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TRU WASTE SAMPLING PROGRAM: VOLUME I--WASTE CHARACTERIZATION

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- o TRU Waste Sampling Program; Retrieved Waste Examination, CSE 83-48, December 1983.
- o TRU Waste Sampling Program; Retrieved Waste Examination, CSE 84-035, August 1984.
- o TRU Waste Sampling Program; Retrieved Waste Examination and Vented Gas Study, CSE 85-042, August 1985.

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ABSTRACT

Volume I of the TRU Waste Sampling Program report presents the waste characterization information obtained from sampling and characterizing various aged transuranic waste retrieved from storage at the Idaho National Engineering Laboratory and the Los Alamos National Laboratory.

The data contained in this report include the results of gas sampling and gas generation, radiographic examinations, waste visual examination results, and waste compliance with the Waste Isolation Pilot Plant-Waste Acceptance Criteria (WIPP-WAC).

A separate report, Volume II, contains data from the gas generation studies.

SUMMARY

Summarized below are the results from opening and examining 199 drums and 10 boxes of ^{239}Pu -contaminated wastes from the Idaho National Engineering Laboratory (INEL) and 15 drums of ^{239}Pu - and 18 drums of ^{238}Pu -contaminated wastes from the Los Alamos National Laboratory (LANL). A total of 212 INEL waste drums and 41 LANL drums were sampled to determine gas composition.

It should be noted that it was not the intent of the TRU Waste Sampling Program to make policy decisions concerning the management and certification of stored transuranic wastes. However, this report does contain information useful for making such site specific policy decisions.

Idaho National Engineering Laboratory Results

Waste Form Compliance

A total of 209 waste containers were visually examined at the Rocky Flats Plant (RFP). The contents of each were characterized to determine waste form compliance with the WIPP-WAC. Fifty-two (25%) of the containers examined did not meet the requirements of the Waste Isolation Pilot Plant-Waste Acceptance Criteria (WIPP-WAC).¹ Forty-eight contained free liquids, two contained free liquids and compressed gases, and two contained particulates in excess of the allowable WIPP-WAC limits. In addition, two drums were not certifiable because the plutonium content was greater than 200 grams per drum. Uncemented sludges and combustibles were the two waste forms that accounted for the majority of noncompliance with the WIPP-WAC.

Real-Time Radiography

A total of 209 waste containers, consisting of 87 drums and 5 boxes of 6-month-old waste, 37 drums of 3-year-old waste, and 75 drums and 5 boxes of 12-year-old waste, were examined by the INEL Real-Time Radiography (RTR)

system prior to visual examination at Rocky Flats. The results of the RTR exams indicate that the procedure will be a very useful technique for certifying waste. Waste containers were judged to be noncertifiable by the RTR operator if: (a) free liquids, significant quantities of particulates, or compressed gases were present or (b) lead shielding or other dense material prevented the operator from fully evaluating the waste.

It should be noted that the radiographic examinations of waste containers selected for the TRU Waste Sampling Program were conducted during the RTR system technology development phase. During this time period, imaging enhancements were made to the RTR system that resulted in an improvement to the quality of the radiograph which enabled it to be interpreted with increased accuracy by the RTR operators. It should also be noted that the determination of waste form compliance with the WIPP-WAC was conducted by RTR operators who were not fully trained or qualified. A training program was defined, developed and established during the course of the sampling program to support future waste certification operations. Operator qualification requirements were put into effect during this same time period.

The TRU Waste Sampling Program served as an extremely beneficial opportunity that assisted in the further development of the RTR system, the establishment of specific requirements that were incorporated in the training and qualification program, and in the defining of improved operational procedures for conducting the waste examinations.

The RTR examinations resulted in 43 of the 209 containers having been identified as noncertifiable. Thirteen of the 43 were later found to be certifiable during visual examination at the RFP. These 13 containers had been rejected by the RTR for the following reasons: (a) three contained small amounts of liquid (which was not found during visual examination), (b) four contained lead-shielding or other similar dense items that prevented the RTR operator from evaluating the waste as a result of limited x-ray penetration, and (c) six were rejected due to the presence of particulates.

Visual examination of the 209 containers resulted in 52 containers being identified as noncertifiable. The RTR system detected 30 of these containers. The remaining 22 containers all contained small amounts of free liquid. The quantity of liquid ranged from a film of oil to 3.1 L. The RTR videotapes for the 22 waste containers were closely reexamined to determine if the free liquids could be detected. Reexamination indicated liquids could be detected in nine of the 22 containers (cause attributed to operator inexperience during initial RTR examination). The amount of liquid in the nine containers ranged from 15 mL to 1.46 L. In the remaining 13 containers: (a) two contained liquids (1.4 L and 3.1 L) in a situation where the liquid motion was severely restricted (motion of the liquid is needed by the RTR operator in order to be detected); (b) five containers had small amounts of liquids (ranging from a film of oil to 50 mL) that apparently were beyond the RTR system resolution capabilities; and (c) six uncemented sludge drums were found to contain liquids (130 mL to 2.7 L) during visual examination at the RFP, however no liquids were detected during the RTR examination at the INEL prior to shipment to the RFP. It appears that dewatering of the sludge may be occurring during transportation of the waste. Many other uncemented sludge drums were found to contain liquids. Additional study is recommended to determine if the uncemented sludge drums are an acceptable waste form for future emplacement at WIPP.

Gas Generation

A total of 212 waste drums were sampled to determine the drum pressure, drum void volume, and gas composition. All waste drums, except seven, were sealed with nonpermeable gaskets. These seven drums were generated after early FY-1983 when the RFP began using semi-permeable drum lid gaskets. The results from sampling the waste drums were used to calculate the measured total moles of radiolytic-produced gas for comparison with the expected total moles of radiolytic gas.

The primary reason for comparing measured gas generation values with expected values was to support the Safety Analysis for the Stored Waste Examination Pilot Plant (SWEPP). The expected total moles of radiolytic gas was calculated using G(total gas) values obtained in past laboratory experiments. The results from sampling the waste drums are reported in moles of gas and not G(total gas) values since the laboratory G(total gas) values were obtained under controlled, experimental conditions. Publishing G-values for waste drums would be misleading, and if used in any design calculations, could be inadequate. In taking these factors into consideration, but still meeting the need for comparison between measured and expected values, it was decided to present the gas generation data in terms of moles of gas. Initial gas sampling results of the waste drums indicated that there was considerable variability in the type and quantity of gas present, and between the measured and expected values. In waste drums there are too many factors (radionuclide assay capabilities, gas leakage or diffusion from the drum, other gas-generating mechanisms such as bacterial action) that can influence gas generation calculations.

The measured total moles of radiolytic gas exceeded expected values for some of the waste drums in the Combustible, Glass, Uncemented Sludges, and Leaded Rubber waste form categories. Possible reasons for differences between the measured and expected values include the accuracy of determining the quantity of radionuclides in the waste; the accuracy of the drum storage time; the effects of retrieval, handling, and shipment of the waste; presence of nonradiolytic produced gases, such as CO₂ from bacterial action; and selection of an appropriate laboratory-derived G(total gas) value for drums containing a variety of waste materials.

Several drums, mainly in the Combustible waste form category, had high concentrations of carbon dioxide with little or no hydrogen present. This would seem to indicate that either the hydrogen had leaked from the drum, or another mechanism, possibly bacterial action, may also be generating gas.

The suspected source of gas in noncombustible waste forms (metal, glass, etc.) is from plastics used in packaging the waste. In the Glass waste form category, wet or dried chemical residues on Raschig rings and laboratory glassware may be an additional source for gas generation.

Hydrogen

All waste forms sampled contained detectable concentrations of hydrogen. All drums sampled, except for seven 6-month-old drums, were sealed with nonpermeable gaskets. Seventy-seven drums (37%) of the 210 analyzed drums contained greater than 1% hydrogen. Of this group, 29 (14%) waste drums contained hydrogen concentrations greater than 4% but less than 5% oxygen. These drums were from the Combustible, Metal, Glass, Uncemented Sludges, Cemented Sludges, Glovebox Gloves, Benelex and Plexiglas, Resins and Mixed Waste waste form categories. Ten drums (5%) contained greater than 4% hydrogen and greater than 5% oxygen, and were potentially flammable. Eight of these drums were in the Uncemented Sludge category, one in the Concrete and Brick category, and one in the Resins category. Hydrogen can be generated in virtually any waste form category as long as organic material, such as plastic packaging, and alpha-emitting radionuclides are present. Hydrogen was found in all age categories of waste sampled.

Los Alamos National Laboratory Results

Waste Form Compliance

A total of 33 waste containers, 18 ^{238}Pu containers and 15 ^{239}Pu containers, were visually examined at LANL and the contents characterized to determine waste form compliance with the WIPP-WAC. Five (15%) of the containers examined did not meet the WIPP-WAC. Three contained free liquids, one contained particulates in excess of the allowable WIPP-WAC limits, and one contained corrosive material.

Radiography

A total of 34 waste containers, consisting of six drums of 7 and 8-month-old waste, 13 drums of 1-year-old waste, 3 drums of 2 to 2-1/2-year-old waste, six drums of approximately 3-year-old waste, and six drums of approximately 9-year-old waste, were examined by a LANL radiography system. Three containers were listed as "probably" certifiable and one was listed as "apparently yes" for certifiability. The LANL radiography system was not designed to examine waste containers. The radiography system was used primarily to examine the waste containers for safety considerations prior to opening and examination.

Gas Generation/Hydrogen

A total of 41 waste drums were sampled to determine the gas composition. All of the LANL drums were at atmospheric pressure because they are sealed with a sponge-rubber semi-permeable gasket that allows gas in excess of atmospheric pressure to diffuse out of the container. Therefore, it was not possible to measure void volumes by pressure-volume relationships. Void volumes for ten of the drums were computed using weights and densities of the waste material.

The 3-year-old and 9-year-old ^{238}Pu -contaminated waste drums showed negligible concentrations of hydrogen. These drums, however, did contain significant quantities of other radiolytic gases such as carbon dioxide. It appears that hydrogen generation had ceased in these drums, possibly due to depletion of the organic matrices, and any significant quantities of hydrogen had diffused through the semi-permeable drum gasket.

Three of six newly-generated (8-month-old) ^{238}Pu waste drums, however, had elevated levels of hydrogen (greater than 4%). These drums contained in excess of 150 alpha-curies. These drums also contained greater than 9% oxygen and were potentially flammable or explosive.

No ^{239}Pu -contaminated waste drums, from any age category, contained hazardous levels of hydrogen. The ^{239}Pu drums all contained less than 15 alpha-curies.

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TRU WASTE-SAMPLING PROGRAM:
VOLUME I--WASTE CHARACTERIZATION

1. INTRODUCTION

1.1 Background

The TRU Waste Sampling Program was established to evaluate various types of wastes contaminated with transuranic (TRU) isotopes. The sampling program was conducted at the Idaho National Engineering Laboratory (INEL) and the Los Alamos National Laboratory (LANL). The Rocky Flats Plant (RFP) provided support for work associated with evaluation of ^{239}Pu waste stored at the INEL. LANL conducted all work associated with evaluating ^{238}Pu -contaminated wastes. EG&G Idaho was responsible for the overall program management, quality assurance, and final reporting of the national effort under the direction of the Joint Integration Office (JIO). Tasks conducted by INEL, RFP, and LANL were delineated in the Implementation Plan for the TRU Waste Sampling Program, EG&G-WM-6324, July 1983. Appropriate task descriptions are repeated to provide the reader with background information.

1.2 Objectives

The primary objectives of the overall TRU Waste Sampling Program were:

1. To provide information on gas generation in newly generated and stored TRU wastes.
2. To evaluate the adequacy of venting/filtering devices (carbon composite filter, Hanford vent clip, and the styrene butadiene gasket) for maintaining safe hydrogen levels in sealed waste drums.

3. To determine the adequacy of the INEL real-time radiography system as a nondestructive certification technique.
4. To examine wastes for compliance with the Waste Isolation Pilot Plant-Waste Acceptance Criteria (WIPP-WAC).¹

1.3 Purpose

The TRU Waste Sampling program report consists of two volumes. The purpose of Volume I, Waste Characterization, is to present the data obtained from sampling, opening and examining various aged transuranic wastes stored at INEL and LANL (objectives 1, 3, and 4 above). This data includes task descriptions, radiographic examination results, gas sampling and INEL gas generation results, waste examination results, evaluation of waste compliance with the Waste Isolation Pilot Plant-Waste Acceptance Criteria (WIPP-WAC) and radiographic examination results. In some cases, the data may be applicable to other Department of Energy (DOE) sites such as in the area of real-time radiography and waste form compliance. In other cases, such as with gas generation, the data may be site specific since the manner in which the wastes are segregated, packaged, sealed, etc. may vary from site to site.

Volume II contains the results of the gas-generation rate studies, and evaluation of the effectiveness of filtering/venting devices for maintaining safe hydrogen levels in sealed waste drums (objective 2 above).

1.4 Quality Assurance and Quality Control

Quality assurance of the data generated by the TRU Waste Sampling Program was provided by management and internal and external review. External peer reviews were conducted by the JIO, RFP, LANL, Rockwell Hanford, Savannah River Plant, and the Sandia National Laboratory.

To ensure that gas sampling and analytical methods were consistent among the participating laboratories, the following special quality control measures were used in addition to established site laboratory procedures and standard practices:

1. Gas Bottles--Bottles or cylinders used to collect gas samples were initially cleaned by evacuating them to less than 2.0×10^{-2} torr (mm/Hg) at 100°C for 2 hours.
2. Measuring Instruments--Instruments (gauges, transducers) used for measuring pressures (subatmosphere and above-atmosphere) were calibrated, as specified by each participating laboratory's quality control program, and were accurate to a minimum of 0.2% of full scale. Pressure measurements are reported in torr (mm Hg).
3. Drum Sealing--Drums required to be completely sealed were considered sealed if pressurized to 155 torr above atmospheric pressure for 3 hours with a pressure loss of no more than 5 torr.
4. Gas Sampling Pressure--The gas sampling manifold and gas sampling bottle were evacuated to less than 2.0×10^{-2} torr before a gas sample was drawn from the drum. After this pressure had been obtained, the valve to the pump was closed and the pressure observed to ensure that the sampling manifold was properly sealed to the drum lid. The seal was adequate if a pressure rise of less than 1.0×10^{-2} torr was observed for 1 minute.
5. Gas Analysis--Mass spectrometry or gas chromatography was used for analyzing gas samples. In either case, the lower limit of detection was 0.1 vol% for each gas. Sensitivity or response factors were established for each type of gas analyzed. At the

beginning of each day, before any gas samples were analyzed, instruments were checked by using one of the gases as an analytical standard for comparison with the established sensitivity or response factor. Results of this test were required to be within $\pm 2\%$ of the established sensitivity or response factor.

6. Gas Standards--A certified gas standard was supplied to each participating laboratory for use when analyzing gas samples. The gas mixture and composition used was the same for each laboratory to allow comparison of analytical results.

After sensitivity or response factors were established for the analytical instrument, a certified gas sample was analyzed before any gas samples were analyzed. The results of this analysis were reported, by phone, to EG&G Idaho before any further analyses were conducted. A sample of the certified gas was then analyzed for approximately every eight field gas samples analyzed.

7. Other Analyses--Other types of analyses, such as those conducted for particulates and unknown materials, were conducted on an as needed basis. For an unknown material, 90% of the total was required to be identified.
8. Documentation--Each participating laboratory was required to keep appropriate documentation such as: (a) analytical instrument output (spectra or chromatogram) used for establishing sensitivity or response factors; (b) environmental conditions when drums were sampled; (c) all analytical results, including daily instrument checks, variance from established factors, tolerances, certified gas standard results, and (d) appropriate internal analytical and quality control standards and procedures.

2. INEL/RFP DATA

This section contains the task descriptions and data obtained from sampling and characterizing 199 drums and 10 boxes of 6-month-old, 3-year-old, and 12-year-old ²³⁹Pu wastes stored at the INEL. The data are divided into four sections (excluding the sampling program overview): radiographic examination, gas sampling, waste examination, and waste form compliance. The data have been subdivided to allow the reader to go to a specific area of interest.

2.1 Sampling Program Overview

2.1.1 Waste Selection

All TRU waste containers used in the sampling program were randomly selected from "certifiable" waste form categories. The term "certifiable" was applied to those waste forms (glass, metal, etc.) that were expected to comply with the waste form requirements of the WIPP-WAC. Each waste form category consists of one or more content codes used to describe the physical content of a waste container (see Appendix A). Certifiable waste forms were previously determined by reviewing the content codes based on INEL waste information records, waste generator records and observing waste-generating processes and waste streams.

Content codes meeting the generic "certifiable" waste form description, e.g. glass, were selected for sampling if available. The 6-month-old containers were selected and set aside from RFP waste shipments received at the INEL Radioactive Waste Management Complex (RWMC). The 3-year-old and 12-year-old RFP wastes were retrieved from interim storage at RWMC. The waste containers were radiographed and shipped to the RFP for sampling and characterization. These tasks were conducted by RFP since INEL does not have the required facilities to open and visually examine waste containers. The term "visual examination" is used to describe the opening and characterization of the waste container contents.

It should be noted that only wastes generated by RFP were used in the sampling program. Wastes shipped to the INEL from other facilities are comparable to RFP-generated waste, and RFP waste constitutes the majority of TRU waste stored at INEL.

2.1.2 Retrieval Operations

Tasks 1 and 2 of the TRU Waste Sampling Program implementation plan² provided for the collection or retrieval of 6-month-old, 3-year-old, and 12-year-old TRU wastes at the INEL. The 6-month-old waste was selected and set aside from RFP waste shipments received at the INEL Radioactive Waste Management Complex (RWMC). The 3-year-old waste was retrieved from storage within the air support building currently used to store TRU wastes. The 12-year-old waste was retrieved from the Transuranic Storage Area Pad 1, Cell 5 (TSA-1, Cell 5). TSA-1, Cell 5 was originally filled with waste and closed June 20, 1973. Wastes selected for the TRU Waste Sampling Program were then radiographed, prepared for shipment and returned by railroad in ATMX boxcars to the RFP for sampling, opening, and characterization of the waste. It should be noted that some of the TSA-1, Cell 5 drums were gas-sampled at the INEL as part of Task 3 of the implementation plan. However, not all drums were sampled due to inclement weather at INEL. Drums not sampled at the INEL were sampled at the RFP.

After removal of most of the TSA-1, Cell 5 soil overburden, but prior to actually penetrating the cell, samples were taken to determine the presence of any airborne activity within the cell, soil contamination, and presence of hazardous gases (hydrogen) within the cell. Analysis of the samples indicated no airborne activity, no soil contamination, and no detectable hazardous gases. The condition of the waste containers was found to be fair to good. Corrosion was evident on the metal drums and drum lids. Some labels were in poor condition due to discoloration from condensation. No problems were encountered retrieving the waste drums.

The fiberglass-reinforced-polyester (FRP) coated wooden boxes were generally found to be in good to excellent condition. However, during the retrieval process some breached waste boxes were discovered. It is believed the waste boxes were breached during emplacement of the soil overburden by heavy construction equipment. During remedial action operations, no airborne activity was detected. A small quantity of slightly alpha-contaminated soil was found inside a breached box, but outside the plastic bag lining the box. Any contaminated items found were disposed of as TRU waste.

2.1.3 Radiographic Examination

All waste containers were examined by the INEL RTR system prior to shipment to the RFP for sampling and visual examination of the container contents. The purpose of the RTR examination was to obtain information concerning the capabilities of the RTR system as a nondestructive examination technique for certifying waste to the WIPP-WAC.

Each waste container was examined to determine whether or not the container contents matched the expected contents based on the assigned content code, and to detect any free liquids, compressed gases, or particulates in the waste. The RTR operator then made a decision on the certifiability of the container. It should be noted that containers were originally identified as "not certifiable" if the waste contents did not match the content code or if the operator could not evaluate the waste due to limited x-ray penetration of the container. Approval has since been given to INEL to certify wastes with the wrong content code (as indicated during RTR examination) as long as the waste meets the WIPP-WAC. Penetration of the waste is limited because either materials in the waste are dense or waste drums are lined with lead-sheeting to reduce radiation levels.

2.1.4 Waste Examination

All INEL waste containers were shipped by rail in ATMX cars to Rocky Flats Building 664. The containers were unloaded, surveyed for

surface contamination, and assigned a sequence number to ensure similar wastes (sludges, combustibles, etc.) were grouped together and examined in a predetermined order. Where possible, drums normally drum counted were reassayed by segmented-gamma scan before being transferred to Building 776 for opening and examination. However, some drums were counted by sodium-iodide assay technique. Sludge drums (Content Codes 1, 2, 3, and 7) were assayed by taking a sample for radiochemical analysis during the visual examination. One drum of molten salt was repackaged and assayed in the can counter to obtain more accurate assay results.

2.1.4.1 Drum Assay Differences. Differences in the original and reassay values arise from a variety of causes. The original assay on sludge drums was determined by assigning the gram values of plutonium and americium for a large waste treatment feed batch equally to the approximately 10 drums of sludge. However, the sludge is not homogeneous, resulting in different gram values in each drum when the reassay was determined by taking a representative sample.

The one notable exception to the above explanation is Drum No. 32-01055 (see Section 2.5, Waste Form Compliance tables), which had an original assay of 35 grams plutonium and reassays from 191 to 313 grams plutonium. The drum contained 20 wide-mouth plastic bottles of graphite chunks and 3 bottles of fines. The original assay done in the MD-28 counter in Building 371 indicated the coarse material contained 27 grams and the fines accounted for 8 grams for a total of 35 grams. Upon return to RFP, the segmented drum count indicated 191 grams. During the visual examination, the fines were packaged into 11 cans for assay in the Building 771 can counter. The counter indicated that the fines contained 292 grams of plutonium. The coarse material was redrummed and counted by the south drum counter, with 21 grams of plutonium resulting. Since the segmented drum count before the visual examination, and the Building 771 can counter produced much higher counts than the original count with MD-28, the original count for the three bottles of fines appears incorrect.

No attempt was made to retrieve the original count sheets for all the drum counted drums, but the original and reassays were likely determined in two different instruments that use different variations of gamma-ray counting techniques. The original values were likely determined by the south drum counter in Building 771 and the recounts were indeed determined by the segmented drum counters in Buildings 771 or 707. The south drum counter uses a 100-second count with low resolution NaI detectors for 330-400 KeV gamma radiation and is used to assign plutonium gram values. Matrix attenuation corrections are based on net weights that assume a full drum and calibrations depend on item description code (content code). The segmented drum counter uses a 20-minute count with high purity germanium detectors to achieve better resolution on gamma ray energies and it also provides americium and uranium values. Matrix attenuation corrections are measured for each of 8 or 10 segments and do not depend on fill height of material in the drum. The segmented procedure is generally preferred in principle.

Differences in the original and new count values can be understood by the fact that nondestructive assay (NDA) is based on the physical properties of the waste and detection equipment. Differing background counts can affect the drum counter results, even though the counter is repeatedly adjusted (every 6 samples) with background and standard counts. Also, the gram values are based on probabilities of detecting events occurring in the waste, on the resultant energy being absorbed, reflected or changing energy before hitting the detector. Physical location of radioisotopes in the waste container can affect the counter results and shifting of the waste in transit and handling can help account for differing results.

2.1.4.2 Gas Sampling. In Building 776, the drums were gas sampled to determine drum pressure, drum void volume and gas composition. Figure 1 is a photograph of the gas sampling manifold used at the RFP to sample the drums. The gauge in the photograph indicates the manifold vacuum. Manifold connections are also provided for a drum pressure gauge, a vacuum pump, the sample bomb, a vent, and a tritium sampling port. The drums were

Figure 1. Gas Sampling Manifold.

punctured with a non-sparking copper-beryllium punch that is part of the gas manifold. An extra punch is shown laying near the manifold. The gas pressure was measured when the drum lid was punctured. An attempt was made to puncture the 90-mil rigid polyethylene liner to determine if there was a pressure difference between the liner and the annular space. Due to the flexibility of the rigid liner lid, this effort was only partially successful. For the drums in which the effort was successful, no pressure differences were observed.

A sample of gas was then removed for compositional analysis. The void volume within each drum was determined. Gas analysis included measuring the volume % of hydrogen (H_2), oxygen (O_2), nitrogen (N_2), oxides of nitrogen (NO_x), carbon dioxide (CO_2), carbon monoxide (CO), and hydrocarbons. Gas in waste boxes was not analyzed. Tests conducted at the INEL indicate that boxes are not airtight.

2.1.4.3 Visual Examination. The drum examination commenced by placing the drum in the Size Reduction vault air lock and removing the drum lid to survey for contamination and to check for signs of rust. The drums were placed inside the vault, opened and visually examined to determine type and condition of drum liners, all waste components were weighed, and evaluated for compliance with WIPP criteria. During examination of a waste container (Task 4 of the implementation plan),² the following information was obtained: container weight; container condition (dents, bulges, rust, etc.); original content code; original packaging date and location of generation; original and reassay values for radionuclide quantities; physical description of the waste and weight of individual components; physical state (damp or dry) of the waste; evaluation of waste form compliance with the WIPP-WAC; revised content code if container contents did not meet the original content code; waste packaging method; approximate packaging efficiency; presence of liners (lead, 90-mil polyethylene) and condition; and location, type, and quantity of absorbent material. Determination of radionuclide quantities in sludge-type waste was by radiochemical analysis.

2.1.4.4 WIPP-WAC Evaluation. Each waste package was evaluated for compliance with the WIPP-WAC, as specified below:

1. Immobilization: All waste packages within a container were opened and examined for particulate materials. Particulates were collected and analyzed to determine the weight percentage and size distribution of less than 200 μm and less than 10 μm particulates. If any particulate materials were found, the entire mass was taken, if possible, for weight determination and particle size analysis. If the entire amount of particulate could not be collected, the weight was recorded during the visual examination and a representative sample was taken to reduce analysis time. Absorbents added to some waste forms to immobilize free water were not included in this analysis.

Particle analysis was conducted using appropriate American Society for Testing and Materials (ASTM) standard methods. The procedure used for examining nonwater-soluble particulates was ASTM standard method C371-77, "Wire-Cloth Sieve Analysis of Nonplastic Ceramic Powders" for less than 200 μm diameter particulates. Particulates were analyzed for less than 212 μm particulates instead of less than 200 μm particulates since a 200- μm sieve was not available. The procedure used for determining less than 10- μm particulates was based on ASTM standard method E20-68, "Analysis of Microscopical Methods for Particle-Size Distribution of Particulate Substances of Subsieve Sizes."

2. Free Liquids: The waste, as removed from the waste container, was examined visually to verify the absence of free liquids. Any free liquid found in a container was collected to determine total quantity, and analyzed to identify the liquid or determine composition, and to determine the pH. Infrared (IR) spectroscopy was used to identify the major and minor composition of the liquid, except where the liquid identity was apparent.

It should be noted that the WIPP-WAC criterion for free liquids has changed since inception of this program (from no free liquids allowed to residual liquids being acceptable). To be conservative and consistent in this report, any free liquids found during visual examination were considered to render the waste package noncertifiable. The definition of residual liquid was considered to be a site specific issue, and therefore a quantity was not established.

3. Sludges: The waste, as removed from the waste container, was examined visually to identify the presence of sludge in the waste and to determine whether or not internal corrosion had occurred. The corroded area was photographed. The method for packaging the sludge was recorded. The sludge was sampled and analyzed to determine the pH. Although not required, the major and minor composition of some sludge was determined by IR spectroscopy.
4. Pyrophoric Materials: The waste was examined visually, as removed from the waste container, to determine whether or not spontaneous combustion has occurred in the waste. Any suspect materials were recovered for further analysis.
5. Explosives/Compressed Gases: The waste, as removed from the waste container, was examined visually to identify the presence of unknown or suspect materials and compressed gases (aerosol cans, gas cylinders, etc.). Chemical analyses were conducted to identify the composition of the material. Results of the analyses were compared with 49 CRF 173, Subpart C, to determine whether or not the material was explosive.

Any vessels capable of being pressurized were checked for puncture holes, drill holes, opened valves, etc. Each vessel was checked to determine if it was pressurized. No internal pressure measurements were taken.

6. Toxic/Corrosive Materials: Unidentified liquids and solids were collected, and the quantity measured, then analyzed to determine material identity and pH. Results of the analysis were compared with 49 CFR 173, Subpart H to determine if the material was a Poison A or Poison B substance. The packaging method for any toxic or corrosive materials was also recorded.
7. Combustibility: The volume % of the combustible content of the waste container, including packaging, was estimated.
8. Gas Generation: The organic material in each waste container was collected and weighed (excludes the 90-mil rigid liner in drums) after the waste had been examined.

The visual examination results are in Appendix B.

2.2 Radiographic Examination

Results of the radiographic examinations are in Appendix B with the general container information and visual examination results, so that comparisons could be made between the results on a container-by-container basis. Table 1 summarizes only the discrepancies between the RTR and visual examination results, including areas in which the RTR did not detect or identify materials, such as particulates, in the waste.

It should be noted that the RTR operator identified the presence of only significant quantities of particulates. Small quantities were not reported if the amount present was judged to be less than 1 weight % of the waste weight. Initially, the RTR operator also rejected waste containers that contained a mixture of wastes or had the wrong content code, even though the waste was certifiable. Upgrades in the RTR imaging system and capability have recently led to approval by the WIPP-WAC Certification Committee to certify wastes with the wrong content codes or containing a

TABLE 1. SUMMARY OF VISUAL AND RTR DISCREPANCIES

Waste Form Category	Container ID Number	Content Code	Visually Certified	RTR Certified	Reason for Discrepancy
Combustibles	02-39453	328	No	Yes	RTR did not detect 4 mL of free liquid in a bag with a filter. Drum was examined prior to enhancements to RTR imaging system. No liquid found when RTR video tape was reexamined.
	42-00291	330	Yes	No	RTR detected a small amount of free liquid and particulates. No free liquids were found during visual examination. Free liquids may have been reabsorbed during shipment and handling of the waste. Quantity of particulates were within WIPP-WAC limits.
	76-02898	330	Yes	No	RTR could not penetrate the lead-lined drum to evaluate the contents.
	389-90609	330	No	No	RTR detected free liquids and four aerosol cans. Free liquids (68 mL) were found during visual examination. No aerosol cans were found.
	02-39465	336	Yes	No	RTR could not penetrate the lead-lined drum to evaluate the contents.
	23-01599	336	No	Yes	RTR did not detect 188 mL of free liquid with wet kimwipes. Drum examined prior to enhancements to RTR imaging system. Liquids found when RTR videotape was reexamined.
	02-40137	336	Yes	No	RTR could not penetrate the lead-lined drum to evaluate the contents.
	92-00419	336	Yes	No	RTR detected small amounts of free liquids. No free liquids found during visual examination--believed to be reabsorbed during handling.
	37-00689	336	Yes	No	RTR detected HEPA filters that contained an unknown amount of particulates. Quantity of fines present was within WIPP-WAC limits.
	90-00039	336	No	Yes	RTR did not detect 295 mL of free liquid found in a bottle of hand lotion. Liquids were found when RTR videotape was reexamined.
	65-00137	336	No	Yes	RTR did not detect 20 mL of free liquid found outside the liner in the bottom of the drum. Liquids were found outside liner when RTR videotape was reexamined.

TABLE 1. (Continued)

Waste Form Category	Container ID Number	Content Code	Visually Certified	RTR Certified	Reason for Discrepancy
Metals	389-85743	337	No	Yes	RTR did not detect 1.4 L of free liquid in a plastic pail. The liquid was under a solidified layer of coating material. No obvious liquid detected when RTR videotape was reexamined since the solidified layer prevented liquid movement.
	746-2906	900	No	Yes	RTR did not detect 15 mL of free liquid found outside the liner in the bottom of the drum. Liquids were found when RTR videotape was reexamined.
	746-2918	900	No	Yes	RTR did not detect 10 mL of free liquid found outside the liner (on the lid and in the drum bottom). Liquids could not be detected when RTR videotape was reexamined.
	31-00939	480	Yes	No	RTR detected unknown quantity of particulate material. The quantity of fines present was within WIPP-WAC limits.
	389-90895	480	No	No	RTR did detect the free liquids but did not detect the two aerosol cans or sand particulates. Quantity of sand fines present was within WIPP-WAC limits.
	389-90828	480	No	Yes	RTR did not detect the 10 mL of oil in crushed cans or the welding flux (fines). Quantity of fines was within WIPP-WAC limits. The oil could not be detected when the RTR videotape was reexamined.
	02-12224	480	Yes	No	RTR detected 1 gallon of particulates. Quantity of fines present was within the WIPP-WAC limits.
Glass	389-85811	480	No	Yes	RTR did not detect 3.1 L of free liquid with paper wipes in a plastic bag on top of the waste. Liquids were not readily discernible when the RTR videotape was reexamined. The paper wipes may have presented liquid movement.
	17-04562	442	No	Yes	RTR did not detect the film of oil on the plastic and Raschig rings. The RTR system is not capable of detecting liquid films. Liquid films are not considered a free liquid by INEL.
Uncemented Sludges	7412-03125	1	No	Yes	RTR did not detect 507 mL of free liquid in outer and inner bag. Drum was examined prior to RTR imaging enhancements. No liquids were detected when the RTR videotape was reexamined. Dewatering of the sludge may be occurring.

TABLE 1. (Continued)

Waste Form Category	Container ID Number	Content Code	Visually Certified	RTR Certified	Reason for Discrepancy
	742-26152	2	No	Yes	RTR did not detect 1425 mL of free liquid in outer bag. Drum was examined prior to RTR imaging system enhancements. Liquids were detected when the RTR tape was reexamined.
	742-26154	2	No	Yes	RTR did not detect 950 mL of free liquid inside and outside the outer bag. Drum was examined, prior to RTR imaging system enhancements. No liquids detected when RTR videotape was reexamined. Dewatering of sludge may be occurring.
	742-21594	2	Yes	No	RTR detected 500 mL of free liquid that was not found in the visual exam. Liquid may have been reabsorbed during shipment and handling of the drum.
	742-21640	2	No	Yes	RTR did not detect 2700 mL of free liquid on top of bag and on top of sludge. Liquids not detected when RTR videotape was reexamined. Dewatering of the sludge may be occurring.
	743-11682	3	No	Yes	RTR did not detect 130 mL of free liquid found in the PVC bag at the bottom of the grease. Liquids not detected when RTR videotape was reexamined.
	743-16487	3	No	Yes	RTR did not detect 1000 mL of free liquid which drained from the top of the grease. No liquid detected when RTR videotape was reexamined.
	743-15023	3	No	Yes	RTR did not detect 400 mL of free liquid found on top of the grease and inside the outer bag. Drum was examined prior to RTR imaging system enhancements. Possible liquid found when RTR videotape was reexamined.
	747-00944	7	No	Yes	RTR did not detect 1465 mL of free liquid found on the top, sides and bottom of the sludge. No liquids were detected when the RTR videotape was reexamined. Dewatering of the sludge may be occurring. Liquids desorbed from sludge as it was handled during visual examination.
	40-00063	292	No	No	RTR did not detect 135 ml of free liquids found in the drum, drum bags, and bottles. RTR also detected particulate materials. No particulates found during visual examination. Drum was examined prior to RTR imaging system enhancements. No liquids detected when RTR videotape was reexamined.

TABLE 1. (Continued)

Waste Form Category	Container ID Number	Content Code	Visually Certified	RTR Certified	Reason for Discrepancy
Cemented Sludges and Solutions	76-01642	292	Yes	No	RTR rejected drum due to particulate and the unknown nature of the waste. Quantity of fines present was within WIPP-WAC limits.
	744-2376	4	No	Yes	RTR did not detect 20 mL of free liquid located outside the drum liner in the bottom of the drum. The liquid was detected when the RTR videotape was reexamined.
	744-2389	4	Yes	No	RTR detected 3.7 L of liquid between the 90 mil liner and the sludge. No free liquid was detected during the visual exam.
Resins	02-39215	432	No	Yes	RTR did not detect 75 mL of free liquid found outside a poly bottle, but within the poly bag. Drum was examined prior to enhancements to RTR imaging system. The liquid was detected when the RTR videotape was reexamined.
	02-10288	432	No	Yes	RTR did not detect 520 mL of free liquid found in the inner drum bag. Liquid was detected when the RTR videotape was reexamined.
	02-10195	432	No	Yes	RTR did not detect 50 mL of free liquid found in a bag containing a gallon jug. Liquid could not be detected when RTR videotape was reexamined.
Mixed Waste	01-08068	241	No	No	RTR could not examine the contents because of the lead lining.
Filters	89-03509	360	Yes	No	RTR estimated 1 gallon of particulates would be present. Quantity of fines present was within the WIPP-WAC limits.

mixture of wastes if the waste otherwise meets the WIPP-WAC. Table 1 does not include containers originally rejected by RTR due to wrong content code or due to containing a mixture of wastes.

The radiographic examinations of waste containers selected for the TRU Waste Sampling Program were conducted during the RTR system technology development phase. During this time period, imaging enhancements were made to the RTR system that resulted in an improvement to the quality of the radiograph which enabled it to be interpreted with increased accuracy by the RTR operators. It should also be noted that the determination of waste form compliance with the WIPP-WAC was conducted by RTR operators who were not fully trained or qualified. A training program was defined, developed and established during the course of the sampling program to support future waste certification operations. Operator qualification requirements were put into effect during this same time period.

The TRU Waste Sampling Program served as an extremely beneficial opportunity that assisted in the further development of the RTR system, the establishment of specific requirements that were incorporated in the training and qualification program, and in the defining of improved operational procedures for conducting the waste examinations. A summary comparison of the RTR and visual certification designation is also in Section 2.5, "Waste Form Compliance."

2.2.1 Radiography Results

A total of 43 waste containers out of 209 examined containers were identified as noncertifiable by RTR. Of the 43 containers, 30 were later confirmed by visual examination to be noncertifiable and the remaining 13 were actually found to be certifiable. The 13 containers were rejected by RTR on the basis of: (a) three contained a small amount of liquid (which was not found during visual examination), (b) four contained lead-shielding

or other dense items that prevented the RTR operator from evaluating the waste due to limited x-ray penetration, and (c) six were rejected due to the presence of particulates.

Visual examination of the 209 waste containers resulted in 52 containers being declared noncertifiable. The RTR system detected 30 of these containers. The remaining 22 containers all contained small amounts of free liquid. The quantity of this liquid ranged from a film of oil to 3.1 L. Additional information follows and is summarized in Table 1 and Table 2.

2.2.1.1 Combustibles. The RTR was unable to detect free liquids in 7 of the 14 waste containers found to contain free liquids. The quantity of free liquid contained in each waste container ranged from 4 mL to 1.4 L. The 1.4 L of liquid, Box 389-8573 Combustibles, Code 300, which was contained in a plastic pail, was a very viscous black material. The top layer of the material in the pail had dried out. The liquid, which was underneath the dried layer, was not visible by RTR since motion of the liquid was not possible.

The remaining six containers had free liquids in the following amounts: 4 mL, 10 mL, 15 mL, 20 mL, 188 mL, and 295 mL. The RTR videotapes for these containers were reexamined to determine if free liquids could be found. Liquids were observed in four of the containers (15 mL, 20 mL, 188 mL, and 295 mL).

2.2.1.2 Metals. The RTR was unable to detect free liquids in two of five waste containers found to contain free liquids. One box (No. 389-90828, Code 480) contained 10 mL of free liquid.

The 3.1 L of liquid was found in a double plastic bag containing wet paperwipes in Box No. 389-85811. The paperwipes may have prevented movement of liquid during the RTR examination. Liquid motion is needed to detect the presence of the liquid. Some of this liquid may have been pressed from the wet paperwipes during visual examination.

TABLE 2. RTR SUMMARY

Waste Form Category	Noncertifiable Containers ^a				Undetected by ^b RTR	Additional RTR Rejections
	Liquids	Liquids and Gas	Particulates	Total		
Combustible	14	0	0	14	7	6
Metals	3	2	0	5	2	3
Glass	1	0	0	1	1	0
Nonmetal Molds	0	0	0	0	0	0
Uncemented Sludge	24	0	2	26	8	2
Cemented Sludge	1	0	0	1	1	1
Concrete, Brick	0	0	0	0	0	0
Salts	0	0	0	0	0	0
Leaded Rubber	0	0	0	0	0	0
Benelex	1	0	0	1	0	0
Resins	3	0	0	3	3	0
Mixed Waste	1	0	0	1	0	0
Filters	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>
	48	2	2	52	22	13

a. Containers identified as noncertifiable during visual examination.

b. Number of noncertifiable containers undetected by RTR.

2.2.1.3 Glass. One drum (No. 17-04562, Code 442) contained Raschig rings and plastic that was coated with a film of oil. The oil, which was not measurable and did not flow, was considered noncertifiable by the RFP, during the visual examination, since the oil was not absorbed into a host material. The RTR cannot detect liquids as nonflowing films. The INEL does not consider the oil film a free liquid, based on the stored waste compliance requirements.

2.2.1.4 Uncemented Sludges. The RTR system was unable to detect free liquids in eight of the 26 waste containers that were uncertifiable. The volumes of liquid found in the containers were: 130 mL, 400 mL, 507 mL, 950 mL, 1.0 L, 1.4 L, 1.5 L, and 2.7 L. Two of these containers were found to contain free liquids (400 mL and 1.4 L) when the RTR videotapes were reexamined. Liquids were not observed in the remaining six containers. This indicates that dewatering of the sludge may be occurring during transportation of the waste.

2.2.1.5 Cemented Sludges and Solutions. One drum (No. 744-2376, Code 4) contained 20 mL of free liquid that was not detected by RTR. The liquid was located in the bottom of the drum, outside the 90-mil rigid drum liner. The liquid did not appear to be from the waste, but was probably residual liquid left in the drum when the drum liner was installed. This liquid was observed when the RTR videotape was reexamined.

2.2.1.6 Resins. The RTR was unable to detect free liquids in three drums. Drum No. 02-39215 (Code 432, 6-month-old) contained 75 mL liquid inside a plastic bag containing a polyethylene bottle. Drum No. 02-10195 (Code 432, 12-year-old) contained 50 mL of liquid inside a plastic bag containing a polyethylene bottle. Drum No. 02-10288 (Code 432, 12-year-old) contained 520 mL of liquid in the bottom of the inner plastic drum bag lining the 90-mil rigid liner. The liquid in both of these drums was observed when the RTR videotapes were reexamined.

2.3 Gas Sampling Results

Waste drums were sampled to determine the drum pressure, drum void volume, and a gas sample was taken for compositional analysis. All drums sampled, except for seven 6-month-old drums, were sealed with nonpermeable rubber gaskets. The seven drums are noted in the appropriate tables. Waste boxes were not sampled. Tests conducted at the INEL indicate that accumulation of flammable gas mixtures in FRP boxes will not occur due to leakage.

The sampling and analysis procedure was conducted in accordance with the guidelines and specifications identified in Section 1.4. The gas sampling and gas generation results are provided in Tables 3 through 16. Each table presents the results for a waste form category.

In addition to gas sampling results for waste containers that were opened and examined, 13 additional results are included for drums that were gas sampled at INEL but not included in the sampling program. These drums include those used to demonstrate the INEL prototype drum venting system and sampling of presently noncertifiable waste forms such as filters and particulate wastes. Results are further divided into the individual content codes and time periods within each table for comparison of the results.

The following paragraphs describe the methods used for determining drum void volume, collection and analysis of gas samples, gas generation calculations and gas generation results.

2.3.1 Void Volume Determination

The drum void volume was determined by measuring the drum pressure and then expanding the gas inside the drum into a calibrated expansion volume and measuring the new pressure. During measurement of the drum pressure, an attempt was made to determine if a pressure differential existed across the 90-mil rigid polyethylene liner. No pressure differences were observed in those rigid liners that were penetrated by the sampling mechanism.

TABLE 3. GAS SAMPLING RESULTS^a

WASTE FORM CATEGORY: COMBUSTIBLES

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total ^a Activity (Ci)	Measured ^b N (Total)	Expected ^c N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other H.C. ^d	(mm Hg)	Gauge (mm Hg)					
02-39371	6-month	328	2.10	0.05	96.5	1.1	--	--	--	--	0.17	--	642	+ 28.5	182	245	1.78	0.14	0.24
02-39453	6-month	328	4.59	--	94.0	1.1	0.05	--	--	0.24	--	--	589	- 24.5	171	251	3.48	0.26	0.49
02-39481	6-month	328	4.07	--	94.2	1.1	0.05	--	--	0.25	0.33	--	574	- 39.5	184	244	3.48	0.24	0.48
42-00291	6-month	330	0.09	--	79.3	0.91	17.3	--	2.26	0.14	--	--	631	+ 17.5	187	251	0.074 ^h	1.28	0.01
22-01194	6-month	330	0.40	18.8	79.2	0.91	0.24	--	--	0.27	0.16	--	614	+ 2.0	181	276	0.30	0.04	0.04
38-00101	6-month	330	0.28	--	78.0	0.93	19.5	--	--	0.87	0.11	0.25 ^f	632	+ 20.0	169	269	0.074	1.16	0.01
76-02898	6-month	330	18.2	--	64.6	0.75	15.2	--	0.36	0.65	0.11	0.11 ^f	701	+ 87.5	171	326	2.15	2.23	0.37
02-39195	6-month	330	0.34	12.5	83.3	0.93	2.09	--	--	0.29	0.53	--	576	- 36.0	168	307	0.15	0.13	0.02
02-39465	6-month	330	0.87	17.2	79.4	0.90	1.1	--	--	0.25	0.32	--	593	- 19.0	179	227	0.74	0.12	0.09
02-39084	6-month	330	0.15	13.6	82.8	0.94	2.23	--	--	0.22	--	--	588	- 24.0	164	328	0.22	0.13	0.04
02-40137	6-month	330	0.97	17.9	78.8	0.92	1.2	--	--	0.18	--	--	614	+ 1.0	178	163	1.70	0.13	0.15
389-90471	6-month	330	Boxes were not sampled																
390-90609	6-month	330	Boxes were not sampled																
02-35272	3-year	330	0.10	19.3	79.1	0.92	0.35	--	--	0.24	--	--	629	+ 13.0	177	903	0.074	0.03	0.04
01-08200	12-year	330	--	20.1	78.5	0.93	0.44	--	--	--	0.06	--	623	- 13.0	155	4,361	1.16	0.02	2.70
01-08796	12-year	330	0.05	18.0	80.6	0.96	0.61	--	--	--	--	--	553	- 84.0	86	4,334	0.33	0.02	0.76
90-00042	12-year	330	13.6	0.10	76.4	0.94	8.45	--	--	0.22	--	0.32 ^k	621	- 15.0	137	4,215	1.18	1.06	2.65
37-00689	12-year	330	1.9	0.13	94.7	1.1	1.9	--	0.37	--	--	--	474	-164.0	m	4,340	0.07	--m	0.17
89-03607	12-year	330	1.4	0.13	91.3	1.1	5.94	--	--	--	0.07	--	501	-135.0	178	4,306	0.23	0.37	0.53
02-10215	12-year	330	3.42	0.13	95.3	1.1	0.06	--	--	--	--	--	510	-126.0	--m	4,318	0.72	--m	1.66
90-00039	12-year	330	7.33	0.29	90.4	1.0	0.74	--	--	0.17	--	--	515	-122.0	165	4,227	1.76	0.39	3.97
23-01599	6-month	336	1.1	--	77.1	0.81	17.6	--	--	--	0.50	2.879	650	+ 37.0	163	260	0.30 ^h	1.09	0.04
47-00256	6-month	336	1.4	12.7	79.9	0.78	4.12	--	--	0.77	0.21	--	620	+ 7.0	177	154	3.85	0.33	0.32
92-00419	6-month	336	--	16.9	78.3	0.92	2.62	--	0.89	--	0.34	--	611	- 2.0	183	190	0.074 ^h	0.22	0.01
02-34820	3-year	336	--	0.54	80.2	0.95	18.2	--	--	0.12	--	--	621	+ 5.0	197	993	0.074	1.23	0.04
22-00748	3-year	336	0.51	7.45	84.0	0.96	7.04	--	--	--	--	--	576	- 40.0	214	925	0.22	0.51	0.11
02-10348	12-year	336	3.30	11.1	78.8	0.94	5.85	--	--	--	--	--	636	- 1.0	-- ⁿ	4,262	0.0	-- ⁿ	--
65-00137	12-year	336	0.87	0.26	76.9	0.91	21.0	--	--	--	--	--	621	- 15.0	144	4,369	0.43	1.11	1.00
744-3792	6-month	337	0.10	21.5	77.1	1.1	--	--	--	0.12	0.10	--	574	- 39.0	187	340	0.50	0.01	0.09
744-3823	6-month	337	0.10	20.8	77.6	1.1	0.16	--	--	0.24	--	0.05 ^f	614	+ 1.0	192	256	0.48	0.02	0.07
744-3789	6-month	337	0.21	19.9	78.0	0.82	--	--	--	0.29	0.26	0.139	612	- 1.0	201	367	0.56	0.01	0.11
55-00435	6-month	337	1.4	8.73	78.5	2.97	7.97	--	--	0.16	0.30	--	611	- 2.0	189	182	2.29	0.60	0.22

TABLE 3. (Continued)

WASTE FORM CATEGORY: COMBUSTIBLES

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total α Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other H.C. ^d	(mm Hg)	Gauge (mm Hg)					
01-08906	12-year	337	0.06	7.26	82.3	0.98	9.33	--	--	--	0.05	--	615	- 25.0	--n	4,328	0.0	--n	--
02-10180	12-year	337	0.85	0.12	81.8	0.95	16.1	--	0.17	--	--	--	570	- 68.0	132	4,318	<0.01	0.73	0.02
37-00672	12-year	337	0.01	8.67	90.1	1.1	0.10	--	--	--	0.05	0.01	633	0.0	--n	4,309	0.22	--n	0.51
37-00698	12-year	337	2.86	0.14	92.6	1.1	3.18	--	0.15	--	--	--	474	-166.0	165	4,318	0.62	0.28	1.43
37-00711	12-year	337	0.18	18.1	80.7	0.96	0.14	--	--	--	--	--	519	-118.0	121	4,252	0.41	0.01	0.93
36-00723	12-year	337	2.55	12.1	82.3	1.0	1.9	--	--	--	0.12	--	594	- 39.0	180	4,257	0.88	0.27	2.00
389-85743	12-year	337	Boxes were not sampled																
746-2906	12-year	900	0.15	16.7	82.1	0.97	0.10	--	--	--	--	--	465	-172.0	--m	4,346	0.73	--m	1.69
746-2918	12-year	900	1.6	0.29	96.8	1.1	0.13	--	--	--	--	--	604	- 36.0	186	4,314	0.69	0.11	1.59
746-7013	12-year	900	12.3	0.03	79.7	0.97	0.05	--	--	6.80	0.12	--	678	+ 41.0	--n	4,155	0.0	--n	--
746-7008	12-year	900	2.65	0.07	95.4	1.1	--	--	--	0.42	0.31	0.07	564	- 40.0	160	4,336	<0.01	0.13	0.02
01-08583	12-year	970	0.52	2.29	89.7	1.04	5.58	--	0.66	0.12	0.06	0.03	692	+ 88.0	97	4,460	0.20	0.25	0.48
01-08604	12-year	970	--	11.4	83.9	0.99	2.95	--	0.13	0.20	0.27	0.12	608	- 3.0	120	4,461	0.05	0.12	0.12
01-08700	12-year	970	0.47	4.07	89.7	1.03	3.74	--	0.60	0.14	0.17	0.05	680	+ 74.0	100	4,458	0.47	0.18	1.12
389-85289	12-year	970	Boxes were not sampled																

a. Gas sampling not conducted on boxes.

b. Hydrocarbons (saturated)--methane through propane.

c. Abbreviation for 1,1,1-trichloroethane.

d. Other hydrocarbons--as specified.

e. N = moles of radiolytic produced gas.

f. Dichloromethane (CH₂Cl₂).

g. Freon (1,1,2-trichloro-1,2,2-trifluoroethane).

h. Original assay data used.

i. No value given. The waste drum actually contained glass and not combustible wastes.

j. No laboratory data available for calculating the expected N (total) for the waste form represented by this content code.

k. Contains a CF₃+ fragment

l. Trichloroethylene

m. Drum not sealed sufficiently to obtain a void volume. Unable to calculate moles of radiolytic gas present.

n. Gas sampling data only. Drums were not included as part of the sampling program. These containers were sampled as part of the drum venting system study, or because the drums were pressurized when retrieved from Cell 5.

TABLE 4. GAS SAMPLING RESULTS^a

WASTE FORM CATEGORY: METALS:

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total α Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other H.C. ^d	(mm Hg)	Gauge (mm Hg)					
29-01396 ⁿ	6-month	320	--	20.4	78.4	0.98	0.19	--	--	0.05	--	--	605	- 5.0	177	211	0.50	0.01	--g
55-00290	3-year	320	0.94	12.9	79.2	4.23	2.56	--	--	0.15	--	--	616	+ 1.0	192	654	11.40	0.23	--g
02-10613	12-year	320	0.04	18.8	79.5	0.94	0.75	--	--	--	--	--	633	- 7.0	128	4,329	0.63	0.04	--g
02-10128	12-year	320	--	3.80	95.0	1.1	0.05	--	--	0.02	--	--	560	- 46.0	159	4,442	0.02	<0.01	--g
02-40002	6-month	480	0.15	16.3	78.6	1.1	3.35	--	--	0.20	0.38	--	618	+ 5.0	180	175	0.00	0.21	--g
31-00939	6-month	480	0.05	20.9	76.0	0.92	0.06	--	--	--	2.06	--	612	- 2.0	185	188	0.22	0.01	--g
02-39738	6-month	480	--	21.4	77.1	1.1	0.13	--	--	0.07	--	--	614	+ 1.0	195	188	0.67	0.01	--g
45-00528	6-month	480	0.12	20.5	77.5	1.1	0.48	--	--	--	0.25	--	617	+ 4.0	191	157	2.40	0.04	--g
02-40153	6-month	480	0.07	21.5	77.0	0.94	0.06	--	--	0.06	0.26	0.10 ^h 0.02 ^f	665	+ 58.0	185	386	1.56	<0.01	--g
12-12505 ⁿ	6-month	480	0.06	19.4	79.1	0.94	0.42	--	--	0.06	0.08	--	628	+ 17.0	175	216	4.38	0.03	--g
29-00513	6-month	480	0.10	21.4	76.8	0.89	0.12	--	--	0.03	0.17	0.06 ^h 0.40 ^j	612	+ 6.0	76	385	0.01	<0.01	--g
29-00528	6-month	480	0.02	21.6	76.9	0.96	0.10	--	--	0.16	0.11	0.20 ^j	606	- 0.0	218	385	0.02	<0.01	--g
78-00199	6-month	480	0.05	20.9	77.8	0.92	0.006	--	--	0.13	0.12	0.01 ^f	608	- 2.0	196	181	0.00	<0.01	--g
389-90895	6-month	480	Boxes were not sampled																
389-90828	6-month	480	Boxes were not sampled																
389-20305	6-month	480	Boxes were not sampled																
02-34855	3-year	480	0.20	13.6	84.4	1.0	--	--	--	0.32	0.43	--	630	+ 15.0	183	990	0.37 ^f	0.01	--g
02-35083	3-year	480	0.38	8.37	89.6	1.0	0.13	--	--	0.50	--	--	548	- 67.0	185	935	0.00	0.03	--g
31-01321	3-year	480	0.96	18.8	78.2	0.94	0.97	--	--	0.15	--	--	620	+ 5.0	185	903	0.37	0.12	--g
42-00209	3-year	480	0.32	18.0	79.7	0.96	0.93	--	--	0.10	--	--	591	- 23.0	175	960	2.04	0.07	--g
01-08226	12-year	480	0.03	18.1	79.8	0.94	0.83	--	--	0.08	--	0.30 ^l	590	- 47.0	126	4,366	0.97	0.04	--g
01-08232	12-year	480	--	20.5	78.3	0.92	0.27	--	--	--	--	--	641	+ 3.0	142	4,365	0.07	0.01	--g
02-12224	12-year	480	0.05	17.9	80.9	0.96	0.22	--	--	--	0.03	0.02 ^m	560	- 76.0	193	4,220	0.35	0.02	--g
18-00025	12-year	480	1.55	0.13	96.9	1.1	0.07	--	--	0.17	--	--	501	-127.0	119	4,310	0.82	0.06	--g
32-00544	12-year	480	0.23	13.1	84.9	1.0	0.16	--	--	0.21	--	0.42 ^h	628	- 4.0	138	4,294	0.35	0.02	--g
42-00043	12-year	480	1.8	4.48	90.3	1.1	2.38	--	--	--	--	--	621	- 19.0	134	4,246	0.93	0.20	--g
389-85769 ^a	12-year	480	Boxes were not sampled																
389-85811 ^a	12-year	480	Boxes were not sampled																
25-00036	12-year	480	0.90	10.2	85.4	1.0	2.1	--	--	0.16	0.09	0.09 ^m	598	- 10.0	138	4,483	0.96	0.14	--g

TABLE 4. (Continued)

WASTE FORM CATEGORY: METALS:

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total α Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other H.C. ^d	(mm Hg)	Gauge (mm Hg)					
15-00049	6-month	481	0.21	20.5	76.8	0.89	0.26	--	--	0.19	0.21	0.15 ^h 0.06 ⁱ 0.81 ^k	613	+ 9.0	185	364	1.21	0.03	--9
19-01827	6-month	481	0.33	18.1	79.4	0.98	1.08	--	--	0.08	0.04	--	612	+ 10.0	184	417	0.95	0.09	--9
19-01901	6-month	481	1.79	8.2	87.6	1.05	1.24	--	--	0.11	--	--	662	+ 60.0	179	422	3.60	0.20	--9
19-01919	6-month	481	0.19	4.8	93.2	1.14	0.17	--	--	0.14	0.16	0.18 ^h	608	+ 6.0	192	354	1.20	0.02	--9
76-00416	12-year	481	6.49	0.12	90.7	1.1	0.62	--	0.88	0.12	0.06	--	605	- 31.0	183	4,203	0.75	0.50	--9

a. Gas sampling not conducted on boxes.

b. Hydrocarbons (saturated)--methane through propane.

c. Abbreviation for 1,1,1-trichloroethane.

d. Other hydrocarbons--as specified.

e. N = Moles of radiolytic produced gas.

f. Original assay data used.

g. No laboratory data available for calculating expected N (total) for the waste form represented by this content code.

h. Dichloromethane (CH₂Cl₂).i. Carbon tetrachloride (CCl₄).j. 1,2-dichloroethane (C₂H₂Cl₂).

k. Freon TF.

l. Possible dichloroethylene

m. Trichloroethylene

n. Drums sealed with a semi-permeable gasket.

TABLE 5. GAS SAMPLING RESULTS^a

WASTE FORM CATEGORY: GLASS

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (t)	Storage Time (Days)	Total α Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other H.C. ^d	(mm Hg)	Gauge (mm Hg)					
37-02339	6-month	440	0.06	19.7	75.5	0.81	0.99	--	0.89	0.88	0.91 0.179	0.10 ^f	658	+ 44.0	139	225	0.22	0.10	--k
28-00781	6-month	440	0.16	21.1	74.5	0.73	0.61	--	0.18	1.7	0.87	0.15 ^f	628	+ 16.0	182	240	0.30	0.06	--k
28-00755	6-month	440	0.13	19.6	76.8	0.91	1.0	--	0.08	0.35	0.93	0.12 ^f	620	+ 7.0	177	258	0.74	0.07	--k
12-11241	6-month	440	0.07	21.0	76.4	0.90	0.14	--	--	--	1.27	0.17 ^f	617	+ 3.0	184	218	0.30	0.01	--k
37-02336	6-month	440	0.07	20.5	75.8	0.89	1.1	--	0.11	0.14	0.48	0.07 ^f	619	+ 5.0	153	245	0.30	0.07	--k
02-34934	3-year	440	--	20.9	77.4	1.0	0.07	--	--	0.21	0.39	--	621	+ 6.0	140	972	0.37	<0.01	--k
29-00030	3-year	440	0.47	10.0	80.0	0.97	8.10	--	0.31	0.07	--	--	603	- 15.0	176	966	0.74	0.52	--k
37-02018	3-year	440	0.12	15.5	77.5	0.87	3.70	--	1.9	0.37	--	--	668	+ 50.0	150	932	0.15	0.32	--k
76-01366	3-year	440	--	21.3	77.5	0.93	0.09	--	--	0.20	--	--	634	+ 16.0	154	914	0.15	<0.01	--k
02-10576	12-year	440	--	20.6	78.3	0.93	0.14	--	--	--	--	--	628	- 12.0	144	4,291	0.69	<0.01	--k
36-00628	12-year	440	0.01	20.6	78.4	0.92	0.08	--	--	--	--	--	592	- 48.0	138	4,389	0.20	<0.01	--k
36-00805	12-year	440	0.95	11.3	83.8	0.99	2.96	--	--	--	--	--	584	- 44.0	181	4,206	0.61	0.24	--k
89-04043	12-year	441	1.7	11.7	85.4	1.0	0.19	--	--	--	--	0.01 ^m 0.05 ⁿ	517	-117.0	134	4,235	0.60	0.07	1.28 ^l
89-04071	12-year	441	6.67	0.13	78.4	0.94	13.8	--	--	0.14	0.02	--	605	- 36.0	163	4,238	0.35	1.16	0.75 ^l
89-04114	12-year	441	2.63	0.21	93.9	1.1	1.9	--	--	0.26	0.05	0.01 ^m	494	-145.0	147	4,335	0.14	0.19	0.31 ^l
89-04072	12-year	441	3.58	0.09	82.7	1.0	12.0	--	--	0.20	0.24	0.12 ^m	640	+ 32.0	193	4,361	0.35	1.05	0.77 ^l
02-39564	6-month	442	--	17.3	80.4	1.1	0.54	--	0.13	--	0.49	--	625	+ 11.0	188	252	0.074	0.04	--k
02-39533	6-month	442	--	16.6	81.3	1.1	0.52	--	0.14	0.12	0.32	--	595	- 19.0	194	258	0.22	0.04	--k
02-39803	6-month	442	--	21.0	76.9	1.1	0.14	--	--	--	0.83	0.05 ^f	616	+ 2.0	187	218	0.15	<0.01	--k
02-39805	6-month	442	--	21.6	77.1	1.1	0.13	--	--	0.11	--	--	614	0.0	-- ¹	211	0.44	-- ¹	--k
19-02730P	6-month	442	--	21.1	77.9	0.92	0.06	--	--	0.02	--	--	615	+ 4.0	138	195	0.06	<0.01	--k
05-01596	3-year	442	0.38	16.0	77.6	1.0	2.0	--	--	0.15	2.84	--	617	+ 1.0	13.5 ^j	1073	0.22	-- ^j	--k
05-01772	3-year	442	0.21	14.5	82.9	0.97	0.68	--	0.58	0.20	--	--	575	- 41.0	186	913	0.37	0.09	--k
17-04562	3-year	442	9.88	1.5	86.1	1.0	0.36	--	--	1.1	--	--	645	+ 29.0	182	994	1.48	0.66	0.74 ^l
22-00722	3-year	442	0.43	18.3	79.5	0.98	0.45	--	--	0.32	--	--	622	+ 4.0	180	932	0.074	0.05	--k
42-00226	3-year	442	--	20.6	77.2	0.93	0.09	--	--	0.36	0.81	--	599	- 17.0	196	876	0.0	<0.01	--k

a. Gas sampling not conducted on boxes.

b. Hydrocarbons (saturated)--methane through propane.

c. Abbreviation for 1,1,1-trichloroethane.

TABLE 5. (Continued)

WASTE FORM CATEGORY: GLASS

Compositional Analysis (Volume %)												Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total a Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
Container ID No.	Time Period	Content Code	H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other H.C. ^d	(mm Hg)					
d. Other hydrocarbons--as specified.																		
e. N = Moles of radiolytic produced gas.																		
f. Dichloromethane (CH ₂ Cl ₂).																		
g. Cyclohexane (C ₆ H ₁₂).																		
h. Freon (1,1,2-trichloro-1,2,2-trifluoroethane).																		
i. Drum was not sealed sufficiently to obtain the void volume. Unable to calculate the measured N (total).																		
j. Inaccurate void volume due to fully-sealed Type I liner. Unable to calculate the measured N (total).																		
k. No laboratory data available for the waste form represented by this content code.																		
l. Special case. Proper content code is 441. The Raschig rings were coated with oil. Expected N (total) calculated based on laboratory data for pump oil.																		
m. Trichloroethylene																		
n. Carbon Tetrachloride																		
p. Drum sealed with a semi-permeable gasket.																		

TABLE 6. GAS SAMPLING RESULTS^a

WASTE FORM CATEGORY: NONMETAL MOLDS AND CRUCIBLES

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total α Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other H.C. ^d	(mm Hg)	Gauge (mm Hg)					
12-11023	6-month	300	0.06	18.5	80.3	0.86	0.06	--	--	0.17	--	--	617	+ 3.5	173	274	1.48	<0.01	--g
19-01811	6-month	300	--	21.2	76.6	0.93	0.16	--	--	--	1.1	--	619	+ 5.5	187	211	1.33	0.01	--g
12-11229	6-month	300	--	21.5	76.5	0.93	0.11	--	--	--	0.90	--	617	+ 2.0	209	210	0.0	<0.01	--g
41-01531	6-month	300	--	21.3	77.2	0.91	0.09	--	--	0.06	0.38	--	618	+ 4.5	181	218	0.74	<0.01	--g
12-09189	3-year	300	--	19.6	79.3	0.90	0.20	--	--	--	--	--	596	-20.0	164	967	0.37	0.01	--g
12-09295	3-year	300	0.07	15.7	83.0	0.82	0.38	--	--	--	--	--	595	-21.0	156	904	2.74	0.02	--g
12-09161	3-year	300	0.05	18.7	80.0	0.93	0.19	--	--	0.11	--	--	606 ^f	-10.0	166	996	1.11	-- ^f	--g
12-09300	3-year	300	--	19.6	79.2	0.92	0.14	--	--	0.11	--	--	654	+38.0	160	904	0.67	<0.01	--g
11-01625	6-month	301	0.11	18.8	78.5	0.92	0.97	--	--	0.03	0.37	--	618	+ 4.5	168	340	2.15	0.06	--g
32-01049	6-month	312	0.02	21.8	77.0	0.94	0.05	--	--	0.10	0.09	--	608	+ 6.0	181	160	0.29	<0.01	--g
32-01055	6-month	312	0.07	20.9	77.5	0.93	0.05	--	--	0.10	0.27	0.11 ^h	631	+29.0	170	160	23.18	<0.01	--g

a. Gas sampling not conducted on boxes.

b. Hydrocarbons (saturated)--methane through propane.

c. Abbreviation for 1,1,1-trichloroethane.

d. Other hydrocarbons--as specified.

e. N = moles of radiolytic produced gas.

f. Pressure reading low due to operator error during sampling procedure. N (total) values not calculated.

g. No laboratory data available for the waste form represented by this content code.

h. Dichloromethane (CH₂Cl₂)

TABLE 7. GAS SAMPLING RESULTS^a

WASTE FORM CATEGORY: UNCEMENTED SLUDGES

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (±)	Storage Time (Days)	Total α Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other d H.C.	(mm Hg)	Gauge (mm Hg)					
7412-03121	6-month	1	0.03	21.1	77.5	0.94	0.02	--	--	0.07	0.29	0.041	621	+ 16.0	104	144	0.17	<0.01	<0.01
7412-03125	6-month	1	0.24	18.2	80.2	0.96	0.01	--	--	0.06	0.30	0.041	681	+ 71.0	79	144	0.30	<0.01	<0.01
7412-03127	6-month	1	0.18	18.1	79.9	0.95	0.02	--	--	0.13	0.58	0.121	651	+ 48.0	114	144	0.40	<0.01	<0.01
7412-03128	6-month	1	0.11	20.1	77.5	0.94	0.02	--	--	0.11	0.94	0.221 0.01g	622	+ 19.0	93	144	0.43	<0.01	<0.01
7412-00483	3-year	1	1.2	21.1	76.4	0.90	0.09	--	--	0.35	--	--	628	+ 14.0	59.5	1,089	1.37	0.03	0.20
7412-00636	3-year	1	5.30	15.6	77.4	0.96	0.11	--	--	0.24	0.38	--	652	+ 36.0	108	975	5.04	0.21	0.65
7412-00766	3-year	1	2.02	21.0	75.5	0.95	0.11	--	--	0.16	0.24	--	618	+ 2.0	61.9	904	4.55	0.04	0.54
7412-00797	3-year	1	0.78	3.87	94.0	1.2	--	--	--	0.11	--	--	538	- 78.0	88.2	902	0.32	0.02	0.04
741-12404	12-year	1	5.19	65.9	27.7	0.32	0.09	--	0.66	--	--	--	1,165	+534.0	60	4,326	5.93	0.21	3.38
741-12411	12-year	1	--m	--m	--m	--m	--m	--	--	--	--	--	--	--	130	4,395	5.06	--	2.94
741-12794	12-year	1	4.12	46.8	48.0	0.58	0.14	--	0.27	--	0.05	0.04k	643	+ 9.0	94	4,205	6.73	0.15	3.74
741-12847	12-year	1	--m	--m	--m	--m	--m	--	--	--	--	--	--	--	74	4,289	5.02	--	2.84
741-12858	12-year	1	11.7	35.7	51.3	0.61	0.14	--	0.46	--	0.04	0.01k	591	+ 30.0	104	4,213	12.08	0.42	6.72
741-12387	12-year	1	1.85	30.9	66.2	0.79	0.09	--	0.15	--	0.03	0.01k	637	+ 5.0	--1	4,304	1.74	--1	0.99
741-12795	12-year	1	11.0	73.4	14.5	0.17	0.13	--	0.63	--	0.94	0.02k 0.01g	1,081	+445.0	--1	4,203	6.20	--1	3.44
742-26152	6-month	2	0.06	20.6	77.8	0.95	0.02	--	--	0.07	0.32	0.121	622	+ 17.0	69	397	0.41	<0.01	0.02
742-26154	6-month	2	0.06	21.8	77.0	0.95	0.04	--	--	0.06	0.15	0.021	599	0.0	70	125	0.14	<0.01	<0.01
742-26150	6-month	2	0.03	19.4	79.4	0.96	0.04	--	--	0.08	0.12	0.021	626	+ 23.0	58	125	0.27	<0.01	<0.01
742-21396	12-year	2	8.63	0.13	89.9	1.0	0.07	--	--	0.15	0.08	0.03k	490	-127.0	80	4,306	0.40	0.20	0.23
742-21440	12-year	2	2.50	0.33	95.8	1.1	0.03	--	--	0.17	0.05	0.01k	498	-141.0	--1	4,298	0.12	--	0.07
742-21594	12-year	2	0.01	20.4	78.5	0.93	0.12	--	--	--	--	0.04k	569	- 51.0	--1	4,222	0.12	--	0.07
742-21640	12-year	2	2.53	0.12	96.2	1.1	0.06	--	--	--	--	--	417	-203.0	61	4,200	0.08	0.04	0.04
743-16469	6-month	3	--	10.7	78.8	0.91	0.30	--	--	0.21	1.02	0.411 1.89g 5.74f	616	+ 9.0	72	399	0.06	<0.01	0.01
743-16487	6-month	3	0.10	12.2	77.5	0.74	0.15	--	--	0.89	4.20	0.451 2.41g 1.40f	640	+ 30.0	56	363	0.07	<0.01	0.01
743-16656	6-month	3	0.02	20.2	77.9	0.95	0.06	--	--	0.10	0.11	0.101 0.50g 0.04f	626	+ 19.0	75	185	0.08	<0.01	<0.01
743-16733	6-month	3	0.08	6.88	82.8	0.88	0.12	--	--	0.32	1.53	0.711 4.09g 2.63f	738	+128.0	65	203	0.09	<0.01	<0.01

TABLE 7. (continued)

WASTE FORM CATEGORY: UNCEMENTED SLUDGES

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total α Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other H.C. ^d	(mm Hg)	Gauge (mm Hg)					
743-15075	3-year	3	1.4	0.07	75.8	0.81	--	--	4.04	--	7.48	10.4 ^f	695	+ 81.0	47.9	1,069	0.07	0.10	0.04
743-15037	3-year	3	5.35	8.29	82.7	1.0	0.08	--	--	0.87	1.7	--	571	- 43.0	58.9	1,096	0.07	0.10	0.04
743-15312	3-year	3	0.40	1.1	88.4	0.98	--	--	1.1	0.07	3.68	0.87 ^f 3.38 ^g 2.73 ^f	631	+ 17.0	57.2	875	0.58	0.03	0.26
743-15023	3-year	3	4.71	0.80	83.7	0.83	--	--	0.26	0.78	6.23	2.73 ^f	687	+ 73.0	56.5	1,110	0.08	0.11	0.04
743-11586	12-year	3	0.11	19.6	78.5	0.92	0.12	--	--	--	--	0.04 ^k 0.65 ^g 0.04 ^f	631	- 9.0	-- ^j	4,340	0.19	--	0.42
743-11682	12-year	3	4.18	0.14	92.4	1.0	0.06	--	--	0.22	--	0.14 ^k 1.83 ^g 0.03 ^f	647	+ 27.0	135	4,300	0.35	0.21	0.76
743-11838	12-year	3	13.7	1.6	83.2	0.96	0.05	--	--	--	--	0.07 ^k 0.39 ^f	628	- 12.0	-- ^j	4,239	0.12	--	0.26
743-11870	12-year	3	0.89	14.4	82.8	0.97	0.09	--	--	--	--	0.04 ^k 0.82 ^g 0.04 ^f	577	- 58.0	133	4,217	0.18	0.04	0.38
747-00944	6-month	7	--	20.3	78.4	0.95	0.04	--	--	0.11	0.12	0.07 ^f	614	+ 8.0	68	264	0.07	<0.01	<0.01
747-01488	6-month	7	0.15	12.0	86.7	1.06	0.01	--	--	0.10	--	--	667	+ 59.0	62	175	0.13	<0.01	<0.01
747-01492	6-month	7	0.03	21.1	77.7	0.96	0.05	--	--	0.06	0.06	0.02 ^g	609	- 1.0	-- ^j	176	0.11	--	<0.01
747-01531	6-month	7	0.10	19.1	79.6	0.96	0.04	--	--	0.12	0.03	0.04 ^g	622	+ 14.0	85	177	0.05	<0.01	<0.01
02-40342	6-month	292	4.75	0.25	93.4	1.1	--	--	--	0.14	0.31	--	612	- 3.8	141	160	5.48	0.23	-- ^h
02-39229	6-month	292	9.08	0.09	89.1	1.1	--	--	--	0.15	0.49	--	582	- 33.8	157	327	5.11	0.46	-- ^h
02-39213	6-month	292	2.35	18.7	77.6	0.93	--	--	--	0.16	0.25	--	632	+ 17.4	172	321	2.29	0.14	-- ^h
02-39435	6-month	292	1.8	9.92	86.7	1.0	--	--	--	0.29	0.25	--	621	+ 5.2	152	260	3.11	0.09	-- ^h
40-00063	3-year	292	23.2	--	75.6	0.89	--	--	--	--	0.31	--	725	+110.0	138	1081	4.59	1.28	-- ^h
76-01642	3-year	292	7.50	5.62	85.2	1.0	--	--	--	0.64	--	--	572	- 43.0	151	880	0.74	0.36	-- ^h
76-01643	3-year	292	0.55	17.9	80.4	0.97	0.07	--	--	0.12	--	--	604	- 10.0	185	887	0.15	0.04	-- ^h
76-01644	3-year	292	4.66	6.92	86.9	1.0	--	--	--	0.51	--	--	564	- 51.0	165	880	0.52	0.24	-- ^h

a. Gas sampling not conducted on boxes.

b. Hydrocarbons (saturated)--methane through propane.

c. Abbreviation for 1,1,1-trichloroethane.

d. Other hydrocarbons--as specified.

e. N = Moles of radiolytic produced gas.

TABLE 7. (continued)

WASTE FORM CATEGORY: UNCEMENTED SLUDGES

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total α Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other H.C. ^d	(mm Hg)	Gauge (mm Hg)					
f.																			
Freon (1,1,2-trichloro-1,2,2-trifluoroethane).																			
g.																			
Carbon tetrachloride (CCl ₄).																			
h.																			
No laboratory data available for calculating expected N (total) for the waste form represented by this content code.																			
i.																			
Dichloromethane (CH ₂ Cl ₂).																			
j.																			
Drum not sealed sufficiently to obtain a void volume. Unable to calculate moles of radiolytic gas present.																			
k.																			
Trichloroethylene.																			
l.																			
Gas sampling data only. Drums were not included as part of the sampling program. The containers were sampled as part of the drum venting study or because the drums were pressurized when retrieved from Cell 5.																			
m.																			
Gas sample lost at INEL.																			

TABLE 8. GAS SAMPLING RESULTS^a

WASTE FORM CATEGORY: CEMENTED SLUDGES AND SOLUTIONS

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total ^a Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other H.C. ^d	(mm Hg)	Gauge (mm Hg)					
744-3829	6-month	4	0.77	1.7	95.0	1.1	0.08	--	--	0.05	1.2	0.08 ^f	627	+ 13.5	76.5	263	0.16 ^g	0.02	-- ^j
744-3837	6-month	4	6.20	0.16	90.7	1.1	--	--	--	--	1.6	0.07 ^f	620	+ 5.4	37.7	256	0.17 ^g	0.08	-- ^j
744-3841	6-month	4	2.69	2.82	91.8	1.1	--	--	--	0.20	1.3	0.07 ^f	620	+ 5.4	75.7	256	0.15 ^g	0.07	-- ^j
744-3846	6-month	4	0.50	14.4	83.5	0.98	0.08	--	--	--	0.56	0.05 ^f	615	+ 0.4	-- ^h	204	0.41 ^g	-- ^h	-- ^j
744-3848	6-month	4	0.10	16.3	82.0	0.99	0.06	--	--	0.19	0.38	0.07 ^f	614	- 0.6	-- ^h	204	0.37 ^g	-- ^h	-- ^j
744-2368	12-year	4	2.08	15.4	81.3	0.97	0.15	--	--	--	0.05	0.04 ^k	634	+ 2.0	138	4,306	0.02 ^g	0.11	-- ^j
744-2376	12-year	4	25.9	0.09	72.1	0.86	0.09	--	0.55	0.44	--	--	629	- 1.0	-- ^h	4,305	0.02 ^g	-- ^h	-- ^j
744-2389	12-year	4	32.4	0.08	64.2	0.80	--	--	--	2.33	0.04	0.12 ^k	758	+154.0	162	4,439	0.20 ^g	2.17	-- ^j
744-2424	12-year	4	0.50	0.15	97.3	1.2	0.02	--	--	0.77	0.10	0.02 ^k	632	- 1.0	-- ^h	4,201	0.05 ^g	-- ^h	-- ^j
744-2430	12-year	4	11.4	0.11	86.6	1.0	0.10	--	--	0.73	--	--	516	-120.0	83	4,218	0.07 ^g	0.28	-- ^j
744-2442	12-year	4	0.25	0.12	97.1	1.2	0.02	--	--	1.3	0.06	0.02 ^k	561	- 76.0	98	4,215	0.04 ^g	<0.01	-- ^j

a. Gas sampling not conducted on boxes.

b. Hydrocarbons (saturated)--methane through propane.

c. Abbreviation for 1,1,1-trichloroethane.

d. Other hydrocarbons--as specified.

e. N = Moles of radiolytic produced gas.

f. Freon (1,1,2-trichloro-1,2,2-trifluoroethane).

g. Carbon tetrachloride (CCl₄).

h. Drum was not sealed sufficiently to obtain a void volume. Unable to calculate moles of radiolytic gas present.

i. Original assay data used. Unable to re-assay code 4 drums.

j. No laboratory data available for calculating expected N (total) for the waste form represented by this content code.

k. Trichloroethylene.

l. Gas sampling data only. Drums were not included as part of the sampling program. These containers were sampled as part of the drum venting system study, or because they were pressurized when retrieved from Cell 5.

TABLE 9. GAS SAMPLING RESULTS^a

WASTE FORM CATEGORY: CONCRETE, BRICK

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total α Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other H.C. ^d	(mm Hg)	Gauge (mm Hg)					
02-45508 ¹	6-month	371	--	20.9	78.0	0.96	0.09	--	--	0.01	--	--	610	- 1.0	-- ^f	98	2.19	--	--g
02-44115 ¹	6-month	377	0.02	21.1	77.8	0.96	0.04	--	--	0.04	--	--	616	+ 5.0	197	222	0.74	<0.01	--g
02-21470	6-month	371	0.12	20.4	78.0	0.97	0.03	--	--	0.06	0.28	0.12 ^f	622	+ 10.0	191	565	8.10	0.01	--g
01-00201	12-year	371	17.1	11.4	69.9	0.80	0.10	--	0.30	0.37	--	--	634	- 4.0	-- ^k	4,343	--	-- ^k	--g
01-08836	12-year	371	0.07	19.8	78.8	0.93	0.08	--	--	0.15	0.18	--	649	+ 41.0	148	4,454	2.60	<0.01	--g
02-10586	12-year	371	0.13	18.8	80.0	0.94	0.09	--	--	--	0.10	--	607	- 29.0	81	4,290	3.88	<0.01	--g
02-11061	12-year	371	3.88	3.78	90.9	1.1	0.12	--	--	0.19	0.06	0.01 ^j	471	-149.0	184	4,255	0.22	0.20	--g
02-11379	12-year	371	0.08	20.3	77.7	0.92	0.07	--	--	0.29	0.46	0.17 ^j	605	- 6.0	157	4,378	0.38	<0.01	--g
01-08083	12-year	374	0.41	0.15	98.3	1.2	0.02	--	--	--	--	--	455	-182.0	-- ^f	4,367	0.66	-- ^f	--g

a. Gas sampling not conducted on boxes.

b. Hydrocarbons (saturated)--methane through propane.

c. Abbreviation for 1,1,1-trichloroethane.

d. Other hydrocarbons--as specified.

e. N = moles of radiolytic produced gas.

f. Dichloromethane (CH₂Cl₂).

g. No laboratory data available for calculating expected N (total) for the waste form represented by this content code.

h. Isopropanol.

i. Drum not sealed sufficiently to obtain a void volume. Unable to calculate moles of radiolytic gas present.

j. Trichloroethylene.

k. Gas sampling data only. Drums were not included as part of the sampling program. These containers were sampled as part of the drum venting study, or because the drums were pressurized when retrieved from Cell 5.

l. Drums sealed with a semi-permeable gasket.

TABLE 10. GAS SAMPLING RESULTS^a

WASTE FORM CATEGORY: SALTS

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total ^a Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other H.C. ^d	(mm Hg)	Gauge (mm Hg)					
01-05779	6-month	409	0.09	21.08	76.61	0.92	0.09	--	--	0.05	0.92	0.239	611	--	198	230	41.27	0.01	-- ^f
03-02724 ¹	6-month	409	0.02	21.2	77.7	0.96	0.08	--	--	0.01	--	--	610	- 1.0	-- ^h	104	18.39	-- ^h	-- ^f
01-05486	6-month	414	0.30	18.5	79.0	0.91	0.24	--	--	0.26	0.75	--	608	- 5.5	176	260	8.21	0.03	-- ^f

a. Gas sampling not conducted on boxes.

b. Hydrocarbons (saturated)--methane through propane.

c. Abbreviation for 1,1,1-trichloroethane.

d. Other hydrocarbons--as specified.

e. N = moles of radiolytic produced gas.

f. No laboratory data available for calculating the expected N (total) for the waste form represented by this content code.

g. 1,2-dichloroethane (C₂H₂Cl₂).

h. Drum not sealed sufficiently to obtain a void volume. Unable to calculate moles of radiolytic gas present.

i. Drum sealed with a semi-permeable gasket.

TABLE 11. GAS SAMPLING RESULTS^a

WASTE FORM CATEGORY: LEADED RUBBER

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total ^a Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trich ^c	Other H.C. ^d	(mm Hg)	Gauge (mm Hg)					
19-01831	6-month	339	2.38	10.5	83.6	1.0	1.4	--	--	0.35	0.60	0.14 ^f 0.089	610	+ 8.0	169	420	12.16	0.21	0.53
19-01840	6-month	339	0.38	18.5	79.4	0.95	0.06	--	--	0.22	0.14	0.06 ^f 0.299	606	+ 3.0	162	389	0.41	0.02	0.02
19-01845	6-month	339	2.84	7.3	85.3	1.0	2.4	--	0.97	0.13	--	--	626	+ 16.0	137	390	3.81	0.29	0.15
19-01884	6-month	339	1.09	13.9	83.3	1.0	0.35	--	--	0.28	--	--	615	+ 3.0	141	369	5.10	0.07	0.20
19-01472	3-year	339	2.90	4.46	90.3	1.2	1.1	--	--	--	--	--	544	- 70.0	180	965	1.26	0.22	0.13
22-00224	12-year	339	0.74	16.0	80.7	0.96	1.6	--	--	--	--	--	--	--	182	4,268	1.26	--	0.56
23-00435	12-year	339	4.12	0.54	93.1	1.1	1.0	--	--	0.09	0.04	0.03 ^h 0.029	490	-150.0	142	4,340	0.22	0.20	0.10

a. Gas sampling not conducted on boxes.

b. Hydrocarbons (saturated)--methane through propane.

c. Abbreviation for 1,1,1-trichloroethane.

d. Other hydrocarbons--as specified.

e. N = moles of radiolytic produced gas.

f. Dichloromethane (CH₂Cl₂).g. Carbon tetrachloride (CCl₄).

h. Trichlorethylene.

TABLE 12. GAS SAMPLING RESULTS^a

WASTE FORM CATEGORY: BENELEX, PLEXIGLAS

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (s)	Storage Time (Days)	Total a Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other H.C. ^d	(mm Hg)	Gauge (mm Hg)					
02-10126	12-year	302	4.06	0.19	91.5	1.1	3.20	--	--	--	--	--	606	- 32.0	141	4,316	0.42	0.36	-- ^f
02-10283	12-year	302	0.03	20.8	78.1	0.93	0.21	--	--	--	--	--	616	- 13.0	137	4,280	0.60	0.01	1.32
02-10436	12-year	302	0.03	20.0	78.5	0.93	0.61	--	--	--	--	--	600	- 21.0	139	4,295	0.93	0.03	2.04
02-10502	12-year	302	0.32	16.8	81.6	0.97	0.32	--	--	--	--	--	574	- 63.0	-- ^j	4,242	0.35	-- ^j	0.72
01-08991	12-year	302	1.83	7.84	85.1	1.0	1.93	--	--	0.49	1.06	0.149 0.62 ^h 0.02 ⁱ 0.069 0.03 ^h	559	- 52.0	116	4,448	0.64	0.13	1.47
02-10316	12-year	302	0.14	19.4	79.0	0.88	0.12	--	--	0.18	0.22	--	621	+ 10.0	-- ^j	4,435	0.35	-- ^j	0.76
01-08266	12-year	464	2.56	11.7	84.6	1.0	0.08	--	--	--	0.06	--	597	- 30.0	139	4,347	0.0	0.12	0.0

a. Gas sampling not conducted on boxes.

b. Hydrocarbons (saturated)--methane through propane.

c. Abbreviation for 1,1,1-trichloroethane.

d. Other hydrocarbons--as specified.

e. N = moles of radiolytic produced gas.

f. No laboratory data available for calculating the expected N (total) for the Benelex contained in this drum.

g. Trichloroethylene.

h. Isopropanol.

i. Carbon tetrachloride.

j. Drum not sealed sufficiently to obtain a void volume. Unable to calculate moles of radiolytic gas present.

TABLE 13. GAS SAMPLING RESULTS^a

WASTE FORM CATEGORY: RESINS

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total ^a Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other H.C. ^d	(mm Hg)	Gauge (mm Hg)					
02-39189	6-month	432	0.70	15.4	81.8	0.92	--	--	--	0.24	0.80	0.08 ^f	638	+ 24.5	137	320	0.59	0.03	0.04
02-39215	6-month	432	11.7	--	86.4	1.0	--	--	0.22	0.38	0.25	--	590	- 23.5	125	320	11.10	0.48	0.67
02-39296	6-month	432	2.07	0.43	96.0	1.1	--	--	--	0.22	0.13	--	549	- 64.5	140	299	1.55	0.09	0.09
02-44427 ^k	6-month	432	0.31	20.7	77.7	0.96	0.05	--	--	0.17	--	0.10 ^l	616	• 5.0	188	212	2.49	0.02	0.10
02-34829	3-year	432	3.72	0.98	93.8	1.1	0.11	--	--	0.25	--	--	530	- 84.0	151	999	1.11	0.17	0.21
02-34844	3-year	432	0.24	11.6	86.8	1.0	--	--	--	--	0.44	--	572	- 42.0	183	991	0.379	0.01	0.07
02-34830	3-year	432	6.45	3.38	87.9	1.0	--	--	0.75	0.52	--	--	576	- 38.0	140	999	1.92	0.32	0.36
01-08811	12-year	432	6.22	1.49	89.6	1.1	0.30	--	--	0.32	0.40	0.08 ^j 0.49 ^h	580	- 28.0	126	4,455	1.20	0.26	1.01
01-08956	12-year	432	6.76	0.11	91.1	1.1	0.09	--	0.44	0.42	--	--	504	-133.0	142	4,326	0.60	0.30	0.49
02-10070	12-year	432	2.55	0.17	95.4	1.1	0.16	--	--	0.57	0.07	--	495	-133.0	175	4,316	0.18	0.13	0.15
02-10195	12-year	432	27.1	0.02	68.8	0.77	--	--	1.62	0.79	0.25	0.05 ^j 0.50 ^h 0.02 ^l	754	+146.0	77	4,440	3.51	0.91	2.93
02-10286	12-year	432	5.93	13.8	78.5	0.93	0.14	--	0.27	0.19	0.15	0.02 ^j	633	- 3.0	125	4,265	2.37	0.28	1.90
02-10288	12-year	432	9.97	0.08	83.8	0.94	0.13	--	4.70	0.44	0.03	0.01 ^j	628	- 3.0	136	4,301	1.75	0.72	1.42

a. Gas sampling not conducted on boxes.

b. Hydrocarbons (saturated)--methane through propane.

c. Abbreviation for 1,1,1-trichloroethane.

d. Other hydrocarbons--as specified.

e. N = moles of radiolytic produced gas.

f. Dichloromethane (CH₂Cl₂).

g. Original assay value used.

h. Isopropanol.

i. Carbon Tetrachloride.

j. Trichloroethylene.

k. Drum sealed with a semi-permeable gasket.

TABLE 14. GAS SAMPLING RESULTS^a

WASTE FORM CATEGORY: MIXED WASTE-PAPER, METAL, GLASS, ETC.

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total ^a Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other H.C. ^d	(mm Hg)	Gauge (mm Hg)					
01-08068	12-year	241	14.4	0.14	31.3	0.04	27.3	4	26.4	0.34	--	--	719	+ 80.0	180	4,363	12.16	5.01	-- ^f
1371-586 ^a	12-year	950	Boxes were not sampled.																

a. Gas sampling not conducted on boxes.

b. Hydrocarbons (saturated)--methane through propane.

c. Abbreviation for 1,1,1-trichloroethane.

d. Other hydrocarbons--as specified.

e. N = moles of radiolytic produced gas.

f. No laboratory data available for calculating the expected N (total) for the waste form represented by this content code.

TABLE 15. GAS SAMPLING RESULTS^a

WASTE FORM CATEGORY: FILTERS

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total ^a Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other H.C. ^d	(mm Hg)	Gauge (mm Hg)					
0-29253	12-year	335	--	20.0	78.6	0.94	0.28	--	0.21	--	--	--	645	+ 16.0	--9	--	--	--9	-- ^f
02-12169	12-year	338	0.66	0.10	56.2	0.51	26.7	3	15.8	--	--	--	1010	+373.0	--9	4,226	0.81	--9	-- ^f
89-03509	12-year	338	0.02	20.2	78.8	0.94	0.05	--	--	--	--	--	625	- 8.0	139	4,295	0.71	<0.01	-- ^f

a. Gas sampling not conducted on boxes.

b. Hydrocarbons (saturated)--methane through propane.

c. Abbreviation for 1,1,1-trichloroethane.

d. Other hydrocarbons--as specified.

e. N = moles of radiolytic produced gas.

f. No laboratory data available for calculating the expected N (total) for the waste form represented by this content code.

g. Gas sampling data only. Drums were not included as part of the sampling program. These containers were sampled as part of the drum venting system study, or because the drums were pressurized when retrieved from Cell 5.

TABLE 16. GAS SAMPLING RESULTS^a

WASTE FORM CATEGORY: PARTICULATE WASTE

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total ^a Activity (Ci)	Measured N (Total) ^e	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^b	Trichl ^c	Other ^d H.C.	(mm Hg)	Gauge (mm Hg)					
02-2464	12-year	376	2.67	14.4	80.4	0.94	1.6	--	--	--	--	--	617	- 11.0	--g	4,723	0.0	--g	--f
41-1577	12-year	376	0.02	20.9	78.1	0.93	0.07	--	--	--	--	--	589	- 39.0	--g	603	12.44	--g	--f
41-1605	12-year	376	0.20	19.4	79.2	0.94	0.29	--	--	--	--	--	579	- 50.0	--g	554	4.59	--g	--f

a. Gas sampling not conducted on boxes.

b. Hydrocarbons (saturated)--methane through propane.

c. Abbreviation for 1,1,1-trichloroethane.

d. Other hydrocarbons--as specified.

e. N = moles of radiolytic produced gas.

f. No laboratory data available for calculating the expected N (total) for the waste form represented by this content code.

g. Gas sampling data only. Drums were not included as part of the sampling program. These containers were sampled as part of the drum venting study, or because the drums were pressurized when retrieved from Cell 5.

The free volume inside the drum was calculated using the equation:

$$V_v = \frac{P_2 V_c}{P_1 - P_2}$$

where

V_v = void volume of the drum (ℓ)

V_c = calibrated expansion volume (ℓ)

P_1 = pressure inside drum before expansion (mm Hg)

P_2 = pressure inside drum after expansion (mm Hg).

The error associated with the void volume was determined by using the certified accuracy of the pressure gauge, the calibrated expansion volume (13.67 liters), the certified volume of an empty, sealed 55-gal drum (220.3 liters) and using the average atmospheric pressure at RFP of 615 mm Hg for P_1 . The lower and upper certified error limits were determined by RFP to be 10.9 and 13.6%, respectively.

An experimental error analysis was performed by determining the void volume six times on the certified empty drum. The mean and the standard deviation of these tests were 233 and 1.3 L, respectively. These results fall within the certified error limits and indicate the actual error limits are much less than the certified error limits. Based on the good reproducibility (precision) of these tests, a correction factor of 0.944 was applied to the calculated drum void volume to obtain a corrected and more accurate void volume value. Assuming that the correction factor is accurate over a wide range of void volumes and that temperature differences are negligible, the experimental error is $\pm 1.7\%$ (90% confidence). It should be noted that variables such as packaging and the degree of drum sealing were not considered.

2.3.2 Gas Sampling

The gas samples were collected in Nupro (trade name) gas sampling bottles and analyzed by mass spectrometry to determine the type and quantity of gas present. A certified gas standard, consisting of a known four-component gas mixture, was analyzed for approximately every eight drum gas samples analyzed. The certified standard contained a mixture of hydrogen, nitrogen, oxygen, and carbon dioxide. The certified standard (Bottle 2) used by RFP consisted of the following gas concentrations: 2.57% H_2 , 18.7 % O_2 , 66.7 % N_2 , and 12.0 % CO_2 . The certified standard (Bottle 3) used by INEL consisted of the following gas concentrations: 2.57 % H_2 , 18.6 % O_2 , 66.8 % N_2 and 12.0 % CO_2 . Results of the standard analysis are shown in Tables 17 and 18. These analyses indicate the relative error is:

INEL:	H_2 :	-1.94%
	N_2 :	-0.45%
	O_2 :	+0.54%
	CO_2 :	+2.44%
RFP:	H_2 :	0.00%
	N_2 :	-0.75%
	O_2 :	0.00%
	CO_2 :	+4.17%

2.3.3 Gas Generation

Extensive laboratory experiments³⁻⁷ on gas generation from degradation of transuranic wastes have been conducted in the past. A comprehensive summary of applicable gas generation data on various degradation mechanisms has been prepared by Molecke.⁸

Mechanisms by which gases may be generated in TRU waste include radiolysis, thermal decomposition and dewatering, bacterial action, and chemical corrosion. The major gases produced in TRU wastes by these mechanisms are: hydrogen (H_2), carbon dioxide (CO_2), carbon monoxide

TABLE 17. ROCKY FLATS PLANT GAS STANDARD ANALYSIS

Analysis Number	Gas Analysis (Volume %)			
	H 2	N 2	O 2	CO 2
1	2.63	67.0	18.2	12.2
2	2.55	65.6	19.2	12.7
3	2.59	65.9	19.2	12.3
4	2.65	66.1	18.6	12.7
5	2.58	65.8	19.0	12.6
6	2.51	66.1	18.7	12.6
7	2.58	66.6	18.7	12.1
8	2.64	66.2	18.7	12.4
9	2.63	65.9	19.1	12.4
10	2.58	66.3	18.8	12.3
11	2.67	66.2	18.8	12.3
12	2.48	66.0	18.9	12.6
13	2.50	66.6	19.0	11.9
14	2.64	66.0	18.9	12.5
15	2.56	65.7	19.1	12.6
16	2.49	65.1	18.5	14.0
17	2.49	66.6	18.7	12.2
18	2.65	66.6	18.2	12.6
19	2.55	66.1	18.7	12.7
20	2.53	66.4	18.4	12.7
21	2.56	66.4	18.6	12.5
22	2.57	66.1	18.8	12.5
23	2.58	66.5	18.3	12.5
24	2.57	66.8	18.5	12.1
$\bar{x}^a =$				
	2.57	66.2	18.7	12.5
$\sigma^b =$				
	0.056	0.43	0.29	0.39
$\sigma/\bar{x}^c =$				
	2.18%	0.65%	1.56%	3.10%

a. Mean or average.

b. Standard deviation

c. Coefficient of variation

TABLE 18. INEL GAS STANDARD ANALYSIS

Analysis Number	Gas Analysis (Volume %)			
	H 2	N 2	O 2	CO 2
1	2.54	66.5	18.8	12.3
2	2.49	66.5	18.8	12.3
3	2.53	66.3	18.8	12.4
4	2.52	66.4	18.8	12.3
5	2.50	66.5	18.7	12.4
6	2.51	66.4	18.8	12.3
7	2.50	66.6	18.6	12.3
8	2.51	66.6	18.7	12.3
9	2.48	66.6	18.7	12.3
10	2.54	66.6	18.7	12.3
11	2.53	66.7	18.6	12.1
12	2.53	66.6	18.6	12.3
13	2.50	66.6	18.7	12.2
14	2.55	66.6	18.7	12.2
$\bar{x}^a =$				
	2.52	66.5	18.7	12.3
$\sigma^b =$				
	0.02	0.12	0.08	0.08
$\sigma/\bar{x}^c =$				
	0.84%	0.18%	0.44%	0.68%

a. Mean or average.

b. Standard deviation

c. Coefficient of variation

(CO), water (H_2O), methane (CH_4), oxygen (O_2) nitrous oxides (NO_x), and helium (He).⁸ Radiolysis and bacterial action are considered to be the major gas-generating mechanisms in TRU wastes stored at INEL.

Laboratory experiments indicate that radiolysis of organic material primarily produces H_2 with the remaining gas being CO_2 and CO. The primary gaseous products from radiolysis of water are H_2 and O_2 . Carbon oxides are formed by depletion of O_2 .⁸ In addition, nitrites may be produced by radiolysis of nitrates.⁹ Degradation of organic materials by bacterial action generally produces only CO_2 in aerobic and anaerobic atmospheres. Methane is also a potential gas produced in an anaerobic atmosphere.⁸ The amount of gas generated by radiolysis is dependent on the amount of radionuclide activity present, the organic waste matrix type, and distribution of the radionuclide on the organic matrix.

2.3.4 Gas Generation Calculations

Production of flammable or explosive concentrations of gas (hydrogen) mixture in waste drums by radiolysis is a primary concern at the INEL. The results from sampling the 212 waste drums were used to determine the measured total moles $[N(\text{total})]$ of radiolytic-produced gas for comparison with the expected total moles of radiolytic gas. The expected total moles of radiolytic gas was calculated using $G(\text{total gas})$ values obtained in past laboratory experiments. $G(\text{total gas})$ is the number of gas molecules produced for each 100 eV of absorbed radiation. $G(\text{total gas})$ values for the waste drums were not calculated for the reasons explained in the following paragraphs.

The primary reason for comparing measured gas generation values with expected values was to support the safety analysis for the Stored Waste Examination Pilot Plant (SWEPP). SWEPP is the INEL facility that will nondestructively examine and certify INEL stored TRU wastes for future shipment to WIPP. It was previously hoped that, by performing calculations based on the laboratory-derived G-values, the reported drum activity, an assumed void volume, and the storage time, the number of drums requiring

venting (to ensure worker health and safety) prior to handling in SWEPP might be reduced. However, during the initial sampling of waste drums, it became apparent that there was considerable variability in the type and quantity of gas present, and between the measured and expected values. In addition, wastes previously assumed to be nongas-generating (e.g., Raschig rings) have been shown to produce significant quantities of hydrogen due to the presence of organic materials, etc.

The laboratory-derived G-values were obtained in carefully controlled, gas-tight systems. Because the waste drums are not generally considered to be gas-tight, the drum gas generation calculations may not reflect the loss of radiolytic-produced gas by leakage or diffusion from the drum. Conversely, in some cases, the calculations may artificially indicate a higher value due to presence of nonradiolytic produced gas (such as produced by bacterial action). Another factor influencing the drum measurements is the error associated with assaying the waste for radionuclide content.

EG&G Idaho does not believe that calculating a measured G(total gas) value for waste drums, when compared with the laboratory value, provided conclusive evidence that the laboratory values were conservative. The laboratory values should be conservative for waste drum comparison if the only mechanism generating gas were radiolysis. In waste drums however, there are too many factors (radionuclide assay capabilities, gas leakage or diffusion from the drum, other gas-generating mechanisms such as bacterial action) that influence these calculations. Publishing G-values for waste drums would be misleading, and, if used in any design calculations, could be inadequate. In taking these factors into consideration, but still meeting the need for comparison between measured and expected values, it was decided to present the gas generation data in terms of moles of gas.

The measured N(total) was calculated from the sampling results using the formula:

$$N(\text{total}) = \frac{(DP)(V_{vc})(\text{vol \% RG})}{760 \text{ mm Hg/atm } (R)(T)(100)}$$

where

- DP = drum pressure, mm Hg
- V_{vc} = corrected drum void volume, L
- RG = vol% of radiolytic-produced gas ($H_2 + CO_2 + NO_x$)
- R = gas constant (0.0821 L-atm/mole-K)
- T = sampling temperature (K). Drums were conditioned a minimum of 24 h for temperature stabilization.

The expected N(total) was calculated based on the time the drum was in storage, the alpha (α) activity of the drum, and the G(total gas) value for the waste form. G(total gas) is the number of gas molecules produced for each 100 eV of absorbed radiation energy. The G(total gas) values used in the calculations are shown in Table 19. The drum activity level was based on the reassay value obtained when returned to RFP. Reassay values for sludge type waste (content Codes 1, 2, 7, and 3) were determined by radiochemical analysis. The original assay value was used only if the reassay value was 0.0 or if the drum could not be reassayed. The expected N(total) was calculated only if a G(total gas) value was available for the specific waste form contained in a waste drum. The calculation was performed by using:

$$A = \frac{N(\text{total})(6.023 \times 10^{23} \text{ molecules/mole})}{(G)(10^6 \text{ eV/MeV})(5.29 \text{ MeV/d})(3.7 \times 10^{10} \text{ d/s-Ci})(8.64 \times 10^4 \text{ s/day})(T)}$$

where

- A = activity, curies [Pu (weapons-grade) = 7.4×10^{-2} Ci/g;
 ^{241}Am = 3.45 Ci/g]
- N(total) = moles of radiolytic gas
- G = total gas molecules/100 eV

TABLE 19. G(TOTAL GAS) VALUES

<u>Waste Form Category</u>	<u>Content Code</u>	<u>G(total gas) Value</u>	<u>Reference</u>
Combustibles	328	2.0 ^a	8
	330	1.9	8
	336	1.9	8
	337	1.9	8
	900	1.9	8
	970	1.9	8
Metals	320	N/A ^b	--
	480	N/A	--
	481	N/A	--
Glass	440	N/A	--
	441	1.8 ^c	8
	442	N/A	--
Nonmetal Molds and Crucibles	300	N/A	--
	301	N/A	--
	312	N/A	--
Uncemented Sludges	1	0.47	9
	2	0.47	9
	3	1.8 ^d	8
	7	0.47	9
	292	N/A	--
Cemented Sludges and Solutions	4	N/A	--
Concrete, Brick	371	N/A	--
	960	N/A	--
Salts	409	N/A	--
	414	N/A	--
Leaded Rubber	339	0.37	6
Benelex, Plexiglas	302	1.9 ^e	6
	464	1.9 ^e	6
Resins	432	0.67	8

TABLE 19. (Continued)

<u>Waste Form Category</u>	<u>Content Code</u>	<u>G(total gas) Value</u>	<u>Reference</u>
Mixed Waste-Paper, Metal Glass, etc.	241	N/A	--
	950	N/A	--
Filters	335	N/A	--
	338	N/A	--
	360	N/A	--
	490	N/A	--
Particulate Wastes	375	N/A	--
	376	N/A	--

a. Composite value that was selected for cellulose and pump oil. Code 328 filters were coated with grease.

b. N/A = G(total gas) value not available.

c. Special case. Value used is for pump oil. One drum of Code 442 waste contained unleached Raschig rings that were coated with a film of oil. The remaining drums contained Code 441 Raschig rings coated with dried material.

d. For comparison, the G-value used is for pump oil. The organic set-ups consist of a mixture of organics solidified in calcium silicate. The organics generally contain a large percentage of machining oils, pump oils, etc.

e. Plexiglas only.

T = storage time, days.

Reducing and solving for N(total):

$$N(\text{total}) = \frac{(A)(T)(G)}{3561.57}$$

2.3.4.1 Cumulative Error Analysis. The cumulative error for the method used to calculate the measured total moles of radiolytic-produced gas [measured N(total)] is based on the cumulative error associated with the void volume determination (13.6%), pressure gage (0.2%), thermometer (2.0%), and the maximum error for the gas sampling analytical results (4.17%). This error was calculated to be $\pm 20.0\%$. This error is considerably less than the error for the expected N(total).

The expected N(total) error would be based on the error associated with: (1) the assay method used to determine radionuclide amounts, (2) laboratory obtained G-values, and (3) the time a waste container has been in storage. The error associated with these factors was not available to conduct a cumulative error analysis.

2.3.5 Gas Generation Results

Tables 3-16 contain the gas sampling and gas generation results. The data indicate there can be considerable variability in the type and quantity of gas present, and between the measured and expected total moles of radiolytic gases. In several instances, the expected value was exceeded by several orders of magnitude. In other instances, the measured value was much less than the expected value. Possible reasons for differences between the measured and expected value include:

1. Because the waste drums are not generally gas-tight, the drum gas generation calculations may not reflect the loss of radiolytic-produced gas by leakage or diffusion from the drum.

Conversely, in some cases, the calculations may artificially indicate a higher value due to presence of nonradiolytically produced gas (such as that produced by bacterial action).

2. The capabilities to accurately measure the quantity of radionuclides present in a waste container vary depending on the waste form. Waste containers were either assayed by segmented-gamma scan (20-minute count) or, in the case of sludges, by radiochemical analysis to increase the accuracy of the reported results. Some drums were assayed by sodium iodide techniques.
3. The waste drums contain a variety of waste materials. This makes selection of an appropriate laboratory-derived $G(\text{total gas})$ value, for use in calculating expected $N(\text{total})$ values, difficult since the distribution and location of the radionuclides within the waste is not known. In addition, the radionuclides may not be uniformly dispersed on the organic matrix.
4. The storage times indicated in Tables 3 through 16 are based on the drum inspection date, as recorded in the INEL Transuranic Contaminated Waste Container Information System (TCWCIS), and the date the drum was sampled. The inspection date is "created" on the day the drum is inspected for shipping compliance and sealed at RFP. In reality, the drum may have set in an operational or production area for weeks or months prior to shipment to INEL. Therefore, the storage time can be used only as an approximation of the actual time the drum has been generating gas.
5. Retrieval, handling, and shipment of the waste may upset drum conditions and cause increased gas generation by redistribution of the radionuclides to undepleted matrices. This variable may be significant only in older wastes, or with drums containing high activity levels.

The gas generation results for each waste form category are described below. As indicated, measured values exceed expected values in some waste form categories. Some of these values are expected to be within the error limits for the expected value calculations. However, as described in Section 2.3.4.1, these error limits are not known. The discussion below demonstrates the potential problems associated with using expected values for maximum gas generation rates.

Combustibles. All measured values for Code 328 waste were less than the expected values, based on the selected G(total gas) value of 2.0. For content Code 330, measured values exceeded expected values in four of the five sampled drums. Expected values were not exceeded for 3-year-old or 12-year-old waste.

Content Code 336 measured values exceeded expected values in the 6-month-old (five out of six drums) and 3-year-old (two out of two drums) category. Measured values were not exceeded for the 12-year-old waste.

Content Code 337 measured values exceeded expected values in the 6-month-old category (one out of four drums) and 12-year-old category (three out of nine drums). No 3-year-old Code 337 was available for sampling.

No 6-month-old or 3-year-old Code 900 waste was available for sampling. Code 900 is an old content code and was replaced by Code 330 or 336 (if waste was damp) in 1974. In the 12-year-old waste, one drum, out of five sampled, exceeded the expected value for gas generation.

During initial drum sampling, it was thought that, in addition to the above stated reasons, the G(total gas) value of 1.9 used for calculating the expected N(total) was low. Reference reports⁸ indicate a G(total gas) value of 8-11 for polyvinyl chloride (PVC). Waste items are usually removed from glovebox lines in PVC bags. Since the PVC can constitute a significant percentage of the waste, it was thought the higher gas-generation rates may be due to radiolysis of PVC. However, recent

information supplied by LANL¹⁰ has reduced the G(total gas) value to 1.0. The high value reported for PVC was influenced by elevated temperature conditions not likely to exist in contact-handled TRU waste containers.

Metals. The suspected source of gas generated in metal waste is from plastics used in packaging the wastes.

Glass. No laboratory data were applicable for comparing with the measured values for Codes 440 and 442, except Drum 17-04562, content Code 442 (Note: the proper content code is 441-Unleached Raschig rings). This drum contained Raschig rings coated with a film of oil, and was compared with the laboratory data for pump oil. For this drum, the measured value was less than the expected value. In addition all Code 441 drums were also compared. Unleached Raschig rings generally have a film or coating of dried material or liquid that may serve as a gas generating matrix. For the Code 441 drums, half of the measured values exceed the expected value. The suspected source of gas generated in other content Codes 440 and 442 waste drums is from the plastic packaging material.

Nonmetal Molds and Crucibles. No laboratory data were applicable for comparing with the measured N(total) values for graphite molds and cores. The small amount of generated gas is suspected to be from plastics used in packaging the waste.

Uncemented Sludges. Measured N(total) values for prefix 7412 Code 1 sludge (6-month old and 3-year old) were less than expected values except for two of the eight sampled drums. Results for the 6-month-old drums were very comparable with expected values.

It should be noted that prefix 7412 represents combined first- and second-stage sludge produced from treating aqueous wastes at RFP Building 774. The sludges were combined to reduce radiation levels associated with first-stage sludge. This practice began in 1979. Prior to

this time, the sludges were produced as Code 1 (prefix 741) or Code 2 (prefix 742) sludge. Periodically, just Code 2 (prefix 742) drums are produced. The term prefix refers to part of the drum identification number as indicated in Table 7.

Measured N(total) values for content Code 1 (prefix 741) 12-year-old sludge were over an order of magnitude less than the expected values. These drums generally contained much higher alpha-activity levels than other sampled drums. In addition to the previously given reasons for differences between measured and expected values, another possible explanation is that drum self-venting could be periodically occurring in these drums. Drum No. 741-12404 was pressurized at +534 torr (10.3 psi) gauge. Tests conducted at the INEL generally indicate that the drums will vent when pressurized above 20 psig. This may be an explanation for the large difference between the measured and expected values in these drums.

Measured N(total values) for 6-month-old and 12-year-old content Code 2 drums were very comparable with expected values. None of the drums, however, exceeded the expected values.

Content Code 3 drums are organic setups produced from treatment of liquid organic wastes generated by various plutonium and nonplutonium operations at RFP. The organic wastes are mixed with calcium silicate to form a grease or paste-like material. The organic wastes consist of a variety of materials such as degreasing agents, lathe coolant, and small amounts of laboratory waste. No specific laboratory G(total gas) value was available for this type of waste. For comparison purposes, the G-value of 1.8 for pump oil was used. For a 6-month-old waste, the measured values were less than expected values. However, for 3-year-old waste, the measured values exceeded expected values in three of the four sampled drums. The 12-year-old drums contained less than expected values of radiolytically produced gas.

Content Code 7 sludge is similar to Content Code 1 sludge. This sludge is produced by the new aqueous waste treatment process at RFP Building 374. Measured values exceeded expected values in two of the three drums for which results were obtained. The third drum was comparable to the expected value.

No laboratory data were available for comparing with the measured values for Content Code 292. It is interesting to note that the measured values were comparable for Content Code 292 6-month-old and 3-year-old wastes [measured G(total gas) values range from 0.31 to 1.97, average is 0.91, median is 0.93]. No 12-year-old Code 202 waste was available for sampling.

Cemented Sludges and Solutions. No laboratory G(total gas) values were available for comparing with the measured value.

Concrete, Brick. No laboratory data were applicable for comparing with the measured N(total) values for concrete and brick.

Salts. No laboratory data were applicable for comparing with the measured N(total) value.

Leaded Rubber. The measured N(total) values exceeded expected values in all age categories except for one drum of 6-month-old waste.

Benelex, Plexiglas. Measured N(total) values for drums containing Plexiglas were less than expected values. Expected values were calculated only for drums containing Plexiglas since laboratory data is not available for Benelex.

Resins. The measured N(total) values were equal to or less than the expected values for all sampled age categories of Content Code 432 drums.

Mixed Waste. No laboratory data were applicable for comparing with the measured N(total) value. The Code 241 drum contained a mixture of combustibles, metals, and polyethylene bottles of liquid.

Filters. No laboratory data were applicable for comparing with the measured N(total) value.

2.3.6 Hydrogen

The generation of hydrogen in waste packages is primarily a worker health and safety concern and a transportation issue. This section summarizes the hydrogen results for all sampled drums. These results include drums sampled at the INEL as part of demonstrating the prototype drum venting system and sampling presently noncertifiable waste forms. The results are summarized in Table 20.

All waste forms sampled contained detectable concentrations of hydrogen. The results are summarized for number of drums containing >1% hydrogen, >4% hydrogen but less than 5% oxygen, and >4% hydrogen and >5% oxygen (which is flammable¹¹). Of the 210 drums sampled, 77 (37%) of the drums contained >1% hydrogen. Of the 210 drums, 29 (14%) had hydrogen concentrations >4% but oxygen concentrations <5%; and 10 drums (5%) had hydrogen concentrations >4% and oxygen concentrations >5%. The remaining 38 drums (18%) had hydrogen concentrations between 1 - 4%.

2.4 Waste Examinations

After gas sampling, the waste containers were placed in the RFP Size Reduction Vault for opening and visual examination. The examination included a physical description of the waste, packaging description, weighing the individual waste components, and determining compliance with the WIPP-WAC (see Section 2.1.4.3). Appendix B contains the detailed visual examination information. This information is combined with the RTR

TABLE 20. HYDROGEN RESULTS

Waste Form Category	Total Drums Sampled	Hydrogen Results					
		>1% H ₂		>4% H ₂ , <5% O ₂ ^a		>4% H ₂ , >5% O ₂ ^b	
		Number	Percent	Number	Percent	Number	Percent
Combustibles	44	18	41	6	14	0	0
Metals	29	4	14	1	3	0	0
Glass	25	5	20	2	8	0	0
Nonmetal Molds and Crucibles	11	0	0	0	0	0	0
Uncemented Sludges	44	22	50	7	16	8	18
Cemented Sludges and Solutions	11	6	55	4	36	0	0
Concrete, Brick	9	2	22	0	0	1	11
Salts	3	0	0	0	0	0	0
Leaded Rubber	7	5	71	1	14	0	0
Benelex, Plexiglas	7	3	43	1	14	0	0
Resins	13	10	77	6	46	1	8
Mixed Waste	1	1	100	1	100	0	0
Filters	3	0	0	0	0	0	0
Particulate Waste	3	1	33	0	0	0	0
Totals	210 ^c	77	37	29	14	10	5

a. Considered to be nonflammable drums.

b. Considered to be potentially flammable drums.

c. Analytical results not received on 2 waste drums due to loss of sample.

examination results and the general information (weight, assay values, etc.) for each waste container. The information is combined so that comparisons could be made between the results on a container-by-container basis.

2.4.1 Waste Examination Results

The component weights for the container contents are summarized in Tables 21 through 33. Tables 21 through 33 and Appendix B list the waste containers in the same sequence.

In general, all waste containers were found to contain the specified waste form type. In all waste form categories, small amounts of different types of material were found. For example, a Code 440 (glass) waste drum would include small quantities of combustible materials used as packaging and possibly some absorbent, such as vermiculite.

Of the 209 waste containers opened and visually examined, only 3 (1%) clearly did not meet the assigned waste form category.

2.5 Waste Form Compliance

A total of 199 drums and 10 boxes were visually examined at RFP. During the visual examination of each waste container, the contents were evaluated against the waste form requirements of the WIPP-WAC,² samples were taken for analysis, and a judgment made if the contents of the waste container met WIPP-WAC requirements. The method for evaluating compliance with the WIPP-WAC was described in Section 2.1.4.3.

Tables 34 through 46 summarize the evaluations made for each waste container (by waste form category) and the determination made whether the waste met the WIPP-WAC requirements based on the visual and RTR examination results. Specific compliance information for each waste container is found in Appendix B and is also summarized by criterion in the text that follows.

TABLE 21. WASTE CONTAINER COMPONENT WEIGHTS
WASTE FORM CATEGORY: COMBUSTIBLES

				Material Type (lb)																											
				Glass			Metal				Combustibles					Miscellaneous							Absorbents								
Container ID No.	Time Period	Content Code	Proper ^a Code	Raschig Rings	Other	Ta	Steel	Stainless Steel	Pb	Other	Surgeons Gloves	Paper	Cloth	Plastic	Rubber	Other	Organic	Inorganic	Leaded Rubber	Cemented Resins	Molds/ Crucibles	Firebrick	Salts	Concrete	Other	Vermiculite	Portland Cement	Oil-Dri	Net Weight (lb)		
02-39371	6-month	328	--	--	--	--	--	--	--	--	--	57.5	0.25	17.75	--	--	--	--	--	--	--	--	--	--	--	--	10.0	--	--	85.5	
02-39453	6-month	328	--	--	--	--	--	--	--	--	--	98.25	--	18.5	--	--	--	--	--	--	--	--	--	--	--	--	4.0	0.5	--	121.25	
02-39481	6-month	328	--	--	--	--	--	--	--	--	--	59.25	0.5	13.75	--	--	--	--	--	--	--	--	--	--	--	--	9.75	--	--	83.25	
28-00781	6-month	330	440	--	84.5	--	--	--	--	--	--	--	--	10.5	--	--	--	--	--	--	--	--	--	--	--	--	5.0	--	--	100.0	
42-00291	6-month	330	336	--	0.5	--	--	--	--	--	2.5	22.5	--	28.25	--	--	--	--	--	5.25	--	--	--	--	--	--	0.5	--	--	59.5	
22-01194	6-month	330	--	--	--	--	--	--	--	1.5	30.0	14.0	0.5	15.0	--	--	--	--	--	--	--	--	--	--	--	--	2.0	--	--	63.0	
38-00101	6-month	330	--	--	--	--	--	--	--	--	53.5	24.75	--	12.0	--	--	--	--	--	--	--	--	--	--	--	--	0.75	--	--	91.0	
76-02898	6-month	330	--	--	--	--	--	--	106.75	--	0.5	--	3.0	59.5	0.25	--	--	--	--	--	--	--	--	--	--	6.0	4.0	--	--	180.0	
02-39195	6-month	330	--	--	--	--	--	--	--	--	--	--	--	9.25	--	73.75	--	--	--	--	--	--	--	--	--	--	4.5	--	--	87.5	
389-90417	6-month	330	--	--	--	--	--	--	--	16.0	143.0	407.0	74.0	406.0	8.0	--	--	--	--	78.0	--	--	--	--	--	--	--	--	--	1054.0	
389-90609	6-month	330	--	--	--	--	--	--	--	10.0	--	336.0	38.0	364.0	--	--	--	--	--	--	--	--	--	--	--	--	14.0	--	--	840.0	
02-35272	3-year	330	--	--	--	--	--	--	--	--	--	--	--	6.75	--	81.5	--	--	--	--	--	--	--	--	--	--	4.25	--	--	92.5	
01-08200	12-yr	330	--	--	--	--	--	--	--	--	3.2	4.2	12.4	24.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.2	53.4	
01-08796	12-yr	330	--	--	--	--	--	--	--	--	6.0	7.4	8.0	19.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16.0	56.9	
90-00042	12-yr	330	--	--	--	--	--	--	--	77.0	--	7.9	1.0	150.0	7.0	--	--	--	--	--	--	--	--	--	--	0.5	--	--	1.5	244.9	
37-00689	12-yr	336	330	--	--	--	--	--	--	--	3.2	19.4	0.25	10.4	--	30.4	--	--	--	--	--	--	--	--	--	--	--	--	1.5	65.2	
89-03607	12-yr	336	330	--	--	--	2.0	--	--	5.6	3.6	28.4	3.4	31.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16.0	90.6	
90-00039	12-yr	336	330	--	--	--	--	--	--	1.0	--	40.0	8.4	115.7	27.3	--	--	--	--	--	--	--	--	--	--	--	--	--	4.4	196.8	
02-39465	6-month	336	330	--	--	--	--	--	--	--	--	0.5	--	45.25	--	0.25	--	--	--	--	--	--	--	--	--	--	3.0	--	--	49.0	
23-01599	6-month	336	--	--	--	--	--	--	--	1.5	5.75	34.0	8.5	17.0	--	3.0	--	--	--	--	--	--	--	--	--	--	3.5	--	--	73.25	
02-39084	6-month	336	330	--	--	--	--	--	--	--	--	--	--	12.0	--	69.25	--	--	--	--	--	--	--	--	--	--	3.5	--	--	84.75	
02-40137	6-month	336	330	--	--	--	--	--	--	--	--	--	1.0	46.5	--	--	--	--	--	--	--	--	--	--	--	--	5.0	--	--	52.5	
47-00256	6-month	336	--	--	--	--	--	--	--	--	--	--	2.25	63.0	--	4.0	--	--	2.75	--	--	--	--	--	--	--	2.5	--	--	74.5	
92-00419	6-month	336	--	--	--	--	--	--	--	--	0.5	0.25	1.25	4.75	--	--	--	--	--	--	--	--	--	--	--	--	6.5	--	--	13.25	
02-34820	3-year	336	--	--	--	--	--	--	--	--	--	3.0	3.0	10.0	1.0	--	--	--	--	--	--	--	--	--	--	4.5	--	--	5.0	26.5	
22-00748	3-year	336	--	1.0	--	--	--	--	--	--	--	14.0	--	6.0	--	--	--	--	1.75	--	--	--	--	--	--	--	--	--	5.0	15.75	
744-3792	6-month	337	--	--	--	--	--	--	--	--	--	--	--	31.5	--	--	--	--	--	--	--	--	6.25	--	--	--	16.25	--	--	54.0	
744-3823	6-month	337	--	--	--	--	--	--	--	--	--	--	--	28.0	--	--	--	--	--	--	--	--	--	--	--	--	16.75	--	--	44.75	
744-3789	6-month	337	--	--	--	--	--	--	--	--	--	--	--	27.25	--	--	--	--	--	--	--	--	--	--	--	--	3.5	--	8.0	38.75	
55-00435	6-month	337	--	--	--	--	--	--	--	--	1.5	5.25	1.5	40.25	--	0.75	--	--	--	--	--	--	--	--	--	--	4.0	--	--	53.25	
02-10180	12-yr	337	--	--	--	--	--	--	--	0.5	1.0	7.0	7.0	46.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.5	68.6	
02-10215	12-yr	337	330	--	--	--	--	--	--	9.4	7.4	28.6	5.6	16.0	1.4	--	--	--	--	--	--	--	--	--	--	--	--	--	3.0	71.4	
37-00698	12-yr	337	--	--	--	--	--	--	--	--	143.4	2.0	0.5	5.4	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	3.4	156.2	
37-00711	12-yr	337	--	--	--	--	--	--	--	0.5	82.0	1.0	--	1.0	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	7.0	92.0	
36-00723	12-yr	337	--	--	--	--	--	--	--	--	52.6	--	--	38.5	3.0	--	--	--	--	--	--	--	--	--	--	--	--	--	12.0	106.1	
65-00137	12-yr	337	--	--	--	--	--	--	--	--	3.0	56.0	8.0	15.8	5.0	0.5	--	--	--	--	--	--	--	--	--	--	--	--	6.5	94.8	
389-85743	12-yr	337	--	--	--	--	--	406.6	--	43.6	--	6.2	--	338.4	--	134.2	--	--	--	--	--	--	--	--	--	134.1	--	--	--	1063.1	
746-2906	12-yr	900	--	--	--	--	1.5	0.5	--	--	4.0	113.0	1.8	22.4	--	--	--	--	--	--	--	--	--	--	--	--	--	26.0	10.8	180.0	
746-2918	12-yr	900	--	--	--	--	2.2	--	--	42.9	16.6	15.4	11.8	17.4	0.2	1.5	--	--	--	--	--	--	--	--	--	--	0.2	--	23.0	11.8	143.0
746-7008	12-yr	900	--	--	--	--	--	4.8	--	--	11.0	24.2	10.1	14.4	--	1.8	--	--	--	--	--	--	--	--	8.8	0.9	--	--	22.4	98.4	
01-08583	12-yr	970	--	--	--	--	--	--	--	--	--	--	--	6.8	--	77.9	--	--	--	--	--	--	--	--	--	--	--	--	7.5	92.2	
01-08604	12-yr	490	330(970)	--	--	--	--	--	--	--	--	--	--	4.6	--	57.6	--	--	--	--	--	--	--	--	--	--	--	--	2.2	64.4	
01-08700	12-yr	970	--	--	--	--	--	--	--	--	--	--	--	13.9	--	92.4	--	--	--	--	--	--	--	--	--	--	--	--	11.4	117.7	
389-85289	12-yr	970	--	--	--	--	781.0	105.2	--	--	--	70.8	--	170.3	--	399.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1526.4

a. Proper content code indicated only if the original is incorrect. Correction is based on visual examination results.

TABLE 22. WASTE CONTAINER COMPONENT WEIGHTS
WASTE FORM CATEGORY: METALS

Material Type (lb)																															
Container ID No.	Time Period	Content Code	Proper ^a Code	Glass		Metal					Combustibles						Sludge		Miscellaneous						Absorbents						
				Raschig Rings	Other	Ta	Steel	Stainless Steel	Pb	Other	Surgeons Gloves	Paper	Cloth	Plastic	Rubber	Other	Organic	Inorganic	Leaded Rubber	Cemented Resins	Molds/ Crucibles	Firebrick	Salts	Concrete	Other	Vermiculite	Portland Cement	Oil-Dri	Net Weight (lb)		
02-40153	6-month	320	--	--	--	--	--	--	--	189.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.0	--	--	197.0
29-00513	6-month	320	--	--	--	--	33.0	--	--	--	--	--	--	4.0	--	--	--	--	--	--	--	--	--	--	--	--	--	19.0	--	--	56.0
29-00528	6-month	320	--	--	--	--	--	--	--	49.0	--	--	--	4.5	--	--	--	--	--	--	--	--	--	--	--	--	--	16.5	--	--	70.0
78-00199	6-month	320	--	--	--	--	148.0	--	27.0	28.0	--	--	--	8.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	211.5
55-00290	3-year	320	--	--	--	40.87	--	--	--	--	--	--	--	6.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.5	--	51.12
02-10613	12-yr	320	--	--	--	91.4	--	--	--	--	--	12.0	--	9.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10.4	--	123.0
02-40002	6-month	480	--	--	--	--	--	--	191.5	54.5	--	2.5	--	6.0	--	--	--	--	--	--	--	--	--	--	--	--	6.0	--	--	260.5	
31-00939	6-month	480	--	--	--	--	--	15.0	--	26.5	1.0	2.0	--	4.25	1.5	--	--	--	--	--	--	--	--	--	11.5	4.5	--	--	--	66.25	
02-39738	6-month	480	--	--	--	--	--	--	--	15.0	--	--	--	9.5	--	--	--	--	--	--	--	--	--	--	--	--	3.0	--	--	27.5	
45-00528	6-month	480	--	--	--	--	92.75	29.0	--	4.5	--	--	--	18.25	--	--	--	--	--	--	--	--	--	--	--	--	2.0	--	--	146.5	
389-90895	6-month	480	--	24.0	--	68.0	1844.0	--	--	420.0	--	15.0	--	71.0	--	--	--	--	--	--	--	--	--	--	--	--	23.0	--	--	2427.0	
389-90828	6-month	480	--	--	--	5.0	--	177.0	--	1412.0	--	73.0	--	--	--	--	--	--	--	--	--	--	--	--	333.0	--	--	--	--	2000.0	
29-01396	6-month	320	480	--	--	--	161.0	--	--	--	2.0	3.0	--	9.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	177.4	
12-12505	6-month	480	--	--	--	4.8	38.7	9.2	--	14.2	--	--	--	16.2	--	1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	84.1	
02-34855	3-year	480	--	--	--	--	--	--	--	161.5	--	--	--	2.0	--	--	--	--	--	--	--	--	--	--	--	7.25	--	--	7.5	178.25	
02-35083	3-year	480	--	--	1.0	--	--	12.25	--	58.37	0.25	1.0	--	22.5	--	--	--	7.5	--	--	--	--	--	16.0	8.0	--	--	4.25	--	131.12	
31-01321	3-year	480	--	--	--	--	--	--	--	42.0	--	3.0	--	10.5	--	--	--	4.5	--	--	--	--	--	--	--	1.5	--	4.25	--	67.75	
42-00209	3-year	480	--	--	--	--	--	45.0	--	94.25	--	--	--	19.25	--	--	--	--	--	--	--	--	--	--	--	6.37	--	5.0	--	169.87	
02-10128	12-yr	320	480	--	--	--	46.2	38.7	17.6	13.2	--	4.0	--	4.0	2.2	10.1	--	--	--	--	--	--	--	--	4.4	--	--	2.2	--	142.6	
01-08226	12-yr	480	--	--	--	--	317.7	--	--	--	--	6.6	--	9.0	--	--	--	--	--	--	--	--	--	--	--	--	--	11.2	--	344.5	
01-08232	12-yr	480	--	--	--	--	189.2	--	--	--	--	2.2	--	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	48.8	--	245.2	
02-12224	12-yr	320	480	--	--	--	33.8	91.5	--	--	--	5.4	--	9.0	--	--	--	--	--	--	--	--	--	--	--	--	--	6.2	--	145.9	
18-00025	12-yr	480	--	--	--	--	36.2	24.2	5.2	--	--	4.4	--	8.3	1.2	--	--	--	--	--	--	--	--	--	--	3.4	--	--	10.0	92.9	
32-00544	12-yr	320	480	--	--	--	72.5	--	--	2.6	--	28.0	--	7.0	--	--	--	--	--	--	--	--	--	--	--	--	--	5.0	--	115.1	
42-00043	12-yr	480	--	--	--	--	32.0	110.0	--	--	--	2.5	--	19.3	--	--	--	--	--	--	--	--	--	--	--	2.8	--	--	4.0	170.6	
389-85769	12-yr	480	--	--	10.0	--	2267.3	--	--	20.7	--	47.5	--	18.9	--	--	--	--	--	--	--	--	--	--	193.6	--	--	--	--	2558.0	
389-85811	12-yr	480	--	--	--	--	1997.2	411.4	259.2	1.5	--	45.8	--	61.2	--	1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	2787.3	
25-00036	12-yr	480	--	--	1.0	--	14.5	26.0	--	--	--	--	1.0	16.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.0	--	63.1
15-00049	6-month	481	--	--	--	--	20.0	--	--	34.0	--	--	--	11.0	--	--	--	--	--	--	--	--	--	--	--	--	--	6.0	--	71.0	
19-01827	6-month	481	--	--	--	--	69.0	48.0	--	--	--	--	--	18.0	--	--	--	--	--	--	--	--	--	--	--	--	6.5	6.0	--	147.5	
19-01901	6-month	481	--	--	--	--	--	--	6.0	234.5	--	--	--	2.0	--	--	--	--	--	--	--	--	--	--	--	--	13.0	--	--	255.5	
19-01919	6-month	481	--	--	--	--	--	50.0	--	55.0	--	--	--	3.0	--	--	--	--	--	--	--	--	--	--	--	--	16.0	--	--	124.0	
76-00416	12-yr	481	--	--	--	--	9.0	145.2	--	--	--	0.1	--	3.5	--	--	--	--	--	--	--	--	--	--	--	--	--	25.0	--	182.8	

a. Proper content code indicated only if the original is incorrect. Correction is based on visual examination results.

TABLE 23. WASTE CONTAINER COMPONENT WEIGHTS
WASTE FORM CATEGORY: GLASS

																Material Type (lb)											Net Weight (lb)	
Container ID No.	Time Period	Content Code	Proper ^a Code	Glass		Metal					Combustibles					Sludge			Miscellaneous							Absorbents		
				Raschig Rings	Other	Ta	Steel	Stainless Steel	Pb	Other	Surgeons Gloves	Paper	Cloth	Plastic	Rubber	Other	Organic	Inorganic	Leaded Rubber	Cemented Resins	Molds/ Crucibles	Firebrick	Salts	Concrete	Other	Vermiculite	Portland Cement	Oil-Dri
37-02339	6-month	440	--	--	54.75	--	--	--	--	--	--	--	--	18.0	--	--	--	--	--	--	--	--	--	--	--	--	--	72.75
28-00755	6-month	440	--	--	75.0	--	--	--	--	5.0	--	--	--	8.5	--	--	--	--	--	--	--	--	--	--	--	--	--	94.5
12-11241	6-month	440	--	--	24.0	--	--	--	--	--	--	--	--	8.75	4.0	--	--	--	--	--	--	--	--	--	--	6.0	--	46.75
37-02336	6-month	440	--	--	22.5	--	--	--	--	--	--	--	--	28.5	--	--	--	--	--	--	--	--	--	--	--	10.0	--	52.0
																									1.0	--		
02-34934	3-year	440	--	--	305.75	--	--	--	--	--	--	--	--	1.75	--	--	--	--	--	--	--	--	--	--	--	--	4.0	311.5
29-00030	3-year	440	--	--	112.0	--	--	--	--	1.0	--	--	--	16.0	--	--	--	--	--	--	--	--	--	--	--	4.25	133.25	
37-02018	3-year	440	--	--	79.75	--	--	--	--	--	--	--	--	2.0	--	--	--	--	--	--	--	--	--	--	--	5.0	116.75	
76-01366	3-year	440	--	--	385.0	--	--	--	--	--	--	--	--	5.0	--	--	--	--	--	--	--	--	--	--	--	4.0	394.0	
02-10576	12-yr	442	440	--	289.4	--	--	--	--	--	--	6.6	--	2.0	--	--	--	--	--	--	--	--	--	--	--	5.4	303.4	
36-00628	12-yr	440	--	--	334.8	--	--	--	--	--	--	--	--	1.0	--	--	--	--	--	--	--	--	--	--	--	21.0	356.8	
36-00805	12-yr	440	--	--	26.5	--	--	--	--	1.0	--	--	--	24.5	--	--	--	--	--	--	--	--	--	--	--	25.5	173.0	
89-04043	12-yr	441	--	--	66.3	--	--	--	--	--	--	6.2	--	2.0	--	--	--	--	--	--	--	--	--	--	--	127.0	201.5	
89-04071	12-yr	441	--	--	91.3	--	--	--	--	--	--	12.0	0.1	4.3	--	--	--	--	--	--	--	--	--	--	0.7	6.0	114.4	
89-04114	12-yr	441	--	--	151.8	--	--	--	--	--	--	16.3	--	2.5	--	--	--	--	--	--	--	--	--	--	--	1.5	172.1	
89-04072	12-yr	441	--	--	47.5	--	--	--	--	--	--	7.0	--	1.5	--	--	--	--	--	--	--	--	--	--	--	155.3	211.3	
02-39564	6-month	442	--	--	23.5	--	--	--	--	--	--	12.0	--	4.0	--	--	--	--	--	--	--	--	--	--	--	11.0	54.5	
02-39533	6-month	442	--	--	50.25	--	--	--	--	--	--	12.0	--	2.0	--	--	--	--	--	--	--	--	--	--	--	15.5	81.75	
02-39803	6-month	442	--	--	88.5	--	--	--	--	--	--	12.0	--	2.0	--	--	--	--	--	--	--	--	--	--	--	12.5	117.5	
02-39805	6-month	442	--	--	78.5	--	--	--	--	--	--	12.0	--	2.5	--	--	--	--	--	--	--	--	--	--	--	12.5	108.0	
19-02730	6-month	442	--	--	145.0	--	--	--	--	--	--	--	--	11.3	--	--	--	--	--	--	--	--	--	--	--	--	20.0	171.3
05-01596	3-year	442	--	--	84.5	--	--	--	--	--	--	12.0	--	3.0	--	--	--	--	--	--	--	--	--	--	--	4.0	103.5	
05-01772	3-year	442	--	--	82.25	--	--	--	--	--	--	12.0	--	4.5	--	--	--	--	--	--	--	--	--	--	--	5.0	103.75	
17-04562	3-year	442	441	--	89.0	--	--	--	--	--	--	12.0	--	4.0	--	--	--	--	--	--	--	--	--	--	--	5.0	110.0	
22-00722	3-year	442	--	--	89.0	--	--	--	--	--	--	12.0	--	9.25	--	--	--	--	--	--	--	--	--	--	--	4.0	114.25	
42-00226	3-year	442	--	--	57.0	--	--	--	--	--	--	12.0	--	4.5	--	--	--	--	--	--	--	--	--	--	--	4.0	77.5	

a. Proper content code indicated only if the original is incorrect. Correction is based on visual examination results.

TABLE 24. WASTE CONTAINER COMPONENT WEIGHTS
WASTE FORM CATEGORY: NONMETAL MOLDS AND CRUCIBLES

				Material Type (lb)																									Net Weight (lb)
Container ID No.	Time Period	Content Code	Proper ^a Code	Glass		Metal					Combustibles					Sludge		Miscellaneous						Absorbents					
				Raschig Rings	Other	Ta	Steel	Stainless Steel	Pb	Other	Surgeons Gloves	Paper	Cloth	Plastic	Rubber	Other	Organic	Inorganic	Leaded Rubber	Cemented Resins	Molds/ Crucibles	Firebrick	Salts	Concrete	Other	Vermiculite	Portland Cement	Oil-Dri	
12-11023	6-month	300	--	--	--	--	--	--	--	--	--	4.5	--	4.0	--	--	--	--	--	--	135.75 ^b	--	--	--	--	3.0	--	--	147.25
19-01811	6-month	300	--	--	--	--	--	--	--	--	--	--	--	2.25	--	--	--	--	--	--	56.5 ^b	--	--	--	--	20.0	--	--	78.75
12-11229	6-month	300	--	--	--	--	--	--	--	--	--	4.0	--	1.5	--	--	--	--	--	--	48.75 ^b	--	--	--	--	22.0	--	--	76.25
41-01531	6-month	300	--	--	--	--	--	--	--	--	--	--	--	5.0	--	--	--	--	--	--	88.75 ^b	--	--	--	--	13.0	--	--	106.75
12-09189	3-year	300	--	--	--	--	--	--	--	--	--	4.0	--	4.0	--	--	--	--	--	--	149.75 ^b	--	--	--	--	--	--	4.0	161.75
12-09295	3-year	300	--	--	--	--	--	--	--	--	--	4.0	--	4.0	--	--	--	--	--	--	210.5 ^b	--	--	--	--	--	--	3.5	222.0
12-09161	3-year	300	--	--	--	--	--	--	--	--	--	4.0	--	3.75	--	--	--	--	--	--	167.5 ^b	--	--	--	--	--	--	4.0	179.75
12-09300	3-year	300	--	--	--	--	--	--	--	--	--	4.0	--	3.0	--	--	--	--	--	--	185.5 ^b	--	--	--	--	--	--	3.5	196.0
11-01625	6-month	301	--	--	--	--	--	--	--	0.125	--	3.75	--	5.75	--	--	--	--	--	--	133.75 ^b	--	--	--	--	2.5	--	8.5	154.375
32-01049	6-month	312	--	--	--	--	--	--	--	--	--	--	--	14.75	--	--	--	--	--	--	74.0	--	--	--	--	--	--	--	88.75
32-01055	6-month	312	--	--	--	--	--	--	--	--	--	--	--	23.5	--	--	--	--	--	--	80.75	--	--	--	16.0	--	--	--	120.25

a. Proper content code indicated only if the original is incorrect. Correction is based on visual examination results.

b. Graphite molds and crucibles.

TABLE 25. WASTE CONTAINER COMPONENT WEIGHTS

WASTE FORM CATEGORY: UNCEMENTED SLUDGES

																Material Type (lb)																	
Container ID No.	Time Period	Content Code	Proper Code ^a	Glass		Metal					Combustibles					Sludge			Miscellaneous								Absorbents			Net Weight (lb)			
				Raschig Rings	Other	Ta	Steel	Stainless Steel	Pb	Other	Surgeons Gloves	Paper	Cloth	Plastic	Rubber	Other	Organic	Inorganic	Leaded Rubber	Cemented Resins	Molds/ Crucibles	Firebrick	Salts	Concrete	Other	Vermiculite	Portland Cement	Oil-Dri					
7412-03121	6-month	1	--	--	--	--	--	--	--	--	--	--	--	4.5	--	--	--	245.5	--	--	--	--	--	--	--	--	38.2	--	--	288.2			
7412-03125	6-month	1	--	--	--	--	--	--	--	--	--	--	--	4.5	--	--	--	355.5	--	--	--	--	--	--	--	--	1.1	--	--	361.1			
7412-03127	6-month	1	--	--	--	--	--	--	--	--	--	--	--	4.5	--	--	--	274.5	--	--	--	--	--	--	--	--	--	--	--	279.0			
7412-03128	6-month	1	--	--	--	--	--	--	--	--	--	--	--	4.5	--	--	--	326.5	--	--	--	--	--	--	--	--	12.1	1.5	--	344.6			
7412-00483	3-year	1	--	--	--	--	--	--	--	--	--	--	--	4.5	--	--	--	433.5	--	--	--	--	--	--	--	--	28.5	3.0	--	469.5			
7412-00636	3-year	1	--	--	--	--	--	--	--	--	--	--	--	5.5	--	--	--	394.5	--	--	--	--	--	--	--	--	--	--	--	400.0			
7412-00766	3-year	1	--	--	--	--	--	--	--	--	--	--	--	4.5	--	--	--	398.5	--	--	--	--	--	--	--	--	27.0	4.0	--	434.0			
7412-00797	3-year	1	--	--	--	--	--	--	--	--	--	--	--	4.5	--	--	--	319.5	--	--	--	--	--	--	--	--	20.75	2.0	--	346.75			
741-12404	12-yr	1	--	--	--	--	--	--	--	--	--	--	--	4.0	--	--	--	427.5	--	--	--	--	--	--	--	--	22.0	--	--	453.5			
741-12411	12-yr	1	--	--	--	--	--	--	--	--	--	--	--	4.0	--	--	--	268.0	--	--	--	--	--	--	--	--	39.0	--	--	311.0			
741-12794	12-yr	1	--	--	--	--	--	--	--	--	--	--	--	4.0	--	--	--	365.0	--	--	--	--	--	--	--	--	20.0	--	--	389.0			
741-12847	12-yr	1	--	--	--	--	--	--	--	--	--	--	--	4.0	--	--	--	411.0	--	--	--	--	--	--	--	--	8.0	--	--	423.0			
741-12858	12-yr	1	--	--	--	--	--	--	27.7	--	--	--	--	4.0	--	--	--	370.6	--	--	--	--	--	--	--	--	15.8	15.4	--	433.5			
742-26150	6-month	2	--	--	--	--	--	--	--	--	--	--	--	2.0	--	--	--	389.0	--	--	--	--	--	--	41.8	--	--	--	--	432.8			
742-26152	6-month	2	--	--	--	--	--	--	--	--	--	--	--	2.0	--	--	--	399.0	--	--	--	--	--	--	3.2	--	--	--	--	404.2			
742-26154	6-month	2	--	--	--	--	--	--	--	--	--	--	--	2.0	--	--	--	390.0	--	--	--	--	--	--	2.1	--	--	--	--	394.1			
742-21396	12-yr	2	--	--	--	--	--	--	--	--	--	--	--	1.0	--	--	--	382.7	--	--	--	--	--	--	--	--	8.8	--	--	392.5			
742-21440	12-yr	2	--	--	--	--	--	--	--	--	--	0.5	--	1.0	--	--	--	227.0	--	--	--	--	--	58.0	--	47.0	--	--	--	333.5			
742-21594	12-yr	2	--	--	--	--	--	--	--	--	--	--	--	1.0	--	--	--	365.0	--	--	--	--	--	--	--	--	37.0	--	--	403.0			
742-21640	12-yr	2	--	--	--	--	--	--	--	--	--	--	--	1.0	--	--	--	415.5	--	--	--	--	--	--	--	--	17.0	--	--	433.5			
743-16469	6-month	3	--	--	--	--	--	--	--	--	--	--	--	1.0	--	--	340.0	--	--	--	--	--	--	--	6.6	7.0	--	--	--	354.6			
743-16487	6-month	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	385.0	--	--	--	--	--	--	--	2.2	9.0	--	--	--	396.2			
743-16656	6-month	3	--	--	--	--	--	--	--	--	--	--	--	3.5	--	--	316.5	--	--	--	--	--	--	--	--	--	--	--	--	320.0			
743-16733	6-month	3	--	--	--	--	--	--	--	--	--	--	--	3.5	--	--	422.5	--	--	--	--	--	--	--	--	--	--	--	--	426.0			
743-15075	3-year	3	--	--	--	--	--	--	--	--	--	--	--	11.75	--	--	397.0	--	--	--	--	--	--	--	--	--	--	6.0	--	414.75			
743-15037	3-year	3	--	--	--	--	--	--	--	--	--	--	--	8.0	--	--	375.0	--	--	--	--	--	--	--	--	--	--	10.5	--	393.5			
743-15312	3-year	3	--	--	--	--	--	--	--	--	--	--	--	9.0	--	--	437.0	--	--	--	--	--	--	--	--	--	--	4.5	--	450.5			
743-15023	3-year	3	--	--	--	--	--	--	--	--	--	--	--	9.25	--	--	396.0	--	--	--	--	--	--	--	--	--	--	6.75	--	412.0			
743-11586	12-yr	3	--	--	--	--	--	--	--	--	--	--	--	3.0	--	--	477.5	--	--	--	--	--	--	--	33.0	--	--	--	--	513.5			
743-11682	12-yr	3	--	--	--	--	--	--	--	--	--	--	--	3.0	--	--	490.5	--	--	--	--	--	--	--	--	--	--	--	--	493.5			
743-11838	12-yr	3	--	--	--	--	--	--	--	--	--	--	--	3.0	--	--	365.5	--	--	--	--	--	--	--	--	--	--	2.0	--	370.5			
743-11870	12-yr	3	--	--	--	--	--	--	--	--	--	--	--	3.0	--	--	439.9	--	--	--	--	--	--	--	--	--	--	18.6	--	461.5			
747-00944	6-month	7	--	--	--	--	--	--	--	--	--	--	--	4.5	--	--	348.0	--	--	--	--	--	--	--	--	3.2	1.0	38.0	--	395.2			
747-01488	6-month	7	--	--	--	--	--	--	--	--	--	--	--	4.5	--	--	286.0	--	--	--	--	--	--	--	--	49.1	--	--	--	339.6			
747-01492	6-month	7	--	--	--	--	--	--	--	--	--	--	--	4.5	--	--	242.0	--	--	--	--	--	--	--	--	34.2	--	--	--	280.7			
747-01531	6-month	7	--	--	--	--	--	--	--	--	--	--	--	4.5	--	--	205.5	--	--	--	--	--	--	--	--	52.9	--	--	--	262.9			
02-40342	6-month	292	--	--	--	--	--	--	--	--	--	--	--	31.25	--	--	141.0	--	--	--	--	--	--	--	--	5.5	--	--	--	177.75			
02-39229	6-month	292	--	--	--	--	--	--	--	--	--	--	--	30.25	--	--	117.25	--	--	--	--	--	--	--	--	5.25	--	--	--	152.75			
02-39213	6-month	292	--	--	--	--	--	--	--	--	--	--	--	26.75	--	--	81.75	--	--	--	--	--	--	--	--	5.0	--	--	--	113.5			
02-39435	6-month	292	--	--	--	--	--	--	--	--	--	--	--	20.75	--	--	125.75	--	--	--	--	--	--	--	--	5.25	--	--	--	151.75			
40-00063	3-year	292	--	--	--	--	--	--	--	--	--	8.0	--	29.75	--	--	148.25	--	--	--	--	--	--	--	--	--	--	10.0	--	195.5			
76-01642	3-year	292	--	--	--	--	--	--	--	0.5	--	--	--	5.0	--	--	218.0	--	--	--	--	--	--	--	--	--	--	--	4.5	228.0			
76-01643	3-year	292	--	--	--	--	--	--	--	--	--	1.5	--	4.0	--	--	73.25	--	--	--	--	--	--	--	--	--	--	--	4.5	83.25			
76-01644	3-year	292	--	--	--	--	--	--	--	--	--	--	--	5.0	--	--	154.5	--	--	--	--	--	--	--	--	--	--	--	--	159.5			

a. Proper content code indicated only if the original is incorrect. Correction is based on visual examination results.

TABLE 26. WASTE CONTAINER COMPONENT WEIGHTS
WASTE FORM CATEGORY: CEMENTED SLUDGES AND SOLUTIONS

Material Type (lb)																														
				Glass		Metal					Combustibles						Sludge		Miscellaneous							Absorbents				
Container ID No.	Time Period	Content Code	Proper Code ^a	Raschig Rings	Other	Ta	Steel	Stainless Steel	Pb	Other	Surgeons Gloves	Paper	Cloth	Plastic	Rubber	Other	Organic	Inorganic	Leaded Rubber	Cemented Resins	Molds/ Crucibles	Firebrick	Salts	Concrete	Other	Vermiculite	Portland Cement	Oil-Dri	Net Weight (lb)	
744-3829	6-month	4	--	--	--	--	--	--	--	--	--	--	--	4.5	--	--	--	--	--	--	--	--	--	--	502.0	--	7.5	--	--	514.0
744-3837	6-month	4	--	--	--	--	--	--	--	--	--	--	--	4.5	--	--	--	--	--	--	--	--	--	--	621.0	--	--	--	--	625.5
744-3841	6-month	4	--	--	--	--	--	--	--	--	--	--	--	4.5	--	--	--	--	--	--	--	--	--	--	492.0	--	--	--	--	496.5
744-3846	6-month	4	--	--	--	--	--	--	--	--	--	--	--	4.5	--	--	--	--	--	--	--	--	--	--	491.0	--	--	--	--	495.5
744-3848	6-month	4	--	--	--	--	--	--	--	--	--	--	--	4.5	--	--	--	--	--	--	--	--	--	--	548.0	--	--	--	--	552.5
744-2368	12-yr	4	--	--	--	--	--	--	--	--	--	--	--	4.0	--	--	--	--	--	--	--	--	--	--	237.0	--	--	130.0	18.6	389.6
744-2376	12-yr	4	--	--	--	--	--	--	--	--	--	--	--	4.0	--	--	--	--	--	--	--	--	--	--	386.3	--	--	14.1	17.6	422.0
744-2389	12-yr	4	--	--	--	--	--	--	--	--	--	--	--	4.0	--	--	--	--	--	--	--	--	--	--	551.6	--	--	37.4	--	593.0
744-2430	12-yr	4	--	--	--	--	--	--	--	--	--	--	--	4.0	--	--	--	--	--	--	--	--	--	--	430.0	--	--	--	10.0	444.0
744-2442	12-yr	4	--	--	--	--	--	--	--	--	--	--	--	4.0	--	--	--	--	--	--	--	--	--	--	353.0	--	--	5.0	10.0	372.0

a. Proper content code indicated only if the original is incorrect. Correction is based on visual examination results.

TABLE 27. WASTE CONTAINER COMPONENT WEIGHTS
WASTE FORM CATEGORY: CONCRETE, BRICK

Material Type (lb)																													
Container ID No.	Time Period	Content Code	Proper ^a Code	Glass		Metal			Combustibles					Sludge		Miscellaneous						Absorbents					Net Weight (lb)		
				Raschig Rings	Other	Ta	Steel	Stainless Steel	Pb	Other	Surgeons Gloves	Paper	Cloth	Plastic	Rubber	Other	Organic	Inorganic	Leaded Rubber	Cemented Resins	Molds/ Crucibles	Firebrick	Salts	Concrete	Other	Vermiculite		Portland Cement	Oil-Dri
02-21470	6-month	371	--	--	--	--	--	--	--	--	--	24.0	--	6.0	--	--	--	--	--	--	--	90.8	--	--	4.0	14.25	--	--	139.05
02-45508	6-month	371	--	--	--	--	--	--	--	--	--	12.0	--	2.2	--	--	--	--	--	--	--	30.8	--	--	--	--	--	45.0	
01-08836	12-yr	371	--	--	--	--	--	--	--	--	--	12.0	--	8.0	--	--	--	--	--	--	--	110.0	--	--	--	--	49.3	179.3	
02-10586	12-yr	371	--	--	--	--	--	--	--	1.2	--	12.0	--	5.2	--	--	--	--	--	--	--	50.2	--	--	--	--	66.4	135.0	
02-11061	12-yr	371	--	--	--	--	--	--	--	--	--	--	--	17.0	--	--	--	--	--	--	--	336.1	--	--	0.1	--	0.5	353.7	
02-11379	12-yr	371	--	--	--	--	--	--	--	--	--	--	--	11.0	--	--	--	--	--	--	--	279.0	--	--	--	--	9.2	299.2	
02-44115	6-month	377	--	--	--	--	--	--	--	--	--	12.0	--	4.4	--	--	--	--	--	--	--	26.4	--	--	--	--	--	42.8	
01-08083	12-yr	960	--	--	--	--	--	--	--	--	--	--	--	1.0	--	--	--	--	--	--	--	--	--	386.4	--	--	--	11.5	398.9

TABLE 28. WASTE CONTAINER COMPONENT WEIGHTS
WASTE FORM CATEGORY: SALTS

				Material Type (lb)																									
				Glass		Metal					Combustibles					Sludge		Miscellaneous						Absorbents					
Container ID No.	Time Period	Content Code	Proper ^a Code	Raschig Rings	Other	Ta	Steel	Stainless Steel	Pb	Other	Surgeons Gloves	Paper	Cloth	Plastic	Rubber	Other	Organic	Inorganic	Leaded Rubber	Cemented Resins	Molds/ Crucibles	Firebrick	Salts	Concrete	Other	Vermiculite	Portland Cement	Oil-Dri	Net Weight (lb)
01-05779	6-month	409	--	--	--	--	--	10.5	--	--	--	--	--	3.0	--	--	--	--	--	--	--	--	12.75	--	--	9.0	--	--	32.25
03-02724	6-month	409	--	--	--	--	--	26.4	96.8	--	--	12.0	--	6.2	--	--	--	--	--	--	--	--	23.8	--	--	--	--	--	165.2
01-05486	6-month	414	--	--	--	--	--	10.12	--	--	--	--	--	16.0	--	--	--	--	--	--	--	19.5 ^b	--	52.88	--	--	6.0	--	104.5

a. Proper content code indicated only if the original is incorrect. Correction is based on visual examination results.

b. Ceramic molds and crucibles.

TABLE 29. WASTE CONTAINER COMPONENT WEIGHTS

WASTE FORM CATEGORY: LEADED RUBBER

																Material Type (lb)													
Container ID No.	Time Period	Content Code	Proper ^a Code	Glass		Metal					Combustibles					Sludge			Miscellaneous							Absorbents			Net Weight (lb)
				Raschig Rings	Other	Ta	Steel	Stainless Steel	Pb	Other	Surgeons Gloves	Paper	Cloth	Plastic	Rubber	Other	Organic	Inorganic	Leaded Rubber	Cemented Resins	Molds/ Crucibles	Firebrick	Salts	Concrete	Other	Vermiculite	Portland Cement	Oil-Dri	
19-01831	6-month	339	--	--	--	--	--	--	--	--	--	--	13.0	4.0	18.0	--	--	--	150.0	--	--	--	--	--	--	7.0	--	--	192.0
19-01840	6-month	339	--	--	--	--	--	--	--	--	--	--	--	1.5	4.0	--	--	--	255.0	--	--	--	--	--	--	9.0	--	1.0	269.5
19-01845	6-month	339	--	--	--	--	--	--	--	--	--	--	--	1.5	--	--	--	--	164.0	--	--	--	--	--	--	12.5	--	--	178.0
19-01884	6-month	339	--	--	--	--	--	--	--	--	--	--	--	3.0	8.0	--	--	--	285.0	--	--	--	--	--	--	4.5	--	--	300.5
19-01472	3-year	339	--	--	--	--	--	--	--	--	--	--	--	4.5	2.25	--	--	--	119.25	--	--	--	--	--	--	--	--	4.5	130.5
22-00224	12-yr	339	--	--	--	--	--	--	--	--	--	--	0.5	8.8	--	--	--	--	286.0	--	--	--	--	--	--	--	--	29.5	324.8
23-00435	12-yr	339	--	--	--	--	--	--	--	--	--	--	--	20.5	--	--	--	--	215.0	--	--	--	--	--	--	--	2.4	237.9	

a. Proper content code indicated only if the original is incorrect. Correction is based on visual examination results.

TABLE 30. WASTE CONTAINER COMPONENT WEIGHTS

WASTE FORM CATEGORY: BENELEX, PLEXIGLASS

																Material Type (lb)											Net Weight (lb)		
				Glass		Metal					Combustibles					Sludge		Miscellaneous							Absorbents				
Container ID No.	Time Period	Content Code	Proper ^a Code	Raschig Rings	Other	Ta	Steel	Stainless Steel	Pb	Other	Surgeons Gloves	Paper	Cloth	Plastic	Rubber	Other	Organic	Inorganic	Leaded Rubber	Cemented Resins	Molds/ Crucibles	Firebrick	Salts	Concrete	Other	Vermiculite	Portland Cement	Oil-Dri	
02-10126	12-yr	302	--	--	--	--	--	--	--	--	--	4.0	--	7.0	--	--	--	--	--	--	--	--	--	--	377.5	--	--	1.0	389.5
02-10283	12-yr	302	--	--	--	--	--	--	--	--	--	--	--	14.5	--	--	--	--	--	--	--	--	--	--	161.7	--	--	12.8	189.0
02-10436	12-yr	302	--	--	--	--	--	--	--	--	--	--	--	9.8	--	--	--	--	--	--	--	--	--	--	60.3	--	--	18.5	88.6
02-10502	12-yr	302	--	--	--	--	--	--	--	--	--	12.0	--	1.0	--	--	--	--	--	--	--	--	--	--	74.7	--	--	46.4	134.1
01-08991	12-yr	302	--	--	73.9	--	--	--	--	--	--	--	--	18.0	--	--	--	--	--	--	--	--	--	--	65.6	--	--	47.6	205.1
02-10316	12-yr	302	--	--	--	--	--	--	--	--	--	--	--	10.9	--	--	--	--	--	--	--	--	--	--	124.1	--	--	22.9	157.9
01-08266	12-yr	464	--	--	--	--	--	--	--	--	--	--	--	16.5	--	--	--	--	--	--	--	--	--	--	76.6	--	--	50.6	143.7

TABLE 31. WASTE CONTAINER COMPONENT WEIGHTS

WASTE FORM CATEGORY: RESINS

Material Type (lb)																														
				Glass		Metal					Combustibles						Sludge		Miscellaneous						Absorbents					
Container ID No.	Time Period	Content Code	Proper ^a Code	Raschig Rings	Other	Ta	Steel	Stainless Steel	Pb	Other	Surgeons Gloves	Paper	Cloth	Plastic	Rubber	Other	Organic	Inorganic	Leaded Rubber	Cemented Resins	Molds/ Crucibles	Firebrick	Salts	Concrete	Other	Vermiculite	Portland Cement	Oil-Dri	Net Weight (lb)	
02-39189	6-month	432	--	--	--	--	--	--	--	--	--	--	--	31.5	--	--	--	--	--	186.5	--	--	--	--	--	--	2.25	--	--	220.25
02-39215	6-month	432	--	--	--	--	--	--	--	--	--	--	--	35.0	--	--	--	--	--	235.0	--	--	--	--	--	--	1.5	--	--	271.5
02-39296	6-month	432	--	--	--	--	--	--	--	--	--	--	--	30.0	--	--	--	--	--	182.75	--	--	--	--	--	--	4.5	--	--	217.25
02-44427	6-month	432	--	--	--	--	--	--	--	--	--	--	--	6.9	--	--	--	--	--	7.0	--	--	--	--	--	--	--	--	--	13.9
02-34829	3-year	432	--	--	--	--	--	--	--	--	--	--	--	31.5	--	--	--	--	--	178.5	--	--	--	--	--	--	--	--	4.5	214.5
02-34844	3-year	432	--	--	--	--	--	--	--	--	--	--	--	13.0	--	--	--	--	--	69.0	--	--	--	--	--	--	--	--	5.25	87.25
02-34830	3-year	432	--	--	--	--	--	--	--	--	--	--	--	29.75	--	--	--	--	--	206.25	--	--	--	--	--	--	--	--	5.0	241.0
01-08811	12-yr	371	432	--	--	--	--	--	--	--	--	--	--	21.7	--	--	--	--	--	168.5	--	--	--	--	--	--	--	--	44.4	234.6
01-08956	12-yr	432	--	--	--	--	--	--	--	--	--	--	--	22.7	--	--	--	--	--	183.0	--	--	--	--	--	--	--	7.7	19.8	233.2
02-10070	12-yr	432	--	--	--	--	--	--	--	--	--	--	--	19.9	--	--	--	--	--	178.1	--	--	--	--	--	--	--	--	39.6	237.6
02-10195	12-yr	432	--	--	--	--	--	--	--	--	--	--	--	24.2	--	--	--	--	--	194.1	--	--	--	--	--	--	--	--	6.4	224.7
02-10286	12-yr	432	--	--	--	--	--	--	--	--	--	--	--	22.2	--	--	--	--	--	197.7	--	--	--	--	--	--	--	--	7.5	227.4
02-10288	12-yr	432	--	--	--	--	--	--	--	--	--	--	--	21.7	--	--	--	--	--	157.3	--	--	--	--	4.8	--	--	--	4.0	187.8

TABLE 32. WASTE CONTAINER COMPONENT WEIGHTS

WASTE FORM CATEGORY: MIXED WASTE-PAPER, METAL, GLASS, ETC.

				Material Type (lb)																										
				Glass		Metal					Combustibles					Sludge		Miscellaneous						Absorbents						
Container ID No.	Time Period	Content Code	Proper ^a Code	Raschig Rings	Other	Ta	Steel	Stainless Steel	Pb	Other	Surgeons Gloves	Paper	Cloth	Plastic	Rubber	Other	Organic	Inorganic	Leaded Rubber	Cemented Resins	Molds/ Crucibles	Firebrick	Salts	Concrete	Other	Vermiculite	Portland Cement	Oil-Dri	Net Weight (lb)	
01-08068	12-yr	241	--	--	--	--	--	--	56.5	16.3	--	--	--	37.5	--	6.2	--	--	--	--	--	--	--	--	--	54.0	--	--	5.0	175.5
1371-586	12-yr	950	--	--	367.0	--	882.6	--	113.1	2.0	--	29.0	--	7.4	--	103.4	--	--	--	--	--	--	--	--	--	543.4	--	--	--	2,047.9

TABLE 33. WASTE CONTAINER COMPONENT WEIGHTS

WASTE FORM CATEGORY: FILTERS

				Material Type (lb)																										
				Glass		Metal					Combustibles					Sludge		Miscellaneous					Absorbents							
Container ID No.	Time Period	Content Code	Proper ^a Code	Raschig Rings	Other	Ta	Steel	Stainless Steel	Pb	Other	Surgeons Gloves	Paper	Cloth	Plastic	Rubber	Other	Organic	Inorganic	Leaded Rubber	Cemented Resins	Molds/ Crucibles	Firebrick	Salts	Concrete	Other	Vermiculite	Portland Cement	Oil-Dri	Net Weight (lb)	
89-03509	12-yr	338	--	--	--	--	--	--	--	--	--	--	--	4.0	--	--	--	--	--	--	--	--	--	--	--	48.0	--	--	2.4	54.4

TABLE 34. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a
WASTE FORM CATEGORY: COMBUSTIBLES

Visual Examination Results												
Container ID No.	Time Period	Content Code	Proper ^b Content Code	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?	Organic Content ? (lb)	WIPP Certifiable ?	RTR ^c Certifiable ?
02-39371	6-month	328	--	--	--	--	--	--	--	75.5	Yes	Yes
02-39453	6-month	328	--	--	Y	--	--	--	--	116.75	No	Yes
02-39481	6-month	328	--	--	Y	Y*	--	--	--	73.5	No	No
28-00781	6-month	330	440	--	--	--	--	--	--	10.5	Yes	Yes
42-00291	6-month	330	336	Y*	--	--	--	--	--	53.25	Yes	No
22-01194	6-month	330	--	--	--	--	--	--	--	59.5	Yes	Yes
38-00101	6-month	330	--	Y*	--	--	--	--	--	90.25	Yes	Yes
76-02898	6-month	330	--	--	--	Y*	--	--	--	69.25	Yes	No
02-39195	6-month	330	--	--	--	--	--	--	--	83.0	Yes	Yes
389-90417	6-month	330	--	--	Y	--	--	--	--	1038.0	No	No
389-90609	6-month	330	--	Y*	Y	--	--	--	--	738.0	No	No
02-35272	3-year	330	--	--	--	--	--	--	--	88.25	Yes	Yes
02-10215	12-year	330	--	--	--	--	--	--	--	59.0	Yes	Yes
01-08200	12-year	330	--	--	--	--	--	--	--	44.2	Yes	Yes
01-08796	12-year	330	--	--	--	--	--	--	--	40.9	Yes	Yes
90-00042	12-year	330	--	--	--	--	--	--	--	166.4	Yes	Yes
37-00689	12-year	336	330	Y*	--	--	--	--	--	63.7	Yes	No
89-03607	12-year	336	330	Y*	--	--	--	--	--	67.0	Yes	Yes
90-00039	12-year	336	330	--	Y	--	--	--	--	191.4	No	Yes
02-39465	6-month	336	330	--	--	--	--	--	--	46.0	Yes	No
23-01599	6-month	336	--	--	Y	--	--	--	--	73.25	No	Yes
02-39084	6-month	336	330	--	--	--	--	--	--	81.25	Yes	Yes
02-40137	6-month	336	330	--	--	--	--	--	--	47.5	Yes	No
47-00256	6-month	336	--	--	Y	--	--	--	--	69.25	No	No
92-00419	6-month	336	--	--	--	--	--	--	--	6.75	Yes	No
02-34820	3-year	336	--	--	--	--	--	--	--	17.0	Yes	Yes
22-00748	3-year	336	--	--	--	--	--	--	--	20.0	Yes	Yes
744-3792	6-month	337	--	--	Y	Y*	--	--	--	31.5	No	No
744-3823	6-month	337	--	--	Y	--	--	--	--	28.0	No	No
744-3789	6-month	337	--	--	Y	Y*	--	--	--	27.25	No	No
55-00435	6-month	337	--	--	--	--	--	--	--	49.25	Yes	Yes

TABLE 34. (Continued)

WASTE FORM CATEGORY: COMBUSTIBLES

Visual Examination Results												
Container ID No.	Time Period	Content Code	Proper ^b Content Code	Immobilization (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?	Organic Content ? (lb)	WIPP Certifiable ?	RTR ^c Certifiable ?
02-10180	12-year	337	--	--	--	--	--	--	--	61.6	Yes	Yes
37-00698	12-year	337	--	--	--	--	--	--	--	152.8	Yes	Yes
37-00711	12-year	337	--	--	--	--	--	--	--	84.5	Yes	Yes
36-00723	12-year	337	--	--	--	--	--	--	--	94.1	Yes	Yes
65-00137	12-year	337	--	--	Y	--	--	--	--	88.3	No	Yes
389-85743	12-year	337	--	Y*	Y	--	--	--	--	612.9	No	Yes
746-2906	12-year	900	--	--	Y	--	--	--	--	141.2	No	Yes
746-2918	12-year	900	--	--	Y	--	--	--	--	63.1	No	Yes
746-7008	12-year	900	--	--	--	--	--	--	--	61.5	Yes	Yes
01-08583	12-year	970	--	--	--	--	--	--	--	84.7	Yes	Yes
01-08604	12-year	490	970	--	--	--	--	--	--	62.2	Yes	Yes
01-08700	12-year	970	--	--	--	--	--	--	--	106.3	Yes	Yes
389-85289	12-year	970	--	--	--	--	--	--	--	640.2	Yes	Yes

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix B.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
 Y* = Yes, but within allowable limits or requirements
 -- = None present

TABLE 35. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: METALS

Visual Examination Results												
Container ID No.	Time Period	Content Code	Proper ^b	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?	Organic	WIPP Certifiable ?	RTP ^c
			Content Code							Content ? (lb)		Certifiable ?
02-40153	6-month	320	480	--	--	--	--	--	--	--	Yes	Yes
29-00513	6-month	320	480	--	--	--	--	--	--	4.0	Yes	Yes
29-00528	6-month	320	480	--	--	--	--	--	--	4.5	Yes	Yes
78-00199	6-month	320	480	Y*	Y	--	--	Y	--	8.5	No	No
29-01396	6-month	320	480	--	--	--	--	--	--	16.4	Yes	Yes
55-00290	3-year	320	--	Y*	--	--	--	--	--	6.75	Yes	Yes
02-10613	12-year	320	--	--	--	--	--	--	--	21.2	Yes	Yes
02-10128	12-year	320	480	Y*	--	--	--	--	--	20.3	Yes	Yes
02-12224	12-year	320	480	Y*	--	--	--	--	--	14.4	Yes	No
32-00544	12-year	320	480	--	--	--	--	--	--	35.0	Yes	Yes
02-40002	6-month	480	--	--	--	--	--	--	--	8.5	Yes	Yes
31-00939	6-month	480	--	Y*	--	--	--	--	--	8.75	Yes	No
02-39738	6-month	480	--	--	--	--	--	--	--	9.5	Yes	Yes
45-00528	6-month	480	--	Y*	--	--	--	--	--	18.25	Yes	Yes
389-90895	6-month	480	--	Y*	Y	--	--	Y	--	86.0	No	No
389-90828	6-month	480	--	Y*	Y	--	--	--	--	73.0	No	Yes
12-12505	6-month	480	--	--	--	--	--	--	--	16.2	Yes	Yes
389-20305	6-month	480	--	--	Y	--	--	--	--	107.6	No	No
02-34855	3-year	480	--	--	--	--	--	--	--	2.0	Yes	Yes
02-35083	3-year	480	--	Y*	--	--	--	--	--	23.75	Yes	Yes
31-01321	3-year	480	--	--	--	--	--	--	--	15.0	Yes	No
42-00209	3-year	480	--	Y*	--	--	--	--	--	19.25	Yes	Yes
01-08226	12-year	480	--	--	--	--	--	--	--	15.6	Yes	Yes
01-08232	12-year	480	--	--	--	--	--	--	--	7.2	Yes	Yes
18-00025	12-year	480	--	--	--	--	--	--	--	13.9	Yes	Yes
42-00043	12-year	480	--	--	--	--	--	--	--	21.8	Yes	Yes
25-00036	12-year	480	--	Y*	--	--	--	--	--	17.9	Yes	Yes
389-85769	12-year	480	--	--	--	--	--	--	--	66.4	Yes	Yes
389-85811	12-year	480	--	Y*	Y	--	--	--	--	62.4	No	Yes

TABLE 35. (Continued)

WASTE FORM CATEGORY: METALS

Visual Examination Results													
Container ID No.	Time Period	Content Code	Proper ^b Content Code	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?	Organic Content ? (1b)	WIPP Certifiable ?	RTR ^C Certifiable ?	
15-00049	6-month	481	--	--	--	--	--	--	--	11.0	Yes	Yes	
19-01827	6-month	481	--	--	--	--	--	--	--	18.0	Yes	Yes	
19-01901	6-month	481	--	--	--	--	--	--	--	2.0	Yes	Yes	
19-01919	6-month	481	--	Y*	--	--	--	--	--	3.0	Yes	Yes	
76-00416	12-year	481	--	--	--	--	--	--	--	3.6	Yes	Yes	

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix B.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
 Y* = Yes, but within allowable limits or requirements
 -- = None present

TABLE 36. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: GLASS

Visual Examination Results												
Container ID No.	Time Period	Content Code	Proper ^b Content Code	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?	Organic Content ? (lb)	WIPP Certifiable ?	RTR ^c Certifiable ?
37-02339	6-month	440	--	--	--	--	--	--	--	18.0	Yes	Yes
28-00755	6-month	440	--	--	--	--	--	--	--	8.5	Yes	Yes
12-11241	6-month	440	--	--	--	--	--	--	--	12.75	Yes	Yes
37-02336	6-month	440	--	--	--	--	--	--	--	28.5	Yes	Yes
02-34934	3-year	440	--	Y*	--	--	--	--	--	1.75	Yes	Yes
29-00030	3-year	440	--	Y*	--	--	--	--	--	16.0	Yes	Yes
37-02018	3-year	440	--	Y*	--	--	--	--	--	32.0	Yes	Yes
76-01366	3-year	440	--	Y*	--	--	--	--	--	5.0	Yes	Yes
02-10576	12-year	442	440	Y*	--	--	--	--	--	8.6	Yes	Yes
36-00628	12-year	440	--	Y*	--	--	--	--	--	1.0	Yes	Yes
36-00805	12-year	440	--	Y*	--	--	--	--	--	24.5	Yes	Yes
89-04043	12-year	441	--	--	--	--	--	--	--	8.2	Yes	Yes
89-04071	12-year	441	--	--	--	--	--	--	--	16.4	Yes	Yes
89-04114	12-year	441	--	--	--	--	--	--	--	18.8	Yes	Yes
89-04072	12-year	441	--	Y*	--	--	--	--	--	8.5	Yes	Yes
02-39564	6-month	442	--	--	--	--	--	--	--	16.0	Yes	Yes
02-39533	6-month	442	--	--	--	--	--	--	--	14.0	Yes	Yes
02-39803	6-month	442	--	--	--	--	--	--	--	14.0	Yes	Yes
02-39805	6-month	442	--	--	--	--	--	--	--	14.5	Yes	Yes
19-02730	6-month	442	--	--	--	--	--	--	--	11.3	Yes	Yes
05-01596	3-year	442	--	Y*	--	--	--	--	--	15.0	Yes	Yes
05-01772	3-year	442	--	--	--	--	--	--	--	16.5	Yes	Yes
17-04562	3-year	442	441	--	Y	--	--	--	--	16.0	No	Yes
22-00722	3-year	442	--	--	--	--	--	--	--	21.25	Yes	Yes
42-00226	3-year	442	--	Y*	--	--	--	--	--	16.5	Yes	Yes

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix B.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
Y* = Yes, but within allowable limits or requirements
-- = None present

TABLE 37. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: NONMETAL MOLDS AND CRUCIBLES

Visual Examination Results												
Container ID No.	Time Period	Content Code	Proper ^b Content Code	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?	Organic Content ? (lb)	WIPP Certifiable ?	RTR ^c Certifiable ?
12-11023	6-month	300	--	Y*	--	--	Y*	--	--	144.25	Yes	Yes
19-01811	6-month	300	--	Y*	--	--	--	--	--	58.75	Yes	Yes
12-11229	6-month	300	--	Y*	--	--	--	--	--	54.25	Yes	Yes
41-01531	6-month	300	--	Y*	--	--	--	--	--	93.75	Yes	Yes
12-09189	3-year	300	--	Y*	--	--	--	--	--	157.75	Yes	Yes
12-09295	3-year	300	--	Y*	--	--	Y*	--	--	218.5	Yes	Yes
12-09161	3-year	300	--	Y*	--	--	--	--	--	175.75	Yes	Yes
12-09300	3-year	300	--	Y*	--	--	--	--	--	192.5	Yes	Yes
11-01625	6-month	301	--	Y*	--	--	--	--	--	143.25	Yes	Yes
32-01049	6-month	312	--	Y*	--	--	--	--	--	14.75	Yes	Yes
32-01055	6-month	312	--	Y*	--	--	--	--	--	23.5	Yes ^e	Yes

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix B.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
Y* = Yes, but within allowable limits or requirements
-- = None present

e. Drum contains fissile material in excess of WIPP-WAC limits.

TABLE 38. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: UNCEMENTED SLUDGES

Visual Examination Results													
Container ID No.	Time Period	Content Code	Proper ^b Content Code	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?	Organic Content ? (lb)	WIPP Certifiable ?	RTR ^c Certifiable ?	
7412-03121	6-month	1	--	--	Y	Y*	--	--	--	4.5	No	No	
7412-03125	6-month	1	--	--	Y	Y*	--	--	--	4.5	No	Yes	
7412-03127	6-month	1	--	--	--	Y*	--	--	--	4.5	Yes	Yes	
7412-03128	6-month	1	--	--	Y	Y*	--	--	--	4.5	No	No	
7412-00483	3-year	1	--	--	--	Y*	--	--	--	4.5	Yes	Yes	
7412-00636	3-year	1	--	--	--	Y*	--	--	--	5.5	Yes	Yes	
7412-00766	3-year	1	--	--	--	Y*	--	--	--	4.5	Yes	Yes	
7412-00797	3-year	1	--	--	--	Y*	--	--	--	4.5	Yes	Yes	
741-12404	12-year	1	--	--	Y	Y*	--	--	--	4.0	No	No	
741-12411	12-year	1	--	--	--	Y*	--	--	--	4.0	Yes	Yes	
741-12794	12-year	1	--	--	--	Y*	--	--	--	4.0	Yes	Yes	
741-12847	12-year	1	--	--	--	Y*	--	--	--	4.0	Yes	Yes	
741-12858	12-year	1	--	--	--	Y*	--	--	--	4.0	Yes	Yes	
742-26150	6-month	2	--	--	Y	Y*	--	--	--	2.0	No	No	
742-26152	6-month	2	--	--	Y	Y*	--	--	--	2.0	No	Yes	
742-26154	6-month	2	--	--	Y	Y*	--	--	--	2.0	No	Yes	
742-21396	12-year	2	--	--	--	Y*	--	--	--	1.0	Yes	Yes	
742-21440	12-year	2	--	--	Y	Y*	--	--	--	1.5	No	No	
742-21594	12-year	2	--	--	--	Y*	--	--	--	1.0	Yes	No	
742-21640	12-year	2	--	--	Y	Y*	--	--	--	1.0	No	Yes	
743-16469	6-month	3	--	--	Y	Y*	--	--	--	221.0	No	No	
743-16487	6-month	3	--	--	Y	Y*	--	--	--	265.0	No	Yes	
743-16656	6-month	3	--	--	--	Y*	--	--	--	200.0	Yes	Yes	
743-16733	6-month	3	--	--	--	Y*	--	--	--	306.0	Yes	Yes	
743-15075	3-year	3	--	--	Y	Y*	--	--	--	288.75	No	No	
743-15037	3-year	3	--	--	--	Y*	--	--	--	263.0	Yes	Yes	
743-15312	3-year	3	--	--	Y	Y*	--	--	--	326.0	No	No	
743-15023	3-year	3	--	--	Y	Y*	--	--	--	285.25	No	Yes	
743-11586	12-year	3	--	--	Y	Y*	--	--	--	3.0	No	No	
743-11682	12-year	3	--	--	Y	Y*	--	--	--	3.0	No	Yes	
743-11838	12-year	3	--	--	--	Y*	--	--	--	3.0	Yes	Yes	
743-11870	12-year	3	--	--	--	Y*	--	--	--	3.0	Yes	Yes	

TABLE 38. (Continued)

WASTE FORM CATEGORY: UNCEMENTED SLUDGES

Visual Examination Results												
Container ID No.	Time Period	Content Code	Proper ^b	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?	Organic	WIPP Certifiable ?	RTR ^c
			Content Code							Content ? (lb)		Certifiable ?
747-00944	6-month	7	--	--	Y	Y*	--	--	--	4.5	No	Yes
747-01488	6-month	7	--	--	Y	Y*	--	--	--	4.5	No	No
747-01492	6-month	7	--	--	Y	Y*	--	--	--	4.5	No	No
747-01531	6-month	7	--	--	Y	Y*	--	--	--	4.5	No	No
02-40342	6-month	292	--	--	Y	Y*	--	--	--	31.25	No	No
02-39229	6-month	292	--	--	Y	Y*	--	--	--	30.25	No	No
02-39213	6-month	292	--	--	--	Y*	--	--	--	26.75	Yes	Yes
02-39435	6-month	292	--	--	Y	Y*	--	--	--	20.75	No	No
40-00063	3-year	292	--	--	Y	Y*	--	--	--	37.25	No	No
76-01642	3-year	292	--	Y*	--	Y*	--	--	--	5.0	Yes	No
76-01643	3-year	292	--	Y	--	--	--	--	--	5.5	No	No
76-01644	3-year	292	--	Y	--	--	--	--	--	5.0	No	No

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix B.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
Y* = Yes, but within allowable limits or requirements
-- = None present

TABLE 39. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: CEMENTED SLUDGES AND SOLUTIONS

Visual Examination Results												
Container ID No.	Time Period	Content Code	Proper ^b Content Code	Immobilization (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?	Organic Content ? (lb)	WIPP Certifiable ?	RTR ^c Certifiable ?
744-3829	6-month	4	--	--	--	--	--	--	--	4.5	Yes	Yes
744-3837	6-month	4	--	--	--	--	--	--	--	4.5	Yes	Yes
744-3841	6-month	4	--	--	--	--	--	--	--	4.5	Yes	Yes
744-3846	6-month	4	--	--	--	--	--	--	--	4.5	Yes	Yes
744-3848	6-month	4	--	--	--	--	--	--	--	4.5	Yes	Yes
744-2368	12-year	4	--	--	--	--	--	--	--	4.0	Yes	Yes
744-2376	12-year	4	--	--	Y	--	--	--	--	4.0	No	Yes
744-2389	12-year	4	--	--	--	--	--	--	--	4.0	Yes	No
744-2430	12-year	4	--	--	--	Y*	--	--	--	4.0	Yes	Yes
744-2442	12-year	4	--	--	--	--	--	--	--	4.0	Yes	Yes
									--	4.0	Yes	Yes

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix B.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
Y* = Yes, but within allowable limits or requirements
-- = None present

TABLE 40. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: CONCRETE, BRICK

Visual Examination Results												
Container ID No.	Time Period	Content Code	Proper ^b Content Code	Immobilization (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?	Organic Content ? (lb)	WIPP Certifiable ?	RTR ^c Certifiable ?
02-45508	6-month	371	--	Y*	--	--	--	--	--	14.2	Yes	Yes
02-21470	6-month	371	--	Y*	--	--	--	--	--	30.0	Yes	Yes
01-08836	12-year	371	--	Y*	--	--	--	--	--	20.4	Yes	Yes
02-10586	12-year	371	--	Y*	--	--	--	--	--	17.2	Yes	Yes
02-11061	12-year	371	--	Y*	--	--	--	--	--	17.0	Yes	Yes
02-11379	12-year	371	--	Y*	--	--	--	--	--	11.0	Yes	Yes
02-44115	6-month	377	--	Y*	--	--	--	--	--	16.4	Yes	Yes
01-08083	12-year	960	--	Y*	--	--	--	--	--	1.0	Yes	Yes

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix B.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
 Y* = Yes, but within allowable limits or requirements
 -- = None present

TABLE 41. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: SALTS

Visual Examination Results												
Container ID No.	Time Period	Content Code	Proper ^b Content Code	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?	Organic Content ? (1b)	WIPP Certiffiable ?	RTR ^c Certiffiable ?
01-05779	6-month	409	--	Y*	--	--	--	--	--	3.0	Yes ^e	Yes
03-02724	6-month	409	--	Y*	--	-	--	--	--	18.2	Yes	Yes
01-05486	6-month	414	--	Y*	--	Y*	--	--	--	16.0	Yes	Yes

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix B.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
Y* = Yes, but within allowable limits or requirements
-- = None present

e. Drum contains fissile material in excess of WIPP-WAC limits.

TABLE 42. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: LEADED RUBBER

Visual Examination Results													
Container ID No.	Time Period	Content Code	Proper ^b Content Code	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?	Organic Content ? (lb)	WIPP Certifiable ?	RTR ^c Certifiable ?	
19-01831	6-month	339	--	--	--	--	--	--	--	35.0	Yes	Yes	
19-01840	6-month	339	--	--	--	--	--	--	--	5.5	Yes	Yes	
19-01845	6-month	339	--	--	--	--	--	--	--	1.5	Yes	Yes	
19-01884	6-month	339	--	--	--	--	--	--	--	11.0	Yes	Yes	
19-01472	3-year	339	--	--	--	--	--	--	--	6.75	Yes	Yes	
22-00224	12-year	339	--	--	--	--	--	--	--	9.3	Yes	Yes	
23-00435	12-year	339	--	--	--	--	--	--	--	20.5	Yes	Yes	

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix B.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
 Y* = Yes, but within allowable limits or requirements
 -- = None present

TABLE 43. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: BENELEX, PLEXIGLAS

Visual Examination Results												
Container ID No.	Time Period	Content Code	Proper ^b	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/Compressed Gases ?	Toxic/Corrosive Materials ?	Organic	WIPP Certifiable ?	RTR ^c
			Content Code							Content ? (lb)		Certifiable ?
02-10126	12 year	302	--	--	--	--	--	--	--	11.0	Yes	Yes
02-10283	12 year	302	--	--	--	--	--	--	--	14.5	Yes	Yes
02-10436	12 year	302	--	--	--	--	--	--	--	9.8	Yes	Yes
02-10502	12 year	440	302	--	--	--	--	--	--	13.0	Yes	Yes
01-08991	12 year	302	--	--	--	--	--	--	--	18.0	Yes	Yes
02-10316	12 year	302	--	--	--	--	--	--	--	10.9	Yes	Yes
01-08266	12 year	464	--	--	Y	--	--	--	--	16.5	No	No

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix B.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
Y* = Yes, but within allowable limits or requirements
-- = None present

TABLE 44. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: RESINS

Visual Examination Results												
Container ID No.	Time Period	Content Code	Proper ^b Content Code	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?	Organic Content ? (lb)	WIPP Certifiable ?	RTR ^c Certifiable ?
02-39189	6-month	432	--	Y*	--	--	--	--	--	31.5	Yes	Yes
02-39215	6-month	432	--	--	Y	--	--	--	--	35.0	No	Yes
02-39296	6-month	432	--	--	--	--	--	--	--	30.0	Yes	Yes
02-44427	6-month	432	--	Y*	--	--	--	--	--	6.9	Yes	Yes
02-34829	3-year	432	--	Y*	--	--	--	--	--	31.5	Yes	Yes
02-34844	3-year	432	--	Y*	--	--	--	--	--	13.0	Yes	Yes
02-34830	3-year	432	--	Y*	--	--	--	--	--	29.75	Yes	Yes
01-08811	12-year	371	432	Y*	--	--	--	--	--	21.7	Yes	Yes
01-08956	12-year	432	--	Y*	--	--	--	--	--	22.7	Yes	Yes
02-10070	12-year	432	--	Y*	--	--	--	--	--	19.9	Yes	Yes
02-10195	12-year	432	--	Y*	Y	--	--	--	--	24.2	No	Yes
02-10286	12-year	432	--	Y*	--	--	--	--	--	22.2	Yes	Yes
02-10288	12-year	432	--	Y*	Y	--	--	--	--	21.7	No	Yes

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix B.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
Y* = Yes, but within allowable limits or requirements
-- = None present

TABLE 45. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: MIXED WASTE--PAPER, METAL, GLASS, ETC.

Container ID No.	Time Period	Content Code	Visual Examination Results									Organic Content ? (lb)	WIPP Certifiable ?	RTR ^C Certifiable ?
			Proper ^b Content Code	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/Compressed Gases ?	Toxic/Corrosive Materials ?					
01-08068	12 year	241	--	--	Y	--	--	--	--	37.5	No	No		
1371-586	12 year	950	--	Y*	--	--	--	--	--	169.8	Yes	Yes		

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix B.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
Y* = Yes, but within allowable limits or requirements
-- = None present

TABLE 46. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: FILTERS

Visual Examination Results												
Container ID No.	Time Period	Content Code	Proper ^b	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?	Organic	WIPP	RTR ^c
			Content Code							Content ? (lb)		
89-03509	12 year	338	--	Y*	--	--	--	--	--	4.0	Yes	No

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix B.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
Y* = Yes, but within allowable limits or requirements
-- = None present

2.5.1 Immobilization

A total of 67 waste containers were sampled for particulates. Of these, two had particulates in excess of the WIPP-WAC requirement. Both waste drums contained 3-year-old Code 292 sludge in bulk form.

The sludge was a mixture of dry Portland cement and what appeared to be fly-ash from the aqueous off-gas treatment system for the plutonium recovery incinerator. Table 47 is a summary of all particle size analyses. The weight percent particulates indicated is based on the waste matrix weight.

2.5.2 Free Liquids

A total of 50 of the examined waste containers were found to contain free liquids. Of the 50 waste containers, 24 (48%) were found in the uncemented waste form category, 14 (28%) in the combustible waste form category, and 5 (10%) in the metal waste form category. The largest volumes of free liquid, up to 24.0 L, were found in the uncemented sludge category. Table 48 summarizes the analytical results on free liquids found during the visual examination of the waste.

2.5.3 Sludge

A total of 48 sludge pH analyses were performed. Results of the analyses are found in Table 49. As can be seen in Table 49, the majority of results indicate the sludge is either neutral or slightly basic. Although not required, the major and minor composition of some of the sludges was determined by IR spectroscopy (see Table 50). The 90-mil rigid polyethylene drum liner or the drum and box plastic bags were considered sufficient to provide corrosion protection. If sludges were present in the waste, the presence of the liner or bags was used to determine that the sludge criterion was met.

TABLE 47. SUMMARY OF PARTICLE SIZE ANALYSES

Waste Form Category	Container ID Number	Content Code	Time Period	Total	
				Wt% <212 μ m	Wt% <10 μ m
Combustibles	42-00192	330	6-month	0.009	<0.001
	38-00101	330	6-month	0.071	<0.001
	389-90609	330	6-month	0.001	<0.001
	89-03607	330	12-year	0.36	<0.001
	744-3789	337	6-month	0.33	0.005
	389-85743	337	12-year	0.043	<0.001
Metals	55-00290	320	3-year	0.025	0.002
	78-00199	480	6-month	0.87	<0.001
	31-00939	480	6-month	0.001	<0.001
	45-00528	480	6-month	0.62	<0.001
	389-90895	480	6-month	0.013	<0.001
	389-90828	480	6-month	1.50	0.006
	19-01919	481	6-month	0.09	<0.001
	02-35083	480	3-year	0.37	0.006
	42-00209	480	3-year	0.022	0.001
	02-12224	480	12-year	2.61	0.002
	02-10128	480	12-year	0.008	<0.001
	25-00036	480	12-year	0.96	0.004
	389-85811	480	12-year	<0.001	<0.001
Glass	02-34934	440	3-year	0.002	<0.001
	29-00030	440	3-year	0.375	0.017
	37-02018	440	3-year	0.286	0.002
	76-01366	440	3-year	0.006	<0.001
	36-00628	440	12-year	0.32	<0.001
	02-10576	440	12-year	0.8	0.030
	36-00805	441	12-year	0.17	<0.001
	89-04072	441	12-year	<0.001	<0.001
	05-01596	442	3-year	0.022	0.002
	42-00226	442	3-year	0.010	<0.001
Nonmetal Molds and Crucibles	12-11023	300	6-month	0.039	<0.001
	19-01811	300	6-month	0.013	<0.001
	12-11229	300	6-month	0.018	<0.001
	41-01531	300	6-month	0.012	<0.001

TABLE 47. (Continued)

Waste Form Category	Container ID Number	Content Code	Time Period	Total	
				Wt% <212 μ m	Wt% <10 μ m
Nonmetal Molds and Crucibles	12-09189	300	3-year	0.020	<0.001
	12-09295	300	3-year	0.022	<0.001
	12-09161	300	3-year	0.016	<0.001
	12-09300	300	3-year	0.033	<0.001
	11-01625	301	6-month	0.014	<0.001
	32-01049	312	6-month	0.16	0.003
	32-01055	312	6-month	11.56	0.069
Uncemented Sludges	76-01642	292	3-year	1.40	0.20
	76-01643	292	3-year	15.7	1.20
	76-01644	292	3-year	26.6	2.30
Concrete, Brick	02-21470	371	6-month	0.11	0.002
	02-11061	371	12-year	0.11	0.001
	02-10586	371	12-year	0.38	0.001
	01-08836	371	12-year	0.030	<0.001
	02-11379	371	12-year	1.09	0.032
	01-08083	960	12-year	0.067	<0.001
	02-44115	337	6-month	0.529	0.001
	02-44115	337	6-month	0.295	<0.001
	01-05779	409	6-month	0.89	0.003
	01-05486	414	6-month	2.24	0.010
Salts	03-02724	409	6-month	0.66	<0.001
	02-39189	432	6-month	<0.001	<0.001
	02-34829	432	3-year	0.042	0.002
Resins	02-34844	432	3-year	0.095	0.001
	02-34830	432	3-year	1.09	0.011
	02-10288	432	12-year	0.037	<0.001
	02-10070	432	12-year	0.015	<0.001
	02-10286	432	12-year	0.001	<0.001
	01-08956	432	12-year	0.024	<0.001
	02-10195	432	12-year	<0.001	<0.001
	01-08811	432	12-year	<0.001	<0.001
	02-44427	432	6-month	0.232	<0.001
	1371-586	950	12-year	0.002	<0.001
	89-03509	338	12-year	0.11	0.001
Mixed Waste					
Filters					

TABLE 48. SUMMARY OF FREE LIQUID ANALYSES

Waste Form Category	Container ID Number	Content Code	Time Period	Total Volume (mL)	pH	Liquid Composition
Combustibles	02-39453	328	6-month	4	12	Major: carbonates and/or nitrates; minor: water
	02-39481	328	6-month	68	12	Major: water; minor: carbonates, silicates
	389-90417	330	6-month	150	8	Water, organic material (possibly polyacrylamide)
	389-90609	330	6-month	68	7	Major: water; minor: silicates
	23-01599	336	6-month	188	7	Freon TF, unidentified oil
	47-00256	336	6-month	--	--	No laboratory results received
	744-3792	337	6-month	20 ^a	12	Major: water; minor: carbonates and/or nitrates
					12	Major: water; minor: carbonates
					12	Carbonates and/or nitrates, water
	744-3823	337	6-month	12 ^a	7	Major: water; minor: silicates
	744-3789	337	6-month	1 ^a	12	Water, carbonates and/or nitrates
	65-00137	336	12-year	20	5	Water, flourides, sulfates, nitrates, trace organics (outside of rigid liner)
	90-00039	336	12-year	295	--	No sample taken-hand lotion
	746-2906	900	12-year	15	12	Water, silicates, carbonates, trace organics, nitrates (outside of rigid liner)
	746-2918	900	12-year	10	--	No sample taken-liquid appeared to be water or condensation outside of rigid liner
Metals	389-85743	337	12-year	1,400	--	No sample taken-liquid was very viscous partially hardened strippable coating
	389-90895	480	6-month	60	7	Chlorinated paraffin oil, unidentified ester
	389-90828	480	6-month	10	7	Alkyl phenol polyoxyethylene, unidentified oil
	78-00199	480	6-month	250	--	WD-40 ^R -glyceryl fatty esters, C ₉ & C ₁₀ isoparaffin, solvent, Freon 12, Dykem ^R steel blue-butyl acetate, ethanol, nitrocellulose, stannous oxide.
	389-85811	480	12-year	3,100	7	Water, silicates, carbonates, trace organics, nitrates
Uncemented Sludges	389-20305	480	6-month	5	--	Liquid was several drops of water from coils of heat exchanger
	02-40342	292	6-month	165	12	Major: water; minor: carbonates
					12	Major: water; minor: carbonates, silicates and/or sulfates, unidentified organic
					12	Major: water; minor: carbonates and/or nitrates
					12	Major: water, minor: carbonates and/or nitrates
	02-39229	292	6-month	966	12	Major: water; minor: carbonates (both samples)
	02-39435	292	6-month	410	12	Major: water; minor: carbonates and/or nitrates, silicates and/or sulfates
	40-00063	292	3-year	135	12	Major: water; minor: carbonates and unknown organics
					12	Major: water, unidentified oil and ester, minor: carbonates

TABLE 48. (Continued)

Waste Form Category	Container ID Number	Content Code	Time Period	Total Volume (mL)	pH	Liquid Composition
	743-15075	3	3-year	6000	12	Grease, trichloroethane, and unidentified carbonyl containing compound
	743-15312	3	3-year	2450	7	Oil and unidentified ester
	743-15023	3	3-year	400	--	Light hydrocarbons, grease, and alkyl phenol polyoxyethylene
	7412-03121	1	6-month	17350	12	Water, Nitrates
	7412-03125	1	6-month	507	12	Water, Nitrates
	7412-03128	1	6-month	5500	12	Water, sulfates and/or silicates nitrates
	742-26150	2	6-month	18950	12	Water, nitrates, oxides. Sulfates and/or silicates
	742-26152	2	6-month	1425	12	Water, carbonates and/or nitrates silicates and/or sulfates
	742-26154	2	6-month	950	12	Water, carbonates and/or nitrates sulfates and/or silicates
	747-00944	7	6-month	1465	12	Water, unknown organics, sulfates and/or silicates, carbonates and/or nitrates
	747-01488	7	6-month	22250	12	Water, carbonates and/or nitrates sulfates and/or silicates
					7	Unknown organic, carbonates and/or nitrates; sulfates and/or silicates
	747-01492	7	6-month	15500	12	Water, carbonates and/or nitrates
	747-01531	7	6-month	24000	12	Water, unknown organic carbonates and/or nitrates
	743-16469	3	6-month	3000	7	Unidentified oil, unidentified ester
	743-16487	3	6-month	1000	12	Unidentified oil, unidentified ester
	741-12404	1	12-year	430	12	Water, sodium nitrate, unidentified basic compound
	742-21640	2	12-year	2700	8	Water, sodium nitrate
	742-21440	2	12-year	22000	12	Water, sodium nitrate, unidentified basic compound
	743-11682	3	12-year	130	5	Paraffinic base oil, carbon tetrachloride, trichloroethylene, small water layer
	743-11586	3	12-year	12250	5	Paraffinic base oil, carbon tetrachloride, trichloroethylene, perchluorethylene, unidentified ester oil, small water layer
				4000	3	Paraffinic base oil, carbon tetrachloride, trichloroethylene, perchlorethylene, small water layer (in bottle)
Cemented Sludges and Solutions	744-2376	4	12-year	20	--	No sample taken-liquid appeared to be water or condensation outside of rigid liner
Glass	17-04562	442	3-year	--b	--	Grease and phthalate ester
Benelex, Plexiglas	01-08260	464	12-year	1400	6	Water, carbonates, sulfates, trace organic (outside of rigid liner)
Resins	02-39215	432	6-month	75	12	Major: water; minor: carbonates and/or nitrates, unidentified organic
	02-10288	432	12-year	520	7	Water, sodium nitrate
	02-10195	432	12-year	50	--	Could not collect sample
Mixed Waste	01-08068	241	12-year	22700	--	No sample taken-too high dose rate

a. Sample volume--actual volume measurement not recorded.

b. Not measurable--oil film.

TABLE 49. SUMMARY OF SLUDGE pH ANALYSES

<u>Waste Form Category</u>	<u>Container ID Number</u>	<u>Content Code</u>	<u>Time Period</u>	<u>pH</u>
Combustibles	02-39481	328	6-month	12
	76-02898	330	6-month	7
	744-02898	330	6-month	12
				12
Uncemented Sludges	7412-03121	1	6-month	12
	7412-03125	1	6-month	12
	7412-03127	1	6-month	12
	7412-03128	1	6-month	12
	7412-00483	1	3-year	12
	7412-00636	1	3-year	12
	7412-00766	1	3-year	12
	7412-00797	1	3-year	--
	741-12411	1	12-year	6
	741-12404	1	12-year	8
	741-12847	1	12-year	8
	741-12794	1	12-year	8
	741-12858	1	12-year	8
	742-26150	2	6-month	12
	742-26152	2	6-month	12
	742-26154	2	6-month	12
	742-21640	2	12-year	8
	742-21594	2	12-year	8
	743-21440	2	12-year	8
	742-21396	2	12-year	8
	743-16649	3	6-month	12
	743-16487	3	6-month	12
	743-16656	3	6-month	12
	743-16733	3	6-month	12
	743-15075	3	3-year	12
	743-15037	3	3-year	--
	743-15312	3	3-year	7
	743-15023	3	3-year	--

TABLE 49. (Continued)

<u>Waste Form Category</u>	<u>Container I.D. Number</u>	<u>Content Code</u>	<u>Time Period</u>	<u>pH</u>
	743-11682	3	12-year	--
	743-11870	3	12-year	--
	743-11586	3	12-year	--
	743-11838	3	12-year	--
	747-00944	7	6-month	12
	747-01488	7	6-month	12
	747-01492	7	6-month	12
	747-01531	7	6-month	12
	02-40432	292	6-month	12
	02-39229	292	6-month	12
	02-39213	292	6-month	12
	02-39435	292	6-month	12
	40-00063	292	3-year	12
Cemented Sludges and Solutions	744-2430	4	12-year	7.5

TABLE 50. SUMMARY OF SLUDGE COMPOSITIONAL ANALYSES

Waste Form Category	Container ID Number	Content Code	Time Period	pH	Sludge Composition
Combustibles	02-39481	328	6-month	12	Major: silicates and/or sulfates; minor: water
	76-02898	330	6-month	7	Major: silica; minor: water, unidentified organic
	744-3792	337	6-month	12 12	Major: nitrates and/or carbonates; minor: water Major: carbonates; minor: water
Uncemented Sludges	7412-00483	1	3-year	12	Major: carbonates and/or nitrates; minor: water
	7412-00636	1	3-year	12	Major: carbonates and/or nitrates, silicates and/or sulfates; Minor: water
	7412-00766	1	3-year	12	Major: carbonates and/or nitrates, silicates, minor: water
	7412-00797	1	3-year	--	No laboratory results received
	743-15075	3	3-year	12	Major: carbonates and/or nitrates, and silicates and/or sulfates; minor: water
	743-15037	3	3-year	--	No laboratory results received
	743-15312	3	3-year	7	Major: silicates and/or sulfates, carbonates and/or nitrates; minor: water
	743-15023	3	3-year	--	No sludge results received
	02-40432	292	6-month	12	Major: carbonates, silicates and/or sulfates; minor: water
	02-39229	292	6-month	12	Major: silicates and unknown inorganics; minor: water
	02-39213	292	6-month	12	Major: silicates and/or sulfates; minor: water
	02-39435	292	6-month	12	Major: silicates and carbonates; minor: water
	40-00063	292	3-year	12	Major: silicates; minor: water

2.5.4 Pyrophoric Materials

No evidence of spontaneous combustion was found in any waste container. Two Nonmetal Mold and Crucible (Code 300) waste drums (Drum No. 12-11023, a 6-month-old, and Drum No. 12-09295, 3-year-old) contained small amounts of plutonium metal, which sparked when struck by a steel knife, adhered to pieces of graphite molds. Both drums contained much less plutonium than the 1-wt% limit allowed by the WIPP-WAC. Also, the salt waste drums are expected to contain 1 - 3% calcium metal. The salt waste is generated from pyrochemical operations. The calcium metal, which is distributed as small beads throughout the salt matrix, was not considered hazardous. The drums were considered certifiable since there was no evidence of spontaneous combustion.

2.5.5 Explosives and Compressed Gases

No explosives of any type were found in the visually examined waste containers. Pressurized aerosol cans were found in two waste containers. Drum No. 78-00199 (metal, Code 480, 6-month-old) contained one aerosol can of WD-40 (tradename). Box No. 389-90895 (metal, Code 480, 6-month-old) contained two pressurized aerosol cans. One aerosol can contained spray paint, the other contained shaving cream.

2.5.6 Toxic and Corrosive Materials

All waste containers were examined for toxic and corrosive materials. Liquids and solids were collected and analyzed (see Tables 48 and 50 for liquid and sludge analytical results).

No Poison A or Poison B materials were identified in the examined waste containers.

2.5.7 Combustibility

Although the WIPP-WAC no longer requires identifying waste containers with more than 25 volume percent combustibles, these data are included in Appendix B for each waste container.

2.5.8 Gas Generation

The organic content of each waste container was collected and weighed (excluding the 90-mil rigid liner in drums). This information is included in Tables 34 through 46.

2.5.9 Fissile Material

Two waste drums were found to contain greater than 200 g plutonium when reassayed at RFP. Drum No. 32-01055 (Content Code 312, Coarse Graphite) had an original assay of 35 grams plutonium. Reassay of the drum contents indicated 191 to 313 grams plutonium, depending on the assay method used (see Section 2.1.4.1). Drum No. 01-05779 (Content Code 409, Molten Salt) had an original assay of 190 g plutonium. Upon reassay, using a high resolution gamma-scan can counter, 208 g of plutonium was determined to be present.

3. LANL DATA

This section contains the data obtained from sampling and characterizing ^{239}Pu - and ^{238}Pu -contaminated wastes at LANL. A total of 18 ^{238}Pu waste drums (six 8-month-old, six 3-year-old, and six 9-year-old) and 23 ^{238}Pu waste drums (three newly generated, 20 1-year old and four ~2.5-year-old) were gas-sampled. All 18 ^{238}Pu drums and 15 of the ^{239}Pu drums were opened and examined. The ^{239}Pu -contaminated wastes were included to allow LANL to gain experience in opening and examining lower-activity wastes in the LANL Size Reduction Facility prior to opening and examining higher-activity (^{238}Pu) wastes. Drums selected for sampling included known gas-generating waste forms. The gas sampling, opening and examination of the waste (Task 9 of the implementation plan²) was conducted using the guidelines established in Section 2.1.4 of this report.

3.1 Waste Retrieval

A total of eighteen 30-gallon drums containing ^{238}Pu -contaminated waste were retrieved from the Los Alamos Waste Disposal Site (Area G). Six 30-gallon drums approximately 8 months old had been stored in a shed at Area G and were readily available for study. A second group of six 30-gallon drums were retrieved from concrete casks in Trench "A" at Area G. These were approximately 9 years old. The third group of six 30-gallon drums were recovered from similar casks in Trench "C" at Area G. These were approximately 39 months old. The 39-month-old drums were all in excellent condition, with no rusting apparent. All tags and stenciled labels were in excellent condition and completely legible. In contrast, the 9-year-old drums were rusted. Several drums had water standing on the lids when the casks were opened. It is believed that wet weather caused rain to puddle on the cask lids before the trench decking and tuff overburden had been put in place, and the water was able to saturate the lids and trickle through into the cask. However, in spite of their

apparent rusted condition, there was no serious corrosive damage. The integrity of the containers was maintained as shown by later examination. Drum labels and identifying marks generally were intact and legible.

A total of 23 ²³⁹Pu-contaminated waste drums were retrieved to support the sampling program. The 8-month-old waste was removed from aboveground TRU Storage Pad No. 2 and moved inside the storage shed at Area G. Four additional drums, which were 26 months old, were recovered from Cell 2, Pit 9, the first retrievable storage facility used at Los Alamos for TRU waste. Except for periodic monitoring of air in this cell, it had been closed from the summer of 1977 until June 1981 when the cell was penetrated to determine waste container condition. The drums were found to be coated with finely divided tuff. There were a few small areas of light rust on the drums, but no significant corrosion. The drums overall were in excellent condition.

During reclosure of Cell 2 in 1981, four 55-gallon drums (two coated with corrosion inhibitors and two uncoated) were placed at the bottom of the access shaft. When the TRU Waste Sampling Program was initiated in 1983, it was decided to include these four drums in the group of drums to be evaluated. When these four drums were recovered, there was no discernible difference in condition between the coated and uncoated drums.

During reopening of Cell 2, airborne activity was monitored and a gas sample was taken for compositional analysis. The 24-hour constant air monitor filter sample showed 20,000 counts per minute alpha activity. The activity was determined to be radon-thoron. The filter was allowed to decay for 24 hours, after which no activity was found. A sample of the cell atmosphere indicated elevated hydrogen levels. Although the level did not constitute a hazard, the cell air was purged prior to entering the cell. Results of the gas sampling, including results from the 1981 cell penetration, are in Table 51.

TABLE 51. RESULTS OF GAS ANALYSES FOR LANL CELL 2, PIT 9, AREA G

<u>Component</u>	<u>June 1981 (vol %)</u>	<u>August 1983 (vol %)</u>
Hydrogen	0.7	2
Helium	<0.1	<0.1
Carbon Monoxide	<0.1	<0.1
Nitrogen	79	78
Methane	<0.1	<0.1
Oxygen	16	19
Argon	0.9	0.9
Carbon Dioxide	3	0.1

3.2 Gas Sampling and Analysis

A total of 18 30-gallon drums containing ^{239}Pu -contaminated waste and 23 55-gallon drums containing ^{238}Pu -contaminated waste were gas-sampled. The gas sampling was consistent with the quality assurance requirements identified in Section 1.3. The gas samples were analyzed by mass spectrometry. The gas pressure in each drum was also measured. As expected, the sampled LANL drums were at atmospheric pressure. Each drum is sealed with a sponge-rubber gasket which is liquid- and particle-tight, but allows gas in excess of atmospheric pressure to diffuse out of the container.

3.2.1 Gas Sampling Results

The gas sampling results are shown in Tables 52 to 60. The results are separated by waste form category and by contaminant (^{238}Pu , ^{239}Pu).

Results of the analysis conducted on the EG&G supplied gas standard are presented in Table 61. The certified standard (Bottle No. 1) contained 2.56% H_2 , 12.0% CO_2 , 18.7% O_2 , and 66.7% N_2 . The relative error for the LANL analysis is:

$$\text{H}_2 = +3.52\%, \text{CO}_2 = -3.33\%, \text{O}_2 = +0.52\%, \text{and } \text{N}_2 = -1.50\% .$$

For ^{239}Pu -contaminated wastes, the maximum hydrogen content found, for any aged waste, was 1.4 vol%. This would indicate that the LANL method for sealing drums with semipermeable sponge rubber gaskets maintains hydrogen levels at safe concentrations. These drums should not represent a transportation problem.

However, of the 18 ^{238}Pu waste drums sampled, three of the six 8-month-old drums contained hazardous gas mixtures that could be flammable or explosive if exposed to an ignition source. One drum (No. BFB-101) of combustible waste contained 7.1% H_2 and 15.4% O_2 . Two drums

TABLE 52. GAS SAMPLING RESULTS

WASTE FORM CATEGORY: COMBUSTIBLES (LANL-Pu²³⁸)

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total ^a Activity (Ci)	Measured ^d N (Total)	Expected ^d N (Total)
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^a	Trichl ^b	Other H.C. ^c	(mm Hg)	Gauge (mm Hg)					
BFB-101	8 mths	A-16	7.1	15.4	68.7	0.8	4.8	2.9	--	0.3	--	--	580	--	107 ^e	368	167.0	0.40	41.6
BFB-27	35 mths	A-18	--	9.3	79.2	1.0	10.1	0.4	--	--	--	--	580	--	105 ^e	1,220	5.80	0.34	4.8
BFB-14	36 mths	A-14	--	14.7	79.3	1.0	4.6	0.4	--	--	--	--	580	--	107 ^e	1,271	2.35	0.16	2.0
BFB-20	36 mths	A-16	0.1	18.9	79.3	1.0	0.6	0.2	--	--	--	--	580	--	92 ^e	1,265	0.0	0.02	<0.01

a. Hydrocarbons (saturated)--methane through propane.

b. Abbreviation for 1,1,1-trichloroethane.

c. Other hydrocarbons--as specified.

d. N = moles of radiolytic produced gas.

e. Void volume was calculated based on weight and density of material in the drum.

TABLE 53. GAS SAMPLING RESULTS

WASTE FORM CATEGORY: METALS (LANL-Pu²³⁸)

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total ^a Activity (Ci)	Measured ^d N (Total)	Expected ^e N (Total)
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^a	Trichl ^b	Other H.C. ^c	(mm Hg)	Gauge (mm Hg)					
BFB-19	37 mths	A-61	0.1	18.0	79.8	1.0	1.1	--	--	--	--	--	--	--	--	1,265	7.18	--	--
BFB-235	111 mths	A-61	0.1	18.1	80.5	1.0	0.3	--	--	--	--	--	--	--	--	3,365	29.0	--	--
BFB-237	111 mths	A-61	--	14.2	83.4	1.0	1.3	--	--	--	--	--	--	--	--	3,365	48.3	--	--
BFB-238	111 mths	A-61	--	17.1	81.5	1.0	0.3	--	--	--	--	--	--	--	--	3,365	0.0	--	--
BFB-239	111 mths	A-61	--	19.5	79.2	1.0	0.3	--	--	--	--	--	--	--	--	3,365	8.97	--	--
BFB-240	111 mths	A-61	--	18.2	80.2	1.0	0.5	--	--	--	--	--	--	--	--	3,365	15.2	--	--

a. Hydrocarbons (saturated)--methane through propane.

b. Abbreviation for 1,1,1-trichloroethane.

c. Other hydrocarbons--as specified.

d. N = moles of radiolytic produced gas.

e. No laboratory data available for calculating the expected N (total) for the waste form represented by this content code.

TABLE 54. GAS SAMPLING RESULTS

WASTE FORM CATEGORY: MIXED WASTE (LANL-Pu²³⁸)

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total ^a Activity (Ci)	Measured N (Total) ^d	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^a	Trichl ^b	Other H.C. ^c	(mm Hg)	Gauge (mm Hg)					
BFB-92	7 mths	A-19	1.0	15.8	77.5	1.0	3.9	0.7	--	0.1	--	--	--	--	--	356	60.7	--	--
BFB-102	7 mths	A-19	1.6	18.0	76.5	0.9	1.9	1.0	--	0.1	--	--	580	0	106 ^f	353	33.1	0.12	-- ^e
BFB-103	7 mths	A-19	3.4	16.3	74.0	0.9	3.3	1.8	--	0.2	--	--	--	--	--	354	84.2	--	--
BFB-96	8 mths	A-19	6.6	16.2	69.7	0.9	3.8	2.4	--	0.4	--	--	--	--	--	377	139.0	--	--
BFB-97	8 mths	A-19	18.6	9.4	54.8	0.7	11.7	4.0	--	0.9	--	--	--	--	--	377	130.0	--	--
BFB-26	35 mths	A-19	--	8.7	79.2	1.0	10.5	0.6	--	--	--	--	580	0	104 ^f	1,216	0.0	0.35	-- ^e
BFB-12	39 mths	A-19	0.1	13.2	80.0	1.0	5.2	0.5	--	--	--	--	--	--	--	1,325	66.9	--	--
BFB-234	111 mths	A-19	--	17.8	79.6	2.0	1.5	0.1	--	--	--	--	--	--	--	3,365	170.0	--	--

a. Hydrocarbons (saturated)--methane through propane.

b. Abbreviation for 1,1,1-trichloroethane.

c. Other hydrocarbons--as specified.

d. N = moles of radiolytic produced gas.

e. No laboratory data available for calculating the expected N (total) for the waste form represented by this content code.

f. Void volume was calculated based on weight and density of material in the drum.

TABLE 55. GAS SAMPLING RESULTS

WASTE FORM CATEGORY: COMBUSTIBLES (LANL-Pu239)

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (g)	Storage Time (Days)	Total α Activity (Ci)	Measured N (Total) ^d	Expected N (Total) ^d
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^a	Trichl ^b	Other H.C. ^c	(mm Hg)	Gauge (mm Hg)					
010761	11 mth	A-14	0.0	18.3	78.9	1.0	1.6	0.2	--	--	--	--	--	--	--	354	0.0	--	--
010605	11 mth	A-15	1.4	16.7	77.4	0.9	3.6	0.0	--	--	--	--	580	0	214 ^e	355	8.21	0.34	1.56
012223	11 mth	A-16	1.2	12.2	79.0	1.0	6.3	0.3	--	--	--	--	--	--	--	353	4.82	--	--
010753	11 mth	A-18	0.1	14.4	82.4	2.0	2.1	0.0	--	--	--	--	580	0	213 ^e	354	3.18	0.15	0.60
007060	11 mth	A-18	0.8	14.1	79.2	1.0	4.0	0.9	--	--	--	--	580	0	200 ^e	335	0.26	0.30	0.05
007226	11 mth	A-18	0.1	16.2	78.8	1.0	2.9	1.0	--	--	--	--	580	0	204 ^e	335	0.03	0.19	0.01
010362	12 mth	A-18	0.2	17.6	78.9	1.0	0.5	0.0	--	--	--	--	--	--	--	361	2.87	--	--
010775	30 mth	A-60	0.0	19.6	78.7	1.0	0.7	0.0	--	--	--	--	--	--	--	957	3.14	--	--

a. Hydrocarbons (saturated)--methane through propane.

b. Abbreviation for 1,1,1-trichloroethane.

c. Other hydrocarbons--as specified.

d. N = moles of radiolytic produced gas.

e. Void volume was calculated based on weight and density of material in the drum.

TABLE 56. GAS SAMPLING RESULTS

WASTE FORM CATEGORY: METALS (LANL-Pu239)

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (g)	Storage Time (Days)	Total α Activity (Ci)	Measured N (Total) ^d	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^a	Trichl ^b	Other H.C. ^c	(mm Hg)	Gauge (mm Hg)					
U10435	12-mths	A-52	0.2	19.5	78.8	1.0	0.5	--	--	--	--	--	--	--	--	360	2.89	--	--
010645	11-mths	A-61	0.1	19.4	78.6	1.0	0.7	0.1	--	--	--	--	--	--	--	354	8.65	--	--

a. Hydrocarbons (saturated)--methane through propane.

b. Abbreviation for 1,1,1-trichloroethane.

c. Other hydrocarbons--as specified.

d. N = moles of radiolytic produced gas.

e. No laboratory data available for calculating the expected N (total) for the waste form represented by this content code.

TABLE 57. GAS SAMPLING RESULTS

WASTE FORM CATEGORY: CEMENTED SLUDGES (LANL-Pu239)

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total a Activity (Ci)	Measured N (Total) d	Expected N (Total) e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. a	Trichl b	Other H.C. c	(mm Hg)	Gauge (mm Hg)					
50011	20 dys	A-76	0.1	19.1	79.8	0.9	0.1	<0.1	--	0.1	--	--	--	0.0	--	20	--	--	--
50016	20 dys	A-76	0.1	18.1	80.4	1.0	0.2	<0.1	--	0.2	--	--	--	0.0	--	20	--	--	--
50048	70 dys	A-76	0.1	20.2	78.3	0.9	0.2	<0.1	--	0.2	--	--	--	0.0	--	70	--	--	--
012124	1 yr	A-75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.02	--	--
012307	1 yr	A-75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.38	--	--
012327	1 yr	A-75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.04	--	--
012535	1 yr	A-75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.71	--	--

a. Hydrocarbons (saturated)--methane through propane.

b. Abbreviation for 1,1,1-trichloroethane.

c. Other hydrocarbons--as specified.

d. N = moles of radiolytic produced gas.

e. No laboratory data available for calculating the expected N (total) for the waste form represented by this content code.

TABLE 58. GAS SAMPLING RESULTS

WASTE FORM CATEGORY: SALTS (LANL-Pu239)

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total a Activity (Ci)	Measured N (Total) d	Expected N (Total) e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. a	Trichl b	Other H.C. c	(mm Hg)	Gauge (mm Hg)					
012432	12 mths	A-27	0.1	12.9	73.8	0.8	12.3	--	--	--	--	--	--	--	--	353	5.63	--	--
012433	12 mths	A-27	0.3	17.0	80.9	1.0	0.8	0.3	--	--	--	--	--	--	--	353	0.59	--	--

a. Hydrocarbons (saturated)--methane through propane.

b. Abbreviation for 1,1,1-trichloroethane.

c. Other hydrocarbons--as specified.

d. N = moles of radiolytic produced gas.

e. No laboratory data available for calculating the expected N (total) for the waste form represented by this content code.

TABLE 59. GAS SAMPLING RESULTS

WASTE FORM CATEGORY: MIXED WASTE (LANL-Pu²³⁹)

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total α Activity (Ci)	Measured N (Total) ^d	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^a	Trichl ^b	Other H.C. ^c	(mm Hg)	Gauge (mm Hg)					
010773	11 mth	A-19	0.0	19.4	78.6	1.0	0.8	0.1	--	--	--	--	--	--	--	354	0.01	--	--
010756	30 mth	A-19	0.0	19.9	78.2	1.0	0.7	0.2	--	--	--	--	--	--	--	944	0.0 ^f	--	--

a. Hydrocarbons (saturated)--methane through propane.

b. Abbreviation for 1,1,1-trichloroethane.

c. Other hydrocarbons--as specified.

d. N = moles of radiolytic produced gas.

e. No laboratory data available for calculating the expected N (total) for the waste form represented by this content code.

f. This drum contains ²⁴⁴Am, ²⁴⁸Cf, ²⁴⁹Bk; no gram amounts specified.

TABLE 60. GAS SAMPLING RESULTS

WASTE FORM CATEGORY: PARTICULATE WASTE (LANL-Pu²³⁹)

Container ID No.	Time Period	Content Code	Compositional Analysis (Volume %)										Drum Pressure		Corrected Drum Void Volume (L)	Storage Time (Days)	Total α Activity (Ci)	Measured N (Total) ^d	Expected N (Total) ^e
			H ₂	O ₂	N ₂	Ar	CO ₂	CO	NO _x	H.C. ^a	Trichl ^b	Other H.C. ^c	(mm Hg)	Gauge (mm Hg)					
012395	12 mths	A-25	0.2	13.7	80.1	0.9	4.9	--	--	--	--	--	--	--	--	361	13.7	--	--
010411	12 mths	A-25	0.1	19.9	78.6	1.0	0.3	--	--	--	--	--	--	--	--	353	9.78	--	--
010108	25 mths	A-25	0.0	19.8	78.6	1.0	0.5	0.3	--	--	--	--	--	--	--	927	3.92	--	--
010925	30 mths	A-25	0.5	21.2	76.9	1.0	0.3	0.1	--	--	--	--	--	--	--	935	2.40	--	--
010405	12 mths	A-47	0.1	20.1	78.4	1.0	0.3	--	--	--	--	--	--	--	--	355	14.15	--	--
010494	12 mths	A-47	0.1	19.5	78.7	1.0	0.6	0.2	--	--	--	--	--	--	--	361	14.67	--	--

a. Hydrocarbons (saturated)--methane through propane.

b. Abbreviation for 1,1,1-trichloroethane.

c. Other hydrocarbons--as specified.

d. N = moles of radiolytic produced gas.

e. No laboratory data available for calculating the expected N (total) for the waste form represented by this content code.

TABLE 61. LANL GAS STANDARD ANALYSIS

Analysis	Date	Mol % of Constituents			
		H ₂	N ₂	O ₂	CO ₂
1	08-01-83	2.5	66.3	18.0	10.0
2	12-29-83	2.6	65.9	18.5	11.4
3	02-21-84	3.0	65.3	18.7	11.7
4	03-27-84	3.0	65.8	18.6	11.6
5	03-30-84	2.3	66.7	18.8	11.6
6	04-10-84	3.6	65.0	18.6	11.4
7	05-04-84	2.7	65.6	19.0	11.7
8	05-30-84	1.9	66.3	19.0	11.7
9	06-14-84	2.4	66.3	19.0	11.8
10	07-10-84	2.5	66.1	19.1	11.8
11	08-03-84	<u>2.5</u>	<u>64.9</u>	<u>18.4</u>	<u>11.3</u>
$\bar{x}^a =$		2.65	65.7	18.8	11.6
$\sigma^b =$		0.46	0.57	0.25	0.19
$\sigma/\bar{x}^c =$		17.4%	0.87%	1.33%	1.64%

a. Mean or average.

b. Standard deviation.

c. Coefficient of variation.

(Nos. BFB-96 and BFB-97) of mixed waste contained 6.6% H₂ and 16.2% O₂ and 18.6% H₂ and 9.4% O₂, respectively. All three drums contained greater than 150 alpha curies of activity. Hydrogen concentrations greater than 0.1% were not observed in 3-year-old and 9-year-old ²³⁸Pu-contaminated wastes. These data tend to support earlier laboratory experiments in which less gas is produced, over time, as the organic substrate is depleted by the plutonium contaminant.³ It has also been shown in laboratory experiments that agitation of the test cylinder can temporarily reverse this process, but that the reversal is short-lived, and the rate of gas generation continues to decrease with time.³

3.3 Void Volumes and G-Values

It was not possible to measure void volumes by pressure and volume relationships nor meaningful to calculate G-Values in Los Alamos waste drums because the drums are not required to be sealed gas-tight. Drums are sealed with 0.5-in. semipermeable sponge rubber gaskets, and the closure rings torqued to approximately 40 ft-lb. The drum is liquid- and particle-tight, but not gas-tight. The gaseous contents of the drum are maintained at atmospheric pressure. Any gases generated in excess of approximately 580 torr diffuse harmlessly through the gasket to the atmosphere. The escaping gases have never been found to be radioactive.

Void volumes were estimated by radiography and during visual examination. The estimated void volumes obtained by these two methods, which are reported on the RTR and visual examination sheets in Appendix D, are actually estimates of filling efficiency. Since many of these drums are filled with organic materials, it was suspected that the void volumes would actually be considerably higher. Using the weights and densities of the waste materials, the void volumes for 10 drums were computed to be in the range of 81 to 97%, with the majority over 90% void. The calculated volumes are recorded on the summary sheets.

3.4 Real-Time Radiography Examinations

Most of the LANL drums selected for this program were examined by real-time x-ray radiography (RTR) and recorded on a video tape. The primary purpose for this effort was to verify, to the extent possible, that the contents of the drums did not pose any significant hazard in subsequent handling and sampling operations. It also was of interest to see, however, if adequate information could be determined through this observation to certify the waste contents. The equipment used was older equipment (~1974) available at LANL and was not designed for the purpose of TRU waste certification. State-of-the-art equipment designed specifically for examination and certification of TRU waste, such as the RTR system used at the INEL SWEPP facility, would provide better resolution and examination results. Several drums could not be radiographed with the LANL system due to excessive waste container weight.

Results of the radiographic examinations are contained in Appendix D with the visual examination results. The LANL system did not detect small quantities of free liquids or particulates later found in the drums during visual examination.

3.5 Assay of TRU Content

Reassay of waste drums was conducted using either segmented gamma scan or thermal neutron coincidence counting, whichever was more appropriate for the recorded waste container contents. The summary sheets (Appendix D) indicate the original assay and reassay values are not always in good agreement. In all cases, the original values for these drums were determined as the sum of separate measurements of the individual items in the drum. These individual item measurements were taken by either thermal coincidence neutron (TCN) or segmented gamma assay (SGA) techniques, depending upon the nature of the item. All of the reassays, on the other hand, were conducted on the entire drum of waste. Realizing that the contents of the drums are a mixture of items best measured by either TCN or

SGA, a portion of the contents of each drum, therefore, are not best measured by the technique applied to the drum as a whole. Thus, when items are individually assayed and then placed into a drum and assayed collectively, the problems of assay geometry and matrix effects often can cause significant differences, and the total assay is not equal to the sum of the individual assays. All of the drums reassayed were found still to be within the limits of meeting the WIPP Waste Acceptance Criteria for TRU content.

3.6 Waste Examination

Eighteen ^{238}Pu waste drums and 15 ^{239}Pu waste drums were opened and examined in the Los Alamos Size Reduction Facility (SRF) to determine compliance with the WIPP-WAC. A special glovebox and drum handling rack was constructed and installed inside the SRF for opening and examining the waste containers. Each drum was weighed. The top and upper part of the drum exterior sidewalls were taped with plastic to expedite later decontamination. Each drum was then clamped horizontally on the rack, and the top of the drum pushed through a circular port into the special glovebox. The annular space between the drum and the port was sealed with plastic. The locking ring, lid, and contents of the drum were then removed and examined. The various fractions of waste were separated and weighed (see Tables 62-69). The materials were then categorized to see if they matched the description and content code given on the original disposal record. A determination was then made whether the drum was in compliance with WIPP-WAC. Samples were taken of materials as required. Particulates were collected and measured if sufficient amounts of material were available. Sieves used to categorize particle size were sized at 212 μm and 75 μm .

3.6.1 Waste Form Compliance

Results of the visual examinations are presented in Tables 70 to 77. Specific container results are found in Appendix D.

TABLE 62. WASTE CONTAINER COMPONENT WEIGHTS

WASTE FORM CATEGORY: COMBUSTIBLES (LANL-238PU)

Container ID No.	Time Period	Content Code	Proper ^a Code	Material Type (lbs)														WEIGHTS	
				Glass	Metals				Combustibles						Miscellaneous				
					Hand Tools	Nails	Other	Leaded Gloves	Cheesecloth	Rags	Paper	Filter Media	Latex Gloves	Other** Rubber	Plastics	Graphite	Dry Chem	Aggregate	Gross
BFB-14	36 mo	A-60	A-14	*	--	--	--	--	*	*	--	--	*	--	--	--	20.02	60	
BFB-20	36 mo	A-60	A-16	--	--	--	--	--	--	--	--	--	--	--	28.81	--	--	28.81	60
BFB-101	8 mo	A-18	--	*	--	--	--	--	*	--	*	--	--	*	*	--	--	22.38	60
BFB-27	35 mo	A-60	A-18	--	--	--	--	--	*	--	*	--	*	--	*	--	--	22.15	50

a. Proper content code indicated only if the original is incorrect. Correction is based on visual examination results.

* Visual examination revealed that packages of waste within a drum were often not limited to one specific type of material; neither were they segregated into combustibles and non-combustibles. In these cases of mixed contents an aggregate weight is given, and asterisks indicate which components are present.

TABLE 63. WASTE CONTAINER COMPONENT WEIGHTS

WASTE FORM CATEGORY: METAL (LANL-238PU)

Container ID No.	Time Period	Content Code	Proper ^d Code	Material Type (lbs)														WEIGHTS	
				Glass	Metals				Combustibles						Miscellaneous				
					Hand Tools	Nails	Other	Leaded Gloves	Cheesecloth	Rags	Paper	Filter Media	Latex Gloves	Other** Rubber	Plastics	Graphite	Dry Chem	Aggregate	Gross
BFB-19	37 mo	A-61	--	9.21	--	13.3	--	--	--	--	--	--	*	--	--	8.58	22.51	70	
BFB-235	111 mo	A-18	A-61	--	--	--	65.0	--	--	--	--	--	--	--	--	--	65.0	100	
BFB-237	111 mo	A-18	A-61	--	--	--	85.0	--	--	--	--	--	--	--	--	--	85.0	120	
BFB-238	111 mo	A-18	A-61	--	--	--	65.0	--	--	--	--	--	--	--	--	--	65.0	100	
BFB-239	111 mo	A-18	A-61	*	*	--	*	--	--	--	--	--	--	*	--	--	101.04	136	
BFB-240	111 mo	A-18	A-61	*	--	*	*	--	--	--	--	--	*	*	--	--	65.0	110	

a. Proper content code indicated only if the original is incorrect. Correction is based on visual examination results.

* Visual examination revealed that packages of waste within a drum were often not limited to one specific type of material; neither were they segregated into combustibles and non-combustibles. In these cases of mixed contents an aggregate weight is given, and asterisks indicate which components are present.

TABLE 64. WASTE CONTAINER COMPONENT WEIGHTS
WASTE FORM CATEGORY: MIXED WASTE (LANL-238pu)

Container ID No.	Time Period	Content Code	Proper ^a Code	Material Type (lbs)														WEIGHTS	
				Glass	Metals				Combustibles							Miscellaneous			
					Hand Tools	Dies	Other	Leaded Gloves	Cheesecloth	Rags	Paper	Filter Media	Latex Gloves	Other** Rubber	Plastics	Graphite	Dry Chem	Aggregate	Gross
BFB-92	7 mo	A-18	A-19	*	--	--	*	--	15.4	--	--	--	--	--	*	1.46	16.86	50	
BFB-96	8 mo	A-19	--	--	--	--	--	20.52	11.14	--	--	--	--	--	5.53	--	--	37.19	70
BFB-97	8 mo	A-19	--	--	*	--	32.65	--	5.51	--	--	--	--	--	*	--	--	5.98	80
BFB-102	7 mo	A-19	--	--	--	--	*	--	*	--	--	--	--	--	*	--	--	32.8	60
BFB-103	7 mo	A-19	--	*	--	--	--	--	*	--	--	--	--	--	*	--	--	27.03	60
BFB-12	39 mo	A-60	A-19	*	*	--	--	--	*	*	*	*	*	--	--	--	--	14.23	50
BFB-26	35 mo	A-60	A-19	*	--	--	*	--	*	--	--	--	*	--	*	--	--	30.26	60
BFB-234	111 mo	A-18	A-19	*	--	--	*	--	--	--	--	--	--	--	--	--	*	14.58	50

a. Proper content code indicated only if the original is incorrect. Correction is based on visual examination results.

* Visual examination revealed that packages of waste within a drum were often not limited to one specific type of material; neither were they segregated into combustibles and non-combustibles. In these cases of mixed contents an aggregate weight is given, and asterisks indicate which components are present.

TABLE 65. WASTE CONTAINER COMPONENT WEIGHTS
WASTE FORM CATEGORY: COMBUSTIBLES (LANL-239pu)

Container ID No.	Time Period	Content Code	Proper Code ^a	Material Type (lbs)														WEIGHTS	
				Glass	Metals				Combustibles						Miscellaneous				
					Hand Tools	Dies	Other	Leaded Gloves	Cheesecloth	Rags	Paper	Filter Media	Latex Gloves	Other** Rubber	Plastics	Graphite	Dry Chem	Aggregate	Gross
10761	11 mo	A-14	--	*	--	--	--	--	--	*	--	--	--	--	*	--	--	20.33	73
010605	11 mo	A-18	A-15	--	--	--	--	--	*	--	--	--	--	--	*	--	--	17.27	100
10753	11 mo	A-16	A-18	--	--	--	--	--	--	--	7.6	--	--	--	6.3	--	--	13.9	73
007060	11 mo	A-18	--	--	--	--	--	--	--	*	*	--	*	--	*	--	--	43.25	100
007226	11 mo	A-18	--	*	--	--	--	--	--	--	*	--	--	--	*	--	--	45.6	120
010362	12 mo	A-18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15.83	68
010775	30 mo	A-60	--	*	--	--	*	--	--	*	*	--	*	--	*	--	--	4.98	120

a. Proper content code indicated only if the original is incorrect. Correction is based on visual examination results.

* Visual examination revealed that packages of waste within a drum were often not limited to one specific type of material; neither were they segregated into combustibles and non-combustibles. In these cases of mixed contents an aggregate weight is given, and asterisks indicate which components are present.

TABLE 66. WASTE CONTAINER COMPONENT WEIGHTS

WASTE FORM CATEGORY: METAL (LANL-239PU)

Container ID No.	Time Period	Content Code	Process Solids	Nitrate Salts	Slag and Crucible	Material Type (lbs)				Comments	Gross Weight
						Chemical Treatment Sludge	Metals	Non-Combustible	Organics		
010435	12 mo	A-52	--	--	--	56.45	100.36	--	--	--	220.0

a. Proper content code indicated only if the original is incorrect. Correction is based on visual examination results.

* Visual examination revealed that packages of waste within a drum were often not limited to one specific type of material; neither were they segregated into combustibles and non-combustibles. In these cases of mixed contents an aggregate weight is given, and asterisks indicate which components are present.

TABLE 67. WASTE CONTAINER COMPONENT WEIGHTS

WASTE FORM CATEGORY: CEMENTED SLUDGES (LANL-239PU)

Container ID No.	Time Period	Content Code	Process Solids	Nitrate Salts	Slag and Crucible	Material Type (lbs)					Comments	Gross Weight
						Chemical Treatment Sludge	Metals	Non-Combustible	Organics			
012124	12 month	A-75	--	--	--	*	--	--	--	--	444.0 ^a	
012307	12 month	A-75	--	--	--	•	--	--	--	--	444.0 ^a	
012327	12 month	A-75	--	--	--	•	--	--	--	--	444.0 ^a	
012535	12 month	A-75	--	--	--	*	--	--	--	--	444.0 ^a	

a. Average weight of drums. Drums were not reweighed.

* Visual examination revealed that packages of waste within a drum were often not limited to one specific type of material; neither were they segregated into combustibles and non-combustibles. In these cases of mixed contents an aggregate weight is given, and asterisks indicate which components are present.

TABLE 68. WASTE CONTAINER COMPONENT WEIGHTS

WASTE FORM CATEGORY: MIXED WASTE (LANL-239pu)

				Material Type (lbs)																	
				Glass	Metals				Combustibles						Miscellaneous			WEIGHTS			
Container ID No.	Time Period	Content Code	Proper ^d Code		Hand Tools	Dies	Other	Leaded Gloves	Cheesecloth	Rags	Paper	Filter Media	Latex Gloves	Other** Rubber	Plastics	Graphite	Dry Chem	Aggregate	Gross		
010773	11 mo	A-19	--	--	--	--	*	--	--	*	*	--	*	--	*	--	--	4.98	120		
010756	30 mo	A-60	A-19	*	--	--	*	--	--	--	*	--	--	--	*	--	--	5.57	45		

a. Proper content code indicated only if the original is incorrect. Correction is based on visual examination results.

* Visual examination revealed that packages of waste within a drum were often not limited to one specific type of material; neither were they segregated into combustibles and non-combustibles. In these cases of mixed contents an aggregate weight is given, and asterisks indicate which components are present.

TABLE 69. WASTE CONTAINER COMPONENT WEIGHTS

WASTE FORM CATEGORY: PARTICULATE WASTES (LANL-239pu)

Container ID No.	Time Period	Content Code	Process Solids	Nitrate Salts	Slag and Crucible	Chemical Treatment Sludge	Material Type (lbs)				Comments	Gross Weight
							Metals	Non-Combustible	Organics			
010108	25 mo	A-25	*	--	4.68	25.89+	2.68	--	0.19	+Includes CaCl ₂		63.5
010925	30 mo	A-25	* Basic wet red sludge, multiple containers, approximately 10 lbs each									520.0

a. Proper content code indicated only if the original is incorrect. Correction is based on visual examination results.

* Visual examination revealed that packages of waste within a drum were often not limited to one specific type of material; neither were they segregated into combustibles and non-combustibles. In these cases of mixed contents an aggregate weight is given, and asterisks indicate which components are present.

TABLE 70. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: COMBUSTIBLES (LANL-238pu)

Visual Examination Results												
Container ID No.	Time Period	Content Code	Proper ^b	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/Compressed Gases ?	Toxic/Corrosive Materials ?	Organic	WIPP Certifiable ?	RTR ^c
			Content Code							Content ? (lb)		Certifiable ?
BFB-14	36-month	A-60	A-14	--	--	--	--	--	--	9.4	Yes	Yes
BFB-20	36-month	A-60	A-16	--	--	--	--	--	--	14.0	Yes	Yes
BFB-101	8-month	A-18	--	--	--	--	--	--	--	8.2	Yes	Yes
BFB-27	35-month	A-60	A-18	--	--	--	--	--	--	14.7	Yes	Yes

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix D.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
Y* = Yes, but within allowable limits or requirements
-- = None present

TABLE 71. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: METAL (LANL-238pu)

Container ID No.	Time Period	Content Code	Visual Examination Results								Organic Content ? (lb)	WIPP Certifiable ?	RTR ^c Certifiable ?
			Proper ^b Content Code	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/Compressed Gases ?	Toxic/Corrosive Materials ?				
BFB-19	37-month	A-61	--	--	--	--	--	--	--	0.75	Yes	Yes	
BFB-235	111-month	A-18	A-61	--	--	--	--	--	--	2.95	Yes	Yes	
BFB-237	111-month	A-18	A-61	--	--	--	--	--	--	3.86	Yes	Yes	
BFB-238	111-month	A-18	A-61	--	--	--	--	--	--	2.95	Yes	Yes	
BFB-239	111-month	A-18	A-61	--	--	--	--	--	--	4.59	Yes	Yes	
BFB-240	111-month	A-18	A-61	--	Y	--	--	--	--	2.95	No	Yes	

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix D.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
Y* = Yes, but within allowable limits or requirements
-- = None present

TABLE 72. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: MIXED WASTE (LANL-238PU)

Container ID No.	Time Period	Content Code	Visual Examination Results								Organic Content ? (lb)	WIPP Certifiable ?	RTR ^C Certifiable ?
			Proper ^b Content Code	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/Compressed Gases ?	Toxic/Corrosive Materials ?				
BFB-92	7-month	A-18	A-19	Y*	--	--	--	--	--	1.93	Yes	Yes	
BFB-96	8-month	A-19	--	--	--	--	--	--	--	8.4	Yes	Yes	
BFB-97	8-month	A-19	--	--	--	--	--	--	--	7.02	Yes	Yes	
BFB-102	7-month	A-19	--	--	--	--	--	--	--	2.98	Yes	Yes	
BFB-103	7-month	A-19	--	--	--	--	--	--	--	6.1	Yes	Yes	
BFB-26	35-month	A-60	A-19	--	--	--	--	--	--	7.4	Yes	Yes	
BFB-12	39-month	A-60	A-19	--	--	--	--	--	--	3.2	Yes	Yes	
BFB-234	111-month	A-18	A-19	--	--	--	--	--	Y	0.7	No	Yes	

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix D.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
 Y* = Yes, but within allowable limits or requirements
 -- = None present

TABLE 73. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: COMBUSTIBLES (LANL-239PU)

Container ID No.	Time Period	Content Code	Visual Examination Results									Organic Content ? (lb)	WIPP Certifiable ?	RT ^C Certifiable ?
			Proper ^b Content Code	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?					
010761	11-month	A-14	--	--	Y	--	--	--	--	18.3	No	Yes		
010605	11-month	A-18	A-15	--	--	--	--	--	--	7.9	Yes			
010753	11-month	A-16	A-18	Y*	--	--	--	--	--	6.3	Yes	Yes		
007060	11-month	A-18	--	--	--	--	--	--	--	19.7	Yes			
070226	11-month	A-18	--	--	--	--	--	--	--	21.9	Yes	Yes		
010775	30-month	A-60	--	--	--	--	--	--	--	14.2	Yes			

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix D.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
Y* = Yes, but within allowable limits or requirements
-- = None present

TABLE 74. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: METAL (LANL-239PU)

Container ID No.	Time Period	Content Code	Visual Examination Results										Organic Content ? (lb)	WIPP Certifiable ?	RTR ^C Certifiable ?
			Proper ^b Content Code	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/Compressed Gases ?	Toxic/Corrosive Materials ?						
010435	12-month	A-52	--	Y	--	--	--	--	--	--	--	No	Yes		

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix D.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
Y* = Yes, but within allowable limits or requirements
-- = None present

TABLE 75. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: CEMENTED SLUDGES (LANL-239PU)

Visual Examination Results												
Container ID No.	Time Period	Content Code	Proper ^b	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?	Organic	WIPP Certifiable ?	RTR ^c
			Content Code							Content ? (lb)		Certifiable ?
012124	12-month	A-75	--	Y*	--	Y*	--	--	--	--	Yes	Yes
012307	12-month	A-75	--	Y*	--	Y*	--	--	--	--	Yes	Yes
012327	12-month	A-75	--	Y*	--	Y*	--	--	--	--	Yes	Yes
012535	12-month	A-75	--	Y*	--	Y*	--	--	--	--	Yes	Yes

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix D.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
Y* = Yes, but within allowable limits or requirements
-- = None present

TABLE 76. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: MIXED WASTE (LANL-239pu)

Visual Examination Results												
Container ID No.	Time Period	Content Code	Proper ^b	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/ Compressed Gases ?	Toxic/Corrosive Materials ?	Organic Content ? (lb)	WIPP Certifiable ?	RTR ^c Certifiable ?
			Content Code									
010773	11-month	A-19	--	--	--	--	--	--	--	20.7	Yes	
010756	30-month	A-60	A-19	--	--	--	--	--	--	7.6	Yes	Yes

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix D.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
Y* = Yes, but within allowable limits or requirements
-- = None present

TABLE 77. WASTE FORM COMPLIANCE WITH THE WIPP-WAC^a

WASTE FORM CATEGORY: PARTICULATE WASTE (LANL-239pu)

Visual Examination Results												
Container ID No.	Time Period	Content Code	Proper ^b	Immobilization ^d (Particulates) ?	Free Liquids ?	Sludge ?	Pyrophorics ?	Explosives/Compressed Gases ?	Toxic/Corrosive Materials ?	Organic Content ? (lb)	WIPP Certifiable ?	RTR ^c Certifiable ?
			Content Code									
010108	25-month	A-25	--	--	--	Y*	--	--	--	1.2	Yes	Yes
010925	30-month	A-25	--	--	Y	Y*	--	--	--	--	No	Yes

a. Data based on the results from the visual examinations. Specific information for all Y and Y* indications are found in Appendix D.

b. Proper content code indicated only if original code is incorrect.

c. Indicates if the waste is certifiable based on the results from the real-time radiography (RTR) examination.

d. KEY: Y = Yes--material exceeds WIPP-WAC limits
Y* = Yes, but within allowable limits or requirements
-- = None present

Five of the 33 (15%) examined drums did not meet the requirements of the WIPP-WAC. These drums contained free liquids, one contained particulates in excess of WIPP-WAC limits, and one drum contained corrosive material. The following additional information is provided:

Liquids

1. Drum No. BFB-240 (Mixed Combustibles): This 30-gal. drum of ^{238}Pu waste contained a double plastic bagged Leverpak (tradename for a small cardboard container). Between the bags was approximately 150 mL of water.
2. Drum No. 010761 (Combustibles): This 55-gal. drum of ^{239}Pu -contaminated combustible decontamination room waste contained 60 mL of hand lotion in a plastic hand lotion bottle.
3. Drum No. 010925 (Leached Process Residue): This 55-gal. drum contained 1/2 gallon cans of ^{238}Pu -contaminated process residues. Each can contained between 100-150 mL free liquid. The total quantity of liquid was estimated at 2-3 L.

Particulate

1. Drum No. 010435 (Scrap Metal): This 55-gal. drum contained ^{238}Pu -contaminated metals and dry filtering aid. The filtering aid was 35.4% of the waste weight. All of the filtering aid was less than 70 μm in diameter.

Corrosive

1. Drum No. BFB-234 (Mixed Combustibles): This 30-gal. drum contained sealed metal cans. The material in one can, which was a wet ^{238}Pu material (pH 3), had corroded through the container walls and had started to corrode the other two cans in the drum.

Eleven drums had the wrong, or at least not the most appropriate, Los Alamos waste code assigned. All of these contained significant portions of combustible material, so this inappropriate coding would not have been a problem from a certification standpoint.

The packaging efficiencies seemed poorer than desirable: 93% of the drums were 50 to 95% filled, while only 66% were 75 to 95% filled. One drum (3%) was only 25% full, and another 35%. There is probably some settling of the contents of the waste material with time, but it does appear that a more efficient use of the disposal volume could be made with a reasonable effort on the part of the waste generators. The calculated void volumes were approximately 90%. No pyrophoric materials, explosives, toxic materials, or compressed gases were found in any of the drums examined. Except for drum BFB-234, corrosive materials were properly packaged to meet WIPP-WAC criteria.

Descriptions of several of the ^{238}Pu waste drums mention a red or brown dust which was observed (e.g., BFB-19, BFB-238). Usually the observers' statement was that "there was not enough to collect." Some of this material probably was rust. However, a portion of it may have been a degradation product from the alpha-attack of ^{238}Pu on cellulose. This has been previously observed in laboratory experiments.³ These particles are low density, extremely fine, easily become airborne, and are generally highly contaminated. This material has high potential for spreading contamination if containers of contaminated waste have to be opened. This degradation product is rarely observed in drums of ^{239}Pu -contaminated waste. Drum No. 010753 is the only instance, seen to this time, where brown powder was observed in ^{239}Pu waste. In all instances, however, the quantity of particulate was not sufficient to render the drum noncertifiable. The particulate is not present when the drums are originally filled, but its potential presence in older drums should not be overlooked.

Waste process solids, Codes A-25 through A-29, may not be a certifiable waste form due to the potential for free liquids, particulates, or corrosives in the containers. Some drums may be certifiable, but most probably will require processing. Among the ²³⁹Pu drums examined, the following are samples:

- o Drum No. 010108: There is no practical way to know whether the damp particulate wastes meet the immobilization criteria. It may be necessary to solidify these materials before packaging.
- o Drum No. 010925: This drum was not certifiable due to free liquids. If the wet particulate present in the drum had also been dry, the drum may not have met the immobilization criterion.

4. REFERENCES

1. U.S. Department of Energy, TRU Waste Acceptance Criteria for the Waste Isolation Pilot Plant, WIPP-DOE-069, Rev. 2, May 1985.
2. T. L. Clements, Jr., Implementation Plan for the TRU Waste Sampling Program, EGG-WM-6324, July 1983.
3. A. Zerwekh, Gas Generation from Radiolytic Attack of TRU-Contaminated Hydrogenous Waste, LA-7674-MS, June 1979.
4. M. A. Molecke, Gas Generation from Transuranic Waste Degradation, SAND79-0911C, November 1979.
5. S. T. Kosiewicz, "Gas Generation from Transuranic Wastes.1. Alpha Radiolysis at Atmospheric Pressure," Nuclear Technology, Vol. 54, July 1981.
6. A. R. Kazanjian, Radiolytic Gas Generation in Plutonium Contamination Waste Materials, RFP-2469, October 29, 1976.
7. N. E. Bibler, Gas Production from Radiolysis of Concrete Containing TRU Incinerator Ash, Progress Report for August-November 1978, DPST-78-150-2, April 1979.
8. M. A. Molecke, Gas Generation from Transuranic Waste Degradation: Data Summary and Interpretation, SAND79-1245, December 1979.
9. A. R. Kazanjian and M. E. Killion, Rocky Flats Plant, Internal Report, June 1981.
10. J. L. Warren (LANL) ltr to M. H. McFadden (DOE-AL0), G-Value for Polyvinyl Chloride (PVC), HSE-7C85-46, March 20, 1985
11. H. F. Coward, G. W. Jones, Limits of Flammability of Gases and Vapors, Bulletin 503, Bureau of Mines, U.S. Government Printing Office, Washington, D.C., (1952)

Volume I

APPENDIX A

WASTE FORM CATEGORIES AND
CONTENT CODE DESCRIPTIONS

APPENDIX A

WASTE FORM CATEGORIES AND CONTENT CODE DESCRIPTIONS

<u>Waste Form Category</u>	<u>Content Code</u>	<u>Code Description</u>
Combustibles	328	Filters, Ful-Flo From Incinerator
	330	Combustibles, Dry
	336	Combustibles, Wet
	337	Plastic and Nonleaded Rubber
	900	LSA Plastics, Paper, etc.
	970	Wood
Metals	320	Heavy Non-SS Metal
	480	Light Non-SS Metal
	481	Leached Light Non-SS Metal
Glass	440	Glass
	441	Unleached Raschig Rings
	442	Leached Raschig Rings
Nonmetal Molds and Crucibles	300	Graphite Molds
	301	Graphite Cores
	312	Graphite, Coarse
Uncemented Sludges	1	First Stage (741) or Combined Sludge (7412)
	2	Second Stage Sludge
	3	Grease (organic setups)
	7	Building 374 Sludge
	292	Cemented Sludge (Note: Cement added as absorbent only)
Cemented Sludges and Solutions	4	Special Setups
Concrete, Brick	371	Brick, Fire
	960	Concrete, Asphalt, etc.
Salts	409	Molten Salt, 30% Unpulverized
	414	Direct Oxide Reduction (DOR) Salt
Leaded Rubber	339	Leaded Drybox Gloves and Other Leaded Rubber
Benelex, Plexiglas	302	Benelex and Plexiglas
	464	Benelex and Plexiglas
Resins	432	Resin, Cemented

Mixed Waste-Paper, Metal, Glass, etc.	241 950	Americium Process Residue LSA Metal, Glass, etc.
Filters	335 338 360 490	Absolute Filters (8" x 8") Insulation and CWS Filter Media Insulation CWS Filters
Particulate Wastes	374 376	Blacktop, Concrete, Dirt and Sand Cemented Insulation and Filter Media

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VOLUME I
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Resins	B-197
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Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-39371
Content Code: 328
Container Wt (lb): 161
Original Assay (g): Pu-26.0
Packaging Location: Bldg 771, Rm 149

Container Type: Drum
Code Description: Filters, Ful-Flo
Surface Dose Rate (mR/h): 1.4
Reassay (g): Pu-24.0
Date Packaged: 12-14-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-24-83
Liner Type: 90-mil; liner also lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Ful-Flo filters

Packaging Description: Filters are contained in polyethylene bags.

Absorbent Information: Vermiculite

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: 2 tbsp	Type: Cement

Packaging Efficiency: 70%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information: Particulate is located outside the polyethylene bags containing the filters

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-17-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Ful-Flo filters; the filters are coated with grease.

Packaging Description: Type II liner is lined with one drum bag. The filters are packaged in a PVC bagout bag and then single- or double-bagged into polyethylene bags.

Absorbent Information: Vermiculite is located on top of the drum bag and around the liner.

Physical State of Waste: Damp
Component Wt (lb): Ful-Flo filters with grease coating--57.5; cloth rag--0.25; polyethylene and PVC bags--17.75; vermiculite--10.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 85%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-39453
Content Code: 328
Container Wt (lb): 186
Original Assay (g): Pu-46.0
Packaging Location: Bldg 771, Rm 149.

Container Type: Drum
Code Description: Filters, Ful-Flo
Surface Dose Rate (mR/h): 2.0
Reassay (g): Pu-47.0
Date Packaged: 12-8-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-24-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Ful-Flo filters

Packaging Description: Filters are packaged in polyethylene bags.

Absorbent Information: Vermiculite is located on top of sealed drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information: Portland cement has been placed in the bottom
of the rigid liner.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-17-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Ful-Flo filters. The
filters are coated with grease.

Packaging Description: Type II liner is lined
with two polyethylene drum bags. Filters are
packaged in a PVC bag-out bag and then
double-bagged in polyethylene bags. Eleven
packages total.

Absorbent Information: Vermiculite is located on
top of drum bag and at bottom of the liner.
Cement located in one bag of filters.
Physical State of Waste: Damp
Component Wt (lb): Ful-Flo filters--98.25; PVC
and polyethylene bags--18.5; cement--0.5;
vermiculite--4.0.

WIPP-WAC Compliance Information:

1. Liquids: Total of 4 ml found in one bag.
Analysis indicates the liquid has a pH of 12.
Major components are carbonates or nitrates;
minor component is water.

Packaging Efficiency: 70%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: U2-39481
Content Code: 328
Container Wt (lb): 160
Original Assay (g): Pu-45.0
Packaging Location: Bldg 771, Rm 149

Container Type: Drum
Code Description: Filters, Ful-Flo
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-47.0
Date Packaged: 12-15-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-24-83
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Ful-Flo filters

Packaging Description: Filters are contained in polyethylene bags.
Some filters are contained in 1-gal residue process containers (RPC).

Absorbent Information: Vermiculite

Free Liquids: Yes	Quantity: 1 qt total	Contained: Yes
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 66%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information: Liquids are contained in three RPC's (one RPC
contains approximately two cups liquid, two RPC's contain approximately
1 cup liquid each.)

WIPP-Certifiable: No--due to free liquids.

VISUAL EXAMINATION

Examination Date: 8-17-83

Lead-Lined: No
Liner Type: Type II 90-mil
Waste Form Description: Ful-Flo filters. Filters
are coated with grease.

Packaging Description: Type II liner is lined
with a drum bag. Filters are packaged in a PVC
bagout bag and then single- or double-bagged in
polyethylene bags. Total of seven bags of
filters and two-RPC's containing filters in a
PVC bag and a polyethylene bag.

Absorbent Information: Vermiculite located on top
of and around the drum bag.

Physical State of Waste: Damp
Component Wt (lb): Ful-Flo filters--59.25; damp
rag--0.5; polyethylene and PVC plastic--13.75;
vermiculite--9.75.

WIPP-WAC Compliance Information:

1. Liquids: Total of 68 ml of dark liquid
contained in a bag of filters. Analysis
indicates a pH of 12. The major
components is water; the minor components
are carbonates and silicates.
2. Sludge: Black grease from a filter.
Analysis indicates a pH of 12. Major
components are silicates and/or sulfates,
minor is water.

Packaging Efficiency: 80%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information: Drum lid lightly rusted on
inside.

WIPP-Certifiable: No

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 28-00781
Content Code: 330
Container Wt (lb): 176
Original Assay (g): Pu-4.0
Packaging Location: Building 559, Rm 102

Container Type: Drum
Code Description: Combustibles, Dry
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-4.0
Date Packaged: 12/21/82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: Lead-taped sample vials

Waste Form Description: Glass, test tubes, sample vials, bottles
etc.

Packaging Description: Not recorded.

Absorbent Information: Not recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: 10%
Correct Content Code? No New Code: 440-glass
Other Information: Estimated organic weight: 25 lb.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8/18/83
Container Condition: Good
Lead Lined: No
Liner Type: Type II, 90 mil

Waste Form Description: Lead-taped sample vials
and glass sample vials.

Packaging Description: Type II liner is lined with a
drum bag. Seven bags of lead-taped sample vials,
13 bags of glass sample vials, and a 1-gal glass
bottle containing glass sample vials. All packages
are double-bagged in PVC bags and then
single-contained in a polyethylene bag.

Absorbent Information: Vermiculite located on top of
drum bag and on bottom of 90-mil liner.

Physical State of Waste: Dry
Component Weight (LB): Polyethylene and PVC bags
and plastic vial caps-10.5; lead-taped glass and glass
vials, bottles and tubes-84.5, vermiculite-5.0.

WIPP-WAC Compliance Information: None.

Packaging Efficiency: 80%
Volume % Combustibles: 20%
Correct Content Code? No New Code: 440-glass
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 42-00291
Content Code: 330
Container Wt (lb): 138
Original Assay (g): Pu-1.0
Packaging Location: Bldg 771, Rm 180D

Container Type: Drum
Code Description: Combustibles, Dry
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.0
Date Packaged: 12-8-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Polyethylene, paper, PVC tubing, etc.

Packaging Description: Waste contained in polyethylene bags.

Absorbent Information: Not recorded.

Free Liquids: Yes	Quantity: 1/4 cup	Contained: Yes, in poly bag
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: 2 gal	Type: Unknown

Packaging Efficiency: 80%
Volume % Combustible: 98
Correct Content Code? Yes New Code:
Other Information: Particulate material contained in two tubes
(approximately 2 in. dia. x 2 ft length). A spare rigid liner
lid is at bottom of liner.

WIPP-Certifiable: No--due to liquids and particulates.

VISUAL EXAMINATION

Examination Date: 8-17-83
Container Condition: Good, some handling
scratches
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Kimwipes, PVC tubing,
plastic, two plastic tubes containing resins,
and a rigid liner lid at bottom of liner.

Packaging Description: Type II liner is lined
with two polyethylene drum bags. All wastes,
except the tubes, are double-bagged in
polyethylene. The tubes containing the resins
were placed directly into the drum.

Absorbent Information: Vermiculite located on top
of drum bag and on bottom of liner.

Physical State of Waste: Damp
Component Wts (lb): Kimwipes, smear paper--22.5;
polyethylene bags, tubing--28.25; surgeon's
gloves--2.5; broken chemical bottle glass--0.5;
resin--5.25; vermiculite--0.5.

WIPP-WAC Compliance Information:

1. Particulates--Ion-exchange resin. Analysis
of the resin indicates the waste contains 0.009
wt % <212µ particulates and <0.01 wt %
10µ particulates.

Packaging Efficiency: 95%
Volume % Combustibles: 100
Correct Content Code? No New Code: 336
Other Information: No free liquids found.
Liquids were probably absorbed during handling.

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 22-01194
Content Code: 330
Container Wt (lb): 140
Original Assay (g): Pu-0.0
Packaging Location: Bldg 707, Module C

Container Type: Drum
Code Description: Combustibles, Dry
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-4.0
Date Packaged: 11-15-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Combustibles such as polyethylene, paper, etc.
Some bags in center of drum appear to be moist. A few metal items
(nails, washers) are also present.

Packaging Description: Waste contained in plastic bags.

Absorbent Information: Information not recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 98%
Volume % Combustible: 99
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-22-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II

Waste Form Description: Kimwipes, paper cards,
gloves, rags, plastic, surgeon's gloves, some
nails, welding rod, brass rod, and lead tape.

Packaging Description: Type II liner is lined
with a drum bag. Wastes are single-contained
in polyethylene bags.

Absorbent Information: Vermiculite located on
top of liner.

Physical State of Waste: Dry
Component Wt (lb): Kimwipes, cards--14.0;
gloves, rags--0.5; polyethylene--15.0;
surgeon's gloves--30.0; nails, rod, and
tape--1.5; vermiculite--2.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 95%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 38-00101
Content Code: 330
Container Wt (lb): 176
Original Assay (g): Pu-2.0
Packaging Location: Bldg 771, Rm 159

Container Type: Drum
Code Description: Combustibles, Dry
Surface Dose Rate (mR/h): 0.6
Reassay (g): Pu-1.0
Date Packaged: 11-22-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Combustibles such as polyethylene and paper,
also a few nails.

Packaging Description: Waste contained in plastic bags. One residue
process container in middle of the waste.

Absorbent Information: Not recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: 98
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-18-83
Container Condition: Good; some scratches due to
handling.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Kimwipes, rubber gloves,
plastic vials, plastic bags, ice cream cartons,
six small ball bearings, two metal bolts, and
two probes.

Packaging Description: Type II liner is lined
with two polyethylene drum bags. Waste items
are
placed directly into the drum.

Absorbent Information: Vermiculite is located
on top of the drum bag and on the bottom of the
liner.

Physical State of Waste: Dry
Component Wt (lb): Kimwipes, ice cream cartons,
etc.--24.75; polyethylene--12.0; surgeon's
gloves--53.5; vermiculite--0.75.

WIPP-WAC Compliance Information:
1. Particulate: Sand or grit powder. Analysis
of the powder indicates the waste contains 0.071
wt % <212 μ particulates and <0.001 wt %
<20 μ particulates.

Packaging Efficiency: 95%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information: Light rust on drum and drum
lid interior.

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 76-02898
Content Code: 330
Container Wt (lb): 245
Original Assay (g): Pu-32.0
Packaging Location: Bldg 776, Rm 146

Container Type: Drum
Code Description: Combustibles, Dry
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-29.0
Date Packaged: 9-24-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: Cannot determine

Lead-Lined: Yes Other Lead:

Waste Form Description: Combustibles

Packaging Description:

Absorbent Information:

Free Liquids: No	Quantity:	Contained:
Compressed Gases:	Type:	Quantity:
Particulates:	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible:
Correct Content Code? New Code:
Other Information: Limited penetration of the lead liner. Unable
to evaluate completely.

WIPP-Certifiable: No--due to limited penetration.

VISUAL EXAMINATION

Examination Date: 8-18-83
Container Condition: Good; small dent on upper
third of the drum
Lead-Lined: Yes, 1/8-in.-thick sheeting
Liner Type: Type II 90-mil

Waste Form Description: Crushed sample cans, an
8 x 8-in. HEPA filter, plastic, rags, vacuum
hose, and plastic sample vials.

Packaging Description: Type II liner is lined
with one polyethylene drum bag. Waste items are
generally contained in single polyethylene
bags. A 1-gal paint can contained the
crushed sample cans and was double-contained in
polyethylene bags. The HEPA filter was in a
box double-wrapped in plastic.

Absorbent Information: Vermiculite located on top
of drum bag.
Physical State of Waste: Dry
Component Wt (lb): Damp rags--3.0; rubber
gasket and hose--0.25; polyethylene bags,
bottles--59.5; lead sheeting and paint
can--106.75; HEPA filter and paint brush--6.0;
vermiculite--4.0.

WIPP-WAC Compliance Information:
1. Sludge: Damp black sludge contained in a
1-gal plastic bottle. Analysis indicates
a pH of 7. The major components are silica
and unidentified inorganics.

Packaging Efficiency: 90%
Volume % Combustibles: 95
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-39195
Content Code: 330
Container Wt (lb): 165
Original Assay (g): Pu-2.0
Packaging Location: Bldg 771, Rm 181

Container Type: Drum
Code Description: Combustibles, Dry
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-2.0
Date Packaged: 10-13-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Filter frames

Packaging Description: Frames are in polyethylene bags.

Absorbent Information: Vermiculite

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: 1/2 cup	Type: Cement

Packaging Efficiency: 85%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information: Portland cement is believed to be added as absorbent.
Filter frames contain nails. Estimated organic weight: 99 lb

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-18-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Filter frames

Packaging Description: Type II liner is lined with two polyethylene drum bags. Filter frames are contained in a PVC bagout bag and then double-contained in polyethylene bags.

Absorbent Information: Vermiculite located on top of drum bag and on bottom of the liner and drum.

Physical State of Waste: Dry
Component Wt (lb): Wood filter frames and nails--73.75; PVC and polyethylene bags--9.25; vermiculite--4.5.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 60%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 389-90417
Content Code: 330
Container Wt (lb): 2000
Original Assay (g): Pu-70.0; U-235: 53.0

Packaging Location: Size Reduction

RADIOGRAPHIC EXAMINATION

Examination Date: 7-5-83
Liner Type: Plastic box liner only.
Lead-Lined: No Other Lead: No

Waste Form Description: Generally plastic and paper.

Packaging Description: Waste generally contained in plastic bags.

Absorbent Information: None identified.

Free Liquids: Yes	Quantity: 2 cups total	Contained: Yes
Compressed Gases: Yes	Type: Aerosol cans	Quantity: Four
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: 98
Correct Content Code? Yes New Code:
Other Information: Liquid is contained two poly bottles.

WIPP-Certifiable: No--due to small amount of liquids.

Container Type: Box
Code Description: Combustibles, Dry
Surface Dose Rate (mR/h): 1.3
Reassay (g): Not available--box counter not operational.
Date Packaged: 10-11-82

VISUAL EXAMINATION

Examination Date: 9-15-83
Container Condition: Good
Lead-Lined: No
Liner Type: PVC box liner

Waste Form Description: Plastic, Kimwipes, newspaper, paper, paint brushes, surgeon's gloves, plastic pails, cardboard, dried paint, bag-out bags, Teflon, plastic pipe, supplied air tent, bubble suits, dry cell battery, rubber mat, pop cans, etc.

Packaging Description: Wastes contained in double 55-gal drum bags. All bags except for the top four were cut open to improve packaging efficiency.

Absorbent Information:

Physical State of Waste: Damp
Component Wt (lb): Paper--407; booties, overalls and rags--74; rubber mat--8; plastic, buckets, and hose--406; surgeons gloves--143; misc metal--16.

WIPP-WAC Compliance Information:
Liquids: Total of 150 ml liquid. One 1-gal polyethylene bottle contained 140 ml. Analysis indicates a pH of 8. The major component is water and the minor is possibly polyacrylamide. Another bottle contained 10 ml. Analysis indicates a pH of 7. The major component is water and the minor is silicates.

Packaging Efficiency: 100%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 389-90609
Content Code: 330
Container Wt (lb): 1580
Original Assay (g): Pu-52.0

Packaging Location: Size Reduction

RADIOGRAPHIC EXAMINATION

Examination Date: 7-5-83
Liner Type: Plastic box liner and cardboard liner.
Lead-Lined: No Other Lead: No

Waste Form Description: Miscellaneous plastic and paper. Some metal items, such as small bolts, nuts, nails and electrical hardware are near the box bottom.

Packaging Description: Loose waste is contained in bags inside the box.

Absorbent Information: Vermiculite

Free Liquids: Yes	Quantity: See below	Contained: See below
Compressed Gases: Yes	Type: Aerosol cans	Quantity: Four
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%

Volume % Combustible: 99

Correct Content Code? Yes New Code:

Other Information: Approximately 1/2 gal (total) liquid in various locations. Some is contained in poly bottles, other is contained in plastic bags.

WIPP-Certifiable: No--due to liquids and aerosol cans.

Container Type: Box
Code Description: Combustibles, Dry
Surface Dose Rate (mR/h): 0.1
Reassay (g): Not available--box counter not operational.
Date Packaged: 12-17-82

VISUAL EXAMINATION

Examination Date: 9-17-83
Container Condition: Good
Lead-Lined: No
Liner Type: PVC box liner and fiberboard liner.

Waste Form Description: Paper, rags, plastics, leaded gloves, and some miscellaneous metal.

Packaging Description: PVC box liner also lined with a fiberboard liner. All waste was contained in drum bags, which were cut open to improve packaging efficiency.

Absorbent Information: Vermiculite

Physical State of Waste: Damp
Component Wt (lb): Paper--336; cloth rags--38; plastics--364; misc. metal--10; leaded gloves--78; vermiculite--14.

WIPP-WAC Compliance Information:

1. Particulates: Graphite fines contained in small polyethylene bottles. Analysis of the fines indicates that the waste contains 0.001 wt % <212 μ particulates and <0.001 wt % <10 μ particulates.
2. Liquids: 68 ml of green liquid in a 1 qt bottle. Analysis indicates a pH of 7. Major composition is water, minor is silicates and/or sulfate and an unidentified organic material.

Packaging Efficiency: 90%

Volume % Combustibles: 100

Correct Content Code? Yes New Code:

Other Information: No aerosol cans found in the waste.

WIPP-Certifiable: No-free liquid (68 ml)

Waste Form Category: Combustibles

Time Period: 3-year old

GENERAL INFORMATION

Container Identification: 02-35272
Content Code: 330
Container Wt (lb): 156
Original Assay (g): Pu-1.0
Packaging Location: Bldg 771, Rm 181

Container Type: Drum
Code Description: Combustibles, Dry
Surface Dose Rate (mR/h): 1.1
Reassay (g): Pu-1.0
Date Packaged: 2-11-82

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Filter frames

Packaging Description: Frames are contained in plastic bags.

Absorbent Information: Portland cement--approximately 1 qt.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information: Few nails in the frames.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-4-83
Container Condition: Good; some handling
scratches on paint.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Wood filter frames and
wood

Packaging Description: Type II liner is lined
with two drum bags. Two packages of wood were
double-bagged in plastic. One package contained
12 x 12 in. HEPA wood filter frames.

Absorbent Information: Oil-Dri located on bottom
of liner.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene bags--6.75;
wood and wood chips--81.5; Oil-Dri--4.25

WIPP-WAC Compliance Information: None

Packaging Efficiency: 80%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-10215
Content Code: Unknown (330-RFP)
Container Wt (lb): 153
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location: Building 771

Container Type: Drum
Code Description: (see below)(RFP-Combustibles, dry)
Surface Dose Rate (mR/h): <0.5
Reassay (g): 9.7-Pu; 0.0-Am
Date Packaged: 1-24-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Plastics

Packaging Description: Packed in bagging material in
a 90-mil liner.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: >25%
Correct Content Code? No New Code: 337-plastic and
nonleaded rubber

Other Information: 65 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-29-85
Container Condition: Moderate rust exterior. No
rust interior
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Combustible waste including
paper (kimwipes, coveralls, filter holders), cloth
(hoods, booties), rubber (respirator hoses), poly bags
and booties, PVC bags, surgeons gloves, misc. metal
(respirator filters, pipe).

Packaging Description: Type I rigid liner was lined
with a single polyethylene drum bag which contained
loose packed waste or waste single bagged in PVC or
poly bags.

Absorbent Information: Oil dry was located outside of
the poly bag in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Paper-28.6; cloth-5.6;
rubber-1.4, poly-10.0, PVC-6.0, surgeons gloves-7.4,
metal-9.4, oil dry-3.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 85%
Volume % Combustibles: 100%
Correct Content Code? Yes New Code: 330
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 01-08200
Content Code: 330
Container Wt (lb): 129
Original Assay (g): 0.0-Pu, 0.0-Am
Packaging Location: Building 771

Container Type: Drum
Code Description: Paper and rags-Dry
Surface Dose Rate (mR/h): <0.5
Reassay (g): 11.0-Pu, 0.1-Am
Date Packaged: 12-6-72

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Examination Date: 1/29/85
Container Condition: Good-light rust outside and
inside

Lead Lined:
Liner Type: Type I, 90 mil

Waste Form Description: Coveralls or tarps with eyelets

Waste Form Description: Paper (coveralls, wipes);
cloth (coveralls, hoods); plastics (raincoats, pants,
supplied air hoods, poly bags, booties, squeeze bulbs,
surgeons gloves).

Packaging Description: Packed in poly bags, then a 90-mil liner

Packaging Description: Type I rigid liner was lined
with a single polyethylene drum bag which contained
5 packages, single bagged in poly.

Absorbent Information: 2 gallons

Absorbent Information: Oil dry was located outside
the poly drum bag in the bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): Paper-4.2, cloth-12.4,
plastics-24.4, surgeons gloves-3.2, oil dri-9.2.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 85%
Volume % Combustible: 90%
Correct Content Code? Yes New Code:
Other Information: 65 lbs of organic material

WIPP-Certifiable: Yes

Packaging Efficiency: 90%
Volume % Combustibles: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 01-08796
Content Code: 330
Container Wt (lb): 130
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Paper and rags-dry
Surface Dose Rate (mR/h): <0.5
Reassay (g): 4.5-Pu; 0.0-Am
Date Packaged: 1-8-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-6-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Rags, paper, poly

Packaging Description: Rags, paper, poly packed in 90 mil liner.
No poly bags tied at top.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information: 65 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1/29/85
Container Condition: Exterior-light rust,
interior-no rust
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Paper (tissue box, newspaper, paper, tape rolls, wipes, coveralls), cloth (coveralls), plastics (tubing, supplied air hoods, booties), surgeons gloves.

Packaging Description: Type I rigid liner was lined with a single polyethylene drum bag. Three packages of waste were in unsealed poly bags, 2 packages were double bagged in poly, 2 more were single bagged in poly.

Absorbent Information: Oil dry was located outside the poly drum bag in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Paper-7.4; cloth-8.0; Plastics-19.5; surgeons gloves-6.0, oil dri-16.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 90%
Volume % Combustibles: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 90-00042
Content Code: 330
Container Wt (lb): 252
Original Assay (g): 6.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Paper and rags-dry
Surface Dose Rate (mR/h): <0.5
Reassay (g): 16.0-Pu; 0.0-Am
Date Packaged: 4-26-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Examination Date: 3/29/85
Container Condition: Exterior-light to moderate rust,
interior-light rust
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Paper and Polyethylene

Waste Form Description: Paper (coveralls, wipes),
cloth (booties), rubber (smoke test bulbs, gloves),
polyethylene (vials, caps, bags, bottles, pipettes,
tubing), PVC (bags, green metal (thermocouple wire,
nuts) and wet sawdust.

Packaging Description: Packed in 90-mil liner, no bagging
material. Could have some absorbed
liquid at bottom of waste.

Packaging Description: Type I rigid liner was lined
with a single PVC drum bag. The drum bag had several
2-3" long tears. This waste had apparently been
mechanically compacted. The waste was primarily
triple bagged in poly, although a few package had PVC
inner bag.

Absorbent Information: 2 quarts

Absorbent Information: Oil dry was located outside
the poly drum bag in the bottom of the rigid liner.

Free Liquids: No Quantity:
Compressed Gases: No Type:
Particulates: No Quantity: Contained:
Quantity: Type:

Physical State of Waste: Dry
Component Weight (LB): Paper-7.9; cloth-1.0;
Rubber-7.0, Poly-45.3, PVC-104.7, metal-77, oil
dry-1.5, wet sawdust-0.5.

Packaging Efficiency: 95%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information: 65 lbs of organic material

WIPP-WAC Compliance Information: None

WIPP-Certifiable: Yes

Packaging Efficiency: 100%
Volume % Combustibles: 98%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 37-00689
Content Code: 336
Container Wt (lb): 140
Original Assay (g): 1.0-Pu; 0.0-Am
Packaging Location: Building 771

Container Type: Drum
Code Description: Rags and paper-moist
Surface Dose Rate (mR/h): <0.5
Reassay (g): 1.0-Pu*
Date Packaged: 1-12-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Rags and paper, HEPA filters

Packaging Description: Rags and paper are packed in 90-mil liner, no poly bagging. HEPA filters are at bottom of waste.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: >10% pkg wt	Type: HEPA Filters

Packaging Efficiency: 90%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information: 65 lbs of organic material

WIPP-Certifiable: No-unknown amount of particulates in filters

VISUAL EXAMINATION

Examination Date: 1/29/85
Container Condition: Exterior-light to moderate rust,
interior-rusty lid

Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Paper (ice cream cartons, paper, wipes, strip charts, radiation monitoring probes, cardboard), cloth (glove liners), polyethylene (bags, pipettes), surgeons gloves, HEPA filters (2 ea. 12" x 12", 3 ea. 8" x 8").

Packaging Description: Type I rigid liner was lined with 2 polyethylene drum bag however only the outer bag was taped. Waste was loose packed in the drum; or single or double bagged in poly. Some ice cream cartons contained wipes, surgeons gloves.

Absorbent Information: Oil dry was located outside of drum bags in the bottom of rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Paper-19.4; cloth-0.25;
Poly-7.4; PVC-3.0; surgeons gloves-3.2; HEPA
filters-30.4; Oil dri-1.5.

WIPP-WAC Compliance Information: Particulates. HEPA filters were loaded with particulates. No sample was taken since the particulates appeared tightly bound. The weight of loaded particulates was estimated at 7.65 lbs by subtracting the weight of new wood frame filters of the same dimensions.

Packaging Efficiency: 100%
Volume % Combustibles: 95%
Correct Content Code? No New Code: 330
Other Information: *Not by segmented gamma scan, by
Na I detector not sensitive to Am.
WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 89-03607
Content Code: 336
Container Wt (lb): 159
Original Assay (g): 1.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Paper and rags-moist
Surface Dose Rate (mR/h): <0.5
Reassay (g): 3.1-Pu; 0.0-Am
Date Packaged: 1-30-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Examination Date: 1/29/85
Container Condition: Light to moderate rust on
interior and exterior
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Rags and poly

Waste Form Description: Paper (wipes, hoods, coveralls, newspaper), cloth (glove liners), poly (bags, hood), PVC (booties, bags, sheeting), surgeons gloves, steel (sawblades welding rods, etc), aluminum (filter cartridges).

Packaging Description: The rags/poly are packed in poly bags, then packed in 90 mil liner. Waste appears dry.

Packaging Description: Type I poly liner was lined with a single polyethylene drum bag. Waste items were loose packed into the poly bag. Two unsealed poly bags also contain waste.

Absorbent Information: None

Absorbent Information: Oil dry was located outside the poly drum bag in the bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): Paper-28.4; cloth-3.4; poly-19.4, PVC-12.2, surgeons gloves-3.6, steel-2.0, aluminum-5.6, oil dry-16.0.

Packaging Efficiency: 90%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information: 65 lbs of organic material

WIPP-WAC Compliance Information: 1. Particulates appeared to be floor sweepings. Analysis of the particulate indicates the waste contains 0.36 wt% <212 micron particles and 4.5E-4 wt% <10 micron particles.

WIPP-Certifiable: Yes

Packaging Efficiency: 95%
Volume % Combustibles: 100%
Correct Content Code? No New Code: 330
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 90-00039
Content Code: 336
Container Wt (lb): 280
Original Assay (g): 1.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Rags and paper-moist
Surface Dose Rate (mR/h): <0.5
Reassay (g): 9.8-Pu; 0.3-Am
Date Packaged: 4-24-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 3/29/85
Container Condition: Exterior-some light rust,
Interior-moderate to heavy rust.
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Paper, poly, etc.

Waste Form Description: Paper (cardboard, wipes, paper), cloth (towels, skull cap, glove liners), rubber (gasket, respirator, surgeons gloves), polyethylene (tubing, bags, bottles) PVC (taped bag cards, "greenhouse", bag), metal (battery, cable).

Packaging Description: Packed in 90-mil liner

Packaging Description: Type I rigid liner was lined with a single PVC bag. Most of the waste was packed directly into drum bag although some was double bagged in poly. This waste appeared to have been mechanically compacted.

Absorbent Information: None

Absorbent Information: Oil dry was located outside of the drum bag and outside the drum bag in the bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): Paper-40.0; cloth-8.4; rubber-27.3, poly-18.9, PVC-96.8, metal-1.0, oil dry-4.4.

Packaging Efficiency: 95%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information: 65 lbs of organic material

WIPP-WAC Compliance Information: 1. Free liquids, 295 ml was found in a bottle of hand lotion. This hand lotion was not sampled.

WIPP-Certifiable: Yes

Packaging Efficiency: 95%
Volume % Combustibles: 100%
Correct Content Code? No New Code: 330
Other Information:

WIPP-Certifiable: No-free liquids (295 ml)

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-39465
Content Code: 336
Container Wt (lb): 231
Original Assay (g): Pu-17.0
Packaging Location: Bldg 771

Container Type: Drum
Code Description: Combustibles, Wet
Surface Dose Rate (mR/h): 3.6
Reassay (g): Pu-10.0
Date Packaged: 1-3-03

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: Unknown if it contains a 90-mil rigid polyethylene liner.
Lead-Lined: Yes Other Lead:

Waste Form Description:

Packaging Description:

Absorbent Information:

Free Liquids:	Quantity:	Contained:
Compressed Gases:	Type:	Quantity:
Particulates:	Quantity:	Type:

Packaging Efficiency:
Volume % Combustible:
Correct Content Code? New Code:
Other Information: Unable to penetrate the lead liner adequately
enough to evaluate.

WIPP-Certifiable: No--due to limited penetration.

VISUAL EXAMINATION

Examination Date: 8-13-83
Container Condition: Good
Lead-Lined: Yes
Liner Type: Type II 90-mil

Waste Form Description: Eleven packages
containing Kimwipes, rags, polyethylene bottles,
ice cream cups, etc.

Packaging Description: The Type II liner is lined
with two polyethylene drum bags. All wastes are
double-bagged.

Absorbent Information: Vermiculite located on top
of liner.

Physical State of Waste: Dry
Component Wt (lb): Kimwipes--0.5; polyethylene
bottles, ice cream cups, cut-out bags,
Tygon--45.25; vermiculite--3.0; wood--0.25

WIPP-WAC Compliance Information: None

Packaging Efficiency: 85%
Volume % Combustibles: 100
Correct Content Code? No New Code: 330 Dry
combustibles

Other Information: Slight internal rust on
drum. Lead sheeting was not weighed.

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 23-01599
Content Code: 336
Container Wt (lb): 140
Original Assay (g): Pu-4.0
Packaging Location: Bldg 776, Rm 134

Container Type: Drum
Code Description: Combustibles, Wet
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.0
Date Packaged: 12-2-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil, liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Combustible materials including a few metal items (screws, washers, nails, and thin aluminum or plastic tubing with a nut).

Packaging Description: No individual packaging.

Absorbent Information: Information not recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: 2 tsp	Type: Unknown

Packaging Efficiency: 90%
Volume % Combustible: 98
Correct Content Code? Yes New Code:
Other Information: Particulate located at bottom of rigid liner.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-22-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Kimwipes, booties, polyethylene and PVC bags, surgeon's gloves, and nails.

Packaging Description: Ranges from loose waste to triple-bagged waste.

Absorbent Information: Vermiculite located on top of liner.

Physical State of Waste: Damp
Component Wt (lb): Kimwipes--34.0; cloth booties--8.5; polyethylene and PVC bags--17.0; PVC pipe--3.0; surgeon's gloves--5.75; nails--1.5; vermiculite--3.5;

WIPP-WAC Compliance Information:
1. Liquids: Wet Kimwipes--total of 188 ml of free liquid. Analysis indicates a pH of 7. The major composition is Freon TF and an unidentified oil.

Packaging Efficiency: 85%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-39084
Content Code: 336
Container Wt (lb): 160
Original Assay (g): Pu-3.0
Packaging Location: Bldg 771, Rm 181

Container Type: Drum
Code Description: Combustibles, Wet
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-3.0
Date Packaged: 9-24-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Primarily wood filter frames, plywood and a few nails.

Packaging Description: Waste contained in polyethylene bags.

Absorbent Information: Information not recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 95%
Volume % Combustible: 99.8
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-22-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Four packages of filter frames.

Packaging Description: Type II liner is lined with two polyethylene drum bags. The filter frames are double-contained in plastic.

Absorbent Information: Vermiculite located outside the liner.

Physical State of Waste: Dry
Component Wt (lb): Wood--69.25; polyethylene and PVC bags--12.0; vermiculite--3.5.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 40%
Volume % Combustibles: 100%
Correct Content Code? No New Code: 330 (Dry combustibles)
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-40137
Content Code: 336
Container Wt (lb): 222
Original Assay (g): Pu-23.0
Packaging Location: Bldg 771, Rm 1796

Container Type: Drum
Code Description: Combustibles, Wet
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-23.0
Date Packaged: 3-9-83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type:

Lead-Lined: Yes Other Lead:

Waste Form Description:

Packaging Description:

Absorbent Information:

Free Liquids: No	Quantity:	Contained:
Compressed Gases:	Type:	Quantity:
Particulates:	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible:
Correct Content Code? New Code:
Other Information: Unable to penetrate lead lining adequately enough
to evaluate completely.

WIPP-Certifiable: No--due to limited penetration.

VISUAL EXAMINATION

Examination Date: 8-24-83
Container Condition: Good, some small dents on
middle ring.
Lead-Lined: Yes
Liner Type: Type II 90-mil

Waste Form Description: Tygon tubing and plastic
bottles contained in 15 packages. An extra
liner lid was found at the bottom of the liner.

Packaging Description: Type II liner lined with
two polyethylene drum bags. The waste items are
double-bagged in plastic.

Absorbent Information: Vermiculite is located on
top of the drum bag.

Physical State of Waste: Dry
Component Wt (lb): Cloth rags--1.0; Tygon, PVC,
bottles, Teflon--46.5; vermiculite--5.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 70%
Volume % Combustibles: 100
Correct Content Code? No New Code: 330 (Dry
combustibles)

Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 47-00256
Content Code: 336
Container Wt (lb): 149
Original Assay (g): Pu-48.0
Packaging Location: Bldg 771, Rm 146

Container Type: Drum
Code Description: Combustibles, Wet
Surface Dose Rate (mR/h): 5.2
Reassay (g): Pu-52.0
Date Packaged: 3-18-83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner also lined with a poly drum bag.
Lead-Lined: No Other Lead: 1-lead-lined glove

Waste Form Description: Combustibles including some filters inside
polyethylene bottles. One tablespoon and one lead-lined glove
near bottom of waste.

Packaging Description: Some of the waste is in residue process containers
and polyethylene bottles.

Absorbent Information: Information not recorded.

Free Liquids: Yes	Quantity: 6 tsp	Contained: Yes
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 98%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information: Liquid contained in three bottles--2 tsp each.

WIPP-Certifiable: No--due to small amount of liquids.

VISUAL EXAMINATION

Examination Date: 8-23-83
Container Condition: Lid appeared caved-in
Lead-Lined: No
Liner Type: Type I 90-mil

Waste Form Description: Towels, Tygon tubing,
empty plastic bottles, leaded gloves, and
Ful-Flo filters.

Packaging Description: Waste items are contained
in double plastic bags. Total of 29 packages.

Absorbent Information: Vermiculite located
inside the liner.

Physical State of Waste: Damp
Component Wt (lb): Cloth towels--2.25;
polyethylene bags, bottles, Tygon tubing--63.0;
leaded gloves--2.75; Ful-Flo filters--4.0;
vermiculite--2.5.

WIPP-WAC Compliance Information:
1. Liquids: No laboratory results received.

Packaging Efficiency: 85%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 92-00419
Content Code: 336
Container Wt (lb): 105
Original Assay (g): Pu-1.0
Packaging Location: Bldg 371, Rm 3567A

Container Type: Drum
Code Description: Combustibles, Wet
Surface Dose Rate (mR/h): 0.1
Reassay (g): 0.0
Date Packaged: 2-10-83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Primarily polyethylene bottles.

Packaging Description: No individual packaging.

Absorbent Information: Information not recorded.

Free Liquids: Yes	Quantity: 7 tsp	Contained: Yes
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information: Liquids located in five bottles in the following amounts:
2 tsp, 3 tsp, 1 tsp, and two with 1/2 tsp each.

WIPP-Certifiable: No--due to small amount of liquids.

VISUAL EXAMINATION

Examination Date: 8-22-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Ten small polyethylene bottles, a rainsuit, Kimwipes and paper.

Packaging Description: The Type II liner is lined with a polyethylene drum bag. The bottles are double-bagged in plastic.

Absorbent Information: Vermiculite is located on top of the drum bag.

Physical State of Waste: Dry
Component Wt (lb): Kimwipes and paper--0.25;
cloth towels--1.25; PVC bags and polyethylene bottles--4.75; surgeons gloves--0.5;
vermiculite--6.5.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 80%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information: No free liquids found.

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 3-year old

GENERAL INFORMATION

Container Identification: 02-34820
Content Code: 336
Container Wt (lb): 100
Original Assay (g): Pu-3.0
Packaging Location: Bldg 771, Rm 149

Container Type: Drum
Code Description: Combustibles, Wet
Surface Dose Rate (mR/h): 0.1
Reassay (g): 1.0
Date Packaged: 11-13-83

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Combustibles and some wire at bottom of waste.

Packaging Description: Combustibles are contained in plastic bags.

Absorbent Information: Portland cement--1-1/2 gal.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 40%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-3-83
Container Condition: Good; slight rust on drum lid.
Lead-Lined: No
Liner Type: 90-mil

Waste Form Description: Paper and cloth coveralls, Kimwipes, rubber gloves, supply air suits (hoods, pants, booties), and an extension cord.

Packaging Description: 90-mil liner is lined with two 55-gal drum bags. The waste items are contained inside the plastic bags.

Absorbent Information: Oil-Dri is located in the bottom of the liner.

Physical State of Waste: Damp
Component Wt (lb): Paper coveralls and Kimwipes--3.0; cloth overalls--3.0; rubber gloves--1.0; plastic air suits--10.0; extension cord--4.5; Oil-Dri--5.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 40%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information: Slight amount of condensation inside a bag--no sample taken.

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 3-year old

GENERAL INFORMATION

Container Identification: 22-00748
Content Code: 336
Container Wt (lb): 100
Original Assay (g): Pu-0.0
Packaging Location: Not available.

Container Type: Drum
Code Description: Combustibles, Wet
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-3.0
Date Packaged: 1-20-81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Combustibles and two Fibre-Paks.

Packaging Description: Combustible wastes are contained in bottom Fiber-Pak. Top Fiber-Pak is empty.

Absorbent Information: Oil-Dri, 1 quart.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 20%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information: Lid not closed on bottom Fiber-Pak.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-3-83
Container Condition: Very good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Damp Kimwipes, two
leaded gloves, broken Raschig rings, and two
Fiber-Paks.

Packaging Description: Type II liner is lined
with three polyethylene drum bags. The waste is
contained in a Fiber-Pak. The one fiber-pack
is empty.

Absorbent Information: Oil-Dri is located on the
bottom of the rigid liner.

Physical State of Waste: Damp
Component Wt (lb): Kimwipes and
Fiber-Paks--14.0; polyethylene bags--6.0;
leaded gloves--1.75; Raschig rings--1.0;
Oil-Dri--5.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 30%
Volume % Combustibles: 98
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 744-3792
Content Code: 337
Container Wt (lb): 134
Original Assay (g): Pu-4.2
Packaging Location: Bldg 774

Container Type: Drum
Code Description: Plastic and Nonleaded Rubber
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-6.8
Date Packaged: 9-16-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Empty plastic bottles.

Packaging Description: Bottles are contained in plastic bags.

Absorbent Information: Bottles contain a small amount of Portland cement (2 cups total). Approximately 1-1/1 gal of Oil-Dri is located at bottom of the liner.

Free Liquids: Yes	Quantity: 1 quart	Contained: Yes, see below
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 95%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information: Four bottles contain approximately 1 cup each free liquid.

WIPP-Certifiable: No--due to free liquids.

VISUAL EXAMINATION

Examination Date: 8-24-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Polyethylene and PVC bottles (13 total), and a yellow sludge contained in a polyethylene bottle.

Packaging Description: The Type II liner is lined with one polyethylene and one PVC drum bag. All 13 bottles were double-bagged in plastic.

Absorbent Information: Oil-Dri is located inside the inner drum bag. Vermiculite is located on top of the outer drum bag.

Physical State of Waste: Damp
Component Wt (lb): Plastic bottles and bags--31.5; salt or sludge--6.25; vermiculite--16.25; Oil-Dri--see other information.

WIPP-WAC Compliance Information:

1. Liquids: Volumes not measured. Analysis of three samples indicates a pH of 12, with the major component being water. Minor components are carbonates; and carbonates and/or nitrates for two samples.
2. Sludge: Analysis indicates a pH of 12 with the major component being nitrates and/or carbonates and the minor component is water.

Packaging Efficiency: 90%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information:

1. The damp sludge or salt was contained in a polyethylene bottle.
2. Oil-Dri weight is included with the plastics since it was adhered to the plastic.

WIPP-Certifiable: No

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 744-3823
Content Code: 337
Container Wt (lb): 121
Original Assay (g): Pu-0.5
Packaging Location: Bldg 774

Container Type: Drum
Code Description: Plastic and Nonleaded Rubber
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-6.5
Date Packaged: 12-9-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Empty plastic bottles.

Packaging Description: Bottles are contained in plastic bags.

Absorbent Information: Some bottles contain Portland cement as absorbent (total: 1 cup). Approximately 1 gal Oil-Dri has been added to the drum as absorbent.

Free Liquids: Yes	Quantity: see below	Contained: see below
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency:
Volume % Combustible: 100%
Correct Content Code? Yes New Code:
Other Information: Two (2) bottles contain liquids. One contains approximately 1/4 cup, the other contains approximately 1 tsp. Some bottles contain Portland cement as absorbent (total: 1 cup). Approximately 1-gal oil-dry has been added to the drum as absorbent.

WIPP-Certifiable: No--due to small amount of free liquid.

VISUAL EXAMINATION

Examination Date: 8-24-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Fourteen empty polyethylene bottles.

Packaging Description: Type II liner is lined with a PVC and a polyethylene drum bag. Each bottle is either double- or triple-bagged in plastic.

Absorbent Information: Vermiculite is located on top of drum bag.

Physical State of Waste: Dry
Component Wt (lb): Plastic and polyethylene bottles--28.0; vermiculite--16.75.

WIPP-WAC Compliance Information:
1. Liquids: Volume not measured. Analysis of a sample of the liquid (12 ml) indicates a pH of 7. The major component is water and the minor component is silicates. The liquid was found in a plastic bag containing a bottle.

Packaging Efficiency: 95%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 744-3789
Content Code: 337
Container Wt (lb): 117
Original Assay (g): Pu-2.5
Packaging Location: Bldg 774

Container Type: Drum
Code Description: Plastic and Nonleaded Rubber
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-7.6
Date Packaged: 8-20-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Empty plastic bottles.

Packaging Description: Bottles in plastic bags.

Absorbent Information: Portland cement has been added to some of the bottles as absorbent (approximately 1/2 cup total). Approximately 1 gal Oil-Dri also.

Free Liquids: Yes	Quantity: 4 tsp	Contained: Yes
Compressed Gases:	Type:	Quantity:
Particulates:	Quantity:	Type:

Packaging Efficiency: Not recorded
Volume % Combustible: 100%
Correct Content Code? Yes New Code:
Other Information: Two bottles contain approximately 2 tsp each free liquid.
Portland cement has been added to some of the bottles as absorbent (approximately 1/2 cup total). Approximately 1-gal Oil-Dri.

WIPP-Certifiable: No--due to small amount of free liquid.

VISUAL EXAMINATION

Examination Date: 8-24-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Seventeen (17) packages each containing a polyethylene bottle.

Packaging Description: Type II liner is lined with a polyethylene and PVC drum bag. The polyethylene bottles are double- and triple-bagged.

Absorbent Information: Oil-Dri is located inside the inner drum bag. Vermiculite is located on top of the outer drum bag.

Physical State of Waste: Damp
Component Wts (lb): Plastic and plastic bottles--27.25; vermiculite--3.5; Oil-Dri--8.0.

WIPP-WAC Compliance Information:

1. Liquids: Volume not measured. Analysis indicates the liquid sample (1 ml) has a pH of 12. The composition of the liquid is water, carbonates, and/or nitrates.
2. Particulates: Analysis of particulate material mixed with sludge indicates that the waste contains 0.33 wt% <212 μ m and 0.005 wt% <10 μ m particulates.

Packaging Efficiency: 90%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No

Waste Form Category: Combustibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 55-00435
Content Code: 337
Container Wt (lb): 134
Original Assay (g): Pu-37.0
Packaging Location: Bldg 779, Rm 160A

Container Type: Drum
Code Description: Plastic and Nonleaded Rubber
Surface Dose Rate (mR/h): 5.0
Reassay (g): Pu-37.0
Date Packaged: 2-21-83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Miscellaneous plastic items

Packaging Description: Items are individually bagged in plastic.

Absorbent Information: No information recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-24-83
Container Condition: Good; small dents on lower
2/3 of drum.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Kimwipes, cloth rags,
surgeon's gloves, polyethylene bags, and wood.

Packaging Description: Type II liner is lined
with two polyethylene bags. Waste items are
contained in a total of 13 packages that are
double- and triple-bagged in plastic.

Absorbent Information: Vermiculite located on
top of the drum bag.

Physical State of Waste: Dry
Component Wt (lb): Kimwipes--5.25; cloth
rags--1.5; polyethylene--40.25; surgeon's
gloves--1.5; wood--0.75; vermiculite--4.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 90%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information: Slight rust inside drum.

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-10180
Content Code: 337
Container Wt (lb): 142
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location: Building 771; Room 181

Container Type: Drum
Code Description: Plastics and nonleaded rubber
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.0-Pu*
Date Packaged: 1-23-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Plastic

Packaging Description: Plastic is in poly bag which
is tied at the top, and then
placed in a 90-mil liner.
Scissors were left on top of bag.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 95%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information: 65 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-30-85
Container Condition: Light to moderate rust; interior
and exterior

Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Paper (wipes, towels,
coveralls), cloth (supplied air suit, hoods), PVC
("greenhouse", sheeting), poly bags, surgeon's gloves,
scissors.

Packaging Description: Type I rigid liner was single
lined with poly drum bags. The waste was in 2 indivi-
dual packages in the poly drum bag. The top
package--was a taped poly drum liner containing the
greenhouse. The bottom package--contained the rest of
the waste in double poly drum bags, unsealed.

Absorbent Information: Oil-Dri was located outside of
the poly drum bags in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Paper-7.0; cloth-7.0;
PVC-40.8, poly-5.8, surgeon's gloves-1.0,
scissors-0.5, oil dry-6.5.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 90%
Volume % Combustibles: 100%
Correct Content Code? Yes New Code:
Other Information: *Could not use segmented gamma
scan. Reassay done with Na I
detector-not sensitive to Am.
WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 37-00698
Content Code: 337
Container Wt (lb): 230
Original Assay (g): 2.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Plastic and nonleaded rubber
Surface Dose Rate (mR/h): <0.5
Reassay (g): 3.7-Pu; 0.1-Am
Date Packaged: 1-23-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Plastics and surgeons gloves

Packaging Description: Waste is in 90-mil liner. One bag is tied at top, but not all is contained in bag.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 95%
Volume % Combustible: 90%
Correct Content Code? Yes New Code:
Other Information: 65 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-30-85
Container Condition: Exterior-moderate rust,
Interior-very light rust on lid.
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Paper (wipes, sheets), cloth (booties, glove liners), rubber 3 ea. nonleaded glovebox gloves), poly bags, surgeon's gloves.

Packaging Description: Type I rigid liner was lined with a single polyethylene drum bag. Most of the waste was packed directly into the drum bag although some waste was double bagged in individual poly bags. The lower portion of the drum contained 6-8 unsealed poly drum bags with a small amount of waste in each bag.

Absorbent Information: Oil-Dri was located outside of the poly bag in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Paper-2.0; cloth-0.5; rubber-1.5, poly-5.4, surgeon's gloves-143.4, oil dry-3.4.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 95%
Volume % Combustibles: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 37-00711
Content Code: 337
Container Wt (lb): 191
Original Assay (g): 1.0-Pu; 0.0-Am
Packaging Location: Building 771, labs

Container Type: Drum
Code Description: Plastic and nonleaded rubber
Surface Dose Rate (mR/h): 0.5
Reassay (g): 5.6-Pu; 0.0-Am
Date Packaged: 2-10-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-9-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 1-30-85
Container Condition: Exterior-moderate rust,
Interior-no rust
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Plastics/paper waste

Waste Form Description: Paper (wipes, towels), rubber
(1 ea. glovebox glove), poly (drum bag), surgeon's
gloves, scissors.

Packaging Description: Packaged in a plastic bag

Packaging Description: Type I rigid liner was lined
with a single poly drum bag. The waste was packed
directly into the drum bag or into 5 ea. unsealed poly
bags.

Absorbent Information: 2 pints

Absorbent Information: Oil-Dri was located outside of
the poly bag in the bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): Paper-1.0; rubber-0.5;
poly-1.0; surgeon's gloves-82.0, scissors-0.5, oil
dry-7.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 95%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information: 65 lbs of organic material

Packaging Efficiency: 90%
Volume % Combustibles: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

WIPP-Certifiable: Yes

Waste Form Category: Combustible

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 36-00723
Content Code: 337
Container Wt (lb): 184
Original Assay (g): 5.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Plastic and nonleaded rubber
Surface Dose Rate (mR/h): <0.5
Reassay (g): 11.9-Pu; 0.0-Am
Date Packaged: 2-16-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-9-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 1-30-85
Container Condition: Exterior-moderate rust,
Interior-no rust

Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Plastic waste

Waste Form Description: Combustibles including rubber
(4 ea. nonleaded glovebox gloves) polyethylene
(bottles, vials, syringes, vial caps, bags) PVC (taped
bag ends), surgeon's gloves.

Packaging Description: Waste is packaged in poly bags

Packaging Description: Type I rigid liner was lined
with a single poly drum bag. The waste single or
double bagged in poly.

Absorbent Information: 2 gallons

Absorbent Information: Oil-Dri was located outside of
the poly bag in the bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): Rubber-3.0, poly-11.7;
PVC-26.8, surgeon's gloves 52.6, oil dry 12.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 90%
Volume % Combustible: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Packaging Efficiency: 85%
Volume % Combustibles: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 65-00137
Content Code: 337
Container Wt (lb): 164
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Plastic and nonleaded rubber
Surface Dose Rate (mR/h): <0.5
Reassay (g): 1.2-Pu; 0.1-Am
Date Packaged: 5-1-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 2-18-85
Container Condition: Exterior-some moderate rust,
Interior-light rust
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Plastics/paper. Flex-hose at
bottom, poly jar.

Waste Form Description: Paper (wipes, paper cleanser
can), cloth (booties), rubber (tubing hose, vacuum
cleaner hose), polyethylene (1-gal bottle, bags, scrub
pads), PVC (sheet), wood (broom).

Packaging Description: Plastics/paper are put in poly bags,
flex-hose is at the bottom. There is
a poly jar with plastic in the inside
of the bag and then the 90-mil liner.

Packaging Description: Type I rigid liner was double
lined with polyethylene drum bags. The waste was
contained in a total of 6 packages which were double
bagged in 15-gallon poly bags.

Absorbent Information: 2 quarts

Absorbent Information: Oil-Dri was located outside of
the poly bag in the bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Damp
Component Weight (LB): Paper-56.0; cloth-8.0;
rubber-5.0, poly-11.8, PVC-4.0, surgeon's gloves-3.0,
wood-0.5, oil dry-6.5.

Packaging Efficiency: 70%
Volume % Combustible: 70%
Correct Content Code? Yes New Code:
Other Information: 65 lbs of organic material

WIPP-WAC Compliance Information: 1. Free
liquids: 20 ml of liquid was found outside of the rigid
liner in the drum bottom. The origin of the liquid
did not appear to be from the waste, but rather from
residual liquid in the drum when the rigid liner was
installed. Analysis indicates a pH of 5 with
components of water, fluorides, sulfates, nitrates and
trace organics.

WIPP-Certifiable: Yes

Packaging Efficiency: 80%
Volume % Combustibles: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-free liquid (20 ml)

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 389-85743
Content Code: 337
Container Wt (lb): 1600
Original Assay (g): 13.0-Pu, 0.0-Am
Packaging Location: Building 776, Room 146

Container Type: Box
Code Description: Plastic and nonleaded rubber
Surface Dose Rate (mR/h): <0.5
Reassay (g): Not performed
Date Packaged: 1-29-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-6-84
Liner Type: Poly box liner
Lead-Lined: No Other Lead:

Waste Form Description: Mixture of poly, paper, metal, etc.
Also a 5-gallon pail.

Packaging Description: 5-gallon pail at bottom of waste has some absorbed material in the bottom 2 inches. Waste is put in poly bagging material then in a box liner. There is some absorbent at the bottom of the box.

Absorbent Information: 2 quarts

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information: 800 lbs of organic materials

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 12-19-84
Container Condition: Box and fiberglass condition was very good.

Lead Lined: No
Liner Type: PVC/cardboard

Waste Form Description: Approximately three-fourths of the box contents were plastic as styrofoam (1" sheets). Some sheet plastic in double bags was also present. Other waste such as sheet metal (*lids, wall section), copper (pipe), steel (0.25" l-beams, angle sliding bars, pipe, ladder section) wood (planks, sawhorses, scaffolding, lumber) and insulation was also in the box.

Packaging Description: The box was lined with 2 PVC liners, then a cardboard liner, then a third PVC liner. Waste styrofoam was double bagged in poly drum bags. Wood and metal were unwrapped and layered in the box.

Absorbent Information: No absorbents were present.

Physical State of Waste: Dry
Component Weight (LB): Cardboard liner-6.2, plastic-338.4, sheet metal-39.2, copper-4.4, carbon steel-406.6, wood-134.2, insulation 134.1.

WIPP-WAC Compliance: Liquids approximately 1,400 ml of very viscous, black strippable coating was located in a plastic pail. The liquid was under a solidified layer of coating. No sample was taken. Particulates 697.43 grams of dust and floor sweepings were collected. Analysis of the particulate indicated the waste contained 0.043 wt % <212 micron-particles and 1.2 E-4 wt % <12 micron-particles.

Packaging Efficiency: 100%
Volume % Combustibles: 95%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No free liquids (1.4 liters)

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 746-2906
Content Code: 900*
Container Wt (lb): 250
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: LSA Plastics, paper, etc.
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.5-Pu; 0.2-Am
Date Packaged: 12-23-72

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 2-18-85
Container Condition: Exterior and interior
 moderate rust
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Rags and paper

Waste Form Description: Paper (wipes), cloth
(booties), PVC (booties, tape, bags), poly (bags),
surgeon's gloves, stainless steel (shims), carbon
steel (pipe cap, welding rod, nut, bolt).

Packaging Description: Packed in poly bags, then in 90-mil
 liner.

Packaging Description: Type I rigid liner was lined
with a polyethylene drum bag. The waste was contained
in a total of 6 packages which were double bagged in
polyethylene.

Absorbent Information: None

Absorbent Information: Oil-Dri was located outside of
the poly drum bag in the bottom of the rigid liner.
Portland cement was located outside of the individual
packages some portland was hardened and some was
powdered. Some hardened portland was located outside
of the rigid liner in the drum bottom.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Damp
Component Weight (LB): Paper-113.0, cloth-1.8;
PVC-7.0, poly-15.4, surgeon's gloves-4.0, stainless
steel-0.5, carbon steel-1.5, Portland cement-26.0, oil
dry-10.8.

Packaging Efficiency: 80%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information: 65 lbs of organic material

WIPP-WAC Compliance Information: 1. Free
liquids: 15 ml of water or condensation was located
outside the rigid liner in the drum bottom. The
origin of the liquid did not appear to be from the
waste, but rather from residual liquid in the drum
when the rigid liner was installed. Analysis of the
liquid indicates a pH of 12 with components of water,
silicates, carbonates, trace organics, nitrates.

Packaging Efficiency: 70%
Volume % Combustibles: 97%
Correct Content Code? Yes* New Code: 330
Other Information: *Code discontinued in 1974. Now
using 330, 336 or 337. Old code
is correct, new code shown for
reference only.
WIPP-Certifiable: No-free liquids (15 ml)

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 746-2918
Content Code: 900*
Container Wt (lb): 370
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: LSA Plastics, paper, etc.
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.6-Pu; 0.2-Am
Date Packaged: 1-23-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 2-18-85
Container Condition: Exterior-moderate rust,
Interior-light rust

Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Plastic in poly bags. Also a
3/4 HP motor.

Waste Form Description: Paper (wipes, labels,
tags, adding machine paper, monitoring probe, pipe),
surgeon's gloves, carbon steel (sheet metal, pipe
hanger, flashlight), 1.5 HP electric motor, leather
(gloves), wood (broom).

Packaging Description: Plastic is packed in poly bags, then
packed in 90-mil liner. Also has a
3/4 HP motor buried in middle of waste
near top.

Packaging Description: Type I rigid liner was lined
with a single polyethylene drum bag which contained
20% of the waste directly. The remaining waste
was single or double bagged in polyethylene. The drum
bag had several pinholes to 1/4" long holes.

Absorbent Information: None

Absorbent Information: Oil-Dri and portland cement
powder and chunks were located outside of poly drum
bag in the bottom of the rigid liner. Portland cement
powder and chunks were located on top of the
individual waste packages inside of the poly drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): Paper-15.4, cloth-11.8;
gloves-0.2, poly-5.6, PVC-11.8, surgeon's gloves-16.6,
carbon steel-2.2, electric motor-42.9, leather-0.2,
wood-1.5, Portland cement-23.0, oil dry-11.8.

WIPP-WAC Compliance Information: 1. Free
liquids: less than 10_u of water of condensation was
located outside of the rigid liner on top of the liner
lid in the drum bottom. The origin of the liquid did
not appear to be from the waste, but rather from
residual liquid in the drum when the rigid liner was
installed. Therefore no sample was taken.

Packaging Efficiency: 90%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information: 65 lbs of organic material

WIPP-Certifiable: Yes

Packaging Efficiency: 85%
Volume % Combustibles: 95%
Correct Content Code? Yes* New Code: 330
Other Information: *Code discontinued in 1974. Now
using 330, 336 or 337. Old code
is correct. New code shown for
reference only.

WIPP-Certifiable: No-free liquids (10 ml)

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 746-7008
Content Code: 900
Container Wt (lb): 180
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: LSA plastic and paper
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.0-Pu; 0.0-Am
Date Packaged: 5-7-73

RADIOGRAPHIC EXAMINATION

Examination Date:
Liner Type: 90 mil poly bag
Lead-Lined: No Other Lead:

Waste Form Description: Miscellaneous plastics and paper.
A 2-in. pipe.

Packaging Description:

Absorbent Information:

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: 98%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-22-85
Container Condition: Exterior-some moderate rust,
Interior-some light rust

Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Paper (wipes), cloth
(booties), surgeon's gloves, poly (bags, containers),
stainless steel (1 piece of pipe), concrete chunks,
electric cord, wood (scrub brush, paint brush,
2" x 4" x 6" long piece).

Packaging Description: Type I rigid liner was lined
with a polyethylene round bottom bag. The waste was
contained in 2 packages which were single untaped poly
bags and some waste was loose inside the round bottom
bag.

Absorbent Information: Oil-Dri was located outside
the drum bag in the bottom of the rigid liner
(18.0 lbs) and was also located inside the bag
(4.4 lbs).

Physical State of Waste: Dry
Component Weight (LB): Paper-24.2; cloth-10.1;
surgeon's gloves-11.0, poly-14.4, stainless steel-4.8,
concrete-8.8, electric cord-0.9, wood-1.8, oil
dry-22.4.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 85%
Volume % Combustibles: 95%
Correct Content Code? Yes* New Code: 330*
Other Information: *code discontinued in 1974. Now
using 330, 336 or 337. Old code
is correct. New code shown for
reference only.

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 01-08583
Content Code: 970*
Container Wt (lb): 160
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Wood
Surface Dose Rate (mR/h): <0.5
Reassay (g): 2.7-Pu; 0.0-Am
Date Packaged: 1-3-73

RADIOGRAPHIC EXAMINATION

Examination Date: 2-20-85
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Wood filter frames, with nails, contained
in poly bags.

Packaging Description:

Absorbent Information: Approximately 1 quart of Oil-Dri in bottom
of rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-22-85
Container Condition: Exterior-some minor light rust,
Interior-no rust

Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Wood filter frames.

Packaging Description: Type I rigid liner was single
lined with polyethylene drum bags. Four packages of
wood were single bagged in PVC.

Absorbent Information: Oil-Dri was located outside
the drum bags in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): PVC-4.8, poly-2.0, wood-77.9,
oil dry-7.5.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 80%
Volume % Combustibles: 100%
Correct Content Code? Yes* New Code: 330*
Other Information: *Code 970 discontinued in 1978.
The code is correct. The new
code shown for reference only.
WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 01-08604
Content Code: 490
Container Wt (lb): 144
Original Assay (g): 3.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: CWS Filters
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.7-Pu; 0.0-Am
Date Packaged: 1-4-73

RADIOGRAPHIC EXAMINATION

Examination Date: 2-21-85
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Wood filter frames with some nails.

Packaging Description: Wood is in poly bags tied at the top in
a 90 mil liner.

Absorbent Information:

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: 100%
Correct Content Code? No New Code: 970
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-28-85
Container Condition: Exterior-light to moderate rust,
Interior-some very light rust

Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Wood filter frames.

Packaging Description: Type I rigid liner was single
lined with a polyethylene drum bag. A total of
2 packages contained wood in an inner sealed PVC bag
and an outer unsealed poly bag.

Absorbent Information: Oil-Dri was located outside
the drum bags in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): PVC (bags)-3.1, poly
(bags)-1.5, wood-57.6, Oil-Dri-2.2.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 70%
Volume % Combustibles: 100%
Correct Content Code? No* New Code: 330 (970)
Other Information: *This drum contained wood filter
frames, but not filters. It is
therefore code 330 (970) during
date packaged).

WIPP-Certifiable: Yes

315

GENERAL INFORMATION

Container Type: Drum
Code Description: Wood
Surface Dose Rate (mR/h): <0.5
Reassay (g): 1.7-Pu; 0.1-Am
Date Packaged: 1-5-73

VISUAL EXAMINATION

Examination Date: 3-22-85
Container Condition: Exterior-light to moderate
 ...localized rust, Interior-no rust
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Wood filter frames.

Packaging Description: Type I rigid liner was single lined with a polyethylene drum bag. Five packages of wood were double bagged in PVC outer bags and poly inner bags.

Absorbent Information: Oil-Dri was located outside the drum bags in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): PVC-11.0, poly-2.9, wood-92.4,
oil dry-11.4

WIPP-WAC Compliance Information: None

Packaging Efficiency: 85%
Volume % Combustibles: 100%
Correct Content Code? Yes* New Code: 330
Other Information: Code 970 was discontinued in 1978.
 The old code is correct. The new
 code is shown for reference only.
WIPP-Certifiable: Yes

WIPP-Certifiable: Yes

Waste Form Category: Combustibles

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 389-85289
Content Code: 970
Container Wt (lb): 2120
Original Assay (g): 13.0-Pu, 0.0-Am
Packaging Location: Building 776, Room 146

Container Type: Box
Code Description: Wood
Surface Dose Rate (mR/h): 4,6
Reassay (g): Not performed
Date Packaged: 7-11-72

RADIOGRAPHIC EXAMINATION

Examination Date: 11-6-84
Liner Type: Box liner
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 3-15-85
Container Condition: Box and fiberglass condition was very good.

Lead Lined: No
Liner Type: PVC/cardboard

Waste Form Description: Wood, metal items

Waste Form Description: Top half of box contained plywood (old cutup fiberglass box). The bottom half contained cut-up rigid drum liners, PVC (pipe, drum), carbon steel (duct grill, 3 crushed drums, pipe, conduit, steel metal-control panel, angle iron, banding) electrical cables, stainless steel (tank top-0.5" thick).

Packaging Description: Wood is packed in poly bagging in the top half of the box. The bottom half is a mixture of waste, but mostly metal items. The box has a liner.

Packaging Description: The box was lined with a PVC liner, then a cardboard liner. The waste was generally loose packed, but some of the metal was single or double bagged. The top half of the box contained wood, the bottom half contained miscellaneous metal. The two halves were separated by a layer of cardboard.

Absorbent Information: None

Absorbent Information: No absorbents were present.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): Paper-13.2, cardboard-57.6, PVC-28.6, poly sheet-13.2, poly drum liners 128.5, carbon steel-781.0, wood 399.1, stainless steel-105.2.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 90%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Packaging Efficiency: 100%
Volume % Combustibles: 60%
Correct Content Code? Yes* New Code: 330
Other Information: *970 is an old code for wood and was used until 1978. This waste is now classified as 330. The old code is correct; the new code is shown for reference only.

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 02-40153
Content Code: 320
Container Wt (lb): 277
Original Assay (g): Pu-0.0
Packaging Location: Building 771

Container Type: Drum
Code Description: Heavy Non-SS Metal
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-11.8; Am-0.2
Date Packaged: 03/23/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/15/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Waste consists of tubing, conduit, wire,
and electrical items and fixtures.

Packaging Description: Waste items are contained in the drum bags.

Absorbent Information: Approximately 5 gallons of absorbent.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 60%
Volume % Combustible: 2%
Correct Content Code? No New Code: 480
Other Information: Organic weight-10 lbs.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/12/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: Cast iron conduit, light
fixtures, aluminum light guards.

Packaging Description: Type II liner is lined with
2 polyethylene drum bags. Waste items directly in
drum bags.

Absorbent Information: Vermiculite on top of outer
sealed drum bag-8 lbs.

Physical State of Waste: Dry
Component Weight (LB): 180 lbs of cast iron conduit,
wiring, light fixtures; 9 lbs of aluminum (light
guards).

WIPP-WAC Compliance Information: none

Packaging Efficiency: 70%
Volume % Combustibles: 2%
Correct Content Code? No New Code: 480
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 29-00513
Content Code: 320
Container Wt (lb): 137
Original Assay (g): Pu-3.0
Packaging Location: Building 559

Container Type: Drum
Code Description: Heavy Non-SS Metal
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.2; Am-0
Date Packaged: 3/24/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/15/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Waste consists of small metal pieces
and several sheet metal items.

Packaging Description: Waste items are contained in polybags.

Absorbent Information: Approximately 20 gallons of absorbent.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 20%
Volume % Combustible: 2%
Correct Content Code? No New Code: 480
Other Information: Organic weight-10 lbs.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/12/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: Plastic gears, mild steel-
instrument panels, brackets, scale bridge and 1/4-in.
drill.

Packaging Description: Type II liner is lined with
polyethylene drum bag. Waste items double-contained
in poly. bags; in drum bag.

Absorbent Information: Vermiculite on top of outer
sealed drum bag-19 lbs.

Physical State of Waste: Dry
Component Weight (LB): 4 lbs plastics; 33 lbs
mild steel-instrument panel, brackets, scale bridge,
drill.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 20%
Volume % Combustibles: 3%
Correct Content Code? No New Code: 480
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 29-00528
Content Code: 320
Container Wt (lb): 139
Original Assay (g): Pu-0.0
Packaging Location: Building 559

Container Type: Drum
Code Description: Heavy Non-SS Metal
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.3; Am-0.0
Date Packaged: 3/24/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/15/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Waste consists of electrical components
and a Vollrath can.

Packaging Description: Waste items are contained in the plastic
drum bag inside the 80-mil liner.

Absorbent Information: Approximately 15 gallons of absorbent.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 15%
Volume % Combustible: 2%
Correct Content Code? No New Code: 480
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/12/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: Furnace, hotplates, wire
brushes, putty knife, knife, respirator filter.

Packaging Description: Type II liner is lined
with polyethylene drum bag. Waste items
double-contained in plas. bag in drum bag.

Absorbent Information: Vermiculite on top of sealed
drum bag-16 1/2 lbs.

Physical State of Waste:
Component Weight (LB): 4.5 lbs plastics, 43 lbs
furnace, hotplates, wire brushes, knives, respirator
filter, and 6 lbs ceramic furnace plates.

WIPP-WAC Compliance Information: None

Packaging Efficiency:
Volume % Combustibles:
Correct Content Code? No New Code: 480
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 78-00199
Content Code: 320
Container Wt (lb): 276
Original Assay (g): Pu-1.0
Packaging Location: Building 771, Rm 182

Container Type: Drum
Code Description: Heavy Non-SS Metal
Surface Dose Rate (mR/h): 0.8
Reassay (g): Pu-0
Date Packaged: 10/14/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/15/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: Yes-See below

Waste Form Description: Waste consists of welding rod, two sheets of lead (1/16-in. thick), pieces of equipment, etc.

Packaging Description: Waste items are contained in the plastic drum bag inside the 90-mil liner.

Absorbent Information: None

Free Liquids: Yes	Quantity: 1-pint	Contained: See below
Compressed Gases: Yes	Type: Aerosol can	Quantity: 1
Particulates: No	Quantity:	Type:

Packaging Efficiency: 75%
Volume % Combustible: 2%
Correct Content Code? No New Code: 480
Other Information: (1) Liquids in aerosol can
 (2) Organic weight-10 lbs.

WIPP-Certifiable: No-due to free liquids in aerosol can.

VISUAL EXAMINATION

Examination Date: 4/12/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: Course graphite, steel plates, lead tape, rubber vacuum hose, glass breaker, aluminum foil, thermocouples, produce cans, lead sheeting, flashlight batteries, saw blades, nuts and bolts and copper tubing.

Packaging Description: Type II liner is lined with polyethylene drum bags. Items placed directly into the inner poly. drum bag. Some contained in single plastic bags.

Absorbent Information: None

Physical State of Waste: Dry
Component Weight (LB): 8 1/2 lbs plastics; 148 lbs SS and mild steel; 3 lbs copper tubing, 10 1/2 lbs aluminum foil, can; 27 lbs lead sheeting and tape; 2 lbs graphites pieces, 2 lbs welding rod; 3 lbs batteries, 7 1/2 lbs fines.

WIPP-WAC Compliance Information: 1. Free liquids: 250 ml; WD-40R and DykemR steel blue.
2. Particulates: floor sweepings; analysis indicates 0.81% <212 and 3.5E-4% <10. 3. Explosives/compressed gas: pressurized aerosol can.

Packaging Efficiency: 80%
Volume % Combustibles: 5%
Correct Content Code? No New Code: 480
Other Information:

WIPP-Certifiable: No-Free liquid and compressed gas.

Waste Form Category: Metals

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 29-01396
Content Code: 320
Container Wt (lb): 242
Original Assay (g): Pu-0.4, Am-0.0
Packaging Location: Building 559, Plenum

Container Type: Drum
Code Description: Heavy non SS metal
Surface Dose Rate (mR/h): <0.5
Reassay (g): 2.1-Pu, 0.1-Am
Date Packaged: 8/20/84

RADIOGRAPHIC EXAMINATION

Examination Date: 2/20/85
Liner Type: 90 mil

Lead-Lined: No Other Lead:

Waste Form Description: Approximately six 6-in. diameter motors, miscellaneous wiring, etc.

Packaging Description: Each motor is contained in a poly bag, tied at the top.

Absorbent Information:

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: <5%
Correct Content Code? No New Code: 480
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3/21/85
Container Condition: Exterior-excellent minor handling scratches, Interior-no rust.

Lead Lined: No
Liner Type: Type III, 90 mil

Waste Form Description: Waste was mainly light metal contained in 3 packages. A total of 7 small pumps and wiring was found; 5 were carbon steel, 2 were plastic. A fourth package contained combustibles such as rubber (gaskets), paper (wipes), surgeon's gloves.

Packaging Description: Type III rigid liner was double lined with polyethylene round bottom drum bags. Four individual packages of waste were double bagged in poly.

Absorbent Information: No absorbents were present

Physical State of Waste: Dry
Component Weight (LB): Paper-3.0, rubber-2.2, poly bags-9.2, surgeon's gloves-2.0 pumps (carbon steel, plastic)-161.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 75%
Volume % Combustibles: 20%
Correct Content Code? No New Code: 480
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metal

Time Period: 3-year old

GENERAL INFORMATION

Container Identification: 55-00290
Content Code: 320
Container Wt (lb): 138
Original Assay (g): Pu-97.0
Packaging Location: Bldg 779A, Rm 160

Container Type: Drum
Code Description: Heavy Non-SS Metal
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-154.0
Date Packaged: 10-23-81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Funnels

Packaging Description: Waste is contained in a plastic bag inside of a Fiber-Pak. The Fiber-Pak is contained in double plastic bags.

Absorbent Information: Oil-Dri, 2 quarts

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 20%
Volume % Combustible: 50
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-9-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Tantalum crucibles and funnels. Waste also contained a small bag of tantalum chips.

Packaging Description: Type II liner is lined with two polyethylene drum bags. The waste items are double-bagged in polyethylene and inside a Fiber-Pak.

Absorbent Information: Oil-Dri is located in the bottom of the liner.

Physical State of Waste: Dry
Component Wt (lb): Plastic bags--6.75;
tantalum funnels, crucibles and chips--40.87;
Oil-Dri--3.5.

WIPP-WAC Compliance Information:
1. Particulates (tantalum chips): Analysis of the chips indicates that the waste contains 0.025 wt % <212 μ particulates and 0.002 wt % <10 μ particulates.

Packaging Efficiency: 25%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-10613
Content Code: 320
Container Wt (lb): 190
Original Assay (g): 6.0-Pu; 0.0-Am
Packaging Location: Building 771, Room 149

Container Type: Drum
Code Description: Heavy non SS metals
Surface Dose Rate (mR/h): <0.5
Reassay (g): 3.9-Pu; 0.1-Am
Date Packaged: 2-18-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Heavy metal

Packaging Description: Metal is packed in 2 fiber pack
containers, then bagging material,
then 90 mil liner.

Absorbent Information: 1 pint

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information: 6.75 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 2-18-85
Container Condition: Exterior-light rust,
Interior-no rust

Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Tantalum crucibles and
funnels.

Packaging Description: Type I rigid liner is double
lined with polyethylene drum bags which contain two
fibre-paks. In the top fibre-pak there were
4 packages containing 9 tantalum pieces; in the bottom
fibre-pak there were 5 packages containing 9 tantalum
pieces. The packages were double-bagged with an inner
PVC bag and an outer poly bag.

Absorbent Information: Oil-Dri was located outside of
the drum bags in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): 2 fibre-paks-12.0, poly
bags-2.2, PVC bags-7.0 tantalum-91.4, oil dry-10.4.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 60%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-10128
Content Code: 320
Container Wt (lb): 220
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location: Building 771, Room 149

Container Type: Drum
Code Description: Heavy non-SS metals
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.3-Pu; 0.0-Am
Date Packaged: 1-21-73

RADIOGRAPHIC EXAMINATION

Examination Date: 2/20/85
Liner Type: Cardboard liner
Lead-Lined: No Other Lead:

Waste Form Description: One heavy metal cylinder, pieces of pipe,
metal cans, conduit, miscellaneous metal.

Packaging Description: All waste is contained in plastic bags.

Absorbent Information:

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: <5%
Correct Content Code? No New Code: 480
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-22-85
Container Condition: Some light to moderate rust
Lead Lined: No
Liner Type: PVC, poly and cardboard

Waste Form Description: Miscellaneous waste primarily
light metal such as stainless steel (hand tools, pipe
fittings, sample carriers), carbon steel (pipe,
conduit, lanterns, paint cans, aluminum cans),
aluminum/filter cartridges), lead (2 pieces) copper
(electric cord), wood (broom, clipboards), rubber (air
hose), dry cell batteries.

Packaging Description: A rigid 90-mil liner was not
used. The drum was double-lined with a PVC outer bag
and a polyethylene inner bag. A cardboard liner was
used inside of the poly bag. Waste was contained
directly inside of the cardboard liner.

Absorbent Information: Oil-Dri was located outside of
the drum bag in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): PVC-3.0, poly-1.0,
cardboard-4.0, stainless steel-38.7, carbon
steel-46.2, aluminum-6.6, lead-17.6, copper-6.6,
wood-10.1, rubber-2.2, batteries-4.4, oil dry-2.2.

WIPP-WAC Compliance Information: 1. Particulates.
1838.38 grams of dessicant as 68 paper packets were
located in ammunition carriers. Analysis of the
particulate indicated the waste contained 7.7E-3 wt%
<212 micron particles and <2.8E-6 wt% <10 micron
particles.

Packaging Efficiency: 85%
Volume % Combustibles: 5%
Correct Content Code? No New Code: 480
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-12224
Content Code: 320 Note: Wrong code (see below)
Container Wt (lb): 235
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Heavy non-SS metal
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.1-Pu; 0.1-Am
Date Packaged: 4-26-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Small hardware, metal sheet, tubing

Packaging Description: Light metal packed in bagging material then 90-mil liner. Small hardware in poly bottles. A one gallon bottle appears to have fine particulate.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: 1 gallon	Type: Unknown

Packaging Efficiency: 80%
Volume % Combustible: <25%
Correct Content Code? No New Code: 480-Unleached light non SS metal.
Other Information: 14 lbs of organic material.

WIPP-Certifiable: No-1 gallon of particulate

VISUAL EXAMINATION

Examination Date: 2-19-85
Container Condition: Exterior-some light rust,
Interior-no rust
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Miscellaneous light metal such as stainless (airduct, 1 1/4" sch. 40 pipe), carbon steel (sawblades, channel (16 gauge), nuts, bolts, pressure gauge), grinding disk.

Packaging Description: Type I rigid liner was lined with a single polyethylene drum bag. The waste was generally double bagged in polyethylene although some waste was in half-gallon poly bottles. Paper wipes were used to cover sharp metal edges. The drum bag had 2 small tears in the top.

Absorbent Information: Oil-Dri was located outside of the drum bag in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Stainless steel-91.5, carbon steel-33.8, poly bags and half-gallon bottles-9.0, paper wipes-5.4, oil dry-6.2.

WIPP-WAC Compliance Information: 1. Particulates. 4630 grams of particulates <6000 micron such as weld grindings, and floor sweepings were located in 4 half-gallon plastic bottles. Analysis of the particulate indicates the waste contained 2.61 wt% <212 micron particles and 1.9E-3 wt% <10 micron particles.

Packaging Efficiency: 80%
Volume % Combustibles: 15%
Correct Content Code? No New Code: 480
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 32-00544
Content Code: 320
Container Wt (lb): 180
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Heavy non-SS metals
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.0-Pu; 0.1-Am
Date Packaged: 1-10-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-9-84
Liner Type: Cardboard
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 2-19-85
Container Condition: Exterior-some light rust,
Interior-no rust

Lead Lined: No
Liner Type: Cardboard and polyethylene.

Waste Form Description:

Waste Form Description: Miscellaneous light metal
such as carbon steel (wire, crushed cans, lids, tools,
turnings and shavings), aluminum (foil).

Packaging Description: Waste is in a cardboard liner. It is
not in bagging material.

Packaging Description: A rigid 90-mil liner was not
used. The drum was lined with two polyethylene drum
bags and a cardboard liner. The waste was packed into
crushed Fibre-Paks either loose or double bagged in
poly.

Absorbent Information: 2 quarts

Absorbent Information: Oil-Dri was located outside of
the drum bag in the bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): Paper (fibre-paks (4),
cardboard liner)-28.0, polyethylene bags-7.0, carbon
steel-72.5, aluminum-2.6, oil dry-5.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 80%
Volume % Combustible: 21%
Correct Content Code? No
Other Information:

New Code: 480 Unleached light non-SS metal

WIPP-Certifiable: Yes

Packaging Efficiency: 90%
Volume % Combustibles: 20%
Correct Content Code? No New Code: 480
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-40002
Content Code: 480
Container Wt (lb): 341
Original Assay (g): Pu-0.0
Packaging Location: Bldg 771, Rm 181

Container Type: Drum
Code Description: Unleached Light Non-SS Metal
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.0
Date Packaged: 2-28-83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: Some rolled-up lead shielding material

Waste Form Description: Metal items such as conduit and electrical hardware.

Packaging Description: Waste contained in plastic bags.

Absorbent Information: Vermiculite

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 73%
Volume % Combustible: 5
Correct Content Code? Yes New Code:
Other Information: Lead does not appear to be shielding any item in the drum.
Estimated organic weight: 25.lb.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-25-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Kimwipes, polyethylene and PVC plastic, lead shielding, conduit, duct, and miscellaneous metal.

Packaging Description: Type II liner is lined with two polyethylene drum bags. The waste items are contained in 14 double- and triple-bagged packages.

Absorbent Information: Vermiculite is located on top of the drum bag.

Physical State of Waste: Dry
Component Wt (lb): Kimwipes--2.5; polyethylene and PVC--6.0; lead--191.5; miscellaneous metal--54.5; vermiculite--6.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 60%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 31-00939
Content Code: 480
Container Wt (lb): 143
Original Assay (g): Pu-0.0
Packaging Location: Bldg 707, Module F
RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Mixed wastes. Rope and plastic in a bag at top of waste, metal objects in the middle, and glass (test tubes) in polyethylene bottles at bottom.

Packaging Description: See waste form description; wastes also contained in plastic bags.

Absorbent Information: Information not recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: 1 gal	Type: Floor sweep/metal chips

Packaging Efficiency: 67%
Volume % Combustible: 50
Correct Content Code? No New Code: Mixed codes (330, 440, 480)
Other Information: Estimated organic weight--27.3 kg. Particulates consist of one poly bag containing approximately 1 gal of course material such as floor sweepings or metal chips.

WIPP-Certifiable: No--due to wrong content code.

Container Type: Drum
Code Description: Unleached Light Non-SS Metal
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-3.0
Date Packaged: 2-16-83
VISUAL EXAMINATION

Examination Date: 8-24-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Metal filter, aluminum foil, copper tubing, vacuum grease, O-ring, gasket, asbestos tie-wraps, and a glass vacuum tube.

Packaging Description: Type II liner is lined with two polyethylene drum bags. Waste items are contained in a total of seven double-bagged packages.

Absorbent Information: Vermiculite is located on top of drum bag.

Physical State of Waste: Dry
Component Wts (lb): Kimwipes--2.0; rubber O-ring gasket--1.5; plastic--4.25; surgeon's gloves--1.0; stainless steel--15.0; copper tubing and aluminum foil--26.5; asbestos tie-wraps and floor sweepings--11.5; vermiculite--4.5.

WIPP-WAC Compliance Information:
1. Particulates (floor sweepings): Analysis of the sweepings indicates that the waste contains 0.001 wt % <212 μ and <0.001 wt % <10 μ particulates.

Packaging Efficiency: 70%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information: Glass vacuum tube is too light to weigh.

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-39738
Content Code: 480
Container Wt (lb): 102
Original Assay (g): Pu-9.0
Packaging Location: Bldg 771, Rm 181

Container Type: Drum
Code Description: Unleached Light Non-SS Metal
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-9.0
Date Packaged: 2-15-83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Waste appears to be all polyethylene.

Packaging Description: Waste contained in plastic bags.

Absorbent Information: Information not recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: 100
Correct Content Code? No New Code: 330
Other Information: Estimated organic weight--52 lb

WIPP-Certifiable: No-due to wrong content code.

VISUAL EXAMINATION

Examination Date: 8-24-83
Container Condition: Several dents in upper third of drum.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Aluminum foil

Packaging Description: Type II liner is lined with one polyethylene drum bag. Waste items are contained in a total of four double-bagged packages.

Absorbent Information: Vermiculite is located on top of the drum bag.

Physical State of Waste: Dry
Component Wt (lb): Aluminum foil--15.0;
polyethylene plastic--9.5; vermiculite--3.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 80%
Volume % Combustibles: 30
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 45-00528
Content Code: 480
Container Wt (lb): 222
Original Assay (g): Pu-31.0; U-235--2.0
Packaging Location: Not available

Container Type: Drum
Code Description: Unleached Light Non-SS Metal
Surface Dose Rate (mR/h): 5.0
Reassay (g): Pu-32.4; U-235--13.6
Date Packaged: 3-18-83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Variety of metal objects.

Packaging Description: Waste is contained in plastic bags.

Absorbent Information: Information not recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 95%
Volume % Combustible: 10
Correct Content Code? Yes New Code:
Other Information: Estimated organic weight--25 lb.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-25-83
Container Condition: Three dents on lower two-thirds of the drum.
Lead-Lined: No
Liner Type: Type I 90-mil

Waste Form Description: Waste consists of 16 packages containing a furnace, hot plate, wire brush, scale, a small motor, etc.

Packaging Description: Type I liner is lined with two polyethylene drum bags. Each package containing waste is triple-bagged.

Absorbent Information: Vermiculite located on top of drum bag.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene and PVC plastic--18.25; stainless steel--29.0; mild steel and iron--92.75; brass--4.5; vermiculite--2.0.

WIPP-WAC Compliance Information:
1. Particulates (rust fines): Analysis of the fines indicates that the waste contains 0.062 wt % <212 μ particulates and <0.001 μ wt % <10 μ particulates.

Packaging Efficiency: 85%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 389-90895
Content Code: 480
Container Wt (lb): 3480
Original Assay (g): Pu-0.2; U-235--141
Packaging Location: Size Reduction

Container Type: Box
Code Description: Unleached Light Non-SS Metal
Surface Dose Rate (mR/h): 3.0
Reassay (g): Not available--box counter not operational.
Date Packaged: 4-6-83

RADIOGRAPHIC EXAMINATION

Examination Date: 7-5-83
Liner Type: Plastic box liner and a cardboard liner.
Other Lead: No Lead-Lined: No

Waste Form Description: Miscellaneous metal items.

Packaging Description: Some waste is wrapped in plastic; remaining waste has been placed directly into the box.

Absorbent Information: Vermiculite

Free Liquids: Yes	Quantity: 1-2 pints	Contained: Yes, see below
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity: See below	Type:

Packaging Efficiency: 98%
Volume % Combustible: 5
Correct Content Code? Yes New Code:
Other Information: Liquid is contained in a plastic bag. Limited examination due to many dense areas (limited penetration). Bottom inch of box is vermiculite.

WIPP-Certifiable: No--due to small amount of liquid.

VISUAL EXAMINATION

Examination Date: 9-19-83
Container Condition: Good Lead-Lined: No
Liner Type: PVC box liner and a cardboard liner.

Waste Form Description: Waste includes 29 steel drums (crushed), 18 drum lids, eight drum rings, tools, Raschig rings, face masks and filter canisters, motors, oil filters, Tygon tubing, plastic bottles, tantalum crucibles, two aerosol cans, etc.

Packaging Description: Some of the waste is contained in polyethylene bags, remaining waste has been placed directly into the box.

Absorbent Information: Vermiculite in the bottom of the PVC box liner.

Physical State of Waste: Damp
Component Wt (lb): Paper--15.0; plastics--71.0; tantalum crucibles--68.0; steel drums and tools--1844.5; Raschig rings--24.0; masks, canisters, motors, oil filters--420.0; vermiculite--23.0.

WIPP-WAC Compliance Information:

1. Liquids: 60 ml of oil in a polyethylene bag. Analysis indicates the liquid has a pH of 7 and is a chlorinated paraffin oil and unidentified ester. The liquid in the aerosol cans was not measured.
2. Particulates (MgO sand): Analysis indicates that the waste contains 0.013 wt % <212 μ particulates and <0.001 wt % <10 μ particulates.
3. Compressed Gases: One pressurized paint can and one shaving cream can.

Packaging Efficiency: 100%
Volume % Combustibles: 2
Correct Content Code? Yes New Code:
Other Information:
WIPP-Certifiable: No

Waste Form Category: Metals

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 389-90828
Content Code: 480
Container Wt (lb): 2920
Original Assay (g): Pu-57.0
Packaging Location: Size Reduction

Container Type: Box
Code Description: Unleached Light Non-SS Metal
Surface Dose Rate (mR/h): 8.4
Reassay (g): Not available--box counter not operational.
Date Packaged: 3-15-83

RADIOGRAPHIC EXAMINATION

Examination Date: 7-5-83
Liner Type: Plastic box liner and cardboard liner.
Lead-Lined: No Other Lead: No

Waste Form Description: Metal waste--several dense areas. Appears to be tubing.

Packaging Description: Waste placed directly into box.

Absorbent Information: None identified.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: Below	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 95%
Volume % Combustible: 5
Correct Content Code? Yes New Code:
Other Information: One container is approximately 12 in.
long x 8 in. diameter; the ends are flat and the container probably
is not pressurized.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 9-21-83
Container Condition: Good
Lead-Lined: No
Liner Type: PVC box liner and a fiberboard liner.

Waste Form Description: Crushed drums, drum
lids, lock-chimes, furnaces, Vollrath cans,
thermocouples, crushed paint and oil cans, hand
tools, lead shielding, bolts, hydraulic jack
(drained), piping, refrigeration unit (parts),
electric motors, aluminum air grill, console,
extension cord, pipe wrenches, valves,
Kimwipes, plastic, tantalum crucibles, etc.

Packaging Description: Both loose and double-
bagged wastes.

Absorbent Information: None

Physical State of Waste: Damp
Component Wt (lb): Paper and plastic--73;
stainless steel cans--177; tantalum
crucibles--5; miscellaneous metal--1412; lead,
cabinet, Metco, fiberglass--333.

WIPP-WAC Compliance Information:

1. Liquids: 10 ml of oil from crushed cans.
Analysis indicates a pH of 7 and consists of
an alkyl phenol polyoxyethylene and
unidentifiable oil.
2. Particulates: Analysis of welding flux
indicates that the waste contains 1.5 wt %
<212 μ particulates and 0.006 wt % <10 μ
particulates.

Packaging Efficiency: 100%
Volume % Combustibles: 2
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No

Waste Form Category: Metals

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 12-12505
Content Code: 480
Container Wt (lb): 165
Original Assay (g): Pu-5.0, Am-0.0*
Packaging Location: Building 776, Area 1

Container Type: Drum
Code Description: Light non SS metal
Surface Dose Rate (mR/h): 2.2
Reassay (g): 49.9-Pu, 0.2-Am
Date Packaged: 8/15/84

RADIOGRAPHIC EXAMINATION

Examination Date: 2/21/85
Liner Type: 90 mil

Lead-Lined: No Other Lead:

Waste Form Description: Metal pans, gallon buckets, metal cans,
scissors, one 12-in. diameter by 1-in.
wide plate.

Packaging Description: All waste items are contained in plastic.

Absorbent Information:

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3/21/85
Container Condition: Exterior-excellent,
Interior-no rust.

Lead Lined: No
Liner Type: Type III, 90 mil

Waste Form Description: Miscellaneous light metal
including stainless steel (4 each, trays, can lids)
carbon steel (produce cans, banding, paint cans,
pedestal 12" dia x 0.375"), aluminum (foil), copper
(electric cord), tantalum (pan, crucible), wood (paint
brushes).

Packaging Description: Type III rigid liner was
single lined with a polyethylene round bottom bag.
Fifteen packages contained waste which was generally
double-bagged in PVC liner bags and poly outer bags.

Absorbent Information: No absorbents were present

Physical State of Waste: Dry
Component Weight (LB): PVC-11.0, poly-5.2, stainless
steel-9.2, tantalum-4.8, carbon steel-38.7, aluminum
1.0, copper-13.2, wood-1.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 70%
Volume % Combustibles: 10%
Correct Content Code? Yes New Code:
Other Information: *The original assay was
50.0 grams, but was transmitted to INEL as 5.0 grams
in the original shipping papers.

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 389-20305
Content Code: 480
Container Wt (lb): 3080
Original Assay (g): Pu-296, Am-0.0
Packaging Location: Building 776, Room 146

Container Type: Box
Code Description: Light non SS metal
Surface Dose Rate (mR/h): 2.7
Reassay (g): Not performed
Date Packaged: 10/13/84

RADIOGRAPHIC EXAMINATION

Examination Date: January 1985
Liner Type: Plastic box liner
Lead-Lined: No Other Lead: No

VISUAL EXAMINATION

Examination Date: 3/19/85
Container Condition: Box and fiberglass condition was very good.
Lead Lined: No
Liner Type: PVC/cardboard

Waste Form Description: Box appears to have 40-50% plastics. The remaining volume contains large and small pieces of miscellaneous metals.

Waste Form Description: Miscellaneous metals including stainless steel, (parts carriers, flanges cylinder & die, pipe, fittings, tools, cans, molds, spool pieces w/1" flanges, copper (pipe, coils) lead (sheeting) carbon steel (2 motors, produce cans, pump, heat exchanger, electric grinder, all thread, drums, lids, rings, fire extinguisher, conduit, pipe, fittings) lighting ballast, gloveport covers (carbon steel with lead) filter canisters, lead glove, lead taped glass sample vials, aluminum (foil, glove change ring).

Packaging Description:

Packaging Description: The box was lined with a PVC liner then a cardboard liner. The waste was generally packaged in 2 inner PVC bags and 1 outer poly bag. Twelve crushed drums were loose packed as the top layer of waste in the box. The drum lids were the bottom layer of waste.

Absorbent Information:

Absorbent Information: No absorbents were present

Free Liquids: Yes
Compressed Gases: No
Particulates: No

Quantity: 1 quart
Type:
Quantity:

Contained:
Quantity:
Type:

Physical State of Waste: Dry
Component Weight (LB): Cardboard-19.8, rubber-22.7,
PVC-51.8, poly-12.4, stainless steel-607.0,
cooper-113.5, lead-6.6, gloveport shield-15.2, carbon
steel-583.7, filter canisters-40.5, lead glove-0.9,
sample vials-8.8, aluminum-11.2, 12 drums-580.8,
12 lids-100.3, 12 rings-46.2, ballast 28.6.

WIPP-WAC Compliance Information: 1. Liquids-several
drops (approximately 5 ml) spilled from the coils of a
Helicoil heat exchanger. The liquid was not sampled.
2. Compressed gas. A fire extinguisher was found,
however, the valve was taped in the open position and
the extinguisher was not pressurized.

Packaging Efficiency:

Volume % Combustible:

Correct Content Code?

New Code:

Other Information: Box was not completely thawed out, appears that
there are two places that contain free liquids.
Maximum quantity would be 1 quart.

WIPP-Certifiable: No-free liquid

Packaging Efficiency: 100%

Volume % Combustibles: 3%

Correct Content Code? Yes New Code:

Other Information:

WIPP-Certifiable: No-free liquids (5 ml)

Waste Form Category: Metals

Time Period: 3-year old waste

GENERAL INFORMATION

Container Identification: 02-34855
Content Code: 480
Container Wt (lb): 251
Original Assay (g): Pu-5.0
Packaging Location: Not available.

Container Type: Drum
Code Description: Unleached Light Non-SS Metal
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.0
Date Packaged: 11-21-80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Metal items such as electrical hardware and appears to include a small transformer.

Packaging Description: Waste is contained in plastic bags.

Absorbent Information: Oil-Dri, 1-gal.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: 10
Correct Content Code? Yes
Other Information:

New Code:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-9-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Electrical equipment such as recorders, timers, switches, controllers, etc.

Packaging Description: Type II liner is lined with two polyethylene drum bags. The waste items were placed directly inside the drum bags.

Absorbent Information: Oil-Dri is at the bottom of the liner.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene drum bags--2.0; miscellaneous electrical hardware (metal)--161.5; other (cables, cord, wire, circuit boards)--7.25; Oil Dry--7.5.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 95%
Volume % Combustibles: 5
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 3-year old waste

GENERAL INFORMATION

Container Identification: 02-35083
Content Code: 480
Container Wt (lb): 210
Original Assay (g): Pu-0.0
Packaging Location: Bldg 771, Rm 161

Container Type: Drum
Code Description: Unleached Light Non-SS Metal
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.0
Date Packaged: 1-15-81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Metal items including bolts, wire, tubing, and piping.

Packaging Description: Waste is contained in plastic bags.

Absorbent Information: Absorbent is either Portland cement or Oil-Dri (7 cup total) and is located at top of waste in some of the bags containing the waste, and in the bottom of the liner.

Free Liquids: No Quantity: Contained:
Compressed Gases: No Type: Quantity:

Particulates: No Quantity: Type:

Packaging Efficiency: 67%
Volume % Combustible: 10
Correct Content Code? Yes New Code:
Other Information: Absorbent is either Portland cement or Oil-Dri and is located at top of waste in some of the bags containing the waste, and in the bottom of the liner.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-9-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Extension cords, valve flange, hammers, a leaded apron, welding hood, glass, two trouble-lights, plastic flashlights, batteries, cement, Kimwipes, etc.

Packaging Description: Type II liner is lined with two polyethylene drum bags. All waste items are double-bagged in polyethylene.

Absorbent Information: Oil-Dri is located on top of the drum bag and in the bottom of the liner.

Physical State of Waste: Dry
Component Wt (lb): Kimwipes--1.0;
plastics--22.5; surgeon's gloves--0.25;
stainless steel--12.25; aluminum, galvanized metal, mild-steel--58.37; leaded apron--7.5;
glass--1.0; cement pieces and fines--16.0;
other (extension cords, trouble lights)--8.0;
Oil-Dri--4.25.

WIPP-WAC Compliance Information:

1. Particulates (cement pieces and fines):
Analysis of the fines indicates that the waste contains 0.37 wt % <212 μ particulates
0.006 wt % <10 μ particulates.

Packaging Efficiency: 75%
Volume % Combustibles: 20
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 3-year old waste

GENERAL INFORMATION

Container Identification: 31-01321
Content Code: 480
Container Wt (lb): 140
Original Assay (g): Pu-6.0
Packaging Location: Bldg 707

Container Type: Drum
Code Description: Unleached Light Non-SS Metal
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-5.0
Date Packaged: 2-16-81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: Yes, lead apron near bottom of drum

Waste Form Description: Mixture of leaded rubber, glass, metal, polyethylene, and some combustibles.

Packaging Description: Waste is contained in plastic bags.

Absorbent Information: Oil-Dri, 2-gal.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: 65
Correct Content Code? No New Code: No proper code available
Other Information: Liner lid is out of the joint in one spot.

WIPP-Certifiable: No--due to mixture of waste types.

VISUAL EXAMINATION

Examination Date: 8-9-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Pair of leaded gloves, plastic parts and fixtures; aluminum foil; paper; metal fixtures, parts and bearings; empty plastic containers; wire brushes; etc.

Packaging Description: Type II liner is lined with two polyethylene drum bags. All waste items are double-bagged in polyethylene.

Absorbent Information: Oil-Dri is located in the bottom of the liner.

Physical State of Waste: Dry
Component Wt (lb): Paper--3.0; plastics--10.5; metal fixtures, bearings, parts and aluminum foil--42.0; leaded gloves--4.5; wire brushes--1.5; Oil-Dri--4.25.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 66%
Volume % Combustibles: 15%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 3-year old waste

GENERAL INFORMATION

Container Identification: 42-00209
Content Code: 480
Container Wt (lb): 260
Original Assay (g): Pu-27.0
Packaging Location: Bldg 771, Rm 157

Container Type: Drum
Code Description: Unleached Light Non-SS Metal
Surface Dose Rate (mR/h): 1.2
Reassay (g): Pu-27.5
Date Packaged: 12-22-80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Miscellaneous metal items.

Packaging Description: Waste is contained in plastic bags.

Absorbent Information: Portland cement (1-gal) is located on top of outer drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: 10%
Correct Content Code? Yes New Code:
Other Information: There is a liner lid at the bottom of the rigid liner.
Absorbent is located on top of outer drum bag.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-9-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Stainless steel
cryogenic Dewar vessels; small metal crucible;
heating element; plastic vials, tools; wire;
scissors; clamp rings; stainless steel
piping and tubing; muffle furnace; and
standard calibration weights.

Packaging Description: Type II liner is lined
with two polyethylene drum bags. Some waste is
contained in Vollrath cans or ice cream
cartons. Waste is double-bagged in plastic.

Absorbent Information: Oil-Dri is located on top
of the drum bag and in the bottom of the liner.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene and PVC
bags--19.25; stainless steel--45.0; misc.
mild steel, aluminum, and lead bricks--94.25;
ceramic pellets and particulate--6.37;
Oil-Dri--5.0.

WIPP-WAC Compliance Information:

1. Particulates: Possibly iron oxide from
steel cylinders. Analysis of the fines
indicates that the waste contains 0.022
wt % <212 μ and 0.001 wt % <10 μ particulates.

Packaging Efficiency: 95%
Volume % Combustibles: 35
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 01-08226
Content Code: Unknown (RFP-480)
Container Wt (lb): 422
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: (see below)
Surface Dose Rate (mR/h): <0.5
Reassay (g): 3.8-Pu; 0.2-Am
Date Packaged: 12-7-72

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Metal hardware

Packaging Description: Packed in poly bags, then in a
90-mil liner.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: <25%
Correct Content Code? No New Code: 480-Unleached light non SS metal
Other Information: 8 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 2-19-85
Container Condition: Exterior-light to moderate rust,
Interior-no rust

Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Miscellaneous light metal
including carbon steel (triangular plates with angle
iron 0.125-0.25, "pipe hangers 0.375" diameter
all-thread rods)

Packaging Description: Type I rigid liner was lined
with a single polyethylene drum bag. The waste was
double-bagged in poly. Paper wipes were used to cover
sharp metal edges. The drum bag had approximately
6-0.5" diameter holes.

Absorbent Information: Oil-Dri was located outside
the single drum bag on top and in the bottom of the
rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Carbon steel-317.7, paper
wipes-6.6, poly bags-9.0, oil dry-11.2.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 80%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 01-08232
Content Code: Unknown (RFP-480)
Container Wt (lb): 280
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: (see below)
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.9-Pu; 0.0-Am
Date Packaged: 12-7-72

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Metal

Packaging Description: Metal is packed in bagging material
then in 90-mil liner.

Absorbent Information: 1 1/2 gallons

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 70%
Volume % Combustible: <25%
Correct Content Code? No New Code: 480-unleached light non-SS metal.
Other Information: 10 lbs of organic material.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 2-19-85
Container Condition: Exterior-moderate rust,
Interior-very light rust
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Miscellaneous light metal
including carbon steel (angle iron 0.375", small
channel iron 0.25", sheet metal, sheet metal bands).

Packaging Description: Type I rigid liner was lined
a single polyethylene drum bag. The waste was double
bagged in poly. Sharp metal edges were covered with
paper wipes. There were three holes and tears up to
1" length.

Absorbent Information: Oil-Dri was located outside of
the single drum liner on top and in the bottom of the
rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Paper wipes-2.2, poly bags-5.0,
carbon steel-189.2, oil dry-48.8.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 50%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 18-00025
Content Code: 480
Container Wt (lb): 174
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Unleached light non SS metal
Surface Dose Rate (mR/h): <0.5
Reassay (g): 1.7-Pu; 0.2-Am
Date Packaged: 1-25-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90 mil
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 2-19-85
Container Condition: Exterior-some light rust,
Interior-heavy rust

Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Metal containers with clamp lids.
Hydraulic ram.

Waste Form Description: Miscellaneous light metal
including stainless steel (duct work 0.625 thick, 10"
dia. pipe plug 0.75", machine turnings) carbon steel
(5-glovebox port covers, hydraulic rams. 18"
long x 3" dia., thermocouples), lead sheeting, rubber
(tubing, gloveport seals), air prefilters.

Packaging Description: Metal packed in bagging material, then
90-mil liner.

Packaging Description: Type I rigid liner was lined
with a single polyethylene drum bag. The waste was
generally single or double-bagged in poly. The sharp
metal edges were taped and covered with paper wipes.

Absorbent Information: 2 quarts

Absorbent Information: Oil-Dri was located outside of
the drum bag in the bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): Paper wipes-4.4, rubber-1.2,
poly drum bags-8.3, stainless steel-24.2, carbon
steel-36.2, lead-5.2, oil dry 10.0, prefilter-3.4.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 80%
Volume % Combustible: ~25%
Correct Content Code? Yes New Code:
Other Information: 14 lbs of organic material.

WIPP-Certifiable: Yes

Packaging Efficiency: 90%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code: 480
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 42-00043
Content Code: 480
Container Wt (lb): 286
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Unleached light non-SS metals
Surface Dose Rate (mR/h): 2.4
Reassay (g): 7.9-Pu; 0.1-Am
Date Packaged: 4-5-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 2-20-85
Container Condition: Some light rust on interior
and exterior
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Metal hardware

Waste Form Description: Miscellaneous light metal
including stainless steel (block or mount, 6-small gas
sampling cylinders, vollrath can, flange, trays,
gloveport covers, rods, criticality drain), carbon
steel (pump, lab stand, cans, gauges, plate, knife,
hot plate, tongs, tweezers, dessicator, batteries,
flashlight, filter cartridge, tape holder, valves,
nuts and bolts, ceramic (mortar, pestle).

Packaging Description: Hardware packed in bagging material,
then put in 90-mil liner.

Packaging Description: Type I rigid liner was lined
with a single polyethylene drum bag. Most of the
waste was double-bagged in PVC and poly bags, although
some waste was triple bagged. A 1 gallon poly bottle
was double bagged also. The drum bag had a 3" tear in
the bottom.

Absorbent Information: None

Absorbent Information: Oil-Dri was located outside of
the drum bag in the bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): Paper (wipes, wood brush,
cardboard)-2.5, PVC bags-10.5, poly (bags,
bottle)-8.8, stainless steel-110.0, carbon steel-32.0,
ceramic-2.8, oil dry-4.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 90%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information: 14 lbs of organic material.

WIPP-Certifiable: Yes

Packaging Efficiency: 90%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metal

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 25-00036
Content Code: 480
Container Wt (lb): 395
Original Assay (g): 4.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Light non SS metal
Surface Dose Rate (mR/h): <0.5
Reassay (g): 3.7-Pu; 0.2-Am
Date Packaged: 12-12-72

RADIOGRAPHIC EXAMINATION

Examination Date: 2/20/85
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Metal object ~10 in. diameter by
~18 in. long. Also some pans, scissors
and miscellaneous metal objects.

Packaging Description: Metal contained in plastic.

Absorbent Information:

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: <5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-23-85
Container Condition: Exterior-light to moderate rust,
Interior-light rust.

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Miscellaneous waste including
light metal such as stainless steel (trays, plate,
gear), carbon steel (instruments, motor case, gauges),
glass (fluorescent light tubes), cloth (felt padding),
PVC (bags), poly (bags, templates, pads).

Packaging Description: type I rigid liner was double
lined with polyethylene drum bags. Eight waste
packages were single or double-bagged in PVC. The
liner had a small (0.25") hole and the outer bag had a
hole.

Absorbent Information: Oil-Dri was located outside of
the drum bag in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Stainless steel-25.96, carbon
steel-14.5, glass-1.0, cloth-1.0, PVC-13.6, poly-3.3,
oil dry-4.0.

WIPP-WAC Compliance Information: 1. Particulates:
4767 grams of magnesium oxide sand was located in a
1-gallon paint can. 2. Analysis of the particulates
indicated the waste contained 0.96 wt% <212 micron
particulates and 4.4E-3 wt% <10 micron particles.

Packaging Efficiency: 90%
Volume % Combustibles: 10%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 389-85769
Content Code: 480
Container Wt (lb): 3300
Original Assay (g): 13.0-Pu, 0.0-Am
Packaging Location: Building 776, Room 146

Container Type: Box
Code Description: Unleached light non SS metal
Surface Dose Rate (mR/h): <0.5
Reassay (g): Not performed
Date Packaged: 2-8-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-6-84
Liner Type: Box liner
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 1-9-85
Container Condition: Box and fiberglass condition was very good.
Lead Lined: No
Liner Type: PVC/cardboard

Waste Form Description: Assorted metal items, predominately piping.

Waste Form Description: Steel [conduit (1-3"dia.) containing wire, junction boxes, 6" square conduit, motors, gear drives], aluminum (light fixtures) ballasts (22 ea), copper (wire), fluorescent light tube.

Packaging Description: Packed in poly bagging, put in wooden box with box liner

Packaging Description: The box was lined with a PVC liner, then a cardboard liner. The metal was loose-packed in the box.

Absorbent Information: None

Absorbent Information: No absorbents were present.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): Cardboard-47.5,
PVC liner-18.9, steel-2267.3, aluminum 16.3,
ballast-193.6, cooper-4.4, light bulb-10.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 90%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Packaging Efficiency: 100%
Volume % Combustibles: 3%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 389-85811
Content Code: 480
Container Wt (lb): 3560
Original Assay (g): 13.0-Pu, 0.0-Am
Packaging Location: Building 776, Room 146

Container Type: Box
Code Description: Unleached light non SS metal
Surface Dose Rate (mR/h): <0.5
Reassay (g): Not performed
Date Packaged: 3-13-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-6-84
Liner Type: Box liner
Lead-Lined: No Other Lead:

Waste Form Description: Metal hardware, predominately pipe.

Packaging Description: Waste is wrapped in poly material then put in a wood box with liner.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-8-85
Container Condition: Box and fiberglass condition was very good.

Lead Lined: No
Liner Type: PVC/cardboard

Waste Form Description: Paper (wipes), rubber (gaskets, surgeon's gloves), plastic (styrofoam polyethylene, PVC, glove retainer rings, PVC liner) stainless (pipe-8"sch 10), steel (conduit w/wiring, junction box, pipe hangers) aluminum (respirator filters) lead (block-18" x 12" x 8"). The majority of waste was conduit.

Packaging Description: The box was lined with a PVC liner, then a cardboard liner. Most of the waste was loose-packed in the box, but some was single or double bagged.

Absorbent Information: No absorbents were present.

Physical State of Waste: Dry
Component Weight (LB): Paper-30.8, cardboard liner-15.0, rubber-10.6, plastics-61.2, stainless steel-411.4, steel-1997.2, aluminum-1.5, lead-259.6.

WIPP-WAC Compliance Information: 1. Liquids-3100. ml of grey liquid was found with wet paper wipes in double plastic bags located on top the waste. Analysis indicated a pH of 7. The components were water, silicates, carbonates, trace organics, nitrates. 2. Particulates-97.76 grams of metal trimmings, metal fines, dirt and sawdust was found. Analysis indicated the waste contained 5.3 E-4 wt% <212 micron particles and <7.7 E-7 wt % <10 micron particles.

Packaging Efficiency: 100%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-free liquids (3.1 liters)

Waste Form Category: Metals

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 15-00049
Content Code: 481
Container Wt (lb): 152
Original Assay (g): Pu-7.0
Packaging Location: Building 707

Container Type: Drum
Code Description: Leached Light Non-SS Metal
Surface Dose Rate (mR/h): 0.8
Reassay (g): Pu-16.3; Am-0
Date Packaged: 4/15/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/15/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Waste consists of two cage type devices, bolts, and small, miscellaneous metal objects.

Packaging Description: Waste is contained in plastic bags and 1 gallon polyethylene bottles.

Absorbent Information: Drum contains approximately 20 gallons of vermiculite.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: 2%
Correct Content Code? Yes New Code:
Other Information: Organic weight-10 lbs.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/13/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: Drill bits, nuts, bolts, bird cages (part carriers), knives and screwdrivers.

Packaging Description: Type II liner is lined with polyethylene drum bag. Small waste items in 1 gallon poly. bottles in double Poly. bags, birdcages in double bags.

Absorbent Information: Vermiculite on top and sides of outer sealed drum bag. (6 lbs)

Physical State of Waste: Dry
Component Weight (LB): 11 lbs plastics; 34 lbs miscellaneous metal; 20 lbs steel bird cages.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 80%
Volume % Combustibles: 3%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

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GENERAL INFORMATION

Container Type: Drum
Code Description: Leached, Light Non-SS Metal
Surface Dose Rate (mR/h): 1.2
Reassay (g): Pu-12.9; Am-0
Date Packaged: 2/21/83

VISUAL EXAMINATION

Examination Date: 4/13/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: Hotplate, scull plates, standard weights, sample can, extension cord, drill press and stand, Vollrath cans, thermocouples, wires, and hotplate bottom.

Packaging Description: Type II liner is lined with 3 poly. drum bags. Waste items were individually double-bagged before placing in drum.

Absorbent Information: Cement between inner and outer bag (6 lb); vermiculite on top of outer drum bag (6.5 lb).

Physical State of Waste: Dry
Component Weight (LB): 18 lbs plastics; 48 lbs
SS; 69 lbs mild steel.

Packaging Efficiency: 60%
Volume % Combustible: 3%
Correct Content Code? Yes New Code:
Other Information: (1)
 (2)

Packaging Efficiency: 70%
Volume % Combustibles: 10%
Correct Content Code? Yes
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 19-01901
Content Code: 481
Container Wt (lb): 336
Original Assay (g): Pu-51.0
Packaging Location: Building 776, Rm. 146

Container Type: Drum
Code Description: Leached, Light Non-SS Metal
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-44; Am-0.1
Date Packaged: 2/16/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/15/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Waste consists of aluminum or polyethylene tubing, one or two tantalum funnels, and two dense cylindrical items.

Packaging Description: Waste is contained in plastic bags.

Absorbent Information: Drum contains approximately 15 gallons of absorbent.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 45%
Volume % Combustible: 3%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/13/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: Tantalum funnel, aluminum sample cans, cylinder head from punch press, copper coils and lead sheet.

Packaging Description: Type II liner is lined with 2 polyethylene drum bags. Items placed directly into drum.

Absorbent Information: Small amt. of vermiculite in drum bottom; on top of outer drum bag (13 lbs).

Physical State of Waste: Dry
Component Weight (LB): 2 lbs plastics; 5 lbs funnel; 26 lbs copper coil; 181.5 lbs other metal; 22 lbs aluminum cans; 6 lb lead sheet.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 50%	
Volume % Combustibles: 2%	
Correct Content Code? Yes	New Code:
Other Information:	

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 19-01919
Content Code: 481
Container Wt (lb): 200
Original Assay (g): Pu-10.0
Packaging Location: Building 776

Container Type: Drum
Code Description: Leached, Light Non-SS Metal
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-11.6; Am-0.1
Date Packaged: 4/28/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/15/84

Liner Type:

Lead-Lined: Other Lead:

Waste Form Description: Metal waste--banding, pipe, Vollrath
cans (empty) etc.

Packaging Description: Waste items are contained in plastic bags.

Absorbent Information: Drum contains approximately 10 gallons
of vermiculite.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 50%
Volume % Combustible: 3%
Correct Content Code? New Code:
Other Information: Organic weight-5 lbs.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/16/84

Container Condition: Good

Lead Lined: No

Liner Type: Type II

Waste Form Description: Vollrath cans, rusty
tin cans, tools, copper gaskets and strips, piping,
flange, valve.

Packaging Description: Type II liner is lined with
polyethylene drum bag. Waste items placed directly
inside the drum bag.

Absorbent Information: Vermiculite on top of outer
sealed drum bag. (16 lbs.) Note: vermiculite was
moist.

Physical State of Waste: Dry
Component Weight (LB): 3 lbs plastics; 50 lbs
SS; 8 lbs tin cans; 18 lbs copper strips and gasket;
29 lbs miscellaneous mild iron metals.

WIPP-WAC Compliance Information: 1. Particulates:
rust fines; analysis indicates 0.09% <212 and
4.2E-4% <10.

Packaging Efficiency: 60%
Volume % Combustibles: 2%
Correct Content Code? Yes
Other Information:

New Code:

WIPP-Certifiable: Yes

Waste Form Category: Metals

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 76-00416
Content Code: 481
Container Wt (lb): 350
Original Assay (g): 9.0-Pu; 0.0-Am
Packaging Location: Building 776, Room 146

Container Type: Drum
Code Description: Leached light non-SS metals
Surface Dose Rate (mR/h): <0.5
Reassay (g): 5.5-Pu; 0.1-Am
Date Packaged: 5-8-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 2-20-85
Container Condition: Some minor rust on interior
and exterior
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Metal hardware

Waste Form Description: Miscellaneous light metal
including stainless steel (bars, filter cartridges,
tubing, gloveport ring, baffled stirrer, filter
screen, rod, flange 0.75" thick 10" dia.), carbon
steel (heat plate, pipe, knives, plate, cable, valves,
flange, cans.)

Packaging Description: Packed in bagging material, tied at
top, then packed in 90 mil liner.

Packaging Description: Type I rigid liner was double
lined with polyethylene drum bags. The waste items
were contained directly in the poly bags. The outer
poly bag had several small holes and tears (0.25").
The inner bag was torn which may have happened during
the examination.

Absorbent Information: 2 gallons

Absorbent Information: Oil-Dri was located outside of
the drum bag in the bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): Paper (wipes)-0.1, poly
bags-2.0, PVC skirt (used for bag out in original
operation)-1.5, stainless steel-145.2, carbon
steel-9., oil dry-25.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 80%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information: 10 lbs of organic material.

Packaging Efficiency: 80%
Volume % Combustibles: 3%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 37-02339
Content Code: 440
Container Wt (lb): 153
Original Assay (g): Pu-3.0
Packaging Location: Bldg 771, Rm 164

Container Type: Drum
Code Description: Glass
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-3.0
Date Packaged: 1-10-83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Primarily glass test tubes, one polyethylene bottle containing broken glass.

Packaging Description: Glass is contained in polyethylene bottles. The polyethylene bottles are contained in plastic bags.

Absorbent Information: Oil-Dri, (approximately 1/4 cup) is located at bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 95%
Volume % Combustible: 10
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 9-2-83
Container Condition: Good, two small handling dents in drum middle.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Eighteen packages of glass test tubes and other assorted glassware.

Packaging Description: Type II liner is lined with a polyethylene drum bag. All glass is contained in polyethylene bottles. Each bottle is double-bagged in plastic.

Absorbent Information: Not recorded. Films indicate a small amount of Oil-Dri or vermiculite in the bottom of the liner.

Physical State of Waste: Dry
Component Wt (lb): Plastic bags and bottles--18.0; glass--54.75.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 80%
Volume % Combustibles: 30
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 28-00755
Content Code: 440
Container Wt (lb): 174
Original Assay (g): Pu-11.0
Packaging Location: Bldg 559, Rm 102

Container Type: Drum
Code Description: Glass
Surface Dose Rate (mR/h): 0.7
Reassay (g): Pu-10.0
Date Packaged: 12-8-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.

Lead-Lined: No Other Lead: Lead-tape on sample bottles (vials)

Waste Form Description: Glass items including test tubes, sample vials, lead-taped sample vials, and one bottle containing broken glass.

Packaging Description: Glass items are contained in plastic bags and polyethylene bottles, which are contained in plastic bags.

Absorbent Information: No information recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 70%
Volume % Combustible: 5
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 9-2-83
Container Condition: Sharp dent in drum middle, and small dents on lid; paint is scratched.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Total of 24 packages containing glass sample vials, some lead-taped glass vials, and some metal mixed with the glass.

Packaging Description: Type II liner is lined with a polyethylene drum bag. Some wastes are contained in 1-gal polyethylene bottles and the bottles are double-bagged in plastic. Other wastes are double-bagged in plastic.

Absorbent Information: Vermiculite is located inside and on top of the drum bag.

Physical State of Waste: Dry
Component Wt (lb): Plastic bottles and bags--8.5; metal--5.0; glass and lead-taped glass--75.0; vermiculite--6.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 85%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information: Rust on inside of the drum.

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 12-11241
Content Code: 440
Container Wt (lb): 123
Original Assay (g): Pu-3.0
Packaging Location: Bldg 707, Module K

Container Type: Drum
Code Description: Glass
Surface Dose Rate (mR/h): 1.5
Reassay (g): Pu-4.0
Date Packaged: 1-17-83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Miscellaneous glass items such as fluorescent tubes.
A denser type of material in the waste appears to be a plate with rounded edges and is probably not glass.

Packaging Description: Waste contained in plastic bags.

Absorbent Information: No information recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 60%
Volume % Combustible: 5
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 9-2-83
Container Condition: Small dents in middle of drum and some scratches in the paint.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Nine packages containing glass bottles, a flood lamp, two dry box windows, light bulbs, and rubber gaskets for dry box windows.

Packaging Description: Type II liner is lined with a polyethylene drum bag. The waste items are contained in plastic.

Absorbent Information: Vermiculite is located on top of the drum bag and in the bottom of the liner.

Physical State of Waste: Dry
Component Wt (lb): Plastic bags--8.75; rubber gaskets--4.0; glass (as described above)--24.0; vermiculite--10.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 45%
Volume % Combustibles: 15
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 37-02336
Content Code: 440
Container Wt (lb): 150
Original Assay (g): Pu-14.0
Packaging Location: Bldg 771, Rm 164

Container Type: Drum
Code Description: Glass
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-4.0
Date Packaged: 12-21-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: Lead tape on some bottles.

Waste Form Description: Primarily glass test tubes.

Packaging Description: Glass is packaged in poly bottles. The bottles are packaged in plastic bags.

Absorbent Information: No information recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: 1/4 cup	Type: Unknown

Packaging Efficiency: 98%
Volume % Combustible: 15
Correct Content Code? Yes New Code:
Other Information: Particulate is located at bottom of liner.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 9-2-83
Container Condition: Good; small dent in lower third of drum.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Glass sample vials, lead-taped glass sample vials, and some broken glass vials.

Packaging Description: Type II liner is lined with a polyethylene drum bag. The wastes are in 15 double-bagged packages containing 19 1-gal polyethylene bottles filled with the glass waste items.

Absorbent Information: Vermiculite is located on top of the drum bag.

Physical State of Waste: Dry
Component Wt (lb): Plastic bottles and bags--28.5; sample vials and other glass--22.5; vermiculite--1.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 95%
Volume % Combustibles: 20
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 02-34934
Content Code: 440
Container Wt (lb): 425
Original Assay (g): Pu-10.0
Packaging Location: Bldg 771, Rm 249

Container Type: Drum
Code Description: Glass
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-5.0
Date Packaged: 12-9-80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Crushed glass

Packaging Description: Waste packaged in poly drum bags.

Absorbent Information: Portland cement, approximately 1 cup. Cement is located in folds of the poly bag at top of the waste.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 70%
Volume % Combustible: 5
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-8-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Waste consists of broken and crushed glass light bulbs and fluorescent tubes.

Packaging Description: Type II liner is lined with two polyethylene drum bags. The glass is contained in the inner polyethylene drum bag.

Absorbent Information: Oil-Dri is located in the bottom of the liner.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene bags--1.75;
glass--305.75; Oil-Dri--4.0.

WIPP-WAC Compliance Information:
1. Particulates (glass fines): Analysis of the glass fines indicates that the waste contains 0.002 wt% <212 μ particulates and <0.001 wt% <10 μ particulates.

Packaging Efficiency: 85%
Volume % Combustibles: 3
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 29-00030
Content Code: 440
Container Wt (lb): 214
Original Assay (g): Pu-12.0
Packaging Location: Bldg 559, Rm 102

Container Type: Drum
Code Description: Glass
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-10.0
Date Packaged: 12-12-80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: Yes; lead tape on one bottle

Waste Form Description: Miscellaneous glass--approximately 1/2 is crushed.

Packaging Description: Glass is contained in polyethylene bottles. One bottle is lead-taped. Bottles are in plastic bags.

Absorbent Information: Portland cement, approximately 2 cups.
Cement is located inside the plastic bags containing the bottles.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: 10
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-8-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Glass sample vials, test tubes, and broken glass.

Packaging Description: Type II liner is lined with a polyethylene drum bag. Glass items are contained in polyethylene bottles and a 1-gal metal paint can. These containers are triple-bagged in plastic (PVC and polyethylene).

Absorbent Information: Oil-Dri is located in the bottom of the liner.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene and PVC bags, polyethylene bottles--16.0; metal paint can--1.0; glass--112.0; Oil-Dri--4.25.

WIPP-WAC Compliance Information:
1. Particulates (glass fines): Analysis of the glass fines indicates that the waste contains 0.375 wt% <212 μ particulates and 0.017 wt% <10 μ particulates.

Packaging Efficiency: 75%
Volume % Combustibles: 15
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 37-02018
Content Code: 440
Container Wt (lb): 188
Original Assay (g): Pu-6.0
Packaging Location: Bldg 771, Rm 164

Container Type: Drum
Code Description: Glass
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-2.0
Date Packaged: 1-15-81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Primarily test tubes. Two bottles at top of waste and one bottle at bottom of waste contain broken glass.

Packaging Description: Glass items are contained in plastic bottles.

Absorbent Information: Vermiculite or Oil-Dri is located between the drum and the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 95%
Volume % Combustible: 10
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-8-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II

Waste Form Description: Broken and unbroken glass vials and unbroken test tubes.

Packaging Description: Type II liner is lined with a polyethylene drum bag. All glass waste is contained in 1-gal polyethylene bottles. Each bottle is double-bagged in plastic.

Absorbent Information: Oil-Dri is located on top of drum bag and in the bottom of the liner.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene bottles, PVC and polyethylene bags--32.0; glass vials and test tubes--79.75; Oil-Dri--5.0.

WIPP-WAC Compliance Information:
1. Particulates (glass fines): Analysis of the sample indicates that the waste contains 0.286 wt% <212 μ particulates and 0.002 wt% <10 μ particulates.

Packaging Efficiency: 50%
Volume % Combustibles: 15
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 76-01366
Content Code: 440
Container Wt (lb): 333
Original Assay (g): Pu-0.0
Packaging Location: Not available.

Container Type: Drum
Code Description: Glass
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-2.0
Date Packaged: 2-2-81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag and cardboard liner.
Lead-Lined: No Other Lead: No

Waste Form Description: Waste consists of broken glass.

Packaging Description: Waste contained in plastic bags.

Absorbent Information: Oil-Dri or Portland cement located on top of outer drum bag and inside the drum bag at bottom. Total quantity is approximately 2 quarts.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 66%
Volume % Combustible: 5
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-8-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Broken and crushed glass

Packaging Description: Type II liner is lined with a polyethylene drum bag. The drum bag is lined with a cardboard liner. The glass is contained in plastic bags (inside the cardboard liner).

Absorbent Information: Oil-Dri is located in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene and PVC bags--5.0; crushed glass--385.0; Oil-Dri--4.0.

WIPP-WAC Compliance Information:
1. Particulates (glass fines): Analysis of the sample indicates that the waste contains 0.006 wt% <212 μ and 0.001 wt% <10 μ particulates.

Packaging Efficiency: 80%
Volume % Combustibles: 1
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-10576
Content Code: 442 (wrong code-see below)
Container Wt (lb): 375
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Raschig rings
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.0-Pu; 0.2-Am*
Date Packaged: 2-15-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: Cardboard
Lead-Lined: No Other Lead:

Waste Form Description: Crushed glass

Packaging Description: Crushed glass packed in poly bags which
are tied at the top and put into a
cardboard liner. (No 90-mil liner.)

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 50%
Volume % Combustible: ~28%
Correct Content Code? No New Code: 440-Glass
Other Information: 14 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 2-20-85
Container Condition: Exterior-moderate to heavy rust,
Interior-no rust.

Lead Lined: No
Liner Type: Cardboard

Waste Form Description: Broken fluorescent tubes and
incandescent bulbs.

Packaging Description: A rigid 90-mil liner was not
used. The drum was double lined with polyethylene
drum bags with a cardboard liner inside of the
innermost bag. Broken light tubes and bulbs were
directly contained in the cardboard and 4-mil poly
liners. Outside drum bag had one hole (<0.125").

Absorbent Information: Oil-Dri was located outside of
the drum bag in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Cardboard liner-6.6, 2 ea.
poly drum bags-2.0, glass-289.4, oil dry-5.4.

WIPP-WAC Compliance Information: 1. Particulates:
the entire waste matrix contained particulate, a
representative sample was analyzed. Analysis of the
sample indicates the waste contained 0.8 wt% <212
micron particles and 3.0E-2 wt% <10 micron particles.

Packaging Efficiency: 90%
Volume % Combustibles: 2%
Correct Content Code? No New Code: 440
Other Information: *This waste form was too dense for
a reliable sequenced gamma scan
this assay is an estimate only.
WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 36-00628
Content Code: 440
Container Wt (lb): 440
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Glass
Surface Dose Rate (mR/h): <0.5
Reassay (g): 2.7-Pu; 0.0-Am*
Date Packaged: 11-10-72

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Crushed glass

Packaging Description: Packed in a poly bag. Oil-Dri added to the top, then packed in a 90-mil liner.

Absorbent Information: 5 gallons

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information: 8 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 2-20-85
Container Condition: Exterior-light to moderate rust,
Interior-no rust.
Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Broken glass (thin plate glass, broken chemical bottles, vials, small bottles).

Packaging Description: Type I rigid liner was lined with a single polyethylene drum bag which directly contained the glass. The bag had a few minor (<0.25") holes.

Absorbent Information: Oil-Dri was located outside of the drum bag in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Poly drum bag-1.0, glass-334.8, oil dry-21.0.

WIPP-WAC Compliance Information: 1. Particulates: 11,990 grams of particulates were calculated to be in the drum based on obtaining 358.12 grams of particulate by sieving 4540 grams of the waste matrix. Analysis of the particulate indicates the waste contained 0.32 wt% <212 micron particles and 7.9E-4 wt% <10 micron particles.

Packaging Efficiency: 80%
Volume % Combustibles: 2%
Correct Content Code? Yes New Code:
Other Information: *This waste form was too dense for a reliable sequenced gamma scan
this assay is an estimate only.
WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 36-00805
Content Code: Unknown (RFP-440)
Container Wt (lb): 240
Original Assay (g): 7.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: (see below)(RFP-Glass)
Surface Dose Rate (mR/h): 3.2
Reassay (g): 3.6-Pu; 0.1-Am
Date Packaged: 5-9-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 3-1-85
Container Condition: Exterior-some light rust,
Interior-no rust.

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Glass, crushed glass

Waste Form Description: Glass including Raschig
rings, separatory funnel, broken pipettes, sample
bottles and vials, and lead taped sample vials.

Packaging Description: Some glass is contained in bagging material,
but most is put directly in 90-mil liner.
Crushed glass is in containers.

Packaging Description: Type I rigid liner was single
lined with a polyethylene drum bag. The waste was
double bagged in polyethylene or in double-bagged 2-
or 4 liter poly bottles. There were a total of
15 poly bottles. One waste package was a double
bagged gallon paint can.

Absorbent Information: None

Absorbent Information: Oil-Dri was located outside of
the drum bag in the bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): Polyethylene bags and
bottles-24.5, metal (paint cans, pipe)-1.0, Raschig
rings-26.5, other glass-95.5, oil dry-25.5.

WIPP-WAC Compliance Information: 1. Particulates:
1516 grams of particulates were calculated to be in
the drum based on obtaining 125.01 grams of particulate
by sieving 6469.5 of the waste matrix. Analysis of
the particulate indicates the waste contained 0.17 wt%
<212 micron particles and <1.9E-4 wt% <10 micron
particles.

Packaging Efficiency: 90%
Volume % Combustible: <25%
Correct Content Code? No New Code: 440-Glass
Other Information: 10 lbs of organic material

WIPP-Certifiable: Yes

Packaging Efficiency: 85%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 89-04043
Content Code: 441
Container Wt (lb): 278
Original Assay (g): 5.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Raschig rings
Surface Dose Rate (mR/h): 2.0
Reassay (g): 3.5-Pu; 0.1-Am
Date Packaged: 4-13-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Raschig rings

Packaging Description: Raschig rings are packed in 1 fiber pack container, surrounded by Oil-Dri, then 90-mil liner.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information: 14 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-1-85
Container Condition: Exterior-some minor rust,
Interior-no rust.

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Raschig rings coated with a dry residue.

Packaging Description: Type I rigid liner was double lined with polyethylene drum bags. A single fiber pak was double bagged in poly. The rings were contained in the Fibre-Pak. The interior lid of the Fibre-Pak had light rust.

Absorbent Information: Oil-Dri was located outside of the drum bag in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Paper (wipes, tape roll, fibre-pak)-6.2, poly drum bags-2.0, raschig rings-66.3, oil dry-127.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 30%
Volume % Combustibles: 10%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 89-04071
Content Code: 441
Container Wt (lb): 205
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Raschig rings
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.0-Pu; 0.1-Am
Date Packaged: 4-13-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Examination Date: 3-1-85
Container Condition: A little rust on interior
and exterior.

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Raschig rings

Waste Form Description: Raschig rings coated with a
dry residue.

Packaging Description: Packed in two fiber packs, then put in
bagging material and packed in 90-mil
liner.

Packaging Description: Type I rigid liner was double
lined with polyethylene drum bags. Two Fibre-Paks
were single bagged in poly. The Raschig rings were
contained directly in the Fibre-Pak.

Absorbent Information: 1 pint

Absorbent Information: Oil-Dri was located outside of
the drum bag in the bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): 2 ea. fibre-paks-12.0,
cloth glove-0.1, poly bags-4.3, Raschig rings-91.3,
Portland cement-0.7, oil dry-6.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 80%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information: 14 lbs of organic material

WIPP-Certifiable: Yes

Packaging Efficiency: 60%
Volume % Combustibles: 10%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 89-04114
Content Code: 441
Container Wt (lb): 250
Original Assay (g): 2.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Raschig rings
Surface Dose Rate (mR/h): <0.5
Reassay (g): 1.9-Pu; 0.0-Am
Date Packaged: 4-25-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Raschig rings

Packaging Description: Raschig rings are packed in cardboard gallon containers, then packed inside the 90-mil liner.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 95%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information: 14 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-1-85
Container Condition: Exterior-light to moderate rust,
Interior-no rust.

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Raschig rings coated with a dry residue.

Packaging Description: Type I rigid liner was double lined with polyethylene drum bags. Raschig rings were placed directly into 8 fiberboard cylinders (6" dia. x 18" tall). The cylinders were placed directly into the drum bags.

Absorbent Information: Oil-Dri was located outside of the drum bag in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): 8 ea. fiberboard containers-16.3, drum bags-2.5, Raschig rings-151.8, oil dry-1.5.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 100%
Volume % Combustibles: 10%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 89-04072
Content Code: 441
Container Wt (lb): 293
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Unleached Raschig rings
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.0-Pu; 0.1-Am
Date Packaged: 4-13-73

RADIOGRAPHIC EXAMINATION

Examination Date: 2/20/85
Liner Type: 90 mil.
Lead-Lined: No Other Lead:

Waste Form Description: Raschig rings

Packaging Description: Raschig rings are packed in 2 Fibre-Paks.

Absorbent Information:

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: <10%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-23-85
Container Condition: Exterior-some minor light rust,
Interior-no rust.

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Raschig rings coated with a dry residue.

Packaging Description: Type I rigid liner was single lined with a polyethylene drum bag. A single fibre pak contained Raschig rings. The Fibre-Pak was triple bagged in poly. The drum bag had small (<0.25") hole.

Absorbent Information: Oil-Dri was located outside of the drum bag in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Paper (1 ea. fibre pak, 2 ea. oil dry bags, wipes)-7.0, poly (3 ea. 30-gal bags, 1 ea. 55-gal bag)-1.5, Raschig rings-47.5, oil dry-155.3.

WIPP-WAC Compliance Information: 1. Particulates: 371.97 grams of dry residue was on the fibre pak and coated the rings. Analysis of the particulates indicated the waste contained <3.7 wt% <212 micron particles and 9.3E-4 wt% <10 micron particles.

Packaging Efficiency: 30%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-39564
Content Code: 442
Container Wt (lb): 152
Original Assay (g): Pu-1.0
Packaging Location: Bldg 771, Rm 149

Container Type: Drum
Code Description: Leached Raschig Rings
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-1.0
Date Packaged: 12-14-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Raschig rings

Packaging Description: Rings are contained in plastic bags and packaged in Fibre-Paks. There are two Fibre-Paks in the drum.

Absorbent Information: Portland cement or Oil-Dri has been added to each Fibre-Pak (1 cup/each) as absorbent. Vermiculite has also been added on top of sealed drum bag

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 50%
Volume % Combustible: 15
Correct Content Code? Yes
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-25-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Raschig rings

Packaging Description: Type II liner is lined with a polyethylene drum bag. The Raschig rings are contained in a plastic bag and placed inside a Fibre-Pak. There are two Fibre-Paks in the drum.

Absorbent Information: Vermiculite is located on top of the drum bag. The Oil-Dri is located in both Fibre-Paks.

Physical State of Waste: Dry
Component Wt (lb): Two Fibre-Paks--12.0;
polyethylene and PVC plastic--4.0; Raschig
rings--23.5; vermiculite--11.0; Oil-Dri--4.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 50%
Volume % Combustibles: 20
Correct Content Code? Yes
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-39533
Content Code: 442
Container Wt (lb): 162
Original Assay (g): Pu-2.0
Packaging Location: Bldg 771, Rm 149

Container Type: Drum
Code Description: Leached Raschig Rings
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-3.0
Date Packaged: 12-8-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Raschig rings

Packaging Description: The Raschig rings are contained in two or three poly bags inside a Fibre-Pak. There are two Fibre-Paks in the drum.

Absorbent Information: Approximately one cup of cement has been added to each Fibre-Pak as absorbent.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 50%
Volume % Combustible: 15
Correct Content Code? Yes New Code:
Other Information: Estimated organic weight--20.0 lb. Liner lid is too small (the liner is dented in).

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-25-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Raschig rings

Packaging Description: Type II liner is lined with a polyethylene drum bag. The Raschig rings are triple-bagged in plastic inside a Fibre-Pak. There are two Fibre-Paks in the drum.

Absorbent Information: Vermiculite is located on top of the drum bag. The Oil-Dri is located in each Fibre-Pak.

Physical State of Waste: Dry
Component Wt (lb): Two-Fibre-Paks--12.0;
polyethylene and PVC plastic--2.0; Raschig rings--50.25; vermiculite--15.0; Oil-Dri--2.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 60%
Volume % Combustibles: 20
Correct Content Code? Yes New Code:
Other Information: Internal rust on the drum lid and in the drum.

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-39803
Content Code: 442
Container Wt (lb): 193
Original Assay (g): Pu-1.0
Packaging Location: Bldg 771, Rm 114

Container Type: Drum
Code Description: Leached Raschig Rings
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-2.0
Date Packaged: 1-17-83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Raschig rings

Packaging Description: Raschig rings are contained in two Fibre-Paks.
The Fibre-Paks are lined with plastic bags (rings are in the bags).

Absorbent Information: Approximately 1 cup of Oil-Dri or Portland cement
is contained in each Fibre-Pak as absorbent. Vermiculite midway up
top Fibre-Pak.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 50%
Volume % Combustible: 15
Correct Content Code? Yes New Code:
Other Information: Estimated organic weight--20.0 lb.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-25-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Raschig rings

Packaging Description: Type II liner is lined
with a polyethylene drum bag. The Raschig
rings are triple-bagged in plastic inside
Fibre-Paks. There are two Fibre-Paks in the
drum.

Absorbent Information: Vermiculite is located on
top of the drum bag. The Oil-Dri is located
inside each Fibre-Pak.

Physical State of Waste: Dry
Component Wt (lb): Two Fibre-Paks--12.0;
polyethylene and PVC plastic--2.0; Raschig
rings--88.5; vermiculite--12.5; Oil-Dri--2.5.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 60%
Volume % Combustibles: 20
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-39805
Content Code: 442
Container Wt (lb): 199
Original Assay (g): Pu-6.0
Packaging Location: Bldg 771, Rm 111

Container Type: Drum
Code Description: Leached Raschig Rings
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-6.0
Date Packaged: 1-24-83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Raschig rings.

Packaging Description: The Raschig rings are contained in plastic bags and packaged in Fibre-Paks. There are two Fibre-Paks in the drum.

Absorbent Information: Portland cement has been added to each fibre-pak (approximately 1 cup each).

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 50%
Volume % Combustible: 15
Correct Content Code? Yes New Code:
Other Information: Estimated organic weight--20.0 lb.
The lid on bottom Fibre-Pak is loose.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-25-83
Container Condition: Badly dented on lower two-thirds of drum; paint is scratched.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Raschig rings.

Packaging Description: Type II liner is lined with a polyethylene drum bag. The Raschig rings are triple-bagged in plastic inside Fibre-Paks. There are two Fibre-Paks in the drum.

Absorbent Information: Vermiculite is located on top of the drum bag. The Oil-Dri is located inside each Fibre-Pak.

Physical State of Waste: Dry
Component Wt (lb): Two Fibre-Paks--12.0; polyethylene and PVC plastic--2.5; Raschig rings--78.5; vermiculite--12.5; Oil-Dri--2.5.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 60%
Volume % Combustibles: 20
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 19-02730
Content Code: 442
Container Wt (lb): 264
Original Assay (g): Pu-0.018, Am-0.0
Packaging Location: Building 776, Room 146

Container Type: Drum
Code Description: Leached Raschig Rings
Surface Dose Rate (mR/h):
Reassay (g): 0.8-Pu, 0.0-Am
Date Packaged: 9/6/84

RADIOGRAPHIC EXAMINATION

Examination Date: 2/21/85
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Raschig rings.

Packaging Description: Raschig rings are contained in plastic bags.

Absorbent Information: Oil-dri (~3 gallons) is contained in the bags.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: 8%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3/21/85
Container Condition: Exterior-lid and lower ring,
minor light rust.
Interior no-rust.
Lead Lined: No
Liner Type: Type III, 90 mil

Waste Form Description: Raschig rings

Packaging Description: Type III rigid liner was double-lined with polyethylene drum bags. Raschig rings were contained in 3 individual packages. The packages were triple-bagged with 2 poly outer bags and an inner PVC bag. A PVC loading skirt was also contained in the drum bags.

Absorbent Information: Oil-Dri was located inside the PVC bag of the individual packages.

Physical State of Waste: Dry
Component Weight (LB): PVC-5.3, poly-6.0,
Raschig rings-145.0, oil dry-20.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 70%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 05-01596
Content Code: 442
Container Wt (lb): 191
Original Assay (g): Pu-0.0
Packaging Location: Bldg 771, Rm 114

Container Type: Drum
Code Description: Leached Raschig Rings
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-3.0
Date Packaged: 8-26-80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Raschig rings

Packaging Description: Rings contained in two Fibre-Paks.

Absorbent Information: Oil-Dri, approximately 2 gal

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 50%
Volume % Combustible: 50
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-8-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type I 90-mil

Waste Form Description: Unbroken Raschig rings
and some broken rings.

Packaging Description: The Type I liner is lined
with a polyethylene drum bag. The Raschig
rings are double-bagged in plastic inside a
Fibre-Pak. There are two Fibre-Paks in the
drum.

Absorbent Information: Oil-Dri is located on the
bottom of the liner.

Physical State of Waste: Dry
Component Wt (lb): Fiber-packs--12.0;
polyethylene bags--3.0; Raschig rings--84.5;
and Oil-Dri--4.0.

WIPP-WAC Compliance Information:

1. Particulates (glass fines): Analysis of the
sample indicates that the waste contains
0.022 wt% <212 μ particulates and 0.002
wt% <10 μ particulates.

Packaging Efficiency: 60%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 05-01772
Content Code: 442
Container Wt (lb): 182
Original Assay (g): Pu-3.0
Packaging Location: Bldg 771, Rm 114

Container Type: Drum
Code Description: Leached Raschig Rings
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-5.0
Date Packaged: 2-2-81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Examination Date: 8-5-83
Container Condition: Good; small dent (1/2 x 3/4 in.) on drum
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Raschig rings

Waste Form Description: Raschig rings

Packaging Description: Rings are packaged in two Fibre-Paks.

Packaging Description: Type II liner is lined with a polyethylene drum bag. The Raschig rings are contained in plastic bags (six bags total) inside Fibre-Paks (three bags/Fibre-Pak). There are 2 Fibre-Paks in the drum.

Absorbent Information: Oil-Dri, approximately 1 gal

Absorbent Information: Oil-Dri is located in the bottom of the liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Wt (lb): Polyethylene plastic--4.5;
Raschig rings--82.25; two Fibre-Paks--12.0;
Oil-Dri--5.0.

Packaging Efficiency: 50%
Volume % Combustible: 50
Correct Content Code? Yes New Code:
Other Information: Rigid liner is dented--lid is too small. Lid on bottom Fibre-Pak is either upside-down or offset.

WIPP-WAC Compliance Information: None

WIPP-Certifiable: Yes

Packaging Efficiency: 80%
Volume % Combustibles: 15
Correct Content Code? Yes New Code:
Other Information: Lid on one Fibre-Pak is on upside-down.

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 17-04562
Content Code: 442
Container Wt (lb): 182
Original Assay (g): Pu-19.0
Packaging Location: Bldg 707, Module C

Container Type: Drum
Code Description: Leached Raschig Rings
Surface Dose Rate (mR/h): 1.2
Reassay (g): Pu-20.0
Date Packaged: 11-13-80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Raschig rings

Packaging Description: Rings are contained in plastic bags inside of two Fibre-Paks. Lid on bottom Fibre-Pak is unclamped.

Absorbent Information: Oil-Dri, approximately 1 gal. Oil-Dri is located between the Fibre-Pak and drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 50%
Volume % Combustible: 50
Correct Content Code? Yes
Other Information: New Code:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-5-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Raschig rings. The rings and plastic are coated with a film of oil.

Packaging Description: Type II liner is lined with a polyethylene drum bag. The Raschig rings are triple-bagged in plastic (two packages) and contained inside the Fibre-Paks (one package/Fibre-Pak). There are two Fibre-Paks in the drum.

Absorbent Information: Oil-Dri located on top of the drum bag.

Physical State of Waste: Wet
Component Wt (lb): Two Fibre-Paks--12.0;
polyethylene bags--4.0; Raschig rings--89.0;
Oil-Dri--5.0.

WIPP-WAC Compliance Information:

1. A piece of plastic coated with the oil was sampled. The analysis indicates the composition as being grease and phthalate ester.

Packaging Efficiency: 60%
Volume % Combustibles: 10
Correct Content Code? No New Code: 441
(Unleached Raschig rings)

Other Information: Few internal rust spots on drum bottom.

WIPP-Certifiable: No. The oil is considered a free liquid since it is not absorbed into or on a host material as required by the WIPP-WAC.

Waste Form Category: Glass

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 22-00722
Content Code: 442
Container Wt (lb): 188
Original Assay (g): Pu-2.0
Packaging Location: Bldg 707

Container Type: Drum
Code Description: Leached Raschig Rings
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-1.0
Date Packaged: 1-15-81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Raschig rings

Packaging Description: Rings are contained in plastic bags inside a Fibre-Pak. There are two Fibre-Paks in the drum.

Absorbent Information: Oil-Dri, approximately 1-1/2 gal. Oil-Dri is located between the drum bag and Fibre-Pak.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 50%
Volume % Combustible: 50
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-8-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Raschig rings

Packaging Description: Type II liner is lined with a polyethylene drum bag. The Raschig rings are triple bagged in a PVC and two polyethylene bags inside a Fibre-Pak. There are two Fibre-Paks in the drum.

Absorbent Information: Oil-Dri is located in the bottom of the liner.

Physical State of Waste: Dry
Component Wt (lb): Two Fibre-Paks--12.0; polyethylene and PVC bags--9.25; Raschig rings--89.0; Oil-Dri--4.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 60%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glass

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 42-00226
Content Code: 442
Container Wt (lb): 158
Original Assay (g): Pu-0.0
Packaging Location: Bldg 771, Rm 153

Container Type: Drum
Code Description: Leached Raschig Rings
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.0
Date Packaged: 3-13-81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Raschig rings

Packaging Description: Rings are packaged in Fibre-Paks. The drum contains two Fibre-Paks. Bottom Fibre-Pak is half-full.

Absorbent Information: Oil-Dri, approximately 2 gal.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 40%
Volume % Combustible: 50
Correct Content Code? Yes New Code:
Other Information: Lid on top Fibre-Pak appears to be on upside-down.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-5-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Raschig rings including some broken Raschig rings.

Packaging Description: Type II liner is lined with two polyethylene drum bags. The Raschig rings are triple-bagged in plastic inside a Fibre-Pak. There are two Fibre-Paks in the drum.

Absorbent Information: Oil-Dri is located in the bottom of the liner.

Physical State of Waste: Dry
Component Wt (lb): Two Fibre-Paks--12.0;
polyethylene bags--4.5; Raschig rings--57.0;
Oil-Dri--4.0.

WIPP-WAC Compliance Information:
1. Particulates (broken glass): Analysis of the sample indicates that the waste contains 0.010 wt% of <212 μ particulates and <0.001 wt% <10 μ particulates.

Packaging Efficiency: 40%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information: Few small, internal rust spots.

WIPP-Certifiable: Yes

Waste Form Category: Nonmetal Molds and Crucibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 12-11023
Content Code: 300
Container Wt (lb): 220
Original Assay (g): Pu-18.0
Packaging Location: Bldg 707, Module J

Container Type: Drum
Code Description: Graphite Molds
Surface Dose Rate (mR/h): 0.5
Reassay (g): Pu-20.0
Date Packaged: 11-15-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-24-83
Liner Type: 90-mil; liner lined with poly drum bag and cardboard liner.
Lead-Lined: No Other Lead: No

Waste Form Description: Graphite molds

Packaging Description: Molds placed directly into prepared drum--no individual packaging.

Absorbent Information: Vermiculite located on top of sealed drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 45%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-16-83
Container Condition: Scratched, with small dents from handling.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Graphite molds

Packaging Description: Type II liner is lined with a PVC O-ring bag. The O-ring bag is lined with a cardboard liner. The molds are placed directly into the cardboard lined O-ring bag.

Absorbent Information: Vermiculite is located on top of the O-ring bag.

Physical State of Waste: Dry
Component Wt (lb): Cardboard liner--4.5; PVC O-ring bag--4.0; graphite molds--135.75; vermiculite--3.0.

WIPP-WAC Compliance Information:

1. Particulates (graphite fines): Analysis of the graphite fines recovered from brushing the molds indicates that the waste contains 0.038 wt% <212 μ particulates and <0.001 wt% <10 μ particulates.
2. Pyrophorics: Some Pu metal found adhered to the molds. No evidence of spontaneous combustion.

Packaging Efficiency: 50%
Volume % Combustibles: 5
Correct Content Code? Yes New Code:
Other Information: Light internal rust on drum lid.

WIPP-Certifiable: Yes

Waste Form Category: Nonmetal Molds and Crucibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 12-11229
Content Code: 300
Container Wt (lb): 150
Original Assay (g): Pu-0.0
Packaging Location: Bldg 707, Module A

Container Type: Drum
Code Description: Graphite Molds
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.0
Date Packaged: 1-17-83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-24-83
Liner Type: 90-mil; rigid liner lined with poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Graphite molds

Packaging Description: Molds placed directly into prepared drum--no individual packaging.

Absorbent Information: Vermiculite is located on top of the sealed drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 20%
Volume % Combustible: 100
Correct Content Code? Yes
Other Information:

New Code:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-17-83
Container Condition: Good; several small dents in center of the drum.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Graphite molds

Packaging Description: Type II liner is lined with a polyethylene drum bag. The drum bag is lined with a fiberboard liner. The graphite molds are contained inside the fiberboard liner.

Absorbent Information: Vermiculite is located on top of the drum bag.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene drum bag--1.5; fiberboard liner--4.0; graphite molds--48.75; vermiculite--22.0.

WIPP-WAC Compliance Information:

1. Particulates (graphite fines): Analysis of the fines recovered from brushing the molds indicates that the waste contains 0.018 wt% <212 μ particulates and <0.001 wt% <10 μ particulates.

Packaging Efficiency: 30%
Volume % Combustibles: 5
Correct Content Code? Yes New Code:

Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Nonmetal Molds and Crucibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 19-01811
Content Code: 300
Container Wt (lb): 158
Original Assay (g): Pu-18.0
Packaging Location: Bldg 776, Rm 146

Container Type: Drum
Code Description: Graphite Molds
Surface Dose Rate (mR/h): 1.2
Reassay (g): Pu-18.0
Date Packaged: 1-17-83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-24-83
Liner Type: 90-mil; rigid liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Graphite molds

Packaging Description: Molds placed directly into prepared drum. No individual packaging.

Absorbent Information: Vermiculite is located on top of the sealed drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 25%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information: No cardboard liner. Rigid liner lid not properly installed.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-16-83
Container Condition: Good; small dent in lower-third of drum.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Graphite molds

Packaging Description: Type II liner is lined with a polyethylene drum bag. The molds are contained in three separate single-bagged packages. There are small holes in the plastic bags.

Absorbent Information: Vermiculite is located on top of the drum bag.

Physical State of Waste: Dry
Component Wt (lb): PVC and polyethylene bags--2.25; graphite molds--56.5; vermiculite--20.0.

WIPP-WAC Compliance Information:
1. Particulates (graphite fines): Analysis of the fines indicate that the waste contains 0.013 wt% <212 μ particulates and <0.001 wt% <10 μ particulates.

Packaging Efficiency: 33%
Volume % Combustibles: 5
Correct Content Code? Yes New Code:
Other Information: Light internal rust on drum lid.

WIPP-Certifiable: Yes

Waste Form Category: Nonmetal Molds and Crucibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 41-01531
Content Code: 300
Container Wt (lb): 182
Original Assay (g): Pu-19.0
Packaging Location: Bldg 776, Rm 146

Container Type: Drum
Code Description: Graphite Molds
Surface Dose Rate (mR/h): 1.2
Reassay (g): Pu-10.0
Date Packaged: 1-10-83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-24-83
Liner Type: 90-mil; rigid liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Graphite molds

Packaging Description: Molds placed directly into prepared drum--no individual packaging.

Absorbent Information: Vermiculite

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 33%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information: No cardboard liner on inside of drum bag.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-16-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Broken graphite molds

Packaging Description: Type II liner is lined with two polyethylene drum bags. The graphite molds are packaged in two single polyethylene drum bags.

Absorbent Information: Vermiculite is located on top of the outer drum bag.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene bags--5.0;
graphite molds--88.75; vermiculite--13.0.

WIPP-WAC Compliance Information:

1. Particulates (graphite fines): Analysis of the fines recovered from brushing the molds indicates that the waste contains 0.012 wt% <212 μ particulates and <0.001 wt% <10 μ particulates.

Packaging Efficiency: 40%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Nonmetal Molds and Crucibles

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 12-09189
Content Code: 300
Container Wt (lb): 246
Original Assay (g): Pu-11.0
Packaging Location: Bldg 707, Module J

Container Type: Drum
Code Description: Graphite Molds
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-5.0
Date Packaged: 12-9-80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag and cardboard liner
Lead-Lined: No Other Lead: No

Waste Form Description: Graphite molds

Packaging Description: Molds are inside the cardboard liner that lines the inside of the poly drum bag.

Absorbent Information: Oil-Dri (approximately 2 gal) is located on top of the drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 55%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-4-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Broken pieces of graphite molds

Packaging Description: Type II liner is lined with a PVC O-ring bag. The bag is lined with a cardboard liner. The molds are inside the cardboard liner.

Absorbent Information: Oil-Dri is located on top of the bag.

Physical State of Waste: Dry
Component Wt (lb): PVC bag--4.0; cardboard--4.0; graphite molds--149.75; Oil-Dri-4.0.

WIPP-WAC Compliance Information:

1. Particulates (graphite fines): Analysis of the graphite fines recovered from brushing the molds indicates that the waste contains 0.020 wt% <212 μ and particulates <0.001 wt% <10 μ particulates.

Packaging Efficiency: 50%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information: The cardboard liner has a small hole in the middle.

WIPP-Certifiable: Yes

Waste Form Category: Nonmetal Molds and Crucibles

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 12-09295
Content Code: 300
Container Wt (lb): 290
Original Assay (g): Pu-23.0
Packaging Location: Bldg 707, Module J

Container Type: Drum
Code Description: Graphite Molds
Surface Dose Rate (mR/h): 3.0
Reassay (g): Pu-37.0
Date Packaged: 2-11-81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag and cardboard liner.
Lead-Lined: No Other Lead: No

Waste Form Description: Graphite molds.

Packaging Description: Molds are inside the cardboard liner that lines the inside of the poly drum bag.

Absorbent Information: Oil-Dri, approximately 2 gal is located on top of the drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 60%
Volume % Combustible: 100
Correct Content Code? Yes
Other Information:

New Code:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-4-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Graphite molds and pieces.

Packaging Description: Type II liner is lined with a PVC O-ring bag that is lined with a cardboard liner. The molds are inside the cardboard liner.

Absorbent Information: Oil-Dri is located on top of the bag.

Physical State of Waste: Dry
Component Wt (lb): PVC bag--4.0; cardboard liner--4.0; graphite molds and pieces--210.5; Oil-Dri--3.5.

WIPP-WAC Compliance Information:

1. Particulates (graphite fines): Analysis of the fines indicates that the waste contains 0.022 wt% <212 μ particulates and <0.001 wt% <10 μ particulates.
2. Pyrophorics: Two pieces of Pu metal on a mold that sparked only when scraped. Weight of Pu is less than 1% of the waste weight.

Packaging Efficiency: 70%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information: The cardboard liner has a 12 x 12-in. tear in it.

WIPP-Certifiable: Yes

Waste Form Category: Nonmetal Molds and Crucibles

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 12-09161
Content Code: 300
Container Wt (lb): 252
Original Assay (g): Pu-15.0
Packaging Location: Bldg 707, Module J

Container Type: Drum
Code Description: Graphite Molds
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-15.0
Date Packaged: 11-11-80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag and cardboard liner.
Lead-Lined: No Other Lead: No

Waste Form Description: Graphite molds

Packaging Description: Waste is inside the cardboard liner that lines the inside of the drum bag.

Absorbent Information: Oil-Dri, approximately 1-1/2 gal is located on top of the drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 63%
Volume % Combustible: 100
Correct Content Code? Yes
Other Information:

New Code:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-4-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Graphite molds and pieces

Packaging Description: Type II liner is lined with a PVC O-ring bag that is lined with a cardboard liner. The molds and pieces are inside the cardboard liner.

Absorbent Information: Oil-Dri is located on top of the bag.

Physical State of Waste: Dry
Component Wt (lb): PVC bag--3.75; cardboard liner--4.0; graphite molds and pieces--167.5; Oil-Dri--4.0.

WIPP-WAC Compliance Information:
1. Particulates (graphite fines): Analysis of recovered fines indicates that the waste contains 0.026 wt% <212 μ particulates and <0.002 wt% <10 μ particulates.

Packaging Efficiency: 50%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information: Cardboard liner has a 2 x 4-in. tear in it.

WIPP-Certifiable: Yes

Waste Form Category: Nonmetal Molds and Crucibles

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 12-09300
Content Code: 300
Container Wt (lb): 270
Original Assay (g): Pu-7.0
Packaging Location: Bldg 707, Module J

Container Type: Drum
Code Description: Graphite Molds
Surface Dose Rate (mR/h): 1.0
Reassay (g): Pu-9.0
Date Packaged: 2-11-81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag and cardboard liner.
Lead-Lined: No Other Lead: No

Waste Form Description: Graphite molds

Packaging Description: Molds are inside the cardboard liner that lines the inside of the poly drum bag.

Absorbent Information: Oil-Dri, approximately 1 gal is located on top of the sealed drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 67%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-4-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Graphite molds and pieces

Packaging Description: Type II liner is lined with an O-ring bag that is lined with a cardboard liner. The molds and pieces are inside the cardboard liner.

Absorbent Information: Oil-Dri located outside the plastic bag.

Physical State of Waste: Dry
Component Wt (lb): PVC bag--3.0; cardboard liner--4.0; graphite molds and pieces--185.5; Oil-Dri--3.5.

WIPP-WAC Compliance Information:

1. Particulates (graphite fines mixed with Oil-Dri): Analysis of the mixture indicates the waste contains 0.033 wt% <212 μ and particulates <0.001 wt% <10 μ particulates.

Packaging Efficiency: 40%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information: Light internal rust on drum bottom.

WIPP-Certifiable: Yes

Waste Form Category: Nonmetal Molds and Crucibles

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 11-01625
Content Code: 301
Container Wt (lb): 233
Original Assay (g): Pu-34.0
Packaging Location: Not available.

Container Type: Drum
Code Description: Graphite Cores
Surface Dose Rate (mR/h): 4.6
Reassay (g): Pu-29.0
Date Packaged: 9-10-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-24-83
Liner Type: 90-mil; liner lined with a poly drum bag and cardboard liner.
Lead-Lined: No Other Lead: No

Waste Form Description: Graphite cores

Packaging Description: Graphite waste placed directly into prepared drum
no individual packaging.

Absorbent Information: Oil-Dri is located inside the drum bag at bottom.
Vermiculite is on top of sealed drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 55%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-17-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil
Waste Form Description: Graphite molds and
cores; some metal bolts and aluminum shavings.

Packaging Description: Type II liner is lined
with two polyethylene drum bags and a PVC
O-ring bag. The O-ring bag is lined with a
cardboard liner. The graphite waste is inside
the cardboard liner.

Absorbent Information: Vermiculite located on
top and sides of outer drum bag. The Oil-Dri
is between the cardboard and plastic bags and
on top of the inner drum bag.

Physical State of Waste: Dry
Component Wt (lb): Cardboard liner--3.75;
polyethylene and PVC bags--5.75; metal--0.125;
graphite--133.75; vermiculite--2.5;
Oil-Dri--8.5.

WIPP-WAC Compliance Information:
1. Particulates (graphite fines): Analysis of
the recovered fines indicates that the waste
contains 0.014 wt% <212 μ particulates and
<0.002 wt% <10 μ particulates.

Packaging Efficiency: 40%
Volume % Combustibles: 5
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 32-01049
Content Code: 312
Container Wt (lb): 156
Original Assay (g): Pu-3.0
Packaging Location: Building 371, Rm. 3701

Container Type: Drum
Code Description: Graphite, Coarse
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-3.9; Am-0
Date Packaged: 11/08/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/15/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Waste consists of chunks and pieces of graphite.

Packaging Description: Graphite is contained in 1 gallon polyethylene bottles. The bottles are contained in plastic bags inside of the rigid liner. Bottles are 1/2 to 3/4 full.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: See below	Type:

Packaging Efficiency: 65%
Volume % Combustible: 10%
Correct Content Code? Yes New Code:
Other Information: (1) Particulate consists of graphite pieces.
Quantity present does not exceed WIPP-WAC
(2) Organic weight-25 lbs.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/16/84
Container Condition: Good
Lead Lined: No
Liner Type: Type III

Waste Form Description: Graphite pieces and chunks inside 16 1-gallon polyethylene bottles.

Packaging Description: Type II liner is lined with 2 polyethylene drum bags and 1 PVC O-ring bag. Bottles of graphite stored inside the PVC O-ring bag.

Absorbent Information: None

Physical State of Waste: Dry
Component Weight (LB): 14 3/4 lbs plastics; 74 lbs
graphite pieces.

WIPP-WAC Compliance Information: 1. Particulates: graphite fines; analysis indicates 0.16% <212 and 3.1E-3% <10.

Packaging Efficiency: 95%
Volume % Combustibles: 15%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

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Waste Form Category: Nonmetal Molds and Crucibles

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 32-01055
Content Code: 312
Container Wt (lb): 196
Original Assay (g): Pu-35.0
Packaging Location: Building 371, Rm. 3701

Container Type: Drum
Code Description: Graphite, Coarse
Surface Dose Rate (mR/h): 4.0
Reassay (g): Pu-313
Date Packaged: 11/08/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/15/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Waste consists of graphite chunks and pieces. Three packages contain powder.

Packaging Description: The graphite pieces and powder are contained in 1 gallon polyethylene bottles. The bottles are contained in plastic bags inside the rigid liner. The bottles are approximately half-full.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: 1 1/2 gal.	Type:

Packaging Efficiency: 90%
Volume % Combustible: 10%
Correct Content Code? Yes New Code:
Other Information: Powder is contained in three (3) half-full 1 gallon bottles.

WIPP-Certifiable: No-due to particulates

VISUAL EXAMINATION

Examination Date: 4/16/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: Graphite pieces are contained in 23 1-gallon and 1/2 gallon polyethylene bottles. 3 bottles contained very fine graphite powder.

Packaging Description: Type II liner is lined with 2 poly. drum bags. Graphite pieces are contained in 23 1-gallon and 1/2 gallon poly. bottles; each is triple-bagged.

Absorbent Information: None

Physical State of Waste: Dry
Component Weight (LB): 23 1/2 lbs plastics;
80 3/4 lbs graphite mold pieces; 16 lbs graphite fines.

WIPP-WAC Compliance Information: 1. Particulates: graphite fines; analysis indicates 11.56% <212 and 6.9E-2% <10.

Packaging Efficiency: 95%
Volume % Combustibles: 15%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-exceeds 200 g/55 gallon drum

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 7412-03121
Content Code: 1
Container Wt (lb): 383
Original Assay (g): Pu-2.8; Am-1.2
Packaging Location: Building 774

Container Type: Drum
Code Description: Combined Sludge
Surface Dose Rate (mR/h): 0.5
Reassay (g): Pu-0.48; Am-0.04
Date Packaged: 1/17/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/22/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Sludge

Packaging Description: Sludge is packaged in two plastic bags.

Absorbent Information: None

Free Liquids: Yes	Quantity: 4 gallons	Contained: See below
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 50%
Volume % Combustible: 1%
Correct Content Code? Yes New Code:
Other Information: (1) Liquid is on top of the sludge
(2) Organic Weight: 10 lbs.

WIPP-Certifiable: No-due to free liquids

VISUAL EXAMINATION

Examination Date: 4/9/84
Container Condition: Good
Lead-Lined: No
Liner Type: Type II

Waste Form Description: Reddish-brown "7412 series" sludge in a PVC O-ring bag. Free liquids on top of sludge and liquid in liner and outer bag, some outside of the outer bag.

Packaging Description: Type II liner lined with polyethylene drum bag & PVC O-ring bag. Sludge contained in PVC bag.

Absorbent Information: Portland cement & vermiculite weight included in weight of sludge.

Physical State of Waste: Wet
Component Weight (lb): 4.5 lbs. poly. drum bag & PVC
O-ring bag; 245.5 lbs. sludge mixed with Portland
cement; 17.35 liters of liquid.

WIPP-WAC Compliance Information: 1. Free liquids: vol. 17,350 ml; pH 12; analysis indicates water & nitrates. 2. Sludge: pH 12; corrosion protection provided.

Packaging Efficiency: 50%
Volume % Combustibles: 2%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-due to free liquids

Waste Form Category: Uncemented Sludges

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 7412-03125
Content Code: 1
Container Wt (lb): 456
Original Assay (g): Pu-2.8; Am-1.2
Packaging Location: Building 774

Container Type: Drum
Code Description: Combined Sludge
Surface Dose Rate (mR/h): 0.5
Reassay (g): Pu-0.73; Am-0.07
Date Packaged: 11/17/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/22/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Sludge

Packaging Description: Sludge is contained in two plastic bags.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 75%
Volume % Combustible: 1%
Correct Content Code? Yes New Code:
Other Information: (1) Appears to be excess cement on top of waste.
(2) Organic Weight: 10 lbs.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/9/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: "7412 series" sludge in PVC
O-ring bag; top half of sludge wet, bottom half of
sludge dry. Free liquids in both outer & inner bags.

Packaging Description: Type II liner lined with
polyethylene drum bag & PVC O-ring bag. Sludge
contained in PVC bag.

Absorbent Information: Portland cement included in
with weight of sludge.

Physical State of Waste: Wet
Component Weight (lb): 4.5 lbs. plastics; 355.5 lbs.
of reddish brown sludge mixed with Portland cement;
0.507 liters of liquid.

WIPP-WAC Compliance Information: 1. Free
liquids: 507 ml; pH 12; analysis indicates water and
nitrates. 2. Sludge: pH 12; corrosion protection
provided.

Packaging Efficiency: 75%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-due to free liquids

Waste Form Category: Uncemented Sludges

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 7412-03127
Content Code: 1
Container Wt (lb): 365
Original Assay (g): Pu-2.8; Am-1.2
Packaging Location: Building 774

Container Type: Drum
Code Description: Combined Sludge
Surface Dose Rate (mR/h): 0.0
Reassay (g): Pu-1.18; Am-0.09
Date Packaged: 11/17/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/22/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Sludge

Packaging Description: Sludge is contained in two plastic bags.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 60%
Volume % Combustible: 1%
Correct Content Code? Yes New Code:
Other Information: (1) Liner lid does not appear to be on the liner properly.
 (2) Organic Weight: 10 lbs.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/9/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: "7412 series" sludge in PVC
O-ring bag

Packaging Description: Type II liner lined with
polyethylene drum bag & PVC O-ring bag. Sludge
contained in PVC bag

Absorbent Information: Portland cement on top of
inner sealed O-ring bag, intermixed w/sludge

Physical State of Waste: Damp
Component Weight (LB): 4.5 lbs. plastics; 274.5 lbs.
sludge intermixed with Portland cement

WIPP-WAC COMPLIANCE INFORMATION: 1. Sludge: pH 12;
corrosion protection provided.

Packaging Efficiency: 65%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Uncemented Sludges

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 7412-03128
Content Code: 1
Container Wt (lb): 436
Original Assay (g): Pu-2.8; Am-1.2
Packaging Location: Building 774

Container Type: Drum
Code Description: Combined Sludge
Surface Dose Rate (mR/h): 0.5
Reassay (g): Pu-1.13; Am-0.10
Date Packaged: 11/17/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/22/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Sludge

Packaging Description: Sludge is contained in two plastic bags.

Absorbent Information: Cement (1 qt.)

Free Liquids: Yes	Quantity: 3 gallons	Contained: See below
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 55%
Volume % Combustible: 1%
Correct Content Code? Yes New Code:
Other Information: (1) Free liquid located on top of sludge
 (2) Organic Weight: 10 lbs

WIPP-Certifiable: No-due to free liquids

VISUAL EXAMINATION

Examination Date: 4/9/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: "7412 series" sludge.
Liquids in PVC O-ring bag, top and bottom

Packaging Description: Type II liner lined with
polyethylene drum bag & PVC O-ring bag. Sludge
contained in PVC bag

Absorbent Information: Portland cement-1.5 lbs.

Physical State of Waste: Damp
Component Weight (LB): 4.5 lbs. plastics; 326.5 lbs.
sludge mixed with cement; 5.5 liters of liquid

WIPP-WAC COMPLIANCE INFORMATION: 1. Free
liquids: 5,500 ml: pH 12 analysis indicates water,
nitrates, sulfates, and/or silicates. 2. sludge:
pH 12; corrosion protection provided.

Packaging Efficiency: 60%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-due to free liquids

Waste Form Category: Uncemented Sludges

Time Period: 3-year old waste

GENERAL INFORMATION

Container Identification: 7412-00483
Content Code: 1
Container Wt (lb): 553
Original Assay (g): Pu-0.4, Am-0.1
Packaging Location: Building 774

Container Type: Drum
Code Description: First Stage Sludge
Surface Dose Rate (mR/h): 4.2
Reassay (g): Pu-6.58; Am-0.256
Date Packaged: 8/18/80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

VISUAL EXAMINATION

Examination Date: 8/15/83
Container Condition: See other information.
Lead Lined: No
Liner Type: Type II, 90 mil

Waste Form Description: Sludge

Waste Form Description: Precipitation sludge.

Packaging Description: Sludge is contained in a poly bag.

Packaging Description: Type II liner is lined with a polyethylene drum bag. The sludge is contained in a PVC O-ring bag.

Absorbent Information: Portland cement, approximately 2 cups.

Absorbent Information: Portland cement is located on top of the O-ring bag and layered in the sludge. Oil-Dri is located in the bottom of the liner and is mixed in the sludge.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Damp
Component Weight (LB): Polyethylene drum bag and PVC O-ring bag-4.5; 7412 sludge-433.5; Portland cement-28.5; vermiculite-3.0.

Packaging Efficiency: 95%
Volume % Combustible: 0
Correct Content Code? Yes New Code:
Other Information: Portland cement is located outside the bag containing the sludge. Unable to penetrate the sludge at the center.

WIPP-WAC Compliance Information: 1. Sludge: The sludge pH is 12 with the major component being carbonates and/or nitrates and the minor component is water.

WIPP-Certifiable: Yes

Packaging Efficiency: 95%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information: 1. Large dent in drum middle, light rust on dented areas, paint condition fair.
2. Interior of the drum is moderately rusted on drum bottom and slightly rusted on the sides.

WIPP-Certifiable: Yes

Waste Form Category: Uncemented Sludges

Time Period: 3-year old waste

GENERAL INFORMATION

Container Identification: 7412-00636
Content Code: 1
Container Wt (lb): 399
Original Assay (g): Pu-2.0, Am-1.0
Packaging Location: Building 774

Container Type: Drum
Code Description: First Stage Sludge
Surface Dose Rate (mR/h): 12.0
Reassay (g): Pu-4.824; Am-1.356
Date Packaged: 12/9/80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Sludge

Packaging Description: Sludge is contained in a poly bag.

Absorbent Information: Portland cement, approximately 1 quart.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 66%
Volume % Combustible: 0
Correct Content Code? Yes New Code:
Other Information: Portland cement is located outside the bag containing the sludge. Unable to penetrate the sludge at the center.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8/11/83
Container Condition: Good
Lead Lined: No
Liner Type: Type II, 90 mil

Waste Form Description: Red-brown precipitation sludge with some very hard-dense, black sludge at the bottom and top of the waste.

Packaging Description: Type II liner is lined with a polyethylene drum bag. The sludge is packaged in two bags.

Absorbent Information: Portland cement on top of the inner bag. The Oil-Dri is located on top of the outer bag.

Physical State of Waste: Damp
Component Weight (LB): Polyethylene and PVC bags-4.5; 7412 sludge and black sludge-395.5.
Absorbents could not be separated from the sludge for weighing.

WIPP-WAC Compliance Information: 1. Sludge: The sludge pH is 12 with the major component being carbonates and/or nitrates, silicates and/or sulfates, and the minor component being water.

Packaging Efficiency: 80%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Uncemented Sludges

Time Period: 3-year old waste

GENERAL INFORMATION

Container Identification: 7412-00766
Content Code: 1
Container Wt (lb): 526
Original Assay (g): Pu-1.6, Am-1.6
Packaging Location: Building 774

Container Type: Drum
Code Description: First Stage Sludge
Surface Dose Rate (mR/h): 20.0
Reassay (g): Pu-3.405; Am-1.246
Date Packaged: 2/21/81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

VISUAL EXAMINATION

Examination Date: 8/15/83
Container Condition: Good; some surface scratches
on paint.

Lead Lined: No
Liner Type: Type II, 90 mil

Waste Form Description: Sludge

Waste Form Description: Precipitation sludge.

Packaging Description: Sludge is contained in a poly bag.

Packaging Description: Type II liner is lined with a polyethylene drum bag. The sludge is contained in a PVC O-ring bag.

Absorbent Information: Portland cement, approximately 2 cups.

Absorbent Information: Portland cement in bottom of and on top of the O-ring bag. the oil-Dri is located on top of the outer drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Damp
Component Weight (LB): Polyethylene drum bag and PVC O-ring bag-4.5; 7412 sludge (including intermixed cement)-398.5; Portland cement-27.0; Oil-Dri-4.0.

WIPP-WAC Compliance Information: 1. Sludge; Analysis indicates a pH of 12. The major component is carbonates and/or nitrates and silicates, the minor component is water.

Packaging Efficiency: 90%
Volume % Combustible: 0
Correct Content Code? Yes New Code:
Other Information: Portland cement is located outside the bag containing the sludge. Unable to penetrate the sludge at the center.

WIPP-Certifiable: Yes

Packaging Efficiency: 90%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Uncemented Sludges

Time Period: 3-year old waste

GENERAL INFORMATION

Container Identification: 7412-00797
Content Code: 1
Container Wt (lb): 432
Original Assay (g): Pu-1.1; Am-1.4
Packaging Location: Building 774

Container Type: Drum
Code Description: First Stage Sludge
Surface Dose Rate (mR/h): 2.0
Reassay (g): Pu-1.801; Am-0.054
Date Packaged: 2/20/81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner also lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Sludge

Packaging Description: Sludge is contained in a poly bag.

Absorbent Information: Portland cement, approximately 2 cups.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 70%
Volume % Combustible: 0
Correct Content Code? Yes New Code:
Other Information: Portland cement is located outside the poly bag containing the sludge. Unable to penetrate the sludge at the center.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8/15/83
Container Condition: Good
Lead Lined: No
Liner Type: Type II, 90 mil

Waste Form Description: Precipitation sludge.

Packaging Description: Type II liner is lined with a polyethylene drum bag. The sludge is contained in a PVC O-ring bag.

Absorbent Information: Portland cement is located in the bottom of and on top of the O-ring bag. Oil-Dri is located on the bottom of the liner.

Physical State of Waste: Damp
Component Weight (LB): Polyethylene drum bag and PVC O-ring bag-4.5; 7412 sludge (including intermixed cement)-319.5; cement-20.75; Oil-Dri-2.0.

WIPP-WAC Compliance Information: 1. Sludge: No laboratory results received on the sludge sample.

Packaging Efficiency: 80%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information: 1. Moderate rust on interior drum bottom.

WIPP-Certifiable: Yes

Waste Form Category: Uncemented Sludge

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 741-12404
Content Code: 1
Container Wt (lb): 530
Original Assay (g): 0.9-Pu; 1.7-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: First Stage Sludge
Surface Dose Rate (mR/h): 19.0
Reassay (g): 1.35-Pu; 1.69-Am
Date Packaged: 1-3-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-29-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 1-22-85
Container Condition: Exterior-dents and bulges,
moderate rust, interior-light
rust.

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Sludge

Waste Form Description: Precipitation sludge with
Portland cement absorbent intermixed.

Packaging Description: Packed in poly bags and then 90-mil liner

Packaging Description: Type I rigid liner was lined
with a round bottom polyethylene drum bag. The sludge
was combined in a PVC O-ring bag.

Absorbent Information: None

Absorbent Information: Oil dry was located on top of
the poly outer bag. Portland cement on top was
hardened and was located between PVC inner and poly
outer bags. Portland cement was dry powder in the
bottom section and was located between the bags and
also outside the outer bag.

Free Liquids: Yes Quantity: 1/2 qt. Contained: on top waste
Compressed Gases: No Type: Quantity:
Particulates: No Quantity: Type:

Physical State of Waste: Damp
Component Weight (LB): PVC bag-3.0, poly bag-1.0,
sludge with intermixed Portland cement-427.5, hardened
portland cement-22.0, Oil-Dri and powdered portland
could not be separated and are included in sludge
weight.

WIPP-WAC Compliance Information: 1. Free liquids:
430 ml on top of sludge. Analysis indicates a pH of
12. The components were water, sodium nitrate, and an
unidentified basic compound. 2. Sludge having a pH of
8. Corrosion protection was provided.

Packaging Efficiency: 85%
Volume % Combustible: 5%
Correct Content Code? Yes New Code:
Other Information: 10 lbs of organic material

WIPP-Certifiable: No-free liquid

Packaging Efficiency: 95%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-free liquid (430 ml)

Waste Form Category: Uncemented Sludges

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 741-12411
Content Code: 1
Container Wt (lb): 495
Original Assay (g): 0.9-Pu; 0.9-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: First Stage Sludge
Surface Dose Rate (mR/h): 19.0
Reassay (g): 1.28-Pu; 1.44-Am
Date Packaged: 1-4-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-21-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Sludge

Packaging Description: Packed in poly bags and then in 90-mil liner

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: 6%
Correct Content Code? Yes New Code:
Other Information: 10 lbs of organic materials

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-22-85
Container Condition: Exterior-moderate rust,
interior-light rust.

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Precipitation sludge with
portland cement absorbent intermixed.

Packaging Description: Type I rigid liner was lined
with a round bottom polyethylene drum bag. The sludge
was contained in a PVC O-ring bag.

Absorbent Information: Oil dry was located on top of
the poly outer bag. Portland cement was mostly
hardened and was located on top between PVC inner and
poly outer bags and was located in bottom section
outside of both bags, between the 2 bags and also
inside the inner bag. Portland cement was also
intermixed with the sludge.

Physical State of Waste: Damp
Component Weight (LB): PVC bag-3.0, poly bag-1.0,
sludge with intermixed Portland cement 268.0, hardened
Portland cement-39.0, Oil-Dri could not be separated
and weight is included with sludge.

WIPP-WAC Compliance Information: 1. Sludge having a
pH of 6. Corrosion protection was provided.

Packaging Efficiency: 80%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Uncemented Sludges

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 741-12794
Content Code: 1
Container Wt (lb): 472
Original Assay (g): 4.7-Pu; 1.6-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: First Stage Sludge
Surface Dose Rate (mR/h): 28.0
Reassay (g): 1.87-Pu; 1.91-Am
Date Packaged: 4-6-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-9-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Examination Date: 1-23-85
Container Condition: Some light rust-Interior
and exterior

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Sludge

Waste Form Description: Precipitation sludge with
portland cement absorbent intermixed.

Packaging Description: Packed in poly bags and then in 90-mil liner

Packaging Description: Type I rigid liner was lined
with a round bottom polyethylene drum bag. The sludge
was combined in a PVC O-ring bag.

Absorbent Information: None

Absorbent Information: Oil-Dri outside of the outer
poly bag. Hardened Portland cement on top between
bags. Hardened Portland cement on bottom inside of
the inner PVC bag. Powdered outside of outer poly bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Damp
Component Weight (LB): PVC bag-3.0, poly bag-1.0,
sludge with intermixed Portland cement 365.0, hardened
Portland cement 20.0, Oil-Dri and powdered Portland
cement weight is included with sludge.

WIPP-WAC Compliance Information: 1. Sludge having a
pH of 8. Corrosion protection was provided.

Packaging Efficiency: 90%
Volume % Combustible: 24%
Correct Content Code? Yes New Code:
Other Information: 10 lbs of organic materials

WIPP-Certifiable: Yes

Packaging Efficiency: 90%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Uncemented Sludges

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 741-12847
Content Code: 1
Container Wt (lb): 511
Original Assay (g): 2.1-Pu; 0.9-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: First Stage Sludge
Surface Dose Rate (mR/h): 18.0
Reassay (g): 7.69-Pu; 1.29-Am
Date Packaged: 4-18-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-9-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Sludge

Packaging Description: Packed in poly bags and then in 90-mil liner

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: 5%
Correct Content Code? Yes New Code:
Other Information: 10 lbs of organic materials

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-23-85
Container Condition: Very little rust-Interior
and exterior
Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Precipitation sludge with
portland cement absorbent intermixed.

Packaging Description: Type I rigid liner was lined
with a round bottom polyethylene drum bag. The sludge
was contained in a PVC O-ring bag.

Absorbent Information: Oil-Dri was located on top of
outer poly bag. Portland cement was located on top
between the two bags and was both hardened and
powdered. Hardened Portland cement was located
between the bags on bottom. Dry Portland cement was
also intermixed with the sludge.

Physical State of Waste: Damp
Component Weight (LB): PVC bag-3.0, poly bag-1.0,
sludge with intermixed Portland cement-411.0, Portland
cement-8.0, Oil-Dri and powdered Portland cement
weight is included with sludge.

WIPP-WAC Compliance Information: 1. Sludge having a
pH of 8. Corrosion protection was provided.

Packaging Efficiency: 90%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

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GENERAL INFORMATION

Container Type: Drum
Code Description: First Stage Sludge
Surface Dose Rate (mR/h): 38.0
Reassay (g): 14.0-Pu; 3.2-Am
Date Packaged: 4-27-73

VISUAL EXAMINATION

Examination Date: 3-28-85
Container Condition: Exterior-light rust,
Interior-light to moderator rust.
Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Precipitation sludge with
portland cement absorbent intermixed.

Packaging Description: Type I rigid liner had 0.125" lead sheeting outside the rigid liner on the top of the drum and lead lid inside the rigid liner lid. Rigid liner was lined with a polyethylene drum bag. The sludge was contained in a PVC O-ring bag.

Absorbent Information: Oil-Dri was located on top of the lead sheeting inside rigid liner top. Oil-Dri was also located on top of the outer poly drum bag and on the bottom between the poly drum bag and the rigid liner. Hardened Portland cement located on top and on the bottom between the two bags.

Physical State of Waste: Damp
Component Weight (LB): PVC bag-3.0, poly drum bag-1.0,
lead sheeting-27.7, sludge with intermixed
Portland-370.6, Portland cement-15.8, Oil-Dri-15.4.

WIPP-WAC Compliance Information: 1. Sludge having a pH of 8. Corrosion protection was provided.

Packaging Efficiency: 80%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Uncemented Sludges

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 742-26150
Content Code: 2
Container Wt (lb): 536
Original Assay (g): Pu-0.3
Packaging Location: Building 774

Container Type: Drum
Code Description: Second-Stage Sludge
Surface Dose Rate (mR/h): 1.5
Reassay (g): Pu-0.43; Am-0.07
Date Packaged: 3/09/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/22/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Sludge

Packaging Description: Sludge is contained in two plastic bags.

Absorbent Information: None

Free Liquids: Yes Quantity: 4 gallons Contained: See below
Compressed Gases: No Type: Quantity:
Particulates: No Quantity: Type:

Packaging Efficiency: 70%
Volume % Combustible: 1%
Correct Content Code? Yes New Code:
Other Information: (1) Free liquid located on top of sludge
(2) Sludge partially penetrated by x-rays.
(3) Organic Weight: 14 lbs

WIPP-Certifiable: No-due to free liquids

VISUAL EXAMINATION

Examination Date: 4/9/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: "742 series" sludge. Free liquids drained from drum & liner; bottom of drum rusted & liner outside was wet. Both bags contained liquids.

Packaging Description: Type II liner lined with polyethylene drum bag & PVC O-ring bag. Sludge inside of PVC O-ring bag.

Absorbent Information: Portland cement on top of outer drum bag; some between bags; in bottom of rigid liner, and intermixed w/sludge. Vermiculite on top of outside bag.

Physical State of Waste: Damp
Component Weight (LB): 2.0 lbs. plastics; 389 lbs. sludge intermixed with layered Portland cement; 18.95 liters of liquid

WIPP-WAC Compliance Information: 1. Free liquids: 18,950 ml; pH 12; analysis indicates water, nitrates, oxides, sulfates and/or silicates.
2. Sludge: pH 12; corrosion protection provided.

Packaging Efficiency: 70%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-due to free liquids

Waste Form Category: Uncemented Sludges

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 742-26152
Content Code: 2
Container Wt (lb): 490
Original Assay (g): Pu-0.3
Packaging Location: Building 774

Container Type: Drum
Code Description: Second-Stage Sludge
Surface Dose Rate (mR/h): 2.0
Reassay (g): Pu-1.31; Am-0.09
Date Packaged: 12/07/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/22/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Sludge

Packaging Description: Sludge is contained in two plastic bags.

Absorbent Information: Drum contains approximately 1 quart
Portland cement.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 75%
Volume % Combustible: 1%
Correct Content Code? Yes New Code:
Other Information: Organic Weight: 10 lbs

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/10/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: "742 series" sludge. Sludge is wet on top dry on bottom. Liquids contained in outer bag; very little in inner bag.

Packaging Description: Type II liner is lined with polyethylene drum bag & PVC O-ring bag. Sludge contained in PVC bag

Absorbent Information: Cement located in middle of drum and in bottom of inner-bag--included with sludge.

Physical State of Waste: Damp
Component Weight (LB): 2.0 lbs. plastics; 399 lbs. sludge with Portland cement; 1.425 liters liquid.

WIPP-WAC Compliance Information: 1. Free liquids: 1425 ml; pH 12; analysis indicated water, carbonates, and/or nitrates, silicates and/or sulfates. 2. Sludge: pH 12; corrosion protection provided.

Packaging Efficiency: 80%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-due to free liquids

Waste Form Category: Uncemented Sludges

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 742-26154
Content Code: 2
Container Wt (lb): 480
Original Assay (g): Pu-0.3
Packaging Location: Building 774

Container Type: Drum
Code Description: Second-Stage Sludge
Surface Dose Rate (mR/h): 2.5
Reassay (g): Pu-1.48; Am-0.01
Date Packaged: 12/07/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/22/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Sludge

Packaging Description: Sludge is contained in two plastic bags.

Absorbent Information: Portland cement-approximately 1 quart.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: 1%
Correct Content Code? Yes New Code:
Other Information: Organic Weight: 10 lbs

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/10/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: "742 series" sludge, top wetter than bottom. Liquids on outside & inside of outer bag and at bottom of drum outside the inner bag.

Packaging Description: Type II liner lined with polyethylene drum bag & PVC O-ring bag. Sludge contained in PVC bag

Absorbent Information: Portland cement located 1/4 way up; cement between the bags that had hardened.

Physical State of Waste: V. Damp
Component Weight (LB): 2 lbs. plastics; 390 lbs. sludge & Portland cement; 0.950 liters liquid

WIPP-WAC Compliance Information: 1. Free liquids: 950 ml; pH 12; analysis indicated water, carbonates, and/or nitrates, sulfates and/or silicates. 2. Sludge: pH 12; corrosion protection provided.

Packaging Efficiency: 80%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-due to free liquids

Waste Form Category: Uncemented Sludges

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 742-21396
Content Code: 2
Container Wt (lb): 460
Original Assay (g): 0.3-Pu; 0.0-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: Second Stage Sludge
Surface Dose Rate (mR/h): 1.2
Reassay (g): 0.8-Pu; 0.1-Am
Date Packaged: 1-24-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-21-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Sludge

Packaging Description: Packed in poly bags, then 90-mil liner

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: 6%
Correct Content Code? Yes New Code:
Other Information: 10 lbs of organic materials

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-28-85
Container Condition: Interior and exterior, moderate
rust. Paint flaked off bottom
4 in. leaving shiny metal.

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Precipitation sludge with
Portland cement absorbent intermixed.

Packaging Description: Type I rigid liner was lined
with a single polyethylene drum bag which directly
contained the sludge.

Absorbent Information: Hardened Portland cement was
located directly on top of the sludge.

Physical State of Waste: Damp
Component Weight (LB): Poly drum bag-1.0, sludge with
intermixed Portland cement-382.7, hardened Portland
cement-8.8.

WIPP-WAC Compliance Information: 1. Sludge having a
pH of 8. Corrosion protection was provided.

Packaging Efficiency: 85%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Uncemented Sludges

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 742-21440
Content Code: 2
Container Wt (lb): 460
Original Assay (g): 0.3-Pu; 0.0-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: Second Stage Sludge
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.26-Pu; 0.03-Am
Date Packaged: 2-8-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 1-23-85
Container Condition: Exterior-moderate rust,
Interior-no rust.
Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Sludge

Waste Form Description: Precipitation sludge with
Portland cement absorbent intermixed.

Packaging Description: Packed in poly bags, then 90-mil liner.

Packaging Description: Type I rigid liner was lined
with a single round bottom polyethylene drum bag which
directly contained the sludge.

Absorbent Information: None

Absorbent Information: Hardened Portland cement was
located directly on top of the sludge.

Free Liquids: Yes.. Quantity: 4 gallons Contained: on top sludge
Compressed Gases: No Type: Quantity:
Particulates: No Quantity: Type:

Physical State of Waste: Damp
Component Weight (LB): Paper-0.5, poly drum bag-1.0,
sludge with intermixed Portland cement-227,
liquids-58.0, hardened Portland cement-47.0.

WIPP-WAC Compliance Information: 1. Free liquids
22,000 ml on top of bag and also on top of sludge.
Analysis indicates a pH of 12. The components were
water, sodium nitrate and an unidentified basic
component. 2. Sludge having a pH of 8. Corrosion
protection was provided.

Packaging Efficiency: 60%
Volume % Combustible: ~25%
Correct Content Code? Yes New Code:
Other Information: 10 lbs of organic materials

WIPP-Certifiable: No-due to free liquid

Packaging Efficiency: 50%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-free liquids (22 liters)

Waste Form Category: Uncemented Sludges

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 742-21594
Content Code: 2
Container Wt (lb): 480
Original Assay (g): 0.3-Pu; 0.0-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: Second Stage Sludge
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.21-Pu; 0.03-Am
Date Packaged: 4-18-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-21-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 1-23-85
Container Condition: Exterior-moderate rust,
Interior-very light rust.
Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Sludge

Waste Form Description: Precipitation sludge with
portland cement absorbent intermixed.

Packaging Description: Packed in poly bags, then 90-mil liner.

Packaging Description: Type I rigid liner was lined
with a single round bottom polyethylene drum bag which
directly contained the sludge.

Absorbent Information: None

Absorbent Information: Oil-Dri was located on top of
the single poly bag. Hardened cement was located on
top of the sludge, on the bottom between the rigid
liner and the drum bag, and also inside the bottom of
the drum bag. Possibly calcium silicate located
inside the bottom of the poly bag.

Free Liquids: Yes Quantity: 2 cups Contained: bagging mat.
Compressed Gases: No Type: Quantity:
Particulates: No Quantity: Type:

Physical State of Waste: Damp
Component Weight (LB): Poly drum bag-1.0, sludge with
intermixed Portland cement and hardened Portland
cement-37.0, oil dry weight is included with sludge.

WIPP-WAC Compliance Information: 1. Sludge having a
pH of 8. Corrosion protection was provided.

Packaging Efficiency:
Volume % Combustible: 6%
Correct Content Code? Yes New Code:
Other Information: 10 lbs of organic materials

WIPP-Certifiable: No-free liquid

Packaging Efficiency: 85%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Uncemented Sludges

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 742-21640
Content Code: 2
Container Wt (lb): 510
Original Assay (g): 0.3-Pu; 0.0-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: Second Stage Sludge
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.55-Pu; <0.01-Am
Date Packaged: 5-10-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-21-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Examination Date: 1-23-85
Container Condition: Exterior-moderate rust,
Interior-light rust.

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Sludge

Waste Form Description: Precipitation sludge with
Portland cement absorbent intermixed.

Packaging Description: Packed in poly bags, then 90-mil liner.

Packaging Description: Type I rigid liner was lined
with a single round bottom polyethylene drum bag which
directly contained the sludge.

Absorbent Information: None

Absorbent Information: Oil-Dri was located on top of
the single poly bag. The Oil-Dri was wet. Hardened
Portland was located on the bottom between the rigid
liner and the drum bag and also inside the bottom of
the drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Damp
Component Weight (LB): Poly drum bag-1.0, sludge with
intermixed Portland cement-415.5, hardened
Portland-17.0, oil dry weight is included with sludge.

Packaging Efficiency: 85%
Volume % Combustible: 5%
Correct Content Code? Yes New Code:
Other Information: 100 lbs of organic material

WIPP-WAC Compliance Information: 1. Free liquids:
2700 ml on top of bag and also on top of sludge.
Analysis indicates pH of 8. The components were water
and sodium nitrate. 2. Sludge having a pH of 8.
Corrosion protection was provided.

WIPP-Certifiable: Yes

Packaging Efficiency: 90%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-free liquids (2.7 liters)

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GENERAL INFORMATION

Container Type: Drum
Code Description: Organic Setups (Grease)
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.34; Am-<0.01
Date Packaged: 3/09/83

VISUAL EXAMINATION

Examination Date: 4/11/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: Bldg. 774 grease and one small bag containing 15 ml. of oil, liquid on top of grease and in bottom of drum bag.

Packaging Description: Type II liner is lined w/polyethylene drum bag. Grease is in the drum bag.

Absorbent Information: 7 lbs. of vermiculite on top of outer drum bag; Oil-Dri in bottom of drum bag--oil-dry layers 1/4 and 3/4 way up in the grease.

Physical State of Waste: Damp
Component Weight (LB): 1 lb of plastics, 340 lbs.
of grease which includes mixed in Oil-Dri; 3.0 liters
of liquid.

WIPP-WAC Compliance Information: 1. Free liquid: 3000 ml; pH 7; analysis indicates unidentified oil and unidentified ester 2. Sludge: pH 12; corrosion protection provided.

WIPP-Certifiable: No-free liquids

Packaging Efficiency: 75%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-due to free liquids

Waste Form Category: Uncemented Sludges

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 743-16487
Content Code: 3
Container Wt (lb): 499
Original Assay (g): Pu-0.0
Packaging Location: Building 774

Container Type: Drum
Code Description: Organic Setups (Grease)
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.51; Am-<0.01
Date Packaged: 4/14/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/15/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Organic setup (grease)

Packaging Description: Grease is contained in a plastic bag.

Absorbent Information: 2 gallons of absorbent vermiculite

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: 50%
Correct Content Code? Yes New Code:
Other Information: (1) Partial penetration of grease with x-rays.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/11/84
Container Condition: Fair
Lead Lined: No
Liner Type: Type II

Waste Form Description: Building 774 grease. Small amount of liquid drained from top of grease.

Packaging Description: Type II liner is lined with polyethylene drum bag. Grease is in drum bag and layered with Oil-Dri.

Absorbent Information: Vermiculite on top of sealed drum bag; Oil-Dri layered in sludge and in bottom of drum bag.

Physical State of Waste: Damp
Component Weight (LB): Grease includes intermixed Oil-Dry (385 lbs), 9 lb. vermiculite, and 1 liter liquid.

WIPP-WAC Compliance Information: 1. Free liquids: 1000 ml; pH 12; analysis indicates unidentified oil and unidentified ester.
2. Sludge: pH 12; corrosion protection provided.

Packaging Efficiency: 75%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-due to free liquids

Waste Form Category: Uncemented Sludges

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 743-16656
Content Code: 3
Container Wt (lb): 400
Original Assay (g): Pu-0.03
Packaging Location: Building 774

Container Type: Drum
Code Description: Organic Setups (Grease)
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.57; Am-<0.01
Date Packaged: 10/10/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/22/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Organic setup (grease)

Packaging Description: Grease is contained in two plastic bags.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 75%
Volume % Combustible: 50%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/12/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: Building 774 Grease

Packaging Description: Type II liner is lined with
PVC O-ring bag.

Absorbent Information: Oil-Dri between bag and
grease, Oil-Dri layered in sludge and on top and sides
of grease. Oil-Dri included with grease in weight.

Physical State of Waste: Damp
Component Weight (LB): 3.5 lbs plastics; 316.5 lbs.
grease and absorbent.

WIPP-WAC Compliance Information: 1. Sludge: pH 12;
corrosion protection provided.

Packaging Efficiency: 90%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

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Waste Form Category: Uncemented Sludges

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 743-16733
Content Code: 3
Container Wt (lb): 512
Original Assay (g): Pu-0.04
Packaging Location: Building 774

Container Type: Drum
Code Description: Organic Setups (Grease)
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.73; Am-<0.01
Date Packaged: 9/22/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/22/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Organic setup (grease)

Packaging Description: Grease is contained in plastic bags.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: 50%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: yes

VISUAL EXAMINATION

Examination Date: 4/12/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: Building 774 grease, bottom
wetter than top.

Packaging Description: Type II liner is lined with
PVC O-ring bag. Grease is contained in O-ring bag.

Absorbent Information: Oil-Dri in bottom of O-ring
bag; included with grease.

Physical State of Waste: Damp
Component Weight (LB): 3.5 lbs. plastic, 422.5 lbs
grease and Oil-Dri combined.

WIPP-WAC Compliance Information: 1. Sludge: pH 12;
corrosion protection provided.

Packaging Efficiency: 70%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

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Waste Form Category: Uncemented Sludges

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 743-15075
Content Code: 3
Container Wt (lb): 521
Original Assay (g): Pu-0.1
Packaging Location: Bldg 774

Container Type: Drum
Code Description: Organic Setups
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.094; Am-0.018
Date Packaged: 9-5-80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Organic setup.

Packaging Description: Setup is contained in a poly bag.

Absorbent Information: Oil-Dri, 1 quart.

Free Liquids: Yes	Quantity: 9 pints	Contained: No, see below
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: 90
Correct Content Code? Yes New Code:
Other Information: Liquid between rigid liner and drum (1 pint) and
inside the packaging material (8 pints).

WIPP-Certifiable: No-due to free liquids.

VISUAL EXAMINATION

Examination Date: 8-10-83
Container Condition: Good; two small dents in
middle and upper drum sections.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Organic setup (grease).

Packaging Description: Type II liner is lined
with a PVC drum bag. The grease is contained
in a PVC O-ring bag.

Absorbent Information: Oil-Dri is located on the
bottom of the liner and on top of the grease.

Physical State of Waste: Wet
Component Wt (lb): PVC drum and O-ring bags--
11.75; organic setup--397.0; Oil-Dri--6.0.

WIPP-WAC Compliance Information:

1. Liquids: A total 6000 ml of free liquid
found on top of the grease and around the
plastic. Analysis of all three samples
indicates the composition to be: grease;
1,1,1-trichloroethane; 1,1,2-trichloroethane-
1,2,2-trifluoroethane; and an unidentified
carbonyl containing compound.
2. Sludge: Analysis of a grease sample
indicates a pH of 12 with the major
component being carbonates and/or nitrates,
and silicates and/or sulfates; and the minor
component is water.

Packaging Efficiency: 90%
Volume % Combustibles: 50-55
Correct Content Code? Yes New Code:
Other Information: Rust on interior side
of the drum lid.

WIPP-Certifiable: No

Waste Form Category: Uncemented Sludges

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 743-15037
Content Code: 3
Container Wt (lb): 474
Original Assay (g): Pu-0.0
Packaging Location: Bldg 774

Container Type: Drum
Code Description: Organic Setups
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.114; Am-0.017
Date Packaged: 8-8-80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.

Lead-Lined: No Other Lead: No

Waste Form Description: Organic setup..

Packaging Description: Setup is contained in a poly bag.

Absorbent Information: No information recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 95%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information: Limited penetration of the waste.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-11-83
Container Condition: Good, slight rust on drum seam
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Organic setup (grease)

Packaging Description: Type II liner is lined with a PVC drum bag. The organic setup is contained in a PVC O-ring bag.

Absorbent Information: Not recorded.

Physical State of Waste: Damp
Component Wt (lb): PVC bags--8.0; organic setup--375.0; Oil-Dri--10.5.

WIPP-WAC Compliance Information:
1. Sludge: No laboratory results received.

Packaging Efficiency: 90%
Volume % Combustibles: 50-55
Correct Content Code? Yes New Code:
Other Information: Interior of drum lid is rusted and the sides and bottom of the drum interior are moderately to heavily rusted.

WIPP-Certifiable: Yes

Waste Form Category: Uncemented Sludges

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 743-15312
Content Code: 3
Container Wt (lb): 542
Original Assay (g): Pu-0.0
Packaging Location: Bldg 774

Container Type: Drum
Code Description: Organic Setups
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-6,615; Am-0.025
Date Packaged: 3-18-81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Organic setup is contained in a poly bag.

Packaging Description: Organic setup is contained in a poly bag.

Absorbent Information: Portland cement or Oil-Dri, approximately 2 cups.

Free Liquids: Yes	Quantity: 1/2 gal	Contained: Yes, see below
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information: The liquid is contained in a bottle near the bottom of the waste. Absorbent is located between the rigid liner and drum. Limited penetration of the drum.

WIPP-Certifiable: No--due to free liquids.

VISUAL EXAMINATION

Examination Date: 8-11-83
Container Condition: Good; two small dents in lower one-third of drum; rust on drum seam.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Organic setup (grease).
A 1-gal polyethylene bottle containing free liquid was buried in the grease. The bottle label indicates the contents as used pump oil dated 1-12-81, Bldg 559.

Packaging Description: Type II liner is lined with a PVC bag. The organic setup is contained in a PVC O-ring bag. The bottle containing the liquid is contained in a single polyethylene bottle.

Absorbent Information: Oil-Dri is located in the bottom of the O-ring bag and in the bottom of liner.

Physical State of Waste: Damp
Component Wt (lb): PVC and polyethylene--9.0;
organic setup--437.0; Oil-Dri--4.5.

WIPP-WAC Compliance Information:

1. Liquids: The 1-gal polyethylene bottle contained 2450 ml of liquid. Analysis of the liquid indicates a pH of 7. The major components of the liquid are oil and an unidentified ester.
2. Sludge: Analysis of the yellow organic setup indicates a pH of 7 with the major components being silicates and/or sulfates, carbonates and/or nitrates; the minor component is water.

Packaging Efficiency: 90%
Volume % Combustibles: 50-55%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No

Waste Form Category: Uncemented Sludges

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 743-15023
Content Code: 3
Container Wt (lb): 495
Original Assay (g): Pu-0.0
Packaging Location: Bldg 774

Container Type: Drum
Code Description: Organic Setups
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.268; AM-0.018
Date Packaged: 7-25-80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Organic setup

Packaging Description: Setup is contained in a poly bag.

Absorbent Information: Vermiculite or Oil-Dri, approximately 2 cups.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information: Vermiculite or Oil-Dri is located between the drum and the rigid liner. Limited penetration of the drum.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-11-83
Container Condition: Good; lower one-third of drum dented and misshapen, paint condition is fair.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Organic setup. Free liquids found on top of the grease and inside the outermost bag.

Packaging Description: Type II liner is lined with a PVC bag. The organic setup is contained in a PVC O-ring bag.

Absorbent Information: Oil-Dri is located on top of the drum bag.

Physical State of Waste: Wet
Component Wt (lb): PVC bags--9.25; organic setup--396.0; Oil-Dri--6.75.
WIPP-WAC Compliance Information:

1. Liquids: Total of 400 ml of free liquid found. Analysis indicates the liquid is composed of light hydrocarbons, grease, and an alkylphenol--polyoxyethylene.
2. Sludge: No laboratory results received.

Packaging Efficiency: 90%
Volume % Combustibles: 50-55
Correct Content Code? Yes New Code:
Other Information: Drum lid interior is badly rusted. The drum is also internally rusted.

WIPP-Certifiable: No

Waste Form Category: Uncemented Sludges

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 743-11586
Content Code: 3
Container Wt (lb): 592
Original Assay (g): 0.3-Pu; 0.0-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: Organic setups
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.76-Pu; 0.04-Am
Date Packaged: 12-28-72

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Examination Date: 1-25-85
Container Condition: Moderate-rust-Interior
and exterior

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Grease

Waste Form Description: Grease-setup of organic
liquids in calcium silicate.

Packaging Description: Packed in bagging material, then put
in a 90 mil liner. Liquid between
liner and drum and outside and inside
poly bag.

Packaging Description: Type I rigid liner was lined
with a PVC O-ring bag which directly contained the
grease.

Absorbent Information: None

Absorbent Information: Oil-Dri was located in bottom
of rigid liner outside the PVC bag.

Free Liquids: Yes Quantity: 4 to 5 gal Contained: liner & drum
Compressed Gases: No Type: Quantity:
Particulates: No Quantity: Type:

Physical State of Waste: Damp
Component Weight (LB): PVC bag-3.0, grease-477.5,
liquids-33.0, oil dry weight is included with grease.

WIPP-WAC Compliance Information: 1. Free liquids:
(1) 12,250 ml of light brown liquid was located inside
and outside of the PVC bag. Analysis indicates pH of
5 and components of paraffinic base oil, carbon
tetrachloride, trichloroethylene, perchloroethylene,
unidentified ester oil and small water layer.
(2) 4,000 ml of light brown liquid was located in a
4 liter bottle in bottom of grease. Analysis
indicates a pH of 3 and components of paraffinic base
oil, carbon tetrachloride, trichloroethylene,
perchloroethylene, small water layer.
Sludge: corrosion protection was provided.

Packaging Efficiency: 70%
Volume % Combustible: 5%
Correct Content Code? Yes New Code:
Other Information: 200 lbs of organic material

WIPP-Certifiable: No-due to free liquid

Packaging Efficiency: 90%
Volume % Combustibles: 50%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-free liquids (~16 liters)

Waste Form Category: Uncemented Sludges

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 743-11682
Content Code: 3
Container Wt (lb): 570
Original Assay (g): 1.4-Pu; 0.0-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: Organic setups
Surface Dose Rate (mR/h): <0.5
Reassay (g): 2.41-Pu; 0.05-Am
Date Packaged: 1-30-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-21-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Organic setups

Packaging Description: Waste packed in poly bags, not closed,
then in 90 mil liner. Cement is
between the liner and the drum.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information: 200 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-25-85
Container Condition: Exterior-heavy rust,
Interior-very light rust
Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Grease-setup of organic
liquids in calcium silicate.

Packaging Description: Type I rigid liner was single
lined with a PVC O-ring bag which directly contained
the grease.

Absorbent Information: Oil-Dri was located in bottom
of rigid liner outside the PVC bag which directly
contained the grease.

Physical State of Waste: Damp
Component Weight (LB): PVC bag-3.0, grease-490.5,
Oil-Dri weight is included with grease.

WIPP-WAC Compliance Information: 1. Free liquids:
130 ml of liquid was located in the PVC bag probably
at the bottom of the grease. Analysis indicates a pH
of 5. The components were paraffinic base oil, carbon
tetrachloride, trichloroethylene and a small water
layer. 2. Sludge: Corrosion protection was provided.

Packaging Efficiency: 95%
Volume % Combustibles: 50%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-free liquids (130 ml)

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 743-11838
Content Code: 3
Container Wt (lb): 445
Original Assay (g): 1.3-Pu; 0.0-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: Organic setups
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.045-Pu; 0.034-Am
Date Packaged: 4-12-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Grease

Packaging Description: Grease is in poly bagging which is not tied at the top. It is in a 90-mil liner. There is something between the liner and drum.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information: 200 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-28-85
Container Condition: Moderate rust-interior
and exterior

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Grease-setup of organic liquids in calcium silicate. This grease appears whiter than usual.

Packaging Description: Type I rigid liner in lined with a single PVC drum bag which directly contains the grease. The bag had an approximate 1 in. long tear possibly from solvent attack.

Absorbent Information: Oil-Dri was located on top of the single poly bag.

Physical State of Waste: Damp
Component Weight (LB): PVC bag-3.0, grease-365.5,
Oil-Dri-2.0.

WIPP-WAC Compliance Information: 1. Sludge having a pH of 7. Corrosion protection was provided.

Packaging Efficiency: 85%
Volume % Combustibles: 50%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Uncemented Sludges

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 743-11870
Content Code: 3
Container Wt (lb): 538
Original Assay (g): 0.1-Pu; 0.0-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: Organic setups
Surface Dose Rate (mR/h): <0.5
Reassay (g): 1.04-Pu; 0.03-Am
Date Packaged: 5-1-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Grease

Packaging Description: Grease is in untied poly bagging, then
put in the 90-mil liner.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information: 200 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-25-85
Container Condition: Exterior-minor rust,
Interior-light rust
Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Grease-setup of organic
liquids in calcium silicate.

Packaging Description: Type I rigid liner was single
lined with a PVC O-ring bag which directly contained
the grease.

Absorbent Information: Oil-Dri was located on top of
the PVC bag and on the bottom between the rigid liner
and PVC bag. Oil-Dri was also located inside the PVC
bag on top of the grease.

Physical State of Waste: Damp
Component Weight (LB): PVC bag-3.0, grease-439.9,
Oil-Dri-18.6.

WIPP-WAC Compliance Information: 1. Sludge:
Corrosion protection was provided.

Packaging Efficiency: 90%
Volume % Combustibles: 50%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Uncemented Sludges

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 747-00944
Content Code: 7
Container Wt (lb): 489
Original Assay (g): Pu-0.5; Am-0.0
Packaging Location: Building 374

Container Type: Drum
Code Description: Wet Sludge-Building 374
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.44; Am-0.01
Date Packaged: 7/21/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/15/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Sludge

Packaging Description: Sludge is contained in two plastic bags.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: 1%
Correct Content Code? Yes New Code:
Other Information: Organic Weight: 14 lbs

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/10/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: Bldg. 374 sludge, wetter on bottom than on top. Liquid on top of sludge & possibly on sides & bottom. Some liquids began to desorb from the sludge as it was handled.

Packaging Description: Type II liner is lined with polyethylene drum bag & PVC O-ring bag. Sludge contained in O-ring bag.

Absorbent Information: Cement between drum bags, on top of sludge, and in bottom of rigid liner. Cement between bags was solidified. Vermiculite on top of bags and on sides of outer drum bag. Portland cement-7 lb dry, 31 lbs. solidified; 1 lb. vermiculite.

Physical State of Waste: Damp
Component Weight (LB): 4.5 lbs. plastics; 348.5 lbs. sludge and Portland cement; 1.465 liters liquid.

WIPP-WAC Compliance Information: 1. Free liquids: 1465 ml; pH 12; analysis indicated water, unknown organics, sulfates and/or silicates, carbonates and/or nitrates. 2. Sludge: pH 12; corrosion protection provided.

Packaging Efficiency: 80%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-due to free liquids

Waste Form Category: Uncemented Sludges

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 747-01488
Content Code: 7
Container Wt (lb): 483
Original Assay (g): Pu-0.04; Am-0.04
Packaging Location: Building 374

Container Type: Drum
Code Description: Wet Sludge-Building-74
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-1.32; Am-<0.01
Date Packaged: 10/18/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/22/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Sludge

Packaging Description: Sludge is contained in two plastic bags.

Absorbent Information: Portland cement-approximately 1 qt.
at bottom of drum.

Free Liquids: Yes	Quantity: 2 gallons	Contained: See below
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 40%
Volume % Combustible: 1%
Correct Content Code? Yes New Code:
Other Information: (1) Liquid is located on top of the waste
and along the sides of the drum inside of the
packaging material.
(2) Appears to be the new type of rigid liner.
(3) Organic weight-10 lb.

WIPP-Certifiable: No-free liquids

VISUAL EXAMINATION

Examination Date: 4/10/84
Container Condition: Good
Lead Lined: No
Liner Type: Type III

Waste Form Description: Building 374 sludge. Liquids
on outside of drum bags and on inside of first and
second bag.

Packaging Description: Type II liner lined with
polyethylene drum bag & PVC O-ring bag. Sludge
contained in PVC bag.

Absorbent Information: Cement between bags at the top
of the drum; solidified cement between liner and drum
bags; solidified cement from between the bags and
inside the O-ring bag at bottom.

Physical State of Waste: Damp
Component Weight (LB): 4.5 lbs. plastics; 286 lbs.
sludge; 22.25 liters of liquid

WIPP-WAC Compliance Information: 1. Free
liquids: 22,250 ml; pH 12: analysis indicated water,
carbonates and/or nitrates, sulfates, and/or
silicates; pH 7; unknown organic, carbonates and/or
nitrates, sulfates and/or silicate water.
2. Sludge: pH 12; corrosion protection

Packaging Efficiency: 75%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-due to free liquids

Waste Form Category: Uncemented Sludges

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 747-01492
Content Code: 7
Container Wt (lb): 451
Original Assay (g): Pu-0.04; Am-0.04
Packaging Location: Building 374

Container Type: Drum
Code Description: Wet Sludge-Building 374
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-1.04; Am-<0.01
Date Packaged: 10/18/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/22/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Sludge

Packaging Description: Sludge is contained inside two plastic bags.

Absorbent Information: Approximately 2 qts. of Portland cement.

Free Liquids: Yes	Quantity: 2 gallons	Contained: See below
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 67%
Volume % Combustible: 1%
Correct Content Code? Yes New Code:
Other Information: (1) Liquid is located on top of the waste.
(2) Organic weight-14 lb.

WIPP-Certifiable: No-due to free liquids

VISUAL EXAMINATION

Examination Date: 4/11/84
Container Condition: Good
Lead Lined: No
Liner Type: Type III

Waste Form Description: Building 374 sludge. Liquid in inner bag on top of sludge.

Packaging Description: Type II liner is lined with polyethylene drum bag & PVC O-ring bag. Sludge contained in PVC O-ring bag.

Absorbent Information: Dry cement located in bottom of rigid liner in between drum bags at top and bottom of drum, and hardened cement inside inner bag at bottom.

Physical State of Waste: Damp
Component Weight (LB): 4.5 lbs plastics; 242 lbs sludge; 15.5 liters of liquid.

WIPP-WAC Compliance Information: 1. Free liquid: 15,500 ml; pH 12 water, carbonates and/or nitrates. 2. Sludge: pH 12; corrosion protection provided.

Packaging Efficiency: 50%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-due to free liquids

Waste Form Category: Uncemented Sludges

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 747-01531
Content Code: 7
Container Wt (lb): 434
Original Assay (g): Pu-0.03; Am-0.03
Packaging Location: Building 374

Container Type: Drum
Code Description: Wet Sludge-Building 374
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.24; Am-<0.01
Date Packaged: 10/17/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/22/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Sludge

Packaging Description: Sludge is contained in two plastic bags.

Absorbent Information: Portland cement-approximately 1 quart.

Free Liquids: Yes	Quantity: 4 gallons	Contained: See below
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 60%
Volume % Combustible: 1%
Correct Content Code? Yes New Code:
Other Information: (1) Liquid is located on top of the waste.

WIPP-Certifiable: No-due to free liquids

VISUAL EXAMINATION

Examination Date: 4/11/84
Container Condition: Good
Lead Lined: No
Liner Type: Type III

Waste Form Description: Building 374 sludge. Liquid inside inner bag on top of sludge.

Packaging Description: Type II liner is lined with polyethylene drum bag & PVC O-ring bag. Sludge contained in O-ring PVC bag

Absorbent Information: Cement on top between bags; between bags at bottom; in bottom of liner; and hardened cement at bottom of O-ring bag and on top of sludge.

Physical State of Waste: Damp
Component Weight (LB): 4.5 lbs. plastics; 205.5 of sludge; liquid 24.0 liters.

WIPP-WAC Compliance Information: 1. Free liquids: 24,000 ml; pH 12 analysis indicates water, unknown organic, carbonates and/or nitrates.
2. Sludge: pH 12; corrosion protection provided.

Packaging Efficiency: 50%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-due to free liquids

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Waste Form Category: Uncemented Sludges

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-40342
Content Code: 292
Container Wt (lb): 268
Original Assay (g): Pu-67.0
Packaging Location: Building 771, Rm 149

Container Type: Drum
Code Description: Cemented Sludge
Surface Dose Rate (mR/h): 2.4
Reassay (g): Pu-74.0
Date Packaged: 3/24/83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Incinerator sludge

Packaging Description: Sludge contained in polyethylene bottles.

Absorbent Information: Not recorded

Free Liquids: Yes	Quantity: 2.5 gal.	Contained: Yes
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: 1/4 cup	Type: Portland cement

Packaging Efficiency: 85%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information: Rigid liner lid is too small for the liner
and is dented inward. Liquids contained in
3 bottles.

WIPP-Certifiable: No-due to free liquids.

VISUAL EXAMINATION

Examination Date: 9/7/83
Container Condition: Good
Lead Lined: No
Liner Type: Type II, 90 mil

Waste Form Description: Seventeen polyethylene
bottles containing sludge. Total of 975 ml free
liquids found: 810 ml, 58 ml, and 80 ml--each found
in a bottle and the surrounding bag; 27 ml found in
the bottom of the drum bag.

Packaging Description: Type II liner is lined with a
polyethylene drum bag. Each polyethylene bottle is
double-bagged in plastic.

Absorbent Information: Vermiculite is located on top
of the drum bag.

Physical State of Waste: Damp
Component Weight (LB): Polyethylene and PVC bags,
polyethylene bottles-31.25; sludge-141.0;
vermiculite-5.5

WIPP-WAC Compliance Information: 1. Sludge:
Analysis of the black sludge sample indicates a pH of
12. The major component is carbonates, silicates
and/or sulfates; the minor component is water.
2. Liquids: Analysis of all four samples indicate a
pH of 12 and the major component of the black liquid
is water. The minor component are as follows:
(1) carbonates, silicates, and/or sulfates and
unidentified organic material; (2) and (3) carbonates
and/or nitrates, and (4) carbonates.

Packaging Efficiency: 90%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No

Waste Form Category: Uncemented Sludges

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-39229
Content Code: 292
Container Wt (lb): 229
Original Assay (g): Pu-78.0
Packaging Location: Building 771, Rm 149

Container Type: Drum
Code Description: Cemented Sludge
Surface Dose Rate (mR/h): 2.5
Reassay (g): Pu-69.0
Date Packaged: 10/8/82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Incinerator sludge.

Packaging Description: Sludge contained in polyethylene bottles.
The bottles are contained in plastic bags.

Absorbent Information: Not recorded.

Free Liquids: Yes	Quantity: 7 pt total	Contained: Yes
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: 100%
Correct Content Code? Yes New Code:
Other Information: One bottle contains approximately
3 l and the other contains
approximately 500 ml. Some liquid
appears to have leaked from the
bottle into the plastic bag.

WIPP-Certifiable: No

VISUAL EXAMINATION

Examination Date: 9/7/83
Container Condition: Good
Lead Lined: No
Liner Type: Type II, 90 mil

Waste Form Description: Sixteen polyethylene bottles
containing sludge.

Packaging Description: Type II liner is lined with a
polyethylene drum bag. Each polyethylene bottle
containing sludge is double-bagged in plastic.

Absorbent Information: Vermiculite is located on top
of the drum bag.

Physical State of Waste: Damp
Component Weight (LB): Polyethylene and PVC bags,
polyethylene bottles-30.25; sludge-117.25;
vermiculite-5.25.

WIPP-WAC Compliance Information: 1. Liquids: Total
952 ml (14 ml in drum bag; 325 ml in bottles, 613 ml
in five bags containing poly bottles). Analysis of
two samples indicates a pH of 12 and major component
is water, the minor component is carbonates for both
samples. 2. Sludge: Analysis of a sample of the
solid black sludge indicates a pH of 12 and the major
component is silicates and unknown inorganics and the
minor component is water.

Packaging Efficiency: 85%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information: Drum lid (interior) has surface
rust.

WIPP-Certifiable: No

Waste Form Category: Uncemented Sludges

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-39213
Content Code: 292
Container Wt (lb): 191
Original Assay (g): Pu-34.0
Packaging Location: Building 771, Rm 149

Container Type: Drum
Code Description: Cemented Sludge
Surface Dose Rate (mR/h): 2.4
Reassay (g): Pu-31.0
Date Packaged: 10/13/82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

VISUAL EXAMINATION
Examination Date: 9/6/83
Container Condition: Good
Lead Lined: No
Liner Type: Type II, 90 mil

Waste Form Description: Incinerator sludge.

Waste Form Description: Damp, cohesive sludge particles. The drum contained a total of 14 polyethylene bottles of sludge. Twelve bottles contained very moist loose material and two bottles contained wet sludge material.

Packaging Description: Sludge contained in polyethylene bottles.

Packaging Description: Type II liner is lined with two polyethylene drum bags. The sludge is contained in polyethylene bottles. Each bottle is double-bagged in a PVC and a polyethylene bag.

Absorbent Information: Not recorded.

Absorbent Information: Vermiculite is located on top of the drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Damp
Component Weight (LB): Polyethylene and PVC bags, polyethylene bottles-26.75; sludge and cement-81.25; vermiculite-5.0.

Packaging Efficiency: 85%
Volume % Combustible: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-WAC Compliance Information: 1. Sludge: Analysis of the black sludge indicates a pH of 12. The major component is silicates and/or sulfates and the minor component is water.

WIPP-Certifiable: Yes

Packaging Efficiency: 75%
Volume % Combustibles: 15%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Uncemented Sludges

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-39435
Content Code: 292
Container Wt (lb): 232
Original Assay (g): Pu-40.0
Packaging Location: Unknown-label illegible

Container Type: Drum
Code Description: Cemented Sludge
Surface Dose Rate (mR/h): 2.1
Reassay (g): Pu-42.0
Date Packaged: 12/14/82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

VISUAL EXAMINATION

Examination Date: 9/7/83
Container Condition: Good; paint condition fair due to scratches.

Lead Lined: No
Liner Type: Type II, 90 mil

Waste Form Description: Incinerator sludge.

Waste Form Description: Fifteen 1-gal polyethylene bottles containing sludge.

Packaging Description: Sludge contained in polyethylene bottles.

Packaging Description: Type II liner is lined with a polyethylene drum bag. Each bottle is double-bagged in plastic.

Absorbent Information: Not recorded.

Absorbent Information: Vermiculite is located on top of the drum bag.

Free Liquids: Yes Quantity: 3/4 gal Contained: Yes
Compressed Gases: No Type: Quantity:
Particulates: No Quantity: Type:

Physical State of Waste: Damp
Component Weight (LB): Polyethylene and plastic bags-20.75; sludge-125.75; vermiculite-5.25.

WIPP-WAC Compliance Information: 1. Liquids: Total of 410 ml of free liquid (330 ml in a bag, 80 ml in another bag) in the drum. Analysis of a sample of the black liquid indicates a pH of 12. The major component is water and the minor components are carbonates and/or nitrates, silicates and/or sulfates. 2. Sludge: Analysis of a sample of the black sludge indicates a pH of 12. The major components are silicates and carbonates and the minor component is water.

Packaging Efficiency: 80%
Volume % Combustible: 100%
Correct Content Code? Yes New Code:
Other Information:

Packaging Efficiency: 80%
Volume % Combustibles: 25%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-due to liquids.

WIPP-Certifiable: No

Waste Form Category: Uncemented Sludges

Time Period: 3-year old waste

GENERAL INFORMATION

Container Identification: 40-00063
Content Code: 292
Container Wt (lb): 275
Original Assay (g): Pu-57.0
Packaging Location: Building 771, Rm 149

Container Type: Drum
Code Description: Cemented Sludge
Surface Dose Rate (mR/h): 3.0
Reassay (g): Pu-62.0
Date Packaged: 8/29/80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-5-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Granulated sludge material and some Ful-Flo filters.

Packaging Description: Sludge contained in polyethylene bottles and a pint can. The filters are contained in a plastic bag near the top of the waste.

Absorbent Information: Oil-Dri, approximately 2 quarts.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: Unknown	Type: Granulated sludge

VISUAL EXAMINATION

Examination Date: 8/15/83
Container Condition: Good
Lead Lined: No
Liner Type: Type II, 90 mil

Waste Form Description: Eighteen 1-gal polyethylene bottles containing cemented sludge and Ful-Flo filters laden with grease.

Packaging Description: Type II liner is lined with two polyethylene drum bags. Each polyethylene bottle containing sludge is double-bagged in a PVC and a polyethylene bag. The filters are in a bag.

Absorbent Information: Oil-Dri is located in the bottom of the liner.

Physical State of Waste: Damp
Component Weight (LB): Ful-Flo filters-8.0; polyethylene and PVC bags, and polyethylene bottles-29.25; incinerator sludge-148.25; Oil-Dri-10.0.

WIPP-WAC Compliance Information: 1. Liquids: Total of 135 ml free liquid found in the drum, drum bags, and bottles. First sample of black liquid has a pH of 12 with the major component being water and the minor components being carbonates and an unknown organic material. Second liquid sample has a pH of 12 with the major components being water and an unidentified oil and ester (flating on top of the water) and the minor component being carbonates.
2. Sludge: Analysis of a solid black sludge sample indicates a pH of 12 with the major component being silicates and the minor component being water.

Packaging Efficiency: 95%
Volume % Combustible: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-due to particulate materials.

Packaging Efficiency: 40%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No due to free liquids-135 ml.

Waste Form Category: Uncemented Sludges

Time Period: 3-year old waste

GENERAL INFORMATION

Container Identification: 76-01642
Content Code: 292
Container Wt (lb): 300
Original Assay (g): Pu-10.0
Packaging Location: Building 771, Rm 146

Container Type: Drum
Code Description: Cemented Sludge
Surface Dose Rate (mR/h): 1.0
Reassay (g): Pu-10.0
Date Packaged: 3/18/81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-5-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Possible cemented sludge--does not meet known waste description.

Packaging Description: Waste is contained in plastic bags.

Absorbent Information: Oil-Dri, approximately 1-1/2 gal.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: Unknown	Type: Unknown

Packaging Efficiency: 50%
Volume % Combustible: 10%
Correct Content Code? Unknown New Code:
Other Information: A few metal items are in the waste.

WIPP-Certifiable: No--due to particulates and unknown nature of the waste.

VISUAL EXAMINATION

Examination Date: 8/16/83
Container Condition: Good; small dent in drum.
Lead Lined: No
Liner Type: Type II, 90 mil

Waste Form Description: Incinerator sludge mixed with Portland cement; some mild steel (drum cap and bolt).

Packaging Description: Type II liner is lined with a polyethylene drum bag. The sludge and cement are packaged in single polyethylene bags. Total of seven bags in the drum.

Absorbent Information: Oil-Dri is located on top of the drum bag and in the bottom of the liner.

Physical State of Waste: Dry
Component Weight (LB): Plastic bags-5.0; mild steel (drum cap and bolt)-0.5; incinerator sludge mixed with cement-218.0; Oil-Dri-4.5.

WIPP-WAC Compliance Information: 1. Sludge: Sample not taken. 2. Particulates (sludge and cement): Analysis of the sludge and cement mixture indicates that the waste contains 1.4 wt% <212 μ particulates and 0.2 wt% <10 μ particulates.

Packaging Efficiency: 80%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Uncemented Sludges

Time Period: 3-year old waste

GENERAL INFORMATION

Container Identification: 76-01643
Content Code: 292
Container Wt (lb): 160
Original Assay (g): Pu-2.0
Packaging Location: Building 776, Rm 146

Container Type: Drum
Code Description: Cemented Sludge
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-2.0
Date Packaged: 3/18/81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-5-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Possibly cemented sludge--does not meet known waste description.

Packaging Description: Waste is contained in plastic bags.

Absorbent Information: Approximately 1-gallon of Oil-Dri is located on top of the drum bag and 1 quart on the bottom of the liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: Unknown	Type: Unknown

Packaging Efficiency: 25%
Volume % Combustible: 10%
Correct Content Code? Unknown New Code:
Other Information:

WIPP-Certifiable: No--due to particulates and unknown nature of the waste.

VISUAL EXAMINATION

Examination Date: 8/16/83
Container Condition: Good; small dent in drum.
Lead Lined: No
Liner Type: Type II, 90 mil

Waste Form Description: Three bags of cemented sludge, two empty cement bags, and two unused polyethylene bags.

Packaging Description: The cemented sludge is packaged in single polyethylene bags.

Absorbent Information: Oil-Dri is located at the bottom of the liner.

Physical State of Waste: Dry
Component Weight (LB): Empty cement bags--1.5; plastic bags--4.0; incinerator sludge and cement--73.25; Oil-Dri--4.5.

WIPP-WAC Compliance Information: 1. Particulates (sludge and Portland cement): Analysis of the sample indicates that the waste contains 15.7 wt% <212 μ particulates and 1.2 wt% <10 μ particulates.

Packaging Efficiency: 20%
Volume % Combustibles: 30%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No

Waste Form Category: Uncemented Sludges

Time Period: 3-year old waste

GENERAL INFORMATION

Container Identification: 76-01644
Content Code: 292
Container Wt (lb): 240
Original Assay (g): Pu-3.0
Packaging Location: Building 776, Rm 146

Container Type: Drum
Code Description: Cemented Sludge
Surface Dose Rate (mR/h): 3.0
Reassay (g): Pu-7.0
Date Packaged: 3/18/81

RADIOGRAPHIC EXAMINATION

Examination Date: 7-5-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Possibly cemented sludge--does not meet known waste description.

Packaging Description: Packaged in plastic bags.

Absorbent Information: Oil-Dri, see below.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: Unknown	Type: Unknown

Packaging Efficiency: 45%
Volume % Combustible: 10%
Correct Content Code? Unknown New Code:
Other Information: Oil-Dri located at bottom of liner (1 qt) and on top of drum bag (2 gal).

WIPP-Certifiable: No--due to particulates and unknown nature of the waste.

VISUAL EXAMINATION

Examination Date: 8/15/83
Container Condition: Good; some slight surface rust
Lead Lined: No
Liner Type: Type II, 90 mil

Waste Form Description: Incinerator sludge mixed with Portland cement.

Packaging Description: Type II liner is lined with a PVC drum bag. The sludge and cement are packaged in a 30-gal PVC bag (five total packages in the drum).

Absorbent Information: Oil-Dri is located on top of the drum bag. Weight was not recorded.

Physical State of Waste: Dry
Component Weight (LB): PVC drum bags-5.0; incinerator sludge and cement-154.5.

WIPP-WAC Compliance Information: 1. Particulates (incinerator sludge mixed with Portland cement): Analysis of the sample indicates that the waste contains 26.6 wt% <2 μ particulates and 2.3 wt% <10 μ particulates.

Packaging Efficiency: 40%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No

Waste Form Category: Cemented Sludge and Solutions

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 744-3829
Content Code: 4
Container Wt (lb): 585
Original Assay (g): Pu-2.2
Packaging Location: Bldg 774

Container Type: Drum
Code Description: Special Setups
Surface Dose Rate (mR/h): 0.1
Reassay (g): Unable to reassay
Date Packaged: 12-9-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Special setup (solid cement)

Packaging Description: Setup contained in a plastic bag.

Absorbent Information: No information recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:

Particulates: No	Quantity:	Type:
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Packaging Efficiency: 70%
Volume % Combustible: Unknown
Correct Content Code? Yes New Code:
Other Information: Unable to penetrate setup at center.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 9-7-83
Container Condition: See other information below
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Solid concrete

Packaging Description: Type II liner is lined
with a polyethylene drum bag. The special
setup is contained in a PVC O-ring bag.

Absorbent Information: Vermiculite is placed on
top of the outer drum bag.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene and PVC bags--
4.5; concrete--502; vermiculite--7.5.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 85%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information:

1. Container condition: Two large handling
dents on upper-third of drum. Surface
rust exists where the paint is scratched.
Poor paint condition.
2. Small amount of rust on interior drum
bottom.

WIPP-Certifiable: Yes

Waste Form Category: Cemented Sludges and Solutions

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 744-3837
Content Code: 4
Container Wt (lb): 704
Original Assay (g): Pu-2.3
Packaging Location: Bldg 774

Container Type: Drum
Code Description: Special Setups
Surface Dose Rate (mR/h): 2.0
Reassay (g): Unable to reassay.
Date Packaged: 12-17-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Special setups (solid cement)

Packaging Description: Setups contained in poly bag.

Absorbent Information: No information recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 98%
Volume % Combustible: Unknown
Correct Content Code? Yes New Code:
Other Information: Unable to penetrate setup at the center.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 9-8-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Solid concrete

Packaging Description: Type II liner is lined with a polyethylene drum bag. The special setup is contained in a PVC O-ring bag.

Absorbent Information: Cement is located on the bottom of the drum. Total weight is 1/2 lb. This is not included in component weight because it is outside the liner.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene and PVC bags--4.5; concrete--621.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 100%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Cemented Sludges and Solutions

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 744-3841
Content Code: 4
Container Wt (lb): 561
Original Assay (g): Pu-2.0
Packaging Location: Bldg 774

Container Type: Drum
Code Description: Special Setups
Surface Dose Rate (mR/h): 2.0
Reassay (g): Unable to reassay.
Date Packaged: 12-17-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Special setups (solid cement)

Packaging Description: Setups contained in plastic bag.

Absorbent Information: No information recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: Unknown
Correct Content Code? Yes New Code:
Other Information: Unable to penetrate special setup at center.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 9-8-83
Container Condition: Good, paint condition fair (scratched)
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Solid concrete

Packaging Description: Type II liner is lined with a polyethylene drum bag. The special setup is contained in a PVC O-ring bag.

Absorbent Information: No absorbent present.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene and PVC bags--4.5; concrete--492.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 100%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Cemented Sludges and Solutions

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 744-3846
Content Code: 4
Container Wt (lb): 574
Original Assay (g): Pu-5.5
Packaging Location: Bldg 774

Container Type: Drum
Code Description: Special Setups
Surface Dose Rate (mR/h): 0.1
Reassay (g): Unable to reassay
Date Packaged: 2-7-83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Special setup (solid cement).

Packaging Description: Setup contained in plastic bag.

Absorbent Information: No information recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 70%
Volume % Combustible: Unknown
Correct Content Code? Yes New Code:
Other Information: Unable to penetrate setup at center.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 9-8-83
Container Condition: Good; paint condition fair.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Solid concrete

Packaging Description: Type II liner is lined
with a polyethylene drum bag. The special
setup is contained in a PVC O-ring bag.

Absorbent Information: No absorbent present.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene and PVC
bags--4.5; concrete--491.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 100%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Cemented Sludges and Solutions

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 744-3848
Content Code: 4
Container Wt (lb): 631
Original Assay (g): Pu-5.0
Packaging Location: Bldg 774

Container Type: Drum
Code Description: Special Setups
Surface Dose Rate (mR/h): 0.1
Reassay (g): Unable to reassay.
Date Packaged: 2-7-83

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Special setup (solid cement)

Packaging Description: Setup contained in a plastic bag.

Absorbent Information: No information recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 75%
Volume % Combustible: Unknown
Correct Content Code? Yes New Code:
Other Information: Unable to penetrate setup at center.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 9-8-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Solid concrete

Packaging Description: Type II liner is lined
with a polyethylene drum bag. The special
setup is contained in a PVC O-ring bag.

Absorbent Information: No information recorded.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene and PVC
bags--4.5; concrete--548.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 100%
Volume % Combustibles: 10
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Cemented Sludges and Solutions

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 744-2368
Content Code: 4
Container Wt (lb): 448
Original Assay (g): 0.3-Pu; 0.0-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: Special setups
Surface Dose Rate (mR/h): <0.5
Reassay (g): Unable to reassay
Date Packaged: 12-25-72

RADIOGRAPHIC EXAMINATION

Examination Date: 11-29-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Organic setup

Packaging Description: Contained in poly bags, then 90-mil
liner. Appears to have layers of
cement, not thoroughly mixed.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: 6%
Correct Content Code? Yes New Code:
Other Information: 10 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-24-85
Container Condition: Exterior-moderate rust,
Interior-light rust
Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Solid monolith, parts of
which were easily broken.

Packaging Description: Type I rigid liner was lined
with a polyethylene round bottom drum bag. The setup
was contained in a PVC O-ring bag.

Absorbent Information: Oil-Dri was located on top of
the outer poly drum bag. Powdered Portland cement was
located on top between the two bags, hardened Portland
was located on top of the setup and in the bottom of
the inner PVC bag.

Physical State of Waste: Dry
Component Weight (LB): PVC bag-3.0, poly bag-1.0,
special setup-237.0, Portland cement absorbent-130.0,
oil dry-18.6.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 90%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Cemented Sludges and Solutions

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 744-2376
Content Code: 4
Container Wt (lb): 498
Original Assay (g): 0.3-Pu; 0.0-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: Special setups
Surface Dose Rate (mR/h): <0.5
Reassay (g): Unable to reassay
Date Packaged: 1-2-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-9-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description:

Packaging Description: Packed in poly bags then in 90-mil liner.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: 6%
Correct Content Code? Yes New Code:
Other Information: 10 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-29-85
Container Condition: Exterior-moderate rust,
Interior-light rust

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Solid concrete monolith.

Packaging Description: Type I rigid liner was lined with a polyethylene drum bag. The special setup was contained in a PVC O-ring bag.

Absorbent Information: Oil-Dri was located on top of the outer poly drum bag. Portland cement was located on the bottom outside of both bags, and also between the two bags. Most of the Portland cement was powdered, however some was hardened.

Physical State of Waste: Dry
Component Weight (LB): PVC bag-3.0, poly bag-1.0, special setup-386.3, Portland cement absorbent-14.1, oil dry-17.6.

WIPP-WAC Compliance Information: 1. Free liquids: approximately 20 ml of water or condensation was located outside of the rigid liner in the drum bottom. The origin of the liquid did not appear to be from the waste, but rather from residual liquid in the drum when the rigid liner was installed. Therefore, no sample was taken.

Packaging Efficiency: 90%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-free liquids (20 ml)

Waste Form Category: Cemented Sludges and Solutions

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 744-2389
Content Code: 4
Container Wt (lb): 670
Original Assay (g): 2.7-Pu; 0.0-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: Special setups
Surface Dose Rate (mR/h): <0.5
Reassay (g): Unable to reassay
Date Packaged: 1-24-73

RADIOGRAPHIC EXAMINATION

Examination Date: 2/21/85
Liner Type: 90 mil
Lead-Lined: No

VISUAL EXAMINATION

Examination Date: 3-22-85
Container Condition: Exterior-light to moderate rust,
Interior-no rust
Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Dense, special setups

Waste Form Description: Solid concrete monolith.

Packaging Description: The special setups are contained in a poly bag, tied at the top. Approximately 1 gallon of liquid between 90 mil liner and sludge, at bottom corner.

Packaging Description: Type I rigid liner was lined with a polyethylene round bottom bag. The setup was contained in a PVC O-ring bag.

Absorbent Information:

Absorbent Information: Oil-Dri was located on top of the outer poly bag. Hardened Portland cement was located on top between the two bags.

Free Liquids: Yes Quantity: 1 gallon Contained: 90-mil liner
Compressed Gases: No Type: Quantity:
Particulates: No Quantity: Type:

Physical State of Waste: Dry
Component Weight (LB): PVC bag-3.0, poly bag-1.0, special setup-551.6, Portland cement absorbent-37.4.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 90%
Volume % Combustible: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-free liquid (~1 gallon)

Packaging Efficiency: 90%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Cemented Sludges and Solutions

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 744-2430
Content Code: 4
Container Wt (lb): 530
Original Assay (g): 1.0-Pu; 0.0-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: Special setups
Surface Dose Rate (mR/h): 0.9
Reassay (g): Unable to reassay
Date Packaged: 4-23-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Setups

Packaging Description: Packed in poly bags then in 90-mil liner.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: ~25%
Correct Content Code? Yes New Code:
Other Information: 10 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-24-85
Container Condition: Exterior-moderate rust,
Interior-no rust

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Solid concrete monolith with
areas of unhardened sludge.

Packaging Description: Type I rigid liner was lined
with a round bottom polyethylene bag. The special
setup was contained in a PVC O-ring bag.

Absorbent Information: Oil-Dri was located on top of
the outer poly drum bag. Portland cement was located
on the bottom between the rigid liner and drum, and
also between the PVC and poly drum bags on top and
bottom.

Physical State of Waste: Dry
Component Weight (LB): PVC bag-3.0, poly bag-1.0,
special setup-430.0, oil dry-10.0.

WIPP-WAC Compliance Information: 1. Small volume of
unhardened sludge with a pH of 7.5. Corrosion
protection was provided.

Packaging Efficiency: 90%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Cemented Sludges

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 744-2442
Content Code: 4
Container Wt (lb): 455
Original Assay (g): 0.5-Pu; 0.0-Am
Packaging Location: Building 774

Container Type: Drum
Code Description: Special setups
Surface Dose Rate (mR/h): <0.5
Reassay (g): Unable to reassay
Date Packaged: 4-26-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Setups

Packaging Description: Packed in poly bagging and a 90-mil liner.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information: 10 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-24-85
Container Condition: Some moderate rust-interior
and exterior

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Solid concrete monolith.

Packaging Description: Type I rigid liner was lined
with a polyethylene bag. The setup was contained in a
PVC O-ring bag.

Absorbent Information: Oil-Dri was located on top of
the outer poly drum bag. Hardened Portland cement was
located on top of the setup inside the inner PVC bag.

Physical State of Waste: Dry
Component Weight (LB): PVC bag-3.0, poly bag-1.0,
special setup-353.0, hardened Portland cement
absorbent-5.0, oil dry-10.0.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 90%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Concrete, Brick

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 02-21470
Content Code: 371
Container Wt (lb): 200
Original Assay (g): Pu-66.0
Packaging Location: Building 771, Rm. 149

Container Type: Drum
Code Description: Brick, Fire
Surface Dose Rate (mR/h): 3.0
Reassay (g): Pu-86.2, Am-0.5
Date Packaged: 9/30/82

RADIOGRAPHIC EXAMINATION

Examination Date:
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Waste consists of broken pieces of brick.

Packaging Description: The waste is contained in plastic bags inside of Fiber-Paks. There are 2 Fiber-Paks inside a plastic bag inside the rigid liner.

Absorbent Information: The drum contains approximately 20 gallons of absorbent.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: See below	Type:

Packaging Efficiency: 50%
Volume % Combustible:
Correct Content Code? Yes New Code:
Other Information: (1) Presence of broken brick indicates some fines-quantity of fines should be within allowable limits.
(2) Organic weight-30 lbs.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/17/84
Container Condition: Fair
Lead Lined: No
Liner Type: Type I

Waste Form Description: 2 12-lb Fiber-Paks containing double-bagged fire-brick. Also contains surgeon's gloves and rock-wool or asbestos-type insulation.

Packaging Description: Type II liner is lined with poly. drum bag. Brick is contained in a double poly. bag; several bags in a PVC O-ring bag; then in fiber-pak.

Absorbent Information: Vermiculite on top of sealed drum bag-14.25 lbs.

Physical State of Waste: Dry
Component Weight (LB): 24 lbs Fiber-Paks; 6 lbs plastics; 90.8 firebrick and particulates; 4 lbs insulation.

WIPP-WAC Compliance Information: 1. Particulates: firebrick fines analysis indicates 0.11% <212 and 2.0E-3% <10.

Packaging Efficiency: 60%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Concrete, Brick

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 02-45508
Content Code: 373
Container Wt (lb): 119
Original Assay (g): Pu-47.0, Am-0.0
Packaging Location: Building 771, Room 149

Container Type: Drum
Code Description: Firebrick
Surface Dose Rate (mR/h): 1.9
Reassay (g): 20.3-Pu, 0.2-Am
Date Packaged: 12/12/84

RADIOGRAPHIC EXAMINATION

Examination Date: 2/20/85
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Firebrick

Packaging Description: Firebrick wrapped in poly bags inside
Fibre-Pak containers. A few nuts and
bolts with the firebrick.

Absorbent Information:

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: 10%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3/21/85
Container Condition: Exterior-excellent,
Interior no-rust.

Lead Lined: No
Liner Type: Type III, 90 mil

Waste Form Description: Firebrick

Packaging Description: Type III rigid liner was double
lined with polyethylene drum bags containing
2 fiber-paks. Each Fiber-Pak was double lined with
poly bags. One Fiber-Pak contained 3 package of waste
single bagged in poly; the other Fiber-Pak contained
2 packages single bagged in poly. The poly drum bags
had several 0.25" holes.

Absorbent Information: No absorbents were present.

Physical State of Waste: Dry
Component Weight (LB): Paper Fiber-Paks-12.0, poly
bags-2.2, firebrick-30.8.

WIPP-WAC Compliance Information: 1. Particulates-
54040 grams of firebrick fines wire obtained from both
Fiber-Paks. Analysis of the particulate indicates the
waste combined 0.529 wt % <212 micron particles and
1.3 E-3 wt % <10 micron particles.

Packaging Efficiency: 60%
Volume % Combustibles: 15%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Concrete, Brick

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 01-08836
Content Code: 371
Container Wt (lb): 254
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location: Building 771

Container Type: Drum
Code Description: Firebrick
Surface Dose Rate (mR/h): 1.5
Reassay (g): 25.8-Pu, 0.2-Am
Date Packaged: 1-10-73

RADIOGRAPHIC EXAMINATION

Examination Date: 2/20/85
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Firebrick

Packaging Description: Firebrick are packed in plastic inside fibre-paks. Fibre-Paks are packed in plastic.

Absorbent Information:

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: <10%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 2-23-85
Container Condition: Some light rust, interior and exterior

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Firebrick and a small amount of insulation.

Packaging Description: Type I rigid liner was single lined with a polyethylene drum bag which contained 2 Fiber-Paks. Each Fiber-Pak was lined with a PVC bag. The PVC bag contained 3 packages of firebrick single bagged in poly. The poly drum liner had 2 large tears.

Absorbent Information: Oil-Dri was located outside of the drum bags in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Paper (Fiber-Paks)-12.0, PVC-4.4, poly-4.0, firebrick-110.0, Oil-Dri-49.3.

WIPP-WAC Compliance Information: 1. Particulates: 142.57 grams of firebrick fines were collected from the Fiber-Paks. Analysis of the particulate indicates the waste contained 0.030 wt% <212 micron particles and 2.3E-4 wt% <10 micron particles.

Packaging Efficiency: 60%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Concrete, Brick

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-10586
Content Code: 371
Container Wt (lb): 210
Original Assay (g): 2.0-Pu; 0.0-Am
Packaging Location: Building 771, Room 181

Container Type: Drum
Code Description: Firebrick
Surface Dose Rate (mR/h): <0.5
Reassay (g): 10.5-Pu, 0.9-Am
Date Packaged: 2-15-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-6-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Examination Date: 1-31-85
Container Condition: Exterior-light rust
Interior-no rust

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Firebrick

Waste Form Description: Firebricks

Packaging Description: Firebrick is packed in poly bags inside
fiber board containers packed inside poly
bags, then packed in a 90-mil liner.

Packaging Description: Type I rigid liner was lined
with 2 polyethylene drum bags which contained
2 Fiber-Pak paper drums. The brick was contained in 2
poly bags inside of a PVC bag in each Fiber-Pak. Some
foil and a thermocouple was bagged in poly and PVC
(inside one Fiber-Pak).

Absorbent Information: 2 quarts

Absorbent Information: Oil-Dri was located outside of
the drum bags in the bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): 2 Fiber-Paks-12.0, PVC
bags-3.2, poly bags-2.0, metal (aluminum foil and
thermocouple)-1.2, firebrick-50.2, oil dry-66.4.

Packaging Efficiency: 60%
Volume % Combustible: ~30%
Correct Content Code? Yes New Code:
Other Information: 15 lbs of organic material

WIPP-WAC Compliance Information: 1. Particulates:
577.30 grams of firebrick fines were collected from
the entire drum. Analysis of the particulate
indicates the waste contained 0.38 wt% <212 micron
particles and 1.4E-3 wt% <10 micron particles.

WIPP-Certifiable: Yes

Packaging Efficiency: 60%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Concrete, Brick

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-11061
Content Code: 371
Container Wt (lb): 430
Original Assay (g): 3.0-Pu; 0.0-Am
Packaging Location: Building 771, Room 149

Container Type: Drum
Code Description: Firebrick
Surface Dose Rate (mR/h): <0.5
Reassay (g): •
Date Packaged: 3-15-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-29-84
Liner Type: 90-mil
Lead-Lined: No Other Lead:

Waste Form Description: Firebrick

Packaging Description: Firebrick is in poly bags. Some poly bottles with firebrick located near the top. Then there is a 90-mil liner.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: <10%
Correct Content Code? Yes New Code:
Other Information: 15 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-31-85
Container Condition: Exterior-some light rust,
Interior-moderate rust

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Firebrick in 29 packages.
PVC bags, poly bags and bottle, batt insulation.

Packaging Description: Type I rigid liner was lined with poly drum bags containing 9 packages. The outer bags were occasionally untaped. One of the packages was 4-liter wide mouth poly bottle containing brick pieces. Outer poly drum bag had 2 small (1/4") holes in bottom. Inner bag was OK.

Absorbent Information: Oil-Dri was located outside of the drum bags in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Firebrick-336.1, PVC-9.5, poly-7.5, insulation batt-0.1, oil dry-0.5.

WIPP-WAC Compliance Information: 1. Particulates 947.40 grams of firebrick fines were collected by sieving the entire drum contents. Analysis of the particulate indicates the waste contained 0.11 wt% <212 micron particles and 1.2E-3 wt% <10 micron particles.

Packaging Efficiency: 85%
Volume % Combustibles: 10%
Correct Content Code? Yes New Code:
Other Information: *Segmented gamma scan could not be done. Na I detector, not sensitive to Am, was used.
WIPP-Certifiable: Yes

Waste Form Category: Concrete, Brick

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-11379
Content Code: 371
Container Wt (lb): 392
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Firebrick
Surface Dose Rate (mR/h): <0.5
Reassay (g): 5.1-Pu, 0.0-Am
Date Packaged: 3-28-73

RADIOGRAPHIC EXAMINATION

Examination Date: 2/20/85
Liner Type: 90 mil and cardboard
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 3-28-85
Container Condition: Exterior-moderate rust,
Interior-some light rust
Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Firebrick

Waste Form Description: Firebrick.

Packaging Description: Firebrick is contained in poly bags.

Packaging Description: Type I rigid liner was single lined with a polyethylene drum bag. A total of 7 packages contained firebrick. The packages were bagged with a poly outer bag, then a PVC bag, then 2 inner poly bags. The drum bag had several small (<0.25") holes.

Absorbent Information:

Absorbent Information: Oil-Dri was located outside of the drum bags in the bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): PVC-5.3, poly-5.7,
firebrick-279.0, oil dry-9.2.

Packaging Efficiency: 95%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information:

WIPP-WAC Compliance Information: 1. Particulates
6016 grams of firebrick fines were collected from all 7 packages. Analysis of the particulate indicates the waste contained 1.09 wt% <212 micron particles and 32 E-2 wt% <10 micron particles.

WIPP-Certifiable: Yes

Packaging Efficiency: 80%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Concrete, Brick

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 02-44115
Content Code: 377
Container Wt (lb): 117
Original Assay (g): Pu-5.0, Am-0.0
Packaging Location: Building 771, Room 114

Container Type: Drum
Code Description: Firebrick Coarse
Surface Dose Rate (mR/h): 0.2
Reassay (g): 5.3-Pu, 0.1-Am
Date Packaged: 8/10/84

RADIOGRAPHIC EXAMINATION

Examination Date: 2/20/85
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Firebrick

Packaging Description: Firebrick is contained in poly bags and packed in Fiber-Paks inside the 90-mil liner. 2 Fiber-Paks in drum. 1 ring is unsnapped.

Absorbent Information:

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: 10%
Correct Content Code? No New Code: 371
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3/22/85
Container Condition: Exterior-excellent,
Interior-very light rust on lid.
Lead Lined: No
Liner Type: Type III, 90 mil

Waste Form Description: Firebrick pieces

Packaging Description: Type III rigid liner was double lined with polyethylene drum bags. Two fiber-paks contained the waste. Each Fiber-Pak was triple-bagged in poly. The inner drum bag had tears up to 1" long where the bottom fiber-pak sat.

Absorbent Information: No absorbents were present.

Physical State of Waste: Dry
Component Weight (LB): Paper Fiber-Paks-12.0,
poly-4.4, firebrick-26.4.

WIPP-WAC Compliance Information: 1. Particulates-211.65 grams of particulates were obtained from the entire drum. Analysis of the particulate indicated the waste contained 0.295 wt % <212 micron particles and 8.7 E-4 wt % <10 micron particles.

Packaging Efficiency: 60%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Concrete, Brick

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 01-08083
Content Code: Unknown (RFP-960*)
Container Wt (lb): 468
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: (see below)
Surface Dose Rate (mR/h): <0.5
Reassay (g): 8.9-Pu, 0.0-Am (Estimate only, too
dense for accurate assay)
Date Packaged: 12-6-72

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: 90 mil
Lead-Lined: No

Waste Form Description: Firebrick

Packaging Description: Packed in bagging material, then in 90-mil liner.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: ~30%
Correct Content Code? No New Code: 371-firebrick
Other Information: 15 lbs of organic materials

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-31-85
Container Condition: Interior and exterior-moderate
rust
Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: cinderblock pieces

Packaging Description: Type I rigid liner was lined
with a single polyethylene drum bag. The drum bag had
a number of tears 1"-2 1/2" in length.

Absorbent Information: Oil-Dri was located outside of
the drum bag in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Poly bag-1.0, cinderblock
pieces and fines-386.4, Oil-Dri-11.5.

WIPP-WAC Compliance Information: 1. Particulates,
600.55 grams of particulate was collected by sieving
the drum contents through a 600 micron sieve.
Analysis of the particulate indicates the waste
contained 0.067 wt% <212 micron particles and 6.6E-5
wt% <10 micron particles.

Packaging Efficiency: 80%
Volume % Combustibles: 2%
Correct Content Code? Yes* New Code: 374
Other Information: *Code 960 was replaced in 1973
with Code 374. The old code is
correct. The new code is shown
for reference only.

WIPP-Certifiable: Yes

Waste Form Category: Salts

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 01-05779
Content Code: 409
Container Wt (lb): 116
Original Assay (g): Pu-190.0
Packaging Location: Building 771

Container Type: Drum
Code Description: Molten Salt-30% Unpulverized
Surface Dose Rate (mR/h): 38.0
Reassay (g): Pu-208; Am-7.5
Date Packaged: 8/30/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/15/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: No

Waste Form Description: Chunks and pieces of salt.

Packaging Description: Salt is contained in a Vollrath can
inside of an overpack Vollrath can.
Each can is contained in a plastic bag.

Absorbent Information: Drum contains approximately 10 gallons of
vermiculite.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 10%
Volume % Combustible: 1%
Correct Content Code? Yes New Code:
Other Information: Organic weight-10 lbs.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/16/84
Container Condition: Good
Lead Lined: No
Liner Type: Type 11

Waste Form Description: Salt, in the form of cake,
chunks, pieces and some fines, are contained in
6 Vollrath cans.

Packaging Description: Type 11 liner is lined
with 2 poly. drum bags. Salt contained in
6 8801 Vollrath cans, double-bagged in plastic;
overpacked into 8802 cans.

Absorbent Information: Vermiculite on top of outer
sealed drum bag-9 lbs.

Physical State of Waste: Dry
Component Weight (LB): 3 lbs plastics; 10 1/2 lbs
Vollrath cans; 12 3/4 lbs molten salt.

WIPP-WAC Compliance Information: 1. Particulates:
salt fines; analysis indicates 0.84% <212 and
3.2E-3% <10.

Packaging Efficiency: 10%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-Exceeds 200g/55 gal. drum

Waste Form Category: Salts

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 03-02724
Content Code: 409
Container Wt (lb): 242
Original Assay (g): Pu-62.0, Am-4.0
Packaging Location: Building 776, Room 154

Container Type: Drum
Code Description: Molten salt
Surface Dose Rate (mR/h): 0.1
Reassay (g): •
Date Packaged: 12/6/84

RADIOGRAPHIC EXAMINATION

Examination Date: 2/20/85
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Dense blocks of salt.

Packaging Description: Salts are contained in 2 Fiber-Paks.
Fiber-Paks are in poly bagging. A clamp
is unhooked on one Fiber-Pak.

Absorbent Information:

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: 10%
Correct Content Code? Yes New Code: .
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3/21/85
Container Condition: Exterior-excellent,
Interior-minor light rust
on upper side.
Lead Lined: Fiber-Paks are lead lined
Liner Type: Type III, 90 mil

Waste Form Description: Molten salt

Packaging Description: Type III rigid liner was double
lined with an outer round bottom poly bag and an inner
poly drum bag which contained 2 Fiber-Paks. The
Fiber-Paks were lead lined and one had 8 cans, the
other had 7. The salt was inside small (8801) taped
stainless cans which were double bagged in PVC then
placed inside of a larger (8802) taped stainless can.
Outer round bottom bag had 2 small (0.25") holes.

Absorbent Information: No absorbents were present.

Physical State of Waste: Dry
Component Weight (LB): Paper Fiber-Paks-12.0,
PVC-4.4, poly-1.8, stainless steel cans-26.4, molten
salt-23.8, lead sheet-96.8.

WIPP-WAC Compliance Information: 1. Particulates-
493.05 grams of salt fines were obtained by sieving
all of the cans. Analysis of the particulate
indicated the waste contained 0.066 wt % <212 micron
particles and 6.0 E-4 wt % <10 micron particles.

Packaging Efficiency: 60%
Volume % Combustibles: 10%
Correct Content Code? Yes New Code:
Other Information: *Unable to reassay, each can must
be individually counted in the "can scan" which was
done for the week between receipt of the boxcar and
the drum examination.

WIPP-Certifiable: Yes

Waste Form Category: Salts

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 01-05486
Content Code: 414
Container Wt (lb): 226
Original Assay (g): Pu-189.0
Packaging Location: Building 771

Container Type: Drum
Code Description: Direct Oxide Reduction Salt
Surface Dose Rate (mR/h): 32.0
Reassay (g): Pu-111.0
Date Packaged: 12/12/82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-24-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Chunks and pieces of salt and ceramic

Packaging Description: Waste is contained in Vollrath cans and polyethylene bottles. Waste in Vollrath cans is double-contained. Four cans contain broken glass or ceramic material-one can appears to be lined with an unidentified material.

Absorbent Information: No

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: 1 quart	Type: Salt

Packaging Efficiency: 75%
Volume % Combustible: 75%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 9/6/83
Container Condition: Good
Lead Lined: No
Liner Type: Type II, 90 mil

Waste Form Description: Waste consists of salt and ceramic material.

Packaging Description: Type II liner is lined with two polyethylene drum bags. The waste consists of total of 30 size 8802 stainless steel Vollrath cans, each containing a double-bagged (PVC and polyethylene) produce can. The produce cans contain salt. Two Vollrath cans contain a plastic freezer container and two cans contain ceramic material without a produce can.

Absorbent Information: Vermiculite is located on top of the drum bag.

Physical State of Waste: Damp
Component Weight (LB): Polyethylene and PVC bags-16.0; stainless steel Vollrath cans-10.125; salts-52.875; ceramics-19.5; vermiculite-6.0.

WIPP-WAC Compliance Information: 1. Particulates: Sample consists of salt and MgO sand. Analysis indicates the waste contains 2.24 wt% <212, particulates and 0.01 wt% 10 particulates.
2. Sludge: Two samples of the brown sludge indicates a pH of 12 with the major components being carbonates and phosphates and the minor components being water and an unidentified organic. The sludge is contained in a plastic freezer container.

Packaging Efficiency: 80%
Volume % Combustibles: 10%
Correct Content Code? Yes New Code:
Other Information: WIPP-Certifiable: Yes

WIPP-Certifiable: Yes

Waste Form Category: Glovebox Gloves

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 19-01831
Content Code: 339
Container Wt (lb): 268
Original Assay (g): Pu-138.0
Packaging Location: Building 776, Rm. 146

Container Type: Drum
Code Description: Leaded Drybox Gloves and Other
Leaded Rubber
Surface Dose Rate (mR/h): 1.5
Reassay (g): Pu-151; Am-0.3
Date Packaged: 2/21/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/15/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: Yes

Waste Form Description: Leaded glovebox gloves and aprons

Packaging Description: Waste items are contained in a plastic bag

Absorbent Information: Drum contains approximately 10 gallons of vermiculite.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 60%
Volume % Combustible: 1%
Correct Content Code? Yes New Code:
Other Information: Organic weight-110 lbs.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/16/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: Surgeon's gloves, rags, cloth towel rags (contained in double polyethylene bags) and leaded gloves.

Packaging Description: Type II liner is lined with poly. drum bag. Gloves placed directly into drum; the cloth rags were contained in double polyethylene bags.

Absorbent Information: Vermiculite on top of sealed drum bags-7 lbs.

Physical State of Waste: Damp
Component Weight (LB): 13 lbs rags, towels; 18 lbs neoprene sheets; 4 lbs plastics; 150 lbs leaded gloves.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 60%
Volume % Combustibles: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glovebox Gloves

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 19-01840
Content Code: 339
Container Wt (lb): 342
Original Assay (g): Pu-11.0
Packaging Location:

Container Type: Drum
Code Description: Leaded Drybox Gloves and
Other Leaded Rubber
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-5.5; Am-0
Date Packaged: 3/24/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/15/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: Yes

Waste Form Description: Leaded gloves

Packaging Description: Waste items are contained in a plastic bag.

Absorbent Information: Drum contains approximately 10 gallons of vermiculite.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 66%
Volume % Combustible: 1%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/16/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: Leaded gloves and neoprene rubber gaskets.

Packaging Description: Type II liner is lined with poly. drum bag. Gloves placed directly into drum bag.

Absorbent Information: Vermiculite on top of sealed drum bag (9 lbs) Oil-Dri, small amount, in bottom of round bottom drum bag (1 lb.).

Physical State of Waste: Dry
Component Weight (LB): 4 lbs rubber; 1 1/2 lbs plastics; 255 lbs leaded gloves.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 75%
Volume % Combustibles: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glovebox Gloves

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 19-01845
Content Code: 339
Container Wt (lb): 252
Original Assay (g): Pu-44.0
Packaging Location: Building 776, Rm. 146

Container Type: Drum
Code Description: Leaded Drybox Gloves and
Other Leaded Rubber
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-42.7; Am-0.2
Date Packaged: 3/24/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/25/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: Yes

Waste Form Description: Leaded glovebox gloves

Packaging Description: Gloves are contained in a plastic bag.

Absorbent Information: Drum contains approximately 10 gallons of
vermiculite.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 50%
Volume % Combustible: 1%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/17/84
Container Condition: Good
Lead Lined: No
Liner Type: Type II

Waste Form Description: Leaded gloves.

Packaging Description: Type II liner is lined with
poly. drum bag. Gloves are placed directly into drum
bag.

Absorbent Information: Vermiculite on top of sealed
drum bag (12 1/2 lbs).

Physical State of Waste: Dry
Component Weight (LB): 1 1/2 lbs plastics; 164 lbs
leaded gloves.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 50%
Volume % Combustibles: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Glovebox Gloves

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 19-01884
Content Code: 339
Container Wt (lb): 370
Original Assay (g): Pu-60.0
Packaging Location: Building 776, Rm. 146

Container Type: Drum
Code Description: Leaded Drybox Gloves and
Other Leaded Rubber
Surface Dose Rate (mR/h): 0.9
Reassay (g): Pu-68.9; Am-0
Date Packaged: 4/14/83

RADIOGRAPHIC EXAMINATION

Examination Date: 2/15/84
Liner Type: 90-mil
Lead-Lined: No Other Lead: Yes

Waste Form Description: Leaded glovebox gloves

Packaging Description: Gloves are contained in a plastic bag.

Absorbent Information: Small amount of vermiculite is located on
top of the plastic bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 70%
Volume % Combustible: 1%
Correct Content Code? Yes New Code:
Other Information: Organic weight-150 lbs.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 4/17/84
Container Condition: Fair
Lead Lined: No
Liner Type: Type II

Waste Form Description: Neoprene rubber sheet and
polyethylene skirting.

Packaging Description: Type II is lined with poly.
drum bag. Gloves placed in drum bag.

Absorbent Information: Vermiculite on top of drum
bag (4.5 lbs.).

Physical State of Waste: Damp
Component Weight (LB): 8 lbs rubber; 3 lbs plastics;
285 lbs leaded gloves.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 60%
Volume % Combustibles: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Leaded Rubber

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 19-01472
Content Code: 339
Container Wt (lb): 208
Original Assay (g): Pu-12.0
Packaging Location: Bldg 776

Container Type: Drum
Code Description: Leaded Gloves/Leaded Rubber
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-17.0
Date Packaged: 12-17-80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Leaded gloves and aprons

Packaging Description: Waste is contained in plastic bags.

Absorbent Information: Approximately 2 quarts of Oil-Dri located on top of drum bag and 2 cups in the bottom of the drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 40%
Volume % Combustible: 100
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-10-83
Container Condition: See other information.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Leaded gloves, some neoprene window gasket material, and a polyethylene bottle.

Packaging Description: Type II liner is lined with a polyethylene drum bag. All waste items are contained in the drum bag.

Absorbent Information: Oil-Dri is located on top of the drum bag and in the bottom of the liner.

Physical State of Waste: Damp
Component Wt (lb): Rubber gasket material--2.25; plastics--4.5; leaded gloves--119.25; Oil-Dri--4.5.

WIPP-WAC Compliance Information: None.

Packaging Efficiency: 60%
Volume % Combustibles: 100
Correct Content Code? Yes New Code:
Other Information:

1. Container condition is good. Two small dents on lower two-thirds of the drum. Small amount of rust on lock-chine.
2. Internal rust on drum lid and on the bottom of the drum.

WIPP-Certifiable: Yes

Waste Form Category: Glovebox, Gloves

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 22-00224
Content Code: 339
Container Wt (lb): 390
Original Assay (g): 31.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Leaded Rubber Gloves
Surface Dose Rate (mR/h): <0.5
Reassay (g): 17.0-Pu*
Date Packaged: 1-24-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-9-84
Liner Type: 90 mil
Lead-Lined: No Other Lead: 150 lbs

Waste Form Description: Leaded Gloves

Packaging Description: Lead gloves packed in plastic bags

Absorbent Information: 2 gallons

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information: 120 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-29-85
Container Condition: Minor light rust, interior and exterior. Some paint has flaked off of the lower sides.

Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Leaded gloves, PVC and polyethylene bags, cloth (booties, glove liner).

Packaging Description: Type I rigid liner was lined with an outer polyethylene drum bag and an inner PVC drum bag. The gloves were packed directly into the drum bags. The bottom length of the drum contained combustible waste. The inner PVC bag was deteriorated such that there were 1-2 foot holes. Poly bag was good.

Absorbent Information: Oil-Dri was located outside of the drum bags in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Leaded rubber gloves-286.0, cloth-0.5, PVC-7.8, poly-1.0, oil dry-29.5.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 70%
Volume % Combustibles: 100%
Correct Content Code? Yes New Code:
Other Information: *Too dense to assay by segmented gamma scan. Reassay performed with a Na I detector that is not sensitive to Am.

WIPP-Certifiable: Yes

Waste Form Category: Glovebox, Gloves

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 23-00435
Content Code: 339
Container Wt (lb): 315
Original Assay (g): 6.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Leaded Rubber Gloves and Aprons
Surface Dose Rate (mR/h): <0.5
Reassay (g): 3.0-Pu*
Date Packaged: 1-12-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90 mil
Lead-Lined: No Other Lead: ~100 lbs lead gloves

Waste Form Description: Leaded Gloves

Packaging Description: Lead gloves packed in poly bags put in
90-mil liner.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-30-85
Container Condition: Exterior-some light rust,
Interior-no rust
Lead Lined: No
Liner Type: Type I, 90-mil

Waste Form Description: Leaded rubber drybox gloves,
PVC and polyethylene bags. One glove appeared to be
oil coated.

Packaging Description: Type I rigid liner was lined
with a single poly drum bag. The waste was generally
double bagged with a poly outer bag and a PVC inner
bag. Some waste was single bagged in poly.

Absorbent Information: Oil-Dri was located outside of
the drum bags in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): Leaded rubber gloves-215.0,
PVC-16.5, poly-4.0, oil dry-2.4.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 90%
Volume % Combustibles: 100%
Correct Content Code? Yes New Code:
Other Information: *Segmented gamma scan could not
be used. Reassay with Na I
detector, not sensitive to Am.
WIPP-Certifiable: Yes

Waste Form Category: Benelex, Plexiglas

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-10126
Content Code: 302
Container Wt (lb): 450
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location: Building 771, Room 148

Container Type: Drum
Code Description: Benelex and plexiglas
Surface Dose Rate (mR/h): <0.5
Reassay (g): 1.0-Pu, 0.1-Am
Date Packaged: 1-21-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: Cardboard
Lead-Lined: No Other Lead:

Waste Form Description: Benelex slabs

Packaging Description: Slabs are packed in cardboard liner,
no poly bagging.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-2-85
Container Condition: Light to moderate rust,
interior and exterior

Lead Lined: No
Liner Type: Cardboard, PVC and poly bags

Waste Form Description: Nine pieces of benelex. The benelex appeared to be gloveport door approximately 8" x 8" x 4" thick. A 0.125-0.25." lead sheet was laminated to the benelex.

Packaging Description: A rigid 90-mil liner was not used. The drum was, triple lined with an outer PVC drum bag and 2 inner polyethylene bags. A cardboard liner was inside the inner poly bag and the benelex was directly inside the cardboard.

Absorbent Information: Oil-Dri was located outside of the drum bags, on top and in the bottom of the drum. All of the Oil-Dri was damp.

Physical State of Waste: Dry
Component Weight (LB): Cardboard drum liner-4.0, PVC-5.0, poly-2.0, benelex doors with lead sheet-377.5, oil dry-1.0.

WIPP-WAC Compliance Information: The exterior of the outer PVC drum bag was coated with a film of water. there were no free liquids however.

Packaging Efficiency: 100%
Volume % Combustibles: 10%
Correct Content Code? Yes New Code:
Other Information: This drum contained 46.48 micro-curries/cubic meter of tritium.
WIPP-Certifiable: Yes

Waste Form Category: Benelex, Plexiglas

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-10283
Content Code: 302
Container Wt (lb): 265
Original Assay (g): 4.0-Pu; 0.0-Am
Packaging Location: Building 771, Room 181

Container Type: Drum
Code Description: Benelex and plexiglas
Surface Dose Rate (mR/h): <0.5
Reassay (g): 3.5-Pu, 0.1-Am
Date Packaged: 1-27-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-9-84
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Plexiglas slabs

Packaging Description: Plexiglas is packaged in plastic bags

Absorbent Information: 1 quart

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 95%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information: 200 lbs of organic materials

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-2-85
Container Condition: Exterior-light rust,
Interior-no rust
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Plexiglas glovebox windows,
some with rubber gaskets.

Packaging Description: Type I rigid liner is single
lined with a polyethylene drum bag. A total of
5 packages contained plexiglas double bagged in PVC
outer and polyethylene inner bags. Poly drum bag had
one small (0.5") hole.

Absorbent Information: Oil-Dri was located outside
the drum bag in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): PVC bags-8.0, poly bags-6.5,
plexiglas glovebox windows-161.7, oil dry-12.8.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 90%
Volume % Combustibles: 15%
Correct Content Code? Yes New Code:
Other Information: Benelex and plexiglas are not
considered combustible nor organic.
WIPP-Certifiable: Yes

B-192

GENERAL INFORMATION

Container Type: Drum
Code Description: Benelex and plexiglas
Surface Dose Rate (mR/h): <0.5
Reassay (g): 3.3-Pu, 0.2-Am
Date Packaged: 2-4-73

VISUAL EXAMINATION

Examination Date: 3-2-85
Container Condition: No rust, minor scratches,
interior and exterior
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Plexiglas glovebox windows, some windows had rubber gaskets.

Packaging Description: Type I rigid liner was single lined with a PVC drum bag. A total of 3 packages contained plexiglas double-bagged in PVC inner and polyethylene outer bags.

Absorbent Information: Oil-Dri was located outside the drum bag in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): PVC bags-7.8, poly bags-2.0,
plexiglas glovebox windows (0.5" thick)-60.3, oil
dry-18.5.

Packaging Efficiency: 80%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information: 65 lbs of organic materials

Packaging Efficiency: 60%
Volume % Combustibles: 10%
Correct Content Code? Yes New Code:
Other Information: Benelex and plexiglas are not
considered combustible nor organic.
WIPP-Certifiable: Yes

Waste Form Category: Benelex, Plexiglas

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-10502
Content Code: 302 (RFP-440)
Container Wt (lb): 222
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Benelex and plexiglas
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.0-Pu, 0.1-Am
Date Packaged: 2-10-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Benelex and plexiglas

Packaging Description: Packed in poly bag. A Fiber Pak with benelex is also in the poly bag. All are packed in a 90-mil liner.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information: 157 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 2-20-85
Container Condition:
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Plexiglas glovebox windows and pieces.

Packaging Description: Type I rigid liner was single lined with polyethylene drum bag. Glovebox plexiglas windows were double-bagged in PVC (inner) and poly (outer). A Fiber-Pak was double-bagged in poly; the Fiber-Pak contained plexiglas pieces directly.

Absorbent Information: Oil-Dri was located mostly outside the drum bag in the bottom of the rigid liner although some was located inside the drum bag.

Physical State of Waste: Dry
Component Weight (LB): Poly drum bag-1.0, fibre pak-12.0, plexiglas-74.7, Oil-Dri-46.4.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 70%
Volume % Combustibles: 10%
Correct Content Code? No New Code: 302
Other Information: Plexiglas is not considered combustible.
WIPP-Certifiable: Yes

Waste Form Category: Benelex, Plexiglas

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 01-08991
Content Code: 302
Container Wt (lb): 256
Original Assay (g): 6.0-Pu, 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Benelex and plexiglas
Surface Dose Rate (mR/h): <0.5
Reassay (g): 4.0-Pu, 0.1-Am
Date Packaged: 1-17-73

RADIOGRAPHIC EXAMINATION

Examination Date: 2/20/85
Liner Type: 90 mil
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 3-28-85
Container Condition: Exterior-light to moderate rust
Interior-very light rust.
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Benelex and plexiglas

Waste Form Description: Plexiglas and glass glovebox windows.

Packaging Description: Benelex and plexiglas are placed in drum.
One piece of curled benelex in lower corner of drum.

Packaging Description: Type I rigid liner was double lined with a PVC outer drum bag and a polyethylene inner drum bag. A total of 4 packages of waste were double-bagged in an inner PVC bag and an outer poly bag.

Absorbent Information:

Absorbent Information: Oil-Dri was located outside of the drum bags in the bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): PVC (bags)-14.5, poly (bags)-3.5, plexiglas-65.6, glass-73.9, Oil-Dri-47.6.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 95%
Volume % Combustible: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Packaging Efficiency: 80%
Volume % Combustibles: 10%
Correct Content Code? Yes New Code:
Other Information: Benelex and plexiglas are not considered combustible nor organic.
WIPP-Certifiable: Yes

Waste Form Category: Benelex, Plexiglas

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-10316
Content Code: 302
Container Wt (lb): 230
Original Assay (g): 2.0-Pu, 0.0-Am
Packaging Location: Building 771, Rm 181

Container Type: Drum
Code Description: Benelex and plexiglas
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.0-Pu, 0.1-Am
Date Packaged: 1-30-73

RADIOGRAPHIC EXAMINATION

Examination Date: 2/20/85
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Plexiglas and Benelex sheets.

Packaging Description: All waste is contained in plastic. Some plexiglas pieces are in a poly bottle. There is a curled piece at the bottom.

Absorbent Information:

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 85%
Volume % Combustible: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-28-85
Container Condition: Light rust, interior and exterior
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Plexiglas glovebox windows.

Packaging Description: Type I rigid liner was double lined with an outer PVC drum bag and an inner polyethylene drum bag. A total of 3 packages and 1 bottle contained plexiglas double-bagged in an inner sealed PVC bag and an outer unsealed poly bag. A 1-gallon poly bottle also contained plexiglas and was in a sealed PVC bag and an unsealed poly bag also.

Absorbent Information: Oil-Dri was located outside of the drum bags in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): PVC (bags)-7.9, poly (bags, bottle)-3.0, plexiglas-124.1, Oil-Dri-22.9.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 80%
Volume % Combustibles: 15%
Correct Content Code? Yes New Code:
Other Information: Benelex and plexiglas are not considered combustible nor organic.
WIPP-Certifiable: Yes

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 01-08266
Content Code: 464*
Container Wt (lb): 208
Original Assay (g): 0.0-Pu; 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Benelex and plexiglas
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.0-Pu, 0.0-Am
Date Packaged: 12-13-72 or 12-18-72

RADIOGRAPHIC EXAMINATION

Examination Date: 11-9-84
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Slabs of plexiglas

Packaging Description: Benelex plexiglas is in poly bags, then in a 90 mil liner.

Absorbent Information: 2 gallons

Free Liquids: Yes	Quantity: 1 1/2 qts	Contained: Liner & drum
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 80%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-2-85
Container Condition: Exterior-moderate rust,
Interior-some light rust

Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Plexiglas windows and pieces.

Packaging Description: Type I rigid liner was lined with a PVC drum bag. Plexiglas was contained in 3 packages double-bagged with a poly inner and PVC outer bag.

Absorbent Information: Oil-Dri was located mostly outside the drum bag in the bottom of the rigid liner although some was located inside the drum bag.

Physical State of Waste: Dry
Component Weight (LB): PVC bags-14.0, poly bags-2.5,
plexiglas-76.6, oil dry-50.6.

WIPP-WAC Compliance Information: 1. Free liquids
1400 ml of liquid was located outside of the rigid
liner in the bottom of the drum. Analysis indicates a
pH of 6 and composition of water, carbonates,
sulfates, trace organics.

Packaging Efficiency: 60%
Volume % Combustibles: 15%
Correct Content Code? Yes* New Code: 302
Other Information: *Code 464 discontinued in 1973.
The old code is correct. The new
code, 302, is shown for reference
only.
WIPP-Certifiable: No-free liquid (1.41).

B-796

Waste Form Category: Resins

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-39189
Content Code: 432
Container Wt (lb): 298
Original Assay (g): Pu-10.0
Packaging Location: Bldg 771, Rm 114

Container Type: Drum
Code Description: Resin, Cemented
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-8.0
Date Packaged: 10-13-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Cemented resins. One bottle near top of waste contains chunks or pieces of resin.

Packaging Description: Resins are contained in polyethylene bottles. The bottles are contained in plastic bags.

Absorbent Information: No information recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 95%
Volume % Combustible: 50
Correct Content Code? Yes New Code:
Other Information: One bottle near top of waste contains chunks or pieces of resin. Estimated organic weight--80 lb.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 9-6-83
Container Condition: Minor denting, badly scratched in drum middle.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Cemented resins

Packaging Description: Type II liner is lined with two polyethylene drum bags. The resins are contained in a total of 17 1-gal polyethylene bottles. The bottles are double-bagged in plastic bags.

Absorbent Information: Vermiculite is located on top of the drum bag.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene bags and bottles--31.5; cemented resins--186.5; and vermiculite--2.25.

WIPP-WAC Compliance Information:

1. Particulates: Analysis of an unsolidified resin and cement sample indicates that the waste contains <0.001 wt% <212 μ particulates and <0.001 wt% <10 μ particulates.

Packaging Efficiency: 85%
Volume % Combustibles: 12
Correct Content Code? Yes New Code:
Other Information: Two internal rust spots on drum bottom.

WIPP-Certifiable: Yes

Waste Form Category: Resins

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-39215
Content Code: 432
Container Wt (lb): 339
Original Assay (g): Pu-138.0
Packaging Location: Bldg 771, Rm 114

Container Type: Drum
Code Description: Resin, Cemented
Surface Dose Rate (mR/h): 2.5
Reassay (g): Pu-150.0
Date Packaged: 10-13-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Cemented resins

Packaging Description: Cemented resins are contained in polyethylene bottles.
The bottles are contained in plastic bags.

Absorbent Information: Information not recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 95%
Volume % Combustible: 50
Correct Content Code? Yes New Code:
Other Information: Estimated organic weight--40.9 kg.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 9-6-83
Container Condition: Good; four small dents in
lower two-thirds of drum.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Cemented resins

Packaging Description: Type II liner is lined
with two polyethylene drum bags. The cemented
resins are contained in 18 1-gal polyethylene
bottles. The bottles are wrapped in
polyethylene.

Absorbent Information: Vermiculite located on
top of drum bag.

Physical State of Waste: Damp
Component Wt (lb): Polyethylene bags and
bottles--35.0; cemented resin--235.0;
vermiculite--1.5.

WIPP-WAC Compliance Information:

1. Liquids: Free liquid (75 ml) found outside
a polyethylene bottle within the bag.
Analysis of the green liquid indicates a pH
of 12 with the major component being water
and the minor components being carbonates
and/or nitrates and an unidentified organic
material.

Packaging Efficiency: 90%
Volume % Combustibles: 15
Correct Content Code? Yes New Code:
Other Information: Some small internal spots of
rust on drum lid and drum bottom.

WIPP-Certifiable: No

Waste Form Category: Resins

Time Period: 6-month-old waste

GENERAL INFORMATION

Container Identification: 02-39296
Content Code: 432
Container Wt (lb): 255
Original Assay (g): Pu-22.0
Packaging Location: Bldg 771, Rm 114

Container Type: Drum
Code Description: Resin, Cemented
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-21.0
Date Packaged: 11-3-82

RADIOGRAPHIC EXAMINATION

Examination Date: 6-27-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Cemented resins

Packaging Description: Resins are contained in polyethylene bottles.
The bottles are contained in plastic bags.

Absorbent Information: Vermiculite is located on top of sealed drum bag.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: 50
Correct Content Code? Yes New Code:
Other Information: Estimated organic weight--78 lb.

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 9-6-83
Container Condition: See other information.
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Cemented resins. Some
of the cemented resins are damp.

Packaging Description: Type II liner is lined
with a polyethylene drum bag. The cemented
resins are contained in 15 polyethylene
bottles. The bottles are contained in
polyethylene bags.

Absorbent Information: Vermiculite is located on
top of drum bag.

Physical State of Waste: Damp
Component Wt (lb): Polyethylene bags and
bottles--30.0; cemented resins--182.75; and
vermiculite--4.5.

WIPP-WAC Compliance Information: None

Packaging Efficiency: 85%
Volume % Combustibles: 20
Correct Content Code? Yes New Code:
Other Information:
1. External drum condition--rust on lower one-
third of drum where paint is scratched.
Paint is scratched to the metal.

WIPP-Certifiable: Yes

Waste Form Category: Resins

Time Period: 6-month old

GENERAL INFORMATION

Container Identification: 02-44427
Content Code: 432
Container Wt (lb): 123
Original Assay (g): Pu-1.7, Am-0.0
Packaging Location: Building 771, Room 114

Container Type: Drum
Code Description: Resin, cemented
Surface Dose Rate (mR/h): 3.0
Reassay (g): 24.3-Pu, 0.2-Am
Date Packaged: 8/20/84

RADIOGRAPHIC EXAMINATION

Examination Date: 2/20/85
Liner Type: 90 mil
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 3/21/85
Container Condition: Exterior-excellent,
Interior-Lid and upper sides had
light rust.

Lead Lined: No
Liner Type: Type III, 90 mil

Waste Form Description: Cemented resin.

Waste Form Description: Cemented resin in
4 polyethylene bottles. Three of the four bottles had
no particulates, the fourth bottle contained
approximately 1" of powder in the bottle bottom.

Packaging Description: Cemented resin in 5 poly bottles. Each
bottle is wrapped in plastic. One
bottle contains very little resin.

Packaging Description: Type III rigid liner was
double-lined with 2 polyethylene round-bottom drum
bags. A total of 4 wide mouth bottles contained
resin. The bottles were double-bagged in individual
packages of inner PVC bags and outer poly bags.

Absorbent Information:

Absorbent Information: No absorbents were present.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): PVC-2.2, poly bags and
bottles-4.7, cemented resin-7.0.

Packaging Efficiency: 30%
Volume % Combustible: >25%
Correct Content Code? Yes New Code:
Other Information:

WIPP-WAC Compliance
Information: 1. Particulates-216.89 grams of resin
and resin fines were present in one bottle. Analysis
of the particulate indicates that the waste contained
0.232 wt % <212 micron particles and 8.5 E-4 wt
%<10 micron particles.

WIPP-Certifiable: Yes

Packaging Efficiency: 20%
Volume % Combustibles: 15%
Correct Content Code? Yes New Code:
Other Information: None

WIPP-Certifiable: Yes

Waste Form Category: Resins

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 02-34829
Content Code: 432
Container Wt (lb): 280
Original Assay (g): Pu-19.0
Packaging Location: Bldg 771, Rm 114

Container Type: Drum
Code Description: Resin, Cemented
Surface Dose Rate (mR/h): 1.7
Reassay (g): Pu-15.0
Date Packaged: 11-13-80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Cemented resin

Packaging Description: Resin is packaged in polyethylene bottles.

Absorbent Information: Oil-Dri, approximately 2 quarts

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: Unknown
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-10-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Cemented resins
contained in a total of 18 1-gal polyethylene
bottles. Six bottles contained particulate
(poorly solidified resin) and the remaining 12
bottles contained 25% particulate (including
the Portland cement added as absorbent.) One
bag contained dry Portland cement.

Packaging Description: Type II liner is lined
with two polyethylene drum bags. Each
polyethylene bottle containing the waste is
double-bagged in a PVC and polyethylene bag.

Absorbent Information: Oil-Dri is located in the
bottom of the liner.
Physical State of Waste: Dry
Component Wt (lb): Polyethylene and PVC bags,
polyethylene bottles--31.5; solid and
particulate cemented resin--178.5; Oil-Dri--4.5.

WIPP-WAC Compliance Information:
1. Particulates (Portland cement and resin):
Analysis of the sample indicates the waste
contains 0.042 wt% <212 μ particulates and
0.002 wt% <10 μ particulates.

Packaging Efficiency: 90%
Volume % Combustibles: 30%
Correct Content Code? Yes New Code:
Other Information: Light internal rust on drum
lid and on the sides and in the bottom of the
drum.

WIPP-Certifiable: Yes

Waste Form Category: Resins

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 02-34844
Content Code: 432
Container Wt (lb): 162
Original Assay (g): Pu-5.0
Packaging Location: Bldg 771, Rm 114

Container Type: Drum
Code Description: Resins, Cemented
Surface Dose Rate (mR/h): 0.1
Reassay (g): Pu-0.0
Date Packaged: 11-21-80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Cemented resin. Some of the resin appears to be in chunk form.

Packaging Description: Resin is contained in polyethylene bottles. Bottles are contained in plastic bags.

Absorbent Information: No information recorded.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 36%
Volume % Combustible: Unknown
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-10-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Cemented resins. Some of the resin is not solidified.

Packaging Description: Type II liner is lined with two polyethylene drum bags. The cemented resin is contained in 1-gal polyethylene bottles. Each bottle is double-bagged in a PVC and a polyethylene bag. Total of seven bottles in the drum.

Absorbent Information: Oil-Dri in the bottom of the liner and on top of the drum bag.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene and PVC bags, polyethylene bottles--13.0; solid- and particulate-cemented resin--69.0; (cement is included with the resin); Oil-Dri--5.25.

WIPP-WAC Compliance Information:
1. Particulates (cement fines): Analysis of the sample indicates that the waste contains 0.095 wt% <212 and 0.001 wt% <10 μ particulates.

Packaging Efficiency: 33%
Volume % Combustibles: 30
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Resins

Time Period: 3-year-old waste

GENERAL INFORMATION

Container Identification: 02-34830
Content Code: 432
Container Wt (lb): 318
Original Assay (g): Pu-29.0
Packaging Location: Bldg 771, Rm 114

Container Type: Drum
Code Description: Resins, Cemented
Surface Dose Rate (mR/h): 2.0
Reassay (g): Pu-26.0
Date Packaged: 11-13-80

RADIOGRAPHIC EXAMINATION

Examination Date: 7-1-83
Liner Type: 90-mil; liner lined with a poly drum bag.
Lead-Lined: No Other Lead: No

Waste Form Description: Cemented resin

Packaging Description: Resin is contained in polyethylene bottles.

Absorbent Information: Oil-Dri, approximately 1 quart, located in folds of plastic on top of the waste.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: Unknown
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 8-10-83
Container Condition: Good
Lead-Lined: No
Liner Type: Type II 90-mil

Waste Form Description: Cemented resins. Some of the resin waste was not solidified.

Packaging Description: Type II liner is lined with two polyethylene drum bags. The cemented resin is contained in a total of 18 1-gal polyethylene bottles. Each bottle is double-bagged in a PVC and polyethylene bag.

Absorbent Information: Oil-Dri is located in the bottom of the liner.

Physical State of Waste: Dry
Component Wt (lb): Polyethylene and PVC bags, polyethylene bottles--29.75; cemented (solid) resin and fines--206.25; Oil-Dri--5.0.

WIPP-WAC Compliance Information:

1. Particulates (resin and Portland cement): Analysis indicates that the waste contains 1.09 wt% <212 μ particulates and 0.011 wt% <10 μ particulates.

Packaging Efficiency: 90%
Volume % Combustibles: 30
Correct Content Code? Yes New Code:
Other Information:

1. Some of the bottles have cracked due to swelling.
2. Internal rust on drum lid.

WIPP-Certifiable: Yes

Waste Form Category: Resins

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 01-08811
Content Code: 371 (see below)
Container Wt (lb): 311
Original Assay (g): 23.0-Pu, 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Firebrick
Surface Dose Rate (mR/h): <0.5
Reassay (g): 11.6-Pu, 0.1-Am
Date Packaged: 1-9-73

RADIOGRAPHIC EXAMINATION

Examination Date: 2/20/85
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Firebrick

Packaging Description: Firebrick pieces are contained in 1-gallon poly bottles. There is Oil-Dri between the rigid liner and the drum.

Absorbent Information: Oil-Dri-3 gallons between the liner and drum.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: 10%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-23-85
Container Condition: Exterior-light to moderate rust,
Interior-minor rust.

Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Cemented resin in polyethylene bottles.

Packaging Description: Type I rigid liner was double lined with an outer PVC bag and an inner polyethylene drum bag. A total of 18 wide-mouth gallon bottles contained resins. Two bottles were packaged together double-bagged in a poly outer bag and a PVC inner bag.

Absorbent Information: Oil-Dri was located outside of the drum bags in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): PVC-6.4, poly (bags, 18 bottles)-15.3, cemented resin-168.5, oil dry-44.4.

WIPP-WAC Compliance Information: 1. Particulates 210.68 grams of resin and cement fines were collected from the top of all bottles. Analysis of the particulates indicate the waste contained 5.4E-4 wt% <212 micron particles and <2.0E-2 wt% <10 micron particles.

Packaging Efficiency: 90%
Volume % Combustibles: 10%
Correct Content Code? Yes New Code: 432
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Resins

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 01-08956
Content Code: 432
Container Wt (lb): 296
Original Assay (g): 11.0-Pu, 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Resin, leached and cemented
Surface Dose Rate (mR/h): <0.5
Reassay (g): 8.1-Pu, 0.0-Am
Date Packaged: 1-16-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Cemented resin.

Packaging Description: Packed in 1 gallon poly bottles and a
paint can. Poly bags over the
16 containers in a 90-mil liner.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 95%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information: 24 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-2-85
Container Condition: Exterior-light to moderate rust,
Interior-light rust.

Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Cemented resin in
polyethylene bottles.

Packaging Description: Type I rigid liner was lined
with a PVC outer drum bag and a poly inner drum bag.
A total of 20 wide-mouth gallon bottles and a gallon
paint can contained resin. Generally, two bottles and
paint can were single bagged in PVC bags.

Absorbent Information: Oil-Dri was located outside of
the drum bags in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): PVC-8.5, poly (bags,
18 bottles)-14.2, cement-7.7, resin-183.0, oil
dry-19.8.

WIPP-WAC Compliance Information: 1. Particulates
289.30 grams of resin cement fines were collected from
a single bottle which was entirely particulate.
Analysis of the particulate indicates that the waste
contained 2.024 wt% <212 micron particles and 2.8E-5
wt% <10 micron particles.

Packaging Efficiency: 90%
Volume % Combustibles: 10%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Resins

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-10070
Content Code: 432
Container Wt (lb): 302
Original Assay (g): 5.0-Pu, 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Resin, leached and cemented
Surface Dose Rate (mR/h): <0.5
Reassay (g): 2.4-Pu, 0.0-Am
Date Packaged: 1-19-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-4-84
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Cemented resin

Packaging Description: Packed in poly bottles, poly bags,
then 90-mil liner.

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: 90%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information: 24 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-2-85
Container Condition: Exterior-light to moderate rust,
Interior-heavy rust on bottom.

Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Cemented resin in
polyethylene bottles.

Packaging Description: Type I rigid liner was single
lined with a PVC drum bag. A total of 18 wide mouth
gallon bottles contained resin. The bottles were
paired in a 9 packages of PVC inner bags and poly
outer bags.

Absorbent Information: Oil-Dri was located outside of
the drum bags in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): PVC-7.0, poly bags and
bottles-12.9, cemented resin-178.1, oil dry-39.6.

WIPP-WAC Compliance Information: 1. Particulates
114.98 grams of resin and cement fines were obtained
by sieving all the resin bottles. Analysis of the
particulate indicates that the waste contained 0.015
wt% <212 micron particles and 5.6E-5 wt% <10
micron particles.

Packaging Efficiency: 80%
Volume % Combustibles: 10%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-10195
Content Code: 432
Container Wt (lb): 318
Original Assay (g): 44.0-Pu, 0.0-Am
Packaging Location: Building 771, Room 181

Container Type: Drum
Code Description: Resin, cemented
Surface Dose Rate (mR/h): <0.5
Reassay (g): 38.1-Pu, 0.2-Am
Date Packaged: 1-24-73

RADIOGRAPHIC EXAMINATION

Examination Date: 2/20/85
Liner Type: 90 mil
Lead-Lined: No Other Lead:

Waste Form Description: Cemented resin.

Packaging Description: 18 1-gallon poly bottles of cemented resins.

Absorbent Information: 1-gallon of Oil-Dri was located inside the rigid liner at the bottom.

Free Liquids: No Quantity: Contained:
Compressed Gases: No Type: Quantity:
Particulates: No Quantity: Type:

Packaging Efficiency: 90%
Volume % Combustible: 15%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-23-85
Container Condition: Exterior-some light rust,
Interior-some moderate rust
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Cemented resin in polyethylene bottles.

Packaging Description: Type I rigid liner was double lined with an outer PVC bag and an inner polyethylene bag. A total of 72 wide-mouth gallon bottles contained resin. Generally, a single bottle was double bagged in a poly outer bag and an inner PVC bag.

Absorbent Information: Oil-Dri was located outside of the drum bags in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): PVC-8.6, poly (bags and
22 bottles)-15.6, cemented resins-194.1, oil dry-6.4.

WIPP-WAC Compliance Information: 1. Free liquids-approximately 50 ml of liquid was in the bag surrounding the gallon jug. A sample of this material could not be collected. 2. Particulates 435.26 grams of resin and cement fines were collected from the top of most of the bottles. Analysis indicates they contained 5.8E-4 wt% <212 micron particles and <4.1E-5 wt% <10 micron particles.

Packaging Efficiency: 90%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Resins

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-10286
Content Code: 432
Container Wt (lb): 312
Original Assay (g): 48.0-Pu, 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Resin, leached and cemented
Surface Dose Rate (mR/h): <0.5
Reassay (g): 32.0-Pu, 0.0-Am
Date Packaged: 1-28-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-29-84
Liner Type: 90 mil
Lead-Lined: No Other Lead:

VISUAL EXAMINATION

Examination Date: 3-2-85
Container Condition: Light localized rust, interior
and exterior

Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Cemented resin

Waste Form Description: Cemented resins in
polyethylene bottles.

Packaging Description: Contained in poly bottles, then put in
poly bags in a 90-mil liner.

Packaging Description: Type I rigid liner was triple
lined with a PVC drum bag-outer, then a poly drum bag,
then a PVC drum bag-inner. A total of 21 wide mouth
gallon bottles contained resin. The bottles were
packed directly inside the inner PVC drum bag.

Absorbent Information: None

Absorbent Information: Oil-Dri was located outside of
the drum bags in the bottom of the rigid liner.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): PVC-7.3, poly bag and
bottles-14.9, cemented resin-197.7, oil dry-7.5.

Packaging Efficiency: 80%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information: 14 lbs of organic material

WIPP-WAC Compliance Information: 1. Particulates
49.35 grams of resin and cement fines were obtained by
sieving 3 bottles which contain some fines. Analysis
of the particulate indicates that the waste contains
1.3E-3 wt% <212 micron particles and 4.8E-6 wt%
<10 micron particles.

WIPP-Certifiable: Yes

Packaging Efficiency: 80%
Volume % Combustibles: 10%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Resins

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 02-10288
Content Code: 432
Container Wt (lb): 270
Original Assay (g): 26.0-Pu, 0.0-Am
Packaging Location: Building 771, Room 181

Container Type: Drum
Code Description: Resin, leached and cemented
Surface Dose Rate (mR/h): <0.5
Reassay (g): 19.0-Pu, 0.1-Am
Date Packaged: 1-28-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-9-84
Liner Type:
Lead-Lined: No Other Lead:

Waste Form Description: Resin

Packaging Description: Resin packed in poly bottles then put
in bags

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: 12 gallons	Type: Resin

Packaging Efficiency:
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information: 20 lbs of organic material

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 3-1-85
Container Condition: Exterior-some light rust,
Interior-some moderate rust
Lead Lined: No
Liner Type: Type I, 90 mil

Waste Form Description: Cemented resin in 17 poly
bottles. White powder in a gallon paint can.

Packaging Description: Type I rigid liner was lined
with a PVC outer bag and a polyethylene inner drum
bag. A total of 17 wide mouth gallon bottles
contained resin. The bottles were paired in packages
of PVC and poly. A one-gallon paint can contained a
partially solidified white powder.

Absorbent Information: Oil-Dri was located outside of
the drum bags in the bottom of the rigid liner.

Physical State of Waste: Dry
Component Weight (LB): PVC-7.5, poly bags and
bottles-14.2, gallon paint can and solidified
material-4.8, cemented resins-157.3, oil dry-4.0.

WIPP-WAC Compliance Information: 1. Free
liquids-520 ml liquid was found in the inner drum
bag. analysis indicates a pH of 7 and composition of
water and sodium nitrate. 2. Particulates
249.71 grams of particulate (probably MgO fire
suppressant sand) was located in a gallon paint can.
analysis indicates the waste contained 0.037 wt%
<212 micron particles and 4.0E-4 wt% <10 micron
particles.

Packaging Efficiency: 80%
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-free liquids (520 ml)

Waste Form Category: Mixed Waste-Paper, Metal, Glass, etc.

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 01-08068
Content Code: Unknown (RFP-241)**
Container Wt (lb): 370
Original Assay (g): 0.0-Pu, 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Americium waste
Surface Dose Rate (mR/h): 38.0
Reassay (g): 1.2-Pu, 3.5-Am*
Date Packaged: 12-5-72

RADIOGRAPHIC EXAMINATION

Examination Date:
Liner Type:
Lead-Lined: Yes ~100 lbs Other Lead:

Examination Date: 3-3-85
Container Condition: Interior-moderate to heavy rust,
Exterior-light rust

Lead Lined: Yes
Liner Type: Type I, 90 mil

Waste Form Description:

Waste Form Description: Miscellaneous waste including
2 packages of metal (steel pipe, flange) 3 packages of
plastic (sheet PVC, poly), 1 package of HEPA filter,
1 package of ful-flow filter, and 8-1 gal wide mouth
bottles with liquid on package).

Packaging Description:

Packaging Description: Type I rigid liner was lined
with lead, then 2 poly drum bags. The lead lid was
outside the rigid liner on top, however, the waste
items were double bagged in PVC inner and poly outer
bags.

Absorbent Information: None

Absorbent Information: Oil dry was located outside of
the drum bags in the bottom of the rigid liner.

Free Liquids:	Quantity:	Contained:
Compressed Gases:	Type:	Quantity:
Particulates:	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): Ful-flow filters-2.2, PVC,
poly sheet and bottles-37.5, iron pipe, flange-16.3,
lead sheeting 56.5, HEPA filter-4.0, liquids-54.0, oil
dry-5.0.

WIPP-WAC Compliance Information: 1. Free liquids
approximately 22,700 ml of liquid was located in
8-1 gal containers located in the waste. Due to the
high dose rate encountered with this waste (to
1 R/hr), no sample was taken).

Packaging Efficiency:
Volume % Combustible:
Correct Content Code? New Code:
Other Information:

WIPP-Certifiable: No-unable to penetrate sufficient to
confirm contents.

Packaging Efficiency: 90%
Volume % Combustibles: 30%
Correct Content Code? Yes** New Code: 330
Other Information: *Too dense, due to lead lining, for
a reliable gamma scan. This is an
estimate only.
**241 is an old code. Waste is now
segregated. The old code is
correct. The new code is shown
for reference only.

WIPP-Certifiable: No-free liquids (22.7 liters)

Waste Form Category: Mixed Waste-Paper, Metal, Glass, etc.

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 1371-586
Content Code: 950
Container Wt (lb): 2740
Original Assay (g): 0.2-Pu, 0.0-Am
Packaging Location: Building 771, Room 152

Container Type: Box
Code Description: LSA metal, glass, etc.
Surface Dose Rate (mR/h): 0.5
Reassay (g): Not performed
Date Packaged: 3-1-73

RADIOGRAPHIC EXAMINATION

Examination Date: 11-7-84
Liner Type: Box liner
Lead-Lined: No Other Lead:

Examination Date: 12-21-84
Container Condition: Box and fiberglass condition was very good.

Lead Lined: No
Liner Type: PVC/cardboard

Waste Form Description: Metal items. Sheet of wood or small board.

Waste Form Description: Miscellaneous waste including paper (cardboard, box liner), plastic (cord, bags), plexiglass (1" steel) aluminum, lead (tape, gloveport covers) steel (light fixtures, pipe, nuts, bolts, I-beam electrical junction box, trash can, furnace, conduit, drum track, tools, door) leaded gloves, leaded glass, wood, sheetrock, section of glovebox front.

Packaging Description: Waste is packed in poly bagging material, then placed inside box liner. Metal items on top. Bottom portion contains sheet of wood or small board.

Packaging Description: The box was lined with a PVC liner, then a cardboard liner. Waste items were loose-packed, wrapped in tape, single or double-bagged. Most of the waste, except sheetrock, was taped to prevent sharp corners and double bagged in poly.

Absorbent Information: None

Absorbent Information: No absorbents were present.

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Physical State of Waste: Dry
Component Weight (LB): Paper-29.0, plastic-7.4, plexiglass-61.6, aluminum-2.0, lead-113.1, steel-882.6, leaded glass-367.0, wood-103.4, sheetrock-481.8.

Packaging Efficiency: 80%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

WIPP-WAC Compliance Information: 1. Particulates-101.70 grams of sheetrock fines were collected. Analysis of the particulate indicated the waste contained 1.8 E-3 wt % <212 micron particles and 3.2 E-6 wt % <10 micron particles.

Packaging Efficiency: 100%
Volume % Combustibles: 3%
Correct Content Code? Yes* New Code: 480
Other Information: *950 is an old code for Low Specific Activity metal, glass, etc. used until 1974. This waste is now segregated into the proper codes. The old code is correct; the new code is shown for reference only.

WIPP-Certifiable: Yes

Waste Form Category: Filters

Time Period: 12-year

GENERAL INFORMATION

Container Identification: 89-03509
Content Code: 360 (RFP-338)
Container Wt (lb): 115
Original Assay (g): 0.0-Pu, 0.0-Am
Packaging Location:

Container Type: Drum
Code Description: Insulation
Surface Dose Rate (mR/h): <0.5
Reassay (g): 0.3-Pu, 0.2-Am
Date Packaged: 1-19-73

RADIOGRAPHIC EXAMINATION

Examination Date: 12-7-84
Liner Type: Poly and cardboard
Lead-Lined: No Other Lead:

Waste Form Description: Insulation. Cement added to bags

Packaging Description: Packed in poly and cardboard liner
(no 90-mil liner). Cement added to bags

Absorbent Information: None

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Yes	Quantity: 1 gallon	Type: Cement

Packaging Efficiency: 90%
Volume % Combustible: <25%
Correct Content Code? Yes New Code:
Other Information: 24 lbs of organic materials

WIPP-Certifiable: No-particulates (1 gallon of cement)

VISUAL EXAMINATION

Examination Date: 3-3-85
Container Condition: Exterior-light to moderate rust,
Interior-some light rust

Lead Lined: No
Liner Type: Polyethylene drum bags

Waste Form Description: Insulation for 1 inch pipe.

Packaging Description: A rigid 90-mil liner was not
used. The drum was double-lined with polyethylene
drum bags. Two packages of insulation were inside the
drum, each package was single bagged in poly drum bags.

Absorbent Information: Oil-Dri was located outside of
the drum bags in the bottom of the drum. A very small
amount of Portland cement was located inside the drum
liner.

Physical State of Waste: Dry
Component Weight (LB): 4 ea. poly drum bags-4.0,
insulation-48.0, Oil-Dri-2.4.

WIPP-WAC Compliance Information: 1.
Particulates-134.17 grams of insulation fines were
collected from the entire drum. Analysis of the
particulate indicates that the waste contained 0.11
wt% <212 micron particles and 1.0E-3 wt% <10
micron particles.

Packaging Efficiency: 100%
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VOLUME I
APPENDIX C
LANL Content Code Description

APPENDIX C

LOS ALAMOS NATIONAL LABORATORY VALID WASTE CODES

Code	Waste Material Description	Code	Waste Material Description
A 10	Graphite	A 50	Metal crucibles, scrap, dies
A 14	Combustible room decon waste	A 51	Precious metals
A 15	Mixed cellulose	A 52	Other scrap metals
A 16	Plastic materials	A 55	Filter media
A 17	Rubber materials	A 56	Filter media residues
A 18	Mixed paper, plastic, rubber, etc.	A 60	Other combustibles
A 19	Mixed Combustible/ Noncombustible trash	A 61	Other noncombustibles
A 20	Hydrocarbon oils	A 65	Animal tissue
A 21	Silicon base oils	A 70	Chemical waste
A 25	Leached process residues	A 71	Be
A 26	Evaporator bottoms (salts)	A 72	Hg
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VOLUME I

APPENDIX D

LANL Radiographic and Visual
Examination Results

APPENDIX D

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Waste Form Category: Other Combustibles

Time Period: 36-months

GENERAL INFORMATION

Container Identification: BFB-14
Content Code: A-60
Container Wt (Kg): 27.3
Original Assay (g): 1.3
Packaging Location: CMB-11, TA-55
Radionuclide: ²³⁸Pu

Container Type: 30-gal drum
Code Description: Other Combustibles
Surface Dose Rate (mR/h): 2 mr
Reassay (g): 0.17
Date Packaged: 7-23-80

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: Smaller containers inside bags
All low density.

Packaging Description: Bagged, low-density trash.

Absorbent Information: None

Free Liquids: None Quantity: Contained:

Compressed Gases: None Type: Quantity:
Particulates: None Quantity: Type:

Packaging Efficiency: Approximately 1/2 full.
Volume % Combustible: 95%
Correct Content Code? Perhaps New Code: A-14
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Exterior very good, interior
bright and shiny.

Lead Lined: No
Liner Type: None

Waste Form Description: Empty alcohol bottle, HF
bottle, gloves, rags, cheesecloth.

Packaging Description: Double-bagged trash from room
cleanup.

Absorbent Information: None

Physical State of Waste: Dry & clean. Not
deteriorated.

Component Weight (Kg): 9.9

WIPP-WAC Compliance Information: Appears to be in
compliance.

Computed Void Volume: 94%

Packaging Efficiency: 50%
Volume % Combustibles: 95%
Correct Content Code? Ok New Code: A-14 would be
Other Information: more specific

WIPP-Certifiable: Yes

Waste Form Category: Other Combustibles

Time Period: 36-months

GENERAL INFORMATION

Container Identification: BFB-20
Content Code: A-60
Container Wt (Kg): 24.1
Original Assay (g): 2.2
Packaging Location: CMB-11, TA-55
Radionuclide: ²³⁸Pu

Container Type: 30-gal drum
Code Description: Other Combustibles
Surface Dose Rate (mR/h): ≤ Background
Reassay (g): 0.0
Date Packaged: 7-29-80

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: Nothing specifically identified.

Packaging Description: Plastic bag, smaller more dense areas
inside. Several smaller bags?

Absorbent Information: No

Free Liquids: None Quantity: Contained:

Compressed Gases: None Type: Quantity:
Particulates: None Quantity: Type:

Packaging Efficiency: About 1/2 full
Volume % Combustible: Probably 100%
Correct Content Code? Ok New Code: A-16 would be more specific.
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Exterior, very good, interior,
clean and dry.

Lead Lined: No
Liner Type: None

Waste Form Description: Two bagout bags, each filled
with plastic sleeves.

Packaging Description: Plastic bags in 30-gal drum.

Absorbent Information: None

Physical State of Waste: Dry and clean.

Component Weight (Kg): 14

WIPP-WAC Compliance Information: Appears to be in
compliance.

Computed Void Volume: 80.6%

Packaging Efficiency: 50%
Volume % Combustibles: 100%
Correct Content Code? Acceptable New Code: A-16
would be
Other Information: more specific
WIPP-Certifiable: Yes

Waste Form Category: Mixed paper, plastic, rubber, etc.

Time Period: 8-months

GENERAL INFORMATION

Container Identification: BFB-101
Content Code: A-18
Container Wt (Kg): 24.5
Original Assay (g): 11.6
Packaging Location: MST-DO, TA-55
Radionuclide: ^{238}Pu

Container Type: 30-gal drum
Code Description: Mixed paper, plastic, rubber, etc.
Surface Dose Rate (mR/h): 15 mr
Reassay (g): 12.1
Date Packaged: 1-12-83

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: Not possible to discern contents.

Packaging Description: 5 or 6 plastic or thin steel containers;
one horizontal lying on top of vertical
ones on bottom.

Absorbent Information: No

Free Liquids: None Quantity: Contained:

Compressed Gases: None Type: Quantity:
Particulates: None Quantity: Type:

Packaging Efficiency: Probably 90% filled.
Volume % Combustible: Probably 50%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: External, very good Internal,
Slight rust-colored film.

Lead Lined: No
Liner Type: Double plastic bag, but no liner per sc.

Waste Form Description: Plastic Ziplocks, sample
vials, gaskets, cheesecloth, sandpaper.

Packaging Description: Metal cans holding inner
bagged-out metal cans.

Absorbent Information: None

Physical State of Waste: Dry, slight rust-colored
film.

Component Weight (Kg): 10.2

WIPP-WAC Compliance Information: Appears to be in
compliance.*

Computed Void Volume: 93.9%

Packaging Efficiency: 8% void
Volume % Combustibles: 80%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

* A sample of partially deteriorated cheesecloth was taken from one of the bags, but there appeared to be no reason to analyze it.

Waste Form Category: Other combustibles

Time Period: 35-months

GENERAL INFORMATION

Container Identification: BFB-27
Content Code: A-60
Container Wt (Kg): 25.1
Original Assay (g): 1.18
Packaging Location: CMB-11, TA-55
Radionuclide: ²³⁸Pu

Container Type: 30-gal drum
Code Description: Other combustibles
Surface Dose Rate (mR/h): $\leq$ Background
Reassay (g): 0.42
Date Packaged: 9-12-80

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: Appeared to be several plastic bags
inside one larger plastic bag.
Small circular dense spot near
bottom, one dense object.

Packaging Description: Plastic bag inside drum.

Absorbent Information: None

Free Liquids: None Quantity: Contained:

Compressed Gases: None Type: Quantity:
Particulates: None Quantity: Type:

Packaging Efficiency: About 2/3 full.
Volume % Combustible: 100% of contents.
Correct Content Code? Ok New Code: A-18 is more specific
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Exterior, very good. Interior,
clean and dry.

Lead Lined: No
Liner Type: None

Waste Form Description: A single plastic bag of paper,
surgeon's gloves, cheese cloth, plastic. No dust,
no liquid, no deterioration.

Packaging Description: A single plastic bag of waste.

Absorbent Information: None

Physical State of Waste: Dry, in good condition.

Component Weight (Kg): 14.7

WIPP-WAC Compliance Information: Appears to be in
compliance.

Computed Void Volume: 91.7%

Packaging Efficiency: 30% void
Volume % Combustibles: 100%
Correct Content Code? Acceptable New Code: A-18
Other Information: would be better.

WIPP-Certifiable: Yes

Waste Form Category: Other Non-combustibles

Time Period: 37-months

GENERAL INFORMATION

Container Identification: BFB-19
Content Code: A-61
Container Wt (Kg): 31.8
Original Assay (g): 5.6
Packaging Location: CMB-11, TA-55
Radionuclide: ²³⁸Pu

Container Type: 30-gal drum
Code Description: Other non-combustibles
Surface Dose Rate (mR/h): 15 mr
Reassay (g): 0.52
Date Packaged: 7-29-80

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: Appeared to be glassware in bagged cylindrical containers. Some small, dense objects.

Packaging Description: Bagged cylindrical containers.

Absorbent Information: No

Free Liquids: No Quantity: Contained:

Compressed Gases: No Type: Quantity:
Particulates: None Quantity: Type:
detected.

Packaging Efficiency: ~80% filled.
Volume % Combustible: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Exterior very good, interior
clean and dry

Lead Lined: No
Liner Type: None

Waste Form Description: Inside can, bagged metal can containing alundum. 2nd can, gasket 3rd can, hot pressing dies. 4th can, glassware. Some red dust in this can, but not enough to collect.

Packaging Description: Bagged metal cans.

Absorbent Information: None

Physical State of Waste: Clean and dry.

Component Weight (Kg): 14.9

WIPP-WAC Compliance Information: Appears to be in compliance.

Computed Void Volume:

Packaging Efficiency: 15% void
Volume % Combustibles: 5%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Mixed paper, plastic, rubber, etc.

Time Period: 9 years, 3 months

GENERAL INFORMATION

Container Identification: BFB-235
Content Code: A-18
Container Wt (Kg): 22.7
Original Assay (g): 1.9
Packaging Location: CMB-11, TA-21
Radionuclide: ²³⁸Pu

Container Type: 30-gal drum
Code Description: Mixed paper, plastic, rubber, etc.
Surface Dose Rate (mR/h): 9 mr
Reassay (g): 2.1
Date Packaged: 10-29-74

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: Some plastic.

Packaging Description: Some small 2R containers; several short, one longer, larger cylindrical container at bottom.

Absorbent Information: No

Free Liquids: None Quantity: Contained:

Compressed Gases: None Type: Quantity:

Particulates: None Quantity: Type:

Packaging Efficiency: About 1/2 full.
Volume % Combustible:
Correct Content Code? Doubtful New Code: Probably A-61
Other Information:

WIPP-Certifiable: Yes, after code change.

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: External, very good, a little rust on one side of lid. Internal, clean and dry, trace of rust film.
Lead Lined: No
Liner Type: None

Waste Form Description: 28 rusty cans, crushed. 26 crushed one-gallon cans. Some aluminum foil. Two, 2" pipe nipples, capped on both ends. A one-gallon can filled with empty cans.

Packaging Description: A leverpak inside the drum.

Absorbent Information: None

Physical State of Waste: Clean and dry.

Component Weight (Kg): 29.5

WIPP-WAC Compliance Information: In compliance after change in waste code.

Computed Void Volume:

Packaging Efficiency: 50% in leverpak.
Volume % Combustibles: 10%
Correct Content Code? No New Code: A-61
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Mixed paper, plastic, rubber, etc.

Time Period: 9 years, 3 months

GENERAL INFORMATION

Container Identification: BFB-237
Content Code: A-18
Container Wt (Kg): 54.5
Original Assay (g): 4.2
Packaging Location: CMB-11, TA-21
Radionuclide: ^{238}Pu

Container Type: 30-gal drum
Code Description: Mixed paper, plastic, rubber, etc.
Surface Dose Rate (mR/h): 9 mr
Reassay (g): 3.5
Date Packaged: 10-29-74

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: Some cylindrical objects.

Packaging Description: Several pieces of dense apparatus in
an array indicating several bags.

Absorbent Information: None

Free Liquids: No Quantity: Contained:

Compressed Gases: No Type: Quantity:
Particulates: No Quantity: Type:

Packaging Efficiency: About 3/4 full.
Volume % Combustible: Could not tell.
Correct Content Code? No New Code: A-61
Other Information:

WIPP-Certifiable: Probably

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: External, very good. Some rust
on lid. Internal, very little rust film.
Lead Lined: No
Liner Type: None

Waste Form Description: Rusty vises, sieves, pipe,
rods, cans, hand tools, garden hose, hammers,
screwdrivers. No loose rust.

Packaging Description: Plastic-wrapped leverpak
inside drum.

Absorbent Information: None

Physical State of Waste: Dry. No free rust available.

Component Weight (Kg): 38.6

WIPP-WAC Compliance Information: Appears to be in
compliance with new waste code.

Computed Void Volume:

Packaging Efficiency: 20% Void.
Volume % Combustibles: 10%
Correct Content Code? No New Code: A-61
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Mixed paper, plastic, rubber, etc.

Time Period: 9 years, 3 months

GENERAL INFORMATION

Container Identification: BFB-238
Content Code: A-18
Container Wt (Kg): 45.5
Original Assay (g): 0.5
Packaging Location: CMB-11, TA-21
Radionuclide: ²³⁸Pu

Container Type: 30-gal drum
Code Description: Mixed paper, plastic, rubber, etc.
Surface Dose Rate (mR/h): 3.5 mr
Reassay (g): 0.0
Date Packaged: 10-29-74

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: Appears to be tubing and apparatus.

Packaging Description: Cylindrical container, appears to be nearly full.

Absorbent Information: No

Free Liquids: None Quantity: Contained:

Compressed Gases: None Type: Quantity:
Particulates: None Quantity: Type:

Packaging Efficiency: About 90% full.
Volume % Combustible: Could not tell.
Correct Content Code? Doubtful New Code: A-61
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: External, some rust on lid and drum, but still good. Internal, rusty inside both drum and leverpak.
Lead Lined: No
Liner Type: None

Waste Form Description: 10 rusty containers, 5 pressure vessels, stainless door frame and gasket, 2 halves of a plastic window port, empty plastic bagout stubs, 8 transfer cans, miscellaneous pieces of metal all rusty except stainless. After much shaking and banging, 0.98 g of rust was collected. Only 4% was smaller than 200 microns, so it would meet WIPP-WAC criteria.

Packaging Description: Leverpak inside a plastic bagout.

Absorbent Information: None

Physical State of Waste: Dry, very rusty.

Component Weight (Kg): 29.5

WIPP-WAC Compliance Information: In compliance after change in waste code.

Computed Void Volume:

Packaging Efficiency: 30% void in leverpak
Volume % Combustibles: 10%
Correct Content Code? No New Code: A-61
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Mixed paper, plastic, rubber, etc.

Time Period: 9 years, 3 months

GENERAL INFORMATION

Container Identification: BFB-239
Content Code: A-18
Container Wt (Kg): 61.8
Original Assay (g): 1.4
Packaging Location: CMB-11, TA-21
Radionuclide: ²³⁸Pu

Container Type: 30-gal drum
Code Description: Mixed paper, plastic, rubber, etc.
Surface Dose Rate (mR/h): 6 mr
Reassay (g): 0.65
Date Packaged: 10-29-74

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: 2R containers? Small drill press
vise? Larger cylindrical containers.

Packaging Description: Plastic-bagged containers of more
dense materials.

Absorbent Information: No

Free Liquids: None Quantity: Contained:

Compressed Gases: None Type: Quantity:
Particulates: None Quantity: Type:

Packaging Efficiency: About 3/4 full.
Volume % Combustible: Appears to be low 10%
Correct Content Code? No New Code: A-61
Other Information:

WIPP-Certifiable: Yes, with change in content code.

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: External, very good. Internal,
clean and dry.
Lead Lined: No
Liner Type: None

Waste Form Description: Plastics, metals, and glass
tubes, metal tubes, scrap metals, desiccator, heat
lamp, glass bottles, broken glass, metal tools.

Packaging Description: Plastic-wrapped metal cans
containing a variety of wastes.

Absorbent Information: None

Physical State of Waste: Clean and dry.

Component Weight (Kg): 45.9

WIPP-WAC Compliance Information: In compliance after
change of waste code.

Computed Void Volume:

Packaging Efficiency: 5% Void.
Volume % Combustibles: 10%
Correct Content Code? No New Code: A-61
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Mixed paper, plastic, rubber, etc.

Time Period: 9 years, 3 months

GENERAL INFORMATION

Container Identification: BFB-240
Content Code: A-18
Container Wt (Kg): 50
Original Assay (g): 1.7
Packaging Location: CMB-11, TA-21
Radionuclide: ²³⁸Pu

Container Type: 30-gal drum
Code Description: Mixed paper, plastic, rubber, etc.
Surface Dose Rate (mR/h): 13 mr
Reassay (g): 1.1
Date Packaged: 10-29-74

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: Appears to be tools and laboratory apparatus.

Packaging Description: Plastic bags in drum.

Absorbent Information: No

Free Liquids: None seen Quantity: Contained:

Compressed Gases: None Type: Quantity:
Particulates: None Quantity: Type:

Packaging Efficiency: 2/3 filled.
Volume % Combustible: Could not tell.
Correct Content Code? No New Code: A-61
Other Information:

WIPP-Certifiable: Probably--could not tell.

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Exterior, lid rust: water standing on lid when cask opened. Drum structurally sound. Interior, rusty.
Lead Lined: No
Liner Type: None

Waste Form Description: Die, desiccator, empty glass containers, power hose for furnace, rusty cans and metal objects.

Packaging Description: Double-bagged leverpak. Approximately 150 ml H₂O between bags. Leverpak saturated.

Absorbent Information: None

Physical State of Waste: Wet and rusty.

Component Weight (Kg): 29.5

WIPP-WAC Compliance Information: Non-compliance due to free liquid.

Computed Void Volume:

Packaging Efficiency: 30% Void.
Volume % Combustibles: Maybe 10%
Correct Content Code? No New Code: A-61
Other Information:

WIPP-Certifiable: No. Free liquids (150 ml H₂O).

Waste Form Category: Mixed paper, plastic, rubber, etc.

Time Period: 7 months

GENERAL INFORMATION

Container Identification: BFB-92
Content Code: A-18
Container Wt (Kg): 23.6
Original Assay (g): 7.7
Packaging Location: MST-DO, TA-55
Radionuclide: ^{238}Pu

Container Type: 30-gal drum
Code Description: Mixed paper, plastic, rubber, etc.
Surface Dose Rate (mR/h): 7 mr
Reassay (g): 4.4
Date Packaged: 1-24-83

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: No clue as to specific contents.

Packaging Description: Cylindrical containers in drum.
Low, uniform density.

Absorbent Information: No

Free Liquids: None Quantity: Contained:

Compressed Gases: None Type: Quantity:
Particulates: None Quantity: Type:
Observed.

Packaging Efficiency: About 1/2 full.
Volume % Combustible: Could not estimate.
Correct Content Code? No New Code: A-19
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Very good externally, clean
inside with some rust color.
Lead Lined: No
Liner Type: None

Waste Form Description: Inside one ice cream carton
 Al_2O_3 . Others contained cheesecloth, lead-
wrapped vials, graphite solids.

Packaging Description: Ice cream carton within a
metal can within a metal can. Carton in plastic
bagout.

Absorbent Information: None

Physical State of Waste: Dry, clean, some rust color.

Component Weight (Kg): 7.7

WIPP-WAC Compliance Information: Appears to be in
compliance with new waste code assigned.

Computed Void Volume:

Packaging Efficiency: 40% Void.
Volume % Combustibles: 25%
Correct Content Code? No New Code: A-19
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Mixed combustible-noncombustible

Time Period: 8 months

GENERAL INFORMATION

Container Identification: BFB-96
Content Code: A-19
Container Wt (Kg): 32.2
Original Assay (g): 10.2
Packaging Location: MST-DO, TA-55
Radionuclide: ²³⁸Pu

Container Type: 30-gal drum
Code Description: Mixed combustible-noncombustible
Surface Dose Rate (mR/h): 13 mr
Reassay (g): 10.1
Date Packaged: 1-03-83

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: Several cylinders in bottom, probably
in low density overpack. Some
circular dense spots.

Packaging Description: Top bag contains more dense material
in cylindrical container.

Absorbent Information: None

Free Liquids: None Quantity: Contained:

Compressed Gases: None Type: Quantity:
Particulates: None Quantity: Type:

Packaging Efficiency: 3/5 full.
Volume % Combustible: Perhaps 50%.
Correct Content Code? Yes New Code: A-19
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: External, very good.
Internal, clean and dry.
Lead Lined: No
Liner Type: None

Waste Form Description: Lead-lined gloves,
cheesecloth, plastic bagouts.

Packaging Description: A bucket and 3 metal
containers, all in plastic bags.

Absorbent Information: None

Physical State of Waste: Dry, clean.

Component Weight (Kg): 16.9

WIPP-WAC Compliance Information: Appears to be in
compliance.

Computed Void Volume:

Packaging Efficiency: 20% Void.
Volume % Combustibles: 50%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Mixed combustible-noncombustible

Time Period: 8 months

GENERAL INFORMATION

Container Identification: BFB-97
Content Code: A-19
Container Wt (Kg): 51.5
Original Assay (g): 9.4
Packaging Location: MST-DO, TA-55
Radionuclide: ²³⁸Pu

Container Type: 30-gal drum
Code Description: Mixed combustible-noncombustible
Surface Dose Rate (mR/h): 15 mr
Reassay (g): No record
Date Packaged: 1-03-83

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: Cylindrical dark blobs--probably
metallic vials or canisters--all
in a larger, less dense container.

Packaging Description: Several containers; one lying on its
side on top.

Absorbent Information: No

Free Liquids: None Quantity: Contained:

Compressed Gases: None Type: Quantity:
Particulates: None Quantity: Type:

Packaging Efficiency: 90% full.
Volume % Combustible: Probably 50%.
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Very good exterior--some
handling scratches around one rolling hoop.
Some rust-colored stains inside.
Lead Lined: No
Liner Type: None

Waste Form Description: Wire and plastic bottles
(empty). Inside bagged-out cans, deteriorated
cheesecloth, Ziplock containers, aluminum
foil, rusty cans, hacksaw blade, small
pressure vessel, paintbrushes, pliers.

Packaging Description: Metal containers holding
bagged-out metal containers.

Absorbent Information: None

Physical State of Waste: Dry, rust colored.

Component Weight (Kg): 20.07

WIPP-WAC Compliance Information: Appears to be in
compliance.

Computed Void Volume:

Packaging Efficiency: 5% Void.
Volume % Combustibles: 35%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Mixed combustible-noncombustible trash

Time Period: 7 months

GENERAL INFORMATION

Container Identification: BFB-102
Content Code: A-19
Container Wt (Kg): 32
Original Assay (g): 3.4
Packaging Location: MST-DO, TA-55
Radionuclide: ²³⁸Pu

Container Type: 30-gal drum
Code Description: Mixed combustible-noncombustible
trash
Surface Dose Rate (mR/h): 7 mr
Reassay (g): 2.4
Date Packaged: 1-27-83

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: Appeared to be hydraulic jack,
several plastic containers, and
a Boston round bottle.

Packaging Description: Plastic bags in drum.

Absorbent Information: No

Free Liquids: None Quantity: Contained:

Compressed Gases: None Type: Quantity:
Particulates: None Quantity: Type:

Packaging Efficiency: 3/4 filled.
Volume % Combustible: Could not tell; maybe 30%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: External, very good. Internal,
Clean, dry and shiny.
Lead Lined: No
Liner Type: None

Waste Form Description: Punctured WD-40 can, another
empty can, cheesecloth, pieces of metal, crushed
aluminum foil.

Packaging Description: Double plastic-wrapped metal
cans containing bagged-out metal cans.

Absorbent Information: None

Physical State of Waste: Dry, clean and shiny.

Component Weight (Kg): 14.9

WIPP-WAC Compliance Formation: Appears to be in
compliance.

Computed Void Volume: 92.7%

Packaging Efficiency: 15% Void.
Volume % Combustibles: 20%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Mixed combustible-noncombustible trash

Time Period: 7 months

GENERAL INFORMATION

Container Identification: BFB-103
Content Code: A-19
Container Wt (Kg): 29
Original Assay (g): 6.8
Packaging Location: MST-DO, TA-55
Radionuclide: ²³⁸Pu

Container Type: 30-gal drum
Code Description: Mixed combustible-noncombustible
trash
Surface Dose Rate (mR/h): 5 mr
Reassay (g): 6.1
Date Packaged: 1-26-83

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: One small one (4 x 4) on bottom.
No indication of contents.

Packaging Description: Cans in plastic bags--one horizontal
on top, 4 vertical on bottom.

Absorbent Information: No

Free Liquids: None Quantity: Contained:

Compressed Gases: None Type: Quantity:
Particulates: None Quantity: Type:

Packaging Efficiency: 2/3 full.
Volume % Combustible: Could not tell.
Correct Content Code? Probably New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: External, very good. Internal,
clean and dry.
Lead Lined: No
Liner Type: None

Waste Form Description: Bagged-out cans containing
vials and glass jars, cheesecloth, Ziplock bags.
Inside cans were corroded on their insides.

Packaging Description: Double plastic-wrapped metal
containers.

Absorbent Information: None

Physical State of Waste: Dry, not deteriorated.

Component Weight (Kg): 12.3

WIPP-WAC Compliance Information: Appears to be in
compliance.*

Computed Void Volume:

Packaging Efficiency: 30% Void.
Volume % Combustibles: Probably 50%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

- A sample of partially decomposed cheesecloth was taken from one of the bags, but there appeared to be no reason to analyze it.

Waste Form Category: Other Combustibles

Time Period: 35 months

GENERAL INFORMATION

Container Identification: BFB-26
Content Code: A-60
Container Wt (Kg): 25.4
Original Assay (g): 1.05
Packaging Location: CMB-11, TA-55
Radionuclide: ²³⁸Pu

Container Type: 30-gal drum
Code Description: Other Combustibles
Surface Dose Rate (mR/h): 0.2 mr
Reassay (g): 0.0
Date Packaged: 9-16-80

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: Forceps, wide-mouth bottle,
2-liter acid bottle, less dense
material near bottom.

Packaging Description: Bagged trash inside drum.

Absorbent Information: No

Free Liquids: None Quantity: Contained:

Compressed Gases: None Type: Quantity:
Particulates: None Quantity: Type:

Packaging Efficiency: 2/3 full.
Volume % Combustible: Probably 50%
Correct Content Code? No New Code: A-19
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Exterior, very good. Interior,
clean and dry, tinge of rust color.
Lead Lined: No
Liner Type: None

Waste Form Description: Empty nitric acid and HF
bottles, aluminum foil, gloves, plastics, empty
gallon jar, cheesecloth.

Packaging Description: Plastic bagged trash.

Absorbent Information: None

Physical State of Waste: Dry, slightly decomposed.

Component Weight (Kg): 14.8

WIPP-WAC Compliance Information: Appears to be in
compliance.

Computed Void Volume: 90.9%

Packaging Efficiency: 35% Void.
Volume % Combustibles: 50%
Correct Content Code? No New Code: A-19
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Other Combustibles

Time Period: 39 months

GENERAL INFORMATION

Container Identification: BFB-12
Content Code: A-60
Container Wt (Kg): 18.6
Original Assay (g): 6.6
Packaging Location: CMB-11, TA-55
Radionuclide: ²³⁸Pu

Container Type: 30-gal drum
Code Description: Other Combustibles
Surface Dose Rate (mR/h): 80 mR
Reassay (g): 4.85
Date Packaged: 5-30-80

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: Large cylindrical container at angle on top, more dense objects, probably tools, near bottom.

Packaging Description: Several plastic bags inside drum.
Can inside top bag.

Absorbent Information:

Free Liquids: No Quantity: Contained:

Compressed Gases: No Type: Quantity:
Particulates: No Quantity: Type:

Packaging Efficiency: 3/4 full.
Volume % Combustible:
Correct Content Code? Perhaps New Code: A-19 might be better.
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Good. Slight rust film but not enough to collect particulate.
Lead Lined: No
Liner Type: None

Waste Form Description: There were zones where the rust had penetrated the can and created pinholes. Cheesecloth and filter paper contents of can were partially burned. 2nd plastic bag contained rags, cheesecloth, drill bits, crescent wrenches, paper, gloves, broken glass. No deterioration in this bag.

Packaging Description: Double plastic bagged metal can.

Absorbent Information: No

Physical State of Waste: Dry.

Component Weight (Kg): 6.5

WIPP-WAC Compliance Information: Appears to be in compliance.*

Computed Void Volume:

Packaging Efficiency: 15% Void.
Volume % Combustibles: 50-60%
Correct Content Code? Doubtful New Code: A-19
Other Information: more appropriate

WIPP-Certifiable: Yes

* Portions of partially charred cheesecloth and filter paper were removed as a sample from one of the container bags, but there appeared to be no reason to analyze it.

Waste Form Category: Mixed paper, plastic, rubber, etc.

Time Period: 9 years, 3 months

GENERAL INFORMATION

Container Identification: BFB-234
Content Code: A-18
Container Wt (Kg): 22.7
Original Assay (g): 18.2
Packaging Location: CMB-11, TA-21
Radionuclide: ²³⁸Pu

Container Type: 30-gal drum
Code Description: Mixed paper, plastic, rubber, etc.
Surface Dose Rate (mR/h): 120 mr
Reassay (g): 13.0
Date Packaged: 10-29-74

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: Some more dense areas. Might be discarded equipment.

Packaging Description: Drum appeared more dense than some of the others. 2 cylindrical objects. Not clear.

Absorbent Information: No

Free Liquids: None Quantity: Contained:

Compressed Gases: None Type: Quantity:
Particulates: None Quantity: Type:

Packaging Efficiency: 2/3 full.
Volume % Combustible: Could not tell.
Correct Content Code? Not sure New Code:
Other Information:

WIPP-Certifiable: Probably, but could not tell for sure.

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Exterior, very good. Interior, drum rusty on bottom.
Lead Lined: No
Liner Type: None

Waste Form Description: Bagout full of small sealed cans. Can of wet material which reacted out of can and involved the other two cans. Was a ²³⁸Pu material with a pH of 3.

Packaging Description: 4 plastic-bagged metal containers.

Absorbent Information: None

Physical State of Waste: 3 containers dry, one wet.

Component Weight (Kg): 6.6

WIPP-WAC Compliance Information: Non-compliance. The wet material will have to be rendered non-corrosive.

Computed Void Volume:

Packaging Efficiency: 8% Void.
Volume % Combustibles: 10%
Correct Content Code? No New Code: A-19
Other Information:

WIPP-Certifiable: Not until corrosive material has been neutralized.

Waste Form Category: Combustible Room Decon Waste

Time Period: 11 months

GENERAL INFORMATION

Container Identification: 010761
Content Code: A-14
Container Wt (Kg): 49
Original Assay (g): 0.47
Packaging Location: MST-DO, TA-55
Radionuclide: ²³⁹Pu

Container Type: 55-gal drum
Code Description: Combustible Room Decon Waste
Surface Dose Rate (mR/h): 1 mr
Reassay (g): 0.0
Date Packaged: 1-26-83

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: .005" plastic.
Lead-Lined: No

Waste Form Description: Bags of low density trash, tubes,
articles of lab glassware, more
dense bundle on bottom of drum.

Packaging Description: Bagged trash.

Absorbent Information: No

Free Liquids: None Quantity: Contained:

Compressed Gases: None Type: Quantity:
Particulates: None Quantity: Type:

Packaging Efficiency: Probably 95% filled.
Volume % Combustible: Probably 80%.
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Good. Clean and dry with no
serious dents or rust.
Lead Lined: No
Liner Type: .005" plastic.

Waste Form Description: Plastic bucket with cleaning
materials, plastic floor covering, coveralls, gloves,
wood scrap, plastic hand lotion bottle containing
2 oz. hand lotion, glass jars in plastic bag.

Packaging Description: Partially bagged, partially
loose in liner.

Absorbent Information: None

Physical State of Waste: Dry except for damp
coveralls and hand lotion.

Component Weight (Kg): 20.3

WIPP-WAC Compliance Information: Not in compliance
with free liquid.

Computed Void Volume:

Packaging Efficiency: No significant void space.
Volume % Combustibles: 90%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: No-free liquid (2 oz).

Waste Form Category: Mixed paper, plastic, rubber, etc.

Time Period: 11 months

GENERAL INFORMATION

Container Identification: 010605
Content Code: A-18
Container Wt (Kg): 64.7
Original Assay (g): 122
Packaging Location: MST-DO, TA-55
Radionuclide: ²³⁹Pu

Container Type: 55-gal drum
Code Description: Mixed paper, plastic, rubber, etc.
Surface Dose Rate (mR/h): 15 mr
Reassay (g): 111
Date Packaged: 1-25-83

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: .005" plastic.
Lead-Lined: No

Waste Form Description:

Packaging Description: No record of radiograph.

Absorbent Information:

Free Liquids:	Quantity:	Contained:
Compressed Gases:	Type:	Quantity:
Particulates:	Quantity:	Type:

Packaging Efficiency:
Volume % Combustible:
Correct Content Code? New Code:
Other Information:

WIPP-Certifiable:

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: External, very good. Internal,
clean and dry.
Lead Lined: No
Liner Type: .005" plastic.

Waste Form Description: Rags in four cylindrical metal
containers, packed in 30-gal drum.

Packaging Description: Bagged-out 30-gal drum inside
55-gal drum.

Absorbent Information: None

Physical State of Waste: Clean and dry.

Component Weight (Kg): 7.9

WIPP-WAC Compliance Information: Appears to be in
compliance.

Computed Void Volume: 97.1%

Packaging Efficiency: 80% Void in 30-gal drum
Volume % Combustibles: 100% of contents
Correct Content Code? Ok New Code: Could be A-15
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Plastic materials

Time Period: 11 months

GENERAL INFORMATION

Container Identification: 010753
Content Code: A-16
Container Wt (Kg): 70
Original Assay (g): 46
Packaging Location: MST-DO, TA-55
Radionuclide: ²³⁹Pu

Container Type: 55-gal drum
Code Description: Plastic Materials.
Surface Dose Rate (mR/h): 12 mr
Reassay (g): 43
Date Packaged: 1-26-83

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: .005" plastic, taped to drum.
Lead-Lined: No

Waste Form Description: 30-gal drum containing separate bags of low-density material. Some cylindrical containers. One area in bottom more dense.

Packaging Description: Bagged-out 30 gal drum inside 55.

Absorbent Information: No

Free Liquids: None	Quantity:	Contained:
Compressed Gases: None	Type:	Quantity:
Particulates: None	Quantity:	Type:

Packaging Efficiency: 4/5 filled.
Volume % Combustible: Probably 100%
Correct Content Code? Yes New Code: Could be A-18
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: External, very good. Internal, clean and dry.
Lead Lined: No
Liner Type: .005" plastic

Waste Form Description: Plastic bag of empty plastic bottles, bag of paper filters. Approximately 1 liter of loose, fine, brown dust loose in 30-gal drum.

Packaging Description: Bagged-out 30-gal drum inside 55-gal drum.

Absorbent Information: None

Physical State of Waste: Dry. 36 g of the brown powder is less than 200 microns, but this is only 0.6% of the total; waste is in compliance.

Component Weight (Kg): 6.3

WIPP-WAC Compliance Information: Waste is in compliance.

Computed Void Volume: 96.7%

Packaging Efficiency: 25% Void.
Volume % Combustibles: 100%
Correct Content Code? Ok New Code: Could be A-18
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Mixed paper, plastic, rubber, etc.

Time Period: 11 months

GENERAL INFORMATION

Container Identification: 007060
Content Code: A-18
Container Wt (Kg): 47.2
Original Assay (g): 3.3
Packaging Location: CHM-1, SM-29
Radionuclide: ²³⁹Pu, MFP, ²⁴¹Am

Container Type: 55-gal drum
Code Description: Mixed paper, plastic, rubber, etc.
Surface Dose Rate (mR/h): 1 mr
Reassay (g): 3.56
Date Packaged: 2-14-83

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description:

Packaging Description: This drum was not radiographed.

Absorbent Information:

Free Liquids:	Quantity:	Contained:
Compressed Gases:	Type:	Quantity:
Particulates:	Quantity:	Type:

Packaging Efficiency:
Volume % Combustible:
Correct Content Code? New Code:
Other Information:

WIPP-Certifiable:

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: External, very good. Internal,
clean and dry, no dents, no dust.
Lead Lined: No
Liner Type: None

Waste Form Description: Gloves, rags, empty plastic
vials shoe covers, empty ice cream containers, organic
room trash.

Packaging Description: Large 5-mil plastic bag
contained the waste inside the drum.

Absorbent Information: None

Physical State of Waste: Dry and clean.

Component Weight (Kg): 19.7

WIPP-WAC Compliance Information: Appears to be in
compliance.

Computed Void Volume: 91.1%

Packaging Efficiency: 5% Void.
Volume % Combustibles: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Mixed paper, plastic, rubber, etc.

Time Period: 11 months

GENERAL INFORMATION

Container Identification: 007226
Content Code: A-18
Container Wt (Kg): 48.1
Original Assay (g): 0.4
Packaging Location: CHM-1, SM-29
Radionuclide: ²³⁹Pu, ²⁴¹Am

Container Type: 55-gal drum
Code Description: Mixed paper, plastic, rubber, etc.
Surface Dose Rate (mR/h): 2 mR
Reassay (g): 0.43
Date Packaged: 2-14-83

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: None
Lead-Lined: No

Waste Form Description: Organic trash, plus pipes or tubes,
about 30 inches long.

Packaging Description: Variable density suggesting multiple
bags of trash.

Absorbent Information: No

Free Liquids: None Quantity: Contained:

Compressed Gases: None Type: Quantity:
Particulates: None Quantity: Type:

Packaging Efficiency: Appeared almost full.
Volume % Combustible: Probably 80%.
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: External, very good. Internal,
clean and dry.
Lead Lined: No
Liner Type: None

Waste Form Description: Empty ice cream cartons, glass
vials, squeeze bottles, paper and rubber, bagged out in
several separate plastic bags.

Packaging Description: Plastic bagged drybox trash.

Absorbent Information: None

Physical State of Waste: Dry.

Component Weight (Kg): 21.9

WIPP-WAC Compliance Information: Appears to be in
compliance.

Computed Void Volume: 92.6%

Packaging Efficiency: 5% void space.
Volume % Combustibles: 100%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Other Combustibles

Time Period: 30 months

GENERAL INFORMATION

Container Identification: 010775
Content Code: A-60
Container Wt (Kg): 55.7
Original Assay (g): 27.9
Packaging Location: CMB-11, TA-55
Radionuclide: ²³⁹Pu

Container Type: 55-gal drum
Code Description: Other Combustibles.
Surface Dose Rate (mR/h): 1 mR
Reassay (g): 42.4
Date Packaged: 6-02-81

RADIOGRAPHIC EXAMINATION

Examination Date: No record of radiograph.
Liner Type:
Lead-Lined:

Waste Form Description:

Packaging Description:

Absorbent Information:

Free Liquids:	Quantity:	Contained:
Compressed Gases:	Type:	Quantity:
Particulates:	Quantity:	Type:

Packaging Efficiency:
Volume % Combustible:
Correct Content Code? New Code:
Other Information:

WIPP-Certifiable:

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Good, both outside and inside.
Inner drum very dirty, but structurally sound.
Lead Lined: No
Liner Type: .005" Plastic.

Waste Form Description: 9 separate bagout sleeves
containing glass and metal parts, gloves, paper,
plastic, tape, rags, scrap, plastic tubing. Also
loose fine brown dust in inner drum.

Packaging Description: Inside of 55 was a 30-gal drum
bagged out in .012" plastic.

Absorbent Information: None

Physical State of Waste: Dry. Damp rags inside of
one bagout sleeve, but no free liquid.

Component Weight (Kg): 15.8

Type:

WIPP-WAC Compliance Information: In compliance.
Quantity of brown dust was insignificant.

Computed Void Volume:

Packaging Efficiency: 10% Void.
Volume % Combustibles: 90%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Other Scrap Metals

Time Period: 12 months

GENERAL INFORMATION

Container Identification: 010435
Content Code: A-52
Container Wt (Kg): 84.9
Original Assay (g): 38
Packaging Location: MST-00, TA-55
Radionuclide: ²³⁹Pu

Container Type: 55-gal drum
Code Description: Other Scrap Metals
Surface Dose Rate (mR/h): 26 mr
Reassay (g): 39
Date Packaged: 1-20-83

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: Two .005" plastic bags.
Lead-Lined: No

Waste Form Description: Bag of dense material near top.
6 or 8 tubes in a cylindrical
container. Large mashed can on
bottom.

Packaging Description: Multiple bags and cans.

Absorbent Information: No

Free Liquids: None	Quantity:	Contained:
Compressed Gases: None	Type:	Quantity:
Particulates: None	Quantity:	Type:

Packaging Efficiency: About 4/5 filled.
Volume % Combustible: Quite low
Correct Content Code? Probably New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: External, very good. Internal,
clean and dry.
Lead Lined: No
Liner Type: Double plastic bags.

Waste Form Description: Smashed, rusty cans,
2 pieces of pipe, moist filter cake (no free
liquid). Fine filtering aid.

Packaging Description: Multiple bags in drum.

Absorbent Information: None

Physical State of Waste: Dry. The filtering aid was
35.4% of the total weight, and was all <70 microns.

Component Weight (Kg): 72.4

WIPP-WAC Compliance Information: Does not comply.

Computed Void Volume:

Packaging Efficiency: 15% Void.
Volume % Combustibles: 5% or less.
Correct Content Code? Partially New Code: Should be
Other Information: A-52, A-55, A-61

WIPP-Certifiable: No. Fines in filtering aid will
have to be stabilized.

Waste Form Category: Chemical Treatment Sludge

Time Period: Approximately 1 year

GENERAL INFORMATION

Container Identification: 012124
Content Code: A-75
Container Wt (Kg): 201.9
Original Assay (g): 0.017, 0.17, 0.35
Packaging Location: TA-50
Radionuclide: ^{238}Pu , ^{239}Pu , ^{241}Am .

Container Type: 55-gal drum
Code Description: Chemical Treatment Sludge
Surface Dose Rate (mR/h): 5 mr
Reassay (g): 0.016- ^{238}Pu , 0.015- ^{239}Pu ,
0.23- ^{241}Am
Date Packaged: 01-26-83

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: 90-mil
Lead-Lined: No

Waste Form Description: Sludge.

Packaging Description: 90-mil HDPE liner.

Absorbent Information: Portland cement.

Free Liquids: No	Quantity:	Contained
Compressed Gases: No	Type:	Quantity:
Particulates: Meets	Quantity:	Type:
criteria.		

Packaging Efficiency: Full
Volume % Combustible: None
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Very good.
Lead Lined: No
Liner Type: 90-mil high density polyethylene

Waste Form Description: Sludge

Packaging Description: Sludge in above containers.

Absorbent Information: Portland cement.

Physical State of Waste: Solid. No free liquid.

Component Weight (Kg): 174.6

WIPP-WAC Compliance Information: Should be possible to certify.

Computed Void Volume:

Packaging Efficiency: 90-95%.
Volume % Combustibles: None
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Chemical Treatment Sludge

Time Period: Approximately 1 year

GENERAL INFORMATION

Container Identification: 012307
Content Code: A-75
Container Wt (Kg): 201.9
Original Assay (g): 0.017, 0.17, 0.36
Packaging Location: TA-50
Radionuclide: ²³⁸Pu, ²³⁹Pu, ²⁴¹Am.

Container Type: 55-gal drum
Code Description: Chemical Treatment Sludge
Surface Dose Rate (mR/h): 6 mr
Reassay (g): 0.027-²³⁸Pu, 0.016-²³⁹Pu,
0.24-²⁴¹Am
Date Packaged: 01-24-83

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: 90-mil
Lead-Lined: No

Waste Form Description: Sludge.

Packaging Description: 90-mil HDPE liner.

Absorbent Information: No

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Meets	Quantity:	Type:
criteria.		

Packaging Efficiency: Full
Volume % Combustible: None
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Very good.
Lead Lined: No
Liner Type: 90-mil high density polyethylene

Waste Form Description: Sludge

Packaging Description: Sludge in above containers.

Absorbent Information: None.

Physical State of Waste: Solid. No free liquid.

Component Weight (Kg): 179.2

WIPP-WAC Compliance Information: Should be possible
to certify.

Computed Void Volume:

Packaging Efficiency: 95%
Volume % Combustibles: None
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Chemical Treatment Sludge

Time Period: Approximately 1 year

GENERAL INFORMATION

Container Identification: 012327
Content Code: A-75
Container Wt (Kg): 201.9
Original Assay (g): 0.017, 0.17, 0.36
Packaging Location: TA-50
Radionuclide: ²³⁸Pu, ²³⁹Pu, ²⁴¹Am.

Container Type: 55-gal drum
Code Description: Chemical Treatment Sludge
Surface Dose Rate (mR/h): 6 mr
Reassay (g): 0.015-²³⁸Pu, 0.017-²³⁹Pu,
0.24-²⁴¹Am
Date Packaged: 01-27-83

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: 90-mil
Lead-Lined: No

Waste Form Description: Sludge.

Packaging Description: 90-mil HDPE liner.

Absorbent Information: No

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Meets	Quantity:	Type:
criteria.		

Packaging Efficiency: Full
Volume % Combustible: None
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Very good.
Lead Lined: No
Liner Type: 90-mil high density polyethylene

Waste Form Description: Sludge

Packaging Description: Sludge in above containers.

Absorbent Information: None.

Physical State of Waste: Solid. No free liquid.

Component Weight (Kg): 179.2

WIPP-WAC Compliance Information: Should be possible
to certify.

Computed Void Volume:

Packaging Efficiency: 95%
Volume % Combustibles: None
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Chemical Treatment Sludge

Time Period: Approximately 1 year

GENERAL INFORMATION

Container Identification: 012535
Content Code: A-75
Container Wt (Kg): 201.9
Original Assay (g): 0.017, 0.17, 0.36
Packaging Location: TA-50
Radionuclide: ^{238}Pu , ^{239}Pu , ^{241}Am .

Container Type: 55-gal drum
Code Description: Chemical Treatment Sludge
Surface Dose Rate (mR/h): 5 mr
Reassay (g): ^{238}Pu , ^{239}Pu , ^{241}Am
Date Packaged: 01-26-83

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: 90-mil
Lead-Lined: No

Waste Form Description: Sludge.

Packaging Description: 90-mil HDPE liner.

Absorbent Information: Portland cement

Free Liquids: No	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: Meets criteria.	Quantity:	Type:

Packaging Efficiency: Full
Volume % Combustible: None
Correct Content Code? Yes
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Very good.
Lead Lined: No
Liner Type: 90-mil high density polyethylene

Waste Form Description: Sludge

Packaging Description: Sludge in above containers.

Absorbent Information: Portland cement.

Physical State of Waste: Solid. No free liquid.

Component Weight (Kg): 179.2

WIPP-WAC Compliance Information: Should be possible to certify.

Computed Void Volume:

Packaging Efficiency: 95%
Volume % Combustibles: None
Correct Content Code? Yes
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Mixed Combustible-Noncombustible Trash

Time Period: 11 months

GENERAL INFORMATION

Container Identification: 010773
Content Code: A-19
Container Wt (Kg): 50.4
Original Assay (g): 0.1
Packaging Location: MST-00, TA-55
Radionuclide: ²³⁹Pu

Container Type: 55-gal drum
Code Description: Mixed Combustible-Noncombustible
Trash
Surface Dose Rate (mR/h): 5 mr
Reassay (q): Apparently not done
Date Packaged: 1-26-83

RADIOGRAPHIC EXAMINATION

Examination Date: No record of radiograph.
Liner Type:
Lead-Lined:

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Outside, very good. Inside, rust
colored, damp.
Lead Lined: No
Liner Type: .005" Plastic

Waste Form Description:

Waste Form Description: 5-30" pipe sections, taped.
Included valves, also taped. Wet paper, rags, gloves,
coveralls, but no free liquid.

Packaging Description:

Packaging Description: Partially bagged in plastic,
partially loose in liner.

Absorbent Information:

Absorbent Information: None

Physical State of Waste: Wet, but no free liquid.

Free Liquids:	Quantity:	Contained
Compressed Gases:	Type:	Quantity:
Particulates:	Quantity:	Type:

Component Weight (Kg): 31.8

WIPP-WAC Compliance Information: Appears to be in
compliance.

Computed Void Volume:

Packaging Efficiency:
Volume % Combustible:
Correct Content Code? New Code:
Other Information:

Packaging Efficiency: 20% Void.
Volume % Combustibles: 65%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable:

WIPP-Certifiable: Yes

Waste Form Category: Other Combustibles

Time Period: 30 months

GENERAL INFORMATION

Container Identification: 010756
Content Code: A-60
Container Wt (Kg): 40.5
Original Assay (g): 0.0
Packaging Location: CMB-11, TA-55
Radionuclide: Am-44, CF-48, BK-249

Container Type: 55-gal drum
Code Description: Other combustibles
Surface Dose Rate (mR/h): 5 mr
Reassay (g): 0.0
Date Packaged: 6-15-81

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: .005" plastic
Lead-Lined: No

Waste Form Description: Dense ring in bottom of 15.

Packaging Description: Smaller drum (15-gal?) inside 55.

Absorbent Information: No

Free Liquids: None	Quantity:	Contained:
Compressed Gases: None	Type:	Quantity:
Particulates: None	Quantity:	Type:

Packaging Efficiency: 15-gal drum about 1/3 filled.
Volume % Combustible: Probably at least 50%.
Correct Content Code? Possibly New Code: A-19 better.
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Good, externally. Some scraped paint. Internally, clean and dry.
Lead Lined: No
Liner Type: .005" plastic

Waste Form Description: Fluorescent bulb, roll of masking tape, empty vials, paper, metal and plastic scrap, foil, copper rings.

Packaging Description: 19-gal steel drum bagged out inside 55. Numerous quart and pint ice-cream cartons inside 19.

Absorbent Information: None

Physical State of Waste: Dry and clean.

Component Weight (Kg): 15.24

WIPP-WAC Compliance Information: In compliance with change of content code.

Computed Void Volume:

Packaging Efficiency: 65% Void.
Volume % Combustibles: 50%
Correct Content Code? No New Code: A-19
Other Information:

WIPP-Certifiable: Yes

Waste Form Category: Leached Process Residues

Time Period: 25 months

GENERAL INFORMATION

Container Identification: 010108
Content Code: A-25
Container Wt (Kg): 56.8
Original Assay (g): 80 (239) 0.3 (238)
Packaging Location: CMB-11, TA-55
Radionuclide: Mixed as shown

Container Type: 55-gal drum
Code Description: Leached process residues
Surface Dose Rate (mR/h): 13 mr
Reassay (g): 53 (239) 0.0 (238)
Date Packaged: 7-02-81

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: Double lined with 0.005" plastic, and taped.
Lead-Lined: No

Waste Form Description: Probably process solids.

Packaging Description: Numerous cylindrical containers
within containers. Dense material.

Absorbent Information: No

Free Liquids: None	Quantity:	Contained:
Compressed Gases: None	Type:	Quantity:
Particulates: None	Quantity:	Type:

Packaging Efficiency: Probably 4/5 filled.
Volume % Combustible: Low--perhaps 5%.
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: External, very good; internal,
clean and dry.
Lead Lined: No
Liner Type: Double .005" plastic, taped.

Waste Form Description: Solids such as CaCl_2 ,
hydroxide cake, ceramic chips, 1 double-bagged
"damp" dark powder.

Packaging Description: 14 units. Either can in bag in
can, or can in can in can, or double plastic bagged.

Absorbent Information: None

Physical State of Waste: Dry except for damp powder
mentioned above. No free liquid.

Component Weight (Kg): 33.44

WIPP-WAC Compliance Information: Appears to be in
compliance.

Computed Void Volume:

Packaging Efficiency: 25% Void.
Volume % Combustibles: 5-10%
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Possibly

Waste Form Category: Leached Process Residues

Time Period: 30 months

GENERAL INFORMATION

Container Identification: 010925
Content Code: A-25
Container Wt (Kg): 227.3
Original Assay (g): 32.4
Packaging Location: CMB-11, TA-55
Radionuclide: ²³⁹Pu

Container Type: 55-gal drum
Code Description: Leached process residues
Surface Dose Rate (mR/h): 2 mr
Reassay (g): Not done. Too heavy for equipment.
Date Packaged: 6-24-81

RADIOGRAPHIC EXAMINATION

Examination Date: 9-83
Liner Type: Lead
Lead-Lined: Yes

Waste Form Description: Process solids, probably in
1/2 gal cans.

Packaging Description: Multiple containers of process
solids

Absorbent Information: None

Free Liquids: None apparent	Quantity:	Contained:
Compressed Gases: No	Type:	Quantity:
Particulates: No	Quantity:	Type:

Packaging Efficiency: Appeared to be almost full.
Volume % Combustible: None except plastic bagging.
Correct Content Code? Yes New Code:
Other Information:

WIPP-Certifiable: Apparently yes

VISUAL EXAMINATION

Examination Date: 1-84
Container Condition: Good, wet inside, some rust.
Lead Lined: Yes
Liner Type: Lead

Waste Form Description:

Packaging Description: Multiple 1/2 gal cans of wet
red sludge, contained in plastic bag.

Absorbent Information: None

Physical State of Waste: Wet. There were varying
amounts of free standing liquid on top of each can,
and since some of the cans were upside down, some of
the liquid was leaking.

Component Weight (Kg): 218

WIPP-WAC Compliance Information: Not in compliance.

Computed Void Volume:

Packaging Efficiency: 1% Voids.
Volume % Combustibles: None
Correct Content Code? Yes New Code:
Other Information: The liquid smelled strongly of
NH₃, so there was no danger of acid corrosion.

WIPP-Certifiable: Not certifiable until the free
liquid in each can has been stabilized.