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Corrugated Metal Pipes Category of Transuranic Waste Stored Below Ground within Area G

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Corrugated Metal Pipes Category of Transuranic Waste Stored Below Ground within Area G

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Abbreviations and Acronyms

AEC	Atomic Energy Commission
BG	below ground
CBFO	Carlsbad Field Office, U.S. Department of Energy
CCP	Central Characterization Project
CFR	Code of Federal Regulations
CH	contact handled
CH-TRAMPAC	Contact-Handled Transuranic Waste Authorized Methods for Payload Control
CMB-11	Chemistry and Metallurgy Group
CMP	corrugated metal pipe
Consent Order	New Mexico Environment Department Compliance Order on Consent
Cs-137	cesium-137
DOE	U.S. Department of Energy
ft	feet
ft^3	cubic feet
FY	fiscal year
gal	gallon
GPR	ground penetrating radar
H-7	Industrial Waste Management Group
HE-RTR	High-Energy Real Time Radiography unit
in	inch
l	liter
LAFO	Los Alamos Field Office
LANL	Los Alamos National Laboratory
LANS	Los Alamos National Security, LLC
lb	pound
m^3	cubic meters
MAR	material at risk
MDA	Material Disposal Area
MFP	mixed fission products
mR/hr	millirad per hour
nCi/g	nanocuries per gram
NEPA	National Environmental Policy Act
NMED	New Mexico Environment Department
NNSA	National Nuclear Security Administration
NNSS	Nevada National Security Site
psi	pounds per square inch
PE-Ci	plutonium-239 equivalent curies

Pu-238	plutonium-238
Pu-239	plutonium-239
RCRA	Resource Conservation and Recovery Act
RH	remote handled
RLWTF	radioactive liquid waste treatment facility
RSWD	Radioactive Solid Waste Disposal Record
SuperHENC	Super High Efficiency Neutron Counter unit
SWB	standard waste box
TA	Technical Area
TRU	transuranic
U-233	uranium-233
U-235	uranium-235
U-238	uranium-238
WAC	Waste Acceptance Criteria
WIPP	Waste Isolation Pilot Plant

1. Executive Summary

The primary regulatory driver for environmental cleanup at the Los Alamos National Laboratory (LANL) is the March 2005 Compliance Order on Consent (Consent Order), an agreement between LANL and the New Mexico Environment Department (NMED) that contains specific requirements and schedules for cleaning up historical contamination at the LANL site. The Consent Order has a final deliverable date of December 2015 (Reference 1). The Consent Order does not address requirements for removing transuranic (TRU) waste from the LANL site; therefore TRU waste removal was typically placed at lower priority in budget decisions. Removal of TRU waste stored both above ground and below ground at Technical Area 54 (TA-54) Area G is required before a remedy is implemented under the Consent Order for Material Disposal Area G (MDA G, which is the below-ground portion of Area G). After the Las Conchas Fire burned large areas near Los Alamos in 2011, New Mexico Governor Susana Martinez asked the U.S. Department of Energy (DOE) to provide sufficient funding for cleanup of defense legacy wastes from LANL and for TRU waste disposal at the Waste Isolation Pilot Plant (WIPP). Discussions were held with the NMED on accelerating TRU waste removal from LANL.

In January 2012, the DOE National Nuclear Security Administration (DOE/NNSA) and the NMED announced the issuance of the *Framework Agreement: Realignment of Environmental Priorities* (Framework Agreement). The Framework Agreement is a non-binding agreement that outlines DOE/NNSA commitments to further accelerate TRU waste disposition at LANL (Reference 2). Commitments under the Framework Agreement related to TRU waste include:

- Removal of all non-cemented above-ground TRU waste stored at Area G as of October 1, 2011, by no later than June 30, 2014. This inventory was defined as 3,706 cubic meters (m^3) of material;
- Removal of all newly-generated TRU waste received in Area G during Fiscal Years (FY) 2012 and 2013 by December 31, 2014;
- Based on projected funding profiles, develop by December 31, 2012, a schedule with pacing milestones for disposition of below-ground TRU waste requiring retrieval at Area G; and
- Removal of the above-ground cemented TRU waste in an efficient and effective manner protective of human health and safety of workers and the public.

Within the schedule for disposition of below-ground (BG) TRU waste submitted to the NMED in December 2012, the DOE/NNSA determined that there are seven below-ground waste unit categories within MDA G that potentially contain TRU waste that may require retrieval (Reference 3). These seven categories were identified as (1) Pit 9; (2) Trenches A-D; (3) Corrugated Metal Pipes (CMPs); (4) Hot Cell Liners; (5) Tritium Packages; (6) 17th RH Canister; and (7) the 33 Shafts. The seven categories have an approximate total volume of 2,399 m^3 and approximate radioactive Material at Risk (MAR) of 110,751 plutonium-239 equivalent curies (PE-Ci). Of these seven categories, approximately 99.86% of the waste volume and approximately 99.9% of the MAR is contained within the first six categories. The DOE/NNSA concluded that these first six categories may include below-ground TRU waste that requires retrieval.

The DOE/NNSA committed to disposition of the below-ground TRU waste in the first six categories no later than September 30, 2018, and will work to meet cumulative pacing milestones to disposition 250 m^3 by September 30, 2015; 1,000 m^3 by September 30, 2016; 1,750 m^3 by September 30, 2017; and 2,395 m^3 by September 30, 2018.

For the 33 Shafts, DOE/NNSA will complete (1) a determination as to whether this category contains TRU waste that requires retrieval; and (2) to the extent necessary, its decision process under the National Environmental Policy Act (NEPA) regarding retrieval, by no later than September 30, 2015.

Detailed planning has begun on retrieval and processing of the other six categories of below-ground TRU waste, with Trenches A-D, Pit 9 and the CMPs as the categories to be retrieved and processed for disposition first. Because the CMPs present less of a challenge in terms of both retrieval and processing, it is likely that the CMPs will be the first category to be retrieved and processed for disposition.

The CMPs waste unit category consists of a total of 158 corrugated metal pipes filled with cement from a batch treatment process that mixed Portland cement with several liquid waste streams containing americium and plutonium at the TA-21 Building 257 (21-257) Radioactive Liquid Waste Treatment Facility (RLWTF). Each CMP is 20 feet (ft) long with a diameter of 30 inches (in). About 95% of the cemented liquid waste came from an americium processing operation at the DP West plutonium processing facility. The CMPs were filled with cemented waste from late 1975 to 1978 and maintained in a vertical configuration in a pit at MDA T (adjacent to Building 21-257) at TA-21. The CMPs were retrieved from storage, decontaminated, painted, and transported to TA-54 Area G in 1986. The 158 CMPs were placed in two horizontal rows end-to-end and stacked two high at the top of the east end of Pit 29. After all of the CMPs were placed, they were covered with plywood and tarps and about six feet of soil. Sometime after the CMPs were placed into storage, an access road was constructed above Pit 29 and a portion of the CMPs are believed to be located beneath the road.

This report summarizes available information on the origin and composition of the CMPs, their physical and radiological characteristics, and issues that may be encountered in the retrieval and processing of the CMPs. Review of this information indicates that the CMPs should present no major issues in retrieval and processing, and that the CMPs contain TRU waste that can be shipped to WIPP. The most likely issue that will be encountered is the potential for free liquids in the CMPs, possibly due to dewatering of the cement in the CMPs.

2. Introduction

2.1 Purpose and Introduction

Purpose of Report. This report presents a general description of categories of TRU waste in below-ground storage configurations at LANL TA-54 MDA G (the below-ground portion of Area G), with a detailed description of the CMP category of below-ground TRU waste. The report is intended to support work packages or Statements of Work for subcontracting task orders for retrieval and processing of the CMPs for disposition. Information is presented on the historic source of the waste stored in the CMPs, the configuration of the CMPs in storage, and characteristics of the CMP waste category.

Framework Agreement. A large wildfire called the Las Conchas Fire burned more than 150,000 acres south and west of LANL in late June and July 2011. The fire came within about 3.5 miles of TA-54, Area G, which is the primary location where LANL manages solid radioactive waste, and heightened public concern and news media attention on TRU waste storage at Area G. Following the fire, New Mexico Governor Susana Martinez asked the DOE to provide sufficient funding for cleanup of defense legacy wastes from LANL and for TRU waste disposal at WIPP.

The primary regulatory driver for environmental cleanup at LANL is the Compliance Order on Consent, a 2005 agreement between LANL and the NMED that contains specific requirements and schedules for cleaning up historical contamination of the LANL site, and has a final deliverable date of December 2015 (Reference 1). The Compliance Order on Consent does not address requirements and deliverables for removing TRU waste from the LANL site, which placed TRU waste removal at a lower priority in budget decisions. Removal of TRU waste stored above ground at Area G and below ground within pits, shafts, and trenches within MDA G is required before a remedy for cleanup of MDA G can be implemented under the Consent Order. After the Las Conchas Fire, discussions were held with the NMED on accelerating TRU waste removal from LANL.

In January 2012, the DOE/NNSA) and the State of New Mexico Environment Department (NMED) announced issuance of the *Framework Agreement: Realignment of Environmental Priorities*. The Framework Agreement is a non-binding agreement that outlines DOE/NNSA commitments to further accelerate TRU waste disposition at LANL (Reference 2). Commitments under the Framework Agreement related to TRU waste include:

- Removal of all non-cemented above-ground TRU waste stored at Area G as of October 1, 2011, by no later than June 30, 2014. This inventory was defined as 3,706 cubic meters (m^3) of material;
- Removal of all newly-generated TRU waste received in Area G during FYs 2012 and 2013 by December 31, 2014;
- Based on projected funding profiles, develop by December 31, 2012, a schedule with pacing milestones for disposition of below-ground TRU waste requiring retrieval at Area G; and
- Removal of the above-ground cemented TRU waste in an efficient and effective manner protective of human health and safety of workers and the public.

Within the schedule for disposition of below-ground TRU waste submitted to the NMED in December 2012, the DOE/NNSA determined that there are seven below-ground waste unit categories within MDA G that potentially contain TRU waste that may require retrieval (Reference 3). These seven categories were identified as (1) Pit 9; (2) Trenches A-D; (3) Corrugated Metal Pipes; (4) Hot Cell Liners; (5) Tritium Packages; (6) 17th RH Canister; and (7) the 33 Shafts. The seven categories have an approximate total volume of 2,399 m^3 and approximate radioactive MAR of 110,751 plutonium-239 equivalent curies (PE-Ci). Of these seven categories, approximately 99.86% of the waste volume and approximately

99.9% of the MAR is contained within the first six categories. The DOE/NNSA concluded that these first six categories may include below-ground TRU waste that requires retrieval. For the remaining category, the 33 Shafts (which have a total approximate volume of 3.4 m^3 and total MAR of 97 PE-Ci), additional evaluation is warranted.

The DOE/NNSA committed to disposition the below-ground TRU waste in the first six categories no later than September 30, 2018, and will work to meet cumulative pacing milestones to disposition 250 m^3 by September 30, 2015; 1,000 m^3 by September 30, 2016; 1,750 m^3 by September 30, 2017; and 2,395 m^3 by September 30, 2018. For the 33 Shafts, DOE/NNSA will complete (1) a determination as to whether this category contains TRU waste that requires retrieval; and (2) to the extent necessary, its decision process under NEPA regarding retrieval, by no later than September 30, 2015

2.2 Background

Historical Perspective. Radioactive waste has been generated at LANL since the 1940's during research and development activities for nuclear weapons, nuclear reactors, and plutonium science. Historically, radioactive waste was buried in shallow landfills at LANL called Material Disposal Areas or MDAs; MDA G at TA-54 (below-ground portion of Area G) first received radioactive waste in 1957 and has served as the primary radioactive solid waste management facility at LANL since 1959 (Reference 4). Figure 1 shows a high-level aerial photograph of TA-54 Area G and location of Area G on a map of LANL technical areas and the surrounding area. MDA G underlies most of the portion of Area G shown in the aerial photograph.

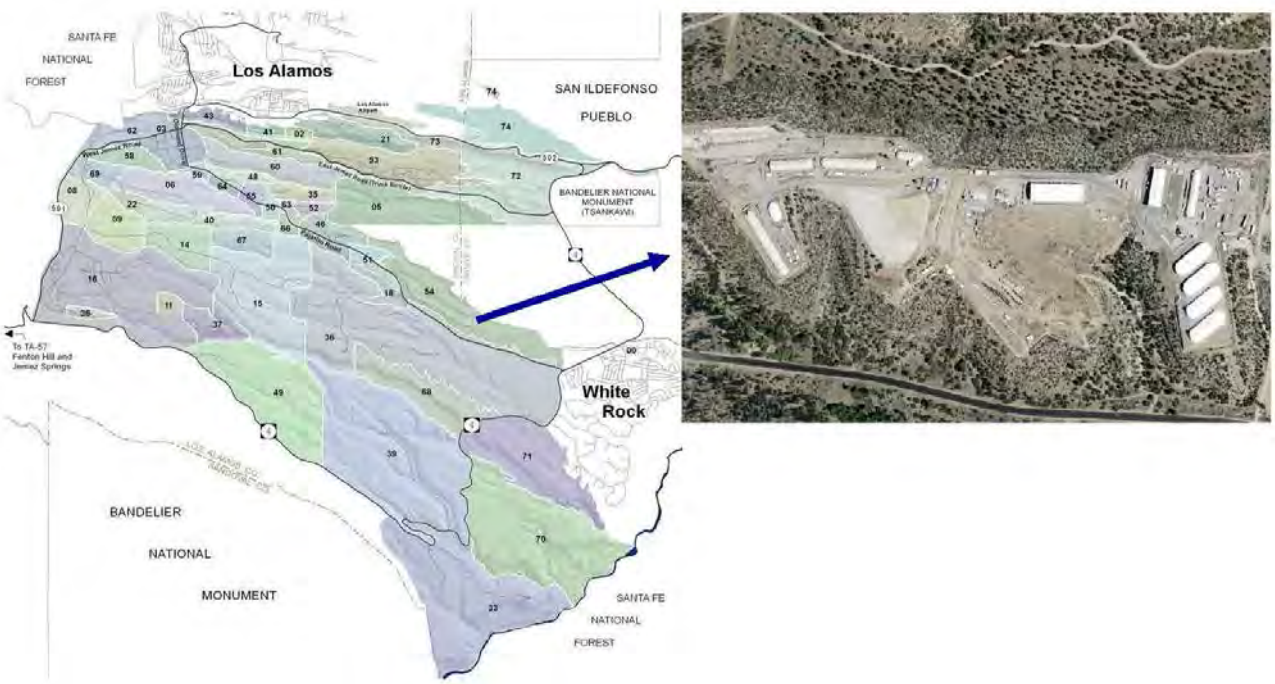

Figure 1. Location and Aerial Photo of TA-54 Area G

In 1970, the Atomic Energy Commission (AEC) issued Immediate Action Directive 0511-21 that directed AEC sites to segregate wastes with "known or detectable concentrations of transuranium nuclides" and that such wastes be "packaged and buried in such a fashion that they can be readily

retrievable as contamination-free packages within an interim period of 20 years; beyond that period retrievability should continue to be possible" (Reference 5). This waste was to be stored for disposition in a future deep geologic repository (ultimately, WIPP).

The segregation limit for TRU waste was changed in 1973 with issuance of the *Atomic Energy Commission Manual*, Chapter 0511, "*Radioactive Waste Management*" to material contaminated with certain alpha-emitting radionuclides and activity greater than10 nanocuries per gram (nCi/g) for plutonium-239 (Pu-239) and uranium-233 (U-233). Both Pu-238 and Pu-241 were excluded unless indicated by Pu-239 impurities or when required by local burial criteria (LANL established a segregation limit for Pu-238 of 100 nCi/g). The value of 10 nCi/g was derived from the upper range of concentrations of radium-226 in the earth and was "subject to modification based on long-term studies of nuclide migration in soil" (Reference 6). In 1982, the TRU waste segregation limits were changed to 100 nCi/g for all TRU isotopes with a half-life of 20 years or longer (including Pu-238) by DOE Order 5820.1, *Management of Transuranic Contaminated Material* (Reference 7).

Like a number of DOE sites, LANL initially developed storage configurations for TRU waste that involved placing the waste containers in trenches, pits, and shafts that were excavated into the ground surface (Reference 4). LANL also began storing TRU waste in large fabric-covered storage domes in 1985 (white structures in the aerial photograph in Figure 1). By the time that WIPP opened in 1999, LANL had built up an inventory of about 9,100 cubic meters (m^3) of TRU waste at Area G, with about 2,416 m^3 stored below ground in trenches, pits, and shafts and about 6,700 m^3 stored above ground (Reference 8). Newly-generated TRU waste also continues to be managed at Area G.

TRU Waste Disposition. Through December 31, 2012, LANL shipped a total of 5,250 m^3 of TRU waste to WIPP. A total of 1,022 m^3 of TRU waste that was reclassified to MLLW after radioassay showed TRU isotope concentrations less than 100 nCi/g was also shipped off-site to commercial facilities for treatment and disposal at the Nevada National Security Site (NNSS), formerly the Nevada Test Site. Total disposition of TRU waste through December 31, 2012, was 6,272 m^3. There isn't a one-to-one correlation between TRU waste volumes shipped to WIPP, or reclassified and shipped as MLLW, and inventory reduction because some containers were over-packed into standard waste boxes or repackaged into multiple drums because of their high activity.

The LANL TRU Program is currently engaged in a campaign to ship 3,706 m^3 of higher risk TRU waste stored above ground by June 30, 2014, and will also complete shipment of all newly-generated TRU waste received in FYs 2012 and 2013 by December 31, 2014.

Although the focus of shipments of TRU waste from LANL to WIPP has been on TRU waste stored above ground, LANL retrieved and shipped below-ground RH waste in 16 shafts (Shafts 236-243 and 246-253) with a total volume of about 17 m^3 to WIPP in 2009. All other waste segregated and stored below ground as TRU waste remains below ground.

Below-Ground TRU Waste. Figure 2 presents a high-level aerial photograph of MDA G with locations of the seven remaining below-ground waste unit categories. These locations are shaded in red and labels identify the seven waste unit categories.

Table 1 presents a summary of the seven TRU waste unit categories stored below-ground at MDA G. The last row of the table is shaded yellow because DOE/NNSA will complete (1) a determination whether the 33 Shafts category contains TRU waste that requires retrieval, and (2) to the extent necessary, its decision process under NEPA regarding retrieval, by no later than September 30, 2015. Table 1 provides a general description of each category, the approximate volume of each category and

the percentage each category makes up of the total volume of the seven below-ground categories, and the approximate MAR of each category and the percentage each category makes up of the total MAR of the

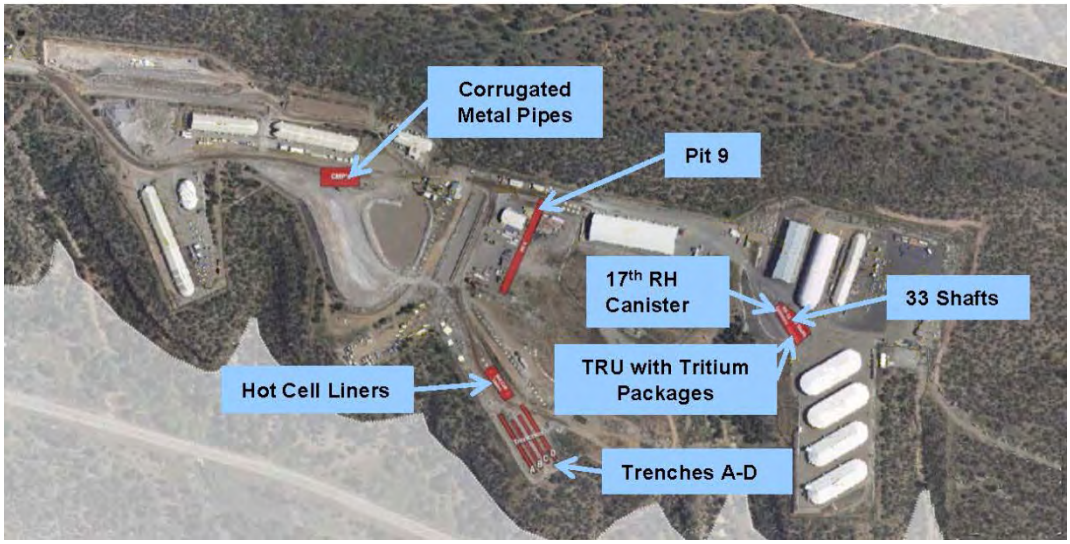

Figure 2. Aerial Photo of Area G with Below-Ground TRU Waste Storage Areas Shaded in Red

seven below-ground categories. The first six categories (Pit 9, Trenches A-D, CMPs, Hot Cell Liners, Tritium Packages, and 17th RH Canister) that are scheduled to be retrieved and dispositioned in the FY 2015 to FY 2018 period, make up 99.84% of the total volume and 99.92% of the total MAR of the seven categories. The 33 shafts make up only 0.14% of the total volume and 0.09% of the total MAR of the seven below-grade categories.

TABLE 1
Overview of Below-Ground TRU Waste Categories

Waste Category	General Description	Approximate Volume (m^3)	Percentage Total Volume	Approximate MAR (PE-Ci)	Percentage Total MAR
Pit 9	3,881 55-gallon , 30-gallon, and 85-gallon drums and 197 Fiberglass-Reinforced Plywood boxes	1,560	65.0	6,019	5.4
Trenches A-D	720 30-gallon drums in 4 trenches	335	14.0	93,870	84.8
Corrugated Metal Pipes (CMPs)	158 CMPs, each ~ 30 in. diameter x 20 ft long, located above Pit 29	442	18.4	10,755	9.7
Hot Cell Liners	5 Shafts with glovebox liners from hot cells, each in a steel box 6 ft x 6 ft x 10 ft long (Shafts 302-306)	51	2.1	0.5	0.0005
Tritium Packages	4 tritium packages, each containing three 55-gallon drums, and 1 tritium tank that is 20 ft long (Shafts 262-266)	6.7	0.3	8	0.01
17th RH Canister	Canister containing 3 55-gal. drums (Shaft 235)	1	0.04	1.5	0.001
33 Shafts	32 Lined Shafts with pipes containing 1- or 2- gallon cans of hot-cell debris; 1 shaft with reactor vessel (Shafts 200-232)	3.4	0.14	97	0.09
Total		2,399	100%	110,751	100%

It is important to note that the volumes shown in the table are not the volumes that will be characterized and shipped to WIPP. Some containers in the waste unit categories may be determined to be LLW or MLLW that would not be dispositioned at WIPP. Some containers with high MAR such as those in the Trenches A-D waste category are expected to be repackaged and produce a number of daughter drums, while other containers such as the oversize boxes in Pit 9 are expected to result in a much smaller volume that will be shipped to WIPP.

The values shown for MAR are also expected to change as containers are retrieved and processed for disposition. The Environmental Protection Agency (EPA) approved assay methods used for WIPP characterization may produce different values than the historical methods used by the waste generators during the period when the containers in these waste categories were generated.

Figure 3 presents LANL's planned TRU waste disposition timeline for all TRU waste stored at MDA G based on the Framework Agreement, current budget targets and the schedule for below-ground TRU waste that was submitted to the NMED in December 2012 (Reference 3). Major milestones for TRU waste disposition in the timeline consist of completion of the 3,706 m^3 Campaign for higher-risk above-ground TRU waste by June 30, 2014; completion of disposition of newly-generated TRU waste received in FYs 2012 and 2013 by December 31, 2014; removal of the lower-risk (non-3706 Campaign) above-ground TRU waste by September 30, 2016; and completion of disposition of all below-ground TRU waste categories except the 33 Shafts by September 30, 2018. Analyses would be completed and a Federal Decision whether to retrieve the 33 Shafts category of below-ground TRU waste would be completed by September 30, 2015. If a decision is made that the 33 Shafts category requires retrieval, then a capital project is expected to be required to implement this decision and this project may not be completed until FY 2022.

LANL currently plans to begin retrieval of below-ground TRU waste during FY 2014 with the CMP category. The CMP category is expected to present fewer challenges for retrieval and processing because of the configuration and characteristics of the waste. With a total estimated volume of 442 m^3, the CMP category also contains more than sufficient volume to achieve the commitment for disposition of at least 250 m^3 of below-ground TRU waste by the end of FY 2015.

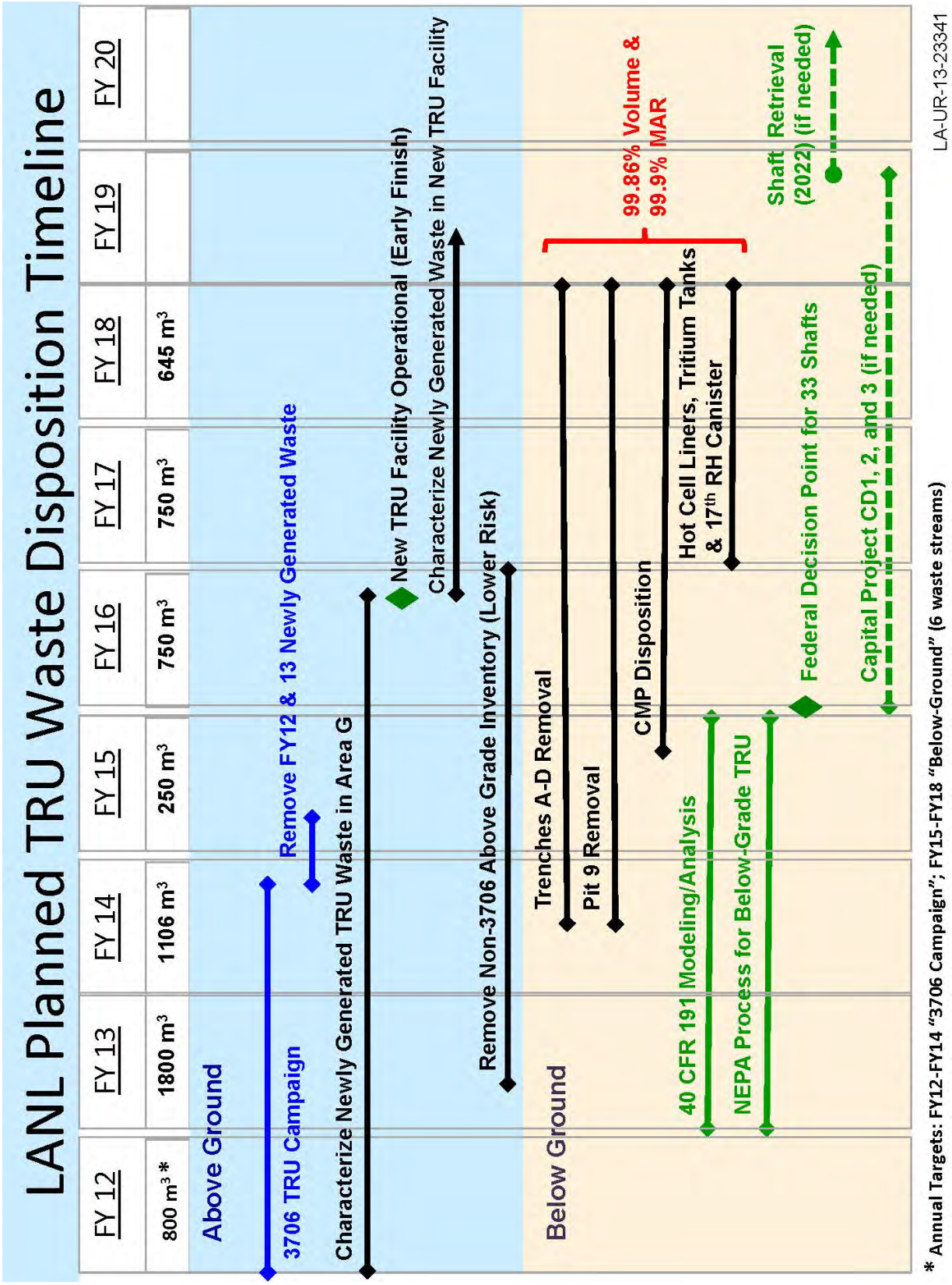

Figure 3. LANL Planned TRU Waste Disposition Timeline

3. Origin of CMP Waste

The CMP waste unit category consists of a total of 158 corrugated metal pipes filled with cement from a batch treatment process that mixed Portland cement with several liquid waste streams containing americium and plutonium at the TA-21 RLWTF (Building 21-257).

Building 21-257 received and treated liquid wastes from the DP West and DP East processing areas at TA-21, but the waste streams that were cemented all came from the DP West plutonium processing facility at TA-21. The liquid wastes from the DP East processing area also were low in activity at that time. Most liquid wastes were piped to storage tanks at 21-257, but acidic waste from americium recovery activities at DP West was transported in a tank mounted on a trailer and vacuum transferred to a stainless steel storage tank. By volume, most liquid waste coming to 21-257 was chemically treated using a ferric hydroxide precipitation process that produced a ferric hydroxide-calcium carbonate sludge. Several waste streams that were not amenable to the chemical treatment process were mixed with Portland cement to create a solid waste for disposal. The sludge from the chemical treatment process was also mixed with Portland cement for disposal (References 9 to 13).

The waste streams that were not amenable to the chemical treatment process consisted of Am-241 wastes that had been neutralized with sodium hydroxide (which had levels of contamination that were too high for processing in the chemical treatment process), potassium hydroxide (KOH) waste from neutralization of off-gases from a hydrogen fluoride scrubber in a crucible dissolving operation, “strip waste” from a uranium extraction process, and small volumes of miscellaneous liquid wastes (Reference 11). Radioactivity due to Am-241 represented more than 95% of the alpha activity in wastes received at the facility and was concentrated in the waste from americium recovery (Reference 10).

In 1968, a “pug mill” was installed for more effective mixing of the cement with the neutralized Am-241 waste, plant sludge, and other wastes to be cemented. The pug mill was a large, horizontal, rubber-lined mixer with a number of separate paddles attached to two shafts that rotated inside the tank to mix and moved the contents from an inlet at one end to an outlet at the other. Photographs of the pug mill are shown in Figure 4, with a worker standing behind the pug mill in the photo on the left and a photo of the pug mill with the cover removed in the photo on the right. Liquid waste was pumped into the inlet of the tank from a pug mill feed storage tank and Portland cement was injected into the same end of the tank through a screw conveyor from a cement silo. The liquid waste and cement were mixed by the paddles as the mixture traveled the length of the mill, and the mixture dropped into a hopper for a pump at the other end of the tank. The cement paste from the pug mill was pumped through a fire hose to vertical shafts or pits that were drilled into the ground surface at MDA T for the first seven years of operation.

A process flow diagram of the pug mill system with capacities of storage tanks is shown in Figure 5 (from Reference 10). In this diagram, the Am-241 waste stream is referred to as “Intermediate Level ^{239}Pu and ^{241}Am Wastes” and the plant sludge is referred to as “Low-Level Waste Treatment Sludge.” Pug mill runs contained a mixture or blend of the various waste streams to be cemented, and generally consisted of about 5,000 to 6,000 liters (l) of the feed liquid. Cement was added at a rate of about 130lb/min (59 kg/min), and the liquid waste was pumped into the pug mill at a rate of about 23 to 34 l/min. The rate of feed of both liquid waste and cement could easily be adjusted to maintain a good mix (Reference 9). Tap water was used to wash the pug mill feed tank and sight glass on the side of the tank, and this usually made up a few percent of the feed solution to the pug mill.

For each pug mill run, a sample of the pug mill feed liquid was collected for radiochemical analysis and a sample of cement paste was collected for leach testing and determination of the compressive strength of the cement as a measure of the stability of the cement paste after it had cured or hardened. Samples of

Figure 4. Pug Mill for Cementing Wastes at Building 21-257

pug mill feed solutions were transported to TA-50 Building 1 for analysis of gross alpha, gross beta, gross gamma, Pu-238, Pu-239, Am-241, Cesium-137, and Strontium-90.

The compressive strength tests on the cement paste samples were performed at Building 21-257, and used a 6 in-diameter by 1 ft-high cylindrical sample of the cement paste mix. The test cylinders for compressive strength were cured underwater for 28 days before testing. The ends of the test cylinder

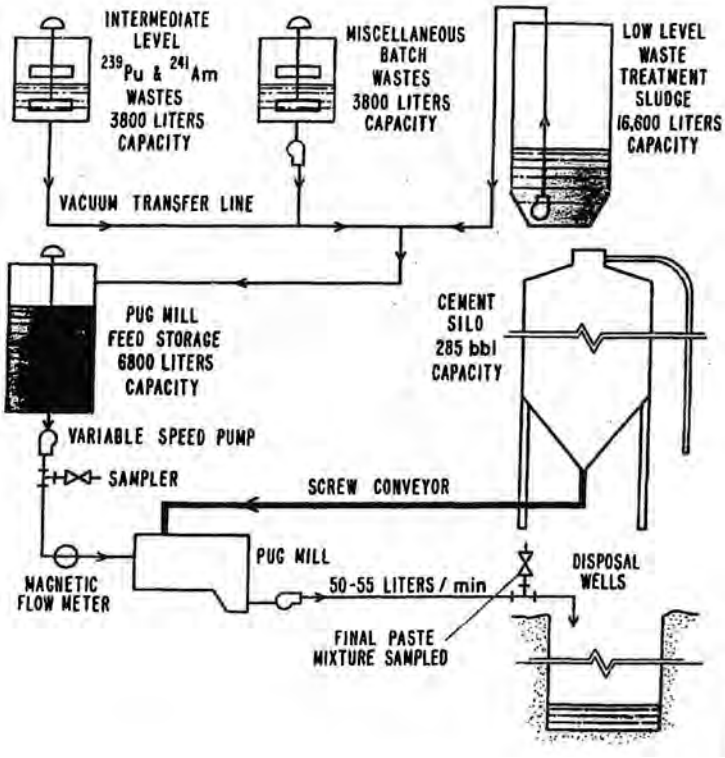

Figure 5. Process Flow Diagram of Pug Mill System

were capped with a standard lead compound to ensure flatness and parallelism before breaking the test cylinder in the compression test (Reference 13). Figure 6 has a 1978 photograph of a worker at 21-257 performing a compression test on a cured cement sample of cement paste from a pug mill run.

Figure 6. Performing Compression Test on Cured Cement Paste Sample

4. Segregation of Cement Paste as Retrievable Waste

After the AEC directive to segregate waste with transuranic isotopes, an evaluation was performed on waste streams that were received at Building 21-257 and methods to segregate wastes that might require retrievable storage. Segregation limits at that time for waste that required retrievable storage at LANL were 10 nCi/g of Pu-239 and/or 100 nCi/g of Pu-238 (Reference 10). The neutralized americium waste stream contained mg/l quantities of Am-241 and Pu-239 and the waste resulting from cementing this waste stream would always exceed the segregation limits. In any mix of waste streams in which americium was present, the resultant cement paste had an activity considerably above 10 nCi/g of TRU. However, where the americium waste was not present in the mix, the activity level of the cement paste was often below 10 nCi/g Pu-239 and 100 nCi/g of Pu-238 (Reference 10).

A decision was made to always segregate cement paste produced from the americium waste as retrievable cement paste, and to measure the activity of each batch of the other waste streams to be cemented to determine if they should be used as part of the feed solution for retrievable cement paste. The November 1975 *Standard Operating Procedure for Disposal of Retrievable and Nonretrievable Cement Paste in Area T, TA-21-257* (Reference 14) contains specific guides (gross alpha levels) for plant sludge, raw KOH solutions, and strip solutions to determine whether or not they would be used as part of the feed solution for the retrievable cement paste. All americium solutions were to be used to generate retrievable cement paste because of their high Am-241 and Pu-239 contents, and the SOP did not require samples of the americium solutions to be collected for gross alpha analysis.

The use of lined 55-gallon drums for retrievable storage of the retrievable cement paste was first proposed, but was determined to be too costly. About 50 drums would be required per pug mill run and construction of a drum filling system would be required. The use of forms or molds to create cement paste blocks was also evaluated. The method that seemed to be the most reasonable in cost and require minimum handling of the packages was use of galvanized 20-ft x 30 in diameter CMPs with continuous welded seams and non-radioactive concrete plugs about 12 in thick poured into the ends (Reference 10). This method was accepted after a test of a cement-paste-filled CMP demonstrated that the CMP could be retrieved and that the CMP maintained its integrity during retrieval (Reference 15).

A portion of MDA T was set aside as a Retrievable Waste Storage Area and a pit was excavated to a depth of 20 feet in this area. Forty empty CMPs were initially placed into a vertical array within this pit (Reference 15) and additional CMPs were added as needed. Pieces of rebar were welded between CMPs at the top to hold the CMPs in a vertical configuration. A new fence was also constructed around the area in June 1975 (Reference 15). A plug about 1 ft thick of non-radioactive concrete obtained from a concrete batch plant was placed into the bottom of each of the CMPs. Beginning in September 1977, the CMPs that were filled had a 16 gauge metal plate welded to the bottom (Reference 16). A photograph of the vertical CMP array taken from the bottom of the pit in 1978 is shown in Figure 7.

The 21-257 plant operator was responsible for knowing the volumes of each type of waste to be cemented that was in storage and the respective alpha radioactivity of each type based on a 10 ml sample that was dried and counted for gross alpha by the operator. Where the alpha activity of the plant sludges, KOH solutions, strip solutions, or miscellaneous wastes exceeded the values for retrievable waste, those solutions that exceeded the values for retrievable waste were blended with the americium solutions to create a pug mill feed for retrievable cement paste to be pumped into CMPs. Where those solutions did not exceed the gross alpha values for each type of solution for retrievable waste, the solutions were not blended with the americium solutions. Instead they were blended for feed into the pug mill for non-retrievable cement paste that continued to be pumped to shafts in MDA T (Reference 14).

Figure 7. CMPs In Retrievable Waste Storage Area at MDA T

Records were compiled for each pug mill run that identified them as either retrievable or non-retrievable and listed the volumes of each type of waste stream that made up the feed for the pug mill run. In practice, a pug mill run of non-retrievable waste was usually started immediately after the feed for the retrievable pug mill run was completed. The fire hose continued to be discharged into the CMP for about 10 minutes after the non-retrievable pug mill run began so that the volume of retrievable cement paste that remained in the fire hose was placed into the CMP. The fire hose was then transferred to a shaft and the cement paste from the non-retrievable pug mill run was discharged into the shaft. At the conclusion of the non-retrievable pug mill run, the pug mill, discharge pump, and fire hose were rinsed with tap water and flushed into a shaft. This rinse water was allowed to stand for 24 to 48 hours to allow solids to settle in the shaft, and the supernatant was then pumped to the 21-257 raw waste storage tanks using a submersible pump (Reference 14).

For retrievable pug mill runs, cement paste from the pug mill was pumped into a CMP up to about a foot from the top. After the cemented waste had set, “cold” (non-radioactive) concrete mix was used to fill the remaining space of the CMP and a metal identification tag was embedded into the surface of the concrete before it had hardened. The identification number of the CMP and the corresponding pug mill run were recorded. Figure 8 shows 1978 photos of filled and empty CMPs from the top of the array in the photo on the left and CMPs being filled in the photo on the right. Empty CMPs were covered with a plywood cover bolted to the CMP before they were to be filled. A yellow identification tag can also be seen on the top of two of the filled CMPs, and rebar connecting some CMPs can be seen at the left of the barrier with CMPs covered with plastic sheet. Based on cold concrete plugs of about 1 ft in length on both ends of the CMP, approximately 2,500 l of cement paste was placed into each CMP. Most retrievable pug mill runs generated enough cement paste to fill two CMPs and partially fill a third CMP (which was then filled in the next retrievable pug mill run). The result is that about 70% of the 158 CMPs in the CMP TRU waste category received cement paste from one pug mill run and about 30% of the CMPs received cement paste from two pug mill runs.

Appendix A contains pug mill data sheets for 1975 to June 1978 that include information on the volume of each type of liquid waste to the pug mill feed, operational data, radioactive constituents, and the identification number of CMPs that received waste from each retrievable pug mill run except one. Information for retrievable pug mill runs is highlighted in yellow. (Detailed pug mill data is not available for the last pug mill run that generated cement paste that filled or partially filled four CMPs.)

Figure 8. Filling CMPs with Retrievable Cement Paste (1978)

Overall, one of the 50 pug mill runs that generated cement paste within the 158 retrievably stored CMPs contained some plant sludge in the feed, one pug mill run contained some treated strip solution in the feed, and three included KOH solution in the feed solution. All of the other pug mill runs contained only neutralized americium in the waste feed or americium waste with a few percent miscellaneous waste in the feed solution.

Almost half of the retrievable pug mill runs received neutralized americium waste as the only waste stream in the feed. Neutralized americium solutions make up over 95% by volume of the pug mill feeds for the retrievable cement paste in all but four of the 50 pug mill runs that generated retrievable cement paste. This is contrary to a previous report with summary information on the CMPs (Reference 8), that indicated that the CMPs contained cemented wastewater treatment plant sludge. The detailed pug mill data sheets show that only one pug mill run that generated retrievably stored cement paste contained plant sludge.

The pug mill feed solution for the first retrievable pug mill run on December 31, 1975, consisted of a blend of about 20% plant sludge and 80% neutralized Am-241 solution by volume. The other three pug mill runs in which neutralized americium solutions made up less than 95% of the feed solution consisted of (1) a pug mill run in which “treated strip” solution made up approximately 22% and neutralized americium solution made up about 78% of the waste in the feed blend by volume; (2) a pug mill run in which raw KOH solution made up about 5%, miscellaneous waste solution made up about 1.5%, and neutralized americium solution made up about 94% of the waste in the feed blend by volume; and (3) a pug mill run in which raw KOH solution made up about 53%, miscellaneous solution about 1%, and neutralized americium solution made up about 47% of the waste in the feed blend by volume.

Plutonium and americium processing moved from DP West at TA-21 to TA-55 in early 1978, and the americium waste stream and other liquid waste streams that had been cemented in the pug mill were discharged to the TA-50 RLWTF after the TA-55 plutonium processing facility began operations (Reference 11). Some cement paste with TRU isotope contamination above 10 nCi/g continued to be generated at 21-257 and placed into CMPs until pug mill operations ceased in April 1983. However, the definition of TRU waste was changed in 1982 to 100 nCi/g for all TRU isotopes with a half-life of 20 years or longer. The first project to retrieve CMPs from MDA T was in 1984, and 69 CMPs that were determined to contain low-level radioactive wastes were retrieved and relocated to TA-54 MDA G (Reference 17). This left a total of 158 CMPs in the radioactive waste storage area at MDA T.

5. Retrieval and Transport of the CMPs to TA-54

A project to retrieve and transport the 158 CMPs in retrievable storage at MDA T to TA-54 Area G was initiated at the end of April 1986 and excavation of soil started July 21 of that year (Reference 18). The left side of Figure 9 contains a photo of the tops of some of the CMPs before excavation began. The right side of the figure shows a photo of the west end of the vertical CMP array after excavation of a pit so that CMPs could be removed from the array and laid down into the pit for soil removal and decontamination.

Figure 9. CMPs at Start of Retrieval from MDA T in 1986

Radiation surveys of the tops of CMPs showed that many CMPs had external radioactive contamination. A "scabbling gun" or scraper was used to clean the tops of the CMPs as shown in the photo on the left of Figure 10. Further cleaning was done using rags with "Fantastic" cleaner to remove loose contamination (Reference 19). Radiological swipe tests were performed on a continuous basis and plastic sheeting was used to cover the ground surface to prevent spread of contamination during decontamination activities. Rebar that had been welded to the top of CMPs to hold the array together was cut with a torch (Reference 18) and crowbars were used to pry CMPs apart so that a cable sling from a crane could be placed near the top of a CMP as shown in the photo on the right of Figure 10.

Figure 10. Preparation of CMPs for Removal from Vertical Array

The crane pulled a CMP away from the array as shown in the photo on the left of Figure 11, and the CMP was lowered onto plastic sheeting placed at the bottom of the pit for soil removal, cleaning, and additional decontamination of the sides and bottom of the CMP. Water spilled from several CMPs as they were removed from the array (Reference 18), but sampling and analysis of the water showed levels that were near the maximum permissible concentration of 4 nCi/l for CMPs # 3306 and 3308, and non-detectable for water from CMP # 3304. Several CMPs also had punctures in the side or were punctured during handling. After decontamination, CMPs were raised from the pit by the crane using a sling as shown in the photo on the right in Figure 11.

Figure 11. Removal of CMP from the Vertical Array

Some CMPs had high levels of contamination on their surfaces, and required extensive decontamination. The CMPs were placed under great stress when they were pulled away from the vertical position and lifted from the pit by the crane. Some CMPs stretched and bowed due to these stresses as shown in the photo on the left of Figure 12. Some CMPs also showed a small amount of rust at locations near the base of the CMP when standing in the vertical position. The CMPs with external contamination were painted after they were decontaminated to further reduce the possibility for removable contamination (as seen in the photo on the right in Figure 12). CMPs with punctures were repaired with silicone sealer and wrapped in black plastic. The crane also placed CMPs on a scale to obtain the weight of each CMP (Reference 18).

Figure 12. CMPs After Removal from the Vertical Array

The surface of the concrete plug of some CMPs that did not have a steel plate at the bottom was found to be crumbling on retrieval (Reference 18) as shown in the photo on the left of Figure 13. The ends of these damaged CMPs were repaired with a fast drying patching material called “Tiger Crete” (Reference 19). The end of a CMP that was repaired can be seen in the photo on the right of Figure 13.

Figure 13. Damaged End of CMP Before and After Repair

Cleaned and painted CMPs were staged at TA-21 and transport of the CMPs to TA-54 was initiated in early August 1986. Three CMPs were loaded on a flat-bed truck, covered with a tarp, and secured for transport. Transportation of the 158 CMPs to TA-54 was completed in early October 1986. The photo on the left of Figure 14 shows staged CMPs and the photo on the right shows CMPs loaded on a truck at TA-21.

Figure 14. CMPs Awaiting Transport and Loaded on Truck at TA-21

New Radioactive Solid Waste Disposal (RSWD) Record forms were completed for the CMPs before their acceptance at Area G. These forms replaced the RSWD forms prepared for the CMPs as they were filled at MDA T in 1975 through 1978. Information on origin of waste, waste code, volume and radionuclide content was transferred from the original form for each CMP, but new weights, date of disposal, and disposal/storage location were recorded. A copy of the 1986 RSWD form for each of the 158 CMPs is in Appendix B to this report.

At TA-54, CMPs were unloaded from a truck and placed into a horizontal array at the top of the southeast end of Pit 29 in MDA G using a forklift as seen in the photo on the left of Figure 16. The CMPs were placed in a configuration of two rows of CMPs placed end-to-end and stacked two high as shown in the photo on the right of Figure 15. After all 158 CMPs were in place (area of about 40 ft x 100 ft), the CMPs were covered with plywood, tarps, and about five to six feet of soil.

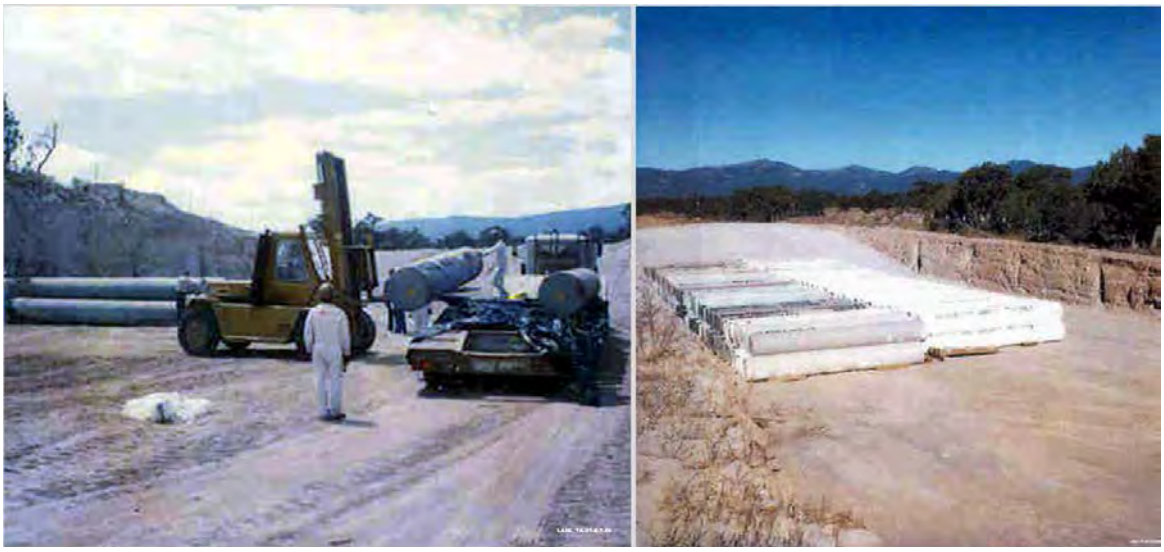

Figure 15. Unloading and Placement of CMPs at TA-54

There has been considerable development at Area G since 1986, including construction of a number of domes for storage of TRU waste containers and construction of a road that runs the length of Area G. This road lies on top of Pit 29 and it is likely that the CMPs are located just south of the road and partially under the road. Figure 16 shows the approximate location of the CMPs relative to the road and nearby structures (Domes 33 and 153) placed onto a 2011 aerial photo. North is up in the aerial photo. The location of the CMPs is based on a field study conducted in 2007 that included hand augering to try to locate the CMPs (Reference 20). A blue/white tarp and plywood were encountered at a depth of 5 to 6 ft at hand-augering locations that were above the CMPs. Location of the southeastern corner of the

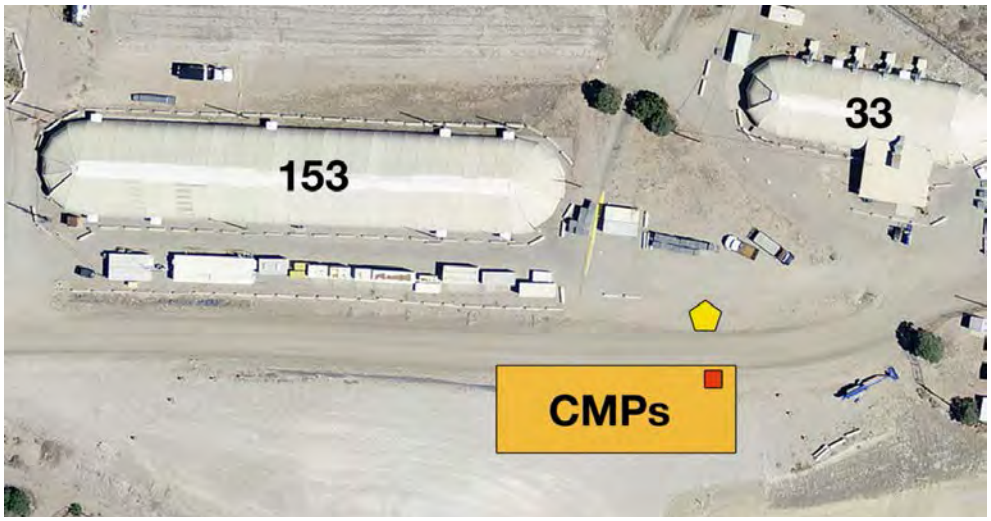

Figure 16. Approximate Location of CMPs Relative to Road and Nearby Structures

CMPs was accomplished by hand augering, but this was the only corner located as the northeastern and northwestern corners underlie the road. The southwestern corner was buried by an estimated 15 ft of stockpiled soils and was too deep to be located by hand augering (which had been approved to a depth of 10 ft).

The red square on the upper right corner of the CMPs area in Figure 16 is an electrical box on the ground surface that is thought to be part of the fire alarm system and drawings of this area show a line identified as “FA” running underground approximately parallel to the northern edge of the CMPs at this location. The yellow pentagon symbol in the figure shows the location of a fire hydrant that is across the road from the electrical box.

Figure 17 shows a photograph looking west from the approximate eastern edge of the CMPs location in July 2013. The rectangular box on the ground surface with three yellow pipes around it on the right side of the photo is the box thought to be associated with the fire alarm system (red square near upper right corner of CMPs rectangle in Figure 16). Dome 153 is across the road at the upper right of the photo. Most of the metal transportainer boxes shown across the road and south of Dome 153 in the aerial photo of Figure 17 have been removed. The thick gray line that stretches down the center of the photograph is a berm covered with plastic sheet. The left side of the photo also shows the rise in elevation of additional soil that has been placed above the southern portion of the CMPs. There are no structures located in the area above the area where the CMPs are believed to be located.

Figure 17. Photo of Ground Surface above CMPs in July 2013

6. Characteristics of CMP Waste

There are a number of sources of information on the CMPs and the characteristics of the waste within the CMPs. The most readily accessible information is that contained within the LANL TRU waste database. Other historical records are available that can be used to confirm information in the database and to augment or clarify that information. These include the raw data sheets for pug mill runs in Appendix A that include information on the volume of each type of liquid waste to the pug mill feed, operational data, radioactive constituents, and the identification number of CMPs that received cemented waste for each retrievable pug mill. Another important source of information is the RSWD record form for each CMP that was completed in 1986 as the CMPs were retrieved from MDA T and transported to Area G. The RSWD records are one-page forms that are available for all 158 of the CMPs, and these forms were compiled into a single file and are attached to this report as Appendix B. An attempt was also made to compile the original RSWD forms for CMPs as they were filled with cement paste at MDA T (and contain additional waste description, date the CMPs were filled, etc.), but only the forms for CMPs that were filled in 1975 and 1976 are available (the forms for CMPs filled in 1977 and 1978 could not be located.)

There are also a number of other sources of information, but most of these are also not complete with respect to all of the 158 CMPs. Most are available in the LANL Environmental Programs Records Management System, but only after considerable effort to search for individual records. Monthly summaries of solid waste generated at the 21-257 RLWTF were completed by the 21-257 plant engineer, and copies were located for about half of the months in which the CMPs were filled with cemented waste. These were compiled and provided in Appendix C. Memos that summarized cemented waste for a six-month period and included information on the CMPs were also completed by the 21-257 plant engineer. Copies of many of these were located for the period when the CMPs were filled, and these were compiled and are provided as Appendix D. A CMP Retrievable Storage Log was located for the period of December 31, 1975, through December 15, 1977, that includes information on the volume of cement paste and the initial depth and final depth of the cement paste in each CMP. This log is provided as Appendix E. Table 2 provides a summary of these sources of information that are available for each CMP in the appendices. Finally, there are other reports that provide very specific information relating to characteristics of the waste and these are referenced in the discussion.

6.1 Physical Characteristics

All reports and other sources of information that have dimensions of the CMPs state that the CMPs are 30 inches in diameter and 20 ft long or their metric equivalents. No source of information was found that indicated different dimensions. The CMP pipes that were purchased were galvanized metal pipes with continuous welded seams (Reference 12), and beginning with CMP ID # 1244 had a 16-gauge cap on the bottom (Reference 16). Approximately 64 of the 158 CMPs have a steel plate or cap on one end based on this reference, and these CMPs are identified in Table 3. A copy of a May 1978 Purchase Order for CMPs is also available that specifies 16 gauge CMPs with a 16 gauge plate welded to cap one end only (Reference 20).

Approximate gross weights of the 158 CMPs are shown in Table 3, which shows a range of 10,000 to 14,000 pounds (lb). The average weight based on the weights in the table is 12,650 lb. These values are based on weights in the LTP Container Management database, but were rounded to better reflect gross weights shown on the 1986 RSWD forms that were reported to 1/10 of a ton. Weights reported in a table attached to the field notes for the 1986 retrieval project when the CMPs were weighed (Reference 18) range from 12,000 to 14,000 lb with an average weight of 13,200 lb. The RSWD forms were also

TABLE 2
Available Information for Each of the CMPs

Package ID Number	Original CMP ID Number	Pug Mill Run Data Sheets	H-7 Monthly Summary	H-7 Six-Month Summary	Retrievable CMP Storage Log	RSWD Record	
						Orig.	1986
S863429	1150	√		√	√	√	√
S863430	1151	√		√	√	√	√
S863431	1157	√		√	√	√	√
S863432	1158	√		√	√	√	√
S863433	1159	√		√	√	√	√
S863434	1152	√		√	√	√	√
S863435	1153	√		√	√	√	√
S863436	1154	√		√	√	√	√
S863437	1155	√		√	√	√	√
S863438	1156	√		√	√	√	√
S863439	1163	√		√	√	√	√
S863440	1164	√		√	√	√	√
S863441	1165	√		√	√	√	√
S863442	1169	√		√	√	√	√
S863443	1173	√		√	√	√	√
S863444	1174	√		√	√	√	√
S863445	1160	√		√	√	√	√
S863446	1161	√		√	√	√	√
S863447	1162	√		√	√	√	√
S863448	1166	√		√	√	√	√
S863449	1167	√		√	√	√	√
S863450	1168	√		√	√	√	√
S863451	1170	√		√	√	√	√
S863452	1171	√		√	√	√	√
S863453	1175	√		√	√	√	√
S863454	1178	√		√	√	√	√
S863455	1177	√		√	√	√	√
S863456	1176	√		√	√	√	√
S863457	1179	√	√		√	√	√
S863458	1180	√	√		√	√	√
S863459	1181	√	√		√	√	√
S863460	1182	√	√		√	√	√
S863461	1183	√	√		√	√	√
S863462	1184	√	√		√	√	√
S863463	1185	√	√		√	√	√
S863464	1187	√	√		√	√	√
S863465	1188	√	√		√	√	√
S863466	1186	√	√		√	√	√
S863467	1172	√			√	√	√
S863468	1198	√	√		√	√	√
S863469	1189	√	√		√	√	√
S863470	1190	√	√		√	√	√
S863471	1191	√	√		√	√	√
S863472	1192	√	√		√	√	√
S863473	1193	√	√		√	√	√

TABLE 2, continued
Available Information for Each of the CMPs

Package ID Number	Original CMP ID Number	Pug Mill Run Data Sheets	H-7 Monthly Summary	H-7 Six-Month Summary	Retrievable CMP Storage Log	RSWD Record	
						Orig.	1986
S863474	1194	√	√		√	√	√
S863475	1195	√	√		√	√	√
S863476	1196	√	√		√	√	√
S863477	1197	√	√		√	√	√
S863478	1199	√	√		√	√	√
S863479	1200	√	√		√	√	√
S863480	1201	√	√		√	√	√
S863481	1202	√	√		√	√	√
S863482	1203	√	√		√	√	√
S863483	1207	√	√		√	√	√
S863484	1205	√	√		√	√	√
S863485	1204	√	√		√	√	√
S863486	1206	√	√		√	√	√
S863487	1210	√	√	√	√		√
S863488	1209	√	√	√	√		√
S863489	1208	√	√	√	√		√
S863490	1211	√	√	√	√		√
S863491	1212	√	√	√	√		√
S863492	1213	√	√	√	√		√
S863493	1214	√	√	√	√		√
S863494	1257	√		√	√		√
S863495	1258	√		√	√		√
S863496	1259	√		√	√		√
S863497	1254	√		√	√		√
S863498	1255	√		√	√		√
S863499	1245	√		√	√		√
S863500	1246	√		√	√		√
S863501	1247	√		√	√		√
S863502	1248	√		√	√		√
S863503	1249	√		√	√		√
S863504	1252	√		√	√		√
S863505	1253	√		√	√		√
S863506	1250	√		√	√		√
S863507	1251	√		√	√		√
S863508	1256	√		√	√		√
S863509	1240	√		√	√		√
S863510	1239	√		√	√		√
S863511	1236	√		√	√		√
S863512	1241	√		√	√		√
S863513	1233	√	√	√	√		√
S863514	1231	√	√	√	√		√
S863515	1232	√	√	√	√		√
S863516	1234	√		√	√		√
S863517	1235	√	√	√	√		√
S863518	1237	√		√	√		√

TABLE 2, continued
Available Information for Each of the CMPs

Package ID Number	Original CMP ID Number	Pug Mill Run Data Sheets	H-7 Monthly Summary	H-7 Six-Month Summary	Retrievable CMP Storage Log	RSWD Record	
						Orig.	1986
S863519	1238	√		√	√		√
S863520	1242	√		√	√		√
S863521	1243	√		√	√		√
S863522	1244	√		√	√		√
S863523	1225	√	√	√	√		√
S863524	1226	√	√	√	√		√
S863525	1227	√	√	√	√		√
S863526	1228	√	√	√	√		√
S863527	1229	√	√	√	√		√
S863528	1230	√	√	√	√		√
S863529	1217	√	√	√	√		√
S863530	1216	√	√	√	√		√
S863531	1215	√	√	√	√		√
S863532	1222	√	√	√	√		√
S863533	1223	√	√	√	√		√
S863534	1218	√	√	√	√		√
S863535	1219	√	√	√	√		√
S863536	1220	√	√	√	√		√
S863537	1221	√	√	√	√		√
S863538	1224	√		√	√		√
S863539	1262	√		√	√		√
S863540	1263	√		√	√		√
S863541	1264	√		√	√		√
S863542	1265	√		√	√		√
S863543	1266	√		√	√		√
S863544	1260	√		√			√
S863545	1261	√		√			√
S863546	3305	√	√				√
S863547	3306						√
S863548	3307						√
S863549	3308						√
S863550	1280	√	√				√
S863551	1281	√	√				√
S863552	1282	√	√				√
S863553	1283	√	√				√
S863554	1284	√	√				√
S863555	1285	√	√				√
S863556	1286	√	√				√
S863557	1287	√	√				√
S863558	1288	√	√				√
S863559	1289	√	√				√
S863560	1267	√	√				√
S863561	1268	√	√				√
S863562	1269	√	√				√
S863563	1270	√	√				√

TABLE 2, continued
Available Information for Each of the CMPs

Package ID Number	Original CMP ID Number	Pug Mill Run Data Sheets	H-7 Monthly Summary	H-7 Six-Month Summary	Retrievable CMP Storage Log	RSWD Record	
						Orig.	1986
S863564	1271	√	√				√
S863565	1272	√	√				√
S863566	1273	√	√				√
S863567	1274	√	√				√
S863568	1275	√	√				√
S863569	1276	√	√				√
S863570	1277	√	√				√
S863571	1278	√	√				√
S863572	1279	√	√				√
S863573	1290	√	√				√
S863574	1291	√	√				√
S863575	1292	√	√				√
S863576	1293	√	√				√
S863577	1294	√	√				√
S863578	1295	√	√				√
S863579	1296	√	√				√
S863580	1297	√	√				√
S863581	1298	√	√				√
S863582	1299	√	√				√
S863583	3301	√	√				√
S863584	3302	√	√				√
S863585	3303	√	√				√
S863586	3304	√	√				√

prepared at this time, and it is unknown why reported weights of some CMPs in the table attached to the field notes are different from those in the database and RSWD forms.

All sources that were reviewed indicate that the CMPs are filled with a cemented waste or cement paste, and none indicates that other types of waste were placed into the CMPs. All sources indicate that cold (non-contaminated) concrete plugs were placed into both ends of the CMPs. The waste in the CMPs should be characterized as homogeneous cemented waste.

Although the cold plugs were reported to be about 12 inches in length in several reports, the actual length of cold plugs in 117 of the CMPs were calculated based on the initial and final depth data shown in the table in Appendix E. The calculated lengths of the cold plugs are presented in Table 3. Metric values shown in the table in Appendix E were converted to inches. The total length of a CMP minus the initial depth gives the calculated length of the cold plug that was at the bottom of the CMP (shown in the column on the left in Table 3), and the final depth is the same as the length of the cold plug added after the CMP was filled (shown in the column on the right in Table 3). The cold plugs that were at the bottom of the CMPs range from four inches to 59 inches in length, and average about 19 inches in length. About 30% of the bottom plugs were calculated to be equal to or greater than two feet in length. The cold plugs at the top range from seven inches to 18 inches, and average 12 inches. The person placing cement paste into the CMP with a fire hose could easily see the depth at the top and stop filling the CMP when the cement paste was about a foot from the top of a CMP, whereas it was probably very difficult to observe the height of the concrete plug as it was placed into the bottom of a CMP.

TABLE 3
Physical Characteristics of the CMPs

Package ID Number	Original CMP ID Number	Approx. Gross Weight (pounds)	Cement Paste Compressive Strength (psi) *	Actual Length of Cold Plugs (inches)		Metal Plate on One End (Yes or No)
S863429	1150	13000	1316	26	11	N
S863430	1151	12800	1316	12	7	N
S863431	1157	13000	955, 2319	18	12	N
S863432	1158	12800	2319	12	11	N
S863433	1159	13000	2319	20	11	N
S863434	1152	13400	1316, 2007	13	12	N
S863435	1153	13000	2007	14	11	N
S863436	1154	13000	2007, 955	14	11	N
S863437	1155	13000	955	15	10	N
S863438	1156	13000	955	16	11	N
S863439	1163	12600	1852, 1793	18	13	N
S863440	1164	13200	1793	24	12	N
S863441	1165	12600	1793	6	12	N
S863442	1169	12600	2046, 1579	23	12	N
S863443	1173	12600	1969	18	12	N
S863444	1174	13400	1969	16	12	N
S863445	1160	12600	2319, 1852	20	11	N
S863446	1161	13200	1852	14	9	N
S863447	1162	13200	1852	20	11	N
S863448	1166	12800	1793, 2046	16	11	N
S863449	1167	13200	2046, 1579	18	13	N
S863450	1168	12400	2046, 1579	18	12	N
S863451	1170	13000	1579	18	11	N
S863452	1171	12800	1579	16	11	N
S863453	1175	12800	1969	23	12	N
S863454	1178	13000	1043	22	12	N
S863455	1177	13000	1043	20	12	N
S863456	1176	13000	1969, 1043	25	12	N
S863457	1179	13000	1043, 2007	23	12	N
S863458	1180	13000	2007	59	14	N
S863459	1181	13200	2007	30	10	N
S863460	1182	12800	2007, 1248	30	13	N
S863461	1183	12600	1248	38	13	N
S863462	1184	13000	1248	17	13	N
S863463	1185	12800	1248	26	13	N
S863464	1187	13000	1715	22	12	N
S863465	1188	13000	1715	20	11	N
S863466	1186	13000	1248, 1715	19	14	N
S863467	1172	12800	1579, 1969	16	12	N
S863468	1198	13600	1608, 1725	17	11	N
S863469	1189	12600	1715, 1852	19	18	N
S863470	1190	12800	1852	20	18	N
S863471	1191	12800	1852	22	12	N
S863472	1192	12800	1852, 1452	20	12	N
S863473	1193	13600	1452	13	12	N

TABLE 3, continued
Physical Characteristics of the CMPs

Package ID Number	Original CMP ID Number	Approx. Gross Weight (pounds)	Cement Paste Compressive Strength (psi)	Actual Length of Cold Plugs (inches)		Metal Plate on One End (Yes or No)
S863474	1194	13800	1452	20	13	N
S863475	1195	12600	1452, 1608	14	12	N
S863476	1196	12600	1608	15	14	N
S863477	1197	13200	1698	14	15	N
S863478	1199	13200	1725	15	12	N
S863479	1200	13600	1725	12	12	N
S863480	1201	13200	1725, 1228	17	16	N
S863481	1202	13000	1228	13	15	N
S863482	1203	13000	1208	12	12	N
S863483	1207	12800	1521, 2008	17	14	N
S863484	1205	12800	1521	10	13	N
S863485	1204	13200	1228, 1521	12	16	N
S863486	1206	12800	1521	24	12	N
S863487	1210	13200	2008	13	12	N
S863488	1209	13000	2008	11	13	N
S863489	1208	13600	2008, 838	11	15	N
S863490	1211	13000	838, 780	31	11	N
S863491	1212	13000	780	31	16	N
S863492	1213	13000	780	34	14	N
S863493	1214	13000	780	25	14	N
S863494	1257	12800	NA **	4	13	Y
S863495	1258	13000	NA	4	9	Y
S863496	1259	13200	NA	4	12	Y
S863497	1254	13000	NA	4	10	Y
S863498	1255	13200	NA	4	11	Y
S863499	1245	13000	1472, 975	4	12	Y
S863500	1246	13000	975	6	11	Y
S863501	1247	12200	975, 1335	6	12	Y
S863502	1248	12600	1335	6	12	Y
S863503	1249	13000	1335	6	12	Y
S863504	1252	11000	NA	4	12	Y
S863505	1253	11200	NA	4	12	Y
S863506	1250	13000	1335	6	11	Y
S863507	1251	13000	NA	4	11	Y
S863508	1256	13000	NA	4	12	Y
S863509	1240	13200	1433	28	11	N
S863510	1239	12800	1433	34	15	N
S863511	1236	12800	1433	41	10	N
S863512	1241	13200	1433, 1372	30	12	N
S863513	1233	12600	2495	18	10	N
S863514	1231	12600	1657, 2495	24	10	N
S863515	1232	12800	2495	26	10	N
S863516	1234	12600	1618	29	12	N
S863517	1235	10800	1618	30	10	N
S863518	1237	13000	1618	47	10	N

TABLE 3, continued
Physical Characteristics of the CMPs

Package ID Number	Original CMP ID Number	Approx. Gross Weight (pounds)	Cement Paste Compressive Strength (psi)	Actual Length of Cold Plugs (inches)		Metal Plate on One End (Yes or No)
S863519	1238	13000	1618	24	12	N
S863520	1242	13000	1472	31	12	N
S863521	1243	12800	975	32	10	N
S863522	1244	13800	975	4	12	Y
S863523	1225	12800	1023	32	9	N
S863524	1226	13000	1023	28	9	N
S863525	1227	13000	1023	26	10	N
S863526	1228	13800	1023, 1657	27	10	N
S863527	1229	13200	1657	23	10	N
S863528	1230	13000	1657	24	10	N
S863529	1217	13200	1784	27	18	N
S863530	1216	13000	1784	20	17	N
S863531	1215	13000	780, 1784	31	17	N
S863532	1222	12800	1764	24	11	N
S863533	1223	12600	1764	30	9	N
S863534	1218	13000	1784, 2066	42	10	N
S863535	1219	12800	2066	29	10	N
S863536	1220	12600	2066	28	10	N
S863537	1221	13000	2066, 1764	24	11	N
S863538	1224	13200	1764	28	9	N
S863539	1262	12600	NA	4	12	Y
S863540	1263	13000	NA	4	12	Y
S863541	1264	13000	NA	4	11	Y
S863542	1265	11002	NA	4	12	Y
S863543	1266	10202	NA	4	14	Y
S863544	1260	12800	NA	4	14	Y
S863545	1261	13000	NA	4	13	Y
S863546	3305	12000	NA	NA	NA	Y
S863547	3306	11000	NA	NA	NA	Y
S863548	3307	14000	NA	NA	NA	Y
S863549	3308	13000	NA	NA	NA	Y
S863550	1280	13200	NA	NA	NA	Y
S863551	1281	13000	NA	NA	NA	Y
S863552	1282	13200	NA	NA	NA	Y
S863553	1283	13800	NA	NA	NA	Y
S863554	1284	12600	NA	NA	NA	Y
S863555	1285	13800	NA	NA	NA	Y
S863556	1286	13000	NA	NA	NA	Y
S863557	1287	11000	NA	NA	NA	Y
S863558	1288	11000	NA	NA	NA	Y
S863559	1289	11200	NA	NA	NA	Y
S863560	1267	10200	NA	NA	NA	Y
S863561	1268	13000	NA	NA	NA	Y
S863562	1269	13000	NA	NA	NA	Y
S863563	1270	13000	NA	NA	NA	Y

TABLE 3, continued
Physical Characteristics of the CMPs

Package ID Number	Original CMP ID Number	Approx. Gross Weight (pounds)	Cement Paste Compressive Strength (psi)	Actual Length of Cold Plugs (inches)		Metal Plate on One End (Yes or No)
S863564	1271	11000	NA	NA	NA	Y
S863565	1272	14000	NA	NA	NA	Y
S863566	1273	11000	NA	NA	NA	Y
S863567	1274	12000	NA	NA	NA	Y
S863568	1275	10600	NA	NA	NA	Y
S863569	1276	10000	NA	NA	NA	Y
S863570	1277	13000	NA	NA	NA	Y
S863571	1278	11000	NA	NA	NA	Y
S863572	1279	10600	NA	NA	NA	Y
S863573	1290	12600	NA	NA	NA	Y
S863574	1291	12600	NA	NA	NA	Y
S863575	1292	12800	NA	NA	NA	Y
S863576	1293	10200	NA	NA	NA	Y
S863577	1294	14000	NA	NA	NA	Y
S863578	1295	13000	NA	NA	NA	Y
S863579	1296	10000	NA	NA	NA	Y
S863580	1297	10600	NA	NA	NA	Y
S863581	1298	13200	NA	NA	NA	Y
S863582	1299	11200	NA	NA	NA	Y
S863583	3301	10600	NA	NA	NA	Y
S863584	3302	11000	NA	NA	NA	Y
S863585	3303	11400	NA	NA	NA	Y
S863586	3304	10600	NA	NA	NA	Y

* Two compressive strength values indicates CMP received waste from two pug mill runs
** NA = Not Available

Available information indicates that the cement inside the CMPs is cured or hardened, and is not in the form of a sludge or wet paste. Compression strength tests were conducted on the cement paste from all pug mill runs at the 21-257 plant (References 11 and 22), and compression data were located for retrievable pug mill runs from December 31, 1975, through October 4, 1977 (Pug Mill Run # 424) and are included in Appendix A). The data are available for cement paste that went into 101 of the 158 CMPs, and these are shown in Table 3. Two compressive strength values are shown for CMPs that received cement paste from two pug mill runs. The compression data ranged from 780 to 2,495 pounds per square inch (psi), with an average of 1,623 psi. Data for non-retrievable cement paste that was placed into MDA T shafts during this period showed a range of 634 to 2,924 psi. These data all indicate that the cement paste within the CMPs should be stable enough for processing and repackaging of the CMPs into containers that are approved for WIPP.

One concern is whether items of debris waste were also placed into the CMPs, but this concern appears to be unfounded. The MDA T retrievable waste storage area was fenced and access to the CMPs was limited to the group that operated the 21-257 plant. Plywood covers were bolted to the top of the unfilled CMPs and were removed as the CMPs were to be filled. Reports do indicate that other types of waste (such as 3-ft diameter “bathyspheres”) were placed by the 21-257 operating group into MDA T shafts that received cemented waste (References 11 and 22). Discussions with a 21-257 plant operator and plant

engineer who worked at the 21-257 plant during the period that CMPs were filled confirmed that waste items other than cemented waste were placed into the MDA T disposal shafts, but both individuals stated that to their knowledge only cement paste was placed into the CMPs (References 22 and 24). These items placed into the shafts (not CMPs) included the bathyspheres, waste from the Health Research Laboratory, and the cement paste samples used in the compression tests.

6.2 Radiological Characteristics

Table 4 presents values for each CMP for total curies, curies of Am-241, curies of Pu-238, curies of Pu-239, PE-Ci, fissile grams of material, and dose at the surface from the TRU waste database. On average, the CMPs contain about 66 curies of Am-241 activity and about 68 PE-Ci, but range up to 160 curies of Am-241 activity and about 164 PE-Ci. About 99% of all activity and of the TRU activity on average is due to Am-241, with Pu-239 and Pu-238 making up most of the remaining activity of TRU isotopes. Other radionuclides that were reported on the RSWD forms for the CMPs include mixed fission products (MFP), uranium-235 (U-235), and uranium-238 (U-238).The range of fissile material is less than 1 gram to more than 500 grams and about 47 grams on average. Uranium-235 accounts for much of the fissile material in the CMPs with higher amounts of fissile material.

Radiological information was originally provided by the Building 21-257 plant engineer, based on analyses of the pug mill feed solutions performed at the H-7 radiochemistry lab at TA-50. The monthly reports compiled by the plant engineer (in Appendix C) include results for analyses by the H-7 laboratory for Am-241 in a footnote, but the reports indicate that the Am-241 values provided in the table (and believed to have been used in the RSWD forms) for CMPs were based on analysis by the Chemistry & Metallurgy Group (CMB-11) at the DP West facility (which generated the Am waste). The CMB-11 analysis was considered to be more accurate than the H-7 analysis (Reference 25).

Values for surface dose of the CMPs from the TRU database are also shown in Table 4, and range from 0 to 100 mR/hr with an average of about 16 mR/hr. These data were collected after decontamination and painting of the CMPs, and before the CMPs were loaded on a truck for transport to TA-54 Area G (Reference 18).

6.2 Chemical Characteristics

No results of analyses for chemical constituents were reported for the pug mill feed solutions, on the RSWD forms, or other documents related to the CMPs that were reviewed. At the time that the CMPs were filled in 1975 to 1978, there were no regulatory requirements related to hazardous chemical constituents in waste that were applicable to LANL.

TABLE 4
Radiological Characteristics of the CMPs

Package ID Number	Original CMP ID Number	Total Curies	Am-241 (Curies)	Pu-238 (Curies)	Pu-239 (Curies	PE-Ci	Fissile Grams	Dose at Surface (mR/hr)
S863429	1150	11.12	10.16	0.06	0.90	11.31	14.33	3
S863430	1151	11.12	10.16	0.06	0.90	11.31	14.33	1
S863431	1157	10.82	10.51	0.05	0.26	11.02	4.14	2
S863432	1158	10.82	10.51	0.05	0.26	11.02	4.14	3
S863433	1159	10.82	10.51	0.05	0.26	11.02	4.14	0
S863434	1152	20.35	19.54	0.04	0.77	20.73	12.31	1
S863435	1153	33.51	32.70	0.04	0.77	34.15	12.38	1
S863436	1154	14.51	13.70	0.04	0.77	14.78	12.27	1
S863437	1155	14.51	13.70	0.04	0.77	14.78	12.27	2
S863438	1156	14.50	13.70	0.04	0.75	14.76	12.07	2
S863439	1163	10.31	9.82	0.04	0.45	10.50	7.22	2
S863440	1164	10.31	9.82	0.04	0.45	10.50	7.22	3
S863441	1165	10.31	9.82	0.04	0.45	10.50	7.22	3
S863442	1169	12.07	11.21	0.11	0.75	12.28	12.06	1
S863443	1173	16.68	16.10	0.06	0.52	16.99	8.37	1
S863444	1174	16.68	16.10	0.06	0.52	16.99	8.37	1
S863445	1160	10.82	10.51	0.05	0.26	11.02	4.14	1
S863446	1161	10.82	10.51	0.05	0.26	11.02	4.14	3
S863447	1162	10.82	10.51	0.05	0.26	11.02	4.14	2
S863448	1166	12.07	11.21	0.11	0.75	12.28	12.06	1
S863449	1167	12.07	11.21	0.11	0.75	12.28	12.06	1
S863450	1168	12.07	11.21	0.11	0.75	12.28	12.06	1
S863451	1170	12.07	11.21	0.11	0.75	12.28	12.06	1
S863452	1171	12.07	11.21	0.11	0.75	12.28	12.06	4
S863453	1175	16.68	16.10	0.06	0.52	16.99	8.37	2
S863454	1178	11.81	11.45	0.33	0.02	12.00	0.42	1
S863455	1177	11.81	11.45	0.33	0.02	12.00	0.42	1
S863456	1176	11.81	11.45	0.33	0.02	12.00	0.42	1
S863457	1179	10.36	10.03	0.03	0.30	10.56	4.81	3
S863458	1180	10.36	10.03	0.03	0.30	10.56	4.81	3
S863459	1181	10.36	10.03	0.03	0.30	10.56	4.81	4
S863460	1182	10.36	10.03	0.03	0.30	10.56	4.81	4
S863461	1183	10.36	10.03	0.03	0.30	10.56	4.81	3
S863462	1184	10.36	10.03	0.03	0.30	10.56	4.81	3
S863463	1185	10.36	10.03	0.03	0.30	10.56	4.81	3
S863464	1187	17.37	16.97	0.05	0.36	17.70	5.76	4
S863465	1188	17.37	16.97	0.05	0.36	17.70	5.76	4
S863466	1186	17.37	16.97	0.05	0.36	17.70	5.76	3
S863467	1172	16.68	16.10	0.06	0.52	16.99	8.37	1
S863468	1198	13.45	11.80	0.98	0.67	13.58	10.77	7
S863469	1189	23.12	22.21	0.36	0.55	23.51	8.82	3
S863470	1190	23.12	22.21	0.36	0.55	23.51	8.82	2
S863471	1191	23.12	22.21	0.36	0.55	23.51	8.82	12
S863472	1192	23.12	22.21	0.36	0.55	23.51	8.82	4
S863473	1193	23.12	22.21	0.36	0.55	23.51	8.82	4

TABLE 4, continued
Radiological Characteristics of the CMPs

Package ID Number	Original CMP ID Number	Total Curies	Am-241 (Curies)	Pu-238 (Curies)	Pu-239 (Curies	PE-Ci	Fissile Grams	Dose at Surface (mR/hr)
S863474	1194	23.12	22.21	0.36	0.55	23.51	8.82	4
S863475	1195	13.45	11.80	0.98	0.67	13.58	10.77	7
S863476	1196	13.45	11.80	0.98	0.67	13.58	10.77	7
S863477	1197	13.45	11.80	0.98	0.67	13.58	10.77	7
S863478	1199	13.45	11.80	0.98	0.67	13.58	10.77	7
S863479	1200	13.45	11.80	0.98	0.67	13.58	10.77	1
S863480	1201	13.45	11.80	0.98	0.67	13.58	10.77	1
S863481	1202	13.45	11.80	0.98	0.67	13.58	10.77	4
S863482	1203	13.45	11.80	0.98	0.67	13.58	10.77	1
S863483	1207	9.53	9.02	0.11	0.39	9.69	405.50	12
S863484	1205	9.53	9.02	0.11	0.39	9.69	405.50	1
S863485	1204	9.53	9.02	0.11	0.39	9.69	405.50	1
S863486	1206	9.53	9.02	0.11	0.39	9.69	405.50	1
S863487	1210	38.57	38.52	0.01	0.04	39.33	0.89	2
S863488	1209	38.57	38.52	0.01	0.04	39.33	0.89	7
S863489	1208	38.57	38.52	0.01	0.04	39.33	0.89	12
S863490	1211	69.28	69.05	0.03	0.18	70.62	3.27	2
S863491	1212	69.28	69.05	0.03	0.18	70.62	3.27	12
S863492	1213	69.28	69.05	0.03	0.18	70.62	3.27	12
S863493	1214	69.28	69.05	0.03	0.18	70.62	3.27	12
S863494	1257	160.65	160.00	0.45	0.20	163.74	7.90	20
S863495	1258	160.65	160.00	0.45	0.20	163.74	4.04	30
S863496	1259	160.65	160.00	0.45	0.20	163.74	4.04	30
S863497	1254	160.65	160.00	0.45	0.20	163.74	4.04	20
S863498	1255	160.65	160.00	0.45	0.20	163.74	4.04	20
S863499	1245	134.73	134.30	0.07	0.36	137.35	6.59	23
S863500	1246	134.73	134.30	0.07	0.36	137.35	6.59	20
S863501	1247	134.73	134.30	0.07	0.36	137.35	6.59	20
S863502	1248	134.73	134.30	0.07	0.36	137.35	6.59	25
S863503	1249	135.03	134.30	0.07	0.66	137.65	11.36	20
S863504	1252	93.58	93.20	0.29	0.10	95.38	2.01	18
S863505	1253	93.58	93.20	0.29	0.10	95.38	2.01	20
S863506	1250	93.58	93.20	0.29	0.10	95.38	2.01	25
S863507	1251	93.58	93.20	0.29	0.10	95.38	2.01	20
S863508	1256	160.65	160.00	0.45	0.20	163.74	4.04	20
S863509	1240	186.63	186.10	0.21	0.32	190.26	115.40	23
S863510	1239	186.63	186.10	0.21	0.32	190.26	115.40	25
S863511	1236	186.63	186.10	0.21	0.32	190.26	115.40	4
S863512	1241	134.73	134.30	0.07	0.36	137.35	6.59	35
S863513	1233	86.55	86.30	0.05	0.20	88.23	3.65	15
S863514	1231	86.55	86.30	0.05	0.20	88.23	3.65	12
S863515	1232	86.55	86.30	0.05	0.20	88.23	3.65	26
S863516	1234	97.40	96.75	0.21	0.44	99.28	265.36	20
S863517	1235	97.40	96.75	0.21	0.44	99.28	265.36	18
S863518	1237	97.40	96.75	0.21	0.44	99.28	265.36	26

TABLE 4, continued
Radiological Characteristics of the CMPs

Package ID Number	Original CMP ID Number	Total Curies	Am-241 (Curies)	Pu-238 (Curies)	Pu-239 (Curies	PE-Ci	Fissile Grams	Dose at Surface (mR/hr)
S863519	1238	97.40	96.75	0.21	0.44	99.28	265.36	20
S863520	1242	134.73	134.30	0.07	0.36	137.35	6.59	35
S863521	1243	134.73	134.30	0.07	0.36	137.35	6.59	23
S863522	1244	134.73	134.30	0.07	0.36	137.35	6.59	35
S863523	1225	72.48	72.00	0.17	0.30	73.87	177.80	4
S863524	1226	72.48	72.00	0.17	0.30	73.87	177.80	4
S863525	1227	72.48	72.00	0.17	0.30	73.87	177.80	10
S863526	1228	72.48	72.00	0.17	0.30	73.87	177.80	10
S863527	1229	72.48	72.00	0.17	0.30	73.87	177.80	10
S863528	1230	72.48	72.00	0.17	0.30	73.87	177.80	12
S863529	1217	69.99	69.75	0.02	0.22	71.36	518.28	15
S863530	1216	69.99	69.75	0.02	0.22	71.36	518.28	15
S863531	1215	69.99	69.75	0.02	0.22	71.36	518.28	10
S863532	1222	72.48	72.00	0.17	0.30	73.87	177.80	26
S863533	1223	72.48	72.00	0.17	0.30	73.87	177.80	15
S863534	1218	36.12	36.09	0.01	0.02	36.82	13.38	12
S863535	1219	36.12	36.09	0.01	0.02	36.82	13.38	10
S863536	1220	36.12	36.09	0.01	0.02	36.82	13.38	10
S863537	1221	72.48	72.00	0.17	0.30	73.87	177.80	15
S863538	1224	72.48	72.00	0.17	0.30	73.87	177.80	15
S863539	1262	175.37	174.30	0.64	0.42	178.72	7.64	25
S863540	1263	175.37	174.30	0.64	0.42	178.72	7.64	25
S863541	1264	175.37	174.30	0.64	0.42	178.72	7.64	25
S863542	1265	175.37	174.30	0.64	0.42	178.72	7.64	25
S863543	1266	175.37	174.30	0.64	0.42	178.72	7.64	25
S863544	1260	175.37	174.30	0.64	0.42	178.72	8.29	20
S863545	1261	175.37	174.30	0.64	0.42	178.72	7.64	25
S863546	3305	35.51	35.35	0.12	0.03	36.18	0.63	4
S863547	3306	35.51	35.35	0.12	0.03	36.18	0.63	5
S863548	3307	35.51	35.35	0.12	0.03	36.18	0.63	4
S863549	3308	35.51	35.35	0.12	0.03	36.18	0.63	5
S863550	1280	98.41	97.50	0.09	0.82	100.31	13.52	50
S863551	1281	98.41	97.50	0.09	0.82	100.31	13.52	50
S863552	1282	98.41	97.50	0.09	0.82	100.31	13.52	50
S863553	1283	91.37	90.96	0.21	0.20	93.13	6.90	100
S863554	1284	91.37	90.96	0.21	0.20	93.13	6.90	100
S863555	1285	91.37	90.96	0.21	0.20	93.13	6.90	100
S863556	1286	91.37	90.96	0.21	0.20	93.13	6.90	80
S863557	1287	91.37	90.96	0.21	0.20	93.13	6.90	30
S863558	1288	91.37	90.96	0.21	0.20	93.13	6.90	40
S863559	1289	91.37	90.96	0.21	0.20	93.13	6.90	20
S863560	1267	157.59	156.80	0.07	0.72	160.65	12.25	20
S863561	1268	157.58	156.80	0.07	0.72	160.65	12.25	18
S863562	1269	157.58	156.80	0.07	0.72	160.65	12.25	20
S863563	1270	157.58	156.80	0.07	0.72	160.65	12.25	20

TABLE 4, continued
Radiological Characteristics of the CMPs

Package ID Number	Original CMP ID Number	Total Curies	Am-241 (Curies)	Pu-238 (Curies)	Pu-239 (Curies	PE-Ci	Fissile Grams	Dose at Surface (mR/hr)
S863564	1271	157.58	156.80	0.07	0.72	160.65	12.25	18
S863565	1272	157.58	156.80	0.07	0.72	160.65	12.25	30
S863566	1273	157.58	156.80	0.07	0.72	160.65	12.25	18
S863567	1274	157.58	156.80	0.07	0.72	160.65	12.25	20
S863568	1275	98.41	97.50	0.09	0.82	100.31	13.52	18
S863569	1276	98.41	97.50	0.09	0.82	100.31	13.52	20
S863570	1277	98.41	97.50	0.09	0.82	100.31	13.52	15
S863571	1278	98.41	97.50	0.09	0.82	100.31	13.52	15
S863572	1279	98.41	97.50	0.09	0.82	100.31	13.52	15
S863573	1290	37.03	36.73	0.19	0.10	37.73	9.71	50
S863574	1291	37.03	36.73	0.19	0.10	37.73	9.71	50
S863575	1292	37.03	36.73	0.19	0.10	37.73	9.71	50
S863576	1293	37.03	36.73	0.19	0.10	37.73	9.71	30
S863577	1294	37.03	36.73	0.19	0.10	37.73	9.71	80
S863578	1295	37.03	36.73	0.19	0.10	37.73	9.71	80
S863579	1296	37.03	36.73	0.19	0.10	37.73	9.71	5
S863580	1297	35.83	35.69	0.07	0.06	36.51	1.08	5
S863581	1298	35.83	35.69	0.07	0.06	36.51	1.08	30
S863582	1299	35.83	35.69	0.07	0.06	36.51	1.08	5
S863583	3301	35.83	35.69	0.07	0.06	36.51	1.08	40
S863584	3302	35.83	35.69	0.07	0.06	36.51	1.08	40
S863585	3303	35.83	35.69	0.07	0.06	36.51	1.08	4
S863586	3304	35.83	35.69	0.07	0.06	36.51	1.08	5
TOTALS		**10,575.90**	**10,483.36**	**31.97**	**60.10**	**10,777.85**	**7,360.79**	
Average (Mean)		**66.94**	**66.35**	**0.20**	**0.38**	**68.21**	**46.59**	**16**

7. Processing CMPs for Disposition

The CMPs must be retrieved from below ground storage and repackaged into WIPP-approved containers, characterized and certified to the WIPP Waste Acceptance Criteria, and transported to WIPP (or another approved disposal facility if some containers are determined to be ineligible for WIPP because they have concentrations below 100 nCi/g of TRU isotopes with a half- life of 20 years or longer). Although both retrieval and processing of the CMPs appear straight forward, there will be considerable effort in project engineering, development of project plans and work control documents, and readiness before either retrieval or processing can begin. These include design and engineering to relocate or realign the gravel road near the area where the CMPs are located, submittal of a RCRA permit modification request to the NMED, and purchase and installation of equipment to cut the CMPs into sections that will fit into WIPP-approved containers that can be characterized for disposition.

7.1 Retrieval of CMPs from Below-Ground Storage

The exact location of the CMPs must be determined. Although the field study that included hand-augering identified one corner of the CMP array in 2007 (Reference 20), the other three corners need to be located. Ground penetrating radar (GPR) of the CMP area was performed in July 2013 and the GPR data are being compiled and analyzed. Land surveying of the area will be conducted in early August 2013 and the land survey will be used to locate the GPR marked areas as well as to determine elevations so that the volume of soil overburden above the CMPs can be estimated. The exact location of the CMPs relative to the road and any utility lines (such as fire alarm lines or other electrical) that may cross the ground surface above the CMPs will be identified.

It is expected that predecessor activities such as relocation of utilities, realignment of the road, installation of vehicle barriers and controls for run-on, submittal of a permit modification request, and removal of much of the soil cover over the CMPs can be performed before readiness-for-retrieval activities are conducted. Removal of the final soil cover, tarps, and plywood that cover the CMPs would likely be conducted after readiness for retrieval is demonstrated. The level of readiness review and the specific activities that constitute retrieval will be defined.

Because the CMPs were covered with tarps and plywood before being covered with soil at TA-54 Area G, it is expected that the CMPs should not require significant cleaning, decontamination, or contamination control efforts during retrieval. This must be confirmed after CMPs are exposed, but it appears that retrieval will consist primarily of lifting each CMP from its current position and transporting it to a staging or storage area. By the time that the CMPs are retrieved from their current below-ground location, most of the TRU waste that is currently stored above ground at Area G will be dispositioned, and there will be several areas available for staging or storage of CMPs while they are scheduled through processing. Rates of retrieval and processing of CMPs will also be coordinated.

7.2 Processing of CMPs after Retrieval

With a length of 20 ft and diameter of 30 in, the CMPs are too large to be transported to WIPP. The CMP weights of 10,000 to 14,000 lb also exceed the Contact-Handled Transuranic Waste Authorized Methods for Payload Control (CH-TRAMPAC, Reference 26) weight limits for transportation of waste containers to WIPP. The CMPs must be cut into sections that can be placed into WIPP-approved containers such as standard waste boxes (SWB) and meet the weight limits. Other WIPP limits such as the PE-Ci activity and fissile gram limits must also be achieved, but based on the information on each CMP in Table 4 it appears that sections of a CMP that will meet size and weight limits for the SWB will also achieve the other limits if the cement within the CMPs is relatively uniform in concentration of radioactive materials.

Cutting the CMPs into five sections will be adequate to meet the size and weight limits of the SWB. With a length of 20 ft, four cuts across the length of the CMP for five sections of equal size would create cylinders with a length of approximately 48 in and diameter of approximately 30 in. Table 2.9-30 of the CH-TRAMPAC document (Reference 26) lists the approximate inside dimensions of the SWB as height 36 9/16 inches, length 68 ¼ inches, and width 52 inches. The cylinders would easily fit into the SWB. Cutting the CMPs into four equal-sized sections with a length of approximately 60 in and diameter of approximately 30 inches in would also create sections that would probably fit into the SWB, but the SWB is convex on the ends and it would be a close fit. Sections of CMPs at the higher weight range of the CMPs that are 60 in long would also exceed the CH-TRAMPAC weight limit for SWBs. Table 2.9-32 of the CH-TRAMPAC document shows the maximum gross weight of the SWB is 4,000 lb, with an approximate empty weight for the SWB of 640 lb. This gives a maximum net weight of about 3,360 lb of waste materials for the SWB. Cutting a CMP with the maximum weight of 14,000 lb in Table 2 would give an approximate weight of 3,500 lb for each section if cut into four sections and an approximate weight of 2,800 lb if cut into five sections.

Engineering design work for purchase and installation of a diamond wire saw in the permacon in Dome 375 has begun. The diamond wire saw will be available for cutting CMPs, confinement spheres, and items such as gloveboxes or pencil tanks. Diamond wire saws are used for stone cutting in stone quarries and in demolition projects for concrete piers, and should easily cut through the CMPs. Diamond wire saws can also be operated at very low speeds to minimize heating at the cut and creation of dust.

Equipment for characterization of SWBs is already in place and operating on Pad 10 at Area G. This includes the high-energy real-time radiography unit (HE-RTR) and the Super High Efficiency Neutron Counter (SuperHENC) for radiography and assay of SWB containers. Although there is currently an Acceptable Knowledge (AK) document for TA-21 debris waste, it does not appear that there is presently an AK document for TA-21 homogeneous waste. The LANL LTP will coordinate with the Central Characterization Project (CCP) and the DOE Carlsbad Field Office (CBFO) on a determination as to whether there is currently an AK document that is applicable to the CMPs; if not, LANL will work with the CCP and CBFO on preparation and approval of an AK document before containers with CMP sections are characterized by the CCP. Homogeneous waste also requires sampling and analysis for hazardous waste constituents, and the LTP will work with CCP and CBFO on types and quantities of samples that will be required for analysis.

7.3 Potential Issues in Processing of CMPs

A question has been raised about whether some CMPs may contain sludge that is not cemented (consistency of toothpaste-like putty) that would be difficult to contain when cutting CMPs into sections for repackaging into WIPP-approved containers. This concern appears to have no basis. As discussed in Section 4 on Page 13, only one of 50 pug mill runs that produced retrievable cement paste included plant sludge as part of the pug mill feed solution and plant sludge made up only 20% of the feed solution blend in this pug mill run. The compressive strength of the cured cement resulting from this pug mill run was 1,316 psi. CMPs with ID Numbers 1150 (Package ID Number 863429) and 1151 (Package ID Number 863430) were filled with cement paste from this pug mill run, and CMP ID number 1152 (Package ID Number 863434) was partially filled with cement paste from this pug mill run.

A related question is whether some CMPs may contain cement of poor strength that crumbles on handling. Again, this appears unlikely based on the compressive strength results available for cement used to fill 101 of the 158 CMPs, which had compressive strength results ranging from 780 to 2,495 psi, and non-retrievable cement produced during this period had compressive strength results ranging from 634 to 2,924 psi. All but two of the pug mill runs that generated retrievable cement paste that do not

have compressive strength data available had very similar pug mill feed solution blends to those where compressive strength data are available. All of the pug mill data are in Appendix A.

The two that are different consisted of Pug Mill Run # 428 (which had a feed solution blend consisting of approximately 21% treated strip waste and 78% americium waste) and Pug Mill Run #439R (which had a feed solution blend consisting of approximately 53% raw KOH waste, 47% americium waste, and less than 1% miscellaneous waste. Non-retrievable cement waste produced with both the treated strip waste and raw KOH waste streams with compressive strength data show that these still produce cement with good compressive strength. For example, Pug Mill Run # 384 with about 23% treated strip waste and 41% raw KOH produced cement with a compressive strength of 2,271 psi. Pug Mill Run # 3388 with about 72% raw KOH in the waste feed blend produced cement with a compressive strength of 2,339 psi.

Questions have also been raised about the presence of prohibited items such as free liquids and debris waste embedded within the cement matrix. The field notes from retrieval of the CMPs at TA-21 in 1986 (Reference 18) state that water spilled from three CMPs when they were removed from the vertical position and were laid horizontally on the ground. These CMPs were identified as CMP ID Number 3304 (Package ID Number 863586), CMP ID Number 3306 (Package ID Number 863547), and CMP ID Number 3308 (Package ID Number 863549). All were among the first CMPs to be retrieved and were located at the face of the array. It is possible that rain water somehow entered the CMPs. Analysis of the spilled water also showed low concentrations of contamination. However, dewatering of cemented waste in drums has occurred in drums stored at TA-54 and this would not be unexpected in cemented waste in other containers such as the CMPs. Planning for handling and processing of the CMPs should include control measure for liquids that may be released from the CMPs.

The presence of items of debris waste embedded within the cement in the CMPs is considered unlikely based on the fact that the CMP area at TA-21 was fenced, empty CMPs had covers bolted to the top, and personnel who were involved in filling CMPs at TA-21 stated that other waste items were placed into the MDA T shafts rather than in the CMPs. Radiography by HE-RTR will identify any SWBs containing CMP sections that contain prohibited items and these would then be remediated. However, the likelihood of prohibited items other than free liquids is low enough that it appears that other actions such as RTR of intact CMPs before cutting is not necessary. If cutting of CMPs or HE-RTR of CMP sections identifies other types of prohibited items, then this approach would be reconsidered.

There is also a question as to whether CMPs may be reclassified to low-level waste or mixed low-level waste because the assay results show concentrations below 100 nCi/g of TRU isotopes with half lives longer than 20 years at concentrations. Based on the weights of CMPs shown in Table 3 and values of Am-241in Table 4, it appears that all 158 of the CMPs will assay as TRU waste.

A related question is whether the non-radioactive plugs at the ends of the CMPs will cause sections of the CMPs with the cold plugs to assay at less than 100 nCi/g. Although the plugs are reported to be about 1 ft in length in many reports, the CMP Retrievable Storage Log in Appendix E has data on the actual initial depth to the bottom plug and the depth of the top plug for a total of 117 CMPs. No similar data was located for the other 41 CMPs. By taking the difference of the total length of a CMP and the initial depth, the length of the bottom plug was calculated and is shown in Table 3. The length of the bottom plug in the 117 CMPs ranged from four inches to 59 inches, with an average of 19 inches. A total of 23 of the 117 CMPs in the log had a metal plate on the bottom, and the average depth of the bottom plug on these CMPs was only 4 inches. The average for the 94 CMPs in the log that did not have a metal plate on the bottom was 22 inches. The length of the top plug in the 117 CMPs ranged from 7 inches to 18 inches, with an average of 12 inches. There was no apparent difference in the length of the top plug between the CMPs with plates on the bottom and those without plates on the bottom.

Obviously, the section of the CMP (CMP ID No. 1180, Package ID No. 863458) containing the bottom plug of 59 in is expected to assay as less than 100 nCi/g since the entire 48 in section should be composed of non-radioactive concrete. Calculations on the estimated concentration of Pu isotopes in seven CMPs with bottom plugs of 32 in up to 47 in in length were performed using the actual data from Tables 3 and 4 for Am-241 activity and weights of the CMPs and the length of the CMPs that actually contained radioactive cement. All of these gave estimated concentrations of Pu concentrations greater than 100 nCi/g for a 48 in section containing the cold plug, even the section with 47 in of non-radioactive concrete (CMP ID Number 1237, Package ID Number 863518).

Actual plug lengths are also available in Table 3 for the CMPs with the lowest activity in Table 4, and the same type of calculations for these also showed concentrations greater than 100 nCi/g for sections containing the cold plug. Actual plug lengths are not available for 41 of the CMPs, but these calculations indicate that most if not all CMP sections will likely assay greater than 100 nCi/g of TRU isotopes even if the section contains a non-radioactive plug (except for the one CMP where the non-radioactive plug exceeds the length of a 48 in section.)

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21. *LANL Purchase Order No. 7129G with requirements for Corrugated Metal Pipe (May 31, 1978).*
22. Personal communication by Kenneth Hargis with David Salazar (July 11, 2013).
23. Memorandum from L.A. Emelity to T.K. Keenan, *Disposal of Three-Feet Diameter Bathyspheres, H7-79-381 (August 9, 1979); LANL ERID-000974.*
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25. *Summary of Contaminated Wastes to Disposal Pits, January 1 through June 30, 1977*, Memorandum from P.E. McGinnis to John L. Warren, H-7-77-324 (August 26, 1977; LANL ERID-506954.
26. *CH-TRAMPAC Document, Rev. 4*, U.S. Department of Energy (April 4, 2012).

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Appendix A

Data Sheets for 21-257 Pug Mill Runs, January 1975 through June 1978

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Pug Mill Runs - 1975
Composition of Raw Feed

Run No.	DATE	Liters Total	Liters Plant Sludge	Liters Neut. Am	Liters Treated Strip	Liters Raw KOH	Liters TAP WATER	Liters Misc.
325	1-10	5885	1331	3418	—	762	374	—
326	1-15	5692	963	3366	—	920	443	—
327	1-21	5860	—	3209	2250	—	401	—
328	1-27	6272	1174	3156	—	814	1128	—
329	1-29	5056	1174	3093	—	604	185	—
330	2-7	5177	1437	3129	—	157	454	—
331	2-19	5515	911	3365	—	762	477	—
332	2-26	5838	1420	—	2987	579	852	—
333	3-5	5612	1174	3313	—	762	337	26
334	3-10	5280	1542	3155	—	341	242	—
335	3-14	5781	1778	3208	—	473	322	—
336	3-24	5872	2829	—	2209	316	518	—
337	3-27	5382	1647	3103	—	341	291	—
338	4-3	5506	1016	3279	—	762	257	192
339	4-9	6263	1157	—	3250	631	1225	—
340	4-22	5375	1147	3182	—	657	389	—
341	4-25	6917	1104	2777	—	947	2089	—
342	5-1	6621	900	3859	—	878	984	—
343	5-13	6721	1121	3208	—	867	1525	—
344	5-16	5313	1174	3260	—	762	117	—
345	5-28	5135	911	1644	1813	578	189	—

Pug Mill Runs – 1975
Composition of Raw Feed

Run No	Date	Liters Total	Liters Plant sludge	Liters Neut. Am	Liters treated strip	Liters Raw KOH	Liters Tap Water	Liters Misc.
367A	12-16	5311	1121	3208	—	867	115	—
367B	12-16	11770	11581	—	—	—	189	—
368	12-24	~~5598~~ 5182	1226	—	3050	762	144	—
369R	12-31	4870	977	3776	—	—	117	—

Note: Beginning with PMR # 369 the retrievable storage area containing Corrugated Metal Pipe (CMP) was put into service. These Pipe are 30" in diameter and are 20 feet in length. Total capacity of ~~the~~ each CMP is approximately 100 ft^3 or 2.8 m^3. PMR's generating retrievable cement paste are designated by the run number followed by an R indicating the retrievable nature of the paste.

These runs generally consist of Americium sludge, KOH, and/or strip is used to generate a non-retrievable sludge to flush the discharge line before rinsing with tap water.

		109319 (Excl 369R)			
	72267 (Excl 369R)		24892	29617	

Pug Mill Runs - 1975
Operational Data

PMR No.	Date	Liters Treated	Liters Total Paste	Liters Wash Water	Paste to Pit #	Wash Water to Pit #	Min of oper.	Min Pump off	Liters Feed ÷ Liters Paste	Liters Pumped Per Min
346	6-5	5248	8193	2131	75	#8 G.C.	127	0	.641	64.5
347	6-12	5338	8797	2655	75	#8 G.C.	140	0	.607	62.8
348	6-25	5521	8745	3766	75	#8 G.C.	137	0	.631	63.8
349	7-2	4200	6013	1798	75	#8 G.C.	100	0	.698	60.1
350	7-17	6221	14132	2048	6	#8 G.C.	124	0	.440	114.0
351	7-23	5261	11240	3077	6	#8 G.C.	126	0	.468	89.2
352	8-4	5322	9654	2672	6	#8 G.C.	137	0	.551	70.5
353	8-21	5324	7680	2725	76	#8 G.C.	118	0	.693	65.1
354	8-26	6258	8928	1840	76	#9 G.C.	177	0	.701	50.4
355	9-8	4630	6539	1957	76	#8 G.C.	141	0	.708	46.4
356	9-19	5436	8062	2400	76	#9 G.C.	167	0	.674	48.3
357	9-24	5341	8193	1601	76	#9 G.C.	174	0	.652	47.1
358	10-3	5340	7589	1855	76	#8 G.C.	141	0	.704	53.8
359	10-9	4251	5567	2025	76	#8 G.C.	118	0	.764	47.2
360	10-17	4197	7237	1895	70	#8 G.C.	130	0	.580	55.7
361	10-31	5891	8534	1397	70	#8 G.C.	160	0	.690	53.3
362	11-12	7121	9480	1382	70	#8 G.C.	197	0	.751	48.1
363	11-20	5487	8298	1855	70	#8 G.C.	175	0	.661	47.4
364	12-2	5220	8272	2029	70	#8 G.C	178	0	.631	46.5
365	12-5	5528	7930	1934	70	#8 G.C.	194	0	.697	40.9
366	12-11	5547	8456	1665	70, 83	#8 G.C.	150	0	.656	56.4

31% -
69% -

Pug Mill Runs - 1975
Operational Data

PMR No.	DATE	Liters Treated	Liters Total Paste	Liters Wash Water	Paste to Pit #	Wash Water to Pit #	Min. of Oper.	Min Pump Off	Liters Feed ÷ Liters Paste	Liters Pumped Per Min
367 (1)	12-16	17081	19921	2195	[illegible]	#8 G.C.	426 ~~459~~	0	.857	46.8
368	12-24	5598	7852	3240	[illegible]	#8 G.C.	178	0	.713	44.1
369 R (2)	12-31	4870	5165	1783	GMP 1150 " 1151 " 1152	#8 G.C.	129	0	.801	47.2
369 F (2)			919	–	[illegible]	#8 G.C.				

61% 39%

(1) Run in two parts: A - sludge, KOH, + Am
B - sludge only

(2) Retrievable paste storage initiated.
F - 2 liters final paste generated for flushing the retrievable paste from the discharge line

Pug Mill Runs - ~~1974~~ 1975
Total Radioactivity

PMR No.	DATE	Liters feed from P.M. feed tank	Gross α (d/m-ml)	Gross β (d/m-ml)	Gross γ (d/m-ml)	^{238}Pu (d/m-ml)	^{239}Pu (d/m-ml)	^{137}Cs (d/m-ml)	^{90}Sr (d/m-ml)	^{239}Pu Equiv. of Gross α (grams)	m β
325	1-10	5511	16,600,000	15,000,000	5,000	3,200,000	2,610,000	1,690	8,000	671.1	36
326	1-15	5249	12,000,000	9,600,000	19,000	233,000 ~~140,000~~	1,090,000 ~~1,340,000~~	1,680	9,610	462.1	4
327	1-21	5459	12,000,000	9,960,000	25,700	140,000	1,183,000	769	9,400	480.6	3
328*	1-27	5144	10,000,000*	9,000,000*	20,000*	200,000*	1,200,000*	600*	9,000*	377*	33
329	1-29	4871	10,600,000	8,400,000	23,211	23,000	167,000	201	6,600	378.8	2
330	2-7	4723	7,600,000	5,700,000	17,000	137,000	132,000	159	2,200	263.3	7
331	2-19	5038	9,400,000	5,800,000	11,022	207,000	204,000	203	2,300	347.4	8
332	2-26	4986	192,613	119,836	1,005	17,600	15,700	782	357	7.0	3.
333	3-5	5275	11,200,000	8,200,000	16,000	51,700	152,000	175	5,600	433	20
334	3-10	5038	10,500,000	7,200,000	18,000	21,500	176,000	192	4,600	388	16.
335	3-14	5459	14,000,000	10,000,000	43,000	21,200	213,000	160	5,600	561	21
336	3-24	5354	190,000	120,000	1,800	11,700	12,300 ~~123,000~~	411	438	7	3.
337	3-27	5091	11,600,000	7,400,000	17,000	26,400	223,000	248	2,400	433	9.
338	4-3	5249	12,000,000	8,200,000	27,500	115,000	495,000	1,000	11,600	462	44.
339	4-9	5038	680,000	408,000	763	50,200	92,000	405	640	25	3.
340	4-22	4986	12,300,000	7,700,000	27,000	83,000	417,000	—	11,000	450	37
341	4-25	4828	8,100,000	6,800,000	10,000	39,200	223,000	—	2,200	285	7.
342	5-1	5637	15,900,000	12,300,000	50,000	27,180	220,400	—	3,800	657	14.
343	5-13	5196	11,000,000	8,080,000	22,000	87,700	261,000	—	13,000	419	45.
344	5-16	5196	13,000,000	9,700,000	29,000	167,000	935,000	60	11,000	496	38.
345	5-28	4946	5,100,000	3,300,000	3,000	43,500	439,000	54	3,500	185	11.

* Feed sample was not collected - activity data is estimated. P.E.M.

Pug Mill Runs - 1975
Total Radioactivity

PMR No.	DATE	Liters feed from P.M. feed Tank	Gross α (d/m-ml)	Gross β (d/m-ml)	Gross γ (d/m-ml)	^{238}Pu (d/m-ml)	^{239}Pu (d/m-ml)	^{137}Cs (d/m-ml)	^{90}Sr (d/m-ml)	^{239}Pu Equiv. of Gross α (grams)	m β-
346	6-5	5082	17,500,000	10,000,000	60,000	97,100	719,000	76.	3,000	652	10
347	6-12	5249	12,500,000	7,000,000	29,000	48,000	616,000	51	6,100	481	21
348	6-25	5354	17,000,000	6,600,000	89,500	16,500	189,000	28,200	1,550,000	668	57
349	7-2	4000	260,000	140,000	869	6,510	10,100	718	1,916	8	7
350	7-17	5301	13,000,000	7,600,000	24,000	20,300	174,000	384	2,489	506	10
351	7-23	5144	517,000	307,000	411	17,900	32,900	36	918	20	[illegible]
352	8-4	5038	12,000,000	7,400,000	27,000	14,400	178,000	238	10,000	444	31
353	8-21	5226	16,900,000	8,280,000	69,000	20,900	202,000	209	812	648	3
354	8-26	5933	5,980,000	3,490,000	5,770	6,400	50,900	28	7,600	260	30
355	9-8	4354	28,800,000	16,000,000	149,376	34,500	288,000	910	7,300	920	24
356	9-19	5345	10,300,000	3,850,000	11,500	11,200	110,000	67	3,370	404	12
357	9-24	5091	14,000,000	5,570,000	42,500	34,400	285,000	210	1,900	523	7.
358	10-3	5196	30,000,000	18,000,000	197,000	17,400	241,000	340	23,000	1144	81.
359	10-9	4092	470,000	248,000	1,480	4,350	11,700	1,400	1,070	14	6.
360	10-17	4144	18,000,000	5,800,000	18,000	405,000	24,200	167	7,700	547	22
361	10-31	4407	16,500,000	6,100,000	21,000	69,500	1,030,000	109	11,000	533	33
362	11-12	6837	9,740,000	6,070,000	5,840	55,200	597,000	98	392	489	2.
363	11-20	5249	10,700,000	72,600	9,370	23,700	284,000	90	1,220	412	4.
364	12-2	5091	450,000	164,000	347	40,500	77,500	39	1,600	17	5.6
365	12-5	5354	12,600,000	4,450,000	7,760	23,200	190,000	230	523	495	2.
366	12-11	5354	358,000	155,000	174	51,700	109,000	44	1,400	14	5.

Pug Mill Runs - 1975

Total Radioactivity

PMR No.	Date	Liters Feed from P.M. Feed TANK	Gross α	Gross β	Gross γ	^{238}Pu	^{239}Pu	^{137}Cs	^{90}Sr	^{239}Pu Equiv. of Gross α (grams)	mC β-
			d/min								
367 A	12-16	5196	11,500,000	5,190,000	3980	1,540,000	769,000	170	6	438	.6
367B (1)	12-16	11581	323,000	278,000	160	43,200	95,300	39	1,360	27	10.
368	12-24	5038	54,500	236,000	33,400	11,800	22,200	3,070	1,700	2	16.
369R	12-31	3776	17,800,000	8,130,000	14,000	73,600	1,030,000	700	1,500	493	5.
369F (2)	12-31	977	75,000	53,000	96	22,800	46,200	47	360	1	.

(1) Plant Sludge Only 62% of radioactivity went to Shaft # 80 ; 38% to shaft # 83

(2) Feed used ~~for~~ to generate flushing paste (sludge only)

PUG MILL RUNS - 1976

Composition of Raw Feed Solutions

Pug Mill Run No. (1)	Date	Liters Total	Liters Plant Sludge	Liters Neut. Rm	Liters Treated Strip	Liters Raw KOH	Liters Tap Water	Liters Misc.
370	1-14-76	5390	2724	—	—	2314	352	—
371 R	1-16	5050	—	4986	—	—	64	—
371 F	"	1990	1740	—	—	—	250	—
372 R	1-23	5120	—	5038	—	—	91	—
372 F	"	2324	1889	—	—	—	435	—
373 R	2-5	5034	—	4989	—	—	11	34
373 F	"	1743	1565	—	—	—	178	—
374	2-11	5288	2173	—	—	2918	197	—
375	2-18	5216	1210	—	2408	1420	178	—
376	2-20	5341	3184	—	—	1907	250	—
377 R	2-26	4983	—	4960	—	—	23	—
377 F	2-26	1874	1708	—	—	—	166	—
378	3-5	4788	3356	—	—	1262	170	—
379 R	3-16	5054	—	4925	—	—	121	8
379 F	3-16	1922	1672	—	—	—	250	—
380 R	4-6	5027	—	4986	—	—	23	18
380 F	"	1804	1619	—	—	—	185	—
381	4-20	5705	2671	—	—	2315	719	—
382 R	4-23	5691	—	5639	—	—	22	30
382 F	"	1708	1492	—	—	—	216	0
383	4-29	~~5572~~ 5572	736	—	2777	1578	481	—

(1) Initial R following the PMR # indicates data is for portion of run in which Retrievable cement paste was generated. Initial F indicates data is for portion of run in which non-retrievable Paste was generated to Flush the Retrievable paste from the line.

PUG MILL RUNS - 1976

Composition of Raw Feed Solutions

Pug Mill Run No.	Date	Liters Total	Liters Plant Sludge	Liters Neut. Am	Liters Treated Strip	Liters Raw KOH	Liters Tap Water	Liters Misc.
384	5-7	5212	666	—	1138	2071	174	1163
385	5-12	5491	541	—	—	—	279	4671
386 R	5-19	6091	—	6038	—	—	53	—
386 F	5-19	1337	1072	—	—	—	265	—
387 R	6-8	~~5693~~ 5153	—	4933	—	—	220	—
387 F	6-8	1148	936	—	—	—	212	—
388	6-22	5381	1437	—	—	3759	185	—
389	6-24	5163	1631	—	2566	841	125	—
390 R	7-13	4938	—	4828	—	—	110	—
390 F	"	1680	1404	—	—	—	276	—
391 R	7-20	5077	—	4933	—	—	144	—
391 F	"	2069	1630	—	—	—	439	—
392	7-22	9071	3147	—	—	3154	2297	473 (1)
393	7-28	3758	1607	—	—	1611	193	347
394 R	8-26	5275	—	5108	—	—	79	88
394 F	"	1678	1519	—	—	—	159	—
No Pug Mill Runs Were Made During The Month of September								
395 R	10-5	5327	—	5144	—	—	183	—
395 F	"	1281	—	—	—	1243	38	—
396 R	10-13	5246	—	5126	—	—	76	44
396 F	"	1788	—	—	—	1455	333	—

(1) Water used to clear PUG MILL FEED TRANSFER LINE

PUG MILL RUNS - 1976

Composition of Raw Feed Solutions

Pug Mill Run No.	Date	Liters Total	Liters Plant Sludge	Liters Next. Am	Liters Treated Strip	Liters Raw KOH	Liters Tap Water	Liters Misc.
397R	11-5	4784	—	4459	—	—	325	—
397F	"	1241	—	—	—	786	455	—
398	11-12	5556	1421	—	2654	1174	307	—
399R	11-18	4938	—	4828	—	—	110	—
399F	"	1205	—	—	—	1061	144	—
400R	11-24	5216	—	5068	—	—	72	76
400F	"	1751	—	—	—	1414	337	—
401R	12-21	4938	—	4828	—	—	110	—
401F	"	3508	1075	—	—	1449	984	—
402R	12-27	5063	—	4836	—	—	182	45
402F	"	1578	—	—	—	1060	518	—

PUG MILL RUNS - 1976
Operational Data

PMR No. (1)	Date	Liters Treated	Liters Total Paste	Liters Wash Water	Paste to Pit #	Paste to CMP #	Wash Water to....	Min. of Oper.	Liters Feed ÷ Liters Paste	Liters Pumped Per Min
370	1-14-76	5390	7589	1094	80	—	#8 (Then CC)	136	.71	55.8
371 R	1-16	5050	6913	—	—	1152, 1153, 1154	—	162	.73	42.7
371 F	"	1990	2285	1718	80	—	#8	52	.87	43.9
372 R	1-23	5120	6758	—	—	1154-1157	—	158	.76	42.8
372 F	"	2324	2836	1968	80	—	#8	46	.82	61.7
373 R	2-5	5034	7040	—	—	1157-1160	—	177	.72	39.8
373 F	"	1743	2363	1469	80	—	#8	47	.74	50.3
374	2-11	5288	7300	2226	80	—	#8	130	.72	56.2
375	2-18	5216	7747	1567	80	—	#8	177	.67	43.8
376	2-20	5341	8153	2138	78 80	—	#8	204	.66	40.0
377 R	2-26	4983	7389	—	—	1160-1163	—	165	.67	44.8
377 F	"	1874	1654	1483	78	—	#8	29	1.13	57.0
378	3-5	4788	7300	2975	78	—	#8	168	.66	43.5
379 R	3-16	5054	7106	—	—	1163-1166	—	158	.71 *	45.0
379 F	3-16	1922	1730	1472	78	—	#8	35	1.11 *	49.4
380 R	4-6	5027	7343	—	—	1166-1169	—	145	.68	37.7
380 F	"	1804	2180	2782	78	—	#8	32	.83	68.1
381	4-20	5705	6906	2369	78	—	#8	233	.83	29.6
382 R	4-23	5691	7991	—	—	1169-1172	—	185	.71	43.2
382 F	"	1708	1234	1934	78	—	#8	24	1.38 *	51.4
383	4-29	5572 ~~5575~~	6119	1487	78	—	#8	156	.91	39.2

56 %
44 %

* Value is greater than 1.0 probably due to insufficient rinsing of paste from the line before transferring hose to rinse water pit. So vol. of paste generated could not be accurately measured.

(1) The Initial R after the run # indicates data is for the portion of the run in which Retrievable Cement Paste was generated. Initial F (or Figal) indicates data is for portion of the run in which non-Retrievable paste was generated to flush the Retrievable paste from the lines. All paste entering the CMP is recorded as Liters Total Paste for the Retrievable portion of the run. Volume of paste contained in the pug mill, boot + pump, and ~50' length of fire hose is estimated to be 18 ft³ or ~500 liters. It will normally take about 12 minutes of pug mill operation to displace this volume of retrievable paste with non-retrievable paste. So the policy has been established to continue discharging the paste into the CMP for about 10 minutes after non-retrievable paste generation begins. P.E.H.

PUG MILL RUNS - 1976

Operational Data

PMR No.	Date	Liters Treated	Liters Total Paste	Liters Wash Water	Paste to Pit #	Paste to CMP #	Wash Water to....	Min. of Oper.	Liters Feed ÷ Liters Paste	Liters Pumped Per Min
384	5-7	5212	8351	3248	78	—	#8	222	.62	37.6
385	5-12	5491	9712	1556	78	—	#8	263	.57	36.9
386 R	5-19	6091	8790	—	—	1172 - 1176	—	213	.69	41.3
386 F	5-19	1337	1155	1071	84	—	#8	22	1.16 (1)	52.5
387 R	6-8	~~5693~~ 5153	7900	—	—	1176 - 1179	—	160	.72	49.4
387 F	6-8	1148	867	2771	84	—	#8	11	1.32 (1)	78.8
388	6-22	5381	7248	2044	84	—	#8	163	.74	44.5
389	6-24	5163	11581	1382	84	—	#8	141	.45	82.1
390 R	7-13	4938	7493	—	—	1179-1182	—	148	.66	50.6
390 F	"	1680	1838	2434	84	—	#8	22	.91	83.6
391 R	7-20	5077	7215	—	—	1182-1186	—	148	.70	48.8
391 F	"	2069	1733	2475	84	—	#8	31	1.19 (1)	55.9
392	7-22	9071	11108	2203	84	—	#8	370	.82	30.0
393	7-28	3758	5080	1253	84 + 82	—	#8	95	.74	53.5
394 R	8-26	5275	7945	—	—	1186-1189	—	170	.66	46.7
394 F	"	1678	1733	1715	82	—	#8	39	.97	44.4
	No Pug Mill Runs Were Made During September									
395 R	10-5	5327	7296	—	—	1189-1192	—	279	.73	26.2
395 F	"	1281	1733	1446	82	—	#8	45	.74	38.5
396 R	10-13	5246	7493	—	—	1192-1195	—	158	.70	47.4
396 F	"	1788	2074	1355	82	—	#8	29	.86	71.5

84 - 1
82 - 5

(1) Ratio is greater than 1.0 probably due to insufficient rinsing of paste from the line before transferring hose to rinse water pit. So volume of paste generated could not be accurately meas.

PUG MILL RUNS - 1976

Operational Data

PMR No.	Date	Liters Treated	Liters Total Paste	Liters Wash Water	Paste to Pit #	Paste to CMP #	Wash Water to ...	Min. of Oper.	Liters Feed ÷ Liters Paste	Liters Pumped Per Min.
397 R	11-5	4784	7146	—	—	1195-1198		157	.67	45.5
397 F	"	1241	1733	1994	82	—	#8	38	.72	45.6
398	11-12	5556	7589	1525	82	—	#8	161	.73	47.1
399 R	11-18	4938	7552	—	—	1198-1201		175	.65	43.2
399 F	"	1205	1654	1923	82	—	#8	35	.73	47.3
400 R	11-24	5216	7761	—	—	1201-1204		240	.67	32.3
400 F	"	1751	1969	1525	82	—	#8	30	.89	65.6
401 R	12-21	4938	7133	—	—	1204-1207		167	.69	42.7
401 F	"	3508	4175	2055	82	—	#8	63	.84	66.3
402 R	12-27	5063	7314*	—	—	1207-1210		162	.69	45.2
402 F	"	1578	1526	1063	82	—	#8	21	1.03**	72.7

289233

* Based on a Paste to feed ratio of 1.44 (PMR #401) approx. 7300 liters of Retrievable Paste were generated but approx. 4100 liters leaked out the bottom of CMP's 1208 + 1209.

** Ratio is greater than 1.0 probably due to insufficient rinsing of paste from the line before transferring hose to rinse water pit.

PUG MILL RUNS - 1976

Total Radioactivity

PMR no.	Date	Liters Feed from PM feed Tank	Gross α	Gross β	Gross γ	d/m-ml ^{238}Pu	d/m-ml ^{239}Pu	^{241}Am	^{137}Cs	^{90}Sr	Total mCi β-γ	Equiv. gms ^{239}Pu of Gross α	Remarks
370	1-14-76	5038	208,000	87,000	29	62,000 ~~32,000~~	32,000	140,000	170	1,700	6.4	[redacted]	
371 R	1-16	4986	27,500,000	8,050,000	43,000	57,800	1,170,000 ~~57,000~~	25,900,000	240	2,170	8.5	1006	
371 F	"	1740	380,000	195,000	97	21,200	35,000 ~~21,000~~	348,000	37	595	.8	5	
372 R	1-23	5038	28,000,000	11,200,000	51,500	45,900	488,000	24,400,000	233	63	1.0	1035	
372 F	"	1889	480,000	339,000	1,330	11,400	27,800	332,000	24	210	.3	7	
373 R	2-5	5023	17,000,000	6,500,000	43,682	42,300	245,000	17,100,000	183	519	2.37	626	
373 F	"	1565	270,000	130,000	268	9,010	20,600	218,000	24	375	.42	3	
374	2-11	5091	98,000	35,000	240	8,520	18,200	56,400	15	490	[redacted] 1.73	4	
~~375~~													
375	2-18	5038	21,000	9,700	240	4,570	8,320	11,400	130	190	[redacted] 1.10	1	
376	2-20	5091	55,000	19,000	72	8,510	17,300	21,100	24	240	.92	2	
377R	2-26	4937	18,000,000 ~~11,000,000~~	62,000	45,000	80,900	427,000	18,900,000	15	180	.65	[redacted]	
377F	"	1708	870,000	8,200	800	10,800	32,100	1,560,000	17	390	.47	11	
378	3-5-76	4618 ~~4788~~	100,000	41,000	130	8,870	24,900	63,300	14	1,300	4.1	3	
379 R	3-16-76	4933	18,000,000	5,400,000	25,000	50,000	594,000	12,400,000	14	220	.8	651	
379 F	3-16-76	1672	520,000	230,000	240	13,700	47,000	333,000	4	280	.3	6	

PUG MILL RUNS - 1976
Total Radioactivity

P.M.R. No.	Date	Liters Feed from PM Feed Tank	Gross α	Gross β	Gross γ	d/m-ml ^{238}Pu	^{239}Pu	^{241}Am	^{137}Cs	^{90}Sr	Total mCi β-γ	Equiv. gms ^{234}Pu of Gross α	Remarks
380 R	4-6-76	5004	14,600,000	4,680,000	15,800	81,500	750,000	11,000,000	4.5	98.4	.3	536	
380 F	"	1434	1,580,000	702,000	467	19,000	140,000	1,200,000	2.5	490.2	.5	17	
381	4-20-76	4986	96,000	28,600	106	10,500	22,000	45,000	1.9	58.0	.2	3	
382 R	4-23-76	5669	22,500,000	5,370,000	38,000	179,000	1,070,000	17,000,000	21.0	114.0	.5	936	
382 F	"	1492	359,000	130,000	248	17,800	43,100	810,000	4.8	1,870	1.9	4	
383	4-29-76	5091	86,300	20,300	171	4,350	25,000	45,000	59	1,160	4.2	3	
384	5-7	5038	26,500	8,802	87	3,100	18,300	7,050	15.5	584	2.0	1	
385	5-12	5212	240,000	104,000	126	3,330	8,900	205,000	<1	479	1.7	9	
386 R	5-19	6038	26,700,000	956,800	131,000	83,600	748,000	29,400,000	<1	<300	1.2	1183	
386 F	5-19	1072	966,000	450,000	185	6,620	52,200	894,000	<1	<300	.2	8	
387 R	6-8	4933	11,000,000	156,000	18,570	453,000	29,900	11,800,000	<1	347	1.2	398	
387 F	6-8	936	322,000	426,600	221	43,700	4,740	271,000	<1	169	.1	2	
388	6-22	5196	173,000	56,000	147	4,930	75,500	93,100	14	32	.2	7	
389	6-24	5038	62,150	1,658	476	3,870	40,800	15,300	417	3.4	1.4	2	
390 R	7-13	4828	19,200,000	8,530,000	44,500	[illegible]	464,000	18,700,000	847	1,140	6.5	680	
390 F	"	1404	40,400	30,500	262	5,950	55,500	345,000	9	825	.8	.4	
391 R	7-20	4933	16,800,000	788,000	33,500	71,600	466,000	16,200,000	959	317	4.3	608	
391 F	"	1630	425,000	281,000	254	5,300	41,900	412,000	20	1,140	1.3	5	
392	7-22	6774	130,000	71,500	156	10,200	90,300	52,000	11	786	3.7	6	
393	7-28	3565	106,000	76,300	131	32,500	10,400	46,800	42	335	.9	3	

PUG MILL RUNS - 1976

Total Radioactivity

PMR No	Date	Liters Feed from P.M. Feed Tank	Gross α	Gross β	Gross γ	d/ ^{238}Pu	m-m/ ^{239}Pu	^{241}Am	^{137}Cs	^{90}Sr	Total mCi β-γ	Equiv. gms ^{239}Pu of Gross α	Remarks
394 R	8-26-76	5196	No Sample Was Taken For This Feed Solution									—	
394 F	"	1519	459,356	311,429	175	7,100	41,800	378,000	33.9	931	1.0	5	
	No Pug Mill Runs Were Made During September												
395 R	10-5-76	5144	29,400,000	23,360,000	221,274	520,000	628,000	34,700,000	562	8,340	30.9	1110	
395 F	"	1243	8,680	6,540	164	3,610	5,060	7,290	85	891	.8	.1	
396 R	10-13-76	5170	49,700,000	37,300,000	287,000	408,000	752,000	52,400,000	58	6,070	21.4	1885	
396 F	"	1455	294,000	166,000	181	5,620	13,000	328,000	77	215	.3	3.1	
397 R	11-5-76	4459	35,500,000	18,200,000	121,000	243,000	933,000	32,900,000	167	848	3.1	1161	
397 F	"	786	335,000	240,000	108	5,370	22,800	357,000	51	781	.4	1.9	
398	11-12-76	5249	220,000	120,000	1,884	5,850	23,000	229,000	1,820	4,590	22.7	8.5	
399 R	11-18-76	4828	17,200,000	9,770,000	20,700	234,000	1,130,000	17,200,000	76	552	2.1	609	
399 F	"	1061	29,300	168	96	2,410	6,940	26,500	75	861	.7	.2	
400 R	11-24-76	5144	11,800,000	10,200,000	15,000	3,390,000	671,000	10,200,000	80	988	3.7	445	
400 F	"	1414	7,280	207	105	5,160	2,840	6,450	70	27	.1	.1	
401 R	12-21-76	4828	9,950,000	9,120,000	8,430	267,000	892,000	10,000,000	33	876	3.0	352	
401 F	"	2524	229,000	75,300	84	12,000	177,000	84,900	10	329	.6	4	
402 R	12-27-76	4881	14,100,000	11,600,000	16,500	26,900	75,200	15,100,000	49	164	.7	505	
402 F	"	1060	164,000	99,700	115	19,100	229,000	45,600	25	301	.2	1	

PUG MILL RUNS - 1977

Composition of Raw Feed Solutions

Pug Mill Run No.	DATE	Liters Total	Liters Plant Sludge	Liters Neut. Am.	Liters Treated Strip	Liters Raw KOH	Liters Tap Water	Liters Misc.
403	1/7/77	5870	1790	—	2410	840	830	—
404 R	1/28/77	5730	—	4880	—	—	850	—
404 F	"	Non-Retrievable	Paste	was	not	generated		
405	2-3-77	6041	3391	—	—	1700	950	—
406 R	2-10-77	5652	—	5379	—	—	193	80
406 F	"	1481	—	—	—	910	571	—
407	3-4-77	5110	3040	—	—	1472	598	—
408 R	3-10-77	5499	—	4723	—	—	776	—
408 F	"	993	—	—	—	770	223	—
409	3-23-77	4206	2024	—	1893	—	289	—
410	4-7-77	5488	2945	—	568	1525	450	—
411 R	4-14-77	5119	—	4828	—	—	291	—
411 F	"	1063	—	—	—	813	250	—
412 R	5-3-77	5150	—	4819	—	—	269	62
412 F	"	1463	—	—	—	1096	367	—
413 R	5-5-77	5171	—	4933	—	—	238	—
413 F	"	1358	—	—	—	919	439	—
414	5-18-77	5450	2520	—	2624	—	306	—
415 R	5-26-77	5155	—	4828	—	—	227	—
415 F	"	1644	—	—	—	1061	583	—
416 R	6-14-77	5240	—	4844	—	—	307	89
416 F	"	821	—	—	—	707	114	—
417	6-24-77	5710	2367	—	2181	806	356	—

PUG MILL RUNS - 1977

Composition of Raw Feed Solutions

Pug Mill Run No.	Date	Liters Total	Liters Plant Sludge	Liters Neut. Am.	Liters Treated Strip	Liters Raw KOH	Liters TAP WATER	Liters Misc.	
418 R	7-7-77	4960	—	4828	—	—	132	—	
418 F	"	1177	—	—	—	1166	11	—	
419	7-20-77	5428	2461	—	1841	369	757	—	
420 R	8-26-77	5464	—	4933	—	—	531	—	
420 F	"	939	—	—	—	247	692	—	
421 R	9-8-77	5607	—	5113	—	265	148	81	
421 F	"	1426	—	—	—	1078	348	—	
422 R	9-21-77	5194	—	4933	—	—	261	—	
422 F	"	1105	—	—	—	848	257	—	
423 R	9-23-77	4984	—	4776	—	—	208	—	
423 F	"	1408	—	—	—	—	431	977	
424	10-4-77	6052	1789	—	3828	—	435	—	
425 R	10-19-77	5003	—	4723	—	—	280	—	
425 F	"	1098	—	—	—	—	462	636	
426 R	11-4-77	4838	—	4512	—	—	326	—	
426 F	"	1120	—	—	—	—	397	723	
427 R	11-15-77	5563	—	5039	—	210	314	—	
427 F	"	1252	—	—	—	707	545	—	
428 R	12-9-77	7085	—	5347	1480	—	42	216	← tap water rinse
428 F	"	1221	—	—	—	778	443	—	
429 R	12-15-77	5472	—	5196	—	—	38	238	
429 F	"	1256	—	—	—	707	549	—	

PUG MILL RUNS — 1977

Operational Data

PMR No.	Date	Liters Treated	Liters Total Paste	Liters Wash Water	Paste to Pit #	Paste to CMP #	Wash Water to	Min. of Operation	Liters Feed ÷ Liters paste	Liters Pumped per min.
403	1-7-77	5870	8610	1490	82	—	8	158	.68	54.5
404 R	1-28-77	5730	8010	2286	—	1208 - 1211	8	142	.72	56.4
404 F	"	Non-Retrievable Paste was not generated								
405	2-3-77	6041	9690	1892	82	—	8	170	.62	57.0
406 R	2-10-77	5652	7650	—	—	1211 - 1215	—	151	.74	50.7
406 F	"	1481	1549	1158	82	—	8	15	.96	103.3
407	3-4-77	5110	6895 3,447	2320	82+87	—	8	142	.74	48.6
408 R	3-10-77	5499	7141	—	—	1215 - 1218	—	159	.77	44.9
408 F	"	993	814	1359	87	—	8	8	1.22	101.8 *
409	3-23-77	4206	5672	1503	87	—	8	110	.74	51.6
410	4-7-77	5488	8170	1442	87	—	95	180	.67	45.4
411 R	4-14-77	5119	7514	—	—	1218 - 1221	—	158	.68	47.6
411 F	"	1063	1103	1734	87	—	95	25	.96	44.1
412 R	5-3-77	5150	7708	—	—	1221 - 1224	—	157	.67	49.1
412 F	"	1463	1471	1461	87	—	95	32	.99	46.0
413 R	5-5-77	5171	7320	—	—	1225 - 1228	—	150	.70	48.8
413 F	"	1358	1339	1934	87	—	95	28	1.01	47.8
414	5-18-77	5450	7799	980	87	—	95	143	.70	54.5
415 R	5-26-77	5155	7667	—	—	1228 - 1231	—	155	.67	49.5
415 F	"	1644	2022	1453	87	—	95	45	.81	44.9
416 R	6-14-77	5240	8016	—	—	1231 - 1233 + 1235	—	150	.65	53.4
416 F	"	821	630	2161	87	—	95	20	1.30	31.5
417	6-24-77	5710	7773	1329	87	—	95	147	.74	52.9

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* High F/P ratio ~~and pumping rate~~ indicates a surplus of paste went to the CMP before transfering to the non-retrievable shafts.

PUG MILL RUNS - 1977

Operational Data

PMR No.	Date	Liters Treated	Liters Total Paste	Liters Wash Water	Paste To Shaft #	Paste To CMP #	Wash Water To	Min. of Operation	Liters Feed ÷ Liters Paste	Liters Pumped Per Min.
418 R	07-7-77	4960	7447	—	—	1234, 1235 1237, 1238	—	157	.67	47.4
418 F	"	1177	1654	1067	87	—	95	42	.71	39.4
419	7-20-77	5428	6569 7,205	1287	8 + 87	—	95	119	.83	55.2
420 R	8-26-77	5464	7679	—	—	1236 1239-1241	—	172	.71	44.7
420 F	"	939	1050	916	87	—	95	10	.89	105.0
421 R	9-8-77	5607	8222	—	—	1241, 1242 1244, 1245	—	157	.68	52.37
421 F	"	1426	1313	1196	87	—	95	19	1.09	69.10
422 R	9-21-77	5194	7667	—	—	1243 1245-1247	—	143	.68	53.61
422 F	"	1105	788	1450	87	—	95	11	1.41	71.64
423 R	9-23-77	4984	7832	—	—	1247 - 1250	—	152	.64	51.53
423 F	"	1408	1602	1222	87	—	95	29	.88	55.24
424	10-4-77	6052	9229 4615	556	87 94	—	95	157	.66	58.78
425 R	10-19-77	5003	8050	—	—	1252 - 1255	—	168	.62	47.92
425 F	"	1098	919	1995	94	—	95	13	1.19	70.69
426 R	11-4-77	4838	7933	—	—	1256 - 1259	—	162	.61	48.97
426 F	"	1120	1287	1802	94	—	95	20	.87	64.45
427 R	11-15-77	5563	8500	—	—	1259 - 1262	—	178	.65	47.75
427 F	"	1252	1024	1272	94	—	95	8	1.22	128.00
428 R	12-9-77	7085	10657	—	—	1260 - 1264	—	234	.67	45.54
428 F	"	1221	1208	1438	94	—	95	10	1.01	120.80
429 R	12-15-77	5472	8072	—	—	1264 - 1267	—	189	.68	42.71
429 F	"	1256	683	1067	94	—	95	16	1.85	42.69

PUG MILL RUNS - 1977

Total Radioactivity

		Liters Feed from P.M. feed Tank	Gross α	Gross β	Gross γ	d/m-ml 238 Pu	239 Pu	241 Am	137 Cs	90 Sr	mCi β-γ	Equiv. grms 239Pu of Gross α	REMARKS
403	1-7-77	5040	124,000	77,000	1,180	8,750	30,400	107,000	976	1,400	8.09	5	
404R	1-28-77	4880	31,200,000	198,000	12,600,000	15,000	58,000	41,600,000	85	438	1.73	1117	
404F	"	NON-RETRIEVABLE SLUDGE WAS NOT GENERATED →											
405	2-3-77	5091	410,000	232,000	123	44,500	16,800	426,000	356	1,140	5.15	15	
406 R	2-10-77	5459	126,000,000	83,000,000	25,300	50,700	288,000	104,000,000	103	20,200	74.89	5046	
406 F	"	910	51,000	37,500	126	1,740	4,590	39,100	41	179	0.14	1	
407	3-4-77	4512	85,000	39,000	97	19,000	22,300	56,900	39	7,020	21.52	3	38% - #82 62% - #87
408 R	3-10-77	4723	107,000,000	50,500,000	16,400	31,200	304,000	129,000,000	9	675	2.18	3707	
408 F	"	770	127,000	36,900	123	27,000	57,800	52,500	20	101	0.06	1	
409	3-23-77	3917	44,400	13,300	249	7,940	6,970	14,900	170	791	2.54	1	
410	4-7-77	5038	109,500	34,520	84	13,800	21,800	58,700	30	2,500	8.61	4	
411 R	4-14-77	4828	4,540,000	1,220,000	1,050	6,280	16,600	5,120,000	11	2,320	7.61	160	
411 F	"	813	265,000	83,700	125	6,130	84,480	178,000	17	2,330	1.29	2	
412 R	5-3-77	4881	180,000,000	86,600,000	37,700	342,000	685,000	102,000,000	66	3,520	11.83	6446	
412 F	"	1096	275,000	76,000	99	16,200	160,000	54,000	22	145	0.13	2	
413 R	5-5-77	5156	179,000,000	91,100,000	38,800	114,000	439,000	151,000,000	193	139	1.16	6771	
413 F	"	919	342,000	117,000	147	14,100	109,000	123,000	22	799	0.51	2	
414	5-18-77	5144	123,000	622,000	122	6,540	7,270	77,600	15	524	1.87	5	
415 R	5-26-77	4828	162,000,000	80,600,000	39,300	316,000	206,000	125,000,000	114	43	0.54	5999	
415 F	"	1061	90,300	26,600	74	4,210	25,900	38,500	9	126	0.10	1	

PUG MILL RUNS - 1977

Total Radioactivity

PMR No.	Date	Liters From P.M. Feed Tank	Gross α (d/m-ml)	Gross β (d/m-ml)	Gross γ (d/m-ml)	^{238}Pu (d/m-ml)	^{239}Pu (d/m-ml)	^{241}Am (d/m-ml)	^{137}Cs (d/m-ml)	^{90}Sr (d/m-ml)	Total mCi β-γ	Equiv. gms ^{239}Pu of Gross α	Remarks
416 R	6-14-77	5190	160,000,000	65,800,000	72,900	62,000	253,000	150,000,000	1	249	0.88	6092	
416 F	"	707	77,200	70,900	52	2,130	6,150	34,800	0	913	.44	0	
417	6-24-77	5354	102,000	44,400	92	4,060	7,580	68,400	18	183	.73	4	
418 R	7-7-77	4838	141,000,000	48,600,000	26,000	282,000	809,000	217,000,000	20	204	.73	5005	
418 F	"	1166	922,000	442,000	238	17,100	36,200	489,000	19	138	.73	8	
419	7-20-77	4671	157,000	61,460	88	5,300	19,900	107,000	0	176	.56	5	
420 R	8-26-77	4933	288,000,000	140,000,000	48,700	285,000	438,000	288,000,000	1	1,330	4.43	10,423	
420 F	"	247	1,210,000	527,000	177	4,790	6,070	1,040,000	0	3,110	.52	2	
421 R	9-8-77	5459	182,000,000	113,000,000	27,400	81,000	761,000	193,000,000	1	815	3.01	7289	
421 F	"	1078	156,000	10,500	85	5,810	66,200	66,600	0	196	0.14	1	
422 R	9-21-77	4933	240,000,000	110,000,000	133	110,000	414,000	191,000,000	0	1350	4.50	8686	
422 F	"	848	470,000	149,000	32,600	10,300	265,000	159,000	0	381	0.22	3	
423 R	9-23-77	4776	249,000,000	107,000,000	36,700	68,300	211,000	201,000,000	0	2180	7.04	8725	
423 F	"	977	173,000	85,200	10	15,900	18,000	144,000	0	657	0.43	1	
424	10-4-77	5617	292,000	150,000	149	3,190	9,270	412,000	0	1,010	3.83	12	47% - 87 96% - 94
425 R	10-19-77	4723	216,000,000	131,000,000	20,000	541,000	177,000	190,000,000	265	886	3.67	7484	
425 F	"	636	413,000	58,740	1	2,460	2,000	408,000	22	421	0.19	2	
426 R	11-4-77	4838	266,000,000	5,900	36	453,000	193,000	235,000,000	51	2,320	7.75	9441	
426 F	"	1120	334,000	13,000	303	2,320	1,850	293,000	2	1,420	1.08	3	
427 R	11-15-77	5563	270,000,000	133,000,000	37,000	698,000	294,000	258,000,000	113	403	1.94	11,019	
427 F	"	1252	236,000	77,000	100	5,520	56,400	155,000	10	37	0.04	2	

PUG MILL RUNS - 1977

Total Radioactivity

PMR No.	DATE	Liters From P.M. Feed Tank	Gross α (d/m-ml)	Gross β (d/m-ml)	Gross γ (d/m-ml)	^{238}Pu (d/m-ml)	^{239}Pu (d/m-ml)	^{241}Am (d/m-ml)	^{137}Cs (d/m-ml)	^{90}Sr (d/m-ml)	Total mCi β-γ	Total Ci of Gross α	Remarks
428 R	12-9-77	7043	259,000,000	108,000,000	241	710,000	431,000	238,000,000	430	1,040	6.99	822	
428 F	"	778	590,000	107,000	124	7,930	92,400	358,000	19	235	0.09	0.2	
429 R	12-15-77	5434	262,000,000	138,000,000	32,000	918,000	648,000	259,000,000	1,030	1,690	9.99	641	
429 F	12-15-77	707	786,000	3,210,000	116	4,060	23,300	629,000	19	242	0.13	0.3	

PUG MILL RUNS - 1978

Composition of Raw Feed Solutions

Pug Mill Run No.	Date	Liters Total Feed	Liters Plant Sludge	Liters Neut. Americium	Liters Treated Strip	Liters Raw KOH	Liters Tap Water	Liters Misc.
430 R	1-05-78	5545	—	5249	—	—	23	273
430 F	"	1267	—	—	—	707	560	—
431 R	1-13-78	2654	—	2525	—	—	129	—
432 R	1-26-78	5612	—	5249	—	—	363	—
432 F	"	996	—	—	—	742	254	—
No Pug Mill Runs Were Made IN February								
433 R	3-2-78	5324	—	5301	—	—	23	—
433 F	"	265	—	—	—	247	18	—
434 R	3-9-78	6439	—	6259	—	—	60	120
434 F	"	972	—	—	—	707	80	185
435	3-16-78	5737	1841	—	3776	—	120	—
436 R	4-06-78	7008	—	6459	—	—	14	535
436 F	"	—	—	—	—	—	—	—
437 R	4-21-78	6319	—	6143	—	—	26	150
437 F	"	—	—	—	—	—	—	—
438 R	5-16-78	6656	—	6516	—	—	40	100
438 F	"	—	—	—	—	—	—	—
439 R	5-23-78	6511	—	2987	—	3366	115	43
439 F	"	—	—	—	—	—	—	—
440	6-09-78	4807	—	—	4807	—	50	350
441 R	6-15-78	6033	—	5850	—	—	28	125
441 F	"	—	—	—	—	—	—	—
442 R	6-27-78	6360	—	6195	—	—	35	130
442 F	—	—	—	—	—	—	—	—

PUG MILL RUNS - 1978

Operational Data

PMR No.	Date	Liters Treated	Liters Total Paste	Liters Wash Water	Paste to Pit #	Paste to CMP #	Wash Water To	Min. of Operation	Liters Feed ÷ Liters Paste	Liters Pumped Per Min.
430 R	1-05-78	5545	8130	—	—	1267-1270		171	.68	47.5
430 F	"	1267	788	1691	94	—	95	15	1.61	52.5
431 R	1-13-78	2654	3996	2460	—	1270, 1271 1276	95	67	.66	59.6
432 R	1-26-78	5612	8848	—	—	1272-1275		143	.63	61.9
432 F	"	996	945	1329	92	—	95	23	1.05	41.1
	No Pug Mill Runs Were Made IN February									
433 R	3-2-78	5324	7611	—	—	1275-1279		120	.70	63.4
433 F	"	265	463	1536	92	—	95	10	.57	46.3
434 R	3-9-78	6439	9204	—	—	1279-1283		217	.70	42.4
434 F	"	972	2366	1612	92	—	95	42	.41	56.3
435	3-16-78	5737	9322	2288	92	—	95	135	.62	69.1
436 R	4-06-78	7008	8154	1471	—	1283-1286	95	155	.86	52.6
436 F	"	—	—	—	—	—	—	—	—	—
437 R	4-21-78	6319	8908	1549	—	1283 1287-1290	95	185	.71	48.2
437 F	"	—	—	—	—	—	—	—	—	—
438 R	5-16-78	6656	8422	1468	—	1290-1293	95	158	.79	53.3
438 F	"	—	—	—	—	—	—	—	—	—
439 R	5-23-78	6511	9129	186	—	1293-1297	95	186	.71	49.1
439 F	"	—	—	—	—	—	—	—	—	—

PUG MILL RUNS - 1978

Total Radioactivity in Feed Solutions

PMR No.	Date	Liters From P.M. Feed TANK	Gross α d/m-ml	Gross β d/m-ml	Gross γ d/m-ml	^{238}Pu d/m-ml	^{239}Pu d/m-ml	^{241}Am d/m-ml	^{137}Cs d/m-ml	^{90}Sr d/m-ml	Total mCi β-γ	Total Curies of Gross α	Remarks
430 R	1-05-78	5522	253,000,000	62,900,000	25,000	34,500	945,000	261,000,000	204	70	1.02	629	
430 F	"	707	643,000	164,000	141	9,230	167,000	457,000	660	70	0.35	.2	
431 R	1-13-78	2525	234,000,000	111,000,000	31,800	210,000	832,000	237,000,000	7	4,130	7.07	266	
432 R	1-26-78	5249	147,000,000	258,000,000	31,700	80,800	1,030,000	229,000,000	5,420	519	21.08	348	
432 F	"	742	513,000	254,000	236	43,100	227,000	384,000	2,880	273	1.58	.2	
	No Pug Mill Runs Were Made During February												
433 R	3-2-78	5301	142,000,000	70,200,000	10,200	103,000	825,000	131,000,000	800	647	5.18	339	
433 F	"	247	4,440,000	1,860,000	906	628,000	307,000	5,100,000	800	0	0.14	.5	
434 R	3-09-78	6379	146,000,000	70,000,000	11,700	159,000	1,590,000	163,000,000	0	0	0	420	
434 F	"	707	877,000	267,000	206	552,000	515,000	186,000	35	99	0.06	.3	
435	3-16-78	5617	5,800,000	1,920,000	726	19,100	32,200	4,890,000	180	761	1.38	15	
436 R	4-06-78	6994	121,000,000	652,000,000	8,740	692,000	490,000	121,000,000	1,130	41	5.5	381	
436 F	"	—	—	—	—	—	—	—	—	—	—	—	
437 R	4-21-78	6293	149,000,000	71,700,000	14,900	1,010,000	1,110,000	120,000,000	1,470	44	L	422	
437 F	"	—	—	—	—	—	—	—	—	—	—	—	
438 R	5-16-78	6616	96,200,000	36,600,000	6,900	1,900,000	881,000	78,200,000	2,560	1,440		287	
438 F	"	—	—	—	—	—	—	—	—	—	—	—	
439 R	5-23-78	6396											
439 F	"	—	—	—	—	—	—	—	—	—	—	—	

Total Radioactivity in feed Solutions

PMR NO	Date	liters from PM feed Tank	Gross α d/m/ml	Gross β d/m/ml	Gross γ d/m/ml	238 PU d/m/ml	239 PU d/m/ml	241 AM d/m/ml	137 Cs d/m/ml	90 Sr d/m/ml	total mCi β-γ	total curies of Gross α	Remarks
440	6-09-78	4757	8.73×10^{5}	3.55×10^{5}	308	3.3×10	3.8×10	8.49×10^{5}	4.6	1.83×10^{3}		2	
441	6-15	6005	6.45×10^{7}	3.01×10^{7}	9.1×10^{3}	1.57×10^{6}	7.98×10^{5}	5.25×10^{7}	2.46×10^{3}	1.1×10^{2}			
442	6-27	6325	5.31×10^{7}	3.0×10^{7}	4.5×10^{3}	1.71×10^{4}	2.22×10^{4}	4.84×10^{7}	0	87.8			

STRENGTH DATA 1975 + 1976

PMR #	DATE	Liters Treated	% Solids	Comp. Strength psi	Raw Feed Specific Gravity
352	8-4	5322	27	2319	1.166
353	8-21	5324	28	1072	1.188
354	8-26	6258	27	2485	1.156
355	9-8	4630	29	2329	1.200
356	9-19	5436	28	1969	1.184
357	9-24	5341	26	2582	1.184
358	10-3	5340	26	1900	1.178
359	10-9	4251	27	2007	1.186
360	10-17	4197	30	1871	1.254
361	10-31	5891	30	2154	1.212
362	11-12	7121	29	1667	1.192
363	11-20	5487	25	2738	1.172
364	12-2	5220	13	2183	1.092
365	12-5	5528	28	2359	1.164
366	12-11	5547	10	1696	1.022
367	12-16	5311	29	2105	1.206
368	12-24	5598	27	2251	1.178
369 R	12-31	3893		1316	
370	1-14-76	5390	11	1345	1.082
371 R	1-16	5050	38	2007	1.252
372 R	1-23	5120	39	955	1.290
373 R	2-5	5034	35	2319	1.266

STRENGTH DATA 1976

PMR no.	DATE	Liters Treated	% Solids (Feed)	Comp. Strength psi	Raw Feed Specific Gravity
374	2-11	5288	12	1355	1.082
375	2-18	5216	22	1647	1.094
376	2-20	5341	8	2924	1.046
377R	2-26	4983	39	1852	1.272
378	3-5	4788	7	2484	1.040
379 R	3-16	5054	38	1793	1.260
380 R	4-6	5027	34	2046	1.256
381	4-20	5705	8	858	1.054
382 R	4-23	5691	36	1579	1.240
383	4-29	5572	26	1472	1.184
384	5-7	5212	11	2271	1.070
385	5-12	5491	3	2154	1.006
386 R	5-19	6091	36	1969	1.270
387 R	6-8	5153	33	1043	1.252
388	6-22	5381	11	2339	1.118
389	6-24	5163	24	1170	1.160
390 R	7-13	4938	36	2007	1.246
391 R	7-20	5077	38	1248	1.336
392	7-22	9071	10	1647	1.056
393	7-28	3758	8	1910	1.082
394 R	8-26	5275	37	1715	1.280

STRENGTH DATA - 1976 - 1977

PMR No.	DATE	Liters Treated	% Solids (Feed)				Cylinder Comp. Strength psi	Raw Feed Specific Gravity
No Pug Mill Runs were made during September								
395 R	10-5	5327	37				1852	1.270
396 R	10-13	5246	37				1452	1.268
397 R	11-5	4784	35				1608	1.236
398	11-12	5556	25				1569	1.154
399 R	11-18	4938	36				1725	1.266
400 R	11-24	5216	33				1228	1.242
401 R	12-21	4938	36				1521	1.30
402 R	12-27	5063	35				2008	1.25
			1977					
403	1-7-77	5870	30				1842	1.22
404 R	1-28	5730	37				838	1.26
405	2-3	6041	10				1092	1.09
406 R	2-10	5652	36				780	1.27
407	3-4	5110	12				2680	1.01
408 R	3-10	5499	36				1784	1.26
409	3-23	4206	21				1170	1.15
410	4-7	5488	10				1998	1.03
411 R	4-14	5119	35				2066	1.26
412 R	5-3	5150	35				1764	1.26
413 R	5-5	5171	35				1023	1.27
414	5-18	5450	14				1959	1.10

STRENGTH DATA 1977

PMR No.	Date	Liters Treated	% Solids (Feed)				Cylinder Compressive Strength PSI	Raw Feed Specific Gravity
415 R	5-26	5055	36				1657	1.27
416 R	6-14	5240	37				2495	1.26
417	6-24	5710	12				897	1.07
418 R	7-7	4960	27				1618	1.22
419	7-20	5428	12				634	1.12
420 R	8-26	5464	38				1433	1.30
421 R	9-8	5607	35				1472	1.28
422 R	9-21	5194	37				975	1.28
423 R	9-23	4984	38				1335	1.29
~~424~~	10-4	6052	18				1638	1.17
425 R	10-19	5003	36					1.29
426 R	11-4	4838	36					1.27
427 R	11-15	5563	37					1.28
428 R	12-9	7085						1.25
429 R	12-15	5472						1.28
			1978					
430 R	1-5-78	5545	37					1.26
431 R	1-13	2654	37					1.24
432 R	1-26	5612	36					1.27
433 R	3-2	5324	36					1.30

Appendix B

Radioactive Solid Waste Disposal Record Forms for CMPs

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Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3429

2. Date (M M D D Y Y): 09 30 86

3. Retrievable Serial Number: 0 0 1 1 5 0

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement waste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
3	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area TT RSWD 50041/02

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
AM241	2.928	E+0	M [redacted]			A [redacted]		
PU238	3.6000	E-3	M [redacted]			A [redacted]		
PU239	1.4217	E+1	M [redacted]			A [redacted]		
			[redacted]			[redacted]		
			[redacted]			[redacted]		
			[redacted]			[redacted]		

APPROVALS arrived @ 1355 9/30/86

Waste Generator (Print Name Here)	HSE-7/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste package or shipment is acceptable to handle and transport: Earl J. Cox by [illegible]	Signature certifies that waste package or shipment is acceptable to handle and transport: Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 30 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		219	6T	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
Kc	Kc	[illegible]	DF
Date 9/30/86	Date 9/30/86	Date 10/1	Date 10/3

Form Number HSE-10-2A (3/88)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 5096, MS J592

1. Form Number: S 8 6 3430

2. Date (M M D D Y Y): 09 30 86

3. Retrievable Serial Number: 001151

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU cement paste OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
248	M [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
1	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
64	T [redacted]

11. Additional Description of Packaging and Packaging Materials: AREG TT RSWD S0041013

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
AM241	2928	E+0	M [redacted]		E	A [redacted]		
PU238	3600	E-5	M [redacted]		E	A [redacted]		
PU239	1427	E+1	M [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS arrived @ 0950 9/30/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Fox	Joe A. Vigil	
Earl J. Fox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 30 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	67	9	C

15. Shaft Surface Dose (mr/hr):

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met.
(Signature) Keith Carter

Received	Logbook	Computer	Verified
KC	KC	RD	DP
Date 9/30/86	Date 9/30/86	Date 9/1	Date 10/3

Form Number HS 86-3A (5/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3431

2. Date (M M D D Y Y): 1 0 0 1 8 6

3. Retrievable Serial Number: 0 0 1 1 5 7

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU Cement Paste OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
2	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
65	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSKLD 5760287

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
AM241	3.03 E	+0	M [redacted]			A [redacted]		
PU238	2.670 E	-13	M [redacted]			A [redacted]		
PU239	4.08 E	+0	M [redacted]			A [redacted]		
MFP	5.00 E	-4	C [redacted]			A [redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 1 0 0 9 8 6

14. Disposal/Storage Location 10 40 Bldg

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	5	7	C

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature)

Received	Logbook	Computer	Verified
	28		
Date 10-1-86	Date 10-1-86	Date 10/20	Date 11/5

Form Number HS 107A (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3432

2. Date (M M D D Y Y): 09 30 86

3. Retrievable Serial Number: 0 0 1 1 5 8

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OLD CMR to TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
128	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
3	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
64	T [redacted]

11. Additional Description of Packaging and Packaging Material: Area T RSWD S760288

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
AM241	3.0 3 0	E +0	M [redacted]		E	A [redacted]		
PU238	2.4 7 0	E -3	M [redacted]		E	A [redacted]		
PU239	4.0 8 0	E +0	M [redacted]		E	A [redacted]		
MFP	5.0 0 0	E -4	C [redacted]		E	A [redacted]		
		E			E			
		E			E			

APPROVALS arrived @ 1355 9/30/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by [illegible]	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 30 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	6 7	9	C

15. Shaft Surface Dose mr/hr:

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Received	Logbook	Computer	Verified
RC	KC	[illegible]	DP
Date 9/30/86	Date 9/30/86	Date 10/1	Date 10/3

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Form No. PHS 10-2A (3/80)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3433

2. Date (M M D D Y Y): 09 30 86

3. Retrievable Serial Number: 001159

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWA S7602 89

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
AM241	3.0310	E +0	M [redacted]		E	A [redacted]		
PU238	2.6710	E -3	M [redacted]		E	A [redacted]		
PU239	4.0800	E +0	M [redacted]		E	A [redacted]		
MFP	5.0000	E -4	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS arrived @ 1030 9/30/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste is in accordance with all applicable disposal requirements: Earl J. Cox by JM	Signature certifies that waste package or shipment is safe to handle and transport: Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 30 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	7 T	9	C

15. Shaft Surface Dose (mr/hr):

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KP	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) Keith Carter	Date [illegible]	Date [illegible]	[illegible]	[illegible]

7-2225

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3434

2. Date (M M D D Y Y): 09 30 86

3. Retrievable Serial Number: 0 0 1 1 5 2

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
208	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
1	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.7	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 576031 2

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
AM241	5.65 1	E +0	M [redacted]		E	A [redacted]		
PU238	2.6 0 0	E -3	M		E	A		
PU239	1.2 2 5	E +1	M		E	A		
MFP	1.8 8 0	E -3	C		E	A		
		E			E			
		E			E			

APPROVALS arrived @ 0950 9/30/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste is in compliance with all applicable disposal requirements: Earl J. Cox by JM	Signature certifies that waste package is shipment is safe to handle and transport: Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 30 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	T7	9	e

15. Shaft Surface Dose (mr/hr)

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	Ke	Ke	RD	DP
Signature certifies that waste acceptance criteria and all disposal requirements were met: Keith Carter	Date 9/30/86	Date 9/30/86	Date 10/1	Date 10/3

7-2226

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S86 3435

2. Date (M M D D Y Y): 09 30 86

3. Retrievable Serial Number: 001153

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume: Amount 28 m³ [redacted] (M = meter³, F = foot³, G = gallon)

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
1	0

10. Gross Weight: Amount 65 T [redacted] (K = kilogram, P = pound, T = ton)

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 576031 3

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
AM241	9423	E +0	M [redacted]		E	[redacted]		
PU238	2400	E -3	M [redacted]		E	[redacted]		
PU239	1220	E +1	M [redacted]		E	[redacted]		
MFP	1880	E -3	C [redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS arrived at 1030 9/30/86

Waste Generator (Print Name Here): Earl J. Cox
Signature certifies that waste is in accordance with all applicable disposal requirements: Earl J. Cox by J.M.

HSE-1/-10/-11 Area Representative (Print Name Here): Joe A. Vigil
Signature certifies that waste package or shipment is safe to handle and transport: Joe A. Vigil

Additional Signatures (Optional):

13. Date Disposed (M M D D Y Y): 09 30 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	6 T7	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature): Keith Carter

Received	Logbook	Computer	Verified
Ke	Ke	RD	DO
Date 9/30/86	Date 9/30/86	Date 10/1	Date [redacted]

7-2227

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form

HSE 7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3436

2. Date (M M D D Y Y): 09 30 86

3. Retrievable Serial Number: 0 0 1 1 5 4

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 76

6. Waste Description: TRU element paste OLD CMP TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD S76C314

12. Radionuclide Content — SS Materials Write-Off

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	Account	Project Code
AM241	3.9148	+0	M [redacted]			A [redacted]		
PU238	2.6100	-3	M [redacted]			A [redacted]		
PU239	1.2220	+1	M [redacted]			A [redacted]		
MFP	1.8800	-3	C [redacted]			A [redacted]		
						[redacted]		
			[redacted]			[redacted]		

APPROVALS arrived @ 1030 9/30/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste is in compliance with all applicable disposal requirements: Earl J. Cox by JM.	Signature certifies that waste package or shipment is safe to handle and transport: Joe A. Vigil	

13. Date Disposed: M M D D Y Y 0 9 3 0 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		2	9 6 T7	9	C

15. Shaft Surface Dose (mr/hr): .

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	Kc	Kc	RD	DP
Signature certifies that waste acceptance criteria and all disposal requirements were met. Signature: Keith Carter	Date 9/30/86	Date 9/30/86	Date 10/1	Date 10/3

7-2228

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions carefully before completing this form.

HSE-7 Waste Management
Ext. 6096 MS J592

1. Form Number: S 8 6 34337

2. Date (M M D D Y Y): 0 9 3 0 8 6

3. Retrievable Serial Number: 0 0 1 1 5 5

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OLD SMP TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume: Amount 28 M³ (M = meter³, F = foot³, G = gallon) [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
2	1

10. Gross Weight: Amount 6.8 T (K = kilogram, P = pound, T = ton) [redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7 RSWD 5 7 6 0 3 1 5

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
AM241	3.9418	E +0	M [redacted]		E	A [redacted]		
PU238	2.6005	E -3	M [redacted]		E	A [redacted]		
PU239	1.2210	E +1	M [redacted]		E	A [redacted]		
MFP	1.8800	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS Arrived @ 1430 9/30/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 9 3 0 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	0 T7	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	QD	DP
Date 9/30/86	Date 9/30/86	Date 10/1	Date 10/3

Form Number HS-2A (2/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back before completing form.

1. Form Number: S 8 6 3438

2. Date: M M D D Y Y — 0 9 3 0 8 6

3. Retrievable Serial Number: 0 0 1 1 5 6

4. Origin of Waste

Group	TA	Building	Wing	Room
H S E - 7	2 1		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU CEMENT ASTE OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
248	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	Meter (mr/hr)
2	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
66	T [redacted]

11. Additional Description of Packaging and Packaging Materials: AREA 7 RSWA 576031 6

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
AM241	3.948 E	+0	M [redacted]	. E		A [redacted]		
PU238	2.600 E	-3	M	. E		A		
PU239	1.200 E	+1	M	. E		A		
MFP	1.880 E	-3	C	. E		A		
	. E			. E				
	. E			. E				

APPROVALS approved @ 1430 9/30/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste acceptance criteria and all disposal requirements were met: Earl J. Cox by JM	Signature certifies that waste packaging and shipment is approved and inspected: Joe A. Vigil	

13. Date Disposed: M M D D Y Y — 0 9 3 0 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	6 T7	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	RD	D.P
Signature certifies that waste acceptance criteria and all disposal requirements were met: Keith Carter	Date 9/30/86	Date 9/30/86	Date 10/1	Date 10/3

7-2230

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3439

2. Date (M M D D Y Y): 0 9 3 0 8 6

3. Retrievable Serial Number: 0 0 1 1 6 3

4. Origin of Waste

Group	TA	Building	Wing	Room
H S E - 7	2 1		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU element waste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³ F = foot³ G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
2	1

10. Gross Weight

Amount	(K = kilogram P = pound T = ton)
63	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD S76031 7

12. Radionuclide Content

Nuclide	Amount	±	(C = curie M = gram)	Error on Amount	±	Amount Determined By: (A = analysis M = measurement E = estimate)	SS Materials Write-Off Account	Project Code
AM241	2.830	E +0	M [redacted]		E	A [redacted]		
PU238	2.130	E -3	M		E	A		
PU239	7.170	E +0	M		E	A		
MFP	2.670	E -4	C		E	A		
		E			E			
		E			E			

APPROVALS arrived @ 1430 9/30/86

Waste Generator (Print Name Here)	HSE-1/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Cox	Joe A. Vigil	
Signature certifies that waste is in accordance with appropriate disposal requirements: Earl J. Cox	Signature certifies that waste package or shipment is safe to handle and transport: Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 9 3 0 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	6 T	9	C

15. Shaft Surface Dose (mr/hr):

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	KD	
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) Keith Carter	Date 9/30/86	Date 9/30/86	Date 10/6	

7-2231

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S86 3440

2. Date (M M D D Y Y): 09 26 86

3. Retrievable Serial Number: 001164

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU cement paste OCD GMA TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
	3

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
1.0	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 576031 8

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
Am241	28.30 E	+0	M [redacted]		E	A [redacted]		
PU238	21.30 E	-3	M [redacted]		E	A [redacted]		
PU239	71.70 E	+0	M [redacted]		E	A [redacted]		
MFP	26.710 E	-4	C [redacted]		E	A [redacted]		
	E		[redacted]		E	[redacted]		
	E		[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10 -1 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by [illegible]	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 26 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	6T	9	C

15. Shaft Surface Dose (mr/hr):

HSE-7 Waste Management Representative (Print Name Here): Andrew Catanach

Signature certifies that waste acceptance criteria and all disposal requirements were met.
Signature: [illegible]

Received	Logbook	Computer	Verified
AC	AC	K.D	DP
Date 9/26/86	Date 9/26/86	Date 10/1	Date 10/3

Form Number HS 10-2A (3/86)

Los Alamos

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back side before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 3 6 3441

2. Date: M M D D Y Y — 0 9 2 6 8 6

3. Retrievable Serial Number: 0 0 1 1 4 5

4. Origin of Waste

Group	TA	Building	Wing	Room
H S E - 7	2 1		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU Cement Paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
3	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.3	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD S7603 1 9

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU239	1.70	E +0	M [redacted]		E	A [redacted]		
AM241	2.830	E +0	M [redacted]		E	A [redacted]		
PU238	2.130	E -3	M [redacted]		E	A [redacted]		
MFP	2.670	E -4	C [redacted]		E	A [redacted]		
		E			E			
		E			E			

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Cox	Joe A. Vigil	
Earl J. Cox by M.	Joe A. Vigil	

13. Date Disposed: M M D D Y Y — 0 9 2 6 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	09T	10	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): ANDREW J. CATANACH

Signature certifies that waste acceptance criteria and all disposal requirements were met.
(Signature) Andrew J. Catanach

Received	Logbook	Computer	Verified
AC	AC	RS	WS
Date 9/26/86	Date 9/26/86	Date 9/30	Date

Form Number HS 10-2A (9/89)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number	2. Date (M M D D Y Y)	3. Retrievable Serial Number	4. Origin of Waste: Group	TA	Building	Wing	Room	5. Waste Code
S 8 6 3442	0 9 2 5 8 6	0 0 1 1 6 9	H S E - 7	21		[redacted]		A 7 6

6. Waste Description

TRU cement paste OCD and TD TA-54

7. Numbers of Waste Packages: Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crate No.	Wooden Crate Volume-ft³

8. Gross Volume: Amount	(M = meter³, F = foot³, G = gallon)	9. Package Radiation at: Surface (mr/hr)	1 Meter (mr/hr)
218	M³ [redacted]	1	0

10. Gross Weight: Amount	(K = kilogram, P = pound, T = ton)
6.3	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5760322

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU239	1.200	E +1	M [redacted]		E	A [redacted]		
PU238	6.150	E -3	M [redacted]		E	A [redacted]		
AM241	3.230	E +0	M [redacted]		E	A [redacted]		
MIP	1.300	E -4	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y)	14. Disposal/Storage Location: Area	Shaft	Pit	Post(s)	Layer	Pos	15. Shaft Surface Dose (mr/hr)
9 2 5 8 6	6		29	9 T09	10	C	

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
ANDREW J. CATANACH	AC	AC	RL	DP
Signature certifies that waste acceptance criteria and disposal requirements were met (Signature)	Date 9/25/86	Date 9/25/86	Date 9/30	Date 10/2/86

Form Number HSE-10-2A (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3443

2. Date (M M D D Y Y): 0 9 2 5 8 6

3. Retrievable Serial Number: 0 0 1 1 7 3

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 376

6. Waste Description

TRU cement paste OLD CMR TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
1	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
653	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5760323

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	3.2810	E-3	M [redacted]		E	A [redacted]		
PU239	8.2810	E+0	M		E	A		
AM241	4.6410	E+0	M		E	A		
MFP	3.0000	E-4	C		E	A		
		E			E			
		E			E			

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by [illegible]	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 9 2 5 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	09T/10	10	C

15. Shaft Surface Dose mr/hr: 0

HSE-7 Waste Management Representative (Print Name Here): ANDREW CATANACH

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Andrew J. Catanach

Received	Logbook	Computer	Verified
AC	AC	[illegible]	DP
Date 9/25/86	Date 9/25/86	Date 9/30	Date 10/3

Form Number: HS 10-2A (3/86)

Los Alamos

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: [illegible]

[illegible] Waste Management
P.O. Box [illegible], MS J[illegible]

1. Form Number: S 8 6 3444

2. Date (M M D D Y Y): 0 9 2 5 8 6

3. Retrievable Serial Number: 0 0 1 1 7 4

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU cement paste OLD CMP TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³ / F = foot³ / G = gallon)
208	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
1	0

10. Gross Weight

Amount	(K = kilogram / P = pound / T = ton)
6.7	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 57603 24

12. Radionuclide Content

Nuclide	Amount	±	(C = curie / M = gram)	Error on Amount	±	Amount Determined By (A = analysis / M = measurement / E = estimate)	SS Materials Write-Off Account	Project Code
PU238	3.2810 E	-3	A [redacted]	.	E	A [redacted]		
PU239	8.2810 E	+0	A [redacted]	.	E	A [redacted]		
AM241	4.4410 E	+0	A [redacted]	.	E	A [redacted]		
MFP	3.0000 E	-14	C [redacted]	.	E	A [redacted]		
	. E		[redacted]	.	E	[redacted]		
	. E		[redacted]	.	E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM.	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 9 2 5 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
61		21	9T 10	9	C

15. Shaft Surface Dose mr/hr: .

Field Waste Management Representative (Print Name Here): ANDREW CARLACH

Signature certifies that waste acceptance criteria and all disposal requirements were met.

Signature: [illegible]

[redacted]

Received	Logbook	Computer	Verified
AC	AC	[illegible]	[illegible]
Date 9/25/86	Date 9/25/86	Date 9/30	Date 10/3/86

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3445

2. Date (M M D D Y Y): 09 30 86

3. Retrievable Serial Number: 001160

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU cement paste OLD CMR TO TA-54

7. Numbers of Waste Package

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³ / F = foot³ / G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
1	0

10. Gross Weight

Amount	(K = kilogram / P = pound / T = ton)
63	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 57603719

12. Radionuclide Content

Nuclide	Amount	±	(C = curie / M = gram)	Error on Amount	±	Amount Determined By: (A = analysis / M = measurement / E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.670	E -3	M [redacted]	.	E	A [redacted]		
PU239	4.018	E +0	M [redacted]	.	E	A [redacted]		
AM241	3.013	E +0	M [redacted]	.	E	A [redacted]		
MFP	5.000	E -4	C [redacted]	.	E	A [redacted]		
	.	E	[redacted]	.	E	[redacted]		
	.	E	[redacted]	.	E	[redacted]		

APPROVALS arrived @ 0950 9/30/86

Waste Generator (Print Name Here)	HSE-1/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste package or shipment complies with applicable DOT regulations. Earl J. Cox by JAV	Signature certifies that waste package or shipment is safe to handle and transport. Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 30 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	7 T	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	RD	DP
Date 9/30/86	Date 9/30/86	Date 10/1	Date 10/3

Form Number HS 10-2A (3/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions [illegible]

Waste Management
Form MS-1592

1. Form Number: S 8 6 3446

2. Date (M M D D Y Y): 09 30 86

3. Retrievable Serial Number: 0 0 1 1 6 1

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OLD CMP TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
3	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
66	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 5 7 6 0 3 8 0

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	246700	E -3	M [redacted]		E	A [redacted]		
PU239	40810	E +0	M [redacted]		E	A [redacted]		
AM241	30310	E +6	M [redacted]		E	A [redacted]		
MFP	5000	E -4	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS arrived @ 1365 9/30/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	Jos A. Vigil	
Earl J. Cox by [illegible]	Jos A. Vigil	

13. Date Disposed (M M D D Y Y): 0 9 3 0 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	61 T7	9	C

15. Shaft Surface Dose (mr/hr)

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) Keith Carter

Received	Logbook	Computer	Verified
KC	KC	[illegible]	DP
Date 9/30/86	Date 9/30/86	Date 10/1	Date 10/3

[redacted]

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S85 3447

2. Date (M M D D Y Y): 10 01 86

3. Retrievable Serial Number: 001162

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

3. Waste Description

TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
218	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
20	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
66	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 576038 1

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	2.670	E-3	M [redacted]			A [redacted]		
PU239	4.080	E+0	A [redacted]			A [redacted]		
AM241	3.030	E+0	M [redacted]			A [redacted]		
AFP	5.000	E-4	C [redacted]			A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste acceptance criteria and all disposal requirements were met. Earl J. Cox by [illegible]	Signature certifies that waste package or shipment is safe to handle and transport. Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 10 01 86

14. Disposal/Storage Location 10:11 TRP

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	56	9	C

18. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
EUGENE C. [illegible]	8	29	RV	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) [illegible]	Date 10-1-86	Date 10-1-86	Date 10/28	Date 11/5

Form Number HE 19-2A (9/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: [illegible]

HSE-7 Waste Management
Form WR-1

1. Form Number: SSA 3448

2. Date (M M D D Y Y): 09 25 86

3. Retrievable Serial Number: 001166

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU cement paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation (mr/hr)

Surface (mr/hr)	1 Meter (mr/hr)
	1.0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.4	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 57607644

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU239	1.200	E A1	M [redacted]		E	A [redacted]		
Am241	3.23 0	E A0	M [redacted]		E	A [redacted]		
PU238	6.15 0	E -3	M [redacted]		E	A [redacted]		
MFP	1.310	E -14	C [redacted]		E	A [redacted]		
		E			E			
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-14/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 25 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
6		29	9T	9	C

15. Shaft Surface Dose (mr/hr): .

HSE-7 Waste Management Representative (Print Name Here): Andrew Catanach

Signature certifies that waste acceptance criteria and all disposal requirements were met.

Received	Logbook	Computer	Verified
AC	AC	[illegible]	DP
Date 9/25/86	Date 9/25/86	Date 9/30	Date 10/3

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3149

2. Date: M M D D Y Y — 0 9 2 5 8 6

3. Retrievable Serial Number: 0 0 1 1 6 7

4. Origin of Waste: Group: HS6-7 | TA: 21 | Building: | Wing: [redacted] | Room:

5. Waste Code: A76

6. Waste Description: TRU cement paste OLD MR TD TD 54

7. Number of Waste Packages:

Plastic Bags	Cardboard Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume: Amount: 2.8 (M = meter³, F = foot³, G = gallon) M³ [redacted]

9. Package Radiation at: Surface (mr/hr): 1 | 1 Meter (mr/hr): 0

10. Gross Weight: Amount: 6.6 (K = kilogram, P = pound, T = ton) T [redacted]

11. Additional Description of Packaging and Packaging Material: Area T RSWD 57607655

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU239	1.800	E+1	A [redacted]		E	A [redacted]		
PU238	6.150	E-3	M [redacted]		E	A [redacted]		
AM241	3.23	E-6	M [redacted]		E	A [redacted]		
MFP	1.3	E-1	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-7 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	[illegible]	
Signature certifies that waste is characterized and all applicable requirements are met. Earl J. Cox	Signature certifies that waste package or shipment is safe to handle and transport. [illegible]	

13. Date Disposed: M M D D Y Y — 0 9 2 5 8 6

14. Disposal/Storage Location:

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	9T	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
[illegible]	AC	AC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) [illegible]	Date 9/26/86	Date 9/25/86	Date [illegible]	Date [illegible]

Form Number HS-M-24-09/86

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number	2. Date (M M D D Y Y)	3. Retrievable Portal Number	4. Origin of Waste: Group	TA	Building	Wing	Room	5. Waste Code
S86 3450	092586	001168	MSE-7	21		[redacted]		A76

6. Waste Description

TRU cement paste OLD CMP TO TA 54

7. Numbers of Waste Packages: Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³	8. Gross Volume: Amount	(M = meter³, F = foot³, G = gallon)	9. Package Radiation at: Surface (mr/hr)	1 Meter (mr/hr)
						28	m³ [redacted]	10	0

10. Gross Weight: Amount	(K = kilogram, P = pound, T = ton)
6.2	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWO 576076

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write Off: Account	Project Code
PU239	1.2	E+1	M [redacted]		E	A [redacted]		
PU238	61.5	E-3	M		E	A		
AM241	3.23	E+0	M		E	A		
MFP	1.300	E-4	C		E	A		
		E			E			
		E			E			

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	Jeff A. Vigil	
Earl J. Cox by [illegible]	Jeff A. Vigil	

13. Date Disposed (M M D D Y Y)	14. Disposal/Storage Location: Area	Shaft	Pit	Post(s)	Layer	Pos	15. Shaft Surface Dose (mr/hr)
092586	G		29	9 T/10	10	C	

Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
ANDREW J. CATANACH	9/25/86	AC	RD	DP
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) [illegible]	Date AC	Date 9/25/86	Date 9/30	Date 10/3/86

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions carefully before completing this form

HSE-7 Waste Management
Mail Stop J, MS J592

1. Form Number: S 6 6 3451

2. Date (M M D D Y Y): 0 9 2 5 8 6

3. Retrievable Serial Number: 0 0 1 1 7 0

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU cement paste OLD CMR TD TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
	1.0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 57611172

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU239	1.2	E +1	M [redacted]	.	E	A [redacted]		
PU238	6.15	E -3	M [redacted]	.	E	A [redacted]		
AM241	3.23	E -10	M [redacted]	.	E	A [redacted]		
MFP	.3	E -4	C [redacted]	.	E	A [redacted]		
	.	E	[redacted]	.	E	[redacted]		
	.	E	[redacted]	.	E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Jay A. Vigil	
Earl J. Cox	Jay A. Vigil	

13. Date Disposed (M M D D Y Y): 0 9 2 5 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G1		219	9 T 10	10	C

15. Shell Surface Dose mr/hr: .

HSE-7 Waste Management Representative (Print Name Here): ANDREW J. CATANACH

Signature certifies that waste acceptance criteria and all disposal requirements were met

Signature

Received: AC, Date 9/25/86
Logbook: AC, Date 9/25/86
Computer: RD, Date 9/30
Verified: DP, Date

Supersedes HS 10-2A (7/79)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3452

2. Date (M M D D Y Y): 09 26 86

3. Retrievable Serial Number: 00 1 1 7 1

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU cement paste OCD CMP VD VP 84

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
4	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.4	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 5761173

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU239	1.2 E	+1	M [redacted]	. E		A [redacted]		
PU238	6.15 E	-3	M	. E		A		
Am241	7.23 E	+6	M	. E		A		
MFP	1.300 E	-4	C	. E		A		
	. E			. E				
	. E			. E				

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 26 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
61		27	8T9	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
Andrew Catanach	AC	AC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature)	Date 9/26/86	Date 9/26/86	Date 9/30	Date 10/3/86

Form Number HS 10-2A (3/85)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3453

2. Date (M M D D Y Y): 0 9 2 5 8 6

3. Retrievable Serial Number: 0 0 1 1 7 5

4. Origin of Waste

Group	TA	Building	Wing	Room
MS6-7	21		[redacted]	

5. Waste Code: A7 16

6. Waste Description: TRU cement paste OLD OMR TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
2	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.4	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 5/7/1/85

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	3.2860	E-3	M [redacted]		E	A [redacted]		
PU239	8.2810	E+0	M [redacted]		E	A [redacted]		
AM241	4.6400	E+0	M [redacted]		E	A [redacted]		
~~U235~~ MED	3.000	E-4	G [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 9 2 5 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
6		29	10T	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): Andrew Chavez

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): [signature]

Received	Logbook	Computer	Verified
AC	AC	RD	[illegible]
Date 9-25-86	Date 9-25-86	Date 9/30	

Form Number HS 10-2A (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

Waste Management
Ext. 6095, MS J594

1. Form Number: S 8 6 0454

2. Date (M M D D Y Y): 0 9 2 5 8 6

3. Retrievable Serial Number: 0 0 1 1 7 8

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-17	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste QCD CMP TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
1	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
645	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 5 7 6 1 1 8 7

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU239	3.600	-1	M [redacted]		E	A [redacted]		
PU238	1.330	-2	M [redacted]		E	A [redacted]		
AM241	3.300	E	+0		E	A [redacted]		
MER	5.000	E	-4	C [redacted]	E	A [redacted]		
		E			E			
		E		[redacted]	C			

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Cox	Joe A. Vigil	
Earl J Cox by GM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 9 2 5 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G1		29	19T/10	10	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): Andrew C. Lawrence

Signature certifies that waste acceptance criteria and all disposal requirements were met.
Signature: [illegible]

Received	Logbook	Computer	Verified
AC	AC	QD	DP
Date 9/25/86	Date 9/25/86	Date 9/30	Date 10/3

Form Number NS 10-9A (3/86)

Los Alamos

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3455

2. Date (M M D D Y Y): 09 25 86

3. Retrievable Serial Number: 0 0 1 1 7 7

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28 m³	[redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
1	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
65 T	[redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 5/6/1/88

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined by (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU 239	3.6 10 0	E -6	[redacted]		E	[redacted]		
PU 238	1.9 B 0	E -2	[redacted]		E	[redacted]		
AM 241	5.3 0 0	E -1	[redacted]		E	[redacted]		
MFP	4.0 0 0	E -4	[redacted]		E	[redacted]		
		E			E			
		E			E			

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Fox	Joe A. Vigil	
Earl J Fox by GM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 25 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G1		29	8T9	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): [illegible]

Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature): [illegible]

Received	Logbook	Computer	Verified
AC	AC	RJ	D.P
Date 9/25/86	Date 9/25/86	Date 9/30	Date 10/3/86

Form Number HS-10-2A (3/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number	2. Date (M M D D Y Y)	3. Retrievable Serial Number	4. Origin of Waste: Group	TA	Building	Wing	Room	5. Waste Code
S86 3456	092586	001176	HSE-7	21		[redacted]		A76

6. Waste Description

TRU cement paste OLD CMP TO TA 54

7. Numbers of Waste Packages: Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³	8. Gross Volume: Amount	(M = meter³, F = foot³, G = gallon)	9. Package Radiation at: Surface (mr/hr)	1 Meter (mr/hr)
						28	M³ [redacted]	1	0

10. Gross Weight: Amount	(K = kilogram, P = pound, T = ton)
6.6	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWO 5761189

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
Am241	3.3000	E-10	M [redacted]		E	A [redacted]		
MFP	4.0000	E-14	C [redacted]		E	A [redacted]		
PU238	1.8300	E-2	n [redacted]		E	A [redacted]		
PU239	3.6000	E-1	M [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-16/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by [illegible]	Joe A. Vigil	

13. Date Disposed (M M D D Y Y)	14. Disposal/Storage Location: Area	Shaft	Pit	Post(s)	Layer	Pos	15. Shaft Surface Dose (mr/hr)
092586	G		29	09	10	C	

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
Andrew Catanach	AC	AC	RL	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met. Signature: Andrew Catanach [redacted]	Date 9/25/86	Date 9/25/86	Date 9/30	Date 10/3/86

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3457

2. Date: M M D D Y Y — 0 9 2 6 8 6

3. Retrievable Serial Number: 0 0 1 1 7 9

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OCD CMR TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume: Amount 28 (M = meter³, F = foot³, G = gallon) M³ [redacted]

9. Package Radiation at: Surface (mr/hr) 3; 1 Meter (mr/hr) 5

10. Gross Weight: Amount 6.5 (K = kilogram, P = pound, T = ton) T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD S76V19V

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.01 E	-3	M [redacted]			A [redacted]		
PU239	4.760 E	+0	M [redacted]			A [redacted]		
AM241	2.8 E	+0	M [redacted]			A [redacted]		
MFP	1.53 E	-3	C [redacted]			A [redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by [signature]	Joe A. Vigil [signature]	

13. Date Disposed: M M D D Y Y — 0 9 2 6 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	8 ~~6~~ 9	10	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): ANDREW J. CATANACH

Signature certifies that waste acceptance criteria and all disposal requirements were met.
(Signature) [signature]

Received	Logbook	Computer	Verified
AC	AC	[signature]	[signature]
Date 9/26/86	Date 9/26/86	Date 9/30	Date 10/3

Form Number HS 10-34 (3/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number	2. Date (M M D D Y Y)	3. Retrievable Serial Number	4. Origin of Waste: Group	TA	Building	Wing	Room	5. Waste Code
S 8 6 3458	0 9 2 6 8 6	0 0 1 1 8 0	HSE-7	21		[redacted]		A 7 6

6. Waste Description

TRU cement paste OCD CMP TD TA-54

7. Numbers of Waste Packages: Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³	8. Gross Volume: Amount	(M = meter³, F = foot³, G = gallon)	9. Package Radiation at: Surface (mr/hr)	1 Meter (mr/hr)
						28	m^3 [redacted]	3	~~[illegible]~~

10. Gross Weight: Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5 7 6 1 1 9 2

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	2.01 0	E-3	M [redacted]		E	A [redacted]		
PU239	4.76 0	E+0	M [redacted]		E	A [redacted]		
AM241	2.89 0	E+0	M [redacted]		E	A [redacted]		
MFP	1.53 0	E-3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-19/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by [illegible]	Joe A. Vigil	

13. Date Disposed (M M D D Y Y)	14. Disposal/Storage Location: Area	Shaft	Pit	Post(s)	Layer	Pos.	15. Shaft Surface Dose (mr/hr)
0 9 2 6 8 6	G		[redacted]	7 8	9	C	

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
[illegible]	AC	AC	[illegible]	D.P.
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature) [illegible]	Date 9/26/86	Date 9/26/86	Date [illegible]	Date 10/3

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 / Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3459

2. Date: 09 19 86

3. Retrievable Serial Number: 0 0 1 1 8 1

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
4	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
66	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7 RSWO 5 7 6 1 1 9 3

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.01 E	-3	A [redacted]	. E		A [redacted]		
PU239	4.76 E	+0	A [redacted]	. E		A [redacted]		
AM241	2.8 E	+0	A [redacted]	. E		A [redacted]		
MFP	1.53 E	-3	[redacted]	. E		A [redacted]		
	. E		[redacted]	. E		[redacted]		
	. E		[redacted]	. E		[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste is accountable in accordance with all applicable disposal requirements: Earl J. Cox by [illegible]	Signature certifies that waste package or shipment is safe to handle and transport: Joe A. Vigil	

13. Date Disposed: 09 19 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G1		29	1 0	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
Andrew C. Stovall	AC	AC	RD	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Andrew C. Stovall	Date 9/19/86	Date 9/19/86	Date [illegible]	Date [illegible]

Form Number: HS-RADCOM

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S86 3460

2. Date (M M D D Y Y): 09 19 86

3. Retrievable Serial Number: 001182

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-17	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU cement paste OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
4	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.4	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 5/7/6/1/1/94

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.01	E-3	M [redacted]		E	A [redacted]		
PU239	4.760	E+0	M [redacted]		E	A [redacted]		
AM241	2.89	E+0	M [redacted]		E	A [redacted]		
MFP	1.530	E-3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 19 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	10T	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
Andrew Chavez	AC	AC	[illegible]	DP
Signature certifies that waste acceptance criteria and all disposal requirements were met. [redacted]	Date 9/19/86	Date 9/19/86	Date 10/1	Date 10/3

Los Alamos

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3461

2. Date (M M D D Y Y): 0 9 2 6 8 6

3. Retrievable Serial Number: 0 0 1 1 8 3

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OCD CMP TD YA-64

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
3	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
63	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 5761195

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.01 0	E -3	M [redacted]		E	A [redacted]		
PU239	4.76 0	E +0	M [redacted]		E	A [redacted]		
AM241	2.09 0	E +0	M [redacted]		E	A [redacted]		
MFP	1.53 0	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl T. Cox	Joe A. Vigil	
Earl T. Cox by [illegible]	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 9 2 6 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		219	1 ~~78~~	10	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Calculator	Verified
Andrew Catanach	AC	AC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature) [illegible]	Date 9/26/86	Date 9/26/86	Date [illegible]	Date [illegible]

Form Number MS 10-DA (3/85)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

[illegible] Waste Management
[illegible] MS 1592

1. Form Number: S 8 6 3462

2. Date (M M D D Y Y): 0 9 2 6 8 6

3. Retrievable Serial Number: 0 0 1 1 8 4

4. Origin of Waste

Group	TA	Building	Wing	Room
H S E - 7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU Cement Paste | OLD CMP TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
3	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5/6/1/96

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.01 0	E -3	M [redacted]		E	A [redacted]		
PU239	4.76 0	E +0	M [redacted]		E	A [redacted]		
AM241	2.89 0	E +0	M [redacted]		E	A [redacted]		
MFP	1.53 0	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator *(Print Name Here)*: Earl J. Cox
Signature certifies that waste packaging and shipping meet DOT requirements
Earl J. Cox by GM.

HSE-1/-16/-11 Area Representative *(Print Name Here)*: Joe A. Vigil
Signature certifies that waste packaging and shipping meet DOT requirements to handle and transport
Joe A. Vigil

Additional Signatures *(Optional)*

13. Date Disposed (M M D D Y Y): 0 9 2 6 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G1		219	7 7 8	1 0	C

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative *(Print Name Here)*: Andrew Cafarack
Signature certifies that waste acceptance criteria and all disposal requirements were met
(Signature) [illegible]

Received	Logbook	Computer	Verified
AC	AC	RD	DD
Date 9/26/86	Date 9/26/86	Date 10/1	Date 10/3

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3463

2. Date (M M D D Y Y): 0 9 2 6 8 6

3. Retrievable Serial Number: 0 0 1 1 8 5

4. Origin of Waste

Group	TA	Building	Wing	Room
HS6-17	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU cement waste OCD CMP TD TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume: Amount 28 (M = meter³, F = foot³, G = gallon) m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
3	<1

10. Gross Weight: Amount 604 (K = kilogram, P = pound, T = ton) T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 5/6/1/97

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error or Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.01 0	E-3	M [redacted]			A [redacted]		
PU239	4.76 0	E+0	M [redacted]			A [redacted]		
AM241	2.89 0	E+0	M [redacted]			A [redacted]		
MFP	1.53 0	E-3	C [redacted]			A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-17/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste is characterized and that the information is correct. Earl J. Cox by JH	Signature certifies that waste package or shipment has been sampled and is acceptable. Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 9 2 6 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	TB	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
Alfredo Chavez	AC	AC	KJ	DP
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature)	Date 9/26/86	Date 9/26/86	Date	Date

Form Number HS 14-SA 01/86

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3464

2. Date (M M D D Y Y): 0 9 2 6 8 6

3. Retrievable Serial Number: 0 0 1 1 8 7

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU cement paste OLD CMP TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter, F = foot³, G = gallon)
28	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
4	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
65	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5761200

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.670 E	-3	A [redacted]	. E		A [redacted]		
PU239	5.670 E	+0	M [redacted]	. E		A [redacted]		
AM241	4.890 E	+0	M [redacted]	. E		A [redacted]		
MFP	2.330 E	-3	C [redacted]	. E		A [redacted]		
	. E		[redacted]	. E		[redacted]		
	. E		[redacted]	. E		[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by [illegible]	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 9 2 6 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	89	9	C

15. Shaft Surface Dose mr/hr: .

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
Andrew Catanzaro	AC	AC	[illegible]	[illegible]
Signature verifies that waste acceptance criteria and all disposal requirements were met. Signature [illegible]	Date 9/26/86	Date 9/26/86	Date 9/30	Date 10/8/86

Form Number HS 10-2A (3/8)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3465

Waste Management
Form 295 AS 392

2. Date (M M D D Y Y): 0 9 2 6 8 6

3. Retrievable Serial Number: 0 0 1 1 8 8

4. Original Waste

Group	TA	Building	Wing	Room
HSE-17	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU cement paste OLD CMR TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
4	1

10. Gross Weight

	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 57 61 20 1

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
PU238	2.670 E	-3	M [redacted]	. E		A [redacted]		
PU239	5.670 E	+0	M	. E		A		
AM241	4.8910 E	+0	M	. E		A		
MFP	2.330 E	-3	C	. E		A		
	. E			. E				
	. E			. E				

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): C 9 2 6 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		39	3T	9	C

15. Shaft Surface Dose (mr/hr): .

HSE-7 Waste Management Representative (Print Name Here): Andrew Canaca

Signature certifies that waste acceptance criteria and disposal requirements were met.
(Signature)

Received	Logbook	Computer	Verified
AC	AC	RD	WP
Date 9/26/86	Date 9/26/86	Date 9/30	Date 10/3/86

Form Number HS 10-2A (37/m)

Los Alamos

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S86 5465

2. Date (M M D D Y Y): 09 26 86

3. Retrievable Serial Number: 001186

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU Cement Paste GLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
3	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
60.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 576/203

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error or Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.670	E-3	M [redacted]			A [redacted]		
PU239	5.670	E+0	M [redacted]			A [redacted]		
AM241	4.890	E+0	M [redacted]			A [redacted]		
MFP	2.330	E-5	C [redacted]			A [redacted]		
			[redacted]			[redacted]		
			[redacted]			[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JH	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 26 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	18T	1C	C

15. Shaft Surface Dose (mr/hr): .

HSE-7 Waste Management Representative (Print Name Here): Andrew Catanach

Signature certifies that waste acceptance criteria and all disposal requirements were met.
Signature: Andrew C. Catanach

Received	Logbook	Computer	Verified
AC	AC	[illegible]	DR
Date 9/26/86	Date 9/26/86	Date 10/1	Date 10/3

Form Number HS 10-2A (3/89)

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Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back side before completing this form

Prof. Waste Management
Ext. 6095 MS J592

1. Form Number: S 8 6 3467

2. Date (M M D D Y Y): 09 25 86

3. Retrievable Serial Number: 001172

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-17	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU Cement Paste OLD CMP TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
1	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
64	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWB 5716 V 205

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	3.280	E-3	M [redacted]	.	E	A [redacted]		
PU239	8.280	E+0	M [redacted]	.	E	A [redacted]		
AM241	4.640	E+0	M [redacted]	.	E	A [redacted]		
~~U235~~ MEP	3.000	E-4	C [redacted]	.	E	A [redacted]		
	.	E	[redacted]	.	E	[redacted]		
	.	E	[redacted]	.	E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste is accurately described and packaged as required: Earl J. Cox by M	Signature certifies that waste package or shipment is safe to handle and transport: Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 25 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	09T	10	C

15. Shaft Surface Dose mr/hr: .

HSE-17 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
[illegible]	AC	AC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met. Signature: [illegible]	Date 9/25/86	Date 9/25/86	Date 9/30	Date [illegible]

Form Number HS 10-2A (3/86)

Los Alamos

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext 6095 MS J592

1. Form Number: S 8 6 3468

2. Date (M M D D Y Y): 09 17 86

3. Retrievable Serial Number: 00 1 1 98

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU Cement Paste OCD CMP TO: TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
7	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
68	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 5762076

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
PU239	10.7010	E +6	M [redacted]		E	A [redacted]		
PU238	5.6510	E -2	A		E	A		
AM241	3.4010	E +0	M		E	A		
MFP	1.0000	E -3	C		E	A		
		E			E			
		E			E			

APPROVALS

arrived @ 1430 9/18/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JA	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 18 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	12T13	9	C

15. Shaft Surface Dose (mr/hr):

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	R.D	DP
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature) Keith Carter	Date 9/18/86	Date 9/18/86	Date 10/1	Date 10/3

Form Number HS 10-23 (8/78)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3469

2. Date: M M D D Y Y — 09 26 86

3. Retrievable Serial Number: 001189

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
3	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
63	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 57620777

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
PU238	20060	E -2	M [redacted]		E	A [redacted]		
PU239	87000	E +0	M [redacted]		E	A [redacted]		
AM241	6400	E +0	M [redacted]		E	A [redacted]		
MFP	8700	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste is in accordance with all applicable [illegible] requirements. Earl J. Cox by [illegible]	Signature certifies that waste package or shipment [illegible] to handle and transport. Joe A. Vigil	

13. Date Disposed: M M D D Y Y — 09 26 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	8T9	10	C

15. Shell Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): ANDREW J. CAYANACH

Signature certifies that waste acceptance criteria and all disposal requirements were met.
(Signature) [illegible]

Received	Logbook	Computer	Verified
AC	AC	[illegible]	[illegible]
Date 9/26/86	Date 9/26/86	Date [illegible]	Date [illegible]

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

1. Form Number	2. Date (M D D Y Y)	3. Retrievable Serial Number	4. Origin of Waste: Group	TA	Building	Wing	Room	5. Waste Code
S 8 6 3470	09 19 86	0 0 1 1 9 0	HSE-7	21		[redacted]		476

6. Waste Description

TRU cement paste OCD CMP TO TA-54

7. Numbers of Waste Packages: Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³	8. Gross Volume: Amount	(M = meter³, F = foot³, G = gallon)	9. Package Radiation at: Surface (mr/hr)	1 Meter (mr/hr)
						28	m³ [redacted]	2	0

10. Gross Weight: Amount	(K = kilogram, P = pound, T = ton)	11. Additional Description of Packaging and Packaging Materials
6.4	T [redacted]	Area T RSWO 57620718

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU239	8700	E +0	M [redacted]		E	A [redacted]		
PU238	2060	E -2	M [redacted]		E	A [redacted]		
Am241	64 00	E +0	M [redacted]		E	A [redacted]		
MFP	8700	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by M	Joe A. Vigil	

13. Date Disposed (M M D D Y Y)	14. Disposal/Storage Location: Area	Shaft	Pit	Post(s)	Layer	Pos.	15. Shaft Surface Dose (mr/hr)
09 19 86	61		219	10T11	10	C	

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
Andrew C. Kennedy	AC	AC	R.D.	DP
Signature certifies that waste acceptance criteria and all disposal requirements were met. Andrew C. Kennedy	Date 9-19-86	Date 9/19/86	Date 10/1	Date 10/3

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3471

2. Date (M M D D Y Y): 09 17 86

3. Retrievable Serial Number: 00 11 91

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 76

6. Waste Description

TRW cement paste OCD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
1.2	2.

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.4	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5762079

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.0 6 0 E	-2	M [redacted]	. E		A [redacted]		
PU239	8.7 0 0 E	+0	M [redacted]	. E		A [redacted]		
Am241	6.4 0 0 E	+0	M [redacted]	. E		A [redacted]		
MFP	8.7 0 0 E	-3	C [redacted]	. E		A [redacted]		
	. E		[redacted]	. E		[redacted]		
	. E		[redacted]	. E		[redacted]		

APPROVALS arrived @ 1030 9/18/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM.	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 18 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	12T	9	C

15. Shaft Surface Dose mr/hr: .

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	R.E.	DD
Date 9/18/86	Date 9/18/86	Date 10/1	Date 10/3

Form Number HS 10-2A (3/86)

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Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3472

2. Date (M M D D Y Y): 09 19 86

3. Retrievable Serial Number: 001192

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU Cement Paste OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
4	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.4	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD S76 2080

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
Pu 235	2.0 6 0	E -2	M [redacted]		E	A [redacted]		
Pu 239	8.7 0 0	E +0	M [redacted]		E	A [redacted]		
Am 241	1.4 0 0	E +0	M [redacted]		E	A [redacted]		
MFP	8.7 0 0	E -3	C [redacted]		E	A [redacted]		
		E			E			
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by [illegible]	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 19 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		2A	9T1	09 [redacted]	C

15. Shaft Surface Dose mr/hr:

HSE-7 Waste Management Representative (Print Name Here): [illegible]

(Signature) certifies that waste acceptance criteria and all disposal requirements were met

Received	Logbook	Computer	Verified
AC	AC	[illegible]	DP
Date 9-19-86	Date 9-19-86	Date 10/1	Date 10/2

Form Number HS 10-2A (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3473

2. Date (M M D D Y Y): 0 9 1 9 8 6

3. Retrievable Serial Number: 0 0 1 1 9 3

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OCD OMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
4	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
68	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7 RSKWA S76208 1

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
PU238	24060	E -2	M [redacted]		E	A [redacted]		
PU239	8700	E +0	M		E	A		
AM241	6400	E +0	M		E	A		
NFP	8700	E -3	C		E	A		
		E			E			
		E			E			

APPROVALS arrived at 0950 9/19/86

Waste Generator (Print Name Here): Earl J. Cox
Signature certifies that waste package or shipment is prepared properly: Earl J. Cox by [illegible]

HSE-1/-10/-11 Area Representative (Print Name Here): Joe R. Virji
Signature certifies that waste package or shipment is safe to handle and transport: Joe R. Virji

Additional Signatures (Optional)

13. Date Disposed (M M D D Y Y): 0 9 1 9 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	11T	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
EC	MC	[illegible]	[illegible]
Date 9/19/86	Date 9/19/86	Date 10/1	Date 10/3

Form Number HS 10-2A (3/85)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

Waste Management
Ext. Bldg. MS [illegible]

1. Form Number: S86 3474

2. Date: M M D D Y Y — 09 19 86

3. Retrievable Serial Number: 001194

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU Cement Paste OLD CMP TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
4	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
69	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD S762082

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	20.60	E -2	M [redacted]	.	E	A [redacted]		
PU239	87.00	E +0	M	.	E	A		
AM241	64.00	E +0	M	.	E	A		
MFP	87.00	E -3	C	.	E	A		
	.	E		.	E			
	.	E		.	E			

APPROVALS arrived @ 0950 9/19/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste package complies with all applicable requirements. Earl J. Cox by [illegible]	Signature certifies that waste package complies with all applicable requirements to handle and transport. Joe A. Vigil	

13. Date Disposed: M M D D Y Y — 09 19 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
J		29	11T12	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KP	[illegible]	DD
Date 9/19/86	Date 9/19/86	Date 9/30	Date 10/3

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095 MS J592

1. Form Number: S 8 6 3475

2. Date (M M D D Y Y): 09 17 86

3. Retrievable Serial Number: 001195

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU cemented plastic OCD CMP TO TB 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³ F = foot³ G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
7	1

10. Gross Weight

Amount	(K = kilogram P = pound T = ton)
6.3	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 57620085

12. Radionuclide Content

Nuclide	Amount	±	(C = curie M = gram)	Error on Amount	±	Amount Determined By: (A = analysis M = measurement E = estimate)	SS Materials Write-Off Account	Project Code
PU239	1.0700	E+1	M [redacted]		E	A [redacted]		
PU238	5.6500	E-2	M [redacted]		E	A [redacted]		
Am241	3.4000	E+0	M [redacted]		E	A [redacted]		
MFP	1.0000	E-3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS arrived @ 1350 9/18/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) Earl J. Cox by JA	Signature certifies that waste package or shipment is safe to handle and transport. (Signature) Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 18 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	12T13	9	C

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	RD	KC
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature) Keith Carter	Date 9/18/86	Date 9/19/86	Date 10/1	Date 10/3

Form Number HS 10-9A (3/85)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: [illegible]

1. Form Number: S86 3476

2. Date (M M D D Y Y): 09 17 86

3. Retrievable Serial Number: 001196

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU cement A. stel OCD CMP 70 TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
7	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
.613	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD S76 2086

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
Pu 239	1.070	E +1	M [redacted]	.	E	A [redacted]		
Pu 238	5.650	E -2	M [redacted]	.	E	A [redacted]		
Am 241	3.400	E +0	M [redacted]	.	E	A [redacted]		
MFP	1.00	E -3	C [redacted]	.	E	A [redacted]		
	.	E	[redacted]	.	E	[redacted]		
	.	E	[redacted]	.	E	[redacted]		

APPROVALS arrived @ 1350 9/18/86

Waste Generator (Print Name Here)	HSE-7/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by [illegible]	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 18 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	12T13	9	C

15. Shaft Surface Dose mr/hr: .

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	[illegible]	[illegible]
Date 9/18/86	Date 9/18/86	Date 10/1	Date 10/3

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 34777

2. Date (M M D D Y Y): 09 17 86

3. Retrievable Serial Number: 0 0 1 1 9 7

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU Cement Paste OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
248	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
7	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.6	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7T RSWD 5 7 6 2 0 8 7

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
PU239	1.0 7 0	E +1	M [redacted]	.	E	A [redacted]		
PU238	5.6 5 0	E -2	M [redacted]	.	E	A [redacted]		
Am241	3.4 0 0	E +1	M [redacted]	.	E	A [redacted]		
MPP	1.0 0 0	E -3	C [redacted]	.	E	A [redacted]		
	.	E	[redacted]	.	E	[redacted]		
	.	E	[redacted]	.	E	[redacted]		

APPROVALS arrived @ 1430 9/18/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste package or shipment is safe to handle and transport: Earl J. Cox by [illegible]	Signature certifies that waste package or shipment is safe to handle and transport: Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 18 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	12T	9	C

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	[illegible]	[illegible]
Date 9/18/86	Date 9/18/86	Date 10/1	Date 10/3

Form Number HSE 10-2A (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3478

2. Date (M M D D Y Y): 09 17 86

3. Retrievable Serial Number: 00/1/99

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 476

6. Waste Description

TRU cement paste OCD CMP TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³ / F = foot³ / G = gallon)
248	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
7	1

10. Gross Weight

Amount	(K = kilogram / P = pound / T = ton)
66	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area 7 RSWD 5762099

12. Radionuclide Content

Nuclide	Amount	±	(C = curie / M = gram)	Error on Amount	±	Amount Determined By (A = analysis / M = measurement / E = estimate)	CS Materials Write-Off Account	Project Code
PU239	10.70 E	+1	M [redacted]		E	A [redacted]		
PU238	5.65 E	-2	M [redacted]		E	A [redacted]		
AM241	34.00 E	+0	M [redacted]		E	A [redacted]		
MFP	10.00 E	-3	C [redacted]		E	A [redacted]		
	E		[redacted]		E	[redacted]		
	E		[redacted]		E	[redacted]		

APPROVALS

arrived @ 1430 9/18/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe H. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 18 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
6		29	11 T 12	9	C

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) Keith Carter

Received	Logbook	Computer	Verified
KC	KC	RD	DD
Date 9/18/86	Date 9/18/86	Date 10/1	Date 10/3

Form Number HS 10-20 (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3479

2. Date (M M D D Y Y): 09 17 86

3. Retrievable Serial Number: 001200

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU cement paste OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
	1.0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.8	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSVD 57621 00

12. Radionuclide Content

Nuclide	Amount		±	(C = curie, M = gram)	Error on Amount		±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	1.0710	E	+1	M [redacted]	.	E		A [redacted]		
PU239	5.6510	E	-2	M [redacted]	.	E		A [redacted]		
Am241	3.4000	E	+0	M [redacted]	.	E		A [redacted]		
MFP	1.000	E	-3	C [redacted]	.	E		A [redacted]		
	.	E		[redacted]	.	E		[redacted]		
	.	E		[redacted]	.	E		[redacted]		

APPROVALS arrived @ 0950 9/18/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl T. Cox	Joe A. Vigil	
Earl J. Cox by JAV	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 18 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29 ~~32~~	13T14	9	C

15. Shaft Surface Dose mr/hr: .

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature) Keith Carter	Date 9/18/86	Date 9/18/86	Date 10/[illegible]	Date [illegible]3

Form Number: HS 10-2A (3/86)

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Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3480

2. Date (M M D D Y Y): 09 19 86

3. Retrievable Serial Number: 001201

4. Origin of Waste: Group: HSE-7 | TA: 21 | Building: | Wing: [redacted] | Room:

5. Waste Code: A76

6. Waste Description: TRU cement fixed OLD CMR TD TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume: Amount: 208 m³ (M = meter³, F = foot³, G = gallon) [redacted]

9. Package Radiation at: Surface (mr/hr): 1 | 1 Meter (mr/hr): 0

10. Gross Weight: Amount: 66 T (K = kilogram, P = pound, T = ton) [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T PSWD 576201

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU239	10.70 E	+1	M [redacted]		E	A [redacted]		
PU238	5.65 E	-2	M		E	A		
AM241	3.40 E	+0	M		E	A		
MFP	10.00 E	-3	C		E	A		
	E				E			
	E				E			

APPROVALS arrived @ 1020 9/19/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 19 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	11T12	9	C

15. Shaft Surface Dose (mr/hr):

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria have been met. (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	K.D.	DD
Date 9/19/86	Date 9/19/86	Date 9/30	Date 10/3

Form Number HS 10-2A (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 875 .5

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions carefully, before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3481

2. Date (M M D D Y Y): 09 19 86

3. Retrievable Serial Number: 001202

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU Cement Paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
4.	1.

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 57621/02

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
PU239	1.070 E	+1	M [redacted]	. E		A [redacted]		
PU238	5.650 E	-2	M [redacted]	. E		A [redacted]		
AM241	3.400 E	+0	M [redacted]	. E		A [redacted]		
MFP	1.000 E	-3	C [redacted]	. E		A [redacted]		
	. E			. E				
	. E		[redacted]	. E		[redacted]		

APPROVALS arrived @ 0950 9/19/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 19 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	10 T 11	9	C

15. Shaft Surface Dose: mr/hr .

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	RR	DP
Date 9/19/86	Date 9/19/86	Date 10/1	Date 10/3

Form Number HS 10-2A (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back before completing this form.

Waste Management
Ext. 6091, LMS 1692

1. Form Number: S 8 6 3482

2. Date (M M D D Y Y): 09 19 86

3. Retrievable Serial Number: 001203

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description:

TRU Cement Paste OLD CMR TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Cardboard Boxes	Drums No	Drums Gal.	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume: Amount 2.8 m³ (M = meter³, F = foot³, G = gallon) [redacted]

9. Package Radiation at: Surface (mr/hr) 1; 1 Meter (mr/hr) 0

10. Gross Weight: Amount 6.5 T (K = kilogram, P = pound, T = ton) [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T VSWD 57621/03

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU239	10.70	E +1	M [redacted]	.	E	A [redacted]		
PU238	5.65	E -2	M [redacted]	.	E	A [redacted]		
Am241	3.40	E +0	M [redacted]	.	E	A [redacted]		
MFP	10.00	E -3	C [redacted]	.	E	A [redacted]		
	.	E	[redacted]	.	E	[redacted]		
	.	E	[redacted]	.	E	[redacted]		

APPROVALS arrived @ 1020 9/19/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 19 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	11T ~~112~~	9	C

15. Shaft Surface Dose: mr/hr .

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met.
(Signature) Keith Carter

Received	Logbook	Computer	Verified
RC	KC	RD	RP
Date 9/19/86	Date 9/19/86	Date 9/20	Date 10/3

Form Number HS 1078 (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form

HSE 7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3483

2. Date (M M D D Y Y): 09 17 86

3. Retrievable Serial Number: 00/207

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU Cement Paste OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
12	2

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.4	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 576255 3

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
Am241	2.6 0 0	E ±0	A [redacted]	.	E	A [redacted]		
PU238	6.6 0 0	E ±3	A [redacted]	.	E	A [redacted]		
PU239	1.1 5 0	E ±1	A [redacted]	.	E	A [redacted]		
MFP	7000 ~~0.7 0 0~~	E ±9	C [redacted]	.	E	A [redacted]		
U235	6.2 1 0	E ±2	A [redacted]	.	E	A [redacted]		
U238	1.5 1 0	E ±2	A [redacted]	.	E	A [redacted]		

APPROVALS arrived @ 1030 9/18/86

Waste Generator (Print Name Here): Earl J. Cox
Signature certifies that waste acceptance criteria and all disposal requirements were met: Earl J. Cox by JM

HSE-1/-10/-11 Area Representative (Print Name Here): Joe A. Vigil
Signature certifies that waste package or shipment is safe to handle and transport: Joe A. Vigil

Additional Signatures (Optional):

13. Date Disposed (M M D D Y Y): 09 18 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	12T	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	RD	DP
Date 9/18/86	Date 9/18/86	Date 10/1	Date 10/3

Form Number HS 10-2A (3/86)

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Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095 MS J592

1. Form Number: S86 3484

2. Date (M M D D Y Y): 09 17 86

3. Retrievable Serial Number: 001205

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 876

6. Waste Description: TRU Cement Paste OCD GMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
	1.0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.4	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWO 576251 5

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
Am241	2.0 10 E	+9	M [redacted]			A [redacted]		
MFP	7.000 ~~1.0 10~~ E	-9 ~~-12~~	C [redacted]			A [redacted]		
PU238	6.6 10 E	-3	M [redacted]			A [redacted]		
PU239	6.1 5 10 E	+0	M [redacted]			A [redacted]		
U235	6.2 1 0 E	+2	M [redacted]			A [redacted]		
U238	1.3 1 0 E	+2	M [redacted]			A [redacted]		

APPROVALS arrived @ 0950 9/18/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by GM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 18 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29 ~~32~~	12T13	9	C

15. Shaft Surface Dose mr/hr:

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	[illegible]	DD
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature) Keith Carter	Date 9/18/86	Date 9/18/86	Date 10/1	Date 10/3

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3485

2. Date (M M D D Y Y): 0 9 1 9 8 6

3. Retrievable Serial Number: 0 0 1 2 0 4

4. Origin of Waste

Group	TA	Building	Wing	Room
H S G - 1 7	2 1		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU cement waste old CMR to TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.6	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T asbd 57625V6

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	Sb Materials Write-Off Account	Project Code
PU238	6.6 00	E -3	M [redacted]		E	A [redacted]		
PU239	6.1 50	E +0	M [redacted]		E	A [redacted]		
AM241	2.6 00	E +0	M [redacted]		E	A [redacted]		
MFP	7.0 00	E -4	C [redacted]		E	A [redacted]		
U235	6.2 10	E +2	M [redacted]		E	A [redacted]		
U238	1.3 10	E +2	M [redacted]		E	A [redacted]		

APPROVALS Issued @ 1020 9/19/86

Waste Generator (Print Name Here): Earl J. Cox

Signature certifies that waste package or shipment is safe to handle and transport: Earl J. Cox by JM

HSE-1/-1a/-11 Area Representative (Print Name Here): Joe A. Vigil

Signature certifies that waste package or shipment is safe to handle and transport: Joe A. Vigil

Additional Signature (Optional):

13. Date Disposed (M M D D Y Y): 0 9 1 9 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	10T11	9	C

15. Shaft Surface Dose mr/hr:

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	KS	W.
Date 9/19/86	Date 9/19/86	Date 9/30	Date

Form Number [illegible]

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3486

2. Date (M M D D Y Y): 09 17 86

3. Retrievable Serial Number: 001206

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU Cement Paste OLD CMP TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.4	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Ar 60 7 RS WO 57625 33

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	6.600	E -13	M [redacted]		E	A [redacted]		
PU239	6.150	E +10	M [redacted]		E	A [redacted]		
AM241	2.600	E +10	M [redacted]		E	A [redacted]		
MFP	7.000 ~~0.700~~	E -4 ~~-5~~	C [redacted]		E	A [redacted]		
U235	6.210	E +2	M [redacted]		E	A [redacted]		
U238	1.310	E +2	M [redacted]		E	A [redacted]		

APPROVALS arrived @ 0950 9/18/86

Waste Generator (Print Name Here)	HSE-1/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Cox	Joe A. Vigil	
Signature certifies that waste is acceptable for disposal: Earl J. Cox by JM	Signature certifies that waste package or shipment is acceptable for handling and transport: Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 18 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		~~32~~ 29	3T	9	C

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC		DP
Date 9/18/86	Date 9/18/86	Date 10/1	Date 10/3

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3487

2. Date (M M D D Y Y): 09 11 86

3. Retrievable Serial Number: 00 12 0

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU Cement Paste OCD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
2	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.6	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7 RSWD S7709V2

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	1.218	E	-4 C [redacted]		E	A [redacted]		
PU239	4.29	E	-5 C [redacted]		E	A [redacted]		
AM241	1.660	E	-4 C [redacted]		E	A [redacted]		
MFP	6000	E	-4 C [redacted]		E	M [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	[illegible] (Print Name Here)	[illegible] Signature (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste [illegible]	Signature certifies that waste package or shipment is safe to handle and transport	
Earl J. Cox by M.	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 11 86

14. Disposal Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		39	1 10T/1	110	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Transcribed	Verified
[illegible]	AC	AC	RD	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met	Date 9-19-86	Date 9-19-86	Date 10/1	Date

Form Number HS 16.6 (3/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 5095 MS J592

1. Form Number: S86 3488

2. Date: M M D D Y Y — 09 16 86

3. Retrievable Serial Number: 001209

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU Cement Pasted OLD CMR TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
7	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD S770913

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU239	4.298	-2	[redacted]		E	A [redacted]		
PU238	[illegible]	E	[redacted]		E	A [redacted]		
AM241	[illegible]	[illegible]	[redacted]		E	A [redacted]		
NFP	[illegible]	E	[redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS arrived @ 1350 9/18/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox by GM	Joe A. Vigil	
Signature certifies that waste is in accordance with all applicable disposal requirements: Earl J. Cox by GM	Signature certifies that waste package or shipment is safe to handle and transport: Joe A. Vigil	

13. Date Disposed: M M D D Y Y — 09 18 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	12T	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met: Keith Carter	Date 9/18/86	Date 9/18/86	Date 10/1	Date 10/3

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE 7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3489

2. Date (M M D D Y Y): 09 17 86

3. Retrievable Serial Number: 001208

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU cement paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
1.2	2

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.8	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 57709 14

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.186	E -2	[redacted]		E	[redacted]		
PU239	4.29	E -2	[redacted]		E	[redacted]		
AM241	[illegible]	E [illegible]	[redacted]		E	[redacted]		
MFP	6.000	E -4	[redacted]		E	[redacted]		
		E			E			
		E	[redacted]		E	[redacted]		

APPROVALS arrived @ 1030 9/18/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	Joe R. Vigil	
Signature certifies that waste is in accordance with all applicable disposal requirements: Earl J. Cox by JM.	Signature certifies that waste package or shipment is safe to handle and transport: Joe R. Vigil	

13. Date Disposed (M M D D Y Y): 09 18 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	12T13	19	C

15. Shaft Surface Scan (mr/hr):

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	RD	DR
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) Keith Carter	Date 9/18/86	Date 9/18/86	Date	Date

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: [illegible]

HSE-7 Waste Management
P.O. Box 1663, MS J592

1. Form Number: SSC 3490

2. Date: 09/19/86

3. Retrievable Serial Number: 00121/1

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 476

6. Waste Description: TRW cement paste OCD OMR TD TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
1.28	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
2	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
65	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWO 5770934

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	1.7510	E-3	A [redacted]		E	A [redacted]		
PU239	2.9000	E+0	A [redacted]		E	A [redacted]		
AM241	1.9900	E+1	A [redacted]		E	A [redacted]		
MPP	1.8700	E-2	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by [illegible]	Joe A. Vigil	

13. Date Disposed: 9/19/86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
A		29	11T	10	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): Andrew Stonacek

Signature certifies that waste acceptance criteria and all disposal requirements were met.

Received	Logbook	Computer	Verified
AC	AC	[illegible]	DP
Date 9-19-86	Date 9-19-86	Date 10/1	Date 10/3

Los Alamos

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3491

2. Date (M M D D Y Y): 09 12 86

3. Retrievable Serial Number: 09/12/2

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-17	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU Cement Pasteel OCD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation ≈

Surface (mr/hr)	1 Meter (mr/hr)
12	3

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 5770935

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	1.750	E-3	M [redacted]			A [redacted]		
PU239	2.910	E+0	A [redacted]			A [redacted]		
AM241	1.910	E+1	M [redacted]			A [redacted]		
MFP	1.870	E-2	C [redacted]			A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-17/-18/-11 Area Representative (Print Name Here)	[redacted] (Signature)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste is properly packaged and labeled: Earl J. Cox by [illegible]	Signature certifies that waste package or shipment is safe to handle and transport: Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 12 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	14 T	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
EUGENE C. SALAZAR	[illegible]	[illegible]	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): [illegible]	Date 9-12-86	Date 9-12	[illegible]	[illegible]

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S86 3492

2. Date (M M D D Y Y): 09 11 86

3. Retrievable Serial Number: 001213

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU cement paste OLD CMR TO TA-54

7. Number of Waste Packages

Plastic Bags	Card Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
248	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
12	3

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
65	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7 RSWO 5770936

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
PU238	1.75	E-3	M [redacted]		E	A [redacted]		
PU239	2.90	E+0	M [redacted]		E	A [redacted]		
AM241	1.99	E+1	M [redacted]		E	A [redacted]		
NFP	1.870	E-2	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS arrived @ 1430 9/11/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 11 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	15T	9	C

15. Shaft Surface Dose mr/hr:

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met.
(Signature) Keith Carter

Received	Logbook	Computer	Verified
KC	KC	[illegible]	[illegible]
Date 9/11/86	Date 9/11/86	Date 9/12	Date 9/24/86

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

[illegible] Waste Management [illegible] 5095, MS [illegible]

1. Form Number: S 8 6 3493

2. Date: M M D D Y Y 09 11 86

3. Retrievable Serial Number: 00124

4. Origin of Waste: Group HSE-7; TA 21; Building; Wing [redacted]; Room

5. Waste Code: 476

6. Waste Description: TRU cement paste OLD CMR TO TA-54

7. Numbers of Waste Packages: Plastic Bags; Card-Board Boxes; Drums No. Gal.; Wooden Crates No. Volume ft³

8. Gross Volume: Amount 28 m³ (M = meter³, F = foot³, G = gallon) [redacted]

9. Package Radiation at: Surface (mr/hr); 1 Meter (mr/hr) 12 3

10. Gross Weight: Amount 6.5 T (K = kilogram, P = pound, T = ton) [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 5770937

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	1.750	E-3	M [redacted]	.	E	A [redacted]		
PU239	2.910	E+0	M [redacted]	.	E	A [redacted]		
Am241	1.990	E+1	M [redacted]	.	E	A [redacted]		
MPP	1.870	E-2	C [redacted]	.	E	A [redacted]		
	.	E	[redacted]	.	E	[redacted]		
	.	E	[redacted]	.	E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by GM	Joe A. Vigil	

13. Date Disposed: M M D D Y Y 09 11 86

14. Disposal/Storage Location: Area G; Shaft; Pit 29; Post(s) 14T15; Layer 9; Pos. C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature entries that waste acceptance criteria and all disposal requirements have been met
(Signature) Keith Carter

Received	Logbook	Computer	Verified
KC	KC	KD	D.Q.
Date 9/11/86	Date 9/11/86	Date 9/22	Date [illegible]

Form Number [illegible]

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3494

2. Date (M M D D Y Y): 08 28 86

3. Retrievable Serial Number: 001257

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU cement paste OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
20	6

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.4	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5771 S 48

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write Off Account	Project Code
PU238	4.500	E -1	C [redacted]	.	E	A [redacted]		
PU239	2.000	E -1	C [redacted]	.	E	A [redacted]		
AM241	1.600	E +0	C [redacted]	.	E	A [redacted]		
U235	6.000	E +0	M [redacted]	.	E	E [redacted]		
U238	2.000	E +0	M [redacted]	.	E	E [redacted]		
MFP	1.620	E -3	C [redacted]	.	E	A [redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 08 28 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
		219	13 ~~E-13~~	10	5

15. Shaft Surface Dose (mr/hr): .

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
ANDREA J. CATANZA	AC	AC	RP	RP
(Signature)	Date 8-28-86	Date 8-28-86	Date 9/4/86	Date 9-15-86

Form Number HS 10-2A (3/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Please read instructions carefully before completing this form

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3495

2. Date (M M D D Y Y): 0 8 2 8 8 6

3. Retrievable Serial Number: 0 0 1 2 5 8

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
30	9

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 5771049

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
PU238	4.500	E -1	C [redacted]	.	E	A [redacted]		
PU239	2.000	E -1	C	.	E	A		
AM241	1.600	E +2	C	.	E	A		
MFP	1.620	E -3	C	.	E	A		
	.	E		.	E			
	.	E		.	E			

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Personnel Signatures (Optional)
Earl J. Fox	Joe A. Vigil	
Earl J. Fox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 8 2 8 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	14T	9	S

15. Shaft Surface Dose mr/hr: .

HSE-7 Waste Management Representative (Print Name Here): ANDREW J. CATANACH

Signature certifies that waste acceptance criteria and all disposal requirements were met.

(Signature)

Received	Logbook	Computer	Verified
AC	AC		BJ
Date 8-28-86	Date 8-28-86	Date	Date 9-15-86

Form Number HS 10-2A (3/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Los Alamos, NM 87545

1. Form Number: S 8 6 3496

2. Date: M M D D Y Y — 08 28 86

3. Retrievable Serial Number: 001259

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU cement paste OCD CMP TO 7A-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
30	9

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
66	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T Pad 57750

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	4.500	E -1	C [redacted]		E	A [redacted]		
PU239	2.000	E -1	C		E	A		
Am241	1.600	E +2	C		E	A		
NFP	1.620	E -3	C		E	A		
		E			E			
		E			E			

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Lonnie L. Martin	
Earl J. Cox by JM	[signature]	

13. Date Disposed: M M D D Y Y — 08 28 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	14 ~~[illegible]~~	9	S

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): ANDREW J. CATANACH

Signature certifies that waste acceptance criteria and all disposal requirements were met.
(Signature) [signature]

Received	Logbook	Computer	Verified
AC	AC	[illegible]	[illegible]
Date 8-28-86	Date 8-28-86	Date [illegible]	Date 9-15-86

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE Read instructions on back carefully before completing this form

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3497

2. Date (M M D D Y Y): 0 8 2 8 8 6

3. Retrievable Serial Number: 0 0 1 2 5 4

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 176

6. Waste Description: TRU cement paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume: Amount 28 m³ (M = meter³, F = foot³, G = gallon) [redacted]

9. Package Radiation at: Surface (mr/hr) 20; 1 Meter (mr/hr) 7

10. Gross Weight: Amount 65 T (K = kilogram, P = pound, T = ton) [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 5771051

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	4.5000	E -1	C [redacted]		E	A [redacted]		
PU239	2.0000	E -1	C [redacted]		E	A [redacted]		
AM241	1.6000	E +2	C [redacted]		E	A [redacted]		
MFP	1.6200	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-7 Waste Management Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Lonnie E Martin	
Earl J. Cox by [illegible]	Lonnie E Martin	

13. Date Disposed: M M D D Y Y 0 8 2 8 8 6

14. Disposal/Storage Location

Area	Shaft	Pin	Post(s)	Layer	Pos
G		29	14T	9	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): [illegible]

Received	Logbook	Computer	Verified
[illegible]	29	[illegible]	[illegible]
Date 8-28-86	Date 8-28-86	Date 9-4-86	Date 9-15-86

Form Number HS 10-2 (3/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

Hist. Waste Management
Ext. [illegible] MS [illegible]

1. Form Number	2. Date (M M D D Y Y)	3. Retrievable Serial Number	4. Origin of Waste: Group	TA	Building	Wing	Room	5. Waste Code
S 8 6 3498	0 8 2 8 8 6	0 0 1 2 5 5	H S E - 1 7	2 1		[redacted]		A 7 6

6. Waste Description

TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages: Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³	8. Gross Volume: Amount	(M = meter³, F = foot³, G = gallon)	9. Package Radiation at: Surface (mr/hr)	1 Meter (mr/hr)
						28	m³ [redacted]	20	6

10. Gross Weight: Amount	(K = kilogram, P = pound, T = ton)
66	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area 7 RSWO S77V01

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	4500	E -1	C [redacted]		E	A [redacted]		
PU239	2000	E -1	C [redacted]		E	A [redacted]		
Am241	1600	E +2	C [redacted]		E	A [redacted]		
MFP	1620	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-17/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Lonnie E. Martin	
Earl J. Cox by GM	Lonnie E. Martin	

13. Date Disposed (M M D D Y Y)	14. Disposal/Storage Location: Area	Shaft	Pit	Post(s)	Layer	Pos	15. Shaft Surface Dose (mr/hr)
0 7 2 8 8 6			2 9	1 3 T 1 2	1 0	S	

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
ANDREW J. CAYINAN	AC	AC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature)	Date 8-28-86	Date 8-28-86	Date 9/11/86	Date 9-15-86

HSE-7 (8/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3499

2. Date (M M D D Y Y): 09 05 86

3. Retrievable Serial Number: 001245

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
23	8

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
65	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7 RSWD 5771109

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU239	45600	E -2	C [redacted]		E	A [redacted]		
PU239	3616	E -1	C [redacted]		E	A [redacted]		
AM241	1343	E +2	C [redacted]		E	A [redacted]		
U235	~~0200~~ 2000	E ~~+0~~ -1	M [redacted]		E	E [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Lonnie E. Martin	
Earl J. Cox by GM	Lonnie E. Martin	

13. Date Disposed (M M D D Y Y): ~~09 05 86~~ 09 05 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	6 T 7	9	5

15. Shaft Surface Dose mr/hr:

HSE-7 Waste Management Representative (Print Name Here): ANDREW J. CATANACH

Signature certifies that waste acceptance criteria and all disposal requirements were met.
(Signature)

Received	Logbook	Computer	Verified
AC	AC	RD	DB
Date 9-5-86	Date 9-5-86	Date 9/4	Date

HSE-7 Form HS 14-3A (5/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE Read instructions on back carefully before completing this form

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3500

2. Date (M M D D Y Y): 09 05 86

3. Retrievable Serial Number: 001246

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 476

6. Waste Description

TRU cement paste OLD CMP TO 789-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
20	7

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
65	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWA 5711110

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials White-Out Account	Project Code
PU238	6560	E -2	C [redacted]		E	A [redacted]		
PU239	3610	E -1	C [redacted]		E	A [redacted]		
Am241	1343	E +2	C [redacted]		E	A [redacted]		
U	9000 ~~6200~~	E ~~+6~~ -6	M [redacted]		E	E [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	LONNIE E MARTIN	
Earl J. Cox	Lonnie E Martin	

13. Date Disposed (M M D D Y Y): 09 05 86

14. Disposal/Storage Location Bldg 10.80

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	7T	9	5

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
VINCENT G. SALAZAR		29		
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature)	Date 9-5-86	Date 9-5-86	Date 9/12	Date 9/12

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3501

2. Date (M M D D Y Y): 0 9 0 5 8 6

3. Retrievable Serial Number: 0 0 1 2 4 7

4. Origin of Waste: Group: HSE-7 | TA: 21 | Building: | Wing: [redacted] | Room:

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume ft³

8. Gross Volume: Amount: 248 | (M = meter³, F = foot³, G = gallon): M³ [redacted]

9. Package Radiation at: Surface (mr/hr): | 1 Meter (mr/hr): 20 7

10. Gross Weight: Amount: 641 | (K = kilogram, P = pound, T = ton): T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 5771/1/1

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	6.560	E-2	C [redacted]		E	A [redacted]		
PU239	3.610	E-1	C		E	A		
Am241	1.343	E+2	C		E	A		
U235	~~0.200~~ 0.000	E-1	~~M~~		E	E		
		E			E			
		E			E			

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	LONNIE E MARTIN	
Earl J. Cox by [illegible]	Lonnie E Martin	

13. Date Disposed: M M D D Y Y: 0 9 0 5 8 6

14. Disposal/Storage Location Bottom 10'30

Area	Shaft	Pit	Post(s)	Layer	Pos
6		27	78	9	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

Signature certifies that waste accepted [illegible] (Signature): [illegible]

Received	Logbook	Computer	Verified
[illegible]	29	[illegible]	[illegible]
Date 9-5-86	Date 9-5-86	Date 9/22	Date 9/22/86

Form Number HS 10-2A (3/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3502

2. Date (M M D D Y Y): 0 9 0 5 8 6

3. Retrievable Serial Number: 0 0 1 2 4 8

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume (ft³)

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
25	10

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
63	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area 7 RWD 57711 2

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	6.560	E -2	C [redacted]		E	A [redacted]		
PU239	3.610	E -1	C		E	A		
Am241	1.3143	E +2	C		E	A		
U235	~~0.206~~ 2.000	E ~~-10~~ -1	M		E	E		
		E			E			
		E			E			

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Bonnie E. Martin	
Earl J. Cox by [illegible]	Bonnie E. Martin	

13. Date Disposed (M M D D Y Y): 0 9 0 5 8 6

14. Disposal/Storage Location Top 11'00

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	78	9	5

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

(Signature) [illegible]

Received	Logbook	Computer	Verified
[illegible]	29	[illegible]	[illegible]
Date 9-5-86	Date 9-8-86	Date 9/22	Date 9/24/86

Form Number HS 10-2A (3/86)

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Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3503

2. Date (M M D D Y Y): 0 8 2 9 8 6

3. Retrievable Serial Number: 0 0 1 [illegible]

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 4 7 6

6. Waste Description

TRU Cement Paste OCD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³ F = foot³ G = gallon)
[illegible] m³	[redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
20	7

10. Gross Weight

Amount	(K = kilogram P = pound T = ton)
6.5 T	[redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSCD 5 7 7 1 1 1 3

12. Radionuclide Content

Nuclide	Amount	±	(C = curie M = gram)	Error on Amount	±	Amount Determined By (A = analysis M = measurement E = estimate)	SS Materials Write-Off Account	Project Code
PU 238	6.5 6 0	E -3	C [redacted]		E	A [redacted]		
PU 239	3.6 1 0	E -1	C [redacted]		E	A [redacted]		
Am 241	1.3 4 3	E [illegible]	C [redacted]		E	A [redacted]		
U 235	[illegible]	E [illegible]	m [redacted]		E	E [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Cox	Joel A. Vigil	
Earl J. Cox by EM	Joel A. Vigil	

13. Date Disposed: M M D D Y Y 0 9 2 9 8 6

14. Disposal/Storage Location Top 1/3

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	1 5 T	9	5

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

(Signature)

Received	Logbook	Computer	Verified
	29		
Date 9-29-86	Date 9-29-86	Date 9/29/86	Date 9-15-86

Form Number HS 10-2A (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S86 3504

2. Date (M M D D Y Y): 082886

3. Retrievable Serial Number: 001252

4. Origin of Waste: Group HSE-17 | TA 2V | Building | Wing [redacted] | Room

5. Waste Code: 476

6. Waste Description: TRU Cement Paste OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume ft³

8. Gross Volume: Amount 248 (M = meter³, F = foot³, G = gallon) M³ [redacted]

9. Package Radiation at: Surface (mr/hr) 18 | 1 Meter (mr/hr) 4

10. Gross Weight: Amount 55 (K = kilogram, P = pound, T = ton) T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T PSWD S77111 7

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.875	E	-1 C [redacted]		E	A [redacted]		
PU239	9.500	E	-2 C [redacted]		E	A [redacted]		
AM241	9.326	E	-4 C [redacted]		E	A [redacted]		
NFP	9.175	E	-4 C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Cox	Bonnie E Martin	
Earl J. Cox	Bonnie E Martin	

13. Date Disposed (M M D D Y Y): 082886

14. Disposal/Storage Location Top

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	13T	9	5

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) Eugene Salazar

Received	Logbook	Computer	Verified
8	29	RD	DP
Date 8-28-86	Date 8-28-86	Date 9/2/86	Date 9-15-86

Form Number HS 1[illegible]A (3/86)

Los Alamos

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number	2. Date (M M D D Y Y)	3. Retrievable Serial Number	4. Origin of Waste: Group	TA	Building	Wing	Room	5. Waste Code
S 8 6 3505	0 8 2 8 8 6	0 0 1 2 5 3	H S E - 7	21		[redacted]		A 7 6

6. Waste Description

TRU cement paste OLD CMP TO TA-54

7. Numbers of Waste Packages: Plastic Bags	Card Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume ft³	8. Gross Volume: Amount	(M = meter³, F = foot³, G = gallon)	9. Package Radiation at: Surface (mr/hr)	1 Meter (mr/hr)
						2.8	m³ [redacted]	2.0	7

10. Gross Weight: Amount	(K = kilogram, P = pound, T = ton)	11. Additional Description of Packaging and Packaging Materials
5.6	T [redacted]	Area T RSWD S 7 7 1 1 1 8

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	2.875	E -1	C [redacted]		E	A [redacted]		
PU239	9.500	E -2	C [redacted]		E	A [redacted]		
AM241	9.320	E -1	C [redacted]		E	A [redacted]		
MFP	9.175	E -4	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Lonnie E Martin	
Earl J. Cox by GM	Lonnie E Martin	

13. Date Disposed (M M D D Y Y)	14. Disposal/Storage Location: Area	Shaft	Pit	Post(s)	Layer	Pos	15. Shaft Surface Dose (mr/hr)
0 8 1 8 8 6	G		29	13T	9	5	

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
[redacted] C. SALAZAR		29		
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature)	Date 8-28-86	Date 8-26-86	Date 9/4/86	Date 9-15-86

Form Number HSE 10-3(7/86)

Los Alamos

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3506

2. Date (M M D D Y Y): 0 9 0 5 8 6

3. Retrievable Serial Number: 0 0 1 2 5 0

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21			

5. Waste Code: A 7 6

6. Waste Description

TRU cement paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume m³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
25	10

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5771119

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.875	E-1	C		E	A		
PU239	9.500	E-2	C		E	A		
Am241	9.320	E+1	C		E	A		
NFP	9.175	E-4	C		E	A		
		E			E			
		E			E			

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	Lonnie E. Martin	
Earl J. Cox by [illegible]	Signature: Lonnie E Martin	

13. Date Disposed (M M D D Y Y): 0 9 0 5 8 6

14. Disposal/Storage Location Top 11.8

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	8	9	5

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

Signature affirms that waste acceptance criteria and all disposal requirements were met
(Signature) Eugene Salazar

Received	Logbook	Computer	Verified
EC	29	[illegible]	D-8
Date 9-5-86	Date 9-5-86	Date 9/22	Date 9/[illegible]

Form Number HS 10-28 (3/86)

Los Alamos

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 3 6 3507

2. Date (M M D D Y Y): 0 8 2 9 8 6

3. Retrievable Serial Number: 0 0 1 2 5 1

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 4 7 6

6. Waste Description

TRU cement paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Cardboard Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
20	7

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWO 5771/120

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.875	E-1	C [redacted]		E	A [redacted]		
PU239	9.500	E-2	C [redacted]		E	A [redacted]		
AM241	9.320	E+1	C [redacted]		E	A [redacted]		
MFP	9.175	E-4	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-7 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by GM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 8 2 9 8 6

14. Disposal/Storage Location TOP 245

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	1 5 T	9	5

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
EUGENE C. SALAZAR	8/	25		
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature)	Date 8-27-86	Date 8-29-86	Date 9/11/86	Date 9-15-86

Form Number HSE 10-2 (3/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number	2. Date (M M D D Y Y)	3. Retrievable Serial Number	4. Origin of Waste: Group	TA	Building	Wing	Room	5. Waste Code
S 8 6 3508	08 28 86	001256	HSE-17	21		[redacted]		476

6. Waste Description

TRU cement paste OLD CMP TO TA-54

7. Numbers of Waste Packages: Plastic Bags	Card Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³	8. Gross Volume: Amount	(M = meter³, F = foot³, G = gallon)	9. Package Radiation at: Surface (mr/hr)	1 Meter (mr/hr)
						28	m³ [redacted]	20	6

10. Gross Weight: Amount	(K = kilogram, P = pound, T = ton)	11. Additional Description of Packaging and Packaging Materials
65	T [redacted]	Area 7 RSWD 5727V24

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	4500	-1	C [redacted]			A [redacted]		
PU239	2000	-1	C			A		
Am241	1600	-2	C			A		
MFP	1620	-3	C			A		

APPROVALS

Waste Generator (Print Name Here)	HSE-17/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Lonnie E. Martin	
Earl J. Cox by GM	Lonnie E. Martin	

13. Date Disposed (M M D D Y Y)	14. Disposal/Storage Location: Area	Shaft	Pit	Post(s)	Layer	Pos	15. Shaft Surface Dose (mr/hr)
08 28 86			21	1 2 ~~3~~ 4	10	5	

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
ANDREW J. CATANZARITI	AC	AC	DL	DP
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature)	Date 8-28-86	Date 8-28-86	Date 8/6/8	Date 9-15-86

Form Number HS 10-3A (2/85)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S86 3509

2. Date: M M D D Y Y — 0 9 0 5 8 6

3. Retrievable Serial Number: 0 0 1 2 4 0

4. Origin of Waste: Group: HSE-7 | TA: 21 | Building: | Wing: [redacted] | Room:

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume ft³

8. Gross Volume: Amount: 2.8 m³ (M = meter³, F = foot³, G = gallon) [redacted]

9. Package Radiation at: Surface (mr/hr): 23 | 1 Meter (mr/hr): 8

10. Gross Weight: Amount: 6.6 T (K = kilogram, P = pound, T = ton) [redacted]

11. Additional Description of Packaging and Packaging Materials: Area J RSWD 5/7/1/26

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write Off: Account	Project Code
PU238	2.100 ~~3.210~~	E ~~+10~~ −1	C [redacted]		E	A [redacted]		
PU239	3.200 ~~3.210~~	E ~~+10~~ −1	C [redacted]		E	A [redacted]		
Am241	1.861	E +2	C [redacted]		E	A [redacted]		
U235	1.700	E +2	M [redacted]		E	E [redacted]		
NFP	1.500	E −3	C [redacted]		E	A [redacted]		
U238	5.400	E +1	M [redacted]		E	E [redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	LONNIE E. MARTIN	
Earl J. Cox by [illegible]	Lonnie E. Martin	

13. Date Disposed: M M D D Y Y — 0 9 0 5 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		2 7	0 7	1 0	S

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): ANDREW J. CATANACH

Signature certifies that waste certification criteria and all applicable requirements were met.
(Signature) [illegible]

Received	Logbook	Comp	Verified
	AC	[illegible]	[illegible]
Date 9-5-86	Date 9-5-86	Date 9/2/	Date 9/[illegible]

Form Number HS-10-04 (9/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3510

2. Date (M M D D Y Y): 0 9 0 5 8 6

3. Retrievable Serial Number: 0 0 1 2 3 9

4. Origin of Waste

Group	TA	Building	Wing	Room
MSE-17	21		[redacted]	

5. Waste Code: 4 7 6

6. Waste Description

TRU cement paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.2	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
25	10

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
647	[redacted]

11. Additional Description of Packaging and Packaging Materials

Area 7 35 40 5771127

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.100 ~~[illegible]~~	E -1 ~~+10~~	C [redacted]		E	A [redacted]		
PU239	3.200 ~~[illegible]~~	E -1 ~~+10~~	C [redacted]		E	A [redacted]		
AM241	1.861	E [redacted]	C [redacted]		E	A [redacted]		
U235	1.700	E [redacted]	M [redacted]		E	E [redacted]		
MPP	1.500	E -3	C [redacted]		E	A [redacted]		
U238	5.400	E -1	M [redacted]		E	E [redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	LONNIE E MARTIN	
Earl J. Cox by [illegible]	Lonnie E Martin	

13. Date Disposed (M M D D Y Y): 0 9 0 5 8 6

14. Disposal/Storage Location Pro Tap

Area	Shaft	Pit	Post(s)	Layer	Pos
G-1		29	7	9	5

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

Signature certifies that waste acceptance criteria and all disposal requirements were met
(Signature) [signature]

Received	Logbook	Computer	Verified
[signature]	29	RJ	DG
Date 9-5-86	Date 9-5-86	Date 9/22	Date [signature]

Form Number HS 10-2A (3/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3511

2. Date (M M D D Y Y): 09 12 86

3. Retrievable Serial Number: 001236

4. Origin of Waste: Group HSE-7 | TA 21 | Building | Wing [redacted] | Room

5. Waste Code: 476

6. Waste Description: TRU cement paste OLD CMR TO TA-54

7. Numbers of Waste Packages: Plastic Bags | Card Board Boxes | Drums No | Drums Gal | Wooden Crates No | Wooden Crates Volume

8. Gross Volume: Amount 28 | (M = meter³, F = foot³, G = gallon) M [redacted]

9. Package Radiation at: Surface (mr/hr) 4 | 1 Meter (mr/hr) 0

10. Gross Weight: Amount 644 | (K = kilogram, P = pound, T = ton) T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7 RFWD 577149

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error or Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write Off Account	Project Code
PU 238	5.100 ~~0.210~~	E -1 ~~+10~~	C [redacted]		E	A [redacted]		
PU 239	5.500 ~~0.330~~	E -1 ~~+10~~	C [redacted]		E	A [redacted]		
AM 241	1.8601	E +2	C [redacted]		E	A [redacted]		
U 235	1.7000	E +2	M [redacted]		E	E [redacted]		
NEP	1.5000	E -3	C [redacted]		E	A [redacted]		
U 238	5.4000	E +1	M [redacted]		E	E [redacted]		

APPROVALS arrived @ 1045 9/12/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cor	Joe A. Vigil	
Earl J. Cor by JM	Joe A Vigil	

13. Date Disposed: M M D D Y Y 09 12 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		219	14T15	9	C

15. Shaft Surface Dose (mr/hr)

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria in [illegible] (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	[illegible]	D.Q.
Date 9/12/86	Date 9/12/86	Date 9/12/86	Date 9/26/86

Form Number HS 10-9 (6-86)

Los Alamos

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Los Alamos, New Mexico 87545

RADIOACTIVE S[illegible]D WASTE DISPOSAL RECORD

1. Form Number
S B 6 3512

2. Date (M M D D Y Y): 090586

3. Retrievable Serial Number: 001241

4. Origin of Waste: Group: HSE-7; TA: 21; Building:; Wing: [redacted]; Room:

5. Waste Code: A76

6. Waste Description

TRU cement paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
35	3

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.6	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area 7 PSUD 57 7 1 1 34

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write Off: Account	Project Code
PU238	6.560	E-2	C [redacted]		E	A [redacted]		
PU239	3.610	E-1	C [redacted]		E	A [redacted]		
AM241	1.343	E-2	C [redacted]		E	A [redacted]		
U235	~~6.200~~ 2.005	E-10	M [redacted]		E	E [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-1[illegible]/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Fox	RONNIE E. MARTIN	
Earl J. Fox by RM	Ronnie E Martin	

13. Date Disposed (M M D D Y Y): 09 05 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pit
E		21	6	9	S

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): [illegible]

Signature	Received	Logbook	Computer	Verified
[illegible]	AC	AC	RR	D.G.
	Date 9-5-86	Date 9-5-86	Date 9/11/86	Date 9/[illegible]

Form Number HS 10 2A (3/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S B 6 3513

2. Date (M M D D Y Y): 0 9 1 2 8 6

3. Retrievable Serial Number: 0 0 1 2 3 3

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	2		[redacted]	

5. Waste Code: 4 7 6

6. Waste Description

TRU cement paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
15	5

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
68	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area 7 RSWD 5771/36

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	4.700 ~~0.047~~	E ~~-10~~ -2	C [redacted]		E	A [redacted]		
PU239	2.000 ~~0.200~~	E ~~-10~~ -1	C [redacted]		E	A [redacted]		
Am241	8.630	E +1	C [redacted]		E	A [redacted]		
NFP	3.000 ~~0.300~~	E ~~-3~~ -1	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS received at 1350 9/12/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Cox	Lennie Martin	
Earl J. Cox by LM	Lennie Martin	

13. Date Disposed (M M D D Y Y): 0 9 1 2 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	13T14	1	C

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

(Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	KC	D-8
Date 9/12/86	Date 9/12/86	Date 9/22	Date 9/22/86

Form Number HS 10-2A (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

Mail: Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3514

2. Date (M M D D Y Y): 09 12 86

3. Retrievable Serial Number: 001231

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU cement paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
	1.2

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.3	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 57711 38

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	4.700 ~~0.047~~	E -2 ~~+0~~	C [redacted]		E	A [redacted]		
PU239	2.000 ~~0.200~~	E -1 ~~+0~~	C [redacted]		E	A [redacted]		
AM241	8.630	E +1	C [redacted]		E	A [redacted]		
MFP	2.000 ~~0.530~~	E -4 ~~-3~~	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 12 86

14. Disposal/Storage Location Bottom Tier 2 Sh

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	15T	9	C

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SHAW

Signature certifies that waste acceptance criteria and disposal requirements were met (Signature): Eugene Shaw

Received	Logbook	Computer	Verified
	21	Q1	
Date 9-12-86	Date 9-12-86	Date 9/22	Date

Form Number HS 10-2 (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3515

2. Date (M M D D Y Y): 0 9 1 1 8 6

3. Retrievable Serial Number: 0 0 1 2 3 2

4. Origin of Waste

Group	TA	Building	Wing	Room
H S E - 7	2 1		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRW cement paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8 m³	[redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
26	8

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.4 T	[redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7 RSWD S 7 7 1 1 4 0

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
Pu 238	21.700 ~~0.0447~~	E -2 ~~-10~~	C [redacted]		E	A [redacted]		
Pu 239	2.000 ~~0.000~~	E -1 ~~-10~~	C [redacted]		E	A [redacted]		
Am 241	~~0.6310~~	E ~~-11~~	C [redacted]		E	A [redacted]		
MFP	3.000 ~~0.3000~~	E -4 ~~-3~~	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Cox	Lonnie E. Martin	
Earl J. Cox by [illegible]	Lonnie E. Martin	

13. Date Disposed (M M D D Y Y): 0 9 1 1 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		2 9	5 T	9	S

15. Shaft Surface Dose (mr/hr): [illegible]

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature) Keith Carter	Date 9/11/86	Date 9/11/86	Date 9/22	Date 9/22/86

Form Number HS 10-9A (3/86)

Los Alamos

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3516

2. Date: M M D D Y Y — 0 8 2 9 8 6

3. Retrievable Serial Number: 0 0 1 2 3 4

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU cement paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Cardboard Boxes	Drums No	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
208	M [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
20	7

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
63	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area TT RSWD 57114

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
PU238	2.100 ~~0.210~~	E ~~+13~~ -1	C [redacted]		E	A [redacted]		
PU239	4.400 ~~0.440~~	E ~~+10~~ -1	C [redacted]		E	A [redacted]		
AM241	9.675	E +1	C [redacted]		E	A [redacted]		
U235	4.010	E +2	M [redacted]		E	A [redacted]		
U238	1.710	E +2	M [redacted]		E	A [redacted]		
MFP	0.750 ~~0.175~~	E ~~+3~~ -3	C [redacted]		E	A [redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-16/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl T. Cox	Joe A. Vigil	
Earl T. Cox	Joe A. Vigil	

13. Date Disposed: M M D D Y Y — 0 8 2 9 8 6

14. Disposal/Storage Location Top 195

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		27	15T	9	S

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. [illegible]

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Eugene [illegible]

Received	Logbook	Computer	Verified
8-29-86	29	R.D.	DS
Date 8-29-86	Date 8-29-86	Date 9/2/86	Date 9-15-86

Form Number HSE-7-2A (6/85)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S86 3517

2. Date (M M D D Y Y): 08 28 86

3. Retrievable Serial Number: 001235

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU cement paste old CMP to TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
18	4

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
54	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T ASWO 577142

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU239	4.400 ~~0.440~~	E-1 ~~+0~~	C [redacted]		E	A [redacted]		
PU238	2.100 ~~2.210~~	E-1 ~~+0~~	C [redacted]		E	A [redacted]		
AM241	9.675	E+1	C [redacted]		E	A [redacted]		
U235	4.010	E+2	M [redacted]		E	A [redacted]		
U238	1.710	E+2	M [redacted]		E	A [redacted]		
NFP	1.750 ~~0.175~~	E-3 ~~-3~~	C [redacted]		E	A [redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Lonnie E. Martin	
Earl J. Cox by LM	Lonnie E. Martin	

13. Date Disposed (M M D D Y Y): 08 28 86

14. Disposal/Storage Location 700

Area	Shaft	Pit	Post(s)	Layer	Pos.
C		29	12T	9	5

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
EUGENE C. [illegible]	[illegible]	29	[illegible]	DP
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature) [illegible]	Date 8-28-86	Date 8-28-86	Date 9/2/86	Date 9-15-86

Form Number HS 10-[illegible]

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions and back carefully before completing this form

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3518

2. Date: M M D D Y Y — 09 11 86

3. Retrievable Serial Number: 001237

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 476

6. Waste Description: TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume: Amount 2.8 (M = meter³, F = foot³, G = gallon) M³ [redacted]

9. Package Radiation at: Surface (mr/hr) 2.6; 1 Meter (mr/hr) .8

10. Gross Weight: Amount 6.5 (K = kilogram, P = pound, T = ton) T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 57711 43

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU239	4.400	-1	C [redacted]			A [redacted]		
PU238	2.100	-1	C [redacted]			A [redacted]		
AM241	9.675	+1	C [redacted]			A [redacted]		
U235	4.010	+2	M [redacted]			A [redacted]		
U238	1.710	+2	M [redacted]			A [redacted]		
NFP	1.758	-3	C [redacted]			A [redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Lonnie E Martin	
Earl J. Cox	Lonnie E Martin	

13. Date Disposed: M M D D Y Y — 09 11 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	5 T6	9	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	A.D.	D.G.
Date 9/11/86	Date 9/11/86	Date 9/22	Date [illegible]

Form Number HS 10-2A (3/85)

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Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

Waste Management
Engineering MS-514

1. Form Number: S 8 6 8519

2. Date: M M D D Y Y — 0 9 0 5 8 6

3. Retrievable Serial Number: 0 0 1 2 3 8

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU cement waste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³ F = foot³ G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
20	7

10. Gross Weight

Amount	(K = kilogram P = pound T = ton)
65	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area 7 RSWD 5711144

12. Radionuclide Content

Nuclide	Amount	±	(C = curie M = gram)	Error on Amount	±	Amount Determined By (A = analysis M = measurement E = estimate)	SS Materials Write-Off Account	Project Code
PU239	4.400	-1	[redacted]			A [redacted]		
PU238	3.100	-1	C			A		
Am241	9.675	+1	C			A		
U235	4.010	+2	M			A		
U238	1.710	+2	M			A		
MFP	6.750	-3	C			A		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Cox	Joe A. Vigil	
Earl J Cox by JM	Joe A. Vigil	

13. Date Disposed: M M D D Y Y — 0 9 0 5 1 6

14. Disposal/Storage Location — Bottom 10 30

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	78	9	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): [redacted] EUGENE C.

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): [signature]

Form Number [redacted]

Received	Logbook	Computer	Verified
	29		D.G.
Date 9-5-86	Date 9-5-86	Date 9/22	Date 9/[illegible]

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: [illegible] instructions [illegible] completing this form.

HSE-7 Waste Management
Ext. 6094, MS-1592

1. Form Number: S 8 6 3520

2. Date: M M D D Y Y — 0 9 0 5 8 6

3. Retrievable Serial Number: 0 0 1 2 4 2

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU Cement Paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
35	13

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5771147

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	6.560 E	-2	C [redacted]		E	A [redacted]		
PU239	3.610 E	-1	C [redacted]		E	A [redacted]		
Am241	1.343 E	+2	C [redacted]		E	A [redacted]		
U 235	~~0.200 E~~ 2.000	~~+0~~ -1	M [redacted]		E	E [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by [illegible]	Joe A. Vigil	

13. Date Disposed: M M D D Y Y — 0 9 0 5 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
6		29	0	9	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): Andrew Czarnecki

Signature certifies that waste acceptance criteria and all disposal requirements were met.
Signature: [illegible]

Received	Logbook	Computer	Verified
AC	AC	[illegible]	[illegible]
Date 9-5-86	Date 9-5-86	Date 9/15/86	Date 9/[illegible]

Form Number: IS 10-2A (3/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3521

2. Date (M M D D Y Y): 0 9 0 5 8 6

3. Retrievable Serial Number: 0 0 1 2 4 3

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU cement POSAL OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³ F = foot³ G = gallon)
248	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
23	8

10. Gross Weight

Amount	(K = kilogram P = pound T = ton)
64T	[redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 57711 48

12. Radionuclide Content

Nuclide	Amount	±	(C = curie M = gram)	Error on Amount	±	Amount Determined By (A = analysis M = measurement E = estimate)	SS Materials Write-Off Account	Project Code
PU238	6.560	E	-2 C		E	A		
PU239	3.610	E	-1 C		E	A		
AM241	1.343	E	-2 C		E	A		
U235	~~0.0200~~ 2.000	E	~~-2~~ -1 M		E	E		
		E			E			
		E			E			

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 9 0 5 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	6 7	10	S

15. Shaft Surface Dose mr/hr:

HSE-7 Waste Management Representative (Print Name Here): ANDREW J. CATANACH

Signature certifies that waste acceptance criteria and all disposal requirements were met.
(Signature) [signature]

Received	Logbook	Computer	Verified
AC	AC	[illegible]	[illegible]
Date 9-5-86	Date 9-5-86	Date 9/12	Date 9/[illegible]

Form Number HS 10-9A (7/85)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext. 5645, MS 1092

1. Form Number: S 8 6 3522

2. Date (M M D D Y Y): 0 9 0 5 8 6

3. Retrievable Serial Number: 0 0 1 2 4 4

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU Cement Paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
35	13

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
.619	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWO 577/149

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	6.560	E -2	C [redacted]		E	A [redacted]		
PU239	3.610	E -1	C		E	A		
AM241	1.343	E -2	C		E	A		
U235	~~0.200~~ 2.000	E ~~-6~~ -1	A		E	S		
		E			E			
		E			E			

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by DM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 9 0 5 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	5 T6	9	S

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): Andrew Carmach

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): [signature]

Received	Logbook	Computer	Verified
AC	AC	RV	DG
Date 9-5-86	Date 9-5-86	Date 9-5-86	Date 9-5-86

Form Number HS-10-A (3/86)

Printed: 14-MAY-9

DRUM RETRIEVAL DATA FORM

ORIGINAL DATA (from TRU Waste Database)

DRUM NO.	LABEL NO.	DRUM SIZE (m3)	CONTENT DESCRIPTION	WEIGHT (lbs)	SURFACE DOSE RATE (mrem/hr)	POSSIBLE H2 > LFL (Y/N)
001244	S863522	2.80	Waste_cd: 76, tru cement paste old cmp to ta-54 area t rswd s771149	13802.2	35.0	N

NEW DATA (complete during retrieval)

RETRIEVAL DATE (m/d/y)	SURFACE DOSE RATE (mrem/hr)	DRUM CONDITION		COMMENTS
		GOOD		This drum is to be vented and placed into storage. Apply one barcode label to drum
		SUSPECT"O"		This drum is to be vented, overpacked, and placed into storage. Mark top of drum with an "O" for overpack. Apply one barcode label to drum
		SUSPECT"S"		This drum is to be vented and placed into storage. Mark top of drum with a "S" for suspect with no overpack. Apply one barcode label to drum
		DENTS		Description:
		RUST		Description:
		PITTING CORROSION		Description:
		DAMAGED (breached)		This drum is to be overpacked or repacked, and placed into storage. overpack/repack container.
		OVERPACK		Overpack container size:
		REPACK		Repack container size:

Drum Manufacturing
or Purchasing Data:

Signature: Date:

WM-F056,R.0(11/96)

DATE	1/8/98	TIME	2:48:20 PM

OPERATOR	Dino Martinez
DRUM ID	01244
RSWD	
DRUM CONDITION	Good - no significant wear and/or damage.
SUSPECTED HIGH %H2	NO

DRUM WEIGHT	395
%H2 IN DRUM	0.00
FINAL EVAC. PRES.	13.03
DRUM PRESSURE	20.70
EVAC OVERRIDE?	YES

The fields below need to be updated for each drum.

VENT SERIAL #	828
DRUM BURN?	NO
LID CONTAMINATION?	NO
VENT THREADS STRIPPED?	NO

WEF No.
97-004

Completed by Waste Generator

☒ On-going ☐ One-time	WPF No.	CWDR/TWSR No.	Item Nos.
	Multiple	Multiple	Multiple

☐ Hazardous/Chemical ☐ Low-Level Waste ☒ Transuranic Waste
☐ Low-Level Mixed Waste ☐ Radioactive Liquid Waste ☐ Other _____

Waste Acceptance Criteria

Section 4.1.2 Venting. The WAC states that "All TRU waste containers must be vented using carbon-composite filters."

Reason for Variance from WAC and Justification

Scintered metal filters instead of carbon-composite filters are being installed on TWISP drums. This it due to the fact that ~5000 metal filters were purchased 2+ years ago based on guidance from characterization and certification personnel.

Requested by: (Print)	Requested by: (Signature)	Z Number	Date
Gilbert Montoya	[signature]	097369	6/16/97

Waste Management Facility Approval

Special Instructions and Comments

~~A list of drums with scintered metal filters will be provided to the Information Management team weekly. The IM team will attach the list to this form.~~ 6/16/97 DVC, GMM

EM-SWO will work with CST-7 to determine when and how these filters will be replaced with carbon-composite filters prior to shipment of the drums to WIPP. If EM-SWO is required to replace the filters, the process and tracking of the appropriate paperwork will be documented in a formal procedure. GMM, DVC 6/16/97

A copy of this WE will be placed with each affected data package.

☒ Approved ☐ Rejected	Approved by: (Signature)	Z Number	Date
	[signature]	113199	6/16/97

WM-F054, R.1 (3/97)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3523

2. Date (M M D D Y Y): 09 12 86

3. Retrievable Serial Number: 001225

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU cement waste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
4	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
64	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWA S77115 2

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	1.7400	E -1	C [redacted]		E	A [redacted]		
PU239	3.0000	E -1	C [redacted]		E	A [redacted]		
U235	2.6875	E -3	M [redacted]		E	E [redacted]		
Am241	7.2000	E +1	C [redacted]		E	A [redacted]		
NFP	1.3500	E -3	C [redacted]		E	A [redacted]		
U238	1.0355	E +2	M [redacted]		E	E [redacted]		

APPROVALS Arrived @ 1040 9/12/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 12 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	14T15	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	DD	D.B
Date 9/12/86	Date 9/12/86	Date 9/12	Date 9/26/86

Form Number HS 10-RA (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext. 6016, MS J592

1. Form Number: S86 8524

2. Date: M M D D Y Y 09 12 86

3. Retrievable Serial Number: 001226

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 476

6. Waste Description: TRU cement paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume: Amount 28 (M = meter³, F = foot³, G = gallon) [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
40	0

10. Gross Weight: Amount 665 (K = kilogram, P = pound, T = ton) [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 57711153

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	1.740	E-1	C [redacted]		E	A [redacted]		
PU239	3.000	E-1	C [redacted]		E	A [redacted]		
U235	2.685	E+2	M [redacted]		E	E [redacted]		
Am241	7.200	E+1	C [redacted]		E	A [redacted]		
NFP	1.350	E-3	C [redacted]		E	A [redacted]		
U238	1.035	E+2	M [redacted]		E	E [redacted]		

APPROVALS arrived @ 1040 9/12/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by GM	Joe A. Vigil	

13. Date Disposed: M M D D Y Y 09 12 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	14T15	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC		
Date 9/12/86	Date 9/12/86	Date	Date

Form Number HS 10-2A (3/86) [redacted]

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3525

2. Date (M M D D Y Y): 0 9 1 1 8 6

3. Retrievable Serial Number: 0 0 1 2 2 7

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 4 7 6

6. Waste Description: TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card Board Boxes	Drums No	Drums Gal	Wooden Crates #	Wooden Crates Volume ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
	1.0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7 RSWO 5771/154

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined (A = analysis, M = measurement, E = estimate)	SS Materials Write Off Account	Project Code
PU 238	1.740	E-1	C [redacted]	.	E	A [redacted]		
PU 239	3.000	E-1	C [redacted]	.	E	A [redacted]		
U 235	2.685	E-2	M [redacted]	.	E	E [redacted]		
AM 241	7.200	E-1	C [redacted]	.	E	A [redacted]		
MFP	1.356	E-3	C [redacted]	.	E	A [redacted]		
U 238	1.035	E-2	M [redacted]	.	E	E [redacted]		

APPROVALS arrived @ 10 30 9/11/86

Waste Generator (Print Name Here)	HSE-17/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 9 1 1 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
6		29	5 T6	9	5

15. Shaft Surface Dose mr/hr: .

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	RD	DB
Signature verifies that waste acceptance criteria and all disposal requirements were met. (Signature) Keith Carter	Date 9/11/86	Date 9/11/86	Date 9/22	Date 9/24/86

Form Number/Rev 10-20-86

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S86 3526

2. Date: M M D D Y Y — 09 11 86

3. Retrievable Serial Number: 001228

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU cement paste OGD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount: 2.8 m³ (M = metric, F = foot, G = gallon) [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
10	1

10. Gross Weight

Amount: 6.9 T (K = kilogram, P = pound, T = ton) [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5771155

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	1.140 E	-1	C [redacted]		E	A [redacted]		
PU239	3.000 E	-1	C [redacted]		E	A [redacted]		
U235	2.685 E	+2	M [redacted]		E	E [redacted]		
AM241	7.200 E	+1	C [redacted]		E	A [redacted]		
NFP	1.350 E	-3	C [redacted]		E	A [redacted]		
U238	1.035 E	+2	M [redacted]		E	E [redacted]		

APPROVALS arrived at 0955 9/11/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by GM	Joe A. Vigil	

13. Date Disposed: M M D D Y Y — 09 11 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	5 6	9	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

(Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC		
Date 9/11/86	Date 9/11/86	Date	Date 9/11/86

Form Number HS 10-2A (8/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3527

2. Date: M M D D Y Y — 0 9 1 1 8 6

3. Retrievable Serial Number: 0 0 1 2 2 7

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume: Amount 2.8 m³ (M = meter³, F = foot³, G = gallon) [redacted]

9. Package Radiation at: Surface (mr/hr) 10; 1 Meter (mr/hr) 2

10. Gross Weight: Amount 616 T (K = kilogram, P = pound, T = ton) [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 577/556

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU 238	1.740	E-1	C [redacted]		E	A [redacted]		
PU 239	3.000	E-1	C [redacted]		E	A [redacted]		
U 235	2.685	E+2	M [redacted]		E	E [redacted]		
Am 241	7.200	E+1	C [redacted]		E	A [redacted]		
MFP	1.356	E-3	C [redacted]		E	A [redacted]		
U 238	1.035	E+2	M [redacted]		E	E [redacted]		

APPROVALS arrived @ 10:30 9/11/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed: M M D D Y Y — 0 9 1 1 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	5 T	9	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) Keith Carter	Date 9/11/86	Date 9/11/86	Date 9/22	Date 9/29/86

Form Number HS 10-2A (3/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: [illegible] back of this form before completing this form

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3528

2. Date (M M D D Y Y): 09 11 86

3. Retrievable Serial Number: 001230

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU cement paste OLD CMR TD TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
	1.2 / 3.

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 57711157

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	1.740	E-1	C [redacted]	.	E	A [redacted]		
PU239	3.000	E-1	C [redacted]	.	E	A [redacted]		
U235	2.685	E+2	G [redacted]	.	E	E [redacted]		
Am241	7.200	E+4	C [redacted]	.	E	A [redacted]		
NPP	1.350	E-3	C [redacted]	.	E	A [redacted]		
U238	1.035	E+2	M [redacted]	.	E	E [redacted]		

APPROVALS Received @ 1430 9/11/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Signature certifies that waste package or shipment is safe to handle and transport. Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 11 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	15T16	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) Keith Carter	Date 9/11/86	Date 9/11/86	Date 9/12	Date [illegible]

Form Number HS 10-2A (3/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Reproduction [illegible]

HSE-7 Waste Management
Ext. 6097, MS J592

1. Form Number: S 8 6 3529

2. Date (M M D D Y Y): 09 12 86

3. Retrievable Serial Number: 0 0 1 2 1 7

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume: Amount 2.8 m³ (M = meter³, F = foot³, G = gallon) [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
15	5

10. Gross Weight: Amount 6.6 T (K = kilogram, P = pound, T = ton) [redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7 RSWD 5 7 7 1 1 6 1

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU 238	1.530	E -3	[redacted]		E	[redacted]		
PU 239	3.500	E +0	[redacted]		E	[redacted]		
U 235	[illegible]	E +2	[redacted]		E	[redacted]		
Am 241	3.010	E +1	[redacted]		E	[redacted]		
MFP	7.890	E -4	[redacted]		E	[redacted]		
U 238	6.480	E +2	[redacted]		E	[redacted]		

APPROVALS arrived @ 1350 9/12/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe H. Vigil	
Earl J. Cox by JM	Joe H. Vigil	

13. Date Disposed (M M D D Y Y): 09 12 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	13T14	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature) Keith Carter	Date 9/12/86	Date 9/12/86	Date 9/22/86	Date 9/26/86

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Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3530

2. Date (M M D D Y Y): 09 12 86

3. Retrievable Serial Number: 0 0 1 2 1 6

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 476

6. Waste Description: TRU cement paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
1.5	.5

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7 RSWD 5771162

12. Radionuclide Content

Nuclide	Amount		(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU239	3.500	E+0	M [redacted]		E	A [redacted]		
PU238	1.330	E-3	M [redacted]		E	A [redacted]		
Am241	2.010	E+1	M [redacted]		E	A [redacted]		
U235	8.000	E+2	M [redacted]		E	A [redacted]		
MFP	7.000	E-4	C [redacted]		E	A [redacted]		
U238	6.480	E+2	C [redacted]		E	A [redacted]		

APPROVALS arrived @ 13:50 9/12/86

Waste Generator (Print Name Here): Earl J. Cox
Earl J. Cox

HSE-1/-10/-11 Area Representative (Print Name Here): Joe A. Vigil
Signature certifies that waste packaging and generator data is complete and correct.
Joe A. Vigil

Additional Signatures (Optional)

13. Date Disposed (M M D D Y Y): 09 12 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	14T	9	C

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met.
(Signature) Keith Carter

Received	Logbook	Computer	Verified
KC	KC		
Date 9/12/86	Date 9/12/86	Date 9/22	Date 9/29

Form Number HS 10-2A (3/86)

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Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: [illegible]

1. Form Number: S 8 6 3531

2. Date: M M D D Y Y — 0 9 1 1 8 6

3. Retrievable Serial Number: 0 0 1 2 1 5

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU Cement Waste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8 m³	[redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
10	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5 T	[redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RWO 57711 63

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
PU239	3.5 06	E +0	A [redacted]		E	A [redacted]		
PU238	1.330	E -3	M [redacted]		E	A [redacted]		
AM241	2.010	E -1	M [redacted]		E	A [redacted]		
U235	8.000	E +2	M [redacted]		E	A [redacted]		
MFP	8.000	E -4	C [redacted]		E	A [redacted]		
U238	6.480	E +2	M [redacted]		E	A [redacted]		

arrived @ 0955 9/11/86

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Cox	Joe R. Vigil	
Earl J. Cox by [illegible]	Joe R. Vigil	

13. Date Disposed: M M D D Y Y — 0 9 1 1 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	6 T7	9	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	[illegible]	[illegible]
Date 9/11/86	Date 9/11/86	Date 9/22	Date 9/29

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Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext. 6095 MS J592

1. Form Number: S86 3532

2. Date (M M D D Y Y): 09 11 86

3. Retrievable Serial Number: 001222

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU Cement Paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
7.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
26	8

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
64	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 577165

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	1.740	E -1	C [redacted]	.	E	A [redacted]		
PU239	3.000	E -1	C	.	E	A		
U235	2.1	E -5	M	.	E	M		
AM241	7.200	E +1	C	.	E	A		
NEP	1.350	E -3	C	.	E	A		
U238	1.035	E +2	M	.	E	E		

APPROVALS arrived @ 1350 9/11/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

Signature certifies that waste package or shipment is safe to handle and transport

13. Date Disposed (M M D D Y Y): 09 11 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	5T	9	S

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	[illegible]	[illegible]
Date 9/11/86	Date 9/11/86	Date 9/22	Date 9/22

Form Number HS 10-2A (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before [illegible]

[illegible] Waste Management [illegible]
[illegible] WS-[illegible]

1. Form Number: S 8 6 3533

2. Date (M M D D Y Y): 0 9 1 2 8 6

3. Retrievable Serial Number: 0 0 1 2 2 3

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
15	4

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
68	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWO S7711/66

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
PU238	1.740	E -1	C [redacted]		E	A [redacted]		
PU239	30.00	E -1	C [redacted]		E	A [redacted]		
U235	2.685	E +2	M [redacted]		E	G [redacted]		
Am241	7.200	E +1	C [redacted]		E	A [redacted]		
MFP	1.350	E -3	C [redacted]		E	A [redacted]		
U238	1.035	E +2	M [redacted]		E	E [redacted]		

APPROVALS arrived @ 0950 9/12/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by [illegible]	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 9 1 2 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	15T	9	C

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) Keith Carter	Date 9/12/86	Date 9/12/86	Date 9/22	Date [illegible]

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 8534

2. Date (M M D D Y Y): 09 12 86

3. Retrievable Serial Number: 0 0 1 2 1 8

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU Cement Paste OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
208	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
12	3

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
65	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWO 57 7/1/68

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU 238	3.300 ~~0.330~~	E -4 ~~-3~~	A [redacted]		E	A [redacted]		
PU 239	3.300 ~~0.330~~	E -1 ~~-10~~	M [redacted]		E	A [redacted]		
AM 241	1.0410	E 1A	M [redacted]		E	A [redacted]		
U 235	2.0010	E +1	M [redacted]		E	A [redacted]		
MFP	2.5010	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 12 86

14. Disposal/Storage Location Top Tier 2-25

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	4T	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature)

Received	Logbook	Computer	Verified
	29		
Date 9-12-86	Date 9-12-86	Date 9/12	Date

Form Number HS 10-A (5/86) [redacted]

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management Ext. 6095, MS J576

1. Form Number: S 8 6 3535

2. Date (M M D D Y Y): 0 9 1 1 8 6

3. Retrievable Serial Number: 0 0 1 2 1 9

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 4 7 6

6. Waste Description: TRU CERAMIC POSTE OLD CMR TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8 m³	[redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
10	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
647	[redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7 ASWD 5771169

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	~~0.3300~~ 3.300	E -3	M [redacted]		E	A [redacted]		
PU239	~~0.3300~~ 3.300	E -1	M [redacted]		E	A [redacted]		
AM241	1040	E -1	M [redacted]		E	A [redacted]		
U235	2000	E -1	M [redacted]		E	A [redacted]		
MFP	2500	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS arrived @ 0955 9/11/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Fox	Joe A. Vigil	
Earl J. Fox by GM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 9 1 1 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	6 T7	9	S

15. Shaft Surface Dose mr/hr:

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) Keith Carter	Date 9/11/86	Date 9/11/86	Date 9/22	Date 7/2/86

Form Number HSE-7-R3/E3

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 5 3536

2. Date (M M D D Y Y): 09 11 86

3. Retrievable Serial Number: 001220

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 476

6. Waste Description: TRU cement paste OLD CMP TO TA-54

7. Number of Waste Packages

Plastic Bags	Card Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
10	2

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
63	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7 RSWD S77170

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	3.300 ~~[illegible]~~	E -4 -5	M [redacted]		E	A [redacted]		
PU239	3.300 ~~[illegible]~~	E -1 -10	M [redacted]		E	A [redacted]		
AM241	1.0410	E -4	M [redacted]		E	A [redacted]		
U235	2.0000	E -1	M [redacted]		E	A [redacted]		
MFP	2.5000	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS arrived @ 10:30 9/11/86

Waste Generator (Print Name Here)	HSE-17-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Carl J Cox	Joe A. Vigil	
Signature certifies that waste acceptance criteria and all disposal requirements were met: Earl J Cox by [illegible]	Signature certifies that waste package or shipment is safe to handle and transport: Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 11 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	6T	9	S

15. Shaft Surface Dose (mr/hr):

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter	Date 9-11-86	Date 9/11/86	Date 9/22	Date [illegible]

Form Number HS 585A (3/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: [illegible]

[illegible] Waste Management
[illegible]

1. Form Number: S 8 6 3537

2. Date: M M D D Y Y 09 12 86

3. Retrievable Serial Number: 001221

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-17	21		[redacted]	

5. Waste Code: 476

6. Waste Description: TRU cement paste OLD CMP TO TR-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume: Amount 28 m³ (M = meter³, F = foot³, G = gallon) [redacted]

9. Package Radiation at: Surface (mr/hr) 15; 1 Meter (mr/hr) 4

10. Gross Weight: Amount .65 T (K = kilogram, P = pound, T = ton) [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T ASKW 577171

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	1.740	E -1	C [redacted]	.	E	A [redacted]		
PU239	3.000	E -1	C [redacted]	.	E	A [redacted]		
AM241	7.200	E -1	C [redacted]	.	E	A [redacted]		
U235	2.685	E +2	M [redacted]	.	E	E [redacted]		
MFP	1.350	E -3	C [redacted]	.	E	A [redacted]		
U238	1.035	E +2	M [redacted]	.	E	E [redacted]		

APPROVALS [illegible] @ 0950 9/12/86

Waste Generator (Print Name Here)	HSE-1/-16/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by [illegible]	Joe A. Vigil	

13. Date Disposed: M M D D Y Y 09 12 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		219	14T16	9	C

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	[illegible]	[illegible]
Date 9/12/86	Date 9/12/86	Date 9/12	Date 9/26/86

Form [illegible]

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3538

2. Date (M M D D Y Y): 09 12 86

3. Retrievable Serial Number: 001224

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU cement paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
15	4

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.6	T [redacted]

11. Additional Description of Packaging and Packaging Materials: AREA T RSWD S7 71/174

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU 238	1.7400	E -1	C [redacted]	.	E	A [redacted]		
PU 239	3.0000	E -1	C [redacted]	.	E	A [redacted]		
U 235	2.6985	E +2	M [redacted]	.	E	E [redacted]		
AM 241	7.2000	E +1	C [redacted]	.	E	A [redacted]		
NP	1.3500	E -3	C [redacted]	.	E	A [redacted]		
U 238	1.0355	E +2	M [redacted]	.	E	E [redacted]		

APPROVALS arrived @ 0950 9/12/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM.	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 09 12 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	15T	9	C

15. Shaft Surface Dose mr/hr:

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	RR	DP
Date 9/12/86	Date 9/12/86	Date 9/22	Date [redacted]

Form Number HS 10-9A (3/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3569

2. Date (M M D D Y Y): 0 8 2 9 8 6

3. Retrievable Serial Number: 0 0 1 2 6 2

4. Origin of Waste

Group	TA	Building	Wing	Room
H S G - 7	2 1		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
25	6

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
63	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD S7724887

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	6.428	E -1	C [redacted]		E	A [redacted]		
PU239	4.214	E -1	C [redacted]		E	A [redacted]		
Am241	1.743	E +2	C [redacted]		E	A [redacted]		
AFP	2.426	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Lux	Joe A. Vigil	
Earl J. Lux by J.M.	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 8 2 9 8 6

14. Disposal/Storage Location Bldg 10 41

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	1 3 T	19	5

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): E. Salazar

Received	Logbook	Computer	Verified
	29		
Date 8-29-86	Date 8-29-86	Date 9/10/86	Date 9-15-86

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3540

2. Date (M M D D Y Y): 0 8 2 9 8 6

3. Retrievable Serial Number: 0 0 1 2 6 3

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
2.5	6

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T PSWD 5772488

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	4.428	E -1	C [redacted]		E	A [redacted]		
PU239	4.214	E -1	C		E	A		
AM241	1.743	E -1	C		E	A		
AFP	2.426	E -3	C		E	A		
		E			E			
		E			E			

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe H. Vigil	
Earl J. Cox by GM	Joe H. Vigil	

13. Date Disposed (M M D D Y Y): 0 8 2 9 8 6

14. Disposal/Storage Location Bottom 10.41

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	1 5T	9	5

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

Received	Logbook	Computer	Verified
EA	29	LD	DP
Date 8-29-86	Date 8-29-86	Date 9/4/86	Date 9-15-86

Signature certifies that waste acceptance criteria and all disposal requirements were met
(Signature) Eugene Salazar

Form Number HS 10-2A (3/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number	2. Date (M M D D Y Y)	3. Retrievable Serial Number	4. Origin of Waste: Group	TA	Building	Wing	Room	5. Waste Code
S 8 6 3541	0 8 1 5 8 6	0 0 1 2 6 4	HSE-7	21		[redacted]		A 7 6

6. Waste Description

TRU cement paste OLD CMP TO TA-54

7. Numbers of Waste Packages: Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No.	Wooden Crates Volume-ft³	8. Gross Volume: Amount	(M = meter³, F = foot³, G = gallon)	9. Package Radiation at: Surface (mr/hr)	1 Meter (mr/hr)
						2.8m	[redacted]	25	5

10. Gross Weight: Amount	(K = kilogram, P = pound, T = ton)
657	[redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWO S7,7248 9

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	6.42 8	E -1	C [redacted]		E	A [redacted]		
PU239	4.2 1 4	E -1	C [redacted]		E	A [redacted]		
AM241	1.7 4 3	E +2	C [redacted]		E	A [redacted]		
MFP	24 2 6	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]			[redacted]		

APPROVALS 10:30 @ 8/5/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by EM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y)	14. Disposal/Storage Location: Area	Shaft	Pit	Post(s)	Layer	Pos	15. Shaft Surface Dose (mr/hr)
0 8 1 5 8 6	G		29	11T+2	9	S	

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) Keith Carter	Date 8/15/86	Date 8/15/86	Date 9/[illegible]/86	Date 9-15-86

Form Number HS 10-3A (3/8)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3542

2. Date: M M D D Y Y: 0 8 1 5 8 6

3. Retrievable Serial Number: 0 0 1 2 6 5

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
25	5

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
55	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T ASWO 57724 90

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	4.428	E -1	C [redacted]		E	A [redacted]		
PU239	4.214	E -1	C [redacted]		E	A [redacted]		
AM241	1.743	E -12	C [redacted]		E	A [redacted]		
NFP	2.426	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS Arrived @ 12:30 8/15/86

Waste Generator (Print Name Here)	HSE-1/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste package or container is properly prepared and approved for shipment. Earl J. Cox by GM.	Signature certifies that waste package or container is properly prepared, handled and transported. Joe A. Vigil	

13. Date Disposed: M M D D Y Y: 0 8 1 5 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	12T	9	S

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	RD	ZP
Date 8/15/86	Date 8/15/86	Date 9/2/86	Date 8-5-86

Form Number HS 10-2A (3/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3543

2. Date (M M D D Y Y): 0 8 1 5 8 6

3. Retrievable Serial Number: 0 0 1 2 6 6

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU cement paste old CMA to TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³ / F = foot³ / G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
25	5

10. Gross Weight

Amount	(K = kilogram / P = pound / T = ton)
54	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 57724 91

12. Radionuclide Content

Nuclide	Amount	±	(C = curie / M = gram)	Error on Amount	±	Amount Determined By (A = analysis / M = measurement / E = estimate)	SS Materials Write-Off Account	Project Code
PU238	6.428	E -1	C [redacted]		E	A [redacted]		
PU239	42.14	E -1	C [redacted]		E	A [redacted]		
AM241	1.74 3	E -2	C [redacted]		E	A [redacted]		
AFP	24.26	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS approved @ 10.50 8/15/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM.	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 8 1 5 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	11 T-12	9	5

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	DD	ZP
Date 8/15/86	Date 8/15/86	Date 9/11/86	Date 9-15-86

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 9 6 3544

2. Date (M M D D Y Y): 0 8 2 9 8 6

3. Retrievable Serial Number: 0 0 1 2 6 0

4. Origin of Waste

Group	TA	Building	Wing	Room
MSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU Cement Paste OLD CMP TO TA 54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	M [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
20	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.4	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area 7 RSWD 5772492

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU 238	6.428	E -1	C [redacted]		E	A [redacted]		
PU 239	.214	E -1	C [redacted]		E	A [redacted]		
AM 241	1.743	E +2	C [redacted]		E	A [redacted]		
U 235	1.000	E +0	M [redacted]		E	E [redacted]		
U 238	3.000	E +0	M [redacted]		E	E [redacted]		
NFP	2.426	E -3	C [redacted]		E	A [redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-16/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste [illegible]	Signature certifies that waste package or shipment [illegible] safe to handle and transport	
Earl J. Cox by EM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 8 2 9 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		27	15	7	S

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Eugene Salazar

Received	Logbook	Computer	Verified
	27		
Date	Date	Date	Date

Form Number HS 19-20 (9/85)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3545

2. Date (M M D D Y Y): 0 8 2 9 8 6

3. Retrievable Serial Number: 0 0 1 2 6 1

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU cement paste OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
25	6

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 57724993

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	6428	E -1	C [redacted]		E	A [redacted]		
PU239	4.21	E -1	C [redacted]		E	A [redacted]		
AM241	1.7	E +2	C [redacted]		E	A [redacted]		
MFP	2.4	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 8 2 9 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	15T	9	5

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
EUGENE C. SALAZAR		29		
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature) [redacted]	Date 8-24-86	Date 9-15-86	Date 9/9/86	Date 9-15-86

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE 7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3546

2. Date (M M D D Y Y): 08 14 86

3. Retrievable Serial Number: 003305

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
4	1.3

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.77	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T ASWD 5780135

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	1.2010 E	-1	C [redacted]		E	A [redacted]		
PU239	2.7510 E	-2	C [redacted]		E	A [redacted]		
AM241	3.5315 E	+1	C [redacted]		E	A [redacted]		
MFP	1.6 8 V E	-2	C [redacted]		E	A [redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste package or shipment is properly handled and transported: Earl J. Cox by JM	Signature certifies that waste package or shipment is properly handled and transported: Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 08 14 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	1 0 T	9	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
EUGENE C. SALAZAR		29		
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): [signature]	Date 8-14-86	Date 8-14-86	Date	Date

Form Number [illegible]

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3547

2. Date (M M D D Y Y): 0 8 1 5 8 6

3. Retrievable Serial Number: 0 0 3 3 0 6

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU Cement Paste OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
208	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
50	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
55	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 57801/36

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	1.2000	E -1	C [redacted]	.	E	A [redacted]		
PU239	2.7510	E -2	C [redacted]	.	E	A [redacted]		
AM241	3.5355	E +1	C [redacted]	.	E	A [redacted]		
AFP	1.4811	E -2	C [redacted]	.	E	A [redacted]		
	.	E	[redacted]	.	E	[redacted]		
	.	E	[redacted]	.	E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste acceptance criteria and all applicable requirements were met. Earl J. Cox	Signature certifies that waste packages are properly sealed, handled and transported. Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 8 1 5 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	13T	9	S

B

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
Marvin Tilley	MT	MT	RS	
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Marvin Tilley	Date 15 86	Date 8/15/86	Date 8/15/86	Date

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3548

2. Date (M M D D Y Y): 08 14 86

3. Retrievable Serial Number: 003307

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU cement posts old CMR to TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
4	2

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
170	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 07801137

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	1.210	E -1	C [redacted]		E	A [redacted]		
PU239	2.815	E -2	C [redacted]		E	A [redacted]		
AM241	3.532	E +1	C [redacted]		E	A [redacted]		
MFP	1.681	E -2	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Cox	Joe A. Vigil	
Signature certifies that waste is in compliance with applicable waste requirements: Earl J. Cox by JM	Signature certifies that waste package or shipment is safe to handle and transport: Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 08 19 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	1 1T	9	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
EUGENE C. SALAZAR		29		
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature)	Date 8-14-86	Date 8-14-86	Date	Date

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3549

2. Date (M M D D Y Y): 0 8 1 5 8 6

3. Retrievable Serial Number: 0 0 3 3 0 8

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-17	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
5	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
145	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T 45 WD 5780138

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
PU238	1.200	E -1	C [redacted]	.	E	A [redacted]		
PU239	2.750	E -2	C [redacted]	.	E	A [redacted]		
AM241	3.535	E +1	C [redacted]	.	E	A [redacted]		
NFP	1.681	E -2	C [redacted]	.	E	E [redacted]		
	.	E	[redacted]	.	E	[redacted]		
	.	E	[redacted]	.	E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe R. Vigil	
Signature certifies that waste packaging is in compliance with the applicable requirements. Earl J. Cox by GM	Signature certifies that waste packaging is in compliance with hazard and transport specs. Joe R. Vigil	

13. Date Disposed (M M D D Y Y): 0 8 1 5 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	13T	9	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
Marvin Tillery	MT	MT	RR	DP
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) Marvin Tillery	Date Aug 15 86	Date 8/15/86	Date 9/12/86	Date 9-15-86

Los Alamos NATIONAL LABORATORY EST. 1943

TRU Waste Storage Record Change Form

Waste Package Serial Number: 5863549

1. Generator's Pre-Use Visual Inspection

Purchase Order #	Inspected Items		
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	☐ Ring, Bolt, and Nut	☐ Chime	☐ Dents
	☐ Lid and Gasket	☐ Gouges	☐ Paint

Printed Name	Signature	Date

2. Generator's Package Information

Group	Technical Area	Building	Cost Center	Program Code	Cost Account	Work Package

Additional Information: Subject is ACMP and located at Pit 29 change for consistency. NO TARE weight

☐ DP ☐ Non-DP
If Non-DP waste, attach DOE approval documentation.

Container	Liner
☐ Steel Drum (55 gal.)	☐ None
☐ Pipe Overpack Type:	☐ 90 mil liner
☐ Steel Drum (85 gal. Overpack)	☐ 125 mil liner
☐ Standard Waste Box	☐ Fiberboard liner
☐ Standard Waste Box Overpack	Internal Shielding
☐ RH Canister	☐ None
☐ Other (Call TWCO)	Type / Thickness (in.)

Filter Serial No.			
	01		
	02		

Waste Profile Number	
Gross Weight (lb.)	
Net Weight (lb.)	
Shipping Category	
LANL Waste Stream ID	
TRUCON Code	

Hazardous Materials

Name	EPA Code	Quantity (g)

Date Closed (MM/DD/YY):

Accumulation Start Date (MM/DD/YY):

The data in this section were collected and waste described herein was packaged and labeled according to approved procedures.

Printed Name	Signature	Date
DAVIS, William Scott		2/23/10

3. Generator Site Health Physics Information

	Survey Date	Survey Meter Model	Property Number	Calibration Void Date
Gamma Dose Rate (mrem/h) (contact)				
Neutron Dose Rate (mrem/h) (contact)				

Total Dose Rate (mrem/h) (contact)	
Total Dose Rate (mrem/h) (1 meter)	*The data in this section were collected according to approved procedures.*
Alpha Contamination (dpm/100cm²)	Printed Name / Date
Beta-Gamma Cont. (dpm/100cm²)	Signature

Subject: [rt1 #151318] Fwd: Scan from a Xerox WorkCentre
From: "Charlotte Fernandez via RT" <wastehelp@lanl.gov>
To: vivianm@lanl.gov

Vivian,

Louella was trying to update the locations as per the change form in doing so she is not able to save until she fills in the tare wgt. Would it be possible to get the tare wgt on this pkg to be able to update in the data base.

Thanks
Charlotte

8:32:49 2010, cgf wrote:
> To: louellas@lanl.gov
> Subject: TWSR # S863549
> X-Attachments: Y:\Eudora\Attach\Scan0017951.PDF;
>
> Below is a copy of the ...
...snip...
>... please update location on TWSR #
> S863549.
>
>
> This has already been approved through Monica to give this to you.

If

> you have any questions, let me know. Also once this is updated let

me

> know so that I may close out RT Ticket #151318.
>
>
> Thanks
> Charlotte

Louella J. Sandoval

From: Vivian Norris [vivianm@lanl.gov]
Sent: Wednesday, February 24, 2010 7:22 AM
To: Louella J. Sandoval
Subject: Re: S863549
Attachments: TRU change form.pdf

Louella,
Sorry, this is not a drum. It is a CMP and needs to be relocated to Pit 29. Here is the correction. Tare weight is 0. Can you please let me know when complete?
Thank you
Vivian

At 11:43 AM 2/22/2010, you wrote:
>Hi Vivian:
>
>I need to make some changes on TWSR S863549 and in order to save the
>TWSR after the information is entered we need Package Tare Wt. Please
>send me another Change Form with the Tare wt. information.
>
>Thanks,
>Louella

Louella J. Sandoval

From: Vivian Norris [vivianm@lanl.gov]
Sent: Wednesday, February 24, 2010 7:22 AM
To: Louella J. Sandoval
Subject: Re: S863549
Attachments: TRU change form.pdf

Louella,
Sorry, this is not a drum. It is a CMP and needs to be relocated to Pit 29. Here is the correction. Tare weight is 0. Can you please let me know when complete?
Thank you
Vivian

At 11:43 AM 2/22/2010, you wrote:
>Hi Vivian:
>
>I need to make some changes on TWSR S863549 and in order to save the
>TWSR after the information is entered we need Package Tare Wt. Please
>send me another Change Form with the Tare wt. information.
>
>Thanks,
>Louella

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form

HSE-7 Waste Management
Ext. 6093, MS J592

1. Form Number: S 8 6 3550

2. Date (M M D D Y Y): 0 8 0 7 8 6

3. Retrievable Serial Number: 0 0 1 2 8 0

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU cement paste OCP CMP TO TA54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	M [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
50	6

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
58	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWO 57801 82

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	8.875 E	-2	C [redacted]			A [redacted]		
PU239	8.175 E	-1	C [redacted]			A [redacted]		
AM241	7.750 E	+1	C [redacted]			A [redacted]		
MFP	5.180 E	-3	C [redacted]			A [redacted]		
	E		[redacted]		E	[redacted]		
	E		[redacted]		E	[redacted]		

APPROVALS Approved 14:15 8/7/86

Waste Generator (Print Name Here): Earl J. Cox
Signature certifies that waste package or shipment was prepared for handling and transport: Earl J. Cox by JM

HSE-1/HSV-11 Area Representative (Print Name Here): Joe A. Vigil
Signature certifies that waste package or shipment was prepared for handling and transport: Joe A. Vigil

Additional Signature (Optional):

13. Date Disposed (M M D D Y Y): 0 8 0 7 8 6

14. Disposal Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	9 T 10	9	S

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	RS	[redacted]
Date 8/7/86	Date 8/7/86	Date [redacted]	[redacted]

Form Number HS 10-32 (3/86)

Los Alamos

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

Waste Management
Ext. Bldg. Mar. 1982

1. Form Number	2. Date (M M D D Y Y)	3. Retrievable Serial Number	4. Origin of Waste: Group	TA	Building	Wing	Room	5. Waste Code
S86 3551	080786	001281	HSE-7	21		[redacted]		476

6. Waste Description

TRU cement paste-OLD CMP TO TA-54

7. Numbers of Waste Packages: Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³	8. Gross Volume: Amount	(M = meter³, F = foot³, G = gallon)	9. Package Radiation at: Surface (mr/hr)	1 Meter (mr/hr)
						28	M³ [redacted]	50	60

10. Gross Weight: Amount	(K = kilogram, P = pound, T = ton)
65	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 57801 83

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	8.875	E -2	C [redacted]		E	A [redacted]		
PU239	8.175	E -1	C [redacted]		E	A [redacted]		
AM241	9.750	E +1	C [redacted]		E	A [redacted]		
MFP	5.180	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS initial 14:15 8/7/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Cox	Joe A. Vigil	
Earl J. Cox by [illegible]	Joe A. Vigil	

13. Date Disposed (M M D D Y Y)	14. Disposal/Storage Location: Area	Shaft	Pit	Post(s)	Layer	Pos.	15. Shaft Surface Dose (mr/hr)
080786	G		29	9 T 10	9	5	

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	[illegible]	D.Q.
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature) Keith Carter	Date 8/7/86	Date 8/7/86	Date 8/14/86	Date 8/[illegible]

Los Alamos

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number	2. Date (M M D D Y Y)	3. Retrievable Serial Number	4. Origin of Waste: Group	TA	Building	Wing	Room	5. Waste Code
S86 3552	080786	001282	HSE-	7	21	[redacted]		A76

6. Waste Description

TRU cement paste - OLD CMR TO TA-54

7. Numbers of Waste Packages: Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No.	Wooden Crates Volume-ft³	8. Gross Volume: Amount	(M = meter³, F = foot³, G = gallon)	9. Package Radiation at: Surface (mr/hr)	1 Meter (mr/hr)
					28	m³ [redacted]	50	6

10. Gross Weight: Amount	(K = kilogram, P = pound, T = ton)
6	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area 7 RSWD 5780184

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU239	8.175	E-1	C [redacted]		E	A [redacted]		
PU238	8.875	E-2	C [redacted]		E	A [redacted]		
AM241	9.750	E+1	C [redacted]		E	A [redacted]		
MFP	5.180	E-3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS arrived 14:15 8/7/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by [illegible]	Joe A. Vigil	

13. Date Disposed (M M D D Y Y)	14. Disposal/Storage Location: Area	Shaft	Pit	Post(s)	Layer	Pos.	15. Shaft Surface Dose (mr/hr)
080786	G		29	9	9	5	

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature) Keith Carter	Date 8/7/86	Date 8/7/86	Date 8/11/86	Date [illegible]

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3553

2. Date (M M D D Y Y): 0 8 0 7 8 6

3. Retrievable Serial Number: 0 0 1 2 8 3

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste-OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	M [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
100	13

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
69	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 57891 89

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	21.29	E -1	C [redacted]		E	A [redacted]		
PU239	19.71	E -1	C [redacted]		E	A [redacted]		
AM241	90.96	E -1	C [redacted]		E	A [redacted]		
U-238	22.86	E -3	M [redacted]		E	E [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS Time Received 10:15 8/7/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	William F. Romero	
Earl J. Cox	William F. Romero	

13. Date Disposed (M M D D Y Y): 0 8 0 7 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	91 T/10	91	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Receiver	Logbook	Computer	Verified
KEITH CARTER	KC	KC		
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter	Date 8/7/86	Date 8/7/86	Date	Date

Form Number HS 14-9A (3/89)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3554

2. Date (M M D D Y Y): 080786

3. Retrievable Serial Number: 001284

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 476

6. Waste Description: TRU cement paste-OLD CMP TO TA-54

7. Number of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume: Amount 2.8 (M = meter³, F = foot³, G = gallon) m³ [redacted]

9. Package Radiation at: Surface (mr/hr) 100; 1 Meter (mr/hr) 13

10. Gross Weight: Amount 6.3 (K = kilogram, P = pound, T = ton) T [redacted]

11. Additional Description of Packaging and Packaging Materials: AVELO TRSWD S7801910

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
PU238	2.129	E -1	C [redacted]		E	A [redacted]		
PU239	1.971	E -1	C [redacted]		E	A [redacted]		
AM241	9.096	E -1	C [redacted]		E	A [redacted]		
U12	2.286	E +3	M [redacted]		E	E [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS Time received 10:15 8/7/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	William F. Romero	
Earl J. Cox by JM.	William F. Romero	

13. Date Disposed (M M D D Y Y): 080786

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	9 T/10	9	S

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

(Signature) Keith Carter

Signature indicates that waste acceptance criteria and all disposal requirements were met

Received	Logbook	Computer	Verified
KC	KC		
Date 8/7/86	Date 8/7/86	Date 8/11/86	Date 8/26/86

Form Number HS 10-2A (3/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number	2. Date (M M D D Y Y)	3. Retrievable Serial Number	4. Origin of Waste: Group	TA	Building	Wing	Room	5. Waste Code
S86 3555	080786	001285	HSG-17	2V		[redacted]		A76

6. Waste Description

TRU cement paste-OLD CMP TO TA-54

7. Numbers of Waste Packages: Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No	Wooden Crates Volume-ft³	8. Gross Volume: Amount	(M = meter³, F = foot³, G = gallon)	9. Package Radiation at: Surface (mr/hr)	1 Meter (mr/hr)
						248	m³ [redacted]	100	13

10. Gross Weight: Amount	(K = kilogram, P = pound, T = ton)
6.9	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area 7 PSWD S780191

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	2.129	E-1	C [redacted]		E	A [redacted]		
PU239	1.971	E-1	C [redacted]		E	A [redacted]		
Am241	9.096	E+1	C [redacted]		E	A [redacted]		
U12	2.286	E+3	A [redacted]		E	E [redacted]		
		E			E			
		E	[redacted]		E	[redacted]		

APPROVALS Time recieved 10:15 8/7/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Cox	W. F. Romero	
Earl J. Cox Jr.	William F. Romero	

13. Date Disposed (M M D D Y Y)	14. Disposal/Storage Location: Area	Shaft	Pit	Post(s)	Layer	Pos	15. Shaft Surface Dose (mr/hr)
080786	G		29	9 T10	9	S	

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	[illegible]	[illegible]
Signature certifies that waste accepted [illegible] statements were [illegible] (Signature) Keith Carter	Date 8/7/86	Date 8/7/86	Date 8/4/86	Date 8/24/86

Form Number HS 10-24 (3/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3556

2. Date (M M D D Y Y): 080786

3. Retrievable Serial Number: 001286

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU cement paste-old CMP to TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	M = meter³, F = foot³, G = gallon
248	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
80	13

10. Gross Weight

Amount	K = kilogram, P = pound, T = ton
685	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 57801.92

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.129	E -1	C [redacted]		E	A [redacted]		
PU239	1.971	E -1	C [redacted]		E	A [redacted]		
AM241	9.096	E -1	C [redacted]		E	A [redacted]		
U12	2.286	E +3	M [redacted]		E	E [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS Reviewed 11:00 8/7/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	William F. Romero	
Earl J. Cox by EM.	William F. Romero	

13. Date Disposed (M M D D Y Y): 080786

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	9 T/10	9	S

15. Shaft Surface Dose mr/hr:

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met.
(Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	[illegible]	[illegible]
Date 8/7/86	Date 8/7/86	Date 8/13/86	Date [illegible]

Form Number HS 10-2A (3/86)

Los Alamos

10:20am

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

Waste Management
LAL 5095 MS J592

1. Form Number: S 8 6 3557

2. Date (M M D D Y Y): 0 8 0 8 8 6

3. Retrievable Serial Number: 0 0 1 2 8 7

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU Cement Waste-OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³ F = foot³ G = gallon)
208	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
30	10

10. Gross Weight

Amount	(K = kilogram P = pound T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7 RSWD 57801 93

12. Radionuclide Content

Nuclide	Amount	±	(C = curie M = gram)	Error on Amount	±	Amount Determined By (A = analysis M = measurement E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.129	E -1	C [redacted]		E	A [redacted]		
PU259	1.971	E -1	C [redacted]		E	A [redacted]		
AM241	9.096	E +1	C [redacted]		E	A [redacted]		
U12	2.286	E +5	M [redacted]		E	E [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by [illegible]	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 8 8 8 8

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		214	T	9	S

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): [illegible]

Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature): [illegible]

Received	Logbook	Computer	Verified
AC	AC	[illegible]	[illegible]
Date 8-8-86	Date 8-8-86	Date 8/13/86	Date 8/26/86

Los Alamos

9:20 AM 8-8-86

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3558

2. Date (M M D D Y Y): 0 8 0 8 8 6

3. Retrievable Serial Number: 0 0 1 2 8 8

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU cement paste-OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
40	10

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
650	[redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5780194

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU 238	241 29	E -1	C [redacted]		E	A [redacted]		
PU 239	149 71	E -1	C [redacted]		E	A [redacted]		
AM 241	940 96	E +1	C [redacted]		E	A [redacted]		
U 12	242 86	E +3	M [redacted]		E	E [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-18/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by SM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 8 0 8 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G			5T	9	5

15. Shaft Surface Dose (mr/hr)

HSE-7 Waste Management Representative (Print Name Here): Andrew Cutanda

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): [signature]

Received	Logbook	Computer	Verified
AC	AC	[illegible]	[illegible]
Date 8-8-86	Date 8-8-86	Date [illegible]	Date [illegible]

Form [illegible]

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing form.

HSE-7 Waste Management
Ext. 5096, MS J576

1. Form Number: S 8 6 3559

2. Date (M M D D Y Y): 0 8 1 4 8 6

3. Retrievable Serial Number: 0 0 1 2 8 9

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
248	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
20	6

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
5.6	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area 9 T PSWD S78019S

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	2.129	E -1	C [redacted]		E	A [redacted]		
PU239	1.971	E -1	C [redacted]		E	A [redacted]		
AM241	9.096	E +1	C [redacted]		E	A [redacted]		
U12	2.286	E +3	M [redacted]		E	E [redacted]		
U235		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	LONNIE E. MARTIN	
Earl J. Cox by [illegible]	Lonnie E. Martin	

13. Date Disposed (M M D D Y Y): 0 8 1 4 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	9T	9	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
EUGENE C. [illegible]	65	29	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): [illegible]	Date 8-14-86	Date 8-14-86	Date 9-2-86	Date 9-15-86

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Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE 7 Waste Management
Ext. 6095, MS J592

1. Form Number: S86 3560

2. Date (M M D D Y Y): 08 28 86

3. Retrievable Serial Number: 001267

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
208	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
20	7

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
5.1	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 5780244

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	6.500 E	-2	C [redacted]		E	A [redacted]		
PU239	71.75 E	-1	C [redacted]		E	A [redacted]		
AM241	1.568 E	+2	C [redacted]		E	A [redacted]		
	9.650	-9						
NFP	0.965 E	-3	C [redacted]		E	A [redacted]		
	E		[redacted]		E	[redacted]		
	E		[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-16/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Lonnie E. Martin	
Earl J. Cox by [illegible]	Lonnie E. Martin	

13. Date Disposed (M M D D Y Y): 08 28 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	13	9	5

15. Shaft Surface Dose (mr/hr): [illegible]

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
EUGENE C. SALAZAR	[illegible]	29 ES	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) [illegible]	Date 8-28-86	Date 8-28-86	Date 9/8	Date 9-15-86

Form Number HSE 1?-04(3/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: [illegible]

[illegible] Waste Management
Ex. [illegible]

1. Form Number: S 8 6 3561

2. Date (M M D D Y Y): 0 8 2 8 8 6

3. Retrievable Serial Number: 0 0 1 2 6 8

4. Origin of Waste

Group	TA	Building	Wing	Room
H S E - 7	21		[redacted]	

5. Waste Code: 4 7 6

6. Waste Description: TRU cement paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
1.8	4

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RCWO 5780225

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU 238	6.5 0 0	E -2	C [redacted]		E	A [redacted]		
PU 239	7.1 7 5	E -1	C [redacted]		E	A [redacted]		
AM 241	1.5 6 8	E -2	C [redacted]		E	A [redacted]		
MFP	9.6 5 0	E -2	C		E	A		
	0.9 0 5	E -3						
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Originator (Print Name Here)	HSE-17/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Lonnie E Martin	
Earl J. Cox by GM.	Lonnie E Martin	

13. Date Disposed (M M D D Y Y): 0 8 2 8 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		2 9	1 2 T 1 3	9	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
[redacted] C. SALAZAR				
Signature Certifies that waste acceptance criteria and all disposal requirements were met (Signature) [redacted]	Date 8-25-86	Date 8-25-86	Date 9/2/86	Date 9-15-86

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S86 3562

2. Date: M M D D Y Y — 082986

3. Retrievable Serial Number: 001269

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU cement paste old CMP to TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
20	7

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.5	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD S7802226

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	6.500	E -2	C [redacted]		E	A [redacted]		
PU239	7.175	E -1	C		E	A		
AM241	1.508	E -2	C		E	A		
MPP	9.650 8.965	E -1	C		E	A		
		E			E			
		E			E			

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Lonnie E. Martin	
Earl J. Cox by JM	Lonnie E. Martin	

13. Date Disposed: M M D D Y Y — 082986

14. Disposal/Storage Location Top

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	14 15	9	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) Eugene Salazar

Received	Logbook	Computer	Verified
EE	29	JD	DSP
Date 8-29-86	Date 8-29-86	Date	Date 9-15-86

Form Number HS 10-SA (8/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 5095, MS J592

1. Form Number: S 8 6 3563

2. Date (M M D D Y Y): 0 8 2 9 8 6

3. Retrievable Serial Number: 0 0 1 2 7 0

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-17	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	S M [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
20	7

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
65	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWO 5780227

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	6500	E -2	C [redacted]		E	A [redacted]		
PU239	7175	E -1	C [redacted]		E	A [redacted]		
AM241	1568	E -2	C [redacted]		E	A [redacted]		
MP1	~~[illegible]~~ 9.650	E ~~-3~~	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Lonnie E. Martin	
Earl J. Cox Jr.	Lonnie E. Martin	

13. Date Disposed (M M D D Y Y): 0 8 2 9 8 6

14. Disposal/Storage Location Top

Area	Shaft	Pit	Post(s)	Layer	Pos.
6		29	14	9	5

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature): Eugene Salazar

Received	Logbook	Computer	Verified
8	29	RD	DP
Date 8-29-86	Date 8-29-86	Date 9/2/86	Date 9-15-86

Form Number HSE-7 [illegible]

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S86 3564

2. Date (M M D D Y Y): 08 14 86

3. Retrievable Serial Number: 001271

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 476

6. Waste Description: TRU cement paste OCD CMP to TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
248	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
18	6

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
55	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7 RSWD S7802228

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	6500	E-2	C [redacted]		E	A [redacted]		
PU239	7175	E-1	C [redacted]		E	A [redacted]		
AM241	1568	E-1	C [redacted]		E	A [redacted]		
NFP	9650 ~~8650~~	E-1	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-16/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	LONNIE E. MARTIN	
Earl J. Cox by [illegible]	Lonnie E. Martin	

13. Date Disposed (M M D D Y Y): 08 14 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	NOT	9	S

15. Shaft Surface Dose (mr/hr):

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. [illegible]

Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature): Eugene [illegible]

Received	Log Book	Computer	Verified
[illegible]	29	[illegible]	[illegible]
Date 8/14/86	Date 8/14/86	Date 9/16/86	Date 9-Tue-86

Form Number HS 10-3A (3/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE [illegible]

1. Form Number: S 8 6 3565

2. Date: M M D D Y Y — 0 8 2 8 8 6

3. Retrievable Serial Number: 0 0 1 2 7 2

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 76

6. Waste Description

TRU cement PO5AC OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
30	9

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
750	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area J RSWD 5780229

12. Radionuclide Content

Nuclide	Amount		±	(C = curie, M = gram)	Error on Amount		±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	6500	E	-2	C [redacted]		E		A [redacted]		
PU239	7175	E	-1	C [redacted]		E		A [redacted]		
AM241	1568	E	+2	C [redacted]		E		A [redacted]		
MFP	9.650 ~~[illegible]~~	E	-3	C [redacted]		E		A [redacted]		
		E		[redacted]		E		[redacted]		
		E		[redacted]		E		[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-7/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	LONNIE E. MARTIN	
Earl J. Cox by GM	Lonnie E. Martin	

13. Date Disposed: M M D D Y Y — 0 8 2 8 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		219	1 4T 1 5	9	S

15. Shipping Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
ANDREW J. CATANACH	AC	AC	[illegible]	DP
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature)	Date 8-28-86	Date 8-28-86	Date 9/2/86	Date 9-15-86

[illegible]

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back prior to completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3566

2. Date (M M D D Y Y): 08/14/86

3. Retrievable Serial Number: 001273

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: TRU Cement Paste OLD CMP TD TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
1 E	6

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
55	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 5780250

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	6.5006 E	-4	C [redacted]		E	A [redacted]		
PU239	7.1715 E	-1	C [redacted]		E	A [redacted]		
AM241	1.5618 E	-3	C [redacted]		E	A [redacted]		
MFP	9.650 E	-4	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	LONNIE E MARTIN	
Earl J. Cox by GM	Lonnie E Martin	

13. Date Disposed (M M D D Y Y): 09/18/86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		219	10T	9	5

15. Shaft Surface Dose (mr/hr):

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

Signature indicates that waste acceptance criteria and all disposal requirements were met.
(Signature): Eugene Salazar

Received	Logbook	Computer	Verified
8-14-86	29		
Date	Date	Date	Date
	8-14-86	9/16/86	9-16-86

Form Number HS 1600 (9/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3567

2. Date (M M D D Y Y): 08 14 86

3. Retrievable Serial Number: 001274

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
20	6

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
60	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 578023

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	6500	E -2	C [redacted]		E	A [redacted]		
PU239	7175	E -1	C [redacted]		E	A [redacted]		
AM241	1568	E +2	C [redacted]		E	A [redacted]		
	9.650	-4						
NP	~~12.65~~	E ~~-5~~	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Lonnie E. Martin	
Earl J. Cox by LM	Lonnie E. Martin	

13. Date Disposed (M M D D Y Y): 08 14 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	9T	9	5

15. Shaft Surface Dose (mr/hr)

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

Signature certifies that waste acceptance criteria [illegible]
(Signature)

Received	Logbook	Computer	Verified
Date 8-14-86	Date 8-14-86	Date 9/8/86	Date 9-15-86

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

Waste Management
Form HS-J592

1. Form Number: S 8 6 3568

2. Date (M M D D Y Y): 08 14 86

3. Retrievable Serial Number: 001 275

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-	7	21	[redacted]	

5. Waste Code: A76

6. Waste Description

TRU cement paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
18	6

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
5.3	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5780262

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
PU238	8.875 E	-2	C [redacted]		E	A [redacted]		
PU239	8.175 E	-1	C [redacted]		E	A [redacted]		
AM241	9.750 E	+1	C [redacted]		E	A [redacted]		
MFP	5.180 E	-3	C [redacted]		E	A [redacted]		
	E		[redacted]		E	[redacted]		
	E		[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Lonnie L. Martin	
Earl J. Cox by GM	Lonnie L. Martin	

13. Date Disposed (M M D D Y Y): 08 14 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	10T	9	5

15. Shaft Surface Dose (mr/hr):

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

(Signature): Eugene C. Salazar

Received	Logbook	Computer	Verified
ES	29	[illegible]	[illegible]
Date 8-14-86	Date 8-14-86	Date 8-14-86	Date 8-15-86

Form Number HS 14-2A (3/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3569

2. Date (M M D D Y Y): 08 14 86

3. Retrievable Serial Number: 001276

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU cement Paste OLD CMP TO TD-54

7. Numbers of Waste Packages

Plastic Bags	Card Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
.28	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
20	6

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
507	[redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWO S7802 63

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	8.875	E-2	C [redacted]	.	E	A [redacted]		
PU239	8.175	E-1	C [redacted]	.	E	A [redacted]		
AM241	9.750	E-1	C [redacted]	.	E	A [redacted]		
MFP	5.180	E-3	C [redacted]	.	E	A [redacted]		
	.	E	[redacted]	.	E	[redacted]		
	.	E	[redacted]	.	E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	LONNIE E. MARTIN	
Earl J. Cox by [illegible]	Ronnie E. Martin	

13. Date Disposed (M M D D Y Y): 08 14 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
6		29	9T	9	5

15. Shaft Surface Dose (mr/hr): .

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. [illegible]

Signature (Signature): [illegible]

Received	Logbook	Computer	Verified
[illegible]	29	[illegible]	DP
Date 8-14-86	Date 8-14-86	Date 9/4/86	Date 9-15-86

Form Number HSE-10-2A (3/86)

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RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext. 6095, MS 1592

1. Form Number: S 8 6 3570

2. Date: M M D D Y Y — 0 8 1 5 8 6

3. Retrievable Serial Number: 0 0 1 2 7 7

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU Cement Waste OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28 m³	[redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
15	4

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
65T	[redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5780264

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	8.875	E -2	C [redacted]		E	A [redacted]		
PU239	8.175	E -1	C [redacted]		E	A [redacted]		
AM241	9.750	E -1	C [redacted]		E	A [redacted]		
MFP	5.180	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS arrived @ 10:55 8/15/86

Waste Generator (Print Name Here)	HSE-1/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	LONNIE E. MARTIN	
Earl J. Cox by JM	Lonnie E Martin	

13. Date Disposed: M M D D Y Y — 0 8 1 5 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	11 THE	9	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Loghook	Computer	Verified
KC	KC	[illegible]	[illegible]
Date 8/15/86	Date 8/15/86	Date [illegible]	Date [illegible]

Form Number HS 10-2A (3/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number	2. Date (M M D D Y Y)	3. Retrievable Serial Number	4. Origin of Waste: Group	TA	Building	Wing	Room	5. Waste Code
S 8 6 3571	0 8 1 5 8 6	0 0 1 2 7 8	HSE-7	21		[redacted]		A 7 6

6. Waste Description

TRU Cement Paste OCD CMP TO TA-54

7. Numbers of Waste Packages: Plastic Bags	Card Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³	8. Gross Volume: Amount	(M = meter³, F = foot³, G = gallon)	9. Package Radiation at: Surface (mr/hr)	1 Meter (mr/hr)
						28	m³ [redacted]	15	4

10. Gross Weight: Amount	(K = kilogram, P = pound, T = ton)
63	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5780265

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	8.875	E -2	C [redacted]		E	A [redacted]		
PU239	8.175	E -1	C [redacted]		E	A [redacted]		
AM241	7.75	E -4	C [redacted]		E	A [redacted]		
MPP	5.180	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS arrived @ 10:55 8/15/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Lonnie E. Martin	
Earl J. Cox by [illegible]	Lonnie E. Martin	

13. Date Disposed (M M D D Y Y)	14. Disposal/Storage Location: Area	Shaft	Pit	Post(s)	Layer	Pos	15. Shaft Surface Dose (mr/hr)
0 8 1 5 8 6	G		29	11 T ~~12~~	9	5	

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	RD	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature) Keith Carter	Date 8/15/86	Date 8/15/86	Date 9/2/86	Date 9-15-86

Form Number HS 10-28 (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3572

2. Date (M M D D Y Y): 08 15 86

3. Retrievable Serial Number: 001279

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description: rev cement paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	M³ [redacted]

9. Package Radiation at

Face (/hr)	1 Meter (mr/hr)
15	4

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.3	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWA 57802666

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	8.875	E -2	C [redacted]		E	A [redacted]		
PU239	8.175	E -1	C [redacted]		E	A [redacted]		
AM241	9.750	E -1	C [redacted]		E	A [redacted]		
MFP	5.180	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS arrived @ 12:55 8/15/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	LONNIE E. MARTIN	
Earl J. Cox by GM	Lonnie E. Martin	

13. Date Disposed (M M D D Y Y): 08 15 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	11T ~~H2~~	9	5

15. Shaft Surface Dose (mr/hr):

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	KC	KC	RZ	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter	Date 8/15/86	Date 8/15/86	Date 9/8/86	Date 9-22-86

Form Number HS 10-2A (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number	2. Date (M M D D Y Y)	3. Retrievable Serial Number	4. Origin of Waste: Group	TA	Building	Wing	Room	5. Waste Code
S86 3573	080786	001290	HSE-7	21		[redacted]		A76

6. Waste Description

TRU Cement Paste-OLD CMP TO TA-54

7. Numbers of Waste Packages: Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³	8. Gross Volume: Amount	(M = meter³, F = foot³, G = gallon)	9. Package Radiation at: Surface (mr/hr)	1 Meter (mr/hr)
						248	m³ [redacted]	50	10

10. Gross Weight: Amount	(K = kilogram, P = pound, T = ton)
68	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area 7 RSWD 5780271

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	1.929 E	-1	C [redacted]	. E		A [redacted]		
PU239	1.014 E	-1	C [redacted]	. E		A [redacted]		
AM241	3.673 E	+1	C [redacted]	. E		A [redacted]		
MPP	3.771 E	-5	C [redacted]	. E		A [redacted]		
U81	1.714 E	+3	M [redacted]	. E		E [redacted]		
	. E		[redacted]	. E		[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	William F. Romero	
Earl J. Cox by GM	William F. Romero	

13. Date Disposed (M M D D Y Y)	14. Disposal/Storage Location: Area	Shaft	Pit	Post(s)	Layer	Pos	15. Shaft Surface Dose (mr/hr)
080786	G		24	B T9	9	S	

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	8/7/86	8/7/86	RS	D.G.
Signature certifies that waste acceptance criteria and disposal requirements were met (Signature) Keith Carter	Date KC	Date KC	Date 8/14/86	Date 8/14/86

Form Number HSE-18-A (V.88)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 37545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S86 3574

2. Date: M M D D Y Y — 080786

3. Retrievable Serial Number: 001291

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU Cement Paste-OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
28	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
50	10

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
63	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5780272

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
PU238	1.929	E-1	C [redacted]		E	A [redacted]		
PU239	1.014	E-1	C [redacted]		E	A [redacted]		
AM241	3.673	E+1	C [redacted]		E	A [redacted]		
NFD	3.771	E-3	C [redacted]		E	A [redacted]		
UP1	1.714	E+3	M [redacted]		E	E [redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J. Cox	William F. Lamoreaux	
Earl J. Cox by [illegible]	William F. Lamoreaux	

13. Date Disposed: M M D D Y Y — 080786

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	8 T9	9	S

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	RS	[illegible]
Date 8/7/86	Date 8/7/86	Date 8/14/86	[illegible]

Form Number HS-10-29 (1/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: [illegible]

1. Form Number	2. Date (M M D D Y Y)	3. Retrievable Serial Number	4. Origin of Waste: Group	TA	Building	Wing	Room	5. Waste Code
S 8 6 3575	0 8 0 7 8 6	0 0 1 2 9 2	HSE-7	21		[redacted]		476

6. Waste Description

TRU cement paste to CDA CMR TD TRAY

7. Numbers of Waste Packages: Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³	8. Gross Volume: Amount	(M = meter³, F = foot³, G = gallon)	9. Package Radiation at: Surface (mr/hr)	1 Meter (mr/hr)
						248	M³ [redacted]	50	10

10. Gross Weight: Amount	(K = kilogram, P = pound, T = ton)	11. Additional Description of Packaging and Packaging Materials
64	T [redacted]	Area T RSWD 57801273

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	10929	E -1	C [redacted]		E	A [redacted]		
PU239	10014	E -1	C [redacted]		E	A [redacted]		
AM241	36733	E +1	C [redacted]		E	A [redacted]		
MFP	5771	E -3	C [redacted]		E	A [redacted]		
U8	1714	E -3	M [redacted]		E	E [redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS 14:45 8/7/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signature (Optional)
Earl J Cox	William F. Romes	
Earl J. Cox by GM	William F. Romes	

13. Date Disposed (M M D D Y Y)	14. Disposal/Storage Location: Area	Shaft	Pit	Post(s)	Layer	Pos	15. Shaft Surface Dose (mr/hr)
0 8 0 7 8 6	G		29	8 T4	9	S	

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
KEITH CARTER	NC	NC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements are met. (Signature) Keith Carter	Date 8/7/86	Date 8/7/86	Date 8/14/86	Date 8/14/86

Form Number HS-13-RA-8/86

10:20 am

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3576

2. Date (M M D D Y Y): 0 8 0 8 8 6

3. Retrievable Serial Number: 0 0 1 2 9 3

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU cement paste-OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
248	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
30	10

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
61	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area 7 RSWD 57802 74

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	1.92 E	-1	C [redacted]			A [redacted]		
PU239	1.01 E	-1	C [redacted]			A [redacted]		
AM241	3.673 E	-3	C [redacted]			A [redacted]		
AF P	3.771 E	-3	C [redacted]			A [redacted]		
U81	1.714 E	+3	M [redacted]			E [redacted]		
U235			[redacted]			[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 8 0 8 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)		Pos.
G		21	5T	2	C

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here)

"Signature certifies that waste acceptance criteria and all disposal requirements were met."
(Signature)

Received	Logbook	Computer	Verified
AC	AC		
Date 8-8-86	Date 8-8-86		Date

Form Number HS 10-2A (3/86)

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext. 5096, MS 505

1. Form Number: S 8 8 3577

2. Date (M M D D Y Y): 0 8 0 7 8 6

3. Retrievable Serial Number: 0 0 1 2 9 4

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU Cement Paste-OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
80	13

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
[redacted]	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5780275

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU239	1.929	E -1	C [redacted]		E	A [redacted]		
PU239	1.014	E -1	C [redacted]		E	A [redacted]		
AM241	3.673	E -4	C [redacted]		E	A [redacted]		
MFP	3.771	E -3	C [redacted]		E	A [redacted]		
U-1	1.714	E +3	M [redacted]		E	E [redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS Required 11:00 8/7/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	William F. Romero	
Earl J. Cox by [illegible]	[illegible]	

13. Date Disposed (M M D D Y Y): 0 8 0 7 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	9 T 10	9	5

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
Ke	Ke	[illegible]	[illegible]
Date 8/7/86	Date 8/7/86	Date 8/3/86	Date 8/24/86

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3578

2. Date (M M D D Y Y): 0 8 0 7 8 6

3. Retrievable Serial Number: 0 0 1 2 9 5

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 4 7 6

6. Waste Description

TRU Cement Paste-OLD CMP TP TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
80	13

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
65	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 57802 76

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	SS Materials Write-Off Project Code
PU238	1.92	E -1	C [redacted]		E	A [redacted]		
PU239	1.01	E -1	C [redacted]		E	A [redacted]		
AM241	3.673	E -1	C [redacted]		E	A [redacted]		
NPP	3.771	E -3	C [redacted]		E	A [redacted]		
U81	1.714	E -3	M [redacted]		E	E [redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS Received 11:00 8/7/86

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	William F. Romero	
Earl J. Cox by GM	William F. Romero	

13. Date Disposed (M M D D Y Y): 0 8 0 7 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	9 T/10	9	S

15. Shaft Surface Dose mr/hr

HSE-7 Waste Management Representative (Print Name Here): KEITH CARTER

Signature certifies that waste acceptance criteria and all disposal requirements were met (Signature): Keith Carter

Received	Logbook	Computer	Verified
KC	KC	RL	[illegible]
Date 8/7/86	Date 8/7/86	Date 8/13/86	Date [illegible]

Form Number HS 10-2A (3/86)

Los Alamos

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Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S86 3579

2. Date: M M D D Y Y — 08 14 86

3. Retrievable Serial Number: OC1296

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU cement paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
5	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
5.0	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWB S780277

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	1.929	E-1	C [redacted]		E	A [redacted]		
PU239	1.014	E-1	C [redacted]		E	A [redacted]		
AM241	3.673	E+1	C [redacted]		E	A [redacted]		
MFP	3.771	E-3	C [redacted]		E	A [redacted]		
U81	1.714	E+3	M [redacted]		E	E [redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Lonnie E. Martin	
Earl J. Cox by JM	Lonnie E. Martin	

13. Date Disposed: M M D D Y Y — 08 14 86

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
G		29	1 1 T	9	S

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

Signature certifies that waste acceptance criteria and all applicable requirements have been met.
(Signature) [signature]

Received	Logbook	Computer	Verified
[signature]	29	[signature]	[signature]
Date 8/14	Date 8-14-86	Date 9/8/86	Date 9-15-86

Form Number [illegible]

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Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S 8 6 3580

2. Date (M M D D Y Y): 0 8 1 4 8 6

3. Retrievable Serial Number: 0 0 1 2 9 7

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: 4 7 6

6. Waste Description

TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
5	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
5.3	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area 7 RSKID 5780282

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	7.286	E -2	C [redacted]		E	A [redacted]		
PU239	55.71	E -2	C [redacted]		E	A [redacted]		
AM241	35.69	E +1	C [redacted]		E	A [redacted]		
MFP	7.214	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	LONNIE E. MARTIN	
Earl J. Cox by JM	Lonnie E. Martin	

13. Date Disposed (M M D D Y Y): 0 9 1 4 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	1 10T	9	5

15. Shaft Surface Dose (mr/hr): [ ]

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
EUGENE C. SALAZAR		29		
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature)	Date 8/14/86	Date	Date	Date 9-10-86

Form Number HSE-10 (5/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

1. Form Number: S86 3581

2. Date (M M D D Y Y): 080886

3. Retrievable Serial Number: 001298

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-17	21		[redacted]	

5. Waste Code: A76

6. Waste Description

TRU cement paste-OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
30	10

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.67	[redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD S780283

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	7.286	E-2	C		E	A		
PU239	5.571	E-2	C		E	A		
AM241	3.569	E+1	C		E	A		
AM-P	7.214	E-5	C		E	A		
		E			E			
		E			E			

[redacted]

APPROVALS

Waste Generator (Print Name Here)	HSE-17/-19/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Earl J. Cox by JM	Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 080886

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos
			7		

15. Shaft Surface Dose (mr/hr): [redacted]

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
Andrew S. Cutsinger	AC	AC	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all applicable requirements were met (Sign Here)	Date 8-8-86	Date 8-8-86	Date 8/13/86	Date 8/26/86

[redacted]

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

Waste Management
Operations Division

1. Form Number: S 8 6 0582

2. Date (M M D D Y Y): 0 8 1 4 8 6

3. Retrievable Serial Number: 0 0 1 2 9 9

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description

TRU Cement Paste OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No	Drums Gal	Wooden Crates No	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
2.8	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
5	1

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
5.6	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area T RSWD 5780284

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	72.6	E-2	C [redacted]		E	A [redacted]		
PU239	55.71	E-2	C [redacted]		E	A [redacted]		
AM241	35.69	E-1	C [redacted]		E	A [redacted]		
MFP	7.214	E-3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-7 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J Cox	Lonnie E Martin	
Earl J. Cox by JM	Lonnie E Martin	

13. Date Disposed (M M D D Y Y): 0 8 1 4 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	1 1 T	9	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here): EUGENE C. SALAZAR

(Signature): Eugene Salazar

Received	Logbook	Computer	Verified
	29		
Date 8/14/86	Date 8-14-86	Date 9/2/86	Date 9-15-86

Form Number HS 10-86 (3/86)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE Read instructions on back carefully before completing this form

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3583

2. Date (M M D D Y Y): 0 8 0 8 8 6

3. Retrievable Serial Number: 0 0 3 3 0 1

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-17	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU Cement Paste-OLD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
208	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
40	10

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
6.37	[redacted]

11. Additional Description of Packaging and Packaging Materials: Area 7 RSWS 5780285

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	7.28 16	E-2	[redacted]		E	[redacted]		
PU239	55.71	E-2	[redacted]		E	[redacted]		
AM241	35.18	E+1	[redacted]		E	[redacted]		
MFP	7.14	E-3	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste is in accordance with all applicable disposal requirements: Earl J. Cox by JM	Signature certifies that waste package or shipment is safe to handle and transport: Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 8 0 8 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	18T	10	S

15. Shaft Surface Dose (mr/hr): [illegible]

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met.	Date 8-8-86	Date 8-8-86	Date 8/13/86	Date 8/24/86

7-2377

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 B584

2. Date (M M D D Y Y): 0 8 0 8 8 6

3. Retrievable Serial Number: 0 0 3 3 0 2

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 76

6. Waste Description

TRU cement Pasteo-OCD CMP TO TA-54

7. Numbers of Waste Packages

Plastic Bags	Cardboard Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
258	m³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
40	10

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
65	T [redacted]

11. Additional Description of Packaging and Packaging Materials

Area 7 RSWD 57802 86

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	72816	E -12	C [redacted]		E	[redacted]		
PU239	55171	E -12	C		E			
AM241	3565	E -14	C		E			
NFP	72114	E -3	C		E			
		E			E			
		E			E			

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-18/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste is in accordance with all applicable disposal requirements. Earl J. Cox by JM	Signature certifies that waste package or shipment is safe to handle and transport. Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 8 0 8 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
6		29	8T	10	S

15. Shaft Surface Rate mr/hr:

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Receipt
[illegible]	[illegible]	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met.	Date	Date	

7-2378

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: 836 3585

2. Date: M M D D Y Y 08 14 86

3. Retrievable Serial Number: V 0033303

4. Origin of Waste: Group: HSE-7 | TA: 21 | Building: | Wing: [redacted] | Room:

5. Waste Code: A76

6. Waste Description: TRU cement paste OCD CMP TO TA-54

7. Numbers of Waste Packages:

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume: Amount: 28 m³ (M = meter³, F = foot³, G = gallon) [redacted]

9. Package Radiation at: Surface (mr/hr): 4 | 1 Meter (mr/hr): 2 ~~4.5~~

10. Gross Weight: Amount: 50 T (K = kilogram, P = pound, T = ton) [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWS S7802817

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off Account	Project Code
PU238	72816	E-12	C [redacted]		E	A [redacted]		
PU239	55721	E-12	C [redacted]		E	A [redacted]		
AM241	55619	E-11	C [redacted]		E	A [redacted]		
NPP	72114	E-5	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	LONNIE E. MARTIN	
Signature certifies that waste is in accordance with all applicable disposal requirements: Earl J. Cox by GM	Signature certifies that waste package or shipment is safe to handle and transport: Lonnie E. Martin	

13. Date Disposed: M M D D Y Y 08 14 86

14. Disposal/Storage Location:

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		21	T	8	5

15. Shaft Surface Dose: mr/hr

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
EUGENE C. SALAZAR				
Signature certifies that waste acceptance criteria and all disposal requirements were met.	Date	Date	Date	Date

7-2379

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

RADIOACTIVE SOLID WASTE DISPOSAL RECORD

NOTE: Read instructions on back carefully before completing this form.

HSE-7 Waste Management
Ext. 6095, MS J592

1. Form Number: S 8 6 3586

2. Date (M M D D Y Y): 0 8 1 5 8 6

3. Retrievable Serial Number: 0 0 3 3 0 4

4. Origin of Waste

Group	TA	Building	Wing	Room
HSE-7	21		[redacted]	

5. Waste Code: A 7 6

6. Waste Description: TRU cement paste old CMP to TA-54

7. Numbers of Waste Packages

Plastic Bags	Card-Board Boxes	Drums No.	Drums Gal.	Wooden Crates No.	Wooden Crates Volume-ft³

8. Gross Volume

Amount	(M = meter³, F = foot³, G = gallon)
248	M³ [redacted]

9. Package Radiation at

Surface (mr/hr)	1 Meter (mr/hr)
5	0

10. Gross Weight

Amount	(K = kilogram, P = pound, T = ton)
58	T [redacted]

11. Additional Description of Packaging and Packaging Materials: Area T RSWD 57802888

12. Radionuclide Content

Nuclide	Amount	±	(C = curie, M = gram)	Error on Amount	±	Amount Determined By: (A = analysis, M = measurement, E = estimate)	SS Materials Write-Off: Account	Project Code
PU238	7286	E -12	C [redacted]		E	A [redacted]		
PU239	5571	E -12	C [redacted]		E	A [redacted]		
AM241	3569	E +1	C [redacted]		E	A [redacted]		
MPP	7214	E -3	C [redacted]		E	A [redacted]		
		E	[redacted]		E	[redacted]		
		E	[redacted]		E	[redacted]		

APPROVALS

Waste Generator (Print Name Here)	HSE-1/-10/-11 Area Representative (Print Name Here)	Additional Signatures (Optional)
Earl J. Cox	Joe A. Vigil	
Signature certifies that waste is in accordance with all applicable disposal requirements: Earl J. Cox by JM	Signature certifies that waste package or shipment is safe to handle and transport: Joe A. Vigil	

13. Date Disposed (M M D D Y Y): 0 8 1 5 8 6

14. Disposal/Storage Location

Area	Shaft	Pit	Post(s)	Layer	Pos.
G		29	12T	9	S

15. Shaft Surface Dose mr/hr:

HSE-7 Waste Management Representative (Print Name Here)	Received	Logbook	Computer	Verified
Marvin Tilley	MT	HT	[illegible]	[illegible]
Signature certifies that waste acceptance criteria and all disposal requirements were met. (Signature) Marvin Tilley	Date [illegible]	[illegible]	[illegible]	[illegible]

Appendix C

Monthly Summaries of Contaminated Waste Solids to Disposal Pits and CMPs

July 1976 to June 1977
January 1978 to September 1978

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To: H-7 Files
Thru: J. R. Buchholz; L. A. Emerity, and T. K. Keenan, H-7
From: Paul E. McGinnis, Liquid Waste Engr. Section
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR JULY 19 76
Date: 10/13/76
Symbol: H7-76-503

JUN 2 2 1993

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums[4]	Vol. of Waste (Liters)	^{238}Pu (mg)	^{239}Pu (mg)	Equiv. ^{239}Pu Cont'd[1] grams
Plant Sludge	65	12126	14.2	619	4.7
Grit	0	-	-	-	-
Tritium Vials	0	-	-	-	-
Miscellaneous	1	9	-	-	-
Total	66	12135	14.2	619	4.7

NOTES

1) Includes ^{241}Am
2) Water used to clean sight glass
3) R - indicates feed solutions used to generate Retrievable Paste
F - indicates feed solutions used to generate non-retrievable paste as the final portion of the Pug Mill Run.
4) All drums sent to TA-54 this period were 200 liter fiber units and contained wastes with non-retrievable levels of TRU and ^{238}Pu.
5) Number reported is based on CMB-11 analysis. H-7 analysis of feed solutions indicate 33.7 grams ^{241}Am present.

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number[3] 390R	390F	391R	391F	392	393	Total
Plant Sludge	-	1404	-	1630	3147	1607	7788
Neutralized Americium	4828	-	4933	-	-	-	9761
Treated Strip	-	-	-	-	-	-	-
Raw KOH	-	-	-	-	3154	1611	4765
Sight Glass Rinse Water[2]	110	276	144	439	2297	193	3459
Miscellaneous	-	-	-	-	473	347	820
Total Vol. Feed Solutions	4938	1680	5077	2069	9071	3758	26593

GRAND Total Feed Solutions (liters)	26593
GRAND Total Cement Paste	34467

	SHAFTS	CMP
Total Milligrams ^{238}Pu in Feed Solution	5.4	14.1
Total Grams ^{239}Pu in Feed Solution	5.9	33.3
Total Grams ^{241}Am in Feed Solution	.2	20.2[5]
Total Equivalent Grams ^{239}Pu in Feed Solution*	17.4	1047
Total mCi β-γ activity in Feed Solution	6.6	10.73

Designation of Pit(s) Receiving Cement Paste	82 & 84
I.D. Nos. of CMP receiving Cement Paste	1179, 1180, 1181, 1182, 1183 1184, 1185, 1186
Miscellaneous Drums of Waste Sent to Area "G", TA-54	0

*^{238}Pu, ^{239}Pu, ^{241}Am expressed as ^{239}Pu. Actual H-7 Lab analysis of Feed Solutions indicate a total of 14/1288 equivalent grams of ^{239}Pu based on gross α.

cc: John Warren, H-7
John Enders, H-7

(1)

JUN 2 2 1993

o: H-7 Files

hru: J. R. Buchholz; L. A. Emetity, and T. K. Keenan, H-7

rom: Paul E. McGinnis, Liquid Waste Engr. Section

ubject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR AUGUST 1976

ate: November 8, 1976

ymbol: H7-76-533

From TA-50-1 to Mesita del Buey (TA-54)

ype of Solids	No. of Drums (4)	Vol. of Waste (Liters)	^{238}Pu (mg)	^{239}Pu (mg)	Equiv. ^{239}Pu Cont'd (7) grams
nt Sludge	56	10,604	10.6	474	3.6
	--	--	--	--	--
tium Vials	1	7	--	--	--
cellaneous	--	--	--	--	--
al	57	10,611	10.6	474	3.6

NOTES

Includes ^{241}Am

Water used to clean sight glass

R - indicates feed solutions used to generate Retrievable Paste

F - indicates feed solutions used to generate nonretrievable paste as the final portion of the Pug Mill Run.

All drums sent to TA-54 this period were 200 liter fiber units and contained wastes with nonretrievable levels of TRU and ^{233}Pu.

Number Reported is based on CMB-11 analysis. There was no H-7 analysis of this feed solution.

Estimated.

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (3) 394R	394F					Total
Plant Sludge	--	1519					1519
Neutralized Americium	5103	--					5103
Treated Strip	--	--					--
Raw KOH	--	--					--
Sight Glass Rinse Water (2)	79	159					238
Miscellaneous	88	--					88
Total Vol. Feed Solutions	5275	1678					6953

GRAND Total Feed Solutions (liters)	6953
GRAND Total Cement Paste	9678

	SHAFTS	CMP
Total Milligrams ^{238}Pu in Feed Solution	.3	8 (6)
Total Grams ^{239}Pu in Feed Solution	.5	17 (6)
Total Grams ^{241}Am in Feed Solution	.08	14.68 (5)
Total Equivalent Grams ^{239}Pu in Feed Solution*	.6	753 (6)
Total mCi B-γ activity in Feed Solution	.99	7 (6)
Designation of Pit(s) Receiving Cement Paste	82	
I.D. Nos. of CMP receiving Cement Paste	1186, 1187, 1188, 1189	
Miscellaneous Drums of Waste Sent to Area "G", TA-54	0	

*^{238}Pu, ^{239}Pu, ^{241}Am expressed as ^{239}Pu. Actual H-7 Lab analysis of Feed Solutions indicate a total of 5.1/N.D. equivalent grams of ^{239}Pu based on gross α.

c: John Warren, H-7
John Fedens, H-7

H7-76-1

(1)

Reviewed by ER-RPF
JUN 22 1993

To: H-7 Files
Thru: J. R. Buchholz; L. A. Emgity, and T. K. Keenan, H-7
From: Paul E. McGinnis, Liquid Waste Engr. Section
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR September 1976
Date: November 10, 1976
Symbol: H7-76-541

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums (4)	Vol. of Waste (Liters)	^{238}Pu (mg)	^{239}Pu (mg)	Equiv. ^{239}Pu Conc'd (1) grams
Plant Sludge	66	12,410	9.3	443	3.2
Grit	--	--	--	--	--
Tritium Vials	5	170			
Miscellaneous	--	--	--	--	--
Total	71	12,580	9.3	443	3.2

NOTES

(1) Includes ^{241}Am

(2) Water used to clean sight glass

(3) R - indicates feed solutions used to generate Retrievable Paste

F - indicates feed solutions used to generate nonretrievable paste as the final portion of the Pug Mill Run.

(4) All drums sent to TA-54 this period were 200 liter fiber units and contained wastes with nonretrievable levels of TRU and ^{238}Pu.

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (3)						Total
Plant Sludge							
Neutralized Americium							
Treated Strip							
Raw KOH							
Sight Glass (2)							
Miscellaneous							
Total Vol. Feed Solut.							

NO PUG MILL RUNS WERE MADE

	SHAFTS	CMP
GRAND Total Feed Solutions		
GRAND Total Cement Paste		
Total Milligrams ^{238}Pu in Feed Solut.		
Total Grams ^{239}Pu in Feed Solution		
Total Grams ^{241}Am in Feed Solution		
Total Equivalent Grams ^{239}Pu in Feed Solution*		
Total mCi B-γ activity in Feed Solution		
Designation of Pit(s) Receiving Cement Paste		
I.D. Nos. of CMP receiving Cement Paste		
Miscellaneous Drums of Waste Sent to Area "G", TA-54		

*^{238}Pu, ^{239}Pu, ^{241}Am expressed as ^{239}Pu. Actual H-7 Lab analysis of Feed Solutions indicate a total of _____ equivalent grams of ^{239}Pu

cc: John Warren, H-7

①

JUN 2 2 1993

To: H-7 Files
Thru: J. R. Buchholz; L. A. Emelity, and T. K. Keenan, H-7
From: Paul E. McGinnis, Liquid Waste Engr. Section
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR OCTOBER 1976
Date: December 22, 1976
Symbol: H7-76-589

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums (4)	Vol. of Waste (Liters)	^{238}Pu (mg)	^{239}Pu (mg)	Equiv. ^{239}Pu Cont's (1) grams
nt Sludge	38	7182	14	457	4.6
t	--	--	--	--	--
tium Vials	--	--	--	--	--
cellaneous	--	--	--	--	--
al	38	7182	14	457	4.6

NOTES

Includes ^{241}Am (1 g ^{241}Am = ~52 g ^{239}Pu)

Water used to clean sight glass

B - indicates feed solutions used to generate Retrievable Paste

F - indicates feed solutions used to generate nonretrievable paste to flush the discharge hose as the final portion of the pug mill run

ll drums sent to TA-54 this period were 200-iter fiber units and contained nonretrievable oncentrations of TRU.

ased on GMX-11 analysis. H-7 analysis indi-ate the presence of 62.5 g of ^{241}Am in feed olutions.

c: John Warren, H-7

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (3) 395R	395F	396R	395F			Total
Plant Sludge	--	--	--	--			--
Neutralized Americium	5144	--	5126	--			10270
Treated Strip	--	--	--	--			--
Raw KOH	--	1243	--	1455			2698
Sight Glass Rinse Water (2)	183	38	76	333			630
Miscellaneous	--	--	44	--			44
Total Vol. Feed Solutions	5327	1281	5246	1788			13642

GRAND Total Feed Solutions (liters)	13642
GRAND Total Cement Paste	18596

	SHAFTS	CMP
Total Milligrams ^{238}Pu in Feed Solution	.3	123.8
Total Grams ^{239}Pu in Feed Solution	.1	52.2
Total Grams ^{241}Am in Feed Solution	.07	38.2 (5)
Total Equivalent Grams ^{239}Pu in Feed Solution*	3.7	1997
Total mCi B-γ activity in Feed Solution	1.1	52.4
Designation of Pit(s) Receiving Cement Paste	82	
I.D. Nos. of CMP receiving Cement Paste	1189, 1190, 1191, 1192, 1193, 1194, 1195	
Miscellaneous Drums of Waste Sent to Area "G", TA-54	0	

*^{238}Pu, ^{239}Pu, ^{241}Am expressed as ^{239}Pu. Actual H-7 Lab analysis of Feed Solutions indicate a total of 3.2/2995 equivalent grams of ^{239}Pu based on Grossα. (1 gram ^{241}Am = ~50 grams ^{239}Pu)

Received by ER-RPF
JUN 2 2 1993

(2)

To: H-7 Files
Thru: J. R. Buchholz; L. A. Emelity, and T. K. Keenan, H-7
From: Paul E. McGinnis, Liquid Waste Engr. Section
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR NOVEMBER 1976
Date: December 22, 1976
Symbol: H7-76-590

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums	Vol. of Waste (Liters)	^{238}Pu (mg)	^{239}Pu (mg)	Equiv. ^{239}Pu Cont'd (1) grams
Plant Sludge					
Grit					
Tritium Vials					
Miscellaneous					
Total					

(1) Includes [illegible]
(2) Wat[illegible] ght glass
(3) [illegible] solutions used to [illegible] Retrievable Paste
F - [illegible]icates feed solutions used to generate Paste to Flush the Pug Mill discharge hose

SEE NEXT PAGE

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (3) 397R	397F	398	399R	399F		Total
Plant Sludge	--	--	1421	--	--		Totals on next page
Neutralized Americium	4459	--	--	4828	--		
Treated Strip	--	--	2654	--	--		
Raw KOH	--	786	1174	--	1061		
Sight Glass Rinse Water (2)	325	455	307	110	144		
Miscellaneous	--	--	--	--	--		
Total Vol. Feed Solutions	4784	1241	5556	4938	1205		

GRAND Total Feed Solutions (liters)
GRAND Total Cement Paste
[illegible] CMP
Total Milligrams ^{238}Pu in Feed Solution
Total Grams ^{239}Pu in Feed Solution
Total Grams ^{241}Am in Feed Soluti[illegible]
Total Equivalent Grams ^{239}[illegible]
Total mCi β-γ ac[illegible]
Designation of [illegible]ent Paste
I.D. Nos. of CM[illegible] Cement Paste
Miscellaneous Dru[illegible] of Waste Sent to Area "G", TA-54

TOTALS ON NEXT PAGE

a ^{238}Pu, ^{239}Pu, ^{241}Am expressed as ^{239}Pu. Actual H-7 Lab analysis of Feed Solutions indicate a total of _____ equivalent grams of ^{239}Pu

xc: John Warren, H-7
John Enders, H-7

To: H-7 Files
Thru: J. R. Buchholz; L. A. Emelity, and T. K. Keenan, H-7
From: Paul E. McGinnis, Liquid Waste Engr. Section
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR NOVEMBER (continued) 19 76
Date: December 22, 1976
Symbol: H7-76-590

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums (4)	Vol. of Waste (Liters)	^{238}Pu (mg)	^{239}Pu (mg)	Equiv. ^{239}Pu Cont'd (1) grams
Plant Sludge	32	6048	13	333	4.1
Grit	--	--	--	--	--
Tritium Vials	--	--	--	--	--
Miscellaneous	1	18	--	--	--
Total	33	6066	13	333	4.1

NOTES

(1) Includes ^{241}Am (1 g ^{241}Am = ~52 g ^{239}Pu)

(2) Water used to clean sight glass

(3) R - indicates feed solutions used to generate Retrievable Paste

F - indicates feed solutions used to generate nonretrievable paste to flush the discharge hose as the final portion of the pug mill run.

(4) All drums sent to TA-54 this period from TA-50 were 200-ℓ fiber units containing nonretrievable concentrations of TRU.

(5) Based on CMP-11 analysis. H-7 analysis indicate the presence of 39.2 g of ^{241}Am in the feed solutions.

(6) Retrievable cement paste and dirt

xc: John Warren, H-7

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (3) 400R	400F					Total
Plant Sludge	--	--					1421
Neutralized Americium	5068	--					14355
Treated Strip	--	--					2654
Raw KOH	--	1414					4435
Sight Glass Rinse Water (2)	72	337					1750
Miscellaneous	76	--					76
Total Vol. Feed Solutions	5216	1751					24691

GRAND Total Feed Solutions (liters)	24691	
GRAND Total Cement Paste	35404	
	SHAFTS	CMP
Total Milligrams ^{238}Pu in Feed Solution	1.8	509
Total Grams ^{239}Pu in Feed Solution	1.1	96
Total Grams ^{241}Am in Feed Solution	.21	30.5 (5)
Total Equivalent Grams ^{239}Pu in Feed Solution*	12.1	1765
Total mCi β-γ activity in Feed Solution	29.3	8.8
Designation of Pit(s) Receiving Cement Paste	82	
I.D. Nos. of CMP receiving Cement Paste	1195, 1196, 1197, 1199, 1200, 1201, 1202, 1203, 1204, 1193	
Miscellaneous Drums of Waste Sent to Area "G", TA-54	9 (6)	

*^{238}Pu, ^{239}Pu, ^{241}Am expressed as ^{239}Pu. Actual H-7 Lab analysis of Feed Solutions indicate a total of 10.7/2215 equivalent grams of ^{239}Pu based on gross α. (1 gram ^{241}Am = ~50 grams ^{239}Pu)

(1)

Received by GRHoff
JUN 22 1993

To: H-7 Files
Thru: J. R. Buchholz; L. A. Emelity and T. K. Keenan, H-7
From: Paul E. McGinnis, Liquid Waste Engr. Section
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR December 19 76
Date: 1/6/77
Symbol: H7-77-13

From TA-50-1 to Mesita del Buey (TA-54)

Type of W[illegible] Solids	No. of Drums(4)	Vol. of Waste (Liters)	^{238}Pu (mg)	^{239}Pu (mg)	Equiv. ^{239}Pu Cont'd(1) grams
lant Sludge	37	6993	11	353	3.6
-it	--	--	--	--	--
-itium Vials	5	233	--	--	--
iscellaneous	--	--	--	--	--
otal	42	7226	11	353	3.6

NOTES

1) Includes ^{241}Am (where 1 g ≈52 g ^{239}Pu)
2) Water used to clean sight glass
3) R - indicates feed solutions used to generate Retrievable Paste
F - indicates feed solutions used to generate nonretrievable paste to flush the discharge hose as the final portion of the pug mill run.
4) All drums sent to TA-54 this period were 200-ℓ fiber units containing nonretriev. conc./TRU.
5) Based on CMB-11 Analysis. H-7 Analysis indicate presence of 17.0 g of ^{241}Am in feed sol.
6) Approx. 56% of paste in PMR 402 (Ret. Port) leaked out of the CMP.

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number(3) 401R	401F	402R	402F			Total
Plant Sludge	--	1075	--	--			1075
Neutralized Americium	4828	--	4836	--			9664
Treated Strip	--	--	--	--			--
Raw KOH	--	1449	--	1060			2609
Sight Glass Rinse Water(2)	110	984	182	518			1794
Miscellaneous			45				45
Total Vol. Feed Solutions	4938	3508	5063	1578			15087

GRAND Total Feed Solutions (liters)	15087 (6)	
GRAND Total Cement Paste	20148 (6)	
	SHAFTS	CMP
Total Milligrams ^{238}Pu in Feed Solution	1.3	36.8
Total Grams ^{239}Pu in Feed Solution	5.1	34.3
Total Grams ^{241}Am in Feed Solution	.04	14.5(6)
Total Equivalent Grams ^{239}Pu in Feed Solution*	7	770
Total mCi β-γ activity in Feed Solution	.8	3.7
Designation of Pit(s) Receiving Cement Paste	82	
I.D. Nos. of CMP receiving Cement Paste	1204, 1205, 1206, 1207, 1208, 1209, 1210	
Miscellaneous Drums of Waste Sent to Area "G", TA-54	0	

*^{238}Pu, ^{239}Pu, ^{241}Am expressed as ^{239}Pu. Actual H-7 Lab analysis of Feed Solutions indicate a total of 5/857 equivalent grams of ^{239}Pu based on gross α. (1 g ^{241}Am = ~50 g ^{239}Pu).

c: John Warren, H-7

To: H-7 Files
Thru: J. R. Buchholz; L. A. Emelity, and T. K. Keenan, H-7
From: Paul E. McGinnis, Liquid Waste Engr. Section P.E.M.
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR January 19 77
Date: March 11, 1977
Symbol: H7-77-92

JUN 2 2 1993

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums (4)	Vol. of Waste (Liters)	^{238}Pu (mg)	^{239}Pu (mg)	Equiv. ^{239}Pu Corr'd (1) grams
Plant Sludge	34	6070	10	276	3.3
Pit (5)	1	200	--	--	--
Tritium Vials	--	--	--	--	--
Miscellaneous	1	40	--	--	--
Total	36	6310	10	276	3.3

NOTES

1) Includes ^{241}Am
2) Water used to clean sight glass
3) R - indicates feed solutions used to generate Retrievable Paste
F - indicates feed solutions used to generate Paste to Flush the Pug Mill discharge hose
4) All drums sent to TA-54 this period contained nonretrievable concentrations of TRU.
5) 215 liter steel unit
6) Based on CMB-11 Analysis. H-7 Analysis indicated presence of 28.2g of ^{241}Am in feed solution.

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (3) 403	404R	404F				Total
Plant Sludge	1790		--				1790
Neutralized Americium	--	4880	--				4880
Treated Strip	2410	--	--				2410
Raw KOH	840	--	--				840
Sight Glass Rinse Water (2)	830	850	--				1680
Miscellaneous	--	--	--				
Total Vol. Feed Solutions	5870	5730	--				11600

GRAND Total Feed Solutions (liters)	11600	
GRAND Total Cement Paste	16620	
	SHAFTS	CMP
Total Milligrams ^{238}Pu in Feed Solution	1	2
Total Grams ^{239}Pu in Feed Solution	1.12	2.08
Total Grams ^{241}Am in Feed Solution	.8	33.3 (6)
Total Equivalent Grams ^{239}Pu in Feed Solution*	41	1668
Total mCi β-γ activity in Feed Solution	8.1	1.7
Designation of Pit(s) Receiving Cement Paste	82	
I.D. Nos. of CMP receiving Cement Paste	1208, 1209, 1210, 1211	
Miscellaneous Drums of Waste Sent to Area "G", TA-54	36	

*^{238}Pu, ^{239}Pu, ^{241}Am expressed as ^{239}Pu. Actual H-7 Lab analysis of Feed Solutions indicate a total of 5/1117 equivalent grams of ^{239}Pu

xc: John Warren, H-7

To: H-7 Files
Thru: J. R. Buchholz; L. A. Emelity, and T. K. Keenan, H-7
From: Paul E. McGinnis, Liquid Waste Engr. Section
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR February 19 77
Date: April 7, 1977
Symbol: H7-77-126

Received by SR-NPF
JUN 2 2 1993

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums (4)	Vol. of Waste (Liters)	^{238}Pu (mg)	^{239}Pu (mg)	Equiv. ^{239}Pu Coef.: grams
Plant Sludge	69	12950	22	704	7.5
Grit	--	--	--	--	--
Tritium Vials	--	--	--	--	--
Miscellaneous	4	92	--	--	--
Total	73	13042	22	704	7.5

NOTES

(1) Includes ^{241}Am
(2) Water used to clean sight glass
(3) R - indicates feed solutions used to generate Retrievable Paste
F - indicates feed solutions used to generate Paste to Flush the Pug Mill discharge hose
(4) All drums sent to TA-54 this period were 200-ℓ fiber units and contained nonretrievable levels of TRU.
(5) Based on CMB-11 Analysis. H-7 Analysis indicated presence of 78.9 g of ^{241}Am in feed solution

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (3) 405	406R	406F				Total
Plant Sludge	3391	--	--				3391
Neutralized Americium	--	5379	--				5379
Treated Strip	--	--	--				--
Raw KOH	1700	--	910				2610
Sight Glass Rinse Water (2)	950	193	571				1714
Miscellaneous	--	80	--				80
Total Vol. Feed Solutions	6041	5652	1481				13174

GRAND Total Feed Solutions (liters)	13174	
GRAND Total Cement Paste	18890	
	SHAFTS	CMP
Total Milligrams ^{238}Pu in Feed Solution	6	7
Total Grams ^{239}Pu in Feed Solution	0.7	11.5
Total Grams ^{241}Am in Feed Solution	0.3	79.6 (5)
Total Equivalent Grams ^{239}Pu in Feed Solution*	17.4	3993
Total mCi β-γ activity in Feed Solution	5.3	74.9
Designation of Pit(s) Receiving Cement Paste	82	
I.D. Nos. of CMP receiving Cement Paste	1211, 1212, 1213, 1214, 1215	
Miscellaneous Drums of Waste Sent to Area "G", TA-54	18	

*^{238}Pu, ^{239}Pu, ^{241}Am expressed as ^{239}Pu. Actual H-7 Lab analysis of Feed Solutions indicate a total of 16/5046 equivalent grams of ^{239}Pu based on gross α.

xc: John Warren, H-7

H7-ENG-13

To: H-7 Files
Thru: J. R. Buchholz; L. A. Emelity, and T. K. Keenan, H-7
From: Paul E. McGinnis, Liquid Waste Engr. Section
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR March 19 77
Date: April 7, 1977
Symbol: H7-77-126

JUN 22 1993

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums (1)	Vol. of Waste (Liters)	^{238}Pu (mg)	^{239}Pu (mg)	Equiv. ^{239}Pu Cont'd (5) grams
Plant Sludge	57	10736	10	379	3.4
Grit	--	--	--	--	--
Tritium Vials	--	--	--	--	--
Miscellaneous	1	24			
Total	58	10760	10	379	3.4

NOTES

(1) Includes ^{241}Am

(2) Water used to clean sight glass

(3) R - indicates feed solutions used to generate Retrievable Paste

F - indicates feed solutions used to generate Paste to Flush the Pug Mill discharge hose

(4) All drums sent to TA-54 this period were 200 liter fiber units and contained nonretrievable levels of TRU.

(5) Based on CMB-11 Analysis. H-7 analysis indicated presence of 84.7 g of ^{241}Am in feed solution.

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (3) 407	408R	408F	409			Total
Plant Sludge	3040	--	--	2024			50[illegible]
Neutralized Americium	--	4723	--	--			4723
Treated Strip	--	--	--	1893			1893
Raw KOH	1472	--	770	--			2242
Sight Glass Rinse Water (2)	598	776	223	289			1886
Miscellaneous	--	--	--	--			--
Total Vol. Feed Solutions	5110	5499	993	4206			15808

GRAND Total Feed Solutions (liters)	15808
GRAND Total Cement Paste	20522

	SHAFTS	CMP
Total Milligrams ^{238}Pu in Feed Solution	4	4
Total Grams ^{239}Pu in Feed Solution	1.3	10.5
Total Grams ^{241}Am in Feed Solution	0.1	60.2 (5)
Total Equivalent Grams ^{239}Pu in Feed Solution*	7	3022
Total mCi β-γ activity in Feed Solution	24.1	2.2

Designation of Pit(s) Receiving Cement Paste	82 & 87
I.D. Nos. of CMP receiving Cement Paste	1215, 1216, 1217, 1218
Miscellaneous Drums of Waste Sent to Area "G", TA-54	0

*^{238}Pu, ^{239}Pu, ^{241}Am expressed as ^{239}Pu. Actual H-7 Lab analysis of Feed Solutions indicate a total of 5/3707 equivalent grams of ^{239}Pu based on gross α.

cc: [illegible] Warren, H-7
John Enders, H-7

①

Received by ER-RPF
JUN 2 2 1993

To: H-7 Files
Thru: J. R. Buchholz; L. A. Emelity, and T. K. Keenan, H-7
From: Paul E. McGinnis, Liquid Waste Engr. Section P.E.M
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR April 19 77
Date: June 6, 1977
Symbol: H-7-77195

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums	Vol. of Waste (Liters)	^{238}Pu (mg)	^{239}Pu (mg)	Equiv. ^{239}Pu Cont'd (1) grams
Plant Sludge	28	5292	3	136	1.1
Grit	-	-	-	-	-
Tritium Vials	5	215	-	-	-
Miscellaneous	-	-	-	-	-
Total	33	5507	3	136	1.1

NOTES

(1) Includes ^{241}Am

(2) Water used to clean sight glass

(3) R - indicates feed solutions used to generate Retrievable Paste

F - indicates feed solutions used to generate Paste to Flush the Pug Mill discharge hose

(4) All drums sent to TA-54 this period were 200 liter fiber units and contained non-retrievable levels of TRU.

(5) Based on CMB-11 Ananysis. H-7 analysis indicated presence of 3.4g of ^{241}Am in feed solution. Reason for 10 fold discrepancy is not known for sure - either CMB-11 analysis or H-7 sampling error

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (3) 410	411R	411F				Total
Plant Sludge	2945	-	-				2945
Neutralized Americium	-	4828	-				4828
Treated Strip	568	-	-				568
Raw KOH	1525	-	813				2338
Sight Glass Rinse Water (2)	450	291	250				991
Miscellaneous	-	-	-				-
Total Vol. Feed Solutions	5488	5119	1063				11670

GRAND Total Feed Solutions (liters)	11670
GRAND Total Cement Paste	16787

	SHAFTS	CMP
Total Milligrams ^{238}Pu in Feed Solution	2	1
Total Grams ^{239}Pu in Feed Solution	1	1
Total Grams ^{241}Am in Feed Solution	0	31.2 (5)
Total Equivalent Grams ^{239}Pu in Feed Solution*	2	1561
Total mCi B-γ activity in Feed Solution	9.9	7.6

Designation of Pit(s) Receiving Cement Paste	87
I.D. Nos. of CMP receiving Cement Paste	1218, 1219, 1220, 1221
Miscellaneous Drums of Waste Sent to Area "G", TA-54	0

*^{238}Pu, ^{239}Pu, ^{241}Am expressed as ^{239}Pu. Actual H-7 Lab analysis of Feed Solutions indicate a total of 6/160 equivalent grams of ^{239}Pu

cc: John Warren, H-7
John Enders, H-7

H7-ENG-13

②

Received by ERPF
JUN 2 2 1993

To: H-7 Files JPB
Thru: J. R. Buchholz; L. A. Emelity, and T. K. Keenan, H-7
From: Paul E. McGinnis, Liquid Waste Engr. Section P.E.M.
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR May 1977
Date: July 12, 1977
Symbol: H7-77-250

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums	Vol. of Waste (Liters)		Equiv. ^{239}Pu Cont'd grams
lant Sludge				
it				
itium Vials				
iscellaneous				
otal				

NOTES

1) Includes ^{241}Am
2) Water used to ... t glass
3) R - indicat... ...tions used to generate ...ble Paste
F - indi... solutions used to ge... to Flush the Pug Mill d... se

From TA-21-257 to Area T Shafts and CMP

Type of Waste In Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (3) 412R	412F	413R	413F	414	
Plant Sludge	--	--	--	--	2520	
Neutralized Americium	4819	--	4933	--	--	
Treated Strip	--	--	--	--	2624	
Raw KOH	--	1096	--	919	--	
Sight Glass Rinse Water (2)	269	367	238	439	306	
Miscellaneous	62	--	--	--	--	
Total Vol. Feed Solutions	5150	1463	5171	1358	5450	

GRAND Total Feed Solutions (liters)
GRAND Total Cement Paste

Total Milligrams ^{238}Pu in Feed Solution
Total Grams ^{239}Pu in Feed Solution
Total Grams ^{241}Am in Feed Solutio...
Total Equivalent Grams ^{239}Pu
Total mCi ß-γ activity
Designation of Pit(s) ... Paste
I.D. Nos. of CM... ...t Paste
Miscellanec... ... Sent to Area "G", TA-54

...^{238}Pu ... ...pressed as ^{239}Pu. Actual H-7 Lab analysis of Feed Solut... ...cate a total of _____ equivalent grams of ^{239}Pu

TOTALS ON NEXT PAGE

TOTALS ON NEXT PAGE

SEE NEXT PAGE

cc: John Warren, H-7

H-7 Files
To: J. R. Buchholz; L. A. Emelity, and T. K. Keenan, H-7
From: Paul E. McGinnis, Liquid Waste Engr. Section
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR May 19 77
Date: July 12, 1977
Symbol: H7-77-250

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums (4)	Vol. of Waste (Liters)	^{238}Pu Curies	^{239}Pu Curies	^{241}Am Curies
Plant Sludge (5)	69	13041	.15	.03	.02
Grit	--	--	--	--	--
Tritium Vials (5)	3	--	--	--	--
Miscellaneous (6)	3	378	--	--	--
Total	75	13419	.15	.03	.02

NOTES

1) Includes ^{241}Am
2) Water used to clean sight glass
3) R - indicates feed solutions used to generate Retrievable Paste
F - Indicates feed solutions used to generate Paste to Flush the Pug Mill discharge hose
4) All drums sent to TA-54 this period contained nonretrievable levels of TRU.
5) Packaged in 200 liter fiber drums
6) Packaged in 213 liter steel units
7) Quantity based on CMB-11 analysis. H-7 analysis indicated a total of 859 curies ^{241}Am in feed solutions.

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (3) 415R	415F					Total
Plant Sludge	--	--					252[illegible]
Neutralized Americium	4828	--					14580
Treated Strip	--	--					2624
Raw KOH	--	1061					3076
Sight Glass Rinse Water (2)	227	583					2429
Miscellaneous	--	--					62
Total Vol. Feed Solutions	5055	1644					25291

GRAND Total Feed Solutions (liters)	25291	
GRAND Total Cement Paste	35326	
	SHAFTS	CMP
Total curies ^{238}Pu in Feed Solution	.03	1.74
Total curies ^{239}Pu in Feed Solution	.15	2.99
Total curies ^{241}Am in Feed Solution	.28	719 (7)
Total Equivalent curies ^{239}Pu in Feed Solution*	.46	724
Total mCi β-γ activity in Feed Solution	2.6	13.5
Designation of Pit(s) Receiving Cement Paste	87	
I.D. Nos. of CMP receiving Cement Paste	1221 through 1231	
Miscellaneous Drums of Waste Sent to Area "G", TA-54	0	

*^{238}Pu, ^{239}Pu, ^{241}Am Total curies. 1. Actual H-7 Lab analysis of Feed Solutions indicate a total of .61/1180 curies based on gross α. Disagreement with CMB-11 values appears to be due to poor H-7 sample.

xc: John Warren, H-7

JUN 2 2 1993

o: H-7 Files
hru: J. R. Buchholz; L. A. Freifeld, and T. K. Keenan, H-7
rom: Paul E. McGinnis, Liquid Waste Engr. Section
ubject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR JUNE 19 77
ate: 8/1/77
ymbol: H7-77-273

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums (4)	Vol. of Waste (Liters)	238Pu curies	239Pu curie	241Am curie
lant Sludge	27	5092	.024	.006	.003
rit	--	--	--	--	--
ritium Vials	--	--	--	--	--
iscellaneous	--	--	--	--	--
Total	27	5092	.024	.006	.003

NOTES

(1) Includes 241Am

(2) Water used to clean sight glass

(3) R - indicates feed solutions used to generate Retrievable Paste

F - indicates feed solutions used to generate Paste to Flush the Pug Mill discharge hose

(4) All drums sent to TA-54 this period contained nonretrievable levels of TRU and were 200-litre fiber units

(5) Number based on CMB-11 analysis. H-7 analysi ... 351 curies of 241Am in feed solutions. Dif- ... likely due to sampling problems

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (3) 416R	416F	417				Tot
Plant Sludge	--	--	2367				2367
Neutralized Americium	4844	--	--				4844
Treated Strip	--	--	2181				2181
Raw KOH	--	707	806				1513
Sight Glass Rinse Water (2)	307	114	356				777
Miscellaneous	89	--	--				89
Total Vol. Feed Solutions	5240	821	5710				11771

GRAND Total Feed Solutions (liters)	11771	
GRAND Total Cement Paste	16419	
	SHAFTS	CMP
Total curies 238Pu in Feed Solution	.01	.1
Total curies 239Pu in Feed Solution	.02	.59
Total curies 241Am in Feed Solution	.18	259
Total Equivalent curies 239Pu in Feed Sol.	.21	260
Total mCi β-γ activity in Feed Solution	1.2	.9
Designation of Pit(s) Receiving Cement Paste	87	
I.D. Nos. of CMP receiving Cement Paste	1231, 1232, 1233, 1235	
Miscellaneous Drums of Waste Sent to Area "G", TA-54	0	

*238Pu, 239Pu, 241Am total curies. Actual H-7 Lab analysis of Feed Solutions indicate a total of .25/374 curies based on

(1)

To: H-7 Files
Thru: J. R. Buchholz; L. A. Emelity
From: Paul E. McGinnis, Liquid Waste Engr. Section
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR JANUARY 1978
Date: 24 February 1978
Symbol: H7-78-79

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums	Vol. of Waste (Liters)	^{238}Pu curies	^{239}Pu curies	^{241}Am curies
Plant Sludge	29 (4)	5481	.04	.04	.01
Grit	1	208	--	--	--
Ret. Plant Sludge	5 (5)	945	.02	.04	.01
Miscellaneous	4	100	--	--	--
Total	39	6734	.06	.08	.02

NOTES

(1) Water used to clean sight glass
(2) R - indicates feed solutions used to generate Retrievable Paste
F - indicates feed solutions used to generate Paste to Flush the Pug Mill discharge hose.
(3) Number reported is based on CMB-11 analysis H-7 analysis indicates the presence of 1460 curies in the Feed solution.
(4) 200-liter fiber units - nonretrievable
(5) 213-liter, 90-mil lined steel units, retrievable

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (2) 430R	430F	431R	432R	432F		Total
Plant Sludge	--	--	--	--	--		
Neutralized Americium	5249	--	2525	5249	--		13023
Treated Strip	--	--	--	--	--		
Raw KOH	--	707	--	--	742		1449
Sight Glass Rinse Water (1)	23	560	129	363	254		1329
Miscellaneous	273	--	--	--	--		273
Total Vol. Feed Solutions	5545	1267	2654	5612	996		16074

GRAND Total Feed Solutions (liters)	16074	
GRAND Total Cement Paste	22707	
	SHAFTS	CMP
Total curies ^{238}Pu in Feed Solution	.01	.52
Total curies ^{239}Pu in Feed Solution	.13	5.74
Total curies ^{241}Am in Feed Solution	.28	1254 (3)
Total curies in Feed Solution *	.42	1260
Total mCi β-γ activity in Feed Solution	1.93	29.17
Designation of Pit(s) Receiving Cement Paste	94, 92	
I.D. Nos. of CMP receiving Cement Paste	1267 - 1276	
Miscellaneous Drums of Waste Sent to Area "G", TA-54	0	

*^{238}Pu, ^{239}Pu, ^{241}Am total curies. Actual H-7 Lab analysis of Feed Solutions indicate a total of .4/1243 curies based on gross α.

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xc: John Warren, H-7

H7-ENG-13

①

To: H-7 Files
Thru: J. R. Buchholz; L. A. Emelity.
From: Paul E. McGinnis, Liquid Waste Engr. Section P.E.M.
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR February 1978
Date: 21 March 1978
Symbol: H-7-78-106

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums	Vol. of Waste (Liters)	^{238}Pu curies	^{239}Pu curie	^{241}Am curie
Plant Sludge	37	6975	0.04	0.04	0.01
Grit	-	-	-	-	-
Tritium Vials	-	-	-	-	-
Miscellaneous	1	-	-	-	-
Total	38	6975	0.04	0.04	0.01

NOTES

(1) Water used to clean sight glass
(2) R - indicates feed solutions used to generate Retrievable Paste
F - indicates feed solutions used to generate Paste to Flush the Pug Mill discharge hose.
(3) Number reported is based on CMB-11 analysis H-7 analysis indicates the presence of curies in the Feed solution.
(4) All drums are 200 liter fiber units containing nonretrievable TRU wastes.

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (2)						Total
Plant Sludge							
Neutralized Americium							
Treated Strip							
Raw KOH							
Sight Glass Rinse Water (1)							
Miscellaneous							
Total Vol. Feed Solutions							

NO PUG MILL RUNS THIS MONTH

	SHAFTS	CMP
GRAND Total Feed Solutions (liters)		
GRAND Total Cement Paste		
Total curies ^{238}Pu in Feed Solution		
Total curies ^{239}Pu in Feed Solution		
Total curies ^{241}Am in Feed Solution		
Total curies in Feed Solution		
Total mCi β-γ activity in Feed Solution		
Designation of Pit(s) Receiving Cement Paste		
I.D. Nos. of CMP receiving Cement Paste		
Miscellaneous Drums of Waste Sent to Area "G", TA-54		

*^{238}Pu, ^{239}Pu, ^{241}Am total curies. Actual H-7 Lab analysis of Feed Solutions indicate a total of curies based on gross α.

JUN 2 2 1993

cc: John Warren, H-7

To: H-7 Files
Thru: J. R. Buchholz, L. A. Emelity
From: Paul E. McGinnis, Liquid Waste Engr. Section
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR March 19 78
Date: April 18, 1978
Symbol: H7-78-137

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums (4)	Vol. of Waste (Liters)	^{238}Pu curies	^{239}Pu curies	^{241}Am curies
lant Sludge	53	9560	.09	.07	.03
rit	--	--	--	--	--
ritium Vials	--	--	--	--	--
iscellaneous	--	--	--	--	--
otal	53	9560	.09	.07	.03

NOTES

1) Water used to clean sight glass
2) R - indicates feed solutions used to generate Retrievable Paste
F - indicates feed solutions used to generate Paste to Flush the Pug Mill discharge hose.
3) Number reported is based on CMB-11 analysis H-7 analysis indicates the presence of 780 curies in the Feed solution.
4) All drums are 200-liter fiber units containing nonretrievable levels of TRU in the waste.

xc: John Warren, H-7

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From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (2) 433R	433F	434R	434F	435		Total
Plant Sludge	--	--	--	--	1841		1841
Neutralized Americium	5301	--	6259	--	--		11560
Treated Strip	--	--	--	--	3776		3776
Raw KOH	--	247	--	707	--		954
Sight Glass Rinse Water (1)	23	18	60	80	120		301
Miscellaneous	--	--	120	185	--		305
Total Vol. Feed Solutions	5324	265	6439	972	5737		18737

GRAND Total Feed Solutions (liters)	18737	
GRAND Total Cement Paste	29000	
	SHAFTS	CMP
Total curies ^{238}Pu in Feed Solution	.30	.71
Total curies ^{239}Pu in Feed Solution	.27	6.54
Total curies ^{241}Am in Feed Solution	13.00	780 *
Total curies in Feed Solution	13.57	787.25
Total mCi β-γ activity in Feed Solution	1.58	5.18
Designation of Pit(s) Receiving Cement Paste	92	
I.D. Nos. of CMP receiving Cement Paste	1275 - 1283	
Miscellaneous Drums of Waste Sent to Area "G", TA-54	0	

*^{238}Pu, ^{239}Pu, ^{241}Am total curies. Actual H-7 Lab analysis of Feed Solutions indicate a total of 15.8/760 curies based on gross α.

H7-PEG-13

(1)

To: H-7 Files
Thru: L. A. Emality, H-7
From: J. R. Buchholz, Liquid Waste Engr. Section
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR April 1978
Date: 15 June 1978
Symbol: H-7-78-237

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums	Vol. of Waste (Liters)	^{238}Pu curies	^{239}Pu curie	^{241}Am curie
ant Sludge	60	11328	0.31	0.062	0.0019
it	-	-	-	-	-
itium Vials	-	-	-	-	-
scellaneous	-	-	-	-	-
tal	60	11328	0.31	0.062	0.0019

NOTES

1) Water used to clean sight glass
2) R - indicates feed solutions used to generate Retrievable Paste
F - indicates feed solutions used to generate Paste to Flush the Pug Mill discharge hose.
3) Number reported is based on CMB-11 analysis H-7 analysis indicates the presence of 730 curies in the Feed solution.

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xc: John Warren, H-7

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (2) 436R	436F	437R	437F			Total
Plant Sludge	-	-	-	-			-
Neutralized Americium	6459	-	6143	-			12602
Treated Strip	-	-	-	-			-
Raw KOH	-	-	-	-			-
Sight Glass Rinse Water (1)	14	-	26	-			40
Miscellaneous	535	-	150	-			685
Total Vol. Feed Solutions	7008	-	6319	-			13327

GRAND Total Feed Solutions (liters)	13327	
GRAND Total Cement Paste	17062	
	SHAFTS	CMP
Total curies ^{238}Pu in Feed Solution	-	1.49
Total curies ^{239}Pu in Feed Solution	-	1.38
Total curies ^{241}Am in Feed Solution	-	636.7 (3)
Total curies in Feed Solution	-	640.6 *
Total mCi β-γ activity in Feed Solution	-	27.8
Designation of Pit(s) Receiving Cement Paste	-	
I.D. Nos. of CMP receiving Cement Paste	1283 thru 1289	
Miscellaneous Drums of Waste Sent to Area "G", TA-54	0	

*^{238}Pu, ^{239}Pu, ^{241}Am total curies. Actual H-7 Lab analysis of Feed Solutions indicate a total of 815 curies based on gross α.

To: H-7 Files
Thru: L. A. Emelity, H-7
From: J.R. Buchholz, Liquid Waste Engr. Section
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR May 1978
Date: 15 June 1978
Symbol: H-7-78-236

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums	Vol. of Waste (Liters)	^{238}Pu curies	^{239}Pu curies	^{241}Am curies
ant Sludge	57	10773	0.37	0.092	0.0032
it	-	-	-	-	-
itium Vials	-	-	-	-	-
scellaneous	-	-	-	-	-
tal	57	10773	0.37	0.092	0.0032

NOTES

) Water used to clean sight glass

) R - indicates feed solutions used to generate Retrievable Paste

F - indicates feed solutions used to generate Paste to Flush the Pug Mill discharge hose.

) Number reported is based on CMB-11 analysis H-7 analysis indicates the presence of 366 curies in the Feed solution.

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From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (2) 438R	438F	439R	439F			Total
Plant Sludge	-	-	-	-			-
Neutralized Americium	6516	-	2987	-			9503
Treated Strip	-	-	-	-			-
Raw KOH	-	-	3366	-			3366
Sight Glass Rinse Water (1)	40	-	115	-			155
Miscellaneous	100	-	43	-			143
Total Vol. Feed Solutions	6656	-	6511	-			13167

GRAND Total Feed Solutions (liters)	13167	
GRAND Total Cement Paste	17551	
	SHAFTS	CMP
Total curies ^{238}Pu in Feed Solution	-	1.35
Total curies ^{239}Pu in Feed Solution	-	0.71
Total curies ^{241}Am in Feed Solution	-	257.1 (3)
Total curies in Feed Solution	-	259.2 *
Total mCi β-γ activity in Feed Solution	-	26.4
Designation of Pit(s) Receiving Cement Paste		
I.D. Nos. of CMP receiving Cement Paste	1290 thru 1296	
Miscellaneous Drums of Waste Sent to Area "G", TA-54	22	

*^{238}Pu ^{239}Pu ^{241}Am total curies. Actual H-7 Lab analysis of Feed Solutions indicate a total of 366 curies based on gross α.

To: Files
Thru: L. A. Emelity
From: J.R. Buchholz, Liquid Waste Engr. Section
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR JUNE 1978
Date: July 11, 1978
Symbol: H7-78-275

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums	Vol. of Waste (Liters)	^{238}Pu curies	^{239}Pu curies	^{241}Am curies
Plant Sludge	18	3402	0.075	0.015	0.0088
Pit	--	--	--	--	--
Tritium Vials	---	---	---	---	---
Miscellaneous	---	---	---	---	---
Total	18	3402	0.075	0.015	0.0088

NOTES

(1) Water used to clean sight glass
(2) R - indicates feed solutions used to generate Retrievable Paste
F - indicates feed solutions used to generate Paste to Flush the Pug Mill discharge hose.
(3) Number reported is based on CMB-11 analysis H-7 analysis indicates the presence of 330.7 curies in the Feed solution.

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From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (2) 440	441R	441F	442R	442F		Total
Plant Sludge		---	---	---	---		--
Neutralized Americium		5850	---	6195	---		12045
Treated Strip	4407	---	---	---	---		4407
Raw KOH		---	---	---	---		---
Sight Glass Rinse Water (1)	50	28	---	35	---		113
Miscellaneous	350	125	---	130	---		605
Total Vol. Feed Solutions	4807	6005	---	6325	---		17137

GRAND Total Feed Solutions (liters)	17,137	
GRAND Total Cement Paste	28,252	
	SHAFTS	CMP
Total curies ^{238}Pu in Feed Solution	0.07	0.51
Total curies ^{239}Pu in Feed Solution	0.08	0.39
Total curies ^{241}Am in Feed Solution (3)	1.83	249.8
Total curies in Feed Solution *	1.98	250.7
Total mCi β-γ activity in Feed Solution	0.07	50.5
Designation of Pit(s) Receiving Cement Paste	92	
I.D. Nos. of CMP receiving Cement Paste	1297 - 1299 & 3301 - 3305	
Miscellaneous Drums of Waste Sent to Area "G", TA-54	--	

*^{238}Pu, ^{239}Pu, ^{241}Am total curies. Actual H-7 Lab analysis of Feed Solutions indicate a total of 282.6 curies based on gross α.

xc: John Warren, H-7

To: Files
Thru: L. A. Emelity
From: J. R. Buchholz, Liquid Waste Engr. Section
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR JULY 19 78
Date: September 7, 1978
Symbol: H7-78-363

(1)

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums	Vol. of Waste (Liters)	^{238}Pu curies	^{239}Pu curies	^{241}Am curies
Plant Sludge	87	16471	0.060	0.35	0.0097
Pit	2	378	---	--	---
Tritium Vials					
Miscellaneous	6	1134	---	--	---
Total	95	17955	0.060	0.35	0.0097

NOTES

1) Water used to clean sight glass
2) R - indicates feed solutions used to generate Retrievable Paste
F - indicates feed solutions used to generate Paste to Flush the Pug Mill discharge hose.

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From TA-21-257 to Area T Shafts and CMP

Type of Waste In Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (2) 443						Total
Plant Sludge	5406						5406
Neutralized Americium	---						---
Treated Strip	---						---
Raw KOH	---						---
Sight Glass Rinse Water (1)	300						300
Miscellaneous	150						150
Total Vol. Feed Solutions	5856						5856

GRAND Total Feed Solutions (liters)	5856	
GRAND Total Cement Paste	9611	
	SHAFTS	CMP
Total curies ^{238}Pu in Feed Solution	.028	
Total curies ^{239}Pu in Feed Solution	.066	
Total curies ^{241}Am in Feed Solution	0.69	
Total curies in Feed Solution	0.78	
Total mCi β-γ activity in Feed Solution	0.29	
Designation of Pit(s) Receiving Cement Paste	91	
I.D. Nos. of CMP receiving Cement Paste	---	
Miscellaneous Drums of Waste Sent to Area "G", TA-54	---	

^{238}Pu, ^{239}Pu, ^{241}Am total curies. Actual H-7 Lab analysis of Feed Solutions indicate a total of 0.78 curies based on

cc: John Warren, H-7

(1)

Declassified by DOE
JUN 2 2 1993

To: H-7 Files
Thru: L. A. Emelity
From: J. R. Buchholz, Liquid Waste Engr. Section Leader
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR AUGUST 1978
Date: October 5, 1978
Symbol: H7-78-397

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums (4)	Vol. of Waste (Liters)	^{238}Pu curies	^{239}Pu curie	^{241}Am curie
Plant Sludge	156	29857	0.16	0.25	0.073
Grit					
Tritium Vials					
Miscellaneous					
Total	156	29857	0.16	0.25	0.073

NOTES

(1) Water used to clean sight glass

(2) R - indicates feed solutions used to generate Retrievable Paste
F - indicates feed solutions used to generate Paste to Flush the Pug Mill discharge hose.

(3) Number reported is based on CMB-11 analysis
H-7 analysis indicates the presence of curies in the Feed solution.

NO PUG MILL RUNS DURING AUGUST, 1978.
41
52 steel nonretrievable drums used.

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (2)						Total
Plant Sludge							
Neutralized Americium							
Treated Strip							
Raw KOH							
Sight Glass Rinse Water (1)							
Miscellaneous							
Total Vol. Feed Solutions							

GRAND Total Feed Solutions (liters)		
GRAND Total Cement Paste		
	SHAFTS	CMP
Total curies ^{238}Pu in Feed Solution		
Total curies ^{239}Pu in Feed Solution		
Total curies ^{241}Am in Feed Solution		
Total curies in Feed Solution		
Total mCi β-γ activity in Feed Solution		
Designation of Pit(s) Receiving Cement Paste		
I.D. Nos. of CMP receiving Cement Paste		
Miscellaneous Drums of Waste Sent to Area "G", TA-54		

*^{238}Pu, ^{239}Pu, ^{241}Am total curies. Actual H-7 Lab analysis of Feed Solutions indicate a total of curies based on gross α.

xc: John Warren, H-7
Cyndee Murphy H-7 MS 592

①

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To: H-7 Files
Thru: L. A. Emelity
From: J. R. Buchholz, Liq. Waste Engr. Section Leader
Subject: SUMMARY OF CONTAMINATED WASTE SOLIDS TO DISPOSAL PITS FOR SEPTEMBER 1978
Date: October 5, 1978
Symbol: H7-78-398

From TA-50-1 to Mesita del Buey (TA-54)

Type of Waste Solids	No. of Drums (4)	Vol. of Waste (Liters)	^{238}Pu curies	^{239}Pu curies	^{241}Am curies
Plant Sludge	58	11909	.06	.07	.02
Grit					
Tritium Vials					
Miscellaneous					
Total	58	11909	.06	.07	.02

NOTES

(1) Water used to clean sight glass

(2) R - indicates feed solutions used to generate Retrievable Paste
F - indicates feed solutions used to generate Paste to Flush the Pug Mill discharge hose.

(3) Number reported is based on CMB-11 analysis
H-7 analysis indicates the presence of curies in the Feed solution.

(4) Used 34 steel nonretrievable drums

From TA-21-257 to Area T Shafts and CMP

Type of Waste in Pug Mill Feed Solution	Volume (liters) Pug Mill Run Number (2) 444						Total
Plant Sludge	---						
Neutralized Americium	---						
Treated Strip	5406						5406
Raw KOH	---						
Sight Glass Rinse Water (1)	100						100
Miscellaneous	200						200
Total Vol. Feed Solutions	5706						5706

GRAND Total Feed Solutions (liters)	5706
GRAND Total Cement Paste	7448

	SHAFTS	CMP
Total curies ^{238}Pu in Feed Solution	0.02	
Total curies ^{239}Pu in Feed Solution	0.04	
Total curies ^{241}Am in Feed Solution	0.48	
Total curies in Feed Solution*	0.54	
Total mCi β-γ activity in Feed Solution	3.17	

Designation of Pit(s) Receiving Cement Paste	90-91
I.D. Nos. of CMP receiving Cement Paste	---
Miscellaneous Drums of Waste Sent to Area "G", TA-54	19

*^{238}Pu, ^{239}Pu, ^{241}Am total curies. Actual H-7 Lab analysis of Feed Solutions indicate a total of 0.6 curies based on gross α.

xc: John Warren, H-7

Appendix D

Six-Month Summaries of Contaminated Wastes to Disposal Pits (and CMPs)

July 1, 1975, to December 31, 1975
January 1, 1976, to June 30, 1976
January 1, 1977, to June 30, 1977
July 1, 1977, to December 31, 1977
January 1, 1978, to June 30, 1978

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LOS ALAMOS SCIENTIFIC LABORATORY
UNIVERSITY OF CALIFORNIA
LOS ALAMOS, NEW MEXICO 87544

OFFICE MEMORANDUM

TO : John L. Warren, Solid Waste Engr. Sect., H-7 DATE: February 10, 1976

Thru : J. R. Buchholz, Liq. Waste Engr. Sect. Ldr., H-7 JRB
L. A. Emelity, Alt. Group Leader, H-7

FROM : Paul E. McGinnis, Liq. Waste Treatment, H-7 P.E.M.

SUBJECT : SUMMARY OF CONTAMINATED WASTES TO DISPOSAL PITS, JULY 1, 1975 THROUGH DECEMBER 31, 1975

SYMBOL : H7-76-PEM-97

During the last six months of 1975, the following contaminated wastes were forwarded to burial:

1) To Mesita del Buey

Total Volume	91,600 liters[a]
Total Equivalent ^{239}Pu	3.5 Ci
Total ^{238}Pu	3.0 Ci
Total ^{239}Pu	.4 Ci
Total ^{241}Am	.2 Ci
Total U[b]	315 grams

2) To TA-21-257 (Area T)

	Non-Retrievable Shafts	Retrievable CMP
Total Volume Cement Paste (liters)	181,100	4560
Total Volume Feed Solutions (liters)	119,900	3790
Total ^{238}Pu Ci	5.7	.1
Total ^{239}Pu Ci	11.4	1.8
Total ^{241}Am Ci	349.0	19.1
Total MFP Activity Ci	.3	0
Total U[c] grams	308	0

a) Volume includes 240/215-liter steel drums of plant sludge, 54/200-liter fiber drums of plant sludge, 27/215-liter steel drums of vermiculite and oil, and 98/113-liter fiber drums of contaminated anthracite coal filter media.

b) Activity contained in plant sludge only.

c) Activity contained in plant sludge, KOH batch waste, and strip solutions. Mostly ^{235}U.

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UNIVERSITY OF CALIFORNIA
LOS ALAMOS, NEW MEXICO 87544

TO: J. L. Warren -2 DATE: February 10, 1976

Data on shafts filled this period are as follows:

Shaft No.	Approx. Depth m	Date Filled	Cement Paste liters	^{238}Pu Ci	^{239}Pu Ci	^{241}Am Ci
6-15	20.3	7/ 2/75	52,800	1.0	7.1	113.3
6	8.2	8/ 4/75	35,000	.1	.9	43.1
6-16	20.5	10/ 9/75	52,600	.3	2.7	181.8
6-10	20.7	12/11/75	52.400	1.3	4.9	103.2
6-23	7.3	12/16/75	18,000	3.7	2.0	20.8

Data on Corrugated Metal Pipe (CMP) filled this period[d] are as follows:

CMP I.D. No.	Date Filled	Cement Paste liters	^{238}Pu Ci	^{239}Pu Ci	^{241}Am Ci
00150	12/31/75	3,000	.05	.9	9.9
00151	12/31/75	3,000	.05	.9	9.2

d) Retrievable Storage in Area T began December 31, 1975. Containment vessel is 30" (.8m) dia x 20' (6.1m) deep and will hold approximately 3.0 m^3 cement paste

PEM:bh
xc: M. A. Rogers, H-8, MS 737

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(2)

LOS ALAMOS SCIENTIFIC LABORATORY
UNIVERSITY OF CALIFORNIA
LOS ALAMOS, NEW MEXICO 87545
Telephone Ext:

OFFICE MEMORANDUM

TO : John L. Warren, H-7, MS 517 DATE: July 28, 1976

Thru : J. R. Buchholz, Liq. Waste Engr. Sect. Ldr. JRB
L. A. Emelity, H-7 Alt. Group Leader

FROM : P. E. McGinnis, Liq. Waste Treatment, H-7 P.E.M.

SUBJECT : SUMMARY OF CONTAMINATED WASTES TO DISPOSAL PITS, JANUARY 1, 1976 THROUGH JUNE 30, 1976

SYMBOL : H7-76-381

MAIL STOP: 518

During the first six months of 1976, the following contaminated wastes were forwarded to burial:

1) To Mesita del Buey

Total volume	82,528 liters[a]
Total Equivalent ^{239}Pu	1.8 Ci
Total ^{238}Pu	1.5 Ci
Total ^{239}Pu	.2 Ci
Total ^{241}Am	.1 Ci
Total U[b]	218 grams

2) To TA-21-257 (Area T)

	Non-Retrievable Shafts	Retrievable CMP
Total Vol. Cement Paste (ℓ)	104,310	67,230
Total Vol. Feed Solutions (ℓ)	74,397	47,203
Total ^{238}Pu Ci	.27	2.49
Total ^{239}Pu Ci	.95	13.09
Total ^{241}Am Ci	3.21	316.22[d]
Total MFP Activity Ci	.029	.016
Total U[c] grams	333	0

a) Volume includes 83/215-ℓ steel drums of plant sludge and 336/200-ℓ fiber drums of plant sludge.

b) Activity contained in plant sludge only.

c) Activity contained in plant sludge, KOH batch waste, and strip solutions. Mostly ^{235}U.

d) Based on quantities reported by CMB-11 analysis of Raffinate waste.

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UNIVERSITY OF CALIFORNIA
LOS ALAMOS, NEW MEXICO 87544

TO: John L. Warren -2- DATE: July 28, 1976

Data on shafts filled this period are as follows:

Shaft No.	Approx. Depth m	Date Filled	Cement Paste liters	^{238}Pu Ci	^{239}Pu Ci	^{241}Am(e) Ci
80	21.7	2-20-76	56,300	.29	.60	1.20
78	21.2	5-12-76	49,800	.11	.42	3.69

Data on Corrugated Metal Pipe (CMP) filled this period(f) are as follows:

CMP I.D. No.	Date Filled	Cement Paste liters	^{238}Pu Ci	^{239}Pu Ci	^{241}Am(g) Ci
001152	1/16/76	2,800	.04	.90	18.9
001153	1/16/76	2.800	.04	.90	20.9
001154	1/23/76	2,800	.04	.88	20.9
001155	1/23/76	2.800	.04	.40	20.4
001156	1/23/76	2,800	.04	.40	20.2
001157	2/ 5/76	2,800	.04	.34	21.6
001158	2/ 5/76	2,800	.05	.28	25.1
001159	2/ 5/76	2,800	.05	.27	24.2
001160	2/26/76	2,800	.07	.37	24.2
001161	2/26/76	2,800	.09	.48	25.1
001162	2/26/76	2,800	.09	.48	25.1
001163	3/16/76	2,800	.06	.45	16.1
001164	3/16/76	2,800	.04	.44	9.1
001165	3/16/76	2,800	.04	.48	9.9
001166	4/ 6/76	2,800	.05	.52	8.8
001167	4/ 6/76	2,800	.06	.56	3.2
001168	4/ 6/76	2,800	.06	.56	8.2
001169	4/23/76	2,800	.10	.69	10.8
001170	4/23/76	2,800	.14	.85	13.5
001171	4/23/76	2,800	.14	.85	13.5
001172	5/19/76	2,800	.11	.74	16.3
001173	5/19/76	2,800	.06	.56	22.1
001174	5/19/76	2,800	.06	.57	22.3
001175	5/19/76	2,800	.06	.55	21.6
001176	6/ 8/76	2,800	.24	.18	12.1
001177	6/ 8/76	2,800	.32	.02	8.3
001178	6/ 8/76	2,800	.30	.02	7.9

e) Concentration in paste exceeds 10 nCi/g. However, administrative efforts are continuing to perfect operating procedures which will reduce the concentrations to acceptable levels.

f) Retrievable Storage in Area T began December 31, 1975. Containment vessel is 30" (.8 m) dia x 20' (6.1 m) deep and will hold approximately 2.8 m^3 cement paste.

g) Numbers are based on H-7 analysis of Pug Mill Feed Solutions

M. A. Rogers, H-8, MS 737

CMP-11

LOS ALAMOS SCIENTIFIC LABORATORY
UNIVERSITY OF CALIFORNIA
LOS ALAMOS, NEW MEXICO 87545

OFFICE MEMORANDUM

TO : John L. Warren, Solid Waste Engr. Sect., H-7 DATE: 1 February 1978

Thru : J. R. Buchholz, Liq. Waste Engr. Sect., H-7 JRB
L. A. Emelity, Alt. Group Leader, H-7 LAE

FROM : P. E. McGinnis, Liq. Waste Treatment, H-7 P.E.M.

SUBJECT : SUMMARY OF CONTAMINATED WASTES TO DISPOSAL PITS, JULY 1, THROUGH DECEMBER 31, 1977

SYMBOL : H-7-78-49

MAIL STOP: 518

During the last six months of 1977, the following contaminated wastes were forwarded to burial:

1) To Mesita del Buey

Total Volume	37540	Liters	(a)
Total ^{238}Pu	.26	Ci	(b)
Total ^{239}Pu	.47	Ci	(b)
Total ^{241}Am	.14	Ci	(b)
Total U	796	Grams	(b)

2) To TA-21-257 (Area T)

	Non-Retrievable Shafts	Retrievable CMP
Total Volume Cement Paste (liters)	27330	82060
Total Volume Feed Solutions (liters)	23480	54170
Total ^{238}Pu Ci	0.05	10.44
Total ^{239}Pu Ci	1.46	10.47
Total ^{241}Am Ci	2.47	4710[d]
Total MFP Activity Ci	0.017	0.050
Total U[(c)] grams	384	0

a) Volume includes 8/215 ℓ steel drums of plant sludge, 180/200 ℓ fiber drums of plant sludge, and 9 drums of miscellaneous wastes from Bldg. 257.

b) Activity contained in plant sludge only.

c) Activity contained in plant sludge, KOH batch waste, and strip solutions. Mostly ^{235}U

d) Based on quantities reported by CMB-11 analysis of raffinate waste.

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Data on shafts filled this period are as follows:

Shaft No.	Approx. Depth m	Date Filled	Cement Paste liters	^{238}Pu Ci	^{239}Pu Ci	^{241}Am (e), (g) Ci
8 (h)	20.4	7/20/77	77,300	0.54	3.29	99.10
87	20.0	10/4/77	51,100	0.18	0.56	2.61

Data on Corrugated Metal Pipe (CMP) filled this period (f) are as follows:

CMP I.D. No.	Date Filled	Cement Paste liters	^{238}Pu Ci	^{239}Pu Ci	^{241}Am (g) Ci
001234	7/7/77	2,800	0.26	0.55	146.6
001235	7/7/77	2,800	0.10	0.28	116.2
001236	8/26/77	2,800	0.18	0.28	185.6
001237	7/7/77	2,800	0.23	0.49	132.4
001238	7/7/77	2,800	0.27	0.56	151.3
001239	8/26/77	2,800	0.18	0.28	185.6
001240	8/26/77	2,800	0.19	0.29	192.0
001241	9/8/77	2,800	0.11	0.42	152.7
001242	9/8/77	2,800	0.06	0.52	132.9
001243	9/21/77	2,800	0.07	0.28	127.3
001244 (i)	9/8/77	2,800	0.06	0.58	147.1
001245	9/21/77	2,800	0.07	0.54	150.1
001246	9/21/77	2,800	0.08	0.31	144.3
001247	9/23/77	2,800	0.08	0.29	140.4
001248	9/23/77	2,800	0.05	0.15	142.7
001249	9/23/77	2,800	0.05	0.15	142.7
001250	10/19/77	2,800	0.09	0.16	145.9
001251	10/19/77	2,800	0.37	0.12	129.4
001252	10/19/77	2,800	0.37	0.12	129.4
001253	10/19/77	2,800	0.37	0.12	129.4
001254	11/4/77	2,800	0.33	0.14	169.0
001255	11/4/77	2,800	0.33	0.14	169.0
001256	11/4/77	2,800	0.33	0.14	169.0
001257	11/15/77	2,800	0.30	0.12	153.6
001258	11/15/77	2,800	0.54	0.23	200.4
001259	11/15/77	2,800	0.54	0.23	200.4
001260	12/9/77	2,800	0.55	0.30	193.1
001261	12/9/77	2,800	0.54	0.33	181.2
001262	12/9/77	2,800	0.54	0.33	181.2
001263	12/9/77	2,800	0.54	0.33	181.2
001264	12/15/77	2,800	0.65	0.44	197.2
001265	12/15/77	2,800	0.72	0.51	202.9
001266	12/15/77	2,800	0.72	0.51	202.9

e) Concentration in paste exceeds 10 nCi/g. However, administrative efforts are continuing to perfect operating procedures which will reduce the concentrations to acceptable levels.

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LOS ALAMOS, NEW MEXICO 87545

f) Retrievable Storage in Area T began December 31, 1975. Containment vessel is 30" (.8 m) dia x 20' (6.1 m) deep and will hold approximately 2.8 m^3 cement paste.

g) Numbers are based on H-7 analysis of Pug Mill Feed Solutions.

h) Includes solids in rinse water from 95 PMRs. Bulk of radioactivity received during 6 PMRs in 1974.

i) first CMP with 16-gauge cap on bottom.

PEM:ms

xc: M. A. Rogers, H-8, MS 737

P2010-2754

LOS ALAMOS SCIENTIFIC LABORATORY
UNIVERSITY OF CALIFORNIA
LOS ALAMOS, NEW MEXICO 87545
Telephone Ext: 4301

OFFICE MEMORANDUM

TO : John L. Warren, Solid Waste Engr. Sect., H-7 DATE: 26 August 1977

THRU : J. R. Buchholz, Liq. Waste Engr. Sect., H-7 JRB
L. A. Emelity, Alt. Group Leader, H-7

FROM : P. E. McGinnis, Liq. Waste Treatment, H-7 P.E.M.

SUBJECT : SUMMARY OF CONTAMINATED WASTES TO DISPOSAL PITS, JANUARY 1, THROUGH JUNE 30, 1977

SYMBOL : H7-77-324

MAIL STOP: 518

During the first six months of 1977, the following contaminated wastes were forwarded to burial:

1) To Mesita del Buey

Total Volume	62730	Liters	(a)
Total Equivalent ^{239}Pu	1.17	Ci	(b)
Total ^{238}Pu	.96	Ci	(b)
Total ^{239}Pu	.13	Ci	(b)
Total ^{241}Am	.08	Ci	(b)
Total U	220	Grams	(b)

2) To TA-21-257 (Area T)

	Non-Retrievable Shafts	Retrievable CMP
Total Volume Cement Paste (liters)	63,540	61,030
Total Volume Feed Solutions (liters)	46,700	42,620
Total ^{238}Pu Ci	.26	2.12
Total ^{239}Pu Ci	.44	5.10
Total ^{241}Am Ci	2.05	1842.6
Total MFP Activity Ci	.051	.101
Total U[c] grams	310	0

a) Volume includes 0/215-ℓ steel drums of plant sludge, 284/200-ℓ fiber drums of plant sludge, and 43 drums of miscellaneous wastes from Bldg. 257.

b) Activity contained in plant sludge only.

c) Activity contained in plant sludge, KOH batch waste, and strip solutions. Mostly ^{235}U.

d) Based on quantities reported by CMB-11 analysis of raffinate waste.

Data on shafts filled this period are as follows:

Shaft No.	Approx. Depth m	Date Filled	Cement Paste liters	^{238}Pu Ci	^{239}Pu Ci	^{241}Am[e,f] Ci
82	19.5	3-4-77	49,600	.23	.55	2.58

e) Concentration in paste exceeds 30 nCi/g. However, administrative efforts are continuing to perfect operating procedures which will reduce the concentrations to acceptable levels.

f) Numbers are based on H-7 analysis of Pug Mill Feed Solutions.

RECEIVED
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LT

LOS ALAMOS SCIENTIFIC LABORATORY
UNIVERSITY OF CALIFORNIA
LOS ALAMOS, NEW MEXICO 87544

TO: John L. Warren
H7-77-324

DATE: 26 August 1977

Data on Corrugated Metal Pipe (CMP) filled this period[g] are as follows:

CMP I.D. No.	Date Filled	Cement Paste Liters	^{238}Pu Ci	^{239}Pu Ci	^{241}Am[h,i] Ci
001208	01/28/77	2,800	.01	.03	24.1
001209	01/28/77	2,800	.01	.04	26.5
001210	01/28/77	2,800	.02	.06	23.9
001211	02/10/77	2,800	.01	.04	27.3
001212	02/10/77	2,800	.04	.21	74.2
001213	02/10/77	2,800	.04	.21	74.2
001214	02/10/77	2,800	.04	.22	79.3
001215	03/10/77	2,800	.02	.21	83.2
001216	03/10/77	2,800	.02	.21	90.6
001217	03/10/77	2,800	.02	.21	87.8
001218	04/14/77	2,800	.01	.11	42.8
001219	04/14/77	2,800	.00	.01	3.5
001220	04/14/77	2,800	.00	.00	3.5
001221	05/03/77	2,800	.06	.13	20.5
001222	05/03/77	2,800	.23	.47	69.5
001223	05/03/77	2,800	.23	.45	67.3
001224	05/03/77	2,800	.23	.47	69.5
001225	05/05/77	2,800	.08	.32	108.7
001226	05/05/77	2,800	.08	.33	112.2
001227	05/05/77	2,800	.08	.33	112.2
001228	05/26/77	2,800	.20	.17	90.7
001229	05/26/77	2,800	.22	.15	88.1
001230	05/26/77	2,800	.22	.15	88.1
001231	06/14/77	2,800	.11	.16	97.9
001232	06/14/77	2,800	.04	.17	101.7
001233	06/14/77	2,800	.04	.18	108.7

g) Retrievable Storage in Area T began December 31, 1975. Containment vessel is 30" (.8m) dia x 20' (6.1m) deep and will hold approximately 2.8 m^3 cement paste.

h) Numbers are based on H-7 analysis of Pug Mill Feed Solutions.

i) CMB-11 analysis (considered more accurate) will be supplied at a later date.

PEM:bh
xc: M. A. Rogers, H-8, MS 490

LOS ALAMOS SCIENTIFIC LABORATORY
UNIVERSITY OF CALIFORNIA
LOS ALAMOS, NEW MEXICO 87545

OFFICE MEMORANDUM

TO : John L. Warren, Solid Waste Disposal Sec. DATE: 11 July 1978

THRU : L. A. Emelity, Alt. Group Leader

FROM : J. R. Buchholz, Liq. Waste Engr. Sect.

SUBJECT : SUMMARY OF CONTAMINATED WASTES TO DISPOSAL PITS, JANUARY 1 THROUGH JUNE 30, 1978

SYMBOL : H7-78-276

MAIL STOP: 518

During the first six months of 1978, the following contaminated wastes were forwarded to burial:

1) To Mesita del Buey

Total Volume	53,000 liters[a]
Total ^{238}Pu	0.93 Ci [b]
Total ^{239}Pu	0.36 Ci [b]
Total ^{241}Am	0.07 Ci [b]
Total U	204 Grams [b]

2) To TA-21-257 (Area T)

	Nonretrievable Shafts	Retrievable CMP
Total Volume Cement Paste	24,202 liters	88,370 liters
Total Volume Feed Solutions	14,044 liters	64,398 liters
Total ^{238}Pu	0.38 Ci	4.6 Ci
Total ^{239}Pu	0.63 Ci	14.8 Ci
Total ^{241}Am	15.1 Ci	3178 Ci [d]
Total MFP Activity	0.004 Ci	0.14 Ci
Total U[c]	329 Grams	0 Grams

a) Volume includes 5/213 ℓ 90-mil lined steel drums of plant sludge, 254/200 ℓ fiber drums of plant sludge, 6 drums of misc. wastes from TA-50-1 and 22 drums of misc. wastes from Bldg. 257.

b) Activity contained in plant sludge only.

c) Activity contained in plant sludge, KOH batch waste, and strip solutions.

d) Based on quantities reported by CMB-11 analysis of raffinate waste.

Received by ER-RPF
JUN 2 1 1993

Appendix E

CMP Retrievable Storage Log
Area T, TA-21-257

CMP Numbers 1150 – 1266,
Filled 12/31/75 – 12/15/77

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CMP Retrievable Storage Log

Area T, TA-21-257

CMP No.	Pug Mill Run No.	Initial Depth (m)	Final Depth (m)	Date Filled	Volume of Paste During Retrev.Part	Vol/Paste After Non-Retrev. Part Started
001150	369	5.44	.28	12/31/75	2351	0
001151	369	5.79	.18	12/31/75	2212	347
001152	371	5.76	.31	1/16/76	2247	255
001153	371	5.74	.29	1/16/76	2484	0
001154	372	5.74	.28	1/23/76	2067	422
001155	372	5.72	.25	1/23/76	2490	0
001156	372	5.69	.28	1/23/76	2467	0
001157	372 & 373	5.64	.31	2/ 5/76	1980	452
001158	373	5.79	.28	2/ 5/76	2512	0
001159	373	5.59	.28	2/ 5/76	2420	0
001160	373 & 377	5.59	.28	2/26/76	2097	324
001161	377	5.74	.23	2/26/76	2513	0
001162	377	5.79	.28	2/26/76	2513	0
001163	377 & 379	5.63	.32	3/16/76	1419	973
001164	379	5.49	.31	3/16/76	2363	0
001165	379	5.94	.31	3/16/76	2571	0
001166	379 & 380	5.69	.28	4/ 6/76	1645	823
001167	380	5.64	.33	4/ 6/76	2420	0
001168	380	5.64	.31	4/ 6/76	2432	0
001169	380 & 382	5.51	.31	4/23/76	1876	498
001170	382	5.64	.28	4/23/76	2444	0
001171	382	5.69	.28	4/23/76	2467	0
001172	382 & 386	5.69	.31	5/19/76	1795	660
001173	386	5.64	.31	5/19/76	2432	0
001174	386	5.69	.31	5/19/76	2455	0
001175	386	5.51	.31	5/19/76	2374	0
001176	386 & 387	5.49	.31	6/ 8/76	1807	625
001177	387	5.79	.31	6/ 8/76	2507	0
001178	387	5.54	.31	6/ 8/76	2386	0
001179	387 & 390	5.51	.31	7/13/76	1587	800
001180	390	4.60	.36	7/13/76	1934	0
001181	390	5.33	.25	7/13/76	2316	0
001182	390 & 391	5.33	.33	7/20/76	1493	788
001183	391	5.13	.33	7/20/76	2189	0
001184	391	5.66	.33	7/20/76	2432	0
001185	391	5.44	.33	7/20/76	2328	602
001186	394	5.61	.36	8/26/76	2293	116
001187	394	5.53	.31	8/26/76	2386	0
001188	394	5.58	.28	8/26/76	2421	0
001189	394 & 395	5.61	.46	10/ 5/76	1633	718
001190	395	5.79	.46	10/ 5/76	2432	0
001191	395	5.54	.31	10/ 5/76	2385	0
001192	395 & 396	5.79	.31	10/13/76	2502	382
001193	396	5.77	.31	10/13/76	2490	0
001194	396	5.79	.33	10/13/76	2490	0
001195	396 & 397	5.74	.31	11/ 5/76	1644	834
001196	397	5.72	.36	11/ 5/76	2444	0
001197	397	5.74	.38	11/ 5/76	2444	0

CMP Retrievable Storage Log
- Radioactivity -
Area T, TA-21-257

CMP No.	Pug Mill Run No.	Date Filled	Date Capped	Radioactivity ^{238}Pu (Ci)	^{239}Pu (Ci)	^{241}Am (Ci)(1)	Tot. β-γ (mCi)
001150	369	12/31/75	4/21/76	.05	.9	9.9	2.55
001151	369	12/31/75	4/21/76	.05	.9	9.2	2.40
001152	369 & 371	1/16/76	4/21/76	.04 (tot.)	.9 (tot.)	18.9 (tot.)	3.03(tot.
001153	371	1/16/76	4/21/76	.04	.9	20.9	3.04
001154	371 & 372	1/23/76	4/21/76	.04	.83 + .05	18.4 + 2.5	2.67 + .04
001155	372	1/23/76	4/21/76	.04	.4	20.4	.35
001156	372	1/23/76	4/21/76	.04	.4	20.2	.35
001157	372 & 373	2/ 5/76	4/21/76	.023 + .02	.24 + .10	12.23 + 9.38	.21 + .32
001158	373	2/ 5/76	4/21/76	.05	.28	25.1	.85
001159	373	2/ 5/76	4/21/76	.05	.27	24.2	.81
001160	373 & 377	2/26/76	4/21/76	.02 + .05	.13 + .24	11.7 + 12.5	.39 + .11
001161	377	2/26/76	4/21/76	.09	.48	25.1	.22
001162	377	2/26/76	4/21/76	.09	.48	25.1	.22
001163	377 & 379	3/16/76	4/21/76	.04 + .02	.21 + .24	11.1 + 5.0	.1 + .14
001164	379	3/16/76	4/21/76	.04	.44	9.1	.27
001165	379	3/16/76	4/21/76	.04	.48	9.9	.29
001166	379 & 380	4/ 6/76	4/21/76	.01 + .04	.17 + .35	3.6 + 5.2	.10 + .07
001167	380	4/ 6/76	4/21/76	.06	.56	8.2	.12
001168	380	4/ 6/76	4/21/76	.06	.56	8.2	.12
001169	380 & 382	4/23/76	6/17/76	.02 + .08	.20 + .49	3.0 + 7.8	.04 + .09
001170	382	4/23/76	6/17/76	.14	.85	13.5	.16
001171	382	4/23/76	6/17/76	.14	.85	13.5	.16
001172	382 & 386	5/19/76	6/17/76	.09 + .02	.55 + .19	8.7 + 7.6	.10 + .12
001173	386	5/19/76	6/17/76	.06	.56	22.1	.34
001174	386	5/19/76	6/17/76	.06	.57	22.3	.34
001175	386	5/19/76	6/17/76	.06	.55	21.6	.33
001176	386 & 387	6/ 8/76	6/17/76	.02 + .22	.16 + .02	6.3 + 5.8	.10 + .26
001177	387	6/ 8/76	6/17/76	.32	.02	8.3	.37
001178	387	6/ 8/76	6/17/76	.30	.02	7.9	.35
001179	387 & 390	7/13/76	10/ 4/76	.16 + .01	.01 + .15	4.2 + 6.1	.19 + .96
001180	390	7/13/76	10/ 4/76	.02	.26	10.5	1.67
001181	390	7/13/76	10/ 4/76	.03	.31	12.6	2.00
001182	390 & 391	7/20/76	10/ 4/76	.02 + .00	.29 + .02	11.6 + .8	1.84 + .09
001183	391	7/20/76	10/ 4/76	.05	.31	10.9	1.29
001184	391	7/20/76	10/ 4/76	.05	.35	12.1	1.43
001185	391	7/20/76	10/ 4/76	.05	.33	11.6	1.44
001186	394	8/26/76	10/ 4/76	0 + ∿.04	.02 + ∿.30	.6 + 13.7	.02 + ∿2.0
001187	394	8/26/76	10/ 4/76	∿.04	∿.31	14.3	∿2.10
001188	394	8/26/76	10/ 4/76	∿.04	∿.32	14.5	∿2.13
001189	394 & 395	10/ 5/76	12/15/76	∿.01 + .25	∿.11 + .30	5.1 + 16.6	∿.74 + 6.39
001190	395	10/ 5/76	12/15/76	.40	.49	26.8	10.31
001191	395	10/ 5/76	12/15/76	.39	.48	26.3	10.11
001192	395 + 396	10/13/76	12/15/76	.16 + .19	.19 + .36	3.3 + 24.9	4.13 + 4.3
001193	396	10/13/76	12/15/76	.32	.58	40.5	7.12
001194	396	10/13/76	12/15/76	.32	.58	40.5	7.12
001195	396 + 397	11/ 5/76	12/15/76	.12 + .10	.23 + .39	16.02 + 13.8	2.8 + .55
001196	397	11/ 5/76	12/15/76	.17	.64	22.6	.90
001197	397	11/ 5/76	12/15/76	.17	.64	22.6	.90

(1) ^{241}Am numbers based on H-7 analysis of Pug Mill Feed Solutions.

CMP Retrievable Storage Log

Area T, TA-21-257

CMP No.	Pug Mill Run No.	Initial Depth (m)	Final Depth (m)	Date Filled	Volume of Paste During Retrev.Part	Vol/Paste After Non-Retrev. Part Starte
001198	397 & 399	5.66	.28	11/18/76	1714	741
001199	399	5.72	.31	11/18/76	2467	
001200	399	5.79	.31	11/18/76	2502	
001201	399 & 400	5.66	.41	11/24/76	1680	718
001202	400	5.77	.38	11/24/76	2456	
001203	400	5.79	.31	11/24/76	2502	
001204	400 & 401	5.79	.41	12/21/76	1621	834
001205	401	5.84	.33	12/21/76	2512	
001206	401	5.49	.31	12/21/76	2363	
001207	401 & 402	5.66	.36	12/27/76	2015	405
001208	402 & 404	5.82	.38	1/28/77	2177	
001209	402 & 404	5.82	.33	1/28/77	2328	
001210	402 & 404	5.77	.30	1/28/77	2488	764
001211	404 & 406	5.30	.28	2/10/77	1554	730
001212	406	5.31	.41	2/10/77	2236	
001213	406	5.23	.36	2/10/77	2223	
001214	406	5.47	.36	2/10/77	2334	
001215	406 & 408	5.31	.43	3/10/77	1471	753
001216	408	5.58	.43	3/10/77	2345	
001217	408	5.41	.46	3/10/77	2259	
001218	408 & 411	5.03	.25	4/14/77	1448	730
001219	411	5.36	.25	4/14/77	2328	
01220	411	5.39	.25	4/14/77	2340	
001221	411 & 412	5.49	.28	5/3/77	1660	715
001222	412	5.49	.28	5/3/77	2374	
001223	412	5.33	.23	5/3/77	2328	
001224	412	5.39	.23	5/3/77	1670	695
001225	413	5.28	.23	5/5/77	2305	
001226	413	5.38	.23	5/5/77	2351	
001227	413	5.44	.25	5/5/77	2016	347
001228	413 & 415	5.41	.25	5/26/77	2050	301
001229	415	5.51	.25	5/26/77	2397	
001230	415	5.49	.25	5/26/77	2154	232
001231	415 & 416	5.49	.25	6/14/77	1552	834
001232	416	5.44	.25	6/14/77	2363	
001233	416	5.64	.25	6/14/77	2456	
001234	418	5.36	.30	7/7/77	2305	
001235	416 & 418	5.33	.25	7/7/77	1552	765
001236	420	5.06	.25	8/26/77	2189	
001237	418	4.90	.25	7/7/77	2119	
001238	418	5.49	.33	7/7/77	1656	695
001239	420	5.23	.38	8/26/77	2212	
001240	420	5.38	.28	8/26/77	2328	
001241	420 & 421	5.33	.31	9/8/77	1552	741
01242	421	5.31	.31	9/8/77	2281	
001243	422	5.28	.25	9/21/77	2293	
001244	421	5.99	.33	9/8/77	2583	
001245	421 & 422	5.99	.33	9/21/77	1886	696

CMP Retrievable Storage Log

Area T, TA-21-257

CMP No.	Pug Mill Run No.	Initial Depth (m)	Final Depth (m)	Date Filled	Volume of Paste During Retrev.Part	Vol/Paste After Non-Retrev. Part Starte
001246	422	5.94	0.28	9/21/77	2583	
001247	422 & 423	5.94	0.30	9/23/77	1860	712
001248	423	5.94	0.30	9/23/77	2572	
001249	423	5.94	0.30	9/23/77	2572	
001250	423 & 425	5.94	0.28	10/19/77	1889	741
001251	425	5.99	0.28	10/19/77	2606	
001252	425	5.99	0.31	10/19/77	2594	
001253	425	5.99	0.38	10/19/77	2096	464
001254	426	5.99	0.25	11/4/77	2617	
001255	426	5.99	0.28	11/4/77	2606	
001256	426	5.99	0.31	11/4/77	2015	579
001257	426 & 427	5.99	0.33	11/15/77	2466	116
001258	427	5.99	0.23	11/15/77	2629	
001259	427	5.99	0.31	11/15/77	2594	
001260	427 & 428	5.99	0.36	12/09/77	1924	649
001261	428	5.99	0.33	12/09/77	2583	
001262	428	5.99	0.31	12/09/77	2594	
001263	428	5.99	0.31	12/09/77	2594	
001264	428 & 429	5.99	0.28	12/15/77	1818	788
001265	429	5.99	0.30	12/15/77	2595	
001266	429	5.99	0.36	12/15/77	2571	

CMP Retrievable Storage Log
- Radioactivity -
Area T, TA-21-257

CMP No.	Pug Mill Run No.	Date Filled	Date Capped	Radioactivity ^{238}Pu (Ci)	^{239}Pu (Ci)	^{241}Am (Ci)	Tot. β-γ (mCi
1198	397 & 399	11/18/76	12/15/76	.05 + .11	.20 + .55	7.1 + 8.4	.28 + .46
001199	399	11/18/76	12/15/76	.17	.80	12.2	.67
001200	399	11/18/76	12/15/76	.17	.81	12.4	.68
001201	399 & 400	11/24/76	12/15/76	.06 + 1.52	.29 + .30	4.4 + 4.6	.24 + .70
001202	400	11/24/76	12/15/76	2.49	.49	7.5	1.19
001203	400	11/24/76	12/15/76	2.53	.50	7.6	1.19
001204	400 & 401	12/21/76	3/17/77	1.31 + .09	.26 + .31	3.9 + 3.5	.63 + .48
001205	401	12/21/76	3/17/77	.20	.68	7.6	1.04
001206	401	12/21/76	3/17/77	.19	.64	7.2	.98
001207	401 & 402	12/27/76	3/17/77	.09 + .01	.29 + .03	3.3 + 6.0	.45 + .13
001208	402 & 404	1/28/77	3/17/77	0 + .01	0 + .03	.3 + 23.8	.01 + .45
001209	402 & 404	1/28/77	3/17/77	0 + .01	0 + .04	0 + 26.5	0 + .50
001210	402 & 404	1/28/77	3/17/77	.01 + .01	.04 + .02	8.3 + 15.6	.18 + .29
001211	404 & 406	2/10/77	3/17/77	.01 + 0.0	.03 + .01	24.7 + 2.6	.47 + .75
001212	406	2/10/77	3/17/77	.04	.21	74.2	21.72
001213	406	2/10/77	3/17/77	.04	.21	74.2	21.72
001214	406	2/10/77	3/17/77	.04	.22	79.3	23.22
001215	406 & 408	3/10/77	3/17/77	.01 + .01	.07 + .14	25.6 + 57.6	7.5 + .46
001216	408	3/10/77	3/17/77	.02	.21	90.6	.72
001217	408	3/10/77	3/17/77	.02	.21	87.8	.70
001218	408 & 411	4/14/77	6/23/77	.01 + .00	.10 + .01	41.2 + 1.6	.33 + 1.13
001219	411	4/14/77	6/23/77	.00	.01	3.5	2.36
1220	411	4/14/77	6/23/77	.00	.00	3.5	2.37
001221	411 & 412	5/3/77	6/23/77	.00 + .06	.01 + .12	2.6 + 17.9	1.76 + .95
001222	412	5/3/77	6/23/77	.23	.47	69.5	3.67
001223	412	5/3/77	6/23/77	.23	.45	67.3	3.55
001224	412	5/3/77	6/23/77	.23	.47	69.5	3.67
001225	413	5/5/77	6/23/77	.08	.32	108.7	.36
001226	413	5/5/77	6/23/77	.08	.33	112.2	.37
001227	413	5/5/77	6/23/77	.08	.33	112.2	.37
001228	413 & 415	5/26/77	6/23/77	.01 + .19	.04 + .13	14.0 +76.7	.05 + .15
001229	415	5/26/77	6/23/77	.22	.15	88.1	.17
001230	415	5/26/77	6/23/77	.22	.15	88.1	.17
001231	415 & 416	6/14/77	6/23/77	.08 + .03	.05 + .11	31.3 + 66.6	.06 + .17
001232	416	6/14/77	6/23/77	.04	.17	101.7	.26
001233	416	6/14/77	6/23/77	.04	.18	108.7	.27
001234	418	7/7/77	10/13/77	.26	.55	146.6	.23
001235	416 & 418	7/7/77	10/13/77	.03 + .07	.12 + .16	73.6 + 42.6	.18 + .07
001236	420	8/26/77	10/13/77	.18	.28	185.6	1.28
001237	418	7/7/77	10/13/77	.23	.49	132.4	.20
001238	418	7/7/77	10/13/77	.27	.56	151.3	.23
001239	420	8/26/77	10/13/77	.18	.28	185.6	1.28
001240	420	8/26/77	10/13/77	.19	.29	192.0	1.33
001241	420 & 421	9/8/77	10/13/77	.08 + .03	.12 + .30	76.8 + 75.9	.53 + .48
001242	421	9/8/77	10/13/77	.06	.52	132.9	.84
1243	422	9/21/77	10/13/77	.07	.28	127.3	1.35
001244	421	9/8/77	10/13/77	.06	.58	147.1	.93
001245	421 & 422	9/21/77	10/13/77	.05 + .02	.47 + .07	118.7 +31.4	.75 + .33

(1) ^{241}Am numbers based on H-7 Analysis of Pug Mill Feed Solutions.

CMP Retrievable Storage Log
- Radioactivity -
Area T, TA-21-257

CMP No.	Pug Mill Run No.	Date Filled	Date Capped	Radioactivity			
				^{238}Pu (Ci)	^{239}Pu (Ci)	^{241}Am (Ci)	Tot.β-γ(mCi
001246	422	9/21/77	10/13/77	0.08	0.31	144.3	1.53
001247	422 & 423	9/23/77	10/13/77	.07 & .01	.27 & .02	123.1 & 17.3	1.31 & .28
001248	423	9/23/77	10/13/77	0.05	0.15	142.7	2.32
001249	423	9/23/77	10/13/77	0.05	0.15	142.7	2.32
001250	423 & 425	10/19/77		.04 & .05	.14 & .02	129.7 & 16.2	2.11 & .15
001251	425	10/19/77		0.37	0.12	129.4	1.17
001252	425	10/19/77		0.37	0.12	129.4	1.17
001253	425	10/19/77		0.37	0.12	129.4	1.17
001254	426	11/4/77		0.33	0.14	169.0	2.56
001255	426	11/4/77		0.33	0.14	169.0	2.56
001256	426	11/4/77		0.33	0.14	169.0	2.56
001257	426 & 427	11/15/77		.01 & .29	0 & .12	5.12 & 148.5	0.08 & 2.2
001258	427	11/15/77		0.54	0.23	200.4	0.60
001259	427	11/15/77		0.54	0.23	200.4	0.60
001260	427 & 428	12/9/77		.17 & .38	.07 & .23	64.7 & 128.4	.19 & 1.19
001261	428	12/9/77		0.54	.33	181.2	1.68
001262	428	12/9/77		0.54	.33	181.2	1.68
001263	428	12/9/77		0.54	.33	181.2	1.68
001264	428 & 429	12/15/77		0.25 & .40	0.15 & .29	83.1 & 114.1	.77 & 1.8
001265	429	12/15/77		0.72	.51	202.9	3.20
001266	429	12/15/77		0.72	.51	202.9	3.20