520	0.120	PCI/G	8.92		
1-123-032	04/14/2005	000120	Plutonium-238	0.035	0.028	PCI/G	55	J	J
1-123-032	04/14/2005	000120	Plutonium-239/240	0.004	0.021	PCI/G	61.2	U	UJ
1-123-032	04/14/2005	000120	Potassium-40	13.000	4.300	PCI/G	47.8		
1-123-032	04/14/2005	000120	Protactinium-231	0.440	1.800	PCI/G	4.1	U	UJ
1-123-032	04/14/2005	000120	Radium-226	0.470	0.140	PCI/G	2.9		J
1-123-032	04/14/2005	000120	Radium-228	0.360	0.520	PCI/G	3.06	U	U
1-123-032	04/14/2005	000120	Thallium-208	0.172	0.072	PCI/G	0.498		
1-123-032	04/14/2005	000120	Thorium-228	0.660	0.070	PCI/G	2.6		J
1-123-032	04/14/2005	000120	Thorium-230	0.790	0.040	PCI/G	2.8		
1-123-032	04/14/2005	000120	Thorium-232	0.610	0.030	PCI/G	2.1		J
1-123-033	04/14/2005	000107	Actinium-227	-0.040	0.300	PCI/G	4.6	U	UJ
1-123-033	04/14/2005	000107	Americium-241	-0.015	0.130	PCI/G	63	U	UJ
1-123-033	04/14/2005	000107	Bismuth-207	-0.003	0.061	PCI/G	1.2	U	UJ
1-123-033	04/14/2005	000107	Bismuth-210M	0.109	0.120	PCI/G	8.34	U	UJ
1-123-033	04/14/2005	000107	Bismuth-214	0.410	0.130	PCI/G	9.87		
1-123-033	04/14/2005	000107	Cesium-137	0.045	0.110	PCI/G	3.8	U	UJ
1-123-033	04/14/2005	000107	Cobalt-60	0.159	0.190	PCI/G	0.7	U	U
1-123-033	04/14/2005	000107	Lead-210	1.330	1.900	PCI/G	7.4	U	U
1-123-033	04/14/2005	000107	Lead-212	0.340	0.130	PCI/G	16.6		
1-123-033	04/14/2005	000107	Lead-214	0.410	0.150	PCI/G	8.92		
1-123-033	04/14/2005	000107	Plutonium-238	0.236	0.064	PCI/G	55		
1-123-033	04/14/2005	000107	Plutonium-239/240	-0.003	0.047	PCI/G	61.2	U	UJ
1-123-033	04/14/2005	000107	Potassium-40	9.200	0.900	PCI/G	47.8		
1-123-033	04/14/2005	000107	Protactinium-231	0.006	1.700	PCI/G	4.1	U	UJ
1-123-033	04/14/2005	000107	Radium-226	0.410	0.130	PCI/G	2.9		J
1-123-033	04/14/2005	000107	Radium-228	0.180	0.390	PCI/G	3.06	U	U
1-123-033	04/14/2005	000107	Thorium-228	0.560	0.030	PCI/G	2.6		
1-123-033	04/14/2005	000107	Thorium-230	0.740	0.020	PCI/G	2.8		
1-123-033	04/14/2005	000107	Thorium-232	0.480	0.030	PCI/G	2.1		
1-123-034	04/14/2005	000091	Actinium-227	0.100	0.400	PCI/G	4.6	U	UJ
1-123-034	04/14/2005	000091	Actinium-228	0.580	0.330	PCI/G	1.93		
1-123-034	04/14/2005	000091	Americium-241	0.007	0.140	PCI/G	63	U	UJ
1-123-034	04/14/2005	000091	Bismuth-207	-0.007	0.068	PCI/G	1.2	U	UJ
1-123-034	04/14/2005	000091	Bismuth-210M	0.269	0.088	PCI/G	8.34		J
1-123-034	04/14/2005	000091	Bismuth-214	0.510	0.190	PCI/G	9.87		
1-123-034	04/14/2005	000091	Cesium-137	0.056	0.110	PCI/G	3.8	U	U
1-123-034	04/14/2005	000091	Cobalt-60	0.220	0.100	PCI/G	0.7		
1-123-034	04/14/2005	000091	Lead-210	0.890	1.900	PCI/G	7.4	U	UJ
1-123-034	04/14/2005	000091	Lead-212	0.520	0.170	PCI/G	16.6		
1-123-034	04/14/2005	000091	Lead-214	0.640	0.120	PCI/G	8.92		
1-123-034	04/14/2005	000091	Plutonium-238	0.254	0.030	PCI/G	55		
1-123-034	04/14/2005	000091	Plutonium-239/240	0.013	0.020	PCI/G	61.2	U	UJ
1-123-034	04/14/2005	000091	Potassium-40	12.300	0.600	PCI/G	47.8		
1-123-034	04/14/2005	000091	Protactinium-231	0.800	1.900	PCI/G	4.1	U	UJ
1-123-034	04/14/2005	000091	Radium-226	0.510	0.190	PCI/G	2.9		J
1-123-034	04/14/2005	000091	Radium-228	0.580	0.330	PCI/G	3.06		
1-123-034	04/14/2005	000091	Thallium-208	0.230	0.071	PCI/G	0.498		J
1-123-034	04/14/2005	000091	Thorium-228	0.730	0.030	PCI/G	2.6		
1-123-034	04/14/2005	000091	Thorium-230	0.900	0.020	PCI/G	2.8		
1-123-034	04/14/2005	000091	Thorium-232	0.660	0.030	PCI/G	2.1		
1-123-034	04/14/2005	000091	Thorium-232	0.580	0.330	PCI/G	2.1		
1-123-035	04/14/2005	000092	Actinium-227	-0.110	0.400	PCI/G	4.6	U	UJ
1-123-035	04/14/2005	000092	Actinium-228	0.930	0.300	PCI/G	1.93		
1-123-035	04/14/2005	000092	Americium-241	0.044	0.170	PCI/G	63	U	UJ
1-123-035	04/14/2005	000092	Bismuth-207	0.050	0.095	PCI/G	1.2	U	U
1-123-035	04/14/2005	000092	Bismuth-210M	0.230	0.100	PCI/G	8.34		J

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-035	04/14/2005	000092	Bismuth-214	0.580	0.160	PCI/G	9.87		
1-123-035	04/14/2005	000092	Cesium-137	0.129	0.160	PCI/G	3.8	U	U
1-123-035	04/14/2005	000092	Cobalt-60	0.220	0.230	PCI/G	0.7	U	U
1-123-035	04/14/2005	000092	Lead-210	1.100	2.100	PCI/G	7.4	U	U
1-123-035	04/14/2005	000092	Lead-212	0.580	0.130	PCI/G	16.6		
1-123-035	04/14/2005	000092	Lead-214	0.610	0.150	PCI/G	8.92		
1-123-035	04/14/2005	000092	Plutonium-238	0.308	0.043	PCI/G	55		
1-123-035	04/14/2005	000092	Plutonium-239/240	0.003	0.026	PCI/G	61.2	U	UJ
1-123-035	04/14/2005	000092	Potassium-40	12.500	4.600	PCI/G	47.8		
1-123-035	04/14/2005	000092	Protactinium-231	-0.200	2.500	PCI/G	4.1	U	UJ
1-123-035	04/14/2005	000092	Radium-226	0.580	0.160	PCI/G	2.9		J
1-123-035	04/14/2005	000092	Radium-228	0.930	0.310	PCI/G	3.06		
1-123-035	04/14/2005	000092	Thallium-208	0.208	0.094	PCI/G	0.498		J
1-123-035	04/14/2005	000092	Thorium-228	0.770	0.050	PCI/G	2.6		
1-123-035	04/14/2005	000092	Thorium-230	1.170	0.020	PCI/G	2.8		
1-123-035	04/14/2005	000092	Thorium-232	0.930	0.310	PCI/G	2.1		
1-123-035	04/14/2005	000092	Thorium-232	0.750	0.030	PCI/G	2.1		
1-123-036	04/14/2005	000127	Actinium-227	0.080	0.470	PCI/G	4.6	U	UJ
1-123-036	04/14/2005	000127	Actinium-228	0.500	0.380	PCI/G	1.93		
1-123-036	04/14/2005	000127	Americium-241	0.060	0.190	PCI/G	63	U	UJ
1-123-036	04/14/2005	000127	Bismuth-207	0.046	0.110	PCI/G	1.2	U	UJ
1-123-036	04/14/2005	000127	Bismuth-210M	0.540	0.120	PCI/G	8.34		
1-123-036	04/14/2005	000127	Bismuth-214	0.490	0.190	PCI/G	9.87		
1-123-036	04/14/2005	000127	Cesium-137	0.023	0.140	PCI/G	3.8	U	UJ
1-123-036	**04/14/2005**	**000127**	**Cobalt-60**	**1.010**	**0.120**	**PCI/G**	**0.7**		
1-123-036	04/14/2005	000127	Lead-210	0.100	2.200	PCI/G	7.4	U	UJ
1-123-036	04/14/2005	000127	Lead-212	0.610	0.160	PCI/G	16.6		
1-123-036	04/14/2005	000127	Lead-214	0.470	0.170	PCI/G	8.92		
1-123-036	04/14/2005	000127	Plutonium-238	0.072	0.039	PCI/G	55	J	J
1-123-036	04/14/2005	000127	Plutonium-239/240	0.002	0.031	PCI/G	61.2	U	UJ
1-123-036	04/14/2005	000127	Potassium-40	19.000	1.000	PCI/G	47.8		
1-123-036	04/14/2005	000127	Protactinium-231	1.000	2.600	PCI/G	4.1	U	UJ
1-123-036	04/14/2005	000127	Radium-226	0.490	0.190	PCI/G	2.9		J
1-123-036	04/14/2005	000127	Radium-228	0.500	0.400	PCI/G	3.06		
1-123-036	04/14/2005	000127	Thallium-208	0.280	0.090	PCI/G	0.498		
1-123-036	04/14/2005	000127	Thorium-228	0.750	0.070	PCI/G	2.6		J
1-123-036	04/14/2005	000127	Thorium-230	0.880	0.070	PCI/G	2.8		
1-123-036	04/14/2005	000127	Thorium-232	0.880	0.060	PCI/G	2.1		J
1-123-036	04/14/2005	000127	Thorium-232	0.500	0.400	PCI/G	2.1		
1-123-037	04/18/2005	000128	Actinium-227	0.200	0.520	PCI/G	4.6	U	UJ
1-123-037	04/18/2005	000128	Americium-241	0.004	0.180	PCI/G	63	U	UJ
1-123-037	04/18/2005	000128	Bismuth-207	-0.001	0.083	PCI/G	1.2	U	UJ
1-123-037	04/18/2005	000128	Bismuth-210M	0.150	0.130	PCI/G	8.34		
1-123-037	04/18/2005	000128	Bismuth-214	0.580	0.180	PCI/G	9.87		
1-123-037	04/18/2005	000128	Cesium-137	0.011	0.110	PCI/G	3.8	U	UJ
1-123-037	04/18/2005	000128	Cobalt-60	0.150	0.210	PCI/G	0.7	U	U
1-123-037	04/18/2005	000128	Lead-210	0.700	2.400	PCI/G	7.4	U	UJ
1-123-037	04/18/2005	000128	Lead-212	0.680	0.180	PCI/G	16.6		
1-123-037	04/18/2005	000128	Lead-214	0.660	0.160	PCI/G	8.92		
1-123-037	04/18/2005	000128	Plutonium-238	0.014	0.029	PCI/G	55	U	UJ
1-123-037	04/18/2005	000128	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
1-123-037	04/18/2005	000128	Potassium-40	19.000	0.700	PCI/G	47.8		
1-123-037	04/18/2005	000128	Protactinium-231	1.100	3.000	PCI/G	4.1	U	UJ
1-123-037	04/18/2005	000128	Radium-226	0.580	0.180	PCI/G	2.9		J
1-123-037	04/18/2005	000128	Radium-228	0.980	0.750	PCI/G	3.06		
1-123-037	04/18/2005	000128	Thallium-208	0.300	0.110	PCI/G	0.498		
1-123-037	04/18/2005	000128	Thorium-228	0.790	0.080	PCI/G	2.6		J
1-123-037	04/18/2005	000128	Thorium-230	0.720	0.060	PCI/G	2.8		
1-123-037	04/18/2005	000128	Thorium-232	0.670	0.060	PCI/G	2.1		J
1-123-038	04/14/2005	000116	Actinium-227	0.030	0.440	PCI/G	4.6	U	UJ
1-123-038	04/14/2005	000116	Actinium-228	0.550	0.350	PCI/G	1.93		
1-123-038	04/14/2005	000116	Americium-241	0.032	0.180	PCI/G	63	U	UJ
1-123-038	04/14/2005	000116	Bismuth-207	0.011	0.070	PCI/G	1.2	U	UJ
1-123-038	04/14/2005	000116	Bismuth-210M	0.134	0.120	PCI/G	8.34		
1-123-038	04/14/2005	000116	Bismuth-214	0.890	0.100	PCI/G	9.87		
1-123-038	04/14/2005	000116	Cesium-137	0.028	0.110	PCI/G	3.8	U	UJ
1-123-038	04/14/2005	000116	Cobalt-60	0.139	0.180	PCI/G	0.7	U	U
1-123-038	04/14/2005	000116	Lead-210	0.100	1.900	PCI/G	7.4	U	UJ

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-038	04/14/2005	000116	Lead-212	0.460	0.140	PCI/G	16.6		
1-123-038	04/14/2005	000116	Lead-214	0.660	0.130	PCI/G	8.92		
1-123-038	04/14/2005	000116	Plutonium-238	0.169	0.033	PCI/G	55		
1-123-038	04/14/2005	000116	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
1-123-038	04/14/2005	000116	Potassium-40	13.800	0.700	PCI/G	47.8		
1-123-038	04/14/2005	000116	Protactinium-231	0.800	2.500	PCI/G	4.1	U	UJ
1-123-038	04/14/2005	000116	Radium-226	0.890	0.100	PCI/G	2.9		J
1-123-038	04/14/2005	000116	Radium-228	0.550	0.340	PCI/G	3.06		
1-123-038	04/14/2005	000116	Thallium-208	0.150	0.097	PCI/G	0.498		
1-123-038	04/14/2005	000116	Thorium-228	0.830	0.090	PCI/G	2.6		J
1-123-038	04/14/2005	000116	Thorium-230	1.030	0.040	PCI/G	2.8		
1-123-038	04/14/2005	000116	Thorium-232	0.710	0.020	PCI/G	2.1		J
1-123-038	04/14/2005	000116	Thorium-232	0.550	0.340	PCI/G	2.1		
1-123-039	04/14/2005	000114	Actinium-227	0.060	0.400	PCI/G	4.6	U	UJ
1-123-039	04/14/2005	000114	Americium-241	0.033	0.170	PCI/G	63	U	UJ
1-123-039	04/14/2005	000114	Bismuth-207	0.021	0.091	PCI/G	1.2	U	UJ
1-123-039	04/14/2005	000114	Bismuth-210M	0.260	0.170	PCI/G	8.34		
1-123-039	04/14/2005	000114	Bismuth-214	0.450	0.200	PCI/G	9.87		
1-123-039	04/14/2005	000114	Cesium-137	0.058	0.110	PCI/G	3.8	U	U
1-123-039	04/14/2005	000114	Cobalt-60	0.310	0.120	PCI/G	0.7		
1-123-039	04/14/2005	000114	Lead-210	0.070	2.200	PCI/G	7.4	U	UJ
1-123-039	04/14/2005	000114	Lead-212	0.690	0.130	PCI/G	16.6		
1-123-039	04/14/2005	000114	Plutonium-238	3.500	0.050	PCI/G	55		
1-123-039	04/14/2005	000114	Plutonium-239/240	0.060	0.031	PCI/G	61.2	J	J
1-123-039	04/14/2005	000114	Potassium-40	15.200	0.700	PCI/G	47.8		
1-123-039	04/14/2005	000114	Protactinium-231	0.300	2.500	PCI/G	4.1	U	UJ
1-123-039	04/14/2005	000114	Radium-226	0.450	0.200	PCI/G	2.9		J
1-123-039	04/14/2005	000114	Radium-228	0.290	0.540	PCI/G	3.06	U	U
1-123-039	04/14/2005	000114	Thallium-208	0.175	0.089	PCI/G	0.498		
1-123-039	04/14/2005	000114	Thorium-228	0.600	0.060	PCI/G	2.6		J
1-123-039	04/14/2005	000114	Thorium-230	0.880	0.030	PCI/G	2.8		
1-123-039	04/14/2005	000114	Thorium-232	0.620	0.040	PCI/G	2.1		J
1-123-040	04/18/2005	000105	Actinium-227	0.030	0.380	PCI/G	4.6	U	UJ
1-123-040	04/18/2005	000105	Americium-241	0.030	0.150	PCI/G	63	U	UJ
1-123-040	04/18/2005	000105	Bismuth-207	-0.028	0.054	PCI/G	1.2	U	UJ
1-123-040	04/18/2005	000105	Bismuth-210M	0.113	0.130	PCI/G	8.34	U	UJ
1-123-040	04/18/2005	000105	Bismuth-214	0.490	0.170	PCI/G	9.87		
1-123-040	04/18/2005	000105	Cesium-137	-0.031	0.087	PCI/G	3.8	U	UJ
1-123-040	04/18/2005	000105	Cobalt-60	0.055	0.140	PCI/G	0.7	U	UJ
1-123-040	04/18/2005	000105	Lead-210	1.000	2.200	PCI/G	7.4	U	UJ
1-123-040	04/18/2005	000105	Lead-212	0.300	0.130	PCI/G	16.6		
1-123-040	04/18/2005	000105	Plutonium-238	0.138	0.036	PCI/G	55		
1-123-040	04/18/2005	000105	Plutonium-239/240	0.010	0.010	PCI/G	61.2	U	U
1-123-040	04/18/2005	000105	Potassium-40	10.800	0.900	PCI/G	47.8		
1-123-040	04/18/2005	000105	Protactinium-231	0.500	2.000	PCI/G	4.1	U	UJ
1-123-040	04/18/2005	000105	Radium-226	0.490	0.170	PCI/G	2.9		J
1-123-040	04/18/2005	000105	Radium-228	0.290	0.470	PCI/G	3.06	U	U
1-123-040	04/18/2005	000105	Thallium-208	0.128	0.077	PCI/G	0.498		J
1-123-040	04/18/2005	000105	Thorium-228	0.480	0.030	PCI/G	2.6		
1-123-040	04/18/2005	000105	Thorium-230	0.740	0.020	PCI/G	2.8		
1-123-040	04/18/2005	000105	Thorium-232	0.460	0.030	PCI/G	2.1		
1-123-041	04/14/2005	000106	Actinium-227	0.110	0.350	PCI/G	4.6	U	UJ
1-123-041	04/14/2005	000106	Americium-241	-0.021	0.140	PCI/G	63	U	UJ
1-123-041	04/14/2005	000106	Bismuth-207	0.032	0.076	PCI/G	1.2	U	UJ
1-123-041	04/14/2005	000106	Bismuth-210M	0.348	0.089	PCI/G	8.34		J
1-123-041	04/14/2005	000106	Bismuth-214	0.460	0.150	PCI/G	9.87		
1-123-041	04/14/2005	000106	Cesium-137	0.036	0.110	PCI/G	3.8	U	UJ
1-123-041	04/14/2005	000106	Cobalt-60	0.198	0.094	PCI/G	0.7		
1-123-041	04/14/2005	000106	Lead-210	0.700	2.000	PCI/G	7.4	U	UJ
1-123-041	04/14/2005	000106	Lead-212	0.338	0.120	PCI/G	16.6		
1-123-041	04/14/2005	000106	Lead-214	0.450	0.110	PCI/G	8.92		
1-123-041	04/14/2005	000106	Plutonium-238	0.288	0.035	PCI/G	55		
1-123-041	04/14/2005	000106	Plutonium-239/240	0.010	0.014	PCI/G	61.2	U	UJ
1-123-041	04/14/2005	000106	Potassium-40	9.600	0.900	PCI/G	47.8		
1-123-041	04/14/2005	000106	Protactinium-231	0.090	2.100	PCI/G	4.1	U	UJ
1-123-041	04/14/2005	000106	Radium-226	0.460	0.150	PCI/G	2.9		J
1-123-041	04/14/2005	000106	Radium-228	0.420	0.470	PCI/G	3.06	U	U
1-123-041	04/14/2005	000106	Thallium-208	0.137	0.071	PCI/G	0.498		J

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-041	04/14/2005	000106	Thorium-228	0.450	0.040	PCI/G	2.6		
1-123-041	04/14/2005	000106	Thorium-230	0.840	0.030	PCI/G	2.8		
1-123-041	04/14/2005	000106	Thorium-232	0.680	0.020	PCI/G	2.1		
1-123-042	04/14/2005	000104	Actinium-227	0.110	0.410	PCI/G	4.6	U	UJ
1-123-042	04/14/2005	000104	Americium-241	-0.072	0.160	PCI/G	63	U	UJ
1-123-042	04/14/2005	000104	Bismuth-207	-0.008	0.068	PCI/G	1.2	U	UJ
1-123-042	04/14/2005	000104	Bismuth-210M	0.102	0.130	PCI/G	8.34	U	UJ
1-123-042	04/14/2005	000104	Bismuth-214	0.860	0.120	PCI/G	9.87		
1-123-042	04/14/2005	000104	Cesium-137	0.023	0.130	PCI/G	3.8	U	UJ
1-123-042	04/14/2005	000104	Cobalt-60	0.051	0.150	PCI/G	0.7	U	UJ
1-123-042	04/14/2005	000104	Lead-210	-0.400	2.000	PCI/G	7.4	U	UJ
1-123-042	04/14/2005	000104	Lead-212	0.590	0.150	PCI/G	16.6		
1-123-042	04/14/2005	000104	Lead-214	0.530	0.140	PCI/G	8.92		
1-123-042	04/14/2005	000104	Plutonium-238	0.205	0.028	PCI/G	55		
1-123-042	04/14/2005	000104	Plutonium-239/240	-0.005	0.032	PCI/G	61.2	U	UJ
1-123-042	04/14/2005	000104	Potassium-40	18.400	1.100	PCI/G	47.8		
1-123-042	04/14/2005	000104	Protactinium-231	0.300	2.200	PCI/G	4.1	U	UJ
1-123-042	04/14/2005	000104	Radium-226	0.860	0.120	PCI/G	2.9		J
1-123-042	04/14/2005	000104	Radium-228	0.550	0.580	PCI/G	3.06	U	U
1-123-042	04/14/2005	000104	Thallium-208	0.242	0.090	PCI/G	0.498		J
1-123-042	04/14/2005	000104	Thorium-228	0.710	0.020	PCI/G	2.6		
1-123-042	04/14/2005	000104	Thorium-230	0.910	0.010	PCI/G	2.8		
1-123-042	04/14/2005	000104	Thorium-232	0.680	0.010	PCI/G	2.1		
1-123-043	04/14/2005	000137	Actinium-227	-0.160	0.420	PCI/G	4.6	U	UJ
1-123-043	04/14/2005	000137	Actinium-228	0.660	0.280	PCI/G	1.93		
1-123-043	04/14/2005	000137	Americium-241	-0.044	0.150	PCI/G	63	U	UJ
1-123-043	04/14/2005	000137	Bismuth-207	0.003	0.076	PCI/G	1.2	U	UJ
1-123-043	04/14/2005	000137	Bismuth-210M	0.094	0.120	PCI/G	8.34	U	UJ
1-123-043	04/14/2005	000137	Bismuth-214	0.500	0.180	PCI/G	9.87		
1-123-043	04/14/2005	000137	Cesium-137	-0.025	0.090	PCI/G	3.8	U	UJ
1-123-043	04/14/2005	000137	Cobalt-60	0.023	0.130	PCI/G	0.7	U	UJ
1-123-043	04/14/2005	000137	Lead-210	1.200	2.200	PCI/G	7.4	U	U
1-123-043	04/14/2005	000137	Lead-212	0.770	0.150	PCI/G	16.6		
1-123-043	04/14/2005	000137	Lead-214	0.480	0.150	PCI/G	8.92		
1-123-043	04/14/2005	000137	Plutonium-238	0.125	0.034	PCI/G	55		
1-123-043	04/14/2005	000137	Plutonium-239/240	0.008	0.025	PCI/G	61.2	U	UJ
1-123-043	04/14/2005	000137	Potassium-40	23.400	0.800	PCI/G	47.8		
1-123-043	04/14/2005	000137	Protactinium-231	0.500	2.200	PCI/G	4.1	U	UJ
1-123-043	04/14/2005	000137	Radium-226	0.500	0.180	PCI/G	2.9		J
1-123-043	04/14/2005	000137	Radium-228	0.660	0.280	PCI/G	3.06		
1-123-043	04/14/2005	000137	Thallium-208	0.300	0.100	PCI/G	0.498		
1-123-043	04/14/2005	000137	Thorium-228	0.890	0.050	PCI/G	2.6		
1-123-043	04/14/2005	000137	Thorium-230	0.800	0.030	PCI/G	2.8		
1-123-043	04/14/2005	000137	Thorium-232	1.070	0.030	PCI/G	2.1		
1-123-043	04/14/2005	000137	Thorium-232	0.660	0.280	PCI/G	2.1		
1-123-044	04/14/2005	000136	Actinium-227	0.350	0.480	PCI/G	4.6	U	U
1-123-044	04/14/2005	000136	Actinium-228	0.430	0.350	PCI/G	1.93		
1-123-044	04/14/2005	000136	Americium-241	-0.005	0.160	PCI/G	63	U	UJ
1-123-044	04/14/2005	000136	Bismuth-207	0.020	0.080	PCI/G	1.2	U	UJ
1-123-044	04/14/2005	000136	Bismuth-210M	-0.029	0.091	PCI/G	8.34	U	UJ
1-123-044	04/14/2005	000136	Bismuth-214	0.610	0.160	PCI/G	9.87		
1-123-044	04/14/2005	000136	Cesium-137	0.058	0.100	PCI/G	3.8	U	U
1-123-044	04/14/2005	000136	Cobalt-60	-0.033	0.100	PCI/G	0.7	U	UJ
1-123-044	04/14/2005	000136	Lead-210	-0.300	2.000	PCI/G	7.4	U	UJ
1-123-044	04/14/2005	000136	Lead-212	0.530	0.150	PCI/G	16.6		
1-123-044	04/14/2005	000136	Lead-214	0.570	0.160	PCI/G	8.92		
1-123-044	04/14/2005	000136	Plutonium-238	0.019	0.041	PCI/G	55	U	UJ
1-123-044	04/14/2005	000136	Plutonium-239/240	0.005	0.024	PCI/G	61.2	U	UJ
1-123-044	04/14/2005	000136	Potassium-40	16.500	1.000	PCI/G	47.8		
1-123-044	04/14/2005	000136	Protactinium-231	1.300	2.300	PCI/G	4.1	U	U
1-123-044	04/14/2005	000136	Radium-226	0.610	0.160	PCI/G	2.9		J
1-123-044	04/14/2005	000136	Radium-228	0.430	0.350	PCI/G	3.06		
1-123-044	04/14/2005	000136	Thallium-208	0.266	0.097	PCI/G	0.498		
1-123-044	04/14/2005	000136	Thorium-228	0.720	0.070	PCI/G	2.6		
1-123-044	04/14/2005	000136	Thorium-230	0.980	0.050	PCI/G	2.8		
1-123-044	04/14/2005	000136	Thorium-232	0.590	0.040	PCI/G	2.1		
1-123-044	04/14/2005	000136	Thorium-232	0.430	0.350	PCI/G	2.1		

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-045	04/14/2005	000135	Actinium-227	-0.009	0.340	PCI/G	4.6	U	UJ
1-123-045	04/14/2005	000135	Americium-241	0.029	0.130	PCI/G	63	U	UJ
1-123-045	04/14/2005	000135	Bismuth-207	-0.010	0.061	PCI/G	1.2	U	UJ
1-123-045	04/14/2005	000135	Bismuth-210M	-0.013	0.073	PCI/G	8.34	U	UJ
1-123-045	04/14/2005	000135	Bismuth-214	0.490	0.110	PCI/G	9.87		
1-123-045	04/14/2005	000135	Cesium-137	0.014	0.084	PCI/G	3.8	U	UJ
1-123-045	04/14/2005	000135	Cobalt-60	0.026	0.100	PCI/G	0.7	U	UJ
1-123-045	04/14/2005	000135	Lead-210	-0.190	1.700	PCI/G	7.4	U	UJ
1-123-045	04/14/2005	000135	Lead-212	0.480	0.110	PCI/G	16.6		
1-123-045	04/14/2005	000135	Lead-214	0.300	0.130	PCI/G	8.92		
1-123-045	04/14/2005	000135	Plutonium-238	0.029	0.032	PCI/G	55	U	U
1-123-045	04/14/2005	000135	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
1-123-045	04/14/2005	000135	Potassium-40	14.900	0.800	PCI/G	47.8		
1-123-045	04/14/2005	000135	Protactinium-231	0.090	2.100	PCI/G	4.1	U	UJ
1-123-045	04/14/2005	000135	Radium-226	0.490	0.110	PCI/G	2.9		J
1-123-045	04/14/2005	000135	Radium-228	0.480	0.500	PCI/G	3.06	U	U
1-123-045	04/14/2005	000135	Thallium-208	0.164	0.082	PCI/G	0.498		
1-123-045	04/14/2005	000135	Thorium-228	0.780	0.040	PCI/G	2.6		
1-123-045	04/14/2005	000135	Thorium-230	0.930	0.040	PCI/G	2.8		
1-123-045	04/14/2005	000135	Thorium-232	0.760	0.040	PCI/G	2.1		
1-123-046	04/14/2005	000133	Actinium-227	0.130	0.500	PCI/G	4.6	U	UJ
1-123-046	04/14/2005	000133	Americium-241	-0.010	0.190	PCI/G	63	U	UJ
1-123-046	04/14/2005	000133	Bismuth-207	0.145	0.130	PCI/G	1.2		
1-123-046	04/14/2005	000133	Bismuth-210M	1.840	0.110	PCI/G	8.34		
1-123-046	04/14/2005	000133	Bismuth-214	0.750	0.170	PCI/G	9.87		
1-123-046	04/14/2005	000133	Cesium-137	0.091	0.130	PCI/G	3.8	U	U
1-123-046	**04/14/2005**	**000133**	**Cobalt-60**	**0.810**	**0.130**	**PCI/G**	**0.7**		
1-123-046	04/14/2005	000133	Lead-210	0.100	2.400	PCI/G	7.4	U	UJ
1-123-046	04/14/2005	000133	Lead-212	0.560	0.160	PCI/G	16.6		
1-123-046	04/14/2005	000133	Lead-214	0.720	0.160	PCI/G	8.92		
1-123-046	04/14/2005	000133	Plutonium-238	0.001	0.038	PCI/G	55	U	UJ
1-123-046	04/14/2005	000133	Plutonium-239/240	0.010	0.010	PCI/G	61.2	U	U
1-123-046	04/14/2005	000133	Potassium-40	18.000	0.900	PCI/G	47.8		
1-123-046	04/14/2005	000133	Protactinium-231	1.100	2.200	PCI/G	4.1	U	UJ
1-123-046	04/14/2005	000133	Radium-226	0.750	0.170	PCI/G	2.9		J
1-123-046	04/14/2005	000133	Radium-228	0.700	0.620	PCI/G	3.06		
1-123-046	04/14/2005	000133	Thallium-208	0.270	0.100	PCI/G	0.498		
1-123-046	04/14/2005	000133	Thorium-228	0.810	0.070	PCI/G	2.6		J
1-123-046	04/14/2005	000133	Thorium-230	0.910	0.050	PCI/G	2.8		
1-123-046	04/14/2005	000133	Thorium-232	0.840	0.030	PCI/G	2.1		J
1-123-047	04/15/2005	000130	Actinium-227	0.160	0.400	PCI/G	4.6	U	UJ
1-123-047	04/15/2005	000130	Americium-241	-0.025	0.150	PCI/G	63	U	UJ
1-123-047	04/15/2005	000130	Bismuth-207	0.030	0.079	PCI/G	1.2	U	UJ
1-123-047	04/15/2005	000130	Bismuth-210M	0.151	0.092	PCI/G	8.34		
1-123-047	04/15/2005	000130	Bismuth-214	0.480	0.170	PCI/G	9.87		
1-123-047	04/15/2005	000130	Cesium-137	0.100	0.140	PCI/G	3.8	U	U
1-123-047	04/15/2005	000130	Cobalt-60	0.410	0.110	PCI/G	0.7		
1-123-047	04/15/2005	000130	Lead-210	0.040	1.800	PCI/G	7.4	U	UJ
1-123-047	04/15/2005	000130	Lead-212	0.660	0.140	PCI/G	16.6		
1-123-047	04/15/2005	000130	Lead-214	0.670	0.120	PCI/G	8.92		
1-123-047	04/15/2005	000130	Plutonium-238	0.026	0.027	PCI/G	55	U	U
1-123-047	04/15/2005	000130	Plutonium-239/240	0.008	0.019	PCI/G	61.2	U	UJ
1-123-047	04/15/2005	000130	Potassium-40	19.000	5.300	PCI/G	47.8		
1-123-047	04/15/2005	000130	Protactinium-231	-0.500	2.000	PCI/G	4.1	U	UJ
1-123-047	04/15/2005	000130	Radium-226	0.480	0.170	PCI/G	2.9		J
1-123-047	04/15/2005	000130	Radium-228	0.950	0.660	PCI/G	3.06		
1-123-047	04/15/2005	000130	Thallium-208	0.176	0.087	PCI/G	0.498		
1-123-047	04/15/2005	000130	Thorium-228	0.760	0.040	PCI/G	2.6		J
1-123-047	04/15/2005	000130	Thorium-230	0.900	0.030	PCI/G	2.8		
1-123-047	04/15/2005	000130	Thorium-232	0.780	0.030	PCI/G	2.1		J
1-123-048	04/18/2005	000118	Actinium-227	-0.140	0.450	PCI/G	4.6	U	UJ
1-123-048	04/18/2005	000118	Actinium-228	0.700	0.500	PCI/G	1.93		
1-123-048	04/18/2005	000118	Americium-241	0.050	0.190	PCI/G	63	U	UJ
1-123-048	04/18/2005	000118	Bismuth-207	0.026	0.100	PCI/G	1.2	U	UJ
1-123-048	04/18/2005	000118	Bismuth-210M	0.410	0.230	PCI/G	8.34		
1-123-048	04/18/2005	000118	Bismuth-214	0.580	0.230	PCI/G	9.87		
1-123-048	04/18/2005	000118	Cesium-137	0.015	0.120	PCI/G	3.8	U	UJ
1-123-048	04/18/2005	000118	Cobalt-60	0.170	0.240	PCI/G	0.7	U	U

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-048	04/18/2005	000118	Lead-210	-0.500	2.700	PCI/G	7.4	U	UJ
1-123-048	04/18/2005	000118	Lead-212	0.820	0.130	PCI/G	16.6		
1-123-048	04/18/2005	000118	Plutonium-238	0.053	0.049	PCI/G	55	J	J
1-123-048	04/18/2005	000118	Plutonium-239/240	0.030	0.030	PCI/G	61.2	U	U
1-123-048	04/18/2005	000118	Potassium-40	27.100	1.300	PCI/G	47.8		
1-123-048	04/18/2005	000118	Protactinium-231	0.050	2.800	PCI/G	4.1	U	UJ
1-123-048	04/18/2005	000118	Radium-226	0.580	0.230	PCI/G	2.9		J
1-123-048	04/18/2005	000118	Radium-228	0.700	0.550	PCI/G	3.06		
1-123-048	04/18/2005	000118	Thallium-208	0.350	0.110	PCI/G	0.498		
1-123-048	04/18/2005	000118	Thorium-228	1.020	0.060	PCI/G	2.6		J
1-123-048	04/18/2005	000118	Thorium-230	0.760	0.020	PCI/G	2.8		
1-123-048	04/18/2005	000118	Thorium-232	0.720	0.040	PCI/G	2.1		J
1-123-048	04/18/2005	000118	Thorium-232	0.700	0.550	PCI/G	2.1		
1-123-049	04/18/2005	000117	Actinium-227	-0.110	0.370	PCI/G	4.6	U	UJ
1-123-049	04/18/2005	000117	Americium-241	-0.092	0.140	PCI/G	63	U	UJ
1-123-049	04/18/2005	000117	Bismuth-207	-0.002	0.067	PCI/G	1.2	U	UJ
1-123-049	04/18/2005	000117	Bismuth-210M	0.147	0.100	PCI/G	8.34		
1-123-049	04/18/2005	000117	Bismuth-214	0.620	0.180	PCI/G	9.87		
1-123-049	04/18/2005	000117	Cesium-137	0.030	0.110	PCI/G	3.8	U	UJ
1-123-049	04/18/2005	000117	Cobalt-60	0.227	0.210	PCI/G	0.7		
1-123-049	04/18/2005	000117	Lead-210	0.600	1.600	PCI/G	7.4	U	UJ
1-123-049	04/18/2005	000117	Lead-212	0.650	0.120	PCI/G	16.6		
1-123-049	04/18/2005	000117	Lead-214	0.630	0.130	PCI/G	8.92		
1-123-049	04/18/2005	000117	Plutonium-238	0.154	0.042	PCI/G	55		
1-123-049	04/18/2005	000117	Plutonium-239/240	0.003	0.025	PCI/G	61.2	U	UJ
1-123-049	04/18/2005	000117	Potassium-40	18.300	0.700	PCI/G	47.8		
1-123-049	04/18/2005	000117	Protactinium-231	1.900	2.300	PCI/G	4.1	U	U
1-123-049	04/18/2005	000117	Radium-226	0.620	0.180	PCI/G	2.9		J
1-123-049	04/18/2005	000117	Radium-228	0.590	0.570	PCI/G	3.06		
1-123-049	04/18/2005	000117	Thallium-208	0.239	0.092	PCI/G	0.498		
1-123-049	04/18/2005	000117	Thorium-228	0.700	0.080	PCI/G	2.6		J
1-123-049	04/18/2005	000117	Thorium-230	0.690	0.040	PCI/G	2.8		
1-123-049	04/18/2005	000117	Thorium-232	0.640	0.040	PCI/G	2.1		J
1-123-050	04/14/2005	000119	Actinium-227	0.300	0.530	PCI/G	4.6	U	UJ
1-123-050	04/14/2005	000119	Actinium-228	0.540	0.480	PCI/G	1.93		
1-123-050	04/14/2005	000119	Americium-241	0.050	0.210	PCI/G	63	U	UJ
1-123-050	04/14/2005	000119	Bismuth-207	0.001	0.090	PCI/G	1.2	U	UJ
1-123-050	04/14/2005	000119	Bismuth-210M	0.670	0.120	PCI/G	8.34		
1-123-050	04/14/2005	000119	Bismuth-214	0.490	0.230	PCI/G	9.87		
1-123-050	04/14/2005	000119	Cesium-137	0.099	0.160	PCI/G	3.8	U	U
1-123-050	04/14/2005	000119	Cobalt-60	0.410	0.120	PCI/G	0.7		
1-123-050	04/14/2005	000119	Lead-210	0.500	2.400	PCI/G	7.4	U	UJ
1-123-050	04/14/2005	000119	Lead-212	0.860	0.180	PCI/G	16.6		
1-123-050	04/14/2005	000119	Lead-214	0.630	0.160	PCI/G	8.92		
1-123-050	04/14/2005	000119	Plutonium-238	0.273	0.045	PCI/G	55		
1-123-050	04/14/2005	000119	Plutonium-239/240	0.003	0.027	PCI/G	61.2	U	UJ
1-123-050	04/14/2005	000119	Potassium-40	27.200	1.300	PCI/G	47.8		
1-123-050	04/14/2005	000119	Protactinium-231	-0.100	2.800	PCI/G	4.1	U	UJ
1-123-050	04/14/2005	000119	Radium-226	0.490	0.230	PCI/G	2.9		J
1-123-050	04/14/2005	000119	Radium-228	0.540	0.470	PCI/G	3.06		
1-123-050	04/14/2005	000119	Thallium-208	0.320	0.090	PCI/G	0.498		
1-123-050	04/14/2005	000119	Thorium-228	0.940	0.050	PCI/G	2.6		J
1-123-050	04/14/2005	000119	Thorium-230	0.860	0.040	PCI/G	2.8		
1-123-050	04/14/2005	000119	Thorium-232	0.940	0.030	PCI/G	2.1		J
1-123-050	04/14/2005	000119	Thorium-232	0.540	0.470	PCI/G	2.1		
1-123-051	04/14/2005	000111	Actinium-227	0.100	0.350	PCI/G	4.6	U	UJ
1-123-051	04/14/2005	000111	Actinium-228	0.660	0.270	PCI/G	1.93		
1-123-051	04/14/2005	000111	Americium-241	-0.020	0.150	PCI/G	63	U	UJ
1-123-051	04/14/2005	000111	Bismuth-207	0.013	0.076	PCI/G	1.2	U	UJ
1-123-051	04/14/2005	000111	Bismuth-210M	0.089	0.120	PCI/G	8.34	U	U
1-123-051	04/14/2005	000111	Bismuth-214	0.520	0.140	PCI/G	9.87		
1-123-051	04/14/2005	000111	Cesium-137	0.044	0.110	PCI/G	3.8	U	UJ
1-123-051	04/14/2005	000111	Cobalt-60	0.025	0.130	PCI/G	0.7	U	UJ
1-123-051	04/14/2005	000111	Lead-210	0.080	1.700	PCI/G	7.4	U	UJ
1-123-051	04/14/2005	000111	Lead-212	0.580	0.110	PCI/G	16.6		
1-123-051	04/14/2005	000111	Lead-214	0.510	0.140	PCI/G	8.92		
1-123-051	04/14/2005	000111	Plutonium-238	0.264	0.036	PCI/G	55		
1-123-051	04/14/2005	000111	Plutonium-239/240	0.004	0.024	PCI/G	61.2	U	UJ

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Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-051	04/14/2005	000111	Potassium-40	15.600	0.900	PCI/G	47.8		
1-123-051	04/14/2005	000111	Protactinium-231	1.200	2.100	PCI/G	4.1	U	U
1-123-051	04/14/2005	000111	Radium-226	0.520	0.140	PCI/G	2.9		J
1-123-051	04/14/2005	000111	Radium-228	0.660	0.270	PCI/G	3.06		
1-123-051	04/14/2005	000111	Thallium-208	0.240	0.059	PCI/G	0.498		
1-123-051	04/14/2005	000111	Thorium-228	0.620	0.040	PCI/G	2.6		J
1-123-051	04/14/2005	000111	Thorium-230	0.960	0.020	PCI/G	2.8		
1-123-051	04/14/2005	000111	Thorium-232	0.810	0.030	PCI/G	2.1		J
1-123-051	04/14/2005	000111	Thorium-232	0.660	0.270	PCI/G	2.1		
1-123-052	04/14/2005	000103	Actinium-227	0.090	0.460	PCI/G	4.6	U	UJ
1-123-052	04/14/2005	000103	Americium-241	0.039	0.170	PCI/G	63	U	UJ
1-123-052	04/14/2005	000103	Bismuth-207	0.018	0.071	PCI/G	1.2	U	UJ
1-123-052	04/14/2005	000103	Bismuth-210M	0.054	0.120	PCI/G	8.34	U	UJ
1-123-052	04/14/2005	000103	Bismuth-214	0.720	0.170	PCI/G	9.87		
1-123-052	04/14/2005	000103	Cesium-137	0.024	0.110	PCI/G	3.8	U	UJ
1-123-052	04/14/2005	000103	Cobalt-60	0.026	0.130	PCI/G	0.7	U	UJ
1-123-052	04/14/2005	000103	Lead-210	0.700	2.300	PCI/G	7.4	U	UJ
1-123-052	04/14/2005	000103	Lead-212	0.450	0.160	PCI/G	16.6		
1-123-052	04/14/2005	000103	Lead-214	0.810	0.150	PCI/G	8.92		
1-123-052	04/14/2005	000103	Plutonium-238	0.259	0.034	PCI/G	55		
1-123-052	04/14/2005	000103	Plutonium-239/240	0.004	0.023	PCI/G	61.2	U	UJ
1-123-052	04/14/2005	000103	Potassium-40	14.100	0.600	PCI/G	47.8		
1-123-052	04/14/2005	000103	Protactinium-231	1.200	2.600	PCI/G	4.1	U	UJ
1-123-052	04/14/2005	000103	Radium-226	0.720	0.170	PCI/G	2.9		J
1-123-052	04/14/2005	000103	Radium-228	0.590	0.600	PCI/G	3.06	U	U
1-123-052	04/14/2005	000103	Thallium-208	0.200	0.070	PCI/G	0.498		J
1-123-052	04/14/2005	000103	Thorium-228	0.600	0.030	PCI/G	2.6		
1-123-052	04/14/2005	000103	Thorium-230	0.970	0.030	PCI/G	2.8		
1-123-052	04/14/2005	000103	Thorium-232	0.730	0.030	PCI/G	2.1		
1-123-053	04/14/2005	000101	Actinium-227	0.280	0.480	PCI/G	4.6	U	U
1-123-053	04/14/2005	000101	Americium-241	0.070	0.180	PCI/G	63	U	UJ
1-123-053	04/14/2005	000101	Bismuth-207	-0.004	0.074	PCI/G	1.2	U	UJ
1-123-053	04/14/2005	000101	Bismuth-210M	0.044	0.120	PCI/G	8.34	U	UJ
1-123-053	04/14/2005	000101	Bismuth-214	0.540	0.190	PCI/G	9.87		
1-123-053	04/14/2005	000101	Cesium-137	0.024	0.120	PCI/G	3.8	U	UJ
1-123-053	04/14/2005	000101	Cobalt-60	0.100	0.160	PCI/G	0.7	U	UJ
1-123-053	04/14/2005	000101	Lead-210	0.030	2.200	PCI/G	7.4	U	UJ
1-123-053	04/14/2005	000101	Lead-212	0.490	0.130	PCI/G	16.6		
1-123-053	04/14/2005	000101	Lead-214	0.410	0.160	PCI/G	8.92		
1-123-053	04/14/2005	000101	Plutonium-238	0.244	0.031	PCI/G	55		
1-123-053	04/14/2005	000101	Plutonium-239/240	0.007	0.025	PCI/G	61.2	U	UJ
1-123-053	04/14/2005	000101	Potassium-40	11.300	0.900	PCI/G	47.8		
1-123-053	04/14/2005	000101	Protactinium-231	0.100	2.100	PCI/G	4.1	U	UJ
1-123-053	04/14/2005	000101	Radium-226	0.540	0.190	PCI/G	2.9		J
1-123-053	04/14/2005	000101	Radium-228	0.360	0.550	PCI/G	3.06	U	U
1-123-053	04/14/2005	000101	Thallium-208	0.230	0.060	PCI/G	0.498		J
1-123-053	04/14/2005	000101	Thorium-228	0.830	0.040	PCI/G	2.6		
1-123-053	04/14/2005	000101	Thorium-230	1.060	0.030	PCI/G	2.8		
1-123-053	04/14/2005	000101	Thorium-232	0.830	0.020	PCI/G	2.1		
1-123-054D	04/14/2005	000098	Actinium-227	0.190	0.390	PCI/G	4.6	U	UJ
1-123-054	04/14/2005	000097	Actinium-227	-0.120	0.410	PCI/G	4.6	U	UJ
1-123-054D	04/14/2005	000098	Actinium-228	0.610	0.390	PCI/G	1.93		
1-123-054D	04/14/2005	000098	Americium-241	0.036	0.160	PCI/G	63	U	UJ
1-123-054	04/14/2005	000097	Americium-241	-0.010	0.190	PCI/G	63	U	UJ
1-123-054	04/14/2005	000097	Bismuth-207	-0.014	0.068	PCI/G	1.2	U	UJ
1-123-054D	04/14/2005	000098	Bismuth-207	-0.035	0.065	PCI/G	1.2	U	UJ
1-123-054D	04/14/2005	000098	Bismuth-210M	0.046	0.100	PCI/G	8.34	U	UJ
1-123-054	04/14/2005	000097	Bismuth-210M	0.024	0.120	PCI/G	8.34	U	UJ
1-123-054	04/14/2005	000097	Bismuth-214	0.660	0.190	PCI/G	9.87		
1-123-054D	04/14/2005	000098	Bismuth-214	0.550	0.170	PCI/G	9.87		
1-123-054	04/14/2005	000097	Cesium-137	0.096	0.160	PCI/G	3.8	U	U
1-123-054D	04/14/2005	000098	Cesium-137	0.047	0.120	PCI/G	3.8	U	UJ
1-123-054	04/14/2005	000097	Cobalt-60	0.037	0.150	PCI/G	0.7	U	UJ
1-123-054D	04/14/2005	000098	Cobalt-60	0.029	0.110	PCI/G	0.7	U	UJ
1-123-054D	04/14/2005	000098	Lead-210	1.000	2.100	PCI/G	7.4	U	UJ
1-123-054	04/14/2005	000097	Lead-210	0.700	2.500	PCI/G	7.4	U	UJ
1-123-054	04/14/2005	000097	Lead-212	0.520	0.150	PCI/G	16.6		
1-123-054D	04/14/2005	000098	Lead-212	0.450	0.130	PCI/G	16.6		

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-054	04/14/2005	000097	Lead-214	0.710	0.120	PCI/G	8.92		
1-123-054	04/14/2005	000097	Plutonium-238	0.610	0.040	PCI/G	55		
1-123-054D	04/14/2005	000098	Plutonium-238	0.560	0.040	PCI/G	55		
1-123-054D	04/14/2005	000098	Plutonium-239/240	0.033	0.021	PCI/G	61.2	J	J
1-123-054	04/14/2005	000097	Plutonium-239/240	0.018	0.016	PCI/G	61.2	J	J
1-123-054D	04/14/2005	000098	Potassium-40	12.800	1.000	PCI/G	47.8		
1-123-054	04/14/2005	000097	Potassium-40	11.400	1.000	PCI/G	47.8		
1-123-054	04/14/2005	000097	Protactinium-231	1.800	2.700	PCI/G	4.1	U	U
1-123-054D	04/14/2005	000098	Protactinium-231	1.330	2.000	PCI/G	4.1	U	U
1-123-054	04/14/2005	000097	Radium-226	0.660	0.190	PCI/G	2.9		J
1-123-054D	04/14/2005	000098	Radium-226	0.550	0.170	PCI/G	2.9		J
1-123-054D	04/14/2005	000098	Radium-228	0.610	0.390	PCI/G	3.06		
1-123-054	04/14/2005	000097	Radium-228	0.340	0.570	PCI/G	3.06	U	U
1-123-054	04/14/2005	000097	Thallium-208	0.150	0.092	PCI/G	0.498		J
1-123-054D	04/14/2005	000098	Thallium-208	0.126	0.078	PCI/G	0.498		J
1-123-054D	04/14/2005	000098	Thorium-228	0.660	0.030	PCI/G	2.6		
1-123-054	04/14/2005	000097	Thorium-228	0.640	0.030	PCI/G	2.6		
1-123-054	04/14/2005	000097	Thorium-230	1.110	0.020	PCI/G	2.8		
1-123-054D	04/14/2005	000098	Thorium-230	1.050	0.030	PCI/G	2.8		
1-123-054	04/14/2005	000097	Thorium-232	0.660	0.020	PCI/G	2.1		
1-123-054D	04/14/2005	000098	Thorium-232	0.630	0.020	PCI/G	2.1		
1-123-054D	04/14/2005	000098	Thorium-232	0.610	0.390	PCI/G	2.1		
1-123-055	04/13/2005	000096	Actinium-227	0.110	0.350	PCI/G	4.6	U	UJ
1-123-055	04/13/2005	000096	Actinium-228	0.350	0.270	PCI/G	1.93		
1-123-055	04/13/2005	000096	Americium-241	-0.037	0.120	PCI/G	63	U	UJ
1-123-055	04/13/2005	000096	Bismuth-207	0.002	0.059	PCI/G	1.2	U	UJ
1-123-055	04/13/2005	000096	Bismuth-210M	0.004	0.086	PCI/G	8.34	U	UJ
1-123-055	04/13/2005	000096	Bismuth-214	0.490	0.120	PCI/G	9.87		
1-123-055	04/13/2005	000096	Cesium-137	0.060	0.083	PCI/G	3.8	U	U
1-123-055	04/13/2005	000096	Cobalt-60	0.026	0.110	PCI/G	0.7	U	UJ
1-123-055	04/13/2005	000096	Lead-210	0.410	1.800	PCI/G	7.4	U	UJ
1-123-055	04/13/2005	000096	Lead-212	0.330	0.120	PCI/G	16.6		
1-123-055	04/13/2005	000096	Lead-214	0.610	0.100	PCI/G	8.92		
1-123-055	04/13/2005	000096	Plutonium-238	0.410	0.030	PCI/G	55		
1-123-055	04/13/2005	000096	Plutonium-239/240	0.020	0.023	PCI/G	61.2	U	UJ
1-123-055	04/13/2005	000096	Potassium-40	10.900	0.700	PCI/G	47.8		
1-123-055	04/13/2005	000096	Protactinium-231	0.400	1.900	PCI/G	4.1	U	UJ
1-123-055	04/13/2005	000096	Radium-226	0.490	0.120	PCI/G	2.9		J
1-123-055	04/13/2005	000096	Radium-228	0.410	0.470	PCI/G	3.06	U	U
1-123-055	04/13/2005	000096	Thallium-208	0.204	0.075	PCI/G	0.498		J
1-123-055	04/13/2005	000096	Thorium-228	0.570	0.030	PCI/G	2.6		
1-123-055	04/13/2005	000096	Thorium-230	0.830	0.030	PCI/G	2.8		
1-123-055	04/13/2005	000096	Thorium-232	0.540	0.030	PCI/G	2.1		
1-123-056	04/14/2005	000140	Actinium-227	0.040	0.540	PCI/G	4.6	U	UJ
1-123-056	04/14/2005	000140	Actinium-228	1.190	0.430	PCI/G	1.93		
1-123-056	04/14/2005	000140	Americium-241	-0.100	0.190	PCI/G	63	U	UJ
1-123-056	04/14/2005	000140	Bismuth-207	0.011	0.110	PCI/G	1.2	U	UJ
1-123-056	04/14/2005	000140	Bismuth-210M	-0.044	0.110	PCI/G	8.34	U	UJ
1-123-056	04/14/2005	000140	Bismuth-214	0.520	0.200	PCI/G	9.87		
1-123-056	04/14/2005	000140	Cesium-137	-0.069	0.100	PCI/G	3.8	U	U
1-123-056	04/14/2005	000140	Cobalt-60	0.012	0.120	PCI/G	0.7	U	UJ
1-123-056	04/14/2005	000140	Lead-210	0.800	2.600	PCI/G	7.4	U	UJ
1-123-056	04/14/2005	000140	Lead-212	0.680	0.180	PCI/G	16.6		
1-123-056	04/14/2005	000140	Lead-214	0.520	0.170	PCI/G	8.92		
1-123-056	04/14/2005	000140	Plutonium-238	0.095	0.034	PCI/G	55	J	J
1-123-056	04/14/2005	000140	Plutonium-239/240	0.005	0.024	PCI/G	61.2	U	UJ
1-123-056	04/14/2005	000140	Potassium-40	26.700	0.900	PCI/G	47.8		
1-123-056	04/14/2005	000140	Protactinium-231	1.800	3.100	PCI/G	4.1	U	U
1-123-056	04/14/2005	000140	Radium-226	0.520	0.200	PCI/G	2.9		J
1-123-056	04/14/2005	000140	Radium-228	1.190	0.470	PCI/G	3.06		
1-123-056	04/14/2005	000140	Thallium-208	0.260	0.100	PCI/G	0.498		
1-123-056	04/14/2005	000140	Thorium-228	1.120	0.100	PCI/G	2.6		
1-123-056	04/14/2005	000140	Thorium-230	0.610	0.070	PCI/G	2.8		
1-123-056	04/14/2005	000140	Thorium-232	1.190	0.470	PCI/G	2.1		
1-123-056	04/14/2005	000140	Thorium-232	0.850	0.060	PCI/G	2.1		
1-123-057	04/14/2005	000139	Actinium-227	0.100	0.440	PCI/G	4.6	U	UJ
1-123-057	04/14/2005	000139	Actinium-228	0.810	0.390	PCI/G	1.93		
1-123-057	04/14/2005	000139	Americium-241	-0.010	0.170	PCI/G	63	U	UJ

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Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-057	04/14/2005	000139	Bismuth-207	-0.020	0.077	PCI/G	1.2	U	UJ
1-123-057	04/14/2005	000139	Bismuth-210M	-0.045	0.092	PCI/G	8.34	U	UJ
1-123-057	04/14/2005	000139	Bismuth-214	0.580	0.200	PCI/G	9.87		
1-123-057	04/14/2005	000139	Cesium-137	-0.042	0.090	PCI/G	3.8	U	UJ
1-123-057	04/14/2005	000139	Cobalt-60	0.014	0.120	PCI/G	0.7	U	UJ
1-123-057	04/14/2005	000139	Lead-210	-0.060	2.300	PCI/G	7.4	U	UJ
1-123-057	04/14/2005	000139	Lead-212	0.710	0.160	PCI/G	16.6		
1-123-057	04/14/2005	000139	Lead-214	0.530	0.190	PCI/G	8.92		
1-123-057	04/14/2005	000139	Plutonium-238	0.097	0.037	PCI/G	55	J	J
1-123-057	04/14/2005	000139	Plutonium-239/240	0.030	0.030	PCI/G	61.2	U	U
1-123-057	04/14/2005	000139	Potassium-40	25.500	0.500	PCI/G	47.8		
1-123-057	04/14/2005	000139	Protactinium-231	0.300	2.400	PCI/G	4.1	U	UJ
1-123-057	04/14/2005	000139	Radium-226	0.580	0.200	PCI/G	2.9		J
1-123-057	04/14/2005	000139	Radium-228	0.810	0.390	PCI/G	3.06		
1-123-057	04/14/2005	000139	Thallium-208	0.310	0.100	PCI/G	0.498		
1-123-057	04/14/2005	000139	Thorium-228	1.010	0.070	PCI/G	2.6		
1-123-057	04/14/2005	000139	Thorium-230	0.870	0.030	PCI/G	2.8		
1-123-057	04/14/2005	000139	Thorium-232	1.040	0.050	PCI/G	2.1		
1-123-057	04/14/2005	000139	Thorium-232	0.810	0.390	PCI/G	2.1		
1-123-058	04/14/2005	000131	Actinium-227	0.020	0.400	PCI/G	4.6	U	UJ
1-123-058	04/14/2005	000131	Americium-241	0.130	0.210	PCI/G	63	U	U
1-123-058	04/14/2005	000131	Bismuth-207	0.026	0.094	PCI/G	1.2	U	UJ
1-123-058	04/14/2005	000131	Bismuth-210M	0.570	0.110	PCI/G	8.34		
1-123-058	04/14/2005	000131	Bismuth-214	0.410	0.170	PCI/G	9.87		
1-123-058	04/14/2005	000131	Cesium-137	0.058	0.140	PCI/G	3.8	U	UJ
1-123-058	04/14/2005	000131	Cobalt-60	0.440	0.140	PCI/G	0.7		
1-123-058	04/14/2005	000131	Lead-210	-0.050	2.200	PCI/G	7.4	U	UJ
1-123-058	04/14/2005	000131	Lead-212	0.460	0.140	PCI/G	16.6		
1-123-058	04/14/2005	000131	Lead-214	0.570	0.180	PCI/G	8.92		
1-123-058	04/14/2005	000131	Plutonium-238	0.231	0.027	PCI/G	55		
1-123-058	04/14/2005	000131	Plutonium-239/240	0.010	0.031	PCI/G	61.2	U	U
1-123-058	04/14/2005	000131	Potassium-40	13.800	0.900	PCI/G	47.8		
1-123-058	04/14/2005	000131	Protactinium-231	-0.040	2.400	PCI/G	4.1	U	UJ
1-123-058	04/14/2005	000131	Radium-226	0.410	0.170	PCI/G	2.9		J
1-123-058	04/14/2005	000131	Radium-228	0.410	0.590	PCI/G	3.06	U	U
1-123-058	04/14/2005	000131	Thallium-208	0.189	0.084	PCI/G	0.498		
1-123-058	04/14/2005	000131	Thorium-228	0.690	0.070	PCI/G	2.6		J
1-123-058	04/14/2005	000131	Thorium-230	0.840	0.040	PCI/G	2.8		
1-123-058	04/14/2005	000131	Thorium-232	0.700	0.030	PCI/G	2.1		J
1-123-059	04/14/2005	000110	Actinium-227	0.090	0.350	PCI/G	4.6	U	UJ
1-123-059	04/14/2005	000110	Americium-241	0.051	0.150	PCI/G	63	U	UJ
1-123-059	04/14/2005	000110	Bismuth-207	0.004	0.055	PCI/G	1.2	U	UJ
1-123-059	04/14/2005	000110	Bismuth-210M	0.002	0.083	PCI/G	8.34	U	UJ
1-123-059	04/14/2005	000110	Bismuth-214	0.370	0.110	PCI/G	9.87		
1-123-059	04/14/2005	000110	Cesium-137	0.034	0.093	PCI/G	3.8	U	UJ
1-123-059	04/14/2005	000110	Cobalt-60	0.032	0.100	PCI/G	0.7	U	UJ
1-123-059	04/14/2005	000110	Lead-210	-0.010	1.500	PCI/G	7.4	U	UJ
1-123-059	04/14/2005	000110	Lead-212	0.280	0.120	PCI/G	16.6		
1-123-059	04/14/2005	000110	Lead-214	0.610	0.100	PCI/G	8.92		
1-123-059	04/14/2005	000110	Plutonium-238	0.041	0.038	PCI/G	55	J	J
1-123-059	04/14/2005	000110	Plutonium-239/240	0.030	0.030	PCI/G	61.2	U	U
1-123-059	04/14/2005	000110	Potassium-40	8.700	0.600	PCI/G	47.8		
1-123-059	04/14/2005	000110	Protactinium-231	0.200	1.800	PCI/G	4.1	U	UJ
1-123-059	04/14/2005	000110	Radium-226	0.370	0.110	PCI/G	2.9		J
1-123-059	04/14/2005	000110	Radium-228	0.230	0.380	PCI/G	3.06	U	U
1-123-059	04/14/2005	000110	Thallium-208	0.112	0.073	PCI/G	0.498		
1-123-059	04/14/2005	000110	Thorium-228	0.270	0.080	PCI/G	2.6		J
1-123-059	04/14/2005	000110	Thorium-230	0.780	0.040	PCI/G	2.8		
1-123-059	04/14/2005	000110	Thorium-232	0.306	0.036	PCI/G	2.1		J
1-123-060	04/14/2005	000109	Actinium-227	-0.020	0.370	PCI/G	4.6	U	UJ
1-123-060	04/14/2005	000109	Americium-241	-0.039	0.160	PCI/G	63	U	UJ
1-123-060	04/14/2005	000109	Bismuth-207	-0.002	0.072	PCI/G	1.2	U	UJ
1-123-060	04/14/2005	000109	Bismuth-210M	0.026	0.120	PCI/G	8.34	U	UJ
1-123-060	04/14/2005	000109	Bismuth-214	0.450	0.180	PCI/G	9.87		
1-123-060	04/14/2005	000109	Cesium-137	0.006	0.092	PCI/G	3.8	U	UJ
1-123-060	04/14/2005	000109	Cobalt-60	0.015	0.130	PCI/G	0.7	U	UJ
1-123-060	04/14/2005	000109	Lead-210	0.500	2.200	PCI/G	7.4	U	UJ
1-123-060	04/14/2005	000109	Lead-212	0.550	0.120	PCI/G	16.6		

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-060	04/14/2005	000109	Lead-214	0.610	0.160	PCI/G	8.92		
1-123-060	04/14/2005	000109	Plutonium-238	0.256	0.028	PCI/G	55		
1-123-060	04/14/2005	000109	Plutonium-239/240	0.006	0.029	PCI/G	61.2	U	UJ
1-123-060	04/14/2005	000109	Potassium-40	13.700	0.900	PCI/G	47.8		
1-123-060	04/14/2005	000109	Protactinium-231	1.200	2.700	PCI/G	4.1	U	UJ
1-123-060	04/14/2005	000109	Radium-226	0.450	0.180	PCI/G	2.9		J
1-123-060	04/14/2005	000109	Radium-228	0.670	0.660	PCI/G	3.06		
1-123-060	04/14/2005	000109	Thallium-208	0.194	0.077	PCI/G	0.498		J
1-123-060	04/14/2005	000109	Thorium-228	0.770	0.050	PCI/G	2.6		
1-123-060	04/14/2005	000109	Thorium-230	0.810	0.030	PCI/G	2.8		
1-123-060	04/14/2005	000109	Thorium-232	0.700	0.040	PCI/G	2.1		
1-123-061	04/14/2005	000100	Actinium-227	-0.005	0.260	PCI/G	4.6	U	UJ
1-123-061	04/14/2005	000100	Americium-241	0.051	0.120	PCI/G	63	U	UJ
1-123-061	04/14/2005	000100	Bismuth-207	0.004	0.056	PCI/G	1.2	U	UJ
1-123-061	04/14/2005	000100	Bismuth-210M	0.022	0.076	PCI/G	8.34	U	UJ
1-123-061	04/14/2005	000100	Bismuth-214	0.430	0.130	PCI/G	9.87		
1-123-061	04/14/2005	000100	Cesium-137	-0.017	0.083	PCI/G	3.8	U	UJ
1-123-061	04/14/2005	000100	Cobalt-60	-0.029	0.072	PCI/G	0.7	U	UJ
1-123-061	04/14/2005	000100	Lead-210	-0.140	1.400	PCI/G	7.4	U	UJ
1-123-061	04/14/2005	000100	Lead-212	0.460	0.100	PCI/G	16.6		
1-123-061	04/14/2005	000100	Lead-214	0.460	0.100	PCI/G	8.92		
1-123-061	04/14/2005	000100	Plutonium-238	0.173	0.034	PCI/G	55		
1-123-061	04/14/2005	000100	Plutonium-239/240	0.013	0.020	PCI/G	61.2	U	UJ
1-123-061	04/14/2005	000100	Potassium-40	12.500	0.700	PCI/G	47.8		
1-123-061	04/14/2005	000100	Protactinium-231	0.581	1.800	PCI/G	4.1	U	UJ
1-123-061	04/14/2005	000100	Radium-226	0.430	0.130	PCI/G	2.9		J
1-123-061	04/14/2005	000100	Radium-228	0.350	0.460	PCI/G	3.06	U	U
1-123-061	04/14/2005	000100	Thallium-208	0.137	0.071	PCI/G	0.498		J
1-123-061	04/14/2005	000100	Thorium-228	0.590	0.030	PCI/G	2.6		
1-123-061	04/14/2005	000100	Thorium-230	0.860	0.020	PCI/G	2.8		
1-123-061	04/14/2005	000100	Thorium-232	0.680	0.020	PCI/G	2.1		
1-123-062	03/31/2005	000099	Actinium-227	-0.110	0.390	PCI/G	4.6	U	UJ
1-123-062	03/31/2005	000099	Americium-241	0.028	0.160	PCI/G	63	U	UJ
1-123-062	03/31/2005	000099	Bismuth-207	0.008	0.078	PCI/G	1.2	U	UJ
1-123-062	03/31/2005	000099	Bismuth-210M	0.028	0.098	PCI/G	8.34	U	UJ
1-123-062	03/31/2005	000099	Bismuth-214	0.370	0.160	PCI/G	9.87		
1-123-062	03/31/2005	000099	Cesium-137	-0.009	0.093	PCI/G	3.8	U	UJ
1-123-062	03/31/2005	000099	Cobalt-60	-0.005	0.110	PCI/G	0.7	U	UJ
1-123-062	03/31/2005	000099	Lead-210	1.200	2.100	PCI/G	7.4	U	U
1-123-062	03/31/2005	000099	Lead-212	0.510	0.110	PCI/G	16.6		
1-123-062	03/31/2005	000099	Lead-214	0.450	0.140	PCI/G	8.92		
1-123-062	03/31/2005	000099	Plutonium-238	0.029	0.035	PCI/G	55	U	UJ
1-123-062	03/31/2005	000099	Plutonium-239/240	-0.002	0.025	PCI/G	61.2	U	UJ
1-123-062	03/31/2005	000099	Potassium-40	16.900	0.900	PCI/G	47.8		
1-123-062	03/31/2005	000099	Protactinium-231	0.900	2.200	PCI/G	4.1	U	UJ
1-123-062	03/31/2005	000099	Radium-226	0.370	0.160	PCI/G	2.9		J
1-123-062	03/31/2005	000099	Radium-228	0.580	0.550	PCI/G	3.06		
1-123-062	03/31/2005	000099	Thallium-208	0.269	0.085	PCI/G	0.498		J
1-123-062	03/31/2005	000099	Thorium-228	0.910	0.040	PCI/G	2.6		
1-123-062	03/31/2005	000099	Thorium-230	0.780	0.040	PCI/G	2.8		
1-123-062	03/31/2005	000099	Thorium-232	0.720	0.040	PCI/G	2.1		
1-123-063	03/31/2005	000156	Actinium-227	-0.330	0.280	PCI/G	4.6	U	U
1-123-063	03/31/2005	000156	Americium-241	-0.049	0.120	PCI/G	63	U	UJ
1-123-063	03/31/2005	000156	Bismuth-207	-0.005	0.058	PCI/G	1.2	U	UJ
1-123-063	03/31/2005	000156	Bismuth-210M	-0.003	0.083	PCI/G	8.34	U	UJ
1-123-063	03/31/2005	000156	Cesium-137	0.024	0.095	PCI/G	3.8	U	UJ
1-123-063	03/31/2005	000156	Cobalt-60	0.021	0.110	PCI/G	0.7	U	UJ
1-123-063	03/31/2005	000156	Lead-210	0.720	1.600	PCI/G	7.4	U	UJ
1-123-063	03/31/2005	000156	Lead-212	0.191	0.130	PCI/G	16.6		
1-123-063	03/31/2005	000156	Lead-214	0.290	0.130	PCI/G	8.92		
1-123-063	03/31/2005	000156	Plutonium-238	0.570	0.040	PCI/G	55		
1-123-063	03/31/2005	000156	Plutonium-239/240	0.028	0.021	PCI/G	61.2	J	J
1-123-063	03/31/2005	000156	Potassium-40	6.100	0.800	PCI/G	47.8		
1-123-063	03/31/2005	000156	Protactinium-231	0.660	1.700	PCI/G	4.1	U	UJ
1-123-063	03/31/2005	000156	Radium-226	0.330	0.250	PCI/G	2.9		J
1-123-063	03/31/2005	000156	Radium-228	0.440	0.450	PCI/G	3.06	U	U
1-123-063	03/31/2005	000156	Thorium-228	0.390	0.050	PCI/G	2.6		
1-123-063	03/31/2005	000156	Thorium-230	0.710	0.040	PCI/G	2.8		

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-063	03/31/2005	000156	Thorium-232	0.370	0.030	PCI/G	2.1		
1-123-064	03/31/2005	000158	Actinium-227	-0.070	0.280	PCI/G	4.6	U	UJ
1-123-064	03/31/2005	000158	Americium-241	0.030	0.130	PCI/G	63	U	UJ
1-123-064	03/31/2005	000158	Bismuth-207	0.008	0.056	PCI/G	1.2	U	UJ
1-123-064	03/31/2005	000158	Bismuth-210M	0.049	0.084	PCI/G	8.34	U	U
1-123-064	03/31/2005	000158	Bismuth-214	0.280	0.100	PCI/G	9.87		
1-123-064	03/31/2005	000158	Cesium-137	0.033	0.089	PCI/G	3.8	U	UJ
1-123-064	03/31/2005	000158	Cobalt-60	0.025	0.076	PCI/G	0.7	U	UJ
1-123-064	03/31/2005	000158	Lead-210	0.380	1.600	PCI/G	7.4	U	UJ
1-123-064	03/31/2005	000158	Lead-212	0.177	0.094	PCI/G	16.6		
1-123-064	03/31/2005	000158	Lead-214	0.340	0.110	PCI/G	8.92		
1-123-064	03/31/2005	000158	Plutonium-238	0.251	0.035	PCI/G	55		
1-123-064	03/31/2005	000158	Plutonium-239/240	0.005	0.013	PCI/G	61.2	U	UJ
1-123-064	03/31/2005	000158	Potassium-40	5.600	0.700	PCI/G	47.8		
1-123-064	03/31/2005	000158	Protactinium-231	0.060	1.500	PCI/G	4.1	U	UJ
1-123-064	03/31/2005	000158	Radium-226	0.280	0.100	PCI/G	2.9		J
1-123-064	03/31/2005	000158	Radium-228	0.240	0.390	PCI/G	3.06	U	U
1-123-064	03/31/2005	000158	Thallium-208	0.091	0.057	PCI/G	0.498		
1-123-064	03/31/2005	000158	Thorium-228	0.360	0.080	PCI/G	2.6		
1-123-064	03/31/2005	000158	Thorium-230	0.750	0.050	PCI/G	2.8		
1-123-064	03/31/2005	000158	Thorium-232	0.400	0.040	PCI/G	2.1		
1-123-065	04/14/2005	000108	Actinium-227	0.070	0.270	PCI/G	4.6	U	UJ
1-123-065	04/14/2005	000108	Americium-241	0.021	0.100	PCI/G	63	U	UJ
1-123-065	04/14/2005	000108	Bismuth-207	0.005	0.045	PCI/G	1.2	U	UJ
1-123-065	04/14/2005	000108	Bismuth-210M	-0.002	0.059	PCI/G	8.34	U	UJ
1-123-065	04/14/2005	000108	Bismuth-214	0.360	0.080	PCI/G	9.87		
1-123-065	04/14/2005	000108	Cesium-137	0.036	0.097	PCI/G	3.8	U	UJ
1-123-065	04/14/2005	000108	Cobalt-60	0.007	0.070	PCI/G	0.7	U	UJ
1-123-065	04/14/2005	000108	Lead-210	0.260	1.300	PCI/G	7.4	U	UJ
1-123-065	04/14/2005	000108	Lead-212	0.210	0.087	PCI/G	16.6		
1-123-065	04/14/2005	000108	Lead-214	0.367	0.083	PCI/G	8.92		
1-123-065	04/14/2005	000108	Plutonium-238	0.630	0.050	PCI/G	55		
1-123-065	04/14/2005	000108	Plutonium-239/240	0.026	0.044	PCI/G	61.2	U	UJ
1-123-065	04/14/2005	000108	Potassium-40	4.800	2.400	PCI/G	47.8		
1-123-065	04/14/2005	000108	Protactinium-231	0.480	1.300	PCI/G	4.1	U	UJ
1-123-065	04/14/2005	000108	Radium-226	0.360	0.080	PCI/G	2.9		J
1-123-065	04/14/2005	000108	Radium-228	0.280	0.330	PCI/G	3.06	U	U
1-123-065	04/14/2005	000108	Thallium-208	0.076	0.058	PCI/G	0.498		J
1-123-065	04/14/2005	000108	Thorium-228	0.360	0.030	PCI/G	2.6		
1-123-065	04/14/2005	000108	Thorium-230	0.550	0.030	PCI/G	2.8		
1-123-065	04/14/2005	000108	Thorium-232	0.320	0.030	PCI/G	2.1		
1-123-066	03/31/2005	000157	Actinium-227	-0.100	0.180	PCI/G	4.6	U	UJ
1-123-066	03/31/2005	000157	Americium-241	-0.009	0.084	PCI/G	63	U	UJ
1-123-066	03/31/2005	000157	Bismuth-207	0.005	0.038	PCI/G	1.2	U	UJ
1-123-066	03/31/2005	000157	Bismuth-210M	-0.008	0.050	PCI/G	8.34	U	UJ
1-123-066	03/31/2005	000157	Bismuth-214	0.390	0.040	PCI/G	9.87		
1-123-066	03/31/2005	000157	Cesium-137	-0.001	0.055	PCI/G	3.8	U	UJ
1-123-066	03/31/2005	000157	Cobalt-60	-0.003	0.066	PCI/G	0.7	U	UJ
1-123-066	03/31/2005	000157	Lead-210	0.460	1.200	PCI/G	7.4	U	UJ
1-123-066	03/31/2005	000157	Lead-212	0.158	0.074	PCI/G	16.6		
1-123-066	03/31/2005	000157	Lead-214	0.360	0.070	PCI/G	8.92		
1-123-066	03/31/2005	000157	Plutonium-238	0.022	0.034	PCI/G	55	U	UJ
1-123-066	03/31/2005	000157	Plutonium-239/240	0.004	0.020	PCI/G	61.2	U	UJ
1-123-066	03/31/2005	000157	Potassium-40	4.300	0.500	PCI/G	47.8		
1-123-066	03/31/2005	000157	Protactinium-231	0.580	1.200	PCI/G	4.1	U	UJ
1-123-066	03/31/2005	000157	Radium-226	0.390	0.040	PCI/G	2.9		J
1-123-066	03/31/2005	000157	Radium-228	0.100	0.240	PCI/G	3.06	U	UJ
1-123-066	03/31/2005	000157	Thallium-208	0.047	0.047	PCI/G	0.498		
1-123-066	03/31/2005	000157	Thorium-228	0.200	0.045	PCI/G	2.6		
1-123-066	03/31/2005	000157	Thorium-230	0.500	0.030	PCI/G	2.8		
1-123-066	03/31/2005	000157	Thorium-232	0.202	0.018	PCI/G	2.1		
1-123-067	04/14/2005	000138	Actinium-227	0.150	0.490	PCI/G	4.6	U	UJ
1-123-067	04/14/2005	000138	Americium-241	-0.020	0.190	PCI/G	63	U	UJ
1-123-067	04/14/2005	000138	Bismuth-207	0.004	0.083	PCI/G	1.2	U	UJ
1-123-067	04/14/2005	000138	Bismuth-210M	0.069	0.140	PCI/G	8.34	U	U
1-123-067	04/14/2005	000138	Bismuth-214	0.570	0.200	PCI/G	9.87		
1-123-067	04/14/2005	000138	Cesium-137	-0.062	0.064	PCI/G	3.8	U	U

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
1-123-067	04/14/2005	000138	Cobalt-60	-0.006	0.130	PCI/G	0.7	U	UJ
1-123-067	04/14/2005	000138	Lead-210	0.500	2.500	PCI/G	7.4	U	UJ
1-123-067	04/14/2005	000138	Lead-212	0.710	0.160	PCI/G	16.6		
1-123-067	04/14/2005	000138	Lead-214	0.530	0.190	PCI/G	8.92		
1-123-067	04/14/2005	000138	Plutonium-238	0.040	0.040	PCI/G	55	U	U
1-123-067	04/14/2005	000138	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
1-123-067	04/14/2005	000138	Potassium-40	16.700	0.800	PCI/G	47.8		
1-123-067	04/14/2005	000138	Protactinium-231	1.300	2.800	PCI/G	4.1	U	UJ
1-123-067	04/14/2005	000138	Radium-226	0.570	0.200	PCI/G	2.9		J
1-123-067	04/14/2005	000138	Radium-228	0.690	0.700	PCI/G	3.06	U	U
1-123-067	04/14/2005	000138	Thallium-208	0.252	0.100	PCI/G	0.498		
1-123-067	04/14/2005	000138	Thorium-228	0.930	0.060	PCI/G	2.6		
1-123-067	04/14/2005	000138	Thorium-230	0.860	0.020	PCI/G	2.8		
1-123-067	04/14/2005	000138	Thorium-232	0.800	0.020	PCI/G	2.1		
1-123-B6	04/15/2005	000144	Actinium-227	0.140	0.500	PCI/G	4.6	U	UJ
1-123-B6	04/15/2005	000144	Americium-241	-0.006	0.170	PCI/G	63	U	UJ
1-123-B6	04/15/2005	000144	Bismuth-207	0.018	0.078	PCI/G	1.2	U	UJ
1-123-B6	04/15/2005	000144	Bismuth-210M	0.029	0.110	PCI/G	8.34	U	UJ
1-123-B6	04/15/2005	000144	Bismuth-214	0.630	0.210	PCI/G	9.87		
1-123-B6	04/15/2005	000144	Cesium-137	0.044	0.120	PCI/G	3.8	U	UJ
1-123-B6	04/15/2005	000144	Cobalt-60	0.051	0.140	PCI/G	0.7	U	UJ
1-123-B6	04/15/2005	000144	Lead-210	1.200	2.500	PCI/G	7.4	U	U
1-123-B6	04/15/2005	000144	Lead-212	0.500	0.150	PCI/G	16.6		
1-123-B6	04/15/2005	000144	Lead-214	0.660	0.160	PCI/G	8.92		
1-123-B6	04/15/2005	000144	Plutonium-238	0.060	0.060	PCI/G	55	U	U
1-123-B6	04/15/2005	000144	Plutonium-239/240	0.050	0.050	PCI/G	61.2	U	U
1-123-B6	04/15/2005	000144	Potassium-40	16.500	0.200	PCI/G	47.8		
1-123-B6	04/15/2005	000144	Protactinium-231	0.700	2.600	PCI/G	4.1	U	UJ
1-123-B6	04/15/2005	000144	Radium-226	0.630	0.210	PCI/G	2.9		J
1-123-B6	04/15/2005	000144	Radium-228	0.500	0.600	PCI/G	3.06	U	U
1-123-B6	04/15/2005	000144	Thallium-208	0.290	0.090	PCI/G	0.498		
1-123-B6	04/15/2005	000144	Thorium-228	0.720	0.070	PCI/G	2.6		
1-123-B6	04/15/2005	000144	Thorium-230	0.930	0.020	PCI/G	2.8		
1-123-B6	04/15/2005	000144	Thorium-232	0.570	0.030	PCI/G	2.1		
1-123-B7	04/15/2005	000142	Actinium-227	0.090	0.490	PCI/G	4.6	U	UJ
1-123-B7	04/15/2005	000142	Actinium-228	0.900	0.300	PCI/G	1.93		
1-123-B7	04/15/2005	000142	Americium-241	0.070	0.190	PCI/G	63	U	UJ
1-123-B7	04/15/2005	000142	Bismuth-207	-0.007	0.084	PCI/G	1.2	U	UJ
1-123-B7	04/15/2005	000142	Bismuth-210M	-0.014	0.110	PCI/G	8.34	U	UJ
1-123-B7	04/15/2005	000142	Bismuth-214	0.550	0.200	PCI/G	9.87		
1-123-B7	04/15/2005	000142	Cesium-137	-0.032	0.099	PCI/G	3.8	U	UJ
1-123-B7	04/15/2005	000142	Cobalt-60	0.036	0.140	PCI/G	0.7	U	UJ
1-123-B7	04/15/2005	000142	Lead-210	0.700	2.400	PCI/G	7.4	U	UJ
1-123-B7	04/15/2005	000142	Lead-212	0.700	0.130	PCI/G	16.6		
1-123-B7	04/15/2005	000142	Lead-214	0.510	0.170	PCI/G	8.92		
1-123-B7	04/15/2005	000142	Plutonium-238	0.003	0.058	PCI/G	55	U	UJ
1-123-B7	04/15/2005	000142	Plutonium-239/240	0.040	0.040	PCI/G	61.2	U	U
1-123-B7	04/15/2005	000142	Potassium-40	16.500	1.300	PCI/G	47.8		
1-123-B7	04/15/2005	000142	Protactinium-231	1.000	2.500	PCI/G	4.1	U	UJ
1-123-B7	04/15/2005	000142	Radium-226	0.550	0.200	PCI/G	2.9		J
1-123-B7	04/15/2005	000142	Radium-228	0.900	0.300	PCI/G	3.06		
1-123-B7	04/15/2005	000142	Thallium-208	0.170	0.090	PCI/G	0.498		
1-123-B7	04/15/2005	000142	Thorium-228	0.680	0.060	PCI/G	2.6		
1-123-B7	04/15/2005	000142	Thorium-230	0.980	0.020	PCI/G	2.8		
1-123-B7	04/15/2005	000142	Thorium-232	0.900	0.300	PCI/G	2.1		
1-123-B7	04/15/2005	000142	Thorium-232	0.630	0.040	PCI/G	2.1		
4-123-068	04/15/2005	000151	Actinium-227	0.090	0.540	PCI/G	4.6	U	UJ
4-123-068	04/15/2005	000151	Actinium-228	0.860	0.470	PCI/G	1.93		
4-123-068	04/15/2005	000151	Americium-241	-0.030	0.220	PCI/G	63	U	UJ
4-123-068	04/15/2005	000151	Bismuth-207	0.024	0.099	PCI/G	1.2	U	UJ
4-123-068	04/15/2005	000151	Bismuth-210M	-0.058	0.130	PCI/G	8.34	U	UJ
4-123-068	04/15/2005	000151	Bismuth-214	0.720	0.210	PCI/G	9.87		
4-123-068	04/15/2005	000151	Cesium-137	-0.018	0.120	PCI/G	3.8	U	UJ
4-123-068	04/15/2005	000151	Cobalt-60	0.024	0.150	PCI/G	0.7	U	UJ
4-123-068	04/15/2005	000151	Lead-210	1.200	2.900	PCI/G	7.4	U	UJ
4-123-068	04/15/2005	000151	Lead-212	1.140	0.140	PCI/G	16.6		
4-123-068	04/15/2005	000151	Lead-214	0.650	0.210	PCI/G	8.92		
4-123-068	04/15/2005	000151	Plutonium-238	0.037	0.029	PCI/G	55	J	J

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
4-123-068	04/15/2005	000151	Plutonium-239/240	0.030	0.030	PCI/G	61.2	U	U
4-123-068	04/15/2005	000151	Potassium-40	32.900	1.300	PCI/G	47.8		
4-123-068	04/15/2005	000151	Protactinium-231	1.000	3.100	PCI/G	4.1	U	UJ
4-123-068	04/15/2005	000151	Radium-226	0.720	0.210	PCI/G	2.9		J
4-123-068	04/15/2005	000151	Radium-228	0.860	0.540	PCI/G	3.06		
4-123-068	04/15/2005	000151	Thallium-208	0.480	0.130	PCI/G	0.498		
4-123-068	04/15/2005	000151	Thorium-228	1.170	0.070	PCI/G	2.6		
4-123-068	04/15/2005	000151	Thorium-230	1.070	0.030	PCI/G	2.8		
4-123-068	04/15/2005	000151	Thorium-232	1.240	0.050	PCI/G	2.1		
4-123-068	04/15/2005	000151	Thorium-232	0.860	0.540	PCI/G	2.1		
4-123-069	04/15/2005	000147	Actinium-227	0.150	0.600	PCI/G	4.6	U	UJ
4-123-069	04/15/2005	000147	Americium-241	0.020	0.230	PCI/G	63	U	UJ
4-123-069	04/15/2005	000147	Bismuth-207	0.022	0.110	PCI/G	1.2	U	UJ
4-123-069	04/15/2005	000147	Bismuth-210M	0.011	0.130	PCI/G	8.34	U	UJ
4-123-069	04/15/2005	000147	Bismuth-214	0.820	0.180	PCI/G	9.87		
4-123-069	04/15/2005	000147	Cesium-137	0.001	0.110	PCI/G	3.8	U	UJ
4-123-069	04/15/2005	000147	Cobalt-60	0.024	0.130	PCI/G	0.7	U	UJ
4-123-069	04/15/2005	000147	Lead-210	0.700	2.700	PCI/G	7.4	U	UJ
4-123-069	04/15/2005	000147	Lead-212	0.630	0.210	PCI/G	16.6		
4-123-069	04/15/2005	000147	Lead-214	0.540	0.200	PCI/G	8.92		
4-123-069	04/15/2005	000147	Plutonium-238	0.073	0.039	PCI/G	55	J	J
4-123-069	04/15/2005	000147	Plutonium-239/240	0.020	0.020	PCI/G	61.2	U	U
4-123-069	04/15/2005	000147	Potassium-40	28.600	1.000	PCI/G	47.8		
4-123-069	04/15/2005	000147	Protactinium-231	-0.500	3.000	PCI/G	4.1	U	UJ
4-123-069	04/15/2005	000147	Radium-226	0.820	0.180	PCI/G	2.9		J
4-123-069	04/15/2005	000147	Radium-228	1.060	0.870	PCI/G	3.06		
4-123-069	04/15/2005	000147	Thallium-208	0.250	0.130	PCI/G	0.498		
4-123-069	04/15/2005	000147	Thorium-228	1.050	0.100	PCI/G	2.6		
4-123-069	04/15/2005	000147	Thorium-230	0.780	0.050	PCI/G	2.8		
4-123-069	04/15/2005	000147	Thorium-232	1.140	0.050	PCI/G	2.1		
4-123-070D	04/15/2005	000150	Actinium-227	0.170	0.650	PCI/G	4.6	U	UJ
4-123-070	04/15/2005	000149	Actinium-227	0.140	0.550	PCI/G	4.6	U	UJ
4-123-070D	04/15/2005	000150	Actinium-228	1.350	0.490	PCI/G	1.93		
4-123-070	04/15/2005	000149	Actinium-228	1.260	0.530	PCI/G	1.93		
4-123-070D	04/15/2005	000150	Americium-241	-0.010	0.240	PCI/G	63	U	UJ
4-123-070	04/15/2005	000149	Americium-241	-0.070	0.210	PCI/G	63	U	UJ
4-123-070D	04/15/2005	000150	Bismuth-207	0.012	0.110	PCI/G	1.2	U	UJ
4-123-070	04/15/2005	000149	Bismuth-207	-0.040	0.085	PCI/G	1.2	U	UJ
4-123-070	04/15/2005	000149	Bismuth-210M	0.005	0.120	PCI/G	8.34	U	UJ
4-123-070D	04/15/2005	000150	Bismuth-210M	-0.061	0.120	PCI/G	8.34	U	UJ
4-123-070	04/15/2005	000149	Bismuth-214	0.850	0.200	PCI/G	9.87		
4-123-070D	04/15/2005	000150	Bismuth-214	0.670	0.260	PCI/G	9.87		
4-123-070D	04/15/2005	000150	Cesium-137	-0.012	0.140	PCI/G	3.8	U	UJ
4-123-070	04/15/2005	000149	Cesium-137	-0.022	0.130	PCI/G	3.8	U	UJ
4-123-070D	04/15/2005	000150	Cobalt-60	0.031	0.170	PCI/G	0.7	U	UJ
4-123-070	04/15/2005	000149	Cobalt-60	-0.020	0.140	PCI/G	0.7	U	UJ
4-123-070	04/15/2005	000149	Lead-210	0.500	2.600	PCI/G	7.4	U	UJ
4-123-070D	04/15/2005	000150	Lead-210	0.050	3.000	PCI/G	7.4	U	UJ
4-123-070	04/15/2005	000149	Lead-212	1.290	0.170	PCI/G	16.6		
4-123-070D	04/15/2005	000150	Lead-212	1.190	0.200	PCI/G	16.6		
4-123-070	04/15/2005	000149	Lead-214	0.690	0.220	PCI/G	8.92		
4-123-070D	04/15/2005	000150	Lead-214	0.590	0.210	PCI/G	8.92		
4-123-070	04/15/2005	000149	Plutonium-238	0.050	0.050	PCI/G	55	U	U
4-123-070D	04/15/2005	000150	Plutonium-238	0.050	0.050	PCI/G	55	U	U
4-123-070D	04/15/2005	000150	Plutonium-239/240	0.050	0.050	PCI/G	61.2	U	U
4-123-070	04/15/2005	000149	Plutonium-239/240	0.040	0.040	PCI/G	61.2	U	U
4-123-070D	04/15/2005	000150	Potassium-40	31.700	1.400	PCI/G	47.8		
4-123-070	04/15/2005	000149	Potassium-40	30.400	7.800	PCI/G	47.8		
4-123-070D	04/15/2005	000150	Protactinium-231	1.800	3.800	PCI/G	4.1	U	UJ
4-123-070	04/15/2005	000149	Protactinium-231	1.500	3.200	PCI/G	4.1	U	UJ
4-123-070	04/15/2005	000149	Radium-226	0.850	0.200	PCI/G	2.9		J
4-123-070D	04/15/2005	000150	Radium-226	0.670	0.260	PCI/G	2.9		J
4-123-070D	04/15/2005	000150	Radium-228	1.350	0.500	PCI/G	3.06		
4-123-070	04/15/2005	000149	Radium-228	1.260	0.530	PCI/G	3.06		
4-123-070D	04/15/2005	000150	Thallium-208	0.460	0.130	PCI/G	0.498		
4-123-070	04/15/2005	000149	Thallium-208	0.420	0.130	PCI/G	0.498		
4-123-070D	04/15/2005	000150	Thorium-228	1.270	0.050	PCI/G	2.6		
4-123-070	04/15/2005	000149	Thorium-228	1.180	0.110	PCI/G	2.6		

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
4-123-070	04/15/2005	000149	Thorium-230	1.000	0.060	PCI/G	2.8		
4-123-070D	04/15/2005	000150	Thorium-230	0.900	0.030	PCI/G	2.8		
4-123-070	04/15/2005	000149	Thorium-232	1.440	0.070	PCI/G	2.1		
4-123-070D	04/15/2005	000150	Thorium-232	1.350	0.500	PCI/G	2.1		
4-123-070	04/15/2005	000149	Thorium-232	1.260	0.530	PCI/G	2.1		
4-123-070D	04/15/2005	000150	Thorium-232	1.260	0.040	PCI/G	2.1		
4-123-071	04/15/2005	000146	Actinium-227	0.260	0.510	PCI/G	4.6	U	UJ
4-123-071	04/15/2005	000146	Actinium-228	0.590	0.400	PCI/G	1.93		
4-123-071	04/15/2005	000146	Americium-241	0.080	0.200	PCI/G	63	U	UJ
4-123-071	04/15/2005	000146	Bismuth-207	0.019	0.094	PCI/G	1.2	U	UJ
4-123-071	04/15/2005	000146	Bismuth-210M	0.002	0.110	PCI/G	8.34	U	UJ
4-123-071	04/15/2005	000146	Bismuth-214	0.770	0.200	PCI/G	9.87		
4-123-071	04/15/2005	000146	Cesium-137	-0.041	0.110	PCI/G	3.8	U	UJ
4-123-071	04/15/2005	000146	Cobalt-60	0.048	0.140	PCI/G	0.7	U	UJ
4-123-071	04/15/2005	000146	Lead-210	0.400	2.300	PCI/G	7.4	U	UJ
4-123-071	04/15/2005	000146	Lead-212	0.860	0.180	PCI/G	16.6		
4-123-071	04/15/2005	000146	Lead-214	0.500	0.190	PCI/G	8.92		
4-123-071	04/15/2005	000146	Plutonium-238	0.006	0.037	PCI/G	55	U	UJ
4-123-071	04/15/2005	000146	Plutonium-239/240	0.005	0.013	PCI/G	61.2	U	UJ
4-123-071	04/15/2005	000146	Potassium-40	28.500	1.100	PCI/G	47.8		
4-123-071	04/15/2005	000146	Protactinium-231	1.200	2.500	PCI/G	4.1	U	UJ
4-123-071	04/15/2005	000146	Radium-226	0.770	0.200	PCI/G	2.9		J
4-123-071	04/15/2005	000146	Radium-228	0.590	0.400	PCI/G	3.06		
4-123-071	04/15/2005	000146	Thallium-208	0.310	0.120	PCI/G	0.498		
4-123-071	04/15/2005	000146	Thorium-228	1.010	0.060	PCI/G	2.6		
4-123-071	04/15/2005	000146	Thorium-230	0.920	0.060	PCI/G	2.8		
4-123-071	04/15/2005	000146	Thorium-232	1.080	0.050	PCI/G	2.1		
4-123-071	04/15/2005	000146	Thorium-232	0.590	0.400	PCI/G	2.1		
4-123-072	04/15/2005	000153	Actinium-227	0.100	0.320	PCI/G	4.6	U	UJ
4-123-072	04/15/2005	000153	Americium-241	-0.014	0.110	PCI/G	63	U	UJ
4-123-072	04/15/2005	000153	Bismuth-207	0.012	0.052	PCI/G	1.2	U	UJ
4-123-072	04/15/2005	000153	Bismuth-210M	-0.053	0.055	PCI/G	8.34	U	U
4-123-072	04/15/2005	000153	Bismuth-214	0.490	0.090	PCI/G	9.87		
4-123-072	04/15/2005	000153	Cesium-137	0.035	0.092	PCI/G	3.8	U	UJ
4-123-072	04/15/2005	000153	Cobalt-60	0.003	0.087	PCI/G	0.7	U	UJ
4-123-072	04/15/2005	000153	Lead-210	-0.110	1.400	PCI/G	7.4	U	UJ
4-123-072	04/15/2005	000153	Lead-212	0.308	0.085	PCI/G	16.6		
4-123-072	04/15/2005	000153	Lead-214	0.570	0.110	PCI/G	8.92		
4-123-072	04/15/2005	000153	Plutonium-238	0.090	0.090	PCI/G	55	U	U
4-123-072	04/15/2005	000153	Plutonium-239/240	0.070	0.070	PCI/G	61.2	U	U
4-123-072	04/15/2005	000153	Potassium-40	11.000	0.500	PCI/G	47.8		
4-123-072	04/15/2005	000153	Protactinium-231	0.250	1.600	PCI/G	4.1	U	UJ
4-123-072	04/15/2005	000153	Radium-226	0.490	0.090	PCI/G	2.9		J
4-123-072	04/15/2005	000153	Radium-228	0.320	0.390	PCI/G	3.06	U	U
4-123-072	04/15/2005	000153	Thallium-208	0.098	0.063	PCI/G	0.498		
4-123-072	04/15/2005	000153	Thorium-228	0.490	0.080	PCI/G	2.6		
4-123-072	04/15/2005	000153	Thorium-230	1.160	0.030	PCI/G	2.8		
4-123-072	04/15/2005	000153	Thorium-232	0.410	0.020	PCI/G	2.1		
4-123-073	04/15/2005	000152	Actinium-227	0.120	0.570	PCI/G	4.6	U	UJ
4-123-073	04/15/2005	000152	Actinium-228	0.730	0.460	PCI/G	1.93		
4-123-073	04/15/2005	000152	Americium-241	0.150	0.250	PCI/G	63	U	U
4-123-073	04/15/2005	000152	Bismuth-207	-0.022	0.085	PCI/G	1.2	U	UJ
4-123-073	04/15/2005	000152	Bismuth-210M	0.045	0.130	PCI/G	8.34	U	UJ
4-123-073	04/15/2005	000152	Bismuth-214	0.440	0.200	PCI/G	9.87		
4-123-073	04/15/2005	000152	Cesium-137	-0.038	0.110	PCI/G	3.8	U	UJ
4-123-073	04/15/2005	000152	Cobalt-60	-0.048	0.130	PCI/G	0.7	U	UJ
4-123-073	04/15/2005	000152	Lead-210	0.300	2.500	PCI/G	7.4	U	UJ
4-123-073	04/15/2005	000152	Lead-212	0.950	0.210	PCI/G	16.6		
4-123-073	04/15/2005	000152	Lead-214	0.630	0.190	PCI/G	8.92		
4-123-073	04/15/2005	000152	Plutonium-238	0.021	0.048	PCI/G	55	U	UJ
4-123-073	04/15/2005	000152	Plutonium-239/240	0.030	0.030	PCI/G	61.2	U	U
4-123-073	04/15/2005	000152	Potassium-40	30.200	1.500	PCI/G	47.8		
4-123-073	04/15/2005	000152	Protactinium-231	-0.500	3.000	PCI/G	4.1	U	UJ
4-123-073	04/15/2005	000152	Radium-226	0.440	0.200	PCI/G	2.9		J
4-123-073	04/15/2005	000152	Radium-228	0.730	0.450	PCI/G	3.06		
4-123-073	04/15/2005	000152	Thallium-208	0.370	0.110	PCI/G	0.498		
4-123-073	04/15/2005	000152	Thorium-228	0.970	0.180	PCI/G	2.6		
4-123-073	04/15/2005	000152	Thorium-230	1.010	0.090	PCI/G	2.8		

Table 2: Sample Event 2 Verification Sample Results
(PRSs 123, 415, 430, 434-436)

SU-PRS-Location	Date Collected	MEIMS ID	Analyte	Results	Detection Limit	Units	CO	Lab Qual	Data Qual
4-123-073	04/15/2005	000152	Thorium-232	1.080	0.100	PCI/G	2.1		
4-123-073	04/15/2005	000152	Thorium-232	0.730	0.450	PCI/G	2.1		

CO: cleanup objective
J: estimated
MEIMS: Mound Environmental Information Management System
PRS: Potential Release Site
Qual: qualifier
SU: Survey Unit
U: not detected
D: duplicate

Table 3: Two Onsite Gamma Spec Sheets

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: GL05841
File ID: 1SC01841.s0
Priority: Yes

Description\Location
SU1-PRS123-068
Long Count

Collector: 6175
Date Received: 5/5/05
Date Collected: 5/5/05

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0	0.07
Cs-137	*	0.01	0.05
Pb-210	*	0.65	0.68
Ra-226		1.27	0.7
Ac-227 (D)	*	0.01	0.31
Th-230	*	2.96	6.24
Th-232 (D)		0.47	0.15
Pu-238	*	0	25.54
Am-241	*	0	0.07

Other Nuclides

Radionuclide	Activity (pCi/g)	MDA

Σ_{DOT} 0.03 nCi/g

Instrument type: High Purity Germanium

*DOT: 2nCi/g limit, total activity.
(D) Denotes identification by daughter emissions
Sample is Assumed to be in secular equilibrium
* Indicates activity < MDA. MDA used in limits calculation

Comments:

Date: 5/5/05 Counted By: 5288 Analyzed By: 5288 Initials GB

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: GL05842
File ID: 1SC01842.s0
Priority: Yes

Description\Location
SU1-PRS123-069
Long Count

Collector: 6175
Date Received: 5/5/05
Date Collected: 5/5/05

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0.03	0.06
Cs-137	*	0	0.06
Pb-210	*	0.42	0.67
Ra-226		0.82	0.75
Ac-227 (D)	*	0	0.32
Th-230	*	5.52	6.41
Th-232 (D)		0.58	0.23
Pu-238	*	0	12.31
Am-241	*	0	0.08

Other Nuclides

Radionuclide	Activity (pCi/g)	MDA

Σ_{DOT} 0.02 nCi/g

Instrument type: High Purity Germanium

*DOT: 2nCi/g limit, total activity.
(D) Denotes identification by daughter emissions
Sample is Assumed to be in secular equilibrium
* Indicates activity < MDA. MDA used in limits calculation

Comments:

Date: 5/5/05 Counted By: 5288 Analyzed By: 5288 Initials GB

APPENDIX C

POST-EX SUD EXCERPTS

Post-Ex SUD for Sample Event 1 ..... A61/114
(PRSs 431-433)

Post-Ex SUD for Sample Event 2 ..... A70/114
(PRSs 123, 415, 429-430, and 434-436)

Survey Unit Design (SUD)

Project: PRSs 123, 415, and 429 – 436

Review & Approval

Project Engineer: Denny Lammlein Dennis R Lammlein 27 Jan 05

Reviewer: James Fontaine 1/27/05

Reviewer:

Document	Title
Action Memo	*UGL Action Memorandum, Final, September 2003*
RP	*UGLs Removal Plan. Final, April 2004*
WP	*Soil Removal, ELT-MND-105-00, April 2004*
WP	*Underground Lines Removal, ELT-MND-106-00, April 2004*
VSAP	*Standard Verification Sampling & Analysis Plan, Final, August 2004*

SAMPLE EVENT 1

DWA 24 Aug 05

01/114

☐ **Pre-Excavation** or ☑ **Post-Excavation**? **(PRSs 431, 432, and 433 Only) (SU2 & partial SU5)**

Summary of Changes (for Post-Excavation SUDs ONLY) (see following pages for details)	YES	NO
1. Did the COC(s) change?		X
2. Did the grid size or N change?	X	
3. Did the classification change?		X
4. Were bias/judgmental samples collected?	X	
5. Other significant change?	X	

SUD Worksheet

Acronyms

BGS	Below Ground Surface
HH	Building HH (Hydrolysis House)
PRS	Potential release Site
TBD	To Be Determined
WD	WD Building (Waste Disposal)

Item 1

Summary of historic information relevant to this SUD:

The Removal Plan associated with this SUD addressed identified contamination areas with contaminants of concern (COCs) above the cleanup objectives (COs).

The PRSs included within this SUD, with the exception of 123 and 415, are all associated with the underground waste lines that carried radiologically contaminated waste from Technical (T) Building to manhole HW-6 located west of Building 48 (Reference Figure 2.). From there, a common trunk line carried the wastes to WD via manholes HW-4 and HW-2. The T building trunk lines consisted of a north branch and a south branch. The north branch lay below the former DS building, consisting of an eight inch VCP line which extends from manhole MW-8 through manhole MW-8A then approximately 600 feet to a fanhouse east of DS. The south branch is an eight inch cast iron pipe running from manhole MW-8 southeast to manhole MW-10, then east to the former COS connector hallway. Included with this remediation are the removals of the lateral branches through the T Building wall and vertical risers that connect to the above-mentioned north and south trunk lines. PRSs 123 and 415 are included in this SUD because of their proximity to PRSs 429 and PRSs 434, 435, and 436 respectively, and because they are planned to be removed along with these UGLs PRSs. PRS 123 resulted from a December 1970 waste line break northeast of Building 48. PRS 415 was established during the binning process for DS Building.

A 6/11/14

Item 2

Summary of historic **data** relevant to SU:

PRS 123: Authorizing Document: UGL Action Memo, Final, September 2003.

Contaminants include Cesium 137, Cobalt 60, Pu238, and Th232. The depth of contamination varies from the surface to a depth of nearly 20 feet bgs.

PRS 415: Authorizing Document: UGL Action Memo, Final, September 2003.

Contaminants include Pu238 and Th232. The depth of contamination varies from the surface to a maximum depth of about 5 feet bgs.

PRSs 429-433: Authorizing Document: UGL Action Memo, Final, September 2003.

Contaminants include Cesium 137, Cobalt 60, Pu238, Th228, and Th232. The depth of contamination is at pipe depth, generally at approximately five to six feet bgs, except for the T Building risers, which extend down below grade approximately 29 feet bgs.

PRSs 434-436: Authorizing Document: UGL Action Memo, Final, September 2003.

Contaminants include Cesium 137, Cobalt 60, Pu238, and Th232. The depth of contamination is at pipe depth, generally at approximately five to six feet bgs, except for the T Building risers, which extend down below grade approximately 22 feet bgs.

Item 3a

COC	BASIS	CO (pCi/g)	HS (pCi/g)	MAX (pCi/g)	Offsite Analysis & Compendium Method: Gamma (A-015)	Iso Pu (A-012)	Iso Th (A-012)	Iso U (A-012)
Cs137	*UGL AM: PRSs 123, 429-436*	3.8	10.62	N/A	X			
Co60	*UGL AM: PRSs 123, 429-436 (Max result @ PRS 123)*	0.7	2.1	250	X			
Pu238	*UGL AM: PRSs 123, 415, 429-436 (Max result @ PRS 415)*	55	165.13	268		X		
Th228	*UGL AM: PRSs 429-433*	2.6	4.8	N/A			X	
Th232	*UGL AM:PRSs 123, 415, 429-436 (Max result @ PRS 415)*	2.1	3.5	11.6			X	

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Note: Where no historic results above cleanup objectives exist for these PRSs, N/A was placed in table for MAX sample results.

Analyses are to be performed per Mound Methods Compendium and COs (for surface samples/analysis i.e., bedrock, asphalt, concrete) as applicable. Compendium Method A-012 is Isotopic Uranium, Isotopic Plutonium, and Isotopic Thorium by Alpha Spectrometry and Compendium Method A-015 is Gamma Spectrometry. Surface samples/analysis are to be in accordance with MD-80036: OP 10001, 10002, 30005, 30007, and 30040. Hard surfaces will be swiped and gross alpha and beta measurements will be performed and compared to the most restrictive COC in Mound 2000 Work Plan Appendix A Table 1 (NUREG 1.86 Regulatory Guide). If the location fails to meet the most restrictive criteria then it will be sent to alpha spec for determination of the COC so the applicable, instead of the most restrictive, criteria can be applied.

Changes if any, from Pre-ex SUD:

None

Item 3b

Chem basis for std dev, AM COCs/New COCs

Item 4

Classify Areas & provide justification

All five SUs are Class 1.

Selection	Class	Scan Coverage guidelines
X	1	100%
	2	10-90%
	3	Judgmental

Changes if any, from Pre-ex SUD:

None

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Item 5	Subdivide areas into SUs See Attachment A for Figures See Attachment B for Historical Sample Data – Standard Deviations for COCs. The data set is historical data without results that exceed COs in order to mimic the "as-left" condition. See Attachment C for MARRSIM Survey Unit Spreadsheets	This SUD consists of five SUs (see attached Figures 1-A thru 1-E): (SUs were selected based on physical location and common COCs.) SU1 covers PRS 429 and the area of expected excavation in PRS 123, and is approximately 4860 sq. ft. COCs: Cs137, Co60, Pu238, Pu238, Th228, and Th232. SU2 covers the north T Building trunk line, PRSs 430 through 433, and is approximately 17460 sq. ft. COCs: Same as SU1. SU3 covers the south T Building trunk line, PRSs 434 through 436, and is approximately 12390 sq. ft. COCs: Cs137, Co60, Pu238, and Th232. SU4 covers PRS 415, and is approximately 560 sq. ft. COCs: Pu238 and Th232. SU5 covers the load out areas and is approximately 6600 sq. ft. COCs: Cs137, Co60, Pu238, Th228, and Th232.

A5/114

Item 6a

Calculations / Rad

1. Calculate the (s) for each COC listed above: See Attachment C.

2. Number of Samples (N): See Attachment C.

Spreadsheet-Calculated Numbers of Samples: SU1 – 12; SU2 – 12; SU3 – 11; SU4 – 10; and SU5 – 12.

SU1 Scanning MDC (Area Factor) corrected = 151 samples.

SU2 Scanning MDC (Area Factor) corrected = 541 samples.

SU3 Scanning MDC (Area Factor) corrected = 384 samples.

SU4 Scanning MDC (Area Factor) corrected = 17 samples.

SU5 Scanning MDC (Area Factor) corrected = 204 samples.

Visual Sample Plan (VSP) 15 foot triangular grid: (Calculated, On map*)

SU1 Calculated = Selected Samples (on Map) = (25, 23)

SU2 Calculated = Selected Samples (on Map) = (90, 89)

SU3 Calculated = Selected Samples (on Map) = (67, 68)

SU4 Calculated = Selected Samples (on Map) =(3, 1) Per Pre-Ex SUD Tech Review Meeting, 7 Dec 2004, Three samples will be taken for this SU.

SU5 Calculated = Selected Samples (on Map) = (34, 34)

This number may differ from calculated because of grid edge effects or adding judgement/bias samples.

The determination of the number of samples is consistent with section 3.7 of the standard VSAP, which provides a default grid spacing for SUs where PU-238 is the primary driver in the removal action.

Sample locations were selected by VSP with sampling goals of finding a Hot Spot utilizing a 15-foot triangular grid with a random starting point. Additional samples chosen via judgmental sampling. Sample locations will be surveyed at the time of sampling or closely following.

A total of 221 sample locations will be assessed (includes four additional bias samples as described in Item 9.

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	Changes if any, from Pre-ex SUD: **Actual extent of excavation shown in attached Sketch No. 1, Appendix D. Number of samples changed as a result. Survey Unit 2, reduced in size, now has 40 samples, still based on a 15' grid; and Survey Unit 5 (hauler loadout - partial) has 22, also based on a 15' grid. RASS sampling did not result in any additional COCs. See Appendix D for Post Excavation data.** Note: This partial Post-Ex SUD was necessary in order to meet final DS Building demolition schedule requirements.
Item 6b	Calculations/Chem, Std dev, Number of Samples N/A
	Changes if any, from Pre-ex SUD: **None**
Item 7	Grid spacing From Attachment B. Triangular 15 foot grid, laid out by Visual Sample Plan.
	Changes if any, from Pre-ex SUD: **None**

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Item 8	QA/QC: 1/20 via field duplicate in accordance with Mound Methods Compendium. Q-002 Chain-of-Custody Procedures Q-003 Documentation Requirements Q-004 Laboratory Data Reduction Q-006 Validation of Laboratory Data Packages Q-007 Data Assessment Q-008 Data Integrity Verification Q-010 Electronic Data Deliverable Format Specifications – MEIMS Std. S-001 General Instructions for Field Personnel S-002 Soil Sampling With a Spade and Scoop S-028 Sample Control and Documentation S-029 Guide to Handling, Packaging, and Shipping of Samples and Method Q-002	
Item 9	Bias/judgement samples (Additional bias samples are always within the discretion of the EPA.)	Two bias samples will be taken from the soil at the base of each vertical hot waste riser exiting from T Building, south side – see Survey Unit 3, Figure 1-C.

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Item	
10	Not otherwise covered.../ comments Site policy requires performance of onsite soil screening (NaI or germanium) on verification samples slated for offsite analysis and evaluation of the results prior to shipment. This analysis will generally be performed on a split of the verification sample containerized in an EPA dish (approximately 500 mL) but may be performed on the actual verification sample as long as containerization requirements are maintained for the offsite lab. Count time of the analysis will be sufficient to meet the cleanup objectives (COs) of the contaminants of concern (COCs) requiring verification. In-process sampling events (Characterization and Remedial Action Support Survey (RASS) samples) will be conducted during the entire PRS remediation. Those samples will undergo gamma spectrometry analysis to guide actions. RASS sampling of the remediated areas will be used to determine if the FSS (verification) sampling can be conducted. These samples will undergo gamma spectroscopy analysis At PRS 433, the location of the north hot waste riser from T Building, an excavation of at least 30 feet deep will be required. With the proper slope-back (1.5-1) associated with this excavation, a huge crater will result. For safety reasons, it is planned to removed the hot waste riser, the lateral in the T Building wall, sample the sleeve and base of excavation , and then backfill at risk. (Reference Figure 1-B. The bottom of the trenches of PRSs 431, 432, 434, and 435 is the roof of T Building. This will effectively be a bedrock situation. If there is an insufficient volume of soil to fill an EPA dish within a 1 m x 1 m square centered on the proposed sample location, due to bedrock or obstruction (such as a structure, foundation, or utility bank which is not to be removed), then the soil analysis will not be performed. In lieu of a soil analysis, RadCon will survey the surface per COs and provide documentation thereof in an RSDS. The RSDS(s) will be included as documentation. Any final sample location that does not meet the surface release criteria will be submitted to the Core Team for concurrence prior to the area being back-filled. Potentially impacted work areas where excavated materials are loaded into haulers will be included in an existing or additional survey unit, as appropriate. MARSSIM spreadsheets for Load Out Survey Units shall include the same COCs as the adjacent SU. Note regarding haul route, Survey Unit 1. SU-1 will be excavated from left to right - reference the SU-1 sketch, Figure 1-A. This means that the haulers will be on top of the line and move with the excavator toward the T tower. The load out area then becomes excavated as we move from left to right (west to east).

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Survey Unit Design (SUD)

Project: PRSs 123, 415, and 429 – 436

Review & Approval

Project Engineer: Denny Lammlein Dennis R Lammlein 20 Apr 2005

Reviewer: James Fontaine 4/20/05

Reviewer:

Document	Title
Action Memo	*UGL Action Memorandum, Final, September 2003*
RP	*UGLs Removal Plan. Final, April 2004*
WP	*Soil Removal, ELT-MND-105-00, April 2004*
WP	*Underground Lines Removal, ELT-MND-106-00, April 2004*
VSAP	*Standard Verification Sampling & Analysis Plan, Final, August 2004*

o **Pre-Excavation or ✓ Post-Excavation? (PRSs 123, 415, 429, 430, 434-436 Only; SU1, SU3, SU4, & SU5 Partial)**
Note: PRSs 431 - 433 (SU2 & SU5 partial) already completed; see "you are here" diagram.

SAMPLE EVENT 2 A70/114

Summary of Changes (for Post-Excavation SUDs ONLY) (see following pages for details)	YES	NO
1. Did the COC(s) change?	X	
2. Did the grid size or N change?	X	
3. Did the classification change?		X
4. Were bias/judgmental samples collected?	X	
5. Other significant change?	X	

SUD Worksheet

Acronyms

AM	Action Memo
BGS	Below Ground Surface
CO	Cleanup Objective
COC	Contaminant of Concern
COS	Central Operations Support (COS) Building
DCGL	Derived Concentration Guideline Level
Delta	Delta (change)
DS	Development Standards (DS) Building
EPA	Environmental Protection Agency
FSS	Final Status Survey
HS	Hot Spot
HW	Hot Waste (manhole)
LBGR	Lower Bound of the Gray Region
m	meter
MARSSIM	Multi – Agency Radiation Survey and Site Investigation Manual
MDC	Minimum Detectable Concentration
MEIMS	Mound Environmental Information Management System
mL	milliliter
NA or N/A	Non-applicable
NaI	Sodium Iodide
PRS	Potential Release Site
QA/QC	Quality Assurance/Quality Control
PCi/g	picocuries per gram
RA	Remedial Action
RadCon	Radiological Control
RASS	Remedial Action Support Survey
Rel Shft	Relative Shift
RP	Removal Plan
RSDS	Radiological Survey Data Sheet
R/SW	Research/Special Works (R/SW) Complex
sq-ft	Square Feet
SU	Survey Unit
SUD	Survey Unit Design
T	Technical (T) Building
TBD	To Be Determined
UGL	Underground Lines
VCP	Vitreous Clay Pipe
VSAP	Verification Sampling and Analysis Plan
VSP	Visual Sample Plan

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WD	Waste Disposal (WD) Building
WDA	Waste Disposal Annex (WDA) Building
WP	Work Package

Item 1

Summary of historic information relevant to this SUD:

The Removal Plan associated with this SUD addressed identified contamination areas with contaminants of concern (COCs) above the cleanup objectives (COs).

The PRSs included within this SUD, with the exception of 123 and 415, are all associated with the underground waste lines that carried radiologically contaminated waste from Technical (T) Building to manhole HW-6 located west of Building 48 (Reference Figure 2.). From there, a common trunk line carried the wastes to WD via manholes HW-4 and HW-2. The T building trunk lines consisted of a north branch and a south branch. The north branch lay below the former DS building, consisting of an eight inch VCP line which extends from manhole HW-8 through manhole HW-8A then approximately 600 feet to a fanhouse east of DS. The south branch is an eight inch cast iron pipe running from manhole HW-8 southeast to manhole HW-10, then east to the former COS connector hallway. Included with this remediation are the removals of the lateral branches through the T Building wall and vertical risers that connect to the above-mentioned north and south trunk lines. PRSs 123 and 415 are included in this SUD because of their proximity to PRSs 429 and PRSs 434, 435, and 436 respectively, and because they are planned to be removed along with these UGLs PRSs. PRS 123 resulted from a December 1970 waste line break northeast of Building 48. PRS 415 was established during the binning process for DS Building.

Item 2

Summary of historic **data** relevant to SU:

PRS 123: Authorizing Document: UGL Action Memo, Final, September 2003.

Contaminants include Cesium 137, Cobalt 60, Pu238, and Th232. The depth of contamination varies from the surface to a depth of nearly 20 feet bgs.

PRS 415: Authorizing Document: UGL Action Memo, Final, September 2003.

Contaminants include Pu238 and Th232. The depth of contamination varies from the surface to a maximum depth of about 5 feet bgs.

PRSs 429-433: Authorizing Document: UGL Action Memo, Final, September 2003.

Contaminants include Cesium 137, Cobalt 60, Pu238, Th228, and Th232. The depth of contamination is at pipe depth, generally at approximately five to six feet bgs, except for the T Building risers, which extend down below grade approximately 29 feet bgs.

PRSs 434-436: Authorizing Document: UGL Action Memo, Final, September 2003.

Contaminants include Cesium 137, Cobalt 60, Pu238, and Th232. The depth of contamination is at pipe depth, generally at approximately five to six feet bgs, except for the T Building risers, which extend down below grade approximately 22 feet bgs.

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Item 3a

COC	BASIS	CO	HS (pCi/g)	MAX	Offsite Analysis & Compendium Method: Gamma (A-015)	Iso Pu (A-012)	Iso Th (A-012)	Iso U (A-012)

Cs137	*UGL AM: PRSs 123, 429-436*	3.8	10.62	N/A	X			
Co60	*UGL AM: PRSs 123, 429-436 (Max result @ PRS 123)*	0.7	2.1	250	X			
Pu238	*UGL AM: PRSs 123, 415, 429-436 (Max result @ PRS 415)*	55	165.13	268		X		
Th228	*UGL AM: PRSs 429-433*	2.6	4.8	N/A			X	
Th232	*UGL AM:PRSs 123, 415, 429-436 (Max result @ PRS 415)*	2.1	3.5	11.6			X	

Note: Where no historic results above cleanup objectives exist for these PRSs, N/A was placed in table for MAX sample results.

Analyses are to be performed per Mound Methods Compendium and COs (for surface samples/analysis i.e., bedrock, asphalt, concrete) as applicable. Compendium Method A-012 is Isotopic Uranium, Isotopic Plutonium, and Isotopic Thorium by Alpha Spectrometry and Compendium Method A-015 is Gamma Spectrometry. Surface samples/analysis are to be in accordance with MD-80036: OP 10001, 10002, 30005, 30007, and 30040. Hard surfaces will be swiped and gross alpha and beta measurements will be performed and compared to the most restrictive COC in Mound 2000 Work Plan Appendix A Table 1 (NUREG 1.86 Regulatory Guide). If the location fails to meet the most restrictive criteria then it will be sent to alpha spec for determination of the COC so the applicable, instead of the most restrictive, criteria can be applied.

Changes if any, from Pre-ex SUD:

Two additional COCs, were found near manhole, HW-8, namely, Bi207 and Bi210m. Highest activity was 5.54 pCi/g (MDA 0.52) and 126.4 (0.62) respectively. Bi207 Cleanup Objective and Hot Spot Criteria are 1.2 and 3.6 pCi/g respectively. For Bi210m, CO and HS are 8.3 and 24.9 pCi/g respectively. Offsite analysis per Compendium Method (A-015). See Table 1, RASS Sample Data ("as-left" condition), Attachment D.

Item 3b

Chem basis for std dev, AM COCs/New COCs

Item 4

Classify Areas & provide justification

All five SUs are Class 1.

Selection	Class	Scan Coverage guidelines
X	1	100%
	2	10-90%
	3	Judgmental

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Changes if any, from Pre-ex SUD:

None

Item 5	Subdivide areas into SUs See Attachment A for Figures See Attachment B for Historical Sample Data – Standard Deviations for COCs. The data set is historical data without results that exceed COs in order to mimic the "as-left" condition. See Attachment C for MARRSIM Survey Unit Spreadsheets	This SUD consists of five SUs (see attached Figures 1-A thru 1-E): (SUs were selected based on physical location and common COCs.) SU1 covers PRS 429 and the area of expected excavation in PRS 123, and is approximately 4860 sq. ft. COCs: Cs137, Co60, Pu238, Th228, and Th232. SU2 covers the north T Building trunk line, PRSs 430 through 433, and is approximately 17460 sq. ft. COCs: Same as SU1. SU3 covers the south T Building trunk line, PRSs 434 through 436, and is approximately 12390 sq. ft. COCs: Cs137, Co60, Pu238, and Th232. SU4 covers PRS 415, and is approximately 560 sq. ft. COCs: Pu238 and Th232. SU5 covers the load out areas and is approximately 6600 sq. ft. COCs: Cs137, Co60, Pu238, Th228, and Th232.

Changes if any, from Pre-ex SUD: The original Survey Units #1, #3, and #5 (partial – load out area) have been combined into one Survey Unit, new SU #1. (See Attachment D, Post Excavation Data, for all new information.) The SUs were combined because of their overlapping geometry. COCs were essentially the same for all three former Survey Units, except that SU #3 did not have Th228, but does contain Th232.

New Survey Unit 1 covers PRSs 123, 429, 430, and 434 – 436. COCs: Cs137, Co60, Pu238, Th228, Th232, Bi207, and Bi210m, and is approximately 13, 201 sq ft. Survey Unit 4 has the same COCs, Pu238 and Th232, but is larger than shown in the Pre-Ex SUD because the post ex SUD shows the actual extent of excavation – based on sloping requirements or extent of contamination Area: approximately 831 sq ft.

Attachment A pages 1-5 are replaced with Attachment D, page 1.

Attachment B is replaced with Attachment D, pages 2 & 3.

Attachment C, MARSSIM Survey Unit spreadsheets 1, 3, and 5 are replaced with Attachment D Survey Unit 1.

Attachment C, MARSSIM Survey Unit spreadsheet 4 is replaced with Attachment D Survey Unit 4.

hll/hlt

Item 6a

Calculations / Rad

1. Calculate the (s) for each COC listed above: See Attachment C.

2. Number of Samples (N): See Attachment C.

Spreadsheet-Calculated Numbers of Samples: SU1 – 12; SU2 – 12; SU3 – 11; SU4 – 10; and SU5 – 12.

SU1 Scanning MDC (Area Factor) corrected = 151 samples.

SU2 Scanning MDC (Area Factor) corrected = 541 samples.

SU3 Scanning MDC (Area Factor) corrected = 384 samples.

SU4 Scanning MDC (Area Factor) corrected = 17 samples.

SU5 Scanning MDC (Area Factor) corrected = 204 samples.

Visual Sample Plan (VSP) 15 foot triangular grid: (Calculated, On map*)

SU1 Calculated = Selected Samples (on Map) = (25, 23)

SU2 Calculated = Selected Samples (on Map) = (90, 89)

SU3 Calculated = Selected Samples (on Map) = (67, 68)

SU4 Calculated = Selected Samples (on Map) =(3, 1) Per Pre-Ex SUD Tech Review Meeting, 7 Dec 2004, Three samples will be taken for this SU.

SU5 Calculated = Selected Samples (on Map) = (34, 34)

This number may differ from calculated because of grid edge effects or adding judgement/bias samples.

The determination of the number of samples is consistent with section 3.7 of the standard VSAP, which provides a default grid spacing for SUs where PU-238 is the primary driver in the removal action.

Sample locations were selected by VSP with sampling goals of finding a Hot Spot utilizing a 15-foot triangular grid with a random starting point. Additional samples chosen via judgmental sampling. Sample locations will be surveyed at the time of sampling or closely following.

A total of 221 sample locations will be assessed (includes four additional bias samples as described in Item 9.

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Changes if any, from Pre-ex SUD: Actual extent of excavation shown in attached Sketch No. 1, Attachment D. Number of samples changed as a result. The new SU#1 will now contain 69 total samples (includes the four bias samples at the base of the south T Building risers located northwest of SU#4); excavation area – 13,201 sq. ft. Survey Unit #4 will have six samples; excavation area – 831 sq. ft.

Note: This is a partial Post-Ex SUD. Previously, the other part of this SUD (Survey Units #2 and partial #5) was completed in order to meet the final DS Building demolition schedule.

See Attachment D for the calculated (s) for each of the COCs.

Number of Samples (N): See Attachment D.

Spreadsheet-calculated Numbers of Samples: SU1 - 9; SU4 - 8.

SU1 Scanning MDC (Area Factor) corrected = 409 samples.

SU4 Scanning MDC (Area factor) corrected = 26 samples.

Survey Unit 1 samples selected on map based on 15' grid; SU1 = 65.

SU4 has six samples selected based on SVSAP paragraph 3.5.1, special considerations (small area).

Item 6b	Calculations/Chem, Std dev, Number of Samples	N/A

Changes if any, from Pre-ex SUD:

None

Item 7	Grid spacing	From Attachment B. Triangular 15 foot grid, laid out by Visual Sample Plan

Changes if any, from Pre-ex SUD:

None

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Item 8	QA/QC: 1/20 via field duplicate in accordance with Mound Methods Compendium. Q-002 Chain-of-Custody Procedures Q-003 Documentation Requirements Q-004 Laboratory Data Reduction Q-006 Validation of Laboratory Data Packages Q-007 Data Assessment Q-008 Data Integrity Verification Q-010 Electronic Data Deliverable Format Specifications – MEIMS Std. S-001 General Instructions for Field Personnel S-002 Soil Sampling With a Spade and Scoop S-028 Sample Control and Documentation S-029 Guide to Handling, Packaging, and Shipping of Samples and Method Q-002
Item 9	Bias/judgement samples (Additional bias samples are always within the discretion of the EPA.) Two bias samples will be taken from the soil at the base of each vertical hot waste riser exiting from T Building, south side – see Survey Unit 3, Figure 1-C.
	Changes if any from Pre- Ex SUD: The bias samples are now a part of Survey Unit 1, which is shown in Sketch 1, attachment D.

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Item	
10	Not otherwise covered.../ comments Site policy requires performance of onsite soil screening (NaI or germanium) on verification samples slated for offsite analysis and evaluation of the results prior to shipment. This analysis will generally be performed on a split of the verification sample containerized in an EPA dish (approximately 500 mL) but may be performed on the actual verification sample as long as containerization requirements are maintained for the offsite lab. Count time of the analysis will be sufficient to meet the cleanup objectives (COs) of the contaminants of concern (COCs) requiring verification. In-process sampling events (Characterization and Remedial Action Support Survey (RASS) samples) will be conducted during the entire PRS remediation. Those samples will undergo gamma spectrometry analysis to guide actions. RASS sampling of the remediated areas will be used to determine if the FSS (verification) sampling can be conducted. These samples will undergo gamma spectroscopy analysis At PRS 433, the location of the north hot waste riser from T Building, an excavation of at least 30 feet deep will be required. With the proper slope-back (1.5-1) associated with this excavation, a huge crater will result. For safety reasons, it is planned to remove the hot waste riser, the lateral in the T Building wall, sample the sleeve and base of excavation, and then backfill at risk. (Reference Figure 1-B, Attachment A.) The bottom of the trenches of PRSs 431, 432, 434, and 435 is the roof of T Building. This will effectively be a bedrock situation. If there is an insufficient volume of soil to fill an EPA dish within a 1 m x 1 m square centered on the proposed sample location, due to bedrock or obstruction (such as a structure, foundation, or utility bank which is not to be removed), then the soil analysis will not be performed. In lieu of a soil analysis, RadCon will survey the surface per COs and provide documentation thereof in an RSDS. The RSDS(s) will be included as documentation. Any final sample location that does not meet the surface release criteria will be submitted to the Core Team for concurrence prior to the area being back-filled. Potentially impacted work areas where excavated materials are loaded into haulers will be included in an existing or additional survey unit, as appropriate. MARSSIM spreadsheets for Load Out Survey Units shall include the same COCs as the adjacent SU. Note regarding haul route, Survey Unit 1. SU-1 will be excavated from left to right - reference the SU-1 sketch, Figure 1-A. This means that the haulers will be on top of the line and move with the excavator toward the T tower. The load out area then becomes excavated as we move from left to right (west to east).

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APPENDIX D

BACKFILL PACKAGES

Standard VSAP Backfill Info for Sample Event 1 ..... A80/114
(submitted to regulators in March 2005)

Standard VSAP Backfill Info for Sample Event 2 ..... A96/114
(submitted to regulators in May 2005)

A79/114

STD VSAP BACKFILL INFO

This information will be represented in the Data Report.

For: PRS 431 - 433 (SU2 & SU5)

Checklist:

(per Section 5.6 of Std VSAP, Final, Aug 04)

- [x] final Graphic
  (show sample locations & note any >CO ~~and/or >HS~~)
- [x] sample results
  (show DLs, HS, COs, and COC std deviation(s))
- [x] recalc of N
- [x] Data Review & Validation Prelim.
- [x] Sign test
  (not required if all results <CO, see pg 19/21 of VSAP)
- [x] retro curve
  (not required if all results <CO [null hypothesis is rejected, MARSSIM])

From: (sign/date) Mark Spivey / Dennis R Lammlein 9 Mar 05

SAMPLE EVENT 1 DMJ 10 Aug 05

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Data Review and Validation

The Terran Corporation is under contract to provide verification sampling services for the Underground Lines Project. Data Review and Validation is included with their services. In discussion with Terran's management on 9 March 2005, this task is subcontracted to an independent firm and usually takes from two to three weeks to complete.

CH2M HILL has performed a preliminary data review; no problems have been noted.

The formal Data Review and Validation portion of this backfill package is not available now, but will be included in the On-Site Coordinator (OSC) Report. .

Dennis R Lammlein 9 Mar 05

Dennis R. Lammlein, Project Engineer

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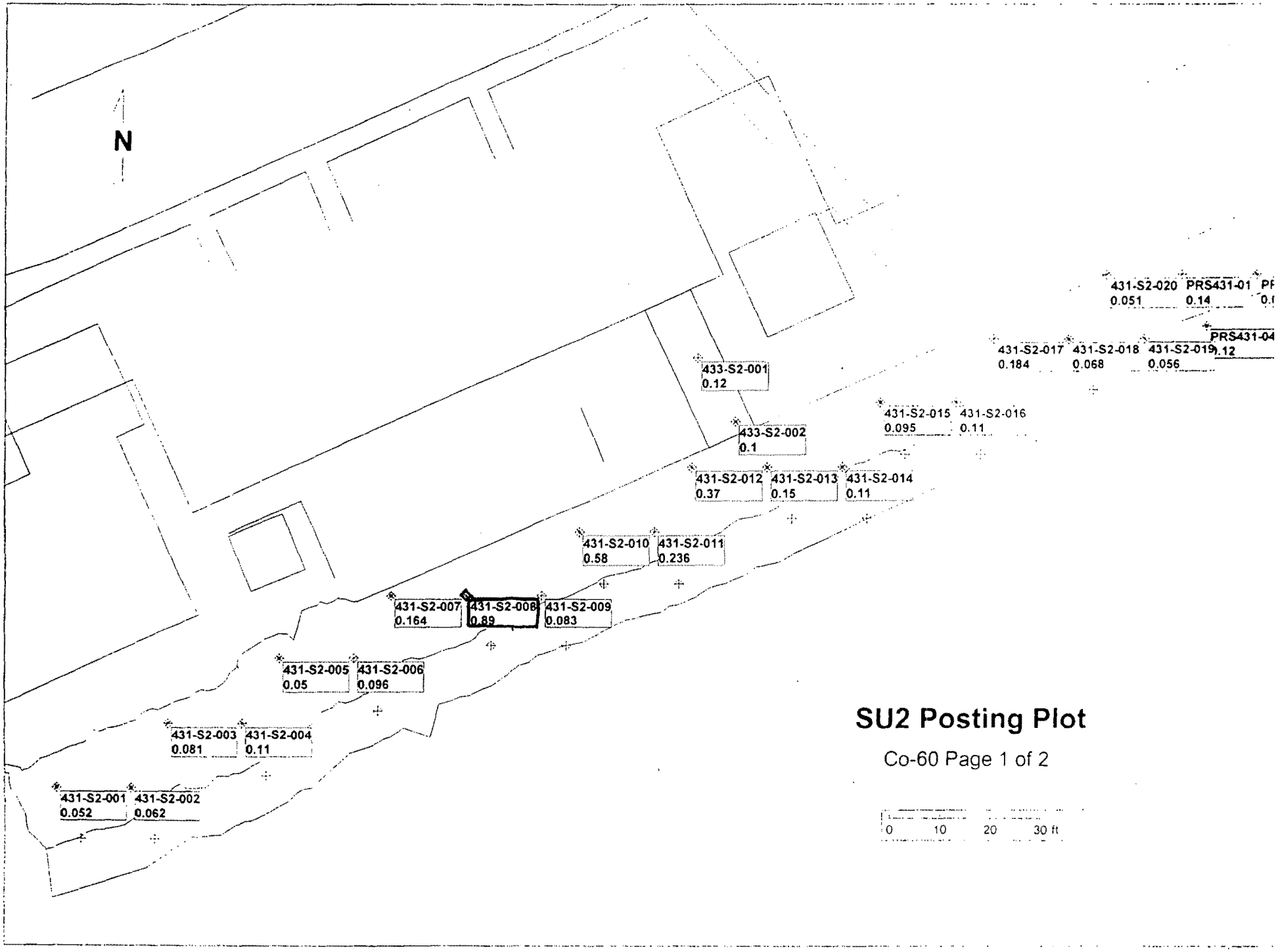

SU2 Posting Plot

Co-60 Page 1 of 2

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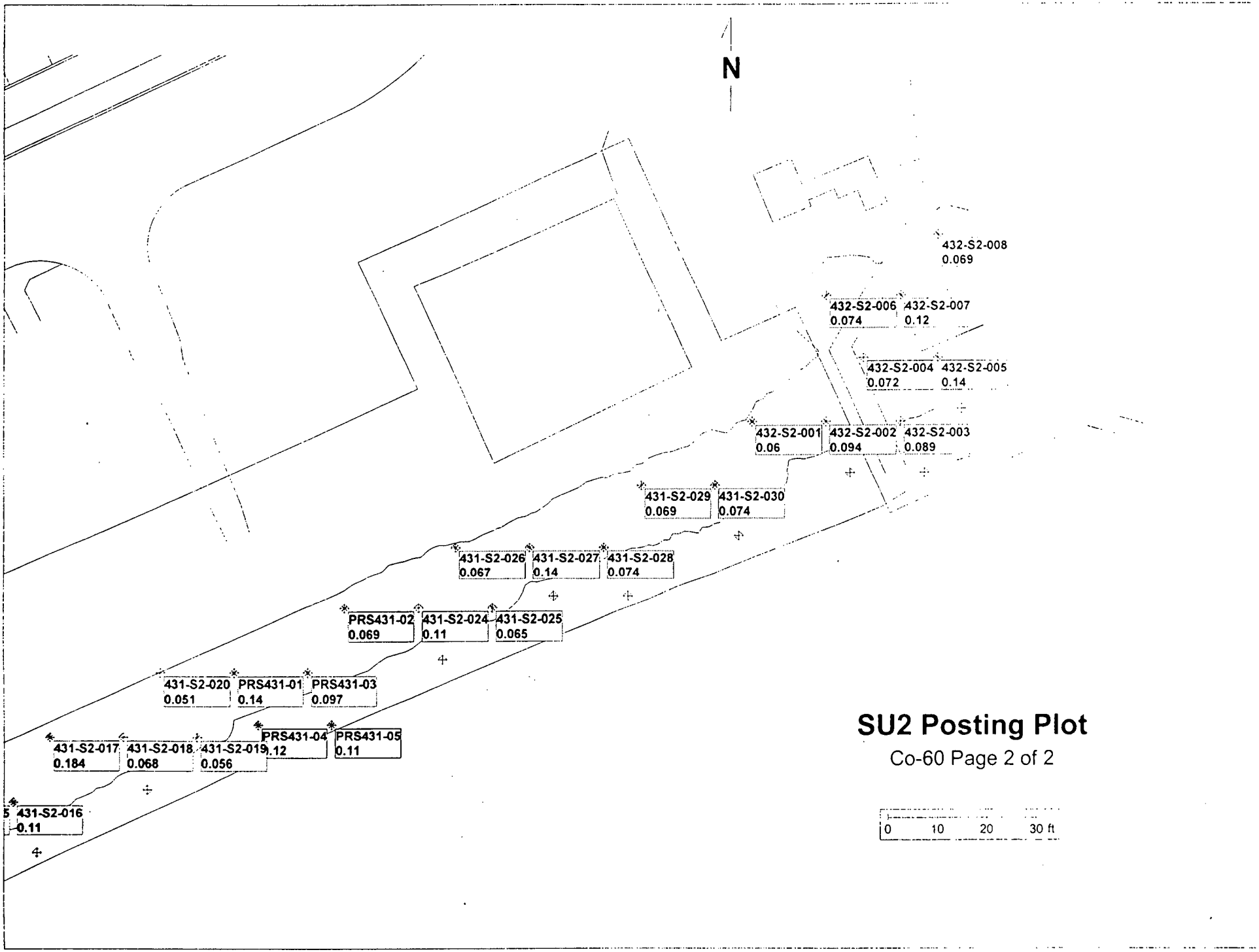

SU2 Posting Plot

Co-60 Page 2 of 2

4/3/14

Area: SU2	Terran							pCi/g					
Label	ID	Co60	MDC	Cs137	MDC	Th228	MDC	Th232	MDC	Pu238	MDC	X Coord	Y Coord
431-S2-001	1	0.000	0.052	0.000	0.062	0.265	0.040	0.275	0.027	0.070	0.035	1464991.651	598730.083
431-S2-002	2	0.003	0.062	0.000	0.065	0.200	0.042	0.243	0.016	0.048	0.023	1465006.651	598730.083
431-S2-003	3	0.027	0.081	0.000	0.061	0.187	0.047	0.160	0.017	0.022	0.034	1465014.151	598743.073
431-S2-004	4	0.049	0.110	0.011	0.080	0.450	0.050	0.610	0.030	0.074	0.027	1465029.151	598743.073
431-S2-005	5	0.005	0.050	0.013	0.061	0.236	0.030	0.201	0.016	0.035	0.036	1465036.651	598756.063
431-S2-006	6	0.020	0.096	0.016	0.084	0.370	0.070	0.370	0.030	0.073	0.017	1465051.651	598756.063
431-S2-007	7	0.164	0.140	0.020	0.065	0.196	0.074	0.275	0.033	0.035	0.019	1465059.151	598769.054
431-S2-008	8	**0.890**	0.100	0.083	0.090	0.560	0.050	0.480	0.020	0.076	0.025	1465074.151	598769.054
431-S2-009	9	0.023	0.083	0.004	0.081	0.490	0.030	0.590	0.030	0.060	0.028	1465089.151	598769.054
431-S2-010	10	0.580	0.020	0.074	0.120	0.410	0.030	0.460	0.020	0.078	0.022	1465096.651	598782.044
431-S2-011	11	0.236	0.012	0.001	0.067	0.310	0.049	0.157	0.033	0.032	0.024	1465111.651	598782.044
431-S2-012	12	0.370	0.100	0.028	0.120	0.710	0.040	0.590	0.040	0.104	0.031	1465119.151	598795.035
431-S2-013	13	0.085	0.150	0.029	0.100	0.640	0.040	0.530	0.010	0.088	0.030	1465134.151	598795.035
431-S2-014	14	0.007	0.110	0.005	0.100	0.730	0.040	0.580	0.030	0.051	0.014	1465149.151	598795.035
431-S2-015	15	0.042	0.095	0.000	0.063	0.420	0.050	0.341	0.015	0.087	0.022	1465156.651	598808.025
431-S2-016	16	0.036	0.110	0.008	0.090	0.510	0.040	0.480	0.020	0.072	0.021	1465171.651	598808.025
431-S2-017	17	0.184	0.094	0.000	0.085	0.760	0.030	0.680	0.030	0.044	0.021	1465179.151	598821.015
431-S2-018	18	0.005	0.068	0.000	0.063	0.271	0.044	0.253	0.026	0.115	0.061	1465194.151	598821.015
431-S2-019	19	0.000	0.056	0.014	0.076	0.313	0.026	0.265	0.016	0.114	0.045	1465209.151	598821.015
431-S2-020	20	0.000	0.051	0.038	0.078	0.190	0.100	0.360	0.060	0.095	0.031	1465201.651	598834.006
431-S2-021	21	0.000	0.072	0.017	0.100	0.670	0.040	0.710	0.030	0.063	0.056	1465216.651	598834.006
431-S2-022	22	0.003	0.055	0.000	0.064	0.400	0.030	0.350	0.030	0.226	0.064	1465231.651	598834.006
431-S2-023	23	0.025	0.130	0.062	0.120	0.700	0.030	0.660	0.030	0.048	0.047	1465239.151	598846.996
431-S2-024	24	0.000	0.110	0.000	0.079	0.580	0.040	0.540	0.030	0.027	0.046	1465254.151	598846.996
431-S2-025	25	0.013	0.065	0.022	0.078	0.330	0.050	0.254	0.035	0.022	0.036	1465269.151	598846.996
431-S2-026	26	0.000	0.067	0.016	0.072	0.490	0.040	0.308	0.035	0.049	0.033	1465261.651	598859.986
431-S2-027	27	0.107	0.140	0.018	0.064	0.299	0.039	0.201	0.014	0.013	0.029	1465276.651	598859.986
431-S2-028	28	0.016	0.074	0.038	0.078	0.400	0.040	0.345	0.028	0.035	0.041	1465291.651	598859.986
431-S2-029	29	0.005	0.069	0.013	0.068	0.333	0.046	0.327	0.023	0.033	0.039	1465299.151	598872.977
431-S2-030	30	0.006	0.074	0.000	0.052	0.239	0.043	0.162	0.035	0.049	0.043	1465314.151	598872.977
432-S2-001	37	0.000	0.060	0.000	0.066	0.245	0.049	0.274	0.027	0.030	0.045	1465321.651	598885.967
432-S2-002	38	0.000	0.094	0.068	0.160	0.720	0.030	0.670	0.020	0.052	0.046	1465336.651	598885.967
432-S2-003	39	0.000	0.089	0.019	0.094	0.710	0.040	0.780	0.030	0.083	0.031	1465351.651	598885.967
432-S2-004	40	0.000	0.072	0.000	0.095	0.640	0.040	0.460	0.030	0.045	0.028	1465344.151	598898.958
432-S2-005	41	0.043	0.140	0.146	0.099	0.690	0.100	0.650	0.060	0.077	0.024	1465359.151	598898.958
432-S2-006	42	0.019	0.074	0.012	0.071	0.267	0.049	0.225	0.016	0.081	0.058	1465336.651	598911.948
432-S2-007	43	0.000	0.120	0.027	0.110	0.980	0.030	0.910	0.030	0.007	0.077	1465351.651	598911.948
432-S2-008	44	0.000	0.069	0.018	0.087	0.560	0.030	0.560	0.030	0.053	0.065	1465359.151	598924.938
433-S2-002	45	0.000	0.100	0.045	0.110	0.790	0.040	0.860	0.020	0.165	0.051	1465127.759	598804.231
433-S2-001	46	0.023	0.120	0.048	0.130	0.580	0.050	0.690	0.030	0.034	0.070	1465120.259	598817.221
PRS431-01	69	0.023	0.140	0.000	0.100	0.670	0.040	0.630	0.020	0.000	0.080	1465216.651	598834.006
PRS431-02	70	0.000	0.069	0.000	0.089	0.720	0.050	0.590	0.030	0.000	0.070	1465239.151	598846.996
PRS431-03	71	0.015	0.097	0.016	0.100	0.520	0.030	0.490	0.020	0.005	0.051	1465231.651	598834.006

Label	ID	Co60	MDC	Cs137	MDC	Th228	MDC	Th232	MDC	Pu238	MDC	X Coord	Y Coord
PRS431-04	72	0.000	0.120	0.000	0.096	0.510	0.040	0.420	0.020	0.000	0.040	1465221.544	598823.555
PRS431-05	73	0.000	0.110	0.034	0.120	0.520	0.030	0.710	0.030	0.000	0.020	1465236.544	598823.555
Area: SU5	Terran					pCi/g							
Label	ID	Co60	MDC	Cs137	MDC	Th228	MDC	Th232	MDC	Pu238	MDC	X Coord	Y Coord
431-S5-001	47	0.000	0.064	0.009	0.093	0.550	0.040	0.460	0.030	0.084	0.048	1464996.544	598719.632
431-S5-002	48	0.000	0.062	0.000	0.051	0.258	0.048	0.269	0.017	0.048	0.042	1465011.544	598719.632
431-S5-003	49	0.034	0.100	0.016	0.100	0.380	0.040	0.410	0.030	0.048	0.024	1465034.044	598732.622
431-S5-004	50	0.000	0.061	0.000	0.058	0.450	0.050	0.252	0.027	0.029	0.032	1465056.544	598745.612
431-S5-005	51	0.007	0.084	0.000	0.055	0.430	0.040	0.430	0.040	0.012	0.041	1465079.044	598758.603
431-S5-006	52	0.019	0.081	0.022	0.072	0.420	0.040	0.510	0.030	0.001	0.030	1465094.044	598758.603
431-S5-007	53	0.000	0.015	0.024	0.081	0.260	0.042	0.268	0.016	0.016	0.042	1465101.544	598771.593
431-S5-008	54	0.000	0.055	0.012	0.095	0.540	0.050	0.510	0.020	0.054	0.039	1465116.544	598771.593
431-S5-009	55	0.000	0.067	0.000	0.077	0.244	0.049	0.286	0.027	0.052	0.036	1465139.044	598784.584
431-S5-010	56	0.021	0.089	0.014	0.065	0.470	0.040	0.400	0.020	0.074	0.046	1465154.044	598784.584
431-S5-011	57	0.035	0.110	0.002	0.086	0.380	0.040	0.304	0.025	0.005	0.013	1465161.544	598797.574
431-S5-012	58	0.000	0.080	0.000	0.047	0.241	0.037	0.380	0.030	0.077	0.031	1465176.544	598797.574
431-S5-013	59	0.000	0.046	0.000	0.056	0.490	0.040	0.760	0.020	0.042	0.035	1465199.044	598810.564
431-S5-014	60	0.000	0.067	0.010	0.063	0.300	0.031	0.350	0.020	0.040	0.039	1465221.544	598823.555
431-S5-015	61	0.013	0.068	0.000	0.061	0.330	0.050	0.410	0.040	0.028	0.040	1465236.544	598823.555
431-S5-016	62	0.012	0.078	0.000	0.065	0.287	0.043	0.245	0.024	0.007	0.031	1465259.044	598836.545
431-S5-017	63	0.011	0.069	0.069	0.061	0.225	0.033	0.239	0.023	0.007	0.026	1465281.544	598849.536
431-S5-018	64	0.008	0.074	0.008	0.071	0.279	0.040	0.276	0.027	0.012	0.030	1465296.544	598849.536
431-S5-019	65	0.000	0.074	0.010	0.074	0.306	0.037	0.261	0.025	0.018	0.037	1465319.044	598862.526
432-S5-001	66	0.000	0.086	0.082	0.130	0.510	0.040	0.510	0.020	0.070	0.030	1465341.544	598875.516
432-S5-002	67	0.009	0.076	0.052	0.098	0.370	0.030	0.254	0.025	0.018	0.042	1465356.544	598875.516
432-S5-003	68	0.000	0.081	0.026	0.056	0.390	0.040	0.350	0.030	0.017	0.041	1465364.044	598888.507
Duplicate Samples:													
	Terran					pCi/g							
Label	ID	Co60	MDC	Cs137	MDC	Th228	MDC	Th232	MDC	Pu238	MDC	X Coord	Y Coord
DUP-1 (5)	31	0.043	0.043	0.036	0.036	0.188	0.035	0.214	0.024	0.044	0.044	1465036.651	598756.063
DUP-2 (62)	32	0.063	0.063	0.070	0.070	0.270	0.043	0.151	0.016	0.031	0.031	1465259.044	598836.545
DUP-3 (39)	33	0.097	0.097	0.096	0.096	0.780	0.050	0.670	0.020	0.101	0.033	1465351.651	598885.967
Rinsate Samples:													
	Terran					pCi/L							
Label	ID	Co60	MDC	Cs137	MDC	Th228	MDC	Th232	MDC	Pu238	MDC		
RIN-1	34	2.80	16.00	3.50	16.00	0.000	0.200	0.000	0.100	0.011	0.110		
RIN-2	35	6.40	19.00	0.00	11.00	0.000	0.200	0.000	0.070	0.000	0.100		
RIN-3	36	3.80	17.00	0.00	14.00	0.026	0.110	0.000	0.060	0.009	0.057		

Area: SU2	Terran	pCi/g														
Label	ID	Co60	MEIMS	MDC	Cs137	MEIMS	MDC	Th228	MEIMS	MDC	Th232	MEIMS	MDC	Pu238	MEIMS	MDC
431-S2-001	1	0.000	0.052	0.052	0.000	0.062	0.062	0.265	0.265	0.040	0.275	0.275	0.027	0.070	0.070	0.035
431-S2-002	2	0.003	0.062	0.062	0.000	0.065	0.065	0.200	0.200	0.042	0.243	0.243	0.016	0.048	0.048	0.023
431-S2-003	3	0.027	0.081	0.081	0.000	0.061	0.061	0.187	0.187	0.047	0.160	0.160	0.017	0.022	0.034	0.034
431-S2-004	4	0.049	0.110	0.110	0.011	0.080	0.080	0.450	0.450	0.050	0.610	0.610	0.030	0.074	0.074	0.027
431-S2-005	5	0.005	0.050	0.050	0.013	0.061	0.061	0.236	0.236	0.030	0.201	0.201	0.016	0.035	0.036	0.036
431-S2-006	6	0.020	0.096	0.096	0.016	0.084	0.084	0.370	0.370	0.070	0.370	0.370	0.030	0.073	0.073	0.017
431-S2-007	7	0.164	0.164	0.140	0.020	0.065	0.065	0.196	0.196	0.074	0.275	0.275	0.033	0.035	0.035	0.019
431-S2-008	8	**0.890**	0.890	0.100	0.083	0.090	0.090	0.560	0.560	0.050	0.480	0.480	0.020	0.076	0.076	0.025
431-S2-009	9	0.023	0.083	0.083	0.004	0.081	0.081	0.490	0.490	0.030	0.590	0.590	0.030	0.060	0.060	0.028
431-S2-010	10	0.580	0.580	0.020	0.074	0.120	0.120	0.410	0.410	0.030	0.460	0.460	0.020	0.078	0.078	0.022
431-S2-011	11	0.236	0.236	0.012	0.001	0.067	0.067	0.310	0.310	0.049	0.157	0.157	0.033	0.032	0.032	0.024
431-S2-012	12	0.370	0.370	0.100	0.028	0.120	0.120	0.710	0.710	0.040	0.590	0.590	0.040	0.104	0.104	0.031
431-S2-013	13	0.085	0.150	0.150	0.029	0.100	0.100	0.640	0.640	0.040	0.530	0.530	0.010	0.088	0.088	0.030
431-S2-014	14	0.007	0.110	0.110	0.005	0.100	0.100	0.730	0.730	0.040	0.580	0.580	0.030	0.051	0.051	0.014
431-S2-015	15	0.042	0.095	0.095	0.000	0.063	0.063	0.420	0.420	0.050	0.341	0.341	0.015	0.087	0.087	0.022
431-S2-016	16	0.036	0.110	0.110	0.008	0.090	0.090	0.510	0.510	0.040	0.480	0.480	0.020	0.072	0.072	0.021
431-S2-017	17	0.184	0.184	0.094	0.000	0.085	0.085	0.760	0.760	0.030	0.680	0.680	0.030	0.044	0.044	0.021
431-S2-018	18	0.005	0.068	0.068	0.000	0.063	0.063	0.271	0.271	0.044	0.253	0.253	0.026	0.115	0.115	0.061
431-S2-019	19	0.000	0.056	0.056	0.014	0.076	0.076	0.313	0.313	0.026	0.265	0.265	0.016	0.114	0.114	0.045
431-S2-020	20	0.000	0.051	0.051	0.038	0.078	0.078	0.190	0.190	0.100	0.360	0.360	0.060	0.095	0.095	0.031
431-S2-021	21	0.000	0.072	0.072	0.017	0.100	0.100	0.670	0.670	0.040	0.710	0.710	0.030	0.063	0.063	0.056
431-S2-022	22	0.003	0.055	0.055	0.000	0.064	0.064	0.400	0.400	0.030	0.350	0.350	0.030	0.226	0.226	0.064
431-S2-023	23	0.025	0.130	0.130	0.062	0.120	0.120	0.700	0.700	0.030	0.660	0.660	0.030	0.048	0.048	0.047
431-S2-024	24	0.000	0.110	0.110	0.000	0.079	0.079	0.580	0.580	0.040	0.540	0.540	0.030	0.027	0.046	0.046
431-S2-025	25	0.013	0.065	0.065	0.022	0.078	0.078	0.330	0.330	0.050	0.254	0.254	0.035	0.022	0.036	0.036
431-S2-026	26	0.000	0.067	0.067	0.016	0.072	0.072	0.490	0.490	0.040	0.308	0.308	0.035	0.049	0.049	0.033
431-S2-027	27	0.107	0.140	0.140	0.018	0.064	0.064	0.299	0.299	0.039	0.201	0.201	0.014	0.013	0.029	0.029
431-S2-028	28	0.016	0.074	0.074	0.038	0.078	0.078	0.400	0.400	0.040	0.345	0.345	0.028	0.035	0.041	0.041
431-S2-029	29	0.005	0.069	0.069	0.013	0.068	0.068	0.333	0.333	0.046	0.327	0.327	0.023	0.033	0.039	0.039
431-S2-030	30	0.006	0.074	0.074	0.000	0.052	0.052	0.239	0.239	0.043	0.162	0.162	0.035	0.049	0.049	0.043
432-S2-001	37	0.000	0.060	0.060	0.000	0.066	0.066	0.245	0.245	0.049	0.274	0.274	0.027	0.030	0.045	0.045
432-S2-002	38	0.000	0.094	0.094	0.068	0.160	0.160	0.720	0.720	0.030	0.670	0.670	0.020	0.052	0.052	0.046
432-S2-003	39	0.000	0.089	0.089	0.019	0.094	0.094	0.710	0.710	0.040	0.780	0.780	0.030	0.083	0.083	0.031
432-S2-004	40	0.000	0.072	0.072	0.000	0.095	0.095	0.640	0.640	0.040	0.460	0.460	0.030	0.045	0.045	0.028
432-S2-005	41	0.043	0.140	0.140	0.146	0.146	0.099	0.690	0.690	0.100	0.650	0.650	0.060	0.077	0.077	0.024
432-S2-006	42	0.019	0.074	0.074	0.012	0.071	0.071	0.267	0.267	0.049	0.225	0.225	0.016	0.081	0.081	0.058
432-S2-007	43	0.000	0.120	0.120	0.027	0.110	0.110	0.980	0.980	0.030	0.910	0.910	0.030	0.007	0.077	0.077
432-S2-008	44	0.000	0.069	0.069	0.018	0.087	0.087	0.560	0.560	0.030	0.560	0.560	0.030	0.053	0.065	0.065
433-S2-002	45	0.000	0.100	0.100	0.045	0.110	0.110	0.790	0.790	0.040	0.860	0.860	0.020	0.165	0.165	0.051
433-S2-001	46	0.023	0.120	0.120	0.048	0.130	0.130	0.580	0.580	0.050	0.690	0.690	0.030	0.034	0.070	0.070
PRS431-01	69	0.023	0.140	0.140	0.000	0.100	0.100	0.670	0.670	0.040	0.630	0.630	0.020	0.000	0.080	0.080
PRS431-02	70	0.000	0.069	0.069	0.000	0.089	0.089	0.720	0.720	0.050	0.590	0.590	0.030	0.000	0.070	0.070
PRS431-03	71	0.015	0.097	0.097	0.016	0.100	0.100	0.520	0.520	0.030	0.490	0.490	0.020	0.005	0.051	0.051
PRS431-04	72	0.000	0.120	0.120	0.000	0.096	0.096	0.510	0.510	0.040	0.420	0.420	0.020	0.000	0.040	0.040
PRS431-05	73	0.000	0.110	0.110	0.034	0.120	0.120	0.520	0.520	0.030	0.710	0.710	0.030	0.000	0.020	0.020
	CO		**0.7**			**3.8**			**2.6**			**2.1**			**55**	
	Hot Spot		**2.1**			**10.62**			**4.8**			3.5			**165.13**	
	Max Obs		**0.890**			**0.160**			**0.980**			**0.910**			**0.226**	
	Mean		0.132			0.088			0.484			0.459			0.067	
	Standard Deviation		0.147			0.024			0.200			0.201			0.037	
	Number of Samples		45			45			45			45			45	

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Sample Standard Deviation (s)	Radionuclide	Cleanup Objective	Units
	Ac-227+D	4.6	(pCi/g)
	Am-241	63	(pCi/g)
	Ce-141	38	(pCi/g)
0.02	Cs-137+D	3.8	(pCi/g)
0.15	Co-60	0.7	(pCi/g)
	Cu-244	92	(pCi/g)
	Pb-210+D	7.4	(pCi/g)
	Np-237+D	10.4	(pCi/g)
	Ni-95	2.5	(pCi/g)
0.04	Pu-238	55	(pCi/g)
	Pu-239/240	62	(pCi/g)
	Pa-231+D	4	(pCi/g)
	Ra-226+D	2.9	(pCi/g)
	Ra-228	2.1	(pCi/g)
0.20	Th-228+D	2.6	(pCi/g)
	Th-230+D	2.8	(pCi/g)
0.20	Th-232+D	2.1	(pCi/g)
	U-233+D	4.8	(pCi/g)
	U-234	106.1	(pCi/g)
	U-234+D	2	(pCi/g)
	U-235	16.11	(pCi/g)
	U-235+D	3.2	(pCi/g)
	U-238	121.2	(pCi/g)
	U-238+D	2.2	(pCi/g)
	Bi-207	1.2	(pCi/g)
	Bi-210m	8.3	(pCi/g)
	Tc-99	2140	(pCi/g)
	Sr-90	94.72	(pCi/g)

Type I Error	0.05		
$Z_{1\text{-alpha}}$	1.645		
Type II Error	0.2		
$Z_{1\text{-beta}}$	0.842		
Effective	0.24	*(s)*	
Sign p	0.977250		

Calculate the Total Effective (s)

Estimate (N) - Sign Test

DCGL	1
LBGR	0.50
Delta	0.50
(s)	0.24
Rel Shift	2.055
(N)	9.00

Pu-238 Area Factor (N) 449

Sample Grid Spacing

SU Area	1,347.1	m^2	14500.0	ft^2
Grid Length	11.4	m	37.4	ft
Grid Height	9.9	m	32.3	ft

PRS 431 - 433 Survey Unit 2

Note: Surface area for this SU is approx. 20% less than specified in the PreEx SUD.

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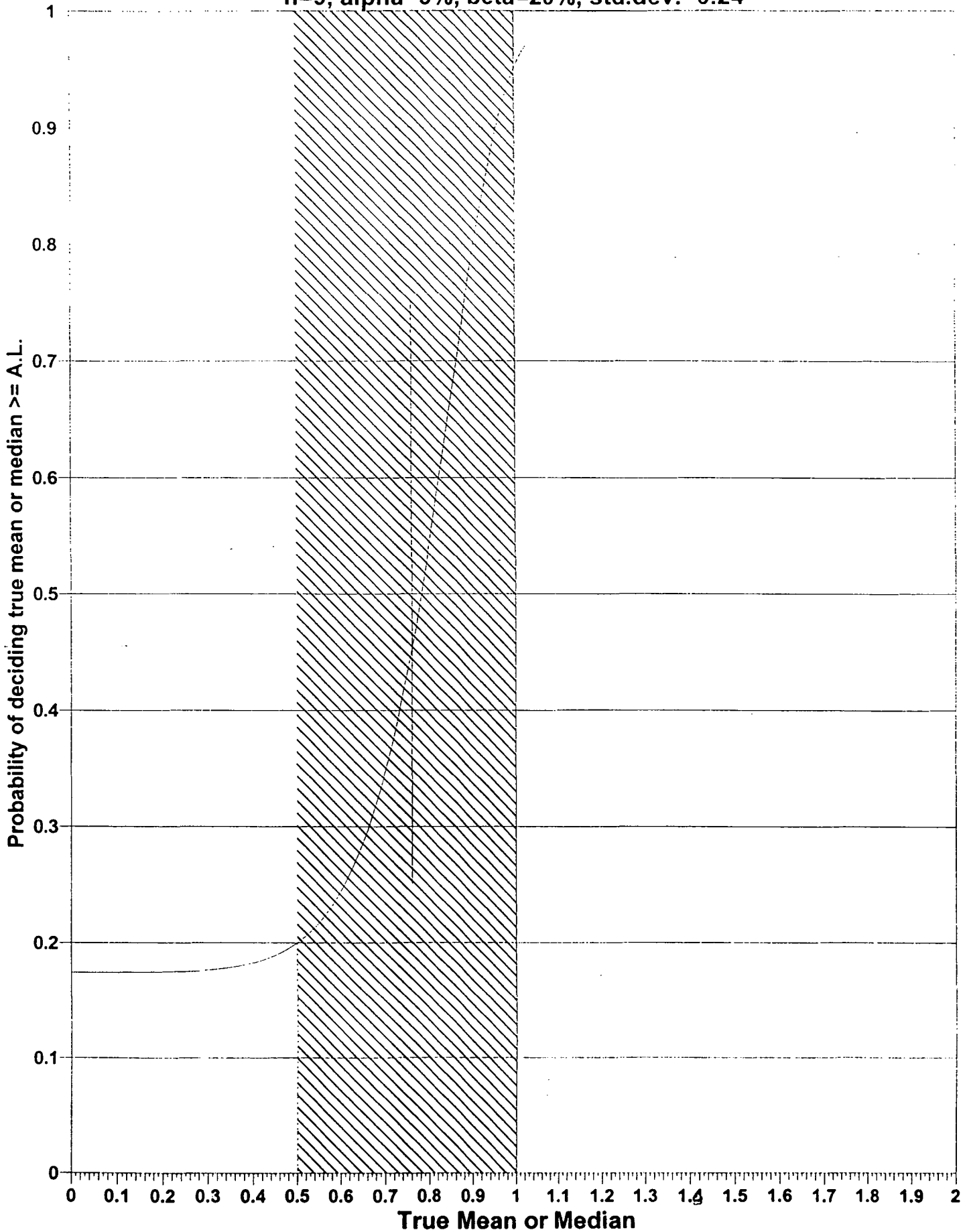
MARSSIM Sign Test

n=9, alpha=5%, beta=20%, std.dev.=0.24



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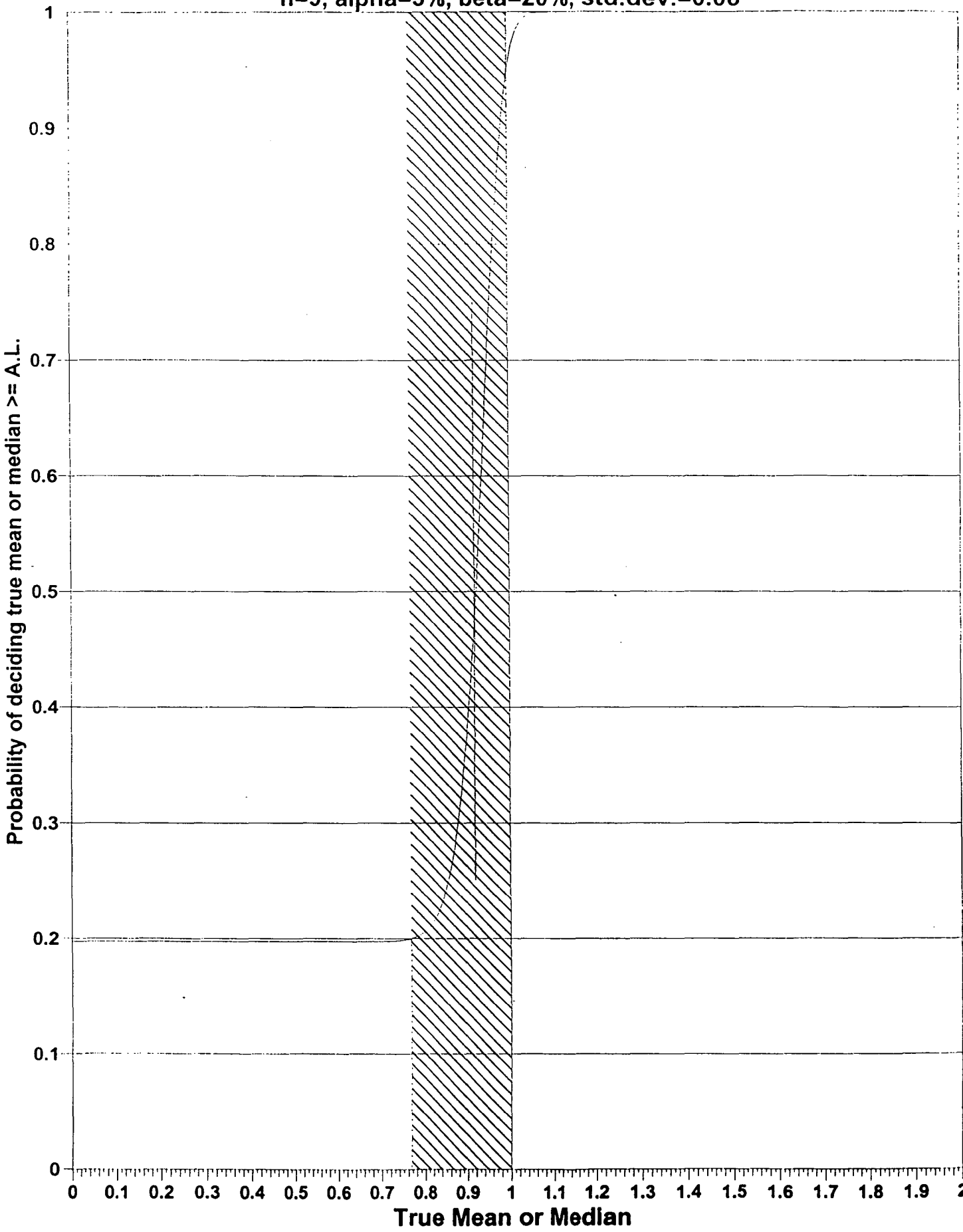
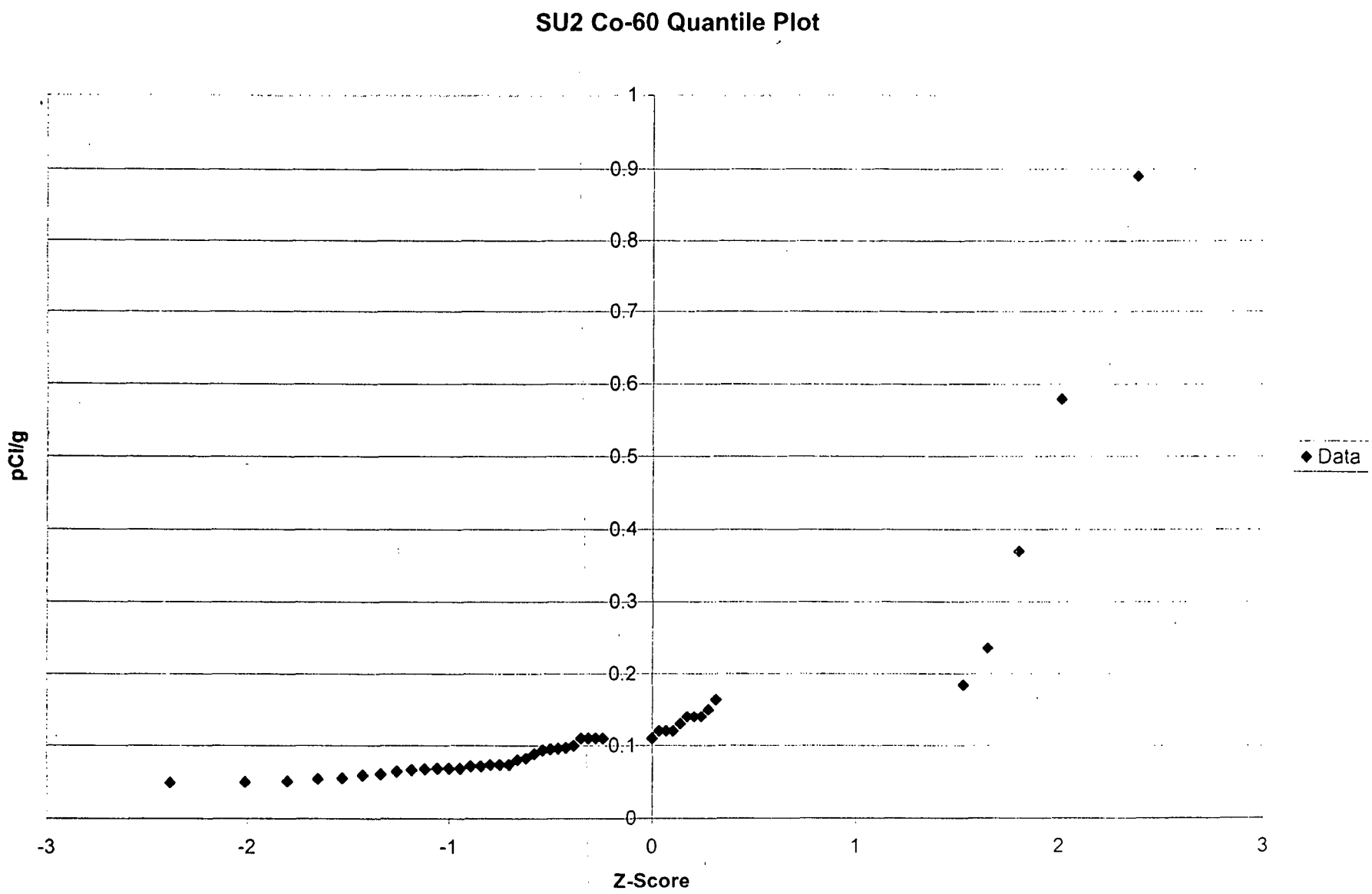
MARSSIM Sign Test

n=9, alpha=5%, beta=20%, std.dev.=0.08

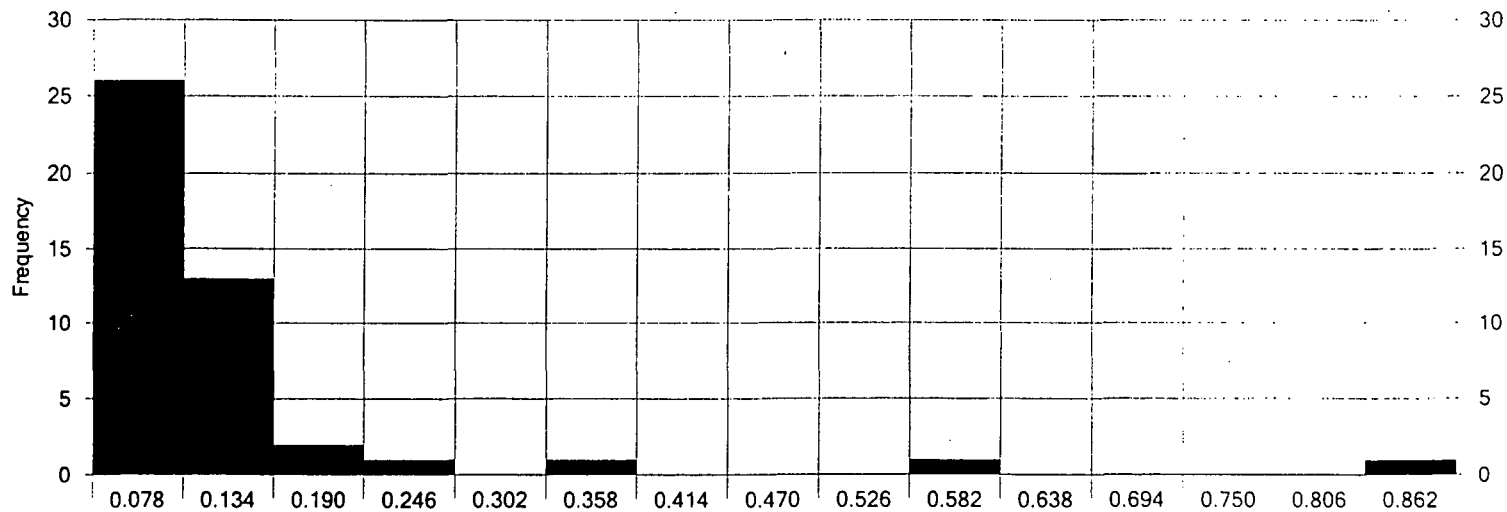



SU2 Co-60 Quantile Plot
pCi/g
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
-3
-2
-1
0
1
2
3
Z-Score
Data

h11/06 U

SU2

Histogram of Co60



Area: SU2 Label	Terran ID	Co60	CO-Meas	Sign	MDC
431-S2-001	1	0.052	0.648	1.000	0.052
431-S2-002	2	0.062	0.638	1.000	0.062
431-S2-003	3	0.081	0.619	1.000	0.081
431-S2-004	4	0.110	0.590	1.000	0.110
431-S2-005	5	0.050	0.650	1.000	0.050
431-S2-006	6	0.096	0.604	1.000	0.096
431-S2-007	7	0.164	0.536	1.000	0.140
431-S2-008	8	0.890	-0.190	FALSE	0.100
431-S2-009	9	0.083	0.617	1.000	0.083
431-S2-010	10	0.580	0.120	1.000	0.020
431-S2-011	11	0.236	0.464	1.000	0.012
431-S2-012	12	0.370	0.330	1.000	0.100
431-S2-013	13	0.150	0.550	1.000	0.150
431-S2-014	14	0.110	0.590	1.000	0.110
431-S2-015	15	0.095	0.605	1.000	0.095
431-S2-016	16	0.110	0.590	1.000	0.110
431-S2-017	17	0.184	0.516	1.000	0.094
431-S2-018	18	0.068	0.632	1.000	0.068
431-S2-019	19	0.056	0.644	1.000	0.056
431-S2-020	20	0.051	0.649	1.000	0.051
431-S2-021	21	0.072	0.628	1.000	0.072
431-S2-022	22	0.055	0.645	1.000	0.055
431-S2-023	23	0.130	0.570	1.000	0.130
431-S2-024	24	0.110	0.590	1.000	0.110
431-S2-025	25	0.065	0.635	1.000	0.065
431-S2-026	26	0.067	0.633	1.000	0.067
431-S2-027	27	0.140	0.560	1.000	0.140
431-S2-028	28	0.074	0.626	1.000	0.074
431-S2-029	29	0.069	0.631	1.000	0.069
431-S2-030	30	0.074	0.626	1.000	0.074
432-S2-001	37	0.060	0.640	1.000	0.060
432-S2-002	38	0.094	0.606	1.000	0.094
432-S2-003	39	0.089	0.611	1.000	0.089
432-S2-004	40	0.072	0.628	1.000	0.072
432-S2-005	41	0.140	0.560	1.000	0.140
432-S2-006	42	0.074	0.626	1.000	0.074
432-S2-007	43	0.120	0.580	1.000	0.120
432-S2-008	44	0.069	0.631	1.000	0.069
433-S2-002	45	0.100	0.600	1.000	0.100
433-S2-001	46	0.120	0.580	1.000	0.120
PRS431-01	69	0.140	0.560	1.000	0.140
PRS431-02	70	0.069	0.631	1.000	0.069
PRS431-03	71	0.097	0.603	1.000	0.097
PRS431-04	72	0.120	0.580	1.000	0.120
PRS431-05	73	0.110	0.590	1.000	0.110

CO	**0.7**	**Sum:**	**44.000**	
Hot Spot	**2.1**	**k Crit**	27.000	(from Table I.3 MARSSIM)
Max Obs	**0.890**	P/F	**PASS**	
Mean	0.132			
Standard Deviati	0.147			
Number of Samp	45			

General Statistics

Data File	K:\SHARED\ER\UGL\SUDS\PRS 123\PRS 431-433 Final Sample Results Co-60 ProUCL.x		
Variable:	Co60		
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	45	Shapiro-Wilk Test Statisitic	0.498528
Number of Unique Samples	32	Shapiro-Wilk 5% Critical Value	0.945
Minimum	0.05	Data not normal at 5% significance level	
Maximum	0.89		
Mean	0.131733	95% UCL (Assuming Normal Distribution)	
Median	0.095	Student's-t UCL	0.16847
Standard Deviation	0.146669		
Variance	0.021512	Gamma Distribution Test	
Coefficient of Variation	1.113377	A-D Test Statistic	3.675303
Skewness	4.02965	A-D 5% Critical Value	0.759789
		K-S Test Statistic	0.219553
Gamma Statistics		K-S 5% Critical Value	0.133331
k hat	2.149752	Data do not follow gamma distribution	
k star (bias corrected)	2.02125	at 5% significance level	
Theta hat	0.061278		
Theta star	0.065174	95% UCLs (Assuming Gamma Distribution)	
nu hat	193.4777	Approximate Gamma UCL	0.157959
nu star	181.9125	Adjusted Gamma UCL	0.158914
Approx.Chi Square Value (.05)	151.7097		
Adjusted Level of Significance	0.044667	Lognormal Distribution Test	
Adjusted Chi Square Value	150.798	Shapiro-Wilk Test Statisitic	0.843359
		Shapiro-Wilk 5% Critical Value	0.945
Log-transformed Statistics		Data not lognormal at 5% significance level	
Minimum of log data	-2.995732		
Maximum of log data	-0.116534	95% UCLs (Assuming Lognormal Distribution)	
Mean of log data	-2.277236	95% H-UCL	0.146215
Standard Deviation of log data	0.596684	95% Chebyshev (MVUE) UCL	0.172534
Variance of log data	0.356032	97.5% Chebyshev (MVUE) UCL	0.194405
		99% Chebyshev (MVUE) UCL	0.237366
		95% Non-parametric UCLs	
		CLT UCL	0.167697
		Adj-CLT UCL (Adjusted for skewness)	0.18173
		Mod-t UCL (Adjusted for skewness)	0.170659
		Jackknife UCL	0.16847
		Standard Bootstrap UCL	0.167572
		Bootstrap-t UCL	0.223395
RECOMMENDATION		Hall's Bootstrap UCL	0.311347
Data are Non-parametric (0.05)		Percentile Bootstrap UCL	0.169267
		BCA Bootstrap UCL	0.185933
Use 95% Chebyshev (Mean, Sd) UCL		95% Chebyshev (Mean, Sd) UCL	0.227037
		97.5% Chebyshev (Mean, Sd) UCL	0.268275
		99% Chebyshev (Mean, Sd) UCL	0.349278

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Area: SU5	Terran							pCi/g								
Label	ID	Co60	MEIMS	MDC	Cs137	MEIMS	MDC	Th228	MEIMS	MDC	Th232	MEIMS	MDC	Pu238	MEIMS	MDC
431-S5-001	47	0.000	0.064	0.064	0.009	0.093	0.093	0.550	0.550	0.040	0.460	0.460	0.030	0.084	0.084	0.048
431-S5-002	48	0.000	0.062	0.062	0.000	0.051	0.051	0.258	0.258	0.048	0.269	0.269	0.017	0.048	0.048	0.042
431-S5-003	49	0.034	0.100	0.100	0.016	0.100	0.100	0.380	0.380	0.040	0.410	0.410	0.030	0.048	0.048	0.024
431-S5-004	50	0.000	0.061	0.061	0.000	0.058	0.058	0.450	0.450	0.050	0.252	0.252	0.027	0.029	0.032	0.032
431-S5-005	51	0.007	0.084	0.084	0.000	0.055	0.055	0.430	0.430	0.040	0.430	0.430	0.040	0.012	0.041	0.041
431-S5-006	52	0.019	0.081	0.081	0.022	0.072	0.072	0.420	0.420	0.040	0.510	0.510	0.030	0.001	0.030	0.030
431-S5-007	53	0.000	0.015	0.015	0.024	0.081	0.081	0.260	0.260	0.042	0.268	0.268	0.016	0.016	0.042	0.042
431-S5-008	54	0.000	0.055	0.055	0.012	0.095	0.095	0.540	0.540	0.050	0.510	0.510	0.020	0.054	0.054	0.039
431-S5-009	55	0.000	0.067	0.067	0.000	0.077	0.077	0.244	0.244	0.049	0.286	0.286	0.027	0.052	0.052	0.036
431-S5-010	56	0.021	0.089	0.089	0.014	0.065	0.065	0.470	0.470	0.040	0.400	0.400	0.020	0.074	0.074	0.046
431-S5-011	57	0.035	0.110	0.110	0.002	0.086	0.086	0.380	0.380	0.040	0.304	0.304	0.025	0.005	0.013	0.013
431-S5-012	58	0.000	0.080	0.080	0.000	0.047	0.047	0.241	0.241	0.037	0.380	0.380	0.030	0.077	0.077	0.031
431-S5-013	59	0.000	0.046	0.046	0.000	0.056	0.056	0.490	0.490	0.040	0.760	0.760	0.020	0.042	0.042	0.035
431-S5-014	60	0.000	0.067	0.067	0.010	0.063	0.063	0.300	0.300	0.031	0.350	0.350	0.020	0.040	0.040	0.039
431-S5-015	61	0.013	0.068	0.068	0.000	0.061	0.061	0.330	0.330	0.050	0.410	0.410	0.040	0.028	0.040	0.040
431-S5-016	62	0.012	0.078	0.078	0.000	0.065	0.065	0.287	0.287	0.043	0.245	0.245	0.024	0.007	0.031	0.031
431-S5-017	63	0.011	0.069	0.069	0.069	0.069	0.061	0.225	0.225	0.033	0.239	0.239	0.023	0.007	0.026	0.026
431-S5-018	64	0.008	0.074	0.074	0.008	0.071	0.071	0.279	0.279	0.040	0.276	0.276	0.027	0.012	0.030	0.030
431-S5-019	65	0.000	0.074	0.074	0.010	0.074	0.074	0.306	0.306	0.037	0.261	0.261	0.025	0.018	0.037	0.037
432-S5-001	66	0.000	0.086	0.086	0.082	0.130	0.130	0.510	0.510	0.040	0.510	0.510	0.020	0.070	0.070	0.030
432-S5-002	67	0.009	0.076	0.076	0.052	0.098	0.098	0.370	0.370	0.030	0.254	0.254	0.025	0.018	0.042	0.042
432-S5-003	68	0.000	0.081	0.081	0.026	0.056	0.056	0.390	0.390	0.040	0.350	0.350	0.030	0.017	0.041	0.041

CO	**0.7**	**3.8**	**2.6**	**2.1**	**55**
Hot Spot	**2.1**	**10.62**	**4.8**	**3.5**	**165.13**
Mean	0.072	0.074	0.369	0.370	0.045
Max Obs	0.110	0.130	0.550	0.760	0.084
Standard Deviation	0.019	0.020	0.103	0.127	0.018
Number of Samples	22	22	22	22	22

Sample Standard Deviation (s)	Radionuclide	Cleanup Objective	Units
	Ac-227+D	4.6	(pCi/g)
	Am-241	63	(pCi/g)
	Ce-141	38	(pCi/g)
0.02	Cs-137+D	3.8	(pCi/g)
0.02	Co-60	0.7	(pCi/g)
	Cu-244	92	(pCi/g)
	Pb-210+D	7.4	(pCi/g)
	Np-237+D	10.4	(pCi/g)
	Ni-95	2.5	(pCi/g)
0.02	Pu-238	55	(pCi/g)
	Pu-239/240	62	(pCi/g)
	Pa-231+D	4	(pCi/g)
	Ra-226+D	2.9	(pCi/g)
	Ra-228	2.1	(pCi/g)
0.10	Th-228+D	2.6	(pCi/g)
	Th-230+D	2.8	(pCi/g)
0.13	Th-232+D	2.1	(pCi/g)
	U-233+D	4.8	(pCi/g)
	U-234	106.1	(pCi/g)
	U-234+D	2	(pCi/g)
	U-235	16.11	(pCi/g)
	U-235+D	3.2	(pCi/g)
	U-238	121.2	(pCi/g)
	U-238+D	2.2	(pCi/g)
	Bi-207	1.2	(pCi/g)
	Bi-210m	8.3	(pCi/g)
	Tc-99	2140	(pCi/g)
	Sr-90	94.72	(pCi/g)

Type I Error	0.05		
$Z_{1\text{-alpha}}$	1.645		
Type II Error	0.2		
$Z_{1\text{-beta}}$	0.842		
Effective	0.08	*(s)*	
Sign p	0.993790		

Calculate the Total Effective (s)

Estimate (N) - Sign Test	
DCGL	1
LBGR	0.77
Delta	0.23
(s)	0.08
Rel Shift	2.997
(N)	8.00

Pu-238 Area Factor (N) 269

Sample Grid Spacing

SU Area	808.3	m^2	8700.0	ft^2
Grid Length	9.4	m	30.7	ft
Grid Height	8.1	m	26.6	ft

PRS 123, et al Survey Unit 5 (partial)

note: This Post-exc SUD applies only to that portion of SU5 that supports SU2. The remainder of SU5 will be included in another post-exc SUD.

A-95/114

285-6404

STD VSAP BACKFILL INFO

This information will be represented in the Data Report.

For: PRSs 123, 415, 429, 430, 434-436
(SU-1 & SU-4)

Checklist:

(per Section 5.6 of Std VSAP, Final, Aug 04)

- ☑ final Graphic
  (show sample locations & note any >CO and/or >HS)
- ☑ sample results
  (show DLs, HS, COs, and COC std deviation(s))
- ☑ recalc of N
- ☑ Data Review & Validation (PRE-LIM)
  (if available)
- ☑ Sign test
  (not required if all results <CO, see pg 19/21 of VSAP)
- ☑ retro curve

From: (sign/date) Dennis R Lamunier 2 MAY 05

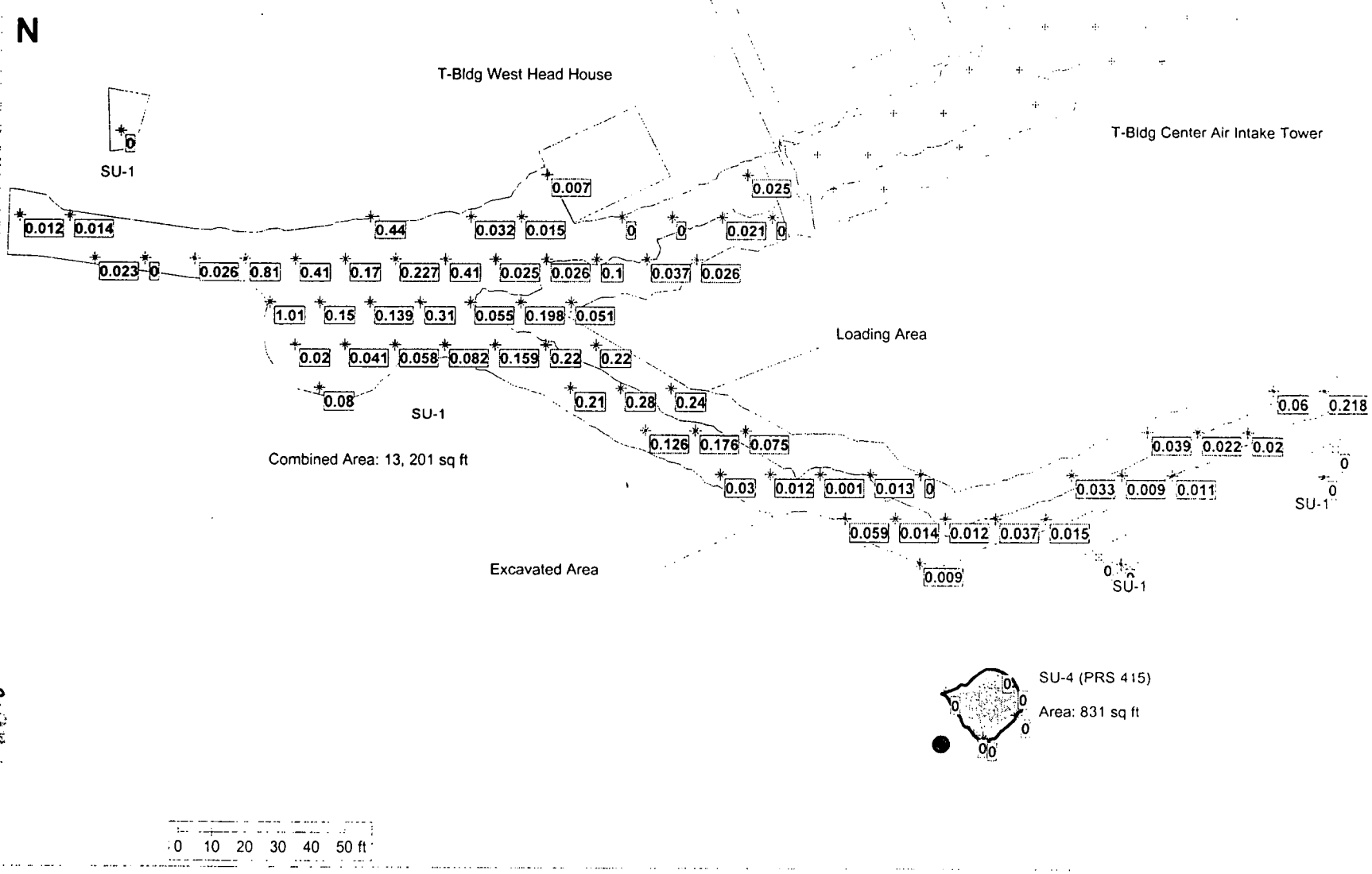
SAMPLE EVENT 2 DMS 10 Aug 05

A 96/114

PRSs 123, 415, 429, 430, 434 - 436 Post-Ex SUD (SU-1 & SU-4)

(SU-1 includes the areas previously designated as SU-1, SU-3, and SU-5 Partial)

Co-60 Posting Plot



A 97/114

Area: SU-1				COC	Co-60				Cs-137		Th-228		Th-232		Pu-238		Bi-207		Bi-210m	
				Mean	0.110				0.045		0.670		0.658		0.211		0.013		0.122	
				Std Dev	0.179				0.041		0.198		0.186		0.436		0.021		0.260	
				No. Sam.	67				67		67		67		67		67		67	
				CO	0.7				3.8		2.6		2.1		55		1.2		8.3	
				HS	2.1				10.62		4.8		3.5		165.13		3.6		24.9	
X Coord	Y Coord	Label	Terran ID	COC	Co-60	MDC	CO-Meas	Sign Test	Cs-137	MDC	Th-228	MDC	Th-232	MDC	Pu-238	MDC	Bi-207	MDC	Bi-210m	MDC
1465023.315	598606.9649	SU1-123-001	81		0.009	0.120	0.691	1	0.076	0.083	0.630	0.050	0.600	0.040	0.065	0.038	0.000	0.064	0.046	0.110
1465083.315	598606.9649	SU1-123-002	145		0.000	0.090	0.700	1	0.021	0.140	0.840	0.040	0.900	0.030	0.070	0.028	0.000	0.100	0.000	0.120
1465000.815	598619.9552	SU1-123-003	83		0.059	0.130	0.641	1	0.009	0.098	0.660	0.110	0.690	0.040	0.004	0.032	0.000	0.069	0.000	0.087
1465015.815	598619.9552	SU1-123-004	82		0.014	0.110	0.686	1	0.031	0.098	0.780	0.110	0.650	0.120	0.027	0.043	0.014	0.070	0.000	0.073
1465030.815	598619.9552	SU1-123-005	85		0.012	0.100	0.688	1	0.040	0.100	0.390	0.060	0.390	0.040	0.120	0.050	0.000	0.056	0.000	0.081
1465045.815	598619.9552	SU1-123-006	78		0.037	0.110	0.663	1	0.137	0.093	0.760	0.060	0.710	0.050	0.710	0.040	0.013	0.069	0.000	0.092
1465060.815	598619.9552	SU1-123-007	79		0.015	0.110	0.685	1	0.125	0.100	0.550	0.110	0.460	0.080	0.220	0.044	0.049	0.089	0.000	0.095
1464963.315	598632.9456	SU1-123-008	86		0.030	0.110	0.670	1	0.040	0.110	0.660	0.070	0.550	0.040	0.093	0.034	0.011	0.070	0.046	0.097
1464978.315	598632.9456	SU1-123-009	95		0.012	0.088	0.688	1	0.045	0.076	0.321	0.031	0.261	0.015	0.047	0.027	0.021	0.054	0.000	0.060
1464993.315	598632.9456	SU1-123-010	84		0.001	0.079	0.699	1	0.000	0.073	0.410	0.100	0.360	0.040	0.206	0.050	0.001	0.050	0.000	0.081
1465008.315	598632.9456	SU1-123-011	115		0.013	0.057	0.687	1	0.029	0.075	0.240	0.120	0.320	0.060	0.163	0.044	0.017	0.054	0.000	0.057
1465023.315	598632.9456	SU1-123-012	102		0.000	0.069	0.700	1	0.000	0.062	0.420	0.050	0.430	0.020	0.090	0.029	0.001	0.038	0.004	0.066
1465068.315	598632.9456	SU1-123-013	77		0.033	0.120	0.667	1	0.096	0.140	0.590	0.070	0.570	0.050	0.224	0.041	0.004	0.086	0.016	0.100
1465083.315	598632.9456	SU1-123-014	73		0.009	0.097	0.691	1	0.115	0.099	0.690	0.050	0.750	0.040	0.049	0.065	0.021	0.075	0.000	0.080
1465098.315	598632.9456	SU1-123-015	72		0.011	0.120	0.689	1	0.046	0.120	0.710	0.080	0.820	0.050	0.000	0.085	0.023	0.080	0.006	0.100
1465143.315	598632.9456	SU1-123-016	143		0.000	0.093	0.700	1	0.000	0.110	0.830	0.050	0.800	0.030	0.006	0.036	0.015	0.054	0.012	0.085
1464940.815	598645.936	SU1-123-017	88		0.126	0.200	0.574	1	0.029	0.110	0.830	0.060	0.880	0.030	0.062	0.052	0.012	0.087	0.083	0.140
1464955.815	598645.936	SU1-123-018	87		0.176	0.190	0.524	1	0.099	0.120	0.840	0.040	0.750	0.020	0.301	0.045	0.000	0.065	0.115	0.092
1464970.815	598645.936	SU1-123-019	94		0.075	0.140	0.625	1	0.044	0.091	0.480	0.040	0.560	0.020	0.196	0.043	0.000	0.053	0.075	0.099
1465090.815	598645.936	SU1-123-020	76		0.039	0.120	0.661	1	0.048	0.110	0.500	0.070	0.570	0.070	0.118	0.041	0.000	0.049	0.000	0.077
1465105.815	598645.936	SU1-123-021	75		0.022	0.110	0.678	1	0.017	0.100	0.630	0.110	0.530	0.060	0.123	0.048	0.000	0.059	0.009	0.095
1465120.815	598645.936	SU1-123-022	71		0.020	0.110	0.680	1	0.137	0.130	0.750	0.050	0.750	0.030	0.206	0.031	0.000	0.057	0.000	0.093
1464843.315	598658.9264	SU1-123-023	123		0.080	0.190	0.620	1	0.060	0.120	0.930	0.080	0.850	0.030	0.023	0.039	0.045	0.100	0.012	0.130
1464918.315	598658.9264	SU1-123-024	90		0.210	0.270	0.490	1	0.078	0.140	0.840	0.030	0.790	0.030	0.150	0.044	0.000	0.075	0.250	0.200
1464933.315	598658.9264	SU1-123-025	89		0.280	0.080	0.420	1	0.063	0.110	0.520	0.060	0.730	0.020	0.103	0.046	0.031	0.076	0.370	0.090
1464948.315	598658.9264	SU1-123-026	93		0.240	0.260	0.460	1	0.144	0.093	0.840	0.040	0.850	0.020	0.281	0.048	0.009	0.100	0.380	0.100
1465128.315	598658.9264	SU1-123-027	69		0.060	0.140	0.640	1	0.014	0.099	0.580	0.040	0.520	0.020	0.137	0.052	0.009	0.078	0.051	0.110
1465143.315	598658.9264	SU1-123-028	70		0.218	0.220	0.482	1	0.133	0.099	0.660	0.060	0.630	0.040	0.059	0.043	0.006	0.070	0.042	0.110
1464835.815	598671.9168	SU1-123-029	126		0.020	0.150	0.680	1	0.000	0.110	0.930	0.060	0.860	0.040	0.011	0.035	0.019	0.100	0.000	0.110
1464850.815	598671.9168	SU1-123-030	124		0.041	0.120	0.659	1	0.034	0.061	0.690	0.070	0.780	0.030	0.124	0.034	0.041	0.073	0.053	0.099
1464865.815	598671.9168	SU1-123-031	121		0.058	0.140	0.642	1	0.025	0.098	0.550	0.050	0.550	0.030	0.073	0.032	0.015	0.069	0.055	0.110
1464880.815	598671.9168	SU1-123-032	120		0.082	0.130	0.618	1	0.010	0.100	0.660	0.070	0.610	0.030	0.035	0.028	0.000	0.054	0.000	0.094
1464895.815	598671.9168	SU1-123-033	107		0.159	0.190	0.541	1	0.045	0.110	0.560	0.030	0.480	0.030	0.236	0.064	0.000	0.061	0.109	0.120
1464910.815	598671.9168	SU1-123-034	91		0.220	0.100	0.480	1	0.056	0.110	0.730	0.030	0.660	0.030	0.254	0.030	0.000	0.068	0.269	0.088
1464925.815	598671.9168	SU1-123-035	92		0.220	0.230	0.480	1	0.129	0.160	0.770	0.050	0.750	0.030	0.308	0.043	0.050	0.095	0.230	0.100
1464828.315	598684.9071	SU1-123-036	127		**1.010**	0.120	-0.310	FALSE	0.023	0.140	0.750	0.070	0.880	0.060	0.072	0.039	0.046	0.110	0.540	0.120
1464843.315	598684.9071	SU1-123-037	128		0.150	0.210	0.550	1	0.011	0.110	0.790	0.080	0.670	0.060	0.014	0.029	0.000	0.083	0.150	0.130
1464858.315	598684.9071	SU1-123-038	116		0.139	0.180	0.561	1	0.028	0.110	0.830	0.090	0.710	0.020	0.169	0.033	0.011	0.070	0.134	0.120
1464873.315	598684.9071	SU1-123-039	114		0.310	0.120	0.390	1	0.058	0.110	0.600	0.060	0.620	0.040	3.500	0.050	0.021	0.091	0.260	0.170
1464888.315	598684.9071	SU1-123-040	105		0.055	0.140	0.645	1	0.000	0.087	0.480	0.030	0.460	0.030	0.138	0.036	0.000	0.054	0.113	0.130
1464903.315	598684.9071	SU1-123-041	106		0.198	0.094	0.502	1	0.036	0.110	0.450	0.040	0.680	0.020	0.288	0.035	0.032	0.076	0.348	0.089
1464918.315	598684.9071	SU1-123-042	104		0.051	0.150	0.649	1	0.023	0.130	0.710	0.020	0.680	0.010	0.205	0.028	0.000	0.068	0.102	0.130
1464775.815	598697.8975	SU1-123-043	137		0.023	0.130	0.677	1	0.000	0.090	0.890	0.050	1.070	0.030	0.125	0.034	0.003	0.076	0.094	0.120
1464790.815	598697.8975	SU1-123-044	136		0.000	0.100	0.700	1	0.058	0.100	0.720	0.070	0.590	0.040	0.019	0.041	0.020	0.080	0.000	0.091
1464805.815	598697.8975	SU1-123-045	135		0.026	0.100	0.674	1	0.014	0.084	0.780	0.040	0.760	0.040	0.029	0.032	0.000	0.061	0.000	0.073
1464820.815	598697.8975	SU1-123-046	133		**0.810**	0.130	-0.110	FALSE	0.091	0.130	0.810	0.070	0.840	0.030	0.006	0.038	0.145	0.130	1.840	0.110
1464835.815	598697.8975	SU1-123-047	130		0.410	0.110	0.290	1	0.100	0.140	0.760	0.040	0.780	0.030	0.026	0.027	0.030	0.079	0.151	0.092
1464850.815	598697.8975	SU1-123-048	118		0.170	0.240	0.530	1	0.015	0.120	1.020	0.060	0.720	0.040	0.053	0.049	0.026	0.100	0.410	0.230
1464865.815	598697.8975	SU1-123-049	117		0.227	0.210	0.473	1	0.030	0.110	0.700	0.080	0.640	0.040	0.154	0.042	0.000	0.067	0.147	0.100
1464880.815	598697.8975	SU1-123-050	119		0.410	0.120	0.290	1	0.099	0.160	0.940	0.050	0.940	0.030	0.273	0.045	0.001	0.090	0.670	0.120
1464895.815	598697.8975	SU1-123-051	111		0.025	0.130	0.675	1	0.044	0.110	0.620	0.040	0.810	0.030	0.264	0.036	0.013	0.076	0.089	0.120
1464910.815	598697.8975	SU1-123-052	103		0.026	0.130	0.674	1	0.024	0.110	0.600	0.030	0.730	0.030	0.259	0.034	0.018	0.071	0.054	0.120
1464925.815	598697.8975	SU1-123-053	101		0.100	0.160	0.600	1	0.024	0.120	0.830	0.040	0.830	0.020	0.244	0.031	0.000	0.074	0.044	0.120
1464940.815	598697.8975	SU1-123-054	97		0.037	0.150	0.663	1	0.096	0.160	0.640	0.030	0.660	0.020	0.610	0.040	0.000	0.068	0.024	0.120

X Coord	Y Coord	Label	Terran ID	COC	Co-60	MDC	CO-Meas	Sign Test	Cs-137	MDC	Th-228	MDC	Th-232	MDC	Pu-238	MDC	Bi-207	MDC	Bi-210m	MDC
1464955.815	598697.8975	SU1-123-055	96		0.026	0.110	0.674	1	0.060	0.083	0.570	0.030	0.540	0.030	0.410	0.030	0.002	0.059	0.004	0.086
1464753.315	598710.8879	SU1-123-056	140		0.012	0.120	0.688	1	0.000	0.100	1.120	0.100	0.850	0.060	0.095	0.034	0.011	0.110	0.000	0.110
1464768.315	598710.8879	SU1-123-057	139		0.014	0.120	0.686	1	0.000	0.090	1.010	0.070	1.040	0.050	0.097	0.037	0.000	0.077	0.000	0.092
1464858.315	598710.8879	SU1-123-058	131		0.440	0.140	0.260	1	0.058	0.140	0.690	0.070	0.700	0.030	0.231	0.027	0.026	0.094	0.570	0.110
1464888.315	598710.8879	SU1-123-059	110		0.032	0.100	0.668	1	0.034	0.093	0.270	0.080	0.306	0.036	0.041	0.038	0.004	0.055	0.002	0.083
1464903.315	598710.8879	SU1-123-060	109		0.015	0.130	0.685	1	0.006	0.092	0.770	0.050	0.700	0.040	0.256	0.028	0.000	0.072	0.026	0.120
1464933.315	598710.8879	SU1-123-061	100		0.000	0.072	0.700	1	0.000	0.083	0.590	0.030	0.680	0.020	0.173	0.034	0.004	0.056	0.022	0.076
1464948.315	598710.8879	SU1-123-062	99		0.000	0.110	0.700	1	0.000	0.093	0.910	0.040	0.720	0.040	0.029	0.035	0.008	0.078	0.028	0.098
1464963.315	598710.8879	SU1-123-063	156		0.021	0.110	0.679	1	0.024	0.095	0.390	0.050	0.370	0.030	0.570	0.040	0.000	0.058	0.000	0.083
1464978.315	598710.8879	SU1-123-064	157		0.000	0.066	0.700	1	0.000	0.055	0.200	0.045	0.202	0.018	0.022	0.034	0.005	0.038	0.000	0.050
1464910.815	598723.8783	SU1-123-065	108		0.007	0.070	0.693	1	0.036	0.097	0.360	0.030	0.320	0.030	0.630	0.050	0.005	0.045	0.000	0.059
1464970.815	598723.8783	SU1-123-066	158		0.025	0.076	0.675	1	0.033	0.089	0.360	0.080	0.400	0.040	0.251	0.035	0.008	0.056	0.049	0.084
1464783.315	598736.8687	SU1-123-067	138		0.000	0.130	0.700	1	0.000	0.064	0.930	0.060	0.800	0.020	0.000	0.040	0.004	0.083	0.069	0.140
							Sum:	65												
							k Crit	41	(from Table I.3 MARSSIM)											
							P/F	PASS												

Area: SU-4	COC	Co-60	Cs-137	Th-228	Th-232	Pu-238	Bi-207	Bi-210m
	Mean	0.017	0.006	0.978	1.065	0.023	0.013	0.011
	Std Dev	0.019	0.014	0.254	0.348	0.028	0.011	0.017
	No. Sam.	6	6	6	6	6	6	6
	CO	0.7	3.8	2.6	2.1	55	1.2	8.3
	HS	2.1	10.62	4.8	3.5	165.13	3.6	24.9

X Coord	Y Coord	Label	Terran ID	COC	Co-60	MDC	Cs-137	MDC	Th-228	MDC	Th-232	MDC	Pu-238	MDC	Bi-207	MDC	Bi-210m	MDC
1465042.767	598554.5097	SU4-123-068	151		0.024	0.150	0.000	0.120	1.170	0.070	1.240	0.050	0.037	0.029	0.024	0.099	0.000	0.130
1465051.779	598570.1191	SU4-123-069	147		0.024	0.130	0.001	0.110	1.050	0.100	1.140	0.050	0.073	0.039	0.022	0.110	0.011	0.130
1465052.675	598561.5327	SU4-123-070	149		0.000	0.140	0.000	0.130	1.180	0.110	1.440	0.070	0.000	0.050	0.000	0.085	0.005	0.120
1465047.103	598575.0697	SU4-123-071	146		0.048	0.140	0.000	0.110	1.010	0.060	1.080	0.050	0.006	0.037	0.019	0.094	0.002	0.110
1465031.535	598568.4151	SU4-123-072	153		0.003	0.087	0.035	0.092	0.490	0.080	0.410	0.020	0.000	0.090	0.012	0.052	0.000	0.055
1465039.873	598555.468	SU4-123-073	152		0.000	0.130	0.000	0.110	0.970	0.180	1.080	0.100	0.021	0.048	0.000	0.085	0.045	0.130

Bias:					Co-60	MDC	Cs-137	MDC	Th-228	MDC	Th-232	MDC	Pu-238	MDC	Bi-207	MDC	Bi-210m	MDC
1465146.805	598641.0896	SU1-123-B6	144		0.051	0.140	0.044	0.120	0.720	0.070	0.570	0.030	0.000	0.060	0.018	0.078	0.029	0.110
1465076.642	598609.0324	SU1-123-B7	142		0.036	0.140	0.000	0.099	0.680	0.060	0.630	0.040	0.003	0.058	0.000	0.084	0.000	0.110

Duplicates:					Co-60	MDC	Cs-137	MDC	Th-228	MDC	Th-232	MDC	Pu-238	MDC	Bi-207	MDC	Bi-210m	MDC
		Field Dup (DP1)	74		0.040	0.130	0.105	0.140	0.680	0.050	0.590	0.020	0.019	0.061	0.000	0.067	0.000	0.095
		Field Dup (DP2)	98		0.029	0.110	0.047	0.120	0.660	0.030	0.630	0.020	0.560	0.040	0.000	0.065	0.046	0.100
		Field Dup (DP3)	122		0.052	0.100	0.026	0.076	0.065	0.060	0.450	0.020	0.100	0.035	0.000	0.057	0.034	0.083
		Field Dup (DP4)	150		0.031	0.170	0.000	0.140	1.270	0.050	1.260	0.040	0.000	0.050	0.012	0.110	0.000	0.120
		Lab Dup (69)	69		0.070	0.130	0.004	0.098	0.720	0.100	0.640	0.060	0.187	0.034	0.044	0.083	0.039	0.098
		Lab Dup (90)	90		0.240	0.240	0.027	0.140	0.720	0.020	0.610	0.030	0.172	0.048	0.006	0.093	0.160	0.130
		Lab Dup (110)	110		0.070	0.110	0.004	0.072	0.390	0.070	0.460	0.040	0.042	0.041	0.008	0.056	0.000	0.066
		Lab Dup (135)	135		0.030	0.090	0.042	0.095	0.890	0.050	0.730	0.040	0.032	0.038	0.000	0.048	0.007	0.080

Rinsates:		Terran	Results	(pCi/L)									
		ID	Co-60	MDC	Cs-137	MDC	Th-228	MDC	Th-232	MDC	Pu-238	MDC	
		80	0.200	18.000	0.000	13.000	0.007	0.077	0.003	0.070	0.000	0.070	
		80 DUP	5.500	21.000	4.400	17.000							
		112	4.200	15.000	0.000	8.200	0.100	0.086	0.001	0.061	0.024	0.077	
		132	0.000	15.000	0.000	13.000	0.001	0.066	0.009	0.045	0.048	0.082	
		132 DUP					0.015	0.092	0.019	0.046	0.000	0.070	
		141	0.000	16.000	1.800	18.000	0.000	0.095	0.008	0.043	0.000	0.080	

Sample Standard Deviation (s)	Radionuclide	Cleanup Objective	Units
	Ac-227+D	4.6	(pCi/g)
	Am-241	63	(pCi/g)
	Ce-141	38	(pCi/g)
0.04	Cs-137+D	3.8	(pCi/g)
0.18	Co-60	0.7	(pCi/g)
	Cu-244	92	(pCi/g)
	Pb-210+D	7.4	(pCi/g)
	Np-237+D	10.4	(pCi/g)
	Ni-95	2.5	(pCi/g)
0.44	Pu-238	55	(pCi/g)
	Pu-239/240	62	(pCi/g)
	Pa-231+D	4	(pCi/g)
	Ra-226+D	2.9	(pCi/g)
	Ra-228	2.1	(pCi/g)
0.20	Th-228+D	2.6	(pCi/g)
	Th-230+D	2.8	(pCi/g)
0.19	Th-232+D	2.1	(pCi/g)
	U-233+D	4.8	(pCi/g)
	U-234	106.1	(pCi/g)
	U-234+D	2	(pCi/g)
	U-235	16.11	(pCi/g)
	U-235+D	3.2	(pCi/g)
	U-238	121.2	(pCi/g)
	U-238+D	2.2	(pCi/g)
0.02	Bi-207	1.2	(pCi/g)
0.26	Bi-210m	8.3	(pCi/g)
	Tc-99	2140	(pCi/g)
	Sr-90	94.72	(pCi/g)

Type I Error	0.05		
$Z_{1\text{-alpha}}$	1.645		
Type II Error	0.2		
$Z_{1\text{-beta}}$	0.842		
Effective	0.28	*(s)*	
Sign p	0.955435		

Calculate the Total Effective (s)

Estimate (N) - Sign Test

DCGL	1
LBGR	0.50
Delta	0.50
(s)	0.28
Rel Shift	1.762
(N)	9.00

Pu-238 Area Factor (N) 409

Sample Grid Spacing

SU Area	1,226.4	m^2	13201.0	ft^2
Grid Length	10.9	m	35.6	ft
Grid Height	9.4	m	30.9	ft

PRSs: 123, 429, 430, 434-436

Survey Unit: 1

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Data File		Variable: Co-60	
Raw Statistics		Normal Distribution Test	
Number of observations	67	Lilliefors Test Statisitic	0.252319
Number of Missing Data	8	Lilliefors 5% Critical Value	0.115347
Number of Valid Samples	59	Data not normal at 5% significance level	
Number of Unique Samples	47		
Minimum	0.001	95% UCL (Assuming Normal Distribution)	
Maximum	1.01	Student's-t UCL	0.165332
Mean	0.124915		
Median	0.041	Gamma Distribution Test	
Standard Deviation	0.185722	A-D Test Statistic	1.616606
Variance	0.034493	A-D 5% Critical Value	0.795925
Coefficient of Variation	1.486781	K-S Test Statistic	0.153327
Skewness	2.987388	K-S 5% Critical Value	0.120695
		Data do not follow gamma distribution	
Gamma Statistics		at 5% significance level	
k hat	0.710462		
k star (bias corrected)	0.685636	95% UCLs (Assuming Gamma Distribution)	
Theta hat	0.175823	Approximate Gamma UCL	0.165202
Theta star	0.182189	Adjusted Gamma UCL	0.166369
nu hat	83.83449		
nu star	80.90505	Lognormal Distribution Test	
Approx.Chi Square Value (.05)	61.17508	Lilliefors Test Statisitic	0.090552
Adjusted Level of Significance	0.045932	Lilliefors 5% Critical Value	0.115347
Adjusted Chi Square Value	60.74597	Data are lognormal at 5% significance level	
Log-transformed Statistics		95% UCLs (Assuming Lognormal Distribution)	
Minimum of log data	-6.907755	95% H-UCL	0.220864
Maximum of log data	0.00995	95% Chebyshev (MVUE) UCL	0.266353
Mean of log data	-2.929001	97.5% Chebyshev (MVUE) UCL	0.324298
Standard Deviation of log data	1.368833	99% Chebyshev (MVUE) UCL	0.438119
Variance of log data	1.873704		
		95% Non-parametric UCLs	
		CLT UCL	0.164686
		Adj-CLT UCL (Adjusted for skewness)	0.174734
		Mod-t UCL (Adjusted for skewness)	0.166899
		Jackknife UCL	0.165332
		Standard Bootstrap UCL	0.163964
		Bootstrap-t UCL	0.179807
RECOMMENDATION		Hall's Bootstrap UCL	0.198125
Data are lognormal (0.05)		Percentile Bootstrap UCL	0.166102
		BCA Bootstrap UCL	0.178034
Use H-UCL		95% Chebyshev (Mean, Sd) UCL	0.230309
		97.5% Chebyshev (Mean, Sd) UCL	0.275912
		99% Chebyshev (Mean, Sd) UCL	0.365492

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Data Review and Validation

The Terran Corporation is under contract to provide verification sampling services for the Underground Lines Project. Data Review and Validation is included with their services. This task is subcontracted to an independent firm and usually takes from two to three weeks to complete.

CH2M HILL has performed a preliminary data review; no problems have been noted.

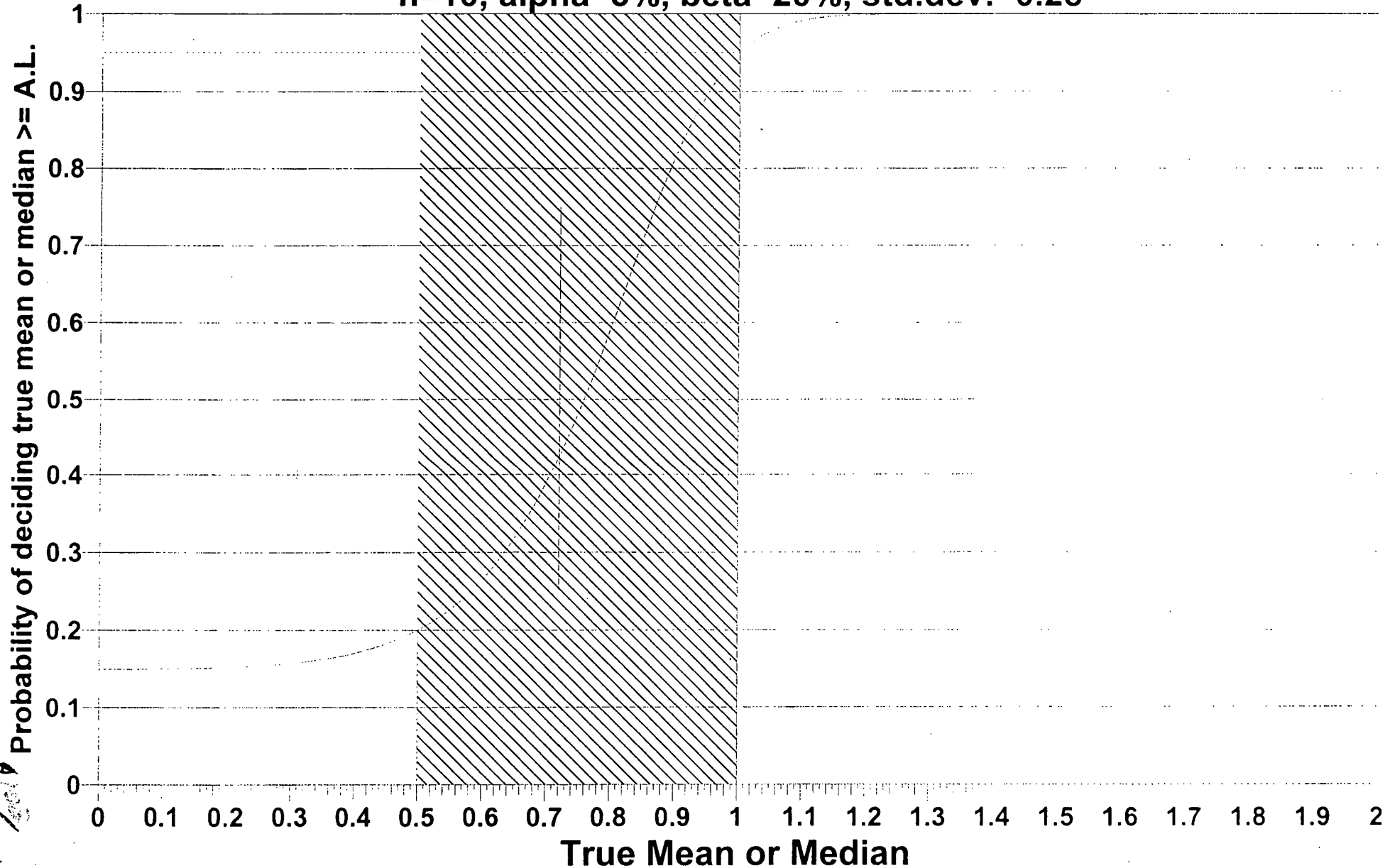
The formal Data Review and Validation portion of this backfill package is not available now, but will be included in the On-Site Coordinator (OSC) Report.

Dennis R Lammlein 2 May 05

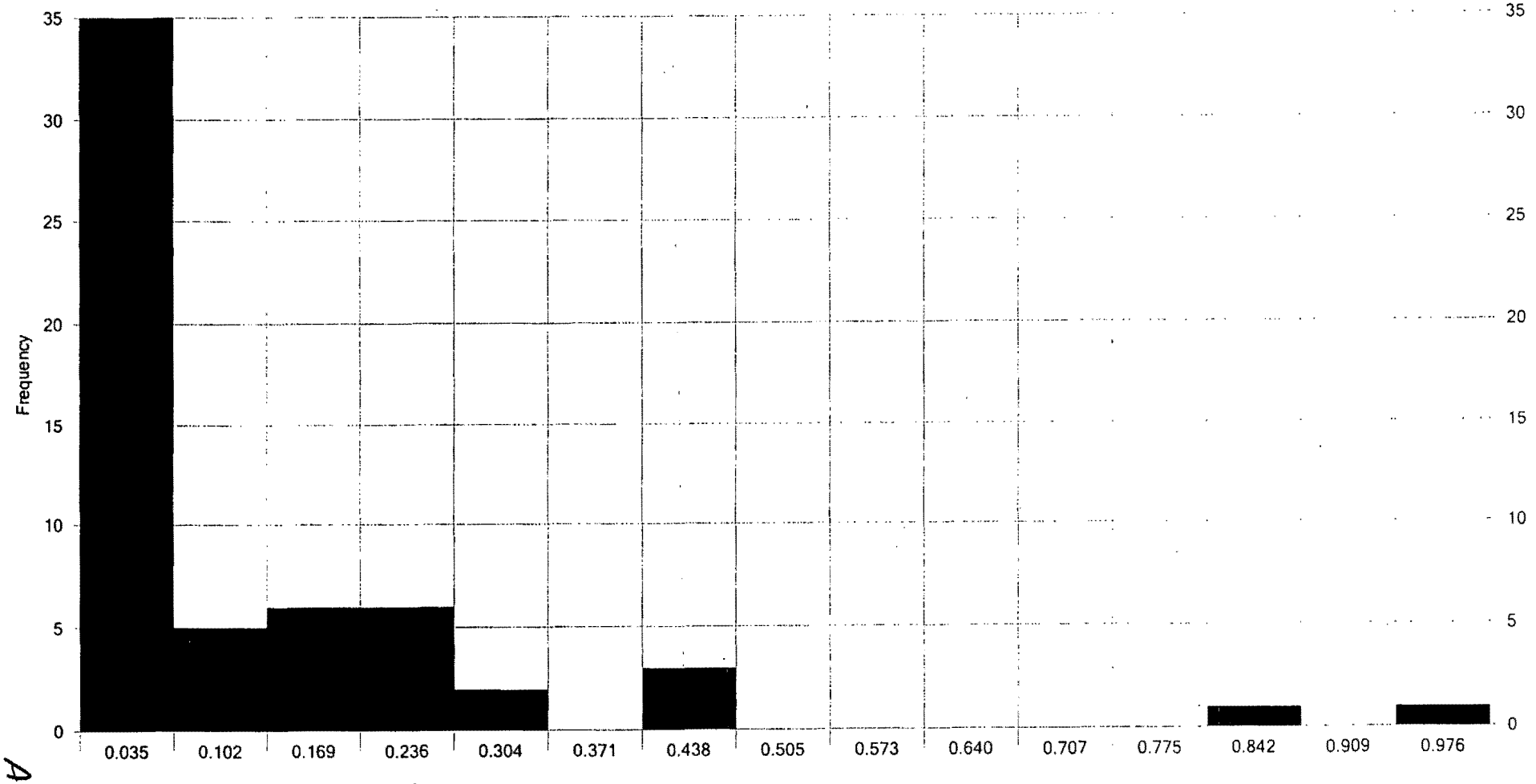
Dennis R. Lammlein, Project Engineer

MARSSIM Sign Test

n=10, alpha=5%, beta=20%, std.dev.=0.28



Histogram of Co-60



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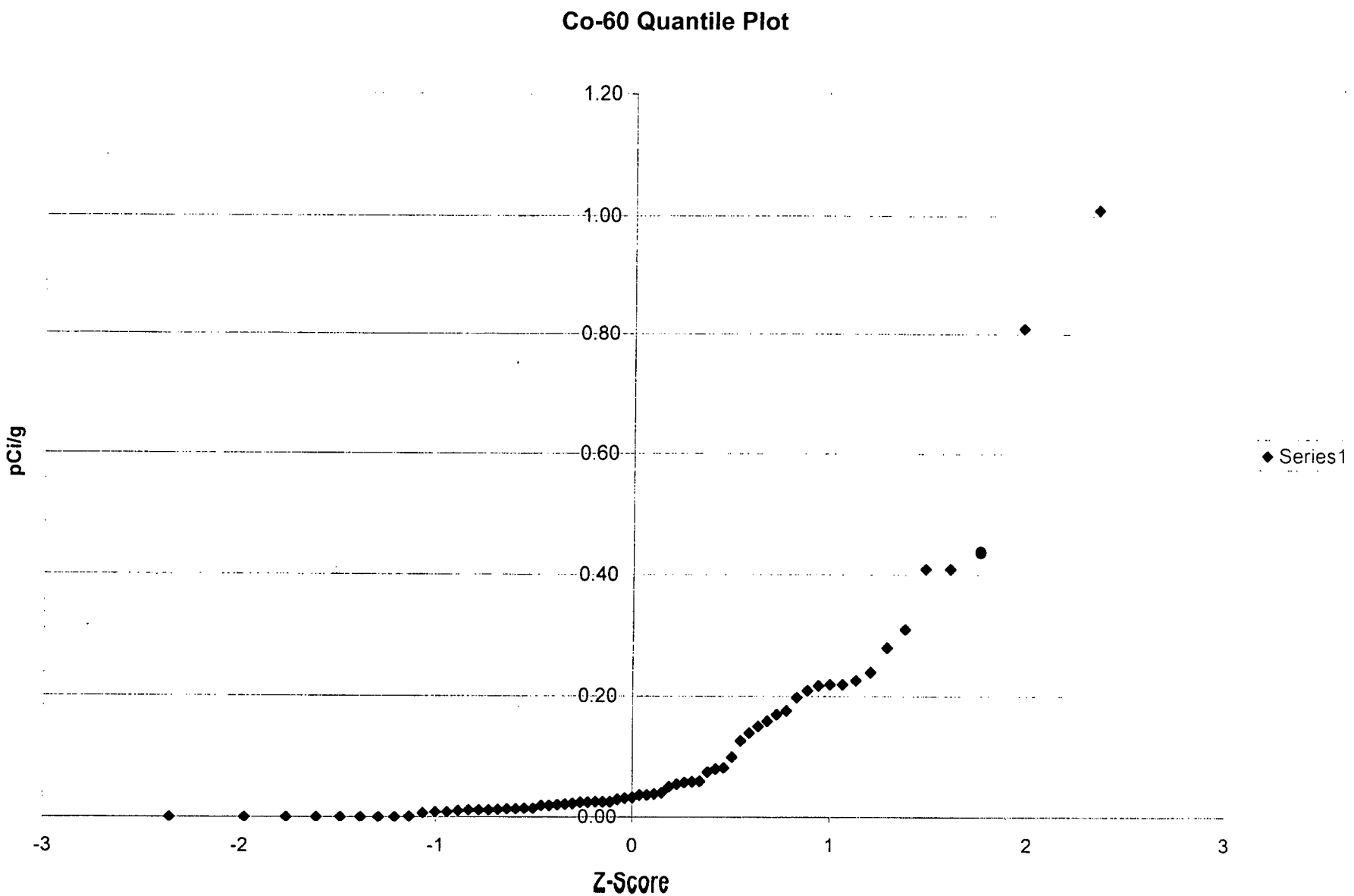
Co-60 Quantile Plot
1.20
1.00
0.80
0.60
0.40
0.20
0.00
pCi/g
-3
-2
-1
0
1
2
3
Z-Score
Series1

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Sample Standard Deviation (s)	Radionuclide	Cleanup Objective	Units
	Ac-227+D	4.6	(pCi/g)
	Am-241	63	(pCi/g)
	Ce-141	38	(pCi/g)
	Cs-137+D	3.8	(pCi/g)
	Co-60	0.7	(pCi/g)
	Cu-244	92	(pCi/g)
	Pb-210+D	7.4	(pCi/g)
	Np-237+D	10.4	(pCi/g)
	Ni-95	2.5	(pCi/g)
0.03	Pu-238	55	(pCi/g)
	Pu-239/240	62	(pCi/g)
	Pa-231+D	4	(pCi/g)
	Ra-226+D	2.9	(pCi/g)
	Ra-228	2.1	(pCi/g)
	Th-228+D	2.6	(pCi/g)
	Th-230+D	2.8	(pCi/g)
0.35	Th-232+D	2.1	(pCi/g)
	U-233+D	4.8	(pCi/g)
	U-234	106.1	(pCi/g)
	U-234+D	2	(pCi/g)
	U-235	16.11	(pCi/g)
	U-235+D	3.2	(pCi/g)
	U-238	121.2	(pCi/g)
	U-238+D	2.2	(pCi/g)
	Bi-207	1.2	(pCi/g)
	Bi-210m	8.3	(pCi/g)
	Tc-99	2140	(pCi/g)
	Sr-90	94.72	(pCi/g)

Type I Error	0.05		
$Z_{1\text{-alpha}}$	1.645		
Type II Error	0.2		
$Z_{1\text{-beta}}$	0.842		
Effective	0.17	*(s)*	
Sign p	0.993790		

Calculate the Total Effective (s)

Estimate (N) - Sign Test

DCGL	1
LBGR	0.50
Delta	0.50
(s)	0.17
Rel Shift	2.999
(N)	8.00

Pu-238 Area Factor (N) 26

Sample Grid Spacing

SU Area	77.2	m^2	831.0	ft^2
Grid Length	2.9	m	9.5	ft
Grid Height	2.5	m	8.2	ft

PRS 415 Survey Unit 4

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APPENDIX E

WALKOVER SURVEYS

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RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM)	SURVEY NO.
PRS 123,415,and 429-436	05-GP-9-0618
PURPOSE:	RWP NO.
	N/A
PRS Walk-over for Sample events 1 & 2	DATE: 8/25/2005
	TIME: 7:00

MAP / DRAWING

The Bicron FIDLER or Sodium Iodines used as an indicator only:

Walk-over:
This is a summary report of FIDLER readings taken during and following daily field excavation activities at PRS 123, 414 and 429-436 and represents the accessible as-left surfaces prior to verification sampling for those areas. This report only applies to the areas indicated above.

100% walk-over of all accessible surfaces within verification limits and slopeback areas occurred as a matterof course throughout the excavation process. Walk-overs entailed surveying as referenced in MD-80036 and MD- 80043 Radiological Control Procedures. FIDLER readings on all surfaces were at background levels for channel out and channel one based on COCs.

Walk-over surveys are indicators of the ~~prence~~ presence or absence of gross contamination only. However, certain correlations to specific isotopes and respective Cos have been made based on testing described in (Recharacterization of pink soil in PRS 66 Dec 3, 2003, Final)

LEGEND:
- # = mrem/hr (γ) whole body
- #E = mrem/hr (β+η+γ) extremity on contact
- K = factor of 1000
- — · — · — · · = radiological boundary

- # - mrem/hr neutron
- # - swipe number
- # - air sample number
- #/α or /β - direct contamination measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
	N	
	A	

[redacted]

HP#	Date:
6175	8-25-05
HP#	Date:
HP# 725	Date: 8-25-05

ML-9620 (2-98)

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APPENDIX F

DATA REVIEW & VALIDATION

Note: Sample Events 1 & 2 are covered under this single R&V Report

1.0 Introduction

Analytical data assessment can be performed on at least two quality control levels. Data Review involves an assessment of the quality controls used by the laboratory during the performance of the analysis. These include such things as laboratory blanks, system monitoring compound (surrogate) recoveries, matrix spikes, etc. Which controls are assessed and what criteria are applied depend on the analysis performed. The results of field quality control measures such as field duplicates and trip blanks may also be evaluated. Data Review is normally performed on 100% of the analytical data.

Data Validation is a much more detailed review of the entire laboratory data package. It includes all the elements of the Data Review plus verification of such things as proper instrument calibration, proper use of standards and correct performance of data calculations. Data Validation is used to identify systemic problems with the way the laboratory performs and reports analyses.

2.0 Description of the Data Set

This data assessment covers samples collected in connection with Potential Release Sites (PRSs) 123, 415, and 429-436. PRSs 429-436 are all associated with the underground waste lines that carried radiologically contaminated waste from Technical (T) Building to manhole HW-6 located west of Building 48. From there, a common trunk line carried the wastes to the Waste Disposal Building via manholes HW-4 and HW-2. The T Building trunk lines consisted of a north branch and a south branch; this remediation included laterals and risers to both branches. PRSs 123 and 415 are included in this remedial event due to their proximity to the other PRSs; PRS 123 resulted from a December 1970 waste line break northeast of Building 48.

Offsite sample analysis was performed at Severn-Trent Laboratories of Earth City (St. Louis), MO. There were no variances or problems associated with the documentation, shipment, or chain of custody of the samples. Analyte detection goals were achieved, except in the infrequent situation where high levels of one analyte required sample dilution, raising detection limits for other analytes as well.

Table 1 - Sampling Events

Sample Date	LSDGs	Number of Samples	Mound Sample IDs
February 2, February 17-22	F5B240129, F5B240132 F5B240136, F5B240138	149 solids, 7 aqueous, (4 field dupl. pairs)	000001 – 000073
March 31 to April 18	F5D190159, F5D190166 F5D190170, F5D190174		000069-112, 000114-124, 000126-128, 000130-33, 000135-47, 000149-53, 000156-58

3.0 Data Review

The quality control data submitted with the analytical data packages were reviewed and assessed. The results of the assessment are presented in this section. The following

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qualification flags are used to indicate data quality problems identified during the data review process.

Table 2 - Data Review Qualifications

Flag	Description
J	Estimated sample result
U	Non-detect sample result
UJ	Non-detected sample result at an estimated reporting limit
R	Rejected (unusable) sample result – (NOT required for these data)

3.1 Tracer Recovery

The laboratory spikes every alpha spectrometry sample with Pu-242 (and Th-229 / U-232 where appropriate). The percent recovery of these isotopes is then used to scale the detected presence of the target isotopes. To fully meet QC criteria the isotope recovery must be between 30 – 110 % and have an accumulated count of at least 200 counts. Tracer recovery for all samples met quality control (QC) criteria.

3.2 Blanks

The laboratory analyzes one blank for every 20 samples or LSDG (laboratory sample delivery group). Laboratory blanks are analyzed to determine if laboratory processes are contributing to the detected sample activities. Laboratory blanks were analyzed at an appropriate frequency.

The laboratory method blanks associated with the verification samples were typically either free of contamination or were contaminated at such low levels relative to the concentrations in the associated field samples that data qualification was not needed. However, in two laboratory batches blank contamination with plutonium isotopes led to qualification of soil sample data as nondetect as noted in the table below.

Table 3 – Blank Qualification of Sample Data

Laboratory Batch	Analyte(s)	Samples qualified as nondetect (Field sample IDs)
F5B240129	Pu-238	001, 002, 004, and 006 through 020 (i.e., all detected results)
	Pu-239/40	008 and 010 (i.e., all detected results)
F5B240132	Pu-238	021-3, 026-7, 030, 033, 038-40 (i.e., all detected results)

3.3 Laboratory Duplicate

A laboratory duplicate analysis is performed to assess the precision and accuracy of the laboratory analysis. One duplicate is performed for every 20 samples or LSDG. In some cases, the laboratory counted a matrix spike (MS) duplicate or lab control sample (LCS)

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duplicate as the laboratory duplicate in order to achieve this frequency; no data were qualified for these occurrences.

To meet QC criteria the relative error ratio (RER) of duplicate samples must be < 3.0, or if one or both results are nondetect.

$$RER = \frac{[\text{Sample Result} - \text{Duplicate Result}]}{[TPU^2_{sample} + TPU^2_{dup}]^{1/2}}$$

note: TPU: total propagated uncertainty

It is known that for Mound soils contamination is usually distributed non-homogeneously even in dried and ground samples. Divergent results obtained from analysis of second portions from the same sample, when found, are a demonstration of this fact and not of the laboratory capability for precision. The relative error ratio for the laboratory duplicate analyses was within QC criteria in all cases for this sampling event.

3.4 Matrix Spike

A MS analysis is performed to assess the precision and accuracy of the laboratory analysis. One matrix spike is to be performed for every 20 samples or LSDG. This frequency was not met, but no data were qualified for this occurrence: Four MS samples were analyzed for 145 field samples collected (i.e. excluding field duplicate QC samples).

For all spiked analytes/samples, the matrix spike recoveries were within QC criteria for the target analytes and no data qualification was required.

3.5 Laboratory Control Sample

The LCS is a standard sample with a known quantity of the analyte of concern. The LCS recovery is an indication of whether the analytical process was in control during the analysis. The LCS recoveries were consistently within QC requirements, demonstrating good analytical accuracy, and were analyzed at an acceptable frequency.

3.6 Equipment Rinsates

Equipment rinsates are used to ensure efficacy of equipment field decontamination procedures, and that the sample collection process is not causing cross contamination. All of the rinsates were free of measurable contamination.

For this sampling event, seven aqueous (rinse) samples were collected and 145 field samples collected (i.e. excluding field duplicate QC samples). This frequency is slightly

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below the 1/20 frequency required for this project, but data were not qualified for this occurrence.

3.7 Field Duplicates

Field duplicates give an indication of the degree of homogeneity within the sample material. As with laboratory duplicates, they are reported as RER. Agreement between field duplicates was acceptable for all analyte pairs. Four field duplicate samples were reported for this sampling event.

As noted under laboratory duplicates, it is known that for Mound soils contamination is usually distributed non-homogeneously even in dried and ground samples. If divergent results are obtained from analysis of field duplicate pairs from the same sampling location, such an outlier would be a demonstration of this fact.

3.8 Other Issues

Consistent with standard laboratory practice, detected results that were found below the required reporting limit were qualified as estimated by the laboratory. These results have inherently poor precision, as they are close to the analytical detection limit. The qualifiers were retained during data validation, and pose no significant limitation to data usability.

In no case were positive results reported with uncertainties greater than the result. Such data would have been qualified as estimated, as this implies a less than 95% confidence in the detection. Nondetect results where the uncertainty was greater than the absolute value of the result were present, and were qualified "UJ" (nondetect at an estimated reporting limit), as the sample count may be less than the background reading in such cases. These instances did not result in data rejection; the results may be used as estimated values.

4.0 Data Validation

The results of 10% of samples in each LSDG were fully data validated. In addition to the items discussed above, the following items were evaluated:

1. Instrument calibration
2. Daily Source checks
3. Background and efficiency measurement
4. Proper frequency and use of blanks
5. All calculations

No additional qualification resulted from this assessment. There was no indication of a systemic deficiency.

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5.0 Certification

Based upon this review the analytical data maybe used as presented with no further qualifications.

ATTACHMENT B

GENERAL MEDIA INFORMATION

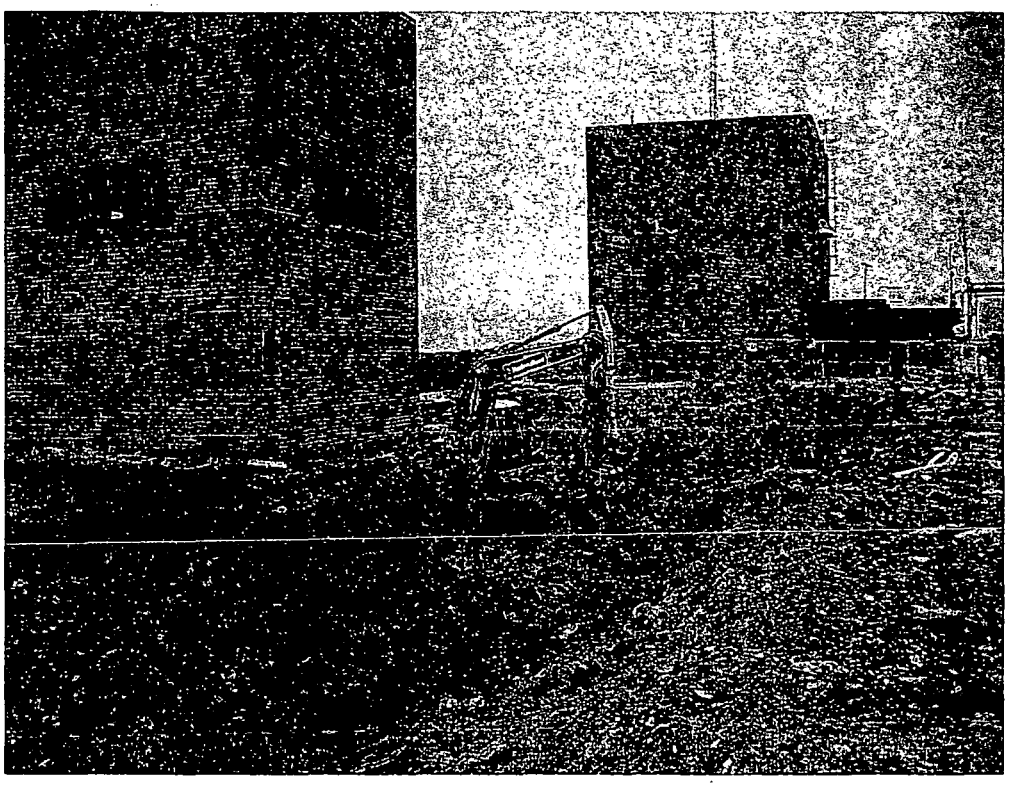
(There was no information released to the media regarding PRSs 123, 415, or 429 through 436)

ATTACHMENT C

PHOTOGRAPH DOCUMENTATION

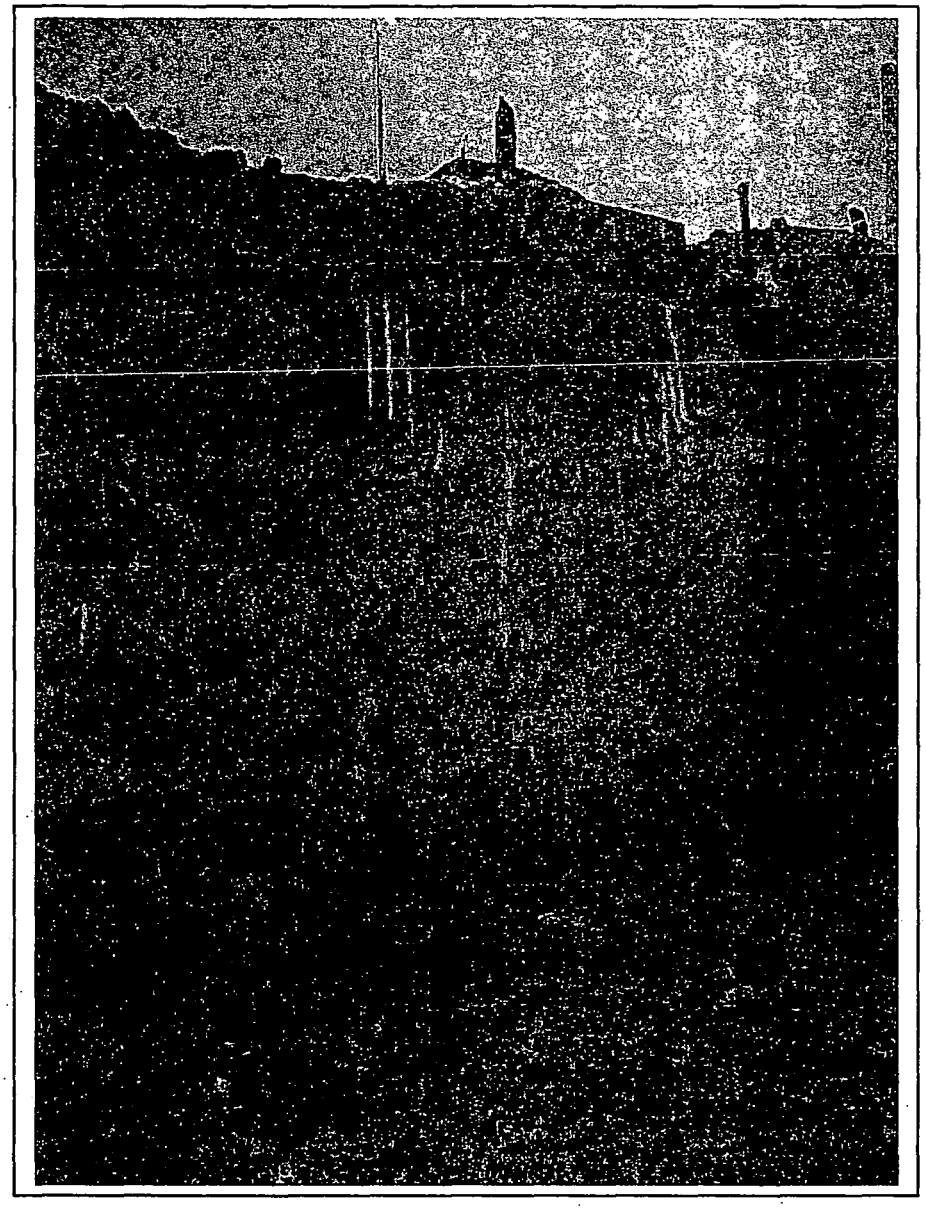
Photos of PRSs 431 and 433-436

(photos not available for PRSs 123, 415, 429, or 430)

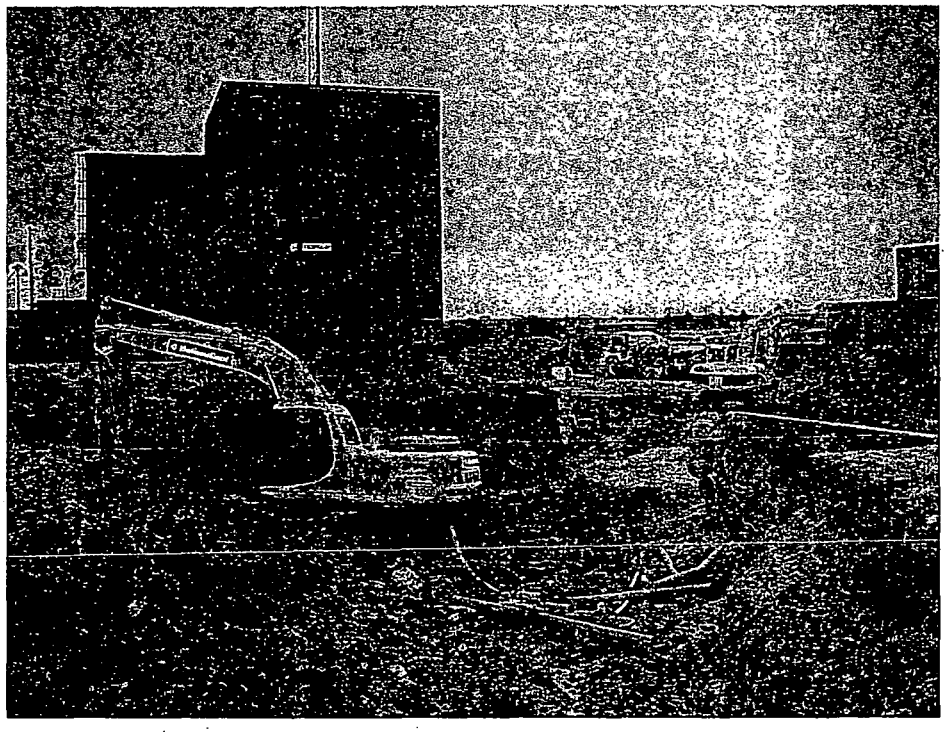


PRS 431 Looking Northeast During Excavation

PRS 435 Looking West During Excavation



PRS 436 Looking North During Excavation



PRS 433 Looking East During Excavation

PRS 434 Looking Southeast During Excavation