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DEC 17 1993

William K. Honker, Chief
RCRA Permits Branch
Hazardous Waste Management Division
U. S. Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Dear Mr. Honker:

Enclosed are two copies of the Environmental Restoration Quarterly Technical Report for July-September 1993 for the Los Alamos National Laboratory.

If you have any questions, please call me at (505) 665-5027, or ask your staff to call Ted Taylor of my staff at (505) 665-7203.

Sincerely,

FOR

Joseph C. Vozella, Chief
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Branch

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CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Document Titles:

LANL Quarterly Technical Report, July–September, Fiscal Year 1993

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LA-UR-93-3946

Los Alamos National Laboratory

Environmental Restoration

A Department of Energy environmental cleanup program

QUARTERLY TECHNICAL REPORT

JULY–SEPTEMBER

FISCAL YEAR 1993

December 6, 1993

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LIST OF ACRONYMS AND ABBREVIATIONS

ADS	Activity data sheet
AT	Accelerator Technology (Division)
AT-9	High-Power Microwave Sources and Effects Group
DOE	US Department of Energy
EM	Environmental Management (Division)
EM-8	Environmental Protection Group
EM-9	Environmental Chemistry Group
ENG	Facilities Engineering (Division)
EPA	US Environmental Protection Agency
ER	Environmental restoration
FIDLER	Field instrument for detection of low-energy radiation
FIMAD	Facility for Information Management, Analysis, and Display
FY	Fiscal year
HS	Health and Safety (Division)
HS-5	Industrial Hygiene and Safety Group
ICP/AES	Inductively coupled plasma/atomic emission spectrometry
LAAO	Los Alamos Area Office
LANL	Los Alamos National Laboratory
MDA	Material disposal area
NMED	New Mexico Environment Department
OU	Operable unit
PCB	Polychlorinated biphenyls
pCi/g	Picocuries per gram
pCi/l	Picocuries per liter
ppb	Parts per billion
ppm	Parts per million
PRS	Potential release site
rad van	Mobile radiological analysis laboratory
RCRA	Resource Conservation and Recovery Act
RFI	RCRA facility investigation
SAL	Screening action level
SVOC	Semivolatile organic compound
SWMU	Solid waste management unit
TA	Technical area
TCLP	Toxicity characteristic leaching procedure
VOC	Volatile organic compound

QUARTERLY TECHNICAL REPORT
JULY–SEPTEMBER
FISCAL YEAR 1993
LOS ALAMOS NATIONAL LABORATORY
ENVIRONMENTAL RESTORATION PROGRAM

ALBUQUERQUE OPERATIONS OFFICE

CONTRACTOR: University of California

PROGRAM MANAGER: Robert Vocke

NUMBER OF POTENTIAL RELEASE SITES (sampling sites): Approximately 1,700, of which approximately 1,100 are solid waste management units

SUSPECT WASTE: Radionuclides, High Explosives, Metals, Solvents, Organics

1.0 INTRODUCTION

This quarterly report describes the technical status of activities in the Los Alamos National Laboratory (the Laboratory) Environmental Restoration (ER) Program. Each activity is identified by an activity data sheet (ADS) number, a brief title describing the activity or the technical area (TA) where the activity is located, and the name of the project leader. The Hazardous and Solid Waste Amendments portion of the facility operating permit (Section P, Task III, c) requires the submission of a technical progress report on a quarterly basis. This report, submitted to fulfill the permit's requirement, summarizes the work performed and the results of sampling and analysis in the ER Program.

Previous quarterly technical reports have described progress in activity data sheets 1066, 1067, 2105, 2107, and 2110. The emphasis in this report has changed to that of presenting technical data derived from field investigations; therefore, progress in the five activity data sheets listed above will be reported, as appropriate, in other reports rather than in this series of quarterly reports.

2.0 ACTIVITY DATA SHEETS

2.1 ADS 1049—Canyons (Project Leader: Everett Springer)

Data archival activities continued this quarter for Operable Unit (OU) 1049. A presentation on groundwater monitoring at Los Alamos was prepared with assistance from the Environmental Protection Group (EM-8) personnel for the ER public meetings held July 13, 14, and 15, 1993, in Los Alamos, Santa Fe, and Taos, respectively. A presentation was also made at the September 15, 1993, ER Technical Session on subsurface flow properties in Mortandad Canyon.

2.2 ADS 1071—TAs-0, -19, -26, -73, -74 (Project Leader: Jim Aldrich)

Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) activities conducted at OU 1071 included a readiness review for the small-arms firing range west of Guaje Pines Cemetery (Solid Waste Management Unit [SWMU] 0-016) and field work at a septic tank at the old Catholic church (SWMU 0-030) and at ordnance impact areas [SWMUs 0-011 (a, d, and e)].

2.2.1 Administrative Activities

The readiness review for SWMU 0-016, the small-arms firing range west of Guaje Pines Cemetery, was held in early September 1994. Site preparation at SWMU 0-016 was scheduled to begin October 4, 1993, with remediation (soil washing) projected to occur between October 11 and November 19, 1993.

2.2.2 Field Work

2.2.2.1 SWMU 0-030(g)–Septic Tank 6

Field investigation and sampling activities at SWMU 0-030(g) began June 18, 1993, and concluded August 6, 1993. Ninety samples were collected; of these, 86 were soil samples and 4 were concrete samples. The soil samples were collected from the clay pipe excavation and the septic tank chambers (east and west) excavation. Nine soil samples received the full suite of analyses indicated in the sampling and analysis plan. Upon further investigation of the contaminants found in the septic tank, personnel collected numerous soil samples for mobile radiological analysis laboratory (rad van) screening and target-analyte-list metals analyses for waste classification purposes and for determining the extent of metals contamination in the tank and associated piping. If metals analyses showed concentrations greater than 20 times the toxicity characteristic leaching procedure (TCLP) thresholds, then TCLP analyses were done on those samples to determine the leachability of the metals in the samples. Sample details are shown in Table A-1 in Appendix A of this report.

Twenty soil samples were collected from the clay pipe excavation. The radiochemical analysis of one sample collected immediately below the pipe showed Pu-239 well above the Laboratory's ER Program screening action level (SAL). No other samples showed above-background radioactivity on field screening, rad van screening, or radiochemistry analyses. Metals analyses showed all metals to be at background or below ER Program SALs, and no metals exceeded TCLP thresholds. Semivolatile, volatile, polychlorinated biphenyls (PCBs), and pesticides analyses showed no elevated constituents around the clay pipe. Confirmatory samples showed all constituents to be at background or below ER Program SALs.

Thirty-four soil samples were collected from the eastern chamber of the septic tank. The radiochemical analysis of one sample collected from the northeast corner of the eastern chamber showed Pu-239 well above the ER Program SAL. No other samples showed elevated radioactivity on radiochemistry analyses. Several samples were analyzed for target-analyte-list metals, and two showed slightly elevated mercury above the ER Program SAL. One sample was from material within the eastern chamber, and the other was from 1 in. below the eastern chamber concrete. Both samples showed mercury to be well below the TCLP threshold. All other metals analyses were found to be at background or below the ER Program SALs, and no metals exceeded TCLP thresholds. Semivolatile, volatile, PCBs, and pesticides analyses showed no elevated constituents within or under the eastern chamber of the tank. Confirmatory samples showed all constituents to be at background or below ER Program SALs.

Thirty-two soil samples were collected from the western chamber of the septic tank. Radiochemical analysis of one sample collected from the southeast corner of the western chamber showed activities of total U, Am-241, U-234, and Pu-239 to be above ER Program SALs. This sample showed mercury and lead exceeding the ER Program SALs but not the TCLP thresholds. Two other samples from the western chamber showed mercury exceeding the ER Program SAL but not the TCLP thresholds. All other metals analyses were found to be at background or below ER Program SALs, and no metals exceeded TCLP thresholds. Analyses for volatile organic compounds, semivolatile organic compounds, PCBs, and pesticides showed no elevated constituents within or under the western chamber of the tank. Confirmatory samples showed all constituents to be at background or below ER Program SALs.

2.2.2.2 SWMUs 0-011(a) and (e)—Ordnance Impact Areas

Explosive ordnance sweeps, geophysical surveys, geomorphic mapping, and soil sampling at these SWMUs have been completed. The explosive ordnance disposal team recovered ordnance and ordnance fragments. Two live mortar rounds were found and de-energized on site. The ordnance sweep was followed by a geophysical survey to locate any subsurface metallic items that might represent ordnance; no other live ordnance was discovered. Shallow grab samples were collected and are being analyzed for high explosives and target-analyte-list metals as required by the RFI work plan for OU 1071 (LANL 1992, 0781).

2.2.2.3 SWMU 0-011(d)—Ordnance Impact Area

No contaminants of concern were identified at SWMU 0-011(d) (see sample summary information in Table 2-1). Inorganic measurements for sediment samples from the channel running past the site were made following the US Environmental Protection Agency's (EPA's) SW 846 procedures for inductively coupled plasma/atomic emission spectrometry (ICP/AES) for most elements, flame atomic absorption for silver, and electrothermal vaporization atomic absorption for arsenic and selenium. No observations above SALs were recorded except for elements where SALs were below background concentrations (arsenic and beryllium). Most observations for all elements were consistent with expected background concentrations for the poorly developed soils found in this channel. Elevated observations for lead in Sample AAA1731 (see Table 2-1) may reflect deposits from activities in the impact area, but observed values are below SALs for these elements. Results of radiation screening (gross alpha, beta, and gamma) and analyses for high explosives were uniformly below background and detection limits, respectively.

2.3 ADS 1078—TA-1 (Project Leader: Carl Newton)

RFI activities conducted during the fourth quarter of FY93 consisted of administrative activities and field work. Analytical laboratory results for samples from the FY92 Phase I hillside sampling efforts continued to be delivered during the fourth quarter. Data validation for the majority of the FY92 hillside sample results was completed during the fourth quarter of FY93, and the resulting data tables, tables B-1 through B-6, are included as Appendix B of this quarterly report. The data in tables B-4 through B-6 are considered validated data. Validated data in this case means that all data above SALs were validated and that 10 per cent of the data below SALs were validated. The data are usable as reported for recommending no further action or for baseline risk assessments, as required in the RFI work plan for OU 1078 (LANL 1992, 0782), unless the value carries a "J" flag. Those values carrying "J" flags are usable as reported for decisions where the need for accuracy and precision are not high, but the data may not be of acceptable quality for all uses because some sample documentation may be lacking, analyses may have resulted in incomplete separation of tracer peaks from analyte peaks, or there was suspected low-level contamination of organic and inorganic analyses. The Data Validation Report for Operable Unit 1078, Technical Area 1, Phase 1 Hillsides 1992 Sampling Events will be published in a phase report for OU 1078.

2.3.1 Administrative Activities

Administrative activities completed during the fourth quarter of FY93 included

- additional archival searches to support no-further-action proposals;
- preparation and submittal of no-further-action proposals for 19 additional mesa-top potential release sites (PRSs) (included as part of Addendum I to the RFI work plan for OU 1078, submitted to the US Department of Energy/Los Alamos Area Office [DOE/LAAO] on July 30, 1993);
- continued compilation of Phase I hillside analytical results, and completion of a preliminary data validation report for these results;

TABLE 2-1

SWMU 0-011(d) SAMPLE SUMMARY, OU 1071

Sample ID	AAA1727	AAA1728	AAA1729	AAA1730	AAA1731	AAA1732	AAA1733
Collection Date	22 Oct 92	22 Oct 92	22 Oct 92	22 Oct 92	22 Oct 92	22 Oct 92	22 Oct 92
Al	68414	68468	61358	68550	55421	61310	62371
Ba	155	135	142	175	482	174	555
Be	3	3	2	3	2	2	2
Ca	2735	2829	2147	2217	5471	2597	4878
Cd	ND*	ND	ND	ND	ND	ND	ND
Co	4	4	3	3	8	3	18
Cr	3	3	2	3	16	4	21
Cu	5	14	ND	13	ND	ND	ND
Fe	15562	16618	10424	10828	14165	11824	19132
K	38230	38045	34992	37989	26016	33450	24969
Li	29	29	24	28	21	26	27
Mg	765	835	484	715	2325	947	3441
Mn	538	501	407	432	444	395	867
Mo	4	3	2	2	ND	2	ND
Na	31445	30888	28537	30894	18128	27004	16259
Ni	ND	ND	ND	ND	8	ND	12
Pb	33	34	31	44	156	32	68
Sb	ND	ND	ND	ND	ND	ND	ND
Sr	37	30	32	39	123	39	110
V	7	7	4	7	28	8	45
Zn	88	86	58	61	79	60	60
Ag	ND	ND	ND	ND	ND	2.6	ND
As	0.9	0.9	0.4	0.8	1.1	0.8	3.4
Se	ND	-0.2	ND	ND	ND	ND	ND

*ND = Not detected.
Note that all values are in parts per million (ppm).

- preparation and submittal of a draft surface soil and water sampling and analysis plan for contaminated hillside locations in TA-1 (included as part of Addendum I to the RFI work plan for OU 1078);

- preparation and submittal of a draft sampling and analysis plan for a screening assessment of the D-Building area Stratum 1 in TA-1 to be compared to the compositing approach proposed in the March 15, 1993, Mesa-Top Sampling and Analysis Plan (included as part of Addendum I to the RFI work plan for OU 1078);

- preparation and submittal of a draft sampling and analysis plan for the Western Sanitary Waste Line in TA-1 (included as part of Addendum I to the RFI work plan for OU 1078);

- preparation of access agreements for the proposed Western Sanitary Waste Line sampling effort;

- generation of the Facility for Information Management, Analysis, and Display (FIMAD) maps with sample locations identified for inclusion in the three new sampling and analysis plans;

- planning, scheduling, budgeting, and mobilization preparations for the proposed Phase I investigation of the Western Sanitary Waste Line;

- preparation of a Site-Specific Health and Safety Plan for Western Sanitary Waste Line sampling effort; and

- ongoing management of OU 1078.

2.3.2 Field Work

Field work for the fourth quarter of FY93 consisted of surface and near-surface soil sampling activities on Hillsides 138 and 140; storm water run-off sampling on Hillsides 137, 138, and 140; and surface and subsurface soil sampling of Stratum 1 of the D-Building subarea.

2.3.2.1 Sampling at Hillsides 137, 138, and 140

Analytical results from soil sampling on Hillsides 138 and 140 during FY92 indicate that several localized areas of elevated levels of radioactivity have persisted since TA-1 operations ceased decades ago (see Appendix B). The objectives of the additional soil sampling were to define the degree of contamination on these localized hillside areas on DOE property, to define the lateral and vertical extent of contamination on these same hillsides, and to define the potential for run-off of contaminants from these areas into Los Alamos Canyon. With this additional information from these areas that have the highest soil concentrations of transuranic isotopes within OU 1078, interim measures can be accomplished, such as posting and signing or fencing of those areas that the DOE wants the public to avoid.

Between August 16 and 23, 1993, ninety-one surface and near-surface soil samples were collected on Hillsides 138 (63 samples) and 140 (28 samples) through the depth of the soils to the tuff interface. (Detailed maps of the sample locations for Hillsides 137, 138, and 140 are available through the Laboratory's FIMAD.) Each sample was analyzed for gross levels of alpha, beta, and gamma activity and for lead, mercury, and barium content by x-ray fluorescence. Gross radioactivity screening results showed 39 samples with greater than 20 picocuries per gram (pCi/g) gross alpha, with the highest reading of 1,764 pCi/g at sample location 5230 on Hillside 138. Twenty-six samples exhibited gross beta activity of greater than 30 pCi/g, with the highest reading of 105 pCi/g at sample location 1304 on Hillside 140. Preliminary x-ray fluorescence screening results showed 6 samples from Hillside 138 with elevated lead (but < 500 parts per million [ppm]) and 6 samples also from Hillside 138 with elevated mercury (between 150 and 300 ppm).

Fifty-six samples (37 from Hillside 138 and 19 from Hillside 140) were submitted to the Sample Coordination Facility for a full suite of analyses. At Hillside 138, a full suite includes analyses for isotopic plutonium, gamma-ray activity, and metals, including chromium, mercury, lead, and antimony. These were the only metals found in concentrations above SALs in at least 1 location on Hillside 138 during the

FY92 sampling. At Hillside 140, a full suite consists of analyses for isotopic uranium, gamma-ray activity, and metals, including chromium, mercury, lead, antimony, and thallium (following the same rationale as Hillside 138). Results from these analyses will be presented in future quarterly and phase reports.

During the month of August 1993, 30 surface water run-off samples were collected from Hillsides 137, 138, and 140 by two different methods: single-stage sampling and grab samples of the surface flow in the hillside tributaries just before they enter the creek at the bottom of Los Alamos Canyon.

For each water sample collected from the hillside drainages, analysis of water and accompanying sediment was performed to measure specific conductivity and pH. The water was filtered, and analyses were performed to determine total constituents in both water and sediment. For water samples collected from the Hillside 137 and 138 drainages, analyses of water and accompanying sediment will be performed for isotopic plutonium, gamma-ray activity, mercury, lead, antimony, and chromium. For the water samples collected from the Hillside 140 drainage, analyses of water and accompanying sediment will be performed for isotopic uranium, gamma-ray activity, chromium, mercury, lead, antimony, and thallium. Results from these analyses will be presented in future quarterly and phase reports.

2.3.2.2 Sampling of Stratum 1 of the D-Building Subarea

Between September 13 and 23, 1993, 24 boreholes were advanced in Stratum 1 of the D-Building subarea. (A detailed map of the D-Building area is available through the FIMAD.) Details of this sampling effort are described in the D-Building (Stratum 1) Sampling Plan for FY93, which was prepared and submitted to the DOE/LAAO as part of Addendum I to the RFI work plan for OU 1078. The sampling plan calls for a screening assessment to be performed using soil samples taken from 24 boreholes selected from a rectangular grid of about 50 nodes placed 30 ft apart. Six of these boreholes were selected at locations corresponding to subsurface tuff/fill interface areas with residual contamination. The 18 remaining locations were selected at random from the remaining grid nodes. One hundred nine soil samples were collected. This included 42 surface samples, of which 12 are composites and 6 are field replicates. This also included 67 subsurface samples, of which 18 are composites and 9 are field replicates.

The surface samples were taken using a spade and scoop method at the location of the borehole before drilling was initiated to collect the subsurface samples. Samples selected for volatile organic compounds (VOCs) analysis were obtained from separate boreholes using stainless steel sleeves in the core barrels.

Each sample was analyzed for gross levels of alpha, beta, and gamma activity and for lead, mercury and barium content by x-ray fluorescence. Preliminary screening results showed no elevated levels of radioactivity or of the three metals. One hundred five soil samples were submitted to the Sample Coordination Facility for a full suite of analyses for isotopic plutonium and uranium, for total metals (arsenic, silver, barium, beryllium, cadmium, chromium, silver, nickel, lead, antimony, selenium, and thallium only), and for gamma-ray activity. Thirty-one samples were submitted for analysis for semivolatile organic compounds (SVOCs), and four additional samples were submitted for analysis for VOCs. Results from these analyses will be presented in future quarterly and phase reports.

2.3.2.3 Deviations from the Work Plan

Deviations from the RFI work plan for OU 1078 included the preparation and submittal of documentation recommending 24 additional mesa-top PRSs for no further action, the preparation and submittal of the 3 sampling and analysis plans described in Section 2.3.1 of this report, and the completion of field work specified in 2 of the sampling and analysis plans (see sections 2.3.2.1 and 2.3.2.2 of this report). Schedule variances and the cause or causes associated with each variance are listed below.

- Completion of RFI Work Plan—Three sampling and analysis plans and a total of 24 no-further-action proposals were included as part of Addendum I to the RFI work plan for OU 1078, submitted to the DOE/LAAO on July 30, 1993. Sampling and analysis plans will be prepared for those mesa-top PRSs that are not approved for no further action;

- Data Assessment of FY92 Sampling Results—Analytical laboratory data from FY92 sampling results were not complete, and a program-wide data validation procedure has not been approved;

- Access Agreements for Phase I Mesa-Top Sampling—Access agreements for additional Phase I investigation of the Western Sanitary Waste Line were prepared and submitted to the DOE/LAAO in conjunction with the sampling and analysis plan;

- Documentation for the Records Processing Facility—Analytical data from FY92 sampling results were not complete; however, preliminary validation of the data was completed, and data assessment has begun;

- Preparation of Phase I Report and Work Plan Modification—Analytical data from FY92 sampling results were not complete; however, preliminary validation of the data was completed and data assessment has begun; and

- Development of RFI Report—Analytical data from FY92 sampling results were not complete; however, preliminary validation of the data was completed, and data assessment has begun.

2.4 ADS 1079—TAs-10, -31, -32, -45 (Project Leader: Garry Allen)

The primary focus for ADS 1079 during this past quarter has been to conduct field work at each of the four technical areas of the operable unit.

TA-10: Geomorphic mapping of the firing-site area and seismic mapping of the entire TA-10 region of Bayo Canyon were completed in preparation for implementing the full sampling plan scheduled for the summer of 1994. During the site reconnaissance phase of the geomorphic mapping activities, personnel found firing-site debris that gave a radioactive count of 350,000 disintegrations per minute and a surface dose reading of 8 milliroentgen equivilent man/hr. Initial analysis indicated that the source was natural uranium, a common constituent in firing-site experiments. As a result of this fragment find, the TA-10 region of Bayo Canyon has been posted, and plans have been made to perform surface geophysical screening of the entire firing-site area and to remove all metal debris found.

TA-31: Sampling activities at PRS 31-001 were completed. Five surface soil samples were taken at the septic tank outfall area, three shallow borehole samples were taken at the septic tank location, and six samples were taken in the two shallow trenches that were dug to locate the septic line. The investigation activities revealed that the input septic line had been removed. The trench that had been dug to hold the line was located in the welded tuff; the trench was empty.

TA-32: Sampling activities at PRSs 32-002(a, b) were completed. Ten surface soil samples were taken at the septic tank outfall area, four shallow borehole samples were taken at the septic tank location, and six samples were taken in the two shallow trenches that were dug to locate the septic line. Samples were also taken from inside the septic line and in the vicinity of the line; then the trenches were backfilled. A voluntary corrective action plan will be developed with the intent to remove the line next summer. Sampling activities at PRS 32-001 consisted of taking shallow borehole samples beneath the location of a former incinerator. Because two different drawings gave different locations for the incinerator, samples were taken at both of the locations.

TA-45: Subsurface sampling activities were completed for PRSs 45-001 and 45-002, consisting of 17 split-barrel, rotary-auger boreholes drilled to retrieve 65 soil samples along with the appropriate number of field duplicates and equipment rinsate samples. In addition to the primary subsurface activities, five surface soil samples were taken for cyanide analysis to correct an oversight in last summer's sampling activities. Five additional surface soil samples were taken to establish a local background level for arsenic. To provide an accurate background level, this set of samples was taken in areas that were away from any potential source of contamination, yet still within the site boundaries.

In addition to addressing the various field activities outlined above, OU 1079 personnel continued the preliminary data review of the surface samples taken at TA-45 last summer. A complete set of data is expected soon.

2.5 ADS 1082—TAs-11, -13, -16, -24, -25, -28, -37 (Project Leader: Brad Martin)

The final draft of the RFI work plan for OU 1082 was delivered to the EPA on schedule. The closure plan for the Area P Landfill also was delivered on schedule to the New Mexico Environment Department (NMED). Activities continued in the development of the document addressing the next 160 PRSs in OU 1082, scheduled for delivery in July 1994; the first draft of this document was finished on September 30, 1993.

2.6 ADS 1085—TAs-12, -14, -67 (Project Leader: Calvin Martell)

The primary focus for this quarter was the preparation of the first draft of the RFI work plan for OU 1085. Chapters 1, 2, 3, and 4, the executive summary, fact sheet, annexes, and appendices are complete. Chapter 6 is almost complete, and Chapter 5 is lacking only the data quality objective portion for TA-14.

2.7 ADS 1086—TA-15 (Project Leader: Caroline Mason)

The draft RFI work plan for OU 1086 was submitted to the EPA on schedule. Preparations began for preliminary field work scheduled for October 1993 at TA-15; however, the main sampling effort will not start until the snow melts in April 1994. Personnel have begun preparations for readiness reviews.

2.8 ADS 1093—TA-18 (Project Leader: Gene Gould)

An OU 1093 fact sheet and poster presentation were prepared in coordination with the Public Affairs Office for the ER public meetings that were held this quarter. A bus tour, which included a visual overview of TA-18, was conducted for EPA representatives. Comments on the draft RFI work plan for OU 1093 submitted in May are not expected until calendar year 1994. The readiness review for OU 1093 was conducted on August 27, 1993, and field team members entered the field on September 21, 1993. Preliminary results of field sampling are summarized in Table 2-2.

2.9 ADS 1098—TAs-2, -41 (Project Leader: Patrick Longmire)

OU 1098 personnel continued to address the contamination of alluvial groundwater within Laboratory boundaries. The contamination exceeds the Laboratory standards of 8 picocuries per liter (pCi/l) for strontium-90, 120 pCi/l for cesium-137, and 20,000 pCi/l for tritium. EM-8 staff have collected recent groundwater samples for tritium analyses; analytical results are pending. As reported in the "ER Quarterly Report, April–June, Fiscal Year 1993," the source of tritium was from a break in a weld seam within the primary-cooling water system for the inactive Omega West Reactor at TA-2. The main source of strontium-90 and cesium-137 is an inactive leach field associated with the decommissioned water boiler reactor. Risk assessment efforts continued to be coordinated with ERM-Golder and several groups in the Laboratory. Field work is tentatively scheduled for the spring of 1994.

2.10 ADS 1100—TA-53 (Project Leader: Gene Gould)

A preliminary draft of the RFI work plan for OU 1100 was completed in September 1993. Comments from the NMED on the closure plan submitted in January 1993 were received. Preparation of responses to the comments will require extensive work.

2.11 ADS 1106—TA-21 (Project Leader: P. G. Eller)

Activities conducted during the fourth quarter included the following: field investigation at several PRSs, deep drilling at borehole LADP-4, preparation for drilling at LADP-3, and preparation of information for inclusion in RFI Phase Report 1B to be submitted to the EPA in December 1993. Data management and data validation activities continued for the first and second rounds of grid sampling, outfall investigations, and filter building investigation. In addition, data assessment activities included the development of TA-21 baseline radionuclide and chemical concentrations, the assessment of PRS data with respect to baseline concentrations, and the assessment and preparation of data collected during the FY93 field investigations. A summary of the PRS investigations performed during the fourth quarter of FY93 is provided in Table 2-3.

TABLE 2-2

SAMPLING RESULTS FOR OU 1093
SEPTEMBER 21–27, 1993

Locations of Sampling	Number of Samples Collected/Analyzed	Results	Comments
PRS 18-001(b) (11 manholes associated with inactive sanitary waste line)	20	No radiation detected above background. Slightly elevated organic vapors in one manhole. Samples sent to EM-9 for analysis. No results available.	
PRS 18-001(a) (sewage lagoons)	12	Monitoring instruments revealed • organic vapors at background levels, • alpha, beta, and gamma activities at background levels, and • particulate matter (dust) levels insignificant. Samples sent to EM-9 for analysis. No results available.	
PRS 18-003(a–d, g, h) (5 septic tanks and a settling pit) PRS 18-001 (c) (sump)	30	Rad screening indicated above background alpha and gamma activities in one septic tank. Samples sent to EM-9 for analysis. Preliminary results indicate presence of volatile organic compounds at parts per million concentrations in some septic tanks.	Will need to develop strategy for removing contaminated liquids from septic tanks for appropriate treatment/ disposal.
Total Samples	62		

TABLE 2-3

FY93 SAMPLING SUMMARY

Chapter/Section of RFI Work Plan for OU 1071	PRS No.	Surface and Near-Surface Soil Samples*		Borehole Core Samples		Quality Control Samples*	
		Planned	Collected	Planned	Collected	Planned	Collected
12.4/13.2 Grid Extension		23	23			6	6
16.3 Material Disposal Area T	21-016	50	50			9	9
15.2 Outfalls with Undetermined Locations	21-023(c)	14	14	4	4	3	5
	21-024(a)			4	4	1	
	21-024(g)			4	4	2	2
15.3 Outfalls with Septic Tanks	21-024(b)			4	4	2	1
	21-024(c)			4	4		3
	21-024(d)			4	4	1	3
	21-024(e)			4	4	2	
	21-024(i)	14	14	4	4	4	2
15.4 Direct Discharge Outfalls	21-011(k)	14	14			2	2
15.5 Drainage South of TA-21-3	21-027(a)			8	8	1	1
15.6 Septic Tanks	21-024(j)			4	4	2	3
	21-024(k)			12	12	5	4
15.8 Drainage North of TA-21-155	21-024(h)			4	4	2	2
15.9 Special Cases	21-024(f)			8	8	4	3
15.10 National Pollutant Discharge Elimination Systems	EPA02A129	6	6			1	1
	EPA03A035	3	3			3	2
	EPA03A036	6	6				1
	EPA03A037	6	6			1	1
	EPA04A142	6	4			3	2
	TOTALS	**142**	**140**	**68**	**68**	**54**	**53**

*Differences between planned and collected samples are attributable either to physical impediment (surface and near-surface) or resequencing of field activities (quality control samples). Resequencing was necessary because of site access and logistics requirements.

2.11.1 Administrative Activities

2.11.1.1 Fourth Quarter Activities

Administrative activities included preparation for RFI Phase Report 1B for the TA-21 operable unit, which will be submitted to the EPA in December of 1993. This report will include discussions of mesa-wide surface soil local contaminant levels, mesa-wide investigation of airborne emissions deposition, outfall investigations, and filter building investigations. Data management, assessment, and validation activities were performed for grid 1, grid 2, and outfall sampling.

2.11.1.2 Progress Against Schedule

The shallow boreholes associated with outfall investigations specified in Chapter 15 of the RFI work plan for TA-21 (LANL 1991, 0689) were postponed in FY92 because of airborne emissions considerations raised by the national emissions standards for hazardous air pollutants. This work was rescheduled and performed at PRSs 21-011(k), 21-023(c), 21-024(a-k), and 21-027(a) as part of the fourth quarter FY93 field activities. The EPA outfall sampling specified in Section 16.3 of the RFI work plan scheduled for FY94 was performed in the fourth quarter of FY93. Surface investigations identified in Section 15.6 for Material Disposal Area (MDA) T, originally scheduled for FY94, were performed in the fourth quarter of FY93. The remaining surface grid characterization identified in sections 12.4 and 13.2 of the RFI work plan was completed in the fourth quarter of FY93. Additional grid locations were added and sampled to assess the potential for upgradient sources in and around DP Canyon.

Deep drilling associated with vadose zone investigations at LADP-4 began late in the fourth quarter of FY93, ahead of the revised FY94 start date. Vadose zone investigations at a liquid waste disposal area, MDA V (PRS 21-018), remained delayed because of funding limitations. Activities progressed in support of the RFI Phase Report 1B, to be submitted to the EPA in December of 1993. The progress of near-surface and subsurface investigation schedules is illustrated in figures 2-1 and 2-2, respectively.

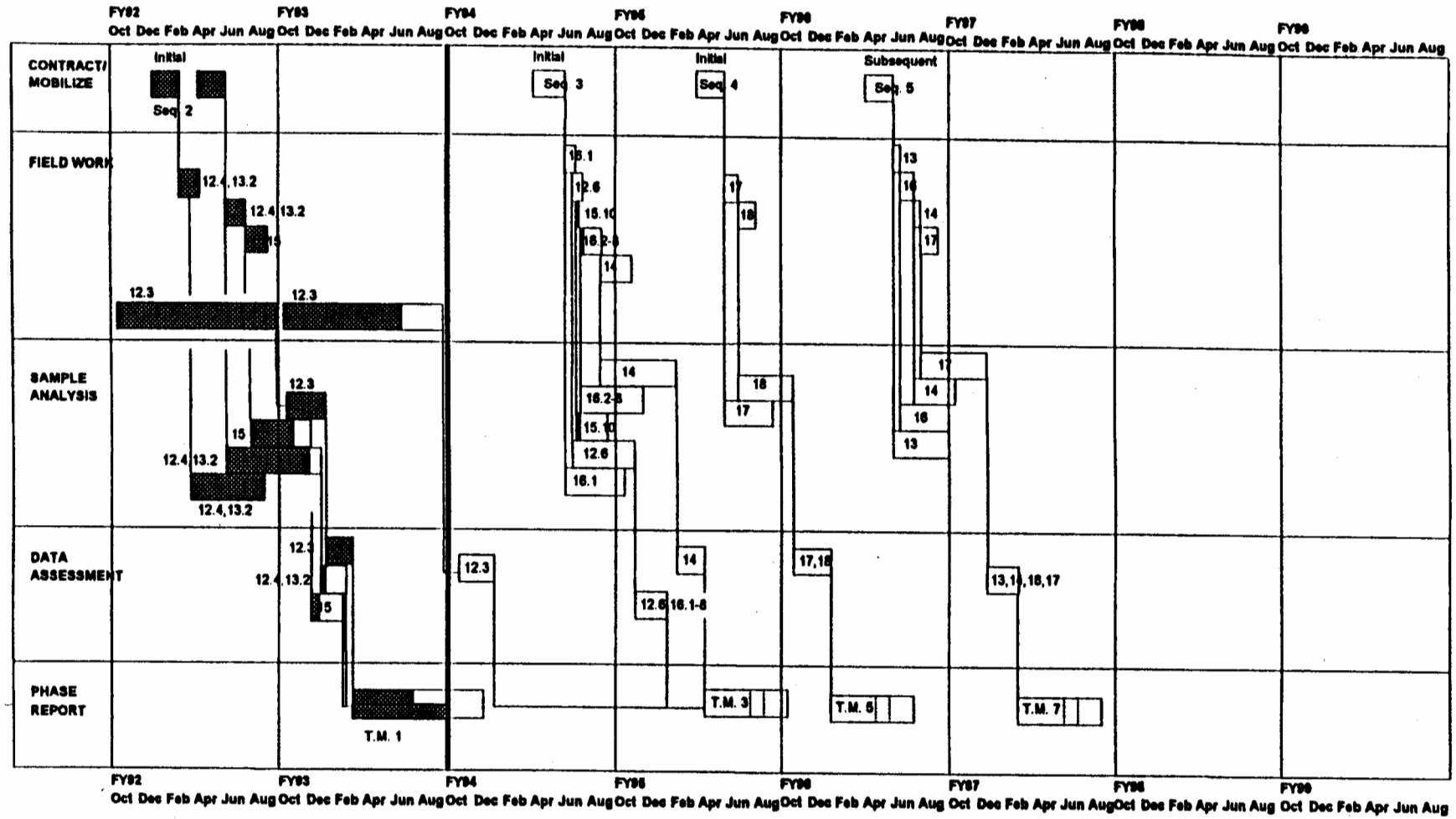
2.11.2 Field Work

Field activities conducted during the fourth quarter of FY93 were a combination of previously delayed investigations that complemented work recently done and of investigations planned as a direct result of data obtained during FY92 RFI work. Sampling plans for the follow-on activities were outlined generally in the approved TA-21 RFI work plan and were identified therein as "subsequent investigations." Field sampling and survey activities addressed an extension of the site grid system, completion of the initial outfalls, some follow-on outfall investigations, MDA T surface investigations, and selected septic tank investigations. In addition, a deep borehole in DP Canyon (LADP-4) was started, and site preparation was completed for borehole LADP-3 in Los Alamos Canyon. All samples collected during the field work have been submitted for laboratory analyses and will be reported in future phase reports. Field screening results have indicated expected contaminant concentrations.

2.11.2.1 Mesa-Wide Surface Grid Sampling

The investigations reported in this section are those described in the RFI work plan in Section 12.4, Surface Grid Sampling Plan, and in Chapter 13, Surface Soil Contamination from Airborne Emissions. Analytical laboratory results for samples from the second round of surface-soil grid sampling, collected from June to July 1992, were completed in the fourth quarter of FY93. A summary of analytical results returned from the Environmental Chemistry Group (EM-9) through the fourth quarter of FY93 and the percentage of the data entered on FIMAD are presented in Table 2-4. For Round 1 samples, one planned metals analysis (SW-6010) and one semivolatiles analysis (SW-8270) could not be performed because of loss or destruction of the sample. One sample has not yet been analyzed for uranium-234, -235, and -238, but these data are expected during the next quarter.

The surface grid system was extended to identify any potential upgradient source to DP Canyon that might result in elevated levels of contaminants, because FY92 RFI data indicated slightly elevated soil contaminant concentrations at upgradient grid locations (northwest DP Canyon). For the FY93 field activities, the grid system was extended to the north and west by an additional 15 locations. All points were subject to surface radiation surveys and 0–1 in. surface and 0–6 in. soil samples. Twenty-three surface soil samples (plus associated quality control samples) were submitted for analyses. Field survey and sample screening indicated no elevated levels of radiation.



Completed

Notes: Field work task 15 was not completed because drilling was postponed.

Sample analysis tasks 12.4, 13.2, and 15 are not on schedule because drilling was postponed and laboratory results were slow.

Figure 2-1. TA-21 OU RFI progress: near-surface investigations (9/30/93)

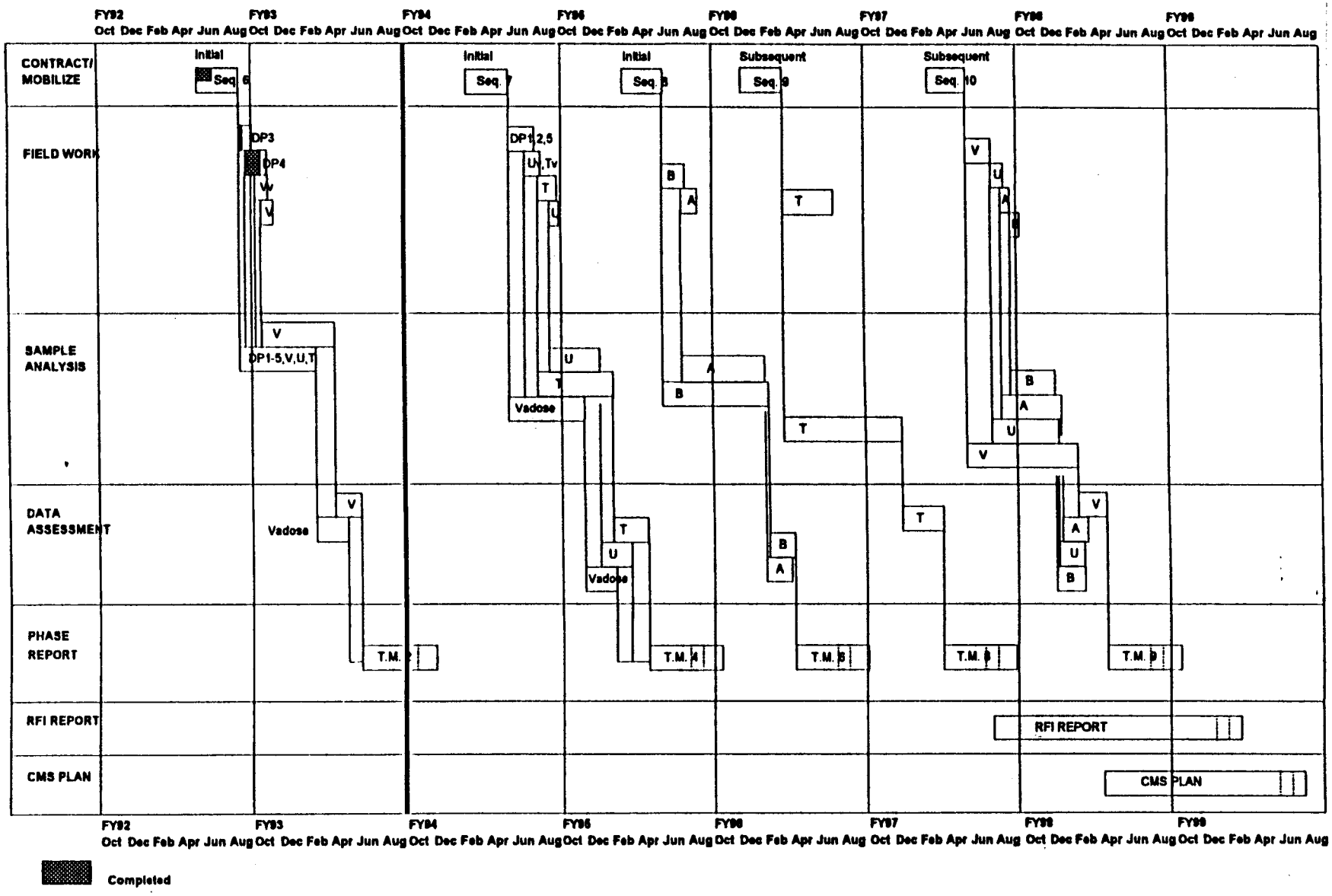


Figure 2-2. TA-21 OU RFI progress: subsurface investigations (9/30/93)

TABLE 2-4

PERCENTAGE OF SURFACE GRID SAMPLE RESULTS RETURNED FROM ANALYTICAL LABORATORIES

	Round 1 Samples				Round 2 Samples			
Analysis Requested	Number of Samples Submitted	Number of Sample Results Received	Percentage of Data Received	Percentage of Data on FIMAD	Number of Samples Submitted	Number of Sample Results Received	Percentage of Data Received	Percentage of Data on FIMAD
Americium-241	136	136	100%	100%	145	145	100%	95%
Gamma Ray Spectrometry	244	244	100%	0%	269	269	100%	0%
Plutonium-238	244	244	100%	100%	269	269	100%	94%
Plutonium-239	244	244	100%	100%	269	269	100%	94%
Strontium-90	244	244	100%	100%	269	269	100%	94%
Thorium-228	27	27	100%	100%	20	20	100%	90%
Thorium-230	27	27	100%	100%	20	20	100%	90%
Thorium-232	27	27	100%	100%	20	20	100%	90%
Tritium	244	244	100%	100%	269	269	100%	100%
Uranium-234	27	27	100%	100%	20	19	95%	90%
Uranium-235	27	27	100%	100%	20	19	95%	90%
Uranium-238	27	27	100%	100%	20	19	95%	90%
Uranium (total)	244	244	100%	100%	269	269	100%	100%
Metals (SW-6010) Ag	256	255*	100%	99.6%	282	282	100%	100%
Metals (SW-6010) As	256	256	100%	99.6%	282	282	100%	100%
Metals (SW-6010) Se	256	256	100%	99.6%	282	282	100%	100%
Metals (SW-6010) ICP/AES	256	256	100%	100%	282	282	100%	100%
Semivolatiles (SW-8270)	101	100	99%	99.6%	81	81	100%	99%

*Further results not expected because one sample was lost or destroyed.

2.11.2.2 Outfall Investigations

The investigations reported in this section are those described in Chapter 15 of the RFI work plan, Outfalls Description and Sampling Plan (Sections 15.2 through 15.9). Analytical laboratory results for samples from the outfall investigations performed in FY92 were completed (with the exception of one sample) in the fourth quarter of FY93. A summary of analytical results from the outfall investigations returned through the fourth quarter of FY93 is provided in Table 2-5.

Outfall investigations were performed at EPA-permitted outfalls EPA02A129, EPA03A035, EPA03A036, EPA03A037, and EPA04A142, according to the sampling plans in Section 15.10 of the RFI work plan. As a follow-on to FY92 investigations, outfalls 21-011(k), 21-023(c), and 21-027(a), which were identified as having elevated radionuclide levels in the FY92 sampling efforts, were subject to more detailed survey and sampling. Surface and near-surface soil samples were collected at each outfall. Shallow boreholes were placed at septic tank locations associated with the outfalls. The boreholes were drilled using an auger rig with a split spoon sampler. The borehole depth was 20 ft with sampling intervals of 0–5 ft, 5–10 ft, 10–15 ft, and 15–20 ft. Field screening was performed at the borehole and over collected core intervals for volatiles and radiation.

TABLE 2-5

PERCENTAGE OF OUTFALL SAMPLE RESULTS RETURNED FROM ANALYTICAL LABORATORIES

	Outfall Samples			
Analysis Requested	**Number of Samples Submitted**	**Number of Sample Results Received**	**Percentage of Data Received**	**Percentage of Data on FIMAD**
Americium-241	202	202	100%	100%
Gamma Ray Spectrometry	202	202	100%	0%
Plutonium-238	202	202	100%	100%
Plutonium-239	202	202	100%	100%
Strontium-90	202	202	100%	100%
Thorium-228	98	97	99%	98%
Thorium-230	98	97	99%	98%
Thorium-232	98	97	99%	98%
Tritium	202	202	100%	100%
Uranium (total)	202	202	100%	100%
Metals (SW-6010) Ag	213	213	100%	82%
Metals (SW-6010) As	213	213	100%	82%
Metals (SW-6010) Se	213	213	100%	82%
Metals (SW-6010) ICP/AES	213	213	100%	82%
Semivolatiles (SW-8270)	215	213*	99%	99%
Volatiles (SW 8240)	224	218	97%	71%

*Two lost samples were re-submitted.

Outfalls 21-011(k), 21-023(c) and 21-027(a) were subject to detailed surface radiological surveys to identify the extent of contamination. These surveys identified elevated levels of cesium-137 and alpha-emitting radionuclides in the drainage channels below outfall 21-011(k). The alpha-emitting radionuclides are being quantified through laboratory analyses of PRS samples.

Laboratory analytical data from outfalls 21-011(k), 21-023(c), 21-024(a), 21-024(i), and 21-024(b) were subjected to level 1 and level 2 validation, using Idaho National Engineering Laboratory guidance. The total number of samples validated by each outfall is presented in Table 2-6.

2.11.2.3 MDA T Investigations

The investigations reported in this section are those described in the RFI work plan in Section 16.3, SWMU 21-016 Material Disposal Area (MDA) T. All surface sampling activities, including radiological grid measurements and soil sample collection, were performed in the fourth quarter in FY93. An adjustment to the grid system was made because of a possible scale or origin problem with the original RFI drawings. Fifty surface samples were collected and submitted for full laboratory analyses. Initial radiological screening of samples and field surveys did not indicate a significant presence of radiological contamination in MDA T surface soils.

2.11.2.4 Deep Boreholes

The investigations reported in this section are those described in the RFI work plan in Section 12.5. Vadose zone characterization was in progress at LADP-4 (DP Canyon). Field screening associated with the placement of surface casing in the 0- to 30-ft zone did not indicate significant quantities of radioactive contamination. Site preparation at the LADP-4 (Los Alamos Canyon) drilling location has been completed, and drilling will be started following the completion of LADP-4.

2.11.2.5 Other Data Received

FY92 analytical laboratory data for the filter building investigations (PRSs 21-12, 21-153) continued to be received by the FIMAD and entered into its data base. All near-surface analyses have been received, but several subsurface results are outstanding. A summary of laboratory data received from the filter building investigations is presented in Table 2-7.

A summary of the field survey and field screening results associated with each PRS investigation performed in the fourth quarter of FY93 is provided in Table C-1 in Appendix C of this report. Completed field survey data include: micro-R meter, field instrument for detection of low-energy radiation (FIDLER), total alpha, total beta-gamma, and gross gamma. These data are summarized by range over each PRS in Table C-1. Field laboratory screening data include gross alpha, gross beta, gross gamma, tritium, and moisture content.

2.12 ADS 1111—TAs-6, -7, -22, -40, -58, -62 (Project Leader: Cheryl K. Rofer)

Comment resolution for the draft RFI work plan for OU 1111 was completed. The RFI work plan was submitted to the EPA ahead of schedule. A National Environmental Policy Act categorical exclusion was received for the RFI. Preparations are being made for radiological and magnetometric surveys of MDA F, which was active in the late 1940s and early 1950s. These surveys are the first step in locating pits for which little documentation exists. Surveys are planned for October and November 1993 using a magnetometry unit developed by EG&G Idaho.

Pilot studies on landfill covers continue to show large amounts of water moving laterally through lower levels of the soil during snowmelt; data analysis has begun; and equipment has been ordered for an additional plot under a denser tree canopy. To compare water balances in soil under a gravel mulch and in a comparable unmulched plot, run-off measurements were made during simulated rainfall. Gravel

TABLE 2-6

COMPLETENESS OF VALIDATED DATA SET FOR FIVE OUTFALL PRSs

	PRS 21-011(k)		PRS 21-023(c)		PRS 21-024(a)		PRS 21-024(l)		PRS 21-024(b)	
Analysis Requested	Number of Samples Planned	Number of Validated Sample Results	Number of Samples Planned	Number of Validated Sample Results	Number of Samples Planned	Number of Validated Sample Results	Number of Samples Planned	Number of Validated Sample Results	Number of Samples Planned	Number of Validated Sample Results
Americium-241	5	5	7	7	20	20	6	6	10	10
Gamma Ray Spectrometry	5	5	7	7	20	20	6	6	10	10
Plutonium-238	5	5	7	7	20	20	6	6	10	10
Plutonium-239	5	5	7	7	20	20	6	6	10	10
Strontium-90	5	5	7	7	20	20	6	6	10	10
Thorium-228							6	6	9	10
Thorium-230							6	6	9	10
Thorium-232							6	6	9	10
Tritium	5	5	7	7	20	20	6	6	10	10
Uranium (total)	5	5	7	7	20	20	6	6	10	10
Metals (SW-6010) Ag	5	5	8	8	21	21	6	6	10	10
Metals (SW-6010) As	5	5	8	8	21	21	6	6	10	10
Metals (SW-6010) Se	5	5	8	8	21	21	6	6	10	10
Metals (SW-6010) ICP/AES	5	5	8	8	21	21	6	6	10	10
Semivolatiles (SW-8270)	5	5	8	8	21	21	6	6	10	10
Volatiles (SW 8240)	5	0*	8	8	22	22	6	6	11	11

*Sample analysis was not done. No results are available for validation.

TABLE 2-7

PERCENTAGE OF FILTER BUILDING SAMPLE RESULTS RETURNED FROM ANALYTICAL LABORATORIES

	Filter Building Samples—Near-Surface				Filter Building Samples—Subsurface			
Analysis Requested	Number of Samples Submitted	Number of Sample Results Received	Percentage of Data Received	Percentage of Data on FIMAD	Number of Samples Submitted	Number of Sample Results Received	Percentage of Data Received	Percentage of Data on FIMAD
Americium-241	18	18	100%	100%	7	2	29%	29%
Gamma Ray Spectrometry	35	35	100%	0%	11	11	100%	0%
Plutonium-238	35	35	100%	100%	11	11	100%	91%
Plutonium-239	35	35	100%	100%	11	11	100%	91%
Strontium-90	35	35	100%	100%	11	11	100%	91%
Thorium-228	1	1	100%	100%				
Thorium-230	1	1	100%	100%				
Thorium-232	1	1	100%	100%				
Tritium	35	35	100%	100%	11	11	100%	100%
Uranium-234	1	1	100%	100%				
Uranium-235	1	1	100%	100%				
Uranium-238	1	1	100%	100%				
Uranium (total)	35	35	100%	100%	11	11	100%	63%
Metals (SW-6010) Ag	42	42	100%	69%	13	13	100%	39%
Metals (SW-6010) As	42	42	100%	69%	13	13	100%	39%
Metals (SW-6010) Se	42	42	100%	69%	13	13	100%	39%
Metals (SW-6010) ICP/AES	42	42	100%	69%	13	13	100%	39%
Semivolatiles (SW-8270)	42	42	100%	100%	13	12	92%	77%
Volatiles (SW 8240)	47	47	100%	68%	15	15	100%	73%

mulches (a thin layer of gravel on the surface of the soil) appear to have the potential to stabilize soil inexpensively.

Samples of altered and unaltered tuff from PRS 22-015(c), the plating bath outflow, continue to be examined for their mineralogical composition to help determine the nature and degree of contamination and possible remediation schemes. At least three types of mineral alteration appear to have resulted from interactions with the outflow. X-ray diffraction data are being obtained to determine the mineralogy of some of the coatings; this information can be used to predict the geochemical behavior of the coatings.

2.13 ADS 1114—TAs-3, -30, -59, -60, -61, -64 (Project Leader: Ed Griggs)

The final draft of the RFI work plan for OU 1114, addressing 127 PRSs, was delivered on schedule to the EPA and NMED. Preparations continued for the data analysis and delineation of the approximately 183 remaining PRSs in OU 1114. Delivery to the EPA and NMED of the document addressing these PRSs is scheduled for mid-July 1995.

Laboratory analyses of soil samples taken at PRS 3-010(a), the mercury spill TA-3-30, were received by EM-8 on September 7, 1993. As suspected, several samples showed high levels of mercury, up to 2,233 micrograms per gram of sample, and Pu-239 ranging from 0.034 to 1.4 pCi/g. Several composite samples required discrete analyses. Final remediation decisions will be made when the discrete sample analyses are received. In other activities, EM-8 delivered a memorandum to the NMED on the proposed disposition of the site of a removed underground storage tank at TA-60 (TA-3-MP-3). The first draft of the updated PRS data base was completed September 30, 1993.

2.14 ADS 1122—TAs-33, -70 (Project Leader: Roy Michelotti)

The final draft of the RFI work plan for OU 1122 was approved by the EPA Region 6 pending specified modifications. Modifications were drafted, approved by the ER Program Office and the DOE, and submitted to the EPA on August 20, 1993. Preparations were completed for the readiness review for the remaining sampling in OU 1122. The review covered deep drilling at MDA K and surface and subsurface sampling at South, East, and NRAO sites. Deep drilling to investigate a subsurface tritium plume began August 16, 1993, at MDA K with the objective of completing three holes to depths exceeding 185 ft per hole. The experimental aspects of the work and inherent difficulties with the soft tuff at TA-33 as well as the desire for good core resulted in the drilling not being completed by October 1, 1993. As a result of the extended drilling activity, the subsurface sampling at South, East, and NRAO sites planned for the fall of 1993 will be deferred until the spring of 1994; no milestones are impacted by this schedule change. Analytical results were being received from the May–June sampling campaign at the main site and Area 6 at TA-33. The data have received an EM-9 quality assurance/quality control review but have not been reviewed by the OU 1122 team for accurate correspondence with field data or for soundness for use in decision making.

2.15 ADS 1127—TA-35, TSL-125 (Project Leader: Dave McInroy)

Following the July 7, 1992, NMED rejection of the closure plan for the TA-3 TSL-125 surface impoundment, the Laboratory amended the plan to include characterization in Ten-Site Canyon, which was the receiving area for any releases from this surface impoundment. Eight locations, selected by the Laboratory and the NMED staff, were sampled on December 1, 1992. Members of the NMED's Hazardous and Radioactive Materials Bureau were present during the sampling event and split samples with Laboratory personnel. Sample analyses for hazardous-substance-list total heavy metals (Ag, As, Ba, Be, Cd, Hg, Ni, Pb, Sb, and Se), VOCs, SVOCs, PCBs, and total petroleum hydrocarbons revealed no hazardous constituents detected above health-based action levels, background concentrations, or NMED-approved clean-up levels. Based on the results of the analyses, the TA-35 TSL-125 surface impoundment has met all applicable regulatory requirements and associated EPA guidance for clean closure. An NMED letter to the Laboratory on September 27, 1993, granted this unit "clean closure" status. The contaminants of concern that were detected are as follows.

- Beryllium was detected above action levels at all sample locations, including upstream from the surface impoundment. The levels that were detected ranged from 1.8 to 3.4 ppm. These levels are

consistent with background ranges of beryllium found in soils at Los Alamos. It should be noted that the original closure report for this unit provided process knowledge that supported the Laboratory's position that there was no beryllium use or disposal associated with this surface impoundment.

- Bis-2-ethylhexylphthalate, a SVOC, was detected in six of the samples taken, and concentrations ranged from 0.47 to 14.7 ppm. These values, however, are below the EPA action level of 50 ppm. This constituent was also detected upstream from the surface impoundment.

- 1,2,4-trimethylbenzene, a VOC, was detected in one sample at a concentration of 6.5 parts per billion (ppb). There is no EPA action level for this compound, but statisticians calculated that a conservative interim guidance action level for this constituent would be 700 ppm.

- PCBs were detected in five samples, with concentrations ranging from 0.11 to 0.58 ppm. These levels are well below the Toxic Substances Control Act clean-up levels of 10 ppm. NMED's Hazardous and Radioactive Bureau personnel supported this conclusion, stating that to achieve clean closure status for this unit, contamination must not exceed 10 ppm of PCBs.

- Total petroleum hydrocarbons were also detected in all samples, but the NMED and the Laboratory have agreed that this substance is not regulated under RCRA.

2.16 ADS 1129—TAs-4, -5, -35, -42, -48, -52, -55, -63, -66 (Project Leader: Allyn Pratt)

The following activities were completed at OU 1129 during the fourth quarter of FY93.

- Initial Phase I site characterization activities for TA-48 began on July 12, 1993, and were completed on July 30, 1993. OU 1129 collected 114 samples and another 59 quality control samples for a total of 173 samples at Aggregates K, L, M, N, X, and Y.

  Mercury vapor was detected at Aggregate L, PRS 48-002(a and b), during routine health and safety monitoring. Sampling was stopped when visible free mercury on the ground surface was encountered during field investigation activities. The field team covered the mercury-contaminated area with plastic, posted mercury contamination notices, and cordoned off the area. Because of field observations at this location, OU 1129 plans to take additional soil samples along the surface drainage channel.

  The trench of former waste line 36 was not intercepted in the initial sampling at TA-48. Additional archival research of engineering drawings places the trench approximately 10 to 15 ft south of the initial sampling locations. A pipe locator confirmed the location of the unremoved section of line 36 inside the security fences; OU 1129 plans to take samples at this location.

  TA-48 analytical requests and results received to date are provided in Table 2-8. All gross-alpha, -beta, and -gamma screening results were below minimum detection activities. Results for VOCs, SVOCs, and PCBs were below quantifiable levels except for the VOC results listed in Table 2-9. Metals and radionuclide results received are listed in tables 2-10 and 2-11, respectively; all are below screening action levels except where noted.

- OU 1129 has begun preparing for the TA-35 site characterization. Sampling activities are currently scheduled for October 1993 through September 1994. The site-specific health and safety plan has been prepared and is awaiting approval from the Industrial Hygiene and Safety Group (HS-5). The field team began setting up the waste management area for the sampling activities. Preliminary field work and archival research began, and sampling in and around the phase separator pit was coordinated with decontamination and decommissioning activities at the east end of TA-35.

- OU 1129 responses to the EPA notice of deficiencies on the RFI work plan for OU 1129 (LANL 1992, 0787) were submitted to the DOE/LAAO on July 15, 1993. A presentation for an EPA Region 6 representative was given on August 19, 1993, to address questions as well as to discuss OU 1129's overall progress and future activities. The representative provided guidance on how the

TABLE 2-8

TA-48 ANALYTICAL REQUESTS AND RESULTS

Analytical Suite	No. of Analyses Requested	No. of Final Analytical Results Received
Metals by EDXRF*	124	
Metals by ICP/AES	52	2
VOCs	111	83
SVOCs	135	2
Alpha Particle Spectrometry	155	76
Gamma Ray Spectrometry	95	
Phosphorous	4	
PCBs	21	6
Gross- α, -β, -γ	242	242

*EDXRF = energy dispersive x-ray fluorescence

TABLE 2-9

TA-48 VOC RESULTS ABOVE THE LEVELS OF QUANTITATION

PRS	ER Program Barcode	Analyte	Result	unc*	Level of Quantitation
			μg/kg		
48-001	AAA3449	4-Isopropyltoluene	10.	3.	5.
48-005	AAA3699	Acetone	32.	9.6	20.
	AAA3707	Acetone	29.	8.7	20.
	AAA3708	Acetone	47.	14.	20.
48-007(f)	AAA3527	Acetone	35.	10.5	20.

*unc = uncertainty

TABLE 2-10

TA-48 METALS ICP/AES RESULTS

ER Program Barcode	PRS 48-005 AAA3704 (Equipment Rinsate)	PRS 48-005 AAA3705 (Bottle Blank)
Ag (mg/l)	<0.01	<0.01
Al (mg/l)	<0.1	<0.1
As (g/l)	<2.	<2.
Ba (mg/l)	0.002 ± 0.001	0.003 ± 0.001
Be (mg/l)	<0.001	<0.001
Ca (mg/l)	0.78 ± 0.08	0.71 ± 0.07
Cd ((mg/l)	<0.003	<0.003
Co (mg/l)	<0.004	0.015 ± 0.002
Cr (mg/l)	<0.004	<0.004
Cu (mg/l)	0.017 ± 0.002	0.12 ± 0.01
Fe (mg/l)	<0.1	<0.1
K (mg/l)	<0.6	<0.6
Li (mg/l)	0.002 ± 0.001	0.004 ± 0.001
Mg (mg/l)	0.18 ± 0.02	0.14 ± 0.01
Mn (mg/l)	<0.002	0.003 ± 0.002
Mo (mg/l)	0.01 ± 0.009	0.017 ± 0.009
Na (mg/l)	0.49 ± 0.05	0.48 ± 0.05
Ni (mg/l)	<0.01	<0.01
P (mg/l)	0.08 ± 0.02	0.05 ± 0.02
Pb (g/l)	23. ± 3.	48. ± 5.
Sb (g/l)	5. ± 1.	8. ± 1.
Se (g/l)	<2.	<2.
Sr (mg/l)	0.004 ± 0.001	0.003 ± 0.001
Tl (g/l)	<1.	**9. ± 1. ***
V (mg/l)	<0.004	0.018 ± 0.002
Zn (mg/l)	0.07 ± 0.01	0.25 ± 0.06

* Tl screening action level = 2.8 µg/l

SOURCE: LANL (Los Alamos National Laboratory), November 1993 (to be published). "Installation Work Plan for Environmental Restoration," Revision 3, Los Alamos National Laboratory Report LA-UR-93-3987, Appendix J, Table J-3.

TABLE 2-11

TA-48 RADIONUCLIDE RESULTS

PRS	ER Program Barcode	Am-241	unc*	Ce-144	unc	Co-60	unc	Cs-137	unc	Ru-106	unc
		pCi/g									
48-001	AAA3445	0.04	0.82	1.72	4.48	0.37	0.66	0.0	0.99	0.0	2.36
	AAA3448	0.25	0.85	3.85	5.39	0.0	0.81	1.38	1.9	0.0	3.01
	AAA3449	0.0	1.02	5.25	6.85	0.0	0.7	0.25	1.05	0.0	1.19
48-002(a,b)	AAA3749	0.04	3.18	0.0	18.3	0.19	2.86	0.0	3.02	1.4	9.12
	AAA3751	0.0	1.03	0.0	5.2	0.07	0.61	0.32	0.92	0.87	2.21
	AAA3752	0.0	0.94	0.0	5.2	0.0	0.55	0.0	0.92	1.3	2.03
	AAA3757	0.0	0.9	0.0	5.2	0.3	0.86	0.12	0.92	3.57	3.17
	AAA3765	0.0	0.79	0.0	5.2	0.88	0.73	0.0	0.92	1.11	2.52
	AAA3766	0.24	1.65	0.0	5.2	0.0	0.55	0.0	0.92	0.82	2.14
	AAA3767	0.3	1.06	0.0	5.2	0.23	0.73	0.0	0.92	0.0	1.6
	AAA3769	0.28	1.3	0.0	5.2	0.0	0.55	0.0	1.3	4.83	2.86
	AAA3770	0.6	1.15	0.0	5.2	0.0	0.55	0.0	1.44	1.35	2.23
	AAA3771	0.25	1.03	0.0	5.2	0.0	0.55	0.0	1.33	0.0	1.6
	AAA3772	0.45	1.02	0.0	5.2	0.0	0.69	3.64	1.47	0.43	2.32
	AAA3773	0.0	0.85	0.0	5.2	0.12	0.7	0.0	1.33	1.21	2.34
	AAA3775	0.17	0.97	0.0	5.2	0.0	0.7	0.0	0.92	1.01	2.3
	AAA4493	0.06	0.95	0.0	5.2	0.0	0.66	0.0	1.35	0.48	2.02
	AAA4494	0.23	0.99	0.0	5.2	0.11	0.92	3.63	1.43	0.77	2.21
	AAA4495	0.0	0.79	0.0	5.2	0.0	0.55	0.0	1.36	0.14	1.6
	AAA4496	0.16	0.86	0.0	5.2	0.0	0.55	0.0	0.92	0.24	2.12
	AAA4497	0.31	0.89	0.0	5.2	0.77	0.85	0.0	0.92	1.88	2.44
	AAA4499	0.0	1.	0.0	5.2	0.12	0.65	0.72	1.03	2.27	2.56
	AAA4500	0.0	0.79	0.0	5.2	0.07	0.55	0.0	0.92	0.87	1.97
	AAA3750	0.0	6.44	0.0	14.	0.0	1.16	0.0	2.88	2.08	9.12
48-002(e)	AAA3545	1.98	1.13	0.0	5.2	0.0	0.55	3.76	1.25	0.05	1.66
	AAA3546	0.0	1.67	0.0	5.2	0.0	0.55	**4.59****	**1.73**	2.27	2.69
	AAA3547	0.47	1.59	0.0	5.2	0.04	0.72	3.64	1.4	0.0	1.6
48-003	AAA3401							0.0	0.86		
	AAA3402							0.31	0.86		
	AAA3403							0.27	0.82		
	AAA3404							0.25	0.86		
	AAA3405							0.0	0.72		
	AAA3406							0.11	0.92		
	AAA3407							0.75	1.18		
	AAA3408							0.23	0.72		
	AAA3409							1.2	1.49		
	AAA3414							1.06	0.97		
	AAA3470	0.0	1.08	0.24	2.6	0.0	0.75	2.82	1.14	0.0	2.21
	AAA3471	0.0	1.2	3.51	5.89	0.19	0.76	2.38	1.63	0.14	2.21
	AAA3493	0.0	1.08	0.0	5.83	0.0	0.75	0.83	0.93	0.0	2.21
	AAA3494	0.0	1.08	0.52	3.91	0.16	0.75	0.0	0.91	0.39	2.21
	AAA3495	0.0	1.08	0.03	2.6	0.39	0.84	1.4	1.16	1.11	2.5
	AAA3496	0.0	1.15	0.0	3.1	0.0	0.75	0.62	1.01	1.4	2.5
	AAA3497	0.16	1.24	4.37	4.94	0.47	0.86	0.0	0.91	0.39	2.4
	AAA3498	0.0	1.08	0.0	3.05	0.0	0.75	0.81	1.36	1.4	2.85
	AAA3512	0.0	1.25	0.0	3.21	0.04	0.75	0.0	0.94	0.0	2.21
	AAA3513	0.0	1.08	1.41	4.67	0.3	0.84	0.07	0.91	0.0	2.21

TABLE 2-11 (continued)

PRS	ER Program Barcode	Am-241	unc*	Ce-144	unc	Co-60	unc	Cs-137	unc	Ru-106	unc
		pCi/g									
48-003 (cont.)	AAA3514	0.0	1.08	5.13	4.54	0.51	0.78	0.95	1.04	1.35	2.81
	AAA3515	0.35	1.82	0.0	3.87	0.0	0.76	0.82	1.22	1.35	2.86
	AAA3516	0.0	1.29	4.58	5.62	0.0	0.75	1.22	1.39	0.0	2.21
	AAA3542	0.0	0.79	0.0	5.2	0.0	0.85	0.0	0.92	0.0	1.6
	AAA3543	0.12	1.09	0.0	5.2	0.0	0.64	0.14	0.92	2.17	2.9
	AAA4449	0.04	1.03	0.0	5.2	0.93	0.81	0.0	0.92	0.05	1.6
	AAA4450	0.0	1.	0.0	5.28	0.0	0.62	0.0	0.92	0.34	2.16
	AAA4451	0.84	1.21	0.0	5.2	0.0	0.55	0.0	0.92	4.25	3.34
	AAA4452	0.0	0.79	0.0	5.2	0.0	0.55	0.0	0.92	1.06	2.67
	AAA4453	0.0	0.95	0.0	5.2	0.56	0.92	0.0	0.92	1.79	2.76
	AAA4454	0.0	1.08	0.55	3.78	0.02	0.75	0.02	0.91	0.1	2.21
	AAA4455	0.0	1.08	3.64	4.59	0.11	0.75	0.0	0.91	2.85	3.2
	AAA4456	0.0	1.08	0.0	3.12	0.0	0.75	0.18	0.86	2.46	2.78
	AAA4457	0.0	1.08	3.02	4.72	0.0	0.75	0.19	0.91	0.0	2.21
	AAA4463	0.0	1.09	0.67	4.21	0.21	0.75	0.0	0.91	2.61	2.86
	AAA4473							0.72	0.96		
48-005	AAA3429	0.85	1.38	0.0	2.21	0.0	0.34	0.03	0.51	0.58	1.86
	AAA3430	0.26	0.96	0.0	3.94	0.04	0.44	0.44	1.07	0.26	1.18
	AAA3431	0.0	1.06	0.0	4.48	0.0	0.47	0.76	1.01	1.64	2.71
	AAA3432	0.0	1.04	0.86	3.54	0.29	0.58	0.0	0.7	0.0	1.08
	AAA3433	0.16	1.	0.06	2.66	0.02	0.4	0.22	0.45	0.69	2.12
	AAA3434	0.26	0.71	0.35	2.75	0.33	0.67	0.0	0.89	1.85	2.19
	AAA3435	0.0	0.83	0.0	4.87	0.06	0.53	0.11	0.52	1.38	2.25
	AAA3436	0.0	1.15	0.0	5.34	0.0	0.65	0.0	1.11	1.16	2.02
	AAA3437	0.23	0.97	0.0	4.8	0.31	0.58	0.0	0.94	0.32	1.84
	AAA3438	0.77	1.11	7.47	8.37	0.08	0.45	0.0	0.96	1.06	1.97
	AAA3439	0.15	0.92	1.71	4.52	0.0	0.91	1.06	1.3	1.27	2.04
	AAA3717	0.0	6.42	0.0	15.4	0.19	3.11	2.04	4.42	0.0	5.31
	AAA3718	0.0	0.68	0.0	4.65	0.61	0.96	**4.22****	**1.59**	1.35	2.19
	AAA3719	0.0	0.84	0.0	2.79	0.4	0.84	**6.94****	**1.33**	0.63	2.28
	AAA3720	0.27	1.62	0.0	2.37	0.02	0.6	0.95	0.71	0.82	2.65
	AAA3721	0.13	0.84	0.0	4.67	0.67	0.73	0.52	0.77	1.21	1.84
	AAA3722	0.05	0.92	0.0	2.2	0.0	0.53	0.05	0.8	0.0	1.35
	AAA3723	0.0	0.95	0.0	3.69	0.28	0.68	0.0	0.88	1.74	2.5
	AAA3724	0.0	1.31	0.0	3.3	0.0	0.66	0.57	1.1	2.08	2.71
	AAA4469	0.12	1.66	0.0	5.25	0.19	0.65	0.0	0.75	1.74	2.95
	AAA4475	0.0	0.91	0.0	4.63	0.19	0.73	0.0	0.83	0.34	2.12
	AAA4476	0.06	0.84	0.0	3.97	0.51	0.89	0.0	0.4	0.1	1.43
	AAA4483	0.0	1.45	0.0	4.88	**1.35*****	**0.96**	2.	1.2	1.84	2.81
48-010	AAA3782	0.25	1.09	0.0	5.2	0.07	0.82	3.79	1.36	1.11	3.25

*unc = uncertainty
**Cs-137 screening action level = 4.0 pCi/g
***Co-60 screening action level = 0.9 pCi/g
No entry indicates that results were not yet received from EM-9
SOURCE: LANL (Los Alamos National Laboratory), November 1993 (to be published). "Installation Work Plan for Environmental Restoration," Revision 3, Los Alamos National Laboratory Report LA-UR-93-3987, Appendix J, Table J-2.

notice of deficiencies responses should be revised. The revisions were made and submitted to the DOE during this quarter for transmittal to the EPA.

- The draft RFI work plan addendum containing the sampling and analysis plans for remaining PRSs not addressed in the original work plan is at the DOE/LAAO for technical review.

- Final development of a sample coordination data base has been completed. It will be used to list the number and type of sample jars required by EM-9/Sample Coordination Facility for site characterization and to produce the preprinted, bar-coded forms and labels for the samples.

- OU 1129 has completed the draft report on sampling activities at TA-42 that took place in July and September 1992. The draft TA-42 report is included as Appendix D of this report for information purposes only. Compilation of these data into a formal no-further-action request for investigated PRSs will be done as part of a larger effort at a later date. Final analytical results for the TA-42 samples have been available only since July 1993.

2.17 ADS 1130—TAs-36, -68, -71 (Project Leader: Gene Gould)

An OU 1130 fact sheet was prepared in coordination with the Public Affairs Office for the ER public meetings that were held during this quarter. In addition, a bus tour of TA-39 was conducted for EPA Region 6 representatives; comments on the draft RFI work plan for OU 1130, which was submitted in June, are not expected until calendar year 1994. The readiness review for OU 1130 was conducted on August 18, 1993, but field work did not begin this quarter. Preparations for entering the field have been extensive for this operable unit.

2.18 ADS 1132—TA-39 (Project Leader: Gene Gould)

An OU 1132 fact sheet was prepared in coordination with the Public Affairs Office for the ER public meetings. Rainfall simulator runs (Surface Stabilization Treatability Study) on treated and untreated plots at TA-36 were conducted in August and September. Personnel have begun work on a final report on the results. The readiness review for OU 1132 was conducted on August 17, 1993, and field work began on September 27, 1993. Highlights of the sampling that was completed in September are listed below.

- Geophysical surveys were conducted at landfills, septic systems, and the canyon bottom. Preliminary results indicate that the landfills may be larger than thought.

- Radiation surveys were conducted at the waste storage areas, firing sites, landfills, septic systems, and sump. Elevated levels of radiation were noted at the cliff face of one of the gas gun sites.

- Phase I sampling has been completed for storage areas, septic systems, and sumps. The field team collected 76 samples, not including quality control samples, duplicates, and field blanks. Sampling results are not available.

2.19 ADS 1135—TA-40 (Project Leader: Dave McInroy)

The site investigation activities at the TA-40 Scrap Detonation Site were conducted in four phases during January and May of 1992. Phase I activities involved sampling a fill area south of the detonation amphitheater. The Phase II investigation sampled the surface burn areas and the burn pit east of the amphitheater. Phase III activities included sampling shallow drainages leading from the area, on-site structures, scattered debris in the area, and soil beneath the debris pile located within the amphitheater. Phases I, II, and III were conducted simultaneously during the January 1992 effort. The Phase IV investigation was conducted in May 1992 and included sampling within the amphitheater after some construction debris was removed from the area in April 1992. All areas were sampled for VOCs, SVOCs, target-analyte-list metals, and PCBs to determine whether hazardous constituents were present

above health-based action levels. Seventy-one samples were analyzed for the above listed constituents. The only constituents detected in these samples are listed below or shown in Table 2-12.

The data from these sampling events showed that the only constituents in debris or soil above SALs were beryllium, thallium, lead, antimony, silver, and arsenic. Table 2-12 summarizes the data for the target-analyte-list metal analyses of interest; the observations of lead, antimony, or silver above SALs and background levels are provided in bold print. The beryllium and arsenic levels are all well within naturally occurring background levels. A combination of cleanup and risk assessment will be used to ensure the site meets clean closure requirements.

No VOCs, SVOCs, pesticides, herbicides, PCBs, or nitrates were detected above SALs. Several constituents were detected, however, below SALs. They are listed below with a brief description of sample type and location. Also provided are the corresponding SALs for the contaminant detected.

- Charred surface debris at the burn cage contained benzo[b]fluoranthene at a concentration of 1.8 ppm. The SAL for this compound is 3,200 ppm.

- A soil sample from the zero- to six-inch interval at the east burn area contained 4.6 ppb of the pesticide delta-BHC. A SAL for delta-BHC could not be calculated because no data for this compound are available in EPA's IRIS and HEAST reference documents. A SAL was calculated for beta-BHC, however, and because these compounds behave similarly, it is reasonable to assume that the action level for beta-BHC may apply to delta-BHC. The beta-BHC action level was calculated to be 519 ppb. This calculated SAL is far greater than the observed pesticide concentration of 4.6 ppb.

- Benzoic acid was detected at a concentration of 2,100 ppb in the soil above the charred debris at the burn pit; however, this compound is not included on the 40 CFR 261, Appendix VIII or the 40 CFR 264, Appendix IX lists of hazardous substances. Phenol was detected in the same sample at a concentration of 1.5 ppm, which is far below the SAL of 48,000 ppm.

- Soil above the charred debris at the burn pit location, collected at the one- to two-foot interval, contained 33 ppb heptachlor epoxide, which is less than the 103 ppb SAL for this compound. Another sample collected at depth from the layer of charred debris within the burn pit contained 0.047 ppm of the herbicide 2,4,5-TP. The SAL for this compound is 640 ppm.

- A surface soil sample collected at the west electrical box contained the insecticides p,p'-DDE at 12 ppb and p,p'-DDT at 14 ppb. SALs for both DDE and DDT were calculated at 2,740 ppb.

- Benzo[b]fluoranthene and fluoranthene at 0.46 and 0.38 ppm, respectively, were detected in a soil sample collected from the zero- to six-inch depth within the amphitheater. The SAL for both compounds is 3,200 ppm.

- Pyrene at 0.35 ppm was detected in a soil sample collected at the zero- to six-inch depth from within the amphitheater. The SAL for pyrene is 2,400 ppm.

- Fluoranthene and pyrene were detected in a soil core sample collected within the amphitheater. The sample contained 0.49 and 0.42 ppm of these compounds, respectively. The corresponding SALs are 3,200 and 2,400 ppm.

2.20 ADS 1136—TA-43 (Project Leader: Calvin Martell)

Extensive investigation of the TA-43 PRSs has been carried out. Progress on the first draft of the RFI work plan for OU 1136 includes the completion of a fact sheet, the executive summary, chapters 1, 2, and 3, the annexes, and the appendices. Chapter 6 is almost completed. The decision to recommend no further action for all the PRSs in OU 1136 was made and extensively documented in Chapter 6.

TABLE 2-12

SELECTED TARGET-ANALYTE-LIST METALS AT THE TA-40 SCRAP DETONATION SITE

Phase	Area	Field #	Sample #	Media	Depth	As	Ba	Be	Hg	Ag	Pb	Sb	Th	Zn
						ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm
I	fill area	PF-40-FA-13A	92.00701	soil, tuff	0-2.5'	0.2	200	1.52	18.4	<1	13	<2	<4	24
I	fill area	PF-40-FA-15A	92.00700	soil, tuff	0-2.5'	0.3	156	1.61	18.9	1.1	12.7	<2	<4	24
I	fill area	PF-40-FA-16A	92.00702	soil, tuff	0-2.5'	0.4	260	1.98	16.5	<1	12	<2	<4	24
I	fill area	PF-40-FA-16A	92.00702d	soil, tuff	0-2.5'	NA	NA	NA	NA	NA	NA	NA	NA	21
I	fill area	PF-40-FA-18A	92.00703	tuff	0-2.5'	0.4	284	1.55	17.6	<1	35	<2	<4	56
I	fill area	PF-40-FA-19A	92.00704	soil, tuff	0-2.5'	0.4	281	1.76	19.6	<1	27	<2	<4	21
I	fill area	PF-40-FA-19A	92.00704d	soil, tuff	0-2.5'	NA	NA	NA	NA	NA	24	NA	NA	33
I	fill area	PF-40-FA-1A	92.00696	soil, tuff	0-2.5'	<0.2	180	1.91	18.7	2.6	13	<2	<4	28
I	fill area	PF-40-FA-2A	92.00699	soil, tuff	0-2.5'	0.2	248	1.6	16	<1	14	<2	<4	27
I	fill area	PF-40-FA-4A	92.00697	soil, tuff	0-2.5'	0.3	183	2.08	15.3	<1	15	<2	<4	26.6
I	fill area	PF-40-FA-5A	92.00698	soil, tuff	0-2.5'	0.3	231	1.7	20.4	<1	15	<2	<4	24
I	fill area	PF-40-FA-5R	92.00770	soil, tuff	0-2.5'	0.4	313	1.72	<2	<1	***2980***	<2	<1	48
I	fill area	PF-40-FA-5R	92.00770d	soil, tuff	0-2.5'	0.4	262	1.87	<2	<1	***2710***	<2	<1	54
II	burn area	PF-40-BAE-1	92.00914	soil, debris	surface	0.7	291	1.96	16	2.3	41	<3	<4	163
II	burn area	PF-40-BAE-2	92.00707	soil	0-6"	3.1	469	1.17	85.6	10.7	***1470***	<2	<4	2750
II	burn area	PF-40-BAE-3	92.00708	soil	1-2'	0.3	186	1.29	10.6	<1	19	<2	<4	74
II	burn area	PF-40-BAW-1	92.00913	soil, debris	surface	0.6	278	1.87	<2	1.1	137	<3	<4	199
II	burn area	PF-40-BAW-2	92.00709	soil	0-6"	0.7	242	1.75	34.6	<1	22	<2	<4	64
II	burn area	PF-40-BAW-3	92.00710	soil	1-2'	0.7	194	1.89	24.8	<1	9.2	<2	<4	21
II	burn area	PF-40-BAW-3	92.00710d	soil	1-2'	NA	NA	NA	NA	NA	8.2	NA	NA	21
II	burn cage	PF-40-BC-1	92.00767	debris	surface	2.2	365	2.14	<2	21.2	***21102***	***43***	<1	6360
II	burn cage	PF-40-BC-2	92.00705	soil	0-6"	0.4	224	1.7	18.9	<1	20	<2	<4	57
II	burn cage	PF-40-BC-3	92.00706	soil	1-2'	0.2	210	1.57	16.7	<1	13	<2	<4	24
II	burn cage	PF-40-BC-3	92.00706d	soil	1-2'	NA	NA	1.61	NA	NA	NA	<2	<4	NA

TABLE 2-12 (continued)

Phase	Area	Field #	Sample #	Media	Depth	As	Ba	Be	Hg	Ag	Pb	Sb	Th	Zn
						ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm
II	burn pit	PF-40-BP-1A	92.00761	soil	1-2'	0.7	302	2.28	<2	<1	22.5	<2	<1	54
II	burn pit	PF-40-BP-1B	92.00762	debris	3'	0.5	149	2.5	<2	<1	8	<2	<1	40
II	burn pit	PF-40-BP-1C	92.00763	soil	4-5'	0.6	129	2.41	<2	<1	10	<2	<1	42
II	burn pit	PF-40-BP-2A	92.00764	soil	1-2'	0.5	280	2.15	<2	<1	34	<2	<1	49
II	burn pit	PF-40-BP-2B	92.00765	debris	4-5'	0.5	182	1.81	98	1.4	16	<2	<1	43
II	burn pit	PF-40-BP-2B	92.00765d	debris	4-5'	NA	196	1.94	NA	NA	NA	<2	<1	54
II	burn pit	PF-40-BP-2C	92.00766	soil	5'	0.5	143	6.74	<2	<1	9	<2	<1	36
II	burn pit	PF-40-BP-3B	92.00768	debris	3-4'?	1.5	182	1.11	<2	<1	93	<2	<1	28
II	burn pit	PF-40-BP-3C	92.00769	soil	4-5'?	0.9	208	2.64	<2	<1	12	<2	<1	45
III	drainage	PF-40-SD-E	92.00921	soil	surface	0.4	204	1.84	<2	<1	<4	<3	<4	54
III	drainage	PF-40-SD-M	92.00920	soil	surface	0.4	270	1.29	<2	<1	<4	<3	<4	58
III	drainage	PF-40-SD-W	92.00919	soil	surface	0.3	231	1.9	<2	<1	5	<3	<4	75
III	elec. box	PF-40-EBX-E	92.00916	soil	surface	0.7	262	1.85	<2	<1	32	<3	<4	91
III	elec. box	PF-40-EBX-W	92.00915	soil	surface	0.6	292	2.1	<2	<1	<4	<3	<4	86
III	shelter	PF-40-SPS	92.00917	soil	surface	0.6	241	1.76	<2	<1	<4	<3	<4	70
III	amphitheater	PF-40-DP	92.00918	soil	surface	1.2	446	1.71	32	***20900***	<3	<4	22	NA
IV	amphitheater	PF-40-A-1	92.06115	soil	0-6"	1.2	414	2.5	21	1.6	48	<6	21	72.5
IV	amphitheater	PF-40-A-1-QA	92.06123	soil	0-6"	1.1	440	2.39	11	<1	44	<6	24	67.1
IV	amphitheater	PF-40-A-2	92.06116	soil	0-6"	0.9	569	2.1	10	1.5	34	<6	25	55
IV	amphitheater	PF-40-A-3	92.06117	soil	0-6"	0.8	363	2.36	10	<1	48	<6	28	79
IV	amphitheater	PF-40-A-4	92.06118	soil	0-6"	0.8	241	2.8	<10	<1	46	<6	25	77
IV	amphitheater	PF-40-A-CH1-2	92.06119	soil	0-2'	0.8	463	2.3	11	<1	36	10	26	80
IV	amphitheater	PF-40-A-CH1-4	92.06120	soil	2-4'	0.5	217	2.49	<10	<1	39	<6	24	91.6
IV	amphitheater	PF-40-A-CH2-2	92.06121	soil	0-2'	<0.2	176	2.63	<10	<1	36	<6	21	55.8
IV	amphitheater	PF-40-A-CH2-4	92.06122	soil	2-4'	0.8	663	2.21	<10	<1	30.6	<6	27	47

Notes:
Data for mercury are in parts per billion (ppb); data for other metals are in parts per million (ppm).
NA = not analyzed.
The letter "d" following the sample number indicates a duplicate sample.
Bold numbers represent observations of lead, antimony, or silver above SALs and background levels.

2.21 ADS 1140—TA-46 (Project Leader: Roy Michelotti)

The final draft of the RFI work plan was submitted to the DOE/LAAO on schedule for delivery to the EPA. Several meetings with personnel from Facilities Engineering (ENG) Division were held regarding ENG/Johnson Controls, Inc. projects to reroute unpermitted outfalls into the sanitary sewer system; the projects began during late September 1993. Land surveying and radiation surveying were conducted; no above-background radiation was detected. Field planning is proceeding at a low level of effort.

2.22 ADS 1144—TA-49 (Project Leader: Ines Triay)

The readiness review was held for the drilling activities at Area 2, TA-49. The Site-Specific Health and Safety Plan, Waste Plan, and Spill Prevention Control and Countermeasures Plan have been written and approved. A representative from the EPA visited TA-49 during this quarter, and the procedures and planned drilling activities delineated in the Drilling Plan were approved by the EPA. The drilling activities that are planned include one 700-ft cold hole to the east of Area 2, two 150-ft boreholes in Area 2, and four 10-ft boreholes in Area 2. Site preparation at TA-49 has been completed, and some of the portable buildings have been moved into place. Shaft and drilling locations have been surveyed and marked on the Area 2 pad. Most of the analytical data from the surface soil sampling in Area 2 and from the bail-out of corehole CH-2 have been received, and review of those data has begun. Geophysical survey (Ground-Penetrating Radar) of Area 2 has been started by the High-Power Microwave Sources and Effects Group (AT-9).

2.23 ADS 1147—TA-50 (Project Leader: Cheryl K. Rofer)

Formal comments have not been received from the NMED on the response to the notice of deficiency on the RFI work plan for OU 1147 (LANL 1992, 0787); however, during a tour of the liquid radioactive waste treatment plant (TA-50-1) in July 1993, NMED personnel indicated than an additional horizontal corehole under that area would probably be recommended.

Soil sampling was completed in July for Aggregate 5 at TA-50 [PRSs 50-006(c), 50-007, and 50-008]; for Aggregate 6, Ten-Site Canyon [PRS 50-006(a)] and Mortandad Canyon [PRS 50-006(d)]; and for MDA C (PRS 50-009). Additional samples were collected in areas where screening revealed levels of radioactivity above background. Four hundred forty-nine samples were collected and sent to EM-9 for analysis. A sample-tracking system has been developed for analytical results. Some chemical analysis results for the soil samples have been received and validated.

2.24 ADS 1148—TAs-51, -54 (Project Leader: Don Neeper)

Dialog continued this quarter with the EPA, following our response to the notice of deficiency on the RFI work plan for OU 1148 (LANL 1992, 0788). A pilot study plan for retraction of the organic vapor plume at TA-54, Area L, was submitted to the EPA and was approved. Readiness reviews were conducted for passive surface activities and auger drilling and for deep air-rotary drilling near Area L. Auger drilling began September 8, 1993; three boreholes, each approximately 300 ft deep, were drilled that month. A survey of passive emissions of soil gas at ground surface was conducted August 26 through 31, 1993. Emissions of trichloroethane were noted, but quantitative data have not yet been reported.

2.25 ADS 1154—TA-57 (Project Leader: Tracy Glatzmaier)

Primary efforts were focused on writing the draft RFI work plan for OU 1154. Contractor help has been obtained to finish the technical approach chapter, the sampling and analysis plans, and the annexes for the work plan. Statements of work were finalized.

2.26 ADS 1157—TAs-8, -9, -23, -69 (Project Leader: Tracy Glatzmaier)

The final draft of the RFI work plan for OU 1157 was submitted to the EPA and NMED on schedule. Other activities included writing contracts to obtain personnel to assist with the field work scheduled for the fall of 1994 and the FY94 field season and finalizing statements of work.

3.0 REFERENCES

LANL (Los Alamos National Laboratory), May 1991. "TA-21 Operable Unit RFI Work Plan for Environmental Restoration," Volumes I-III, Los Alamos National Laboratory Report LA-UR-91-962, Los Alamos, New Mexico. (LANL 1991, 0689)

LANL (Los Alamos National Laboratory), May 1992. "RFI Work Plan for Operable Unit 1071," Los Alamos National Laboratory Report LA-UR-92-810, Los Alamos, New Mexico. (LANL 1992, 0781)

LANL (Los Alamos National Laboratory), May 1992. "RFI Work Plan for Operable Unit 1078," Los Alamos National Laboratory Report LA-UR-92-838, Los Alamos, New Mexico. (LANL 1992, 0782)

LANL (Los Alamos National Laboratory), May 1992. "RFI Work Plan for Operable Unit 1129," Los Alamos National Laboratory Report LA-UR-92-800, Los Alamos, New Mexico. (LANL 1992, 0785)

LANL (Los Alamos National Laboratory), May 1992. "RFI Work Plan for Operable Unit 1147," Los Alamos National Laboratory Report LA-UR-92-969, Los Alamos, New Mexico. (LANL 1992, 0787)

LANL (Los Alamos National Laboratory), May 1992. "RFI Work Plan for Operable Unit 1148," Los Alamos National Laboratory Report LA-UR-92-855, Los Alamos, New Mexico. (LANL 1992, 0788)

Appendix A

SWMU 0-030(g) Sample Inventory for OU 1071

(Definitions for acronyms and abbreviations and other notes for Table A-1 are on pages A-44 and A-45.)

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
Excavated soils tank	Soil	Rad van, SV, V	6/21/93	Excavated soil, E chamber, S end	BBG	BBG	BBG						None above minimum detection limits.		
5' inside tank	Soil	Rad van, SV, V	6/22/93	E chamber, NE corner, inside tank, 5 ft BGS	BBG	BBG	BBG						None above minimum detection limits.		
AAA 1904	Soil	Rad van, R, M, P, SV, V, PCB	6/22/93	Bottom of septic tank, E chamber, NE corner	BBG	BBG	BBG	Gamma Scan: Am-241 = 10.19 pCi/g Cs-137 < 0.56 pCi/g K-40 = 18.88 pCi/g Ra-226 <1.83 pCi/g * Th-232 < 2.67 pCi/g * U-234 < 41.8 pCi/g U-235 < 3.98 pCi/g ICP/MS: Total U = 15.2 mg/kg RAS: Pu-238 = 2.44 pCi/g ***Pu-239 = 591.69 pCi/g*** Am-241 = 8.53 pCi/g PC: Sr-90 = 0.13 pCi/g	Am-241 = 22.0 pCi/g Cs-137 = 4.0 pCi/g None Ra-226 = 0.73 pCi/g * Th-232 = 0.88 pCi/g * U-234 = 86.0 pCi/g U-235 = 18.0 pCi/g Pu-238 = 27.0 pCi/g Pu-239 = 24.0 pCi/g Am-241 = 22.0 pCi/g Sr-90 = 8.9 pCi/g	Ag = 1.6 ppm Al = 3400 ppm Ba = 74 ppm ***Be = 0.79 ppm*** Ca = 9000 ppm Cd = 2 ppm Co = 1.8 ppm Cr = 4.3 ppm Cu = 33 ppm Fe = 6300 ppm K = 470 ppm Mg = 490 ppm Mn = 200 ppm Na = 120 ppm Ni = 4.5 ppm Pb = 210 ppm Sb = 45 ppb Tl = 42 ppb V = 5.8 ppm Zn = 110 ppm Hg = 2.5 ppm	Ag = 400 ppm Al = None Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	Pb and Hg below TCLP thresholds. No total metals concentrations that require TCLP analyses.	None above minimum detection limits.		510 ppb

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 1905	Soil	Rad van, R, M, P, SV, V, PCB	6/22/93	Bottom of septic tank, E chamber, SE corner	BBG	BBG	BBG	Gamma Scan: Am-241 < 5.2 pCi/g Cs-137 < 0.51 pCi/g K-40 = 24.86 pCi/g Ra-226 < 1.75 pCi/g * Th-232 < 2.72 pCi/g * U-234 < 38.5 pCi/g U-235 < 1.89 pCi/g ICP/MS: Total U = 3.1 mg/kg RAS: Pu-238 = 0.08 pCi/g Pu-239 = 22.65 pCi/g Am-241 = 0.37 pCi/g PC: Sr-90 = 0.1 pCi/g	Am-241 = 22.0 pCi/g Cs-137 = 4.0 pCi/g None Ra-226 = 0.73 pCi/g * Th-232 = 0.88 pCi/g * U-234 = 86.0 pCi/g U-235 = 18.0 pCi/g Pu-238 = 27.0 pCi/g Pu-239 = 24.0 pCi/g Am-241 = 22.0 pCi/g Sr-90 = 8.9 pCi/g	Ag < 1.0 ppm Al = 5000 ppm Ba = 45 ppm ***Be = 0.65 ppm*** Ca = 1200 ppm Cd < 0.4 ppm Co = 1.0 ppm Cr = 2.7 ppm Cu = 5.4 ppm Fe = 4900 ppm K = 570 ppm Mg = 640 ppm Mn = 210 ppm Na = 130 ppm Ni = 2.7 ppm Pb = 9 ppm Sb < 30 ppb Tl = 40 ppb V = 7.1 ppm Zn = 30 ppm Hg = 0.19 ppm	Ag = 400 ppm Al = None Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentra-tions that require TCLP analyses.	None above minimum detection limits.		

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 1906	Soil	Rad van, R, M, P, SV, V, PCB	6/22/93	Duplicate of AAA 1905	BBG	BBG	BBG	Gamma Scan: Am-241 < 7.22 pCi/g Cs-137 < 0.67 pCi/g K-40 = 22.51 pCi/g Ra-226 < 1.62 pCi/g * Th-232 = 2.68 pCi/g * U-234 < 40.1 pCi/g U-235 < 3.04 pCi/g ICP/MS: Total U = 2.5 mg/kg RAS: Pu-238 = 0.05 pCi/g Pu-239 = 11.38 pCi/g Am-241 = 0.16 pCi/g PC: Sr-90 = 0.17 pCi/g	Am-241 = 22.0 pCi/g Cs-137 = 4.0 pCi/g None Ra-226 = 0.73 pCi/g * Th-232 = 0.88 pCi/g * U-234 = 86.0 pCi/g U-235 = 18.0 pCi/g Pu-238 = 27.0 pCi/g Pu-239 = 24.0 pCi/g Am-241 = 22.0 pCi/g Sr-90 = 8.9 pCi/g	Ag < 1.0 ppm Al = 4500 ppm Ba = 39 ppm ***Be = 0.63 ppm*** Ca = 1100 ppm Cd < 0.4 ppm Co = 0.9 ppm Cr = 2.2 ppm Cu = 4.8 ppm Fe = 4600 ppm K = 530 ppm Mg = 560 ppm Mn = 160 ppm Na = 120 ppm Ni = 2 ppm Pb = 8 ppm Sb < 30 ppb Tl = 60 ppb V = 6 ppm Zn = 29 ppm Hg < 0.1 ppm	Ag = 400 ppm Al = None Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentra-tions that require TCLP analyses.	None above minimum detection limits.		
E chamber N, 6'	Soil	Rad van, SV, V	6/23/93	E chamber, N end, 6 ft BGS	BBG	BBG	BBG						None above minimum detection limits.		
Bottom, outer E wall	Soil	Rad van, SV, V	6/23/93	Bottom of excava-tion, outer E wall	BBG	BBG	BBG						None above minimum detection limits.		
W wall, N end	Soil	Rad van, SV, V	6/23/93	Bottom of W wall, N end	BBG	BBG	BBG						None above minimum detection limits.		

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
W wall	Soil	Rad van, SV, V	6/23/93	Bottom of W wall, center	BBG	BBG	BBG						None above minimum detection limits.		
AAA 1907	Sludge	Rad van, R, M, P, SV, V, PCB	6/23/93	W chamber, SE corner, approx. 5 ft BGS	BBG	32.20	BBG	Gamma Scan: Am-241 = 54.25pCi/g Co-60 < 0.43 pCi/g Cs-137 < 0.29pCi/g K-40 < 21.6 pCi/g Ra-226 < 2.1 pCi/g * Th-232 < 3.33 pCi/g * ***U-234 = 105.89 pCi/g*** U-235 = 11.73 pCi/g ICP/MS: ***Total U = 387 mg/kg*** RAS: Pu-238 = 16 pCi/g ***Pu-239 = 16310 pCi/g*** LS: H-3 = 800 pCi/l PC: Sr-90 = 0.65 pCi/g	Am-241 = 22.0 pCi/g Co-60 = 0.9 pCi/g Cs-137 = 4.0 pCi/g None Ra-226 = 0.73 pCi/g * Th-232 = 0.88 pCi/g * U-234 = 86.0 pCi/g U-235 = 18.0 pCi/g Pu-238 = 27.0 pCi/g Pu-239 = 24.0 pCi/g H-3 = 1.5 x 10^7 pCi/g Sr-90 = 8.9 pCi/g	Ag = 27 ppm Al = 5300 ppm ***As = 3.2 ppm*** Ba = 540 ppm ***Be = 8.8 ppm*** Ca = 12000 ppm Cd = 24 ppm Co = 12 ppm Cr = 20 ppm Cu = 1500 ppm Fe = 17000 ppm K = 800 ppm Mg = 1600 ppm Mn = 140 ppm Na = 410 ppm Ni = 19 ppm ***Pb = 520 ppm*** Sb = 2300 ppb Se = 0.77 ppm Tl < 30 ppb V = 9.4 ppm Zn = 1300 ppm ***Hg = 35.3 ppm***	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Co = None Cr (IV) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	Pb and Hg below TCLP thresholds. No other total metals concen-trations that require TCLP analyses.	Benzo(a) pyrene = 1.3 ppm (SAL = 0.1 ppm). Not a RCRA waste. No other Semi-vols exceed MDLs or ER Program SALs; no total concentra-tions that require TCLP analyses. No volatiles above MDLs or ER Program SALs; no total concentra-tions that require TCLP analyses.		1460 ppb

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
Aliquot	Sludge	Rad van, M, SV, V	6/23/93	W chamber, center, approx. 5 ft BGS, sludge showing 2000 cpm β/γ						*Hg = 76 ppm*	Hg = 24 ppm	Hg below TCLP threshold.	1,4-Dichloro-benzene = 10 ppm 2-Methyl-naphtha-lene =2.8 ppm 2-Butanone = 0.0806 ppm. (These constitu-ents are above MDLs but below ER Program SALs.) No other constitu-ents above MDLs. No total concentra-tions that require TCLP analyses.		
AAA 3558	Soil	Rad van	7/9/93	E chamber, W central hole, 8-10 in. BGS	BBG	BBG	BBG								
AAA 3559	Soil	Rad van	7/9/93	E chamber, W central hole, 2 ft BGS	BBG	BBG	BBG								
AAA 3560	Soil	Rad van	7/9/93	E chamber, W central hole, 3 ft BGS	BBG	BBG	BBG								
AAA 3569	Soil	Rad van	7/9/93	W chamber, S central hole, 4 ft BGS	BBG	BBG	BBG								

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Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 3570	Soil	Rad van	7/9/93	W chamber, S central hole, 5 ft BGS	BBG	BBG	BBG								
AAA 3571	Soil	Rad van	7/9/93	W chamber, S central hole, 5 1/2 ft BGS	BBG	BBG	BBG								
AAA 3572	Swipe	Rad van	7/9/93	Swipe of concrete rubble removed from septic tank	BBG	BBG	BBG								
AAA 3573	Swipe	Rad van	7/9/93	Swipe of concrete rubble removed from septic tank	BBG	BBG	BBG								
AAA 3574	Soil	Rad van	7/12/93	W chamber, NW corner of S end, approx. 3 ft BGS	BBG	BBG	BBG								
AAA 3575	Soil	Rad van	7/12/93	W chamber, SW corner of S end, approx. 3 ft BGS	BBG	BBG	BBG								
AAA 3576	Soil	Rad van	7/12/93	W chamber, SE corner of S end, approx. 3 ft BGS	BBG	BBG	BBG								
AAA 3577	Soil	Rad van	7/12/93	W chamber, NE corner of S end, approx. 3 ft BGS	BBG	BBG	BBG								

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 3578	Soil	Rad van	7/12/93	W chamber, S central end, 4 ft BGS	BBG	BBG	BBG								
AAA 3581	Soil	Rad van	7/9/93	E chamber, W central hole, 4 ft BGS	BBG	BBG	BBG								
AAA 3582	Soil	Rad van	7/9/93	E chamber, W central hole, 5 ft BGS	BBG	BBG	BBG								
AAA 3583	Soil	Rad van	7/9/93	W chamber, E central hole, 6 in. BGS	BBG	BBG	BBG								
AAA 3584	Soil	Rad van	7/9/93	W chamber, E central hole, 2 ft BGS	BBG	BBG	BBG								
AAA 3585	Soil	Rad van	7/9/93	W chamber, E central hole, 3 ft BGS	BBG	BBG	BBG								
AAA 3586	Soil	Rad van	7/9/93	W chamber, W central hole, 1 ft BGS	BBG	BBG	BBG								
AAA 3587	Soil	Rad van	7/9/93	W chamber, S central hole, 2 ft BGS	BBG	BBG	BBG								
AAA 3588	Soil	Rad van	7/9/93	W chamber, S central hole, 3 ft BGS	BBG	BBG	BBG								
AAA 4325	Soil	Rad van	7/13/93	W chamber, S central, 5 ft BGS	BBG	BBG	BBG								

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4328	Soil	Rad van, M	7/14/93	Lift 1, composite, central 1/3 of tank	BBG	BBG	BBG			As < 0.2 ppm Hg = 1.3 ppm Se < 0.2 ppm	As = 0.40 ppm Hg = 24 ppm Se = 400 ppm	No metals above thresholds on TCLP analyses.			
AAA 4329	Soil	Rad van, M	7/14/93	Lift 2, central 1/3 of tank, NE corner of lift	BBG	BBG	BBG			Hg = 1.2 ppm	Hg = 24 ppm	No metals above thresholds on TCLP analyses.			
AAA 4330	Soil	Rad van, M	7/14/93	Lift 2, central 1/3 of tank, NW corner of lift	BBG	BBG	BBG			Ag < 1.0 ppm Al = 3500 ppm ***As = 1.5 ppm*** Ba = 46 ppm ***Be = 0.75 ppm*** Ca = 1900 ppm Cd = 0.5 ppm Co = 1.3 ppm Cr = 12 ppm Cu = 4.7 ppm Fe = 5100 ppm K = 450 ppm Mg = 550 ppm Mn = 200 ppm Na = 70 ppm Ni = 7 ppm Pb = 21 ppm Sb < 70 ppb Se = 0.3 ppm Tl = 80 ppb V = 5 ppm Zn = 63 ppm Hg < 0.1 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentrations that require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4336	Soil	Rad van, M (Hg & Pb only)	7/16/93	Section 7, 1 ft BGS	BBG	BBG	BBG			Pb = 40 ppm Hg < 0.1 ppm	Pb = 500 ppm Hg = 24 ppm	Total Hg & Pb concentrations do not require TCLP analyses.			
AAA 4337	Soil	Rad van, M (Hg & Pb only)	7/16/93	Section 6, 2 ft BGS	BBG	BBG	BBG			Pb = 11 ppm Hg < 0.1 ppm	Pb = 500 ppm Hg = 24 ppm	Total Hg & Pb concentrations do not require TCLP analyses.			
AAA 4338	Soil	Rad van, M (Hg & Pb only)	7/16/93	Section 4, 2 ft BGS	BBG	BBG	BBG			Pb = 13 ppm Hg < 0.1 ppm	Pb = 500 ppm Hg = 24 ppm	Total Hg & Pb concentrations do not require TCLP analyses.			
AAA 4339	Soil	Rad van, M (Hg & Pb only)	7/16/93	Section 5, 2 ft BGS	BBG	BBG	BBG			Pb = 14 ppm Hg < 0.1 ppm	Pb = 500 ppm Hg = 24 ppm	Total Hg & Pb concentrations do not require TCLP analyses.			
AAA 4342	Soil	Rad van, M (Hg & Pb only)	7/16/93	Section 10, 6 ft BGS	BBG	BBG	BBG			Pb = 16 ppm Hg < 0.1 ppm	Pb = 500 ppm Hg = 24 ppm	Total Hg & Pb concentrations do not require TCLP analyses.			
AAA 4343	Soil	Rad van, M (Hg & Pb only)	7/16/93	Section 2, 6 ft BGS	BBG	BBG	BBG			Pb = 13 ppm Hg = 0.1 ppm	Pb = 500 ppm Hg = 24 ppm	Total Hg & Pb concentrations do not require TCLP analyses.			
AAA 4344	Soil	Rad van, M (Hg & Pb only)	7/16/93	Section 3, 2 ft BGS	BBG	BBG	BBG			Pb = 14 ppm Hg = 0.3 ppm	Pb = 500 ppm Hg = 24 ppm	Total Hg & Pb concentrations do not require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4345	Soil	Rad van, M (Hg & Pb only)	7/16/93	Section 9, 5 ft BGS	BBG	BBG	BBG			Pb = 10 ppm Hg < 0.1 ppm	Pb = 500 ppm Hg = 24 ppm	Total Hg & Pb concentrations do not require TCLP analyses.			
AAA 4346	Concrete	Rad van, M	7/19/93	Bottom of W chamber, S side	BBG	BBG	BBG			Ag = 1.5 ppm Al = 6800 ppm ***As = 3.3 ppm*** Ba = 260 ppm ***Be = 2.4 ppm*** Ca = 49000 ppm Cd = 4.5 ppm Cyanide = 900 ppb Co = 6.6 ppm Cr = 15 ppm Cu = 110 ppm Fe = 9200 ppm K = 800 ppm Mg = 2100 ppm Mn = 220 ppm Na = 270 ppm Ni = 10 ppm Pb = 90 ppm Sb < 0.3 ppm Se = 0.9 ppm Tl < 0.3 ppm V = 14 ppm Zn = 590 ppm Hg = 4.5 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (IV) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	Hg = 0.4 µg/l on TCLP analysis. No other total metals concentrations that require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4349	Soil	Rad van, M	7/20/93	Drum # 005	89.90	43.30	BBG			Ag = 8.2 ppm Al = 5100 ppm ***As = 2.7 ppm*** Ba = 220 ppm ***Be < 2.2 ppm*** Ca = 3300 ppm Cd = 10.6 ppm Cyanide = 950 ppb Co = 7.3 ppm Cr = 11.1 ppm Cu = 440 ppm Fe = 9800 ppm K = 700 ppm Mg = 1100 ppm Mn = 180 ppm Na < 200 ppm Ni = 15.5 ppm Pb = 300 ppm Sb = 0.7 ppm Se = 0.7 ppm Tl < 0.2 ppm V = 9.8 ppm Zn = 580 ppm ***Hg = 179 ppm***	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	Hg below TCLP threshold. No other total metals concen-trations that require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4350	Soil	Rad van, M	7/20/93	Drum #078	BBG	BBG	BBG			Ag < 1.0 ppm Al = 3040 ppm ***As = 2.9 ppm*** Ba = 67.5 ppm ***Be = 0.67 ppm*** Ca = 5740 ppm Cd = 1.4 ppm Cyanide = 1.1 ppm Co = 2.14 ppm Cr = 13.5 ppm Cu = 55 ppm Fe = 4050 ppm K = 315 ppm Mg = 580 ppm Mn = 169 ppm Na = 88.9 ppm Ni = 8.0 ppm Pb = 54 ppm Sb < 500 ppb Se < 0.2 ppm Tl < 200 ppb V = 5.5 ppm Zn = 113 ppm Hg = 10.1 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	Hg below TCLP threshold. No other total metals concen-trations that require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4351	Soil	Rad van, M	7/20/93	Drum #152	BBG	BBG	BBG			Ag = 1.7 ppm Al = 3840 ppm ***As = 3.5 ppm*** Ba = 110 ppm ***Be = 0.8 ppm*** Ca = 1.36% Cd = 2.0 ppm Cyanide = 1.0 ppm Co = 2.2 ppm Cr = 13.6 ppm Cu = 70 ppm Fe = 5420 ppm K = 470 ppm Mg = 712 ppm Mn = 181 ppm Na = 136 ppm Ni = 9 ppm Pb = 69 ppm Sb < 500 ppb Se < 0.2 ppm Tl < 200 ppb V = 7.9 ppm Zn = 147 ppm Hg = 3.9 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (IV) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	Hg below TCLP threshold. No other total metals concen-trations that require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4352	Soil	Rad van, M	7/20/93	Drum #171	BBG	BBG	BBG			Ag < 1.0 ppm Al = 4030 ppm ***As = 1.8 ppm*** Ba = 57.2 ppm ***Be = 0.72 ppm*** Ca = 2970 ppm Cd = 0.5 ppm Cyanide = 650 ppb Co = 1.17 ppm Cr = 10.6 ppm Cu = 25.4 ppm Fe = 4880 ppm K = 424 ppm Mg = 647 ppm Mn = 276 ppm Na = 100 ppm Ni = 7 ppm Pb = 26.5 ppm Sb < 70 ppb Se < 0.2 ppm Tl < 40 ppb V = 6.0 ppm Zn = 64 ppm Hg = 1.9 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (IV) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentra-tions that require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4355	Soil	Rad van, M	7/20/93	Drum #199	BBG	BBG	BBG			Ag = 4.3 ppm Al = 5400 ppm ***As = 2.7 ppm*** Ba = 100 ppm ***Be = 1.1 ppm*** Ca = 1.3% Cd = 2.3 ppm Cyanide = 1.25 ppm Co = 2.6 ppm Cr = 16 ppm Cu = 68 ppm Fe = 6200 ppm K = 590 ppm Mg = 880 ppm Mn = 200 ppm Na = 170 ppm Ni = 10 ppm Pb = 73 ppm Sb < 0.3 ppm Se = 0.4 ppm Tl < 0.3 ppm V = 8.6 ppm Zn = 200 ppm Hg = 5.5 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm				

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4356	Soil	M	7/20/93	E chamber, NE corner, 5 ft BGS	BBG	BBG	BBG			Ag < 1.0 ppm Al = 5100 ppm ***As = 2.4 ppm*** Ba = 40 ppm ***Be = 0.67 ppm*** Ca = 2400 ppm Cd = 0.87 pm Cyanide = 495 ppb Co = 1.4 ppm Cr = 11 ppm Cu = 14 ppm Fe = 7400 ppm K = 480 ppm Mg = 640 ppm Mn = 180 ppm Na = 100 ppm Ni = 7 ppm Pb = 26 ppm Sb < 0.3 ppm Se < 0.2 ppm Tl < 0.3 ppm V = 6.0 ppm Zn = 60 ppm Hg = 0.9 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentra-tions require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4357	Soil	M	7/20/93	E chamber, S end, 5 ft BGS	BBG	BBG	BBG			Ag < 1.0 ppm Al = 5400 ppm ***As = 1.4 ppm*** Ba = 45 ppm ***Be = 0.67 ppm*** Ca = 1400 ppm Cd = 0.42 ppm Cyanide = 900 ppb Co = 1.5 ppm Cr = 12 ppm Cu = 8.3 ppm Fe = 5900 ppm K = 580 ppm Mg = 770 ppm Mn = 240 ppm Na = 66 ppm Ni = 8 ppm Pb = 19 ppm Sb < 0.3 ppm Se < 0.2 ppm Tl < 0.3 ppm V = 7 ppm Zn = 38 ppm Hg = 0.3 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (IV) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentrations that require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4358	Soil	M	7/20/93	E chamber, W central hole, 5 ft BGS	BBG	BBG	BBG			Ag < 1.0 ppm Al = 5900 ppm ***As = 2.4 ppm*** Ba = 44 ppm ***Be = 0.58 ppm*** Ca = 1800 ppm Cd < 0.003 ppm Cyanide = 493 ppb Co = 1.7 ppm Cr = 12 ppm Cu = 2.5 ppm Fe = 8600 ppm K = 470 ppm Mg = 810 ppm Mn = 190 ppm Na = 210 ppm Ni = 8 ppm Pb = 10 ppm Sb < 0.3 ppm Se < 0.2 ppm Tl < 0.3 ppm V = 7.2 ppm Zn = 32 ppm Hg < 0.1 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentrations that require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4359	Soil	M	7/20/93	W chamber, E central hole, 3 ft BGS	BBG	BBG	BBG			Ag < 1.0 ppm Al = 5800 ppm ***As = 1.3 ppm*** Ba = 43 ppm ***Be = 0.51 ppm*** Ca = 1300 ppm Cd = 0.06 ppm Cyanide = 758 ppb Co = 1.5 ppm Cr = 11 ppm Cu = 2 ppm Fe = 5600 ppm K = 520 ppm Mg = 760 ppm Mn = 160 ppm Na = 76 ppm Ni = 5.6 ppm Pb = 12 ppm Sb < 0.3 ppm Se < 0.2 ppm Tl < 0.3 ppm V = 7.0 ppm Zn = 20 ppm Hg < 0.1 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentrations that require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4360	Soil	M	7/20/93	W chamber, S central hole, 51/2 ft BGS	BBG	BBG	BBG			Ag < 1.0 ppm Al = 4300 ppm ***As = 2.4 ppm*** Ba = 37 ppm ***Be = 0.61 ppm*** Ca = 2000 ppm Cd = 0.4 ppm Cyanide = 568 ppb Co = 1.5 ppm Cr = 14 ppm Cu = 8.9 ppm Fe = 4900 ppm K = 420 ppm Mg = 600 ppm Mn = 200 ppm Na = 100 ppm Ni = 8.4 ppm Pb = 15 ppm Sb < 20 ppm Se < 0.2 ppm Tl < 0.3 ppm V = 5.9 ppm Zn = 34 ppm Hg = 0.7 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentrations that require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4363	Soil	Rad van, M	7/21/93	Soils associated with metal 'T' pipe, W chamber, N 1/3 of tank, 4 ft BGS	BBG	BBG	BBG			Ag < 1.0 ppm Al = 5700 ppm ***As = 1.9 ppm*** Ba = 61 ppm ***Be = 0.78 ppm*** Ca = 8800 ppm Cd = 1.2 ppm Cyanide = 808 ppb Co = 2.2 ppm Cr = 12 ppm Cu = 28 ppm Fe = 7500 ppm K = 590 ppm Mg = 820 ppm Mn = 221 ppm Na = 130 ppm Ni = 8 ppm Pb = 290 ppm Sb < 0.3 ppm Se < 0.2 ppm Tl < 0.3 ppm V = 8.0 ppm Zn = 96 ppm Hg = 1.9 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm				

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4364	Soil	Rad van, M	7/27/93	E chamber, 5 1/2 ft BGS, bucket	78.70	212.80	8.00			Ag = 4.0 ppm Al = 7600 ppm ***As = 2.8 ppm*** Ba = 204 ppm ***Be = 4.9 ppm*** Ca = 5350 ppm Cd = 3.3 ppm Cyanide = 3.5 ppm Co = 4.0 ppm Cr = 11 ppm Cu = 210 ppm Fe = 11200 ppm K = 700 ppm Mg = 1100 ppm Mn = 160 ppm Na = 700 ppm Ni < 100 ppm Pb = 110 ppm Sb < 0.3 ppm Se = 0.3 ppm Tl < 0.3 ppm V = 13 ppm Zn = 360 ppm Hg = 18 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	Hg < 0.2 µg/l on TCLP analysis. No other total metals concen-trations require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4365	Soil	Rad van, M	7/27/93	E chamber, 5 1/2 ft BGS, S center	BBG	BBG	BBG			Ag = 8.0 ppm Al = 5200 ppm ***As = 3.7 ppm*** Ba = 190 ppm ***Be = 1.1 ppm*** Ca = 20000 ppm Cd =7.6 ppm Cyanide = 3.3 ppm Co = 6.3 ppm Cr = 40 ppm Cu = 170 ppm Fe = 8400 ppm K = 500 ppm Mg = 110 ppm Mn - 150 ppm Na = 160 ppm Ni = 20 ppm Pb = 190 ppm Sb = 4.4 ppm Se = 1.4 ppm Tl = 50 ppb V = 13 ppm Zn = 580 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm	Hg < 0.2 µg/l on TCLP analysis. No other total metals concen-trations require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4366	Soil	Rad van, M	7/27/93	E chamber, 5 1/2 ft BGS, SW corner	BBG	27.70	BBG			Ag = 10.7 ppm Al = 6500 ppm ***As = 3.3 ppm*** Ba = 279 ppm ***Be = 4.0 ppm*** Ca = 4000 ppm Cd = 26 ppm Cyanide = 7.5 ppm Co = 12 ppm Cr = 34.6 ppm Cu = 690 ppm Fe = 18500 ppm K = 600 ppm Mg = 1400 ppm Mn = 140 ppm Na = 600 ppm Ni < 100 ppm Pb = 490 ppm Sb = 5.5 ppm Se = 0.7 ppm Tl < 0.3 ppm V = 20 ppm Zn = 1150 ppm ***Hg = 25.3 ppm***	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	Hg = 0.35 µg/l on TCLP analysis. No other total metals concen-trations require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4378	Soil	Rad van, M	7/29/93	W chamber, SE corner of tank, 6-8 in. below concrete	BBG	BBG	BBG			Ag < 1.0 ppm Al = 4600 ppm ***As = 0.8 ppm*** Ba = 33 ppm ***Be = 0.58 ppm*** Ca = 13000 ppm Cd < 0.4 ppm Cyanide = 224 ppb Co = 1.6 ppm Cr = 39 ppm Cu = 7.6 ppm Fe = 5800 ppm K = 430 ppm Mg = 890 ppm Mn = 170 ppm Na = 140 ppm Ni = 3.0 ppm Pb = 5.0 ppm Sb < 80 ppb Se < 0.2 ppm Tl = 70 ppb V = 6.3 ppm Zn = 89 ppm Hg < 0.1 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentrations that require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4379	Concrete	Rad van, M	7/29/93	W chamber, SE corner of tank, 0-3 in. of concrete floor	BBG	BBG	BBG			Ag < 1.0 ppm Al = 5200 ppm ***As = 2.1 ppm*** Ba = 73 ppm ***Be = 0.82 ppm*** Ca = 32000 ppm Cd = 0.8 ppm Cyanide = 832 ppb Co = 4.6 ppm Cr = 46 ppm Cu = 66 ppm Fe = 16000 ppm K = 510 ppm Mg = 1400 ppm Mn = 320 ppm Na = 190 ppm Ni = 20 ppm Pb = 27 ppm Sb = 180 ppb Se < 0.2 ppb Tl = 110 ppm V = 10 ppm Zn = 200 ppm Hg = 1.9 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentrations that require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α- +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4380	Soil	Rad van, M	7/29/93	W chamber, N center, 10 in. below concrete	BBG	BBG	BBG			Ag < 1.0 ppm Al = 4500 ppm ***As = 1.6 ppm*** Ba = 42 ppm ***Be = 0.48 ppm*** Ca = 22000 ppm Cd < 0.4 ppm Cyanide = 171 ppb Co = 1.2 ppm Cr = 39 ppm Cu = 9.5 ppm Fe = 4800 ppm K = 470 ppm Mg = 1000 ppm Mn = 160 ppm Na = 120 ppm Ni = 2.0 ppm Pb < 10 ppm Sb = 130 ppb Se < 0.2 ppm Tl = 120 ppb V = 6.9 ppm Zn = 130 ppm Hg < 0.1 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentra-tions that require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4381	Concrete	Rad van, M	7/29/93	W chamber, N center, 0-6 in. of concrete floor	BBG	BBG	BBG			Ag < 1.0 ppm Al = 6400 ppm As = 3.4 ppm Ba = 100 ppm Be = 0.34 ppm Ca = 76000 ppm Cd < 0.4 ppm Cyanide = 229 ppb Co = 2.9 ppm Cr = 35 ppm Cu = 18 ppm Fe = 7100 ppm K = 950 ppm Mg = 2500 ppm Mn = 260 ppm Na = 370 ppm Ni = 3 ppm Pb = 9 ppm Sb < 80 ppb Se = 0.8 ppm Tl = 90 ppb V = 14 ppm Zn = 230 ppm Hg = 0.1 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentra-tions that require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4382	Soil	Rad van, M	7/29/93	W chamber, center, 12 in. below concrete	BBG	BBG	BBG			Ag < 1.0 ppm Al = 5300 ppm ***As = 1.8 ppm*** Ba = 54 ppm ***Be = 0.64 ppm*** Ca = 4100 ppm Cd < 0.4 ppm Cyanide = 140 ppb Co = 1.4 ppm Cr = 37 ppm Cu = 4.3 ppm Fe = 4900 ppm K = 610 ppm Mg = 730 ppm Mn = 400 ppm Na = 75 ppm Ni = 2 ppm Pb < 10 ppm Sb < 80 ppb Se < 0.2 ppm Tl = 110 ppb V = 6.1 ppm Zn = 39 ppm Hg < 0.1 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentra-tions that require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4383	Concrete	Rad van, M	7/29/93	W chamber, center, 0-6 in. of concrete floor	BBG	BBG	BBG			Ag < 1.0 ppm Al = 6300 ppm ***As = 2.0 ppm*** Ba = 92 ppm ***Be = 0.32 ppm*** Ca = 58000 ppm Cd < 0.4 ppm Cyanide = 336 ppb Co = 2.3 ppm Cr = 42 ppm Cu = 19 ppm Fe = 6100 ppm K = 610 ppm Mg = 2000 ppm Mn = 170 ppm Na = 200 ppm Ni = 3 ppm Pb < 10 ppm Sb < 80 ppb Se = 1.0 ppm Tl < 40 ppb V = 14 ppm Zn = 260 ppm Hg < 0.1 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentra-tions that require TCLP analyses.			
AAA 4401	Soil	Rad van, M (Hg & Pb only)	8/4/93	E chamber, SE quadrant of center 1/3, 1 in. below concrete floor	BBG	BBG	BBG			Pb = 200 ppm Hg = 21.5 ppm	Pb = 500 ppm Hg = 24 ppm	Pb = 0.11 mg/l Hg < 0.2 µg/l			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4402	Soil	Rad van, M (Hg & Pb only)	8/4/93	E chamber, SW quadrant of center 1/3, 1 in. below concrete floor	BBG	31.50	BBG			***Pb = 610 ppm Hg = 34.8 ppm***	Pb = 500 ppm Hg = 24 ppm	Pb = 0.07 mg/l Hg = 0.2 µg/l			
AAA 4403	Soil	Rad van, M (Hg & Pb only)	8/4/93	E chamber, N central section, 1 in. below concrete floor	BBG	BBG	BBG			Pb = 42 ppm Hg = 1.4 ppm	Pb = 500 ppm Hg = 24 ppm	TCLP not required for Pb. Hg < 0.2 µg/l			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 1910	Soil	Rad van, R, M, P, SV, V, PCB	8/5/93	#1 / SW corner of tank, W chamber, 18 in. below concrete floor	BBG	BBG	BBG	Am-241 = 0.02 pCi/g Pu-239+240 = 0.84 pCi/g Pu-238 = 0.00 pCi/g U-238 = 1.41 pCi/g U-235 = 0.11 pCi/g U-234 = 1.43 pCi/g	Am-241 = 22.0 pCi/g Pu-239 = 24.0 pCi/g Pu-238 = 27.0 pCi/g U-238 = 59.0 pCi/g U-235 = 18.0 pCi/g U-234 = 86.0 pCi/g	Ag < 1.0 ppm Al = 3400 ppm ***As = 1.2 ppm*** Ba = 28 ppm ***Be = 0.65 ppm*** Ca = 3700 ppm Cd < 0.4 ppm Cyanide = 141 ppb Co = 1.1 ppm Cr = 55 ppm Cu = 4.7 ppm Fe = 4600 ppm K = 320 ppm Mg = 490 ppm Mn = 290 ppm Na = 91 ppm Ni = 20 ppm Pb = 7 ppm Sb < 80 ppb Se < 0.2 ppm Tl < 40 ppb V = 5.3 ppm Zn = 38 ppm Hg < 0.1 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentra-tions require TCLP analyses.	None above minimum detection limits.		< 0.5 ppm PCBs

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 3563	Soil	Rad van, R, M, P, SV, V, PCB	8/5/93	#4 / NE corner of E chamber, 18 in. below concrete floor	BBG	BBG	BBG	Am-241 = 0.04 pCi/g Pu-239+240 = 2.47 pCi/g Pu-238 = 0.01 pCi/g U-238 = 2.11 pCi/g U-235 = 0.20 pCi/g U-234 = 3.01 pCi/g	Am-241 = 22.0 pCi/g Pu-239 = 24.0 pCi/g Pu-238 = 27.0 pCi/g U-238 = 59.0 pCi/g U-235 = 18.0 pCi/g U-234 = 86.0 pCi/g	Ag < 1.0 ppm Al = 4600 ppm ***As = 1.3 ppm*** Ba = 33 ppm ***Be = 0.67 ppm*** Ca = 7000 ppm Cd < 0.4 ppm Cyanide = 144 ppb Co = 0.88 ppm Cr = 53 ppm Cu = 6.4 ppm Fe = 5500 ppm K = 490 ppm Mg = 700 ppm Mn = 360 ppm Na = 93 ppm Ni = 22 ppm Pb = 5 ppm Sb < 80 ppb Se = 0.9 ppm Tl < 40 ppb V = 6.4 ppm Zn = 55 ppm Hg < 0.1 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm	No total metals concentra-tions require TCLP analyses.	None above minimum detection limits.		< 0.5 ppm PCBs
AAA 4406	Soil	Rad van, M (Hg & Pb only)	8/5/93	#2 / Center of tank, 18 in. below concrete floor	BBG	BBG	BBG			Pb < 4 ppm Hg 0.1 ppm	Pb = 500 ppm Hg = 24 ppm	No total metals concentra-tions require TCLP analyses.			

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4407	Soil	Rad van, M (Hg & Pb only)	8/5/93	#3 / E chamber, S 1/3, 18 in. below concrete floor	BBG	BBG	BBG			Pb = 12 ppm Hg < 0.1 ppm	Pb = 500 ppm Hg = 24 ppm	No total metals concentra-tions require TCLP analyses.			
AAA 4408	Soil	Rad van, M (Hg & Pb only)	8/5/93	#5 / E chamber, S1/3, 18 in. below concrete floor	BBG	BBG	BBG			Pb = 6 ppm Hg < 0.1 ppm	Pb = 500 ppm Hg = 24 ppm	No total metals concentra-tions require TCLP analyses.			
Clay Pipe Drainline Samples															
24" below asphalt	Soil	Rad van	6/21/93	Soil sample from 24 in. below asphalt, valve box excava-tion	BBG	BBG	BBG						None above minimum detection limits.		
4' below asphalt	Soil	Rad van	6/21/93	Soil sample from 4 ft below asphalt, valve box excava-tion	BBG	BBG	BBG						None above minimum detection limits.		

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 1903	Soil	Rad van, R, M, P, SV, V, PCB	6/21/93	Under clay pipe, valve box excava-tion	112.40	BBG	BBG	Gamma Scan: Am-241 = 7.27 pCi/g Cs-137 < 0.5 pCi/g K-40 = 25.09 pCi/g Ra-226 = 1.82 pCi/g * Th-232 < 2.91 pCi/g * U-234 < 41.2 pCi/g U-235 < 3.03 pCi/g ICP/MS: Total U = 3.9 mg/kg RAS: Pu-238 = 1.847 pCi/g ***Pu-239 = 456.00 pCi/g*** Am-241 = 6.54 pCi/g PC: Sr-90 = 0.16 pCi/g	Am-241 = 22.0 pCi/g Cs-137 = 4.0 pCi/g None Ra-226 = 0.73 pCi/g * Th-232 = 0.88 pCi/g * U-234 = 86.0 pCi/g U-235 = 18.0 pCi/g Pu-238 = 27.0 pCi/g Pu-239 = 24.0 pCi/g Am-241 = 22.0 pCi/g Sr-90 = 8.9 pCi/g						<1.0 ppm (MDL = 1.0 ppm) (ER Program SAL for PCBs is 90 ppb.)

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 1912	Soil	Rad van, R, M, P, SV, V, PCB	6/21/93	N side of clay pipe, valve box excava-tion	BBG	BBG	BBG	Gamma Scan: Am-241 <7.09 pCi/g Cs-137 < 0.37 pCi/g K-40 = 27.69 pCi/g Ra-226 < 2.01 pCi/g * Th-232 < 2.9 pCi/g * U-234 < 41.5 pCi/g U-235 < 3.28 pCi/g ICP/MS: Total U = 2.4 mg/kg RAS: Pu-238 = 0.07 pCi/g Pu-239 = 20.16 pCi/g Am-241 = 0.31 pCi/g PC: Sr-90 = 0.0 pCi/g	Am-241 = 22.0 pCi/g Cs-137 = 4.0 pCi/g None Ra-226 = 0.73 pCi/g * Th-232 = 0.88 pCi/g * U-234 = 86.0 pCi/g U-235 = 18.0 pCi/g Pu-238 = 27.0 pCi/g Pu-239 = 24.0 pCi/g Am-241 = 22.0 pCi/g Sr-90 = 8.9 pCi/g						<1.0 ppm (MDL = 1.0 ppm) (ER Program SAL for PCBs is 90 ppb.)
S side of septic tank	Soil	Rad van, SV, V	7/1/93	Clay pipe, S of septic tank, soil from within pipe	BBG	BBG	BBG						None above minimum detection limits.		
N end of pipe	Swipe	Rad van	7/1/93	Swipe of clay pipe, S of tank, N end	BBG	BBG	BBG								
S end of pipe	Swipe	Rad van	7/1/93	Swipe of clay pipe S of tank, S end	BBG	BBG	BBG								

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 1909	Soil	Rad van, R, M, P, SV, V, PCB	7/28/93	Beneath clay pipe outfall, surface	BBG	BBG	BBG	H-3 = 800 pCi/l	H-3 = 1.5 x 10^7 pCi/g	Ag < 1 ppm Al = 4200 ppm ***As = 1.3 ppm*** Ba = 33 ppm ***Be = 0.59 ppm*** Ca = 980 ppm Cd < 0.4 ppm Cyanide = 325 ppb Co = 1.2 ppm Cr = 60 ppm Cu = 5.4 ppm Fe = 4800 ppm K = 390 ppm Mg = 540 ppm Mn = 240 ppm Na = 63 ppm Ni = 24 ppm Pb = 15 ppm Sb < 80 ppb Se < 0.2 ppm Tl < 40 ppm V = 5.5 ppm Zn = 24 ppm Hg < 0.1 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm		None above minimum detection limits.		<0.5 ppm (MDL = 0.5 ppm) (ER Program SAL for PCBs is 90 ppb.)

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4371	Soil	Rad van, M	7/28/93	End of pipe outfall, 1 ft BGS	BBG	BBG	BBG			Ag < 1.0 ppm Al = 2800 ppm ***As = 1 ppm*** Ba = 26 ppm ***Be = 0.83 ppm*** Ca = 740 ppm Cd < 0.4 ppm Cyanide = 200 ppb Co < 0.5 ppm Cr = 13 ppm Cu = 0.6 ppm Fe = 4200 ppm K = 290 ppm Mg = 350 ppm Mn = 210 ppm Na = 69 ppm Ni = 5.8 ppm Pb = 16 ppm Sb < 80 ppb Se < 0.2 ppm Tl < 40 ppb V = 1.7 ppm Zn = 30 ppm Hg < 0.1 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm				

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4372	Soil	Rad van, M	7/28/93	10 ft from outfall, within pipe	BBG	BBG	BBG			Ag < 1.0 ppm Al = 2400 ppm ***As = 1.1 ppm*** Ba = 30 ppm ***Be = 0.6 ppm*** Ca = 1100 ppm Cd = 0.46 ppm Cyanide = 325 ppb Co = 1 ppm Cr = 12.1 ppm Cu = 59 ppm Fe = 4800 ppm K = 430 ppm Mg = 370 ppm Mn = 240 ppm Na = 74 ppm Ni = 6.8 ppm Pb = 17 ppm Sb < 80 ppb Se < 0.2 ppm Tl < 40 ppb V = 2.6 ppm Zn = 48 ppm Hg < 0.1 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm				

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4375	Soil	Rad van, M	7/29/93	5 ft from outfall, 1 ft below pipe, verification sample	BBG	BBG	BBG			Ag < 1.0 ppm Al = 3200 ppm ***As = 1.9 ppm*** Ba = 19 ppm ***Be = 0.43 ppm*** Ca = 670 ppm Cd < 0.4 ppm Cyanide = 267 ppb Co = 1.8 ppm Cr = 360 ppm Cu = 8.8 ppm Fe = 3400 ppm K = 300 ppm Mg = 410 ppm Mn = 130 ppm Na = 72 ppm Ni = 118 ppm Pb = 5 ppm Sb < 80 ppb Se = 0.4 ppm Tl = 70 ppb V = 4.5 ppm Zn = 18 ppm Hg < 0.1 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm				

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4376	Soil	Rad van, M	7/29/93	10 ft from outfall, 1 ft below pipe, verification sample	BBG	BBG	BBG			Ag < 1.0 ppm Al = 4500 ppm ***As = 1.0 ppm*** Ba = 31 ppm ***Be = 0.64 ppm*** Ca = 750 ppm Cd < 0.4 ppm Cyanide = 189 ppb Co = 0.9 ppm Cr = 38 ppm Cu = 3.1 ppm Fe = 4500 ppm K = 380 ppm Mg = 480 ppm Mn = 230 ppm Na = 100 ppm Ni < 2.0 ppm Pb = 5 ppm Sb < 80 ppb Se < 0.2 ppm Tl = 60 ppb V = 3.5 ppm Zn = 29 ppm Hg < 0.1 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm				

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4377	Soil	Rad van, M	7/29/93	15 ft from outfall, 1 ft below pipe, verification sample	BBG	BBG	BBG			Ag < 1.0 ppm Al = 3900 ppm ***As = 0.9 ppm*** Ba = 33 ppm ***Be = 0.54 ppm*** Ca = 1000 ppm Cd < 0.4 ppm Cyanide = 266 ppb Co = 1.3 ppm Cr = 36 ppm Cu = 5.7 ppm Fe = 4200 ppm K = 400 ppm Mg = 540 ppm Mn = 230 ppm Na = 120 ppm Ni = 2 ppm Pb = 8 ppm Sb < 80 ppb Se < 0.2 ppm Tl = 115 ppb V = 4.4 ppm Zn = 32 ppm Hg = 0.2 ppm	Ag = 400 ppm Al = None As = 0.40 ppm Ba = 5600 ppm Be = 0.16 ppm Ca = None Cd = 80 ppm Cyanide = 1600 ppm Co = None Cr (VI) = 400 ppm Cu = 3000 ppm Fe = None K = None Mg = None Mn = 8000 ppm Na = None Ni = 1600 ppm Pb = 500 ppm Sb = 32 ppm Se = 400 ppm Tl = 6.4 ppm V = 560 ppm Zn = 24000 ppm Hg = 24 ppm				
AAA 4386	Soil	Rad van, M (Hg & Pb only)	7/30/93	4 ft N of center of tank, 18 in. BGS	0.00	-20.80	-0.60			Pb = 15 ppm Hg < 0.1 ppm	Pb = 500 ppm Hg = 24 ppm				
AAA 4387	Soil	Rad van, M (Hg & Pb only)	7/30/93	1 ft below AAA 4386, 50 ft from outfall, verification sample	0.00	-21.30	-1.00			Pb = 19 ppm Hg < 0.1 ppm	Pb = 500 ppm Hg = 24 ppm				

TABLE A-1. SWMU 0-030(g) SAMPLE INVENTORY FOR OU 1071

Sample ID	Sample Matrix	Analyses Requested	Date Collected	Sample Location	Rad Van Results (pCi/g) Gross Analyses			Isotopes		Metals			SVOCs and VOCs Results	Pesticides Results	PCBs Results
					α +/- 63.1	β +/- 23.8	γ +/- 4.4	Isotope Results	ER Program SALs (Soil)	Metals Results	ER Program SALs (Soil)	TCLP Results			
AAA 4388	Soil	Rad van, M (Hg & Pb only)	7/30/93	45 ft from outfall, 5 ft from NE edge of tank, 1 ft below clay pieces, verification sample	BBG	BBG	BBG			Pb = 16 ppm Hg < 0.1 ppm	Pb = 500 ppm Hg = 24 ppm				
AAA 4389	Soil	Rad van, M (Hg & Pb only)	7/30/93	40 ft from outfall, 8 ft NE of NE corner of tank, 1 ft below pipe, verification sample	BBG	BBG	BBG			Pb = 17 ppm Hg < 0.1 ppm	Pb = 500 ppm Hg = 24 ppm				
AAA 4390	Soil	Rad van, M (Hg & Pb only)	7/30/93	20 ft from outfall, 1 ft below pipe, verification sample	BBG	BBG	BBG			Pb = 16 ppm Hg = 0.6 ppm	Pb = 500 ppm Hg = 24 ppm				
AAA 4391	Soil	Rad van, M (Hg & Pb only)	7/30/93	25 ft from outfall, 1 ft below pipe, verification sample	BBG	BBG	BBG			Pb = 29 ppm Hg = 0.8 ppm	Pb = 500 ppm Hg = 24 ppm				
AAA 4392	Soil	Rad van, M (Hg & Pb only)	7/30/93	30 ft from outfall, 1 ft below pipe, verification sample	BBG	BBG	BBG			Pb = 18 ppm Hg = 0.4 ppm	Pb = 500 ppm Hg = 24 ppm				
AAA 4393	Soil	Rad van, M (Hg & Pb only)	7/30/93	35 ft from outfall, 1 ft below pipe, verification sample	BBG	BBG	BBG			Pb = 26 ppm Hg = 0.6 ppm	Pb = 500 ppm Hg = 24 ppm				

Notes:

Analyses Requested

Rad Van = gross alpha, beta, and gamma screening by the mobile radiological analysis laboratory.
R = radiochemical isotope analysis.
M = target-analyte-list (TAL) metals analysis.
P = pesticides analysis.
SV = semivolatiles analysis.
V = volatiles analysis.
PCB = polychlorinated biphenyls analysis.

Sample Location

BGS = below ground surface.
N, S, E, W = cardinal directions.
NE, NW, SE, SW = intercardinal directions.

Rad Van Results

BBG = below background.
Gross alpha, beta, and gamma analyses have uncertainty values of +/- 63.1, +/- 23.8, and +/- 4.4, respectively. Analyses that were greater than the positive uncertainty value (i.e., +63.1, +23.8, or +4.4 for alpha, beta, or gamma) were considered above background.

Isotopes Results

SAL = screening action level.
Constituent concentrations in ***bold and italics*** are above the ER Program SAL for that constituent.
* Ra-226 and Th-232 method detection limits are above the ER Program SALs for those constituents; therefore, it is unknown if these constituents actually exceed the ER Program SALs.
ICP/MS = inductively coupled plasma/mass spectrometry.
PC = proportional counting.
RAS = radiochemical alpha spectrometry.
LS = liquid scintillation counting.

Metals Results

TAL = target analyte list.
SAL = screening action level .
Constituent concentrations in ***bold and italics*** are above the ER Program SAL for that constituent.
All arsenic and beryllium concentrations exceed the ER Program SALs; however, sample concentrations fall within background concentrations for these constituents (SALs are below background concentrations for arsenic and beryllium).

Metals Results (continued)

TCLP = toxicity characteristic leaching procedure.

TCLP threshold values:

Arsenic = 5.0 ppm
Barium = 100.0 ppm
Cadmium = 1.0 ppm

Chromium = 5.0 ppm
Lead = 5.0 ppm
Mercury = 0.2 ppm
Nickel = 134.0 ppm
Selenium = 1.0 ppm
Silver = 5.0 ppm
Thallium = 130.0 ppm

If a total metal concentration exceeded 20 times the TCLP threshold value, TCLP analyses were required for that metal constituent.

SVOCs, and VOCs Results

SVOC = semivolatile organic compound.
VOC = volatile organic compound.
MDL = method detection limit.
SAL = screening action level.

PCBs Results

PCB = polychlorinated biphenyl.
MDL = method detection limit.
SAL = screening action level.
Constituent concentrations in ***bold and italics*** are above the ER Program SAL for that constituent.
MDLs for PCBs analyses (1.0 ppm or 0.5 ppm) were above ER Program SALs for PCBs of 90 ppb; therefore, it is unknown if PCBs actually exceed ER Program SALs.

Appendix B

Data Tables for OU 1078

(Definitions for acronyms and abbreviations and other notes for tables in Appendix B are on the following pages:

Table B-1—page B-1,
Table B-2—page B-2,
Table B-3—page B-3,
Table B-4—page B-31,
Table B-5—page B-45, and
Table B-6—page B-53.)

Note: Bold numbers in tables B-4, B-5, and B-6 represent results greater than 50% of screening action level, including detection limits.

TABLE B-1

ORGANIC REQUEST NUMBERS FOR OU 1078

Request Number	Date Samples Submitted	Laboratory	Date Sample Results Received	Analyses	Number Samples/ Number Validated	Results Above SALs[a]
13203	07/20/92	ITAS[b]- St. Louis	01/28/93	SVOCs[c]	14/14	Yes, PAHs[d] only
13234	07/23/92	ITAS-St. Louis	03/03/93	SVOCs	23/23	No
13258	07/27/92	ITAS-St. Louis	02/18/93	SVOCs	6/0	No
13284	07/29/92	ITAS-St. Louis	12/17/92	SVOCs	11/0	No
13291	07/29/92	ITAS-St. Louis	12/17/92	SVOCs	5/5	No
13319	08/03/92	ITAS-St. Louis	03/11/93	SVOCs	15/15	Yes, PAHs only
13358	08/10/92	LANL/EM-9	11/06/92	SVOCs	16/16	Yes, PAHs only
13382	08/17/92	LANL/EM-9	11/13/92	SVOCs	3/0	No
13402	08/17/92	LANL/EM-9	12/08/93	SVOCs	5/0	No
13414	08/19/92	LANL/EM-9	11/13/93	SVOCs	25/0	No
13424	08/26/92	LANL/EM-9	10/26/92	SVOCs	5/0	No
13447	08/27/92	LANL/EM-9	02/04/93	SVOCs	7/0	No
13449	08/26/92	LANL/EM-9	12/08/92	SVOCs	9/0	No
13499	09/02/92	LANL/EM-9	11/30/92	SVOCs	13/0	No
13535	09/08/92	LANL/EM-9	11/19/92	SVOCs	6/0	No
13546	09/09/92	LANL/EM-9	11/19/92	SVOCs	7/0	No
13586	09/16/92	LANL/EM-9	12/08/92	SVOCs	11/0	No
13595	09/17/92	LANL/EM-9	12/21/92	SVOCs	7/0	No
13612	09/23/92	LANL/EM-9	12/08/92	SVOCs	14/0	No
13698	10/08/92	LANL/EM-9	12/21/92	SVOCs	6/0	No
13750	10/19/92	LANL/EM-9	01/06/93	SVOCs	4/4	Yes, PAHs only

a. SALs = screening action levels.
b. ITAS = International Technology Analytic Laboratory.
c. SVOCs = semivolatile organic compounds.
d. PAHs = polynuclear aromatic hydrocarbons.

TABLE B-2

INORGANIC REQUEST NUMBERS FOR OU 1078

Request Number	Date Samples Submitted	Laboratory	Date Sample Results Received	Analyses	Number Samples/ Number Validated	Results Above SALs
13201	07/20/92	ITAS-St. Louis	12/18/92	All Metals	14/14	Yes, Tl only
13233	07/23/92	ITAS-St. Louis	01/22/93	All Metals	23/23	Yes, Tl only
13257	07/27/92	ITAS-St. Louis	01/22/93	All Metals	6/0	No
13283	07/29/92	ITAS-St. Louis	01/27/93	All Metals	11/0	No
13290	07/29/92	ITAS-St. Louis	01/27/93	All Metals	5/0	No
13318	08/03/92	ITAS-St. Louis	02/18/93	All Metals	20/0	No
13357	08/10/92	ITAS-St. Louis	03/04/93	All Metals	16/16	No
13381	08/17/92	LANL/EM-9	02/08/93	All Metals	5/0	No
13411	08/17/92	LANL/EM-9	4/30/93[a]	All Metals	5/5	Yes, Hg, Pb only
13413	08/19/92	ITAS-St. Louis[b]	03/08/93	All Metals	25/25	Yes, Tl only
13423	08/26/92	LANL/EM-9	04/09/93	All Metals	6/0	No
13446	08/27/92	ITAS-St. Louis	05/30/93[a]	All Metals	8/8	Yes, Hg only
13448	08/26/92	LANL/EM-9	05/27/93	All Metals	9/0	No
13498	09/02/92	ITAS-St. Louis	03/08/93	All Metals	13/13	Yes, Tl only
13530	09/08/92	LANL/EM-9	12/08/92	All Metals	6/0	No
13534	09/08/92	LANL/EM-9	02/12/93	All Metals	6/0	No
13544	09/09/92	LANL/EM-9	03/08/93	All Metals	7/7	No
13585	09/16/92	LANL/EM-9	02/26/93	All Metals	11/11	Yes, Sb only
13594	09/17/92	LANL/EM-9	03/16/93	All Metals	7/7	Yes, Hg only
13611	09/23/92	LANL/EM-9	02/25/93[c]	All Metals	14/0	No
13697	10/08/92	LANL/EM-9	04/11/93[d]	All Metals	6/0	No
13749	10/19/92	LANL/EM-9	03/01/93	All Metals	4/0	No

a. Hg rerun results were received for RN 13411 on 6/4/93 and for RN 13446 on 6/1/93.
b. Ag, As, Hg, and Se were analyzed at LANL EM-9.
c. Amended results were received 4/15/93.
d. Supplemental results were received 5/20/93.

TABLE B-3

RADIOCHEMICAL REQUEST NUMBERS FOR OU 1078

Request Number	Date Samples Submitted	Laboratory	Date Sample Results Received	Analyses	Number Samples/ Number Validated	Results Above SALs
13202	07/20/92	ITAS-St. Louis	12/16/92	Gamma / Alpha spec	14/0	No
13235	07/23/92	ITAS-St. Louis	12/16/92	Gamma / Alpha spec	23/23	Yes, Total U only
13259	07/27/92	ITAS-St. Louis	12/02/92	Gamma / Alpha spec	5/5	No
13285	07/29/92	ITAS-St. Louis	12/16/92[a]	Gamma / Alpha spec	11/11	No
13292	07/29/92	ITAS-St. Louis	11/16/92	Gamma / Alpha spec	5/5	No
13320	080/3/92	ITAS-St. Louis	12/16/92[b]	Gamma / Alpha spec	20/20	Yes, Pu 239 only
13360	08/10/92	GeoTech	06/04/93	Gamma / Alpha spec	16/16	No
13383	08/17/92	LANL/EM-9	08/09/93	Gamma / Alpha spec [c]	6/0	No
13412	08/17/92	LANL/EM-9	08/24/93	Gamma / Alpha spec [c]	6/0	No
13415	08/19/92	LANL/EM-9	07/20/93	Gamma / Alpha spec [c]	25/25	Yes, Pu 239 only
13425	08/26/92	LANL/EM-9	08/09/93	Gamma / Alpha spec [c]	7/0	No
13445	08/27/92	LANL/EM-9	01/19/93	Gamma / Alpha spec [c]	8/0	No
13450	08/26/92	LANL/EM-9	01/12/93	Gamma / Alpha spec[c]	9/9	Yes, Total U only
13500	09/02/92	LANL/EM-9	07/12/93	Gamma / Alpha spec[c]	13/0	No
13533	09/08/92	LANL/EM-9	07/07/93	Gamma / Alpha spec[c]	6/6	No
13536	09/08/92	LANL/EM-9	07/30/93	Gamma / Alpha spec [c]	6/6	No
13547	090/9/92	LANL/EM-9	08/26/93	Gamma / Alpha spec[c]	7/0	No
13587	09/16/92	LANL/EM-9	08/20/93	Gamma / Alpha spec[c]	11/0	No
13596	09/17/92	LANL/EM-9	07/20/93	Gamma / Alpha spec[c]	7/0	No
13613	09/24/92	LANL/EM-9	07/30/93	Gamma / Alpha spec[c]	14/0	No
13699	10/08/92	LANL/EM-9	08/26/93	Gamma / Alpha spec [c]	6/0	No
13751	10/19/92	LANL/EM-9	08/26/93	Gamma / Alpha spec [c]	4/0	No

a. Date given is for plutonium (Pu) data, U data were reported on 4/15/93.
b. Date given is for Pu data, U data were reported on 5/12/93.
c. Uranium (U) was analyzed by kinetic phosphorescence analysis (KPA) to give total U in mg/kg.

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	Acenaphthene µg/kg*	Acenaphthylene µg/kg	Aniline µg/kg	Anthracene µg/kg	Azobenzene µg/kg	m-Benzidine µg/kg	Benzo[a]anthracene µg/kg	Benzo[a]pyrene µg/kg	Benzo[b]fluoranthene µg/kg	Benzo[g,h,i]perylene µg/kg	Benzo[k]fluoranthene µg/kg	Benzoic acid µg/kg	Benzyl alcohol µg/kg	Bis(2-chloroethoxy)methane µg/kg	Bis(2-chloroethyl)ether µg/kg	Bis(2-chloroisopropyl)ether µg/kg	Bis(2-ethylhexyl)phthalate µg/kg	4-Bromophenylphenyl ether µg/kg	Butyl benzyl phthalate µg/kg	4-Chloro-3-methylphenol µg/kg
6005	CAN DUMP SITE/WHOLE AREA	AAA0709	7/20	13203	<360	<360	<360	<360	<360		<360	<360**	<360	<360	<360	<1700	<720	<360	<360	<360	<360	<360	<360	<720
6005R	CAN DUMP SITE/WHOLE AREA	AAA0710	7/20	13203	<350	<350	<350	<350	<350		<350	<350	<350	<350	<350	<1700	<710	<350	<350	<350	<350	<350	<350	<710
6014	CAN DUMP SITE/WHOLE AREA	AAA0711	7/20	13203	<380	<380	<380	<380	<380		<380	<380	<380	<380	<380	<1900	<770	<380	<380	<380	<380	<380	<380	<770
6023	CAN DUMP SITE/WHOLE AREA	AAA0712	7/20	13203	<370	<370	<370	<370	<370		<370	<370	<370	<370	<370	<1800	<750	<370	<370	<370	<370	<370	<370	<750
6023R	CAN DUMP SITE/WHOLE AREA	AAA0713	7/20	13203	<370	<370	<370	<370	<370		<370	<370	<370	<370	<370	<1800	<740	<370	<370	<370	<370	<370	<370	<740
6012-6017	CAN DUMP SITE/WHOLE AREA	AAA0714	7/20	13203	<360	<360	<360	<360	<360		<360	<360	<360	<360	<360	<1800	<730	<360	<360	<360	<360	<360	<360	<730
6018-6023	CAN DUMP SITE/WHOLE AREA	AAA0715	7/20	13203	<370	<370	<370	<370	<370		<370	<370	<370	<370	<370	<1800	<730	<370	<370	<370	<370	<370	<370	<730
1162	J2/TU, HS140/OUTFALL ST135	AAA0716	7/20	13203	1200	<380	<380	1800	<380		3600	2500	2900	930	990	<1800	<760	<380	<380	<380	<380	<380	<380	<760
1168	J2/TU, HS140/OUTFALL ST135	AAA0717	7/20	13203	3900	<370	<370	8200	<370		15000	12000	12000	6000	6700	<1800	<750	<370	<370	<370	<370	<370	<370	<750
1168R	J2/TU, HS140/OUTFALL ST135	AAA0718	7/20	13203	6900	<370	<370	12000	<370		23000	16000	17000	5600	9700	<1800	<740	<370	<370	<370	<370	<370	<370	<740
1174	J2/TU, HS140/OUTFALL ST135	AAA0719	7/20	13203	<370	<370	<370	<370	<370		<370	<370	<370	<370	<370	<1800	<730	<370	<370	<370	<370	<370	<370	<730
1160-1164	J2/TU, HS140/OUTFALL ST135	AAA0720	7/20	13203	620	<380	<380	1200	<380		2000	1600	1700	580	940	<1900	<770	<380	<380	<380	<380	<380	<380	<770
1165-1171	J2/TU, HS140/OUTFALL ST135	AAA0721	7/20	13203	740	<370	<370	1500	<370		2300	1900	2000	650	1200	<1800	<750	<370	<370	<370	<370	<370	<370	<750
1172-1176	J2/TU, HS140/OUTFALL ST135	AAA0722	7/20	13203	<370	<370	<370	<370	<370		<370	<370	<370	<370	<370	<1800	<730	<370	<370	<370	<370	<370	<370	<730
1083	HS140/HS140 SURF RUNOFF AREAS	AAA0723	7/23	13234	<390	<390	<390	<390	<390	<1900	<390	<390	<390	<390	<390	<1900	<780	<390	<390	<390	<390	<390	<390	<780
1090	HS140/HS140 SURF RUNOFF AREAS	AAA0724	7/23	13234	<350	<350	<350	<350	<350	<1700	<350	<350	<350	<350	<350	<1700	<700	<350	<350	<350	<350	<350	<350	<700
1094	HS140/HS140 SURF RUNOFF AREAS	AAA0725	7/23	13234	<380	<380	<380	<380	<380	<1900	<380	<380	<380	<380	<380	<1900	<770	<380	<380	<380	<380	<380	<380	<770
1095	HS140/HS140 SURF RUNOFF AREAS	AAA0726	7/23	13234	<390	<390	<390	<390	<390	<1900	<390	<390	<390	<390	<390	<1900	<790	<390	<390	<390	<390	<390	<390	<790
1096	HS140/HS140 SURF RUNOFF AREAS	AAA0727	7/23	13234	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<370	<1800	<730	<370	<370	<370	<370	<370	<370	<730
1096R	HS140/HS140 SURF RUNOFF AREAS	AAA0728	7/23	13234	<380	<380	<380	<380	<380	<1800	<380	<380	<380	<380	<380	<1800	<760	<380	<380	<380	<380	<380	<380	<760
1097	HS140/HS140 SURF RUNOFF AREAS	AAA0729	7/23	13234	<410	<410	<410	<410	<410	<2000	<410	<410	<410	<410	<410	3500	<820	<410	<410	<410	<410	<410	<410	<820
1080-1086	HS140/HS140 SURF RUNOFF AREAS	AAA0730	7/23	13234	<390	<390	<390	<390	<390	<1900	510	880	1100	440	<390	<1900	<780	<390	<390	<390	<390	<390	<390	<780
1087-1093	HS140/HS140 SURF RUNOFF AREAS	AAA0731	7/23	13234	<380	<380	<380	<380	<380	<1800	<380	<380	<380	<380	<380	<1800	<760	<380	<380	<380	<380	<380	<380	<760
1109	HS140/HS140 SURF RUNOFF AREAS	AAA0732	7/23	13234	<380	<380	<380	<380	<380	<1200	<380	<380	<380	<380	<380	<1200	<760	<380	<380	<380	<380	<380	<380	<760
1110	HS140/HS140 SURF RUNOFF AREAS	AAA0733	7/23	13234	<410	<410	<410	<410	<410	<2000	<410	<410	<410	<410	<410	<2000	<820	<410	<410	<410	<410	<410	<410	<820
1111	HS140/HS140 SURF RUNOFF AREAS	AAA0734	7/23	13234	<340	<340	<340	<340	<340	<1600	<340	<340	<340	<340	<340	<1600	<670	<340	<340	<340	<340	<340	<340	<670
1111R	HS140/HS140 SURF RUNOFF AREAS	AAA0735	7/23	13234	<360	<360	<360	<360	<360	<1700	<360	<360	<360	<360	<360	<1700	<720	<360	<360	<360	<360	<360	<360	<720
1112	HS140/HS140 SURF RUNOFF AREAS	AAA0736	7/23	13234	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<370	<1800	<730	<370	<370	<370	<370	<370	<370	<730
1202	HS140/HS140 SURF RUNOFF AREAS	AAA0737	7/23	13234	<340	<340	<340	<340	<340	<1700	<340	<340	<340	<340	<340	<1700	<690	<340	<340	<340	<340	<340	<340	<690
1202R	HS140/HS140 SURF RUNOFF AREAS	AAA0738	7/23	13234	<350	<350	<350	<350	<350	<1700	<350	<350	<350	<350	<350	<1700	<700	<350	<350	<350	<350	<350	<350	<700
1017	HS140/HS140 SURF RUNOFF AREAS	AAA0739	7/23	13234	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<370	<1800	<740	<370	<370	<370	<370	<370	<370	<740
1045	HS140/HS140 SURF RUNOFF AREAS	AAA0740	7/23	13234	<410	<410	<410	<410	<410	<2000	<410	<410	<410	<410	<410	<2000	<820	<410	<410	<410	<410	<410	<410	<820
1144	HS140/HS140 SURF RUNOFF AREAS	AAA0741	7/23	13234	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<370	<1800	<740	<370	<370	<370	<370	<370	<370	<740
1144R	HS140/HS140 SURF RUNOFF AREAS	AAA0742	7/23	13234	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<370	<1800	<730	<370	<370	<370	<370	<370	<370	<730
1147	HS140/HS140 SURF RUNOFF AREAS	AAA0743	7/23	13234	<420	<420	<420	<420	<420	<2100	<420	<420	<420	<420	<420	<2100	<850	<420	<420	<420	<420	<420	<420	<850

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	4-Chloroaniline	2-Chloronaphthalene	o-Chlorophenol	4-Chlorophenylphenyl ether	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo[a,h]anthracene	Dibenzofuran	o-Dichlorobenzene (1,2)	m-Dichlorobenzene (1,3)	p-Dichlorobenzene (1,4)	3,3-Dichlorobenzidine	2,4-Dichlorophenol	Diethyl phthalate	Dimethyl phthalate	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene
					µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
6005	CAN DUMP SITE/WHOLE AREA	AAA0709	7/20	13203	<720	<360	<360	<360	<360	<360	<360	<360	<360	<360	<360	<360	<720	<360	<360	<360	<360	<1700	<360	<360
6005R	CAN DUMP SITE/WHOLE AREA	AAA0710	7/20	13203	<710	<350	<350	<350	<350	<350	<350	<350	<350	<350	<350	<350	<710	<350	<350	<350	<350	<1700	<350	<350
6014	CAN DUMP SITE/WHOLE AREA	AAA0711	7/20	13203	<770	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<770	<380	<380	<380	<380	<1900	<380	<380
6023	CAN DUMP SITE/WHOLE AREA	AAA0712	7/20	13203	<750	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<750	<370	<370	<370	<370	<1800	<370	<370
6023R	CAN DUMP SITE/WHOLE AREA	AAA0713	7/20	13203	<740	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<740	<370	<370	<370	<370	<1800	<370	<370
6012-6017	CAN DUMP SITE/WHOLE AREA	AAA0714	7/20	13203	<730	<360	<360	<360	<360	<360	<360	<360	<360	<360	<360	<360	<730	<360	<360	<360	<360	<1800	<360	<360
6018-6023	CAN DUMP SITE/WHOLE AREA	AAA0715	7/20	13203	<730	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<730	<370	<370	<370	<370	<1800	<370	<370
1162	J2/TU, HS140/OUTFALL ST135	AAA0716	7/20	13203	<760	<380	<380	<380	2900	<380	<380	<380	520	<380	<380	<380	<760	<380	<380	<380	<380	<1800	<380	<380
1168	J2/TU, HS140/OUTFALL ST135	AAA0717	7/20	13203	<750	<370	<370	<370	13000	<370	<370	1600	2000	<370	<370	<370	<750	<370	<370	<370	<370	<1800	<370	<370
1168R	J2/TU, HS140/OUTFALL ST135	AAA0718	7/20	13203	<740	<370	<370	<370	18000	<370	<370	2200	3200	<370	<370	<370	<740	<370	<370	<370	<370	<1800	<370	<370
1174	J2/TU, HS140/OUTFALL ST135	AAA0719	7/20	13203	<730	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<730	<370	<370	<370	<370	<1800	<370	<370
1160-1164	J2/TU, HS140/OUTFALL ST135	AAA0720	7/20	13203	<770	<380	<380	<380	1800	<380	<380	<380	<380	<380	<380	<380	<770	<380	<380	<380	<380	<1900	<380	<380
1165-1171	J2/TU, HS140/OUTFALL ST135	AAA0721	7/20	13203	<750	<370	<370	<370	2100	<370	<370	<370	<370	<370	<370	<370	<750	<370	<370	<370	<370	<1800	<370	<370
1172-1176	J2/TU, HS140/OUTFALL ST135	AAA0722	7/20	13203	<730	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<730	<370	<370	<370	<370	<1800	<370	<370
1083	HS140/HS140 SURF RUNOFF AREAS	AAA0723	7/23	13234	<780	<390	<390	<390	<390	<390	<390	<390	<390	<390	<390	<390	<780	<390	<390	<390	<390	<1900	<390	<390
1090	HS140/HS140 SURF RUNOFF AREAS	AAA0724	7/23	13234	<700	<350	<350	<350	<350	<350	<350	<350	<350	<350	<350	<350	<700	<350	<350	<350	<350	<1700	<350	<350
1094	HS140/HS140 SURF RUNOFF AREAS	AAA0725	7/23	13234	<770	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<770	<380	<380	<380	<380	<1900	<380	<380
1095	HS140/HS140 SURF RUNOFF AREAS	AAA0726	7/23	13234	<790	<390	<390	<390	<390	<390	<390	<390	<390	<390	<390	<390	<790	<390	<390	<390	<390	<1900	<390	<390
1096	HS140/HS140 SURF RUNOFF AREAS	AAA0727	7/23	13234	<750	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<750	<370	<370	<370	<370	<1800	<370	<370
1096R	HS140/HS140 SURF RUNOFF AREAS	AAA0728	7/23	13234	<760	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<760	<380	<380	<380	<380	<1800	<380	<380
1097	HS140/HS140 SURF RUNOFF AREAS	AAA0729	7/23	13234	<820	<410	<410	<410	<410	<410	<410	<410	<410	<410	<410	<410	<820	<410	<410	<410	<410	<2000	<410	<410
1080-1086	HS140/HS140 SURF RUNOFF AREAS	AAA0730	7/23	13234	<780	<390	<390	<390	540	<390	<390	<390	<390	<390	<390	<390	<790	<390	<390	<390	<390	<1900	<390	<390
1087-1093	HS140/HS140 SURF RUNOFF AREAS	AAA0731	7/23	13234	<760	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<760	<380	<380	<380	<380	<1800	<380	<380
1109	HS140/HS140 SURF RUNOFF AREAS	AAA0732	7/23	13234	<760	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<760	<380	<380	<380	<380	<1200	<380	<380
1110	HS140/HS140 SURF RUNOFF AREAS	AAA0733	7/23	13234	<820	<410	<410	<410	<410	<410	<410	<410	<410	<410	<410	<410	<820	<410	<410	<410	<410	<2000	<410	<410
1111	HS140/HS140 SURF RUNOFF AREAS	AAA0734	7/23	13234	<670	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<670	<340	<340	<340	<340	<1600	<340	<340
1111R	HS140/HS140 SURF RUNOFF AREAS	AAA0735	7/23	13234	<720	<360	<360	<360	<360	<360	<360	<360	<360	<360	<360	<360	<720	<360	<360	<360	<360	<1700	<360	<360
1112	HS140/HS140 SURF RUNOFF AREAS	AAA0736	7/23	13234	<730	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<730	<370	<370	<370	<370	<1800	<370	<370
1202	HS140/HS140 SURF RUNOFF AREAS	AAA0737	7/23	13234	<690	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<690	<340	<340	<340	<340	<1700	<340	<340
1202R	HS140/HS140 SURF RUNOFF AREAS	AAA0738	7/23	13234	<700	<350	<350	<350	<350	<350	<350	<350	<350	<350	<350	<350	<700	<350	<350	<350	<350	<1700	<350	<350
1017	HS140/HS140 SURF RUNOFF AREAS	AAA0739	7/23	13234	<740	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<740	<370	<370	<370	<370	<1800	<370	<370
1045	HS140/HS140 SURF RUNOFF AREAS	AAA0740	7/23	13234	<820	<410	<410	<410	<410	<410	<410	<410	<410	<410	<410	<410	<820	<410	<410	<410	<410	<2000	<410	<410
1144	HS140/HS140 SURF RUNOFF AREAS	AAA0741	7/23	13234	<740	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<740	<370	<370	<370	<370	<1800	<370	<370
1144R	HS140/HS140 SURF RUNOFF AREAS	AAA0742	7/23	13234	<730	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<730	<370	<370	<370	<370	<1800	<370	<370
1147	HS140/HS140 SURF RUNOFF AREAS	AAA0743	7/23	13234	<850	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420	<850	<420	<420	<420	<420	<2100	<420	<420

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-cd)pyrene	Isophorone	2-Methyl-4,6-dinitrophenol	2-Methylnaphthalene	2-Methylphenol	4-Methylphenol	Naphthalene	2-Nitroaniline	3-Nitroaniline	4-Nitroaniline	Nitrobenzene	2-Nitrophenol	4-Nitrophenol	N-Nitrosodi-n-propylamine	N-Nitrosodimethylamine
					µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
6005	CAN DUMP SITE/WHOLE AREA	AAA0709	7/20	13203	<360	<360	<360	<360	<360	<360	<360	<360	<1700	<360	<360	<360	<360	<1700	<1700	<1700	<360	<360	<1700	<360	<360
6005R	CAN DUMP SITE/WHOLE AREA	AAA0710	7/20	13203	<350	<350	<350	<350	<350	<350	<350	<350	<1700	<350	<350	<350	<350	<1700	<1700	<1700	<350	<350	<1700	<350	<350
6014	CAN DUMP SITE/WHOLE AREA	AAA0711	7/20	13203	<380	<380	<380	<380	<380	<380	<380	<380	<1900	<380	<380	<380	<380	<1900	<1900	<1900	<380	<380	<1900	<380	<380
6023	CAN DUMP SITE/WHOLE AREA	AAA0712	7/20	13203	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
6023R	CAN DUMP SITE/WHOLE AREA	AAA0713	7/20	13203	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
6012-6017	CAN DUMP SITE/WHOLE AREA	AAA0714	7/20	13203	<360	<360	<360	<360	<360	<360	<360	<360	<1800	<360	<360	<360	<360	<1800	<1800	<1800	<360	<360	<1800	<360	<360
6018-6023	CAN DUMP SITE/WHOLE AREA	AAA0715	7/20	13203	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
1162	J2/TU, HS140/OUTFALL ST135	AAA0716	7/20	13203	6600	1100	<380	<380	<380	<380	960	<380	<1800	<380	<380	<380	570	<1800	<1800	<1800	<380	<380	<1800	<380	<380
1168	J2/TU, HS140/OUTFALL ST135	AAA0717	7/20	13203	33000	3700	<370	<370	<370	<370	5300	<370	<1800	1000	<370	<370	2300	<1800	<1800	<1800	<370	<370	<1800	<370	<370
1168R	J2/TU, HS140/OUTFALL ST135	AAA0718	7/20	13203	41000	6800	<370	<370	<370	<370	5700	<370	<1800	1200	<370	<370	2700	<1800	<1800	<1800	<370	<370	<1800	<370	<370
1174	J2/TU, HS140/OUTFALL ST135	AAA0719	7/20	13203	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
1160-1164	J2/TU, HS140/OUTFALL ST135	AAA0720	7/20	13203	4400	610	<380	<380	<380	<380	600	<380	<1900	<380	<380	<380	<380	<1900	<1900	<1900	<380	<380	<1900	<380	<380
1165-1171	J2/TU, HS140/OUTFALL ST135	AAA0721	7/20	13203	5200	760	<370	<370	<370	<370	640	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
1172-1176	J2/TU, HS140/OUTFALL ST135	AAA0722	7/20	13203	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
1083	HS140/HS140 SURF RUNOFF AREAS	AAA0723	7/23	13234	<390	<390	<390	<390	<390	<390	<390	<390	<1900	<390	<390	<390	<390	<1900	<1900	<1900	<390	<390	<1900	<390	<390
1090	HS140/HS140 SURF RUNOFF AREAS	AAA0724	7/23	13234	<350	<350	<350	<350	<350	<350	<350	<350	<1700	<350	<350	<350	<350	<1700	<1700	<1700	<350	<350	<1700	<350	<350
1094	HS140/HS140 SURF RUNOFF AREAS	AAA0725	7/23	13234	<380	<380	<380	<380	<380	<380	<380	<380	<1900	<380	<380	<380	<380	<1900	<1900	<1900	<380	<380	<1900	<380	<380
1095	HS140/HS140 SURF RUNOFF AREAS	AAA0726	7/23	13234	<390	<390	<390	<390	<390	<390	<390	<390	<1900	<390	<390	<390	<390	<1900	<1900	<1900	<390	<390	<1900	<390	<390
1096	HS140/HS140 SURF RUNOFF AREAS	AAA0727	7/23	13234	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
1096R	HS140/HS140 SURF RUNOFF AREAS	AAA0728	7/23	13234	<380	<380	<380	<380	<380	<380	<380	<380	<1800	<380	<380	<380	<380	<1800	<1800	<1800	<380	<380	<1800	<380	<380
1097	HS140/HS140 SURF RUNOFF AREAS	AAA0729	7/23	13234	<410	<410	<410	<410	<410	<410	<410	<410	<2000	<410	<410	<410	<410	<2000	<2000	<2000	<410	<410	<2000	<410	<410
1080-1086	HS140/HS140 SURF RUNOFF AREAS	AAA0730	7/23	13234	690	<390	<390	<390	<390	<390	420	<390	<1900	<390	<390	<390	<390	<1900	<1900	<1900	<390	<390	<1900	<390	<390
1087-1093	HS140/HS140 SURF RUNOFF AREAS	AAA0731	7/23	13234	<380	<380	<380	<380	<380	<380	<380	<380	<1800	<380	<380	<380	<380	<1800	<1800	<1800	<380	<380	<1800	<380	<380
1109	HS140/HS140 SURF RUNOFF AREAS	AAA0732	7/23	13234	<380	<380	<380	<380	<380	<380	<380	<380	<1200	<380	<380	<380	<380	<1200	<1200	<1200	<380	<380	<1200	<380	<380
1110	HS140/HS140 SURF RUNOFF AREAS	AAA0733	7/23	13234	<410	<410	<410	<410	<410	<410	<410	<410	<2000	<410	<410	<410	<410	<2000	<2000	<2000	<410	<410	<2000	<410	<410
1111	HS140/HS140 SURF RUNOFF AREAS	AAA0734	7/23	13234	<340	<340	<340	<340	<340	<340	<340	<340	<1600	<340	<340	<340	<340	<1600	<1600	<1600	<340	<340	<1600	<340	<340
1111R	HS140/HS140 SURF RUNOFF AREAS	AAA0735	7/23	13234	<360	<360	<360	<360	<360	<360	<360	<360	<1700	<360	<360	<360	<360	<1700	<1700	<1700	<360	<360	<1700	<360	<360
1112	HS140/HS140 SURF RUNOFF AREAS	AAA0736	7/23	13234	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
1202	HS140/HS140 SURF RUNOFF AREAS	AAA0737	7/23	13234	<340	<340	<340	<340	<340	<340	<340	<340	<1700	<340	<340	<340	<340	<1700	<1700	<1700	<340	<340	<1700	<340	<340
1202R	HS140/HS140 SURF RUNOFF AREAS	AAA0738	7/23	13234	<350	<350	<350	<350	<350	<350	<350	<350	<1700	<350	<350	<350	<350	<1700	<1700	<1700	<350	<350	<1700	<350	<350
1017	HS140/HS140 SURF RUNOFF AREAS	AAA0739	7/23	13234	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
1045	HS140/HS140 SURF RUNOFF AREAS	AAA0740	7/23	13234	<410	<410	<410	<410	<410	<410	<410	<410	<2000	<410	<410	<410	<410	<2000	<2000	<2000	<410	<410	<2000	<410	<410
1144	HS140/HS140 SURF RUNOFF AREAS	AAA0741	7/23	13234	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
1144R	HS140/HS140 SURF RUNOFF AREAS	AAA0742	7/23	13234	530	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
1147	HS140/HS140 SURF RUNOFF AREAS	AAA0743	7/23	13234	<420	<420	<420	<420	<420	<420	<420	<420	<2100	<420	<420	<420	<420	<2100	<2100	<2100	<420	<420	<2100	<420	<420

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	N-Nitrosodiphenylamine µg/kg	Pentachlorophenol µg/kg	Phenanthrene µg/kg	Phenol µg/kg	Pyrene µg/kg	1,2,4-Trichlorobenzene µg/kg	2,4,5-Trichlorophenol µg/kg	2,4,6-Trichlorophenol µg/kg	Total Mixed Arochlors (>10,000) µg/Kg
6005	CAN DUMP SITE/WHOLE AREA	AAA0709	7/20	13203	<360	<1700	<360	<360	<360	<360	<360	<360	
6005R	CAN DUMP SITE/WHOLE AREA	AAA0710	7/20	13203	<350	<1700	<350	<350	<350	<350	<350	<350	
6014	CAN DUMP SITE/WHOLE AREA	AAA0711	7/20	13203	<380	<1900	<380	<380	<380	<380	<380	<380	
6023	CAN DUMP SITE/WHOLE AREA	AAA0712	7/20	13203	<370	<1800	<370	<370	<370	<370	<370	<370	
6023R	CAN DUMP SITE/WHOLE AREA	AAA0713	7/20	13203	<370	<1800	<370	<370	<370	<370	<370	<370	
6012-6017	CAN DUMP SITE/WHOLE AREA	AAA0714	7/20	13203	<360	<1800	<360	<360	<360	<360	<360	<360	
6018-6023	CAN DUMP SITE/WHOLE AREA	AAA0715	7/20	13203	<370	<1800	<370	<370	<370	<370	<370	<370	
1162	J2/TU, HS140/OUTFALL ST135	AAA0716	7/20	13203	<380	<1800	6800	<380	6200	<380	<380	<380	
1166	J2/TU, HS140/OUTFALL ST135	AAA0717	7/20	13203	<370	<1800	25000	<370	29000	<370	<370	<370	
1166R	J2/TU, HS140/OUTFALL ST135	AAA0718	7/20	13203	<370	<1800	39000	<370	39000	<370	<370	<370	
1174	J2/TU, HS140/OUTFALL ST135	AAA0719	7/20	13203	<370	<1800	<370	<370	<370	<370	<370	<370	
1160-1164	J2/TU, HS140/OUTFALL ST135	AAA0720	7/20	13203	<380	<1900	3900	<380	4600	<380	<380	<380	
1165-1171	J2/TU, HS140/OUTFALL ST135	AAA0721	7/20	13203	<370	<1800	4300	<370	5400	<370	<370	<370	
1172-1176	J2/TU, HS140/OUTFALL ST135	AAA0722	7/20	13203	<370	<1800	<370	<370	<370	<370	<370	<370	
1083	HS140/HS140 SURF RUNOFF AREAS	AAA0723	7/23	13234	<390	<1900	<390	<390	<390	<390	<390	<390	
1090	HS140/HS140 SURF RUNOFF AREAS	AAA0724	7/23	13234	<350	<1700	<350	<350	<350	<350	<350	<350	
1094	HS140/HS140 SURF RUNOFF AREAS	AAA0725	7/23	13234	<380	<1900	<380	<380	<380	<380	<380	<380	
1095	HS140/HS140 SURF RUNOFF AREAS	AAA0726	7/23	13234	<390	<1900	<390	<390	<390	<390	<390	<390	
1096	HS140/HS140 SURF RUNOFF AREAS	AAA0727	7/23	13234	<370	<1800	<370	<370	<370	<370	<370	<370	
1096R	HS140/HS140 SURF RUNOFF AREAS	AAA0728	7/23	13234	<380	<1800	<380	<380	<380	<380	<380	<380	
1097	HS140/HS140 SURF RUNOFF AREAS	AAA0729	7/23	13234	<410	<2000	<410	<410	<410	<410	<410	<410	98300
1080-1086	HS140/HS140 SURF RUNOFF AREAS	AAA0730	7/23	13234	<390	<1900	530	<390	720	<390	<390	<390	
1087-1093	HS140/HS140 SURF RUNOFF AREAS	AAA0731	7/23	13234	<380	<1800	<380	<380	<380	<380	<380	<380	
1109	HS140/HS140 SURF RUNOFF AREAS	AAA0732	7/23	13234	<380	<1200	<380	<380	<380	<380	<380	<380	22700
1110	HS140/HS140 SURF RUNOFF AREAS	AAA0733	7/23	13234	<410	<2000	<410	<410	<410	<410	<410	<410	82680
1111	HS140/HS140 SURF RUNOFF AREAS	AAA0734	7/23	13234	<340	<1600	<340	<340	<340	<340	<340	<340	
1111R	HS140/HS140 SURF RUNOFF AREAS	AAA0735	7/23	13234	<360	<1700	<360	<360	<360	<360	<360	<360	26120
1112	HS140/HS140 SURF RUNOFF AREAS	AAA0736	7/23	13234	<370	<1800	<370	<370	<370	<370	<370	<370	35230
1202	HS140/HS140 SURF RUNOFF AREAS	AAA0737	7/23	13234	<340	<1700	<340	<340	<340	<340	<340	<340	
1202R	HS140/HS140 SURF RUNOFF AREAS	AAA0738	7/23	13234	<350	<1700	<350	<350	<350	<350	<350	<350	71100
1017	HS140/HS140 SURF RUNOFF AREAS	AAA0739	7/23	13234	<370	<1800	<370	<370	<370	<370	<370	<370	
1045	HS140/HS140 SURF RUNOFF AREAS	AAA0740	7/23	13234	<410	<2000	<410	<410	<410	<410	<410	<410	
1144	HS140/HS140 SURF RUNOFF AREAS	AAA0741	7/23	13234	<370	<1800	<370	<370	<370	<370	<370	<370	
1144R	HS140/HS140 SURF RUNOFF AREAS	AAA0742	7/23	13234	<370	<1800	410	<370	480	<370	<370	<370	
1147	HS140/HS140 SURF RUNOFF AREAS	AAA0743	7/23	13234	<420	<2100	<420	<420	<420	<420	<420	<420	

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Azobenzene	m-Benzidine	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Benzoic acid	Benzyl alcohol	Bis(2-chloroethoxy)methane	Bis(2-chloroethyl)ether	Bis(2-chloroisopropyl)ether	Bis(2-ethylhexyl)phthalate	4-Bromophenylphenyl ether	Butyl benzyl phthalate	4-Chloro-3-methylphenol
					µg/kg*	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
1098	HS140/HS140 SURF RUNOFF AREAS	AAA0744	7/23	13234	<380	<380	<380	<380	<380	<1900	<380	<380	<380	<380	<380	<1900	<770	<380	<380	<380	<380	<380	<380	<770
1089	HS140/HS140 SURF RUNOFF AREAS	AAA1469	7/23	13234	<380	<380	<380	<380	<380	<1800	<380	<380	<380	<380	<380	<1800	<760	<380	<380	<380	<380	<380	<380	<760
5091	HS138/SELA INN/BOTTOM OF CANYON	AAA0746	7/27	13258	<410	<410	<410	<410	<410		<410	<410	<410	<410	<410	<2000	<820	<410	<410	<410	<410	<410	<410	<820
5091R	HS138/SELA INN/BOTTOM OF CANYON	AAA0747	7/27	13258	<410	<410	<410	<410	<410		<410	<410	<410	<410	<410	<2000	<810	<410	<410	<410	<410	<410	<410	<810
5098	HS138/SELA INN/BOTTOM OF CANYON	AAA0748	7/27	13258	<420	<420	<420	<420	<420		<420	<420	<420	<420	<420	<2000	<840	<420	<420	<420	<420	<420	<420	<840
5075-5079,5092	HS138/SELA INN/BOTTOM OF CANYON	AAA0749	7/27	13258	<370	<370	<370	<370	<370		<370	<370	<370	<370	<370	<1800	<750	<370	<370	<370	<370	<370	<370	<750
5093-5098	HS138/SELA INN/BOTTOM OF CANYON	AAA0750	7/27	13258	<400	<400	<400	<400	<400		<400	<400	<400	<400	<400	<1900	<800	<400	<400	<400	<400	<400	<400	<800
5099-5091	HS138/SELA INN/BOTTOM OF CANYON	AAA0751	7/27	13258	<420	<420	<420	<420	<420		<420	<420	<420	<420	<420	<2000	<840	<420	<420	<420	<420	<420	<420	<840
3132	HS137/CT 80/BOTTOM OF CANYON	AAA1471	7/29	13284	<390	<390	<390	<390	<390		<390	<390	<390	<390	<390	<1900	<770	<390	<390	<390	<390	<390	<390	<770
3139	HS137/CT 80/BOTTOM OF CANYON	AAA1472	7/29	13284	<360	<360	<360	<360	<360		<360	<360	<360	<360	<360	<1800	<730	<360	<360	<360	<360	<360	<360	<730
3139R	HS137/CT 80/BOTTOM OF CANYON	AAA1473	7/29	13284	<370	<370	<370	<370	<370		<370	<370	<370	<370	<370	<1800	<730	<370	<370	<370	<370	<370	<370	<730
3144	HS137/CT 80/BOTTOM OF CANYON	AAA1474	7/29	13284	<350	<350	<350	<350	<350		<350	<350	<350	<350	<350	<1700	<700	<350	<350	<350	<350	<350	<350	<700
1248	J2/TU, HS140 BOTTOM OF CANYON	AAA1475	7/29	13284	<390	<390	<390	<390	<390		<390	<390	<390	<390	<390	<1900	<780	<390	<390	<390	<390	<390	<390	<780
1249	J2/TU, HS140 BOTTOM OF CANYON	AAA1476	7/29	13284	<390	<390	<390	<390	<390		<390	<390	<390	<390	<390	<1900	<790	<390	<390	<390	<390	<390	<390	<790
1253	J2/TU, HS140 BOTTOM OF CANYON	AAA1477	7/29	13284	<370	<370	<370	<370	<370		<370	<370	<370	<370	<370	<1800	<750	<370	<370	<370	<370	<370	<370	<750
1253R	J2/TU, HS140 BOTTOM OF CANYON	AAA1478	7/29	13284	<370	<370	<370	<370	<370		<370	<370	<370	<370	<370	<1800	<740	<370	<370	<370	<370	<370	<370	<740
1260	J2/TU, HS140 BOTTOM OF CANYON	AAA1479	7/29	13284	<360	<360	<360	<360	<360		<360	<360	<360	<360	<360	<1800	<720	<360	<360	<360	<360	<360	<360	<720
1250-1254	J2/TU, HS140 BOTTOM OF CANYON	AAA1480	7/29	13284	<380	<380	<380	<380	<380		<380	<380	<380	<380	<380	<1900	<760	<380	<380	<380	<380	<380	<380	<760
1255-1260	J2/TU, HS140 BOTTOM OF CANYON	AAA1481	7/29	13284	<370	<370	<370	<370	<370		<370	<370	<370	<370	<370	<1800	<750	<370	<370	<370	<370	<370	<370	<750
2013	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1482	8/3	13319	610	<360	<360	<360	<360		<360	<360	<360	<360	<360	<1700	<720	<360	<360	<360	<360	<360	<360	<720
2022	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1483	8/3	13319	<350	<350	<350	<350	<350		<350	<350	<350	<350	<350	<1700	<690	<350	<350	<350	<350	<350	<350	<690
2023	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1484	8/3	13319	<340	<340	<340	<340	<340		<340	<340	<340	<340	<340	<1600	<670	<340	<340	<340	<340	<340	<340	<670
2024	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1485	8/3	13319	<340	<340	<340	<340	<340		<340	<340	<340	<340	<340	<1700	<690	<340	<340	<340	<340	<340	<340	<690
2034	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1486	8/3	13319	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<1600	<670	<330	<330	<330	<330	<330	<330	<670
2035	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1487	8/3	13319	<340	<340	<340	<340	<340		<340	<340	<340	<340	<340	<1600	<670	<340	<340	<340	<340	<340	<340	<670
2036	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1489	8/3	13319	<340	<340	<340	<340	<340		<340	<340	<340	<340	<340	<1600	<670	<340	<340	<340	<340	<340	<340	<670
2038	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1490	8/3	13319	<370	<370	<370	<370	<370		<370	<370	<370	<370	<370	<1800	<740	<370	<370	<370	<370	<370	1500	<740
2043	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1491	8/3	13319	<340	<340	<340	<340	<340		<340	<340	<340	<340	<340	<1600	<680	<340	<340	<340	<340	<340	<340	<680
2045	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1492	8/3	13319	<340	<340	<340	<340	<340		<340	<340	<340	<340	<340	<1700	<690	<340	<340	<340	<340	<340	<340	<690
2050	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1493	8/3	13319	<340	<340	<340	<340	<340		<340	<340	<340	<340	<340	<1600	<670	<340	<340	<340	<340	<340	<340	<670
2058	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1494	8/3	13319	<340	<340	<340	<340	<340		<340	<340	<340	<340	<340	<1700	<690	<340	<340	<340	<340	<340	<340	<690
2064	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1495	8/3	13319	<350	<350	<350	<350	<350		<350	<350	<350	<350	<350	<1700	<710	<350	<350	<350	<350	<350	<350	<710
2022R	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1496	8/3	13319	<360	<360	<360	<360	<360		<360	<360	<360	<360	<360	<1700	<720	<360	<360	<360	<360	<360	<360	<720

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No.	Sample Date '92	EM-9 Request #	4-Chloroaniline	2-Chloronaphthalene	o-Chlorophenol	4-Chlorophenylphenyl ether	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo[a,h]anthracene	Dibenzofuran	o-Dichlorobenzene (1,2)	m-Dichlorobenzene (1,3)	p-Dichlorobenzene (1,4)	3,3-Dichlorobenzidine	2,4-Dichlorophenol	Diethyl phthalate	Dimethyl phthalate	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene
					µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
1098	HS140/HS140 SURF RUNOFF AREAS	AAA0744	7/23	13234	<770	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<770	<380	<380	<380	<380	<1900	<380	<380
1099	HS140/HS140 SURF RUNOFF AREAS	AAA1469	7/23	13234	<760	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<760	<380	<380	<380	<380	<1800	<380	<380
5091	HS138/SELA INN/BOTTOM OF CANYON	AAA0746	7/27	13258	<820	<410	<410	<410	<410	<410	<410	<410	<410	<410	<410	<410	<820	<410	<410	<410	<410	<2000	<410	<410
5091R	HS138/SELA INN/BOTTOM OF CANYON	AAA0747	7/27	13258	<810	<410	<410	<410	<410	<410	<410	<410	<410	<410	<410	<410	<810	<410	<410	<410	<410	<2000	<410	<410
5098	HS138/SELA INN/BOTTOM OF CANYON	AAA0748	7/27	13258	<840	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420	<840	<420	<420	<420	<420	<2000	<420	<420
5075-5079,5092	HS138/SELA INN/BOTTOM OF CANYON	AAA0749	7/27	13258	<750	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<750	<370	<370	<370	<370	<1800	<370	<370
5093-5098	HS138/SELA INN/BOTTOM OF CANYON	AAA0750	7/27	13258	<800	<400	<400	<400	<400	<400	<400	<400	<400	<400	<400	<400	<800	<400	<400	<400	<400	<1900	<400	<400
5099-5091	HS138/SELA INN/BOTTOM OF CANYON	AAA0751	7/27	13258	<840	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420	<840	<420	<420	<420	<420	<2000	<420	<420
3132	HS137/CT 80/BOTTOM OF CANYON	AAA1471	7/29	13284	<770	<390	<390	<390	<390	<390	<390	<390	<390	<390	<390	<390	<770	<390	<390	<390	<390	<1900	<390	<390
3139	HS137/CT 80/BOTTOM OF CANYON	AAA1472	7/29	13284	<730	<360	<360	<360	<360	<360	<360	<360	<360	<360	<360	<360	<730	<360	<360	<360	<360	<1800	<360	<360
3139R	HS137/CT 80/BOTTOM OF CANYON	AAA1473	7/29	13284	<730	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<730	<370	<370	<370	<370	<1800	<370	<370
3144	HS137/CT 80/BOTTOM OF CANYON	AAA1474	7/29	13284	<700	<350	<350	<350	<350	<350	<350	<350	<350	<350	<350	<350	<700	<350	<350	<350	<350	<1700	<350	<350
1248	J2/TU, HS140 BOTTOM OF CANYON	AAA1475	7/29	13284	<780	<390	<390	<390	<390	<390	<390	<390	<390	<390	<390	<390	<780	<390	<390	<390	<390	<1900	<390	<390
1249	J2/TU, HS140 BOTTOM OF CANYON	AAA1476	7/29	13284	<790	<390	<390	<390	<390	<390	<390	<390	<390	<390	<390	<390	<790	<390	<390	<390	<390	<1900	<390	<390
1253	J2/TU, HS140 BOTTOM OF CANYON	AAA1477	7/29	13284	<750	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<750	<370	<370	<370	<370	<1800	<370	<370
1253R	J2/TU, HS140 BOTTOM OF CANYON	AAA1478	7/29	13284	<740	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<740	<370	<370	<370	<370	<1800	<370	<370
1260	J2/TU, HS140 BOTTOM OF CANYON	AAA1479	7/29	13284	<720	<360	<360	<360	<360	<360	<360	<360	<360	<360	<360	<360	<720	<360	<360	<360	<360	<1800	<360	<360
1250-1254	J2/TU, HS140 BOTTOM OF CANYON	AAA1480	7/29	13284	<760	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<760	<380	<380	<380	<380	<1900	<380	<380
1255-1260	J2/TU, HS140 BOTTOM OF CANYON	AAA1481	7/29	13284	<750	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<750	<370	<370	<370	<370	<1800	<370	<370
2013	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1482	8/3	13319	<720	<360	<360	<360	<360	<360	<360	<360	<360	<360	<360	<360	<720	<360	<360	<360	<360	<1700	<360	<360
2022	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1483	8/3	13319	<690	<350	<350	<350	<350	<350	<350	<350	<350	<350	<350	<350	<690	<350	<350	<350	<350	<1700	<350	<350
2023	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1484	8/3	13319	<670	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<670	<340	<340	<340	<340	<1600	<340	<340
2024	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1485	8/3	13319	<690	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<690	<340	<340	<340	<340	<1700	<340	<340
2034	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1486	8/3	13319	<670	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<670	<330	<330	<330	<330	<1600	<330	<330
2035	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1487	8/3	13319	<670	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<670	<340	<340	<340	<340	<1600	<340	<340
2036	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1489	8/3	13319	<670	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<670	<340	<340	<340	<340	<1600	<340	<340
2038	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1490	8/3	13319	<740	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<740	<370	<370	<370	<370	<1800	<370	<370
2043	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1491	8/3	13319	<680	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<680	<340	<340	<340	<340	<1600	<340	<340
2045	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1492	8/3	13319	<690	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<690	<340	<340	<340	<340	<1700	<340	<340
2050	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1493	8/3	13319	<670	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<670	<340	<340	<340	<340	<1600	<340	<340
2058	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1494	8/3	13319	<690	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<340	<690	<340	<340	<340	<340	<1700	<340	<340
2064	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1495	8/3	13319	<710	<350	<350	<350	<350	<350	<350	<350	<350	<350	<350	<350	<710	<350	<350	<350	<350	<1700	<350	<350
2022R	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1496	8/3	13319	<720	<360	<360	<360	<360	<360	<360	<360	<360	<360	<360	<360	<720	<360	<360	<360	<360	<1700	<360	<360

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	Fluoranthene µg/kg	Fluorene µg/kg	Hexachlorobenzene µg/kg	Hexachlorobutadiene µg/kg	Hexachlorocyclopentadiene µg/kg	Hexachloroethane µg/kg	Indeno[1,2,3-cd]pyrene µg/kg	Isophorone µg/kg	2-Methyl-4,6-dinitrophenol µg/kg	2-Methylnaphthalene µg/kg	2-Methylphenol µg/kg	4-Methylphenol µg/kg	Naphthalene µg/kg	2-Nitroaniline µg/kg	3-Nitroaniline µg/kg	4-Nitroaniline µg/kg	Nitrobenzene µg/kg	2-Nitrophenol µg/kg	4-Nitrophenol µg/kg	N-Nitrosodi-n-propylamine µg/kg	N-Nitrosodimethylamine µg/kg
1098	HS140/HS140 SURF RUNOFF AREAS	AAA0744	7/23	13234	<380	<380	<380	<380	<380	<380	<380	<380	<1900	<380	<380	<380	<380	<1900	<1900	<1900	<380	<380	<1900	<380	<380
1089	HS140/HS140 SURF RUNOFF AREAS	AAA1469	7/23	13234	<380	<380	<380	<380	<380	<380	<380	<380	<1800	<380	<380	<380	<380	<1800	<1800	<1800	<380	<380	<1800	<380	<380
5091	HS138/SELA INN/BOTTOM OF CANYON	AAA0746	7/27	13258	<410	<410	<410	<410	<410	<410	<410	<410	<2000	<410	<410	<410	<410	<2000	<2000	<2000	<410	<410	<2000	<410	<410
5091R	HS138/SELA INN/BOTTOM OF CANYON	AAA0747	7/27	13258	<410	<410	<410	<410	<410	<410	<410	<410	<2000	<410	<410	<410	<410	<2000	<2000	<2000	<410	<410	<2000	<410	<410
5098	HS138/SELA INN/BOTTOM OF CANYON	AAA0748	7/27	13258	<420	<420	<420	<420	<420	<420	<420	<420	<2000	<420	<420	<420	<420	<2000	<2000	<2000	<420	<420	<2000	<420	<420
5075-5079,5092	HS138/SELA INN/BOTTOM OF CANYON	AAA0749	7/27	13258	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
5093-5098	HS138/SELA INN/BOTTOM OF CANYON	AAA0750	7/27	13258	<400	<400	<400	<400	<400	<400	<400	<400	<1900	<400	<400	<400	<400	<1900	<1900	<1900	<400	<400	<1900	<400	<400
5099-5091	HS138/SELA INN/BOTTOM OF CANYON	AAA0751	7/27	13258	<420	<420	<420	<420	<420	<420	<420	<420	<2000	<420	<420	<420	<420	<2000	<2000	<2000	<420	<420	<2000	<420	<420
3132	HS137/CT 80/BOTTOM OF CANYON	AAA1471	7/29	13284	<390	<390	<390	<390	<390	<390	<390	<390	<1900	<390	<390	<390	<390	<1900	<1900	<1900	<390	<390	<1900	<390	<390
3139	HS137/CT 80/BOTTOM OF CANYON	AAA1472	7/29	13284	<360	<360	<360	<360	<360	<360	<360	<360	<1800	<360	<360	<360	<360	<1800	<1800	<1800	<360	<360	<1800	<360	<360
3139R	HS137/CT 80/BOTTOM OF CANYON	AAA1473	7/29	13284	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
3144	HS137/CT 80/BOTTOM OF CANYON	AAA1474	7/29	13284	<350	<350	<350	<350	<350	<350	<350	<350	<1700	<350	<350	<350	<350	<1700	<1700	<1700	<350	<350	<1700	<350	<350
1248	J2/TU, HS140 BOTTOM OF CANYON	AAA1475	7/29	13284	<390	<390	<390	<390	<390	<390	<390	<390	<1900	<390	<390	<390	<390	<1900	<1900	<1900	<390	<390	<1900	<390	<390
1249	J2/TU, HS140 BOTTOM OF CANYON	AAA1476	7/29	13284	<390	<390	<390	<390	<390	<390	<390	<390	<1900	<390	<390	<390	<390	<1900	<1900	<1900	<390	<390	<1900	<390	<390
1253	J2/TU, HS140 BOTTOM OF CANYON	AAA1477	7/29	13284	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
1253R	J2/TU, HS140 BOTTOM OF CANYON	AAA1478	7/29	13284	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
1260	J2/TU, HS140 BOTTOM OF CANYON	AAA1479	7/29	13284	<360	<360	<360	<360	<360	<360	<360	<360	<1800	<360	<360	<360	<360	<1800	<1800	<1800	<360	<360	<1800	<360	<360
1250-1254	J2/TU, HS140 BOTTOM OF CANYON	AAA1480	7/29	13284	<380	<380	<380	<380	<380	<380	<380	<380	<1900	<380	<380	<380	<380	<1900	<1900	<1900	<380	<380	<1900	<380	<380
1255-1260	J2/TU, HS140 BOTTOM OF CANYON	AAA1481	7/29	13284	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
2013	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1482	8/3	13319	<360	<360	<360	<360	<360	<360	<360	<360	<1700	<360	<360	<360	<360	<1700	<1700	<1700	<360	<360	<1700	<360	<360
2022	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1483	8/3	13319	<350	<350	<350	<350	<350	<350	<350	<350	<1700	<350	<350	<350	<350	<1700	<1700	<1700	<350	<350	<1700	<350	<350
2023	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1484	8/3	13319	<340	<340	<340	<340	<340	<340	<340	<340	<1600	<340	<340	<340	<340	<1600	<1600	<1600	<340	<340	<1600	<340	<340
2024	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1485	8/3	13319	<340	<340	<340	<340	<340	<340	<340	<340	<1700	<340	<340	<340	<340	<1700	<1700	<1700	<340	<340	<1700	<340	<340
2034	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1486	8/3	13319	<330	<330	<330	<330	<330	<330	<330	<330	<1600	<330	<330	<330	<330	<1600	<1600	<1600	<330	<330	<1600	<330	<330
2035	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1487	8/3	13319	<340	<340	<340	<340	<340	<340	<340	<340	<1600	<340	<340	<340	<340	<1600	<1600	<1600	<340	<340	<1600	<340	<340
2036	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1489	8/3	13319	<340	<340	<340	<340	<340	<340	<340	<340	<1600	<340	<340	<340	<340	<1600	<1600	<1600	<340	<340	<1600	<340	<340
2038	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1490	8/3	13319	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
2043	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1491	8/3	13319	<340	<340	<340	<340	<340	<340	<340	<340	<1600	<340	<340	<340	<340	<1600	<1600	<1600	<340	<340	<1600	<340	<340
2045	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1492	8/3	13319	<340	<340	<340	<340	<340	<340	<340	<340	<1700	<340	<340	<340	<340	<1700	<1700	<1700	<340	<340	<1700	<340	<340
2050	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1493	8/3	13319	<340	<340	<340	<340	<340	<340	<340	<340	<1600	<340	<340	<340	<340	<1600	<1600	<1600	<340	<340	<1600	<340	<340
2058	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1494	8/3	13319	<340	<340	<340	<340	<340	<340	<340	<340	<1700	<340	<340	<340	<340	<1700	<1700	<1700	<340	<340	<1700	<340	<340
2064	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1495	8/3	13319	<350	<350	<350	<350	<350	<350	<350	<350	<1700	<350	<350	<350	<350	<1700	<1700	<1700	<350	<350	<1700	<350	<350
2022R	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1496	8/3	13319	<360	<360	<360	<360	<360	<360	<360	<360	<1700	<360	<360	<360	<360	<1700	<1700	<1700	<360	<360	<1700	<360	<360

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	1,2,4-Trichlorobenzene	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	Total Mixed Arochlors (>10,000)
					µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/Kg
1098	HS140/HS140 SURF RUNOFF AREAS	AAA0744	7/23	13234	<380	<1900	<380	<380	<380	<380	<380	<380	
1089	HS140/HS140 SURF RUNOFF AREAS	AAA1469	7/23	13234	<380	<1800	<380	<380	<380	<380	<380	<380	
5091	HS138/SELA INN/BOTTOM OF CANYON	AAA0746	7/27	13258	<410	<2000	<410	<410	<410	<410	<410	<410	
5091R	HS138/SELA INN/BOTTOM OF CANYON	AAA0747	7/27	13258	<410	<2000	<410	<410	<410	<410	<410	<410	
5098	HS138/SELA INN/BOTTOM OF CANYON	AAA0748	7/27	13258	<420	<2000	<420	<420	<420	<420	<420	<420	
5075-5079,5092	HS138/SELA INN/BOTTOM OF CANYON	AAA0749	7/27	13258	<370	<1800	<370	<370	<370	<370	<370	<370	
5093-5098	HS138/SELA INN/BOTTOM OF CANYON	AAA0750	7/27	13258	<400	<1900	<400	<400	<400	<400	<400	<400	
5099-5091	HS138/SELA INN/BOTTOM OF CANYON	AAA0751	7/27	13258	<420	<2000	<420	<420	<420	<420	<420	<420	
3132	HS137/CT 80/BOTTOM OF CANYON	AAA1471	7/29	13284	<390	<1900	<390	<390	<390	<390	<390	<390	
3139	HS137/CT 80/BOTTOM OF CANYON	AAA1472	7/29	13284	<360	<1800	<360	<360	<360	<360	<360	<360	
3139R	HS137/CT 80/BOTTOM OF CANYON	AAA1473	7/29	13284	<370	<1800	<370	<370	<370	<370	<370	<370	
3144	HS137/CT 80/BOTTOM OF CANYON	AAA1474	7/29	13284	<350	<1700	<350	<350	<350	<350	<350	<350	
1248	J2/TU, HS140 BOTTOM OF CANYON	AAA1475	7/29	13284	<390	<1900	<390	<390	<390	<390	<390	<390	
1249	J2/TU, HS140 BOTTOM OF CANYON	AAA1476	7/29	13284	<390	<1900	<390	<390	<390	<390	<390	<390	
1253	J2/TU, HS140 BOTTOM OF CANYON	AAA1477	7/29	13284	<370	<1800	<370	<370	<370	<370	<370	<370	
1253R	J2/TU, HS140 BOTTOM OF CANYON	AAA1478	7/29	13284	<370	<1800	<370	<370	<370	<370	<370	<370	
1260	J2/TU, HS140 BOTTOM OF CANYON	AAA1479	7/29	13284	<360	<1800	<360	<360	<360	<360	<360	<360	
1250-1254	J2/TU, HS140 BOTTOM OF CANYON	AAA1480	7/29	13284	<380	<1900	<380	<380	<380	<380	<380	<380	
1255-1260	J2/TU, HS140 BOTTOM OF CANYON	AAA1481	7/29	13284	<370	<1800	<370	<370	<370	<370	<370	<370	
2013	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1482	8/3	13319	<360	<1700	<360	<360	<360	<360	<360	<360	
2022	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1483	8/3	13319	<350	<1700	<350	<350	<350	<350	<350	<350	
2023	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1484	8/3	13319	<340	<1600	<340	<340	<340	<340	<340	<340	
2024	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1485	8/3	13319	<340	<1700	<340	<340	<340	<340	<340	<340	
2034	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1486	8/3	13319	<330	<1600	<330	<330	<330	<330	<330	<330	
2035	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1487	8/3	13319	<340	<1600	<340	<340	<340	<340	<340	<340	
2036	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1489	8/3	13319	<340	<1600	<340	<340	<340	<340	<340	<340	
2038	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1490	8/3	13319	<370	<1800	<370	<370	<370	<370	<370	<370	
2043	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1491	8/3	13319	<340	<1600	<340	<340	<340	<340	<340	<340	
2045	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1492	8/3	13319	<340	<1700	<340	<340	<340	<340	<340	<340	
2050	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1493	8/3	13319	<340	<1600	<340	<340	<340	<340	<340	<340	
2058	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1494	8/3	13319	<340	<1700	<340	<340	<340	<340	<340	<340	
2064	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1495	8/3	13319	<350	<1700	<350	<350	<350	<350	<350	<350	
2022R	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1496	8/3	13319	<360	<1700	<360	<360	<360	<360	<360	<360	

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Azobenzene	m-Benzidine	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Benzoic acid	Benzyl alcohol	Bis(2-chloroethoxy)methane	Bis(2-chloroethyl)ether	Bis(2-chloroisopropyl)ether	Bis(2-ethylhexyl)phthalate	4-Bromophenylphenyl ether	Butyl benzyl phthalate	4-Chloro-3-methylphenol
					µg/kg*	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
5041	HS 138, SE LA INN/DEBRIS AREA	AAA0752	8/10	13358	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
5046	HS 138, SE LA INN/DEBRIS AREA	AAA1509	8/10	13358	<3300	<3300	<3300	<3300	<3300		<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300
5042-5046	HS 138, SE LA INN/DEBRIS AREA	AAA1510	8/10	13358	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
5004	HS 138, SE LA INN/OUTFALL ST138	AAA1511	8/17	13382	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5011	HS 138, SE LA INN/OUTFALL ST138	AAA1512	8/17	13382	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5018	HS 138, SE LA INN/OUTFALL ST138	AAA1513	8/17	13402	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5028	HS 138, SE LA INN/OUTFALL ST138	AAA1514	8/17	13402	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	1600	<660	<660	<660	<660	<660	<660	<660	<660
5028R	HS 138, SE LA INN/OUTFALL ST138	AAA1515	8/17	13402	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	1000	<330	<330	<330	<330	<330	<330	<330	<330
5049	HS 138, SE LA INN/OUTFALL ST138	AAA1516	8/17	13402	<330	<330	<330	<330	<330		340	<330	930	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5049R	HS 138, SE LA INN/OUTFALL ST138	AAA1517	8/17	13402	<330	<330	<330	<330	<330		470	830	1600	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5061	HS 138, SE LA INN/OUTFALL ST138	AAA1518	8/17	13382	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
5065	HS 138, SE LA INN/OUTFALL ST138	AAA1519	8/17	13382	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5000-5004	HS 138, SE LA INN/OUTFALL ST138	AAA1520	8/17	13382	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2142	B BRIDGE/BOTTOM OF CANYON	AAA1523	7/29	13291	<380	<380	<380	<380	<380	<1800	<380	<380	<380	<380	<380	<1800	<760	<380	<380	<380	<380	<380	<380	<760
2147	B BRIDGE/BOTTOM OF CANYON	AAA1524	7/29	13291	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<370	<1800	<740	<370	<370	<370	<370	<370	<370	<740
2147R	B BRIDGE/BOTTOM OF CANYON	AAA1525	7/29	13291	<390	<390	<390	<390	<390	<1900	<390	<390	<390	<390	<390	<1900	<780	<390	<390	<390	<390	<390	<390	<780
2150	B BRIDGE/BOTTOM OF CANYON	AAA1526	7/29	13291	<380	<380	<380	<380	<380	<1800	<380	<380	<380	<380	<380	<1800	<760	<380	<380	<380	<380	<380	<380	<760
2150-2156	B BRIDGE/BOTTOM OF CANYON	AAA1527	7/29	13291	<390	<390	<390	<390	<390	<1900	<390	<390	<390	<390	<390	<1900	<790	<390	<390	<390	<390	<390	<390	<790
2073	B BRIDGE/TWO LOWER LINES EOD	AAA1528	8/3	13319	<400	<400	<400	<400	<400		<400	<400	850	<400	<400	<1900	<800	<400	<400	<400	<400	<400	<400	<800
2073R	B BRIDGE/TWO LOWER LINES EOD	AAA1529	8/3	13319	<410	<410	<410	<410	<410		<410	<410	<410	<410	<410	<2000	<820	<410	<410	<410	<410	<410	<410	<820
2075	B BRIDGE/TWO LOWER LINES EOD	AAA1530	8/3	13319	<360	<360	<360	610	<360		2200	2200	3600	840	1400	<1800	<730	<360	<360	<360	490	<360	<360	<730
2080	B BRIDGE/TWO LOWER LINES EOD	AAA1531	8/3	13319	<360	<360	<360	<360	<360		<360	<360	<360	<360	<360	<1800	<730	<360	<360	<360	<360	<360	<360	<730
2095	B BRIDGE/TWO LOWER LINES EOD	AAA1532	8/3	13319	<350	<350	<350	<350	<350		<350	<350	<350	<350	<350	<1700	<710	<350	<350	<350	<350	<350	<350	<710
2096	B BRIDGE/TWO LOWER LINES EOD	AAA1533	8/3	13319	<370	<370	<370	<370	<370		<370	<370	<370	<370	<370	<1800	<730	<370	<370	<370	<370	<370	<370	<730
2006	BAILEY BRIDGE/OPPOSITE PARK	AAA1534	8/10	13358	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2007	BAILEY BRIDGE/OPPOSITE PARK	AAA1535	8/10	13358	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2007R	BAILEY BRIDGE/OPPOSITE PARK	AAA1536	8/10	13358	<3300	<3300	<3300	<3300	<3300		<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300
2009	BAILEY BRIDGE/OPPOSITE PARK	AAA1537	8/10	13358	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2001-2006	BAILEY BRIDGE/OPPOSITE PARK	AAA1538	8/10	13358	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2007-2011	BAILEY BRIDGE/OPPOSITE PARK	AAA1539	8/10	13358	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2114	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1540	8/10	13358	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2122	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1541	8/10	13358	<660	<660	<660	710 J***	<660		2200 J	<660	3400 J	<660	1600 J	<660	<660	<660	<660	<660	<660	<660	<660	<660
2122R	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1544	8/10	13358	<660	<660	<660	1900 J	<660		4500 J	<660	6500 J	<660	2900 J	<660	<660	<660	<660	<660	<660	<660	<660	<660

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	4-Chloroaniline	2-Chloronaphthalene	o-Chlorophenol	4-Chlorophenylphenyl ether	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo[a,h]anthracene	Dibenzofuran	o-Dichlorobenzene (1,2)	m-Dichlorobenzene (1,3)	p-Dichlorobenzene (1,4)	3,3-Dichlorobenzidine	2,4-Dichlorophenol	Diethyl phthalate	Dimethyl phthalate	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene
					µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
5041	HS 138, SE LA INN/DEBRIS AREA	AAA0752	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
5046	HS 138, SE LA INN/DEBRIS AREA	AAA1509	8/10	13358	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300
5042-5046	HS 138, SE LA INN/DEBRIS AREA	AAA1510	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
5004	HS 138, SE LA INN/OUTFALL ST138	AAA1511	8/17	13382	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5011	HS 138, SE LA INN/OUTFALL ST138	AAA1512	8/17	13382	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5018	HS 138, SE LA INN/OUTFALL ST138	AAA1513	8/17	13402	<330	<330	<330	<330	<330	610	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5028	HS 138, SE LA INN/OUTFALL ST138	AAA1514	8/17	13402	<660	<660	<660	<660	<660	1200	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
5028R	HS 138, SE LA INN/OUTFALL ST138	AAA1515	8/17	13402	<330	<330	<330	<330	<330	510	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5049	HS 138, SE LA INN/OUTFALL ST138	AAA1516	8/17	13402	<330	<330	<330	<330	410	1400	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5049R	HS 138, SE LA INN/OUTFALL ST138	AAA1517	8/17	13402	<330	<330	<330	<330	660	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5061	HS 138, SE LA INN/OUTFALL ST138	AAA1518	8/17	13382	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
5065	HS 138, SE LA INN/OUTFALL ST138	AAA1519	8/17	13382	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5000-5004	HS 138, SE LA INN/OUTFALL ST138	AAA1520	8/17	13382	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2142	B BRIDGE/BOTTOM OF CANYON	AAA1523	7/29	13291	<760	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<760	<380	<380	<380	<380	<1800	<380	<380
2147	B BRIDGE/BOTTOM OF CANYON	AAA1524	7/29	13291	<740	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<740	<370	<370	<370	<370	<1800	<370	<370
2147R	B BRIDGE/BOTTOM OF CANYON	AAA1525	7/29	13291	<780	<390	<390	<390	<390	<390	<390	<390	<390	<390	<390	<390	<780	<390	<390	<390	<390	<1900	<390	<390
2150	B BRIDGE/BOTTOM OF CANYON	AAA1526	7/29	13291	<760	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<380	<760	<380	<380	<380	<380	<1800	<380	<380
2150-2156	B BRIDGE/BOTTOM OF CANYON	AAA1527	7/29	13291	<790	<390	<390	<390	<390	<390	<390	<390	<390	<390	<390	<390	<790	<390	<390	<390	<390	<1900	<390	<390
2073	B BRIDGE/TWO LOWER LINES EOD	AAA1528	8/3	13319	<800	<400	<400	<400	650	<400	<400	<400	<400	<400	<400	<400	<800	<400	<400	<400	<400	<1900	<400	<400
2073R	B BRIDGE/TWO LOWER LINES EOD	AAA1529	8/3	13319	<820	<410	<410	<410	490	<410	<410	<410	<410	<410	<410	<410	<820	<410	<410	<410	<410	<2000	<410	<410
2075	B BRIDGE/TWO LOWER LINES EOD	AAA1530	8/3	13319	<730	<360	<360	<360	2700	<360	<360	<360	<360	<360	<360	<360	<730	<360	<360	<360	<360	<1800	<360	<360
2080	B BRIDGE/TWO LOWER LINES EOD	AAA1531	8/3	13319	<730	<360	<360	<360	<360	<360	<360	<360	<360	<360	<360	<360	<730	<360	<360	<360	<360	<1800	<360	<360
2095	B BRIDGE/TWO LOWER LINES EOD	AAA1532	8/3	13319	<710	<350	<350	<350	<350	<350	<350	<350	<350	<350	<350	<350	<710	<350	<350	<350	<350	<1700	<350	<350
2096	B BRIDGE/TWO LOWER LINES EOD	AAA1533	8/3	13319	<730	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370	<730	<370	<370	<370	<370	<1800	<370	<370
2006	BAILEY BRIDGE/OPPOSITE PARK	AAA1534	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2007	BAILEY BRIDGE/OPPOSITE PARK	AAA1535	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2007R	BAILEY BRIDGE/OPPOSITE PARK	AAA1536	8/10	13358	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300
2009	BAILEY BRIDGE/OPPOSITE PARK	AAA1537	8/10	13358	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2001-2006	BAILEY BRIDGE/OPPOSITE PARK	AAA1538	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2007-2011	BAILEY BRIDGE/OPPOSITE PARK	AAA1539	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2114	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1540	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2122	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1541	8/10	13358	<660	<660	<660	<660	4500 J	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2122R	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1544	8/10	13358	<660	<660	<660	<660	8900 J	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No.	Sample Date '92	EM-9 Request #	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno[1,2,3-cd]pyrene	Isophorone	2-Methyl-4,6-dinitrophenol	2-Methylnaphthalene	2-Methylphenol	4-Methylphenol	Naphthalene	2-Nitroaniline	3-Nitroaniline	4-Nitroaniline	Nitrobenzene	2-Nitrophenol	4-Nitrophenol	N-Nitrosodi-n-propylamine	N-Nitrosodimethylamine
					µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
5041	HS 138, SE LA INN/DEBRIS AREA	AAA0752	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
5046	HS 138, SE LA INN/DEBRIS AREA	AAA1509	8/10	13358	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300
5042-5046	HS 138, SE LA INN/DEBRIS AREA	AAA1510	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
5004	HS 138, SE LA INN/OUTFALL ST138	AAA1511	8/17	13382	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5011	HS 138, SE LA INN/OUTFALL ST138	AAA1512	8/17	13382	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5018	HS 138, SE LA INN/OUTFALL ST138	AAA1513	8/17	13402	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5028	HS 138, SE LA INN/OUTFALL ST138	AAA1514	8/17	13402	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
5028R	HS 138, SE LA INN/OUTFALL ST138	AAA1515	8/17	13402	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5049	HS 138, SE LA INN/OUTFALL ST138	AAA1516	8/17	13402	480	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5049R	HS 138, SE LA INN/OUTFALL ST138	AAA1517	8/17	13402	530	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5061	HS 138, SE LA INN/OUTFALL ST138	AAA1518	8/17	13382	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
5065	HS 138, SE LA INN/OUTFALL ST138	AAA1519	8/17	13382	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5000-5004	HS 138, SE LA INN/OUTFALL ST138	AAA1520	8/17	13382	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2142	B BRIDGE/BOTTOM OF CANYON	AAA1523	7/29	13291	<380	<380	<380	<380	<380	<380	<380	<380	<1800	<380	<380	<380	<380	<1800	<1800	<1800	<380	<380	<1800	<380	<380
2147	B BRIDGE/BOTTOM OF CANYON	AAA1524	7/29	13291	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
2147R	B BRIDGE/BOTTOM OF CANYON	AAA1525	7/29	13291	<390	<390	<390	<390	<390	<390	<390	<390	<1900	<390	<390	<390	<390	<1900	<1900	<1900	<390	<390	<1900	<390	<390
2150	B BRIDGE/BOTTOM OF CANYON	AAA1526	7/29	13291	<380	<380	<380	<380	<380	<380	<380	<380	<1800	<380	<380	<380	<380	<1800	<1800	<1800	<380	<380	<1800	<380	<380
2150-2156	B BRIDGE/BOTTOM OF CANYON	AAA1527	7/29	13291	<390	<390	<390	<390	<390	<390	<390	<390	<1900	<390	<390	<390	<390	<1900	<1900	<1900	<390	<390	<1900	<390	<390
2073	B BRIDGE/TWO LOWER LINES EOD	AAA1528	8/3	13319	690	<400	<400	<400	<400	<400	<400	<400	<1900	<400	<400	<400	<400	<1900	<1900	<1900	<400	<400	<1900	<400	<400
2073R	B BRIDGE/TWO LOWER LINES EOD	AAA1529	8/3	13319	<410	<410	<410	<410	<410	<410	<410	<410	<2000	<410	<410	<410	<410	<2000	<2000	<2000	<410	<410	<2000	<410	<410
2075	B BRIDGE/TWO LOWER LINES EOD	AAA1530	8/3	13319	4200	<360	<360	<360	<360	<360	900	<360	<1800	<360	<360	<360	<360	<1800	<1800	<1800	<360	<360	<1800	<360	<360
2080	B BRIDGE/TWO LOWER LINES EOD	AAA1531	8/3	13319	<360	<360	<360	<360	<360	<360	<360	<360	<1800	<360	<360	<360	<360	<1800	<1800	<1800	<360	<360	<1800	<360	<360
2095	B BRIDGE/TWO LOWER LINES EOD	AAA1532	8/3	13319	<350	<350	<350	<350	<350	<350	<350	<350	<1700	<350	<350	<350	<350	<1700	<1700	<1700	<350	<350	<1700	<350	<350
2096	B BRIDGE/TWO LOWER LINES EOD	AAA1533	8/3	13319	<370	<370	<370	<370	<370	<370	<370	<370	<1800	<370	<370	<370	<370	<1800	<1800	<1800	<370	<370	<1800	<370	<370
2006	BAILEY BRIDGE/OPPOSITE PARK	AAA1534	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2007	BAILEY BRIDGE/OPPOSITE PARK	AAA1535	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2007R	BAILEY BRIDGE/OPPOSITE PARK	AAA1536	8/10	13358	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300
2009	BAILEY BRIDGE/OPPOSITE PARK	AAA1537	8/10	13358	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2001-2006	BAILEY BRIDGE/OPPOSITE PARK	AAA1538	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2007-2011	BAILEY BRIDGE/OPPOSITE PARK	AAA1539	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2114	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1540	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2122	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1541	8/10	13358	3800 J	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2122R	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1544	8/10	13358	7900 J	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	N-Nitrosodiphenylamine µg/kg	Pentachlorophenol µg/kg	Phenanthrene µg/kg	Phenol µg/kg	Pyrene µg/kg	1,2,4-Trichlorobenzene µg/kg	2,4,5-Trichlorophenol µg/kg	2,4,6-Trichlorophenol µg/kg	Total Mixed Arochlors (>10,000) µg/Kg
5041	HS 138, SE LA INN/DEBRIS AREA	AAA0752	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	
5046	HS 138, SE LA INN/DEBRIS AREA	AAA1509	8/10	13358	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	
5042-5046	HS 138, SE LA INN/DEBRIS AREA	AAA1510	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	
5004	HS 138, SE LA INN/OUTFALL ST138	AAA1511	8/17	13382	<330	<330	<330	<330	<330	<330	<330	<330	
5011	HS 138, SE LA INN/OUTFALL ST138	AAA1512	8/17	13382	<330	<330	<330	<330	<330	<330	<330	<330	
5018	HS 138, SE LA INN/OUTFALL ST138	AAA1513	8/17	13402	<330	<330	<330	<330	<330	<330	<330	<330	
5028'	HS 138, SE LA INN/OUTFALL ST138	AAA1514	8/17	13402	<660	<660	<660	<660	<660	<660	<660	<660	
5028R	HS 138, SE LA INN/OUTFALL ST138	AAA1515	8/17	13402	<330	<330	<330	<330	<330	<330	<330	<330	
5049	HS 138, SE LA INN/OUTFALL ST138	AAA1516	8/17	13402	<330	<330	<330	<330	590	<330	<330	<330	
5049R	HS 138, SE LA INN/OUTFALL ST138	AAA1517	8/17	13402	<330	<330	<330	<330	730	<330	<330	<330	
5061	HS 138, SE LA INN/OUTFALL ST138	AAA1518	8/17	13382	<660	<660	<660	<660	<660	<660	<660	<660	
5065	HS 138, SE LA INN/OUTFALL ST138	AAA1519	8/17	13382	<330	<330	<330	<330	<330	<330	<330	<330	
5000-5004	HS 138, SE LA INN/OUTFALL ST138	AAA1520	8/17	13382	<330	<330	<330	<330	<330	<330	<330	<330	
2142	B BRIDGE/BOTTOM OF CANYON	AAA1523	7/29	13291	<380	<1800	<380	<380	<380	<380	<380	<380	
2147	B BRIDGE/BOTTOM OF CANYON	AAA1524	7/29	13291	<370	<1800	<370	<370	<370	<370	<370	<370	
2147R	B BRIDGE/BOTTOM OF CANYON	AAA1525	7/29	13291	<390	<1900	<390	<390	<390	<390	<390	<390	
2150	B BRIDGE/BOTTOM OF CANYON	AAA1526	7/29	13291	<380	<1800	<380	<380	<380	<380	<380	<380	
2150-2156	B BRIDGE/BOTTOM OF CANYON	AAA1527	7/29	13291	<390	<1900	<390	<390	<390	<390	<390	<390	
2073	B BRIDGE/TWO LOWER LINES EOD	AAA1528	8/3	13319	<400	<1900	<400	<400	540	<400	<400	<400	
2073R	B BRIDGE/TWO LOWER LINES EOD	AAA1529	8/3	13319	<410	<2000	<410	<410	<410	<410	<410	<410	
2075	B BRIDGE/TWO LOWER LINES EOD	AAA1530	8/3	13319	<360	<1800	3200	<360	4700	<360	<360	<360	
2080	B BRIDGE/TWO LOWER LINES EOD	AAA1531	8/3	13319	<360	<1800	<360	<360	<360	<360	<360	<360	
2095	B BRIDGE/TWO LOWER LINES EOD	AAA1532	8/3	13319	<350	<1700	<350	<350	<350	<350	<350	<350	
2096	B BRIDGE/TWO LOWER LINES EOD	AAA1533	8/3	13319	<370	<1800	<370	<370	<370	<370	<370	<370	
2006	BAILEY BRIDGE/OPPOSITE PARK	AAA1534	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	
2007	BAILEY BRIDGE/OPPOSITE PARK	AAA1535	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	
2007R	BAILEY BRIDGE/OPPOSITE PARK	AAA1536	8/10	13358	<3300	<3300	<3300	<3300	<3300	<3300	<3300	<3300	
2009	BAILEY BRIDGE/OPPOSITE PARK	AAA1537	8/10	13358	<330	<330	<330	<330	<330	<330	<330	<330	
2001-2006	BAILEY BRIDGE/OPPOSITE PARK	AAA1538	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	
2007-2011	BAILEY BRIDGE/OPPOSITE PARK	AAA1539	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	
2114	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1540	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	
2122	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1541	8/10	13358	<660	<660	4700 J	<660	9000 J	<660	<660	<660	
2122R	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1544	8/10	13358	<660	<660	10000J	<660	16500J	<660	<660	<660	

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No.	Sample Date '92	EM-9 Request #	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Azobenzene	m-Benzidine	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Benzoic acid	Benzyl alcohol	Bis(2-chloroethoxy)methane	Bis(2-chloroethyl)ether	Bis(2-chloroisopropyl)ether	Bis(2-ethylhexyl)phthalate	4-Bromophenylphenyl ether	Butyl benzyl phthalate	4-Chloro-3-methylphenol
					µg/kg*	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
2133	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1545	8/10	13358	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2110-2116	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1546	8/10	13358	<660	<660	<660	<660	<660		2000 J	<660	2600 J	<660	1100 J	<660	<660	<660	<660	<660	<660	<660	<660	<660
2120-2123	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1547	8/10	13358	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2130-2134	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1548	8/10	13358	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3003	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1521	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3007	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1522	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3015	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1550	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3023	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1551	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3033	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1552	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3045	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1553	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3051	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1554	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3053	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1555	8/19	13414	<1700	<1700	<1700	<1700	<1700		<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700
3059	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1556	8/19	13414	<1700	<1700	<1700	<1700	<1700		<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700
3088	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1557	8/19	13414	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3093	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1558	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3000-3006	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1559	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3031-3037	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1560	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3052-3056	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1561	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3057-3062,3086	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1562	8/19	13414	<1600	<1600	<1600	<1600	<1600		<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600
3087-3090	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1563	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3091-3094	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1564	8/19	13414	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3065	HS137 CT80/BENCH AREA OF HS137	AAA1565	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3069	HS137 CT80/BENCH AREA OF HS137	AAA1566	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3074	HS137 CT80/BENCH AREA OF HS137	AAA1567	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3081	HS137 CT80/BENCH AREA OF HS137	AAA1568	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3083	HS137 CT80/BENCH AREA OF HS137	AAA1569	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3072-3077	HS137 CT80/BENCH AREA OF HS137	AAA1570	8/19	13414	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3078-3081	HS137 CT80/BENCH AREA OF HS137	AAA1571	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3082-3085	HS137 CT80/BENCH AREA OF HS137	AAA1572	8/19	13414	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1300	J-2/TU, HS140/HS140 DRAINAGE	AAA1573	8/26	13424	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1301	J-2/TU, HS140/HS140 DRAINAGE	AAA1574	8/26	13449	<1700	<1700	<1700	<1700	<1700		<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700
1302	J-2/TU, HS140/HS140 DRAINAGE	AAA1575	8/26	13424	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1303	J-2/TU, HS140/HS140 DRAINAGE	AAA1576	8/26	13424	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1304	J-2/TU, HS140/HS140 DRAINAGE	AAA1577	8/26	13449	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1305	J-2/TU, HS140/HS140 DRAINAGE	AAA1578	8/26	13449	<330	<330	<330	<330	<330		<330	<330	410	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	4-Chloroaniline	2-Chloronaphthalene	o-Chlorophenol	4-Chlorophenylphenyl ether	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo[a,h]anthracene	Dibenzofuran	o-Dichlorobenzene (1,2)	m-Dichlorobenzene (1,3)	p-Dichlorobenzene (1,4)	3,3-Dichlorobenzidine	2,4-Dichlorophenol	Diethyl phthalate	Dimethyl phthalate	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene
					µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
2133	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1545	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2110-2116	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1546	8/10	13358	<660	<660	<660	<660	3900 J	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2120-2123	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1547	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2130-2134	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1548	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3003	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1521	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3007	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1522	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3015	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1550	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3023	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1551	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3033	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1552	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3045	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1553	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3051	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1554	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3053	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1555	8/19	13414	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700
3059	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1556	8/19	13414	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700
3088	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1557	8/19	13414	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3093	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1558	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3000-3006	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1559	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3031-3037	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1560	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3052-3058	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1561	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3057-3062,3086	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1562	8/19	13414	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600
3087-3090	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1563	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3091-3094	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1564	8/19	13414	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3065	HS137 CT80/BENCH AREA OF HS137	AAA1565	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3069	HS137 CT80/BENCH AREA OF HS137	AAA1566	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3074	HS137 CT80/BENCH AREA OF HS137	AAA1567	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3081	HS137 CT80/BENCH AREA OF HS137	AAA1568	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3083	HS137 CT80/BENCH AREA OF HS137	AAA1569	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3072-3077	HS137 CT80/BENCH AREA OF HS137	AAA1570	8/19	13414	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3078-3081	HS137 CT80/BENCH AREA OF HS137	AAA1571	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3082-3085	HS137 CT80/BENCH AREA OF HS137	AAA1572	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1300	J-2/TU, HS140/HS140 DRAINAGE	AAA1573	8/26	13424	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1301	J-2/TU, HS140/HS140 DRAINAGE	AAA1574	8/26	13449	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700
1302	J-2/TU, HS140/HS140 DRAINAGE	AAA1575	8/26	13424	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1303	J-2/TU, HS140/HS140 DRAINAGE	AAA1576	8/26	13424	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1304	J-2/TU, HS140/HS140 DRAINAGE	AAA1577	8/26	13449	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1305	J-2/TU, HS140/HS140 DRAINAGE	AAA1578	8/26	13449	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno[1,2,3-cd]pyrene	Isophorone	2-Methyl-4,6-dinitrophenol	2-Methylnaphthalene	2-Methylphenol	4-Methylphenol	Naphthalene	2-Nitroaniline	3-Nitroaniline	4-Nitroaniline	Nitrobenzene	2-Nitrophenol	4-Nitrophenol	N-Nitrosodi-n-propylamine	N-Nitrosodimethylamine
					µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
2133	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1545	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2110-2116	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1546	8/10	13358	3300 J	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2120-2123	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1547	8/10	13358	770 J	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
2130-2134	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1548	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3003	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1521	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3007	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1522	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3015	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1550	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3023	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1551	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3033	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1552	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3045	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1553	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3051	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1554	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3053	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1555	8/19	13414	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700
3059	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1556	8/19	13414	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700
3088	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1557	8/19	13414	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3093	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1558	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3000-3006	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1559	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3031-3037	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1560	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3052-3056	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1561	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3057-3062,3086	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1562	8/19	13414	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600
3087-3090	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1563	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3091-3094	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1564	8/19	13414	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3065	HS137 CT80/BENCH AREA OF HS137	AAA1565	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3069	HS137 CT80/BENCH AREA OF HS137	AAA1566	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3074	HS137 CT80/BENCH AREA OF HS137	AAA1567	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3081	HS137 CT80/BENCH AREA OF HS137	AAA1568	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3083	HS137 CT80/BENCH AREA OF HS137	AAA1569	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3072-3077	HS137 CT80/BENCH AREA OF HS137	AAA1570	8/19	13414	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3078-3081	HS137 CT80/BENCH AREA OF HS137	AAA1571	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3082-3085	HS137 CT80/BENCH AREA OF HS137	AAA1572	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1300	J-2/TU, HS140/HS140 DRAINAGE	AAA1573	8/26	13424	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1301	J-2/TU, HS140/HS140 DRAINAGE	AAA1574	8/26	13449	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700
1302	J-2/TU, HS140/HS140 DRAINAGE	AAA1575	8/26	13424	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1303	J-2/TU, HS140/HS140 DRAINAGE	AAA1576	8/26	13424	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1304	J-2/TU, HS140/HS140 DRAINAGE	AAA1577	8/26	13449	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1305	J-2/TU, HS140/HS140 DRAINAGE	AAA1578	8/26	13449	400	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	N-Nitrosodiphenylamine µg/kg	Pentachlorophenol µg/kg	Phenanthrene µg/kg	Phenol µg/kg	Pyrene µg/kg	1,2,4-Trichlorobenzene µg/kg	2,4,5-Trichlorophenol µg/kg	2,4,6-Trichlorophenol µg/kg	Total Mixed Arochlors (>10,000) µg/Kg
2133	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1545	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	
2110-2116	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1546	8/10	13358	<660	<660	4500 J	<660	7300 J	<660	<660	<660	
2120-2123	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1547	8/10	13358	<660	<660	1000 J	<660	2000 J	<660	<660	<660	
2130-2134	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1548	8/10	13358	<660	<660	<660	<660	<660	<660	<660	<660	
3003	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1521	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3007	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1522	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3015	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1550	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3023	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1551	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3033	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1552	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3045	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1553	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3051	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1554	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3053	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1555	8/19	13414	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	
3059	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1556	8/19	13414	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	
3088	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1557	8/19	13414	<660	<660	<660	<660	<660	<660	<660	<660	
3093	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1558	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3000-3006	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1559	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3031-3037	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1560	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3052-3056	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1561	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3057-3062,3086	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1562	8/19	13414	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	
3087-3090	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1563	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3091-3094	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1564	8/19	13414	<660	<660	<660	<660	<660	<660	<660	<660	
3065	HS137 CT80/BENCH AREA OF HS137	AAA1565	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3069	HS137 CT80/BENCH AREA OF HS137	AAA1566	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3074	HS137 CT80/BENCH AREA OF HS137	AAA1567	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3081	HS137 CT80/BENCH AREA OF HS137	AAA1568	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3083	HS137 CT80/BENCH AREA OF HS137	AAA1569	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3072-3077	HS137 CT80/BENCH AREA OF HS137	AAA1570	8/19	13414	<660	<660	<660	<660	<660	<660	<660	<660	
3078-3081	HS137 CT80/BENCH AREA OF HS137	AAA1571	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
3082-3085	HS137 CT80/BENCH AREA OF HS137	AAA1572	8/19	13414	<330	<330	<330	<330	<330	<330	<330	<330	
1300	J-2/TU, HS140/HS140 DRAINAGE	AAA1573	8/26	13424	<330	<330	<330	<330	<330	<330	<330	<330	
1301	J-2/TU, HS140/HS140 DRAINAGE	AAA1574	8/26	13449	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	
1302	J-2/TU, HS140/HS140 DRAINAGE	AAA1575	8/26	13424	<330	<330	<330	<330	<330	<330	<330	<330	
1303	J-2/TU, HS140/HS140 DRAINAGE	AAA1576	8/26	13424	<330	<330	<330	<330	<330	<330	<330	<330	
1304	J-2/TU, HS140/HS140 DRAINAGE	AAA1577	8/26	13449	<330	<330	<330	<330	<330	<330	<330	<330	
1305	J-2/TU, HS140/HS140 DRAINAGE	AAA1578	8/26	13449	<330	<330	<330	<330	500	<330	<330	<330	

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Azobenzene	m-Benzidine	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Benzoic acid	Benzyl alcohol	Bis(2-chloroethoxy)methane	Bis(2-chloroethyl)ether	Bis(2-chloroisopropyl)ether	Bis(2-ethylhexyl)phthalate	4-Bromophenylphenyl ether	Butyl benzyl phthalate	4-Chloro-3-methylphenol
					µg/kg*	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
1306	J-2/TU, HS140/HS140 DRAINAGE	AAA1579	8/26	13424	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1307	J-2/TU, HS140/HS140 DRAINAGE	AAA1580	8/26	13424	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1308	J-2/TU, HS140/HS140 DRAINAGE	AAA1581	8/26	13449	<330	<330	<330	<330	<330		<330	<330	370	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1309	J-2/TU, HS140/HS140 DRAINAGE	AAA1582	8/26	13424	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1310	J-2/TU, HS140/HS140 DRAINAGE	AAA1583	8/26	13449	<1700	<1700	<1700	<1700	<1700		<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700
1311	J-2/TU, HS140/HS140 DRAINAGE	AAA1584	8/26	13449	<330	<330	<330	<330	<330		330	<330	680	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1312	J-2/TU, HS140/HS140 DRAINAGE	AAA1585	8/26	13449	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1313	J-2/TU, HS140/HS140 DRAINAGE	AAA1586	8/26	13449	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1314	J-2/TU, HS140/HS140 DRAINAGE	AAA1587	8/26	13449	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5080	HS136.SELA INN/BELOW ST138 OUTFALL	AAA1588	8/27	Data lost due to laboratory error																				
5081	HS136.SELA INN/BELOW ST138 OUTFALL	AAA1589	8/27	13447	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5082	HS136.SELA INN/BELOW ST138 OUTFALL	AAA1590	8/27	13447	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5083	HS136.SELA INN/BELOW ST138 OUTFALL	AAA1591	8/27	13447	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5084	HS136.SELA INN/BELOW ST138 OUTFALL	AAA1592	8/27	13447	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5085	HS136.SELA INN/BELOW ST138 OUTFALL	AAA1593	8/27	13447	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5086	HS136.SELA INN/BELOW ST138 OUTFALL	AAA1594	8/27	13447	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5087	HS136.SELA INN/BELOW ST138 OUTFALL	AAA1595	8/27	13447	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	340	<330	<330	<330
3103	HS137, CT80/D-BLD OUTFALL-TOP	AAA1599	9/2	13499	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	410	<330	<330	<330
3103R	HS137, CT80/D-BLD OUTFALL-TOP	AAA1600	9/2	13499	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3106	HS137, CT80/D-BLD OUTFALL-TOP	AAA1601	9/2	13499	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3110	HS137, CT80/D-BLD OUTFALL-TOP	AAA1602	9/2	13499	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3113	HS137, CT80/D-BLD OUTFALL-TOP	AAA1603	9/2	13499	<330	<330	400	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3114	HS137, CT80/D-BLD OUTFALL-TOP	AAA1604	9/2	13499	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3117	HS137, CT80/D-BLD OUTFALL-TOP	AAA1605	9/2	13499	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3117R	HS137, CT80/D-BLD OUTFALL-TOP	AAA1606	9/2	13499	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3124	HS137, CT80/D-BLD OUTFALL-TOP	AAA1607	9/2	13499	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3125	HS137, CT80/D-BLD OUTFALL-TOP	AAA1608	9/2	13499	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3126	HS137, CT80/D-BLD OUTFALL-TOP	AAA1609	9/2	13499	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3127	HS137, CT80/D-BLD OUTFALL-TOP	AAA1610	9/2	13499	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3128	HS137, CT80/D-BLD OUTFALL-TOP	AAA1611	9/2	13499	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6100SL	ASHLEY POND	AAA1619	9/8	13535	<970	<970	<970	<970	<970		<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970
6101SL	ASHLEY POND	AAA1620	9/8	13535	<1000	<1000	<1000	<1000	<1000		<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000
6101SLR	ASHLEY POND	AAA1621	9/8	13535	<990	<990	<990	<990	<990		<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990
6102SL	ASHLEY POND	AAA1622	9/8	13535	<970	<970	<970	<970	<970		<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	4-Chloroaniline	2-Chloronaphthalene	o-Chlorophenol	4-Chlorophenylphenyl ether	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo[a,h]anthracene	Dibenzofuran	o-Dichlorobenzene (1,2)	m-Dichlorobenzene (1,3)	p-Dichlorobenzene (1,4)	3,3-Dichlorobenzidine	2,4-Dichlorophenol	Diethyl phthalate	Dimethyl phthalate	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene
					µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
1306	J-2/TU, HS140/HS140 DRAINAGE	AAA1579	8/26	13424	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1307	J-2/TU, HS140/HS140 DRAINAGE	AAA1580	8/26	13424	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1308	J-2/TU, HS140/HS140 DRAINAGE	AAA1581	8/26	13449	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1309	J-2/TU, HS140/HS140 DRAINAGE	AAA1582	8/26	13424	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1310	J-2/TU, HS140/HS140 DRAINAGE	AAA1583	8/26	13449	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700
1311	J-2/TU, HS140/HS140 DRAINAGE	AAA1584	8/26	13449	<330	<330	<330	<330	350	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1312	J-2/TU, HS140/HS140 DRAINAGE	AAA1585	8/26	13449	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	610	<330	<330	<330	<330	<330
1313	J-2/TU, HS140/HS140 DRAINAGE	AAA1586	8/26	13449	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1314	J-2/TU, HS140/HS140 DRAINAGE	AAA1587	8/26	13449	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5080	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1588	8/27		Data lost due to laboratory error																			
5081	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1589	8/27	13447	<330	<330	<330	<330	<330	1200	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5082	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1590	8/27	13447	<330	<330	<330	<330	<330	1200	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5083	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1591	8/27	13447	<330	<330	<330	<330	<330	1700	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5084	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1592	8/27	13447	<330	<330	<330	<330	<330	710	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5085	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1593	8/27	13447	<330	<330	<330	<330	<330	420	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5086	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1594	8/27	13447	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5087	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1595	8/27	13447	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3103	HS137, CT80/D-BLD OUTFALL-TOP	AAA1599	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3103R	HS137, CT80/D-BLD OUTFALL-TOP	AAA1600	9/2	13499	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3106	HS137, CT80/D-BLD OUTFALL-TOP	AAA1601	9/2	13499	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3110	HS137, CT80/D-BLD OUTFALL-TOP	AAA1602	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3113	HS137, CT80/D-BLD OUTFALL-TOP	AAA1603	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3114	HS137, CT80/D-BLD OUTFALL-TOP	AAA1604	9/2	13499	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3117	HS137, CT80/D-BLD OUTFALL-TOP	AAA1605	9/2	13499	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3117R	HS137, CT80/D-BLD OUTFALL-TOP	AAA1606	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3124	HS137, CT80/D-BLD OUTFALL-TOP	AAA1607	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3125	HS137, CT80/D-BLD OUTFALL-TOP	AAA1608	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3126	HS137, CT80/D-BLD OUTFALL-TOP	AAA1609	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3127	HS137, CT80/D-BLD OUTFALL-TOP	AAA1610	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3128	HS137, CT80/D-BLD OUTFALL-TOP	AAA1611	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6100SL	ASHLEY POND	AAA1619	9/8	13535	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970
6101SL	ASHLEY POND	AAA1620	9/8	13535	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000
6101SLR	ASHLEY POND	AAA1621	9/8	13535	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990
6102SL	ASHLEY POND	AAA1622	9/8	13535	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	Fluoranthene µg/kg	Fluorene µg/kg	Hexachlorobenzene µg/kg	Hexachlorobutadiene µg/kg	Hexachlorocyclopentadiene µg/kg	Hexachloroethane µg/kg	Indeno[1,2,3-cd]pyrene µg/kg	Isophorone µg/kg	2-Methyl-4,6-dinitrophenol µg/kg	2-Methylnaphthalene µg/kg	2-Methylphenol µg/kg	4-Methylphenol µg/kg	Naphthalene µg/kg	2-Nitroaniline µg/kg	3-Nitroaniline µg/kg	4-Nitroaniline µg/kg	Nitrobenzene µg/kg	2-Nitrophenol µg/kg	4-Nitrophenol µg/kg	N-Nitrosodi-n-propylamine µg/kg	N-Nitrosodimethylamine µg/kg
1306	J-2/TU, HS140/HS140 DRAINAGE	AAA1578	8/26	13424	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1307	J-2/TU, HS140/HS140 DRAINAGE	AAA1580	8/26	13424	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1308	J-2/TU, HS140/HS140 DRAINAGE	AAA1581	8/26	13449	390	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1309	J-2/TU, HS140/HS140 DRAINAGE	AAA1582	8/26	13424	570	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1310	J-2/TU, HS140/HS140 DRAINAGE	AAA1583	8/26	13449	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700
1311	J-2/TU, HS140/HS140 DRAINAGE	AAA1584	8/26	13449	950	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1312	J-2/TU, HS140/HS140 DRAINAGE	AAA1585	8/26	13449	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1313	J-2/TU, HS140/HS140 DRAINAGE	AAA1586	8/26	13449	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1314	J-2/TU, HS140/HS140 DRAINAGE	AAA1587	8/26	13449	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5080	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1588	8/27		Data lost due to laboratory error																				
5081	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1589	8/27	13447	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5082	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1590	8/27	13447	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5083	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1591	8/27	13447	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5084	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1592	8/27	13447	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5085	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1593	8/27	13447	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5086	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1594	8/27	13447	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5087	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1595	8/27	13447	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3103	HS137, CT80/D-BLD OUTFALL-TOP	AAA1599	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3103R	HS137, CT80/D-BLD OUTFALL-TOP	AAA1600	9/2	13499	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3106	HS137, CT80/D-BLD OUTFALL-TOP	AAA1601	9/2	13499	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3110	HS137, CT80/D-BLD OUTFALL-TOP	AAA1602	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3113	HS137, CT80/D-BLD OUTFALL-TOP	AAA1603	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3114	HS137, CT80/D-BLD OUTFALL-TOP	AAA1604	9/2	13499	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3117	HS137, CT80/D-BLD OUTFALL-TOP	AAA1605	9/2	13499	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3117R	HS137, CT80/D-BLD OUTFALL-TOP	AAA1606	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3124	HS137, CT80/D-BLD OUTFALL-TOP	AAA1607	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3125	HS137, CT80/D-BLD OUTFALL-TOP	AAA1608	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3126	HS137, CT80/D-BLD OUTFALL-TOP	AAA1609	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3127	HS137, CT80/D-BLD OUTFALL-TOP	AAA1610	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3128	HS137, CT80/D-BLD OUTFALL-TOP	AAA1611	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6100SL	ASHLEY POND	AAA1619	9/8	13535	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970
6101SL	ASHLEY POND	AAA1620	9/8	13535	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000
6101SLR	ASHLEY POND	AAA1621	9/8	13535	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990	<990
6102SL	ASHLEY POND	AAA1622	9/8	13535	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	N-Nitrosodiphenylamine µg/kg	Pentachlorophenol µg/kg	Phenanthrene µg/kg	Phenol µg/kg	Pyrene µg/kg	1,2,4-Trichlorobenzene µg/kg	2,4,5-Trichlorophenol µg/kg	2,4,6-Trichlorophenol µg/kg	Total Mixed Arochlors (>10,000) µg/Kg
1306	J-2/TU, HS140/HS140 DRAINAGE	AAA1579	8/26	13424	<330	<330	<330	<330	<330	<330	<330	<330	
1307	J-2/TU, HS140/HS140 DRAINAGE	AAA1580	8/26	13424	<330	<330	<330	<330	<330	<330	<330	<330	
1308	J-2/TU, HS140/HS140 DRAINAGE	AAA1581	8/26	13449	<330	<330	<330	<330	<330	<330	<330	<330	
1309	J-2/TU, HS140/HS140 DRAINAGE	AAA1582	8/26	13424	<330	<330	<330	<330	590	<330	<330	<330	
1310	J-2/TU, HS140/HS140 DRAINAGE	AAA1583	8/26	13449	<1700	<1700	<1700	<1700	<1700	<1700	<1700	<1700	
1311	J-2/TU, HS140/HS140 DRAINAGE	AAA1584	8/26	13449	<330	<330	900	<330	840	<330	<330	<330	
1312	J-2/TU, HS140/HS140 DRAINAGE	AAA1585	8/26	13449	<330	<330	<330	<330	<330	<330	<330	<330	
1313	J-2/TU, HS140/HS140 DRAINAGE	AAA1586	8/26	13449	<330	<330	<330	<330	<330	<330	<330	<330	
1314	J-2/TU, HS140/HS140 DRAINAGE	AAA1587	8/26	13449	<330	<330	<330	<330	<330	<330	<330	<330	
5080	HS138,SELA INN/BELOW ST138 OUTFALL	AAA1588	8/27			Data lost due to laboratory error							
5081	HS138,SELA INN/BELOW ST138 OUTFALL	AAA1589	8/27	13447	<330	<330	<330	<330	<330	<330	<330	<330	
5082	HS138,SELA INN/BELOW ST138 OUTFALL	AAA1590	8/27	13447	<330	<330	<330	<330	<330	<330	<330	<330	
5083	HS138,SELA INN/BELOW ST138 OUTFALL	AAA1591	8/27	13447	<330	<330	<330	<330	<330	<330	<330	<330	
5084	HS138,SELA INN/BELOW ST138 OUTFALL	AAA1592	8/27	13447	<330	<330	<330	<330	<330	<330	<330	<330	
5085	HS138,SELA INN/BELOW ST138 OUTFALL	AAA1593	8/27	13447	<330	<330	<330	<330	<330	<330	<330	<330	
5086	HS138,SELA INN/BELOW ST138 OUTFALL	AAA1594	8/27	13447	<330	<330	<330	<330	<330	<330	<330	<330	
5087	HS138,SELA INN/BELOW ST138 OUTFALL	AAA1595	8/27	13447	<330	<330	<330	<330	<330	<330	<330	<330	
3103	HS137, CT80/D-BLD OUTFALL-TOP	AAA1599	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	
3103R	HS137, CT80/D-BLD OUTFALL-TOP	AAA1600	9/2	13499	<660	<660	<660	<660	<660	<660	<660	<660	
3106	HS137, CT80/D-BLD OUTFALL-TOP	AAA1601	9/2	13499	<660	<660	<660	<660	<660	<660	<660	<660	
3110	HS137, CT80/D-BLD OUTFALL-TOP	AAA1602	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	
3113	HS137, CT80/D-BLD OUTFALL-TOP	AAA1603	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	
3114	HS137, CT80/D-BLD OUTFALL-TOP	AAA1604	9/2	13499	<660	<660	<660	<660	<660	<660	<660	<660	
3117	HS137, CT80/D-BLD OUTFALL-TOP	AAA1605	9/2	13499	<660	<660	<660	<660	<660	<660	<660	<660	
3117R	HS137, CT80/D-BLD OUTFALL-TOP	AAA1606	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	
3124	HS137, CT80/D-BLD OUTFALL-TOP	AAA1607	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	
3125	HS137, CT80/D-BLD OUTFALL-TOP	AAA1608	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	
3126	HS137, CT80/D-BLD OUTFALL-TOP	AAA1609	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	
3127	HS137, CT80/D-BLD OUTFALL-TOP	AAA1610	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	
3128	HS137, CT80/D-BLD OUTFALL-TOP	AAA1611	9/2	13499	<330	<330	<330	<330	<330	<330	<330	<330	
6100SL	ASHLEY POND	AAA1619	9/8	13535	<970	<970	<970	<970	<970	<970	<970	<970	
6101SL	ASHLEY POND	AAA1620	9/8	13535	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	
6101SLR	ASHLEY POND	AAA1621	9/8	13535	<990	<990	<990	<990	<990	<990	<990	<990	
6102SL	ASHLEY POND	AAA1622	9/8	13535	<970	<970	<970	<970	<970	<970	<970	<970	

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	Acenaphthene µg/kg*	Acenaphthylene µg/kg	Aniline µg/kg	Anthracene µg/kg	Azobenzene µg/kg	m-Benzidine µg/kg	Benzo[a]anthracene µg/kg	Benzo[a]pyrene µg/kg	Benzo[b]fluoranthene µg/kg	Benzo[g,h,i]perylene µg/kg	Benzo[k]fluoranthene µg/kg	Benzoic acid µg/kg	Benzyl alcohol µg/kg	Bis(2-chloroethoxy)methane µg/kg	Bis(2-chloroethyl)ether µg/kg	Bis(2-chloroisopropyl)ether µg/kg	Bis(2-ethylhexyl)phthalate µg/kg	4-Bromophenylphenyl ether µg/kg	Butyl benzyl phthalate µg/kg	4-Chloro-3-methylphenol µg/kg
6103SL	ASHLEY POND	AAA1623	9/8	13535	<960	<960	<960	<960	<960		<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960
6104SL	ASHLEY POND	AAA1624	9/8	13535	<970	<970	<970	<970	<970		<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970
6054	CANYON RIM STUDY	AAA1628	9/9	13546	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6057	CANYON RIM STUDY	AAA1629	9/9	13546	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6064	CANYON RIM STUDY	AAA1630	9/9	13546	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6069	CANYON RIM STUDY	AAA1631	9/9	13546	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6073	CANYON RIM STUDY	AAA1632	9/9	13546	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6074	CANYON RIM STUDY	AAA1633	9/9	13546	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6074R	CANYON RIM STUDY	AAA1634	9/9	13546	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1113	HS140, B BRIDGE/>20 pCi/g	AAA1635	9/16	13586	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1142	HS140, B BRIDGE/>20 pCi/g	AAA1636	9/16	13586	<330	<330	<330	<330	<330		<330	<330	360	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1143	HS140, B BRIDGE/>20 pCi/g	AAA1637	9/16	13586	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1156	HS140, B BRIDGE/>20 pCi/g	AAA1638	9/16	13586	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1157	HS140, B BRIDGE/>20 pCi/g	AAA1639	9/16	13586	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1251	HS140, B BRIDGE/>20 pCi/g	AAA1640	9/16	13586	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1256	HS140, B BRIDGE/>20 pCi/g	AAA1641	9/16	13586	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2076	HS140, B BRIDGE/>20 pCi/g	AAA1642	9/16	13586	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	810	<330	<330	<330	<330	<330	<330	<330	<330
3019	HILLSIDE 137/>20 pCi/g	AAA1643	9/17	13595	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3057	HILLSIDE 137/>20 pCi/g	AAA1644	9/17	13595	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3058	HILLSIDE 137/>20 pCi/g	AAA1645	9/17	13595	<660	<660	<660	<660	<660		<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3082	HILLSIDE 137/>20 pCi/g	AAA1646	9/17	13586	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5016	HILLSIDE 138/>20 pCi/g	AAA1647	9/17	13586	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5025	HILLSIDE 138/>20 pCi/g	AAA1648	9/17	13586	<330	<330	910	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5048	HILLSIDE 138/>20 pCi/g	AAA1649	9/17	13595	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5056	HILLSIDE 138/>20 pCi/g	AAA1650	9/17	13595	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5057	HILLSIDE 138/>20 pCi/g	AAA1651	9/17	13595	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5058	HILLSIDE 138/>20 pCi/g	AAA1652	9/17	13595	<330	<330	<330	<330	<330		460	380	1000	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3153	HILLSIDE 137 DRAINAGE	AAA1654	9/23	13612	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3155	HILLSIDE 137 DRAINAGE	AAA1655	9/23	13612	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3162	HILLSIDE 137 DRAINAGE	AAA1656	9/23	13612	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5100	HILLSIDE 138 DRAINAGE	AAA1657	9/23	13612	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5104	HILLSIDE 138 DRAINAGE	AAA1658	9/23	13612	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No.	Sample Date '92	EM-9 Request #	4-Chloroaniline	2-Chloronaphthalene	o-Chlorophenol	4-Chlorophenylphenyl ether	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo[a,h]anthracene	Dibenzofuran	o-Dichlorobenzene (1,2)	m-Dichlorobenzene (1,3)	p-Dichlorobenzene (1,4)	3,3-Dichlorobenzidine	2,4-Dichlorophenol	Diethyl phthalate	Dimethyl phthalate	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene
					µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
6103SL	ASHLEY POND	AAA1623	9/8	13535	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960
6104SL	ASHLEY POND	AAA1624	9/8	13535	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970
6054	CANYON RIM STUDY	AAA1628	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6057	CANYON RIM STUDY	AAA1629	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6064	CANYON RIM STUDY	AAA1630	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6069	CANYON RIM STUDY	AAA1631	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6073	CANYON RIM STUDY	AAA1632	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6074.	CANYON RIM STUDY	AAA1633	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6074R	CANYON RIM STUDY	AAA1634	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1113	HS140, B BRIDGE/>20 pCi/g	AAA1635	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1142	HS140, B BRIDGE/>20 pCi/g	AAA1636	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1143	HS140, B BRIDGE/>20 pCi/g	AAA1637	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1156	HS140, B BRIDGE/>20 pCi/g	AAA1638	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1157	HS140, B BRIDGE/>20 pCi/g	AAA1639	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1251	HS140, B BRIDGE/>20 pCi/g	AAA1640	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1256	HS140, B BRIDGE/>20 pCi/g	AAA1641	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2076	HS140, B BRIDGE/>20 pCi/g	AAA1642	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3019	HILLSIDE 137/>20 pCi/g	AAA1643	9/17	13595	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3057	HILLSIDE 137/>20 pCi/g	AAA1644	9/17	13595	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3058	HILLSIDE 137/>20 pCi/g	AAA1645	9/17	13595	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3082	HILLSIDE 137/>20 pCi/g	AAA1646	9/17	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5016	HILLSIDE 138/>20 pCi/g	AAA1647	9/17	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5025	HILLSIDE 138/>20 pCi/g	AAA1648	9/17	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5048	HILLSIDE 138/>20 pCi/g	AAA1649	9/17	13595	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5056	HILLSIDE 138/>20 pCi/g	AAA1650	9/17	13595	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5057	HILLSIDE 138/>20 pCi/g	AAA1651	9/17	13595	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5058	HILLSIDE 138/>20 pCi/g	AAA1652	9/17	13595	<330	<330	<330	<330	530	610	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3153	HILLSIDE 137 DRAINAGE	AAA1654	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3155	HILLSIDE 137 DRAINAGE	AAA1655	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3162	HILLSIDE 137 DRAINAGE	AAA1656	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5100	HILLSIDE 138 DRAINAGE	AAA1657	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5104	HILLSIDE 138 DRAINAGE	AAA1658	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No.	Sample Date '92	EM-9 Request #	Fluoranthene µg/kg	Fluorene µg/kg	Hexachlorobenzene µg/kg	Hexachlorobutadiene µg/kg	Hexachlorocyclopentadiene µg/kg	Hexachloroethane µg/kg	Indeno(1,2,3-cd)pyrene µg/kg	Isophorone µg/kg	2-Methyl-4,6-dinitrophenol µg/kg	2-Methylnaphthalene µg/kg	2-Methylphenol µg/kg	4-Methylphenol µg/kg	Naphthalene µg/kg	2-Nitroaniline µg/kg	3-Nitroaniline µg/kg	4-Nitroaniline µg/kg	Nitrobenzene µg/kg	2-Nitrophenol µg/kg	4-Nitrophenol µg/kg	N-Nitrosodi-n-propylamine µg/kg	N-Nitrosodimethylamine µg/kg
6103SL	ASHLEY POND	AAA1623	9/8	13535	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960	<960
6104SL	ASHLEY POND	AAA1624	9/8	13535	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970	<970
6054	CANYON RIM STUDY	AAA1628	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6057	CANYON RIM STUDY	AAA1629	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6064	CANYON RIM STUDY	AAA1630	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6069	CANYON RIM STUDY	AAA1631	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6073	CANYON RIM STUDY	AAA1632	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6074	CANYON RIM STUDY	AAA1633	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
6074R	CANYON RIM STUDY	AAA1634	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1113	HS140, B BRIDGE/>20 pCi/g	AAA1635	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1142	HS140, B BRIDGE/>20 pCi/g	AAA1636	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1143	HS140, B BRIDGE/>20 pCi/g	AAA1637	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1156	HS140, B BRIDGE/>20 pCi/g	AAA1638	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1157	HS140, B BRIDGE/>20 pCi/g	AAA1639	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1251	HS140, B BRIDGE/>20 pCi/g	AAA1640	9/16	13586	380	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
1256	HS140, B BRIDGE/>20 pCi/g	AAA1641	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2076	HS140, B BRIDGE/>20 pCi/g	AAA1642	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3019	HILLSIDE 137/>20 pCi/g	AAA1643	9/17	13595	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3057	HILLSIDE 137/>20 pCi/g	AAA1644	9/17	13595	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3058	HILLSIDE 137/>20 pCi/g	AAA1645	9/17	13595	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660
3062	HILLSIDE 137/>20 pCi/g	AAA1646	9/17	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5016	HILLSIDE 138/>20 pCi/g	AAA1647	9/17	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5025	HILLSIDE 138/>20 pCi/g	AAA1648	9/17	13586	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5048	HILLSIDE 138/>20 pCi/g	AAA1649	9/17	13595	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5056	HILLSIDE 138/>20 pCi/g	AAA1650	9/17	13595	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5057	HILLSIDE 138/>20 pCi/g	AAA1651	9/17	13595	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5058	HILLSIDE 138/>20 pCi/g	AAA1652	9/17	13595	620	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3153	HILLSIDE 137 DRAINAGE	AAA1654	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3155	HILLSIDE 137 DRAINAGE	AAA1655	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3162	HILLSIDE 137 DRAINAGE	AAA1656	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5100	HILLSIDE 138 DRAINAGE	AAA1657	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5104	HILLSIDE 138 DRAINAGE	AAA1658	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No.	Sample Date '92	EM-9 Request #	N-Nitrosodiphenylamine µg/kg	Pentachlorophenol µg/kg	Phenanthrene µg/kg	Phenol µg/kg	Pyrene µg/kg	1,2,4-Trichlorobenzene µg/kg	2,4,5-Trichlorophenol µg/kg	2,4,6-Trichlorophenol µg/kg	Total Mixed Arochlors (>10,000) µg/Kg
6103SL	ASHLEY POND	AAA1623	9/8	13535	<960	<960	<960	<960	<960	<960	<960	<960	
6104SL	ASHLEY POND	AAA1624	9/8	13535	<970	<970	<970	<970	<970	<970	<970	<970	
6054	CANYON RIM STUDY	AAA1628	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	
6057	CANYON RIM STUDY	AAA1629	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	
6064	CANYON RIM STUDY	AAA1630	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	
6069	CANYON RIM STUDY	AAA1631	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	
6073	CANYON RIM STUDY	AAA1632	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	
6074	CANYON RIM STUDY	AAA1633	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	
6074R	CANYON RIM STUDY	AAA1634	9/9	13546	<330	<330	<330	<330	<330	<330	<330	<330	
1113	HS140, B BRIDGE/>20 pCi/g	AAA1635	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	
1142	HS140, B BRIDGE/>20 pCi/g	AAA1636	9/16	13586	<330	<330	<330	460	<330	<330	<330	<330	
1143	HS140, B BRIDGE/>20 pCi/g	AAA1637	9/16	13586	<330	<330	<330	<330	380	<330	<330	<330	
1156	HS140, B BRIDGE/>20 pCi/g	AAA1638	9/16	13586	<330	<330	<330	<330	630	<330	<330	<330	
1157	HS140, B BRIDGE/>20 pCi/g	AAA1639	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	
1251	HS140, B BRIDGE/>20 pCi/g	AAA1640	9/16	13586	<330	<330	420	<330	690	<330	<330	<330	
1258	HS140, B BRIDGE/>20 pCi/g	AAA1641	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	
2076	HS140, B BRIDGE/>20 pCi/g	AAA1642	9/16	13586	<330	<330	<330	<330	<330	<330	<330	<330	
3019	HILLSIDE 137/>20 pCi/g	AAA1643	9/17	13595	<330	<330	<330	<330	<330	<330	<330	<330	
3057	HILLSIDE 137/>20 pCi/g	AAA1644	9/17	13595	<660	<660	<660	<660	<660	<660	<660	<660	
3058	HILLSIDE 137/>20 pCi/g	AAA1645	9/17	13595	<660	<660	<660	<660	<660	<660	<660	<660	
3082	HILLSIDE 137/>20 pCi/g	AAA1646	9/17	13586	<330	<330	<330	<330	<330	<330	<330	<330	
5016	HILLSIDE 138/>20 pCi/g	AAA1647	9/17	13586	<330	<330	<330	<330	<330	<330	<330	<330	
5025	HILLSIDE 138/>20 pCi/g	AAA1648	9/17	13586	<330	<330	<330	<330	<330	<330	<330	<330	
5048	HILLSIDE 138/>20 pCi/g	AAA1649	9/17	13595	<330	<330	<330	<330	<330	<330	<330	<330	
5056	HILLSIDE 138/>20 pCi/g	AAA1650	9/17	13595	<330	<330	<330	<330	<330	<330	<330	<330	
5057	HILLSIDE 138/>20 pCi/g	AAA1651	9/17	13595	<330	<330	<330	<330	<330	<330	<330	<330	
5058	HILLSIDE 138/>20 pCi/g	AAA1652	9/17	13595	<330	<330	<330	<330	700	<330	<330	<330	
3153	HILLSIDE 137 DRAINAGE	AAA1654	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	
3155	HILLSIDE 137 DRAINAGE	AAA1655	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	
3162	HILLSIDE 137 DRAINAGE	AAA1656	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	
5100	HILLSIDE 138 DRAINAGE	AAA1657	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	
5104	HILLSIDE 138 DRAINAGE	AAA1658	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Azobenzene	m-Benzidine	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Benzoic acid	Benzyl alcohol	Bis(2-chloroethoxy)methane	Bis(2-chloroethyl)ether	Bis(2-chloroisopropyl)ether	Bis(2-ethylhexyl)phthalate	4-Bromophenylphenyl ether	Butyl benzyl phthalate	4-Chloro-3-methylphenol
					µg/kg*	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
5110	HILLSIDE 138 DRAINAGE	AAA1659	9/23	13612	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5112	HILLSIDE 138 DRAINAGE	AAA1660	9/23	13612	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5120-6	HILLSIDE 138 BENCH TRENCH	AAA1662	9/24	13612	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5123-6	HILLSIDE 138 BENCH TRENCH	AAA1663	9/24	13612	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5126-6	HILLSIDE 138 BENCH TRENCH	AAA1664	9/24	13612	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5122-T	HILLSIDE 138 BENCH TRENCH	AAA1665	9/24	13612	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5127-T	HILLSIDE 138 BENCH TRENCH	AAA1666	9/24	13612	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5127-TR	HILLSIDE 138 BENCH TRENCH	AAA1667	9/24	13612	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5128-T	HILLSIDE 138 BENCH TRENCH	AAA1668	9/24	13612	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3178-3	HS 137, CT 80/BENCH TRENCH	AAA1670	10/8	13698	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3183-3	HS 137, CT 80/BENCH TRENCH	AAA1671	10/8	13698	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3184-3	HS 137, CT 80/BENCH TRENCH	AAA1672	10/8	13698	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3170-T	HS 137, CT 80/BENCH TRENCH	AAA1673	10/8	13698	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3173-T	HS 137, CT 80/BENCH TRENCH	AAA1674	10/8	13698	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3179-T	HS 137, CT 80/BENCH TRENCH	AAA1675	10/8	13698	<330	<330	<330	<330	<330		<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2164	BAILEY BRIDGE/DRAINAGE	AAA1676	10/19	13750	<1600	<1600	<1600	<1600	<1600		<1600	<1600	2800	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600
2171	BAILEY BRIDGE/DRAINAGE	AAA1677	10/19	13750	<330	<330	<330	<330	<330		<330	<330	340	<330	<330	<330	<330	<330	<330	<330	380	<330	<330	<330
2172	BAILEY BRIDGE/DRAINAGE	AAA1678	10/19	13750	<330	<330	<330	<330	<330		<330	<330	470	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2171R	BAILEY BRIDGE/DRAINAGE	AAA1679	10/19	13750	<330	<330	<330	<330	<330		380	400	850	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No	Sample Date '92	EM-9 Request #	4-Chloroaniline	2-Chloronaphthalene	o-Chlorophenol	4-Chlorophenylphenyl ether	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo[a,h]anthracene	Dibenzofuran	o-Dichlorobenzene (1,2)	m-Dichlorobenzene (1,3)	p-Dichlorobenzene (1,4)	3,3-Dichlorobenzidine	2,4-Dichlorophenol	Diethyl phthalate	Dimethyl phthalate	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene
					µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
5110	HILLSIDE 138 DRAINAGE	AAA1659	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5112	HILLSIDE 138 DRAINAGE	AAA1660	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5120-6	HILLSIDE 138 BENCH TRENCH	AAA1662	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5123-6	HILLSIDE 138 BENCH TRENCH	AAA1663	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5126-6	HILLSIDE 138 BENCH TRENCH	AAA1664	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5122-T	HILLSIDE 138 BENCH TRENCH	AAA1665	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5127-T	HILLSIDE 138 BENCH TRENCH	AAA1666	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5127-TR	HILLSIDE 138 BENCH TRENCH	AAA1667	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5128-T	HILLSIDE 138 BENCH TRENCH	AAA1668	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3178-3	HS 137, CT 80/BENCH TRENCH	AAA1670	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3183-3	HS 137, CT 80/BENCH TRENCH	AAA1671	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3184-3	HS 137, CT 80/BENCH TRENCH	AAA1672	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3170-T	HS 137, CT 80/BENCH TRENCH	AAA1673	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3173-T	HS 137, CT 80/BENCH TRENCH	AAA1674	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3179-T	HS 137, CT 80/BENCH TRENCH	AAA1675	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2164	BAILEY BRIDGE/DRAINAGE	AAA1676	10/19	13750	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600
2171	BAILEY BRIDGE/DRAINAGE	AAA1677	10/19	13750	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2172	BAILEY BRIDGE/DRAINAGE	AAA1678	10/19	13750	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2171R	BAILEY BRIDGE/DRAINAGE	AAA1679	10/19	13750	<330	<330	<330	<330	480	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No.	Sample Date '92	EM-9 Request #	Fluoranthene µg/kg	Fluorene µg/kg	Hexachlorobenzene µg/kg	Hexachlorobutadiene µg/kg	Hexachlorocyclopentadiene µg/kg	Hexachloroethane µg/kg	Indeno(1,2,3-cd)pyrene µg/kg	Isophorone µg/kg	2-Methyl-4,6-dinitrophenol µg/kg	2-Methylnaphthalene µg/kg	2-Methylphenol µg/kg	4-Methylphenol µg/kg	Naphthalene µg/kg	2-Nitroaniline µg/kg	3-Nitroaniline µg/kg	4-Nitroaniline µg/kg	Nitrobenzene µg/kg	2-Nitrophenol µg/kg	4-Nitrophenol µg/kg	N-Nitrosodi-n-propylamine µg/kg	N-Nitrosodimethylamine µg/kg
5110	HILLSIDE 138 DRAINAGE	AAA1659	9/23	13612	420	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5112	HILLSIDE 138 DRAINAGE	AAA1660	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5120-6	HILLSIDE 138 BENCH TRENCH	AAA1662	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5123-6	HILLSIDE 138 BENCH TRENCH	AAA1663	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5126-6	HILLSIDE 138 BENCH TRENCH	AAA1664	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5122-T	HILLSIDE 138 BENCH TRENCH	AAA1665	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5127-T	HILLSIDE 138 BENCH TRENCH	AAA1666	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5127-TR	HILLSIDE 138 BENCH TRENCH	AAA1667	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
5128-T	HILLSIDE 138 BENCH TRENCH	AAA1668	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3178-3	HS 137, CT 80/BENCH TRENCH	AAA1670	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3183-3	HS 137, CT 80/BENCH TRENCH	AAA1671	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3184-3	HS 137, CT 80/BENCH TRENCH	AAA1672	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3170-T	HS 137, CT 80/BENCH TRENCH	AAA1673	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3173-T	HS 137, CT 80/BENCH TRENCH	AAA1674	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
3179-T	HS 137, CT 80/BENCH TRENCH	AAA1675	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2164	BAILEY BRIDGE/DRAINAGE	AAA1676	10/19	13750	3400	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600	<1600
2171	BAILEY BRIDGE/DRAINAGE	AAA1677	10/19	13750	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2172	BAILEY BRIDGE/DRAINAGE	AAA1678	10/19	13750	490	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
2171R	BAILEY BRIDGE/DRAINAGE	AAA1679	10/19	13750	810	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330

TABLE B-4. VALIDATED ORGANIC DATA FOR OU 1078

Sample Location 01-xxxx	Aggregate/Area	ER Sample No.	Sample Date '92	EM-9 Request #	N-Nitrosodiphenylamine µg/kg	Pentachlorophenol µg/kg	Phenanthrene µg/kg	Phenol µg/kg	Pyrene µg/kg	1,2,4-Trichlorobenzene µg/kg	2,4,5-Trichlorophenol µg/kg	2,4,6-Trichlorophenol µg/kg	Total Mixed Arochlors (>10,000) µg/Kg
5110	HILLSIDE 138 DRAINAGE	AAA1659	9/23	13612	<330	<330	700	<330	840	<330	<330	<330	
5112	HILLSIDE 138 DRAINAGE	AAA1660	9/23	13612	<330	<330	<330	<330	<330	<330	<330	<330	
5120-6	HILLSIDE 138 BENCH TRENCH	AAA1662	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	
5123-6	HILLSIDE 138 BENCH TRENCH	AAA1663	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	
5128-6	HILLSIDE 138 BENCH TRENCH	AAA1664	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	
5122-T	HILLSIDE 138 BENCH TRENCH	AAA1665	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	
5127-T	HILLSIDE 138 BENCH TRENCH	AAA1666	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	
5127-TR	HILLSIDE 138 BENCH TRENCH	AAA1667	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	
5128-T	HILLSIDE 138 BENCH TRENCH	AAA1668	9/24	13612	<330	<330	<330	<330	<330	<330	<330	<330	
3178-3	HS 137, CT 80/BENCH TRENCH	AAA1670	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	
3183-3	HS 137, CT 80/BENCH TRENCH	AAA1671	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	
3184-3	HS 137, CT 80/BENCH TRENCH	AAA1672	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	
3170-T	HS 137, CT 80/BENCH TRENCH	AAA1673	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	
3173-T	HS 137, CT 80/BENCH TRENCH	AAA1674	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	
3179-T	HS 137, CT 80/BENCH TRENCH	AAA1675	10/8	13698	<330	<330	<330	<330	<330	<330	<330	<330	
2164	BAILEY BRIDGE/DRAINAGE	AAA1676	10/19	13750	<1600	<1600	2200	<1600	3000	<1600	<1600	<1600	
2171	BAILEY BRIDGE/DRAINAGE	AAA1677	10/19	13750	<330	<330	<330	<330	<330	<330	<330	<330	
2172	BAILEY BRIDGE/DRAINAGE	AAA1678	10/19	13750	<330	<330	<330	<330	500	<330	<330	<330	
2171R	BAILEY BRIDGE/DRAINAGE	AAA1679	10/19	13750	<330	<330	500	<330	920	<330	<330	<330	

*µg/kg = micrograms of contaminant per kilogram of sample.
**Bold numbers represent results greater than 50% of screening action level, including detection limits.
***"J" flags indicate that data may not be acceptable for all uses, as explained in Section 2.3 of this quarterly report.

TABLE B-5. VALIDATED INORGANIC DATA FOR OU 1078

Sample Location	Aggregate/Area	ER Sample No.	Date of Sample	EM -9 Sample No.	Metals Req. No.	Ag mg/kg	As mg/kg	Ba mg/kg
01-6005	CAN DUMP SITE/WHOLE AREA	AAA0709	07/20/92	92.23693	13201	<2.2 J	<0.4 J[a,b]	19.8 J
01-6005R	CAN DUMP SITE/WHOLE AREA	AAA0710	07/20/92	92.23694	13201	<2.2 J	0.6 J	23.5 J
01-6014	CAN DUMP SITE/WHOLE AREA	AAA0711	07/20/92	92.23695	13201	<2.3 J	1.5 J	338 J
01-6023	CAN DUMP SITE/WHOLE AREA	AAA0712	07/20/92	92.23696	13201	<2.3 J	1.3 J	46.5 J
01-6023R	CAN DUMP SITE/WHOLE AREA	AAA0713	07/20/92	92.23697	13201	<2.2 J	<0.4 J	43.2 J
01-6012-6017	CAN DUMP SITE/WHOLE AREA	AAA0714	07/20/92	92.23698	13201	<2.2 J	<0.4 J	115 J
01-6018-6023	CAN DUMP SITE/WHOLE AREA	AAA0715	07/20/92	92.23699	13201	<2.2 J	1.4 J	228 J
01-1162	J2/TU, HS140/OUTFALL ST135	AAA0716	07/20/92	92.23700	13201	<2.3 J	<0.5 J	53 J
01-1168	J2/TU, HS140/OUTFALL ST135	AAA0717	07/20/92	92.23701	13201	<2.3 J	1.3 J	56.3 J
01-1168R	J2/TU, HS140/OUTFALL ST135	AAA0718	07/20/92	92.23702	13201	<2.2 J	0.4 J	41.4 J
01-1174	J2/TU, HS140/OUTFALL ST135	AAA0719	07/20/92	92.23703	13201	<2.2 J	<0.4 J	21.8 J
01-1160-1164	J2/TU, HS140/OUTFALL ST135	AAA0720	07/20/92	92.23704	13201	<2.3 J	1.1 J	59.7 J
01-1165-1171	J2/TU, HS140/OUTFALL ST135	AAA0721	07/20/92	92.23705	13201	<2.3 J	<0.5 J	50 J
01-1172-1176	J2/TU, HS140/OUTFALL ST135	AAA0722	07/20/92	92.23706	13201	<2.2 J	<0.4 J	24.9 J
01-1083	HS140/HS140 SURF RUNOFF AREAS	AAA0723	07/23/92	92.24110	13233	<2.4 J	1.1 J	40.9 J
01-1090	HS140/HS140 SURF RUNOFF AREAS	AAA0724	07/23/92	92.24111	13233	<2.1 J	<0.4 J	12.2 J
01-1094	HS140/HS140 SURF RUNOFF AREAS	AAA0725	07/23/92	92.24112	13233	<2.3 J	1.6 J	46.5 J
01-1095	HS140/HS140 SURF RUNOFF AREAS	AAA0726	07/23/92	92.24113	13233	<2.4 J	1.8 J	32.8 J
01-1096	HS140/HS140 SURF RUNOFF AREAS	AAA0727	07/23/92	92.24114	13233	<2.3 J	1.2 J	28.3 J
01-1096R	HS140/HS140 SURF RUNOFF AREAS	AAA0728	07/23/92	92.24115	13233	<2.3 J	1.1 J	27.9 J
01-1097	HS140/HS140 SURF RUNOFF AREAS	AAA0729	07/23/92	92.24116	13233	<2.5 J	0.6 J	48.9 J
01-1080-1086	HS140/HS140 SURF RUNOFF AREAS	AAA0730	07/23/92	92.24117	13233	<2.3 J	1.2 J	35.1 J
01-1087-1093	HS140/HS140 SURF RUNOFF AREAS	AAA0731	07/23/92	92.24118	13233	<2.3 J	1.5 J	37.7 J
01-1109	HS140/HS140 SURF RUNOFF AREAS	AAA0732	07/23/92	92.24119	13233	<2.3 J	0.6 J	5.8 J
01-1110	HS140/HS140 SURF RUNOFF AREAS	AAA0733	07/23/92	92.24120	13233	<2.5 J	1.4 J	53.2 J
01-1111	HS140/HS140 SURF RUNOFF AREAS	AAA0734	07/23/92	92.24121	13233	<2. J	<0.4 J	13.5 J
01-1111R	HS140/HS140 SURF RUNOFF AREAS	AAA0735	07/23/92	92.24122	13233	<2.2 J	1.4 J	23.8 J
01-1112	HS140/HS140 SURF RUNOFF AREAS	AAA0736	07/23/92	92.24123	13233	<2.2 J	1.2 J	31 J
01-1202	HS140/HS140 SURF RUNOFF AREAS	AAA0737	07/23/92	92.24124	13233	<2.1 J	0.7 J	29.9 J
01-1202R	HS140/HS140 SURF RUNOFF AREAS	AAA0738	07/23/92	92.24125	13233	<2.1 J	0.7 J	30.2 J
01-1017	HS140/HS140 SURF RUNOFF AREAS	AAA0739	07/23/92	92.24126	13233	<2.2 J	0.9 J	34.6 J
01-1045	HS140/HS140 SURF RUNOFF AREAS	AAA0740	07/23/92	92.24127	13233	<2.5 J	1.6 J	47.9 J
01-1144	HS140/HS140 SURF RUNOFF AREAS	AAA0741	07/23/92	92.24128	13233	<2.2 J	0.9 J	30.5 J
01-1144R	HS140/HS140 SURF RUNOFF AREAS	AAA0742	07/23/92	92.24129	13233	<2.2 J	1.1 J	31.4 J

TABLE B-5. VALIDATED INORGANIC DATA FOR OU 1078

Sample Location	ER Sample No.	Be mg/kg	Cd mg/kg	Cr mg/kg	Hg mg/kg	Ni mg/kg	Pb mg/kg	Sb mg/kg	Se mg/kg	Tl mg/kg
01-6005	AAA0709	<1.1 J	<1.1 J	<2.7 J	0.2 J	<5.4 J	<10.8 J	<21.6 J	<1.6 J	<54.1 J
01-6005R	AAA0710	<1.1 J	<1.1 J	<2.7 J	<0.1 J	<5.4 J	<10.8 J	<21.6 J	<1.6 J	<54. J
01-6014	AAA0711	<1.2 J	<1.2 J	10.8 J	0.1 J	6.6 J	119 J	50.4 J	<1.7 J	57.9 J
01-6023	AAA0712	<1.1 J	<1.1 J	<2.9 J	0.1 J	<5.7 J	16.5 J	<22.8 J	<1.7 J	<57.7 J
01-6023R	AAA0713	<1.1 J	<1.1 J	3.1 J	0.1 J	<5.6 J	<11.2 J	<22.5 J	<1.7 J	<56.2 J
01-6012-6017	AAA0714	<1.1 J	<1.1 J	4.2 J	0.1 J	<5.5 J	45.4 J	50.2 J	<1.7 J	<55.1 J
01-6018-6023	AAA0715	<1.1 J	<1.1 J	5.4 J	0.1 J	<5.6 J	60.2 J	90.2 J	<1.7 J	<55.9 J
01-1162	AAA0716	<1.1 J	<1.1 J	10 J	0.8 J	<5.7 J	13.3 J	<22.9 J	<1.7 J	<57.2 J
01-1168	AAA0717	<1.1 J	<1.1 J	82.8 J	0.1 J	<5.7 J	36.8 J	22.8 J	<1.7 J	<56.9 J
01-1168R	AAA0718	<1.1 J	<1.1 J	28.7 J	0.1 J	<5.6 J	20.8 J	<22.4 J	<1.7 J	<56.1 J
01-1174	AAA0719	<1.1 J	<1.1 J	<2.8 J	0.1 J	<5.6 J	<11.1 J	<22.3 J	<1.7 J	<55.7 J
01-1160-1164	AAA0720	<1.2 J	<1.2 J	5.5 J	0.2 J	<5.8 J	21.1 J	<23.3 J	<1.7 J	<58.1 J
01-1165-1171	AAA0721	<1.1 J	<1.1 J	4.3 J	0.1 J	<5.7 J	19.2 J	<22.7 J	<1.7 J	<56.8 J
01-1172-1176	AAA0722	<1.1 J	<1.1 J	<2.8 J	0.1 J	<5.6 J	11.7 J	<22.3 J	<1.7 J	<55.9 J
01-1083	AAA0723	<1.2 J	<1.2 J	3.5 J	0.3 J	<5.9 J	15.9 J	<23.5 J	<1.8 J	<58.8 J
01-1090	AAA0724	<1.1 J	<1.1 J	<2.6 J	0.2 J	<5.3 J	<10.6 J	<21.2 J	<1.6 J	<53. J
01-1094	AAA0725	<1.2 J	<1.2 J	3.5 J	0.3 J	<5.8 J	32.5 J	<23.2 J	<1.7 J	157 J
01-1095	AAA0726	<1.2 J	<1.2 J	<3. J	0.3 J	<6. J	29.9 J	<23.8 J	<1.8 J	60.9 J
01-1096	AAA0727	<1.1 J	<1.1 J	<2.9 J	0.3 J	<5.7 J	17.5 J	<22.8 J	<1.7 J	<57. J
01-1096R	AAA0728	<1.1 J	<1.1 J	<2.9 J	0.3 J	<5.7 J	13.6 J	<22.9 J	<1.7 J	<57.3 J
01-1097	AAA0729	<1.2 J	<1.2 J	3.7 J	0.3 J	<6.2 J	34.6 J	<24.9 J	<1.9 J	146 J
01-1080-1086	AAA0730	<1.2 J	<1.2 J	<2.9 J	0.3 J	<5.9 J	13.9 J	<23.5 J	<1.8 J	<58.7 J
01-1087-1093	AAA0731	<1.1 J	<1.1 J	<2.9 J	0.3 J	<5.7 J	18 J	<22.9 J	<1.7 J	<57.3 J
01-1109	AAA0732	<1.1 J	<1.1 J	<2.9 J	0.3 J	<5.7 J	<11.5 J	<22.9 J	<1.7 J	<57.3 J
01-1110	AAA0733	<1.2 J	1.2 J	3.1 J	0.3 J	<6.2 J	33 J	<24.9 J	1.9 J	169 J
01-1111	AAA0734	<1. J	<1. J	<2.5 J	0.2 J	<5.1 J	13.7 J	<20.4 J	<1.5 J	<51. J
01-1111R	AAA0735	<1.1 J	<1.1 J	<2.7 J	0.3 J	<5.4 J	19.4 J	<21.8 J	<1.6 J	68.5 J
01-1112	AAA0736	<1.1 J	<1.1 J	4.2 J	0.3 J	<5.6 J	20.3 J	<22.2 J	<1.7 J	78.7 J
01-1202	AAA0737	<1. J	<1. J	<2.6 J	0.2 J	<5.2 J	15.6 J	<20.8 J	<1.6 J	63.5 J
01-1202R	AAA0738	<1.1 J	<1.1 J	<2.7 J	0.2 J	<5.3 J	13.9 J	<21.2 J	<1.6 J	<53. J
01-1017	AAA0739	<1.1 J	<1.1 J	<2.8 J	0.3 J	<5.6 J	<11.2 J	<22.4 J	<1.7 J	<56.1 J
01-1045	AAA0740	<1.2 J	<1.2 J	3.4 J	0.3 J	<6.2 J	40 J	<24.8 J	<1.9 J	<62. J
01-1144	AAA0741	<1.1 J	<1.1 J	<2.8 J	0.2 J	<5.6 J	21.3 J	<22.5 J	<1.7 J	<56.2 J
01-1144R	AAA0742	<1.1 J	<1.1 J	<2.8 J	0.3 J	<5.5 J	16.7 J	<22.1 J	<1.7 J	<55.4 J

TABLE B-5. VALIDATED INORGANIC DATA FOR OU 1078

Sample Location	Aggregate/Area	ER Sample No.	Date of Sample	EM -9 Sample No.	Metals Req. No.	Ag mg/kg	As mg/kg	Ba mg/kg
01-1147	HS140/HS140 SURF RUNOFF AREAS	AAA0743	07/23/92	92.24130	13233	<2.6 J	1.3 J	34 J
01-1098	HS140/HS140 SURF RUNOFF AREAS	AAA0744	07/23/92	92.24131	13233	<2.3 J	0.7 J	17 J
01-1089	HS140/HS140 SURF RUNOFF AREAS	AAA1469	07/23/92	92.24132	13233	<2.3 J	0.9 J	53.1 J
01-5091	HS138/SELA INN/BOTTOM OF CANYON	AAA0746	07/27/92	92.24335	13257	<2.5	1.1	66.3
01-5091R	HS138/SELA INN/BOTTOM OF CANYON	AAA0747	07/27/92	92.24336	13257	<2.5	1.2	55.1
01-5098	HS138/SELA INN/BOTTOM OF CANYON	AAA0748	07/27/92	92.24337	13257	<2.4	1.5	82.6
01-5075-5079,5092	HS138/SELA INN/BOTTOM OF CANYON	AAA0749	07/27/92	92.24338	13257	<2.2	1.2	46.5
01-5093-5098	HS138/SELA INN/BOTTOM OF CANYON	AAA0750	07/27/92	92.24339	13257	<2.4	1.3	59.3
01-5099-5091	HS138/SELA INN/BOTTOM OF CANYON	AAA0751	07/27/92	92.24340	13257	<2.5	1.3	61
01-3132	HS137/CT 80/BOTTOM OF CANYON	AAA1471	07/29/92	92.24592	13283	<2.3	0.7	34.3
01-3139	HS137/CT 80/BOTTOM OF CANYON	AAA1472	07/29/92	92.24593	13283	<2.2	1.2	29.4
01-3139R	HS137/CT 80/BOTTOM OF CANYON	AAA1473	07/29/92	92.24594	13283	<2.2	1	29
01-3144	HS137/CT 80/BOTTOM OF CANYON	AAA1474	07/29/92	92.24595	13283	<2.1	1.1	14.1
01-1248	J2/TU, HS140 BOTTOM OF CANYON	AAA1475	07/29/92	92.24596	13283	<2.4	0.9	16.5
01-1249	J2/TU, HS140 BOTTOM OF CANYON	AAA1476	07/29/92	92.24597	13283	<2.4	1.2	28.5
01-1253	J2/TU, HS140 BOTTOM OF CANYON	AAA1477	07/29/92	92.24598	13283	<2.3	0.7	32.7
01-1253R	J2/TU, HS140 BOTTOM OF CANYON	AAA1478	07/29/92	92.24599	13283	<2.2	0.6	34.8
01-1260	J2/TU, HS140 BOTTOM OF CANYON	AAA1479	07/29/92	92.24600	13283	<2.2	0.6	47.9
01-1250-1254	J2/TU, HS140 BOTTOM OF CANYON	AAA1480	07/29/92	92.24601	13283	<2.3	1.1	39.7
01-1255-1260	J2/TU, HS140 BOTTOM OF CANYON	AAA1481	07/29/92	92.24602	13283	<2.3	1.1	46.6
01-2142	B BRIDGE/BOTTOM OF CANYON	AAA1523	07/29/92	92.24673	13290	<2.3	0.6	36.1
01-2147	B BRIDGE/BOTTOM OF CANYON	AAA1524	07/29/92	92.24674	13290	<2.2	0.8	31.1
01-2147R	B BRIDGE/BOTTOM OF CANYON	AAA1525	07/29/92	92.24675	13290	<2.3	0.9	44.7
01-2150	B BRIDGE/BOTTOM OF CANYON	AAA1526	07/29/92	92.24676	13290	<2.2	1.1	43.6
01-2150-2156	B BRIDGE/BOTTOM OF CANYON	AAA1527	07/29/92	92.24677	13290	<2.3	0.9	38
01-2013	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1482	08/03/92	92.24829	13318	<2.2	1.1	48.3
01-2022	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1483	08/03/92	92.24830	13318	<2.1	1.2	60.7
01-2023	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1484	08/03/92	92.24831	13318	<2.2	1.5	90.1
01-2024	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1485	08/03/92	92.24832	13318	<2.1	1.3	47.8
01-2034	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1486	08/03/92	92.24833	13318	<2.	1	38.7
01-2035	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1487	08/03/92	92.24834	13318	<2.	1.2	37.8

TABLE B-5. VALIDATED INORGANIC DATA FOR OU 1078

Sample Location	ER Sample No.	Be mg/kg	Cd mg/kg	Cr mg/kg	Hg mg/kg	Ni mg/kg	Pb mg/kg	Sb mg/kg	Se mg/kg	Tl mg/kg
01-1147	AAA0743	<1.3 J	<1.3 J	<3.2 J	0.1 J	<6.4 J	26.4 J	<25.7 J	<1.9 J	<64.2 J
01-1098	AAA0744	<1.2 J	<1.2 J	<2.9 J	0.1 J	<5.8 J	17 J	<23.4 J	<1.8 J	<58.5 J
01-1089	AAA1469	<1.1 J	<1.1 J	4.2 J	0.1 J	<5.7 J	15.9 J	<23. J	<1.7 J	<57.5 J
01-5091	AAA0746	<1.2	<1.2	4.3	0.2	<6.2	31	<24.9	<1.9	<62.3
01-5091R	AAA0747	<1.2	<1.2	3.6	0.5	<6.2	23.4	<24.9	<1.9	<62.2
01-5098	AAA0748	<1.2	<1.2	6	0.2	<6.1	29.9	<24.4	<1.8	<61.1
01-5075-5079,5092	AAA0749	<1.1	<1.1	4	0.1	<5.6	21.7	<22.4	<1.7	<56.1
01-5093-5098	AAA0750	<1.2	<1.2	4.8	0.2	<6.	26.6	<24.2	<1.8	<60.4
01-5099-5091	AAA0751	<1.3	<1.3	5.1	0.3	<6.3	25.9	<25.4	<1.9	<63.5
01-3132	AAA1471	<1.2	<1.2	<2.9	0.12	<5.8	26.5	<23.3	<1.7	<58.1
01-3139	AAA1472	<1.1	<1.1	<2.8	0.11	<5.6	23.3	<22.2	<1.7	<55.6
01-3139R	AAA1473	<1.1	<1.1	<2.7	<0.1	<5.5	19.6	<22.	<1.6	<54.9
01-3144	AAA1474	<1.1	<1.1	<2.7	0.11	<5.3	<10.6	<21.3	<1.6	<53.1
01-1248	AAA1475	<1.2	<1.2	<2.9	0.12	<5.9	12.4	<23.6	<1.8	<58.9
01-1249	AAA1476	<1.2	<1.2	<3.	0.11	<5.9	<11.8	<23.6	<1.8	<59.
01-1253	AAA1477	<1.1	<1.1	<2.8	0.11	<5.7	16.5	<22.8	<1.7	<56.9
01-1253R	AAA1478	<1.1	<1.1	<2.8	<0.1	<5.6	15.5	<22.3	<1.7	<55.7
01-1260	AAA1479	<1.1	<1.1	<2.7	<0.1	<5.5	15.8	<21.9	<1.6	<54.7
01-1250-1254	AAA1480	<1.2	<1.2	<2.9	0.1	<5.8	21.2	<23.2	<1.7	<58.
01-1255-1260	AAA1481	<1.1	<1.1	2.8	0.11	<5.7	20.8	<22.7	<1.7	<56.7
01-2142	AAA1523	<1.2	<1.2	<2.9	0.11	<5.9	21.1	<23.5	<1.8	<58.7
01-2147	AAA1524	<1.1	<1.1	<2.8	0.11	<5.5	16.5	<22.	<1.7	<55.
01-2147R	AAA1525	<1.2	<1.2	<2.9	0.12	<5.8	23.2	<23.4	<1.8	<58.5
01-2150	AAA1526	<1.1	<1.1	<2.8	0.11	<5.6	12.8	<22.3	<1.7	<55.7
01-2150-2156	AAA1527	<1.2	<1.2	3	0.12	<5.8	24.1	<23.3	<1.8	<58.3
01-2013	AAA1482	<1.1	<1.1	3.1	0.11	<5.4	<10.8	<21.6	<1.6	<53.9
01-2022	AAA1483	<1.	<1.	3.6	<0.1	<5.2	14.6	<20.9	<1.6	<52.2
01-2023	AAA1484	<1.1	<1.1	4.8	0.11	<5.4	19.7	<21.6	<1.6	<53.9
01-2024	AAA1485	<1.	<1.	4.2	<0.1	<5.1	14.1	<20.6	<1.5	<51.4
01-2034	AAA1486	<1.	<1.	4	<0.1	6.8	<10.1	<20.3	<1.5	<50.7
01-2035	AAA1487	<1.	<1.	2.8	<0.1	<5.	14.5	<20.2	<1.5	<50.4

TABLE B-5. VALIDATED INORGANIC DATA FOR OU 1078

Sample Location	Aggregate/Area	ER Sample No.	Date of Sample	EM -9 Sample No.	Metals Req. No.	Ag mg/kg	As mg/kg	Ba mg/kg
01-2036	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1489	08/03/92	92.24835	13318	<2.1	1.6	29.9
01-2038	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1490	08/03/92	92.24836	13318	<2.2	0.7	53.8
01-2043	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1491	08/03/92	92.24837	13318	<2.1	1.3	31.2
01-2045	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1492	08/03/92	92.24838	13318	<2.1	1.2	36.5
01-2050	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1493	08/03/92	92.24839	13318	<2.1	0.7	30.6
01-2058	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1494	08/03/92	92.24840	13318	<2.	1.2	64.5
01-2064	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1495	08/03/92	92.24841	13318	<2.1	2.2	53.3
01-2022R	B BRIDGE/SURF RUNOFF TOP OF AREA	AAA1496	08/03/92	92.24842	13318	<2.2	0.9	64.3
01-2073	B BRIDGE/TWO LOWER LINES EOD	AAA1528	08/03/92	92.24843	13318	<2.4	1.5	63.3
01-2073R	B BRIDGE/TWO LOWER LINES EOD	AAA1529	08/03/92	92.24844	13318	<2.4	1.3	65.8
01-2075	B BRIDGE/TWO LOWER LINES EOD	AAA1530	08/03/92	92.24845	13318	13.6	1.7	32.5
01-2080	B BRIDGE/TWO LOWER LINES EOD	AAA1531	08/03/92	92.24846	13318	<2.1	2.5	79.8
01-2095	B BRIDGE/TWO LOWER LINES EOD	AAA1532	08/03/92	92.24847	13318	<2.1	2	78.4
01-2096	B BRIDGE/TWO LOWER LINES EOD	AAA1533	08/03/92	92.24848	13318	<2.1	1.3	39.9
01-5041	HS 138, SE LA INN/DEBRIS AREA	AAA0752	08/10/92	92.25418	13357	<1.	4.25	100 J
01-5046	HS 138, SE LA INN/DEBRIS AREA	AAA1509	08/10/92	92.25419	13357	<1.	1.72	51.9 J
01-5042-5046	HS 138, SE LA INN/DEBRIS AREA	AAA1510	08/10/92	92.25420	13357	<1.	2.16	<82.4 J
01-2006	BAILEY BRIDGE/OPPOSITE PARK	AAA1534	08/10/92	92.25421	13357	<1.	2.62	73.7 J
01-2007	BAILEY BRIDGE/OPPOSITE PARK	AAA1535	08/10/92	92.25422	13357	<1.	1.58	40.8 J
01-2007R	BAILEY BRIDGE/OPPOSITE PARK	AAA1536	08/10/92	92.25423	13357	<1.	1.96	59.8 J
01-2009	BAILEY BRIDGE/OPPOSITE PARK	AAA1537	08/10/92	92.25424	13357	<1.	1.23	37.4 J
01-2001-2006	BAILEY BRIDGE/OPPOSITE PARK	AAA1538	08/10/92	92.25425	13357	<1.	1.41	55.2 J
01-2007-2011	BAILEY BRIDGE/OPPOSITE PARK	AAA1539	08/10/92	92.25426	13357	<1.	2.09	51 J
01-2114	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1540	08/10/92	92.25427	13357	8.6	2.23	71.7 J
01-2122	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1541	08/10/92	92.25428	13357	<1.	0.93	21.5 J
01-2122R	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1544	08/10/92	92.25429	13357	<1.	1.14	27.4 J
01-2133	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1545	08/10/92	92.25430	13357	<1.	1.65	56.8 J
01-2110-2116	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1546	08/10/92	92.25431	13357	<1.	1.05	50.1 J
01-2120-2123	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1547	08/10/92	92.25432	13357	<1.	1.11	36.7 J
01-2130-2134	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1548	08/10/92	92.25433	13357	<1.	1.13	30.3 J
01-5004	HS 138, SE LA INN/OUTFALL ST138	AAA1511	08/17/92	92.26360	13381	<1. J	2.9 J	144 J
01-5011	HS 138, SE LA INN/OUTFALL ST138	AAA1512	08/17/92	92.26361	13381	<1. J	1.5 J	108 J
01-5061	HS 138, SE LA INN/OUTFALL ST138	AAA1518	08/17/92	92.26362	13381	<1. J	2.4 J	88 J
01-5065	HS 138, SE LA INN/OUTFALL ST138	AAA1519	08/17/92	92.26363	13381	<1. J	0.4 J	<10. J

TABLE B-5. VALIDATED INORGANIC DATA FOR OU 1078

Sample Location	ER Sample No.	Be mg/kg	Cd mg/kg	Cr mg/kg	Hg mg/kg	Ni mg/kg	Pb mg/kg	Sb mg/kg	Se mg/kg	Tl mg/kg
01-2036	AAA1489	<1.	<1.	2.7	<0.1	<5.1	12.2	<20.6	<1.5	<51.4
01-2038	AAA1490	<1.1	<1.1	27.3	<0.1	12.8	15.3	<21.7	<1.6	<54.3
01-2043	AAA1491	<1.	<1.	2.6	<0.1	<5.1	<10.3	<20.6	<1.5	<51.4
01-2045	AAA1492	<1.	<1.	2.6	<0.1	<5.2	12.6	<20.7	<1.5	<51.7
01-2050	AAA1493	<1.	<1.	<2.6	<0.1	<5.2	<10.3	<20.7	<1.6	<51.7
01-2058	AAA1494	<1.	<1.	3.6	0.11	<5.1	22.6	<20.2	<1.5	<50.6
01-2064	AAA1495	<1.1	<1.1	4	<0.1	<5.3	19	<21.3	<1.6	<53.1
01-2022R	AAA1496	<1.1	<1.1	3.6	<0.1	<5.4	14	<21.6	<1.6	<53.9
01-2073	AAA1528	<1.2	<1.2	4	0.12	<6.	27.9	<24.	<1.8	<59.9
01-2073R	AAA1529	<1.2	<1.2	3.5	0.12	<6.	24.2	<24.1	<1.8	<60.2
01-2075	AAA1530	<1.	<1.	27.8	5.2	<5.2	174	<20.9	<1.6	<52.3
01-2080	AAA1531	<1.1	<1.1	6	0.15	<5.3	53.4	<21.3	<1.6	<53.4
01-2095	AAA1532	<1.1	<1.1	5.5	0.22	22.2	32.2	<21.3	<1.6	<53.4
01-2096	AAA1533	<1.1	<1.1	5.4	0.26	5.6	49.9	<21.3	<1.6	<53.3
01-5041	AAA0752	<0.58 J	0.55	3.3	0.0261	<3.6	<23.4 J	<5.4 J	0.25	<19. J
01-5046	AAA1509	<0.3 J	<0.48	2.5	0.016	<3.6	<15.9 J	<5.4 J	<0.2	<19. J
01-5042-5046	AAA1510	<0.58 J	<0.47	5.1	0.089	4.4	<39.4 J	<5.3 J	0.26	<18.7 J
01-2006	AAA1534	<0.33 J	0.66	3	0.088	7.1	<90.8 J	<11.1 J	0.3	<21.3 J
01-2007	AAA1535	<0.31 J	<0.51	1.4	0.021	4.4	<35.6 J	<5.7 J	<0.2	<19.9 J
01-2007R	AAA1536	<0.31 J	<0.5	3.2	0.087	5.6	<61 J	<5.6 J	0.22	<19.7 J
01-2009	AAA1537	<0.23 J	<0.51	1.1	0.022	3.9	<23.6 J	<5.9 J	<0.2	<20. J
01-2001-2006	AAA1538	<0.31 J	0.66	1.9	<0.010	<3.9	<20.9 J	<5.8 J	<0.2	<20.5 J
01-2007-2011	AAA1539	<0.31 J	0.56	1.4	0.034	4	<26.8 J	<5.7 J	0.24	<19.9 J
01-2114	AAA1540	<0.43 J	0.85	6.2	1.2	5.7	<98 J	<6.4 J	0.21	<22.6 J
01-2122	AAA1541	<0.35 J	<0.46	3.3	0.031	<3.5	<33.7 J	<5.2 J	<0.2	<18.1 J
01-2122R	AAA1544	<0.3 J	<0.48	5.5	0.064	<3.7	<38.2 J	<8.8 J	<0.2	<19.1 J
01-2133	AAA1545	<0.59 J	<0.48	4.2	0.184	<4.	<52.1 J	<21.5 J	<0.2	<18.9 J
01-2110-2116	AAA1546	<0.62 J	<0.51	5.2	0.112	<5.3	<60.8 J	<5.7 J	<0.2	<21. J
01-2120-2123	AAA1547	<0.59 J	<0.49	3.3	0.085	<3.7	<33.1 J	<8.8 J	<0.2	<19.2 J
01-2130-2134	AAA1548	<0.59 J	<0.49	<2.3	0.042	<3.7	<29.3 J	<13.5 J	<0.2	<21.7 J
01-5004	AAA1511	<10. J	0.13 J	10.6 J	0.1587 J	6.5 J	16.6 J	0.17 J	0.3 J	<0.1 J
01-5011	AAA1512	<10. J	0.17 J	8.5 J	1.54 J	5.3 J	15.9 J	0.1 J	<0.2 J	<0.1 J
01-5061	AAA1518	<10. J	0.77 J	4.3 J	0.2092 J	4.1 J	23.6 J	0.3 J	0.2 J	<0.1 J
01-5065	AAA1519	<10. J	0.07 J	0.38 J	0.0473 J	<1.5 J	3.09 J	<0.07 J	<0.2 J	<0.1 J

TABLE B-5. VALIDATED INORGANIC DATA FOR OU 1078

Sample Location	Aggregate/Area	ER Sample No.	Date of Sample	EM-9 Sample No.	Metals Req. No.	Ag mg/kg	As mg/kg	Ba mg/kg
01-5000-5004	HS 138, SE LA INN/OUTFALL ST138	AAA1520	08/17/92	92.26364	13381	<1. J	**2.2 J**	159 J
01-5018	HS 138, SE LA INN/OUTFALL ST138	AAA1513	08/17/92	92.26377	13411	13.8 J	**3.47 J**	49 J
01-5028	HS 138, SE LA INN/OUTFALL ST138	AAA1514	08/17/92	92.26378	13411	14.3 J	**3.57 J**	75 J
01-5028R	HS 138, SE LA INN/OUTFALL ST138	AAA1515	08/17/92	92.26379	13411	32.7 J	**6.8 J**	100 J
01-5049	HS 138, SE LA INN/OUTFALL ST138	AAA1516	08/17/92	92.26380	13411	6 J	**1.52 J**	16 J
01-5049R	HS 138, SE LA INN/OUTFALL ST138	AAA1517	08/17/92	92.26381	13411	5 J	**1.47 J**	20 J
01-3003	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1521	08/19/92	92.26386	13413	3.7 J	**1.43 J**	74.7 J
01-3007	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1522	08/19/92	92.26387	13413	2.9 J	**2.15 J**	78.5 J
01-3015	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1550	08/19/92	92.26388	13413	1.9 J	**1.44 J**	53.4 J
01-3023	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1551	08/19/92	92.26399	13413	<1. J	**0.95 J**	36.5 J
01-3033	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1552	08/19/92	92.26405	13413	<1. J	**0.75 J**	16 J
01-3045	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1553	08/19/92	92.26407	13413	1.2 J	**1.1 J**	26 J
01-3051	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1554	08/19/92	92.26393	13413	<1. J	**0.77 J**	19.3 J
01-3053	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1555	08/19/92	92.26390	13413	1.8 J	**1.75 J**	84.1 J
01-3059	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1556	08/19/92	92.26396	13413	<1. J	**1.0 J**	50.9 J
01-3088	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1557	08/19/92	92.26395	13413	1 J	**1.34 J**	59.2 J
01-3093	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1558	08/19/92	92.26406	13413	<1.1 J	**2.49 J**	88.1 J
01-3000-3006	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1559	08/19/92	92.26397	13413	<1. J	**1.54 J**	78.4 J
01-3031-3037	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1560	08/19/92	92.26389	13413	2 J	**0.63 J**	20.1 J
01-3052-3056	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1561	08/19/92	92.26391	13413	1.6 J	**1.66 J**	82.6 J
01-3057-3062,3086	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1562	08/19/92	92.26403	13413	<1. J	**1.14 J**	43 J
01-3087-3090	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1563	08/19/92	92.26401	13413	<1. J	**4.85 J**	47.4 J
01-3091-3094	HS137CT80/D-BLD.HS137 OUTFALLS	AAA1564	08/19/92	92.26392	13413	1.2 J	**1.89 J**	74.6 J
01-3065	HS137 CT80/BENCH AREA OF HS137	AAA1565	08/19/92	92.26404	13413	<1. J	**0.57 J**	11.1 J
01-3069	HS137 CT80/BENCH AREA OF HS137	AAA1566	08/19/92	92.26400	13413	<1. J	**0.6 J**	14 J
01-3074	HS137 CT80/BENCH AREA OF HS137	AAA1567	08/19/92	92.26394	13413	<1. J	**0.5 J**	9.6 J
01-3081	HS137 CT80/BENCH AREA OF HS137	AAA1568	08/19/92	92.26409	13413	<1. J	**0.74 J**	21.9 J
01-3083	HS137 CT80/BENCH AREA OF HS137	AAA1569	08/19/92	92.26408	13413	<1. J	**0.96 J**	13.9 J
01-3072-3077	HS137 CT80/BENCH AREA OF HS137	AAA1570	08/19/92	92.26410	13413	<1. J	**0.73 J**	25.1
01-3078-3081	HS137 CT80/BENCH AREA OF HS137	AAA1571	08/19/92	92.26402	13413	<1. J	**0.85 J**	19.7 J
01-3082-3085	HS137 CT80/BENCH AREA OF HS137	AAA1572	08/19/92	92.26398	13413	<1. J	**1.02 J**	16.9 J
01-1300	J-2/TU, HS140/HS140 DRAINAGE	AAA1573	08/26/92	92.26763	13423	<1. J	**5.89 J**	248 J
01-1302	J-2/TU, HS140/HS140 DRAINAGE	AAA1575	08/26/92	92.26764	13423	<1. J	**0.83 J**	226 J

TABLE B-5. VALIDATED INORGANIC DATA FOR OU 1078

Sample Location	ER Sample No.	Be mg/kg	Cd mg/kg	Cr mg/kg	Hg mg/kg	Ni mg/kg	Pb mg/kg	Sb mg/kg	Se mg/kg	Tl mg/kg
01-5000-5004	AAA1520	**10 J**	0.06 J	9.5 J	0.232 J	7.2 J	19.3 J	<0.07	0.3	<0.1
01-5018	AAA1513	**<1. J**	0.74 J	**<223 J**	**373 J**	1.8 J	**548 J**	0.5 J	0.39 J	<2. J
01-5028	AAA1514	**<1. J**	1.8 J	**<202 J**	**1416.67 J**	2.3 J	**430 J**	2.10 J	0.55 J	<2. J
01-5028R	AAA1515	**<1. J**	1.85 J	**<311 J**	**454 J**	1.6 J	**667 J**	3.45 J	0.55 J	<2. J
01-5049	AAA1516	**<1. J**	0.22 J	<90 J	**21 J**	<1.5 J	100 J	0.20 J	0.2 J	<2. J
01-5049R	AAA1517	**<1. J**	0.27 J	<159 J	**22 J**	<1.5 J	124 J	0.30 J	0.21 J	<2. J
01-3003	AAA1521	**<0.63**	<0.52	5.4	0.0613 J	<4.3	<21.7 J	**<17.2**	<0.2 J	**<26.2**
01-3007	AAA1522	**<0.7**	<0.58	<2.9	0.2163 J	<5.4	<48.8 J	**<25.6 J**	0.2 J	**<22.7**
01-3015	AAA1550	**<0.68**	<0.5	3.2	0.3637 J	<3.8	<31.3 J	<12. J	<0.2 J	**<19.6**
01-3023	AAA1551	**<0.63**	<0.45	14.2	0.1009 J	<3.4	19.1	<8.9	<0.2 J	**<17.9**
01-3033	AAA1552	**<0.26**	<0.47	0.87	0.0153 J	<3.6	10.5	<8.4 J	<0.2 J	**<18.6**
01-3045	AAA1553	**<0.13**	<0.48	<0.53	0.0151 J	<3.6	8.5	<8.3 J	<0.2 J	**<18.8**
01-3051	AAA1554	**<0.65**	<0.47	<0.52	<0.010 J	<3.5	<8.9	13.2	<0.2 J	**<18.4**
01-3053	AAA1555	**<0.61**	<0.56	7.5	0.2164 J	<7.3	94.2	<11.	<0.2 J	**<22.**
01-3059	AAA1556	**<0.59**	<0.54	<2.9	0.0396 J	<4.9	46.5	<10.6	<0.2 J	**<21.4**
01-3088	AAA1557	**<0.51**	<0.54	<2.5	0.0715 J	<3.5	27.3	<13.8	<0.2 J	**<18.5**
01-3093	AAA1558	**<0.55**	<0.5	5.2	0.2451 J	7.2	52.5	<8.5 J	0.2 J	**<19.7**
01-3000-3006	AAA1559	**<0.71**	<0.51	<2.8	0.0327 J	<3.8	17.7	<5.7	<0.2 J	**<20.1**
01-3031-3037	AAA1560	**<0.57**	<0.47	<1.3	0.0145 J	<3.6	<20 J	<10.7 J	<0.2 J	**<18.6**
01-3052-3056	AAA1561	**<0.63**	<0.51	4.2	0.0707 J	<6.9	38.8	<13.9	<0.2 J	**<33.9**
01-3057-3062,3086	AAA1562	**<0.41**	<0.5	3.1	0.022 J	5.1	31.5	<10.7 J	<0.2 J	**<19.5**
01-3087-3090	AAA1563	**<0.34**	<0.49	3.2	0.0312 J	5.4	20.1	<5.5	<0.2 J	**<19.5**
01-3091-3094	AAA1564	**<0.67**	<0.47	3.8	0.1054 J	<3.6	94.2	<7.4	<0.2 J	**<18.7**
01-3065	AAA1565	**<0.31**	<0.46	<0.51	<0.010 J	<3.5	7.3	<5.1	<0.2 J	**<18.1**
01-3069	AAA1566	**<0.78**	<0.55 J	<0.53	<0.010 J	<3.6	11.8	<5.3	<0.2 J	**<18.7**
01-3074	AAA1567	**<0.48**	<0.44	<0.49	<0.010 J	<3.4	<8.7	<5.	<0.2 J	**<17.5**
01-3081	AAA1568	**<0.26**	<0.48	<0.54	0.0173 J	<3.6	8.7	<5.4	<0.2 J	**<19.**
01-3083	AAA1569	**<0.25**	<0.46	<0.51	<0.010 J	<3.5	8.9	<5.1	<0.2 J	**<18.**
01-3072-3077	AAA1570	**<0.68**	<0.45	<0.86	<0.010 J	<3.4	10	7.7	<0.2 J	**21.9**
01-3078-3081	AAA1571	**<0.26**	<0.48	<0.53	0.0217 J	<3.6	17.6	<6 J	<0.2 J	**<18.8**
01-3082-3085	AAA1572	**<0.49**	<0.46	<0.51	<0.010 J	<3.6	<12.8	<10.7	<0.2 J	**<18.1**
01-1300	AAA1573	**3.23 J**	<0.7 J	6.4 J	<0.0001 J	4 J	30 J	6 J	<0.2 J	**<20. J**
01-1302	AAA1575	**2.19 J**	<0.7 J	2.4 J	<0.0001 J	2 J	16 J	<4. J	<0.2 J	**<20. J**

TABLE B-5. VALIDATED INORGANIC DATA FOR OU 1078

Sample Location	Aggregate/Area	ER Sample No.	Date of Sample	EM -9 Sample No.	Metals Req. No.	Ag mg/kg	As mg/kg	Ba mg/kg
01-1303	J-2/TU, HS140/HS140 DRAINAGE	AAA1576	08/26/92	92.26765	13423	<1. J	**2.96 J**	230 J
01-1306	J-2/TU, HS140/HS140 DRAINAGE	AAA1579	08/26/92	92.26766	13423	<1. J	**1.42 J**	277 J
01-1307	J-2/TU, HS140/HS140 DRAINAGE	AAA1580	08/26/92	92.26767	13423	<1. J	**2.57 J**	237 J
01-1309	J-2/TU, HS140/HS140 DRAINAGE	AAA1582	08/26/92	92.26768	13423	<1. J	**1.4 J**	223 J
01-5080	HS138, SELA INN/BELOW ST138 OUTFALL	AAA1588	08/27/92	92.26827	13446	25.8 J		30 J
01-5081	HS138, SELA INN/BELOW ST138 OUTFALL	AAA1589	08/27/92	92.26828	13446	20.7 J		21 J
01-5082	HS138, SELA INN/BELOW ST138 OUTFALL	AAA1590	08/27/92	92.26829	13446	36.2 J		54 J
01-5083	HS138, SELA INN/BELOW ST138 OUTFALL	AAA1591	08/27/92	92.26830	13446	9.5 J		62 J
01-5084	HS138, SELA INN/BELOW ST138 OUTFALL	AAA1592	08/27/92	92.26831	13446	11.5 J		50 J
01-5085	HS138, SELA INN/BELOW ST138 OUTFALL	AAA1593	08/27/92	92.26832	13446	10.9 J		22 J
01-5086	HS138, SELA INN/BELOW ST138 OUTFALL	AAA1594	08/27/92	92.26833	13446	8.7 J		37 J
01-5087	HS138, SELA INN/BELOW ST138 OUTFALL	AAA1595	08/27/92	92.26834	13446	12.2 J		33 J
01-1301	J-2/TU, HS140/HS140 DRAINAGE	AAA1574	08/26/92	92.26780	13448	1 J	**0.94 J**	14 J
01-1304	J-2/TU, HS140/HS140 DRAINAGE	AAA1577	08/26/92	92.26779	13448	2 J	**1.52 J**	32 J
01-1305	J-2/TU, HS140/HS140 DRAINAGE	AAA1578	08/26/92	92.26781	13448	<1. J	**1.23 J**	39 J
01-1308	J-2/TU, HS140/HS140 DRAINAGE	AAA1581	08/26/92	92.26777	13448	<1. J	**1.66 J**	27 J
01-1310	J-2/TU, HS140/HS140 DRAINAGE	AAA1583	08/26/92	92.26775	13448	<1. J	**2.88 J**	62 J
01-1311	J-2/TU, HS140/HS140 DRAINAGE	AAA1584	08/26/92	92.26778	13448	4.5 J	**0.75 J**	25 J
01-1312	J-2/TU, HS140/HS140 DRAINAGE	AAA1585	08/26/92	92.26774	13448	<1. J	**3.17 J**	32 J
01-1313	J-2/TU, HS140/HS140 DRAINAGE	AAA1586	08/26/92	92.26773	13448	<1. J	**0.71 J**	39 J
01-1314	J-2/TU, HS140/HS140 DRAINAGE	AAA1587	08/26/92	92.26776	13448	<1. J	**2.49 J**	48 J
01-3103	HS137, CT80/D-BLD OUTFALL-TOP	AAA1599	09/02/92	92.27583	13498	<0.45	**<6.2**	79.8
01-3103R	HS137, CT80/D-BLD OUTFALL-TOP	AAA1600	09/02/92	92.27584	13498	<0.45	**<6.1**	84.1
01-3106	HS137, CT80/D-BLD OUTFALL-TOP	AAA1601	09/02/92	92.27585	13498	<0.51	**<6.9**	104
01-3110	HS137, CT80/D-BLD OUTFALL-TOP	AAA1602	09/02/92	92.27586	13498	<0.45	**<6.1**	64.4
01-3113	HS137, CT80/D-BLD OUTFALL-TOP	AAA1603	09/02/92	92.27587	13498	<0.46	**<6.2**	48.2
01-3114	HS137, CT80/D-BLD OUTFALL-TOP	AAA1604	09/02/92	92.27588	13498	<0.45	**<6.1**	51.7
01-3117	HS137, CT80/D-BLD OUTFALL-TOP	AAA1605	09/02/92	92.27589	13498	<0.45	**<6.1**	80.1
01-3117R	HS137, CT80/D-BLD OUTFALL-TOP	AAA1606	09/02/92	92.27590	13498	<0.45	**<6.1**	73.9
01-3124	HS137, CT80/D-BLD OUTFALL-TOP	AAA1607	09/02/92	92.27591	13498	<0.46	**<6.3**	83.8
01-3125	HS137, CT80/D-BLD OUTFALL-TOP	AAA1608	09/02/92	92.27592	13498	<0.45	**<6.2**	30.3
01-3126	HS137, CT80/D-BLD OUTFALL-TOP	AAA1609	09/02/92	92.27593	13498	<0.47	**<6.3**	79.2
01-3127	HS137, CT80/D-BLD OUTFALL-TOP	AAA1610	09/02/92	92.27594	13498	<0.48	**6.6**	47.5

TABLE B-5. VALIDATED INORGANIC DATA FOR OU 1078

Sample Location	ER Sample No.	Be mg/kg	Cd mg/kg	Cr mg/kg	Hg mg/kg	Ni mg/kg	Pb mg/kg	Sb mg/kg	Se mg/kg	Tl mg/kg
01-1303	AAA1576	**2.81 J**	<0.7 J	5 J	0.00025 J	3 J	36 J	<4. J	<0.2 J	**<20. J**
01-1306	AAA1579	**3.7 J**	<0.7 J	9.6 J	0.0001 J	7 J	49 J	<4. J	<0.2 J	**<20. J**
01-1307	AAA1580	**3.29 J**	<0.7 J	7.7 J	<0.0001 J	4 J	45 J	<4. J	<0.2 J	**<20. J**
01-1309	AAA1582	**2.68 J**	<0.7 J	28.2 J	0.0003 J	39 J	<4. J	<4. J	<0.2 J	**<20. J**
01-5080	AAA1588	**<1. J**		**<287 J**	**146.67 J**	<1.5 J	249 J	0.16 J		<2. J
01-5081	AAA1589	**<1. J**		**<340 J**	**112 J**	<1.5 J	**279 J**	0.08 J		<2. J
01-5082	AAA1590	**<1. J**		**<382 J**	**341.67 J**	<1.5 J	**324 J**	0.09 J		<2. J
01-5083	AAA1591	**<1. J**		**<239 J**	**139 J**	<1.5 J	136 J	0.05 J		<2. J
01-5084	AAA1592	**<1. J**		**<313 J**	**176.67 J**	<1.5 J	176 J	0.08 J		<2. J
01-5085	AAA1593	**<1. J**		**<398 J**	**29 J**	<1.5 J	104 J	0.08 J		<2. J
01-5086	AAA1594	**<1. J**		**<244 J**	**93.33 J**	<1.5 J	182 J	0.07 J		<2. J
01-5087	AAA1595	**<1. J**		<137 J	**73 J**	<4.4 J	155 J	0.05 J		<2. J
01-1301	AAA1574	**<1. J**	0.14 J	2.21 J	0.079 J	<1.5 J	185 J	0.2 J	<0.2 J	<0.2 J
01-1304	AAA1577	**<1. J**	0.27 J	3.86 J	0.152 J	<1.5 J	28.6 J	0.18 J	<0.2 J	<0.2 J
01-1305	AAA1578	**<1. J**	0.44 J	4.39 J	0.065 J	<1.5 J	50 J	0.44 J	<0.2 J	<0.2 J
01-1308	AAA1581	**<1. J**	0.3 J	3.52 J	0.083 J	<1.5 J	32.6 J	0.12 J	<0.2 J	<0.2 J
01-1310	AAA1583	**<1. J**	0.49 J	6.89 J	0.191 J	<1.5 J	63.4 J	0.23 J	<0.2 J	<0.2 J
01-1311	AAA1584	**<1. J**	0.2 J	3.26 J	0.062 J	<1.5 J	29.4 J	0.17 J	<0.2 J	<0.2 J
01-1312	AAA1585	**<1. J**	3.37 J	16.5 J	0.035 J	37 J	36.9 J	0.25 J	<0.2 J	<0.2 J
01-1313	AAA1586	**<1. J**	0.41 J	1.65 J	0.031 J	37.2 J	10.5 J	0.42 J	<0.2 J	<0.2 J
01-1314	AAA1587	**<1. J**	0.52 J	4 J	0.062 J	<1.5 J	1.87 J	0.16 J	<0.2 J	<0.2 J
01-3103	AAA1599	**<0.91**	<0.5	<5.4	<0.06	7.1	17.1	5.8	54.5	**<19.7**
01-3103R	AAA1600	**<0.9**	<0.49	<5.6	<0.06	5.2	**353**	<5.5	57	**<19.5**
01-3106	AAA1601	**<1**	<0.56	<7.1	0.09	6	72.3	<6.3	55.8	**40.2**
01-3110	AAA1602	**<0.75**	<0.5	<4.3	<0.06	5	15.1	<5.6	44.3	**<19.7**
01-3113	AAA1603	**<0.61**	<0.51	<3.3	<0.06	<3.8	32.4	7.4	38.1	**25.8**
01-3114	AAA1604	**<0.6**	<0.5	<2.2	<0.06	<3.8	33.4	7.3	44.6	**<19.6**
01-3117	AAA1605	**<0.75**	0.61	<5.6	<0.06	4.2	53.8	14.7	41.7	**23.9**
01-3117R	AAA1606	**<0.75**	<0.5	<5.5	0.11	5	57	7.9	58.8	**<19.6**
01-3124	AAA1607	**<0.62**	<0.51	<4.6	0.13	3.9	23.2	**17.4**	46.7	**<20.**
01-3125	AAA1608	**<0.82**	<0.5	<0.94	0.09	4.8	23.1	<5.6	43	**<19.7**
01-3126	AAA1609	**<0.77**	<0.52	<6.1	0.15	4.8	25.8	5.8	65.3	**<20.3**
01-3127	AAA1610	**<0.94**	0.62	<2.8	0.13	5.5	33.8	<5.9	50.1	**<20.8**

TABLE B-5. VALIDATED INORGANIC DATA FOR OU 1078

Sample Location	Aggregate/Area	ER Sample No.	Date of Sample	EM -9 Sample No.	Metals Req. No.	Ag mg/kg	As mg/kg	Ba mg/kg
01-3128	HS137, CT80/D-BLD OUTFALL-TOP	AAA1611	09/02/92	92.27595	13498	<0.44	**<6.**	35.1
01-6100W	ASHLEY POND	AAA1612	09/08/92	92.27790	13530	<10. J	**10.8 J**	0.076 J
01-6101W	ASHLEY POND	AAA1613	09/08/92	92.27791	13530	<10. J	**7.6 J**	0.077 J
01-6101WR	ASHLEY POND	AAA1614	09/08/92	92.27792	13530	<10. J	**7.9 J**	0.078 J
01-6102W	ASHLEY POND	AAA1615	09/08/92	92.27793	13530	<10. J	**9.1 J**	0.076 J
01-6103W	ASHLEY POND	AAA1616	09/08/92	92.27794	13530	<10. J	**10.6 J**	0.077 J
01-6104W	ASHLEY POND	AAA1617	09/08/92	92.27795	13530	<10. J	**8.9 J**	0.75 J
01-6100SL	ASHLEY POND	AAA1619	09/08/92	92.27798	13534	3 J	**2.6 J**	440 J
01-6101SL	ASHLEY POND	AAA1620	09/08/92	92.27799	13534	2.1 J	**2.4 J**	557 J
01-6101SLR	ASHLEY POND	AAA1621	09/08/92	92.27800	13534	<1. J	**2.6 J**	555 J
01-6102SL	ASHLEY POND	AAA1622	09/08/92	92.27801	13534	<1. J	**1.9 J**	505 J
01-6103SL	ASHLEY POND	AAA1623	09/08/92	92.27802	13534	<1. J	**2.7 J**	569 J
01-6104SL	ASHLEY POND	AAA1624	09/08/92	92.27803	13534	<1. J	**2. J**	547 J
01-6054	CANYON RIM STUDY	AAA1628	09/09/92	92.27968	13544	<1. J	**0.8 J**	32.8 J
01-6057	CANYON RIM STUDY	AAA1629	09/09/92	92.27969	13544	<1. J	**1.1 J**	67.2 J
01-6064	CANYON RIM STUDY	AAA1630	09/09/92	92.27970	13544	<1. J	**1.32 J**	50.4 J
01-6069	CANYON RIM STUDY	AAA1631	09/09/92	92.27971	13544	<1. J	**2.8 J**	49.4 J
01-6073	CANYON RIM STUDY	AAA1632	09/09/92	92.27972	13544	<1. J	<0.2 J	74 J
01-6074	CANYON RIM STUDY	AAA1633	09/09/92	92.27973	13544	<1. J	**1.5 J**	27.5 J
01-6074R	CANYON RIM STUDY	AAA1634	09/09/92	92.27974	13544	<1. J	**1.5 J**	28.9 J
01-1113	HS140, B BRIDGE/>20 pCi/g	AAA1635	09/16/92	92.28580	13585	<1. J	**2.47 J**	228 J
01-1142	HS140, B BRIDGE/>20 pCi/g	AAA1636	09/16/92	92.28581	13585	<1. J	**1.55 J**	284 J
01-1143	HS140, B BRIDGE/>20 pCi/g	AAA1637	09/16/92	92.28582	13585	<1. J	**1.66 J**	257 J
01-1156	HS140, B BRIDGE/>20 pCi/g	AAA1638	09/16/92	92.28583	13585	<1. J	**0.79 J**	227 J
01-1157	HS140, B BRIDGE/>20 pCi/g	AAA1639	09/16/92	92.28584	13585	<1. J	**1.54 J**	309 J
01-1251	HS140, B BRIDGE/>20 pCi/g	AAA1640	09/16/92	92.28585	13585	1.3 J	**1.16 J**	250 J
01-1256	HS140, B BRIDGE/>20 pCi/g	AAA1641	09/16/92	92.28586	13585	<1. J	**1.14 J**	239 J
01-2076	HS140, B BRIDGE/>20 pCi/g	AAA1642	09/16/92	92.28587	13585	20.8 J	**1.82 J**	170 J
01-3082	HILLSIDE 137/>20 pCi/g	AAA1646	09/16/92	92.28748	13585	<1. J	**0.52 J**	90.9 J
01-5016	HILLSIDE 138/>20 pCi/g	AAA1647	09/16/92	92.28749	13585	1.7 J	**1.85 J**	229 J
01-5025	HILLSIDE 138/>20 pCi/g	AAA1648	09/16/92	92.28750	13585	1.1 J	**1.58 J**	200 J

TABLE B-5. VALIDATED INORGANIC DATA FOR OU 1078

Sample Location	ER Sample No.	Be mg/kg	Cd mg/kg	Cr mg/kg	Hg mg/kg	Ni mg/kg	Pb mg/kg	Sb mg/kg	Se mg/kg	Tl mg/kg
01-3128	AAA1611	**<0.72 J**	0.54	<1.6 J	0.12	<3.7	30.2	<5.4	39	**<19.1**
01-6100W	AAA1612	<0.001 J	<0.004 J	<0.006 J	<0.1 J	<0.01 J	<0.03 J	<0.02 J	<2. J	<0.03 J
01-6101W	AAA1613	<0.001 J	<0.004 J	<0.006 J	<0.1 J	<0.01 J	<0.03 J	<0.02 J	<2. J	<0.03 J
01-6101WR	AAA1614	<0.001 J	<0.004 J	<0.006 J	<0.1 J	<0.01 J	<0.03 J	<0.02 J	<2. J	<0.03 J
01-6102W	AAA1615	<0.001 J	<0.004 J	<0.006 J	<0.1 J	<0.01 J	<0.03 J	<0.02 J	<2. J	<0.03 J
01-6103W	AAA1616	<0.001 J	<0.004 J	<0.006 J	<0.1 J	<0.01 J	<0.03 J	<0.02 J	<2. J	<0.03 J
01-6104W	AAA1617	<0.001 J	<0.004 J	<0.006 J	<0.1 J	<0.01 J	<0.03 J	<0.02 J	<2. J	<0.03 J
01-6100SL	AAA1619	**1.51 J**	<0.7 J	14 J	0.045 J	6 J	45 J	<3. J	<0.2 J	**<20. J**
01-6101SL	AAA1620	**1.98 J**	0.9 J	29 J	0.047 J	11 J	66 J	<3. J	0.6 J	**<20. J**
01-6101SLR	AAA1621	**2 J**	0.9 J	31 J	0.03 J	11 J	73 J	<3. J	0.4 J	**<20. J**
01-6102SL	AAA1622	**1.73 J**	0.7 J	24 J	0.036 J	9.3 J	55 J	<3. J	0.4 J	**<20. J**
01-6103SL	AAA1623	**2 J**	<0.7 J	31 J	0.026 J	11 J	66 J	<3. J	0.4 J	**<20. J**
01-6104SL	AAA1624	**1.81 J**	<0.7 J	30 J	0.025 J	11 J	62 J	<3. J	0.4 J	**<20. J**
01-6054	AAA1628	**0.58 J**	<0.49 J	1.4 J	0.1 J	7.1 J	23.6 J	8.9 J	0.3 J	**<19.2 J**
01-6057	AAA1629	**0.55 J**	<0.46 J	3.8 J	0.06 J	6.9 J	18.5 J	<5.1 J	0.2 J	**<18.1 J**
01-6064	AAA1630	**0.68 J**	0.65 J	2.5 J	0.27 J	<3.5 J	15.3 J	5.6 J	0.3 J	**<18. J**
01-6069	AAA1631	**0.71 J**	<0.47 J	6.4 J	0.09 J	6.9 J	12.9 J	<5.3 J	0.2 J	**<18.7 J**
01-6073	AAA1632	**0.74 J**	<0.5 J	4.1 J	0.1 J	5.3 J	21.8 J	10 J	0.3 J	**<19.6 J**
01-6074	AAA1633	**0.56 J**	<0.47 J	1.1 J	0.15 J	5.5 J	19.1 J	<5.2 J	0.3 J	**<18.4 J**
01-6074R	AAA1634	**<0.56 J**	<0.55 J	<2.3 J	0.17 J	<3.5 J	20.8 J	<5.2 J	0.2 J	**<18.4 J**
01-1113	AAA1635	**2.24 J**	<0.7 J	6.3 J	<0.010 J	2.88 J	35 J	**74 J**	<0.2 J	<0.2 J
01-1142	AAA1636	**3.33 J**	<0.7 J	11.5 J	0.0175 J	7.61 J	60 J	**119 J**	0.24 J	<0.2 J
01-1143	AAA1637	**2.82 J**	<0.7 J	11.6 J	0.0307 J	6.88 J	64 J	**107 J**	0.26 J	<0.2 J
01-1156	AAA1638	**2.2 J**	<0.4 J	8.1 J	<0.010 J	5.4 J	29 J	**87 J**	<0.2 J	<0.2 J
01-1157	AAA1639	**2.67 J**	<0.7 J	10.7 J	<0.010 J	5.7 J	38 J	**99 J**	0.23 J	<0.2 J
01-1251	AAA1640	**3.01 J**	<0.7 J	9.65 J	<0.010 J	4.68 J	45 J	**114 J**	0.21 J	<0.2 J
01-1256	AAA1641	**2.88 J**	<0.7 J	7 J	0.046 J	3.8 J	39 J	**99 J**	0.2 J	<0.2 J
01-2076	AAA1642	**1.28 J**	0.73 J	24.2 J	**32.9 J**	5.6 J	**409 J**	**83 J**	0.27 J	<0.2 J
01-3082	AAA1646	**3.81 J**	0.68 J	2.91 J	<0.01 J	2.09 J	28.6 J	**76.6 J**	<0.2 J	<0.2 J
01-5016	AAA1647	**2.86 J**	0.44 J	29 J	**18.085 J**	5.79 J	63.2 J	**102 J**	<0.2 J	<0.2 J
01-5025	AAA1648	**3.04 J**	0.37 J	10.9 J	1.67 J	6.09 J	39 J	**107 J**	0.21 J	<0.2 J

TABLE B-5. VALIDATED INORGANIC DATA FOR OU 1078

Sample Location	Aggregate/Area	ER Sample No.	Date of Sample	EM -9 Sample No.	Metals Req. No.	Ag mg/kg	As mg/kg	Ba mg/kg
01-3019	HILLSIDE 137/>20 pCi/g	AAA1643	09/17/92	92.28755	13594	1.3 J	1.27 J	46.6 J
01-3057	HILLSIDE 137/>20 pCi/g	AAA1644	09/17/92	92.28756	13594	<1. J	1.53 J	69.9 J
01-3058	HILLSIDE 137/>20 pCi/g	AAA1645	09/17/92	92.28757	13594	<1. J	1.15 J	55.6 J
01-5048	HILLSIDE 138/>20 pCi/g	AAA1649	09/17/92	92.28758	13594	23.2 J	2.18 J	36.3 J
01-5056	HILLSIDE 138/>20 pCi/g	AAA1650	09/17/92	92.28759	13594	2.6 J	1.82 J	35.6 J
01-5057	HILLSIDE 138/>20 pCi/g	AAA1651	09/17/92	92.28760	13594	12.7 J	1.46 J	30.9 J
01-5058	HILLSIDE 138/>20 pCi/g	AAA1652	09/17/92	92.28761	13594	26.4 J	2.79 J	63.8 J
01-3153	HILLSIDE 137 DRAINAGE	AAA1654	09/23/92	92.29359	13611	2.7 J	1.02 J	197 J
01-3155	HILLSIDE 137 DRAINAGE	AAA1655	09/23/92	92.29360	13611	<1. J	0.99 J	169 J
01-3162	HILLSIDE 137 DRAINAGE	AAA1656	09/23/92	92.29361	13611	<1. J	1.65 J	170 J
01-5100	HILLSIDE 138 DRAINAGE	AAA1657	09/23/92	92.29362	13611	<1. J	2.35 J	426 J
01-5104	HILLSIDE 138 DRAINAGE	AAA1658	09/23/92	92.29363	13611	<1. J	1.64 J	412 J
01-5110	HILLSIDE 138 DRAINAGE	AAA1659	09/23/92	92.29364	13611	<1. J	1.52 J	344 J
01-5112	HILLSIDE 138 DRAINAGE	AAA1660	09/23/92	92.29365	13611	<1. J	1.98 J	378 J
01-5120-6	HILLSIDE 138 BENCH TRENCH	AAA1662	09/24/92	92.29366	13611	2.3 J	0.59 J	111 J
01-5123-6	HILLSIDE 138 BENCH TRENCH	AAA1663	09/24/92	92.29367	13611	<1. J	0.64 J	123 J
01-5128-6	HILLSIDE 138 BENCH TRENCH	AAA1664	09/24/92	92.29368	13611	<1. J	0.81 J	102 J
01-5122-T	HILLSIDE 138 BENCH TRENCH	AAA1665	09/24/92	92.29369	13611	<1. J	1.04 J	96 J
01-5127-T	HILLSIDE 138 BENCH TRENCH	AAA1666	09/24/92	92.29370	13611	<1. J	0.74 J	97 J
01-5127-TR	HILLSIDE 138 BENCH TRENCH	AAA1667	09/24/92	92.29371	13611	<1. J	0.72 J	95 J
01-5128-T	HILLSIDE 138 BENCH TRENCH	AAA1668	09/24/92	92.29372	13611	<1. J	0.77 J	105 J
01-3178-3	HS 137, CT 80/BENCH TRENCH	AAA1670	10/08/92	92.30511	13697	2.3 J	0.85 J	58 J
01-3183-3	HS 137, CT 80/BENCH TRENCH	AAA1671	10/08/92	92.30512	13697	1.3 J	0.81 J	98 J
01-3184-3	HS 137, CT 80/BENCH TRENCH	AAA1672	10/08/92	92.30513	13697	<1. J	1.07 J	77 J
01-3170-T	HS 137, CT 80/BENCH TRENCH	AAA1673	10/08/92	92.30514	13697	<1. J	1.06 J	92 J
01-3173-T	HS 137, CT 80/BENCH TRENCH	AAA1674	10/08/92	92.30515	13697	<1. J	0.57 J	64 J
01-3179-T	HS 137, CT 80/BENCH TRENCH	AAA1675	10/08/92	92.30516	13697	<1. J	0.7 J	85 J
01-2164	BAILEY BRIDGE/DRAINAGE	AAA1676	10/19/92	92.30916	13749	<1. J	1.89 J	293 J
01-2171	BAILEY BRIDGE/DRAINAGE	AAA1677	10/19/92	92.30917	13749	<1. J	1.59 J	214 J
01-2172	BAILEY BRIDGE/DRAINAGE	AAA1678	10/19/92	92.30919	13749	<1. J	2.19 J	418 J
01-2171R	BAILEY BRIDGE/DRAINAGE	AAA1679	10/19/92	92.30919	13749	<1. J	1.27 J	239 J

TABLE B-5. VALIDATED INORGANIC DATA FOR OU 1078

Sample Location	ER Sample No.	Be mg/kg	Cd mg/kg	Cr mg/kg	Hg mg/kg	Ni mg/kg	Pb mg/kg	Sb mg/kg	Se mg/kg	Tl mg/kg
01-3019	AAA1643	1 J	<1. J	29.8 J	0.161 J	24 J	17.3 J	<1. J	<0.2 J	<1. J
01-3057	AAA1644	<1. J	<1. J	6.4 J	0.068 J	29 J	35.8 J	<1. J	<0.2 J	<1. J
01-3058	AAA1645	<1. J	<1. J	4.9 J	0.045 J	28.3 J	53.4 J	<1. J	<0.2 J	<1. J
01-5048	AAA1649	<1. J	<1. J	**234 J**	**26.87 J**	24 J	170 J	<1. J	0.34 J	<1. J
01-5056	AAA1650	<1. J	<1. J	51.2 J	**20.61 J**	21.9 J	62.8 J	<1. J	<0.2 J	<1. J
01-5057	AAA1651	<1. J	<1. J	130 J	**21.549 J**	21.1 J	180 J	<1. J	0.23 J	<1. J
01-5058	AAA1652	1.2 J	<1. J	**310 J**	**213.33 J**	33 J	**266 J**	<1. J	0.39 J	<1. J
01-3153	AAA1654	3 J	<1. J	6.3 J	0.0383 J	<6.3 J	40 J	<15. J	<0.2 J	<0.2 J
01-3155	AAA1655	3.63 J	<1. J	7.4 J	0.0365 J	<6.3 J	46 J	<15. J	<0.2 J	<0.2 J
01-3162	AAA1656	3 J	<1. J	6.2 J	0.0723 J	<6.3 J	24 J	<15. J	<0.2 J	<0.2 J
01-5100	AAA1657	2.7 J	<1. J	17 J	0.181 J	9 J	53 J	<15. J	<0.2 J	<0.2 J
01-5104	AAA1658	2.4 J	<1. J	29 J	0.1359 J	7.2 J	157 J	<15. J	<0.2 J	<0.2 J
01-5110	AAA1659	2.7 J	<1. J	19 J	1.081 J	7 J	47 J	<15. J	<0.2 J	<0.2 J
01-5112	AAA1660	2.32 J	<1. J	12 J	0.0948 J	7 J	42 J	<15. J	<0.2 J	<0.2 J
01-5120-6	AAA1662	3.5 J	<1. J	2 J	0.1242 J	<6.3 J	22 J	<15. J	<0.2 J	<0.2 J
01-5123-6	AAA1663	3.8 J	<1. J	8.4 J	2.306 J	<6.3 J	32 J	<15. J	<0.2 J	<0.2 J
01-5128-6	AAA1664	4.6 J	<1. J	7.7 J	2.103 J	<6.3 J	38 J	<15. J	<0.2 J	<0.2 J
01-5122-T	AAA1665	4 J	<1. J	5.3 J	0.1144 J	<6.3 J	22 J	<15. J	<0.2 J	<0.2 J
01-5127-T	AAA1666	4.7 J	<1. J	5.8 J	0.5423 J	<6.3 J	28 J	<15. J	<0.2 J	<0.2 J
01-5127-TR	AAA1667	4.3 J	<1. J	5.6 J	0.4651 J	<6.3 J	27 J	<15. J	<0.2 J	<0.2 J
01-5128-T	AAA1668	4.5 J	<1. J	3.7 J	0.3078 J	<6.3 J	26 J	<15. J	<0.2 J	<0.2 J
01-3178-3	AAA1670	3.3 J	<1. J	3.2 J	<0.01 J	<6.3 J	30 J	<15. J	<0.2 J	<2. J
01-3183-3	AAA1671	3.9 J	<1. J	3.6 J	0.011 J	<6.3 J	30 J	<15. J	<0.2 J	<2. J
01-3184-3	AAA1672	3.1 J	<1. J	2.5 J	0.012 J	<6.3 J	25 J	<15. J	<0.2 J	<2. J
01-3170-T	AAA1673	3.2 J	<1. J	5 J	<0,01 J	<6.3 J	26 J	<15. J	<0.2 J	<2. J
01-3173-T	AAA1674	4 J	<1. J	3.8 J	<0,01 J	<6.3 J	33 J	<15. J	<0.2 J	<2. J
01-3179-T	AAA1675	4.3 J	<1. J	4.1 J	<0.01 J	<6.3 J	37 J	<15. J	<0.2 J	<2. J
01-2164	AAA1676	3 J	<1. J	12 J	0.133 J	6 J	67 J	<10. J	<0.2 J	<2. J
01-2171	AAA1677	3 J	<1. J	7 J	0.102 J	5 J	57 J	<10. J	<0.2 J	<2. J
01-2172	AAA1678	3 J	<1. J	13 J	0.393 J	10 J	76 J	<10. J	<0.2 J	<2. J
01-2171R	AAA1679	3 J	<1. J	7 J	0.082 J	4 J	57 J	<10. J	<0.2 J	<2. J

a. Bold numbers represent results greater than 50% of screening action level, including detection limits.
b. "J" flags indicate that the data may not be acceptable for all uses, as explained in Section 2.3 of this quarterly report.

TABLE B-6. VALIDATED RADIOCHEMICAL DATA FOR OU 1078

Sample Location	Aggregate/Area	ER Sample No.	Sample Date	EM-9 Sample No.	Rad Req. No.	Gamma Ray	Pu-238 pCi/g	Pu-239 pCi/g	U-234 pCi/g	U-235 pCi/g	U-238 pCi/g	Total U µg/g	Alpha pCi/g	Beta pCi/g	Gamma pCi/g	RAD Screen Date
01-6005	CAN DUMP SITE/WHOLE AREA	AAA0709	07/20/92	92.23693	13202	NAO						3.8	4.96	17.40	2.58	07/20/92
01-6005R	CAN DUMP SITE/WHOLE AREA	AAA0710	07/20/92	92.23694	13202	NAO						<7.3	NC	NC	NC	NC
91-6014	CAN DUMP SITE/WHOLE AREA	AAA0711	07/20/92	92.23695	13202	NAO						5.6	3.93	12.40	1.72	07/20/92
01-6023	CAN DUMP SITE/WHOLE AREA	AAA0712	07/20/92	92.23696	13202	NAO						7.2	3.24	15.80	2.13	07/20/92
01-6023R	CAN DUMP SITE/WHOLE AREA	AAA0713	07/20/92	92.23697	13202	NAO						8.0	NC	NC	NC	NC
01-6012-6017	CAN DUMP SITE/WHOLE AREA	AAA0714	07/20/92	92.23698	13202	NAO						<6.3	2.21	13.4	2.13	07/20/92
01-6018-6023	CAN DUMP SITE/WHOLE AREA	AAA0715	07/20/92	92.23699	13202	NAO						<5.2	5.3	15.7	2.15	07/20/92
01-1162	J2/TU, HS140/OUTFALL ST135	AAA0716	07/20/92	92.23700	13202	NAO						<7.2	3.76	13.2	2.01	11/04/92
01-1168	J2/TU, HS140/OUTFALL ST135	AAA0717	07/20/92	92.23701	13202	NAO						<6.5	3.07	14	2.12	11/04/92
01-1168R	J2/TU, HS140/OUTFALL ST135	AAA0718	07/20/92	92.23702	13202	NAO						3.2	NC	NC	NC	NC
01-1174	J2/TU, HS140/OUTFALL ST135	AAA0719	07/20/92	92.23703	13202	NAO						<7.8	3.07	15.6	2.24	11/04/92
01-1160-1164	J2/TU, HS140/OUTFALL ST135	AAA0720	07/20/92	92.23704	13202	NAO						<7.1	2.04	11.8	2.06	07/20/92
01-1165-1171	J2/TU, HS140/OUTFALL ST135	AAA0721	07/20/92	92.23705	13202	NAO						<4	3.24	13.9	1.91	07/20/92
01-1172-1176	J2/TU, HS140/OUTFALL ST135	AAA0722	07/20/92	92.23706	13202	NAO						8.7	4.1	13.2	2.05	07/20/92
01-1083	HS140/HS140 SURF RUNOFF AREAS	AAA0723	07/23/92	92.24110	13235	NAO						<9.7	2.21	15.3	1.05	07/23/92
01-1090	HS140/HS140 SURF RUNOFF AREAS	AAA0724	07/23/92	92.24111	13235	NAO						<5.3	3.4	17.2	1.02	07/23/92
01-1094	HS140/HS140 SURF RUNOFF AREAS	AAA0725	07/23/92	92.24112	13235	NAO						**2073.0**	154.6	670.2	12.71	07/23/92
01-1095	HS140/HS140 SURF RUNOFF AREAS	AAA0726	07/23/92	92.24113	13235	NAO	<0.6	<0.6				**581.0**	50.8	147.8	5.26	07/23/92
01-1096	HS140/HS140 SURF RUNOFF AREAS	AAA0727	07/23/92	92.24114	13235	NAO	<0.6	<0.6				10.7	3.76	14.5	0.79	07/23/92
01-1096R	HS140/HS140 SURF RUNOFF AREAS	AAA0728	07/23/92	92.24115	13235	NAO	<0.6	<0.6				10.3	NC	NC	NC	07/23/92
01-1097	HS140/HS140 SURF RUNOFF AREAS	AAA0729	07/23/92	92.24116	13235	NAO	<0.6	<0.6				**2457.0**	121.1	445.2	11.17	07/23/92
01-1080-1086	HS140/HS140 SURF RUNOFF AREAS	AAA0730	07/23/92	92.24117	13235	NAO	<0.6	<0.6				12.0	3.41	14	1.10	07/23/92
01-1087-1093	HS140/HS140 SURF RUNOFF AREAS	AAA0731	07/23/92	92.24118	13235	NAO	<0.6	<0.6				53.6	6.33	27.5	1.29	07/23/92
01-1109	HS140/HS140 SURF RUNOFF AREAS	AAA0732	07/23/92	92.24119	13235	NAO	<0.6	<0.6				17.7	117	560.2	4.40	07/23/92
01-1110	HS140/HS140 SURF RUNOFF AREAS	AAA0733	07/23/92	92.24120	13235	NAO	<0.6	1.23				**849.0**	130	645.5	22.97	07/23/92
01-1111	HS140/HS140 SURF RUNOFF AREAS	AAA0734	07/23/92	92.24121	13235	NAO	<0.6	<0.6				**135.0**	24.5	80.4	3.05	07/23/92
01-1111R	HS140/HS140 SURF RUNOFF AREAS	AAA0735	07/23/92	92.24122	13235	NAO	<0.6	<0.6				**138.0**	24.98	88.5	2.90	07/23/92
01-1112	HS140/HS140 SURF RUNOFF AREAS	AAA0736	07/23/92	92.24123	13235	NAO	<0.6	<0.6				**165.0**	17.7	59.3	2.34	07/23/92
01-1202	HS140/HS140 SURF RUNOFF AREAS	AAA0737	07/23/92	92.24124	13235	NAO	<0.6	<0.6				<7.1	2.73	17.30	1.36	07/23/92
01-1202R	HS140/HS140 SURF RUNOFF AREAS	AAA0738	07/23/92	92.24125	13235	NAO	<0.6	<0.6				6.0	2.73	17.3	1.32	07/23/92
01-1017	HS140/HS140 SURF RUNOFF AREAS	AAA0739	07/23/92	92.24126	13235	NAO	<0.6	<0.6				8.8	0.149	0	1.05	07/23/92
01-1045	HS140/HS140 SURF RUNOFF AREAS	AAA0740	07/23/92	92.24127	13235	NAO	<0.6	1.24				17.2	2.9	15.6	0.77	07/23/92
01-1144	HS140/HS140 SURF RUNOFF AREAS	AAA0741	07/23/92	92.24128	13235	NAO	<0.6	<0.6				18.7	4.1	19.4	1.12	07/23/92
01-1144R	HS140/HS140 SURF RUNOFF AREAS	AAA0742	07/23/92	92.24129	13235	NAO	<0.6	<0.6				8.8	4.1	19.4	1.12	07/23/92

TABLE B-6. VALIDATED RADIOCHEMICAL DATA FOR OU 1078

Sample Location	Aggregate/Area	ER Sample No.	Sample Date	EM-9 Sample No.	Rad Req. No.	Gamma Ray	Pu-238 pCi/g	Pu-239 pCi/g	U-234 pCi/g	U-235 pCi/g	U-238 pCi/g	Total U µg/g	Alpha pCi/g	Beta pCi/g	Gamma pCi/g	RAD Screen Date
01-1147	HS140/HS140 SURF RUNOFF AREAS	AAA0743	07/23/92	92.24130	13235	NAO	<0.6	0.629				<5.9	1.35	15.2	0.40	07/23/92
01-1098	HS140/HS140 SURF RUNOFF AREAS	AAA0744	07/23/92	92.24131	13235	NAO	<0.07	0.247				56.9	8.05	26	1.03	07/23/92
01-1089	HS140/HS140 SURF RUNOFF AREAS	AAA1469	07/23/92	92.24132	13235	NAO	0.108	0.199				56.9	6.16	22.7	1.08	07/23/92
RINSATE BLANK	HS140/HS140 SURF RUNOFF AREAS	AAA0745	07/23/92	92.24145	NA								NC	NC	NC	NC
01-1089	HS140/HS140 SURF RUNOFF AREAS	AAA1469	07/23/92	92.24132	13235	NAO	0.108	0.199				35.5				
RINSATE-DECON	HS140/HS140 SURF RUNOFF AREAS	AAA1470	07/23/92										NC	NC	NC	NC
01-5091	HS138/SELA INN/CANYON BOTTOM	AAA0746	07/27/92	92.24335	13259	NAO	<0.06	5.1				<12.2	1.87	15.20	0.29	07/27/92
01-5091R	HS138/SELA INN/CANYON BOTTOM	AAA0747	07/27/92	92.24336	13259	NAO	<0.08	5.94				5.6	1.87	9.88	0.19	07/27/92
01-5098	HS138/SELA INN/CANYON BOTTOM	AAA0748	07/27/92	92.24337	13259	NAO	0.369	1.95				<3.9	3.24	12.90	0.15	07/27/92
01-5075-5079,5092	HS138/SELA INN/CANYON BOTTOM	AAA0749	07/27/92	92.24338	13259	NAO	0.0992	0.707				<6.2	3.24	10.2	0.26	07/27/92
01-5093-5098	HS138/SELA INN/CANYON BOTTOM	AAA0750	07/27/92	92.24339	13259	NAO	0.0787	1.97				8.3	1.69	12.6	0.26	07/27/92
01-5099,5088-5091	HS138/SELA INN/CANYON BOTTOM	AAA0751	07/27/92	92.24340	13259	NAO	<0.06	3.18				4.5	1.52	12.8	0.16	07/27/92
01-3132	HS137/CT 80/BOTTOM OF CANYON	AAA1471	07/29/92	92.24592	13285		0.123	17.5				11.2	9.43	19.37	0.47	07/29/92
01-3139	HS137/CT 80/BOTTOM OF CANYON	AAA1472	07/29/92	92.24593	13285		<0.16	18.1				<11.6	7.71	17.53	0.48	07/29/92
01-3139R	HS137/CT 80/BOTTOM OF CANYON	AAA1473	07/29/92	92.24594	13285		<0.14	20.7				7.3	6.33	18.34	0.44	07/29/92
01-3144	HS137/CT 80/BOTTOM OF CANYON	AAA1474	07/29/92	92.24595	13285		<0.11	19.3				7.6	8.57	14.19	0.53	07/29/92
01-1248	J2/TU, HS140 BOTTOM OF CANYON	AAA1475	07/29/92	92.24596	13285		<0.09	0.0828				<10.6	5.65	20.15	0.57	07/29/92
01-1249	J2/TU, HS140 BOTTOM OF CANYON	AAA1476	07/29/92	92.24597	13285		0.13	0.104				15.6	3.24	15.01	0.29	07/29/92
01-1253	J2/TU, HS140 BOTTOM OF CANYON	AAA1477	07/29/92	92.24598	13285		0.0445	0.0779				<6.5	3.24	13.80	0.28	07/29/92
01-1253R	J2/TU, HS140 BOTTOM OF CANYON	AAA1478	07/29/92	92.24599	13285		<0.06	<0.06				3.7	2.38	14.20	0.03	07/29/92
01-1260	J2/TU, HS140 BOTTOM OF CANYON	AAA1479	07/29/92	92.24600	13285		<0.06	0.0527				5.8	3.93	16.02	0.34	07/29/92
01-1250-1254	J2/TU, HS140 BOTTOM OF CANYON	AAA1480	07/29/92	92.24601	13285		<0.06	0.073				<9.4	5.13	16.6	0.34	07/29/92
01-1255-1260	J2/TU, HS140 BOTTOM OF CANYON	AAA1481	07/29/92	92.24602	13285		<0.06	0.154				19.0	4.27	17.3	0.35	07/29/92
RINSATE	J2/TU, HS140 BOTTOM OF CANYON	AAA1507	07/29/92	92.24607	13285	NAO						<1.0	NC	NC	NC	NC
RINSATE	J2/TU, HS140 BOTTOM OF CANYON	AAA1508	07/29/92	92.24610	NA								NC	NC	NC	NC
01-2013	B BRIDGE/SURF RUNOFF TOP AREA	AAA1482	08/03/92	92.24829	13320	NAO	0.14	0.0747				6.3	3.76	11.60	0.35	08/03/92
01-2022	B BRIDGE/SURF RUNOFF TOP AREA	AAA1483	08/03/92	92.24830	13320	NAO	0.0921	0.067				6.0	3.07	12.90	0.39	08/03/92
01-2023	B BRIDGE/SURF RUNOFF TOP AREA	AAA1484	08/03/92	92.24831	13320	NAO	0.0612	0.0272				4.0	3.24	14.60	0.36	08/03/92
01-2024	B BRIDGE/SURF RUNOFF TOP AREA	AAA1485	08/03/92	92.24832	13320	NAO	0.105	0.0646				<9	4.61	13.60	0.38	08/03/92
01-2034	B BRIDGE/SURF RUNOFF TOP AREA	AAA1486	08/03/92	92.24833	13320	NAO	0.136	0.0678				<6.9	2.90	14.60	0.40	08/03/92
01-2035	B BRIDGE/SURF RUNOFF TOP AREA	AAA1487	08/03/92	92.24834	13320	NAO	0.262	0.157				6.2	3.07	15.80	0.39	08/03/92
01-2036	B BRIDGE/SURF RUNOFF TOP AREA	AAA1489	08/03/92	92.24835	13320	NAO	0.0798	<0.047				6.7	3.41	12.20	0.33	08/03/92

TABLE B-6. VALIDATED RADIOCHEMICAL DATA FOR OU 1078

Sample Location	Aggregate/Area	ER Sample No.	Sample Date	EM-9 Sample No.	Rad Req. No.	Gamma Ray	Pu-238 pCi/g	Pu-239 pCi/g	U-234 pCi/g	U-235 pCi/g	U-238 pCi/g	Total U µg/g	Alpha pCi/g	Beta pCi/g	Gamma pCi/g	RAD Screen Date
01-2038	B BRIDGE/SURF RUNOFF TOP AREA	AAA1490	08/03/92	92.24836	13320	NAO	0.0554	0.0246				<3.2	2.04	7.33	0.05	08/03/92
01-2043	B BRIDGE/SURF RUNOFF TOP AREA	AAA1491	08/03/92	92.24837	13320	NAO	<0.067	0.0797				6.1	2.90	15.60	0.37	08/03/92
01-2045	B BRIDGE/SURF RUNOFF TOP AREA	AAA1492	08/03/92	92.24838	13320	NAO	0.0669	0.0401				4.1	1.69	13.58	0.25	08/03/92
01-2050	B BRIDGE/SURF RUNOFF TOP AREA	AAA1493	08/03/92	92.24839	13320	NAO	0.144	0.0678				5.3	3.59	13.67	0.27	08/03/92
01-2058	B BRIDGE/SURF RUNOFF TOP AREA	AAA1494	08/03/92	92.24840	13320	NAO	0.163	0.124				<9.2	3.41	15.50	0.34	08/03/92
01-2064	B BRIDGE/SURF RUNOFF TOP AREA	AAA1495	08/03/92	92.24841	13320	NAO	0.096	0.524				6.0	3.24	17.60	0.38	08/03/92
01-2022R	B BRIDGE/SURF RUNOFF TOP AREA	AAA1496	08/03/92	92.24842	13320	NAO	0.0792	0.0495				4.3	2.38	14.10	0.35	08/03/92
01-5041	HS 138, SE LA INN/DEBRIS AREA	AAA0752	08/10/92	92.25418	13360	0	0.002	0.018	0.92	0.05	1.06		0.84	12.00	0.26	08/10/92
01-5046	HS 138, SE LA INN/DEBRIS AREA	AAA1509	08/10/92	92.25419	13360	0	0	0.016	0.92	0.04	0.14		1.69	13.20	0.32	08/10/92
01-5042-5046	HS 138, SE LA INN/DEBRIS AREA	AAA1510	08/10/92	92.25420	13360	0	0.005	1.33	1.32	0.07	1.34		2.55	12.5	0.26	08/10/92
RINSATE	HS 138, SE LA INN/DEBRIS AREA	AAA1549	08/10/92	92.25434	NA								NC	NC	NC	NC
01-5004	HS138, SE LA INN/OUTFALL ST138	AAA1511	08/17/92	92.26360	13383	0 J							3.24	10.60	0.13	08/18/92
01-5011	HS138, SE LA INN/OUTFALL ST138	AAA1512	08/17/92	92.26361	13383	0 J							1.18	10.20	0.12	08/18/92
01-5018	HS138, SE LA INN/OUTFALL ST138	AAA1513	08/17/92	92.26377	13412								265.60	19.20	0.27	08/18/92
01-5028	HS138, SE LA INN/OUTFALL ST138	AAA1514	08/17/92	92.26378	13412								312.70	27.00	0.07	08/18/92
01-5028R	HS138, SE LA INN/OUTFALL ST138	AAA1515	08/17/92	92.26379	13412							20.3 J	NC	NC	NC	NC
01-5049	HS138, SE LA INN/OUTFALL ST138	AAA1516	08/17/92	92.26380	13412							30.7 J	157.50	30.60	0.35	08/18/92
01-5049R	HS138, SE LA INN/OUTFALL ST138	AAA1517	08/17/92	92.26381	13412							35.6 J	116.30	24.00	0.33	08/18/92
01-5061	HS138, SE LA INN/OUTFALL ST138	AAA1518	08/17/92	92.26362	13383	0 J						8.4 J	4.79	14.40	0.06	08/18/92
01-5065	HS138, SE LA INN/OUTFALL ST138	AAA1519	08/17/92	92.26363	13383	0 J						11.5 J	4.61	15.50	0.25	08/18/92
01-5000-5004	HS138, SE LA INN/OUTFALL ST138	AAA1520	08/17/92	92.26364	13383	0 J							2.38	11.8	0.14	08/18/92
RINSATE	HS138, SE LA INN/OUTFALL ST138	AAA1598	08/17/92	92.26076	NA								NC	NC	NC	NC
01-2142	BAILEY BRIDGE/BOTTOM OF CANYON	AAA1523	07/29/92	92.24673	13292	NAO	0.0831	1.64				<6	1.35	14.16	0.54	07/29/92
01-2147	BAILEY BRIDGE/BOTTOM OF CANYON	AAA1524	07/29/92	92.24674	13292	NAO	0.102	0.244				<10.1	2.38	14.28	0.59	07/29/92
01-2147R	BAILEY BRIDGE/BOTTOM OF CANYON	AAA1525	07/29/92	92.24675	13292	NAO	0.142	0.249				<13.8	4.44	16.00	0.61	07/29/92
01-2150	BAILEY BRIDGE/BOTTOM OF CANYON	AAA1526	07/29/92	92.24676	13292	NAO	0.106	0.242				9.1	3.24	15.73	0.55	07/29/92
01-2150-2156	BAILEY BRIDGE/BOTTOM OF CANYON	AAA1527	07/29/92	92.24677	13292	NAO	<0.07	0.431				5.7	1.35	13.7	0.44	07/29/92
RINSATE	BAILEY BRIDGE/BOTTOM OF CANYON	AAA1542	07/30/92	92.24678	NA								NC	NC	NC	NC
01-2073	BAILEY BRIDGE/TWO LOWER LINES EOD	AAA1528	08/03/92	92.24843	13320	NAO	0.195	0.072				5.1	3.24	13.57	0.20	08/03/92
01-2073R	BAILEY BRIDGE/TWO LOWER LINES EOD	AAA1529	08/03/92	92.24844	13320	NAO	0.0736	0.204				<10.4	1.52	16.13	0.14	08/03/92
01-2075	BAILEY BRIDGE/TWO LOWER LINES EOD	AAA1530	08/03/92	92.24845	13320	NAO	0.167	0.683				4.1	6.85	18.24	0.26	08/03/92
01-2080	BAILEY BRIDGE/TWO LOWER LINES EOD	AAA1531	08/03/92	92.24846	13320	NAO	0.311	18				<12.4	4.61	14.01	0.24	08/03/92

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Sample Location	Aggregate/Area	ER Sample No.	Sample Date	EM-9 Sample No.	Rad Req. No.	Gamma Ray	Pu-238 pCi/g	Pu-239 pCi/g	U-234 pCi/g	U-235 pCi/g	U-238 pCi/g	Total U µg/g	Alpha pCi/g	Beta pCi/g	Gamma pCi/g	RAD Screen Date
01-2095	BAILEY BRIDGE/TWO LOWER LINES EOD	AAA1532	08/03/92	92.24847	13320	NAO	<0.06	0.981				15.6	3.41	14.21	0.33	08/03/92
01-2096	BAILEY BRIDGE/TWO LOWER LINES EOD	AAA1533	08/03/92	92.24848	13320	NAO	0.194	0.659				10.1	3.24	19.73	0.37	08/03/92
RINSATE	BAILEY BRIDGE/TWO LOWER LINES EOD	AAA1543	08/03/92	92.24849	13320	NAO						<1.0	NC	NC	NC	NC
01-2006	BAILEY BRIDGE/OPPOSITE PARK	AAA1534	08/10/92	92.25421	13360	0	0.013	0.443	7.59	0.37	8.62		3.07	14.00	0.15	08/10/92
01-2007	BAILEY BRIDGE/OPPOSITE PARK	AAA1535	08/10/92	92.25422	13360	0	0.004	0.145	3.61	0.12	3.86		2.38	13.40	0.29	08/10/92
01-2007R	BAILEY BRIDGE/OPPOSITE PARK	AAA1536	08/10/92	92.25423	13360	0	0.007	0.204	3.9	0.16	3.88		NC	NC	NC	NC
01-2009	BAILEY BRIDGE/OPPOSITE PARK	AAA1537	08/10/92	92.25424	13360	0	0.001	0.032	2.65	0.1	2.75		1.87	16.70	0.23	08/10/92
01-2001-2006	BAILEY BRIDGE/OPPOSITE PARK	AAA1538	08/10/92	92.25425	13360	0	0.002	0.035	1.7	0.07	1.66		2.21	14.1	0.30	08/10/92
01-2007-2011	BAILEY BRIDGE/OPPOSITE PARK	AAA1539	08/10/92	92.25426	13360	0	0.004	0.15	6.29	0.34	6.55		2.9	16.7	0.24	08/10/92
01-2114	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1540	08/10/92	92.25427	13360	0	0.092	6.17	4.18	0.21	4.16		3.76	16.00	0.23	08/10/92
01-2122	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1541	08/10/92	92.25428	13360	0	0.008	0.271	1.09	0.06	0.88		3.76	11.10	0.25	08/10/92
01-2122R	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1544	08/10/92	92.25429	13360	0	0.007	0.527	1.57	0.08	1.48		NC	NC	NC	NC
01-2133	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1545	08/10/92	92.25430	13360	0	0.015	2.04	2.23	0.12	1.99		2.73	15.60	0.25	08/10/92
01-2110-2116	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1546	08/10/92	92.25431	13360	0	0.015	0.946	2.3	0.13	2.1		2.21	12	0.19	08/10/92
01-2120-2123	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1547	08/10/92	92.25432	13360	0	0.009	0.526	1.51	0.07	1.59		1.87	13.8	0.19	08/10/92
01-2130-2134	B BRIDGE/BENCH AREA IN DRAINAGE	AAA1548	08/10/92	92.25433	13360	0	0.009	1.59	2.74	0.1	2.43		2.55	13.2	0.31	08/10/92
01-3003	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1521	08/19/92	92.26386	13415	0 J	0.005	4.22				3.1 J	2.04	13.30	0.31	08/20/92
01-3007	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1522	08/19/92	92.26387	13415	0 J	0.077	**15.3**				10.1 J	3.07	15.30	0.24	08/20/92
01-3015	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1550	08/19/92	92.26388	13415	0 J	0.035	**13.4**				4.5 J	5.30	15.70	0.32	08/20/92
01-3023	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1551	08/19/92	92.26399	13415	0 J	0.072	**38.9**				3 J	9.94	15.20	0.42	08/20/92
01-3033	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1552	08/19/92	92.26405	13415	0 J	0.066	**27**				2.1 J	9.43	17.00	0.52	08/20/92
01-3045	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1553	08/19/92	92.26407	13415	0 J	0.013	1.26				3.7 J	5.65	18.80	0.49	08/20/92
01-3051	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1554	08/19/92	92.26393	13415	0 J	0.003	1.28				4.5 J	4.10	18.50	0.49	08/20/92
01-3053	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1555	08/19/92	92.26390	13415	0 J	0.041	9.63				2.6 J	5.65	14.10	0.21	08/20/92
01-3059	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1556	08/19/92	92.26396	13415	0 J	0.095	**28.2**				10.4 J	7.19	16.80	0.26	08/20/92
01-3088	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1557	08/19/92	92.26395	13415	0 J	0.041	**15.4**				9.5 J	7.19	16.06	0.32	08/20/92
01-3093	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1558	08/19/92	92.26406	13415	0 J	0.105	**20.7**				5.4 J	4.10	13.84	0.17	08/20/92
01-3000-3006	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1559	08/19/92	92.26397	13415	0 J	0.003	3.46				2.1 J	2.73	12.1	0.34	08/20/92
01-3031-3037	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1560	08/19/92	92.26389	13415	0 J	0.012	8.7				2.4 J	6.68	17	0.48	08/20/92
01-3052-3056	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1561	08/19/92	92.26391	13415	0 J		**13.7**				3.5 J	1.69	11.4	0.26	08/20/92
01-3057-3062,3086	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1562	08/19/92	92.26403	13415	0 J	0.46	**130 J**				3 J	11.8	14	0.23	08/20/92
01-3087-3090	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1563	08/19/92	92.26401	13415	0 J	0.029	10.4				2.9 J	7.36	15.9	0.43	08/20/92
01-3091-3094	HS137.CT80/D-BLD & HS137 OUTFALLS	AAA1564	08/19/92	92.26392	13415	0 J	0.06	**19.9**				4.1 J	4.61	13.4	0.34	08/20/92

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Sample Location	Aggregate/Area	ER Sample No.	Sample Date	EM-9 Sample No.	Rad Req. No.	Gamma Ray	Pu-238 pCi/g	Pu-239 pCi/g	U-234 pCi/g	U-235 pCi/g	U-238 pCi/g	Total U µg/g	Alpha pCi/g	Beta pCi/g	Gamma pCi/g	RAD Screen Date
01-3065	HS 137.CT 80/BENCH AREA OF HS 137	AAA1565	08/19/92	92.26404	13415	0 J	0.078 R	3.5 R				1.5 J	3.07	17.80	0.55	08/20/92
01-3069	HS 137.CT 80/BENCH AREA OF HS 138	AAA1566	08/19/92	92.26400	13415	0 J	0.012	5.25				2.3 J	4.44	15.81	0.35	08/20/92
01-3074	HS 137.CT 80/BENCH AREA OF HS 139	AAA1567	08/19/92	92.26394	13415	0 J	0.008	1.88					1.87	17.68	0.41	08/20/92
01-3081	HS 137.CT 80/BENCH AREA OF HS 140	AAA1568	08/19/92	92.26409	13415	0 J	0.076	**12.3**				1.6 J	7.71	16.24	0.28	08/20/92
01-3083	HS 137.CT 80/BENCH AREA OF HS 141	AAA1569	08/19/92	92.26408	13415	0 J	0.017	1.93				1.5 J	2.73	16.71	0.26	08/20/92
01-3072-3077	HS 137.CT 80/BENCH AREA OF HS 142	AAA1570	08/19/92	92.26410	13415	0 J	0.026	6.08				1.4 J	2.73	17	0.28	08/20/92
01-3078-3081	HS 137.CT 80/BENCH AREA OF HS 143	AAA1571	08/19/92	92.26402	13415	0 J	0.157	**45.5**				1.8 J	8.91	16	0.43	08/20/92
01-3082-3085	HS 137.CT 80/BENCH AREA OF HS 144	AAA1572	08/19/92	92.26398	13415	0 J	0.008	3.7				1.6 J	4.96	23.3	0.35	08/20/92
RINSATE	HS 137.CT 80/BENCH AREA OF HS 145	AAA1597	08/19/92										NC	NC	NC	NC
01-1300	J-2/TU.HS140/HILLSIDE 140 DRAINAGE	AAA1573	08/26/92	92.26763	13425	0 J							4.10	20.27	0.82	08/26/92
01-1301	J-2/TU.HS140/HILLSIDE 140 DRAINAGE	AAA1574	08/26/92	92.26780	13450	NAO J	0.007	0.43				**130.2 J**	12.86	61.83	1.64	08/26/92
01-1302	J-2/TU.HS140/HILLSIDE 140 DRAINAGE	AAA1575	08/26/92	92.26764	13425	0 J							2.38	13.21	0.35	08/26/92
01-1303	J-2/TU.HS140/HILLSIDE 140 DRAINAGE	AAA1576	08/26/92	92.26765	13425	0 J							5.82	23.68	1.01	08/26/92
01-1304	J-2/TU.HS140/HILLSIDE 140 DRAINAGE	AAA1577	08/26/92	92.26779	13450	NAO J	0.005	0.7				**143.7 J**	12.00	40.40	1.54	08/26/92
01-1305	J-2/TU.HS140/HILLSIDE 140 DRAINAGE	AAA1578	08/26/92	92.26781	13450	NAO J	0.003	0.36				**130.7 J**	9.26	34.37	1.00	08/26/92
01-1306	J-2/TU.HS140/HILLSIDE 140 DRAINAGE	AAA1579	08/26/92	92.26766	13425	0 J							12.69	44.11	1.26	08/26/92
01-1307	J-2/TU.HS140/HILLSIDE 140 DRAINAGE	AAA1580	08/26/92	92.26767	13425	0 J							5.13	22.79	0.64	08/26/92
01-1308	J-2/TU.HS140/HILLSIDE 140 DRAINAGE	AAA1581	08/26/92	92.26777	13450	NAO J	0.23	0.57				**160.3 J**	10.63	47.72	1.24	08/26/92
01-1309	J-2/TU.HS140/HILLSIDE 140 DRAINAGE	AAA1582	08/26/92	92.26768	13425	0 J							7.19	22.15	0.82	08/26/92
01-1310	J-2/TU.HS140/HILLSIDE 140 DRAINAGE	AAA1583	08/26/92	92.26775	13450	NAO J	0.007	0.94				**368.5 J**	17.85	78.00	2.50	08/26/92
01-1311	J-2/TU.HS140/HILLSIDE 140 DRAINAGE	AAA1584	08/26/92	92.26778	13450	NAO J	0.3	0.57				**123.2 J**	9.94	40.05	1.73	08/26/92
01-1312	J-2/TU.HS140/HILLSIDE 140 DRAINAGE	AAA1585	08/26/92	92.26774	13450	NAO J	0.008	0.31				**727 J**	63.37	248.99	5.57	08/26/92
01-1313	J-2/TU.HS140/HILLSIDE 140 DRAINAGE	AAA1586	08/26/92	92.26773	13450	NAO J	0.052	0.17				**479 J**	62.00	148.58	3.64	08/26/92
01-1314	J-2/TU.HS140/HILLSIDE 140 DRAINAGE	AAA1587	08/26/92	92.26776	13450	NAO J	0.005	0.29				**302 J**	25.06	101.42	2.11	08/26/92
RINSATE	J-2/TU.HS140/HILLSIDE 140 DRAINAGE	AAA1596	08/26/92	92.26792	13425	0 J						24.9 J	NC	NC	NC	NC
01-5080	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1588	08/27/92	92.26827	13445	NAO J			4.514	1.078		17.5 J	626.80	79.70	154.00	08/27/92
01-5081	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1589	08/27/92	92.26828	13445	NAO J			3.378	0.156		17.5 J	644.30	43.30	59.00	08/27/92
01-5082	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1590	08/27/92	92.26829	13445	NAO J			3.867	0.184		20 J	872.80	88.50	161.00	08/27/92
01-5083	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1591	08/27/92	92.26830	13445	NAO J			3.568	0.392		12.6 J	258.40	29.50	29.00	08/27/92
01-5084	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1592	08/27/92	92.26831	13445	NAO J			3.913	0.194		13.5 J	180.00	31.40	29.00	08/27/92
01-5085	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1593	08/27/92	92.26832	13445	NAO J			3.128	0.0156		20.9 J	724.00	75.50	131.00	08/27/92
01-5086	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1594	08/27/92	92.26833	13445	NAO J			2.741	0.127		14.1 J	352.30	39.90	75.00	08/27/92
01-5087	HS138.SELA INN/BELOW ST138 OUTFALL	AAA1595	08/27/92	92.26834	13445	NAO J			2.417	0.233		10.5 J	242.20	36.50	54.00	08/27/92

TABLE B-6. VALIDATED RADIOCHEMICAL DATA FOR OU 1078

Sample Location	Aggregate/Area	ER Sample No.	Sample Date	EM-9 Sample No.	Rad Req. No.	Gamma Ray	Pu-238 pCi/g	Pu-239 pCi/g	U-234 pCi/g	U-235 pCi/g	U-238 pCi/g	Total U µg/g	Alpha pCi/g	Beta pCi/g	Gamma pCi/g	RAD Screen Date
01-3103	HS137, CT80/D-BLD OUTFALL-TOP	AAA1599	09/02/92	92.27583	13500	0 J			1.521	0.067	0.993		4.44	14.71	0.76	09/02/92
01-3103R	HS137, CT80/D-BLD OUTFALL-TOP	AAA1600	09/02/92	92.27584	13500	0 J			1.518	0.073	1.002		5.13	11.41	0.58	09/02/92
01-3106	HS137, CT80/D-BLD OUTFALL-TOP	AAA1601	09/02/92	92.27585	13500	0 J			2.746	0.123	2.282		4.44	13.53	1.08	09/02/92
01-3110	HS137, CT80/D-BLD OUTFALL-TOP	AAA1602	09/02/92	92.27586	13500	0 J			0.746	0.032	0.757		2.04	14.79	0.83	09/02/92
01-3113	HS137, CT80/D-BLD OUTFALL-TOP	AAA1603	09/02/92	92.27587	13500	0 J			2.69	0.137	2.75		3.41	15.01	2.01	09/02/92
01-3114	HS137, CT80/D-BLD OUTFALL-TOP	AAA1604	09/02/92	92.27588	13500	0 J			1.912	0.092	1.831		6.16	18.19	1.73	09/02/92
01-3117	HS137, CT80/D-BLD OUTFALL-TOP	AAA1605	09/02/92	92.27589	13500	0 J			2.353	0.103	1.779		5.82	13.21	1.15	09/02/92
01-3117R	HS137, CT80/D-BLD OUTFALL-TOP	AAA1606	09/02/92	92.27590	13500	0 J			2.308	0.098	1.684		4.61	14.32	1.08	09/02/92
01-3124	HS137, CT80/D-BLD OUTFALL-TOP	AAA1607	09/02/92	92.27591	13500	0 J			0.994	0.077	0.957		3.59	14.39	0.77	09/02/92
01-3125	HS137, CT80/D-BLD OUTFALL-TOP	AAA1608	09/02/92	92.27592	13500	0 J			1.462	0.064	1.465		3.24	17.68	0.91	09/02/92
01-3126	HS137, CT80/D-BLD OUTFALL-TOP	AAA1609	09/02/92	92.27593	13500	0 J			0.898	0.038	0.872		3.07	14.60	0.94	09/02/92
01-3127	HS137, CT80/D-BLD OUTFALL-TOP	AAA1610	09/02/92	92.27594	13500	0 J			4.926	0.179	5.09		5.30	20.30	2.47	09/02/92
01-3128	HS137, CT80/D-BLD OUTFALL-TOP	AAA1611	09/02/92	92.27595	13500	0 J			1.795	0.072	1.819		4.10	16.20	1.49	09/02/92
01-6100W	ASHLEY POND	AAA1612	09/08/92	92.27790	13533	0 J	0.013	0.054				0.78 J	0	0	0	0
01-6101W	ASHLEY POND	AAA1613	09/08/92	92.27791	13533	0 J	0.015	0.087				0.3 J	0	0	0	0
01-6101WR	ASHLEY POND	AAA1614	09/08/92	92.27792	13533	0 J	0	0.099				0.36 J	0	0	0	0
01-6102W	ASHLEY POND	AAA1615	09/08/92	92.27793	13533	0 J	0.014	0.138				0.32 J	0	0	0	0
01-6103W	ASHLEY POND	AAA1616	09/08/92	92.27794	13533	0 J	0.02	0.113				0.31 J	0	0	0	0
01-6104W	ASHLEY POND	AAA1617	09/08/92	92.27795	13533	0 J	0.018	0.065				0.23 J	0	0	0	0
01-6100SL	ASHLEY POND	AAA1619	09/08/92	92.27798	13536	0 J	0.0005	0.226				3.35 J	0	0	0	0
01-6101SL	ASHLEY POND	AAA1620	09/08/92	92.27799	13536	0 J	0.007	0.723				3.57 J	0	0	0	0
01-6101SLR	ASHLEY POND	AAA1621	09/08/92	92.27800	13536	0 J	0.003	0.531				3.5 J	0	0	0	0
01-6102SL	ASHLEY POND	AAA1622	09/08/92	92.27801	13536	0 J	0.006	0.351				2.29 J	0	0	0	0
01-6103SL	ASHLEY POND	AAA1623	09/08/92	92.27802	13536	0 J	0.015	0.504				2.08 J	0	0	0	0
01-6104SL	ASHLEY POND	AAA1624	09/08/92	92.27803	13536	0 J	0.0247	0.45				2.72 J	0	0	0	0
RINSATE	ASHLEY POND	AAA1626	09/08/92	92.27797	NA											
TRIP BLANK	ASHLEY POND	AAA1627	09/08/92	92.27796	NA											
01-6054	CANYON RIM STUDY	AAA1628	09/09/92	92.27968	13547	0 J							3.41	16.03	0.75	09/09/92
01-6057	CANYON RIM STUDY	AAA1629	09/09/92	92.27969	13547	0 J							3.59	12.19	0.87	09/09/92
01-6064	CANYON RIM STUDY	AAA1630	09/09/92	92.27970	13547	0 J							4.44	14.74	0.82	09/09/92
01-6069	CANYON RIM STUDY	AAA1631	09/09/92	92.27971	13547	0 J							3.59	15.50	0.77	09/09/92
01-6073	CANYON RIM STUDY	AAA1632	09/09/92	92.27972	13547	0 J							3.07	11.79	0.63	09/09/92
01-6074	CANYON RIM STUDY	AAA1633	09/09/92	92.27973	13547	0 J							3.24	13.49	1.20	09/09/92
01-6074R	CANYON RIM STUDY	AAA1634	09/09/92	92.27974	13547	0 J							4.27	11.37	1.02	09/09/92

TABLE B-6. VALIDATED RADIOCHEMICAL DATA FOR OU 1078

Sample Location	Aggregate/Area	ER Sample No.	Sample Date	EM-9 Sample No.	Rad Req. No.	Gamma Ray	Pu-238 pCi/g	Pu-239 pCi/g	U-234 pCi/g	U-235 pCi/g	U-238 pCi/g	Total U µg/g	Alpha pCi/g	Beta pCi/g	Gamma pCi/g	RAD Screen Date
01-1113	HS140, B BRIDGE/>20 pCi/g	AAA1635	09/16/92	92.28580	13587	0 J						37.3 J	4.44	22.20	1.00	09/16/92
01-1142	HS140, B BRIDGE/>20 pCi/g	AAA1636	09/16/92	92.28581	13587	0 J						65.2 J	6.68	32.17	1.31	09/16/92
01-1143	HS140, B BRIDGE/>20 pCi/g	AAA1637	09/16/92	92.28582	13587	0 J						61.6 J	5.82	26.80	1.72	09/16/92
01-1156	HS140, B BRIDGE/>20 pCi/g	AAA1638	09/16/92	92.28583	13587	0 J						11.5 J	1.01	12.80	0.58	09/16/92
01-1157	HS140, B BRIDGE/>20 pCi/g	AAA1639	09/16/92	92.28584	13587	0 J						62.3 J	8.22	24.97	1.38	09/16/92
01-1251	HS140, B BRIDGE/>20 pCi/g	AAA1640	09/16/92	92.28585	13587	0 J						93.2 J	7.54	32.83	1.40	09/16/92
01-1256	HS140, B BRIDGE/>20 pCi/g	AAA1641	09/16/92	92.28586	13587	0 J						57.4 J	4.10	25.86	1.15	09/16/92
01-2076	HS140, B BRIDGE/>20 pCi/g	AAA1642	09/16/92	92.28587	13587	0 J						13.9 J	6.33	13.42	0.12	09/16/92
01-3019	HILLSIDE 137/>20 pCi/G	AAA1643	09/17/92	92.28755	13596							1.3 J	57.9	12.3	0.96	09/17/92
01-3057	HILLSIDE 137/>20 pCi/G	AAA1644	09/17/92	92.28756	13596							2.2 J	37.4	10.9	0.84	09/17/92
01-3058	HILLSIDE 137/>20 pCi/G	AAA1645	09/17/92	92.28757	13596							2.6 J	120.6	12.8	0.95	09/17/92
01-3082	HILLSIDE 137/>20 pCi/G	AAA1646	09/17/92	92.28748	13587							2.1 J	4.61	14.05	0.71	09/17/92
01-5016	HILLSIDE 138/>20 pCi/G	AAA1647	09/17/92	92.28749	13587							2.3 J	21.45	10.87	1.66	09/17/92
01-5025	HILLSIDE 138/>20 pCi/G	AAA1648	09/17/92	92.28750	13587							1.8 J	3.76	13.97	0.98	09/17/92
01-5048	HILLSIDE 138/>20 pCi/G	AAA1649	09/17/92	92.28758	13596							8.7 J	464.04	38.39	91.00	09/17/92
01-5056	HILLSIDE 138/>20 pCi/G	AAA1650	09/17/92	92.28759	13596							4.2 J	111.64	14.23	5.40	09/17/92
01-5057	HILLSIDE 138/>20 pCi/G	AAA1651	09/17/92	92.28760	13596							12.8 J	724.59	112.21	168.00	09/17/92
01-5058	HILLSIDE 138/>20 pCi/G	AAA1652	09/17/92	92.28761	13596							19.5 J	450.86	41.23	87.00	09/17/92
RINSATE	HILLSIDE 138/>20 pCi/G	AAA1653	09/17/92	92.28762	NA								NC	NC	NC	NC
01-3153	HILLSIDE 137 DRAINAGE	AAA1654	09/23/92	92.29359	13613	0 J						1.19 J	24.7	17.3	0.84	09/23/92
01-3155	HILLSIDE 137 DRAINAGE	AAA1655	09/23/92	92.29360	13613	0 J						0.72 J	9.43	16.9	0.64	09/23/92
01-3162	HILLSIDE 137 DRAINAGE	AAA1656	09/23/92	92.29361	13613	0 J						1.6 J	4.96	15.5	0.99	09/23/92
01-5100	HILLSIDE 138 DRAINAGE	AAA1657	09/23/92	92.29362	13613	0 J						2.56 J	3.59	11.58	1.28	09/23/92
01-5104	HILLSIDE 138 DRAINAGE	AAA1658	09/23/92	92.29363	13613	0 J						1.78 J	1.52	12.33	0.98	09/23/92
01-5110	HILLSIDE 138 DRAINAGE	AAA1659	09/23/92	92.29364	13613	0 J						1.72 J	10.11	12.35	1.24	09/23/92
01-5112	HILLSIDE 138 DRAINAGE	AAA1660	09/23/92	92.29365	13613	0 J						1.43 J	2.90	16.13	0.71	09/23/92
01-5120-6	HILLSIDE 138 BENCH TRENCH	AAA1662	09/24/92	92.29366	13613	0 J						1.6 J	3.59	17.66	1.08	09/24/92
01-5123-6	HILLSIDE 138 BENCH TRENCH	AAA1663	09/24/92	92.29367	13613	0 J						1.36 J	9.77	15.71	2.24	09/24/92
01-5128-6	HILLSIDE 138 BENCH TRENCH	AAA1664	09/24/92	92.29368	13613	0 J						1.22 J	5.47	16.99	0.97	09/24/92
01-5122-T	HILLSIDE 138 BENCH TRENCH	AAA1665	09/24/92	92.29369	13613	0 J						1.59 J	2.55	17.36	1.05	09/24/92
01-5127-T	HILLSIDE 138 BENCH TRENCH	AAA1666	09/24/92	92.29370	13613	0 J						1.62 J	5.47	16.46	1.17	09/24/92

TABLE B-6. VALIDATED RADIOCHEMICAL DATA FOR OU 1078

Sample Location	Aggregate/Area	ER Sample No.	Sample Date	EM-9 Sample No.	Rad Req. No.	Gamma Ray	Pu-238 pCi/g	Pu-239 pCi/g	U-234 pCi/g	U-235 pCi/g	U-238 pCi/g	Total U µg/g	Alpha pCi/g	Beta pCi/g	Gamma pCi/g	RAD Screen Date
01-5127-TR	HILLSIDE 138 BENCH TRENCH	AAA1667	09/24/92	92.29371	13613	0 J						1.53 J				
01-5128-T	HILLSIDE 138 BENCH TRENCH	AAA1668	09/24/92	92.29372	13613	0 J						1.07 J				
01-3178-3	HILLSIDE 137, CT 80/BENCH TRENCH	AAA1670	10/08/92	92.30511	13699	0 J										
01-3183-3	HILLSIDE 137, CT 80/BENCH TRENCH	AAA1671	10/08/92	92.30512	13699	0 J										
01-3184-3	HILLSIDE 137, CT 80/BENCH TRENCH	AAA1672	10/08/92	92.30513	13699	0 J										
01-3170-T	HILLSIDE 137, CT 80/BENCH TRENCH	AAA1673	10/08/92	92.30514	13699	0 J										
01-3173-T	HILLSIDE 137, CT 80/BENCH TRENCH	AAA1674	10/08/92	92.30515	13699	0 J										
01-3179-T	HILLSIDE 137, CT 80/BENCH TRENCH	AAA1675	10/08/92	92.30516	13699	0 J										
01-2164	BAILEY BRIDGE DRAINAGE	AAA1676	10/19/92	92.30916	13751	0 J										
01-2171	BAILEY BRIDGE DRAINAGE	AAA1677	10/19/92	92.30917	13751	0 J										
01-2172	BAILEY BRIDGE DRAINAGE	AAA1678	10/19/92	92.30919	13751	0 J										
01-2171R	BAILEY BRIDGE DRAINAGE	AAA1679	10/19/92	92.30919	13751	0 J										

Notes:
µg/g = micrograms of contaminant per gram of sample.
NAO = natural activitly only.
Bold numbers represent results greater than 50% of screening action level, including detection limits.
NA = not available.
"J" flags indicate that the data may not be acceptable for all uses, as explained in Section 2.3 of this quarterly report.
NC = not counted.

Appendix C

FY93 Sample and Location Screening Summary for OU 1106

(Definitions for acronyms and abbreviations and other notes for Table C-1 are on page C-9.)

TABLE C-1

FY93 SAMPLE AND LOCATION SCREENING SUMMARY FOR OU 1106

Work Plan Chapter/ Section	PRS	Location ID	Sample Number	Sample Depth	Field Laboratory					Field Surveys					
										Gross Alpha	Low-Energy Gamma		Gross Gamma		Beta Gamma
					Gross Alpha pCi/g	Gross Beta pCi/g	Gross Gamma pCi/g	H-3 pCi/g	Moisture . %	Alpha Scintillo-meter cpm	FIDLER (Pu-238) cpm	FIDLER (Am-241) cpm	Micro R µR/hr	2X2 NaI Surface cpm	Pancake GM cpm
12.4															
	grid ext.	21-1577	AAA3923	0-6"	<MDA	<MDA	<MDA			4-16	13K-15K	ND	18-30	18.1K-236K	80-160
		21-1579	AAA3928	0-6"	<MDA	<MDA	<MDA								
		21-1581	AAA3932	0-6"	<MDA	<MDA	<MDA								
		21-1583	AAA3935	0-6"	<MDA	<MDA	<MDA								
		21-1585	AAA3938	0-6"	<MDA	<MDA	<MDA								
		21-1587	AAA3941	0-6"	<MDA	<MDA	<MDA								
		21-1589	AAA3946	0-6"	<MDA	<MDA	1.50								
		21-1590	AAA3948	0-6"	<MDA	<MDA	2.00								
		21-1590	AAA3949	dup of 0-6"	<MDA	<MDA	0.60								
	MDA-T	21-1615	AAA3950	0-6"	<MDA	<MDA	<MDA			0-27	8K-190K	ND	13-210	13.2K-77.7K	70-200
		21-1616	AAA3951	0-6"	<MDA	<MDA	<MDA								
		21-1617	AAA3952	0-6"	<MDA	<MDA	<MDA								
		21-1618	AAA3953	0-6"	<MDA	<MDA	<MDA								
		21-1619	AAA3954	0-6"	<MDA	<MDA	<MDA								
		21-1620	AAA3957	0-6"	<MDA	<MDA	<MDA								
		21-1621	AAA3958	0-6"	<MDA	<MDA	<MDA								
		21-1622	AAA3959	0-6"	<MDA	<MDA	<MDA								
		21-1622	AAA3960	dup of 0-6"	<MDA	<MDA	<MDA								
		21-1623	AAA3961	0-6"	<MDA	<MDA	<MDA								
		21-1624	AAA3962	0-6"	<MDA	<MDA	<MDA								
		21-1625	AAA3963	0-6"	<MDA	<MDA	<MDA								
		21-1626	AAA3964	0-6"	<MDA	<MDA	<MDA								
		21-1627	AAA3965	0-6"	<MDA	<MDA	<MDA								
		21-1628	AAA3966	0-6"	<MDA	<MDA	<MDA								
		21-1629	AAA3967	0-6"	<MDA	<MDA	0.60								
		21-1630	AAA3968	0-6"	<MDA	<MDA	<MDA								
		21-1631	AAA3969	0-6"	<MDA	<MDA	0.00								
		21-1632	AAA3970	0-6"	<MDA	<MDA	<MDA								
		21-1633	AAA3971	0-6"	<MDA	<MDA	<MDA								
		21-1634	AAA3972	0-6"	<MDA	<MDA	<MDA								
		21-1635	AAA3973	0-6"	<MDA	<MDA	0.50								
		21-1636	AAA3974	0-6"	<MDA	15.50	1.00								
		21-1637	AAA3975	0-6"	<MDA	<MDA	<MDA								

TABLE C-1

FY93 SAMPLE AND LOCATION SCREENING SUMMARY FOR OU 1106

Work Plan Chapter/ Section	PRS	Location ID	Sample Number	Sample Depth	Field Laboratory					Field Surveys					
										Gross Alpha	Low-Energy Gamma		Gross Gamma		Beta Gamma
					Gross Alpha pCi/g	Gross Beta pCi/g	Gross Gamma pCi/g	H-3 pCi/g	Moisture %	Alpha Scintillo-meter cpm	FIDLER (Pu-238) cpm	FIDLER (Am-241) cpm	Micro R µR/hr	2X2 NaI Surface cpm	Pancake GM cpm
		21-1638	AAA3976	0-6"	<MDA	<MDA	23.40								
		21-1639	AAA3979	0-6"	<MDA	<MDA	343.20								
		21-1640	AAA3980	0-6"	<MDA	<MDA	1.20								
		21-1641	AAA3981	0-6"	<MDA	<MDA	<MDA								
		21-1641	AAA3982	dup of 0-6"	<MDA	<MDA	<MDA								
		21-1642	AAA3983	0-6"	<MDA	<MDA	0.40								
		21-1643	AAA3984	0-6"	<MDA	<MDA	0.10								
		21-1644	AAA3985	0-6"	<MDA	<MDA	<MDA								
		21-1645	AAA3986	0-6"	<MDA	<MDA	0.00								
		21-1646	AAA3987	0-6"	<MDA	<MDA	<MDA								
		21-1647	AAA3988	0-6"	<MDA	<MDA	<MDA								
		21-1648	AAA3989	0-6"	<MDA	<MDA	<MDA								
		21-1649	AAA3990	0-6"	<MDA	<MDA	<MDA								
		21-1650	AAA3991	0-6"	<MDA	<MDA	15.60								
		21-1651	AAA3992	0-6"	<MDA	<MDA	19.60								
		21-1652	AAA3993	0-6"	<MDA	<MDA	<MDA								
		21-1653	AAA3994	0-6"	<MDA	<MDA	<MDA								
		21-1654	AAA3995	0-6"	<MDA	<MDA	<MDA								
		21-1655	AAA3996	spatial variability 0-6" of 21-1616	<MDA	<MDA	<MDA								
		21-1656	AAA3997	spatial variability 0-6" of 21-1620	<MDA	<MDA	<MDA								
		21-1657	AAA3998	spatial variability 0-6" of 21-1624	<MDA	<MDA	<MDA								
		21-1658	AAA4001	spatial variability 0-6" of 21-1628	<MDA	<MDA	<MDA								
		21-1658	AAA4002	dup of 0-6"	<MDA	<MDA	<MDA								
		21-1659	AAA4003	spatial variability 0-6" of 21-1632	<MDA	<MDA	<MDA								
		21-1660	AAA4004	spatial variability 0-6" of 21-1638	<MDA	<MDA	1.10								
		21-1661	AAA4005	spatial variability 0-6" of 21-1642	<MDA	<MDA	<MDA								
		21-1662	AAA4006	spatial variability 0-6" of 21-1646	<MDA	<MDA	<MDA								
		21-1663	AAA4007	spatial variability 0-6" of 21-1650	<MDA	<MDA	2.90								
		21-1664	AAA4008	spatial variability 0-6" of 21-1654	<MDA	<MDA	<MDA								
13.2															
	grid ext.	21-1576	AAA3921	0-1"	<MDA	<MDA	<MDA								
		21-1577	AAA3922	0-1"	<MDA	<MDA	<MDA								
		21-1578	AAA3924	0-1"	<MDA	<MDA	<MDA								
		21-1579	AAA3927	0-1"	<MDA	<MDA	<MDA								

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FY93 SAMPLE AND LOCATION SCREENING SUMMARY FOR OU 1106

Work Plan Chapter/ Section	PRS	Location ID	Sample Number	Sample Depth	Field Laboratory					Field Surveys					
										Gross Alpha	Low-Energy Gamma		Gross Gamma		Beta Gamma
					Gross Alpha pCi/g	Gross Beta pCi/g	Gross Gamma pCi/g	H-3 pCi/g	Moisture %	Alpha Scintillo-meter cpm	FIDLER (Pu-238) cpm	FIDLER (Am-241) cpm	Micro R µR/hr	2X2 NaI Surface cpm	Pancake GM cpm
		21-1580	AAA3929	0-1"	<MDA	3.40	<MDA								
		21-1581	AAA3930	0-1"	<MDA	<MDA	<MDA								
		21-1581	AAA3931	dup of 0-1"	<MDA	<MDA	<MDA								
		21-1582	AAA3933	0-1"	<MDA	<MDA	<MDA								
		21-1583	AAA3934	0-1"	<MDA	<MDA	<MDA								
		21-1584	AAA3936	0-1"	<MDA	<MDA	<MDA								
		21-1585	AAA3937	0-1"	<MDA	<MDA	<MDA								
		21-1586	AAA3939	0-1"	<MDA	<MDA	<MDA								
		21-1587	AAA3940	0-1"	<MDA	<MDA	<MDA								
		21-1588	AAA3944	0-1"	<MDA	<MDA	1.00								
		21-1589	AAA3945	0-1"	<MDA	<MDA	<MDA								
		21-1590	AAA3947	0-1"	<MDA	<MDA	1.20								
15.10 NDPES Discharge Systems															
	EPA 02A129	21-1383	AAA4058	0-6"	<MDA	<MDA	<MDA								
		21-1383	AAA4059	6-12"	<MDA	<MDA	<MDA								
		21-1383	AAA4060	12-18"	<MDA	<MDA	<MDA								
		21-1384	AAA4061	0-6"	<MDA	<MDA	<MDA								
		21-1384	AAA4062	dup 0-6"	<MDA	<MDA	<MDA								
		21-1384	AAA4063	6-12"	<MDA	<MDA	<MDA								
		21-1384	AAA4064	12-18"	<MDA	<MDA	<MDA								
	EPA 03A035	21-1345	AAA4065	0-6"	<MDA	<MDA	<MDA								
		21-1345	AAA4068	6-12"	<MDA	<MDA	<MDA								
		21-1345	AAA4069	12-18"	<MDA	<MDA	<MDA								
	EPA 03A036	21-1405	AAA4071	0-6"	<MDA	<MDA	<MDA								
		21-1405	AAA4072	6-12"	<MDA	<MDA	<MDA								
		21-1405	AAA4073	12-18"	<MDA	<MDA	<MDA								
		21-1406	AAA4074	0-6"	<MDA	<MDA	<MDA								
		21-1406	AAA4075	6-12"	<MDA	<MDA	<MDA								
		21-1406	AAA4076	12-18"	<MDA	<MDA	<MDA								
	EPA 03A037	21-1375	AAA4077	0-6"	<MDA	<MDA	<MDA								
		21-1375	AAA4078	6-12"	0.00	1.90	<MDA								
		21-1375	AAA4079	12-18"	<MDA	<MDA	<MDA								

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FY93 SAMPLE AND LOCATION SCREENING SUMMARY FOR OU 1106

Work Plan Chapter/ Section	PRS	Location ID	Sample Number	Sample Depth	Field Laboratory					Field Surveys					
										Gross Alpha	Low-Energy Gamma		Gross Gamma		Beta Gamma
					Gross Alpha pCi/g	Gross Beta pCi/g	Gross Gamma pCi/g	H-3 pCi/g	Moisture %	Alpha Scintillo-meter cpm	FIDLER (Pu-238) cpm	FIDLER (Am-241) cpm	Micro R µR/hr	2X2 NaI Surface cpm	Pancake GM cpm
		21-1376	AAA4080	0-6"	<MDA	<MDA	<MDA								
		21-1376	AAA4081	dup 0-6"	11.20	<MDA	<MDA								
		21-1376	AAA4082	6-12"	<MDA	<MDA	<MDA								
		21-1376	AAA4083	12-18"	<MDA	<MDA	<MDA								
	EPA 04A142	21-1434	AAA4084	0-6"	<MDA	<MDA	<MDA								
		21-1435	AAA4087	0-6"	0.00	<MDA	<MDA								
		21-1435	AAA4090	6-12"	<MDA	<MDA	<MDA								
		21-1435	AAA4091	12-18"	<MDA	12.60	<MDA								
15.2 Outfalls with Determined Locations															
	21-023(c)	21-1607	AAA4041	0-4"	0.00	<MDA	<MDA			ND Damaged Mylar	14-35K	ND	20-34	20-367K	80-160
		21-1608	AAA4042	0-4"	0.00	<MDA	<MDA								
		21-1609	AAA4043	0-6"	<MDA	22.30	<MDA								
		21-1610	AAA4044	0-6"	16.90	<MDA	<MDA								
		21-1611	AAA4045	0-6"	<MDA	<MDA	<MDA								
		21-1611	AAA4046	dup of 0-6"	5.60	<MDA	<MDA								
		21-1612	AAA4047	0-6"	11.20	<MDA	<MDA								
		21-1612	AAA4048	6-12"	<MDA	<MDA	<MDA								
		21-1612	AAA4049	12-18"	<MDA	<MDA	0.70								
		21-1613	AAA4050	0-6"	<MDA	<MDA	0.20								
		21-1613	AAA4051	6-12"	<MDA	<MDA	<MDA								
		21-1613	AAA4054	12-18"	<MDA	24.20	<MDA								
		21-1614	AAA4055	0-6"	22.50	<MDA	<MDA								
		21-1614	AAA4056	6-12"	0.00	<MDA	<MDA								
		21-1614	AAA4057	12-18"	11.20	<MDA	1.20								
	21-23(c) (ta-21-62)	21-1665	AAA4093	0-5'	5.60	1.70	0.90								
		21-1665	AAA4094	5-9'	<MDA	<MDA	<MDA								
		21-1665	AAA4095	10-15'	0.00	<MDA	<MDA								
		21-1665	AAA4096	15-20'	<MDA	<MDA	<MDA								
	21-24(a) (TA-21-53)	21-1666	AAA4097	0-5'	<MDA	<MDA	<MDA								
		21-1666	AAA4098	5-10'	<MDA	<MDA	<MDA								
		21-1666	AAA4099	10-15'	<MDA	<MDA	<MDA								

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FY93 SAMPLE AND LOCATION SCREENING SUMMARY FOR OU 1106

Work Plan Section	PRS	Location ID	Sample Number	Sample Depth	Field Laboratory					Field Surveys					
										Gross Alpha	Low-Energy Gamma		Gross Gamma		Beta Gamma
					Gross Alpha pCi/g	Gross Beta pCi/g	Gross Gamma pCi/g	H-3 pCi/g	Moisture %	Alpha Scintillo-meter cpm	FIDLER (Pu-238) cpm	FIDLER (Am-241) cpm	Micro R µR/hr	2X2 NaI Surface cpm	Pancake GM cpm
		21-1666	AAA4100	15-20'	<MDA	<MDA	<MDA								
	21-24(g)	21-1667	AAA4102	0-5'	5.60	<MDA	<MDA								
	(TA-21-125)	21-1667	AAA4105	5-10'	<MDA	<MDA	<MDA								
		21-1667	AAA4106	10-15'	<MDA	<MDA	<MDA								
		21-1667	AAA4107	15-20'	0.00	<MDA	<MDA								
15.3 Outfalls with Septic Tanks															
	21-024(l)	21-1599	AAA4025	0-6"	<MDA	<MDA	<MDA			6-535	12.5-70K	ND	14-75	ND	80-450
		21-1600	AAA4026	0-6"	50.60	<MDA	<MDA								
		21-1601	AAA4027	0-6"	33.70	<MDA	<MDA								
		21-1602	AAA4028	0-6"	<MDA	<MDA	<MDA								
		21-1603	AAA4029	0-6"	<MDA	<MDA	<MDA								
		21-1603	AAA4030	dup of 0-6"	<MDA	<MDA	<MDA								
		21-1604	AAA4031	0-6"	<MDA	<MDA	<MDA								
		21-1604	AAA4032	6-12"	<MDA	<MDA	<MDA								
		21-1604	AAA4033	12-26"	<MDA	<MDA	<MDA								
		21-1605	AAA4034	0-6"	129.20	4.60	5.70								
		21-1605	AAA4035	6-12"	84.30	8.20	<MDA								
		21-1605	AAA4037	12-18"	<MDA	<MDA	0.10								
		21-1606	AAA4038	0-6"	16.90	<MDA	4.50								
		21-1606	AAA4039	6-12"	11.20	<MDA	<MDA								
		21-1606	AAA4040	12-18"	67.40	8.00	<MDA								
	21-24(b)	21-1668	AAA4108	0-2'	<MDA	<MDA	<MDA								
	(TA-21-55)	21-1668	AAA4109	2-4'	0.00	<MDA	4.10								
		21-1668	AAA4110	4-6'	<MDA	1.00	4.20								
		21-1668	AAA4111	6-7.5'	0.00	9.70	3.00								
	21-24(c)	21-1669	AAA4114	0-2'	0.00	<MDA	<MDA								
	(TA-21-55)	21-1669	AAA4115	2-4'	<MDA	<MDA	0.90								
		21-1669	AAA4116	4-6'	<MDA	0.50	<MDA								
		21-1669	AAA4117	6-8'	<MDA	<MDA	<MDA								
	21-24(d)	21-1670	AAA4112	dup of 0-2'	<MDA	<MDA	<MDA								
	(TA-21-106)	21-1670	AAA4118	0-5'	<MDA	<MDA	<MDA								
		21-1670	AAA4119	5-10'	<MDA	<MDA	<MDA								

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FY93 SAMPLE AND LOCATION SCREENING SUMMARY FOR OU 1106

Work Plan Chapter/ Section	PRS	Location ID	Sample Number	Sample Depth	Field Laboratory					Field Surveys					
										Gross Alpha	Low-Energy Gamma		Gross Gamma		Beta Gamma
					Gross Alpha pCi/g	Gross Beta pCi/g	Gross Gamma pCi/g	H-3 pCi/g	Moisture %	Alpha Scintillo-meter cpm	FIDLER (Pu-238) cpm	FIDLER (Am-241) cpm	Micro R µR/hr	2X2 NaI Surface cpm	Pancake GM cpm
		21-1670	AAA4120	10-15'	0.00	<MDA	<MDA								
		21-1670	AAA4121	15-20'	0.00	<MDA	<MDA								
		21-1671	AAA4123	0-5'	0.40	9.00	<MDA								
		21-1671	AAA4126	5-10'	<MDA	9.70	<MDA								
		21-1671	AAA4127	10-15'	11.20	5.80	<MDA								
		21-1671	AAA4128	15-20'	0.00	<MDA	<MDA								
	21-24(i)	21-1672	AAA4129	0-5'	<MDA	<MDA	<MDA								
	(TA-21-181)	21-1672	AAA4131	5-10'	<MDA	<MDA	<MDA								
		21-1672	AAA4132	10-15'	<MDA	<MDA	<MDA								
		21-1672	AAA4133	15-20'	<MDA	<MDA	<MDA								
15.4 Direct Discharge Outfalls															
	21-011(k)	21-1591	AAA4009	0-6"	<MDA	<MDA	26.20								
		21-1592	AAA4010	0-6"	<MDA	374.90	546.40								
		21-1593	AAA4011	0-6"	<MDA	<MDA	55.90								
		21-1594	AAA4012	0-6"	<MDA	68.30	384.80								
		21-1595	AAA4013	0-6"	<MDA	3.90	207.50								
		21-1595	AAA4014	dup of 0-6"	<MDA	51.30	207.80								
		21-1596	AAA4015	0-6"	<MDA	17.90	172.70								
		21-1596	AAA4016	6-12"	<MDA	138.00	291.20								
		21-1596	AAA4017	12-18"	<MDA	44.60	321.00								
		21-1597	AAA4018	0-6"	56.20	697.30	3027.20								
		21-1597	AAA4019	6-12"	95.50	2393.60	2619.00								
		21-1597	AAA4021	12-18"	16.90	319.90	1176.20								
		21-1598	AAA4022	0-6"	<MDA	<MDA	142.60								
		21-1598	AAA4023	6-12"	<MDA	<MDA	175.00								
		21-1598	AAA4024	12-18"	<MDA	<MDA	18.30								

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FY93 SAMPLE AND LOCATION SCREENING SUMMARY FOR OU 1106

					Field Laboratory					Field Surveys					
										Gross Alpha	Low-Energy Gamma		Gross Gamma		Beta Gamma
Work Plan Chapter/ Section	PRS	Location ID	Sample Number	Sample Depth	Gross Alpha pCi/g	Gross Beta pCi/g	Gross Gamma pCi/g	H-3 pCi/g	Moisture %	Alpha Scintillo-meter cpm	FIDLER (Pu-238) cpm	FIDLER (Am-241) cpm	Micro R µR/hr	2X2 NaI Surface cpm	Pancake GM cpm
15.5 Surface Drainage South of TA-21-3															
	21-027(a)	21-1673	AAA4130	dup of 0-5'	<MDA	<MDA	<MDA								
		21-1673	AAA4135	0-5'	<MDA	<MDA	<MDA								
		21-1673	AAA4136	5-10'	<MDA	<MDA	<MDA								
		21-1673	AAA4137	10-15'	<MDA	<MDA	<MDA								
		21-1673	AAA4138	15-20'	11.20	<MDA	<MDA								
		21-1674	AAA4139	0-5'	24.95	<MDA	0.90								
		21-1674	AAA4140	5-10'	37.42	20.84	<MDA								
		21-1674	AAA4141	10-15'	<MDA	<MDA	<MDA								
		21-1674	AAA4142	15-20'	<MDA	<MDA	<MDA								
15.6 Septic Tanks															
	21-024(j)	21-1675	AAA4144	0-5'	0.00	<MDA	<MDA								
		21-1675	AAA4147	5-10'	<MDA	3.40	<MDA								
		21-1675	AAA4148	10-15'	<MDA	<MDA	<MDA								
		21-1675	AAA4149	15-20'	<MDA	<MDA	<MDA								
	21-024(k)	21-1676	AAA4150	0-5'	<MDA	<MDA	<MDA								
		21-1676	AAA4151	5-10'	0.00	<MDA	<MDA								
		21-1676	AAA4152	10-15'	<MDA	<MDA	2.60								
		21-1676	AAA4153	dup of 0-5'	<MDA	<MDA	<MDA								
		21-1676	AAA4154	15-20'	<MDA	<MDA	<MDA								
		21-1677	AAA4156	0-5'	0.00	<MDA	<MDA								
		21-1677	AAA4157	5-10'	0.00	<MDA	<MDA								
		21-1677	AAA4158	10-15'	<MDA	<MDA	<MDA								
		21-1677	AAA4159	15-20'	<MDA	<MDA	<MDA								
		21-1678	AAA4160	0-5'	<MDA	<MDA	<MDA								
		21-1678	AAA4161	5-10'	<MDA	<MDA	<MDA								
		21-1678	AAA4162	10-15'	<MDA	<MDA	<MDA								
		21-1678	AAA4163	15-20'	<MDA	<MDA	<MDA								

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FY93 SAMPLE AND LOCATION SCREENING SUMMARY FOR OU 1106

					Field Laboratory					Field Surveys					
										Gross Alpha	Low-Energy Gamma		Gross Gamma		Beta Gamma
Work Plan Chapter/ Section	PRS	Location ID	Sample Number	Sample Depth	Gross Alpha pCi/g	Gross Beta pCi/g	Gross Gamma pCi/g	H-3 pCi/g	Moisture %	Alpha Scintillo-meter cpm	FIDLER (Pu-238) cpm	FIDLER (Am-241) cpm	Micro R µR/hr	2X2 NaI Surface cpm	Pancake GM cpm
15.8 Surface Drainage North of TA-21-155															
	21-24(h) (TA-21-163)	21-1679	AAA4167	0-5'	<MDA	<MDA	<MDA								
		21-1679	AAA4168	dup of 0-5'	<MDA	<MDA	<MDA								
		21-1679	AAA4169	5-10'	<MDA	<MDA	<MDA								
		21-1679	AAA4170	10-15'	5.60	<MDA	<MDA								
		21-1679	AAA4171	15-20'	<MDA	<MDA	<MDA								
15.9 Special Cases															
	21-024(f)	21-1680	AAA4173	0-2.5'	<MDA	<MDA	<MDA								
		21-1680	AAA4176	2.5-5'	<MDA	<MDA	<MDA								
		21-1680	AAA4177	5-7.5'	<MDA	<MDA	<MDA								
		21-1680	AAA4178	7.5-10'	<MDA	<MDA	<MDA								
		21-1681	AAA4179	0-5'	<MDA	<MDA	<MDA								
		21-1681	AAA4180	dup of 0-5'	<MDA	<MDA	<MDA								
		21-1681	AAA4181	5-10'	<MDA	<MDA	<MDA								
		21-1681	AAA4182	10-15'	<MDA	<MDA	<MDA								
		21-1681	AAA4183	15-20'	<MDA	<MDA	<MDA								
12.5 Deep Boreholes															
	LADP 4	21-1683	AAA4198	15-20'	26.50	28.50	<MDA								
		21-1683	AAA4200	158.6-160.1'	15.80	3.10	<MDA	1.60	14.49						
		21-1683	AAA6211	195-200	<MDA	<MDA	5.00	0.00	14.67						
		21-1683	AAA5685	36.7-37.6	<MDA	<MDA	1.10								
		21-1683	AAA6145	cuttings 0-5'	0.00	8.70	<MDA	0.00	10.15						
		21-1683	AAA6146	cuttings 10-15'	<MDA	<MDA	<MDA	0.00	11.40						
		21-1683	AAA6147	cuttings 15-20'	<MDA	12.80	<MDA	0.00	12.31						
		21-1683	AAA6148	cuttings 20-25'	<MDA	<MDA	<MDA	0.00	11.39						
		21-1683	AAA6149	core 150.3-156.7	10.50	<MDA	<MDA	11.00	17.77						
		21-1683	AAA6150	core 155.4-155.7'	5.30	<MDA	<MDA	8.70	23.62						
		21-1683	AAA6151	core 161.9-162.2'	15.80	24.00	<MDA	1.50	15.23						
		21-1683	AAA6152	core 168.0-168.3'	10.50	19.10	<MDA	0.00	14.40						
		21-1683	AAA6153	cuttings 30-40'				0.00	4.59						

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FY93 SAMPLE AND LOCATION SCREENING SUMMARY FOR OU 1106

					Field Laboratory					Field Surveys					
										Gross Alpha	Low-Energy Gamma		Gross Gamma		Beta Gamma
Work Plan Chapter/ Section	PRS	Location ID	Sample Number	Sample Depth	Gross Alpha pCi/g	Gross Beta pCi/g	Gross Gamma pCi/g	H-3 pCi/g	Moisture %	Alpha Scintillo-meter cpm	FIDLER (Pu-238) cpm	FIDLER (Am-241) cpm	Micro R µR/hr	2X2 NaI Surface cpm	Pancake GM cpm
		21-1683	AAA6154	cuttings 40-50'				0.00	4.94						
		21-1683	AAA6155	cuttings 50-60'				0.00	4.13						
		21-1683	AAA6156	cuttings 60-69'				0.00	3.74						
		21-1683	AAA6157	cuttings 79-89'				0.00	0.76						
		21-1683	AAA6158	cuttings 89-112'				0.00	0.39						
		21-1683	AAA6159	cuttings 112-118'				0.23	0.14						
		21-1683	AAA6160	cuttings 125-145'				3.14	5.31						
		21-1683	AAA6161	cuttings 140-171'											
		21-1683	AAA6162	core 174.8-175.0'											
		21-1683	AAA6163	core 143.5-143.75'											
		21-1683	AAA6164	core 98.3-98.5'											
Special Samples															
	trench-leak	21-1684	AAA4212	4-4.5'	<MDA	<MDA	<MDA								
	tank yank	21-1685	AAA4213	8'	13.20	<MDA	<MDA								

Notes:
Avg. Background: Micro-R meter—18 micro-Roentgens per hour (uR/hr); FIDLER—12,100 counts per minute (cpm); 2" x 2" sodium iodide—15,800 cpm; Alpha—10.3 cpm; Beta-Gamma—103 cpm. MDA: minimum detection activity. ND: not determined. No data entry: analysis not performed.

Appendix D

OU 1129 Accelerated Characterization at Former TA-42

(Preliminary Draft)

Preliminary Draft

OU 1129 Accelerated Characterization at Former TA-42

Interim Action in Support of Construction Validation Project at Los Alamos National Laboratory (LANL)

September 1993

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1.0 INTRODUCTION

This report describes the results of the activities performed as part of an interim action to evaluate contamination at the former site of Technical Area (TA)-42. This interim action was conducted for construction validation of the Nuclear Safeguards Technology Laboratory (NSTL), which is to be constructed at the former site of TA-42. All activities described herein were conducted for and funded by the NSTL program sponsors, N Division and ENG Division. Department of Energy Albuquerque (DOE-AL) used the results of this investigation for construction validation. The results will be incorporated into the overall Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) characterization report for Operable Unit (OU) 1129.

Sampling activities were conducted under the guidelines described in the RFI Work Plan for OU 1129 Environmental Restoration (ER) Program (LANL 1992, 0785). The environmental setting is described in Chapter 2; description of the Potential Release Sites (PRSs) at former TA-42 can be found in Chapter 3, Section 3.4; the conceptual model is detailed in Chapter 4; and the technical approach is presented in Chapter 5. The sampling and analysis plan (SAP) detailed in Chapter 7 was revised and is included as Appendix A in this report. This investigation was conducted to support an institutionally-driven interim action.

TA-42 was the former site of a radioactive waste incinerator facility that operated from 1951 to 1952. From 1956 to 1969, it was used as an area for storage and decontamination of equipment. The facilities were decommissioned and the site decontaminated in 1978. The following PRSs, which resulted from the operations at the site, were included in this investigation:

- 42-001(a), former location of an incinerator;
- 42-001(b and c), former location of two ash storage tanks;
- 42-002(a), former location of a building used as an indoor storage and decontamination area;
- 42-002(b), a former outdoor decontamination area; and
- 42-003, former location of a septic tank and tile field.

2.0 PREVIOUS DATA

Data collected at the site before this investigation came from two sources: the Environmental Surveillance Group's study of the site after D&D activities in 1978 and a reconnaissance study performed by Environmental Protection Group (EM-8) in 1991. These data were used to develop the revised sampling and analysis plan.

2.1 Environmental Surveillance Group's Study

Final gross-alpha contamination measurements from soil samples taken after the D&D activities in 1978 (Harper and Garde 1981, 0591) are shown in Table 1.

TABLE 1

RESULTS OF ENVIRONMENTAL SURVEILLANCE GROUP'S STUDY AFTER D&D

Location	Number of Samples with Gross-Alpha Below 25 pCi/g	Values (in pCi/g) for Samples with Gross-Alpha Activity Greater than 25 pCi/g
Former Building Area	60	29
Septic Tank Area	Unknown	none
Tile Field	17	31 35 44 99 45
Excavation Under the Tile Field Drain	8	65 78 87 310 418
Canyon Wall Below the Tile Field Outfall	14	29 36 40

The Harper and Garde (1981, 0591) report states: "Because of the low levels of contamination and the safety hazards associated with any further excavation, the Environmental Surveillance Group considered the area decontaminated to as low as reasonably achievable (ALARA). After concurrence from the Laboratory's Health Division Office and the Los Alamos, New Mexico, Area Office of the U.S. Department of Energy the area was contoured and revegetated to minimize erosion."

2.2 EM-8 Reconnaissance Study

At the request of the construction leader from the Project Management Group (ENG-1), EM-8 performed a reconnaissance survey on January 1991. The OU 1129 technical team used the analytical results from samples that EM-8 collected as Phase I results to design the sampling and analysis plan (included as Appendix A) for this interim action at former TA-42. Table 2 contains results for ^{238}Pu and $^{239,240}Pu$ for the near-surface samples (surface to 3-5 ft depth). The near surface became important because the construction activities would impact it, and because, if contamination were found to be present, It would be where the path to receptors would originate. Table 3 contains analytical results for the samples (near-surface and subsurface) that EM-8 investigated. Figure 1 shows the location of the reconnaissance samples, which have the prefix "PF," and Figure 2 shows the corresponding cross-section.

TABLE 2

1991 RECONNAISSANCE RESULTS FOR NEAR-SURFACE SAMPLING AT FORMER TA-42

Borehole	Sample Depth (feet)	pCi/g		pCi/g		Pb TCLP (ppm)
		^{238}Pu	Uncertainty	$^{239,240}Pu$	Uncertainty	
PF-IB1	0-5	0.0004	0.0009	0.015	0.026	11.4
PF-IB2	0-5	0.003	0.001	0.0554	0.0047	0.05
PF-HT2	0-5	0.002	0.002	0.0179	0.0036	< 0.01
PF-HT3	0-5	0.0012	0.0007	0.0205	0.0031	0.04
PF-CDA	0-5	0.0036	0.0009	0.0014	0.0006	0.17
PF-PLN	0-5	0.0012	0.0008	0.006	0.001	0.01
PF-PLM	0-5	0.009	0.002	0.0148	0.0021	< 0.01
PF-PLS	0-5	0.006	0.001	0.0151	0.0018	0.34

3.0 OU 1129 SAMPLING ACTIVITIES

Three methods were used for sampling. A hand auger was used to collect fill material, soil, and nonwelded tuff in the near surface from 0 to 6 ft. A power-assisted hand auger was used to collect fill material, soil, and nonwelded tuff in the subsurface from 5 to 11 ft. Subsurface samples from 10 to 30 ft were collected with a hollow-stem auger drill. Table 4 shows the samples collected and sample depths. Figure 1 shows the locations of samples collected.

TABLE 3

ANALYTICAL RESULTS FROM RECONNAISSANCE SAMPLING AT FORMER TA-42

Sample No.[a, b]	PCBs[c] (g/g)	Pb[d] (mg/L)	VOCs[e]	SVOCs[e]	^{238}Pu (pCi/g)	^{239}Pu (pCi/g)	Total U (g/g)	^{137}Cs (pCi/g)
PF-IB1-0	< 0.05	11.4	NTCF	NTCF	0.0004	0.015	3.58	0.0883
PF-IB1-5	< 0.05	0.29	NTCF	NTCF	0.007	0.0002	3.44	0.176
PF-IB2-0	< 0.05	0.05	NTCF	NTCF	0.003	0.0554	3.5	0.0944
PF-IB2-5	< 0.05	0.03	NTCF	NTCF	0.0003	0.000	3.76	0.193
PF-HT2-0	1.02	< 0.01	NTCF	NTCF	0.002	0.0179	3.85	0.169
PF-HT-2-5	0.4	0.04	NTCF	NTCF	0.009	0.0628	3.76	0.0643
PF-HT2-10	< 0.05	< 0.01	NTCF	NTCF	0.0006	0.0013	3.7	0.236
PF-HT3-0	0.08	0.04	NTCF	NTCF	0.0012	0.0205	3.65	0.245
PF-HT3-5	0.11	< 0.01	NTCF	NTCF	0.0035	0.0086	3.13	0.241
PF-HT3-10	< 0.05	0.04	NTCF	NTCF	0.0016	0.0292	3.6	0.238
PF-CDA-0	< 0.05	0.17	NTCF	NTCF	0.0036	0.0014	1.86	0.0643
PF-ST-10	< 0.05	2.2	NTCF	NTCF	0.015	0.151	4.17	0.143
PF-ST-15	< 0.05	0.45	NTCF	(see note f)	2.48	4.77	5.2	0.0579
PF-ST-20	< 0.05	< 0.01	NTCF	NTCF	0.155	0.40	3.34	0.0239
PF-ST-25	< 0.05	< 0.01	NTCF	NTCF	0.016	0.0032	3.9	0.463
PF-PLN-0	0.52	0.01	NTCF	(see note g)	0.0012	0.006	3.7	0.0662
PF-PLM-0	0.12	< 0.01	NTCF	NTCF	0.009	0.0148	3.44	0.272
PF-PLS-0	< 0.05	0.34	NTCF	NTCF	0.006	0.0151	2.47	0.16

a Last number on sampling site identifier indicates the depth of sampling in feet.

b PF = Philip Fresquez (sample collector), ST = septic tank, HT = holding tank, PLS = parking lot south, PLM = parking lot middle, PLN = parking lot north, IB = incinerator building, CDA = canyon disposal area.

c Action level for PCBs is 50 µg/g (or ppm).

d TCLP metals analyzed for included Hg, As, Se, Ag, Ba, Cd, Cr, and Pb. All other TCLP metals were below action levels except for a sample that contained Pb above action levels; therefore, only Pb results are shown.

e No target compound found (NTCF).

f Eight SVOCs were detected in this sample. Seven of the eight were polyaromatic hydrocarbons (PAHs). Although these hydrocarbon compounds are carcinogen hazards in volatile forms (Sax and Lewis 1987), they are all common constituents in paving (asphalt) and roofing tar (coal tar pitch) materials (Windholz 1983). The soil sample collected at the 15-ft level was fill material, thus the PAHs detected in this soil sample were probably from a piece of asphalt or paving tar, a nonhazardous material (nonsoluble and nonvolatile) in its present form. The other SVOC detected is bis-2-ethyl-hexylphthalate, but at trace amounts (400 ppb).

g This sample contained a trace amount of bis-2-ethyl-hexylphthalate (400 ppb). This amount is below the EPA action-level guideline of 83 ppm.

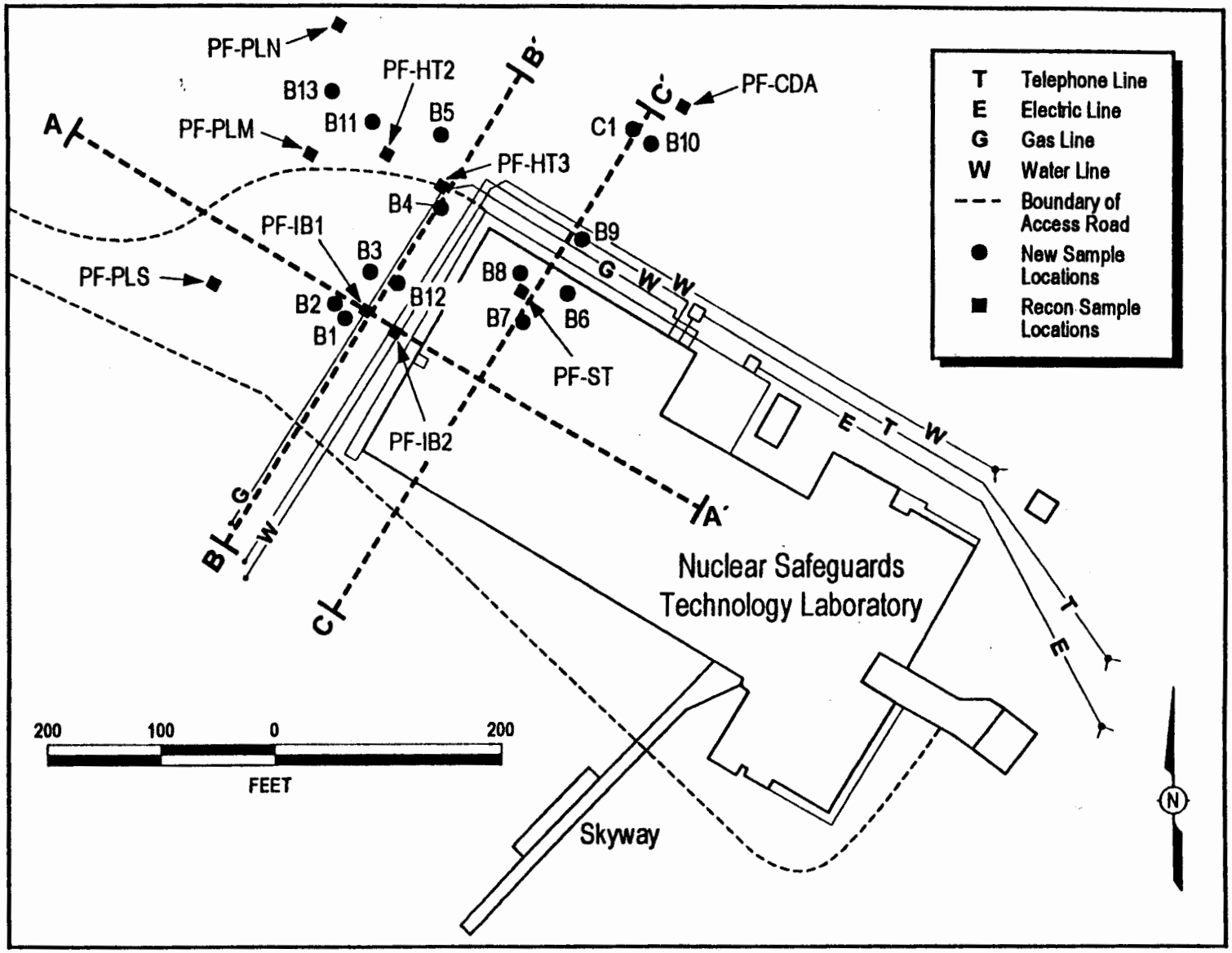
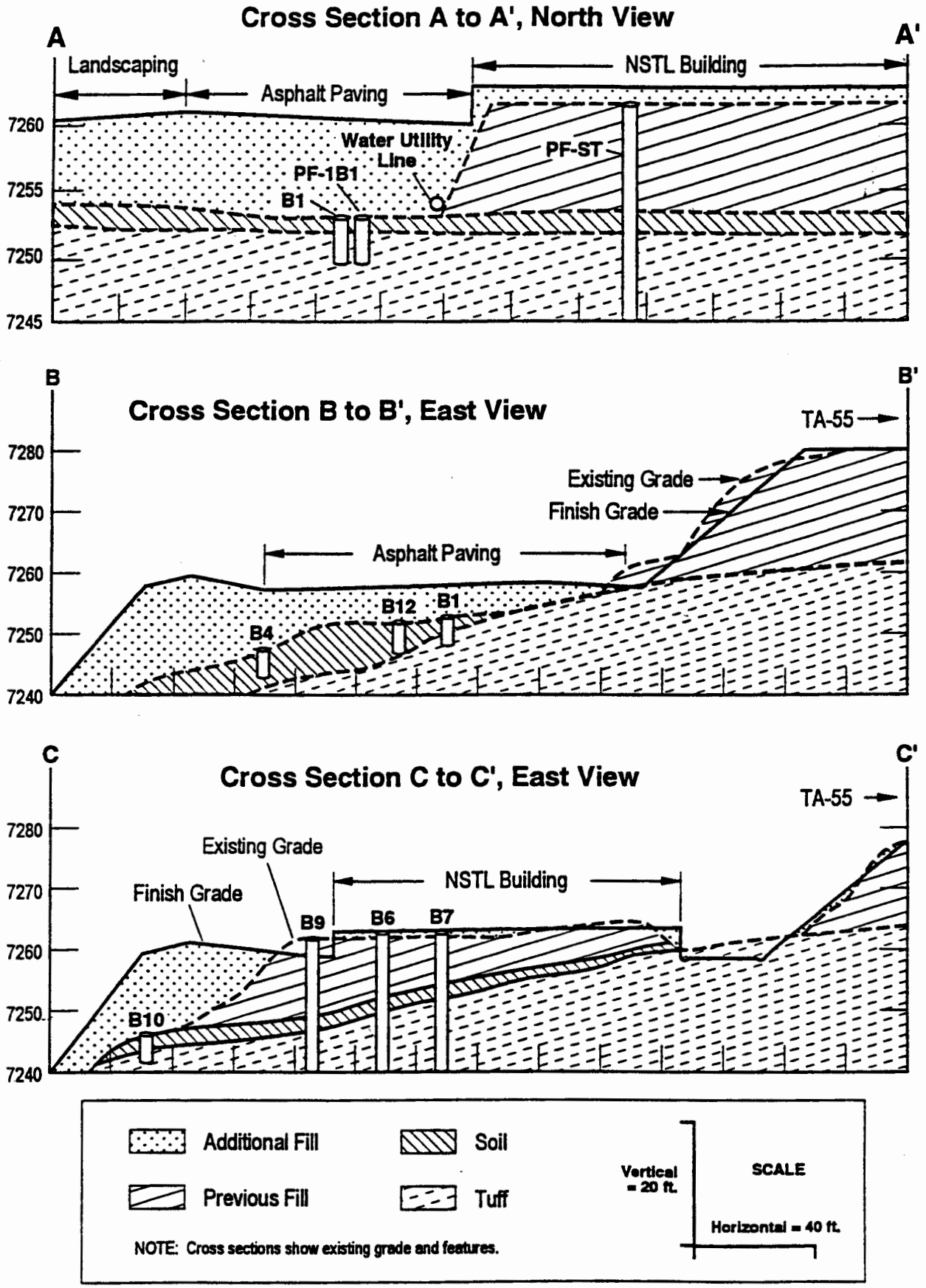


FIG 1 / TA-42_RPT / 092893

Figure 1. Nuclear Safeguards Technology Laboratory (proposed) with sample points, borehole locations, and cross sections.



TA-42 RPT / FIG 2 / 082793

TABLE 4

SAMPLING SUMMARY FOR TA-42

Location (FIMAD No.)	Sample Designation	Depth of Samples Collected (feet)	Minimum Amount of Sample Collected		
			Screening	INC-12	EM-9
B_1 (42-1021)	B-1-1 B-1-2	0-1.8 1.8-2.4	500 g/ea	125 g/ea	125 g/ea
B_2 (42-1022)	B-2-1 B-2-2	0-2.6 2.6-3.5	500 g/ea	125 g/ea	125 g/ea
B_3 (42-1023)	B-3-1 B-3-2	0-3 3-4.75	500 g/ea	125 g/ea	125 g/ea
B_4 (42-1025)	B-4-1 B-4-2	0-2.2 2.2-5.25	500 g/ea	125 g/ea	125 g/ea
B_5 (42-1027)	B-5-1 B-5-2	0-3 3-6	500 g/ea	125 g/ea	125 g/ea
B_6 (42-1028)	B-6-1 B-6-1D B-6-2 B-6-3 B-6-C2	10-15 10-15 15-20 20-25 25-28	500 g/ea	125 g/ea	125 g/ea
B_7 (42-1029)	B-7-1 B-7-2 B-7-3	10-15 15-20 20-25	500 g/ea	125 g/ea	125 g/ea
B_8 (42-1030)	B-8-1 B-8-1D B-8-2 B-8-3 B-8-C3	10-15 10-15 15-20 20-25 25-28	500 g/ea	125 g/ea	125 g/ea
B_9 (42-1031)	B-9-1 B-9-2 B-9-3	10-17 17-22 22-27	500 g/ea	125 g/ea	125 g/ea
B_{10} (42-1032)	B-10-1 B-10-2 B-10-3	0-5 5-7 7-11	500 g/ea	125 g/ea	125 g/ea
B_{11} (42-1026)	B-11-1 B-11-2	0-3 3-6	500 g/ea	125 g/ea	125 g/ea
B_{12} (42-1024)	B-12-1 B-12-2	0-3 3-5	500 g/ea	125 g/ea	125 g/ea
B_{13} (42-1034)	B-13-1 B-13-2	0-3 3-6	500 g/ea	125 g/ea	125 g/ea

3.1 Sampling Techniques

Near-surface samples were taken with a hand auger. The auger was used to bore and collect unconsolidated materials in 6- to 12-in. intervals. The auger was pulled when full, and the sample placed in a decontaminated pan. Augering continued until the top 3 ft of soil was collected, or when the soil-tuff contact was encountered (Table 4 shows the actual sample depths). When the soil-tuff contact was reached, the sample was homogenized and splits from the composite taken for Isotope and Nuclear Chemistry (INC)-12 analysis (125 g); alpha, beta, and gamma screening (500 g); and for the Health and Environmental Chemistry Group (EM-9) analysis (125 g). A custody record was completed on the Chain-of-Custody/Request for Analysis Form, and a sample label affixed to the sample containers. A complete description of the sample was documented in the Borehole Log Form.

Hand-auger subsurface samples were also collected in the interval below the soil-tuff contact. After the contact was encountered and the near-surface samples collected, the equipment was decontaminated. Augering on the same hole continued below the contact in the nonwelded tuff until the auger could no longer be turned, or when a 3-ft interval was collected. The sample was handled in the same manner as near-surface samples.

A power-assisted auger was used to collect samples near the tile drain field. The targeted depths were 0 to 5, 5 to 10, and 10 to 15 ft; however, the actual depths collected were 0 to 5, 5 to 7, and 7 to 11 ft. The first 5 ft was collected with a hand auger. The second interval was also attempted with the hand auger, and when the 7-ft level was reached, the hand auger could no longer be turned. At that point, the 2-ft interval that was drilled with the hand auger was collected. The power-assisted auger was used to collect the 7- to 11-ft interval. The auger bit, by turning, brought the sample up to the surface for collection.

Subsurface samples gathered at intervals between 10 and 30 ft were collected by drilling with a hollow-stem auger and split spoon. The split spoon is a 5-ft core barrel that can be opened to remove the sample. The top 10 ft of fill was not sampled. Coring started at 10 ft, and samples were collected at every 5-ft interval.

3.2 Sampling Locations

Sampling locations were selected to bound the extent of contaminants detected during the reconnaissance study of 1991, and in locations in which construction activities may impact

residual contamination around the NSTL structures or utility lines (Figure 1). The locations were surveyed after sampling was conducted so that the exact coordinates would be documented.

Sample B-10 was moved from the planned location in the SAP (Appendix A) because the tile drain field was not found on the first try. A second hole was augered to find the location of the former structure. The soil from the abandoned hole was collected as a contingency sample (Figure 1).

4.0 RESULTS

4.1 Stratigraphy of the Site

Schematic cross sections were constructed using the information collected during drilling and augering, and also showing the grade that the site will be finished to after the proposed NSTL is constructed (Figure 2). Figure 1 shows the location of the cross sections. In addition, detailed core logs of samples drilled using a hollow-stem auger are shown in Figures 3 through 6. These logs have a detailed lithologic description of the core collected, show core losses and qualitative moisture content, and present the analysis requested for each specific interval.

4.2 Screening

The EM-9 mobile laboratory performed alpha, beta, and gamma screening. The minimum detection activity (MDA) in a soil matrix for alpha screening is 63 pCi/g, for beta screening is 24 pCi/g, and for gamma screening is 4 pCi/g. All samples collected were screened before analysis. Gross-alpha, -beta, and -gamma radiation was not detected in any of the samples collected.

4.3 Field Monitoring

Radiation and organic screening was conducted concurrently with the sampling effort. The auger holes and the breathing zone around sample locations were tested for organic vapors every time the auger advanced an interval. Organic screening was done with a Century OVA 128 GC and HNu Photo-ionizer detector. Monitoring for radiation was done on the soil brought up by the hand augers, the cuttings at the drill rig, the core after opening the split spoons, and the equipment

OU1129 GEOLOGICAL LOG

LOS ALAMOS NATIONAL LABORATORY

RCRA SITE CHARACTERIZATION

TA	42	SITEWORK PLAN	OU1129 TA-42	DATE LOGGED	7-21-92
HOLE NO.	B6 42-1028	COLLAR ELEV	7262'	PAGE	1 OF 1
CORE SIZE	2 1/2"	TOTAL DEPTH	28'	FTL	GABRIELA GAINER
METHOD	6 1/2" HOLLOW STEM AUGER	COORDINATES	N: 1769770.86 E: 485077.53	GEOLOGIST	JEFF WALTERSCHEID

DEPTH IN FEET	SAMPLE INTERVAL	ANALYSIS REQUESTED: GROSS (Alpha, Beta, Gamma)	GAMMA SPEC	ALPHA SPEC	Pb		DRY/WET: DRY	LOW MOISTURE	MOIST	VERY MOIST	PROFILE	LITHOLOGIC DESCRIPTION AND REMARKS
0												TS: Tuff soil, sandy, pebbles mixture, grey in color, 0-2' depth, MOIST
												TCS: Soil/Clay/Tuff mixture, grey to reddish brown, 2-3' depth, MOIST
5												NO RECOVERY: No Recovery between 3-4.5'.
												TS: Soil tuff mix, tan-grey in color, 4-6' depth, MOIST
10												TCS: Soil/Clay/Tuff, dark brown color, mud-clay horizon, 6-8' depth, VERY MOIST.
		X				SAMPLE NO. B-6-1 (D)						NO RECOVERY: No Recovery between 8-8.5'
15		X	X	X	X	SAMPLE NO. B-6-2						TS: Soil/Tuff, tan-brown in color, trace to moderate clay, 8.5-10.00 depth, MOIST
20												TUFF: Tuff contact in this zone, hard to pick actual contact, 10.00-12.00' depth, VERY MOIST.
		X				SAMPLE NO. B-6-3						CLAY: Zone of clay and roots, orange color, 12.00-12.5' depth, moderately MOIST
25						SAMPLE NO. B-6-C-2						TUFF: Soft tan-brown, no competence, 12.5-13.00' depth, MOIST
												TUFF: Soft tan-brown, 13.00-15.00' depth, MOIST
30						28' TOTAL DEPTH NOTE: No dust at collar or during drilling, 23-28' is dry, almost dusty. Small amount of dust when tripping out. Fill material 0-11.'						CLAY: Reddish-brown with 30% tuff (soft grey brown) NOTE 1/4" root running down axis of core barrel in clay zone. White clay at contact with tuff, 15.00-18.00' depth, VERY MOIST.
												CLAY: As above but without the organics, 18.00-20.00' depth, VERY MOIST.
35												CLAY: 50% clay and 50% soft tuff. Tuff is drying out but still very soft and fragile. 20.00-22.00' depth. The clay is VERY MOIST at contact with tuff.
40												TUFF: Grey, fragile, pumice is visible, 22.00-23.00 depth', LOW MOISTURE.
45												TUFF: Grey, edges are dusty, starting to become competent and welded. Up to 1" pumice crystals, 23.00-28.00' depth, DRY

Figure 3. OU 1129 Geological Log of Hole B6 42-1028.

OU1129 GEOLOGICAL LOG

LOS ALAMOS NATIONAL LABORATORY

RCRA SITE CHARACTERIZATION

TA	42	SITEWORK PLAN	OU1129 TA-42	DATE LOGGED	7-21-92
HOLE NO	B7 42-1029	COLLAR ELEV	7263'	PAGE	1 OF 1
CORE SIZE	2 1/2	TOTAL DEPTH	28.5'	FTL	GABRIELA GAINER
METHOD	6 1/2 HOLLOW STEM AUGER	COORDINATES	N: 1769759.13 E: 485077.53	GEOLOGIST	JEFF WALTERSCHEID

DEPTH IN FEET	SAMPLE INTERVAL	ANALYSIS REQUESTED: GROSS (Alpha, Beta, Gamma)	GAMMA SPEC	ALPHA SPEC	Pb		DRY/WET: DRY	LOW MOISTURE	MOIST	VERY MOIST	PROFILE	LITHOLOGIC DESCRIPTION AND REMARKS
0												TS: Tuff/soil mixture. 60% tuff gravels, 40% silty sand of tuff origin, grey-brown in color. Trace clay, 0-3.5' depth, MOIST
5												NO RECOVERY: No recovery between 3.5-4.5' depth.
												TS: Tuff/soil mixture as noted above. Slight increase in brown clay, 4.5-6.5' depth, MOIST
												CLAY: Clayey soil, brown in color, 6.5-8.5' depth, VERY MOIST
10												CLAY: Brown clay with weathered tuff gravels and soils, 8.5-10.00' depth. Note: 10.00' tuff contact. MOIST
		X				SAMPLE NO. B-7-1						
15												TUFF: Grey tuff, weakened, but firm core, pumice is evident, "rocky", 10-13.5' depth. MOIST
		X	X	X		SAMPLE NO. B-7-2						TUFF: Competent, grey, not quite dusty, but getting very dry with depth. Pumice and quartz crystals. Possible PID hit at approximately 14.00-16.00' depth, LOW MOISTURE, 14.00-18.5' depth
20												
		X				SAMPLE NO. B-7-3						TUFF: Competent, grey, drying out with depth, 18.5-23.5' depth, LOW MOISTURE
												TUFF: Competent, grey, 23.5-25.00' depth, LOW MOISTURE
25												TUFF: Competent, grey, dusty. 25.00-28.5' depth, DRY
30												
35												
40												
45												

28.5' TOTAL DEPTH

NOTES: 1) 14'-28.5' Competent tuff. 2) Wind is blowing 10-15 MPH and swirling around vehicles. Dust was also blowing off auger as they tripped out. 3) Fill material 0-approximately 10'

Figure 4. OU 1129 Geological Log of Hole B7 42-1029.

OU1129 GEOLOGICAL LOG

LOS ALAMOS NATIONAL LABORATORY

RCRA SITE CHARACTERIZATION

TA	42	SITEWORK PLAN	OU1129 TA-42	DATE LOGGED	7-21-92
HOLE NO	B8 42-1030	COLLAR ELEV	7262'	PAGE	1 OF 1
CORE SIZE	2 1/2	TOTAL DEPTH	28'	FTL	GABRIELA GAINER
METHOD	6 1/2 HOLLOW STEM AUGER	COORDINATES	N 1769778.96 E 485076.86	GEOLOGIST	JEFF WALTERSCHEID

DEPTH IN FEET	SAMPLE INTERVAL	GROSS (Alpha, Beta, Gamma)	GAMMA SPEC	ALPHA SPEC	Pb	SAMPLE NO.	DRY	LOW MOISTURE	MOIST	VERY MOIST	PROFILE	LITHOLOGIC DESCRIPTION AND REMARKS
0												TS: Soil/Tuff mixture, predominantly fine to medium silty sand with tuff gravels. Trace clay, grey in color. 0-2' depth, MOIST
5												CLAY: Clayey soil with tuff gravels. Brown soil, MOIST
												NO RECOVERY: No recovery 3-4' depth
10												CLAY: Brown clay, 30% tuff gravels. Pieces of asphalt (small pebbles) found at 5.5'. Tuff gravels are purple in color with pumice, VERY MOIST, 4-8' depth.
		X				SAMPLE NO. B-8-1(D)						TS: Soil tuff mixture, 8-10' depth, MOIST
15												CLAY: Brown clay zone at tuff contact, 10-11.50' depth, MOIST
		X	X			SAMPLE NO. B-8-2						CLAY: Brown clay zone at tuff contact, MOIST
20												TUFF: Grey/tan in color, " rocky", not quite competent, 11.50-13' depth, LOW MOISTURE.
		X				SAMPLE NO. B-8-3						TUFF: Competent, grey/tan tuff. Almost dusty, but still holding moisture. Pumice is evident, 15-18' depth, LOW MOISTURE.
25		X	X	X		SAMPLE NO. B-8-C-3						TUFF: competent, grey/tan color, drying out with depth, 18-23' depth, LOW MOISTURE.
30												TUFF: Same as above, 23-24' depth, LOW MOISTURE.
												TUFF: Competent, grey dusty tuff, lightly welded, 24-28' depth, DRY
35												
40												
45												

28' TOTAL DEPTH
NOTE: No dust while drilling, swirling winds (10-15 mph), blowing dust as they tripped out
FILL MATERIAL 0-11'

Figure 5. OU 1129 Geological Log of Hole B8 42-1030.

OU1129 GEOLOGICAL LOG

LOS ALAMOS NATIONAL LABORATORY

RCRA SITE CHARACTERIZATION

TA	42	SITEWORK PLAN	OU1129 TA-42	DATE LOGGED	7-21-92
HOLE NO.	B9 42-1031	COLLAR ELEV	7260'	PAGE	1 OF 1
CORE SIZE	2 1/2"	TOTAL DEPTH	27'	FTL	GABRIELA GAINER
METHOD	6 1/2" HOLLOW STEM AUGER	COORDINATES	N 1769796.48 E 485100.34	GEOLOGIST	JEFF WALTERSCHEID

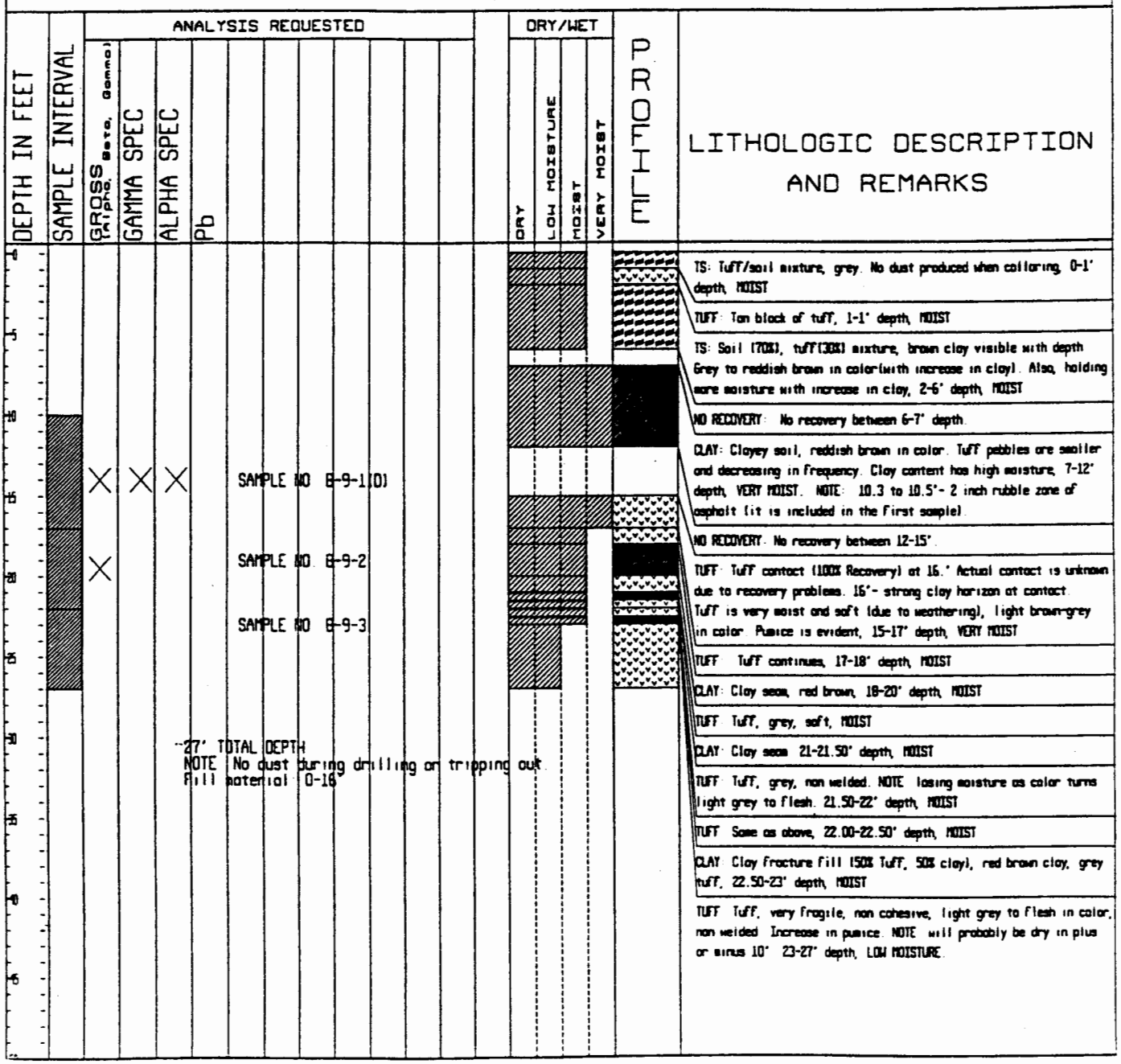


Figure 6. OU 1129 Geological Log of Hole B9 42-1031.

every time the auger or drill rig advanced an interval. In addition, shoes and coveralls of workers were checked before they left the site. Beta and gamma radiation was monitored with an Eberline ESP. Alpha radiation was monitored using an Alpha instrument Model 139.

No radiation was detected above background by the monitoring instruments during sampling. Organic vapors were detected up to 2 ppm in the hole and in several sections in the split-spoon sampler for the auger drill, but they were not detected in the breathing zone. The industrial health technician indicated that the reading was probably the result of the high moisture in the sample or fumes from the drill rig. The samples were high in moisture content but were not saturated.

Field monitoring of fugitive dust in the site was conducted in conjunction with the drill operation. Two high-volume air samplers (HVAS) were set up at the site, one upwind and one downwind of the drill rig. The filter samples were submitted to EM-9 for analysis of gross-alpha, -beta, and -gamma activity, $^{239,240}Pu$, and ^{241}Am. Results from the HVAS are presented in Table 5.

The ^{238}Pu and $^{239,240}Pu$ concentrations in air filter samples collected downwind of the drilling operation are higher than ^{238}Pu and $^{239,240}Pu$ values in air filter samples collected upwind of the drilling operation. However, the analytical results were less than two sigma from the nominal

TABLE 5

RESULTS OF HIGH-VOLUME AIR SAMPLERS

Analyte	Upwind HVAS		Downwind HVAS	
	Analytical Result (pCi/filter)	Analytical Uncertainty	Analytical Result (pCi/filter)	Analytical Uncertainty
ALPHA	0.09	0.2	0.8	0.2
BETA	1.9	0.3	2.0	0.3
GAMMA	80	80	100	80
^{238}Pu	0.002	0.011	0.015	0.016
$^{239,240}Pu$	0.006	0.01	0.026	0.016
^{241}Am	0.0	0.23	0.01	0.04

result; therefore, the results are not considered detectable (measurable) values. The ^{241}Am concentrations in air filter samples collected downwind were similar to values in air filters collected upwind of the drilling operation.

4.4 INC-12 Analysis

INC-12 provided quick-turnaround analysis of samples collected at the former TA-42 site. Quick-turnaround analyses were needed to proceed with construction validation for the NSTL. Turnaround time for receiving the complete set of analytical results from the contract laboratory was about 14 months. The INC analyses were used to make decisions about the type of remediation needed at the site. INC provided ^{238}Pu, $^{239, 240}Pu$, and Pb analyses for a selected suite of samples (Table 6). The limited number of samples were selected on the basis of sample site importance and knowledge gained from the reconnaissance results. Because the INC-12 analyses are not Contract Laboratory Program (CLP) Level III or better, and EPA-approved procedures were not followed, a description of the sample preparation, analyses, and limits of detection follows.

INC-12 personnel prepared the samples for the plutonium analysis. The samples were air dried, pulverized, and placed in a plastic vial from which 0.3- to 5-g aliquots were weighed. A ^{236}Pu tracer was added to each sample. The aliquots were completely dissolved with mineral acids and taken to near dryness. The chemical preparation consisted of a lanthanum fluoride precipitation and two ion-exchange cleanup steps. The purified plutonium fractions were electroplated onto platinum discs and then submitted for counting on solid-state detectors. The counting length was set for 20 hours. The samples were counted three times. The errors for the Pu numbers (Table 6) reflect the counting errors.

A reagent blank was run with each set of 3 to 5 soil samples to establish the detection limit. The average value for the blank is 0.150 pCi (61%) of $^{239, 240}Pu$, which probably reflects the Pu contribution from room 415 at INC-12. No ^{238}Pu was seen on the process blanks. The criterion used for setting the limit of detection is the average value (counting or process blank activity) plus 3σ. Actual sample values have to be greater than this value (99% level) to be reported. For ^{238}Pu, this value is based on the counting statistics only. Only one of six counters showed any background activity in the ^{238}Pu alpha region. The detection limit for ^{238}Pu is estimated to be about 0.04 pCi for this counter. For the remaining five counters the activity observed was assumed to be ^{238}Pu. For $^{239, 240}Pu$, no activity was observed at this alpha range in the process blanks. The limit of detection is based on the average of five process blanks and is ~0.42 pCi.

INC-12 personnel also prepared samples for Pb analysis. The samples (~0.5 g) analyzed for Pb were dissolved in mineral acids. They were taken to near dryness and then diluted to volume. The samples were analyzed using Ion Coupled Plasma-Mass Spectroscopy. A process blank was also run through the procedure in which a contribution from Pb was observed and subtracted from the sample values. Method detection limits for Pb are estimated at about 5 ppm.

Results of the INC-12 analyses are presented in Table 6. Results are given by sample and borehole for each depth sampled. Samples reported as less than (<) values are below the detection level of the instrument. The value provided in these cases is based only on counting statistics. Toxicity characteristic leaching procedure (TCLP) equivalents were calculated using a worst case scenario in which it is assumed that all of the Pb present is leachable.

On the basis of these data, OU 1129 personnel proposed that the site be recommended for no further action (NFA). This preliminary data showed contaminant of concern levels that were below screening action levels. Most of the NSTL building foundation would not overlap the former foot print of the incinerator facility (see map in Appendix B). The parking lot of the proposed NSTL would be the only structure covering the former incinerator facility and associated structures. If other (final contract laboratory analysis) data showed elevated concentrations for the contaminants of concern, remediation could still be conducted, because only the parking lot of the future building would need to be removed. With this information, DOE-AL gave ENG Division and N Division permission to start construction validation in October 1992.

4.5 EDXRF Screening

After obtaining the results of the INC-12 analyses, more information was needed to assess the extent of the Pb result in the location of sample PF-IB1, which was collected during the reconnaissance sampling (Table 3). Sampling and energy dispersive x-ray fluorescence (EDXRF) screening at the former site of the incinerator building was conducted. Figure 7 shows the predicted distribution of Pb concentrations from the kriging interpolation technique. The predicted concentrations were plotted using the software SURFER. The model calculated an area approximately 5 ft in diameter around the old PF-IB1 sample (Figure 1) in which TCLP concentrations of Pb could be as high as 7.5 mg/L.

Pb screening and sampling were conducted inside the 7.5-mg/L contour predicted by the model. Figure 1 shows the sample locations that were selected inside this circumference to test the model. Four samples (B-14 to B-17) were taken 2 ft away from the PF-IB1 sample,

TABLE 6

INC-12 ANALYTICAL RESULTS FOR SAMPLING AT FORMER TA-42

Sample Number	Sample Depth (feet)	pCi/g				Total Pb (ppm)	TCLP Equivalent (mg/L)
		^{238}Pu	Error %	$^{239,240}Pu$	Error %		
B-1-1	0-1.8	0.036	8	1.28	6.5	17	0.85
B-2-1	0-2.6	< 0.02	12	0.094	15	< 5	< 0.25
B-2-2	2.6-3.5	< 0.004	1	0.044	11	< 5	< 0.25
B-3-2	3-4.75	0.016	25	1.05	4.8	< 5	< 0.25
B-4-1	0-2.2	0.0067	24	0.110	20	NM [a]	NA [b]
B-4-2	2.2-5.25	< 0.002	2	0.144	0.9	NM	NA
B-5-2	3-6	< 0.004	9	0.165	13	NM	NA
B-6-2	15-20	< 0.06	17	< 0.406	18	NM	NA
B-6 C-2	25-28	< 0.06	9	< 0.29	79	NM	NA
B-7-2	15-20	< 0.01	6	< 0.006	45	NM	NA
B-8-2	15-20	0.067	7	< 0.002	28	NM	NA
B-8 C-3	25-28	< 0.03	9	< 0.17	13	NM	NA
B-9-1	10-17	0.010	20	0.176	12	NM	NA
B-9-2	17-22	< 0.01	3	< 0.003	28	NM	NA
B-10-1	0-5	0.022	19	0.639	14	NM	NA
B-10-3	7-11	0.009	44	< 0.006	24	NM	NA
B-11-1	0-3	0.012	30	0.149	2.9	NM	NA
B-12-1	0-3	< 0.003	5	0.043	11	NM	NA
B-12-2	3-5	0.029	18	0.877	3.0	NM	NA
B-13-1	0-3	< 0.01	2	< 0.002	23	NM	NA

a NM = Not Measured.

b NA = Not Applicable.

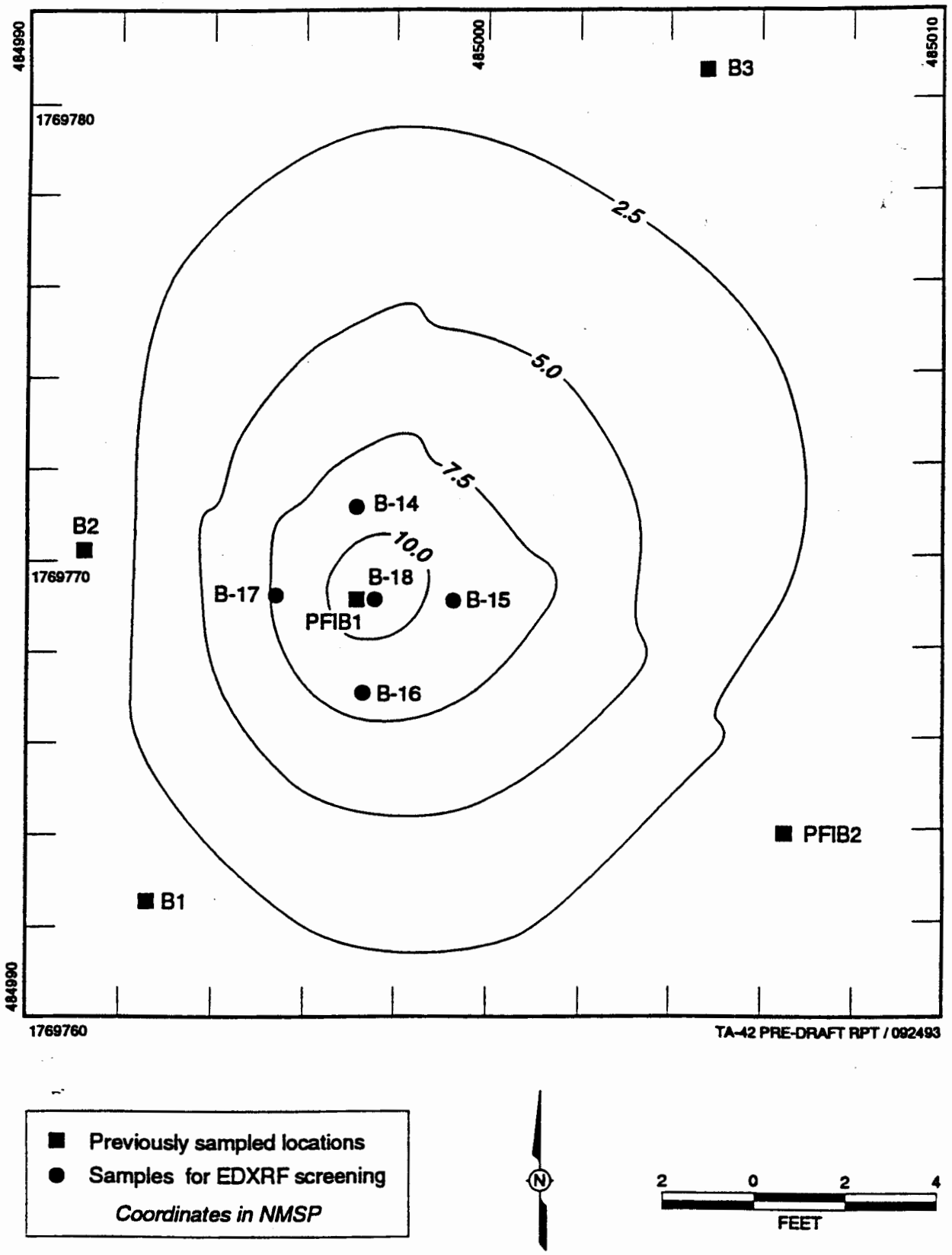


Figure 7. Predicted distribution of lead TCLP concentrations isopleths based on reconnaissance sampling data. Kriging interpolation technique was used.

in cardinal directions (N, S, E, and W). In addition, one sample (B-18) was taken immediately adjacent to the PF-IB1 sample to determine if the 11.4 mg/L (TCLP) Pb in the reconnaissance sample PF-IB1 was from a point source of contamination.

The samples were analyzed with a portable EDXRF instrument. The instrument is a Spectrace 9000 that provides field portable EDXRF analysis. Splits were collected from each 1-ft interval, placed in special 32-mm sample cups, and sealed with 4-micrometer polypropylene x-ray film windows. Total Pb results are shown on Table 7. TCLP maximum potential concentrations were calculated from the total Pb analyses and are included on Table 7. The calculation assumes Pb is 100% leachable from the soil. If TCLP analyses for Pb were performed on these samples, the values would be less than the calculated maximum. The calculation is based on the analytical methodology given in 40 CFR 261, Appendix II, Method 311, in which the solid phase is extracted with an amount of extraction fluid equal to 20 times the weight of the solid phase.

EDXRF analyses did not show Pb concentrations equivalent to or greater than 5 mg/L TCLP; therefore, only five of the samples were submitted to EM-9 for confirmatory contract laboratory analyses. The results of the confirmatory analyses are also shown in Table 7 for comparison. It was demonstrated once the contract laboratory analyses were received, that the EDXRF analyses were very close to the analysis conducted with ICPES by the contract laboratory, making the fast-turnaround technique of EDXRF a good alternative technique for Pb analysis.

This investigation indicated that the most plausible explanation for the 11.4-mg/L (TCLP) Pb analytical result is that the contamination detected during the reconnaissance sampling at the location PF-IB1 was a very localized point source or an analytical error.

4.6 Contract Laboratory Analytical Results

Aliquots of samples collected were submitted to EM-9 for contract laboratory analysis. Not all samples were analyzed for all contaminants of concern (COCs), because not all COCs existed at all potential release sites (PRSs). For example, in the case of the confirmatory samples collected for Pb analysis, only 5 of the 16 samples collected were submitted for confirmatory contract laboratory analyses. Table 8 presents results and uncertainty values of the contract laboratory analysis and shows which samples were analyzed for each COC. Blank spaces under certain analytes represent samples that were not analyzed for that particular COC.

TABLE 7

EDXRF ANALYSIS RESULTS FOR FORMER TA-42 LEAD INVESTIGATION

Sample	Depth in inches	Total Pb by EDXRF (ppm)	TCLP Equivalent* (ppm)	Contract Laboratory Total Pb (ppm)
B-14-1	0-12	8	0.4	
B-14-2	12-24	19	0.95	
B-14-3	24-36	19	0.95	
B-15-1	0-12	12	0.6	
B-15-2	12-24	6	0.3	
B-15-3	24-36	10	0.5	
B-16-1	0-12	12	0.6	
B-16-2	12-24	25	1.25	10.4
B-16-3	24-36	19	0.95	
B-17-1	0-12	19	0.95	
B-17-2	12-24	7	0.35	
B-17-3	24-36	16	0.8	
B-18-1	0-12	19	0.95	12.5
B-18-2	12-24	15	0.75	15.3
B-18-2R	12-24	15	0.75	17.1
B-18-3	24-36	13	0.65	12.4

* Equivalent from EDXRF analyses.

TABLE 8

CONTRACT LABORATORY ANALYTICAL RESULTS

SAMPLE NUMBER	Pu238	unc*	Pu239	unc	Pb	unc	Th228	unc	Th230	unc	Th232	unc	U234	unc	U235	unc	U238	unc	Am241	unc
	pCi/g				mg/kg		pCi/g						pCi/g						pCi/g	
B-1-1	0.0739	0.0244	0.0523	0.0208	14.4	2.88													0.491	0.0352
B-1-1-D					14.5	2.9														
B-1-2	0.2	0.062	0.0839	0.0395	4.3	0.86													0.0657	0.0568
B-2-1					12	2.4														
B-2-2					6.6	1.32														
B-3-1					11.7	2.34														
B-3-2	1.75	0.24	2.24	0.31	28.1	5.62													0.332	0.107
B-4-1	0.438	0.149	0.125	0.08															0.121	0.055
B-4-2	0.289	0.107	0.231	0.096															0.0618	0.0477
B-5-1	0.36	0.146	0.216	0.112															0.0958	0.0558
B-5-2	0.139	0.075	0.511	0.155			1.9	0.49	1.55	0.41	1.53	0.41	0.619	0.28	0.0999	0.0901	0.779	0.226	0.138	0.061
B-6-1																			0.061	0.211
B-6-1-D																			0.0249	0.0499
B-6-2																			0.0862	0.0529
B-6-3																			0.138	0.062
B-6 C-2	0.138	0.09	0.0964	0.0743															0.135	0.057
B-7-1																			0.0707	0.0584
B-7-2																			0.0388	0.0778
B-7-3																			0.0413	0.034
B-8-1																			0.152	0.074
B-8-1-D																			0.292	0.107
B-8-2	0.0836	0.0727	0.0119	0.024															0.327	0.098
B-8-3	0.269	0.105	0.0179	0.0254															0.358	0.112
B-8 C-3	0.147	0.09	0.0793	0.061															0.332	0.097
B-9-1	0.0492	0.0738	0.312	0.159															0.463	0.116
B-9-1-D	0.132	0.07	0.29	0.111															0.749	0.171
B-9-2	0.0238	0.0424	0.0189	0.0378															0.529	0.127
B-9-3	0.332	0.144	0.0553	0.0559															0.342	0.102
B-10-1	0.377	0.171	0.298	0.151															0.103	0.046
B-10-1-D	0.0973	0.0783	0.401	0.152															0.209	0.069
B-10-2																			0.157	0.075
B-10-3																			0.057	0.114
B-11-1	0.389	0.165	0.135	0.102			1.27	0.29	1.1	0.26	1.39	0.3	1	0.43	0	0.105	0.815	0.365	0.107	0.055
B-11-2	0.214	0.108	0.485	0.167															0.227	0.071
B-12-1	0.154	0.091	0.0441	0.0543															0.0804	0.0455
B-12-2																			0.38	0.12
B-13-1	0.0827	0.0719	0.0591	0.0535			2.59	0.81	1.52	0.55	0.91	0.395							0.933	0.194
B-13-2	0.0771	0.07	0	0.0024			1.83	0.69	1.1	0.44	1.46	0.53							0.309	0.09
B-16-2					10.4	NR**														
B-18-1					12.5	NR														
B-18-2					15.3	NR														
B-18-2-R					17.1	NR														
B-18-3					12.4	NR														
C-1-1	0.156	0.102	0.296	0.144															0.105	0.052

* unc = uncertainty

** NR = not reported

5.0 DATA ANALYSIS: INTERPRETATION, MODELS, AND PARAMETERS

Once analytical data were received from the contract laboratory, analyses values for each COC were compared with the screening action level. Table 9 shows the screening action levels compared with the highest concentration measured in samples collected at the site. The concentrations shown in Table 9 are the highest (maximum) concentrations returned from analyses independently of what analytical facility or what method was used to conduct the analysis. None of the samples collected contained concentrations above the screening action level. In fact, all the COCs are at least an order of magnitude below the screening action level, except for ^{232}Th. The screening action level for ^{232}Th is 0.88 pCi/g; however, the generic limit set in DOE 5400.5 is 15 pCi/g for intervals below 15 cm in depth. The sample containing 1.53 pCi/g was collected at an interval of 3 to 6 ft. So even this value, which is above the screening action level published in the LANL Installation Work Plan (to be published November 1993), is an order of magnitude below the limit set by DOE.

TABLE 9

COMPARISON OF SCREENING ACTION LEVELS AND CONCENTRATIONS OF CONTAMINANTS OF CONCERN AT TA-42

Chemical	Soil Screening Action Level [a]	Maximum Concentration at TA-42
Pb	500.0 mg/kg	25. mg/kg
^{241}Am	22.0 pCi/g	0.933 pCi/g
^{238}Pu	27.0 pCi/g	1.75 pCi/g
$^{239, 240}$Pu	24.0 pCi/g	2.24 pCi/g
^{230}Th	10.0 pCi/g	1.52 pCi/g
^{232}Th	0.88 pCi/g [b]	1.53 pCi/g
^{234}U	86.0 pCi/g	1.0 pCi/g
^{235}U	18.0 pCi/g	0.0999 pCi/g
^{238}U	59.0 pCi/g	0.815 pCi/g

a LANL Installation Work Plan (to be published November 1993).

b Generic limits for ^{232}Th are set in DOE 5400.5 (DOE 1990, 0080) at 5 pCi/g averaged over the first 15 cm of soil and 15 pCi/g averaged over each additional 15 cm interval. The more conservative derived screening action levels are to be used for screening purposes only.

Although all the analytical data conclude that all COCs are below screening action levels, the data were modeled using gridding software to better show the distribution of the COCs at the site. The software package ROCKWORKS was used to perform two- and three-dimensional modeling of the data.

5.1 Two-Dimensional Modeling: Concentration Isopleths

The program GRIDZO was used to construct grids and fit the data using an inverse-distance-weighing algorithm without radial searching, then contouring the data to create isopleths of concentrations for each COC. The inverse-distance-weighing algorithm accommodates clustered data points and will not exaggerate its extrapolations beyond the given data points. This algorithm was chosen because of the nature of the PRSs. The potential contamination associated with each PRS is independent from the others, so an algorithm that would restrict influences from other clusters of data was the ideal one to use. Appendix C contains tables with the parameters chosen to construct the isopleth maps. The data chosen to construct the two-dimensional isopleth maps were the highest concentration measured for a particular COC at each unique XY coordinate (sampling location). That is, if four samples were taken at different depth-intervals at a unique XY coordinate, the highest concentration measured for each COC in any of those samples was selected to construct the contour map. Figures 8 to 11 show isopleth maps constructed for ^{241}Am, ^{238}Pu, ^{239,240}Pu, and Pb.

The areas in which ^{241}Am was found in greater concentrations (Figure 8) were in the northern-most section of the outdoor decontamination area (0.9 pCi/g) and in the sample intersecting the line connecting the tile field with the septic tank (0.75 pCi/g). Figures 9 and 10 show how alike ^{238}Pu and ^{239,240}Pu behave; both show similar elevated and lower concentrations in the same areas on the isopleth maps. Elevated concentrations for ^{238}Pu and ^{239,240}Pu were found in the former location of the incinerator. Lead is somewhat uniformly distributed in the site (Figure 11) with values ranging from 4.3 to 28.1 mg/kg. Values for samples that the Environmental Surveillance group in 1990 (Environmental Protection Group 1992, 0740) collected from canyons all across the laboratory ranged from 20 to 28 mg/kg. Therefore, it can be stated that values for Pb at TA-42 are at background levels.

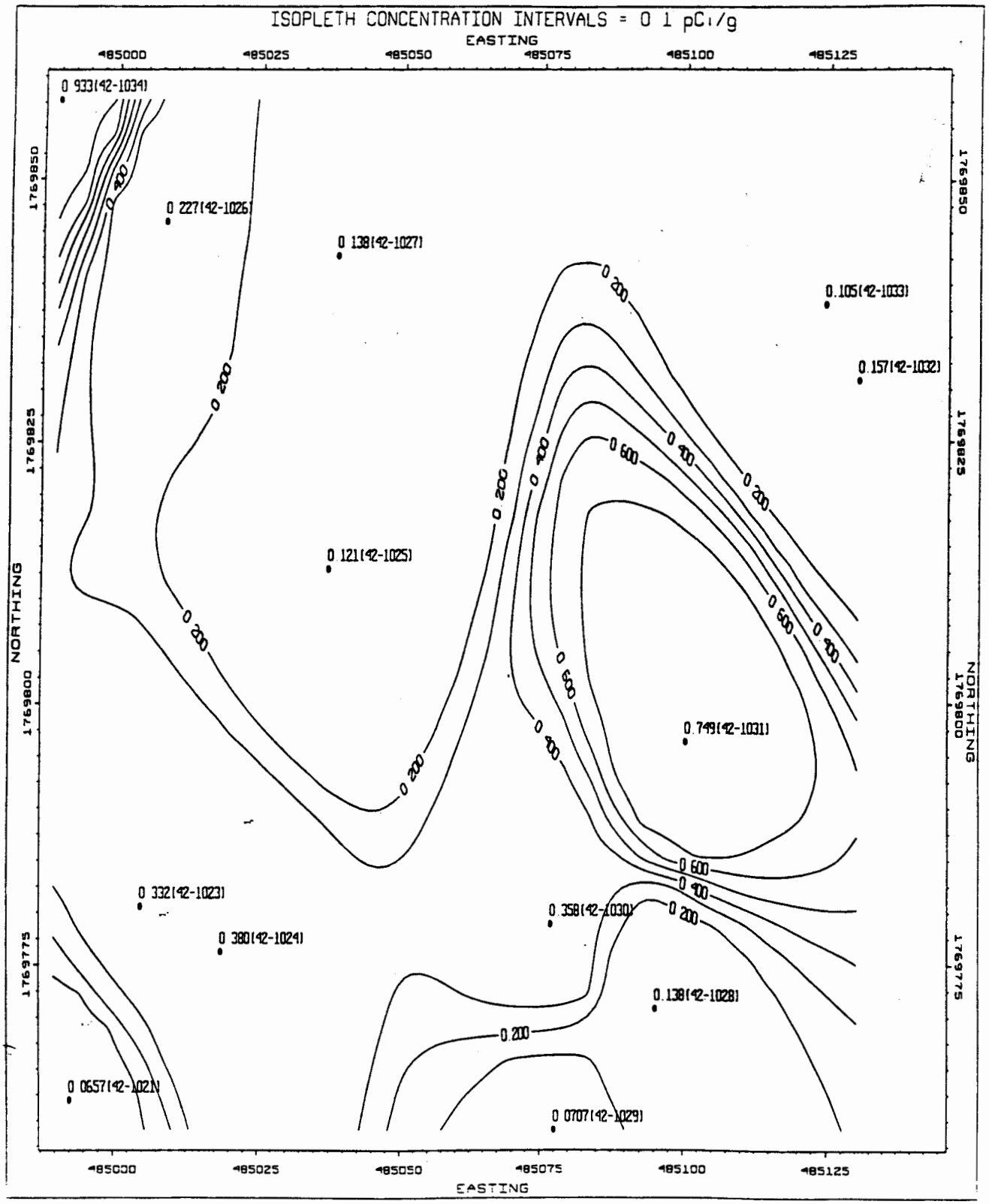


Figure 8. Predicted concentration isopleths for ^{241}Am at former TA-42.

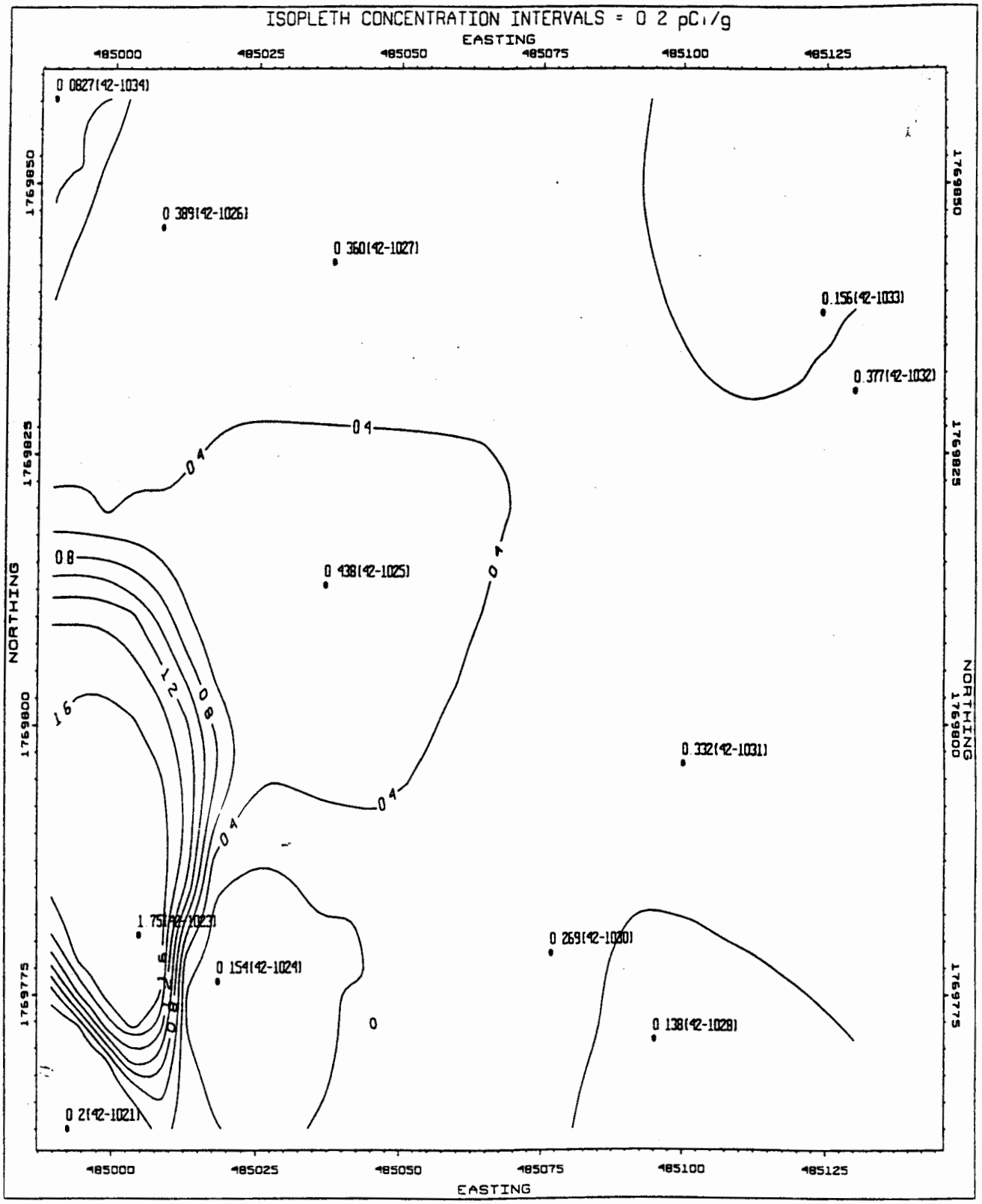


Figure 9. Predicted concentration isopleths for ^{238}Pu at former TA-42.

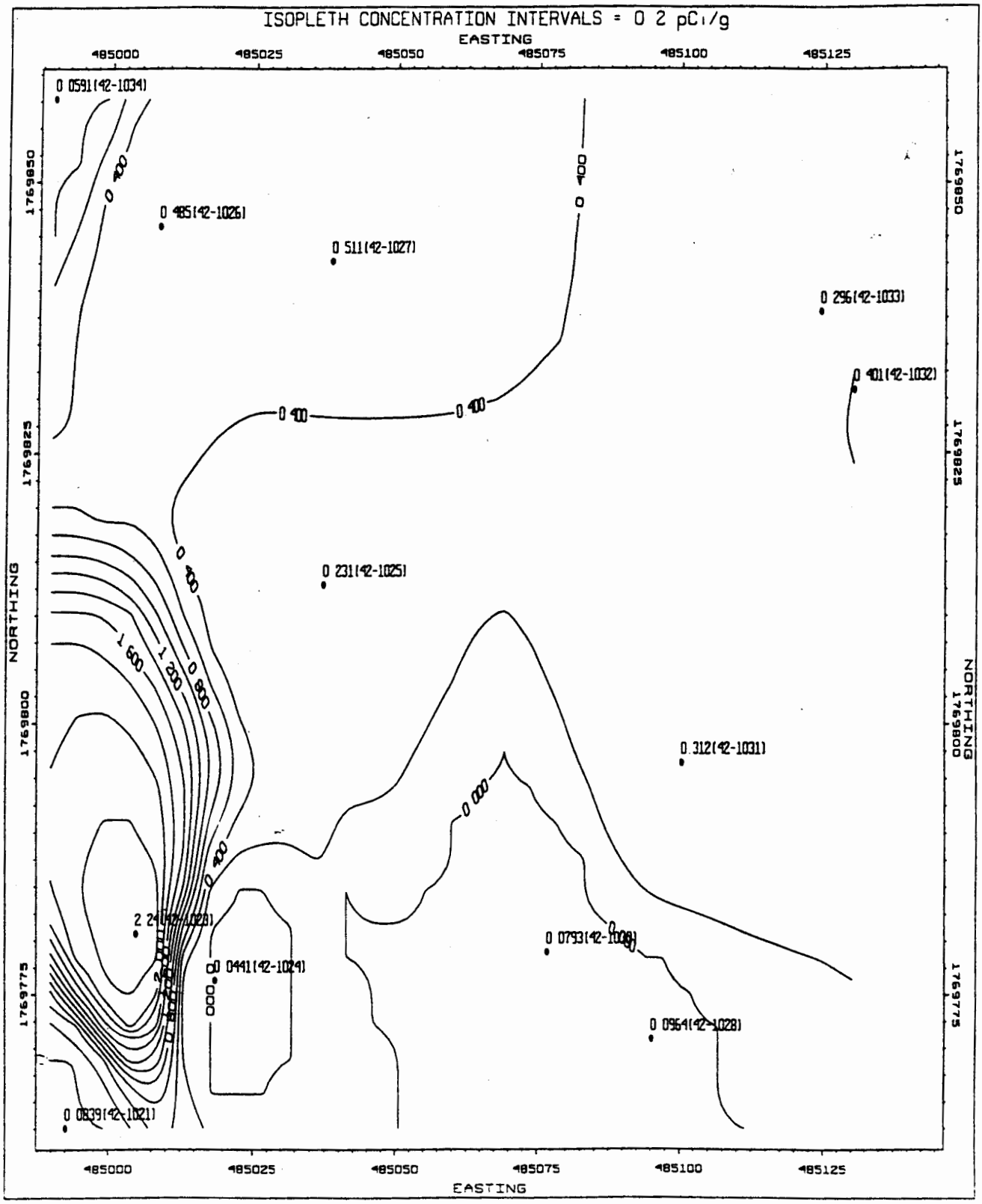


Figure 10. Predicted concentration isopleths for $^{239,240}Pu$ at former TA-42.

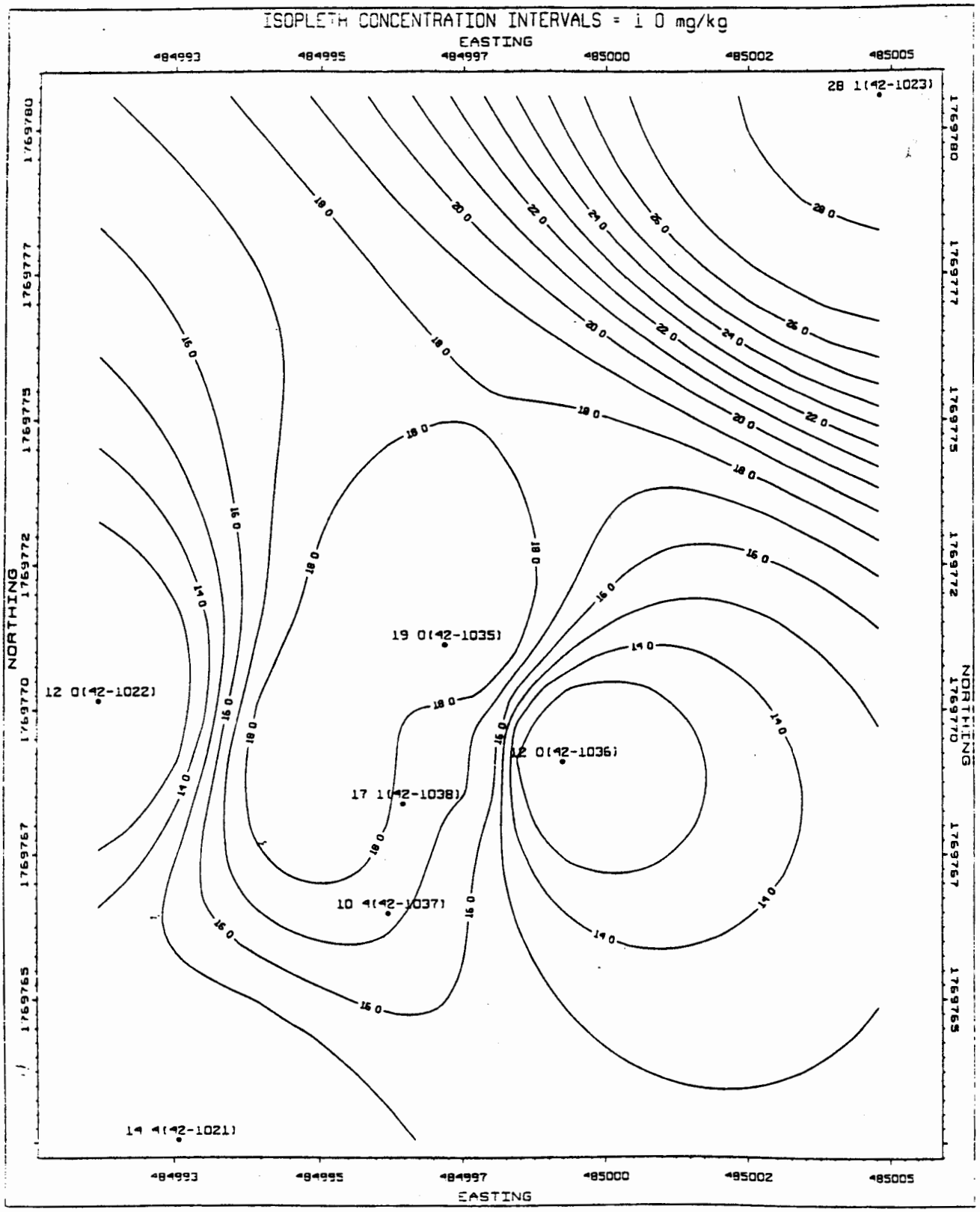


Figure 11. Predicted concentration isopleths for Pb at former TA-42.

5.2 Three-Dimensional Modeling: Block Diagrams

ROCKSOLID was used to construct three-dimensional grids and fit the data using an inverse-distance-squared-with-octant-searching algorithm, then to construct block diagrams that show areas of equal concentration in three dimensions. The inverse-distance modeling method assigns a voxel node value on the basis of the weighted average of the eight closest data points, one point in each of the eight octants surrounding the node. If no point is found in any octant, that octant is left out of the computation. This octant-searching approach ensures that clustered data points will not overly influence the value assigned to a voxel node. This model was chosen so that clustered points in the surface (more samples collected near the surface) do not overly influence values assigned to nodes at depth. Appendix C contains tables with the parameter chosen to construct the block diagrams. Block diagrams show exceptionally well the distribution of COCs in three dimensions (Figures 12 to 15).

6.0 QUALITY ASSURANCE AND QUALITY CONTROL

Activities described in this report were conducted following ER Program administrative procedures (APs) and standard operating procedures (SOPs). Procedures used include:

- LANL-ER-AP-02.1, "Procedure for LANL Records Management"
- LANL-ER-SOP-01.01, "General Instructions for Field Investigations"
- LANL-ER-SOP-01.02, "Sample Containers and Preservation"
- LANL-ER-SOP-01.03, "Handling, Packaging, and Shipping of Samples"
- LANL-ER-SOP-01.04, "Sample Control and Field Documentation"
- LANL-ER-SOP-01.05, "Field Quality Control Samples"
- LANL-ER-SOP-01.06, "Management of Field Generated Waste"
- LANL-ER-SOP-06.10, "Hand-Auger and Thin-Wall Tube Sampler"

As part of quality control (QC) to check the operation of the analytical laboratory and to obtain a measure of the quality of the data generated, field duplicate samples were collected to evaluate the reproducibility of the sampling technique. Blind and spiked samples were included with samples to be analyzed, and replicate analyses were performed by the contract laboratory, which help to evaluate analytical procedures. Equipment rinsate blanks and bottle blanks or field blanks were collected and submitted for every 20 samples or per sampling event (a sampling event is defined as one day of sampling). These blanks were collected to evaluate decontamination and other sample handling procedures. Results of QC samples are shown in Table 10.

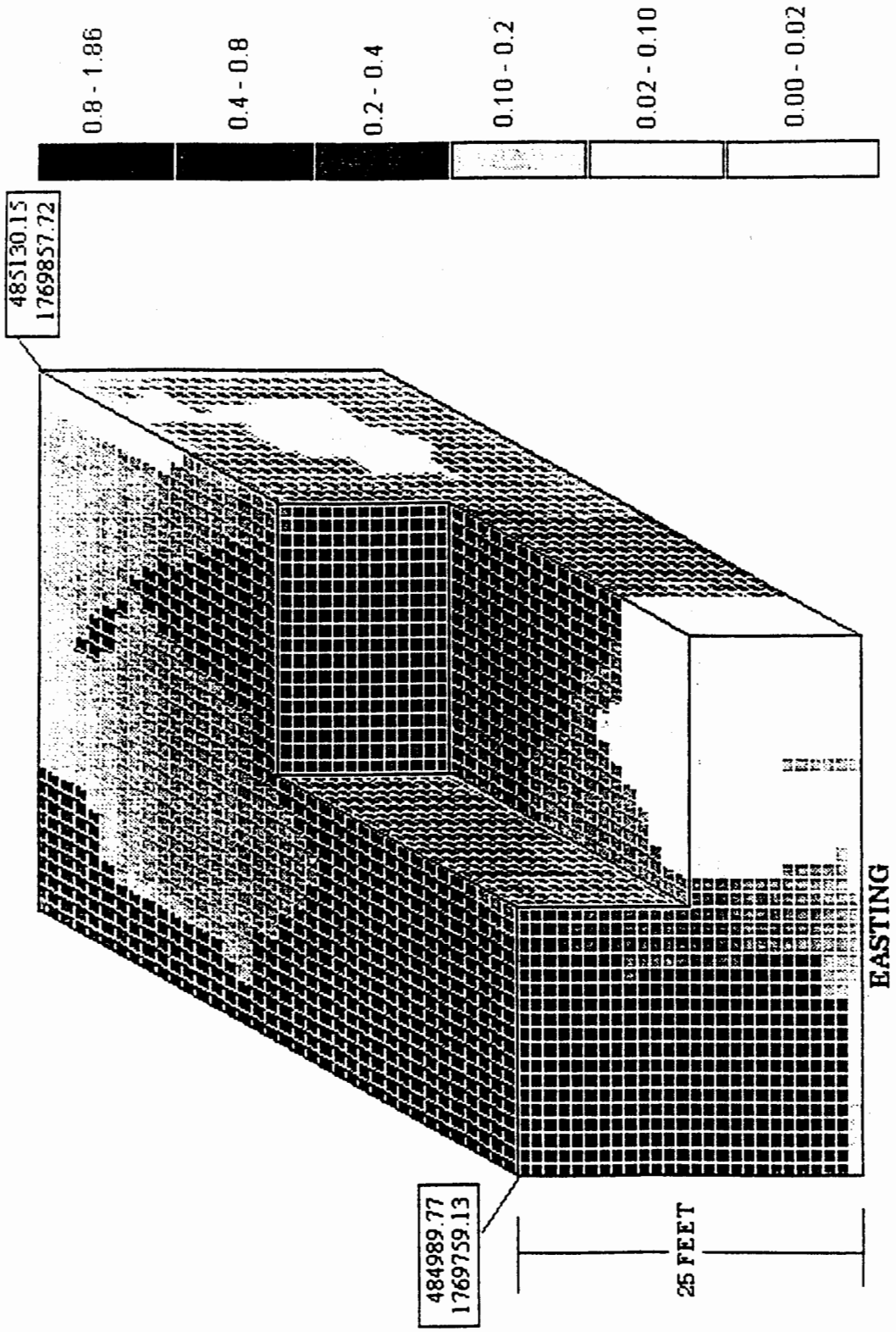


Figure 12. Block diagram of former TA-42 showing distribution of ^{241}Am concentrations in pCi/g.

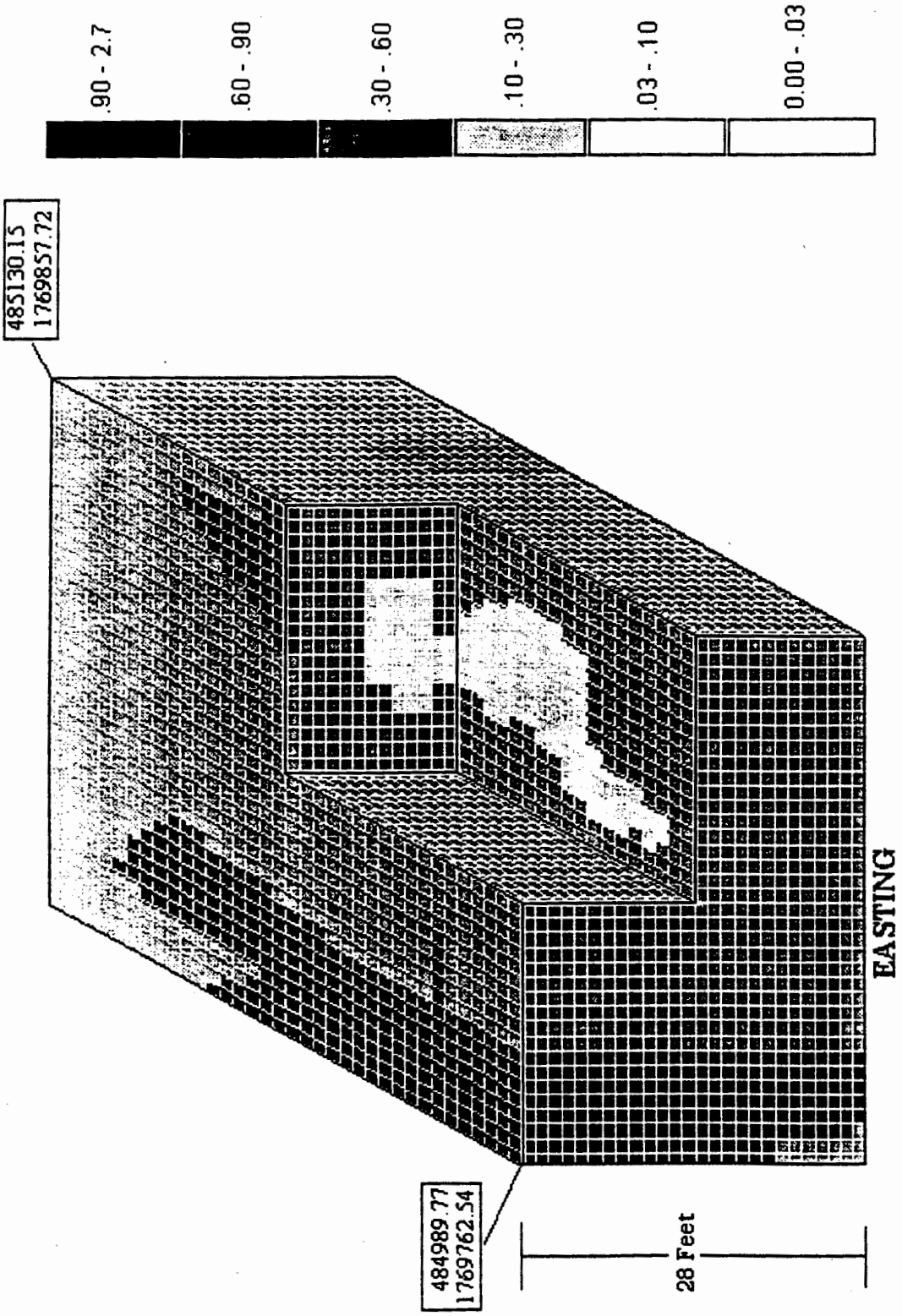


Figure 13. Block diagram of former TA-42 showing distribution of ^{238}Pu concentrations in pCi/g.

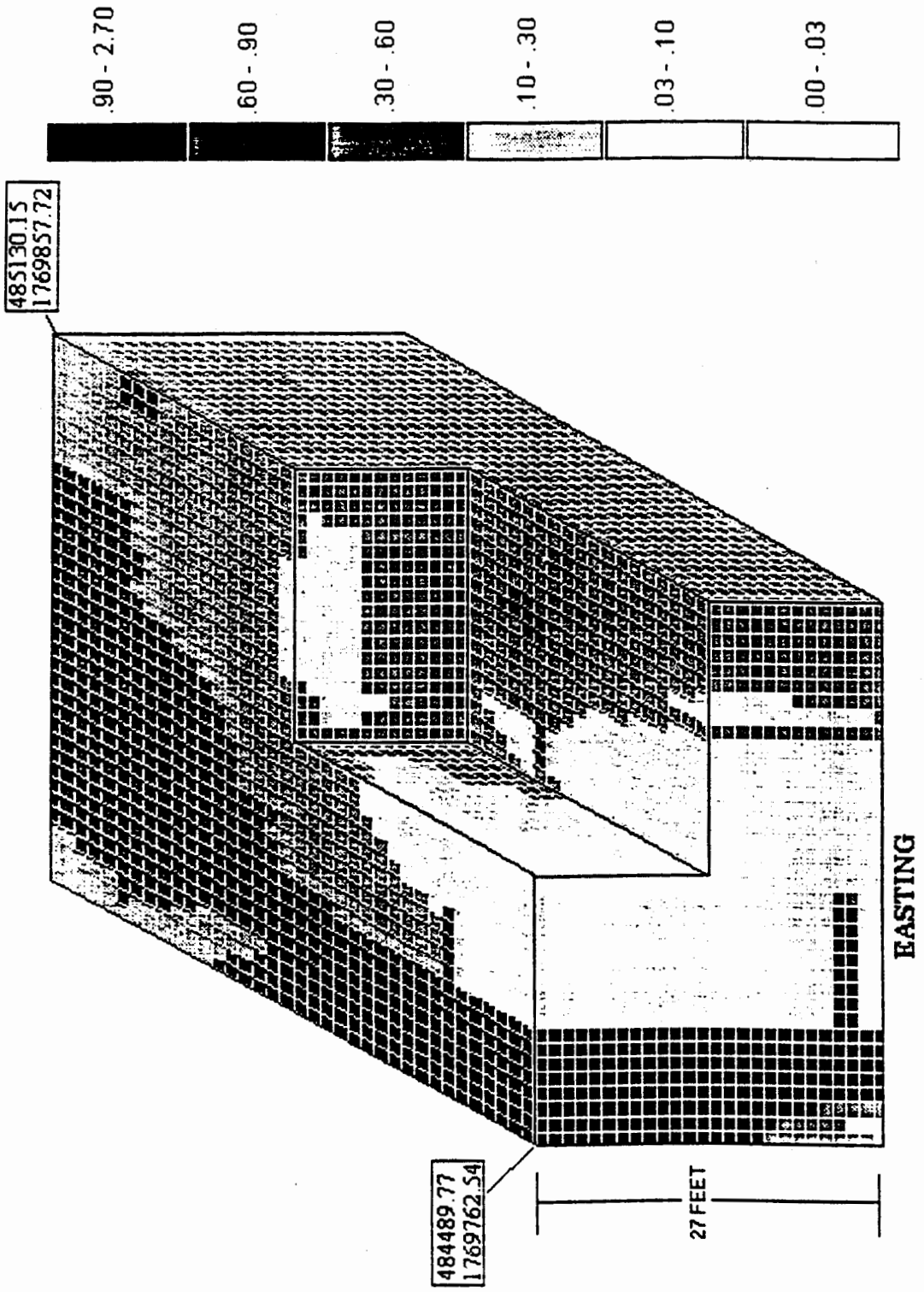


Figure 14. Block diagram of former TA-42 showing distribution of $^{239,240}Pu$ concentrations in pCi/g.

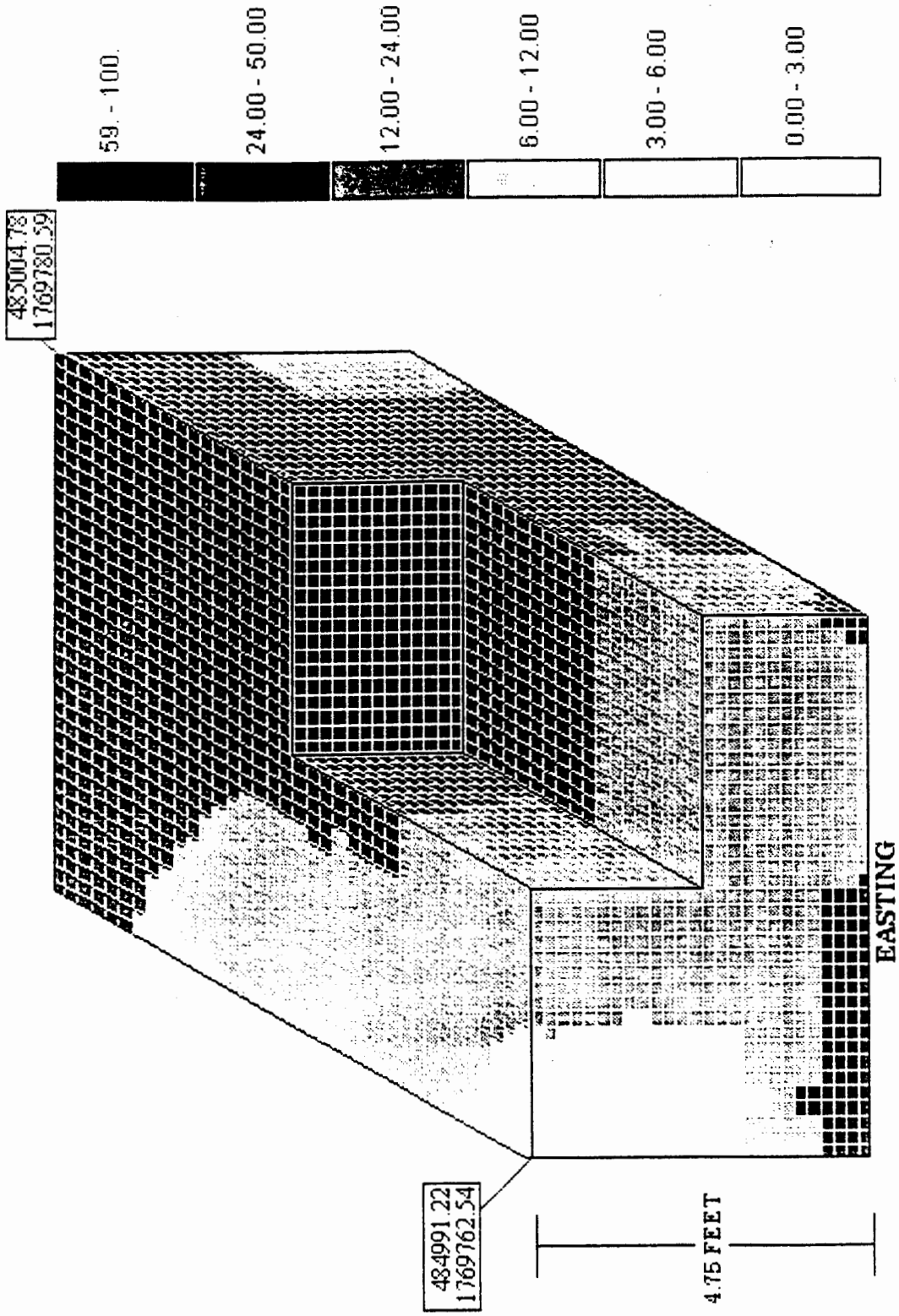


Figure 15. Block diagram of former TA-42 showing distribution of total Pb concentrations in mg/kg.

TABLE 10

RESULTS OF QUALITY CONTROL SAMPLES

SAMPLE NUMBER	Pu-238 uncertainty		Pu-239 uncertainty		Pb uncertainty		Am-241 uncertainty	
	pCi/L				ug/L		pCi/L	
B-12-2-bb*	1.8	1.18	0.969	0.846			0.264	0.325
B-12-2-erb**	5.63	1.66	2.68	1.1			1.09	0.56
B-9-3-bb	0.465	0.471	0	0.0181			0.199	0.298
B-9-3-erb	0.852	0.815	0.142	0.492			0.135	0.27
B-18-3-erb					5.3	NR***		
B-3-2-bb					4.2	0.42		
B-3-2-erb					3.7	0.37		
QC-1					<1			
QC-2					17.6	1		

* bb= bottle blank.

** erb= equipment rinsate blank.

*** NR= not reported.

TABLE 11

RESULTS OF SPIKE AND BLIND QC SAMPLES

Analysis	Amount Spiked	Amount Recovered	Units	Analytical Result	Analytical Uncertainty	QC Value	QC Uncertainty	Sample Type	Comment
Pb	2.31	38%						Spike	
Pb	2.31	39%						Spike	
Pb			mg/kg	< 0.3		0.00		Open QC	Under control
Pb			mg/L	11.40	1.14	12.50	0.50	Blind QC	Under control
Pb	2.31	122.20%						Spike	
Pb	2.31	115.70%						Spike	
Pb			ug/L	<1				Open QC	Under control
Pb			mg/L	17.60		16.00	1.00	Blind QC	Under control
Pu-238			pCi/g	0.30	0.12	0.00	0.00	Blind QC	Warning 2-3 sig
Pu-239			pCi/g	0.31	0.12	0.22	0.02	Blind QC	Under control
Pu-238			pCi/g	0.28	0.11	0.34	0.02	Blind QC	Under control
Pu-239			pCi/g	0.70	0.19	0.79	0.01	Blind QC	Under control
Pu-238			pCi/g	0.40	0.18	0.34	0.02	Blind QC	Under control
Pu-239			pCi/g	0.03	0.04	0.00		Blind QC	Under control
Pu-238			pCi/g	0.05	0.05	0.00		Blind QC	Under control
Pu-239			pCi/g	0.02	0.03	0.04	0.00	Blind QC	Under control
Am-241			pCi/g	0.00		0.32	0.01	Blind QC	Insuf. sample
Am-241			pCi/g	0.00		0.65	0.01	Blind QC	Insuf. sample

7.0 CONCLUSIONS

This report presents results from the investigation at former TA-42 site. This investigation included the following PRSs:

- 42-001(a), former location of an incinerator;
- 42-001(b and c), former location of two ash storage tanks;
- 42-002(a), former location of a building used as an indoor storage and decontamination area;
- 42-002(b), a former outdoor decontamination area; and
- 42-003, former location of a septic tank and tile field.

As it can be seen from the results, none of the samples collected at the PRSs contained concentrations of COCs above screening action levels. In fact, all the COCs are at least an order of magnitude below the screening action level. Therefore, no risk to human health or the environment exists. On the basis of these results, it was recommended to DOE-AL that no remedial actions were required before construction of the NSTL. Additionally, these PRSs will be recommended for no further action by OU 1129 RFI.

8.0 REFERENCES

DOE (U.S. Department of Energy), June 5, 1990. "Radiation Protection of the Public and the Environment," DOE Order 5400.5 (Change 1), Washington, DC. (DOE 1990, 0080)

Environmental Protection Group, March 1992. "Environmental Surveillance at Los Alamos During 1990," Los Alamos National Laboratory Report LA-12271-MS, Los Alamos, New Mexico. (Environmental Protection Group 1992, 0740)

Harper, J. R., and R. Garde, November 1981. "The Decommissioning of the TA-42 Plutonium Contaminated Incinerator Facility," Los Alamos Scientific Laboratory Report LA-9077-MS, Los Alamos, New Mexico. (Harper and Garde 1981, 0591)

LANL (Los Alamos National Laboratory), May 1992. "RFI Work Plan for Operable Unit 1129," Los Alamos National Laboratory Report LA-UR-92-800, Los Alamos, New Mexico. (LANL 1992, 0785)

LANL (Los Alamos National Laboratory), November 1993 (to be published). "Installation Work Plan for Environmental Restoration," Revision 3, Los Alamos National Laboratory Report LA-UR-93-____, Los Alamos, New Mexico.

Sax, I. N., and R. J. Lewis, Sr., 1987. "Hawley's Condensed Chemical Dictionary," 11th Ed., Van Norstrand Reinhold Company, New York, New York. (Sax and Lewis 1987, 04-0277)

Windholz, M. (Editor), 1983. "The Merck Index: An Encyclopedia of Chemicals, Drugs, and Biologicals," 10th Ed., Merck and Co., Inc., Rahway, New Jersey. (Windholz 1983, 04-0278)

APPENDIX A. Sampling and Analysis Plan. (Not available for Preliminary Draft.)

APPENDIX B. FIMAD Map of Former TA-42 Showing Incinerator Facility and Proposed NSTL. (Not available for Preliminary Draft.)

APPENDIX C. Model input parameters. (Not available for Preliminary Draft.)