HISTORICAL INFORMATION REPORT for SWMU 73-002

Los Alamos National Laboratory, New Mexico

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US Army Corps of Engineers, Sacramento District
1325 J Street
Sacramento, CA 95814

and
Los Alamos National Laboratory
National Nuclear Security Administration, US Department of Energy
P.O. Box 1663 MS-A316
Los Alamos, NM 87544

Prepared by
Innovative Technical Solutions, Inc.
2730 Shadelands Drive, Suite 100
Walnut Creek, CA 94598
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DOE Representative

_____ _____

David Gregory, Federal Program Director Date

ITSI Innovative Technical Solutions, Inc.

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1.0 INTRODUCTION

Los Alamos National Laboratory (LANL or the Laboratory) is a multidisciplinary research facility owned by the U.S. Department of Energy (DOE) and managed by the University of California (UC). The Laboratory is located in north-central New Mexico, approximately 60 miles northeast of Albuquerque and 20 miles northwest of Santa Fe, in Los Alamos County. The Laboratory covers 40 square miles of the Pajarito Plateau, which consists of a series of finger-like mesas separated by deep canyons containing perennial and intermittent streams running from west to east. Mesa tops range in elevation between 6,200 feet above sea level (asl) to slightly over 7,800 feet asl.

This Historical Information Report (HIR) presents the results of the recent (April 2005) characterization sampling and previous investigations and includes a discussion of activities that were conducted at solid waste management unit (SWMU) 73-002. Recent and historic sampling locations are shown on Figure 1. The site comprises an incinerator building and an adjacent surface disposal area with accumulated ash and noncombustible debris extending approximately 140 feet below the rim of Pueblo Canyon. SWMU 73-002 is one of five sites within Consolidated Unit 73-002-99, Miscellaneous Airport Structures (see Figure 2).

The report describes the physical layout of the site, installation and demolition of structures, history of operations and associated releases, and present-day site status. Resource Conservation and Recovery Act (RCRA) facility investigations (RFIs) and those investigations performed before 1994 are described, analytical results are summarized, and associated tabulated data are presented in tables 1 through 8.

2.0 DESCRIPTION AND OPERATIONAL HISTORY

2.1 Current Site Description

The SWMU 73-002 incinerator/surface disposal area is located slightly west and north of the Los Alamos County Airport terminal. The former incinerator building currently is used by Budget Car Rental for storage and automotive detailing. The area of disposed ash and debris below the rim of Pueblo Canyon is essentially wedged-shaped, with dimensions being approximately 150 feet wide and 160 feet long. The upper portion of the ash debris is located on DOE property, while the remainder of the site is on Los Alamos County property. The thickness of the ash varies from essentially nil at the edges to greater than eight feet in some locations. The downslope extent of the ash and debris accumulation is approximately 400 feet above the canyon floor and is marked by a band of rusting metal cans.

2.2 Soil and Subsurface Site Conditions

As a result of development at LANL, very little undisturbed soil exists at the facility. The majority of surface material tends to be artificial fill, which may be crushed tuff, disturbed soil, or imported material. Undisturbed soil on the mesa surfaces is generally thin and sandy in texture near the surface, with increasing clay content with depth. Cliff-forming south-facing slopes tend to have poorly developed soil profiles, while north-facing slopes generally have higher organic content. Alluvial deposits of varying thickness exist within the canyons.

Based on regional information presented in the Pueblo Canyon Aggregate Area Investigation Work Plan (LANL, 2005b), subsurface lithologic units underlying surficial alluvium and soil in the vicinity of LANL consist of the Bandelier Tuff (Qbt) and the Puye Formation (Tp). The deeper lithologic unit, the Puye Formation, consists of clastic fanglomerate sediments. This unit is overlain by the Guaje Pumice Bed, which occurs at the base of the overlying Bandelier Tuff.

The tuff deposits originated as gas-charged material expelled and deposited during violent volcanic eruptions. The tuff is subdivided into the deeper Otowi Member and the shallower Tshirege Member; the upper and lower members of the Bandelier Tuff are

separated by the Cerro Toledo Interval at approximately 350 feet below ground surface (bgs) beneath the mesa top sites. The Cerro Toledo interval is a 10 to 40-foot thick sequence of volcaniclastic sediments and primary fallout deposits.

The Tshirege Member, the shallower member of the Bandelier Tuff, is a compound cooling unit subdivided into four distinct units: Qbt 4, Qbt 3, Qbt 2, and Qbt 1v/1g. The Upper Tshirege, including Qbt 4 and Qbt 3, is a cliff-forming non-welded to partially welded tuff and underlies most of the SMWUs at LANL; this is the most likely unit to be encountered beneath the ash debris at SWMU 73-002.

The depth to groundwater in the regional aquifer beneath the Pueblo Canyon area is greater than 1,000 feet bgs. Discontinuous areas of perched alluvial and intermediate groundwater also exist at depths of 100 to 250 feet bgs. These saturated zones, which are expected to form mainly at subsurface horizons where lithologic properties change, have been observed within the Puye Formation during installation of wells beyond the site boundary.

2.3 Historic Facility Description

The incinerator was housed in a two story concrete building (73-2) on the north side of the parking lot at the Los Alamos County Airport, northwest of the existing airport terminal building. The bottom floor of the facility was known as the “stoking” floor and the second floor (level with the current airport terminal parking lot) was known as the “charging” floor. A 6-foot diameter stack was located behind the building. Immediately north of the building and extending over the edge of Pueblo Canyon is a pair of concrete landings that were used to dump the ash and unconsumed metal and glass generated by the incinerator operations.

2.4 Operational History

SWMU 73-002 is the result of periodic, intentional releases that occurred as part of the operation of an incinerator originally designed and installed for the destruction of classified documents. The incinerator operated as intended for a short time in 1947, but use was discontinued due to problems with incomplete combustion. In June 1948, the Zia Company acquired the incinerator building and used it to burn municipal trash until

sometime before September 1973. Beginning in the early 1970s, after incineration had ceased and after the equipment had been removed, the Los Alamos Dog Obedience Club used the building. Documentation of the removal of the incinerator equipment and the effluent stack is not available. As noted in Section 2.1, the building is currently used for storage in conjunction with airport-related activities.

2.5 Disposal, Discharges, and Releases

Historical information does not indicate any treatment, storage, or disposal of hazardous wastes at the incinerator building, nor on the hillside location of the SWMU. The primary source(s) of potential contamination would have been materials disposed of in the trash brought on site for incineration. There were no known releases from this site except for the disposal of the incinerator ash and from floor drains in the incinerator building. The floor drain outfalls ceased operations prior to the enactment of permitting regulations.

2.6 Current Waste Inventory

Together the ash and debris cover an area of approximately 30,000 square feet. The waste accumulation ranges in thickness from less than one foot to greater than eight feet. During recent (April 2005) ash characterization activities conducted by Innovative Technical Solutions, Inc. (ITSI) in preparation for implementing ash removal, the waste pile was surveyed, and its volume was estimated at 1,200 cubic yards.

Based on the results of sampling performed in April 2005 to characterize the ash for appropriate disposal paths, the incinerator ash will be classified as non-hazardous low-level radioactive waste (LLRW) for disposal purposes.

3.0 HISTORIC INVESTIGATION AND FIELD ACTIVITIES

3.1 Pre-RFI Field Activities

There have been no documented pre-RFI characterization or remedial activities at this site. The incinerator decommissioning and removal was conducted sometime between 1948 and 1973, but was not documented.

3.2 RFI Field Activities

The incinerator building floor drains (identified as SWMU 73-006) were plugged with concrete sometime during the late 1980s, but no details are available to document this work. An initial RFI was conducted in July 1996, with the septic tank which served the building (SWMU 73-004(a)) being removed in August 1996. The drain lines were investigated as a part of the July 1996 RFI. The east drain line was not located at that time and was assumed to have been removed previously. The western drain line was removed as a part of the second RFI in February 1999.

Environmental sampling was conducted in the area of SWMU 73-002 during three separate sampling events in 1996, 1997, and 1998. The results of the sampling were used to conduct a preliminary screening evaluation to determine the potential risks to human health and the environment as a consequence of exposure to the ash debris, as documented in the "Draft Preliminary Screening Evaluations of the Ash Debris" (DOE, 1999).

Fifty-one soil samples were collected from within the ash debris, an additional four samples were collected from either side of the ash debris, and 15 samples were collected from the drainages. Sample locations are shown on Figure 1. Samples were analyzed for some or all of the following: metals, pesticides and polychlorinated biphenyls (PCBs), semivolatile organic compounds (SVOCs), volatile organic compounds (VOCs), dioxins and furans, and various radionuclides. The results of these sampling events identified high concentrations of several metals, low concentrations of several organic chemicals, and low levels of several radiological constituents, as discussed further in Section 4.0.

The risk evaluation concluded that the ash debris poses a potential for adverse ecological impacts to the terrestrial receptors evaluated primarily due to the release of inorganic

contaminants. In addition, contaminant concentrations in the samples posed potential unacceptable noncarcinogenic as well as carcinogenic risks to human health for both residential and recreational exposure scenarios. Based on data collected from the sides of the ash debris and within the drainages, risks to both ecological and human receptors for these areas were significantly lower and within acceptable ranges. Although subject to wind and stormwater runoff, it was concluded that there has been little movement of contaminated material from the ash debris.

In April 2005, ITSI performed sampling of the ash debris in order to implement a corrective action (removal of the ash and debris) at the site. Samples were collected primarily for waste characterization purposes. As such, selection of analytical parameters was based on disposal requirements for receiving facilities. Analyses generally consistent with the previous sampling were performed, and screening data was collected to be used in conjunction with confirmation sampling following the removal. Samples were analyzed for some or all of the following: VOCs, SVOCs, PCBs, dioxins and furans, metals (both total metals and TCLP, to satisfy the requirements of potential receiving facilities), gross alpha and beta, gamma, various specific radioisotopes, physical characteristics, reactive cyanide, reactive sulfide, and pH.

A 30-foot by 30-foot sampling grid was established over the ash debris and 18 locations were sampled (this grid layout is the same as the proposed confirmation sampling grid shown on Figure 5 of the Consolidated Unit 73-002-99 Work Plan [ITSI, 2005]). Ash was composited for each grid square for the purpose of waste characterization, with higher frequency sampling (1 sample per 100 cubic yards of ash) conducted for metals and radioisotopes and lower frequency sampling (1 sample per 500 cubic yards of ash) conducted for SVOCs, PCBs, and dioxins/furans. Discrete, undisturbed samples were collected in 6-inch diameter stainless steel tubes for analysis of VOCs and bulk density (at a rate of 1 sample per 500 cubic yards).

Samples were appropriately packaged and sent to an off-site laboratory for analysis. Samples were also screened using a hand-held x-ray fluorescence meter. Results were evaluated relative to hazardous waste and radiological criteria, as appropriate for waste

disposal classification. Based on an evaluation of the results of this sampling, the ash debris is considered non-hazardous low-level radioactive waste (LLRW) for disposal purposes.

4.0 DATA REVIEW

4.1 Inorganic Constituent Results

Based on the results of the sampling events conducted between 1996 and 1998, several contaminants of potential concern (COPCs) were tentatively identified. The following inorganic chemicals were detected at concentrations exceeding the background values (BVs) established by LANL (LANL 1998, ER ID 59730): antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead (a notable maximum concentration of 13,100 milligrams per kilogram [mg/kg] of lead was detected, with an average concentration of 4,864 mg/kg), magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, and zinc. Results from samples collected outside the extent of the ash and debris generally exhibited fewer detections, lower concentrations, and fewer exceedances of the BVs. Historical sampling data are summarized in Table 1.

Results for samples analyzed for inorganic constituents in 2005 were generally consistent with previous sampling results, with some higher values. For example, the maximum concentration of lead was 33,000 mg/kg, and the average concentration was 5,757 mg/kg. Table 2 summarizes the 2005 data for inorganic analytes.

4.2 Organic Chemical Results

Organic compounds were detected during the sampling events conducted both in the late 1990s and in 2005. Table 3 summarizes the organic compounds detected in the samples collected between 1996 and 1998, and Table 4 summarizes the samples collected in 2005. These data also were used to classify the ash for disposal purposes.

4.3 Radionuclide Results

Guidance on comparing background for metals and background and fallout values for radionuclides at LANL is provided in “Inorganic and Radionuclide Background Data for Soils, Canyon Sediments, and Bandelier Tuff at Los Alamos National Laboratory” (LANL, 1998) and “Performing Background Value Comparisons for Radionuclides” (LANL, 2000).

Table 5 presents the results for samples taken in 1996 to 1998 and reported in 1999, and table 6 summarizes the analytical data for radionuclides from the 2005 sampling event. These data are discussed in the following subsections.

4.3.1 Soil/Fill Samples

Soil/Fill Sample Inorganic Data

The inorganic sample results for the soil and fill samples taken in sampling investigations from 1996 to 1999 were compared to the background values established for soils obtained from "Inorganic and Radionuclide Background Data for Soils, Sediments, and Bandelier Tuff at Los Alamos National Laboratory" (LANL 1998, ER ID 59730).

The 95% upper confidence limit (UCL) of the arithmetic mean of the analytical results for each inorganic chemical was used in the comparison to soil background values. This comparison found that UCLs for aluminum, antimony, barium, beryllium, cadmium, calcium, cobalt, copper, iron, lead, magnesium, manganese, mercury, silver, thallium, and zinc exceeded their respective soil background values.

Soil/Fill Radionuclide Data

The radionuclide sample results of the soil and fill taken in sampling investigations in 1996 were compared to the background values established for soils obtained from "Inorganic and Radionuclide Background Data for Soils, Sediments, and Bandelier Tuff at Los Alamos National Laboratory" (LANL 1998, ER ID 59730). This sampling included results for gross alpha, beta, gamma and tritium.

The 95% upper confidence limit (UCL) of the arithmetic mean of the analytical results for each radionuclide analyzed was used in the comparison to soil background values. This comparison found that the UCL for Tritium was below its respective background value. There are no background values established for gross alpha, beta, and gamma by LANL.

4.3.2 Ash Samples

Ash Inorganic Data

The inorganic sample results of the incinerator ash taken in sampling investigations from the 1990's and in 2005 were compared to the background values established for soils obtained from "Inorganic and Radionuclide Background Data for Soils, Sediments, and Bandelier Tuff at Los Alamos National Laboratory" (LANL 1998, ER ID 59730).

The 95% upper confidence limit (UCL) of the arithmetic mean of the analytical results for each inorganic chemical was used in the comparison to soil background values. This comparison found that UCLs for aluminum, beryllium, and vanadium were below their respective soil background values. The other inorganic chemicals (antimony, arsenic, barium. cadmium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, and zinc) were greater than their respective soil background values.

Ash Radionuclide Data

The radionuclide sample results for the incinerator ash taken in sampling investigations in the 1990s and in 2005 were compared to the background values established for soils obtained from "Inorganic and Radionuclide Background Data for Soils, Sediments, and Bandelier Tuff at Los Alamos National Laboratory" (LANL 1998, ER ID 59730).

This comparison found that UCLs for Radium 226, Plutonium 239, Uranium 234, Uranium 235, and Uranium 238 exceeded their respective soil background values; while Americium 241, Cesium 137, and Tritium were below their respective background values.

4.3.3 Tuff Samples

Tuff Inorganic Data

The inorganic sample results for the soil and fill samples taken in sampling investigations from 1997 to 1999 were compared to the background values established for Qbt 3 tuff obtained from "Inorganic and Radionuclide Background Data for Soils, Sediments, and

Bandelier Tuff at Los Alamos National Laboratory" (LANL 1998, ER ID 59730). Only four samples were collected, with all results exceeding the tuff background values for antimony, arsenic, barium, calcium, and selenium.

4.4 Data Comparison Summary

A comparison of the inorganic data from the ash debris to the data for the areas surrounding this site resulted in marked differences. Table 7 demonstrates the differences in concentrations of select inorganic materials between the various areas. Although the small number of samples taken in areas outside of the ash accumulation does not provide for a good statistical comparison, there are noted differences between the results for the different areas sampled. The incinerator ash samples were significantly higher for all analytes except Thallium. Mean values for Thallium in all areas exceeded the background value for soil, with the exception of Thallium for the Ash samples. From the available data, it appears that the inorganic metals had minimal migration from the incinerator ash to the outer adjacent soils and the drainages; however, the adjacent soils presently exceed the background values established for soil.

Table 8 demonstrates the differences in select radionuclide values between the various areas (note: mean values are reported). Only three samples were taken in the drainage areas outside of the ash, and the samples were not analyzed for all radionuclides, but there are noted differences between the incinerator ash and drainage samples for gross alpha and beta. Also, the incinerator ash samples were higher than background for all radionuclides except Cesium 137. Based on this information, it can be hypothesized that radionuclides, like metals, had minimal migration from the incinerator ash.

5.0 REFERENCES

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U.S. Department of Energy (DOE), 1999. "Draft Preliminary Screening Evaluations of the Ash Debris (PRS 73-002)," Los Alamos National Laboratory, July.

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TABLES

Table 1
Summary of Historical Incinerator Ash Laboratory Analytical Data for Inorganic Analytes

Location ID	Depth (ft)	Sample ID	Media	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
Soil Background Value				**29200**	**0.83**	**8.17**	**295**	**1.83**	**0.4**	**6120**	**19.3**	**8.64**	**14.7**	**21500**	**22.3**
Qbt 2,3,4 Background Value				**-**	**-**	**2.79**	**46**	**-**	**-**	**2200**	**-**	**-**	**-**	**-**	**-**
Fill Background Value				**29200**	**0.83**	**-**	**-**	**1.83**	**0.4**	**6120**	**-**	**-**	**-**	**21500**	**22.3**
73-02253	0.00-0.50	0173-96-0302	Soil	-	10 (J-)	-	-	-	0.52 (U)	-	-	-	-	-	-
73-02264	0.00-0.00	0173-96-0304	NA	8340	54.6 (U)	15	5290	0.29	5	12800	94.8	26	3690	6.4 (U)	4500
73-02260	0.00-0.70	0173-96-0305	NA	13400	40.1 (U)	11.4	883	0.21	12.6 (J+)	12500	76.5	22.5	999	160000	3020
73-02262	0.00-1.00	0173-96-0307	NA	4390	85.7 (U)	28.3	440	0.46	7.5 (U)	24300	90.2	37.8	543	431000	4290
73-02255	0.00-0.50	0173-96-0308	Soil	-	12 (J-)	-	-	-	0.62 (U)	-	-	-	-	-	48
73-02266	0.00-0.00	0173-96-0309	NA	18300	54.4 (U)	6.9	6280	0.43	15.1 (J+)	39800	106	30.3	843	174000	2170
73-02268	0.00-1.00	0173-96-0314	NA	15200	119 (J+)	8.9	3030	0.22	11.4	29600	103	18	6330	106000	9620
73-02270	0.00-0.00	0173-96-0316	NA	4320	41.3 (U)	9.7	689	0.22	4.5	8990	58.3	24.2	1360	265000	1380
73-02254	0.00-0.50	0173-96-0320	Soil	-	11 (J-)	-	-	-	0.56 (U)	-	-	-	-	-	-
73-02252	0.10-0.30	0173-96-0331	NA	7000	56 (J-)	90	650	2.8 (U)	7.4	3600	90	13	1800	170000	1300
73-02268	0.00-1.00	0173-96-0345	NA	19000	95.3	11.4	4090	0.4	13.3	33200	109	21.1	2420	117000	9780
73-02270	0.00-0.00	0173-96-0346	NA	4540	50.8	25.1	646	0.27	5	15900	29.5	11.6	588	115000	1210
73-02326	14.00-15.00	0173-96-0501	Fill	-	12	-	-	-	0.59 (U)	6500	-	-	-	-	-
73-02327	14.00-15.00	0173-96-0502	Fill	-	12	-	-	-	0.59 (U)	-	-	-	-	-	-
73-02268	1.20-2.20	0173-97-0001	NA	16900	32.5 (J-)	27	1490 (J-)	0.58	23.3 (J+)	45900	73.9	17.2	2760	52800	6790
73-02268	0.50-1.00	0173-97-0002	NA	18900	49 (J-)	76.5	2020 (J-)	0.65	24.9 (J+)	36200	74.3	16.7	2230	98600	3770
73-02261	0.50-1.00	0173-97-0003	NA	25300	16.8	19.8	2330 (J-)	0.65	11.2 (J+)	30300	133	22.7	1550	78400	2690
73-02261	3.50-4.50	0173-97-0004	NA	22900	29.6	20.1	1920 (J-)	0.51	42.9 (J+)	38700	90.5	17.7	4590	70600	4480
73-02268	1.20-2.20	0173-97-0008	NA	16700	159	20.4	1240	0.5	31.1	40600	71.8	15.6	2390	83500	13100
73-02451	0.50-1.00	0173-97-0312	Soil	-	-	-	-	-	-	-	-	-	-	-	-
73-02452	0.10-0.50	0173-97-0313	Soil	-	-	-	-	-	-	-	-	-	-	-	-
73-02454	0.10-0.50	0173-97-0318	Soil	-	-	-	-	-	12.2	-	-	-	-	-	168
73-02457	0.10-0.50	0173-97-0321	Soil	-	-	-	-	-	-	-	-	9.9	-	-	44.6
73-02459	0.10-0.50	0173-97-0323	Soil	-	-	-	-	-	-	-	-	-	-	-	28.8
73-02460	0.10-0.50	0173-97-0324	Soil	-	-	-	-	-	-	-	-	-	15.1	-	23.4
73-02461	0.10-0.50	0173-97-0325	Soil	-	-	-	325	-	0.81 (J)	-	-	-	40.2	-	82.2
73-02462	0.10-0.50	0173-97-0326	Soil	-	-	-	415	-	0.65 (J)	-	-	-	36.8	-	83.7
73-02463	3.50-4.00	0173-97-0333	Qbt 3	-	0.71 (U)	-	-	-	-	-	-	-	-	-	-
73-02463	3.50-4.00	0173-97-0337	Qbt 3	-	0.72	-	-	-	-	-	-	-	-	-	-
73-10099	7.50-8.50	RE73-99-0089	Fill	35000	-	-	-	1.9	-	-	-	-	-	25000	-
73-02207	5.50-6.00	RE73-99-0094	Qbt 3	-	-	3.2	80	-	-	17000	-	-	-	-	-
73-10106	4.80-5.30	RE73-99-0102	Fill	-	-	-	-	-	-	-	-	-	-	-	32
73-10096	4.30-4.80	RE73-99-0109	Qbt 3	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
All values in milligrams per kilogram (mg/kg)
Background Values from LANL 1998 (59730, Table 6.0-2, p.45)
Qbt = Bandelier Tuff
- = If analyzed, sample result is less than BV
U = The analyte was analyzed for but not detected
J = The analyte was positively identified, value is estimated
J+ = The analyte was identified, value is likely biased high
J- = The analyte was identified, value is likely biased low

Table 1
Summary of Historical Incinerator Ash Laboratory Analytical Data for Inorganic Analytes

Location ID	Depth (ft)	Sample ID	Media	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Soil Background Value				**4610**	**6.71**	**0.1**	**15.4**	**3460**	**1.53**	**1**	**915**	**0.73**	**39.6**	**48.8**
Qbt 2,3,4 Background Value				**-**	**-**	**-**	**-**	**-**	**0.3**	**-**	**-**	**-**	**-**	**-**
Fill Background Value				**4610**	**-**	**0.1**	**-**	**-**	**-**	**1**	**-**	**0.73**	**-**	**48.8**
73-02253	0.00-0.50	0173-96-0302	Soil	-	-	-	-	-	-	2.1 (J-)	-	1.3	-	-
73-02264	0.00-0.00	0173-96-0304	NA	1290 (J)	1240	2 (J+)	131 (J+)	1150	1.7	213	842	0.41	6.4	3820
73-02260	0.00-0.70	0173-96-0305	NA	6010	1250	1.3 (J+)	165	1990	0.93	28.9	940	0.31	5.5	1470
73-02262	0.00-1.00	0173-96-0307	NA	964 (J)	1960	0.55 (J+)	119 (J+)	806	0.96	23.2	675	0.3	10	752
73-02255	0.00-0.50	0173-96-0308	Soil	-	-	0.12 (U)	-	-	-	2.5	-	1.5 (J-)	-	52 (J-)
73-02266	0.00-0.00	0173-96-0309	NA	2380	1500	1.4 (J+)	134 (J+)	2040	4.3	448	1760	0.4	12.6	2530
73-02268	0.00-1.00	0173-96-0314	NA	2440	1140	2.3 (J+)	94.1 (J+)	2660	1	156	2280	0.36	14.4	4260
73-02270	0.00-0.00	0173-96-0316	NA	1250	1190	1.1 (J+0	81.2 (J+)	640	0.99	41.8	674	0.37	4.8	1050
73-02254	0.00-0.50	0173-96-0320	Soil	-	-	0.11 (U)	-	-	-	2.2	-	1.4 (J-)	-	470 (J-)
73-02252	0.10-0.30	0173-96-0331	NA	1000	730	19	60	740	1.1	66	390	1.4	47	1900
73-02268	0.00-1.00	0173-96-0345	NA	3800	1340	0.07	104	3270	1.2	188	2480	0.48	15.9	4250
73-02270	0.00-0.00	0173-96-0346	NA	711 (J)	770	0.07	50.5	582	1.2	31.6	613	3.6	5.9	1590
73-02326	14.00-15.00	0173-96-0501	Fill	-	-	0.12	-	-	-	2.4	-	1.2	-	260
73-02327	14.00-15.00	0173-96-0502	Fill	-	-	0.12	-	-	-	2.4	-	1.2	-	61
73-02268	1.20-2.20	0173-97-0001	NA	4800	1330	0.41	79.9	4290	2	21.3	3930	7.4	13.2	4790
73-02268	0.50-1.00	0173-97-0002	NA	4020	1880	0.49	147	4610	2.1	55.3	3180	10.6	8.2	3860
73-02261	0.50-1.00	0173-97-0003	NA	3200	1660	1.2	236	3220	2.8	55.4	3530	9.3	12.5	4380
73-02261	3.50-4.50	0173-97-0004	NA	3960	1760	2.2	112	5040	1.9	19.6	7760	6.4	12.8	7170
73-02268	1.20-2.20	0173-97-0008	NA	4380	1530	0.44	101	4240	3.8	17.9	4190	8.6	7.8	3790
73-02451	0.50-1.00	0173-97-0312	Soil	-	-	-	-	-	-	-	-	0.87 (J)	-	-
73-02452	0.10-0.50	0173-97-0313	Soil	-	-	-	-	-	-	-	-	0.8 (J)	-	-
73-02454	0.10-0.50	0173-97-0318	Soil	-	-	-	-	-	-	-	-	-	-	-
73-02457	0.10-0.50	0173-97-0321	Soil	-	790	-	-	-	-	-	-	-	-	-
73-02459	0.10-0.50	0173-97-0323	Soil	-	-	0.14	-	-	-	1.1 (J)	-	-	-	-
73-02460	0.10-0.50	0173-97-0324	Soil	-	-	-	-	-	-	1.9 (J)	-	0.77 (J)	-	-
73-02461	0.10-0.50	0173-97-0325	Soil	-	-	0.24	-	-	-	8.8	-	-	-	-
73-02462	0.10-0.50	0173-97-0326	Soil	-	-	-	-	-	-	10.7	-	-	-	-
73-02463	3.50-4.00	0173-97-0333	Qbt 3	-	-	-	-	-	-	-	-	-	-	-
73-02463	3.50-4.00	0173-97-0337	Qbt 3	-	-	-	-	-	-	-	-	-	-	-
73-10099	7.50-8.50	RE73-99-0089	Fill	5500	-	0.14	-	-	-	-	-	-	-	62
73-02207	5.50-6.00	RE73-99-0094	Qbt 3	-	-	-	-	-	-	-	-	-	-	-
73-10106	4.80-5.30	RE73-99-0102	Fill	-	-	-	-	-	-	-	-	-	-	-
73-10096	4.30-4.80	RE73-99-0109	Qbt 3	-	-	-	-	-	0.41	-	-	-	-	-

Notes:
All values in milligrams per kilogram (mg/kg)
Background Values from LANL 1998 (59730, Table 6.0-2, p.45)
Qbt = Bandelier Tuff
- = If analyzed, sample result is less than BV
U = The analyte was analyzed for but not detected
J = The analyte was positively identified, value is estimated
J+ = The analyte was identified, value is likely biased high
J- = The analyte was identified, value is likely biased low

Table 2
Summary of 2005 Incinerator Ash Laboratory Analytical Data for Inorganic Analytes

Sample ID	Sample Date	Total Metals (mg/kg)								
		Silver	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Copper	Manganese
Previous Maximum Concentrations		*448*	*90*	*6280*		*42.9*	*37.8*	*133*	*6320*	*1960*
RE-73-05-58824	4/18/2005	17.5	42	1170	0.27	16.9	16.2	102	1620	1520
RE-73-05-58825	4/19/2005	190	29.6	5030	0.21	12.4	17.9	74	993	1270
RE-73-05-58826	4/19/2005	54.9	22.7	1490	0.34	19.7	13.8	77	1670	1230
RE-73-05-58827	4/19/2005	118	33.6	4150	0.37	9	11.3	61.3	1270	895
RE-73-05-58828	4/19/2005	37.2	39.3	1550	2.4	48.3	18.3	85.9	219000	21800
RE-73-05-58829	4/19/2005									
RE-73-05-58830	4/19/2005	54	26.1	1980	0.39	18.2	40.3	154	1330	2190
RE-73-05-58831	4/19/2005	49.5	19	1880	0.28	78.5	15.1	88.5	4130	1330
RE-73-05-58832	4/19/2005	35.6	20.5	1580	0.28	14.9	13.2	66.8	1930	1380
RE-73-05-58833	4/19/2005	119	26.8	2660	1.2	7.7	17.3	107	1190	1750
RE-73-05-58834	4/19/2005	56.9	26.3	1000	0.74	15.4	17.7	81.8	31500	2540
RE-73-05-58835	4/19/2005									
RE-73-05-58836	4/19/2005	21.2	66.4	643	0.11	4.1	41.9	104	815	2050
RE-73-05-58837	4/19/2005	15.4	133	575	0.089	2.8	49.7	94.4	490	2330
RE-73-05-58838	4/19/2005	95.7	19.5	2600	0.33	67.5	10.1	54.1	3260	859
RE-73-05-58839	4/19/2005	125	76	2870	0.33	16.4	14.8	68.7	3820	2810
RE-73-05-58840	4/19/2005	187	22.1	3490	0.2	16.5	14.4	85	1040	1050
RE-73-05-58841	4/19/2005									
RE-73-05-58842	4/20/2005	63	29.8	1790	0.33	17.7	16.4	85.9	2710	1580
RE-73-05-58843	4/20/2005	59.6	56.4	1710	0.26	16.8	16.8	72.2	2360	1770
RE-73-05-58844	4/20/2005	73.3	45.1	1990	0.25	5.9	16.5	67.7	536	974
RE-73-05-58845	4/20/2005	78.2	138	1940	0.25	6	40.2	116	1640	2010
RE-73-05-58846	4/20/2005	102	21	3330	0.17	7.2	18.6	66.5	2750	1130
RE-73-05-58879	4/20/2005									
Sample ID	**Sample Date**	**TCLP Metals (mg/L)**								
Previous Maximum Concentrations		-	-	*1.45*		*0.151*		*0.033*		
RE-73-05-58824	4/18/2005	-	-	0.884		0.18		-		
RE-73-05-58825	4/19/2005	-	-	1.65		0.0912		-		
RE-73-05-58826	4/19/2005	-	-	1.44		0.105		-		
RE-73-05-58827	4/19/2005	-	-	2.4		0.0406		-		
RE-73-05-58828	4/19/2005	-	-	1.43		0.133		-		
RE-73-05-58829	4/19/2005									
RE-73-05-58830	4/19/2005	-	-	3.84		1.73		-		
RE-73-05-58831	4/19/2005	-	-	1.18		0.134		-		
RE-73-05-58832	4/19/2005	-	-	1.32		0.0403		-		
RE-73-05-58833	4/19/2005	-	-	0.939		0.0205		-		
RE-73-05-58834	4/19/2005	-	-	1.06		0.0316		-		
RE-73-05-58835	4/19/2005									
RE-73-05-58836	4/19/2005	-	-	1.76		0.0117		-		
RE-73-05-58837	4/19/2005	-	-	1.62		0.0112		-		
RE-73-05-58838	4/19/2005	-	-	1.79		0.16		-		
RE-73-05-58839	4/19/2005	-	-	1.59		0.095		-		
RE-73-05-58840	4/19/2005	-	-	0.786		0.0739		-		
RE-73-05-58841	4/19/2005									
RE-73-05-58842	4/20/2005	-	-	2.33		0.0719		-		
RE-73-05-58843	4/20/2005	-	-	1.45		0.0632		-		
RE-73-05-58844	4/20/2005	-	-	1.97		0.0214		-		
RE-73-05-58845	4/20/2005	-	-	2.48		0.0184		-		
RE-73-05-58846	4/20/2005	-	-	1.7		0.0481		-		
RE-73-05-58879	4/20/2005									

Notes:
mg/kg - milligrams per kilogram
mg/L - milligrams per liter
- = non detect
blank - not analyzed
TCLP = Toxicity Characteristic Leaching Procedure

Table 2
Summary of 2005 Incinerator Ash Laboratory Analytical Data for Inorganic Analytes

Sample ID	Sample Date	Total Metals (mg/kg)							
		Nickel	Lead	Antimony	Selenium	Thallium	Vanadium	Zinc	Mercury
Previous Maximum Concentrations		*236*	*13100*	*159*	*3.8*	*10.6*	*65*	*7170*	*19*
RE-73-05-58824	4/18/2005	203	3330	33.4	1.1	0.54	16.1	8220	0.62
RE-73-05-58825	4/19/2005	96.3	6650	52.1	1.6	-	12.8	3020	
RE-73-05-58826	4/19/2005	79.7	6700	48.4	1.1	-	15.3	4360	0.7
RE-73-05-58827	4/19/2005	43.7	2400	32.8	0.89	-	14.1	4450	0.9
RE-73-05-58828	4/19/2005	146	2460	27.8	0.92	-	24.7	11300	0.92
RE-73-05-58829	4/19/2005								
RE-73-05-58830	4/19/2005	633	6110	73.1	0.81	-	20.9	4880	1.6
RE-73-05-58831	4/19/2005	125	3950	27.8	1.7	-	17.2	43000	1.4
RE-73-05-58832	4/19/2005	131	2390	29.1	0.68	-	17.1	3940	1.7
RE-73-05-58833	4/19/2005	115	2500	29.8	0.57	-	12.9	3760	2.1
RE-73-05-58834	4/19/2005	295	8770	123	2	-	12.6	9830	1.6
RE-73-05-58835	4/19/2005								
RE-73-05-58836	4/19/2005	220	2840	36.2	0.45	-	3.8	939	0.71
RE-73-05-58837	4/19/2005	219	4310	24.7	0.64	-	4.1	823	0.28
RE-73-05-58838	4/19/2005	77	13700	116	1.2	-	14.5	4630	0.56
RE-73-05-58839	4/19/2005	98.6	33000	543	1.7	-	15.1	4370	1.2
RE-73-05-58840	4/19/2005	215	1950	19.9	0.94	-	14.1	5500	0.6
RE-73-05-58841	4/19/2005								
RE-73-05-58842	4/20/2005	234	3430	32.6	2.2	-	16.6	6460	0.79
RE-73-05-58843	4/20/2005	189	2220	27.3	1.6	0.31	15.3	6120	1.5
RE-73-05-58844	4/20/2005	115	2990	17.2	0.93	-	10.1	2040	0.7
RE-73-05-58845	4/20/2005	215	3690	64.7	0.55	-	8.6	1710	0.5
RE-73-05-58846	4/20/2005	792	1740	29.8	0.85	-	14.8	2190	0.33
RE-73-05-58879	4/20/2005								
Sample ID	**Sample Date**	**TCLP Metals (mg/L)**							
Previous Maximum Concentrations			*4.1*		-				
RE-73-05-58824	4/18/2005		3.14		-			37.4	-
RE-73-05-58825	4/19/2005		0.786		-			19.4	-
RE-73-05-58826	4/19/2005		2.39		-			39.1	-
RE-73-05-58827	4/19/2005		6.29		-			19.2	-
RE-73-05-58828	4/19/2005		2.56		-			40.5	-
RE-73-05-58829	4/19/2005								
RE-73-05-58830	4/19/2005		3.33		-			35.1	-
RE-73-05-58831	4/19/2005		4.37		-			42.4	-
RE-73-05-58832	4/19/2005		1.08		-			30.3	-
RE-73-05-58833	4/19/2005		0.633		-			24.9	-
RE-73-05-58834	4/19/2005		0.63		-			57.2	-
RE-73-05-58835	4/19/2005								
RE-73-05-58836	4/19/2005		0.792		-			5.1	-
RE-73-05-58837	4/19/2005		0.316		-			8.5	-
RE-73-05-58838	4/19/2005		2.47		-			36.7	-
RE-73-05-58839	4/19/2005		1.47		-			33.7	-
RE-73-05-58840	4/19/2005		1.44		-			67.5	-
RE-73-05-58841	4/19/2005								
RE-73-05-58842	4/20/2005		0.817		-			30.6	-
RE-73-05-58843	4/20/2005		0.779		-			42.5	-
RE-73-05-58844	4/20/2005		0.96		-			12.5	0.00037
RE-73-05-58845	4/20/2005		0.638		-			10.2	-
RE-73-05-58846	4/20/2005		1.33		-			22	-
RE-73-05-58879	4/20/2005								

Notes:
mg/kg - milligrams per kilogram
mg/L - milligrams per liter
- = non detect
blank - not analyzed
TCLP = Toxicity Characteristic Leaching Procedure

Table 3
Summary of Historical Incinerator Ash Laboratory Analytical Data for Organic Analytes

Location ID	Depth (ft)	Sample ID	Media	Acenaphthene	Acetone	Anthracene	Aroclor-1254	Benzene	Benzo(a) - anthracene	Benzo(a)-pyrene	Benzo(b) - fluoranthene	Benzo(k) fluoranthene	Benzoic Acid
SSL Residential				**4690**	**70400**	**23500**	**1.11**	**27**	**6.21**	**0.621**	**6.21**	**62.1**	**100000**
73-02264	0.00-0.00	0173-96-0304	NA	-	-	-	0.046	-	-	-	-	-	-
73-02260	0.00-0.70	0173-96-0305	NA	-	-	-	0.066	-	-	-	-	-	-
73-02262	0.00-1.00	0173-96-0307	NA	-	-	-	-	-	-	-	-	-	-
73-02255	0.00-0.50	0173-96-0308	Soil	-	-	-	-	-	-	-	-	-	-
73-02266	0.00-0.00	0173-96-0309	NA	-	-	-	-	0.002 (J)	-	-	-	-	-
73-02268	0.00-1.00	0173-96-0314	NA	-	-	-	0.17	-	0.043 (J)	-	-	-	-
73-02270	0.00-0.00	0173-96-0316	NA	-	-	-	0.059	-	-	-	-	-	-
73-02252	0.10-0.30	0173-96-0331	NA	-	-	-	-	-	-	-	-	-	-
73-02268	0.00-1.00	0173-96-0345	NA	-	0.005	-	0.13	-	-	-	-	-	-
73-02270	0.00-0.00	0173-96-0346	NA	-	-	-	0.04	-	0.09	-	0.094	0.075	-
73-02326	14.00-15.00	0173-96-0501	Fill	-	0.025 (J-)	-	-	-	-	-	-	-	-
73-02327	14.00-15.00	0173-96-0502	Fill	-	-	-	-	-	-	-	-	-	-
73-02268	1.20-2.20	0173-97-0001	NA	-	-	-	-	-	-	-	-	-	-
73-02268	0.50-1.00	0173-97-0002	NA	-	-	-	-	-	-	-	-	-	-
73-02261	0.50-1.00	0173-97-0003	NA	-	-	-	-	-	-	-	-	-	-
73-02261	3.50-4.50	0173-97-0004	NA	-	-	-	-	-	-	-	-	-	-
73-02268	1.20-2.20	0173-97-0008	NA	-	0.097	-	-	-	-	-	-	-	-
73-02451	0.10-0.50	0173-97-0311	Soil	-	-	-	-	-	-	-	-	-	-
73-02457	0.10-0.50	0173-97-0321	Soil	-	-	-	-	-	-	-	-	-	0.092 (J)
73-02458	0.10-0.50	0173-97-0322	Soil	-	-	-	-	-	-	-	-	-	0.043 (J)
73-02459	0.10-0.50	0173-97-0323	Soil	-	-	-	-	-	-	-	-	-	-
73-02460	0.10-0.50	0173-97-0324	Soil	-	-	-	-	-	-	-	-	-	-
73-02461	0.10-0.50	0173-97-0325	Soil	0.035 (J)	-	0.061 (J)	-	-	0.1 (J)	0.11 (J)	0.21 (J)	-	0.051 (J)
73-02462	0.10-0.50	0173-97-0326	Soil	0.78	-	-	-	-	-	-	-	-	-
73-02465	3.20-3.70	0173-97-0327	NA	-	-	-	-	-	-	-	-	-	-
73-02464	7.00-7.50	0173-97-0336	NA	-	-	-	-	-	-	-	-	-	-
73-02463	3.50-4.00	0173-97-0337	Qbt 3	-	-	-	-	-	-	-	-	-	-
73-02464	7.00-7.50	0173-97-0338	NA	-	-	-	-	-	-	-	-	-	-
73-10098	7.50-7.75	RE73-99-0093	Fill	-	-	-	-	-	-	-	-	-	-
73-02207	5.50-6.00	RE73-99-0094	Qbt 3	-	-	-	-	-	-	-	-	-	-
73-10106	4.80-5.30	RE73-99-0102	Fill	-	-	-	-	-	-	-	-	-	-
73-10107	6.00-6.50	RE73-99-0104	Fill	-	-	-	-	-	-	-	-	-	-
73-10096	4.30-4.80	RE73-99-0109	Qbt 3	-	-	-	-	-	-	-	-	-	-

Notes:
All values in milligrams per kilogram (mg/kg)
- = if analyzed, sample result is less than Background Value
SSLs from NMED 2004 (85615)
J = The analyte was positively identified, value is estimated
J+ = The analyte was identified, value is likely biased high
J- = The analyte was identified, value is likely biased low

Table 3
Summary of Historical Incinerator Ash Laboratory Analytical Data for Organic Analytes

Location ID	Depth (ft)	Sample ID	Media	BHC[beta-]	Bis(2-ethylhexyl) phthalate	Chlordane [alpha-]	Chlordane [gamma-]	Chrysene	DDD[4,4'-]	DDE[4,4'-]	DDT[4,4'-]	Dichloro - benzene[1,2-]	Dichloro - benzene[1,3-]
SSL Residential				**0.902**	**347**	**16.2**	**16.2**	**621**	**24.4**	**17.2**	**17.2**	**116**	**70.4**
73-02264	0.00-0.00	0173-96-0304	NA	0.0026	-	-	-	-	-	0.032	0.024	-	-
73-02260	0.00-0.70	0173-96-0305	NA	-	-	-	-	-	-	0.0057	-	-	-
73-02262	0.00-1.00	0173-96-0307	NA	-	-	-	-	-	-	-	-	-	-
73-02255	0.00-0.50	0173-96-0308	Soil	-	-	0.0035	-	-	-	0.029	0.034	-	-
73-02266	0.00-0.00	0173-96-0309	NA	-	-	-	-	-	-	0.019	0.02	-	-
73-02268	0.00-1.00	0173-96-0314	NA	-	-	-	-	0.047 (J)	-	0.03	0.022	-	-
73-02270	0.00-0.00	0173-96-0316	NA	-	-	-	-	-	-	0.0072	0.006	-	-
73-02252	0.10-0.30	0173-96-0331	NA	-	-	-	-	-	1.3 (J)	0.31	3.9	-	-
73-02268	0.00-1.00	0173-96-0345	NA	-	-	-	-	-	-	0.027	0.023	-	-
73-02270	0.00-0.00	0173-96-0346	NA	-	-	-	-	0.11	-	0.005	-	-	-
73-02326	14.00-15.00	0173-96-0501	Fill	-	-	0.028	0.038	-	0.31	0.089	0.11	-	-
73-02327	14.00-15.00	0173-96-0502	Fill	-	-	-	-	-	0.042	0.01	0.021	-	-
73-02268	1.20-2.20	0173-97-0001	NA	-	-	-	-	-	-	-	-	-	-
73-02268	0.50-1.00	0173-97-0002	NA	-	-	-	-	-	-	-	-	-	-
73-02261	0.50-1.00	0173-97-0003	NA	-	-	-	-	-	-	-	-	-	-
73-02261	3.50-4.50	0173-97-0004	NA	-	0.19 (J)	-	-	-	-	-	-	0.12 (J)	0.12 (J)
73-02268	1.20-2.20	0173-97-0008	NA	-	0.12	-	-	-	-	0.035	0.019	-	-
73-02451	0.10-0.50	0173-97-0311	Soil	-	-	-	-	-	-	-	-	-	-
73-02457	0.10-0.50	0173-97-0321	Soil	-	-	-	-	-	-	-	-	-	-
73-02458	0.10-0.50	0173-97-0322	Soil	-	-	-	-	-	-	-	-	-	-
73-02459	0.10-0.50	0173-97-0323	Soil	-	-	-	-	-	-	-	-	-	-
73-02460	0.10-0.50	0173-97-0324	Soil	-	-	-	-	-	-	-	-	-	-
73-02461	0.10-0.50	0173-97-0325	Soil	-	0.05 (J)	-	-	0.11	-	-	-	-	-
73-02462	0.10-0.50	0173-97-0326	Soil	-	-	-	-	-	-	-	-	-	-
73-02465	3.20-3.70	0173-97-0327	NA	-	-	-	-	-	-	-	-	-	-
73-02464	7.00-7.50	0173-97-0336	NA	-	-	-	-	-	-	-	-	-	-
73-02463	3.50-4.00	0173-97-0337	Qbt 3	-	-	-	-	-	-	-	-	-	-
73-02464	7.00-7.50	0173-97-0338	NA	-	-	-	-	-	-	-	-	-	-
73-10098	7.50-7.75	RE73-99-0093	Fill	-	-	-	-	-	-	0.0043	-	-	-
73-02207	5.50-6.00	RE73-99-0094	Qbt 3	-	-	-	-	-	-	-	0.0076	-	-
73-10106	4.80-5.30	RE73-99-0102	Fill	-	-	-	-		0.006	-	0.19	-	-
73-10107	6.00-6.50	RE73-99-0104	Fill	-	-	-	-	-	-	0.0046	0.03	-	-
73-10096	4.30-4.80	RE73-99-0109	Qbt 3	-	-	-	-	-	-	-	0.0041	-	-

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Table 3
Summary of Historical Incinerator Ash Laboratory Analytical Data for Organic Analytes

Location ID	Depth (ft)	Sample ID	Media	Dichloro - benzene[1,4-]	Di-n-butyl phthalate	Endosulfan I	Fluoranthene	Heptachlorodi benzodioxin [1,2,3,4,6,7,8-]	Heptachlorodi benzodioxins (Total)	Heptachlorodi benzofuran [1,2,3,4,6,7,8-]	Heptachlorodi benzofuran [1,2,3,4,7,8,9-]	Heptachlorodi benzofurans (Total)	Hexachlorodi benzodioxin [1,2,3,4,7,8-]
SSL Residential				**36**	**6000**	**360**	**2250**	**-**	**-**	**-**	**-**	**-**	**-**
73-02264	0.00-0.00	0173-96-0304	NA	-	-	-	-	-	-	-	-	-	-
73-02260	0.00-0.70	0173-96-0305	NA	-	-	-	-	-	-	-	-	-	-
73-02262	0.00-1.00	0173-96-0307	NA	-	-	-	-	-	-	-	-	-	-
73-02255	0.00-0.50	0173-96-0308	Soil	-	-	-	-	-	-	-	-	-	-
73-02266	0.00-0.00	0173-96-0309	NA	-	-	-	-	-	-	-	-	-	-
73-02268	0.00-1.00	0173-96-0314	NA	-	-	-	0.078 (J)	-	-	-	-	-	-
73-02270	0.00-0.00	0173-96-0316	NA	0.01	-	-	-	-	-	-	-	-	-
73-02252	0.10-0.30	0173-96-0331	NA	-	-	-	-	-	-	-	-	-	-
73-02268	0.00-1.00	0173-96-0345	NA	-	-	-	-	-	-	-	-	-	-
73-02270	0.00-0.00	0173-96-0346	NA	-	-	-	-	-	-	-	-	-	-
73-02326	14.00-15.00	0173-96-0501	Fill	-	-	-	-	-	-	-	-	-	-
73-02327	14.00-15.00	0173-96-0502	Fill	-	-	-	-	-	-	-	-	-	-
73-02268	1.20-2.20	0173-97-0001	NA	-	-	-	-	1.80E-10	0.33	0.098	0.0053	0.17	0.0062
73-02268	0.50-1.00	0173-97-0002	NA	-	-	-	-	1.80E-10	0.33	0.066	0.0064	0.11	0.0059
73-02261	0.50-1.00	0173-97-0003	NA	-	-	-	-	1.10E-09	1.8	0.13	0.011	0.25	0.014
73-02261	3.50-4.50	0173-97-0004	NA	-	-	0.0023	-	9.00E-10	1.6	0.35	0.0088	0.61	0.026
73-02268	1.20-2.20	0173-97-0008	NA	-	-	-	-	2.80E-10	0.51	0.071	0.004	0.15	0.0063
73-02451	0.10-0.50	0173-97-0311	Soil	-	-	-	-	1.00E-12		0.00065(J)	-	-	-
73-02457	0.10-0.50	0173-97-0321	Soil	-	-	-	-	3.50E-12	0.0069 (J)	0.0022 (J)	-	0.0041	-
73-02458	0.10-0.50	0173-97-0322	Soil	-	-	-	-	5.00E-12	0.0099(J)	0.0016 (J)	-	0.0029	-
73-02459	0.10-0.50	0173-97-0323	Soil	-	0.19 (J)	-	-	-	-	-	-	-	-
73-02460	0.10-0.50	0173-97-0324	Soil	-	-	-	-	1.40E-11	0.026	0.0033	-	0.0073	0.00027
73-02461	0.10-0.50	0173-97-0325	Soil	-	0.077 (J)	-	0.24 (J)	1.00E-10	0.17	0.044	0.0043 (J)	0.12	0.0033
73-02462	0.10-0.50	0173-97-0326	Soil	-	-	-	-	-	-	-	-	-	-
73-02465	3.20-3.70	0173-97-0327	NA	-	-	-	-	5.90E-11	0.11	0.011	0.00075 (J)	0.024	0.00067
73-02464	7.00-7.50	0173-97-0336	NA	-	-	-	-	4.90E-11	0.094 (J)	0.28	0.0099 (J)	0.34	0.016
73-02463	3.50-4.00	0173-97-0337	Qbt 3	-	-	-	-	2.80E-13	0.00043	0.00014	-	0.00014	-
73-02464	7.00-7.50	0173-97-0338	NA	-	-	-	-	7.60E-11	0.15	0.4	0.014	0.48	0.022
73-10098	7.50-7.75	RE73-99-0093	Fill	-	-	-	-	-	-	-	-	-	-
73-02207	5.50-6.00	RE73-99-0094	Qbt 3	-	-	-	-	-	-	-	-	-	-
73-10106	4.80-5.30	RE73-99-0102	Fill	-	-	-	-	-	-	-	-	-	-
73-10107	6.00-6.50	RE73-99-0104	Fill	-	-	-	-	-	-	-	-	-	-
73-10096	4.30-4.80	RE73-99-0109	Qbt 3	-	-	-	-	-	-	-	-	-	-

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Location ID	Depth (ft)	Sample ID	Media	Hexachlorodibenzodioxin [1,2,3,6,7,8-]	Hexachlorodibenzodioxin [1,2,3,7,8,9-]	Hexachlorodibenzodioxins (Total)	Hexachlorodibenzofuran [1,2,3,4,7,8-]	Hexachlorodibenzofuran [1,2,3,6,7,8-]	Hexachlorodibenzofuran [1,2,3,7,8,9-]	Hexachlorodibenzofuran [2,3,4,6,7,8-]	Hexachlorodibenzofurans (Total)	Isopropyl toluene [4-]	Methylene Chloride
SSL Residential				**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**700**	**165**
73-02264	0.00-0.00	0173-96-0304	NA	-	-	-	-	-	-	-	-	-	0.043
73-02260	0.00-0.70	0173-96-0305	NA	-	-	-	-	-	-	-	-	-	0.034
73-02262	0.00-1.00	0173-96-0307	NA	-	-	-	-	-	-	-	-	-	0.032
73-02255	0.00-0.50	0173-96-0308	Soil	-	-	-	-	-	-	-	-	-	-
73-02266	0.00-0.00	0173-96-0309	NA	-	-	-	-	-	-	-	-	-	0.036
73-02268	0.00-1.00	0173-96-0314	NA	-	-	-	-	-	-	-	-	-	0.1
73-02270	0.00-0.00	0173-96-0316	NA	-	-	-	-	-	-	-	-	-	0.059
73-02252	0.10-0.30	0173-96-0331	NA	-	-	-	-	-	-	-	-	0.013 (J+0	-
73-02268	0.00-1.00	0173-96-0345	NA	-	-	-	-	-	-	-	-	-	0.069
73-02270	0.00-0.00	0173-96-0346	NA	-	-	-	-	-	-	-	-	-	0.08
73-02326	14.00-15.00	0173-96-0501	Fill	-	-	-	-	-	-	-	-	-	-
73-02327	14.00-15.00	0173-96-0502	Fill	-	-	-	-	-	-	-	-	-	-
73-02268	1.20-2.20	0173-97-0001	NA	0.024	0.022	0.18	0.012	0.011	-	0.012	0.12	0.032 (J)	-
73-02268	0.50-1.00	0173-97-0002	NA	0.021	0.025	0.14	0.025	0.017	-	0.018	0.15	-	-
73-02261	0.50-1.00	0173-97-0003	NA	0.056	0.065	0.46	0.023	0.021	-	0.027	0.21	-	-
73-02261	3.50-4.50	0173-97-0004	NA	0.14	0.12	1	0.046	0.049	-	0.052	0.5	-	-
73-02268	1.20-2.20	0173-97-0008	NA	0.037	0.037	0.29	0.015	0.01	-	0.0098	0.1	-	-
73-02451	0.10-0.50	0173-97-0311	Soil	-	-	-	-	-	-	-	-	-	-
73-02457	0.10-0.50	0173-97-0321	Soil	-	-	0.0023 (J)	0.00066 (J)	0.00041	-	0.00032 (J)	-	-	-
73-02458	0.10-0.50	0173-97-0322	Soil	0.00034 (J)	-	0.0027 (J)	-	-	-	-	0.0013 (J)	-	-
73-02459	0.10-0.50	0173-97-0323	Soil	-	-	-	-	-	-	-	-	-	-
73-02460	0.10-0.50	0173-97-0324	Soil	0.00081 (J)	0.00085 (J)	0.0068 (J)	0.00067 (J)	0.0021	-	-	0.028	-	-
73-02461	0.10-0.50	0173-97-0325	Soil	0.0068	0.0073	0.052	0.0059	0.022	-	0.0085	0.32	-	-
73-02462	0.10-0.50	0173-97-0326	Soil	-	-	-	-	-	-	-	-	-	-
73-02465	3.20-3.70	0173-97-0327	NA	0.0037 (J)	0.0033	0.03	0.0021 (J)	0.0019	-	-	0.029	-	-
73-02464	7.00-7.50	0173-97-0336	NA	0.02 (J)	0.041 (J)	0.27	0.43	0.14	0.0061	0.14	1.4	-	-
73-02463	3.50-4.00	0173-97-0337	Qbt 3	-	-	-	-	-	-	-	-	-	-
73-02464	7.00-7.50	0173-97-0338	NA	0.029	0.063	0.42	0.67	0.23	0.01	0.2	2.1	-	-
73-10098	7.50-7.75	RE73-99-0093	Fill	-	-	-	-	-	-	-	-	-	-
73-02207	5.50-6.00	RE73-99-0094	Qbt 3	-	-	-	-	-	-	-	-	-	-
73-10106	4.80-5.30	RE73-99-0102	Fill	-	-	-	-	-	-	-	-	-	-
73-10107	6.00-6.50	RE73-99-0104	Fill	-	-	-	-	-	-	-	-	-	-
73-10096	4.30-4.80	RE73-99-0109	Qbt 3	-	-	-	-	-	-	-	-	0.00076	-

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Location ID	Depth (ft)	Sample ID	Media	Naphthalene	Octachlorodi benzodioxin [1,2,3,4,6,7,8,9-]	Octachlorodi benzofuran [1,2,3,4,6,7,8,9-]	Pentachlorodi benzodioxin [1,2,3,7,8-]	Pentachlorodi benzodioxins (Total)	Pentachlorodi benzofuran [1,2,3,7,8-]	Pentachlorodi benzofuran [2,3,4,7,8-]	Pentachlorodi benzofurans (Totals)	Phenanthrene	Pyrene
SSL Residential				**71.9**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1800**	**2300**
73-02264	0.00-0.00	0173-96-0304	NA	-	-	-	-	-	-	-	-	-	-
73-02260	0.00-0.70	0173-96-0305	NA	-	-	-	-	-	-	-	-	-	-
73-02262	0.00-1.00	0173-96-0307	NA	-	-	-	-	-	-	-	-	-	-
73-02255	0.00-0.50	0173-96-0308	Soil	-	-	-	-	-	-	-	-	-	-
73-02266	0.00-0.00	0173-96-0309	NA	-	-	-	-	-	-	-	-	-	-
73-02268	0.00-1.00	0173-96-0314	NA	-	-	-	-	-	-	-	-	-	0.076 (J)
73-02270	0.00-0.00	0173-96-0316	NA	-	-	-	-	-	-	-	-	-	-
73-02252	0.10-0.30	0173-96-0331	NA	-	-	-	-	-	-	-	-	-	-
73-02268	0.00-1.00	0173-96-0345	NA	-	-	-	-	-	-	-	-	-	-
73-02270	0.00-0.00	0173-96-0346	NA	-	-	-	-	-	-	-	-	-	0.049
73-02326	14.00-15.00	0173-96-0501	Fill	-	-	-	-	-	-	-	-	-	-
73-02327	14.00-15.00	0173-96-0502	Fill	-	-	-	-	-	-	-	-	-	-
73-02268	1.20-2.20	0173-97-0001	NA	-	0.64	0.048	0.0082	0.1	0.014	0.021	0.24	-	-
73-02268	0.50-1.00	0173-97-0002	NA	-	0.68	0.031	0.0084	0.071	0.023	0.035	0.43	-	-
73-02261	0.50-1.00	0173-97-0003	NA	-	4.8	0.1	0.016	0.25	0.019	0.032	0.4	-	-
73-02261	3.50-4.50	0173-97-0004	NA	-	3.2	0.15	0.049	0.58	0.11	0.15	1.9	0.25 (J)	-
73-02268	1.20-2.20	0173-97-0008	NA	-	1	0.043	0.013	0.15	0.015	0.02	0.27	-	-
73-02451	0.10-0.50	0173-97-0311	Soil	-	-	0.00071 (J)	-	-	-	-	-	-	-
73-02457	0.10-0.50	0173-97-0321	Soil	-	0.02	0.0024 (J)	-	0.00066 (J)		0.00068 (J)	0.0094	-	-
73-02458	0.10-0.50	0173-97-0322	Soil	-	0.037	0.0025 (J)	-	-	-	-	0.0019 (J)	-	-
73-02459	0.10-0.50	0173-97-0323	Soil	-	-	-	-	-	-	-	-	-	-
73-02460	0.10-0.50	0173-97-0324	Soil	-	0.082	0.005 (J)	0.00037 (J)	0.0016 (J)	-	0.00045 (J)	0.017 (J)	-	-
73-02461	0.10-0.50	0173-97-0325	Soil	0.041 (J)	0.61	0.055	0.0026 (J)	0.017 (J)	0.0022 (J)	0.0025 (J)	0.089	0.21 (J)	0.32 (J)
73-02462	0.10-0.50	0173-97-0326	Soil	-	-	-	-	-	-	-	-	-	-
73-02465	3.20-3.70	0173-97-0327	NA	-	0.29	-	0.00095 (J)	0.014 (J)	0.00066 (J)	0.00091 (J)	0.019 (J)	-	-
73-02464	7.00-7.50	0173-97-0336	NA	-	-	-	0.06	0.56	0.43	0.54	6.3	-	-
73-02463	3.50-4.00	0173-97-0337	Qbt 3	-	-	-	-	-	-	-	-	-	-
73-02464	7.00-7.50	0173-97-0338	NA	-	-	-	0.096	0.87	0.75	0.84	9.6	-	-
73-10098	7.50-7.75	RE73-99-0093	Fill	-	-	-	-	-	-	-	-	-	-
73-02207	5.50-6.00	RE73-99-0094	Qbt 3	-	-	-	-	-	-	-	-	-	-
73-10106	4.80-5.30	RE73-99-0102	Fill	-	-	-	-	-	-	-	-	-	-
73-10107	6.00-6.50	RE73-99-0104	Fill	-	-	-	-	-	-	-	-	-	-
73-10096	4.30-4.80	RE73-99-0109	Qbt 3	-	-	-	-	-	-	-	-	-	-

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Location ID	Depth (ft)	Sample ID	Media	Tetrachlorodibenzodioxin [2,3,7,8-]	Tetrachlorodibenzodioxins (Total)	Tetrachlorodibenzofuran [2,3,7,8-]	Tetrachlorodibenzofurans (Total)	Tetrachloroethene	Toluene	Trichloroethane [1,1,1]	Trichloroethene	Trichlorofluoromethane	Trimethylbenzene [1,3,5-]
SSL Residential				**-**	**-**	**-**	**-**	**9.83**	**248**	**-**	**0.648**	**528**	**22.3**
73-02264	0.00-0.00	0173-96-0304	NA	-	-	-	-	0.003 (J)	-	0.004 (J)	-	0.013	-
73-02260	0.00-0.70	0173-96-0305	NA	-	-	-	-	0.004 (J)	-	0.006	0.006	0.013	-
73-02262	0.00-1.00	0173-96-0307	NA	-	-	-	-	0.002 (J)	-	0.002 (J)	0.001 (J)	0.005	-
73-02255	0.00-0.50	0173-96-0308	Soil	-	-	-	-	-	-	-	-	-	-
73-02266	0.00-0.00	0173-96-0309	NA	-	-	-	-	0.002 (J)	-	0.004 (J)	0.007	0.009	-
73-02268	0.00-1.00	0173-96-0314	NA	-	-	-	-	0.005 (J)	-	0.007	0.002 (J)	0.016	-
73-02270	0.00-0.00	0173-96-0316	NA	-	-	-	-	0.008	-	0.003 (J)	0.004(J)	0.006 (J)	-
73-02252	0.10-0.30	0173-96-0331	NA	-	-	-	-	-	-	-	-	-	0.01
73-02268	0.00-1.00	0173-96-0345	NA	-	-	-	-	0.007	-	0.009	0.003	0.016	-
73-02270	0.00-0.00	0173-96-0346	NA	-	-	-	-	0.009	0.001	0.006	0.005	0.007	-
73-02326	14.00-15.00	0173-96-0501	Fill	-	-	-	-	-	-	-	-	-	-
73-02327	14.00-15.00	0173-96-0502	Fill	-	-	-	-	-	-	-	-	-	-
73-02268	1.20-2.20	0173-97-0001	NA	0.0033	0.1	0.029	0.51	-	-	-	-	-	-
73-02268	0.50-1.00	0173-97-0002	NA	0.0045	0.12	0.042	0.79	-	-	-	-	-	-
73-02261	0.50-1.00	0173-97-0003	NA	0.0064	0.27	0.032	0.57	-	-	-	-	-	-
73-02261	3.50-4.50	0173-97-0004	NA	0.037	0.71	0.35	5.4	-	-	-	-	-	-
73-02268	1.20-2.20	0173-97-0008	NA	0.0066	0.11	0.031	0.51	-	-	-	-	-	-
73-02451	0.10-0.50	0173-97-0311	Soil	-	-	-	-	-	-	-	-	-	-
73-02457	0.10-0.50	0173-97-0321	Soil	-	0.0011 (J)	0.0031	0.026	-	-	-	-	-	-
73-02458	0.10-0.50	0173-97-0322	Soil	-	0.00081 (J)	0.00085 (J)	0.0045 (J)	-	-	-	-	-	-
73-02459	0.10-0.50	0173-97-0323	Soil	-	-	-		-	-	-	-	-	-
73-02460	0.10-0.50	0173-97-0324	Soil	-	0.00073 (J)	0.00097 (J)	0.017	-	-	-	-	-	-
73-02461	0.10-0.50	0173-97-0325	Soil	0.00069 (J)	0.012	0.0062	0.093	-	-	-	-	-	-
73-02462	0.10-0.50	0173-97-0326	Soil	-	-	-		-	-	-	-	-	-
73-02465	3.20-3.70	0173-97-0327	NA	-	0.0084	0.0026	0.025	-	-	-	-	-	-
73-02464	7.00-7.50	0173-97-0336	NA	0.096	1.5	4.5	28	-	-	-	-	-	-
73-02463	3.50-4.00	0173-97-0337	Qbt 3	-	-	0.0003	0.00068	-	-	-	-	-	-
73-02464	7.00-7.50	0173-97-0338	NA	0.14	2.1	6.7	42	-	-	-	-	-	-
73-10098	7.50-7.75	RE73-99-0093	Fill	-	-	-	-	-	-	-	-	-	-
73-02207	5.50-6.00	RE73-99-0094	Qbt 3	-	-	-	-	-	0.00026 (J)	-	-	-	-
73-10106	4.80-5.30	RE73-99-0102	Fill	-	-	-	-	-	-	-	-	-	-
73-10107	6.00-6.50	RE73-99-0104	Fill	-	-	-	-	-	-	-	-	-	-
73-10096	4.30-4.80	RE73-99-0109	Qbt 3	-	-	-	-	-	-	-	-	-	-

Notes:
All values in milligrams per kilogram (mg/kg)
- = if analyzed, sample result is less than Background Value
SSLs from NMED 2004 (85615)
J = The analyte was positively identified, value is estimated
J+ = The analyte was identified, value is likely biased high
J- = The analyte was identified, value is likely biased low

Table 4
Summary of 2005 Incinerator Ash Laboratory Analytical Data for Organic Analytes

Sample ID:	RE73-05-58829	RE73-05-58835	RE73-05-58841	RE73-05-58878	RE73-05-58879
Matrix:	Ash	Ash	Ash	Ash	Ash
Sample Date:	4/19/2005	4/19/2005	4/19/2005	4/20/2005	4/20/2005
Units:	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Volatile Organic Compounds					
Bromomethane	3.5	4.7	2.4	-	3
Acetone	ND	ND	ND	26	-
Methylene Chloride	11	12	6.6	14	31
Carbon Disulfide	-	-	-	-	-
2-Butanone (MEK)	-	-	-	3.9	-
Chloroform	-	-	-	-	-
Trichloroethene	0.71	-	-	-	-
Bromodichloromethane	-	-	-	-	-
Toluene	-	0.99	-	-	-
Chlorodibromomethane	-	-	-	-	-
Xylenes (total)	-	-		-	3.7
1,2,4-Trimethylbenzene	0.79	-	-	-	-
p-Isopropyltoluene	17	-	1.3	-	-
1,3-Dichlorobenzene	-	2.1	-	-	-
1,4-Dichlorobenzene	-	-	-	-	2.5
1,2-Dichlorobenzene	-	2.6	-	-	-
Semi-Volatile Organic Compounds					
1,3-Dichlorobenzene	160	-	-		-
1,4-Dichlorobenzene	170	-	-		-
Benzyl alcohol	-	-	-		-
1,2-Dichlorobenzene	150	-	-		-
Nitrobenzene	210	-	-		-
2-Nitrophenol	180	-	-		-
Benzoic Acid	830	490	-		-
1,2,4-Trichlorobenzene	180	-	-		-
Naphthalene	130	-	-		-
Hexachlorobutadiene	140	-	-		-
2-Methylnaphthalene	120	-	-		-
2,4,6-Trichlorophenol	130	-	-		-
2-Chloronaphthalene	140	-	-		-
Acenaphthylene	150	-	-		-
Acenaphthene	130	-	-		-
Dibenz(a,h)anthracene	86	-	-		-
Dibenzofuran	140	-	-		-
Fluorene	150	-	-		-
4-Chlorophenyl phenyl ether	190	-	-		-
N-Nitrosodiphenylamine	190	-	-		-
Pyrene	470	110	320		-
4-Bromophenyl phenyl ether	190	-	-		-
Hexachlorobenzene	450	110	-		-
Pentachlorophenol	180	-	-		-
Phenanthrene	150	-	200		-
Anthracene	140	-	-		-
Fluoranthene	140	-	300		-
Benzo(a)anthracene	150	-	150		-
Chrysene	160	-	150		-
Bis(2-ethylhexyl)phthalate	88	97	98		330
Benzo(b)fluoranthene	180	-	120		-
Benzo(k)fluoranthene	150	-	120		-
Benzo(a)pyrene	540	-	110		-
Indeno(1,2,3-cd)pyrene	530	-	-		-
Benzo(ghi)perylene	130	340	-		-
Di-n-butyl phthalate	500	-	-		-
Benzo(ghi)perylene	420	-	-		-
PCBs					
Aroclor 1254	-	58	96		380
Dioxins/Furans					
TEQ	0.0612	0.0742	0.0768		0.0353

Notes:
ug/kg = micrograms per kilogram
ug/L = micrograms per liter
NA = not available
- = not detected
blank = not analyzed/not sampled
TCLP = Toxicity Characteristic Leaching Procedure

Table 4
Summary of 2005 Incinerator Ash Laboratory Analytical Data for Organic Analytes

Sample ID:	RE73-05-58923	RE73-05-58924	TCLP	
Matrix:	Water	Water		
Sample Date:	4/20/2005	4/20/2005	Results	Pass/Fail
Units:	(ug/L)	(ug/L)	(ug/L)	
Volatile Organic Compounds				
Bromomethane	-	-		NA
Acetone	-	3.4		NA
Methylene Chloride	5.5	6		NA
Carbon Disulfide	2.2	-		NA
2-Butanone (MEK)	-	-	200000	Pass
Chloroform	2.1	2.5	6000	Pass
Trichloroethene	-	-	500	Pass
Bromodichloromethane	0.34	-		NA
Toluene	0.27	-		NA
Chlorodibromomethane	0.19	1.9		NA
Xylenes (total)	-	-		NA
1,2,4-Trimethylbenzene	-	-		NA
p-Isopropyltoluene	-	-		NA
1,3-Dichlorobenzene	-	-		NA
1,4-Dichlorobenzene	0.14	-	7500	Pass
1,2-Dichlorobenzene	-	-		NA
Semi-Volatile Organic Compounds				
1,3-Dichlorobenzene	-	-		NA
1,4-Dichlorobenzene	-	-	7500	Pass
Benzyl alcohol	-	3.1		NA
1,2-Dichlorobenzene	-	-		NA
Nitrobenzene	-	-	2000	Pass
2-Nitrophenol	-	-		NA
Benzoic Acid	-	-		NA
1,2,4-Trichlorobenzene	-	-		NA
Naphthalene	-	-		NA
Hexachlorobutadiene	-	-	500	Pass
2-Methylnaphthalene	-	-		NA
2,4,6-Trichlorophenol	-	-	2000	Pass
2-Chloronaphthalene	-	-		NA
Acenaphthylene	-	-		NA
Acenaphthene	-	-		NA
Dibenz(a,h)anthracene	-	-		NA
Dibenzofuran	-	-		NA
Fluorene	-	-		NA
4-Chlorophenyl phenyl ether	-	-		NA
N-Nitrosodiphenylamine	-	-		NA
Pyrene	-	-		NA
4-Bromophenyl phenyl ether	-	-		NA
Hexachlorobenzene	-	-	130	Pass
Pentachlorophenol	-	-	100000	Pass
Phenanthrene	-	-		NA
Anthracene	-	-		NA
Fluoranthene	-	-		NA
Benzo(a)anthracene	-	-		NA
Chrysene	-	-		NA
Bis(2-ethylhexyl)phthalate	-	-		NA
Benzo(b)fluoranthene	-	-		NA
Benzo(k)fluoranthene	-	-		NA
Benzo(a)pyrene	-	-		NA
Indeno(1,2,3-cd)pyrene	-	-		NA
Benzo(ghi)perylene	-	-		NA
Di-n-butyl phthalate	-	-		NA
Benzo(ghi)perylene	-	-		NA
PCBs				
Aroclor 1254	-	-		NA
Dioxins/Furans				
TEQ				NA

Notes:
ug/kg = micrograms per kilogram
ug/L = micrograms per liter
NA = not available
- = not detected
blank = not analyzed/not sampled
TCLP = Toxicity Characteristic Leaching Procedure

Table 5
Summary of Historical Incinerator Ash Laboratory Analytical Data for Radionuclides

Location ID	Depth (ft)	Sample ID	Media	Gross alpha	Gross beta	Gross gamma	Cs-137	Pu-239	U-234	U-235	U-238	Tritium
Soil Background Value (BV)				**-**	**-**	**-**	**1.65**	**0.054**	**2.59**	**0.2**	**2.29**	**0.76**
Units				**(pCi/g)**	**(pCi/g)**	**(pCi/g)**	**(pCi/g)**	**(pCi/g)**	**(pCi/g)**	**(pCi/g)**	**(pCi/g)**	**(pCi/ml)**
73-02252	0.1-0.3	0173-96-0331	NA	-	-	-	-	-	-	-	-	0.08
73-02252	0.10-0.30	0173-96-0331	NA	8.9	6.7	6.65	-	-	-	-	-	-
73-02253	0.00-0.50	0173-96-0302	Soil	0.66	1.04	8.08	-	-	-	-	-	-
73-02254	0.00-0.50	0173-96-0320	Soil	3.55	3.6	14.1	-	-	-	-	-	0.054
73-02255	0.00-0.50	0173-96-0308	Soil	3.07	4.33	16.5	-	-	-	-	-	0.064
73-02260	0.00-0.70	0173-96-0305	NA	6.4	7.7	6.98	-	-	-	-	-	-
73-02262	0.00-1.00	0173-96-0307	NA	2.88	-	2.24	-	-	-	-	-	-
73-02264	0.00-0.00	0173-96-0304	NA	4.7	7.8	5.32	-	-	-	-	-	-
73-02266	0.00-0.00	0173-96-0309	NA	11.6	8.8	5.33	-	-	-	-	-	-
73-02268	0.00-1.00	0173-96-0314	NA	8.7	9.4	7.11	-	-	-	-	-	-
73-02268	0.00-1.00	0173-96-0345	NA	10.7	9	6.21	-	-	-	-	-	-
73-02270	0.00-0.00	0173-96-0316	NA	2.94	5.6	3.99	-	-	-	-	-	-
73-02270	0.00-0.00	0173-96-0346	NA	-	5.2	2.48	-	-	-	-	-	-
73-02326	14.00-15.00	0173-96-0501	Fill	6.02	3.15	12.3	-	-	-	-	-	-
73-02327	14.00-15.00	0173-96-0502	Fill	2.44	1.42	13	-	-	-	-	-	-
73-02467	0.10-0.50	0173-97-0331	NA	22.2	13.8	9.15	-	-	12.57	0.5	8.84	-
73-02468	0.1-0.5	0173-97-0332	NA	-	-	-	0.239	-	-	-	-	-
73-02468	0.10-0.50	0173-97-0332	NA	19.8	21.4	8.89	-	-	17.1	0.771	15.93	-
73-10000	0.00-0.50	RE73-98-0001	NA	-	-	-	-	-	5.37	0.308	2.51	-
73-10000	0-0.5	RE73-98-0001	NA	-	-	-	1.51	2.54	-	-	-	-
73-10000	0.00-0.50	RE73-98-0002	NA	-	-	-	-	-	4.9	0.578	2.23	-
73-10000	0-0.5	RE73-98-0002	NA	-	-	-	1.45	2.5				-
73-10001	0.00-0.50	RE73-98-0003	NA	-	-	-	-	-	3.84	0.352	1.98	-
73-10001	0-0.5	RE73-98-0003	NA	-	-	-	0.98	0.522	-	-	-	-
73-10002	0.00-0.50	RE73-98-0066	NA	-	-	-	-	-	2.82	0.219	1.44	-
73-10002	0-0.5	RE73-98-0066	NA	-	-	-	0.87	0.801	-	-	-	-
73-10003	0.00-0.50	RE73-98-0004	NA	-	-	-	-	-	14.15	0.765	6.6	-
73-10003	0-0.5	RE73-98-0004	NA	-	-	-	-	1.228	-	-	-	-
73-10004	0.00-0.50	RE73-98-0005	NA	-	-	-	-	-	14.53	0.966	11.62	-
73-10004	0-0.5	RE73-98-0005	NA	-	-	-	0.34	0.731	-	-	-	-
73-10005	0.00-0.50	RE73-98-0006	NA	-	-	-	-	-	9.41	0.783	8.11	-
73-10005	0-0.5	RE73-98-0006	NA	-	-	-	-	0.709	-	-	-	-
73-10006	0.00-0.50	RE73-98-0007	NA	-	-	-	-	-	5.89	0.523	4.31	-
73-10006	0-0.5	RE73-98-0007	NA	-	-	-	0.32	1.82				-
73-10007	0.00-0.50	RE73-98-0008	NA	-	-	-	-	-	4.97	0.289	4.32	-
73-10007	0-0.5	RE73-98-0008	NA	-	-	-	0.26	1.052				-
73-10008	0.00-0.50	RE73-98-0009	NA	-	-	-	-	-	3.15	0.211	2.41	-
73-10008	0-0.5	RE73-98-0009	NA	-	-	-	0.5	0.469				-
73-10009	0.00-0.50	RE73-98-0010	NA	-	-	-	-	-	3.53	0.219	2.83	-
73-10009	0-0.5	RE73-98-0010	NA	-	-	-	0.33	0.363	-	-	-	-
73-10010	0.00-0.50	RE73-98-0011	NA	-	-	-	-	-	5.7	0.439	4.57	-
73-10010	0-0.5	RE73-98-0011	NA	-	-	-	0.38	0.627	-	-	-	-
73-10011	0.00-0.50	RE73-98-0012	NA	-	-	-	-	-	6.71	0.353	4.12	-
73-10011	0-0.5	RE73-98-0012	NA	-	-	-	-	1.95	-	-	-	-
73-10026	0.00-0.50	RE73-98-0027	NA	-	-	-	-	-	1.62	0.082	1.5	-

Table 5
Summary of Historical Incinerator Ash Laboratory Analytical Data for Radionuclides

Location ID	Depth (ft)	Sample ID	Media	Gross alpha	Gross beta	Gross gamma	Cs-137	Pu-239	U-234	U-235	U-238	Tritium
Soil Background Value (BV)				**-**	**-**	**-**	**1.65**	**0.054**	**2.59**	**0.2**	**2.29**	**0.76**
Units				**(pCi/g)**	**(pCi/g)**	**(pCi/g)**	**(pCi/g)**	**(pCi/g)**	**(pCi/g)**	**(pCi/g)**	**(pCi/g)**	**(pCi/ml)**
73-10026	0-0.5	RE73-98-0027	NA	-	-	-	0.35	1.242	-	-	-	-
73-10027	0.00-0.50	RE73-98-0028	NA	-	-	-	-	-	1.45	0.085	1.332	-
73-10027	0-0.5	RE73-98-0028	NA	-	-	-	-	0.202	-	-	-	-
73-10028	0.00-0.50	RE73-98-0029	NA	-	-	-	-	-	1.298	0.086	1.253	-
73-10028	0-0.5	RE73-98-0029	NA	-	-	-	-	0.088	-	-	-	-
73-10029	0.00-0.50	RE73-98-0030	NA	-	-	-	-	-	2.88	0.201	2.26	-
73-10029	0-0.5	RE73-98-0030	NA	-	-	-	-	0.51	-	-	-	-
73-10030	0.00-0.50	RE73-98-0031	NA	-	-	-	-	-	1.49	0.083	1.281	-
73-10030	0-0.5	RE73-98-0031	NA	-	-	-	-	0.273	-	-	-	-
73-10031	0.00-0.50	RE73-98-0032	NA	-	-	-	-	-	1.86	0.158	1.69	-
73-10031	0-0.5	RE73-98-0032	NA	-	-	-	0.53	0.225	-	-	-	-
73-10032	0.00-0.50	RE73-98-0033	NA	-	-	-	-	-	2.67	0.226	2.23	-
73-10032	0-0.5	RE73-98-0033	NA	-	-	-	0.43	0.353	-	-	-	-
73-10033	0.00-0.50	RE73-98-0034	NA	-	-	-	-	-	1.43	0.129	1.205	-
73-10033	0-0.5	RE73-98-0034	NA	-	-	-	0.42	0.218	-	-	-	-
73-10034	0.00-0.50	RE73-98-0035	NA	-	-	-	-	-	3.18	0.306	2.98	-
73-10034	0-0.5	RE73-98-0035	NA	-	-	-	0.36	0.322	-	-	-	-
73-10034	0.00-0.50	RE73-98-0068	NA	-	-	-	-	-	3.04	0.216	2.61	-
73-10034	0-0.5	RE73-98-0068	NA	-	-	-	0.27	0.546	-	-	-	-
73-10035	0.00-0.50	RE73-98-0036	NA	-	-	-	-	-	4	0.409	3.48	-
73-10035	0-0.5	RE73-98-0036	NA	-	-	-	0.42	0.48	-	-	-	-
73-10036	0.00-0.50	RE73-98-0037	NA	-	-	-	-	-	5.25	0.383	4.92	-
73-10036	0-0.5	RE73-98-0037	NA	-	-	-	0.29	0.346	-	-	-	-
73-10037	0.00-0.50	RE73-98-0038	NA	-	-	-	-	-	1.312	0.131	1.215	-
73-10037	0-0.5	RE73-98-0038	NA	-	-	-	0.29	0.115	-	-	-	-

Notes:
NA - not available
- = if analyzed, sample result is less than BV
BV from LANL 1998
pCi/g = picoCurries per gram
Cs = Cesium
Pu = Plutonium
U = Uranium

Table 6
Summary of 2005 Incinerator Ash Laboratory Analytical Data for Radionuclides

Sample ID	Location	Am-241	U-234	U-235	U-238	Pu-238	Pu-239	Ra-226	Ra-224	Th-234	Cs-137
Soil Background Value (BV)		**0.013**	**2.59**	**0.2**	**2.29**	**0.023**	**0.054**	**2.59**	**2.33**	**2.29**	**1.65**
RE-73-05-58842/43	B3	0.036	9.090	0.360	7.160	-	1.070	6.240	2.440	5.050	-
RE-73-05-58844/45	Ash	0.029	1.700	0.081	1.360	-	0.143	1.950	2.190	-	0.138
RE-73-05-58846	B4	-	3.290	0.157	2.770	-	0.296	2.060	-	1.340	-
RE73-05-58824	C3 East	0.035	8.410	0.400	7.640	-	0.360	4.740	2.900	3.870	-
RE73-05-58825	C3 West	-	12.400	0.458	5.780	-	2.340	4.910	-	2.390	-
RE73-05-58826	C2 East	0.024	8.220	0.475	7.010	-	0.475	6.210	2.040	4.330	-
RE73-05-58827	C2 West	-	9.970	0.494	6.970	-	0.544	6.910	5.400	5.490	-
RE73-05-58828	C1	0.037	5.230	0.267	3.310	-	1.680	6.650	2.340	5.220	-
RE73-05-58830	D2	0.023	5.540	0.264	4.990	-	0.375	3.360	-	2.200	-
RE73-05-58831	D3	-	20.000	1.060	18.700	-	0.310	8.120	2.300	7.500	-
RE73-05-58832	D3	-	3.540	0.193	2.610	-	0.236	2.810	2.110	1.790	-
RE73-05-58833	E3	-	1.590	0.057	1.240	-	0.219	3.970	2.040	2.970	-
RE73-05-58834	E3	-	1.730	0.092	1.150	-	0.186	-	1.990	-	-
RE73-05-58836	D4	-	2.240	0.106	1.930	-	0.104	1.900	1.150	1.060	0.092
RE73-05-58837	C4	-	1.680	0.089	1.450	-	0.100	1.370	1.130	1.000	-
RE73-05-58838	B1	-	37.300	2.020	31.200	-	0.848	25.200	-	21.100	-
RE73-05-58839	B2	-	7.400	0.340	4.840	-	0.455	4.390	2.490	2.490	-
RE73-05-58840	B3	-	3.030	0.194	2.420	-	0.842	1.640	-	1.160	-

Notes:
All values are in picoCurries per gram (pCi/g)
BVs from LANL 1998 (59730), Table 6.0-2)

- = non detect
Am - Americium

U - Uranium
Pu - Plutonium
Ra - Radium
Th - Thorium
Cs - Cesium

Table 7
Inorganic Sample Data Comparison for Various Areas

	Antimony	Cadmiun	Lead	Mercury	Silver	Thallium
Soil Background Value	**0.83**	**0.4**	**22.3**	**0.1**	**1**	**0.73**
Incinerator Ash	69.4	20.1	5757	0.99	77.7	0.43
Soil Beneath Cans		12.2	106.3			
Outside Ash Perimeter		0.73	54.5	0.19	5.63	0.77
Drainages	11	0.57	48	0.12	2.3	1.12

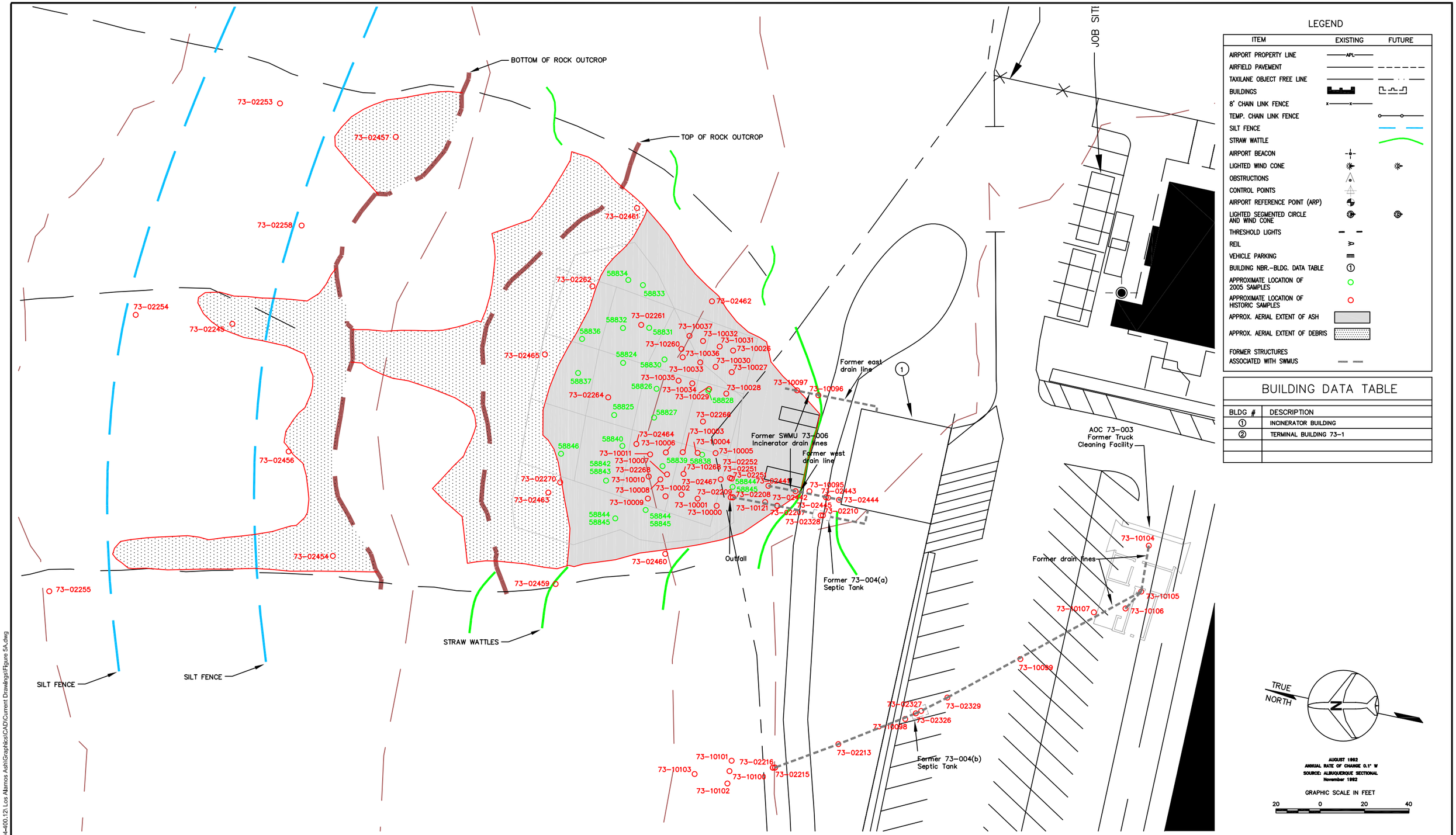
Notes:
All results are in milligram per kilogram
Soil Background Value from LANL 1998 (59730, Table 6.0-2, p.45)
blank - not sampled

Table 8
Radionuclide Sample Data Comparison for Various Areas

	Gross Alpha	Gross Beta	Cesium 137	Radium 226	Plutonium 239	Uranium 234	Tritium
Soil Background Value	**-**	**-**	**1.65**	**2.59**	**0.054**	**2.59**	**0.08***
Incinerator Ash	11.2	13.3	0.055	5.17	0.59	7.91	
Drainages	2.43	2.99					0.06

Notes:
Soil Background Value from LANL 1998 (59730, Table 6.0-2, p.45)
* value calculated based on 10% moisture
all values are in pCi/g
blank - not sampled

FIGURES



2004 Projects\04-400 SPD PRAC\04-400.121 Los Alamos Ash\Graphics\CAD\Current Drawings\Figure 5A.dwg

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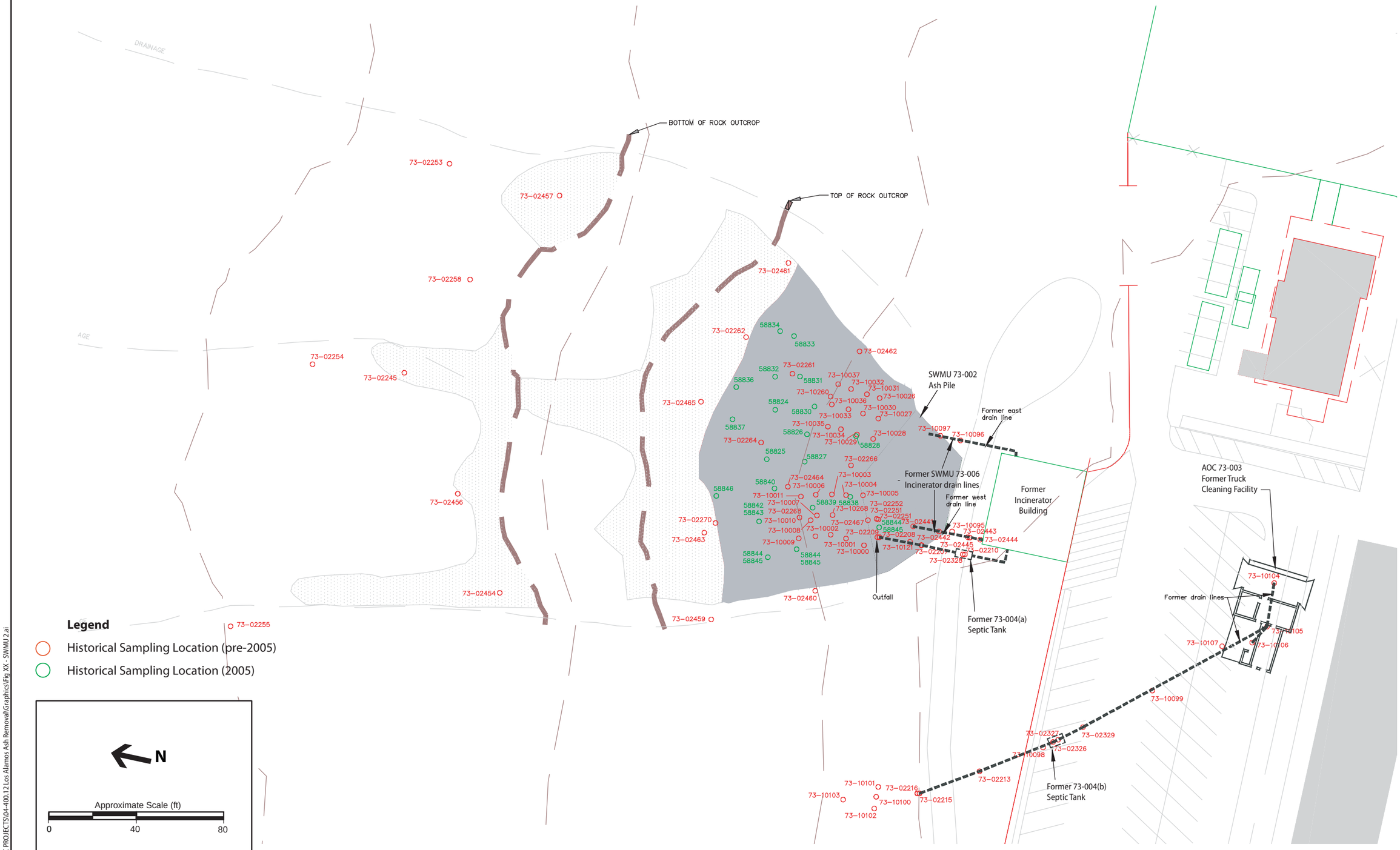
U.S. Army Corps of Engineers, Sacramento District

Los Alamos National Laboratory, U.S. Department of Energy
Consolidated Unit 73-002-99, Los Alamos National Laboratory, New Mexico

FIGURE 1
Distribution of Ash and Previous Sample Locations



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U.S. Army Corps of Engineers, Sacramento District

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FIGURE 2
Consolidated Unit 73-002-99
Miscellaneous Airport Structures