Waste Characterization Strategy Form

Project Title	Lower Sandia Canyon Aggregate Area and Lower Mortandad/Cedro Canyons Aggregate Area Investigations
Solid Waste Management Unit or Area of Concern #	**SWMUs:** 05-003, 05-004, 05-005(b), 05-006(c), 20-001(a), 20-001(b), 20-001(c), 20-002(a), 20-002(b), 20-002(c), 20-002(d), 20-005, 53-001(a), 53-001(b), 53-005, 53-006(f) **AOCs:** 20-003(b), 20-003(c), 20-004, 53-008, 53-009, 53-010, 53-012(e), 53-013
Activity Type	**Investigation and Remediation**
LATA Task Manager	**Jacinto Garduno**
Waste Management Coordinator	**Michael Le Scouarnec**
Completed by	**Kevin Krause**
Date	**06/16/2010**

1.0 Description of Activity

The work will be performed in accordance the New Mexico Environment Department (NMED)-approved Investigation Work Plan for Lower Sandia Canyon Aggregate Area, the Investigation Work Plan for Lower Mortandad/Cedro Canyons Aggregate Area and EXHIBIT "D" Scope of Work and Technical Implementation of the Lower Sandia Canyon Aggregate Area, Subcontract No. 82819-001-10, R0, 01/14/2010.

This waste characteristic strategy form (WCSF) describes the management of investigation-derived waste (IDW) that is expected to be generated during the investigation and limited remediation in Technical Area (TA)-05, TA-20, and TA-53. The IDW may include, but is not limited to, drill cuttings, contact waste, excavated environmental media and debris, decontamination fluids, petroleum-contaminated soils, and all other waste that has potentially come into contact with contaminants.

2.0 Relevant Site History and Description

2.1 TA-05

TA-05, also known as Beta Site, was established in 1944 as an adjunct test firing site to TA-04 (Alpha Site). Firing activities were conducted at two small firing sites located within the Middle Mortandad/Ten Site portion of TA-05 and one large firing site, known as Far Point Site, within the Lower Mortandad/Cedro portion of TA-05. Far Point Site was used briefly during 1944 and 1945 for half-scale mockup tests of the Trinity device. TA-05 was used as a firing site for implosion studies until 1947. After firing activities were halted, several Laboratory groups used the site for a variety of experiments, including the study of hydrogen fires, animal radiation experiments, and beryllium combustion experiments. In late 1959, two experimental reactors known as "Little Eva" and "Godiva" were brought to TA-05 and operated briefly. Little Eva was located inside a trailer, and Godiva was located in an underground chamber

(SWMU 05-003). TA-05 was taken out of service in 1959 and underwent decontamination and demolition in 1985 as part of the Los Alamos Site Characterization Program (LASCP).

2.2 Former TA-20

Former TA-20 was located near the west end of Sandia Canyon and the SWMUs and AOCs associated with it are now contained within TA-53 and TA-72. The TA-20 site consisted of a series of firing areas spaced along a small road heading west from NM 4. TA-20 was used from 1945 to 1948 to test initiators (devices used to generate neutrons needed to initiate nuclear chain reactions) and to conduct implosion studies.

2.3 TA-53

TA-53 is located in the northeast portion of the Laboratory on Mesita de Los Alamos, which is the mesa bounded by Los Alamos Canyon to the north and Sandia Canyon to the south. TA-53 is the location of the Los Alamos Neutron Science Center (LANSCE). The primary component of LANSCE is a 0.5-mi-long linear proton accelerator that produces subatomic particles for experimental physics activities and isotope production. TA-53 also contains office buildings, laboratories, and other facilities associated with the operation of the accelerator.

3.0 Characterization Strategy

This WCSF identifies the types of wastes expected, based on the data from previous investigations; however, other types of wastes may be encountered. An amendment to this strategy form will be prepared and submitted for review and approval if any of the waste streams change in description or characterization approach or a new waste stream is generated. All IDW will be managed in accordance with Los Alamos National Laboratory (LANL) Standard Operating Procedure (SOP) 5238, *Characterization and Management of Environmental Program Waste.*

In accordance with the work plan, waste will initially be managed as hazardous or non-hazardous (unless stored within an Area of Contamination) in accordance with the due diligence reviews already prepared for all potential release sites covered by these investigations. Table 3.0-1 identifies whether initial management should be hazardous or non-hazardous. Waste accumulation area postings, regulated storage duration, and inspection requirements will be based on the type waste and its regulatory classification. The selection of waste containers will be based on U.S. Department of Transportation requirements, waste types, and estimated volumes of IDW to be generated. Immediately following containerization, each waste container will be individually labeled with a unique identification number and with information such as waste classification, contents, radioactivity, and date generated, if applicable. A non-hazardous waste label, date of generation, the generator's name, and container contents should be placed on non-hazardous waste containers as a best management practice. Waste streams with the same regulatory classification that are destined for the same receiving facility may be combined into a single container for disposal (e.g. contact waste with drill cuttings).

IDW characterization will be completed using investigation sampling data or by direct sampling of the IDW. If the waste is directly sampled, it will be sampled within 10 days of generation, and a 21 day turnaround time for analyses will be requested, unless the waste is generated and managed in an Area of Contamination. Samples must be collected using the methods described in this WCSF by trained and qualified sampling personnel. Sampling personnel must record waste sampling information in accordance with LANL's procedure, EP-ERSS-SOP-5058, *Sample Control and Field Documentation* and EP-ERSS-SOP-5181, Documentation of Waste and Environmental Technical Field Activities.

A waste determination will be made within 45 days of the generation date of waste unless the waste is stored in a Satellite Accumulation Area or an approved Area of Contamination. A Waste Acceptance Criteria (WAC) exception form (WEF) can be used if the generator does not meet the 45 day deadline. The generation of no path forward wastes must be approved by Department of Energy (DOE) prior to generation of the waste; however, no such wastes are anticipated for this project.

If documentation exist that the contaminant(s) originated from a listed source but the levels are below residential screening levels and the land disposal restriction treatment standards, a "contained-in" request may be submitted to the New Mexico Environment Department (NMED), who may approve removing the listings from the waste stream. A request to submit a "contained-in" determination to NMED must be submitted to Environmental Protection (ENV-RCRA) through the Subcontract Technical Representative (STR) within 70 days of generating the waste. A copy of the due diligence reviews already prepared for this investigation or the NMED "contained-in" approval letter should accompany all waste profiles prepared for the waste(s) with potentially listed contaminants.

Investigation activities will be conducted in a manner that minimizes the generation of waste. Waste minimization will be accomplished by implementing the most recent version of the "Los Alamos National Laboratory Hazardous Waste Minimization Report.: Waste streams will be recycled/reused, as appropriate.

3.1 Waste # 1: Drill Cuttings (IDW)

This waste stream consists of soil and rock cuttings generated from the drilling of boreholes. This may include small chips or unused core samples collected with a hollow-stem auger core barrel. Drill cuttings may include excess core samples not submitted for analysis and any returned drill cutting samples. Drill cuttings may be land applied if they meet the criteria in Quality Procedure QP-011, Land Application of Drill Cuttings. Approximately 20 yd^3 of drill cuttings are expected to be generated.

Anticipated Regulatory Status: Industrial, Beryllium, Hazardous, Low-level radioactive waste (LLW), Mixed low-level radioactive waste (MLLW), New Mexico Special Waste (NMSW), Land Applied

Characterization Approach: The drill cuttings will be characterized by direct sampling of the containerized cuttings. Cuttings not generated and managed within an Area of Contamination will be sampled within 10 days of generation and submitted for analysis with a 21 day turnaround time. A hand auger or thin-wall tube sampler will be used in accordance with LANL SOP-06.10, *Hand Auger and Thin-Wall Tube Sampler* to collect waste material from each container, augering from the surface to the bottom of the waste in a sufficient number of locations to obtain a representative sample. Samples will be analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), radionuclides, total metals, and toxicity characteristic (TCLP) metals, if needed (see Table 3.1-1). Herbicides and pesticides will be analyzed only if the work plan requires analysis of these contaminants in investigation samples. High explosives (HE), perchlorates, nitrate, and total cyanide will be analyzed only for SWMUs 20-001(a,b,c). If process knowledge, odors, or staining indicate the cuttings may be contaminated with petroleum products, the materials will also be analyzed for total petroleum hydrocarbons (TPH [DRO/GRO]) and polychlorinated biphenyls (PCBs). Other constituents may be analyzed as necessary to meet the WAC for a receiving facility.

Storage and Disposal Method: Drill cuttings will be containerized at the point of generation in LANL approved 55-gallon steel drums, 1 yd^3 Wrangler Bags or other containers appropriate for the quantity of waste generated. Wastes will be stored in secure, designated areas. Drill cuttings from a single potential release site (PRS) may be combined into a single container before sampling but cuttings from different PRSs will not be combined before sampling. If container sizes are small, the representative sample may be collected from more than one container (e.g., one sample for every 20 cy^3 generated from a single

potential release site). Waste generated and managed within an Area of Contamination will initially be managed as non-hazardous. Wastes generated outside an Area of Contamination will initially be managed as hazardous or non-hazardous in accordance with Table 3.0-1. If analytical data changes the waste classification (e.g., PCB waste) or hazardous wastes are moved outside the boundary of the Area of Contamination, the waste will be stored in an area appropriate for the type of waste. Cuttings may be land applied if they meet the criteria of the NMED-approved NOI decision tree for land application. Land application will be conducted in accordance with ENV-RCRA-QP-011, *Land Application of Drill Cuttings.* Drill cuttings that cannot be land applied will be treated and/or disposed of at authorized off-site facilities appropriate for the waste classification.

3.2 Waste # 2: Contact Waste

This waste stream includes personnel protective equipment (PPE), contaminated sampling supplies, and dry decontamination waste that may have come in contact with contaminated environmental media and cannot be decontaminated. This includes, but is not limited to plastic sheeting (e.g., tarps and liners), gloves, coveralls (e.g. Tyvek), booties, paper towels, plastic and glass sample bottles, and disposable sampling supplies. Approximately 1 yd^3 of contact waste are expected to be generated.

Anticipated Regulatory Status: Industrial, Beryllium, Hazardous, LLW, MLLW, Green is Clean

Characterization Approach: Contact waste will be characterized using AK based on data from the media with which they came into contact, as follows:

- If generated during drilling, data from the associated drill cuttings will be used.
- If generated during hand augering, associated investigation sample data will be used.
- If generated during excavations, data from the associated excavated environmental media will be used.

All contact waste will be inspected before being placed in containers to determine if environmental media or staining is present, indicating contamination. If staining is present, an estimate of the portion or percentage of the item stained will be recorded. Results from the analytical data will be weighted by the extent of contamination for determining whether wastes are characteristic. If the material with which the contact waste came into contact is listed, the contact waste will be assumed to be listed unless a "container-in" approval is obtained.

Storage and Disposal Method: The contact waste may be separately containerized in drums or it may be placed into the same containers as the media with which it is contaminated if the media will not be land applied. Wastes will be stored within secure, designated areas. Waste generated and managed within an Area of Contamination will initially be managed as non-hazardous. Wastes generated outside an Area of Contamination will initially be managed as hazardous or non-hazardous in accordance with Table 3.0-1. If analytical data changes the waste classification, the waste will be stored in an area appropriate for the type of waste. For disposal, separately containerized contact waste may also be combined with the material that it contacted (the WPF will document the decision to combine the waste streams). Wastes will be treated and/or disposed of in authorized off-site facilities appropriate for the waste classification.

3.3 Waste #3: Decontamination Fluids (potential)

The decontamination fluids waste stream will consist of liquid wastes generated from decontamination of excavation, sampling and drilling equipment. Consistent with waste minimization practices, the Laboratory employs dry decontamination methods to the extent possible. If dry decontamination cannot be

performed, liquid decontamination wastes will be collected in appropriate containers at the point of generation. Less than 55 gal of decontamination fluids are expected to be generated.

Anticipated Regulatory Status: Industrial, Hazardous, LLW, MLLW

Characterization Approach: All drilling equipment and tooling will be steam-cleaned by the drilling subcontractor prior to arriving onsite. If tooling appears unclean or odors are detected, the equipment must be steam-clean onsite in accordance with EP-ERSS-SOP-5061, *Field Decontamination of Equipment* or an approved equivalent procedure. The rinsate must be separately collected and sampled (do not mix with any other decontamination fluids).

Decontamination fluids will be characterized by investigation samples from the media they contacted or by direct sampling. Unless decontamination fluids are generated and managed within an Area of Contamination, representative samples (if sampling is required) will be collected within 10 days of generation and submitted for analysis with a 21 day turnaround time. Samples will be collected from the storage container in accordance with LANL SOP-06.15, *COLIWASA Sampler for Liquids and Slurries.* If the container does not permit COLIWASA or bailer sampling, the type of sampling equipment used will be appropriate for the waste container and properly operated in accordance with Chapter 7 and Appendix E of the RCRA Waste Sampling Draft Technical Guidance (EPA 530-D-02-002, August 2002, http://www.epa.gov/osw/hazard/testmethods/sw846/pdfs/rwsdtg.pdf). Samples will be analyzed for VOCs, SVOCs, radionuclides, and total metals (see Table 3.1-1). HE will be analyzed only if the decontamination water is generated from potential release site for which the work plan requires HE analysis for investigation samples. Other constituents may be analyzed as necessary to meet the WAC for a receiving facility. If wastes will be treated on-site at the Sanitary Waste Water System (SWWS) or the Radioactive Liquid Waste Treatment Facility (RLWTF), submit a sampling request to http://esp-esh-as01-f5.lanl.gov/~esh19/database/rfa_form.shtml for additional constituents identified in Table 3.1-1, footnote 1. If the fluids cannot be treated on-site, they may be solidified for disposal off-site. The Material Safety Data Sheet (MSDS) for any absorbent used for solidification will be used as AK for waste characterization.

Storage and Disposal Method: Decontamination fluids will be collected in appropriate containers at the point of generation and managed in secure, designated waste areas. Waste generated and managed within an Area of Contamination will initially be managed as non-hazardous. Wastes generated outside an Area of Contamination will initially be managed as hazardous or non-hazardous in accordance with Table 3.0-1. If analytical data changes the waste classification (e.g., PCB wastes) or hazardous wastes are moved outside the Area of Contamination boundaries, the waste will be stored in an area appropriate for the type of waste. It is expected that the decontamination fluids will be treated on-site at the TA-16 High Explosives Wastewater Treatment Facility (HEWTF), the TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF), or the Sanitary Waste Water System (SWWS). Decontamination wastes not meeting the WAC for on-site facilities will be treated and/or disposed of in authorized off-site treatment/disposal facilities. If solidification of decontamination fluids is required for disposal, it may be solidified using an approved absorbent. Solidification activities must be reviewed by the ENV-RCRA before being conducted.

3.4 Waste #4: Excavated Media

Layback and overburden spoils (including environmental media mixed with buried debris after the debris is segregated from the media) will consist of soil and rock removed from within or next to (e.g., from benching to stabilize a trench) areas to be excavated. The amount of media removed is expected to be approximately 25 yd^3.

Anticipated Regulatory Status: Industrial, Beryllium, Hazardous, LLW, MLLW, NMSW, PCB, Fill

Characterization Approach: Because the amount of soil to be excavated from each location is estimated to be less than 5 yd^3, a minimum of one incremental sample of the spoils will be collected for each excavation location as the spoils are excavated. More frequent samples will be collected if screening or visual observations indicate areas with potentially higher contamination. The incremental samples will be collected in accordance with SOP-06.11, *Spade and Scoop Method for Collection of Soil Samples.* Representative samples will be submitted for analysis with a 21 day turnaround time. Samples will be analyzed for VOCs, SVOCs, radionuclides, total metals, and TCLP metals, as needed (see Table 3.1-1). Herbicides and pesticides will be analyzed only if the work plan requires analysis of these contaminants in investigation samples. HE, perchlorates, nitrate, and total cyanide will be analyzed only if the work plan requires HE analysis for investigation samples from the potential release site. If process knowledge, odors, or staining indicate the excavated media may be contaminated with petroleum products, the materials will also be analyzed for TPH and PCBs. Other constituents may be analyzed as necessary to meet the WAC for a receiving facility.

Storage and Disposal Method: An Area of Contamination will be requested for each excavation area and materials generated and managed within the area will be managed as non-hazardous waste. If the material is removed from the Area of Contamination, it will be managed as hazardous or non-hazardous in accordance with Table 3.0-1 unless data are available to show that it is non-hazardous. This material will be field screened for radioactivity and VOCs during the excavation process. If contamination is not detected during screening, the spoils will be stored either in rolloff bins other suitable containers or on the ground surface with appropriate best management practices. If field screening indicates the potential for contamination, the layback and overburden spoils will be placed in rolloff bins or other suitable containers If analytical data changes the waste classification or hazardous waste is moved outside the boundaries of the Area of Contamination, the waste will be stored in an area appropriate for the type of waste. If the spoils are determined to be suitable for reuse (i.e., meets residential cleanup standards as determined using NMED's and DOE's soil screening guidance), the Laboratory will segregate any man-made debris from the soil, if practical, and use the soil to backfill the excavations. If the spoils do not meet residential cleanup standards, they will be treated and/or disposed of at an authorized facility appropriate for the waste regulatory classification.

3.5 Waste #5: Excavated Man-Made Debris

Excavated man-made debris may be generated during excavation of test pits at SWMUs 20-001(c) and 53-005, during remediation of AOC 53-013, and during cleanup of the surface debris at SWMUs 05-005(b) and 05-006(c). The amount of debris removed is expected to be approximately 4 yd^3.

Anticipated Regulatory Status: Industrial, Beryllium, Hazardous, LLW, MLLW, PCB, NMSW, Recycle

Characterization Approach: Debris will be segregated as it is excavated, to the extent practical, based on factors such as the type and size of debris, field screening, process knowledge, and/or staining or odors. For debris that is difficult to characterize; acceptable knowledge (AK) will be used whenever possible, supplemented by sampling as needed. Sampling methods may be identified on a case-by-case basis by qualified sampling personnel. All decisions will be documented in the field activity notebook. If generated outside an Area of Contamination, samples must be collected within 10 days of waste generation and a 21-day analytical turnaround must be requested. Samples will be analyzed for asbestos for articles expected to be asbestos-containing, VOCs, SVOCs, radionuclides, total metals, and TCLP metals, if necessary (see Table 3.1-1). PCBs will be analyzed if oil staining on debris or PCB articles (e.g., capacitors) is unearthed. HE on the external portions of the debris generated at SWMU 20-001(c) will initially be analyzed by HE screening (DX HE Spot Test) or if the investigation samples indicate that HE is present. Waste configurations, process knowledge and additional HE analysis will be performed as needed to identify whether the debris is detonable. Other constituents may be analyzed as necessary to

meet the WAC for a receiving facility. Non-radioactive materials (no LANL-added radioactivity) or those that can be decontaminated will be recycled, if practicable. For the lead shot and other non-porous debris with only surface, non-fixed contamination, smears will be used to detect the presence of radiation. If the lead shot cannot be recycled/reused, it will be assumed to be hazardous for lead.

Storage and Disposal Method: Debris will be containerized at the point of generation in LANL approved 55-gallon steel drums or other appropriate containers. Any debris that leaks as it is excavated must immediately be placed in an area with secondary contamination. The debris will initially be managed in a secure, designated area within the Area of Contamination. If analytical data changes the waste classification (e.g., PCB wastes) or the waste is hazardous and is moved outside the Area of Contamination boundaries, the waste will be stored in an area appropriate for the type of waste. The waste will be treated and/or disposed of at an authorized off-site facility appropriate for the waste classification.

3.6 Waste #6: Municipal Solid Waste (MSW)

This waste stream primarily consists of non- contact trash including, but not limited to paper, cardboard, wood, plastic, food and beverage containers, empty solution containers, but may also include commercial solid wastes which are derived from project activities. It is estimated that less than 1 yd^3 of MSW will be generated, but may change if vegetation removal is required.

Anticipated Regulatory Status: MSW

Characterization Approach: MSW will be characterized based on acceptable knowledge (AK) of the waste materials (including MSDS) and methods of generation.

Management and Disposal Method: MSW will be segregated from all other waste streams and managed in approved containers. It is anticipated that the waste will be stored in plastic trash bags or other appropriate containers and disposed of at the County of Los Alamos Transfer Station or other authorized solid waste landfill.

3.7 Waste #7: Petroleum Contaminated Soils (PCS), (potential)

PCS may be generated from releases of products such as hydraulic fluid, motor oil, unleaded gasoline, or diesel fuel (e.g. from the rupture of hydraulic or fuel hoses, or spills during maintenance or filling equipment) onto soil. PCS created by legacy contamination may also be encountered during investigations. Absorbent padding, paper towels, spill pillows or other absorbent material used to contain the released material may be added to the PCS waste for storage and disposal. It is estimated that less than one cubic yard of PCS will be generated.

Anticipated Regulatory Status: NMSW, Beryllium, Industrial, Hazardous, LLW, MLLW, PCB

Characterization Approach: The contaminated soil may either be sampled in-place (by gridding the spill location and collecting and combining incremental samples into one sample) or after containerization in accordance with LANL SOP-06.10, *Hand Auger and Thin-Wall Tube Sampler*. If the spill is shallow (in-place sampling) or containers are small, Spade and Scoop Method for Collection of Soil Samples (LANL SOP-06.11) may also be appropriate. If the spill is new, it must be immediately reported to ENV-RCRA and the contaminated material must be containerized the same day it is spilled unless permission is received from ENV-RCRA to leave it longer (generally only granted for large spills). Representative samples of containerized waste will be collected within 10 days of generation and submitted for analysis with a 21 day turnaround time. Samples will be analyzed at a minimum for VOCs, SVOCs, TPH (DRO/GRO), and total metals (see Table 3.1-1). Herbicides and pesticides will be analyzed only if the work plan requires analysis of these contaminants for investigation samples. HE, perchlorates, nitrate,

and total cyanide will be analyzed only if screening indicates the presence of HE or if analysis of these constituents is required by the work plan for the contaminated area. If legacy petroleum contamination is present, the soils will also be analyzed for PCBs. Other constituents may be analyzed as necessary to meet the WAC for a receiving facility.

Storage and Disposal Method: PCS will be stored in clearly marked and appropriately constructed waste accumulation areas. Waste accumulation area postings, regulated storage duration, and inspection requirements will be based on the most restrictive waste classification appropriate to the area where the spill occurred. If the PCS is suspect or known hazardous or MLLW, it will initially be managed in a registered hazardous waste accumulation area pending analysis. All PCS will be treated and/or disposed of, at an authorized off-site facility appropriate for the waste classification.

3.8 Waste #8: Returned or Excess Samples

This waste stream consists of soil and tuff samples returned from a laboratory or samples collected but not submitted to the analytical laboratory. It is estimated that less than approximately 0.5 yd^3 of material will be generated from this activity.

Anticipated Regulatory Status: Industrial, Beryllium, Hazardous, LLW, MLLW, NMSW

Characterization Approach: Waste characterization will be based upon analytical results obtained from the direct sampling of containerized waste or from investigation or characterization data from media associated with the returned/excess samples. Direct sampling will be conducted in accordance with LANL SOP-06.10, *Hand Auger and Thin-Wall Tube Sampler* or SOP-06.09, *Spade and Scoop Method for Collection of Soil Samples*. Representative samples will be collected within 10 days of the return of the samples and submitted for analysis with a 21 day turnaround time. Samples will be analyzed for VOCs, SVOCs, total metals, and TCLP metals, as needed (see Table 3.1-1). Herbicides and pesticides will be analyzed only if the work plan requires analysis of these contaminants for investigation samples. HE, perchlorates, nitrate, and total cyanide will be analyzed only if the work plan requires HE analysis for investigation samples. If process knowledge, odors, or staining indicate the returned samples may be contaminated with petroleum products, the materials will also be analyzed for TPH and PCBs. Other constituents may be analyzed as necessary to meet the WAC for a receiving facility.

Storage and Disposal Method: These wastes will be containerized in 5 gallon buckets, 55 gallon drums, or placed into the same containers as the environmental media from which they were taken. They will initially be stored in secure, designated waste areas as hazardous or non-hazardous waste in accordance with Table 3.0-1. If analytical data changes the waste classification, the waste will be stored in an area appropriate for the type of waste. The wastes will be sent to an authorized on-site or off-site treatment or disposal facilities, as appropriate to their waste regulatory classification.

4.0 References

LANL (Los Alamos National Laboratory) 2007. "Los Alamos National Laboratory Hazardous Waste Minimization Report," (LANL,2007).

EP2010-0211 Integrated Work Document (IWD) – Implementation of the Investigation Work Plan for Lower Sandia Canyon Aggregate Area

EP2010-0212-Site-Specific Health and Safety Plan (SSHASP) – Implementation of the Investigation Work Plan for Lower Sandia Canyon Aggregate Area

LANL (Los Alamos National Laboratory), July 2009. "Investigation Work Plan for Lower Sandia Canyon Aggregate, Revision 1," Los Alamos, New Mexico. (LANL 2009, 106660)

Table 3.0-1
Initial Waste Management

Potential Release Site	Initial Management	Comments
SWMU 05-005(b), Outfall	Non-hazardous	
SWMU 05-006(c), Former Building 05-5	Non-hazardous	
SWMU 05-003, Former Calibration Chamber	Non-hazardous	
SWMU 05-004(c), Outfall and Septic Tank, Former Building 05-1	Non-hazardous	
SWMU 20-001 (a), Landfill	Non-hazardous	
SWMU 20-001(b), Landfill	Non-hazardous	
SWMU 20-001 (c), Landfill	Non-hazardous	
SWMU 20-002(a), Former Firing Pit	Non-hazardous	
SWMU 20-002(b), Former Steel Tanks (Firing Site)	Non-hazardous	
SWMU 20-002(c), Former Firing Point	Non-hazardous	
SWMU 20-002(d), Former Firing Point	Non-hazardous	
AOC 20-003(b), Former 20-mm Gun-Firing Site	Non-hazardous	
AOC 20-003(c), Former U.S. Navy Gun Site	Non-hazardous	
AOC 20-004, Septic System	Non-hazardous	
SWMU 20-005, Septic System	Non-hazardous	
SWMU 53-001 (a), Former Waste Storage Area	Non-hazardous	
SWMU 53-001 (b), Waste Storage Area	Non-hazardous	
SWMU 53-005, Former Waste Disposal Pit	Hazardous	
SWMU 53-006(f), Underground Storage Tank	Hazardous	
AOC 53-008, Storage Area	Non-hazardous	Analyze IDW for toxicity characteristic metals (lead)
AOC 53-009, Former Storage	Non-hazardous	
AOC 53-010, Former Storage Area	Non-hazardous	
AOC 53-012(e), Outfall	Non-hazardous	
AOC 53-013, Lead Shot Area	Hazardous	Analyze IDW for toxicity characteristic metals (lead), Recycle if possible.

Table 3.1-1
Waste Characterization Table

Waste Description	Waste Stream # 1 Drill Cuttings	Waste Stream #2 Contact Waste	Waste Stream #3 Decon. Fluids	Waste Stream #4 Excavated Media
Estimated Volume	20 CY	1 CY	< 55 gallons	25 CY
Packaging	55-gallon steel drums or 1 yd^3 Wrangler Bags	55 gallon drums	30 or 55 gallon drums	Roll-offs or on ground
Regulatory Classification				
Radioactive Waste	X	X	X	X
Municipal Solid Waste (MSW)				
Waste destined for LANL's SWWS or RLWTF or HEWTF[1]			X	
Hazardous Waste	X	X	X	X
Mixed (hazardous and radioactive) Waste	X	X	X	X
Beryllium	X	X		X
Polychlorinated Biphenyls-Contaminated Waste (PCBs)				X
New Mexico Special Waste	X			X
Industrial Waste	X	X	X	X
Characterization Method				
Acceptable knowledge (AK): Existing Data/Documentation		X	X	X
AK: Site Characterization		X	X	X
Direct Sampling of Waste	X		X	X
Analytical Testing				
Volatile Organic Compounds (VOCs) (EPA 8260-B)	X		X	X
Semivolatile Organic Compounds (SVOCs) (EPA 8270-C)	X		X	X
Organic Pesticides (EPA 8081-A)	X[4]		X[4]	X[4]
Organic Herbicides (EPA 8151-A)	X[4]		X[4]	X[4]
PCBs (EPA 8082)	X[4]		X[4]	X[4]
Total Metals (EPA 6010-B/7471-A or EPA 6020)	X		X	X
Total Cyanide (EPA 9012-A)	X[4]		X[4]	X[4]
High Explosives Constituents (EPA 8330/8321-A)	X[4]		X[4]	X[4]
Asbestos (EPA 600M4)				
Total petroleum hydrocarbon (TPH)-GRO (EPA 8015-M)	X[4]			X[4]
TPH-DRO (EPA 8015-M)	X[4]		X[4]	X[4]
Toxicity characteristic leaching procedure (TCLP) Metals (EPA 1311/6010-B)	X[4]		X[4]	X[4]

Table 3.1-1 (continued)

Waste Description	Waste Stream # 1 Drill Cuttings	Waste Stream #2 Contact Waste	Waste Stream #3 Decon. Fluids	Waste Stream #4 Excavated Media
TCLP Organics (EPA 1311/8260-B & 1311/8270-C)				
TCLP Pest. & Herb. (EPA 1311/8081-A/1311/8151-A)				
Gross Alpha (alpha counting) (EPA 900)	X[4]		X[4]	X[4]
Gross Beta (beta counting) (EPA 900)	X[4]		X[4]	X[4]
Tritium (liquid scintillation) (EPA 906.0)	X		X	X
Gamma spectroscopy (EPA 901.1)	X[4]		X[4]	X[4]
Isotopic plutonium (HASL-300)	X		X	X
Isotopic uranium (HASL-300)	X		X	X
Total uranium (EPA 6020)	X		X	X
Strontium-90 (EPA 905)	X		X	X
Americium-241 (HASL-300)	X		X	X
Perchlorates (EPA 6850)	X[4]		X[4]	X[4]
Nitrates/Nitrites (EPA 300.09-soil or 343.2-water)	X[4]		X[1,4]	X[4]
Oil / Grease (EPA 1665)			X[1]	
Fluorine, Chorine, Sulfate (EPA 300)			X[1]	
TTO (EPA 8260-B and EPA 8270-C)[2]	**Request VOCs and SVOCs above**			
Total Suspended & Dissolved Solids (TSS) and Total Dissolved Solids (TDS) (EPA 160.1 and 160.2)			X[1]	
Chemical Oxygen Demand (COD) (EPA 410.4)			X[1]	
pH (EPA 904c)			X[1]	
Microtox or Biological Oxygen Demand (BOD)[3]			X[1]	

Table 3.1-1 (continued)

Waste Description	Waste Stream # 5 Excavated Man Made Debris	Waste Stream #6 Municipal Solid Waste	Waste Stream #7 Petroleum Contam Soils	Waste Stream #8 Returned or Excess Samples
Estimated Volume	4 CY	< 1 CY	< 1 CY	0.5 CY
Packaging	55-gallon drums or other containers	Plastic trash bags	30 or 55 gallon drums	Same containers as the environmental media from which they were taken or other drums.
Regulatory Classification				
Radioactive Waste	X		X	X
Municipal Solid Waste (MSW)		X		
Waste destined for LANL's SWWS or RLWTF[1]				
Hazardous Waste	X		X	X
Mixed (hazardous and radioactive) Waste	X		X	X
Beryllium	X		X	X
Polychlorinated Biphenyls-Contaminated Waste (PCBs)	X		X	
New Mexico Special Waste	X		X	X
Industrial Waste	X		X	X
Characterization Method				
Acceptable knowledge (AK): Existing Data/Documentation	X	X		
AK: Site Characterization	X			X
Direct Sampling of Waste	X		X	X
Analytical Testing				
Volatile Organic Compounds (VOCs) (EPA 8260-B)	X		X	X
Semivolatile Organic Compounds (SVOCs) (EPA 8270-C)	X		X	X
Organic Pesticides (EPA 8081-A)	X[4]		X[4]	X[4]
Organic Herbicides (EPA 8151-A)	X[4]		X[4]	X[4]
PCBs (EPA 8082)	X[4]		X[4]	X[4]
Total Metals (EPA 6010-B/7471-A or EPA 6020)	X		X	X
Total Cyanide (EPA 9012-A)	X[4]		X[4]	X[4]
High Explosives Constituents (EPA 8330/8321-A)	X[4]		X[4]	X[4]
Asbestos (EPA 600M4)	X[4]			
Total petroleum hydrocarbon (TPH)-GRO (EPA 8015-M)	X[4]		X	X[4]

Table 3.1-1 (continued)

Waste Description	Waste Stream # 5 Excavated Man Made Debris	Waste Stream #6 Municipal Solid Waste	Waste Stream #7 Petroleum Contam Soils	Waste Stream #8 Returned or Excess Samples
TPH-DRO (EPA 8015-M)	X[4]		X	X[4]
Toxicity characteristic leaching procedure (TCLP) Metals (EPA 1311/6010-B)	X[4]		X[4]	X[4]
TCLP Organics (EPA 1311/8260-B & 1311/8270-C)				
TCLP Pest. & Herb. (EPA 1311/8081-A/1311/8151-A)				
Gross Alpha (alpha counting) (EPA 900)	X[4]		X[4]	X[4]
Gross Beta (beta counting) (EPA 900)	X[4]		X[4]	X[4]
Tritium (liquid scintillation) (EPA 906.0)	X		X	X
Gamma spectroscopy (EPA 901.1)	X[4]		X[4]	X[4]
Isotopic plutonium (HASL-300)	X		X	X
Isotopic uranium (HASL-300)	X		X	X
Total uranium (EPA 6020)	X		X	X
Strontium-90 (EPA 905)	X		X	X
Americium-241 (HASL-300)	X		X	X
Perchlorates (EPA 6850)	X		X	X
Nitrates/Nitrites (EPA 300.09-soil or 343.2-water)	X		X	X
Oil / Grease (EPA 1665)				
Fluorine, Chorine, Sulfate (EPA 300)				
TTO (EPA 8260-B and EPA 8270-C)[2]	**Request VOCs and SVOCs above**			
Total Suspended & Dissolved Solids (TSS) and Total Dissolved Solids (TDS) (EPA 160.1 and 160.2)				
Chemical Oxygen Demand (COD) (EPA 410.4)				
pH (EPA 904c)				
Microtox or Biological Oxygen Demand (BOD)[3]				

[1]in addition to other analytes needed to characterize the waste (e.g., VOC, SVOC, total metals), analyze for TSS, TDS, Oil and Grease, gross alpha, gross beta, tritium, and pH for liquids destined for the LANL sanitary waste water system (SWWS). For wastes destined for the RLWTF additional constituents include TTO,TSS, COD, pH, total nitrates/nitrites, and gross alpha, gross beta (not including tritium), and gross gamma **or** the sum of individual alpha-, beta-, and gamma-emitting nuclides. Submit a sampling request to http://esp-esh-as01-f5.lanl.gov/~esh19/database/rfa_form.shtml .

[2]TTO is the total of volatile organic and semi-volatile organic compound contaminants. Request methods EPA 8260-B (VOCs) and EPA 8270-C (SVOCs).

[3] If Microtox analysis is not available, request BOD. Submit a sampling request to http://esp-esh-as01-f5.lanl.gov/~esh19/database/rfa_form.shtml .

[4] If needed

Signatures	Date
Project Manager: Kent Rich	6/23/10
Preparer: Kevin Krause	6/24/10
Waste Management Coordinator: Michael Le Scouarnec	6/23/10
ENV-RCRA Representative: Ann Sherrard	6/23/10
Waste Acceptance Representative: Andy Alecio for Andy Elicio	6/23/10
Waste Certification Program Representative: Michelle Coriz	6/23/10

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Waste Profile Form

For rapid processing, complete all sections in black or blue ink and mail to: Waste Acceptance Group at MS J496.

For assistance with completing this form, contact your WMC. Click here for instruction in completing the form.

Contact (*if other than given below*)	Reference Number (*for Waste Acceptance Group Use Only*)

Generator's Z Number	Waste Generator's Name (*print*)	WMC's Z Number	WMC's Name (*print*)	Generator's Phone
177319	Kent Rich	135015	Mike Le Scouarnec	505-665-5011

Generator's Mail Stop	Waste Generating Group	Waste Stream Technical Area	Building	Room	WMC Phone
M992	PMFS-DO	05	NA	NA	505-665-5622

Waste Accumulation (*check only one*)

- ☐ Satellite Accumulation Area — Site No: _____
- ☐ Less-than-90-days Storage Area — Site No: _____
- ☐ TSDF — Site No: _____
- ☐ Universal Waste Storage Area — Site No: _____
- ☐ Used Oil for Recycle — Site No: _____

ER Use Only

- ☒ ER Site — SWMU/AOC No. CU 05-005(b)-00

- ☐ PCBs Storage Area — Site No: _____
- ☐ NM Special Waste — Site No: _____
- ☐ Rad Staging Area — Site No: _____
- ☐ Rad Storage Area — Site No: _____
- ☐ None of the Above — CU 05-005(b)-00

Method of Characterization (*check as many as apply*)

☐ Chemical Physical Analysis	☐ Attached	Sample No: _____
☐ Radiological Analysis	☐ Attached	Sample No: _____
☐ PCB Analysis	☐ Attached	Sample No: _____
☒ Acceptable Knowledge Documentation	☒ Attached	Documentation No: See Section 5, #3
☐ MSDS	☐ Attached	

Section 1 – Waste Prevention/Minimization (*answer all questions*)

Can hazard segregation, elimination, or material substitution be used?	☐ Yes (*provide comments*)	☒ No	
Can any of the materials in the waste stream be recycled or reused?	☐ Yes (*provide comments*)	☒ No	
Has waste minimization been incorporated into procedures or other process controls?	☒ Yes	☐ No (*provide comments*)	
Can this waste be generated outside a RCA?	☐ Yes (*provide comments*)	☐ No	☒ N/A

Comments:

Section 2 – Chemical and Physical Information

Waste Type (*check only one*)

- ☐ Unused/Unspent Chemical (complete all sections as appropriate)
- ☐ Process Waste/Spent Chemical/Other (complete all sections)

Radiological Information

Was Waste generated in a RCA?

- ☐ Yes ☐ No
- ☐ Non-radioactive
- ☐ Radioactive – Low Level
- ☐ Radioactive – Transuranic

Waste Destination (*check only one*)

- ☐ SWWS (complete Attachment 1)
- ☐ RLWTF (complete Attachment 2
- ☐ RLWTP (complete Attachment 3)
- ☐ TA-16/HE (complete Attachment 4)
- ☐ NTS (complete Attachment 5)

Classification Information

- ☒ Unclassified
- ☐ Classified/Sensitive

Waste Category (*check all that apply*)

- ☒ Inorganic
- ☐ Organic
- ☐ Solvent*
- ☐ Degreaser*
- ☐ Dioxin
- ☐ Electroplating
- ☐ Treated Hazardous Waste or Residue
- ☐ No-Longer Contained-In
- ☐ Explosive Process
- ☐ Infectious/Medical
- ☐ Biological
- ☐ Beryllium
- ☐ Empty Container (see instructions)
- ☐ Battery (see instructions)

Asbestos ☐ Friable ☐ non-friable

PCB Source Concentration

- ☐ PCB < 50 ppm
- ☐ PCB ≥ 50 - < 500 ppm
- ☐ PCB ≥ 500 ppm
- ☐ Hazardous Waste Contaminated Soil
- ☐ Untreated Hazardous Debris
- ☐ Commercial Solid Waste
- ☒ Other (describe below)

* See instructions

Waste Source (*check only one*)

Waste Source A

- ☐ Decon
- ☐ Materials Processing Production
- ☐ Research/Development/Testing
- ☐ Scheduled Maintenance
- ☐ Housekeeping - Routine
- ☐ Spill Cleanup - Routine
- ☐ Sampling – Routine Monitoring
- ☐ Other (describe below)

Waste Source B

- ☐ Abatement
- ☐ Construction/Upgrades
- ☐ Demolition
- ☐ Decon/Decom
- ☐ Investigative Derived
- ☐ Orphan/Legacy
- ☐ Remediation/Restoration
- ☐ Repacking (secondary)
- ☐ Unscheduled Maintenance
- ☐ Housekeeping (non-routine)
- ☐ Spill Cleanup (non-routine)
- ☐ Non-Petroleum Tanks
- ☐ Petroleum Tanks

☐ Other (describe below)

Waste Matrix (*check only one*)

Gas

- ☐ ≤1.5 Atmospheres Pressure
- ☐ >1.5 Atmospheres Pressure
- ☐ Liquefied Compressed Gas

Liquid

- ☐ Aqueous
- ☐ Non-Aqueous
- ☐ Suspended Solids/Aqueous
- ☐ Suspended Solids/Non-Aqueous

Solid

- ☐ Powder/Ash/Dust
- ☐ Solid
- ☐ Sludge
- ☐ Absorbed/Solidified Liquid
- ☐ Debris

Matrix Type (*check only one*)

- ☐ Homogeneous
- ☐ Heterogeneous

(describe below)

Non-hazardous metal debris such as wire, nails, etc.

Estimated Annual Volume (m^3):

Gallons.

Section 3 – Process and Waste Description

Process Description:
Waste was generated during man made debris cleanup activities at TA-05. The debris were generated when building 15 burned down in 1960 and consists of inorganic metal waste such as nails, wire, and small pieces of iron scrap. The waste was collected from the ground in the former building footprint, field deconed, with fantastic spray kimwipes, and placed into a 5-gallon poly. No gross soil contamination is present. PPE and Kimwipes were placed into lead impacted soil drum.

Waste Description:

Inorganic man made metal debris such as nails, wire, and iron metal scraps.

Section 4 – Characteristics

Ignitability (*check only one*)

(°F)	(°C)
☐ < 73	< 22.8
☐ 73 – 99	22.8 - 37.2
☐ 100 – 139	37.8 - 59.4
☐ 140 –200	60.0 - 93.3
☐ > 200	> 93.3

☐ EPA Ignitable – Non-liquid
☐ DOT Flammable Gas
☐ DOT Oxidizer
☒ Not Ignitable

Corrosivity (*check only one*) (pH)
☐ ≤ 2.0
☐ 2.1 – 4.0
☐ 4.1 – 6.0
☐ 6.1 – 9.0
☐ 9.1 - 12.4
☐ ≥ 12.5
☐ Liquid corrosive to steel
☒ Non-aqueous

Reactivity (*check as many as apply*)
☐ RCRA Unstable
☐ Water Reactive
☐ Cyanide Bearing
☐ Sulfide Bearing
☐ Pyrophoric
☐ Shock Sensitive
☐ Explosive - DOT Div.: _____
☒ Non-reactive

Boiling Point (check only one)

(°F)	(°C)
☐ ≤ 95	≤ 35
☐ > 95	> 35

☒ Not applicable

Identify for all contaminants listed.	Characterization Method: AK	TCLP	Total	None or Non-detect	Concentration of Contaminants: Contaminant present at Minimum	Maximum	Regulatory Limit
Toxicity Characteristic Metals					(10,000 ppm = 1%)		
Arsenic	☒	☐	☐	☒	to	ppm	5.0 ppm
Barium	☒	☐	☐	☒	to	ppm	100.0 ppm
Cadmium	☒	☐	☐	☒	to	ppm	1.0 ppm
Chromium (Total)	☒	☐	☐	☒	to	ppm	5.0 ppm
Lead	☒	☐	☐	☒	to	ppm	5.0 ppm
Mercury	☒	☐	☐	☒	to	ppm	0.2 ppm
Selenium	☒	☐	☐	☒	to	ppm	1.0 ppm
Silver	☒	☐	☐	☒	to	ppm	5.0 ppm
Toxicity Characteristic Organics							
Benzene	☒	☐	☐	☒	to	ppm	0.5 ppm
Carbon Tetrachloride	☒	☐	☐	☒	to	ppm	0.5 ppm
Chlorobenzene	☒	☐	☐	☒	to	ppm	100.0 ppm
Chloroform	☒	☐	☐	☒	to	ppm	6.0 ppm
o – cresol	☒	☐	☐	☒	to	ppm	200.0 ppm
m - cresol	☒	☐	☐	☒	to	ppm	200.0 ppm
p – cresol	☒	☐	☐	☒	to	ppm	200.0 ppm
Cresol – mixed	☒	☐	☐	☒	to	ppm	200.0 ppm
1,4-Dichlorobenzene	☒	☐	☐	☒	to	ppm	7.5 ppm
1,2-Dichloroethane	☒	☐	☐	☒	to	ppm	0.5 ppm
1,1-Dichloroethylene	☒	☐	☐	☒	to	ppm	0.7 ppm
2,4-Dinitrotoluene	☒	☐	☐	☒	to	ppm	0.13 ppm
Hexachlorobenzene	☒	☐	☐	☒	to	ppm	0.13 ppm
Hexachlorobutadiene	☒	☐	☐	☒	to	ppm	0.5 ppm
Hexachloroethane	☒	☐	☐	☒	to	ppm	3.0 ppm
Methyl ethyl ketone	☒	☐	☐	☒	to	ppm	200.0 ppm
Nitrobenzene	☒	☐	☐	☒	to	ppm	2.0 ppm
Pentachlorophenol	☒	☐	☐	☒	to	ppm	100.0 ppm
Pyridine	☒	☐	☐	☒	to	ppm	5.0 ppm
Tetrachloroethylene	☒	☐	☐	☒	to	ppm	0.7 ppm
Trichloroethylene	☒	☐	☐	☒	to	ppm	0.5 ppm
2,4,5-Trichlorophenol	☒	☐	☐	☒	to	ppm	400.0 ppm
2,4,6-Trichlorophenol	☒	☐	☐	☒	to	ppm	2.0 ppm
Vinyl chloride	☒	☐	☐	☒	to	ppm	0.2 ppm
Herbicides and Pesticides							
Chlordane	☒	☐	☐	☒	to	ppm	0.03 ppm
2,4-D	☒	☐	☐	☒	to	ppm	10.0 ppm
Endrin	☒	☐	☐	☒	to	ppm	0.02 ppm
Heptachlor (& its epoxide)	☒	☐	☐	☒	to	ppm	0.008 ppm
Lindane	☒	☐	☐	☒	to	ppm	0.4 ppm
Methoxychlor	☒	☐	☐	☒	to	ppm	10.0 ppm
Toxaphene	☒	☐	☐	☒	to	ppm	0.5 ppm
2,4,5-TP (Silvex)	☒	☐	☐	☒	to	ppm	1.0 ppm

Section 5 – Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constituents (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number." Contact Waste Acceptance at 5-4000 for assistance.

CAS No.	Name of constituent	Minimum		Maximum	
N/A	Inorganic man made debris	99.5	to	100	%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
	Total of max. ranges of this section and page 2		101		in %

Additional Information (Use additional sheet if necessary.)

If additional information is available on the chemical, physical, or radiological character of the waste not covered on this form, provide it below

1. WSCF: EP2010-0246
2. Waste Stream #5 - Excavated Man Made Debris
3. RP-1 Survey Number CAP 11 XXXX.
4. SMWU/AOC: CU 05-005(b)-00.
5. Due diligence for CU 05-005(b)-00 is attached.
6. Based on historical information, there is no documentation in directing use, storage or manufacture of herbicides and pesticides at this location.
7. Visual inspection, and waste determination was made by Kim Oman, on 02//2011. The waste was determined to non-hazardous metal man made debris.

Section 6 - Work Control Documentation (answer all questions)

Do the procedures for this process cover how to manage this waste? ☐ Yes ☐ No (*provide comments*)

Do the procedures for this process address controls to prevent changes to waste constituents and concentrations or addition or removal of waste to/from containers? ☐ Yes ☐ No (*provide comments*)

Comments:

Section 7 – Packaging and Storage Control

Describe how the waste will be packaged in according to the applicable WAC.

DOT approved containers.

Identify the storage management controls that will be used for this waste stream: (*check all that apply*)

☐ Tamper Indication Devices ☐ Limited use locks with log-in for waste ☐ Locked cabinet or building ☒ Other (describe) Controlled Site

Section 8 – Waste Certification Statements (*check only one*)

☐ Waste appears to meet WAC attachment for: LANL WAC, Attachement 14. Non-Hazardous Waste

☐ Waste stream needs exception/exemption for treatment, storage, or disposal at:

☐ Waste does not meet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Principle Associate Director for Weapons Programs [PADWP] for assistance.)

Waste Generator Certification: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature: _____ Date: _____

Waste Management Coordinator: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC.

Signature: _____ Date: _____

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Attachment 4 - LDR and UHC Information

Identify category and presence of any constituents listed below (*equal to or above limit*).

Non-Wastewater/Wastewater Category (*check only one*)

☐ Non Wastewater ☐ Wastewater [as defined by 40 CFR 268.2(f)] ☐ Lab Pack [40 CFR 268.42(c)] **Sign Certification #1**

Notifications and Certifications – Check the applicable boxes

Generator Requirements:

☐ This shipment contains hazardous waste contaminated soil that does not meet treatment standards **Sign Certification #2**
☐ This shipment contains untreated hazardous debris to be treated to 40 CFR 268.45 treatment standards **(No certification)**
☐ Hazardous wastes (except soil) meeting treatment standards at point of generation **Sign Certification #3**
☐ Hazardous wastes contaminated soil meeting treatment standards at point of generation **Sign Certification #4**

TSDF or Generator Treatment:

☐ TSDF Treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 **Sign Certification #5**
☐ Generator Treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 **Sign Certification #6**
☐ Hazardous wastes contaminated soil treated to 40 CFR 268.49 **Sign Certification #7**
☐ Wastes or Residues from characteristic hazardous waste treatment meeting treatment standards and UTS **Sign Certification #8**
☐ Wastes or Residues from characteristic hazardous waste treatment not meeting UTS **Sign Certification #9**
☐ Other TSDF wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed **Sign Certification #10**
☒ Other Generator wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed **Sign Certification #11**

Notification of Underlying Hazardous Constituents

(*Check the applicable underlying constituents above the concentration levels for D001 through D043 characteristic wastes only*)

☒ ***No Underlying Hazardous Constituents in this waste stream.***

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	Acenaphthylene	208-96-8	0.059	3.4	34
☐	Acenaphthene	83-32-9	0.059	3.4	34
☐	Acetone	67-64-1	0.28	160	1600
☐	Acetonitrile	75-05-8	5.6	38	380
☐	Acetophenone	96-86-2	0.010	9.7	97
☐	2-Acetylaminofluorene	53-96-3	0.059	140	1400
☐	Acrolein	107-02-8	0.29	NA	NA
☐	Acrylamide	79-06-1	19	23	230
☐	Acrylonitrile	107-13-1	0.24	84	840
☐	Aldicarb sulfone	1646-88-4	0.056	0.28	2.8
☐	Aldrin	309-00-2	0.021	0.066	0.66
☐	4-Aminobiphenyl	92-67-1	0.13	NA	NA
☐	Aniline	62-53-3	0.81	14	140
☐	o-Anisidine (2-methoxyaniline)	90-04-0	0.010	0.66	6.6
☐	Anthracene	120-12-7	0.059	3.4	34
☐	Aramite	140-57-8	0.36	NA	NA
☐	alpha-BHC	319-84-6	0.00014	0.066	0.66
☐	beta-BHC	319-85-7	0.00014	0.066	0.66
☐	delta-BHC	319-86-8	0.023	0.066	0.66
☐	gamma-BHC	58-89-9	0.0017	0.066	0.66
☐	Barban	101-27-9	0.056	1.4	14
☐	Bendiocarb	22781-23-3	0.056	1.4	14
☐	Benomyl	17804-35-2	0.056	1.4	14
☐	Benzene	71-43-2	0.14	10	100
☐	Benz(a)anthracene	56-55-3	0.059	3.4	34
☐	Benzal chloride	98-87-3	0.055	6.0	60
☐	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68
☐	Benzo(k)fluoranthene	207-08-9	0.11	6.8	68

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Waste Profile Form

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For assistance with completing this form, contact your WMC. Click here for instruction in completing the form.

Contact (*if other than given below*)	Reference Number (*for Waste Acceptance Group Use Only*)

Generator's Z Number	Waste Generator's Name (*print*)	WMC's Z Number	WMC's Name (*print*)	Generator's Phone
177319	Kent Rich	135015	Mike Le Scouarnec	505-665-5011

Generator's Mail Stop	Waste Generating Group	Waste Stream Technical Area	Building	Room	WMC Phone
M992	PMFS-DO	05	NA	NA	505-665-5622

Waste Accumulation (*check only one*)

- ☐ Satellite Accumulation Area — Site No: _____
- ☐ Less-than-90-days Storage Area — Site No: _____
- ☐ TSDF — Site No: _____
- ☐ Universal Waste Storage Area — Site No: _____
- ☐ Used Oil for Recycle — Site No: _____

ER Use Only

- ☒ ER Site — SWMU/AOC No. CU 05-005(b)-00

- ☐ PCBs Storage Area — Site No: _____
- ☐ NM Special Waste — Site No: _____
- ☐ Rad Staging Area — Site No: _____
- ☐ Rad Storage Area — Site No: _____
- ☐ None of the Above — CU 05-005(b)-00

Method of Characterization (*check as many as apply*)

☐ Chemical Physical Analysis	☐ Attached	Sample No: _____
☐ Radiological Analysis	☐ Attached	Sample No: _____
☐ PCB Analysis	☐ Attached	Sample No: _____
☒ Acceptable Knowledge Documentation	☒ Attached	Documentation No: See Section 5, #3
☐ MSDS	☐ Attached	

Section 1 – Waste Prevention/Minimization (*answer all questions*)

Can hazard segregation, elimination, or material substitution be used?	☐ Yes (*provide comments*)	☒ No	
Can any of the materials in the waste stream be recycled or reused?	☐ Yes (*provide comments*)	☒ No	
Has waste minimization been incorporated into procedures or other process controls?	☒ Yes	☐ No (*provide comments*)	
Can this waste be generated outside a RCA?	☐ Yes (*provide comments*)	☐ No	☒ N/A

Comments:

Section 2 – Chemical and Physical Information

Waste Type (*check only one*)

- ☐ Unused/Unspent Chemical (complete all sections as appropriate)
- ☐ Process Waste/Spent Chemical/Other (complete all sections)

Radiological Information

Was Waste generated in a RCA?

- ☐ Yes ☐ No
- ☐ Non-radioactive
- ☐ Radioactive – Low Level
- ☐ Radioactive – Transuranic

Waste Destination (*check only one*)

- ☐ SWWS (complete Attachment 1)
- ☐ RLWTF (complete Attachment 2
- ☐ RLWTP (complete Attachment 3)
- ☐ TA-16/HE (complete Attachment 4)
- ☐ NTS (complete Attachment 5)

Classification Information

- ☒ Unclassified
- ☐ Classified/Sensitive

Waste Category (*check all that apply*)

- ☒ Inorganic
- ☐ Organic
- ☐ Solvent*
- ☐ Degreaser*
- ☐ Dioxin
- ☐ Electroplating
- ☐ Treated Hazardous Waste or Residue
- ☐ No-Longer Contained-In
- ☐ Explosive Process
- ☐ Infectious/Medical
- ☐ Biological
- ☐ Beryllium
- ☐ Empty Container (see instructions)
- ☐ Battery (see instructions)

Asbestos ☐ Friable ☐ non-friable

PCB Source Concentration

- ☐ PCB < 50 ppm
- ☐ PCB ≥ 50 - < 500 ppm
- ☐ PCB ≥ 500 ppm
- ☐ Hazardous Waste Contaminated Soil
- ☐ Untreated Hazardous Debris
- ☐ Commercial Solid Waste
- ☒ Other (describe below)

* See instructions

Waste Source (*check only one*)

Waste Source A

- ☐ Decon
- ☐ Materials Processing Production
- ☐ Research/Development/Testing
- ☐ Scheduled Maintenance
- ☐ Housekeeping - Routine
- ☐ Spill Cleanup - Routine
- ☐ Sampling – Routine Monitoring
- ☐ Other (describe below)

Waste Source B

- ☐ Abatement
- ☐ Construction/Upgrades
- ☐ Demolition
- ☐ Decon/Decom
- ☐ Investigative Derived
- ☐ Orphan/Legacy
- ☒ Remediation/Restoration
- ☐ Repacking (secondary)
- ☐ Unscheduled Maintenance
- ☐ Housekeeping (non-routine)
- ☐ Spill Cleanup (non-routine)
- ☐ Non-Petroleum Tanks
- ☐ Petroleum Tanks

☐ Other (describe below)

Waste Matrix (*check only one*)

Gas

- ☐ ≤1.5 Atmospheres Pressure
- ☐ >1.5 Atmospheres Pressure
- ☐ Liquefied Compressed Gas

Liquid

- ☐ Aqueous
- ☐ Non-Aqueous
- ☐ Suspended Solids/Aqueous
- ☐ Suspended Solids/Non-Aqueous

Solid

- ☒ Powder/Ash/Dust
- ☐ Solid
- ☐ Sludge
- ☐ Absorbed/Solidified Liquid
- ☐ Debris

Matrix Type (*check only one*)

- ☒ Homogeneous
- ☐ Heterogeneous

(describe below)

Non-hazardous metal debris such as wire, nails, etc.

Estimated Annual Volume (m^3):

Gallons.

Section 3 – Process and Waste Description

Process Description:
Waste was generated during man made debris cleanup activities at TA-05. The debris were generated when building 15 burned down in 1960 and consists of inorganic metal waste such as nails, wire, and small pieces of iron scrap. The waste was collected from the ground in the former building footprint, field deconed, with fantastic spray kimwipes, and placed into a 5-gallon poly. No gross soil contamination is present. PPE and Kimwipes were placed into lead impacted soil drum.

Waste Description:

Inorganic man made metal debris such as nails, wire, and iron metal scraps.

Section 4 – Characteristics

Ignitability (*check only one*)

(°F)	(°C)
☐ < 73	< 22.8
☐ 73 – 99	22.8 - 37.2
☐ 100 – 139	37.8 - 59.4
☐ 140 –200	60.0 - 93.3
☐ > 200	> 93.3

☐ EPA Ignitable – Non-liquid
☐ DOT Flammable Gas
☐ DOT Oxidizer
☒ Not Ignitable

Corrosivity (*check only one*) (pH)
☐ ≤ 2.0
☐ 2.1 – 4.0
☐ 4.1 – 6.0
☐ 6.1 – 9.0
☐ 9.1 - 12.4
☐ ≥ 12.5
☐ Liquid corrosive to steel
☒ Non-aqueous

Reactivity (*check as many as apply*)
☐ RCRA Unstable
☐ Water Reactive
☐ Cyanide Bearing
☐ Sulfide Bearing
☐ Pyrophoric
☐ Shock Sensitive
☐ Explosive - DOT Div.: _____
☒ Non-reactive

Boiling Point (check only one)

(°F)	(°C)
☐ ≤ 95	≤ 35
☐ > 95	> 35

☒ Not applicable

Identify for all contaminants listed.	Characterization Method: AK	TCLP	Total	None or Non-detect	Concentration of Contaminants: Contaminant present at Minimum	Maximum	Regulatory Limit
Toxicity Characteristic Metals					(10,000 ppm = 1%)		
Arsenic	☒	☐	☐	☒	to	ppm	5.0 ppm
Barium	☒	☐	☐	☒	to	ppm	100.0 ppm
Cadmium	☒	☐	☐	☒	to	ppm	1.0 ppm
Chromium (Total)	☒	☐	☐	☒	to	ppm	5.0 ppm
Lead	☒	☐	☐	☒	to	ppm	5.0 ppm
Mercury	☒	☐	☐	☒	to	ppm	0.2 ppm
Selenium	☒	☐	☐	☒	to	ppm	1.0 ppm
Silver	☒	☐	☐	☒	to	ppm	5.0 ppm
Toxicity Characteristic Organics							
Benzene	☒	☐	☐	☒	to	ppm	0.5 ppm
Carbon Tetrachloride	☒	☐	☐	☒	to	ppm	0.5 ppm
Chlorobenzene	☒	☐	☐	☒	to	ppm	100.0 ppm
Chloroform	☒	☐	☐	☒	to	ppm	6.0 ppm
o – cresol	☒	☐	☐	☒	to	ppm	200.0 ppm
m - cresol	☒	☐	☐	☒	to	ppm	200.0 ppm
p – cresol	☒	☐	☐	☒	to	ppm	200.0 ppm
Cresol – mixed	☒	☐	☐	☒	to	ppm	200.0 ppm
1,4-Dichlorobenzene	☒	☐	☐	☒	to	ppm	7.5 ppm
1,2-Dichloroethane	☒	☐	☐	☒	to	ppm	0.5 ppm
1,1-Dichloroethylene	☒	☐	☐	☒	to	ppm	0.7 ppm
2,4-Dinitrotoluene	☒	☐	☐	☒	to	ppm	0.13 ppm
Hexachlorobenzene	☒	☐	☐	☒	to	ppm	0.13 ppm
Hexachlorobutadiene	☒	☐	☐	☒	to	ppm	0.5 ppm
Hexachloroethane	☒	☐	☐	☒	to	ppm	3.0 ppm
Methyl ethyl ketone	☒	☐	☐	☒	to	ppm	200.0 ppm
Nitrobenzene	☒	☐	☐	☒	to	ppm	2.0 ppm
Pentachlorophenol	☒	☐	☐	☒	to	ppm	100.0 ppm
Pyridine	☒	☐	☐	☒	to	ppm	5.0 ppm
Tetrachloroethylene	☒	☐	☐	☒	to	ppm	0.7 ppm
Trichloroethylene	☒	☐	☐	☒	to	ppm	0.5 ppm
2,4,5-Trichlorophenol	☒	☐	☐	☒	to	ppm	400.0 ppm
2,4,6-Trichlorophenol	☒	☐	☐	☒	to	ppm	2.0 ppm
Vinyl chloride	☒	☐	☐	☒	to	ppm	0.2 ppm
Herbicides and Pesticides							
Chlordane	☒	☐	☐	☒	to	ppm	0.03 ppm
2,4-D	☒	☐	☐	☒	to	ppm	10.0 ppm
Endrin	☒	☐	☐	☒	to	ppm	0.02 ppm
Heptachlor (& its epoxide)	☒	☐	☐	☒	to	ppm	0.008 ppm
Lindane	☒	☐	☐	☒	to	ppm	0.4 ppm
Methoxychlor	☒	☐	☐	☒	to	ppm	10.0 ppm
Toxaphene	☒	☐	☐	☒	to	ppm	0.5 ppm
2,4,5-TP (Silvex)	☒	☐	☐	☒	to	ppm	1.0 ppm

Section 5 – Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constituents (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number." Contact Waste Acceptance at 5-4000 for assistance.

CAS No.	Name of constituent	Minimum		Maximum	
N/A	Inorganic man made debris	99.5	to	100	%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
	Total of max. ranges of this section and page 2		101		in %

Additional Information (Use additional sheet if necessary.)

If additional information is available on the chemical, physical, or radiological character of the waste not covered on this form, provide it below

1. WSCF: EP2010-0246
2. Waste Stream #5 - Excavated Man Made Debris
3. RP-1 Survey Number CAP 11 XXXX.
4. SMWU/AOC: CU 05-005(b)-00.
5. Due diligence for CU 05-005(b)-00 is attached.
6. Based on historical information, there is no documentation in directing use, storage or manufacture of herbicides and pesticides at this location.
7. Visual inspection, and waste determination was made by Kim Oman, on 02//2011. The waste was determined to non-hazardous metal man made debris.

Section 6 - Work Control Documentation (answer all questions)

Do the procedures for this process cover how to manage this waste? ☐ Yes ☐ No (*provide comments*)

Do the procedures for this process address controls to prevent changes to waste constituents and concentrations or addition or removal of waste to/from containers? ☐ Yes ☐ No (*provide comments*)

Comments:

Section 7 – Packaging and Storage Control

Describe how the waste will be packaged in according to the applicable WAC.

DOT approved containers.

Identify the storage management controls that will be used for this waste stream: (*check all that apply*)

☐ Tamper Indication Devices ☐ Limited use locks with log-in for waste ☐ Locked cabinet or building ☒ Other (describe) Controlled Site

Section 8 – Waste Certification Statements (*check only one*)

☐ Waste appears to meet WAC attachment for: LANL WAC, Attachement 14. Non-Hazardous Waste

☐ Waste stream needs exception/exemption for treatment, storage, or disposal at:

☐ Waste does not meet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Principle Associate Director for Weapons Programs [PADWP] for assistance.)

Waste Generator Certification: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature: _____ Date: _____

Waste Management Coordinator: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC.

Signature: _____ Date: _____

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Attachment 4 - LDR and UHC Information

Identify category and presence of any constituents listed below (*equal to or above limit*).

Non-Wastewater/Wastewater Category (*check only one*)

☐ Non Wastewater ☐ Wastewater [as defined by 40 CFR 268.2(f)] ☐ Lab Pack [40 CFR 268.42(c)] **Sign Certification #1**

Notifications and Certifications – Check the applicable boxes

Generator Requirements:

☐ This shipment contains hazardous waste contaminated soil that does not meet treatment standards **Sign Certification #2**
☐ This shipment contains untreated hazardous debris to be treated to 40 CFR 268.45 treatment standards **(No certification)**
☐ Hazardous wastes (except soil) meeting treatment standards at point of generation **Sign Certification #3**
☐ Hazardous wastes contaminated soil meeting treatment standards at point of generation **Sign Certification #4**

TSDF or Generator Treatment:

☐ TSDF Treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 **Sign Certification #5**
☐ Generator Treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 **Sign Certification #6**
☐ Hazardous wastes contaminated soil treated to 40 CFR 268.49 **Sign Certification #7**
☐ Wastes or Residues from characteristic hazardous waste treatment meeting treatment standards and UTS **Sign Certification #8**
☐ Wastes or Residues from characteristic hazardous waste treatment not meeting UTS **Sign Certification #9**
☐ Other TSDF wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed **Sign Certification #10**
☒ Other Generator wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed **Sign Certification #11**

Notification of Underlying Hazardous Constituents

(*Check the applicable underlying constituents above the concentration levels for D001 through D043 characteristic wastes only*)

☒ ***No Underlying Hazardous Constituents in this waste stream.***

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	Acenaphthylene	208-96-8	0.059	3.4	34
☐	Acenaphthene	83-32-9	0.059	3.4	34
☐	Acetone	67-64-1	0.28	160	1600
☐	Acetonitrile	75-05-8	5.6	38	380
☐	Acetophenone	96-86-2	0.010	9.7	97
☐	2-Acetylaminofluorene	53-96-3	0.059	140	1400
☐	Acrolein	107-02-8	0.29	NA	NA
☐	Acrylamide	79-06-1	19	23	230
☐	Acrylonitrile	107-13-1	0.24	84	840
☐	Aldicarb sulfone	1646-88-4	0.056	0.28	2.8
☐	Aldrin	309-00-2	0.021	0.066	0.66
☐	4-Aminobiphenyl	92-67-1	0.13	NA	NA
☐	Aniline	62-53-3	0.81	14	140
☐	o-Anisidine (2-methoxyaniline)	90-04-0	0.010	0.66	6.6
☐	Anthracene	120-12-7	0.059	3.4	34
☐	Aramite	140-57-8	0.36	NA	NA
☐	alpha-BHC	319-84-6	0.00014	0.066	0.66
☐	beta-BHC	319-85-7	0.00014	0.066	0.66
☐	delta-BHC	319-86-8	0.023	0.066	0.66
☐	gamma-BHC	58-89-9	0.0017	0.066	0.66
☐	Barban	101-27-9	0.056	1.4	14
☐	Bendiocarb	22781-23-3	0.056	1.4	14
☐	Benomyl	17804-35-2	0.056	1.4	14
☐	Benzene	71-43-2	0.14	10	100
☐	Benz(a)anthracene	56-55-3	0.059	3.4	34
☐	Benzal chloride	98-87-3	0.055	6.0	60
☐	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68
☐	Benzo(k)fluoranthene	207-08-9	0.11	6.8	68

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Attachment 4 - LDR and UHC Information (continued)

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	Benzo(g,h,I)perylene	191-24-2	0.0055	1.8	18
☐	Benzo(a)pyrene	50-32-8	0.061	3.4	34
☐	Bromodichloromethane	75-27-4	0.35	15	150
☐	Bromomethane (Methyl bromide)	74-83-9	0.11	15	150
☐	4-Bromophenyl phenyl ether	101-55-3	0.055	15	150
☐	n-Butyl alcohol	71-36-3	5.6	2.6	26
☐	Butylate	2008-41-5	0.042	1.4	14
☐	Butyl benzyl phthalate	85-68-7	0.017	28	280
☐	2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	88-85-7	0.066	2.5	25
☐	Carbaryl	63-25-2	0.006	0.14	1.4
☐	Carbenzadim	10605-21-7	0.056	1.4	14
☐	Carbofuran	1563-66-2	0.006	0.14	1.4
☐	Carbofuran phenol	1563-38-8	0.056	1.4	14
☐	Carbon disulfide	75-15-0	3.8	4.8 mg/l TCLP	48 mg/l TCLP
☐	Carbon tertachloride	56-23-5	0.057	6.0	60
☐	Carbosulfan	55285-14-8	0.028	1.4	14
☐	Chlordane (alpha & gamma isomers)	57-74-9	0.0033	0.26	2.6
☐	p-Chloroaniline	106-47-8	0.46	16	160
☐	Chlorobenzene	108-90-7	0.057	6.0	60
☐	Chlorobenzilate	510-15-6	0.10	NA	NA
☐	2-Chloro-1,3-butadiene	126-99-8	0.057	0.28	2.8
☐	Chlorodibromomethane	124-48-1	0.057	15	150
☐	Chloroethane	75-00-3	0.27	6.0	60
☐	bis(2-Chloroethoxy) methane	111-91-1	0.036	7.2	72
☐	bis(2-Chloroethyl) ether	111-44-4	0.033	6.0	60
☐	Chloroform	67-66-3	0.046	6.0	60
☐	bis(2-Chloroisopropyl) ether	108-60-1	0.055	7.2	72
☐	p-Chloro-m-cresol	59-50-7	0.018	14	140
☐	2-Chloroethyl vinyl ether	110-75-8	0.062	NA	NA
☐	Chloromethane (Methyl chloride)	74-87-3	0.19	30	300
☐	2-Chloronaphthalene	91-58-7	0.055	5.6	56
☐	2-Chlorophenol	95-57-8	0.044	5.7	57
☐	3-Chloropropylene	107-05-1	0.036	30	300
☐	Chrysene	218-01-9	0.059	3.4	34
☐	p-Cresidine	120-71-8	0.010	0.66	6.6
☐	o-Cresol	95-48-7	0.11	5.6	56
☐	m-Cresol	108-39-4	0.77	5.6	56
☐	p-Cresol	106-44-5	0.77	5.6	56
☐	m-Cumenyl methylcarbamate	64-00-6	0.056	1.4	14
☐	Cyclohexanone	108-94-1	0.36	0.75 mg/l TCLP	7.5 mg/l TCLP
☐	o,p'-ddd	53-19-0	0.023	0.087	0.87
☐	p,p'-ddd	72-54-8	0.023	0.087	0.87
☐	o,p'-dde	3424-82-6	0.031	0.087	0.87
☐	p,p'-dde	72-55-9	0.031	0.087	0.87
☐	o,p'-ddt	789-02-6	0.0039	0.087	0.87
☐	p,p'-ddt	50-29-3	0.0039	0.087	0.87
☐	Dibenz(a,h)anthracene	53-70-3	0.055	8.2	82
☐	Dibenz(a,e)pyrene	192-65-4	0.061	NA	NA

Attachment 4 - LDR and UHC Information (continued)

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	1,2-Dibromo-3-chloropropane	96-12-8	0.11	15	150
☐	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	0.028	15	150
☐	Dibromomethane	74-95-3	0.11	15	150
☐	m-Dichlorobenzene	541-73-1	0.036	6.0	60
☐	o-Dichlorobenzene	95-50-1	0.088	6.0	60
☐	p-Dichlorobenzene	106-46-7	0.090	6.0	60
☐	Dichlorodifluoromethane	75-71-8	0.23	7.2	72
☐	1,1-Dichloroethane	75-34-3	0.059	6.0	60
☐	1,2-Dichloroethane	107-06-2	0.21	6.0	60
☐	1,1-Dichloroethylene	75-35-4	0.025	6.0	60
☐	trans-1,2-Dichloroethylene	156-60-5	0.054	30	300
☐	2,4-Dichlorophenol	120-83-2	0.044	14	140
☐	2,6-Dichlorophenol	87-65-0	0.044	14	140
☐	2,4-Dichlorophenoxyacetic acid (2,4-D)	94-75-7	0.72	10	100
☐	1,2-Dichloropropane	78-87-5	0.85	18	180
☐	cis-1,3-Dichloropropylene	10061-01-5	0.036	18	180
☐	trans-1,3-Dichloropropylene	10061-02-6	0.036	18	180
☐	Dieldrin	60-57-1	0.017	0.13	1.3
☐	Diethyl phthalate	84-66-2	0.20	28	280
☐	p-Dimethylaminoazobenzene	60-11-7	0.13	NA	NA
☐	2,4-Dimethylaniline (2,4-xylidine)	95-68-1	0.010	0.66	6.6
☐	2,4-Dimethyl phenol	105-67-9	0.036	14	140
☐	Dimethyl phthalate	131-11-3	0.047	28	280
☐	Di-n-butyl phthalate	84-74-2	0.057	28	280
☐	1,4-Dinitrobenzene	100-25-4	0.32	2.3	23
☐	4,6-Dinitro-o-cresol	534-52-1	0.28	160	1600
☐	2,4-Dinitrophenol	51-28-5	0.12	160	1600
☐	2,4-Dinitrotoluene	121-14-2	0.32	140	1400
☐	2,6-Dinitrotoluene	606-20-2	0.55	28	280
☐	Di-n-octyl phthalate	117-84-0	0.017	28	280
☐	Di-n-propylnitrosamine	621-64-7	0.40	14	140
☐	1,4-Dioxane	123-91-1	12.0	170	1700
☐	Diphenylamine	122-39-4	0.92	13	130
☐	Diphenylnitrosamine	86-30-6	0.92	13	130
☐	1,2-Diphenylhydrazine	122-66-7	0.087	NA	NA
☐	Disulfoton	298-04-4	0.017	6.2	62
☐	Dithiocarbamates (total)	NA	0.028	28	280
☐	Endosulfan I	959-98-8	0.023	0.066	0.66
☐	Endosulfan II	33213-65-9	0.029	0.13	1.3
☐	Endosulfan sulfate	1031-07-8	0.029	0.13	1.3
☐	Endrin	72-20-8	0.0028	0.13	1.3
☐	Endrin aldehyde	7421-93-4	0.025	0.13	1.3
☐	EPTC	759-94-4	0.042	1.4	14
☐	Ethyl acetate	141-78-6	0.34	33	330
☐	Ethyl benzene	100-41-4	0.057	10	100
☐	Ethyl cyanide (Propanenitrile)	107-12-0	0.24	360	3600

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	Ethyl ether	60-29-7	0.12	160	1600
☐	bis(2-Ethylhexyl)phthalate	117-81-7	0.28	28	280
☐	Ethyl methacrylate	97-63-2	0.14	160	1600
☐	Ethylene oxide	75-21-8	0.12	NA	NA
☐	Famphur	52-85-7	0.017	15	150
☐	Fluoranthene	206-44-0	0.068	3.4	34
☐	Fluorene	86-73-7	0.059	3.4	34
☐	Formetanate hydrochloride	23422-53-9	0.056	1.4	14
☐	Heptachlor	76-44-8	0.0012	0.066	0.66
☐	Heptachlor epoxide	1024-57-3	0.016	0.066	0.66
☐	1,2,3,4,6,7,8-Heptachlorodibenzo-pdioxin	35822-46-9	0.000035	0.0025	0.025
☐	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.000035	0.0025	0.025
☐	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.000035	0.0025	0.025
☐	Hexachlorobenzene	118-74-1	0.055	10	100
☐	Hexachlorobutadiene	87-68-3	0.055	5.6	56
☐	Hexachlorocyclopentadiene	77-47-4	0.057	2.4	24
☐	Hexachlorodibenzo-p-dioxins (HxCDDs)	NA	0.000063	0.001	0.01
☐	Hexachlorodibenzo-furans (HxCDFs)	NA	0.000063	0.001	0.01
☐	Hexachloroethane	67-72-1	0.055	30	300
☐	Hexachloropropylene	1888-71-7	0.035	30	300
☐	Indeno (1,2,3-c,d) pyrene	193-39-5	0.0055	3.4	34
☐	Iodomethane	74-88-4	0.19	65	650
☐	Isobutyl alcohol	78-83-1	5.6	170	1700
☐	Isodrin	465-73-6	0.021	0.066	0.66
☐	Isosafrole	120-58-1	0.081	2.6	26
☐	Kepone	143-50-0	0.0011	0.13	1.3
☐	Methacrylonitrile	126-98-7	0.24	84	840
☐	Methanol	67-56-1	5.6	0.75 mg/l TCLP	7.5 mg/l TCLP
☐	Methapyrilene	91-80-5	0.081	1.5	15
☐	Methiocarb	2032-65-7	0.056	1.4	14
☐	Methomyl	16752-77-5	0.028	0.14	1.4
☐	Methoxychlor	72-43-5	0.25	0.18	1.8
☐	3-Methylchlolanthrene	56-49-5	0.0055	15	150
☐	4,4-Methylene bis(2-chloroaniline)	101-14-4	0.50	30	300
☐	Methylene chloride	75-09-2	0.089	30	300
☐	Methyl ethyl ketone	78-93-3	0.28	36	360
☐	Methyl isobutyl ketone	108-10-1	0.14	33	330
☐	Methyl methacrylate	80-62-6	0.14	160	1600
☐	Methyl methansulfonate	66-27-3	0.018	NA	NA
☐	Methyl parathion	298-00-0	0.014	4.6	46
☐	Metolcarb	1129-41-5	0.056	1.4	14
☐	Mexacarbate	315-18-4	0.056	1.4	14
☐	Molinate	2212-67-1	0.042	1.4	14
☐	Naphthalene	91-20-3	0.059	5.6	56
☐	2-Naphthylamine	91-59-8	0.52	NA	NA
☐	o-Nitroaniline	88-74-4	0.27	14	140

Attachment 4 - LDR and UHC Information (continued)

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	p-Nitroaniline	100-01-6	0.028	28	280
☐	Nitrobenzene	98-95-3	0.068	14	140
☐	5-Nitro-o-toluidine	99-55-8	0.32	28	280
☐	o-Nitrophenol	88-75-5	0.028	13	130
☐	p-Nitrophenol	100-02-7	0.12	29	290
☐	N-Nitrosodiethylamine	55-18-5	0.40	28	280
☐	N-Nitrosodimethylamine	62-75-9	0.40	2.3	23
☐	N-Nitroso-di-n-butylamine	924-16-3	0.40	17	170
☐	N-Nitrosomethylethylamine	10595-95-6	0.40	2.3	23
☐	N-Nitrosomorpholine	59-89-2	0.40	2.3	23
☐	N-Nitrosopiperidine	100-75-4	0.013	35	350
☐	N-Nitrosopyrrolidine	930-55-2	0.013	35	350
☐	1,2,3,4,6,7,8,9-Octachlorodibenzo-pdioxin	3268-87-9	0.000063	0.005	0.05
☐	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
☐	Oxamyl	23135-22-0	0.056	0.28	2.8
☐	Parathion	56-38-2	0.014	4.6	46
☐	PCBs (total)	1336-36-3	0.10	10	100
☐	Pebulate	1114-71-2	0.042	1.4	14
☐	Pentachlorobenzene	608-93-5	0.055	10	100
☐	Pentachlorodibenzo-p-dioxins (PeCDDs)	NA	0.000063	0.001	0.01
☐	Pentachlorodibenzo-furans (PeCDFs)	NA	0.000035	0.001	0.01
☐	Pentachloroethane	76-01-7	0.055	6.0	60
☐	Pentachloronitrobenzene	82-68-8	0.055	4.8	48
☐	Pentachlorophenol	87-86-5	0.089	7.4	74
☐	Phenacetin	62-44-2	0.081	16	160
☐	Phenanthrene	85-01-8	0.059	5.6	56
☐	Phenol	108-95-2	0.039	6.2	62
☐	1,3-Phenylenediamine	108-45-2	0.01	0.66	6.6
☐	Phorate	298-02-2	0.021	4.6	46
☐	Phthalic acid	100-21-0	0.055	28	280
☐	Phthalic anhydride	85-44-9	0.055	28	280
☐	Physostigmine	57-47-6	0.056	1.4	14
☐	Physostigmine salicylate	57-64-7	0.056	1.4	14
☐	Promecarb	2631-37-0	0.056	1.4	14
☐	Pronamide	23950-58-5	0.093	1.5	15
☐	Propham	122-42-9	0.056	1.4	14
☐	Propoxur	114-26-1	0.056	1.4	14
☐	Prosulfocarb	52888-80-9	0.042	1.4	14
☐	Pyrene	129-00-0	0.067	8.2	82
☐	Pyridine	110-86-1	0.014	16	160
☐	Safrole	94-59-7	0.081	22	220
☐	Silvex (2,4,5-TP)	93-72-1	0.72	7.9	79
☐	1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14	140
☐	Tetrachlorodibenzo-p-dioxins (TCDDs)	NA	0.000063	0.001	0.01
☐	Tetrachlorodibenzofurans (TCDFs)	NA	0.000063	0.001	0.01
☐	1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60
☐	Tetrachloroethylene	127-18-4	0.056	6.0	60
☐	2,3,4,6-Tertachlorophenol	58-90-2	0.030	7.4	74
☐	Thiodicarb	59669-26-0	0.019	1.4	14
☐	Thiophanate-methyl	23564-05-8	0.056	1.4	14
☐	Toluene	108-88-3	0.080	10	100
☐	Toxaphene	8001-35-2	0.0095	2.6	26
☐	Triallate	2303-17-5	0.042	1.4	14
☐	Tribromomethane (Bromoform)	75-25-2	0.63	15	150
☐	2,4,6-Tribromophenol	118-79-6	0.035	7.4	74
☐	1,2,4-Trichlorobenzene	120-82-1	0.055	19	190
☐	1,1,1-Trichloroethane	71-55-6	0.054	6.0	60
☐	1,1,2-Trichloroethane	79-00-5	0.054	6.0	60
☐	Trichloroethylene	79-01-6	0.054	6.0	60
☐	Trichloromonofluoromethane	75-69-4	0.020	30	300
☐	2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74
☐	2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74
☐	2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	0.72	7.9	79
☐	1,2,3-Trichloropropane	96-18-4	0.85	30	300
☐	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.057	30	300
☐	Triethylamine	121-44-8	0.081	1.5	15
☐	tris-(2,3-Dibromopropyl) phosphate	126-72-7	0.11	0.10	1.0
☐	Vernolate	1929-77-7	0.042	1.4	14
☐	Vinyl chloride	75-01-4	0.27	6.0	60
☐	Xylenes (total)	1330-20-7	0.32	30	300
☐	Antimony	7440-36-0	1.9	1.15 mg/l TCLP	11.5 mg/l TCLP
☐	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP	50 mg/l TCLP
☐	Barium	7440-39-3	1.2	21 mg/l TCLP	210 mg/l TCLP
☐	Beryllium	7440-41-7	0.82	1.22 mg/l TCLP	12.2 mg/l TCLP
☐	Cadmium	7440-43-9	0.69	0.11 mg/l TCLP	1.1 mg/l TCLP
☐	Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP	6.0 mg/l TCLP
☐	Cyanides (Total)[4]	57-12-5	1.2	590	5900
☐	Cyanides (Amenable)[4]	57-12-5	0.86	30	300
☐	Fluoride	16984-48-8	35	NA	NA
☒	Lead	7439-92-1	0.69	0.75 mg/l TCLP	7.5 mg/l TCLP
☐	Mercury (Retort residues)	7439-97-6	NA	0.20 mg/l TCLP	2.0 mg/l TCLP
☐	Mercury - All others	7439-97-6	0.15	0.025 mg/l TCLP	0.25 mg/l TCLP
☐	Nickel	7440-02-0	3.98	11 mg/l TCLP	110 mg/l TCLP
☐	Selenium	7782-49-2	0.82	5.7 mg/l TCLP	57 mg/l TCLP
☐	Silver	7440-22-4	0.43	0.14 mg/l TCLP	1.4 mg/l TCLP
☐	Sulfide	18496-25-8	14	NA	NA
☐	Thallium	7440-28-0	1.4	0.20 mg/l TCLP	2.0 mg/l TCLP
☐	Vanadium[5]	7440-62-2	4.3	1.6 mg/l TCLP	16 mg/l TCLP
☐	Zinc[5]	7440-66-6	2.61	4.3 mg/l TCLP	43 mg/l TCLP

NOTE: Use these buttons to print or save the form. DO NOT use the browser tool bar. SAVE PRINT

Los Alamos NATIONAL LABORATORY EST.1943

Waste Profile Form

For rapid processing, complete all sections in black or blue ink and mail to: Waste Acceptance Group at MS J496.

For assistance with completing this form, contact your WMC. Click here for instruction in completing the form.

Contact (*if other than given below*)	Reference Number (*for Waste Acceptance Group Use Only*)

Generator's Z Number	Waste Generator's Name (*print*)	WMC's Z Number	WMC's Name (*print*)	Generator's Phone
177319	Kent Rich	135015	Mike Le Scouarnec	505-665-5011

Generator's Mail Stop	Waste Generating Group	Waste Stream Technical Area	Building	Room	WMC Phone
M992	PMFS-DO	05	NA	NA	505-665-5622

Waste Accumulation (*check only one*)

- ☐ Satellite Accumulation Area — Site No: _____
- ☐ Less-than-90-days Storage Area — Site No: _____
- ☐ TSDF — Site No: _____
- ☐ Universal Waste Storage Area — Site No: _____
- ☐ Used Oil for Recycle — Site No: _____

ER Use Only

- ☒ ER Site — SWMU/AOC No. CU 05-005(b)-00

- ☐ PCBs Storage Area — Site No: _____
- ☐ NM Special Waste — Site No: _____
- ☐ Rad Staging Area — Site No: _____
- ☐ Rad Storage Area — Site No: _____
- ☐ None of the Above — CU 05-005(b)-00

Method of Characterization (*check as many as apply*)

☐ Chemical Physical Analysis	☐ Attached	Sample No: _____
☐ Radiological Analysis	☐ Attached	Sample No: _____
☐ PCB Analysis	☐ Attached	Sample No: _____
☒ Acceptable Knowledge Documentation	☒ Attached	Documentation No: See Section 5, #3
☐ MSDS	☐ Attached	

Section 1 – Waste Prevention/Minimization (*answer all questions*)

Can hazard segregation, elimination, or material substitution be used?	☐ Yes (*provide comments*)	☒ No	
Can any of the materials in the waste stream be recycled or reused?	☐ Yes (*provide comments*)	☒ No	
Has waste minimization been incorporated into procedures or other process controls?	☒ Yes	☐ No (*provide comments*)	
Can this waste be generated outside a RCA?	☐ Yes (*provide comments*)	☐ No	☒ N/A
Comments:			

Section 2 – Chemical and Physical Information

Waste Type (*check only one*)

- ☐ Unused/Unspent Chemical (complete all sections as appropriate)
- ☐ Process Waste/Spent Chemical/Other (complete all sections)

Radiological Information

Was Waste generated in a RCA?

- ☐ Yes ☐ No
- ☐ Non-radioactive
- ☐ Radioactive – Low Level
- ☐ Radioactive – Transuranic

Waste Destination (*check only one*)

- ☐ SWWS (complete Attachment 1)
- ☐ RLWTF (complete Attachment 2
- ☐ RLWTP (complete Attachment 3)
- ☐ TA-16/HE (complete Attachment 4)
- ☐ NTS (complete Attachment 5)

Classification Information

- ☐ Unclassified
- ☐ Classified/Sensitive

Waste Category (*check all that apply*)

- ☒ Inorganic
- ☐ Organic
- ☐ Solvent*
- ☐ Degreaser*
- ☐ Dioxin
- ☐ Electroplating
- ☐ Treated Hazardous Waste or Residue
- ☐ No-Longer Contained-In
- ☐ Explosive Process
- ☐ Infectious/Medical
- ☐ Biological
- ☐ Beryllium
- ☐ Empty Container (see instructions)
- ☐ Battery (see instructions)

Asbestos ☐ Friable ☐ non-friable

PCB Source Concentration

- ☐ PCB < 50 ppm
- ☐ PCB ≥ 50 - < 500 ppm
- ☐ PCB ≥ 500 ppm
- ☐ Hazardous Waste Contaminated Soil
- ☐ Untreated Hazardous Debris
- ☐ Commercial Solid Waste
- ☒ Other (describe below)

* See instructions

Waste Source (*check only one*)

Waste Source A

- ☐ Decon
- ☐ Materials Processing Production
- ☐ Research/Development/Testing
- ☐ Scheduled Maintenance
- ☐ Housekeeping - Routine
- ☐ Spill Cleanup - Routine
- ☐ Sampling – Routine Monitoring
- ☐ Other (describe below)

Waste Source B

- ☐ Abatement
- ☐ Construction/Upgrades
- ☐ Demolition
- ☐ Decon/Decom
- ☐ Investigative Derived
- ☐ Orphan/Legacy
- ☐ Remediation/Restoration
- ☐ Repacking (secondary)
- ☐ Unscheduled Maintenance
- ☐ Housekeeping (non-routine)
- ☐ Spill Cleanup (non-routine)
- ☐ Non-Petroleum Tanks
- ☐ Petroleum Tanks

☐ Other (describe below)

Waste Matrix (*check only one*)

Gas

- ☐ ≤1.5 Atmospheres Pressure
- ☐ >1.5 Atmospheres Pressure
- ☐ Liquefied Compressed Gas

Liquid

- ☐ Aqueous
- ☐ Non-Aqueous
- ☐ Suspended Solids/Aqueous
- ☐ Suspended Solids/Non-Aqueous

Solid

- ☐ Powder/Ash/Dust
- ☐ Solid
- ☐ Sludge
- ☐ Absorbed/Solidified Liquid
- ☐ Debris

Matrix Type (*check only one*)

- ☐ Homogeneous
- ☐ Heterogeneous (describe below)

Non-hazardous metal debris such as wire, nails, etc.

Estimated Annual Volume (m^3):

Gallons.

Section 3 – Process and Waste Description

Process Description:
Waste was generated during man made debris cleanup activities at TA-05. The debris were generated when building 15 burned down in 1960 and consists of inorganic metal waste such as nails, wire, and small pieces of iron scrap. The waste was collected from the ground in the former building footprint, field deconed, with fantastic spray kimwipes, and placed into a 5-gallon poly. No gross soil contamination is present. PPE and Kimwipes were placed into lead impacted soil drum.

Waste Description:

Inorganic man made metal debris such as nails, wire, and iron metal scraps.

Section 4 – Characteristics

Ignitability (*check only one*)

(°F)	(°C)
☐ < 73	< 22.8
☐ 73 – 99	22.8 - 37.2
☐ 100 – 139	37.8 - 59.4
☐ 140 –200	60.0 - 93.3
☐ > 200	> 93.3

☐ EPA Ignitable – Non-liquid
☐ DOT Flammable Gas
☐ DOT Oxidizer
☒ Not Ignitable

Corrosivity (*check only one*) (pH)
☐ ≤ 2.0
☐ 2.1 – 4.0
☐ 4.1 – 6.0
☐ 6.1 – 9.0
☐ 9.1 - 12.4
☐ ≥ 12.5
☐ Liquid corrosive to steel
☒ Non-aqueous

Reactivity (*check as many as apply*)
☐ RCRA Unstable
☐ Water Reactive
☐ Cyanide Bearing
☐ Sulfide Bearing
☐ Pyrophoric
☐ Shock Sensitive
☐ Explosive - DOT Div.: _____
☒ Non-reactive

Boiling Point (check only one)

(°F)	(°C)
☐ ≤ 95	≤ 35
☐ > 95	> 35

☒ Not applicable

Identify for all contaminants listed.	Characterization Method: AK	TCLP	Total	None or Non-detect	Concentration of Contaminants: Contaminant present at Minimum	Maximum	Regulatory Limit
Toxicity Characteristic Metals					(10,000 ppm = 1%)		
Arsenic	☒	☐	☐	☒	to	ppm	5.0 ppm
Barium	☒	☐	☐	☒	to	ppm	100.0 ppm
Cadmium	☒	☐	☐	☒	to	ppm	1.0 ppm
Chromium (Total)	☒	☐	☐	☒	to	ppm	5.0 ppm
Lead	☒	☐	☐	☒	to	ppm	5.0 ppm
Mercury	☒	☐	☐	☒	to	ppm	0.2 ppm
Selenium	☒	☐	☐	☒	to	ppm	1.0 ppm
Silver	☒	☐	☐	☒	to	ppm	5.0 ppm
Toxicity Characteristic Organics							
Benzene	☒	☐	☐	☒	to	ppm	0.5 ppm
Carbon Tetrachloride	☒	☐	☐	☒	to	ppm	0.5 ppm
Chlorobenzene	☒	☐	☐	☒	to	ppm	100.0 ppm
Chloroform	☒	☐	☐	☒	to	ppm	6.0 ppm
o – cresol	☒	☐	☐	☒	to	ppm	200.0 ppm
m - cresol	☒	☐	☐	☒	to	ppm	200.0 ppm
p – cresol	☒	☐	☐	☒	to	ppm	200.0 ppm
Cresol – mixed	☒	☐	☐	☒	to	ppm	200.0 ppm
1,4-Dichlorobenzene	☒	☐	☐	☒	to	ppm	7.5 ppm
1,2-Dichloroethane	☒	☐	☐	☒	to	ppm	0.5 ppm
1,1-Dichloroethylene	☒	☐	☐	☒	to	ppm	0.7 ppm
2,4-Dinitrotoluene	☒	☐	☐	☒	to	ppm	0.13 ppm
Hexachlorobenzene	☒	☐	☐	☒	to	ppm	0.13 ppm
Hexachlorobutadiene	☒	☐	☐	☒	to	ppm	0.5 ppm
Hexachloroethane	☒	☐	☐	☒	to	ppm	3.0 ppm
Methyl ethyl ketone	☒	☐	☐	☒	to	ppm	200.0 ppm
Nitrobenzene	☒	☐	☐	☒	to	ppm	2.0 ppm
Pentachlorophenol	☒	☐	☐	☒	to	ppm	100.0 ppm
Pyridine	☒	☐	☐	☒	to	ppm	5.0 ppm
Tetrachloroethylene	☒	☐	☐	☒	to	ppm	0.7 ppm
Trichloroethylene	☒	☐	☐	☒	to	ppm	0.5 ppm
2,4,5-Trichlorophenol	☒	☐	☐	☒	to	ppm	400.0 ppm
2,4,6-Trichlorophenol	☒	☐	☐	☒	to	ppm	2.0 ppm
Vinyl chloride	☒	☐	☐	☒	to	ppm	0.2 ppm
Herbicides and Pesticides							
Chlordane	☒	☐	☐	☒	to	ppm	0.03 ppm
2,4-D	☒	☐	☐	☒	to	ppm	10.0 ppm
Endrin	☒	☐	☐	☒	to	ppm	0.02 ppm
Heptachlor (& its epoxide)	☒	☐	☐	☒	to	ppm	0.008 ppm
Lindane	☒	☐	☐	☒	to	ppm	0.4 ppm
Methoxychlor	☒	☐	☐	☒	to	ppm	10.0 ppm
Toxaphene	☒	☐	☐	☒	to	ppm	0.5 ppm
2,4,5-TP (Silvex)	☒	☐	☐	☒	to	ppm	1.0 ppm

Section 5 – Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constituents (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number." Contact Waste Acceptance at 5-4000 for assistance.

CAS No.	Name of constituent	Minimum		Maximum	
N/A	Inorganic man made debris	99.5	to	100	%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
	Total of max. ranges of this section and page 2		101		in %

Additional Information (Use additional sheet if necessary.)

If additional information is available on the chemical, physical, or radiological character of the waste not covered on this form, provide it below

1. WSCF: EP2010-0246
2. Waste Stream #5 - Excavated Man Made Debris
3. RP-1 Survey Number CAP 11 XXXX.
4. SMWU/AOC: CU 05-005(b)-00.
5. Due diligence for CU 05-005(b)-00 is attached.
6. Based on historical information, there is no documentation in directing use, storage or manufacture of herbicides and pesticides at this location.
7. Visual inspection, and waste determination was made by Kim Oman, on 02//2011. The waste was determined to non-hazardous metal man made debris.

Section 6 - Work Control Documentation (answer all questions)

Do the procedures for this process cover how to manage this waste? ☐ Yes ☐ No (*provide comments*)

Do the procedures for this process address controls to prevent changes to waste constituents and concentrations or addition or removal of waste to/from containers? ☐ Yes ☐ No (*provide comments*)

Comments:

Section 7 – Packaging and Storage Control

Describe how the waste will be packaged in according to the applicable WAC.

DOT approved containers.

Identify the storage management controls that will be used for this waste stream: (*check all that apply*)

☐ Tamper Indication Devices ☐ Limited use locks with log-in for waste ☐ Locked cabinet or building ☒ Other (describe) Controlled Site

Section 8 – Waste Certification Statements (*check only one*)

☐ Waste appears to meet WAC attachment for: LANL WAC, Attachement 14. Non-Hazardous Waste

☐ Waste stream needs exception/exemption for treatment, storage, or disposal at:

☐ Waste does not meet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Principle Associate Director for Weapons Programs [PADWP] for assistance.)

Waste Generator Certification: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature: _____ Date: _____

Waste Management Coordinator: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC.

Signature: _____ Date: _____

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Attachment 4 - LDR and UHC Information

Identify category and presence of any constituents listed below (*equal to or above limit*).

Non-Wastewater/Wastewater Category (*check only one*)

☐ Non Wastewater ☐ Wastewater [as defined by 40 CFR 268.2(f)] ☐ Lab Pack [40 CFR 268.42(c)] **Sign Certification #1**

Notifications and Certifications – Check the applicable boxes

Generator Requirements:

☐ This shipment contains hazardous waste contaminated soil that does not meet treatment standards **Sign Certification #2**
☐ This shipment contains untreated hazardous debris to be treated to 40 CFR 268.45 treatment standards **(No certification)**
☐ Hazardous wastes (except soil) meeting treatment standards at point of generation **Sign Certification #3**
☐ Hazardous wastes contaminated soil meeting treatment standards at point of generation **Sign Certification #4**

TSDF or Generator Treatment:

☐ TSDF Treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 **Sign Certification #5**
☐ Generator Treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 **Sign Certification #6**
☐ Hazardous wastes contaminated soil treated to 40 CFR 268.49 **Sign Certification #7**
☐ Wastes or Residues from characteristic hazardous waste treatment meeting treatment standards and UTS **Sign Certification #8**
☐ Wastes or Residues from characteristic hazardous waste treatment not meeting UTS **Sign Certification #9**
☐ Other TSDF wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed **Sign Certification #10**
☒ Other Generator wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed **Sign Certification #11**

Notification of Underlying Hazardous Constituents

(*Check the applicable underlying constituents above the concentration levels for D001 through D043 characteristic wastes only*)

☒ ***No Underlying Hazardous Constituents in this waste stream.***

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	Acenaphthylene	208-96-8	0.059	3.4	34
☐	Acenaphthene	83-32-9	0.059	3.4	34
☐	Acetone	67-64-1	0.28	160	1600
☐	Acetonitrile	75-05-8	5.6	38	380
☐	Acetophenone	96-86-2	0.010	9.7	97
☐	2-Acetylaminofluorene	53-96-3	0.059	140	1400
☐	Acrolein	107-02-8	0.29	NA	NA
☐	Acrylamide	79-06-1	19	23	230
☐	Acrylonitrile	107-13-1	0.24	84	840
☐	Aldicarb sulfone	1646-88-4	0.056	0.28	2.8
☐	Aldrin	309-00-2	0.021	0.066	0.66
☐	4-Aminobiphenyl	92-67-1	0.13	NA	NA
☐	Aniline	62-53-3	0.81	14	140
☐	o-Anisidine (2-methoxyaniline)	90-04-0	0.010	0.66	6.6
☐	Anthracene	120-12-7	0.059	3.4	34
☐	Aramite	140-57-8	0.36	NA	NA
☐	alpha-BHC	319-84-6	0.00014	0.066	0.66
☐	beta-BHC	319-85-7	0.00014	0.066	0.66
☐	delta-BHC	319-86-8	0.023	0.066	0.66
☐	gamma-BHC	58-89-9	0.0017	0.066	0.66
☐	Barban	101-27-9	0.056	1.4	14
☐	Bendiocarb	22781-23-3	0.056	1.4	14
☐	Benomyl	17804-35-2	0.056	1.4	14
☐	Benzene	71-43-2	0.14	10	100
☐	Benz(a)anthracene	56-55-3	0.059	3.4	34
☐	Benzal chloride	98-87-3	0.055	6.0	60
☐	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68
☐	Benzo(k)fluoranthene	207-08-9	0.11	6.8	68

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Attachment 4 - LDR and UHC Information (continued)

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	Benzo(g,h,I)perylene	191-24-2	0.0055	1.8	18
☐	Benzo(a)pyrene	50-32-8	0.061	3.4	34
☐	Bromodichloromethane	75-27-4	0.35	15	150
☐	Bromomethane (Methyl bromide)	74-83-9	0.11	15	150
☐	4-Bromophenyl phenyl ether	101-55-3	0.055	15	150
☐	n-Butyl alcohol	71-36-3	5.6	2.6	26
☐	Butylate	2008-41-5	0.042	1.4	14
☐	Butyl benzyl phthalate	85-68-7	0.017	28	280
☐	2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	88-85-7	0.066	2.5	25
☐	Carbaryl	63-25-2	0.006	0.14	1.4
☐	Carbenzadim	10605-21-7	0.056	1.4	14
☐	Carbofuran	1563-66-2	0.006	0.14	1.4
☐	Carbofuran phenol	1563-38-8	0.056	1.4	14
☐	Carbon disulfide	75-15-0	3.8	4.8 mg/l TCLP	48 mg/l TCLP
☐	Carbon tertachloride	56-23-5	0.057	6.0	60
☐	Carbosulfan	55285-14-8	0.028	1.4	14
☐	Chlordane (alpha & gamma isomers)	57-74-9	0.0033	0.26	2.6
☐	p-Chloroaniline	106-47-8	0.46	16	160
☐	Chlorobenzene	108-90-7	0.057	6.0	60
☐	Chlorobenzilate	510-15-6	0.10	NA	NA
☐	2-Chloro-1,3-butadiene	126-99-8	0.057	0.28	2.8
☐	Chlorodibromomethane	124-48-1	0.057	15	150
☐	Chloroethane	75-00-3	0.27	6.0	60
☐	bis(2-Chloroethoxy) methane	111-91-1	0.036	7.2	72
☐	bis(2-Chloroethyl) ether	111-44-4	0.033	6.0	60
☐	Chloroform	67-66-3	0.046	6.0	60
☐	bis(2-Chloroisopropyl) ether	108-60-1	0.055	7.2	72
☐	p-Chloro-m-cresol	59-50-7	0.018	14	140
☐	2-Chloroethyl vinyl ether	110-75-8	0.062	NA	NA
☐	Chloromethane (Methyl chloride)	74-87-3	0.19	30	300
☐	2-Chloronaphthalene	91-58-7	0.055	5.6	56
☐	2-Chlorophenol	95-57-8	0.044	5.7	57
☐	3-Chloropropylene	107-05-1	0.036	30	300
☐	Chrysene	218-01-9	0.059	3.4	34
☐	p-Cresidine	120-71-8	0.010	0.66	6.6
☐	o-Cresol	95-48-7	0.11	5.6	56
☐	m-Cresol	108-39-4	0.77	5.6	56
☐	p-Cresol	106-44-5	0.77	5.6	56
☐	m-Cumenyl methylcarbamate	64-00-6	0.056	1.4	14
☐	Cyclohexanone	108-94-1	0.36	0.75 mg/l TCLP	7.5 mg/l TCLP
☐	o,p'-ddd	53-19-0	0.023	0.087	0.87
☐	p,p'-ddd	72-54-8	0.023	0.087	0.87
☐	o,p'-dde	3424-82-6	0.031	0.087	0.87
☐	p,p'-dde	72-55-9	0.031	0.087	0.87
☐	o,p'-ddt	789-02-6	0.0039	0.087	0.87
☐	p,p'-ddt	50-29-3	0.0039	0.087	0.87
☐	Dibenz(a,h)anthracene	53-70-3	0.055	8.2	82
☐	Dibenz(a,e)pyrene	192-65-4	0.061	NA	NA

Attachment 4 - LDR and UHC Information (continued)

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	1,2-Dibromo-3-chloropropane	96-12-8	0.11	15	150
☐	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	0.028	15	150
☐	Dibromomethane	74-95-3	0.11	15	150
☐	m-Dichlorobenzene	541-73-1	0.036	6.0	60
☐	o-Dichlorobenzene	95-50-1	0.088	6.0	60
☐	p-Dichlorobenzene	106-46-7	0.090	6.0	60
☐	Dichlorodifluoromethane	75-71-8	0.23	7.2	72
☐	1,1-Dichloroethane	75-34-3	0.059	6.0	60
☐	1,2-Dichloroethane	107-06-2	0.21	6.0	60
☐	1,1-Dichloroethylene	75-35-4	0.025	6.0	60
☐	trans-1,2-Dichloroethylene	156-60-5	0.054	30	300
☐	2,4-Dichlorophenol	120-83-2	0.044	14	140
☐	2,6-Dichlorophenol	87-65-0	0.044	14	140
☐	2,4-Dichlorophenoxyacetic acid (2,4-D)	94-75-7	0.72	10	100
☐	1,2-Dichloropropane	78-87-5	0.85	18	180
☐	cis-1,3-Dichloropropylene	10061-01-5	0.036	18	180
☐	trans-1,3-Dichloropropylene	10061-02-6	0.036	18	180
☐	Dieldrin	60-57-1	0.017	0.13	1.3
☐	Diethyl phthalate	84-66-2	0.20	28	280
☐	p-Dimethylaminoazobenzene	60-11-7	0.13	NA	NA
☐	2,4-Dimethylaniline (2,4-xylidine)	95-68-1	0.010	0.66	6.6
☐	2,4-Dimethyl phenol	105-67-9	0.036	14	140
☐	Dimethyl phthalate	131-11-3	0.047	28	280
☐	Di-n-butyl phthalate	84-74-2	0.057	28	280
☐	1,4-Dinitrobenzene	100-25-4	0.32	2.3	23
☐	4,6-Dinitro-o-cresol	534-52-1	0.28	160	1600
☐	2,4-Dinitrophenol	51-28-5	0.12	160	1600
☐	2,4-Dinitrotoluene	121-14-2	0.32	140	1400
☐	2,6-Dinitrotoluene	606-20-2	0.55	28	280
☐	Di-n-octyl phthalate	117-84-0	0.017	28	280
☐	Di-n-propylnitrosamine	621-64-7	0.40	14	140
☐	1,4-Dioxane	123-91-1	12.0	170	1700
☐	Diphenylamine	122-39-4	0.92	13	130
☐	Diphenylnitrosamine	86-30-6	0.92	13	130
☐	1,2-Diphenylhydrazine	122-66-7	0.087	NA	NA
☐	Disulfoton	298-04-4	0.017	6.2	62
☐	Dithiocarbamates (total)	NA	0.028	28	280
☐	Endosulfan I	959-98-8	0.023	0.066	0.66
☐	Endosulfan II	33213-65-9	0.029	0.13	1.3
☐	Endosulfan sulfate	1031-07-8	0.029	0.13	1.3
☐	Endrin	72-20-8	0.0028	0.13	1.3
☐	Endrin aldehyde	7421-93-4	0.025	0.13	1.3
☐	EPTC	759-94-4	0.042	1.4	14
☐	Ethyl acetate	141-78-6	0.34	33	330
☐	Ethyl benzene	100-41-4	0.057	10	100
☐	Ethyl cyanide (Propanenitrile)	107-12-0	0.24	360	3600

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	Ethyl ether	60-29-7	0.12	160	1600
☐	bis(2-Ethylhexyl)phthalate	117-81-7	0.28	28	280
☐	Ethyl methacrylate	97-63-2	0.14	160	1600
☐	Ethylene oxide	75-21-8	0.12	NA	NA
☐	Famphur	52-85-7	0.017	15	150
☐	Fluoranthene	206-44-0	0.068	3.4	34
☐	Fluorene	86-73-7	0.059	3.4	34
☐	Formetanate hydrochloride	23422-53-9	0.056	1.4	14
☐	Heptachlor	76-44-8	0.0012	0.066	0.66
☐	Heptachlor epoxide	1024-57-3	0.016	0.066	0.66
☐	1,2,3,4,6,7,8-Heptachlorodibenzo-pdioxin	35822-46-9	0.000035	0.0025	0.025
☐	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.000035	0.0025	0.025
☐	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.000035	0.0025	0.025
☐	Hexachlorobenzene	118-74-1	0.055	10	100
☐	Hexachlorobutadiene	87-68-3	0.055	5.6	56
☐	Hexachlorocyclopentadiene	77-47-4	0.057	2.4	24
☐	Hexachlorodibenzo-p-dioxins (HxCDDs)	NA	0.000063	0.001	0.01
☐	Hexachlorodibenzo-furans (HxCDFs)	NA	0.000063	0.001	0.01
☐	Hexachloroethane	67-72-1	0.055	30	300
☐	Hexachloropropylene	1888-71-7	0.035	30	300
☐	Indeno (1,2,3-c,d) pyrene	193-39-5	0.0055	3.4	34
☐	Iodomethane	74-88-4	0.19	65	650
☐	Isobutyl alcohol	78-83-1	5.6	170	1700
☐	Isodrin	465-73-6	0.021	0.066	0.66
☐	Isosafrole	120-58-1	0.081	2.6	26
☐	Kepone	143-50-0	0.0011	0.13	1.3
☐	Methacrylonitrile	126-98-7	0.24	84	840
☐	Methanol	67-56-1	5.6	0.75 mg/l TCLP	7.5 mg/l TCLP
☐	Methapyrilene	91-80-5	0.081	1.5	15
☐	Methiocarb	2032-65-7	0.056	1.4	14
☐	Methomyl	16752-77-5	0.028	0.14	1.4
☐	Methoxychlor	72-43-5	0.25	0.18	1.8
☐	3-Methylchlolanthrene	56-49-5	0.0055	15	150
☐	4,4-Methylene bis(2-chloroaniline)	101-14-4	0.50	30	300
☐	Methylene chloride	75-09-2	0.089	30	300
☐	Methyl ethyl ketone	78-93-3	0.28	36	360
☐	Methyl isobutyl ketone	108-10-1	0.14	33	330
☐	Methyl methacrylate	80-62-6	0.14	160	1600
☐	Methyl methansulfonate	66-27-3	0.018	NA	NA
☐	Methyl parathion	298-00-0	0.014	4.6	46
☐	Metolcarb	1129-41-5	0.056	1.4	14
☐	Mexacarbate	315-18-4	0.056	1.4	14
☐	Molinate	2212-67-1	0.042	1.4	14
☐	Naphthalene	91-20-3	0.059	5.6	56
☐	2-Naphthylamine	91-59-8	0.52	NA	NA
☐	o-Nitroaniline	88-74-4	0.27	14	140

Attachment 4 - LDR and UHC Information (continued)

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	p-Nitroaniline	100-01-6	0.028	28	280
☐	Nitrobenzene	98-95-3	0.068	14	140
☐	5-Nitro-o-toluidine	99-55-8	0.32	28	280
☐	o-Nitrophenol	88-75-5	0.028	13	130
☐	p-Nitrophenol	100-02-7	0.12	29	290
☐	N-Nitrosodiethylamine	55-18-5	0.40	28	280
☐	N-Nitrosodimethylamine	62-75-9	0.40	2.3	23
☐	N-Nitroso-di-n-butylamine	924-16-3	0.40	17	170
☐	N-Nitrosomethylethylamine	10595-95-6	0.40	2.3	23
☐	N-Nitrosomorpholine	59-89-2	0.40	2.3	23
☐	N-Nitrosopiperidine	100-75-4	0.013	35	350
☐	N-Nitrosopyrrolidine	930-55-2	0.013	35	350
☐	1,2,3,4,6,7,8,9-Octachlorodibenzo-pdioxin	3268-87-9	0.000063	0.005	0.05
☐	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
☐	Oxamyl	23135-22-0	0.056	0.28	2.8
☐	Parathion	56-38-2	0.014	4.6	46
☐	PCBs (total)	1336-36-3	0.10	10	100
☐	Pebulate	1114-71-2	0.042	1.4	14
☐	Pentachlorobenzene	608-93-5	0.055	10	100
☐	Pentachlorodibenzo-p-dioxins (PeCDDs)	NA	0.000063	0.001	0.01
☐	Pentachlorodibenzo-furans (PeCDFs)	NA	0.000035	0.001	0.01
☐	Pentachloroethane	76-01-7	0.055	6.0	60
☐	Pentachloronitrobenzene	82-68-8	0.055	4.8	48
☐	Pentachlorophenol	87-86-5	0.089	7.4	74
☐	Phenacetin	62-44-2	0.081	16	160
☐	Phenanthrene	85-01-8	0.059	5.6	56
☐	Phenol	108-95-2	0.039	6.2	62
☐	1,3-Phenylenediamine	108-45-2	0.01	0.66	6.6
☐	Phorate	298-02-2	0.021	4.6	46
☐	Phthalic acid	100-21-0	0.055	28	280
☐	Phthalic anhydride	85-44-9	0.055	28	280
☐	Physostigmine	57-47-6	0.056	1.4	14
☐	Physostigmine salicylate	57-64-7	0.056	1.4	14
☐	Promecarb	2631-37-0	0.056	1.4	14
☐	Pronamide	23950-58-5	0.093	1.5	15
☐	Propham	122-42-9	0.056	1.4	14
☐	Propoxur	114-26-1	0.056	1.4	14
☐	Prosulfocarb	52888-80-9	0.042	1.4	14
☐	Pyrene	129-00-0	0.067	8.2	82
☐	Pyridine	110-86-1	0.014	16	160
☐	Safrole	94-59-7	0.081	22	220
☐	Silvex (2,4,5-TP)	93-72-1	0.72	7.9	79
☐	1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14	140
☐	Tetrachlorodibenzo-p-dioxins (TCDDs)	NA	0.000063	0.001	0.01
☐	Tetrachlorodibenzofurans (TCDFs)	NA	0.000063	0.001	0.01
☐	1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60
☐	Tetrachloroethylene	127-18-4	0.056	6.0	60
☐	2,3,4,6-Tertachlorophenol	58-90-2	0.030	7.4	74
☐	Thiodicarb	59669-26-0	0.019	1.4	14
☐	Thiophanate-methyl	23564-05-8	0.056	1.4	14
☐	Toluene	108-88-3	0.080	10	100
☐	Toxaphene	8001-35-2	0.0095	2.6	26
☐	Triallate	2303-17-5	0.042	1.4	14
☐	Tribromomethane (Bromoform)	75-25-2	0.63	15	150
☐	2,4,6-Tribromophenol	118-79-6	0.035	7.4	74
☐	1,2,4-Trichlorobenzene	120-82-1	0.055	19	190
☐	1,1,1-Trichloroethane	71-55-6	0.054	6.0	60
☐	1,1,2-Trichloroethane	79-00-5	0.054	6.0	60
☐	Trichloroethylene	79-01-6	0.054	6.0	60
☐	Trichloromonofluoromethane	75-69-4	0.020	30	300
☐	2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74
☐	2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74
☐	2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	0.72	7.9	79
☐	1,2,3-Trichloropropane	96-18-4	0.85	30	300
☐	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.057	30	300
☐	Triethylamine	121-44-8	0.081	1.5	15
☐	tris-(2,3-Dibromopropyl) phosphate	126-72-7	0.11	0.10	1.0
☐	Vernolate	1929-77-7	0.042	1.4	14
☐	Vinyl chloride	75-01-4	0.27	6.0	60
☐	Xylenes (total)	1330-20-7	0.32	30	300
☐	Antimony	7440-36-0	1.9	1.15 mg/l TCLP	11.5 mg/l TCLP
☐	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP	50 mg/l TCLP
☐	Barium	7440-39-3	1.2	21 mg/l TCLP	210 mg/l TCLP
☐	Beryllium	7440-41-7	0.82	1.22 mg/l TCLP	12.2 mg/l TCLP
☐	Cadmium	7440-43-9	0.69	0.11 mg/l TCLP	1.1 mg/l TCLP
☐	Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP	6.0 mg/l TCLP
☐	Cyanides (Total)[4]	57-12-5	1.2	590	5900
☐	Cyanides (Amenable)[4]	57-12-5	0.86	30	300
☐	Fluoride	16984-48-8	35	NA	NA
☒	Lead	7439-92-1	0.69	0.75 mg/l TCLP	7.5 mg/l TCLP
☐	Mercury (Retort residues)	7439-97-6	NA	0.20 mg/l TCLP	2.0 mg/l TCLP
☐	Mercury - All others	7439-97-6	0.15	0.025 mg/l TCLP	0.25 mg/l TCLP
☐	Nickel	7440-02-0	3.98	11 mg/l TCLP	110 mg/l TCLP
☐	Selenium	7782-49-2	0.82	5.7 mg/l TCLP	57 mg/l TCLP
☐	Silver	7440-22-4	0.43	0.14 mg/l TCLP	1.4 mg/l TCLP
☐	Sulfide	18496-25-8	14	NA	NA
☐	Thallium	7440-28-0	1.4	0.20 mg/l TCLP	2.0 mg/l TCLP
☐	Vanadium[5]	7440-62-2	4.3	1.6 mg/l TCLP	16 mg/l TCLP
☐	Zinc[5]	7440-66-6	2.61	4.3 mg/l TCLP	43 mg/l TCLP

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH497210

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # ***NONEREQUIRED*** GENERATOR NAME: ***Los Alamos National Laboratory***

GENERATOR CODE (Assigned by Clean Harbors) ***LO1741*** CITY ***Los Alamos*** STATE/PROVINCE ***NM*** ZIP/POSTAL CODE ***87544***

ADDRESS ***Los Alamos National Laboratory Bikini Atoll Road*** PHONE: **(505) 662-9080**

CUSTOMER CODE (Assigned by Clean Harbors) ***LO1647*** CUSTOMER NAME: ***Los Alamos Technical Associates***

ADDRESS ***999 Central Avenue Suite 300*** CITY ***Los Alamos*** STATE/PROVINCE ***NM*** ZIP/POSTAL CODE ***87544***

B. WASTE DESCRIPTION

WASTE DESCRIPTION: ***Non-Haz; Non-Rad Industrial Waste***

PROCESS GENERATING WASTE: **Non-rad debris waste associated with remediation activities at LANL TA-05, Lower Mortandad Canyon**

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE
- [x] SOLID WITHOUT FREE LIQUID
- [ ] POWDER
- [ ] MONOLITHIC SOLID
- [ ] LIQUID WITH NO SOLIDS
- [ ] LIQUID/SOLID MIXTURE
  - % FREE LIQUID
  - % SETTLED SOLID
  - % TOTAL SUSPENDED SOLID
- [ ] SLUDGE
- [ ] GAS/AEROSOL

NUMBER OF PHASES/LAYERS

1 2 3 % BY VOLUME (Approx.)

TOP ***0.00***
MIDDLE ***0.00***
BOTTOM ***0.00***

VISCOSITY (If liquid present)
- 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR ***VARIES***

ODOR
- [x] NONE
- [ ] MILD
- [ ] STRONG

Describe:

BOILING POINT °F (°C)
- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- >= 130 (>54)

MELTING POINT °F (°C)
- < 140 (<60)
- 140-200 (60-93)
- [x] > 200 (>93)

TOTAL ORGANIC CARBON
- [x] <= 1%
- 1-9%
- >= 10%

FLASH POINT °F (°C)
- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- > 200 (>93)

pH
- <= 2
- 2.1 - 6.9
- [x] 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY
- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- [x] > 1.2 (e.g. Methylene Chloride)

ASH
- [x] < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- Unknown

BTU/LB (MJ/kg)
- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
CARBON		--		Trace
IRON	99.5000000	--	100.0000000	%
MAGANESE (AS PART OF ALLOY)		--		Trace
NICKEL		--		Trace
TUNGSTEN CARBIDE		--		Trace

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES [ ] NO [x]

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [ ] NO [x]

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [ ] NO [x]

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. ***G49*** SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. ***W002***

E. CONSTITUENTS

Are these values based on testing or knowledge? ☑ Knowledge ☐ Testing

If based on knowledge, please describe in detail, the rationale applied to identify and characterize the waste material. Please include reference to Material Safety Data Sheets (MSDS) when applicable. Include the chemical or trade-name represented by the MSDS, and or detailed process or operating procedures which generate the waste.

Per review of historical docuemnts, and site characterization analysis, there are no hazardous constituents present. This waste consists of inorganic debris such carbon steel nails, wire, etc.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0				☑
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0				☑
D009	MERCURY	0.2				☑
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑
	VOLATILE COMPOUNDS					
D018	BENZENE	0.5				
D019	CARBON TETRACHLORIDE	0.5				
D021	CHLOROBENZENE	100.0				
D022	CHLOROFORM	6.0				
D028	1,2-DICHLOROETHANE	0.5				
D029	1,1-DICHLOROETHYLENE	0.7				
D035	METHYL ETHYL KETONE	200.0				
D039	TETRACHLOROETHYLENE	0.7				
D040	TRICHLOROETHYLENE	0.5				
D043	VINYL CHLORIDE	0.2				
	SEMI-VOLATILE COMPOUNDS					
D023	o-CRESOL	200.0				
D024	m-CRESOL	200.0				
D025	p-CRESOL	200.0				
D026	CRESOL (TOTAL)	200.0				
D027	1,4-DICHLOROBENZENE	7.5				
D030	2,4-DINITROTOLUENE	0.13				
D032	HEXACHLOROBENZENE	0.13				
D033	HEXACHLOROBUTADIENE	0.5				
D034	HEXACHLOROETHANE	3.0				
D036	NITROBENZENE	2.0				
D037	PENTACHLOROPHENOL	100.0				
D038	PYRIDINE	5.0				
D041	2,4,5-TRICHLOROPHENOL	400.0				
D042	2,4,6-TRICHLOROPHENOL	2.0				
	PESTICIDES AND HERBICIDES					
D012	ENDRIN	0.02				
D013	LINDANE	0.4	*0.0001*			
D014	METHOXYCHLOR	10.0				
D015	TOXAPHENE	0.5				
D016	2,4-D	10.0				
D017	2,4,5-TP (SILVEX)	1.0				
D020	CHLORDANE	0.03				
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008	*0.0001*			

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs

☑ NONE
< 1000 PPM
>= 1000 PPM

PCBs

☑ NONE
< 50 PPM
>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCE	EXPLOSIVE	FUMING	OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	☑ NONE OF THE ABOVE

F. REGULATORY STATUS

YES ☑ NO USEPA HAZARDOUS WASTE?

YES ☑ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code ***outs0021***

YES ☑ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

YES ☑ NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: ***Not subject to LDR***
VARIANCE INFO:

YES ☑ NO IS THIS A UNIVERSAL WASTE?

YES ☑ NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR (CESQG)?

YES NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES ☑ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

YES NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

NONE, NON HAZARDOUS, NON D.O.T. REGULATED, (INDUSTRIAL WASTE), N/A

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ☑ ONE TIME WEEKLY MONTHLY QUARTERLY YEARLY OTHER

☑ **CONTAINERIZED**

1-3 CONTAINERS/SHIPMENT

STORAGE CAPACITY: ***2***
CONTAINER TYPE:

CUBIC YARD BOX PALLET
TOTE TANK ☑ DRUM
OTHER:

DRUM SIZE: ***30***

BULK LIQUID

GALLONS/SHIPMENT: ***0 Min -0 Max*** GAL.

BULK SOLID

SHIPMENT UOM: TON YARD

TONS/YARDS/SHIPMENT: ***0 Min - 0 Max***

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
koman@thelakeworthgroup.com			

This waste profile has been submitted using Clean Harbors' electronic signature system.

*40 CFR Sec. 264.12 required notice:

As required by Federal Resource Conservation and Recovery Act regulations found in 40 CFR Part 264.12(b) and all equivalent State hazardous waste regulations, notice is hereby provided that all Clean Harbors facilities that may be used to treat, store, and /or dispose of the hazardous waste described on this waste profile have the appropriate permits and the capacity to manage these wastes.

Please note this profile must be submitted for re-evaluation if there has been a change in the waste generating process or when there have been changes in the chemical composition or physical characteristics of the material.

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH492236

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # ***NONEREQUIRED***
GENERATOR NAME: ***Los Alamos National Laboratory***
GENERATOR CODE (Assigned by Clean Harbors) ***LO1741***
CITY ***Los Alamos*** STATE/PROVINCE ***NM*** ZIP/POSTAL CODE ***87544***
ADDRESS ***Los Alamos National Laboratory Bikini Atoll Road***
PHONE: **(505) 662-9080**
CUSTOMER CODE (Assigned by Clean Harbors) ***LO1647***
CUSTOMER NAME: ***Los Alamos Technical Associates***
ADDRESS ***999 Central Avenue Suite 300***
CITY ***Los Alamos*** STATE/PROVINCE ***NM*** ZIP/POSTAL CODE ***87544***

B. WASTE DESCRIPTION

WASTE DESCRIPTION: ***Elemental Lead***
PROCESS GENERATING WASTE: **Waste was generated during environmental restoration activities at LANL, Technical Area 05.**
IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE
- [x] SOLID WITHOUT FREE LIQUID
- [ ] POWDER
- [ ] MONOLITHIC SOLID
- [ ] LIQUID WITH NO SOLIDS
- [ ] LIQUID/SOLID MIXTURE
  - % FREE LIQUID
  - % SETTLED SOLID
  - % TOTAL SUSPENDED SOLID
- [ ] SLUDGE
- [ ] GAS/AEROSOL

NUMBER OF PHASES/LAYERS
1 2 3 (% BY VOLUME (Approx.))
TOP ***0.00***
MIDDLE ***0.00***
BOTTOM ***0.00***

VISCOSITY (If liquid present)
- 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR
varies

ODOR
- [x] NONE
- [ ] MILD
- [ ] STRONG

Describe:

BOILING POINT °F (°C)
- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- >= 130 (>54)

MELTING POINT °F (°C)
- < 140 (<60)
- 140-200 (60-93)
- [x] > 200 (>93)

TOTAL ORGANIC CARBON
- [x] <= 1%
- 1-9%
- >= 10%

FLASH POINT °F (°C)
- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- > 200 (>93)

pH
- <= 2
- 2.1 - 6.9
- [x] 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY
- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- [x] > 1.2 (e.g. Methylene Chloride)

ASH
- [x] < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- Unknown

BTU/LB (MJ/kg)
- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
LEAD	99.0000000	--	100.0000000	%

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES [ ] NO [x]

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [ ] NO [x]

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [ ] NO [x]

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. ***G49*** SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. ***W319***

E. CONSTITUENTS

Are these values based on testing or knowledge? ☑ Knowledge ☐ Testing

If based on knowledge, please describe in detail, the rationale applied to identify and characterize the waste material. Please include reference to Material Safety Data Sheets (MSDS) when applicable. Include the chemical or trade-name represented by the MSDS, and or detailed process or operating procedures which generate the waste.

Per historical documentation, this material was once lead shielding inside a building which burned down during the 1960s. The lead melted, and then solidified into "puddles" as it cooled.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0				☑
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0	*5.0000*	*10000.0000000*	*PPM*	
D009	MERCURY	0.2				☑
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑
	VOLATILE COMPOUNDS					
D018	BENZENE	0.5				
D019	CARBON TETRACHLORIDE	0.5				
D021	CHLOROBENZENE	100.0				
D022	CHLOROFORM	6.0				
D028	1,2-DICHLOROETHANE	0.5				
D029	1,1-DICHLOROETHYLENE	0.7				
D035	METHYL ETHYL KETONE	200.0				
D039	TETRACHLOROETHYLENE	0.7				
D040	TRICHLOROETHYLENE	0.5				
D043	VINYL CHLORIDE	0.2				
	SEMI-VOLATILE COMPOUNDS					
D023	o-CRESOL	200.0				
D024	m-CRESOL	200.0				
D025	p-CRESOL	200.0				
D026	CRESOL (TOTAL)	200.0				
D027	1,4-DICHLOROBENZENE	7.5				
D030	2,4-DINITROTOLUENE	0.13				
D032	HEXACHLOROBENZENE	0.13				
D033	HEXACHLOROBUTADIENE	0.5				
D034	HEXACHLOROETHANE	3.0				
D036	NITROBENZENE	2.0				
D037	PENTACHLOROPHENOL	100.0				
D038	PYRIDINE	5.0				
D041	2,4,5-TRICHLOROPHENOL	400.0				
D042	2,4,6-TRICHLOROPHENOL	2.0				
	PESTICIDES AND HERBICIDES					
D012	ENDRIN	0.02				
D013	LINDANE	0.4				
D014	METHOXYCHLOR	10.0				
D015	TOXAPHENE	0.5				
D016	2,4-D	10.0				
D017	2,4,5-TP (SILVEX)	1.0				
D020	CHLORDANE	0.03				
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008				

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs

☑ NONE
< 1000 PPM
>= 1000 PPM

PCBs

☑ NONE
< 50 PPM
>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCE	EXPLOSIVE	FUMING	OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	☑ NONE OF THE ABOVE

F. REGULATORY STATUS

☑ YES ☐ NO USEPA HAZARDOUS WASTE?

D008

☐ YES ☑ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code

☐ YES ☑ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

☑ YES ☐ NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: ***Alternate Soil Std-does not meet std. (with characteristic hazardous waste only)***
VARIANCE INFO:

☐ YES ☑ NO IS THIS A UNIVERSAL WASTE?

☐ YES ☐ NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR (CESQG)?

☐ YES ☐ NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

☐ YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

☑ YES ☐ NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

☐ YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

☐ YES ☐ NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

☐ YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

☐ YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

☐ YES ☑ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

☐ YES ☑ NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD), 9, PG III

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ☑ ONE TIME WEEKLY MONTHLY QUARTERLY YEARLY OTHER

☑ **CONTAINERIZED**

1-1 CONTAINERS/SHIPMENT

STORAGE CAPACITY: ***10***
CONTAINER TYPE:

CUBIC YARD BOX PALLET

TOTE TANK ☑ DRUM

OTHER:

DRUM SIZE: ***16***

BULK LIQUID

GALLONS/SHIPMENT: ***0 Min -0 Max*** GAL.

BULK SOLID

SHIPMENT UOM: TON YARD

TONS/YARDS/SHIPMENT: ***0 Min - 0 Max***

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
koman@thelakeworthgroup.com			

This waste profile has been submitted using Clean Harbors' electronic signature system.

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH492232

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # ***NONEREQUIRED*** GENERATOR NAME: ***Los Alamos National Laboratory***

GENERATOR CODE (Assigned by Clean Harbors) ***LO1741*** CITY ***Los Alamos*** STATE/PROVINCE ***NM*** ZIP/POSTAL CODE ***87544***

ADDRESS ***Los Alamos National Laboratory Bikini Atoll Road*** PHONE: **(505) 662-9080**

CUSTOMER CODE (Assigned by Clean Harbors) ***LO1647*** CUSTOMER NAME: ***Los Alamos Technical Associates***

ADDRESS ***999 Central Avenue Suite 300*** CITY ***Los Alamos*** STATE/PROVINCE ***NM*** ZIP/POSTAL CODE ***87544***

B. WASTE DESCRIPTION

WASTE DESCRIPTION: ***Lead Impacted Soil***

PROCESS GENERATING WASTE: **Excavated material removed during site remediation activities at Lower Mortandad TA-05.**

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE
- [x] SOLID WITHOUT FREE LIQUID
- [ ] POWDER
- [ ] MONOLITHIC SOLID
- [ ] LIQUID WITH NO SOLIDS
- [ ] LIQUID/SOLID MIXTURE
  - % FREE LIQUID
  - % SETTLED SOLID
  - % TOTAL SUSPENDED SOLID
- [ ] SLUDGE
- [ ] GAS/AEROSOL

NUMBER OF PHASES/LAYERS

1 2 3

% BY VOLUME (Approx.)

TOP ***0.00***

MIDDLE ***0.00***

BOTTOM ***0.00***

VISCOSITY (If liquid present)
- 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR

varies

ODOR
- [x] NONE
- [ ] MILD
- [ ] STRONG

Describe:

BOILING POINT °F (°C)
- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- >= 130 (>54)

MELTING POINT °F (°C)
- < 140 (<60)
- 140-200 (60-93)
- [x] > 200 (>93)

TOTAL ORGANIC CARBON
- [x] <= 1%
- 1-9%
- >= 10%

FLASH POINT °F (°C)
- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- > 200 (>93)

pH
- <= 2
- 2.1 - 6.9
- [x] 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY
- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- [x] > 1.2 (e.g. Methylene Chloride)

ASH
- [x] < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- Unknown

BTU/LB (MJ/kg)
- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
LEAD	0.1000000	--	1.0000000	%
PPE	0.0100000	--	0.1000000	%
SOIL	99.0000000	--	100.0000000	%

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES [ ] NO [x]

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [ ] NO [x]

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [ ] NO [x]

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. ***G49*** SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. ***W301***

E. CONSTITUENTS

Are these values based on testing or knowledge? Knowledge ☑ Testing

If constituent concentrations are based on analytical testing, analysis must be provided. Please attach document(s) using the link on the Submit tab.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0				☑
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0	*533.0000*	*1.0000000*	*%*	
D009	MERCURY	0.2				☑
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑
	VOLATILE COMPOUNDS					
D018	BENZENE	0.5				
D019	CARBON TETRACHLORIDE	0.5				
D021	CHLOROBENZENE	100.0				
D022	CHLOROFORM	6.0				
D028	1,2-DICHLOROETHANE	0.5				
D029	1,1-DICHLOROETHYLENE	0.7				
D035	METHYL ETHYL KETONE	200.0				
D039	TETRACHLOROETHYLENE	0.7				
D040	TRICHLOROETHYLENE	0.5				
D043	VINYL CHLORIDE	0.2				
	SEMI-VOLATILE COMPOUNDS					
D023	o-CRESOL	200.0				
D024	m-CRESOL	200.0				
D025	p-CRESOL	200.0				
D026	CRESOL (TOTAL)	200.0				
D027	1,4-DICHLOROBENZENE	7.5				
D030	2,4-DINITROTOLUENE	0.13				
D032	HEXACHLOROBENZENE	0.13				
D033	HEXACHLOROBUTADIENE	0.5				
D034	HEXACHLOROETHANE	3.0				
D036	NITROBENZENE	2.0				
D037	PENTACHLOROPHENOL	100.0				
D038	PYRIDINE	5.0				
D041	2,4,5-TRICHLOROPHENOL	400.0				
D042	2,4,6-TRICHLOROPHENOL	2.0				
	PESTICIDES AND HERBICIDES					
D012	ENDRIN	0.02				
D013	LINDANE	0.4				
D014	METHOXYCHLOR	10.0				
D015	TOXAPHENE	0.5				
D016	2,4-D	10.0				
D017	2,4,5-TP (SILVEX)	1.0				
D020	CHLORDANE	0.03				
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008				

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs

☑ NONE
< 1000 PPM
>= 1000 PPM

PCBs

☑ NONE
< 50 PPM
>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCE	EXPLOSIVE	FUMING	☑ OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	NONE OF THE ABOVE

F. REGULATORY STATUS

☑ YES ☐ NO USEPA HAZARDOUS WASTE?

D008

☐ YES ☑ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code ***OUTS301H***

☐ YES ☑ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

☑ YES ☐ NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: ***Alternate Soil Std-does not meet std. (with characteristic hazardous waste only)***

VARIANCE INFO:

☐ YES ☑ NO IS THIS A UNIVERSAL WASTE?

☐ YES ☐ NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR (CESQG)?

☐ YES ☐ NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

☐ YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

☑ YES ☐ NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

☐ YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

☐ YES ☐ NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

☐ YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

☐ YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

☐ YES ☑ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

☐ YES ☑ NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? ☐ Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data ☐ Knowledge ☐ Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (SOIL AND LEAD), 9, PG III

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ☑ ONE TIME WEEKLY MONTHLY QUARTERLY YEARLY OTHER

☑ **CONTAINERIZED**

4-6 CONTAINERS/SHIPMENT

STORAGE CAPACITY: ***10***

CONTAINER TYPE:

CUBIC YARD BOX PALLET

TOTE TANK ☑ DRUM

OTHER:

DRUM SIZE: ***55***

BULK LIQUID

GALLONS/SHIPMENT: ***0 Min -0 Max*** GAL.

BULK SOLID

SHIPMENT UOM: TON YARD

TONS/YARDS/SHIPMENT: ***0 Min - 0 Max***

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
koman@thelakeworthgroup.com			

This waste profile has been submitted using Clean Harbors' electronic signature system.

*40 CFR Sec. 264.12 required notice:

As required by Federal Resource Conservation and Recovery Act regulations found in 40 CFR Part 264.12(b) and all equivalent State hazardous waste regulations, notice is hereby provided that all Clean Harbors facilities that may be used to treat, store, and /or dispose of the hazardous waste described on this waste profile have the appropriate permits and the capacity to manage these wastes.

Please note this profile must be submitted for re-evaluation if there has been a change in the waste generating process or when there have been changes in the chemical composition or physical characteristics of the material.

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.

Non-Radioactive Profile Addendum

Clean Harbors Deer Trail Facility

General Information

Waste Name: Non-Haz; Non-Rad Industrial Waste
Profile Number: CH497210
Generator Name: Los Alamos National Laboratory
EPA ID: NM0890010515
Mailing Address: 999 Central Ave. Suite 300 (Los Alamos Technical Associates)
Los Alamos, NM 87544
Site Address: LANL TA-05

Waste Information (Please check yes or no)

Does the waste exhibit any radioactivity above background?	Yes ☐	No ☑
Does the waste contain any manmade radioactive material above background even at exempt concentrations?	Yes ☐	No ☑
Does the waste contain smoke detectors?	Yes ☐	No ☑
Does the waste contain any Tritium-filled exit signs or instruments?	Yes ☐	No ☑
Does the waste contain Tritium or Carbon 14 at exempt levels?	Yes ☐	No ☑
Are any other exempt radioactive materials present?	Yes ☐	No ☑

If the answer to any of these questions is yes, please list the radioactive materials which are present and their concentrations below.

Process Information (Please check yes or no)

Was the waste generated at a biomedical research facility?	Yes ☐	No ☑
Was the waste generated at a medical facility utilizing radioactive materials for patient diagnosis or therapy?	Yes ☐	No ☑
Was the waste generated at a nuclear power plant?	Yes ☐	No ☑

Generators Certification

I Hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste.

Authorized Signature	Name (Print)	Title	Date
Kimberly Oman	Kimberly Oman	Sr. Waste Mgt. Specialist	4/18/11

Please Return to:
Clean Harbors Deer Trail, LLC, 108555 East Highway 36, Deer Trail, CO 80105
Phone 970-386-2293 Fax 970-386-2262

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.

Non-Radioactive Profile Addendum

Clean Harbors Deer Trail Facility

General Information

Waste Name: Elemental Lead
Profile Number: CH492236
Generator Name: Los Alamos National Laboratory
EPA ID: NM0890010515
Mailing Address: 999 Central Ave. Suite 300 (Los Alamos Technical Associates)
Los Alamos, NM 87544
Site Address: LANL TA-05

Waste Information (Please check yes or no)

Does the waste exhibit any radioactivity above background?	Yes ☐	No ☑
Does the waste contain any manmade radioactive material above background even at exempt concentrations?	Yes ☐	No ☑
Does the waste contain smoke detectors?	Yes ☐	No ☑
Does the waste contain any Tritium-filled exit signs or instruments?	Yes ☐	No ☑
Does the waste contain Tritium or Carbon 14 at exempt levels?	Yes ☐	No ☑
Are any other exempt radioactive materials present?	Yes ☐	No ☑

If the answer to any of these questions is yes, please list the radioactive materials which are present and their concentrations below.

Process Information (Please check yes or no)

Was the waste generated at a biomedical research facility?	Yes ☐	No ☑
Was the waste generated at a medical facility utilizing radioactive materials for patient diagnosis or therapy?	Yes ☐	No ☑
Was the waste generated at a nuclear power plant?	Yes ☐	No ☑

Generators Certification

I Hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste.

Authorized Signature	Name (Print)	Title	Date
Kimberly Coman	Kimberly Coman	Sr. Waste Mgt. Specialist	3/30/11

Please Return to:
Clean Harbors Deer Trail, LLC, 108555 East Highway 36, Deer Trail, CO 80105
Phone 970-386-2293 Fax 970-386-2262

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.

Non-Radioactive Profile Addendum

Clean Harbors Deer Trail Facility

General Information

Waste Name: Lead Impacted Soil
Profile Number: CH492232
Generator Name: Los Alamos National Labs
EPA ID: NM0890010515
Mailing Address: 999 Central Ave. Suite 300 (Los Alamos Technical Associates)
Los Alamos, NM 87544
Site Address: LANL TA-05

Waste Information (Please check yes or no)

Does the waste exhibit any radioactivity above background?	Yes ☐	No ☑
Does the waste contain any manmade radioactive material above background even at exempt concentrations?	Yes ☐	No ☑
Does the waste contain smoke detectors?	Yes ☐	No ☑
Does the waste contain any Tritium-filled exit signs or instruments?	Yes ☐	No ☑
Does the waste contain Tritium or Carbon 14 at exempt levels?	Yes ☐	No ☑
Are any other exempt radioactive materials present?	Yes ☐	No ☑

If the answer to any of these questions is yes, please list the radioactive materials which are present and their concentrations below.
Please refer to attach email from Michael McNaughton, PhD, CHP dated 4/12/2019

Process Information (Please check yes or no)

Was the waste generated at a biomedical research facility?	Yes ☐	No ☑
Was the waste generated at a medical facility utilizing radioactive materials for patient diagnosis or therapy?	Yes ☐	No ☑
Was the waste generated at a nuclear power plant?	Yes ☐	No ☑

Generators Certification

I Hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste.

Authorized Signature	Name (Print)	Title	Date
Kimberly Omar	Kimberly Omar	Sr. Waste Mgt. Specialist	4/12/19

Please Return to:
Clean Harbors Deer Trail, LLC, 108555 East Highway 36, Deer Trail, CO 80105
Phone 970-386-2293 Fax 970-386-2262

Request for Land Application of Drill Cuttings Form

ENV-RCRA must approve any deviation(s) from this request prior to land application.

Date: 4/1/11 Project: Lower Mortandad / Cedro Canyon

Location of Land Application: Within Project Footprint TA: 05 (SWMU 05-004, 5-003)

Estimated Quantity: _____ (cubic feet or tons)

Composition (e.g., 98% tuff and 2% quick gel, etc.): 98% Soil, 2% Tuff

Proposed Method of Land Application (describe): Cuttings will be land applied within project footprint on project access roads or point of generation and covered with a layer of roadbase.

Note: An EX-ID Permit is required prior to land application.

Decision Tree—Decision Point Evaluation

The following questions require yes or no answers.	Yes	No
1. D1: Is existing characterization data consistent with WCSF? Attach a summary table of results, validated raw data, etc.	☑	☐
2. D2: Do drill cuttings contain RCRA Hazardous Waste or Hazard constituents above RCRA limits? If yes:	☐	☑
Has a Due Diligence been conducted for this waste? Attach a copy of the due diligence documentation.	☐	☐
Has a *No Longer Contained In* been approved for this waste? Attach a copy of the *No Longer Contained In* approval.	☐	☐
3. D6: Do drill cuttings meet the 5 criteria in D6, Attachment 1?	☑	☐
4. Do drill cuttings meeting the criteria in the Radiological Decision Tree, Attachment 3?	☑	☐

Generator or Project Leader Certification: I certify that the drill cuttings described in this request meet the criteria for land application per the Decision Tree and that the drill cuttings will be land applied as described.

Kent Rich		Proj Mgr.	4/4/11
Name (Print)	**Signature**	**Title**	**Date**

ENV-RCRA Review (below):

Does request provide all the required information, and do the drill cuttings meet all the criteria for land application?
Yes X **No** _____ **Note deficiency in the space provided:**

ENV-RCRA Reviewer Name (Print) Jocelyn Buckley **Signature** _____ **Date** 4/4/11

Package Expiration Date: 6-10-11

Solid Waste Evaluation

Summary associated Excel file: ev3344.awd.3.16.2011(1).xlsm

evaluation date: 3/16/2011

RCRA

41 analytes pass
between these 38 analytes pass as undetected
0 analytes fail

Detects

PCBs: none detected

4 analytes with potential F-code
5 analytes with potential K-code
3 analytes with potential U-code
0 analytes with potential P-code
1 analyte - compound detected in blank

Non-wastewater LDR: 13 pass 0 FAIL
Hazardous soil LDR: 13 pass 0 FAIL

Residential Soil (mg/kg) :	22 pass	0 FAIL
Industrial/ Occupational Soil (mg/kg) :	22 pass	0 FAIL
Construction Worker Soil (mg/kg) :	16 pass	1 FAIL
Recreational Soil (mg/kg) :	21 pass	0 FAIL
soil background:	20 pass	0 FAIL
Canyon Sediment background:	19 pass	1 FAIL
Qbt 2,3,4 background:	19 pass	1 FAIL
Qbt 1v background:	18 pass	2 FAIL
Qbt 1g, Qct,Qbo background:	15 pass	5 FAIL

RAD

total dose: 0.6223 mRem/year

?

analysed for H-3
analysed for Pu-239
32 isotopes, 12 were detected
19 undetected

Residen-tial SAL:	4 pass	0 FAIL
Indust-rial SAL:	4 pass	0 FAIL
Constr. Worker SAL:	6 pass	0 FAIL
Recrea-tional SAL:	6 pass	0 FAIL
Soil:	9 pass	2 FAIL
Canyon Sedi-ment:	9 pass	2 FAIL
QBT2,3,4:	9 pass	2 FAIL
QBt 1v:	10 pass	1 FAIL
Qbt 1g, Qct, Qbo:	11 pass	0 FAIL

Remark: The Evaluator may overwrite any result of automatic evaluation, but a short written explanation must be added

Sample ID	associated blanks	associated duplicate
WST05-11-4234	WST05-11-4237	
WST05-11-4235	WST05-11-4237	

Imported data files
ev3344.3.16.2011.txt

Detected Chemicals Form

Analyte	CAS/ Symbol	concen-tration	unit of measure	Non-wastewater LDR	Hazardous Soil LDR	Potential Haz F-codes	Potential Haz K-codes	Potential Haz U-codes	Potential Haz P-codes	comments
Acetone	67-64-1	0.0152	mg/kg	pass	pass			detected in blank		F003,U002 codes not applicable
Aluminum	Al	1960	mg/kg							
Arsenic	As	0.779	mg/kg	pass	pass	F032,F034,F035,	K031,K060,K161,K171,K172,K176,K084,K101,K102,			
Barium	Ba	15.8	mg/kg	pass	pass					
Benzoic Acid	65-85-0	0.54	mg/kg							
Beryllium	Be	0.378	mg/kg	pass	pass					
Calcium	Ca	1120	mg/kg							
Chloronaphthalene[2-]	91-58-7	0.073	mg/kg	pass	pass			U047,		
Chromium	Cr	5.37	mg/kg	pass	pass	F032,F034,F035,F037,F038,	K090,			
Cobalt	Co	0.677	mg/kg							
Copper	Cu	2.5	mg/kg							
Hexanone[2-]	591-78-6	0.871	mg/kg							
Iron	Fe	6530	mg/kg							
Lead	Pb	8.51	mg/kg	pass	pass	F035,F037,F038,	K002,K003,K005,K048,K049,K051,K062,K064,K086,K100,K176,K046,K052,K061,K069,			
Magnesium	Mg	437	mg/kg							
Manganese	Mn	293	mg/kg							
Mercury	Hg	0.0063	mg/kg	pass	pass		K175,K071,K106,	U151,		
Nickel	Ni	1.7	mg/kg	pass	pass	F006,				
Nitroaniline[2-]	88-74-4	0.156	mg/kg	pass	pass					
Perchlorate	ClO4	0.00053	mg/kg							
pH	pH	9.14	SU							
Potassium	K	417	mg/kg							
Selenium	Se	0.385	mg/kg	pass	pass					
Sodium	Na	323	mg/kg							
Thallium	Tl	0.0661	mg/kg				K178,			
Total Petroleum Hydrocarbons Diesel Range Organics	TPH-DRO	16.7	mg/kg							
Total Petroleum Hydrocarbons Gasoline Range Org.	TPH-GRO	0.34	mg/kg							
Vanadium	V	2.54	mg/kg	pass	pass					
Zinc	Zn	21.4	mg/kg	pass	pass					

Detected Chemicals: SSL and Background check

Analyte	CAS/ Symbol	concen-tration	unit of measure	Residential Soil (mg/kg)	Industrial/ Occupational Soil (mg/kg)	Construction Worker Soil (mg/kg)	Recreational Soil (mg/kg)	soil background	Canyon Sediment background	Qbt 2,3,4 background	Qbt 1v background	Qbt 1g, Qct,Qbo background
Acetone	67-64-1	0.0152	mg/kg	pass	pass	pass	pass	NA	NA	NA	NA	NA
Aluminum	Al	1960	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass
Arsenic	As	0.779	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	FAIL
Barium	Ba	15.8	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass
Benzoic Acid	65-85-0	0.54	mg/kg	pass	pass	NA	pass	NA	NA	NA	NA	NA
Beryllium	Be	0.378	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass
Calcium	Ca	1120	mg/kg	NA	NA	NA	NA	pass	pass	pass	pass	pass
Chloronaphthalene[2-]	91-58-7	0.073	mg/kg	pass	pass	pass	pass	NA	NA	NA	NA	NA
Chromium	Cr	5.37	mg/kg	pass	pass	NA	pass	pass	pass	pass	FAIL	FAIL
Cobalt	Co	0.677	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass
Copper	Cu	2.5	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass
Hexanone[2-]	591-78-6	0.871	mg/kg	pass	pass	pass	pass	NA	NA	NA	NA	NA
Iron	Fe	6530	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	FAIL
Lead	Pb	8.51	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass
Magnesium	Mg	437	mg/kg	NA	NA	NA	NA	pass	pass	pass	pass	pass
Manganese	Mn	293	mg/kg	pass	pass	FAIL	pass	pass	pass	pass	pass	FAIL
Mercury	Hg	0.0063	mg/kg	pass	pass	NA	pass	pass	pass	pass	pass	pass
Nickel	Ni	1.7	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass
Nitroaniline[2-]	88-74-4	0.156	mg/kg	pass	pass	NA	NA	NA	NA	NA	NA	NA
Perchlorate	ClO4	0.00053	mg/kg	pass	pass	NA	pass	NA	NA	NA	NA	NA
pH	pH	9.14	SU	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	K	417	mg/kg	NA	NA	NA	NA	pass	pass	pass	pass	pass
Selenium	Se	0.385	mg/kg	pass	pass	pass	pass	pass	FAIL	FAIL	FAIL	FAIL
Sodium	Na	323	mg/kg	NA	NA	NA	NA	pass	pass	pass	pass	pass
Thallium	Tl	0.0661	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass
Total Petroleum Hydrocarbons Diesel Range Organics	TPH-DRO	16.7	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons Gasoline Range Org.	TPH-GRO	0.34	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	V	2.54	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass
Zinc	Zn	21.4	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass

Sampling event ID 3344

SWMU ev 3344

Stockpile Number ev 3344

SAL and background comparison

Excel file: ev3344.awd.3.16.2011(1).xlsm

evaluation date: 3/16/2011

Analyte	CAS/ Symbol	concen-tration	unit of measure	Residen-tial SAL	Indust-rial SAL	Constr. Worker SAL	Recrea-tional SAL	Soil	Canyon Sedi-ment	QBT2, 3,4	QBt 1v	Qbt 1g, Qct, Qbo
Bismuth-214	Bi-214	1.35	pCi/g					pass	pass	pass	pass	pass
Lead-212	Pb-212	2.19	pCi/g					pass	pass	pass	pass	pass
Lead-214	Pb-214	1.74	pCi/g					pass	pass	pass	pass	pass
Potassium-40	K-40	37.1	pCi/g					FAIL	FAIL	FAIL	FAIL	pass
Radium 226/228	calc.	3.55	pCi/g									
Radium-226	Ra-226	1.35	pCi/g			pass	pass	pass	pass	pass	pass	pass
Radium-228	Ra-228	2.2	pCi/g			pass	pass	pass	pass	pass	pass	pass
Thallium-208	Tl-208	0.613	pCi/g					pass	pass	pass	pass	pass
Thorium-234	Th-234	2.56	pCi/g					FAIL	FAIL	FAIL	pass	pass
Tritium	H-3	0.02402	pCi/g	pass	pass	pass	pass	pass	pass	pass	pass	pass
Uranium-234	U-234	0.889	pCi/g	pass	pass	pass	pass	pass	pass	pass	pass	pass
Uranium-235/236	U-235/236	0.0678	pCi/g	pass	pass	pass	pass					
Uranium-238	U-238	1.04	pCi/g	pass	pass	pass	pass	pass	pass	pass	pass	pass
Americium-241	Am-241	-0.00602	pCi/g									
Cerium-139	Ce-139	-0.0113	pCi/g									
Cesium-134	Cs-134	0.0875	pCi/g									
Cesium-137	Cs-137	-0.00595	pCi/g									
Cobalt-60	Co-60	-0.0356	pCi/g									
Europium-152	Eu-152	-0.0461	pCi/g									
Lanthanum-140	La-140	-0.129	pCi/g									
Mercury-203	Hg-203	0.0345	pCi/g									
Plutonium-238	Pu-238	0	pCi/g									
Plutonium-239/240	Pu-239/240	0.00388	pCi/g									
Radium-223	Ra-223	-0.351	pCi/g									
Ruthenium-106	Ru-106	-0.109	pCi/g									
Sodium-22	Na-22	0.00091	pCi/g									
Strontium-90	Sr-90	-0.117	pCi/g									
Thorium-227	Th-227	0.0387	pCi/g									
Thorium-231	Th-231	-0.351	pCi/g									
Tin-113	Sn-113	-0.00893	pCi/g									
Uranium-235	U-235	0.235	pCi/g									
Yttrium-88	Y-88	0.0165	pCi/g									

NA

K^{40} 37.1 − 36.8 = 0.3 < 1200

OK to land apply

PRS Number: SWMU 05-004 May 2010		
Source of contaminants:	Yes	No
F-listed		X
U- or P-listed		X
K-listed		X

PRS Description

SWMU 05-004 is a former septic tank (structure 05-13), associated lines, and outfall that received industrial waste from a laboratory (Building 05-1) from 1948 to 1959. Historical information determined that the tank was free of radiation and HE contamination, but noted that it contained unspecified toxic chemicals. No evidence of radioactively contaminated soil was detected when the tank was removed in 1960. As-built drawings show the presence of a discharge line running from Building 05-1 and discharging south into Cañada del Buey. Notes taken during a 1988 radiation survey show evidence of an outfall near the former location of structure 05-13. Building 05-1 was removed during LASCP activities conducted in 1985. At that time, the building was determined to be free of radioactive and HE contamination. The 1985 LASCP investigation confirmed removal of the tank and piping by excavation, and no evidence of radioactively contaminated soil was detected at that time. A 1988 survey detected slightly above-background gamma activity. The potential contaminants at the site include radionuclides, VOCs, SVOCs, inorganic chemicals, and HE.

Documents Reviewed

Document Date	Title	LAUR No.	ERId No.
1/1/2010	Investigation Work Plan for Lower Mortandad/Cedro Canyons Aggregate Area, Revision 1	10-0048	108290
10/1/2009	Investigation Work Plan for Lower Mortandad/Cedro Canyons Aggregate Area [IWP]	09-6567	107103
10/1/2009	Historical Investigation Report for Lower Mortandad/Cedro Canyons Aggregate Area [HIR]	09-6566	107102
5/18/1992	RFI Work Plan for Operable Unit 1129	92-0800	007666

Summary of Listed Status

According to the October 2009 Investigation Work Plan (ERID 107102), no metals were detected above BG or had detection limits above background during the 1995 RFI, and the only organic detected was benzoic acid. Decision level data from the 1988 RFI show no metals detected above background during the 1988 sampling. Mercury had a detection limit above BV is 3 samples and selenium had detection limits above background in two samples.

According to the Historical Investigation Report (October 2009 ERID 107102), it is unknown what chemicals were discharged to the septic tank from building 05-1. No listed sources of the contaminants identified in previous investigations were identified, nor were any F, K-, P-, or U-listed sources identified in the documents reviewed for this SWMU.

RC

PRS Number: 05-003 May 2010		
Source of contaminants:	Yes	No
F-listed		X
U- or P-listed		X
K-listed		X

PRS Description

SWMU 05-003 (structure 05-20) is a former calibration chamber. The construction of the 10-ft x 10-ft chamber was completed in 1960, and was used to calibrate neutron detector systems for experiments at TA-49. No engineering drawings of the facility have been located. Approximate dimensions and layout of the facility have been obtained through conversations with people who worked on the project and personal logs. The facility consisted of a 6-ft-diameter, 35-ft-deep shaft with an approximately 10-ft cubical room located to the west, at the base of the shaft. The shaft and room were connected by an 8-ft-tall, 7-ft-long tunnel. The connecting tunnel may have had a downward slope toward the room. A second 24-in.-diameter shaft extended from the center of the room to the surface. The shafts were separated by 15 ft (center to center). The smaller shaft was lined with 16-in.-diameter casing and capped with concrete. The floor of the tunnel and chamber may have been covered with wood planking. The neutron source used in the calibration facility was a critical assembly called Godiva. This assembly consisted of highly enriched uranium that was operated in the underground chamber. Borated paraffin and lead bricks were used as shielding. The use of the chamber was discontinued before 1974, and it is not known when the Godiva assembly was removed. However, the Godiva assembly was not present during a 1976 radiological survey of the chamber. The building over the chamber was removed at an unknown date. The concrete shaft is the only original Beta Site structure remaining at TA-05.

Documents Reviewed

Document Date	Title	LAUR No.	ERId No.
1/1/2010	Investigation Work Plan for Lower Mortandad/Cedro Canyons Aggregate Area, Revision 1	10-0048	108290
10/1/2009	Submittal of the Investigation Work Plan and the Historical Investigation Report for Lower Mortandad/Cedro Canyons Aggregate Area [IWP]	09-6567	107103
10/1/2009	Investigation Work Plan and the Historical Investigation Report for Lower Mortandad/Cedro Canyons Aggregate Area [HIR]	09-6566	107102
5/18/1992	RFI Work Plan for Operable Unit 1129	92-0800	007666

Summary of Listed Status

Calibration was the only process identified for this SWMU. Calibration is not a listed source. No F, K-, P-, or U-listed sources were identified in the documentation of the processes occurring at this SWMU.

RC

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH444863

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # ***NONEREQUIRED*** GENERATOR NAME: ***Los Alamos National Laboratory***

GENERATOR CODE (Assigned by Clean Harbors) ***LO1741*** CITY ***Los Alamos*** STATE/PROVINCE ***NM*** ZIP/POSTAL CODE ***87544***

ADDRESS ***Los Alamos National Laboratory Bikini Atoll Road*** PHONE: **(505) 662-9080**

CUSTOMER CODE (Assigned by Clean Harbors) ***LO1647*** CUSTOMER NAME: ***Los Alamos Technical Associates***

ADDRESS ***999 Central Avenue Suite 300*** CITY ***Los Alamos*** STATE/PROVINCE ***NM*** ZIP/POSTAL CODE ***87544***

B. WASTE DESCRIPTION

WASTE DESCRIPTION: ***Excavated Environmental Media***

PROCESS GENERATING WASTE: **Site remediation activities.**

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE

- [x] SOLID WITHOUT FREE LIQUID
- [ ] POWDER
- [ ] MONOLITHIC SOLID
- [ ] LIQUID WITH NO SOLIDS
- [ ] LIQUID/SOLID MIXTURE
  - % FREE LIQUID
  - % SETTLED SOLID
  - % TOTAL SUSPENDED SOLID
- [ ] SLUDGE
- [ ] GAS/AEROSOL

NUMBER OF PHASES/LAYERS

1 2 3 (% BY VOLUME (Approx.))

TOP ***0.00***

MIDDLE ***0.00***

BOTTOM ***0.00***

VISCOSITY (If liquid present)

- 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR

Varies

ODOR

- [x] NONE
- [ ] MILD
- [ ] STRONG

Describe:

BOILING POINT ºF (ºC)

- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- >= 130 (>54)

MELTING POINT ºF (ºC)

- < 140 (<60)
- 140-200 (60-93)
- [x] > 200 (>93)

TOTAL ORGANIC CARBON

- [x] <= 1%
- 1-9%
- >= 10%

FLASH POINT ºF (ºC)

- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- > 200 (>93)

pH

- <= 2
- 2.1 - 6.9
- [x] 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY

- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- [x] > 1.2 (e.g. Methylene Chloride)

ASH

- < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- [x] Unknown

BTU/LB (MJ/kg)

- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
EXCAVATED SOIL	100.0000000	--	100.0000000	%

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES [ ] NO [x]

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [ ] NO [x]

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [ ] NO [x]

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. ***G19*** SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. ***W301***

E. CONSTITUENTS

Are these values based on testing or knowledge? Knowledge ☑ Testing

If constituent concentrations are based on analytical testing, analysis must be provided. Please attach document(s) using the link on the Submit tab.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0	*0.3000*	*0.3000000*	*PPM*	
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0	*0.1940*	*0.1940000*	*PPM*	
D009	MERCURY	0.2	*0.0020*	*0.0020000*	*PPM*	
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑
	VOLATILE COMPOUNDS					
D018	BENZENE	0.5				
D019	CARBON TETRACHLORIDE	0.5				
D021	CHLOROBENZENE	100.0				
D022	CHLOROFORM	6.0				
D028	1,2-DICHLOROETHANE	0.5				
D029	1,1-DICHLOROETHYLENE	0.7				
D035	METHYL ETHYL KETONE	200.0				
D039	TETRACHLOROETHYLENE	0.7				
D040	TRICHLOROETHYLENE	0.5				
D043	VINYL CHLORIDE	0.2				
	SEMI-VOLATILE COMPOUNDS					
D023	o-CRESOL	200.0				
D024	m-CRESOL	200.0				
D025	p-CRESOL	200.0				
D026	CRESOL (TOTAL)	200.0				
D027	1,4-DICHLOROBENZENE	7.5				
D030	2,4-DINITROTOLUENE	0.13				
D032	HEXACHLOROBENZENE	0.13				
D033	HEXACHLOROBUTADIENE	0.5				
D034	HEXACHLOROETHANE	3.0				
D036	NITROBENZENE	2.0				
D037	PENTACHLOROPHENOL	100.0				
D038	PYRIDINE	5.0				
D041	2,4,5-TRICHLOROPHENOL	400.0				
D042	2,4,6-TRICHLOROPHENOL	2.0				
	PESTICIDES AND HERBICIDES					
D012	ENDRIN	0.02				
D013	LINDANE	0.4				
D014	METHOXYCHLOR	10.0				
D015	TOXAPHENE	0.5				
D016	2,4-D	10.0				
D017	2,4,5-TP (SILVEX)	1.0				
D020	CHLORDANE	0.03				
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008				

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM	*401.0000*	*PPM*	
SODIUM	*92.8000*	*PPM*	
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs

☑ NONE
< 1000 PPM
>= 1000 PPM

PCBs

☑ NONE
< 50 PPM
>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCE	EXPLOSIVE	FUMING	OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	☑ NONE OF THE ABOVE

F. REGULATORY STATUS

YES ☑ NO USEPA HAZARDOUS WASTE?

YES ☑ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code

YES ☑ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

YES ☑ NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: ***Not subject to LDR***
VARIANCE INFO:

YES ☑ NO IS THIS A UNIVERSAL WASTE?

YES ☑ NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR (CESQG)?

YES NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES ☑ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

YES NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

NONE, NON D. O. T. REGULATED, N/A, (SOIL)

NONE, NON RCRA HAZARDOUS WASTE SOLIDS, (SOIL CUTTINGS), N/A

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ☑ ONE TIME WEEKLY MONTHLY QUARTERLY YEARLY OTHER ***As needed.***

☑ **CONTAINERIZED**

5-5 CONTAINERS/SHIPMENT

STORAGE CAPACITY:
CONTAINER TYPE:

CUBIC YARD BOX PALLET
TOTE TANK ☑ DRUM
OTHER:

DRUM SIZE: ***55***

BULK LIQUID

GALLONS/SHIPMENT: ***0 Min -0 Max*** GAL.

BULK SOLID

SHIPMENT UOM: TON YARD

TONS/YARDS/SHIPMENT: ***0 Min - 0 Max***

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I certify that I am authorized to execute this document as an authorized agent. I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
koman@thelakeworthgroup.com			

This waste profile has been submitted using Clean Harbors' electronic signature system.

*40 CFR Sec. 264.12 required notice:

As required by Federal Resource Conservation and Recovery Act regulations found in 40 CFR Part 264.12(b) and all equivalent State hazardous waste regulations, notice is hereby provided that all Clean Harbors facilities that may be used to treat, store, and /or dispose of the hazardous waste described on this waste profile have the appropriate permits and the capacity to manage these wastes.

Please note this profile must be submitted for re-evaluation if there has been a change in the waste generating process or when there have been changes in the chemical composition or physical characteristics of the material.

NOTE: Use these buttons to print or save the form. DO NOT use the browser tool bar. SAVE PRINT

Los Alamos NATIONAL LABORATORY EST.1943

Waste Profile Form

For rapid processing, complete all sections in black or blue ink and mail to: Waste Acceptance Group at MS J496.

For assistance with completing this form, contact your WMC. Click here for instruction in completing the form.

Contact (*if other than given below*)	Reference Number (*for Waste Acceptance Group Use Only*)

Generator's Z Number	Waste Generator's Name (*print*)	WMC's Z Number	WMC's Name (*print*)	Generator's Phone
177319	Kent Rich	135015	Mike Le Scouarnec	505-665-5011

Generator's Mail Stop	Waste Generating Group	Waste Stream Technical Area	Building	Room	WMC Phone
M992	PMFS-DO	05	NA	NA	505-665-5622

Waste Accumulation (*check only one*)

- ☐ Satellite Accumulation Area — Site No: _____
- ☐ Less-than-90-days Storage Area — Site No: _____
- ☐ TSDF — Site No: _____
- ☐ Universal Waste Storage Area — Site No: _____
- ☐ Used Oil for Recycle — Site No: _____

ER Use Only

- ☒ ER Site — SWMU/AOC No. CU 05-005(b)-00

- ☐ PCBs Storage Area — Site No: _____
- ☐ NM Special Waste — Site No: _____
- ☐ Rad Staging Area — Site No: _____
- ☐ Rad Storage Area — Site No: _____
- ☐ None of the Above — CU 05-005(b)-00

Method of Characterization (*check as many as apply*)

☐ Chemical Physical Analysis	☐ Attached	Sample No: _____
☐ Radiological Analysis	☐ Attached	Sample No: _____
☐ PCB Analysis	☐ Attached	Sample No: _____
☒ Acceptable Knowledge Documentation	☒ Attached	Documentation No: See Section 5, #3
☐ MSDS	☐ Attached	

Section 1 – Waste Prevention/Minimization (*answer all questions*)

Can hazard segregation, elimination, or material substitution be used?	☐ Yes (*provide comments*)	☒ No	
Can any of the materials in the waste stream be recycled or reused?	☐ Yes (*provide comments*)	☒ No	
Has waste minimization been incorporated into procedures or other process controls?	☒ Yes	☐ No (*provide comments*)	
Can this waste be generated outside a RCA?	☐ Yes (*provide comments*)	☐ No	☒ N/A
Comments:			

Section 2 – Chemical and Physical Information

Waste Type (*check only one*)

- ☐ Unused/Unspent Chemical (complete all sections as appropriate)
- ☐ Process Waste/Spent Chemical/Other (complete all sections)

Radiological Information

Was Waste generated in a RCA?

- ☐ Yes ☐ No
- ☐ Non-radioactive
- ☐ Radioactive – Low Level
- ☐ Radioactive – Transuranic

Waste Destination (*check only one*)

- ☐ SWWS (complete Attachment 1)
- ☐ RLWTF (complete Attachment 2
- ☐ RLWTP (complete Attachment 3)
- ☐ TA-16/HE (complete Attachment 4)
- ☐ NTS (complete Attachment 5)

Classification Information

- ☐ Unclassified
- ☐ Classified/Sensitive

Waste Category (*check all that apply*)

- ☒ Inorganic
- ☐ Organic
- ☐ Solvent*
- ☐ Degreaser*
- ☐ Dioxin
- ☐ Electroplating
- ☐ Treated Hazardous Waste or Residue
- ☐ No-Longer Contained-In
- ☐ Explosive Process
- ☐ Infectious/Medical
- ☐ Biological
- ☐ Beryllium
- ☐ Empty Container (see instructions)
- ☐ Battery (see instructions)

Asbestos ☐ Friable ☐ non-friable

PCB Source Concentration

- ☐ PCB < 50 ppm
- ☐ PCB ≥ 50 - < 500 ppm
- ☐ PCB ≥ 500 ppm
- ☐ Hazardous Waste Contaminated Soil
- ☐ Untreated Hazardous Debris
- ☐ Commercial Solid Waste
- ☒ Other (describe below)

* See instructions

Waste Source (*check only one*)

Waste Source A

- ☐ Decon
- ☐ Materials Processing Production
- ☐ Research/Development/Testing
- ☐ Scheduled Maintenance
- ☐ Housekeeping - Routine
- ☐ Spill Cleanup - Routine
- ☐ Sampling – Routine Monitoring
- ☐ Other (describe below)

Waste Source B

- ☐ Abatement
- ☐ Construction/Upgrades
- ☐ Demolition
- ☐ Decon/Decom
- ☐ Investigative Derived
- ☐ Orphan/Legacy
- ☐ Remediation/Restoration
- ☐ Repacking (secondary)
- ☐ Unscheduled Maintenance
- ☐ Housekeeping (non-routine)
- ☐ Spill Cleanup (non-routine)
- ☐ Non-Petroleum Tanks
- ☐ Petroleum Tanks

☐ Other (describe below)

Waste Matrix (*check only one*)

Gas

- ☐ ≤1.5 Atmospheres Pressure
- ☐ >1.5 Atmospheres Pressure
- ☐ Liquefied Compressed Gas

Liquid

- ☐ Aqueous
- ☐ Non-Aqueous
- ☐ Suspended Solids/Aqueous
- ☐ Suspended Solids/Non-Aqueous

Solid

- ☐ Powder/Ash/Dust
- ☐ Solid
- ☐ Sludge
- ☐ Absorbed/Solidified Liquid
- ☐ Debris

Matrix Type (*check only one*)

- ☐ Homogeneous
- ☐ Heterogeneous (describe below)

Non-hazardous metal debris such as wire, nails, etc.

Estimated Annual Volume (m^3):

Gallons.

Section 3 – Process and Waste Description

Process Description:
Waste was generated during man made debris cleanup activities at TA-05. The debris were generated when building 15 burned down in 1960 and consists of inorganic metal waste such as nails, wire, and small pieces of iron scrap. The waste was collected from the ground in the former building footprint, field deconed, with fantastic spray kimwipes, and placed into a 5-gallon poly. No gross soil contamination is present. PPE and Kimwipes were placed into lead impacted soil drum.

Waste Description:

Inorganic man made metal debris such as nails, wire, and iron metal scraps.

Section 4 – Characteristics

Ignitability (*check only one*)

(°F)	(°C)
☐ < 73	< 22.8
☐ 73 – 99	22.8 - 37.2
☐ 100 – 139	37.8 - 59.4
☐ 140 –200	60.0 - 93.3
☐ > 200	> 93.3

☐ EPA Ignitable – Non-liquid
☐ DOT Flammable Gas
☐ DOT Oxidizer
☒ Not Ignitable

Corrosivity (*check only one*) (pH)
☐ ≤ 2.0
☐ 2.1 – 4.0
☐ 4.1 – 6.0
☐ 6.1 – 9.0
☐ 9.1 - 12.4
☐ ≥ 12.5
☐ Liquid corrosive to steel
☒ Non-aqueous

Reactivity (*check as many as apply*)
☐ RCRA Unstable
☐ Water Reactive
☐ Cyanide Bearing
☐ Sulfide Bearing
☐ Pyrophoric
☐ Shock Sensitive
☐ Explosive - DOT Div.: _____
☒ Non-reactive

Boiling Point (check only one)

(°F)	(°C)
☐ ≤ 95	≤ 35
☐ > 95	> 35

☒ Not applicable

Identify for all contaminants listed.	Characterization Method: AK	TCLP	Total	None or Non-detect	Concentration of Contaminants: Contaminant present at Minimum	Maximum	Regulatory Limit
Toxicity Characteristic Metals					(10,000 ppm = 1%)		
Arsenic	☒	☐	☐	☒	to	ppm	5.0 ppm
Barium	☒	☐	☐	☒	to	ppm	100.0 ppm
Cadmium	☒	☐	☐	☒	to	ppm	1.0 ppm
Chromium (Total)	☒	☐	☐	☒	to	ppm	5.0 ppm
Lead	☒	☐	☐	☒	to	ppm	5.0 ppm
Mercury	☒	☐	☐	☒	to	ppm	0.2 ppm
Selenium	☒	☐	☐	☒	to	ppm	1.0 ppm
Silver	☒	☐	☐	☒	to	ppm	5.0 ppm
Toxicity Characteristic Organics							
Benzene	☒	☐	☐	☒	to	ppm	0.5 ppm
Carbon Tetrachloride	☒	☐	☐	☒	to	ppm	0.5 ppm
Chlorobenzene	☒	☐	☐	☒	to	ppm	100.0 ppm
Chloroform	☒	☐	☐	☒	to	ppm	6.0 ppm
o – cresol	☒	☐	☐	☒	to	ppm	200.0 ppm
m - cresol	☒	☐	☐	☒	to	ppm	200.0 ppm
p – cresol	☒	☐	☐	☒	to	ppm	200.0 ppm
Cresol – mixed	☒	☐	☐	☒	to	ppm	200.0 ppm
1,4-Dichlorobenzene	☒	☐	☐	☒	to	ppm	7.5 ppm
1,2-Dichloroethane	☒	☐	☐	☒	to	ppm	0.5 ppm
1,1-Dichloroethylene	☒	☐	☐	☒	to	ppm	0.7 ppm
2,4-Dinitrotoluene	☒	☐	☐	☒	to	ppm	0.13 ppm
Hexachlorobenzene	☒	☐	☐	☒	to	ppm	0.13 ppm
Hexachlorobutadiene	☒	☐	☐	☒	to	ppm	0.5 ppm
Hexachloroethane	☒	☐	☐	☒	to	ppm	3.0 ppm
Methyl ethyl ketone	☒	☐	☐	☒	to	ppm	200.0 ppm
Nitrobenzene	☒	☐	☐	☒	to	ppm	2.0 ppm
Pentachlorophenol	☒	☐	☐	☒	to	ppm	100.0 ppm
Pyridine	☒	☐	☐	☒	to	ppm	5.0 ppm
Tetrachloroethylene	☒	☐	☐	☒	to	ppm	0.7 ppm
Trichloroethylene	☒	☐	☐	☒	to	ppm	0.5 ppm
2,4,5-Trichlorophenol	☒	☐	☐	☒	to	ppm	400.0 ppm
2,4,6-Trichlorophenol	☒	☐	☐	☒	to	ppm	2.0 ppm
Vinyl chloride	☒	☐	☐	☒	to	ppm	0.2 ppm
Herbicides and Pesticides							
Chlordane	☒	☐	☐	☒	to	ppm	0.03 ppm
2,4-D	☒	☐	☐	☒	to	ppm	10.0 ppm
Endrin	☒	☐	☐	☒	to	ppm	0.02 ppm
Heptachlor (& its epoxide)	☒	☐	☐	☒	to	ppm	0.008 ppm
Lindane	☒	☐	☐	☒	to	ppm	0.4 ppm
Methoxychlor	☒	☐	☐	☒	to	ppm	10.0 ppm
Toxaphene	☒	☐	☐	☒	to	ppm	0.5 ppm
2,4,5-TP (Silvex)	☒	☐	☐	☒	to	ppm	1.0 ppm

Section 5 – Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constituents (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number." Contact Waste Acceptance at 5-4000 for assistance.

CAS No.	Name of constituent	Minimum		Maximum	
N/A	Inorganic man made debris	99.5	to	100	%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
			to		%
	Total of max. ranges of this section and page 2		101		in %

Additional Information (Use additional sheet if necessary.)

If additional information is available on the chemical, physical, or radiological character of the waste not covered on this form, provide it below

1. WSCF: EP2010-0246
2. Waste Stream #5 - Excavated Man Made Debris
3. RP-1 Survey Number CAP 11 XXXX.
4. SMWU/AOC: CU 05-005(b)-00.
5. Due diligence for CU 05-005(b)-00 is attached.
6. Based on historical information, there is no documentation in directing use, storage or manufacture of herbicides and pesticides at this location.
7. Visual inspection, and waste determination was made by Kim Oman, on 02//2011. The waste was determined to non-hazardous metal man made debris.

Section 6 - Work Control Documentation (answer all questions)

Do the procedures for this process cover how to manage this waste? ☐ Yes ☐ No (*provide comments*)

Do the procedures for this process address controls to prevent changes to waste constituents and concentrations or addition or removal of waste to/from containers? ☐ Yes ☐ No (*provide comments*)

Comments:

Section 7 – Packaging and Storage Control

Describe how the waste will be packaged in according to the applicable WAC.

DOT approved containers.

Identify the storage management controls that will be used for this waste stream: (*check all that apply*)

☐ Tamper Indication Devices ☐ Limited use locks with log-in for waste ☐ Locked cabinet or building ☒ Other (describe) Controlled Site

Section 8 – Waste Certification Statements (*check only one*)

☐ Waste appears to meet WAC attachment for: LANL WAC, Attachement 14. Non-Hazardous Waste

☐ Waste stream needs exception/exemption for treatment, storage, or disposal at:

☐ Waste does not meet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Principle Associate Director for Weapons Programs [PADWP] for assistance.)

Waste Generator Certification: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature: _____ Date: _____

Waste Management Coordinator: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC.

Signature: _____ Date: _____

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Attachment 4 - LDR and UHC Information

Identify category and presence of any constituents listed below (*equal to or above limit*).

Non-Wastewater/Wastewater Category (*check only one*)

☐ Non Wastewater ☐ Wastewater [as defined by 40 CFR 268.2(f)] ☐ Lab Pack [40 CFR 268.42(c)] **Sign Certification #1**

Notifications and Certifications – Check the applicable boxes

Generator Requirements:

☐ This shipment contains hazardous waste contaminated soil that does not meet treatment standards **Sign Certification #2**
☐ This shipment contains untreated hazardous debris to be treated to 40 CFR 268.45 treatment standards **(No certification)**
☐ Hazardous wastes (except soil) meeting treatment standards at point of generation **Sign Certification #3**
☐ Hazardous wastes contaminated soil meeting treatment standards at point of generation **Sign Certification #4**

TSDF or Generator Treatment:

☐ TSDF Treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 **Sign Certification #5**
☐ Generator Treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 **Sign Certification #6**
☐ Hazardous wastes contaminated soil treated to 40 CFR 268.49 **Sign Certification #7**
☐ Wastes or Residues from characteristic hazardous waste treatment meeting treatment standards and UTS **Sign Certification #8**
☐ Wastes or Residues from characteristic hazardous waste treatment not meeting UTS **Sign Certification #9**
☐ Other TSDF wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed **Sign Certification #10**
☒ Other Generator wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed **Sign Certification #11**

Notification of Underlying Hazardous Constituents

(*Check the applicable underlying constituents above the concentration levels for D001 through D043 characteristic wastes only*)

☒ ***No Underlying Hazardous Constituents in this waste stream.***

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	Acenaphthylene	208-96-8	0.059	3.4	34
☐	Acenaphthene	83-32-9	0.059	3.4	34
☐	Acetone	67-64-1	0.28	160	1600
☐	Acetonitrile	75-05-8	5.6	38	380
☐	Acetophenone	96-86-2	0.010	9.7	97
☐	2-Acetylaminofluorene	53-96-3	0.059	140	1400
☐	Acrolein	107-02-8	0.29	NA	NA
☐	Acrylamide	79-06-1	19	23	230
☐	Acrylonitrile	107-13-1	0.24	84	840
☐	Aldicarb sulfone	1646-88-4	0.056	0.28	2.8
☐	Aldrin	309-00-2	0.021	0.066	0.66
☐	4-Aminobiphenyl	92-67-1	0.13	NA	NA
☐	Aniline	62-53-3	0.81	14	140
☐	o-Anisidine (2-methoxyaniline)	90-04-0	0.010	0.66	6.6
☐	Anthracene	120-12-7	0.059	3.4	34
☐	Aramite	140-57-8	0.36	NA	NA
☐	alpha-BHC	319-84-6	0.00014	0.066	0.66
☐	beta-BHC	319-85-7	0.00014	0.066	0.66
☐	delta-BHC	319-86-8	0.023	0.066	0.66
☐	gamma-BHC	58-89-9	0.0017	0.066	0.66
☐	Barban	101-27-9	0.056	1.4	14
☐	Bendiocarb	22781-23-3	0.056	1.4	14
☐	Benomyl	17804-35-2	0.056	1.4	14
☐	Benzene	71-43-2	0.14	10	100
☐	Benz(a)anthracene	56-55-3	0.059	3.4	34
☐	Benzal chloride	98-87-3	0.055	6.0	60
☐	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68
☐	Benzo(k)fluoranthene	207-08-9	0.11	6.8	68

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Attachment 4 - LDR and UHC Information (continued)

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	Benzo(g,h,I)perylene	191-24-2	0.0055	1.8	18
☐	Benzo(a)pyrene	50-32-8	0.061	3.4	34
☐	Bromodichloromethane	75-27-4	0.35	15	150
☐	Bromomethane (Methyl bromide)	74-83-9	0.11	15	150
☐	4-Bromophenyl phenyl ether	101-55-3	0.055	15	150
☐	n-Butyl alcohol	71-36-3	5.6	2.6	26
☐	Butylate	2008-41-5	0.042	1.4	14
☐	Butyl benzyl phthalate	85-68-7	0.017	28	280
☐	2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	88-85-7	0.066	2.5	25
☐	Carbaryl	63-25-2	0.006	0.14	1.4
☐	Carbenzadim	10605-21-7	0.056	1.4	14
☐	Carbofuran	1563-66-2	0.006	0.14	1.4
☐	Carbofuran phenol	1563-38-8	0.056	1.4	14
☐	Carbon disulfide	75-15-0	3.8	4.8 mg/l TCLP	48 mg/l TCLP
☐	Carbon tertachloride	56-23-5	0.057	6.0	60
☐	Carbosulfan	55285-14-8	0.028	1.4	14
☐	Chlordane (alpha & gamma isomers)	57-74-9	0.0033	0.26	2.6
☐	p-Chloroaniline	106-47-8	0.46	16	160
☐	Chlorobenzene	108-90-7	0.057	6.0	60
☐	Chlorobenzilate	510-15-6	0.10	NA	NA
☐	2-Chloro-1,3-butadiene	126-99-8	0.057	0.28	2.8
☐	Chlorodibromomethane	124-48-1	0.057	15	150
☐	Chloroethane	75-00-3	0.27	6.0	60
☐	bis(2-Chloroethoxy) methane	111-91-1	0.036	7.2	72
☐	bis(2-Chloroethyl) ether	111-44-4	0.033	6.0	60
☐	Chloroform	67-66-3	0.046	6.0	60
☐	bis(2-Chloroisopropyl) ether	108-60-1	0.055	7.2	72
☐	p-Chloro-m-cresol	59-50-7	0.018	14	140
☐	2-Chloroethyl vinyl ether	110-75-8	0.062	NA	NA
☐	Chloromethane (Methyl chloride)	74-87-3	0.19	30	300
☐	2-Chloronaphthalene	91-58-7	0.055	5.6	56
☐	2-Chlorophenol	95-57-8	0.044	5.7	57
☐	3-Chloropropylene	107-05-1	0.036	30	300
☐	Chrysene	218-01-9	0.059	3.4	34
☐	p-Cresidine	120-71-8	0.010	0.66	6.6
☐	o-Cresol	95-48-7	0.11	5.6	56
☐	m-Cresol	108-39-4	0.77	5.6	56
☐	p-Cresol	106-44-5	0.77	5.6	56
☐	m-Cumenyl methylcarbamate	64-00-6	0.056	1.4	14
☐	Cyclohexanone	108-94-1	0.36	0.75 mg/l TCLP	7.5 mg/l TCLP
☐	o,p'-ddd	53-19-0	0.023	0.087	0.87
☐	p,p'-ddd	72-54-8	0.023	0.087	0.87
☐	o,p'-dde	3424-82-6	0.031	0.087	0.87
☐	p,p'-dde	72-55-9	0.031	0.087	0.87
☐	o,p'-ddt	789-02-6	0.0039	0.087	0.87
☐	p,p'-ddt	50-29-3	0.0039	0.087	0.87
☐	Dibenz(a,h)anthracene	53-70-3	0.055	8.2	82
☐	Dibenz(a,e)pyrene	192-65-4	0.061	NA	NA

Attachment 4 - LDR and UHC Information (continued)

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	1,2-Dibromo-3-chloropropane	96-12-8	0.11	15	150
☐	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	0.028	15	150
☐	Dibromomethane	74-95-3	0.11	15	150
☐	m-Dichlorobenzene	541-73-1	0.036	6.0	60
☐	o-Dichlorobenzene	95-50-1	0.088	6.0	60
☐	p-Dichlorobenzene	106-46-7	0.090	6.0	60
☐	Dichlorodifluoromethane	75-71-8	0.23	7.2	72
☐	1,1-Dichloroethane	75-34-3	0.059	6.0	60
☐	1,2-Dichloroethane	107-06-2	0.21	6.0	60
☐	1,1-Dichloroethylene	75-35-4	0.025	6.0	60
☐	trans-1,2-Dichloroethylene	156-60-5	0.054	30	300
☐	2,4-Dichlorophenol	120-83-2	0.044	14	140
☐	2,6-Dichlorophenol	87-65-0	0.044	14	140
☐	2,4-Dichlorophenoxyacetic acid (2,4-D)	94-75-7	0.72	10	100
☐	1,2-Dichloropropane	78-87-5	0.85	18	180
☐	cis-1,3-Dichloropropylene	10061-01-5	0.036	18	180
☐	trans-1,3-Dichloropropylene	10061-02-6	0.036	18	180
☐	Dieldrin	60-57-1	0.017	0.13	1.3
☐	Diethyl phthalate	84-66-2	0.20	28	280
☐	p-Dimethylaminoazobenzene	60-11-7	0.13	NA	NA
☐	2,4-Dimethylaniline (2,4-xylidine)	95-68-1	0.010	0.66	6.6
☐	2,4-Dimethyl phenol	105-67-9	0.036	14	140
☐	Dimethyl phthalate	131-11-3	0.047	28	280
☐	Di-n-butyl phthalate	84-74-2	0.057	28	280
☐	1,4-Dinitrobenzene	100-25-4	0.32	2.3	23
☐	4,6-Dinitro-o-cresol	534-52-1	0.28	160	1600
☐	2,4-Dinitrophenol	51-28-5	0.12	160	1600
☐	2,4-Dinitrotoluene	121-14-2	0.32	140	1400
☐	2,6-Dinitrotoluene	606-20-2	0.55	28	280
☐	Di-n-octyl phthalate	117-84-0	0.017	28	280
☐	Di-n-propylnitrosamine	621-64-7	0.40	14	140
☐	1,4-Dioxane	123-91-1	12.0	170	1700
☐	Diphenylamine	122-39-4	0.92	13	130
☐	Diphenylnitrosamine	86-30-6	0.92	13	130
☐	1,2-Diphenylhydrazine	122-66-7	0.087	NA	NA
☐	Disulfoton	298-04-4	0.017	6.2	62
☐	Dithiocarbamates (total)	NA	0.028	28	280
☐	Endosulfan I	959-98-8	0.023	0.066	0.66
☐	Endosulfan II	33213-65-9	0.029	0.13	1.3
☐	Endosulfan sulfate	1031-07-8	0.029	0.13	1.3
☐	Endrin	72-20-8	0.0028	0.13	1.3
☐	Endrin aldehyde	7421-93-4	0.025	0.13	1.3
☐	EPTC	759-94-4	0.042	1.4	14
☐	Ethyl acetate	141-78-6	0.34	33	330
☐	Ethyl benzene	100-41-4	0.057	10	100
☐	Ethyl cyanide (Propanenitrile)	107-12-0	0.24	360	3600

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	Ethyl ether	60-29-7	0.12	160	1600
☐	bis(2-Ethylhexyl)phthalate	117-81-7	0.28	28	280
☐	Ethyl methacrylate	97-63-2	0.14	160	1600
☐	Ethylene oxide	75-21-8	0.12	NA	NA
☐	Famphur	52-85-7	0.017	15	150
☐	Fluoranthene	206-44-0	0.068	3.4	34
☐	Fluorene	86-73-7	0.059	3.4	34
☐	Formetanate hydrochloride	23422-53-9	0.056	1.4	14
☐	Heptachlor	76-44-8	0.0012	0.066	0.66
☐	Heptachlor epoxide	1024-57-3	0.016	0.066	0.66
☐	1,2,3,4,6,7,8-Heptachlorodibenzo-pdioxin	35822-46-9	0.000035	0.0025	0.025
☐	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.000035	0.0025	0.025
☐	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.000035	0.0025	0.025
☐	Hexachlorobenzene	118-74-1	0.055	10	100
☐	Hexachlorobutadiene	87-68-3	0.055	5.6	56
☐	Hexachlorocyclopentadiene	77-47-4	0.057	2.4	24
☐	Hexachlorodibenzo-p-dioxins (HxCDDs)	NA	0.000063	0.001	0.01
☐	Hexachlorodibenzo-furans (HxCDFs)	NA	0.000063	0.001	0.01
☐	Hexachloroethane	67-72-1	0.055	30	300
☐	Hexachloropropylene	1888-71-7	0.035	30	300
☐	Indeno (1,2,3-c,d) pyrene	193-39-5	0.0055	3.4	34
☐	Iodomethane	74-88-4	0.19	65	650
☐	Isobutyl alcohol	78-83-1	5.6	170	1700
☐	Isodrin	465-73-6	0.021	0.066	0.66
☐	Isosafrole	120-58-1	0.081	2.6	26
☐	Kepone	143-50-0	0.0011	0.13	1.3
☐	Methacrylonitrile	126-98-7	0.24	84	840
☐	Methanol	67-56-1	5.6	0.75 mg/l TCLP	7.5 mg/l TCLP
☐	Methapyrilene	91-80-5	0.081	1.5	15
☐	Methiocarb	2032-65-7	0.056	1.4	14
☐	Methomyl	16752-77-5	0.028	0.14	1.4
☐	Methoxychlor	72-43-5	0.25	0.18	1.8
☐	3-Methylchlolanthrene	56-49-5	0.0055	15	150
☐	4,4-Methylene bis(2-chloroaniline)	101-14-4	0.50	30	300
☐	Methylene chloride	75-09-2	0.089	30	300
☐	Methyl ethyl ketone	78-93-3	0.28	36	360
☐	Methyl isobutyl ketone	108-10-1	0.14	33	330
☐	Methyl methacrylate	80-62-6	0.14	160	1600
☐	Methyl methansulfonate	66-27-3	0.018	NA	NA
☐	Methyl parathion	298-00-0	0.014	4.6	46
☐	Metolcarb	1129-41-5	0.056	1.4	14
☐	Mexacarbate	315-18-4	0.056	1.4	14
☐	Molinate	2212-67-1	0.042	1.4	14
☐	Naphthalene	91-20-3	0.059	5.6	56
☐	2-Naphthylamine	91-59-8	0.52	NA	NA
☐	o-Nitroaniline	88-74-4	0.27	14	140

Attachment 4 - LDR and UHC Information (continued)

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	p-Nitroaniline	100-01-6	0.028	28	280
☐	Nitrobenzene	98-95-3	0.068	14	140
☐	5-Nitro-o-toluidine	99-55-8	0.32	28	280
☐	o-Nitrophenol	88-75-5	0.028	13	130
☐	p-Nitrophenol	100-02-7	0.12	29	290
☐	N-Nitrosodiethylamine	55-18-5	0.40	28	280
☐	N-Nitrosodimethylamine	62-75-9	0.40	2.3	23
☐	N-Nitroso-di-n-butylamine	924-16-3	0.40	17	170
☐	N-Nitrosomethylethylamine	10595-95-6	0.40	2.3	23
☐	N-Nitrosomorpholine	59-89-2	0.40	2.3	23
☐	N-Nitrosopiperidine	100-75-4	0.013	35	350
☐	N-Nitrosopyrrolidine	930-55-2	0.013	35	350
☐	1,2,3,4,6,7,8,9-Octachlorodibenzo-pdioxin	3268-87-9	0.000063	0.005	0.05
☐	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
☐	Oxamyl	23135-22-0	0.056	0.28	2.8
☐	Parathion	56-38-2	0.014	4.6	46
☐	PCBs (total)	1336-36-3	0.10	10	100
☐	Pebulate	1114-71-2	0.042	1.4	14
☐	Pentachlorobenzene	608-93-5	0.055	10	100
☐	Pentachlorodibenzo-p-dioxins (PeCDDs)	NA	0.000063	0.001	0.01
☐	Pentachlorodibenzo-furans (PeCDFs)	NA	0.000035	0.001	0.01
☐	Pentachloroethane	76-01-7	0.055	6.0	60
☐	Pentachloronitrobenzene	82-68-8	0.055	4.8	48
☐	Pentachlorophenol	87-86-5	0.089	7.4	74
☐	Phenacetin	62-44-2	0.081	16	160
☐	Phenanthrene	85-01-8	0.059	5.6	56
☐	Phenol	108-95-2	0.039	6.2	62
☐	1,3-Phenylenediamine	108-45-2	0.01	0.66	6.6
☐	Phorate	298-02-2	0.021	4.6	46
☐	Phthalic acid	100-21-0	0.055	28	280
☐	Phthalic anhydride	85-44-9	0.055	28	280
☐	Physostigmine	57-47-6	0.056	1.4	14
☐	Physostigmine salicylate	57-64-7	0.056	1.4	14
☐	Promecarb	2631-37-0	0.056	1.4	14
☐	Pronamide	23950-58-5	0.093	1.5	15
☐	Propham	122-42-9	0.056	1.4	14
☐	Propoxur	114-26-1	0.056	1.4	14
☐	Prosulfocarb	52888-80-9	0.042	1.4	14
☐	Pyrene	129-00-0	0.067	8.2	82
☐	Pyridine	110-86-1	0.014	16	160
☐	Safrole	94-59-7	0.081	22	220
☐	Silvex (2,4,5-TP)	93-72-1	0.72	7.9	79
☐	1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14	140
☐	Tetrachlorodibenzo-p-dioxins (TCDDs)	NA	0.000063	0.001	0.01
☐	Tetrachlorodibenzofurans (TCDFs)	NA	0.000063	0.001	0.01
☐	1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60

	Organic Constituents	CASRN[1]	Wastewater Standard (mg/l)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS Nonwastewater (mg/kg unless noted otherwise)
☐	1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60
☐	Tetrachloroethylene	127-18-4	0.056	6.0	60
☐	2,3,4,6-Tertachlorophenol	58-90-2	0.030	7.4	74
☐	Thiodicarb	59669-26-0	0.019	1.4	14
☐	Thiophanate-methyl	23564-05-8	0.056	1.4	14
☐	Toluene	108-88-3	0.080	10	100
☐	Toxaphene	8001-35-2	0.0095	2.6	26
☐	Triallate	2303-17-5	0.042	1.4	14
☐	Tribromomethane (Bromoform)	75-25-2	0.63	15	150
☐	2,4,6-Tribromophenol	118-79-6	0.035	7.4	74
☐	1,2,4-Trichlorobenzene	120-82-1	0.055	19	190
☐	1,1,1-Trichloroethane	71-55-6	0.054	6.0	60
☐	1,1,2-Trichloroethane	79-00-5	0.054	6.0	60
☐	Trichloroethylene	79-01-6	0.054	6.0	60
☐	Trichloromonofluoromethane	75-69-4	0.020	30	300
☐	2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74
☐	2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74
☐	2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	0.72	7.9	79
☐	1,2,3-Trichloropropane	96-18-4	0.85	30	300
☐	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.057	30	300
☐	Triethylamine	121-44-8	0.081	1.5	15
☐	tris-(2,3-Dibromopropyl) phosphate	126-72-7	0.11	0.10	1.0
☐	Vernolate	1929-77-7	0.042	1.4	14
☐	Vinyl chloride	75-01-4	0.27	6.0	60
☐	Xylenes (total)	1330-20-7	0.32	30	300
☐	Antimony	7440-36-0	1.9	1.15 mg/l TCLP	11.5 mg/l TCLP
☐	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP	50 mg/l TCLP
☐	Barium	7440-39-3	1.2	21 mg/l TCLP	210 mg/l TCLP
☐	Beryllium	7440-41-7	0.82	1.22 mg/l TCLP	12.2 mg/l TCLP
☐	Cadmium	7440-43-9	0.69	0.11 mg/l TCLP	1.1 mg/l TCLP
☐	Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP	6.0 mg/l TCLP
☐	Cyanides (Total)[4]	57-12-5	1.2	590	5900
☐	Cyanides (Amenable)[4]	57-12-5	0.86	30	300
☐	Fluoride	16984-48-8	35	NA	NA
☒	Lead	7439-92-1	0.69	0.75 mg/l TCLP	7.5 mg/l TCLP
☐	Mercury (Retort residues)	7439-97-6	NA	0.20 mg/l TCLP	2.0 mg/l TCLP
☐	Mercury - All others	7439-97-6	0.15	0.025 mg/l TCLP	0.25 mg/l TCLP
☐	Nickel	7440-02-0	3.98	11 mg/l TCLP	110 mg/l TCLP
☐	Selenium	7782-49-2	0.82	5.7 mg/l TCLP	57 mg/l TCLP
☐	Silver	7440-22-4	0.43	0.14 mg/l TCLP	1.4 mg/l TCLP
☐	Sulfide	18496-25-8	14	NA	NA
☐	Thallium	7440-28-0	1.4	0.20 mg/l TCLP	2.0 mg/l TCLP
☐	Vanadium[5]	7440-62-2	4.3	1.6 mg/l TCLP	16 mg/l TCLP
☐	Zinc[5]	7440-66-6	2.61	4.3 mg/l TCLP	43 mg/l TCLP

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.

Non-Radioactive Profile Addendum

Clean Harbors Deer Trail Facility

General Information

Waste Name	Industrial Soil
Profile Number:	CH444863
Generator Name:	Los Alamos National Laboratory
EPA ID:	NM0890010515
Mailing Address:	999 Central Ave. Suite 300 (Los Alamos Technical Associates)
	Los Alamos, NM 87544
Site Address:	LANL TA-05

Waste Information (Please check yes or no)

Does the waste exhibit any radioactivity above background?	Yes ☐	No ☑
Does the waste contain any manmade radioactive material above background even at exempt concentrations?	Yes ☐	No ☑
Does the waste contain smoke detectors?	Yes ☐	No ☑
Does the waste contain any Tritium-filled exit signs or instruments?	Yes ☐	No ☑
Does the waste contain Tritium or Carbon 14 at exempt levels?	Yes ☐	No ☑
Are any other exempt radioactive materials present?	Yes ☐	No ☑

If the answer to any of these questions is yes, please list the radioactive materials which are present and their concentrations below.

Process Information (Please check yes or no)

Was the waste generated at a biomedical research facility?	Yes ☐	No ☑
Was the waste generated at a medical facility utilizing radioactive materials for patient diagnosis or therapy?	Yes ☐	No ☑
Was the waste generated at a nuclear power plant?	Yes ☐	No ☑

Generators Certification

I Hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste.

Authorized Signature	Name (Print)	Title	Date
Kimberly Oman	Kimberly Oman	Senior Waste Management Specialist	8/15/11

Please Return to:
Clean Harbors Deer Trail, LLC, 108555 East Highway 36, Deer Trail, CO 80105
Phone 970-386-2293 Fax 970-386-2262

Request for Land Application of Drill Cuttings Form

ENV-RCRA must approve any deviation(s) from this request prior to land application.

Date: 8/1/11 Project: _____

Location of Land Application: Within project footprint TA: 05 (SWMU

Estimated Quantity: 14 ft^3 (cubic feet or tons)

Composition (e.g., 98% tuff and 2% quick gel, etc.): 100% Tuff (QBT-3)

Proposed Method of Land Application (describe): Cuttings will be land applied in the SWMU where they were generated & covered with a layer of road base

Note: An EX-ID Permit is required prior to land application. 10X0810-05 exp 10/05/2011

Decision Tree—Decision Point Evaluation

The following questions require yes or no answers.	Yes	No
1. D1: Is existing characterization data consistent with WCSF? Attach a summary table of results, validated raw data, etc.	✓	
2. D2: Do drill cuttings contain RCRA Hazardous Waste or Hazard constituents above RCRA limits? If yes:		✓
Has a Due Diligence been conducted for this waste? Attach a copy of the due diligence documentation.		
Has a *No Longer Contained In* been approved for this waste? Attach a copy of the *No Longer Contained In* approval.		
3. D6: Do drill cuttings meet the 5 criteria in D6, Attachment 1?	✓	
4. Do drill cuttings meeting the criteria in the Radiological Decision Tree, Attachment 3?	✓	

Generator or Project Leader Certification: I certify that the drill cuttings described in this request meet the criteria for land application per the Decision Tree and that the drill cuttings will be land applied as described.

Kent Rich	[signature]	Proj Mgr.	8/2/11
Name (Print)	**Signature**	**Title**	**Date**

ENV-RCRA Review (below):

Does request provide all the required information, and do the drill cuttings meet all the criteria for land application?
Yes ✓ **No**_____ **Note deficiency in the space provided:**

ENV-RCRA Reviewer Name (Print) ~~Jocelyn Buckley~~ **Signature** [signature] **Date** 8/2/11

Package Expiration Date:_____

Post Land Application Field Certification Sheet

Date(s) of land application: _____ Project: _____

Location of land application: _____ TA: 05

EX-ID Number: 10X0810-05 EX-ID Expiration Date: 10/05/2011

Please explain any deviations from original application (Attachment 2) in the space provided: _____

Note: ENV-RCRA must approve any deviations from Attachment 2 prior to land application.

Generator or Project Leader Certification (below):

I certify that

- land application complied with the requirements of this procedure (ENV-RCRA-SOP-011.1),
- no free liquids were applied during land application,
- an inspection was conducted to ensure the requirements in Attachment 2 of this procedure was met, and
- the land application of drill cuttings complied with the excavation permit.

Name (Print)	**Signature**	**Title**	**Date**

Sampling event ID 3535
SWMU ev 3535
Stockpile Number ev 3535

Solid Waste Evaluation

Summary

associated Excel file: ev3535.awd.7.26.2011(1).xls
evaluation date: 7/26/2011

RCRA

	41	analytes pass
between these	36	analytes pass as undetected
	0	analytes fail

Detects

PCBs: none detected 0

6	analytes with potential F-code	**Non-wastewater LDR:** 10 pass	0 FAIL
6	analytes with potential K-code	**Hazardous soil LDR:** 10 pass	0 FAIL
2	analytes with potential U-code		
0	analytes with potential P-code		

Residential Soil (mg/kg) :	19 pass	0 FAIL
Industrial/ Occupational Soil (mg/kg) :	19 pass	0 FAIL
Construction Worker Soil (mg/kg) :	16 pass	1 FAIL
Recreational Soil (mg/kg) :	19 pass	0 FAIL
soil background:	17 pass	0 FAIL
Canyon Sediment background:	17 pass	0 FAIL
Qbt 2,3,4 background:	17 pass	0 FAIL
Qbt 1v background:	15 pass	2 FAIL
Qbt 1g, Qct,Qbo background:	12 pass	5 FAIL

RAD

total dose: 0.0110 mRem/year

?

analysed for H-3
analysed for Pu-239

20	isotopes,
8	were detected
12	undetected

Residen-tial SAL:	2 pass	0 FAIL
Indust-rial SAL:	2 pass	0 FAIL
Constr. Worker SAL:	2 pass	0 FAIL
Recrea-tional SAL:	2 pass	0 FAIL
Soil:	7 pass	0 FAIL
Canyon Sedi-ment:	7 pass	0 FAIL
QBT2,3,4:	7 pass	0 FAIL
QBt 1v:	7 pass	0 FAIL
Qbt 1g, Qct, Qbo:	7 pass	0 FAIL

Remark: The Evaluator may overwrite any result of automatic evaluation, but a short written explanation must be added

Sample ID	associated blanks	associated duplicate
WST05-11-22404	WST05-11-22407	

Imported data files
ev3535.7.26.2011.txt

Sampling event ID 3535

SWMU ev 3535

Stockpile Number ev 3535

Detected Chemicals Form

associated Excel file: ev3535.awd.7.26.2011(1).xls

evaluation date: 7/26/2011

Analyte	CAS/ Symbol	concen-tration	unit of measure	Non-wastewater LDR	Hazardous Soil LDR	Potential Haz F-codes	Potential Haz K-codes	Potential Haz U-codes	Potential Haz P-codes	comments
Aluminum	Al	2230	mg/kg							
Arsenic	As	0.743	mg/kg	pass	pass	F032,F034,F035,	K031,K060,K161,K171,K172,K176,K084,K101,K102,			
Barium	Ba	19.5	mg/kg	pass	pass					
Beryllium	Be	0.373	mg/kg	pass	pass					
Calcium	Ca	1820	mg/kg							
Chlordane[gamma-]	5103-74-2	0.00141	mg/kg				K097,			
Chloroform	67-66-3	0.00074	mg/kg	pass	pass	F024,F025,	K009,K010,K019,K020,K021,K029,K073,K116,K149,K150,K151,K158,	U044,		
Chromium	Cr	6.36	mg/kg	pass	pass	F032,F034,F035,F037,F038,	K090,			
Cobalt	Co	0.808	mg/kg							
Copper	Cu	1.85	mg/kg							
Iron	Fe	5340	mg/kg							
Isopropyltoluene[4-]	99-87-6	0.00041	mg/kg							
Lead	Pb	6.75	mg/kg	pass	pass	F035,F037,F038,	K002,K003,K005,K048,K049,K051,K062,K064,K086,K100,K176,K046,K052,K061,K069,			
Magnesium	Mg	573	mg/kg							
Manganese	Mn	245	mg/kg							
Nickel	Ni	2.08	mg/kg	pass	pass	F006,				
Nitrate	NO3	1.59	mg/kg							
Perchlorate	ClO4	0.00053	mg/kg							
pH	pH	9.47	SU							
Potassium	K	450	mg/kg							
Sodium	Na	478	mg/kg							
Tetrachloroethene	127-18-4	0.00064	mg/kg	pass	pass	F001,F002,F024,F025,	K016,K019,K020,K073,K116,K150,K151,	U210,		
Total Petroleum Hydrocarbons Diesel Range Organics	TPH-DRO	16.1	mg/kg							
Vanadium	V	3.31	mg/kg	pass	pass					
Zinc	Zn	26.8	mg/kg	pass	pass					

Detected Chemicals: SSL and Background check

Analyte	CAS/ Symbol	concen-tration	unit of measure	Residential Soil (mg/kg)	Industrial/ Occupational Soil (mg/kg)	Construction Worker Soil (mg/kg)	Recreational Soil (mg/kg)	soil background	Canyon Sediment background	Qbt 2,3,4 background	Qbt 1v background	Qbt 1g, Qct,Qbo background
Aluminum	Al	2230	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass
Arsenic	As	0.743	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	FAIL
Barium	Ba	19.5	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass
Beryllium	Be	0.373	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass
Calcium	Ca	1820	mg/kg	NA	NA	NA	NA	pass	pass	pass	pass	pass
Chlordane[gamma-]	5103-74-2	0.00141	mg/kg	pass	pass	pass	pass	NA	NA	NA	NA	NA
Chloroform	67-66-3	0.00074	mg/kg	pass	pass	pass	pass	NA	NA	NA	NA	NA
Chromium	Cr	6.36	mg/kg	pass	pass	NA	pass	pass	pass	pass	FAIL	FAIL
Cobalt	Co	0.808	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass
Copper	Cu	1.85	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass
Iron	Fe	5340	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	FAIL
Isopropyltoluene[4-]	99-87-6	0.00041	mg/kg	pass	pass	pass	pass	NA	NA	NA	NA	NA
Lead	Pb	6.75	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass
Magnesium	Mg	573	mg/kg	NA	NA	NA	NA	pass	pass	pass	pass	pass
Manganese	Mn	245	mg/kg	pass	pass	FAIL	pass	pass	pass	pass	pass	FAIL
Nickel	Ni	2.08	mg/kg	pass	pass	pass	pass	pass	pass	pass	FAIL	FAIL
Nitrate	NO3	1.59	mg/kg	pass	pass	pass	pass	NA	NA	NA	NA	NA
Perchlorate	ClO4	0.00053	mg/kg	pass	pass	NA	pass	NA	NA	NA	NA	NA
pH	pH	9.47	SU	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	K	450	mg/kg	NA	NA	NA	NA	pass	pass	pass	pass	pass
Sodium	Na	478	mg/kg	NA	NA	NA	NA	pass	pass	pass	pass	pass
Tetrachloroethene	127-18-4	0.00064	mg/kg	pass	pass	pass	pass	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons Diesel Range Organics	TPH-DRO	16.1	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	V	3.31	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass
Zinc	Zn	26.8	mg/kg	pass	pass	pass	pass	pass	pass	pass	pass	pass

Sampling event ID 3535

SWMU ev 3535

Stockpile Number ev 3535

SAL and background comparison

associated Excel file: ev3535.awd.7.26.2011(1).xls

evaluation date: 7/26/2011

Analyte	CAS/ Symbol	concen-tration	unit of measure	Residen-tial SAL	Indust-rial SAL	Constr. Worker SAL	Recrea-tional SAL	Soil	Canyon Sedi-ment	QBT2, 3,4	QBt 1v	Qbt 1g, Qct, Qbo
Actinium-228	Ac-228	2	pCi/g									
Bismuth-214	Bi-214	1.65	pCi/g					pass	pass	pass	pass	pass
Lead-212	Pb-212	2.19	pCi/g					pass	pass	pass	pass	pass
Lead-214	Pb-214	1.62	pCi/g					pass	pass	pass	pass	pass
Potassium-40	K-40	32.3	pCi/g					pass	pass	pass	pass	pass
Thallium-208	Tl-208	0.685	pCi/g					pass	pass	pass	pass	pass
Uranium-234	U-234	0.903	pCi/g	pass	pass	pass	pass	pass	pass	pass	pass	pass
Uranium-238	U-238	0.946	pCi/g	pass	pass	pass	pass	pass	pass	pass	pass	pass
Americium-241	Am-241	0.0131	pCi/g									
Cesium-137	Cs-137	-0.0228	pCi/g									
Cobalt-60	Co-60	-0.0251	pCi/g									
Plutonium-238	Pu-238	-0.0024	pCi/g									
Plutonium-239/240	Pu-239/240	-0.0012	pCi/g									
Protactinium-234m	Pa-234m	3.11	pCi/g									
Sodium-22	Na-22	-0.0009	pCi/g									
Strontium-90	Sr-90	-0.0618	pCi/g									
Thorium-234	Th-234	1.63	pCi/g									
Tritium	H-3	0.002999	pCi/g									
Uranium-235	U-235	0.107	pCi/g									
Uranium-235/236	U-235/236	0.0744	pCi/g									

All rad levels are below background for QBT3. No calculations necessary. OK for land app.

PRS Number: SWMU 05-004 May 2010		
Source of contaminants:	Yes	No
F-listed		X
U- or P-listed		X
K-listed		X

PRS Description

SWMU 05-004 is a former septic tank (structure 05-13), associated lines, and outfall that received industrial waste from a laboratory (Building 05-1) from 1948 to 1959. Historical information determined that the tank was free of radiation and HE contamination, but noted that it contained unspecified toxic chemicals. No evidence of radioactively contaminated soil was detected when the tank was removed in 1960. As-built drawings show the presence of a discharge line running from Building 05-1 and discharging south into Cañada del Buey. Notes taken during a 1988 radiation survey show evidence of an outfall near the former location of structure 05-13. Building 05-1 was removed during LASCP activities conducted in 1985. At that time, the building was determined to be free of radioactive and HE contamination. The 1985 LASCP investigation confirmed removal of the tank and piping by excavation, and no evidence of radioactively contaminated soil was detected at that time. A 1988 survey detected slightly above-background gamma activity. The potential contaminants at the site include radionuclides, VOCs, SVOCs, inorganic chemicals, and HE.

Documents Reviewed

Document Date	Title	LAUR No.	ERId No.
1/1/2010	Investigation Work Plan for Lower Mortandad/Cedro Canyons Aggregate Area, Revision 1	10-0048	108290
10/1/2009	Investigation Work Plan for Lower Mortandad/Cedro Canyons Aggregate Area [IWP]	09-6567	107103
10/1/2009	Historical Investigation Report for Lower Mortandad/Cedro Canyons Aggregate Area [HIR]	09-6566	107102
5/18/1992	RFI Work Plan for Operable Unit 1129	92-0800	007666

Summary of Listed Status

According to the October 2009 Investigation Work Plan (ERID 107102), no metals were detected above BG or had detection limits above background during the 1995 RFI, and the only organic detected was benzoic acid. Decision level data from the 1988 RFI show no metals detected above background during the 1988 sampling. Mercury had a detection limit above BV is 3 samples and selenium had detection limits above background in two samples.

According to the Historical Investigation Report (October 2009 ERID 107102), it is unknown what chemicals were discharged to the septic tank from building 05-1. No listed sources of the contaminants identified in previous investigations were identified, nor were any F, K-, P-, or U-listed sources identified in the documents reviewed for this SWMU.

RC