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WMP-33204
Revision 0

Acceptable Knowledge Summary Report for Plutonium Finishing Plant Complex Effluents

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200

FLUOR.
P.O. Box 1000
Richland, Washington

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Document Type: RPT Program/Project: WM

R. J. Swan
EnergySolutions Technical Services

J. P. Evans
Fluor Hanford, Inc.

M. S. Watson
EnergySolutions Technical Services

J. D. Anderson
Project Enhancement Corporation

Date Published
May 2007

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J. D. Aardal 05/09/2007
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EXECUTIVE SUMMARY

The purpose of this report is to provide the acceptable knowledge (AK) information that supports the characterization and disposition of waste generated as a result of effluents that were discharged by the Plutonium Finishing Plant (PFP) Complex. The effluent infrastructure discussed includes the 241-Z Treatment and Storage Tanks, 241-Z-361 Settling Tank, 241-Z-8 Silica Slurry Tank, 216-Z-1A Crib/Tile Field (216-Z-1A), 216-Z-12 Process Crib (216-Z-12), and the 2904-ZA Monitoring Station. This information is required by the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit and the WIPP contact-handled Waste Acceptance Criteria.

The PFP Complex effluent waste, divided into four waste streams, was shipped between 1973 and 1981, and is retrievably stored at the U.S. Department of Energy's (DOE) Hanford Site in Eastern Washington (Figure 1). This report and its supporting documentation have been prepared in support of Hanford's Transuranic (TRU) Waste Certification Program, and are intended to provide a consistent, defensible, and auditable record of AK for the subject waste.

The waste streams described in this report are currently in retrievable storage in Burial Grounds 218-W-4B and 218-W-4C and consists of mixed TRU debris, mixed TRU soil, and mixed low-level debris. The estimated volume of the waste is 75.86 m^3 (99.22 yd^3) and is contained in 230 208-L [55-gal] drums, one 416-L (110–gal) drum, one 4.6-m x 1.8-m x 1.2-m (15-ft x 6-ft x 4-ft) metal box, and one 5-m x 2.2-m x 1.6-m (16.5-ft x 7.1-ft x 5.2-ft) metal box. Volumes for containers within any one of the four waste streams may change based on addition and/or deletion of containers.

The AK documentation indicates that there may be up to four layers of packaging. The PFP Complex Effluent waste has been designated with the hazardous waste numbers F001, F002, F003, F005, D004, D005, D006, D007, D008, D009, D011, and D022 (*Toxic Substances Control Act of 1976* [TSCA] polychlorinated biphenyls [PCB] were assigned to 16 containers) in accordance with the *Washington Administrative Code* (WAC) 173-303.[1]

This document provides mandatory waste program management and waste stream-specific AK information. It also describes the TRU waste generating activities and waste management practices in effect at the time the waste was generated.

The use of AK to make hazardous waste determinations by waste generators and treatment, storage, and disposal facilities was authorized by the *Resource Conservation and Recovery Act of 1976* (RCRA)[2] and *New Mexico Hazardous Waste Act of 1978.*[3] Knowledge of the materials and processes that generated the waste was obtained from baseline characterization of TRU waste presented in this document. AK includes information relating to plant history, process operations, and waste management, in addition to waste-specific data generated prior to the effective date of the RCRA regulations. AK, as an alternative to sampling and analysis, can be used to meet all or part of the waste characterization requirements under RCRA.

[1]WAC 173-303, "Dangerous Waste Regulations," *Washington Administrative Code,* as amended.
[2]*Resource Conservation and Recovery Act of 1976,* 42 USC 6901 et seq.
[3]*New Mexico Hazardous Waste Act of 1978,* §§74-4-1 et. seq.

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TERMS

AEC	U.S. Atomic Energy Commission
ANN	aluminum nitrate nonahydrate
AK	Acceptable Knowledge
ARHCO	Atlantic Richfield Hanford Company
CAW	current acid waste
DBBP	dibutyl butylphosphonate
D&D	decontamination and decommissioning
DOE	U.S. Department of Energy
dpm	disintegrations per minute
ERDA	U.S. Energy Research and Development Agency
IDMS	Integrated Document Management System
PCB	polychlorinated biphenyl
PFP	Plutonium Finishing Plant
PRF	Plutonium Reclamation Facility
PUREX	plutonium uranium reduction and extraction (obsolete)
RCRA	*Resource Conservation and Recovery Act of 1976*
RECUPLEX	Recovery of Uranium and Plutonium by Extraction
REDOX	reduction and oxidation
RHO	Rockwell Hanford Operations
RMIS	Records Management Information System
RMS	Records Management System
SC	slag and crucible
SWITS	Solid Waste Information and Tracking System
TBP	tributyl phosphate
TRU	Transuranic
TRU-SPO	TRU Site Project Office
TRU-WST	TRU Waste Services Technical
TSCA	*Toxic Substances Control Act of 1976*
WAC	*Washington Administrative Code*
WHC	Westinghouse Hanford Company
WIPP	Waste Isolation Pilot Plant

ACCEPTABLE KNOWLEDGE SUMMARY REPORT FOR PLUTONIUM FINISHING PLANT COMPLEX EFFLUENTS

1.0 INTRODUCTION

The purpose of this report is to provide a summary of acceptable knowledge (AK) information that supports the characterization and disposal of transuranic (TRU) waste at the Waste Isolation Pilot Plant (WIPP). This waste stream consists of debris and homogeneous solid waste generated by the Plutonium Finishing Plant (PFP) Complex that is associated with its effluent or effluent infrastructure. This consists of the 241-Z Treatment and Storage Tanks, 241-Z-361 Settling Tank, 241-Z-8 Silica Slurry Tank, 216-Z-1A Crib/Tile Field, 216-Z-12 Process Crib, and the 2904-ZA Monitoring Station.

This AK summary report will concentrate primarily on areas where waste was generated. These areas are located in or around the 241-Z Treatment and Storage Tanks, 241-Z-361 Settling Tank, 241-Z-8 Silica Slurry Tank, 216-Z-1A Crib/Tile Field, 216-Z-12 Process Crib, [soil disposal facilities were designated as 216-Z structures], and 2904-ZA Monitoring Station.[TRU-WST-11.9-0418200735075 (p. 27)]

Several publications provide information about some of the tanks, cribs, trenches, etc., but they do not provide a complete history of the PFP effluents. In the future, as more TRU waste containers need to be retrieved from different burial grounds or trenches, this AK summary report will presumably be updated. Therefore, every effluent line that went to every discharge location cannot possibly be accounted for and included in this AK summary report.[TRU-WST-11.9-0418200734986]

Currently, the waste stream containers are being stored in two burial ground locations with each representing a different time period of generation. The bulk of the waste stream containers was generated from 1973 to 1978 and sent to burial ground 218-W-4B. The waste stream containers generated in 1980 and 1981 were sent to burial ground 218-W-4C.

This document provides several appendices, as listed below. Included are four waste designations along with their supporting documentation. There have been two previous designations that have been superseded and are still being listed in Table 8 for tracking purposes. Those two designations will have the word [superseded] appearing below the Records Management System (RMS) Tracking number.[TRU-WST-11.9-0412200748928]

Appendix A, Waste Designations
Appendix B, Container List
Appendix C, Chemical Lists
Appendix D, Assumptions/Calculations.

2.0 BACKGROUND AND PROCESS DESCRIPTION

2.1 FACILITY HISTORY

The PFP, also known as Z-Plant or 234-5Z, was the location for the last step in the plutonium metal production process at the Hanford Site (Figure 1). The resulting plutonium was used in weapons production and other government-funded programs. The PFP's chemical processing facilities converted plutonium nitrate solutions into plutonium metal and/or oxides. Throughout its operating history, which began in 1949, the PFP used several waste disposal facilities. Over the years, aqueous waste has been discharged to tile fields, ditches, cribs, trenches, French drains, diversion boxes, settling tanks, septic tanks, drain fields, and to a seepage basin and a reverse well. By the late 1960s, PFP was one of the major sources of plutonium discharges to soils at the Hanford Site. Currently, aqueous waste discharged from the PFP is routed to double-shell underground storage tanks.[TRU-WST-11.9-0418200735075 (p. 28), TRU-TS-11.4.3-0423199947115 (p. 28), TRU-WST-11.4.3-1026200445132 (p. 2-5.1), TRU-WST-11.4.3-0801200528154 (pp. II.1-14)]

The subject aqueous waste streams from PFP were discharged either to the 241-Z-8 Silica Slurry Tank directly (Recovery of Uranium and Plutonium by Extraction [Recuplex] operations) or the 241-Z Treatment and Storage Tanks at PFP prior to transfer to the 241-Z-361 Settling Tank. From the 241-Z-361 Settling Tank, the aqueous waste was discharged to the 216-Z-1A and 216-Z-12 Cribs for disposal (Figure 2). The cribs were underground structures that introduced aqueous wastes to soil through perforated underground piping and were initially constructed by digging a ditch. These cribs are also described as drain fields and/or tile fields. A layout of the PFP Complex and associated disposal sites is shown in Figure 3.[TRU-WST-11.4.3-0801200528154 (p. II-1-44 to 45), TRU-WST-11.4.3-0815200524635 (p. 14-17)]

From 1949 to 1955, early fabrication was performed on the rubber glove metal line at PFP. In addition, PFP's Analytical Laboratory operations contributed to the 241-Z effluent. Process and liquid waste disposal was routed to Building 241-Z Treatment and Storage Tanks (which housed five holding tanks) that ran to the 241-Z-361 Settling Tank that discharged to the 216-Z-1A Tile Field. A separate line from PFP routed to the 241-Z-RB that discharged to the 216-Z-1 Ditch (Figure 4).[TRU-WST-11.9-0418200734986]

From 1955 to 1960, the Remote Mechanical A line, Recuplex, and the Development Laboratory were added to the PFP. The Recuplex effluent was sent to the 241-Z-8 Silica Slurry Tank (settling tank) and to the 216-Z-9 Crib. In 1959 the 216-Z-12 Tile Field was added as an additional discharge from the 241-Z-361 Settling Tank. In about 1960, the 241-Z-RB was removed from service and a direct line was sent to a replacement ditch for the 216-Z-1 Ditch (Figure 5).[TRU-WST-11.4.3-0721200544677, TRU-WST-11.9-0418200734986]

From 1960 to 1962 the Remote Mechanical C line replaced the rubber glove metal line (Figures 6 and 7).[TRU-WST-11.4.3-0721200544677, TRU-WST-11.9-0418200734986]

From 1962 to 1966, Recuplex was removed from service and in 1966 the Plutonium Reclamation Facility (PRF) Scrap Recovery process was started. During this four-year interval there were no

activities for processing until 1966 when PRF came on line (also see Section 2.7.1). The PRF routed effluent to the 241-Z Treatment and Storage Tanks. The 232-Z Waste Incineration Facility was added and routed effluent to the 241-Z Treatment and Storage Tanks, and to the PRF. The 241-Z-8 and 241-Z-9 were removed from service around 1962 (Figure 7).[TRU-WST-11.4.3-0721200544677, TRU-WST-11.9-0418200734986]

From 1966 to 1973, the Remote Mechanical A line switched from processing metal to processing oxide. The Remote Mechanical C line continued to process metal. Building 242-Z Waste Treatment and Americium Recovery Facility had return lines feeding from tanks D7/D8 in 241-Z Treatment and Storage Tanks that also routed back (as a loop) to the 241-Z Treatment and Storage Tanks. The 216-Z-1A Tile Field was removed from service in 1969 and the 216-Z-18 Tile Field began accepting effluent directly from the PRF (Figure 8).

From 1973 to 1989 all cribs, ditches, and tile fields along with the 241-Z-361 Settling Tank were removed from service. Beginning in 1973, effluents were routed from 241-Z Treatment and Storage Tanks to the 242-T Evaporator at the tank farms with the exception of an effluent line still being shown to the old Z-1 Replacement Ditch (Figure 9).[TRU-WST-11.4.3-0629200642251 (p. 3)]

From 1990 to 2003 the old line(s) from the PFP to 241-Z Treatment and Storage Tanks were replaced with new encased lines (1993). This line was also shared by the PRF. The effluent line to the Z-1 Replacement Ditch was bypassed in 1997 and routed to the Treated Effluent Disposal Facility (Figure 10).

2.2 241-Z-8 SILICA SLURRY TANK

The 241-Z-8 Silica Slurry Tank operated from 1955 to 1962. Located due east (approximately 91.4 m [300 ft]) of the 234-5Z Building and South of 19th Street and west of Camden Avenue, the 241-Z-8 consisted of a horizontal cylindrical tank located 1.8 m (6 ft) below grade. The tank measurements were 2.4 m (8 ft) in diameter by 12.2 m (40 ft) long, and were constructed of 0.79 cm (5/16 in.) steel or wrought iron plate. The two inlet pipes on the west end and the overflow pipe on the east end of the tank were blanked. The tank had two capped 10-cm (4-in.) steel vent pipes that extend above grade and a 0.3-m (1-ft) diameter pump access opening and a 0.6-m (2-ft) diameter manhole (Figure 11).[TRU-WST-11.4.3-0721200544677, TRU-WST-11.4.2-0607200627147]

The tank was used as a solids settling tank for back flushes of the Recuplex feed filters. Silica gel was used as a settling agent on the dissolved solids. The solids and silica gel were flushed to the 241-Z-8 Tank with nitric acid. Overflow from the tank went to the 216-Z-8 French Drain, located approximately 11 m (36 ft) east of the settling tank. Approximately 9,590 L (92,530 gal) of neutral-basic waste overflowed from the tank to the 216-Z-8 French Drain.[TRU-WST-11.4.3-0721200544677, TRU-WST-11.9-0418200734893 (p. 144/212), TRU-WST-11.4.3-0815200524635, (p. 27)]

In July 1959, records indicated that the tank was at its overflow capacity, i.e., 58,430 L (15,435 gal). The tank was deactivated in 1962, and no records were found to indicate that the tank had been pumped prior to that. In 1974, tank pumping was performed: 28,800 L (7,600 gal) of

waste and 19,000 L (5,000 gal) of flush solution were pumped from the tank.[TRU-WST-11.4.3-0721200544677]

2.3 241-Z TREATMENT AND STORAGE TANKS

The 241-Z Treatment and Storage Tanks began operations November 24, 1948. The tanks were numbered D4 to D8 (Figure 13). The operating capacity of the tank system was 65,000 L (17,000 gal). The site is located near the south end of the PFP Complex and consisted of an above-ground, weather-protected metal building containing controls and monitoring systems for the below-grade concrete vault. Inside the vault there were five stainless steel holding tanks (Figure 12), approximately 8.4 m (8 ft) high and 3.0 m (10 ft) in diameter, with an effective working capacity of approximately 12,000 L (3,000 gal) each and weighing 5.44 metric tons (6 tons) when empty. Each tank was contained within a concrete cell. The cells had removable cover blocks for the replacement of large equipment. Each cover block weighs about one ton. There was no enclosure over the cover blocks. Tank samplers were located in unventilated plywood boxes on top of the concrete pad and exposed to the atmosphere. Through the years of sampling using this method, the plywood boxes and surrounding pad area became highly contaminated. In the 1979 timeframe, a metal shed-like building was erected over the pad, the plywood boxes and sampling lines were removed, and a sample glovebox was installed.[TRU-WST-11.4.3-0721200544677, TRU-WST-11.9-0418200735224 (p. 50)]

Effluents directed to the 216-Z-1A and 216-Z-12 Cribs from the 241-Z system were derived from drain systems in the laboratories and from PFP operations. Liquid wastes generated from PFP operations were collected in Tank 241-Z-D8 for interim storage. The waste was then transferred to Tank 241-Z-D5 for treatment (pH adjustment) prior to discharge to the 241-Z-361 Settling Tank. Tanks 241-Z-D4 and 241-Z-D7 were reserve waste accumulation tanks. The D4, D5, and D6 drains (input) went to the D6 sump tank. Prior to transfer to cribs, the D7 tank contents were sampled. If the plutonium content was analyzed to be more than 10 g per batch, the material was generally reprocessed. Below the discard limit, caustic was added and the material was sent to the cribs via the 241-Z-361 Settling Tank.[TRU-WST-11.4.3-0815200524862, TRU-WST-11.4.3-0913200542772]

2.4 241-Z-361 SETTLING TANK

Located southeast of the 241-Z Treatment and Storage Tanks, the 241-Z-361 Settling Tank operated from 1949 to 1973 to receive radioactively contaminated liquid. The 241-Z-361 Settling Tank was an underground, steel-lined, reinforced concrete structure. The tank had a sloping bottom and the inside of the tank was approximately 4 m (13 ft) wide, 8 m (26 ft) long and 5.5 m (18 ft) deep (Figure 14). Liquids entered the tank from the 241-Z Treatment and Storage Tanks through two 15-cm (6-in.) stainless steel pipes, which penetrated the tank wall by way of a baffled opening, and exited as overflow through a baffle into one 20-cm (8-in.) stainless steel pipe into cribs. Baffles over the inlet and overflow pipes reduced turbulent flow in the tank, which permitted particulates in the waste stream to settle out. When the settling tank was filled

to the overflow level, the liquid flowed by gravity to one of the cribs. Sludge would remain in the tank (Figure 15).

The tank provided settling capacity for solids entrained in liquid wastes generated by the PFP and served wastes enroute to various cribs (e.g., 216-Z-1, 216-Z-2, 216-Z-3, 216-Z-1A, and 216-Z-12). The 241-Z-361 Settling Tank contents are expected to include constituents from nearly all of the historical PFP aqueous processes and are considered representative of the 216-Z-1A and 216-Z-12 Crib waste. Those chemicals and constituents suspected or considered to be present in the 241-Z-361 Tank sludge are also assumed to be in the 1980 and 1981 containers.[TRU-WST-11.4.3-0720200533922 (p. 18), TRU-WST-11.4.3-0712200524082 (p. 21), TRU-WST-11.9-0418200734818]

The tank was blanked off in 1973. Supernate liquid was pumped from the tank and the tank was sealed.[TRU-WST-11.4.3-0815200524862 (p. 18)]

2.5 CRIB DESCRIPTION—LAYOUT/CONSTRUCTION

2.5.1 216-Z-1A Crib/Tile Field

The 216-Z-1A Crib was operable from 1949 to 1959 and from 1964 to 1969. The unit lies south of PFP's perimeter fence and immediately south of the 216-Z-1 and 216-Z-2 Cribs. It received 6,200,000 L (1,637,867 gal) of 234-5Z, 236-Z and 242-Z process effluent during its operational lifetime. The tile field was originally constructed to receive liquid waste overflow from the 216-Z-1 and the 216-Z-2 Cribs. Later the cribs were bypassed and the waste was routed directly into the 216-Z-1A Crib/Tile Field. The cribs received aqueous and organic wastes from the PRF, americium recovery line wastes from the 236-Z and the 242-Z Buildings, and uranium wastes from the 236-Z Building.[TRU-WST-11.4.3-0721200544677, TRU-WST-11.9-0418200734818]

The 216-Z-1A Crib construction is also called an underground drain field. This crib is 85.3 m (280 ft) long and runs north-south with seven pairs of 21.3-m (70-ft) drain field extensions, or laterals, at 10.7-m (35-ft) intervals in a herring-bone pattern. The piping is approximately 5.8 m (19 ft) below grade and rests near the surface of a 1.5-m (5-ft) deep gravel bed. Perforated 12.7-cm (8-in.) vitrified clay pipe was used throughout. The length of the tile field was expanded twice. The crib was divided into three sections. The original section is known as 216-Z-1AA. The expanded sections are known as 216-Z-1AB and 216-Z-1AC (Figure 16).[TRU-WST-11.4.3-0815200524635 (p. 16), TRU-WST-11.4.4-0810200534426]

When the site was deactivated in 1969, the pipeline discharging to the tile field was plugged. Characterization efforts identified radionuclide contamination and high concentrations of carbon tetrachloride below the waste site structures. In 1992, Soil Vapor Extraction operations were begun to extract carbon tetrachloride from the vadose zone beneath the 216-Z-1A Crib.

2.5.2 216-Z-12 Crib

The 216-Z-12 Crib was operable from 1959 to 1973 and is located southwest of the 234-5Z Building, outside the security fence. It received 281,000,000 L (74,232,346 gal) of PFP process effluent during its operational lifetime. The 216-Z-12 Crib was constructed with a rectangular surface dimension of approximately 25 m by 110 m (81 ft by 361 ft). The crib's excavation was 6.1 m (20 ft) deep with inward sloping sides, resulting in a floor dimension of approximately 6.1 m by 91.4 m (20 ft by 300 ft). Three gauge wells were placed on concrete pads on the crib bottom to measure liquid levels in the crib. The floor of the excavation was then covered by 1.2 m (4 ft) of gravel. A single vitrified, perforated, clay pipe ran the length of the crib and was placed directly on top of the gravel layer with no slope. The distributor pipe was vitreous clay tile pipe with a 30-cm (12-in.) diameter. (A second steel pipe [a bypass pipeline] 15 cm [6 in.] in diameter was installed in 1968 when the original line was plugged. This second pipe runs the length of the crib to the west of the original pipe.) Individual segments had 0.6-cm (0.25-in.) perforations located at six places on the circumference every 7.6 cm (3 in.) along the pipe. Construction specifications indicate that the joints of the individual segments of pipe were sealed. The bottom 1.5 m (5 ft) of the excavation was backfilled with gravel and covered with a 0.5-mm (0.02-in.) polyethylene barrier. The remaining excavation was backfilled to ground level (Figure 17).[TRU-WST-11.4.3-0708200528858 (pp. iii, 1, 5), TRU-WST-11.4.3-0721200544677]

When the crib was deactivated, the pipeline was blanked at the 241-Z Treatment and Storage Tanks. The crib was partially vitrified as part of an in-situ vitrification test project conducted in June 1987. After 295 hours of operation at 460 megawatts per hour of electrical current, the soil became molten. This resulted in a 450-ton block of vitrified soil, extending to a depth of 7.3 m (24 ft).

2.6 2904-ZA RADIATION AND FLOW MONITORING STATION

The 2904-ZA Monitoring Station was a 3.7 m (12 feet) by 3.7 m (12 feet) pre-engineered, corrugated-metal building that housed the online alpha monitor as well as a composite sampler and a flow meter. A single riser penetrated an effluent line for purposes of sampling the stream. The building and its equipment was deactivated in February 1994 and was located outside of the PFP security fence.[TRU-WST-11.9-0418200751635]

The 2904-ZA Sample Building was located downstream from the PFP sewer line, which was known to be contaminated. Sources of waste water were eyewash stations located in the labs, storm drains, supply fan drains, floor drains, process steam trap drains, utility water drains, and the heating, ventilation, and air conditioning condensate drains. The former effluent sources discharged to the now deactivated 216-Z-20 Crib.[TRU-TS-11.4.3-0426199933131]

2.7 FACILITY OPERATIONS

The 241-Z Treatment and Storage Tanks, 241-Z-361 Settling Tank, 216-Z-1A Crib/Tile Field, 216-Z-12 Process Crib, and the 2904-ZA Monitoring Station received aqueous waste from PFP operations (Figure 18). A timeline is provided in Table 1.

Corrosive waste from PFP was treated prior to discharge to the 241-Z-361 Settling Tank. Sodium carbonate (soda ash), sodium hydroxide (NaOH), and/or potassium hydroxide were used to increase the pH and/or neutralize the waste. Ferric nitrate solution was added to provide 1% stable solids and sodium nitrite was added to inhibit corrosion. Treatment ensured that the aluminum compounds were solubilized for pumping out of the tank into the cribs.

The addition of caustic to the 241-Z-D7 Tank was checked by use of alkoacid paper. If the paper was still red, more caustic was added. If the paper turned blue, the contents were transferred to the 241-Z-361 Settling Tank. Periodically, nitric acid was used to preclude plutonium hold-up in the tank. When this occurred, the acid flushes were sent directly to the 241-Z-361 Settling Tank. Additional constituents known to be present in the 241-Z-D7 Treatment Tank include chromium, lead, aluminum nitrate, aluminum fluoride, potassium fluoride, magnesium nitrate, calcium nitrate, and other trace metal ions.[TRU-WST-11.4.3-0815200524635 (p. 20), TRU-TS-11.4.3-0426199933131, TRU-WST-11.4.3-0815200524862 (p. 9), TRU-WST-11.4.3-0720200533922 (p 16)]

After the aqueous waste was collected and treated to the proper pH while still in the 241-Z Treatment and Storage Tanks, the waste was transferred to the 241-Z-361 Settling Tank. Overflow from the Settling Tank went to the 216-Z-1A and to the 216-Z-12 Cribs. Liquid exited the Settling Tank as overflow to the 216-Z-1, 216-Z-2, and 216-Z-3 Cribs. The 216-Z-12 replaced the 216-Z-1, 216-Z-2, and 216-Z-3 Cribs in 1959. Some of the PFP aqueous waste was also discharged directly to 216-Z-1A and not through the 241-Z-361 Settling Tank. Figure 19 is a flow chart showing input to the cribs.[TRU-WST-11.9-0418200734818]

The 241-Z-361 Settling Tank was blanked off and was placed out of service in 1973. After this time the waste from the 241-Z-D5 Tank was routed to the tank farms via the 244-TX Receiver Tank. Table 2 provides a description of the waste sources to the 216-Z-1A and 216-Z-12 Cribs.[TRU-WST-11.4.3-0712200524082 (pp. 17, 21, 27), TRU-WST-11.4.3-0720200533922 (pp. 16, 17, 20, 51), TRU-WST-11.4.3-0708200528858 (p. 7), TRU-WST-11.4.3-0726200544049 (p. 22), TRU-WST-11.4.3-0810200534996 (p. 26), TRU-WST-11.4.3-0721200544677]

2.7.1 Recuplex Facility and Operations

The Recuplex facility operated from 1955 to 1962 at PFP's 234-5Z Building. In 1951, design work had begun for a Recuplex process for placement in Rooms 221 and 263. The facility was completed in 1955. Processing with plutonium feed material (supernates from Task I[4]) began.[TRU-WST-11.9-0418200735075 (p. 24)]

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[4] Purification, Oxalate Precipitation, Wet Chemistry, or Feed Preparation. The function was to precipitate the plutonium-nitrate feed solution with oxalic acid and other agents.

The Recuplex facility in the 234-5Z Building served two purposes:

- The recovery of plutonium from metallurgical wastes in a manner that would permit its direct recycle to Task I

- The coupling to wet chemistry operations (both at Hanford Atomic Products Operation and offsite) that were applied to the product solutions from Hanford's B and T Plants and off-standard product solutions from reduction oxidation (REDOX) and plutonium uranium reduction and extraction (PUREX).

The recovery of plutonium from metallurgical waste involved the processing of 11 side streams from the purification and fabrication operations of the 234-5Z Building. Some of these materials were solid and some were liquid. Their total plutonium content represented approximately seven percent of the virgin feed to the building.

The side streams involved in the coupling operations were the plutonium product solutions from the main separations plants. The recovery and coupling functions of Recuplex were achieved by means of a solvent extraction process which was similar to the plutonium purification cycles of the REDOX and PUREX Plants. The normal subsidiary operations of such a system—feed preparation, product concentration, waste disposal, and solvent treatment—were included in the Recuplex Plant.[TRU-WST-11.4.3-0410200747426]

The Recuplex Facility consisted of three large, stainless steel gloveboxes with Lucite[5] panels. Glovebox operations were largely manual. Operators manipulated a control panel in the Recuplex room as well as gloves attached to the boxes themselves. The majority of Recuplex feed was solid waste in the form of slag and crucible (SC) fragments, scrap powders from Remote Mechanical A Line operations, oxidized plutonium turnings, and remnants from metal samples. Operators placed this material in the SC glovebox, dissolved and filtered it. Pumps then sent the liquid product from this glovebox to the receiving and blending glovebox to be blended with other contaminated liquid feed streams from the 234-5Z Building. The receiving and blending glovebox functioned as a feed preparation facility for the solvent extraction glovebox where the plutonium-bearing liquid feed was mixed with tributyl phosphate in carbon tetrachloride solution and processed through a solvent extraction system (Figure 20).[TRU-WST-11.9-0418200735075 (p. 24), TRU-WST-11.4.3-0410200747426 (p. 34)]

The SC process hood served as a means of preparing plutonium wastes containing reduction chemicals (iodine, calcium, and fluorides) for subsequent purification. The solid reduction SCs, pouring and casting crucibles, unreacted reduction powders, and fluoride-powder sweepings were dissolved in the hood by the "controlled-fluoride" process. Button pickling solutions and wet chemistry supernates could be treated simultaneously with the solid materials.

Concentrated nitric acid was sufficient to dissolve the bulk of the solid materials. The plutonium metal and oxides, however, required the presence of hydrofluoric acid in addition to the nitric acid for complete dissolution within an operable time cycle. The calcium and plutonium fluoride powders in the reduction slag were a ready source of hydrofluoric acid, since they were easily

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[5]Lucite is a registered trademark of Lucite International, Incorporated, Cordova, Tennessee.

dissolved to release fluoride ions. The extremely corrosive nature of hydrofluoric acid made it necessary to control the free fluoride concentration to achieve a balance between maximum dissolution efficiency and minimum dissolver corrosion. The fact that aluminum ions strongly complex fluoride ions and thus reduce corrosion, provided a means of attaining such a balance and, therefore, an efficient dissolution cycle.[TRU-WST-11.4.3-0410200747426]

In the controlled fluoride process, concentrated nitric acid and sufficient aluminum nitrate nonahydrate (commonly termed ANN) were added to the solid charge and maintained at boiling temperatures. Iodine was volatilized and the solids, including the plutonium metal and oxides, were dissolved. An excess of ANN was then added to the remaining fluoride ion. The excess ANN also inhibited the formation of a plutonium fluoride complex and served as a salting agent. The dissolver solution was refluxed at a temperature just below the boiling point for a period of eight to 10 hours to precipitate dissolved silica and coagulate it to an easily filterable form. After cooling, the solution was filtered to remove the silica and filter aid precoat and then transferred to the reception and blending process hood. The silica was slurried from the filter and then neutralized prior to being transferred by steam jet to the 241-Z-8 Silica Slurry Tank and overflow crib located east of the 234-5Z Building. Samples of the tank indicate a pH of 6. [TRU-WST-11.4.3-0410200747426, TRU-WST-11.4.3-0815200524635, (p. 27)]

Throughout 1958–1960, plutonium production levels at the Hanford Site continued to increase. As a consequence, throughput in all facilities rose, and the Recuplex equipment was subject to increasing stress from the high volume of very corrosive solutions. Also, the buildup of nuclear materials in equipment joints, crevices, and other inaccessible areas brought about constantly rising radiation readings in the Recuplex room itself. Recuplex shut down for an extensive cleanup of hoods and equipment in 1960. When a criticality accident (nuclear excursion) resulted in widespread contamination throughout the Recuplex room on April 7, 1962, the U.S. Atomic Energy Commission decided in May 1962 to deactivate the Recuplex Facility on a permanent basis.[TRU-WST-11.9-0418200735075 (p. 24)]

2.7.1.1 Recuplex Effluent Disposal. Five containers in this waste stream are associated Recuplex effluent discharges that were discharged to the 241-Z-8 Silica Slurry Tank. However, Recuplex effluent also went to the 216-Z-9 Crib.[TRU-WST-11.4.4-0809200526583]

The U.S. Department of Energy (DOE) used the Recuplex process from 1955 to 1962 to recover plutonium from PFP scrap. The process used a solvent extraction technology that was housed in the 234-5Z Building. Two of the discharges from the process, i.e., spent aqueous extractant and spent organic solvents were discharged to 216-Z-9, and the waste silica gel was discharged to the 241-Z-8 Silica Slurry Tank.

The spent aqueous extractant from Recuplex is characterized as an acidic, high-salt, radioactive liquid waste containing low levels of plutonium and other transuranic elements. Nitric acid, fluoride, and phosphates were major components of the waste. Carbon tetrachloride was used in combination with tributyl phosphate (TBP) to remove residual plutonium from the aqueous solution prior to discharge to the 216-Z-9 Crib.

The organic process waste from Recuplex is characterized as acidic (~pH 2.5), low-salt, high organic, radioactive waste with intermediate levels of plutonium and other transuranic elements. Major chemical components of the waste are carbon tetrachloride; TBP; dibutyl butylphosphonate (DBBP), which played a minor role in Recuplex processes; and degradation byproducts. As the carbon tetrachloride/TBP solvent degraded, it was replaced with fresh solvent and the degraded mixture was discharged to the 216-Z-9 Crib through two stainless steel pipelines. Operating procedures indicate that the waste to the 216-Z-9 Crib was neutralized prior to discharge and that the pipeline was flushed with clean rinse water after each waste discharge batch.[TRU-WST-11.9-0418200734986 (pp. 2-13 & 14)]

The waste silica gel from Recuplex was sent to the 241-Z-8 Settling Tank through a pair of stainless steel pipelines. Overflow from the settling tank was discharged to the 241-Z-8 French Drain. This waste was neutralized by the addition of sodium hydroxide (NaOH) prior to discharge from Recuplex and the pipeline was flushed to the settling tank after each release. A flow chart showing input to the Recuplex settling tank and crib is shown in Figure 19.[TRU-WST-11.4.4-0809200526583]

Table 1. Timeline of Key Events.

Year	Key Events	Hanford Operations Contractor	Hanford Agency
1948	241-Z Treatment and Storage Tanks was put into service	GE	AEC
1949	241-Z-361 Settling Tank was put into service		
1949	Aqueous waste from PFP sent to 241-Z Treatment and Storage Tanks and then transferred to the 241-Z-361 Settling Tank		
1949	216-Z-1A received process, analytical, and development waste from PFP via the 241-Z-361 Settling Tank		
1952	216-Z-1 and 216-Z-2 Cribs were bypassed and 216-Z-1A received waste via overflow from 216-Z-3 Crib		
1955-1962	Recuplex operating period		
1957-1961	241-Z-8 tank employed as a silica gel waste settling tank for the Recuplex Process.		
1958	216-Z-12 Crib constructed to provide a replacement for the 216-Z-3 Crib		
1959	216-Z-12 Crib first accepted aqueous waste as overflow from the 241-Z-361 Settling Tank		
1964	236-Z (PRF) and 242-Z began operations		
1964-1969	216-Z-1A received waste from PRF	ARHCO	
1968	216-Z-1A received waste from the 242-Z		
1969	216-Z-1A retired from service		
1973	216-Z-12 Crib and 241-Z-361 Settling Tank retired from service		
1973–1981	Soil samples taken at 216-Z-12 Crib and the 216-Z-1A	RHO	ERDA (1974-1975)
1980–1981	Soil samples from 216-Z-12 and 216-Z-1A sent as waste to the burial grounds		
1987	Composite samples taken from 216-Z-12 (Study conducted by Pacific Northwest Laboratory)	RHO/WHC	DOE (1977 - Current)
1999	Characterization of the 241-Z-361 Settling Tank initiated	FH	

TRU-WST-11.4.3-0720200533922 (pp. 9, 20, 51), TRU-WST-11.4.3-0815200524635 (p15), TRU-WST-11.4.3-0815200525375 (pp. 11-12), TRU-WST-11.4.3-0712200524082, TRU-WST-11.4.3-0810200534996 (pp. 26-28, 32), TRU-WST-11.4.3-1026200445132 (pp. D.1-D.6), TRU-WST-11.4.3-0801200555127, TRU-WST-11.9-0418200735224 (p. 11), TRU-WST-11.9-0418200734818

AEC	U.S. Atomic Energy Commission	PFP	Plutonium Finishing Plant
ARHCO	Atlantic Richfield Hanford Company	PRF	Plutonium Reclamation Facility
DOE	U.S. Department of Energy	RHO	Rockwell Hanford Operations
ERDA	U.S. Energy Research and Development Agency	TRU	Transuranic
FH	Fluor Hanford	WHC	Westinghouse Hanford Company
GE	General Electric Company		

Table 2. Source of PFP Aqueous Waste to the 216-Z-12 and 216-Z-1A Crib.

Source	Volume (L/mo) 216-Z-12	216-Z-12 waste	Volume (L/Total) 216-Z-1A	216-Z-1A waste
Development Laboratory (plutonium chemistry laboratory and special processing hoods)	15,000	Miscellaneous lab chemicals from sink drains	6,200,000	PFP Process, analytical and development laboratory waste to 216-Z-1A via the 241-Z-361 Settling Tank
Analytical Laboratory Area	40,000	Miscellaneous lab chemicals from sink drains via overflow to the 241-Z-361 Settling Tank		
236-Z Plutonium Reclamation Facility (PRF)	17,000	Condensate from process concentrators, slight chemical contamination		Acidic waste that was a concentrated solution of nitrates. Organic liquid included carbon tetrachloride, dibutyl butylphosphonate, and tributylophosphate, with a minor amount of triolein and organic degradation products
234-5Z Plutonium Finishing Plant Process operations	601,000	Primarily hydrogen fluoride from water for aspirators		
242-Z Waste Treatment	27,000	Principally aluminum, calcium, and magnesium from batch ion exchange processes		
232-Z Incinerator	2,000	Spent scrubber solution via overflow to the 241-Z-361 Settling Tank	N/A	N/A

TRU-WST-11.4.3-0720200533922 (p. 22), TRU-WST-11.4.3-0815200524635 (p. 16), TRU-WST-11.4.3-0712200524082 (pp. 28-29)

2.8 WASTE POINTS OF GENERATION

The different points of generation for the waste streams are discussed individually in Sections 2.8.1 through 2.8.4.

2.8.1 PFP Point of Generation

The PFP Plutonium Process Support Laboratory and Plutonium Analytical Laboratory supported process facility flowsheet evaluation, troubleshooting, new technology implementation, process demonstration, and they performed chemical analysis and physical test analysis on plutonium samples. These labs used the same types of materials as the main PFP Facility. Constituents such as inorganic reagents, acids, organic solvents, reaction indicators, etc. should be expected at trace levels in this waste stream. Laboratory wastes constituted a very small portion of the total volume of wastes. Laboratory waste was discharged through the 241-Z Treatment and Storage Tanks and then to the 241-Z-361 Settling Tank. Some of the liquid organics bypassed the Settling Tank and went directly to the 216-Z-1A Crib. The aqueous waste discharged by PFP operations to the 216-Z-1A and 216-Z-12 Cribs consisted primarily of hydrogen fluoride from aspirator water.[TRU-WST-11.4.3-0712200524082 (p. 28), TRU-WST-11.4.3-0815200524862]

2.8.2 232-Z Point of Generation

The 232-Z incinerator operated from December 1961 until May 1973 and processed plutonium-contaminated solid waste in preparation for plutonium recovery. The building had been a concrete block structure with a slightly sloped roof. The building was divided into areas devoted to processing, storage, change rooms, chemical preparation, ventilation, and utility distribution. The building had two stories at the north end and a single story over the remaining portions.

The 232-Z Facility was built to remove plutonium from contaminated solid wastes by incineration and leaching in preparation for plutonium recovery. The building also housed equipment used for supporting operations such as off-gas treatment and leaching. The wastewater from these processes was discharged to the 241-Z Treatment and Storage Tanks and into the 241-Z-361 Settling Tank. The incinerator burned a variety of materials including organic chemicals, paper, and plastic. The waste consisted mostly of carbon as well as a sodium-hydroxide-urea scrubber solution. All of the liquid waste went to the 241-Z-361 Settling Tank.[TRU-WST-11.4.3-0712200524082 (p. 28), TRU-WST-11.4.3-0720200533922 (p. 24), TRU-WST-11.4.3-0815200524862, TRU-WST-11.9-0418200734726]

2.8.3 236-Z Plutonium Reclamation Facility Point of Generation

In May 1964, the PRF began operations by recovering plutonium from scrap solutions. The waste was similar to waste from the Recuplex. The inorganic process waste was discharged to the 241-Z Treatment and Storage Tanks (Tank D6) and then to the 241-Z-361 Settling Tank. Some of the liquid organics bypassed the Settling Tank and went directly to the 216-Z-1A Crib.

The Recuplex waste was not discharged to the 216-Z-1A or 216-Z-12 Cribs.[TRU-WST-11.4.3-0712200524082 (pp. 27-28)]

2.8.4 242-Z Point of Generation

This facility operated from August 1964 to August 1976 and housed the americium recovery process line. This process included the recovery of americium from the PFP process line. The liquid waste from the recovery process consisted of concentrated nitric acid with traces of TRU elements and metals. In addition, DBBP was used for this process. The waste from this process went through transfer lines to the 241-Z Treatment and Storage sump tanks (D4, D5, D7, and D8) and directly discharged to 216-Z-1A (waste from sump tank D6 went to 241-Z-361 Settling Tank).[TRU-WST-11.4.3-0712200524082 (p. 29)]

2.9 EFFLUENT CHARACTERIZATION

Sampling was performed at the 241-Z-361 Settling Tank in 1999 and also in the 216-Z-1A and 216-Z-12 Cribs in 1973. The analytical results from these samples form the basis for the designations in this waste stream except for the Recuplex wastes in 241-Z-8 (section 2.7.1.1).[TRU-WST-11.4.3-0810200534996 (p. 32), TRU-WST-11.9-0412200748928]

2.9.1 241-Z-361 Settling Tank Analytical Data

Sludge from the 241-Z-361 Settling Tank provides the basis for designating the 241-Z Treatment and Storage Tanks, 241-Z-361 Settling Tank, 216-Z-1A, and 216-Z-12 Crib waste. Effluents from the PFP processes were routed through the 241-Z Treatment and Storage Tanks and then accumulated in the 241-Z-361 Settling Tank. The 241-Z-361 Settling Tank constituents were also discharged to the 216-Z-1A and 216-Z-12 Cribs.

The function of the 241-Z-361 Settling Tank was to settle out solids contained in the wastewaters. Solids and sludge accumulated in the bottom of the tank.

In 1999, sampling and analysis was done to characterize the 241-Z-361 Settling Tank sludge. Multiple core samples of the sludge were analyzed at a laboratory in accordance with a data quality objectives process. The analytical services were conducted in accordance with quality assurance/quality control limits. The sludge samples were collected using a push method. The techniques used for tank characterization were based on an approved stratum compositing approach that is similar to the collection of split-spoon soil samples from a hollow stem auger.[TRU-WST-11.4.3-0712200524082, TRU-WST-11.4.3-0721200544286, TRU-WST-11.4.3-0913200542526]

With the exception of the 241-Z-8 Silica Slurry Tank that was associated with the Recuplex processes; constituents from nearly all the PFP aqueous processes are expected to have been discharged to the 241-Z-361 Settling Tank. Because almost all the effluent waste discharged to the cribs was routed through the 241-Z-361 Settling Tank, the analytical results associated with

the Settling Tank are representative of the waste. The 241-Z-361 Settling Tank received the same effluent waste throughout its lifetime as that routed to the 216-Z-1A and 216-Z-12 Cribs. These same constituents could also be expected to be present (but in lower concentrations) inside the 241-Z Treatment and Storage Tanks, sump pits, and tank areas for the 1973 to 1978 containers.[TRU-WST-11.4.3-0720200533922 (p. 18), TRU-WST-11.4.3-0712200524082 (p. 16)]

The hazardous constituents identified from the 241-Z-361 Settling Tank analysis are discussed in Section 3.0.

2.9.2 Soil Sampling

The 1980 to 1981 mixed debris waste was generated during sampling activities in the 216-Z-1A and 216-Z-12 Cribs by a Hanford decontamination and decommissioning (D&D) team that was investigating inactive facilities around the PFP. Samples were collected through the soil column to determine plutonium and americium distribution as well as soil type and moisture content during drilling in the cribs. As stated earlier, the debris consists of items from sampling such as plastic scrap, rags, and personal protective equipment.[TRU-WST-11.4.4-0809200526583, TRU-WST-11.4.4-0728200524505, TRU-WST-11.4.3-0721200544677, TRU-WST-11.4.3-0720200533922 (pp. v, 18, 20, 51), TRU-WST-11.4.3-0726200544049 (p. 22), TRU-WST-11.4.3-0815200524635 (p. 14), TRU-WST-11.4.3-0801200528154 (pp. II.1-44 to II.1-45), TRU-WST-11.4.3-0810200534996 (p. 32)]

The 216-Z-1A and 216-Z-12 Cribs received aqueous waste from the PFP via the 241-Z-361 Settling Tank. The PFP effluent waste was generated by operational and laboratory processes that involved converting plutonium nitrate solutions into plutonium metal (e.g., metal items) and/or oxides. The aqueous waste was discharged as waste through drains and piping to tanks and cribs.[TRU-WST-11.4.4-0728200524505, TRU-WST-11.4.3-0708200528858, TRU-WST-11.4.3-0721200544677, TRU-WST-11.4.3-0720200533922 (pp. v, 18, 20, 51), TRU-WST-11.4.3-0726200544049 (pp. 17, 22), TRU-WST-11.4.3-0810200534996]

2.9.3 241-Z-8 Silica Slurry Tank Characterization

From 1955 to 1962, the 241-Z-8 Silica Storage Tank received approximately 20 gallons each day of Recuplex effluent waste from the SC filtration operation. Composition data from early operations were used along with inputs to the 216-Z-9 Crib (see Appendix D for detailed information).[TRU-WST-11.4.2-0607200627147 (pp. 1, 3), TRU-WST-11.4.3-0801200555127 (p. 61)]

3.0 WASTE STREAM DESCRIPTION

The waste containers from the PFP Complex in this AK summary report are either debris or soil (sand). Most of the containers are drummed debris the rest are 100% sand or only 100% dirt.[TRU-WST-11.4.4-0809200526583]

Four designations will accompany this AK summary report. The five containers associated with the early Recuplex operations from PFP have been designated separately because the process feeding the 241-Z-8 Silica Slurry Tank was slightly different than other operations within PFP and because no other processes historically discharged to this tank. As described earlier, the waste was generated (and stored) from two different time periods. The waste can be categorized as one of the following:

1. 1973 to 1978 debris from the PFP Complex effluent
2. 1973 to 1977 soil or sand from the PFP Complex effluent
3. 1974 debris from around the 241-Z-8 Silica Slurry Tank associated with Recuplex operations
4. 1980 to 1981 debris from 216-Z-1A and 216-Z-12 soil sampling (PFP Complex effluent).

The 1973 to 1978 individual debris waste items include paper, plastic, metal, glass, rags, rubber gloves, wood, cloth, crystals, Flowmeter, piping, greenhouse, paper towels, packaging cartons, detritus, dirt, soil, agitator motor, gearbox, and hose.

The 1974 debris waste generated from around the 241-Z-8 Silica Slurry Tank includes combustible scrap, a greenhouse, and sand. One of the containers is described as containing non-combustible waste.

The 1980 to 1981 waste described in this document consists of miscellaneous debris items such as personal protective equipment, rags, etc., and includes plastic bags of plutonium-contaminated soil. The waste soil (<50% of the waste matrix) was collected during subsurface characterization activities at the 216-Z-1A and 216-Z-12 Cribs from 1980 to 1981. Figure 21 shows the drill location and greenhouse.

3.1 WASTE PACKAGING AND HANDLING

Beginning in 1968, wastes were contained by one inner liner (e.g., sheet plastic).[TRU-WST-11.4.3-0620200635667]

After 1974, waste was segregated into four groups:

- Nonradioactive, non-hazardous, combustible wastes
- Low-level, non-TRU wastes
- TRU wastes
- High-level wastes.[TRU-SPO-11.9-0708200431435]

While there are several waste containers in this waste stream that are pre-1974, the burial records were clear that each contained combustible, non-combustible, or debris items.

Standard operating procedures released in 1976 define "hood" wastes and "room" wastes. Hood wastes were wastes generated inside processing hoods and were considered highly contaminated with plutonium. Room wastes were wastes generated from operations outside the processing hoods and were considered potentially contaminated with plutonium. Solid wastes were

segregated into combustible hood waste, combustible room waste, and noncombustible room and hood waste. Containers in this waste stream fall into just two of these categories, combustible room waste and noncombustible room waste. See Appendix B for the individual container waste descriptions.[TRU-WST-11.4.3-0620200635667]

Combustible room waste included combustible waste generated outside of hoods. This waste could contain low-level contamination, but should not have contained an appreciable amount of plutonium. The waste was stored in drums topped with a silver dome. This waste was destined for long-term underground storage, unless it contained too much plutonium as measured on the nondestructive assay drum counter.[TRU-WST-11.4.3-0620200635667]

In 1978, a second polyethylene drum liner was placed inside the first polyethylene drum liner. Until the early 1980s there was not much focus on material used as void filler.[TRU-WST-11.4.3-0620200635667, TRU-SPO-11.4.3-0908200434377, TRU-WST-11.4.4-0809200526583]

Burial record information for the 1980 to 1981 debris containers indicates that combustibles (plastic scrap, rags, personal protective equipment, etc.) along with noncombustibles (soil samples) were sent to the burial ground facilities. The soil samples were packaged in plastic bags and placed with the other debris waste items in the 208-L (55-gal) drums. The drum liners (e.g., 10-mil liners) were horse-tailed and taped before closing. The containers were fitted with an air or a gaseous diffusion vent (e.g., vent clip) and there may be up to four layers of packaging. A hydrogen-oxygen recombination catalyst pack containing alumina coated with palladium was placed inside the drums. The dimensions of this triangular-shaped pack were 15.2 cm (6 in.) by 15.2 cm (6 in.) by 21.6 cm (8 1/2 in.), and about 2.54 cm (1 in.) thick.[TRU-WST-11.4.4-0728200524505, TRU-WST-11.4.4-0915200523481, TRU-WST-11.4.4-0809200526583]

Table 3 identifies waste material parameters found for the PFP Complex Effluent Waste Stream.

Table 3. Waste Material Parameters for PFP Complex Effluent Waste Stream.

Waste Material Parameter	Description	Present in Debris Containers?	Present in Soil/ Sand Containers?
Iron-based metals/alloys	Iron and steel alloys in the waste; does not include the waste container materials	Yes	No
Aluminum-based metals/alloys	Aluminum or aluminum-based alloys in the waste materials	No	No
Other metals	All other metals found in the waste materials	No	No
Other inorganic materials	Nonmetallic inorganic waste including concrete, glass, firebrick, ceramics, sand, and inorganic sorbent	Yes	Yes
Cellulosics	Materials generally derived from high-polymer plant carbohydrates; (e.g., paper, cardboard, wood, and cloth)	Yes	No
Rubber	Natural or man-made elastic latex materials; (e.g., surgeons' gloves, and rubber gloves)	Yes	No
Plastics (waste materials)	Generally man-made materials, often derived from petroleum feedstock; (e.g., polypropylene, polyethylene and polyvinylchloride)	Yes	No
Organic matrix	Cemented organic resins, solidified organic liquids and sludges	No	No
Inorganic matrix	Any homogeneous materials consisting of sludge or aqueous-based liquids that are solidified with cement, calcium silicate, or other solidification agents (e.g., wastewater treatment sludge, cemented aqueous liquids, and inorganic particulates)	No	No
Soils/gravel	Generally consists of naturally occurring soils that have been contaminated with inorganic and organic waste materials	No	Yes
Steel (packaging materials)	208-L (55-gal) drums	Yes	Yes
Plastics (packaging materials)	10-mil polyethylene drum liners and plastic	Yes	Yes

3.2 REGULATORY WASTE CHARACTERIZATION

A review was conducted to identify what U.S. Environmental Protection Agency hazardous waste numbers and Washington State Dangerous Waste codes, if any, should be assigned to the four waste streams. To complete this evaluation, the available AK documentation was reviewed.

The AK documentation included studies of the 216-Z-1A and 216-Z-12 that were performed from 1973 to 1981 using soil borings to determine plutonium and americium concentrations, soil types, and moisture content. In addition, results were assessed from a 1987 study that evaluated the possibility of treating waste sites containing significant levels of TRU elements and chemicals. The AK documentation included results from sludge characterization of the 241-Z-361 Settling Tank in 1999. Sampling and analysis of the settling tank provided a synopsis of nearly all the PFP aqueous processes that were discharged to the tank. The chemical analysis from the settling tank sludge sampling will represent a conservative estimate of the chemical contamination that can be expected to be found in the waste soil removed from the 216-Z-1A and 216-Z-12 Cribs. These same chemicals form the basis for residual chemical-contaminated constituents in debris and solid waste containers associated with 241-Z Treatment and Storage Tanks.[TRU-WST-11.4.3-0720200533922, TRU-WST-11.4.3-0712200524082, TRU-WST-11.4.3-0726200544049]

Material Safety Data Sheets, shipping/burial records, interviews with staff, the Solid Waste Information and Tracking System (SWITS) database, the Records Management Information System (RMIS), and the Integrated Document Management System (IDMS) electronic database were also used for the AK review.

Appendix C provides two chemical tables. Table C-1 chemical list was obtained from the results of the settling tank analysis and from results of samples taken from the 216-Z-12 Crib. The chemicals form the basis for EPA hazardous waste number assignment for designations 216Z12DES01-02, 216Z12DES03-00, and 216Z12DES04-00.

Appendix C, Table C-2 chemical list was obtained from 216-Z-9 tank characterization. Period-correct lab analysis of the crib soils as well as monitoring well soils confirmed those constituents as present. Additionally, those chemicals unique to the Recuplex process feeding liquid effluent to 241-Z-8 Silica Slurry Tank were used for designation 241Z8DES-01-00.

Table 4 provides a summary of the waste codes assigned to each of the four separate designations associated with the PFP Complex Effluent Waste Stream.

The applicability of hazardous waste numbers is discussed in the following Sections 3.2.1 through 3.2.6.

Table 4. Waste Stream Hazardous Waste Characterization Summary.

Designation & Description	EPA Hazardous Waste Numbers	TSCA Applicability	Comments
216Z12DES01-02 Crib Debris w/Soil	F001, F002, F003, F005, D004, D005, D006, D007, D008, D009, D011, D022	PCBs - Regulated Asbestos - NA	Previous designations that are superseded: Z12-DES-01-00 216Z12-DES-01-01
216Z12DES03-00 Soil/Sand	F001, F002, F003, F005, D004, D005, D006, D007, D008, D009, D011, D022	PCBs - NA Asbestos - NA	
216Z12DES04-00 Debris	F001, F002, F003, F005, D004, D005, D006, D007, D008, D009, D011, D022	PCBs - NA Asbestos - NA	
241Z8DES-01-00 Recuplex Debris	F001, F002, F003, F005, D005, D006, D007, D008, D009, D011	PCBs - NA Asbestos - NA	

3.2.1 Listed Waste Codes

Based on the review of chemical usage that would have been associated with the waste items in this waste stream, it was determined that there are no discarded chemical products as listed in *Washington Administrative Code* (WAC) 173-303-9903.[6]

However, after review of chemical usage from AK source documents and Material Safety Data Sheets, the solvent use descriptions as required by WAC 173-303-9904,[7] indicated there were F-Listed waste codes associated with the chemicals that were used as solvents. Therefore, the following F-listed waste codes were assigned to this waste stream for multiple solvents: F001 for carbon tetrachloride, tetrachloroethylene, dichloromethane, trichloromonofluoromethane, and trichloroethylene; F002 for tetrachloroethylene, dichloromethane, trichloromonofluoromethane, and trichloroethylene; F003 for acetone, methanol, n-Butanol, and xylene; and F005 for benzene and toluene. Other non-specific source chemicals were not present in products at regulated quantities.[TRU-WST-11.4.4-0912200550383, TRU-SPO-11.4.3-1129199941447]

[6]WAC 173-303-9903, "Discarded Chemical Products List," *Washington Administrative Code*, as amended.
[7]WAC 173-303-9904, "Dangerous Waste Sources List," *Washington Administrative Code*, as amended.

3.2.2 Characteristic of Ignitability

The waste materials in this waste stream do not meet the definition of ignitability in WAC 173-303-090 (5).[8] The materials are not liquid, and are not capable of causing fire through friction or absorption of moisture. The materials in this waste stream are, therefore, not ignitable wastes (i.e., D001). TRU-WST-11.4.4-0912200550383

3.2.3 Characteristic of Corrosivity

The waste materials in this waste stream do not meet the definition of corrosivity in WAC 173-303-090 (6).[9] The waste is not liquid and does not contain any significant unreacted corrosive chemicals. The materials in this waste stream are, therefore, not corrosive wastes (D002). TRU-WST-11.4.4-0912200550383

3.2.4 Characteristic of Reactivity

The materials in this waste stream do not meet the definition of reactivity in WAC 173-303-090 (7).[10] The materials are stable and will not undergo violent chemical change. The materials will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. The materials are not capable of detonation or explosive reaction and are, therefore, not reactive (i.e., D003) wastes. TRU-WST-11.4.4-0912200550383

3.2.5 Toxicity Characteristic

Review of the container documentation, interviews, results from sampling and analysis, and other source documentation indicate this waste stream may contain waste contaminated with toxicity characteristic compounds as defined in WAC 173-303-090 (8).[11] As identified in the source documents, containers in this waste stream contain arsenic, barium, cadmium, chromium, lead, mercury, silver, and chloroform and have been assigned the D004, D005, D006, D007, D008, D009, D011, and D022 codes, respectively. TRU-WST-11.4.4-0912200550383

3.2.6 *Toxic Substances Control Act of 1976* (TSCA)[12]

The waste from 216-Z-1A and 216-Z-12 operations (16 containers from 1980–1981) is regulated under the *Toxic Substances Control Act of 1976.*[13] Lab analysis confirmed PCBs at greater than

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[8] WAC 173-303-090 (5), "Characteristic of Ignitability," *Washington Administrative Code*, as amended.
[9] WAC 173-303-090 (6), "Characteristic of Corrosivity," *Washington Administrative Code*, as amended.
[10] WAC 173-303-090 (7), "Characteristic of Reactivity," *Washington Administrative Code*, as amended.
[11] WAC 173-303-090 (8), "Toxicity Characteristic," *Washington Administrative Code*, as amended.
[12] *Toxic Substances Control Act of 1976*, 15 USC 2601 et seq.
[13] 40 CFR 761, "Polychlorinated biphenyls (PCBs) manufacturing, processing, distribution in commerce, and use prohibitions," *Code of Federal Regulations*, as amended.

50 ppm. Review of all available information revealed no evidence of asbestos within this waste stream.[TRU-WST-11.4.3-0721200544286 (p. 230), TRU-WST-11.4.3-1004200524269]

The wastes from all other PFP Complex operations to include associated 241-Z Treatment and Storage Tank infrastructure, 241-Z-361 operations, waste descriptions that include sand, and 241-Z-8 Recuplex operations (209 containers from 1973–1978) is not regulated under TSCA and does not contain PCBs at any concentration. The same review of all available information revealed no evidence of asbestos within these waste streams.[TRU-WST-11.4.3-0721200544286 (p. 230), TRU-WST-11.4.3-1004200524269]

3.3 RADIONUCLIDES

This evaluation summarizes the radionuclides and isotopic distributions expected to be in the solid waste generated from liquid effluents received at the burial grounds from PFP Complex from 1973 to January 1981. The radionuclides present in these wastes include mainly plutonium (^{238}Pu, ^{239}Pu, ^{240}Pu, ^{241}Pu, and ^{242}Pu), but there also would have been trace amounts of uranium (^{234}U, ^{235}U, ^{236}U and ^{238}U), americium (^{241}Am), neptunium (^{237}Np), and their decay daughters. The presence of mixed fission products would only happen if contaminated or as a very trace material.[TRU-WST-11.4.4-00809200526583]

Hanford initially produced weapons-grade plutonium with a ^{240}Pu weight percentage between approximately 0.9% and 6%. Weapons-grade plutonium metals and oxides were in high demand up to the mid-1960s, but in 1964 the need for fuels-grade plutonium began to increase. The Hanford mission then began turning toward fuels-grade plutonium production to support the reactor research industry. Hanford processed fuels-grade material with varying concentrations of ^{240}Pu from approximately 8% to 27% for experimental reactor technology (e.g., Fast Flux Test Reactor) and other reactors, but most of the fuel-grade plutonium was approximately 12%.[TRU-SPO-11.4.1-0823200032461 (p. 3), TRU-WST-11.4.3-0112200626371 (p. 5), TRU-WST-11.4.3-0410200635059, TRU-WST-11.4.3-0411200631609]

Since ^{241}Am was also present in the waste stream from the processing area of PFP, it is very possible that there is more ^{241}Am present than is indicated. RHO-ST-17, *Distribution of Plutonium and Americium beneath the 216-Z-1A Crib: A Status Report* indicates the quantity of ^{241}Am discharged to the 216-Z-12 Crib was approximately 0.017 grams of ^{241}Am per gram of ^{239}Pu. This adjustment was applied to the information contained in Tables 5, 6, and 7. The actual value will have to be determined from container assay.[TRU-WST-11.4.3-0810200534996 (p. 16)]

A review of the solid waste burial records (e.g., nuclear accountability forms, shipping records, and contents inventory sheets) was performed to determine the isotopic distributions and ratios in the waste streams. When the waste was packaged, the plutonium, uranium, and ^{241}Am content of each waste package was estimated by nondestructive assay, calculated, or otherwise measured and then recorded on the solid waste burial records for each individual waste drum.

The listed isotopic ratios are not exact and will vary from the values in the various Tables based on the radiation history that produced the plutonium and the exact composition when manufactured.

It should be noted that ^{241}Am is the daughter of ^{241}Pu and over time the ^{241}Pu will decay away since it has a half-life of 14.4 years. As a result, the ^{241}Am (with a half-life of 432 years) will increase. In addition, the ^{241}Am alpha decays to ^{237}Np, which has a half-life that is 2.14 E+6 years longer than ^{239}Pu. Therefore, there are trace quantities of ^{237}Np present, but its activity is orders of magnitude lower compared to the ^{241}Am. The peak buildup in activity of ^{241}Am from ^{241}Pu is approximately 2.9% of the initial ^{241}Pu content.

3.3.1 1955—1962 241-Z-8 Silica Slurry Tank

This evaluation summarizes the radionuclides and isotopic distributions expected to be in the solid wastes generated from the 241-Z-8 Silica Slurry Tank. The radionuclides present in the waste includes mainly plutonium (^{238}Pu, ^{239}Pu, ^{240}Pu, ^{241}Pu, and ^{242}Pu) along with trace amounts of uranium (^{234}U, ^{235}U, ^{236}U, and ^{238}U), americium (^{241}Am), neptunium (^{237}Np), and their decay daughters. The presence of mixed fission products would only happen if contaminated or as a very trace material.[TRU-WST-11.4.4-0809200526583, TRU-WST-11.4.3-0607200628030]

A review of the time frame when the crib was used indicates that only weapons grade materials would have been present in the waste stream. The burial records indicate that the plutonium in the waste was approximately 6% ^{240}Pu. Consequently, a range of 4% to 7% is used for the ^{240}Pu. Nuclear accountability forms accompanying the solid waste burial records did not provide complete data on the TRU isotopic content. However, similar isotopic content was utilized for the weapons grade material as shown in Table 5. Since the waste is now approximately 48 years old significant quantities of ^{238}Pu and ^{241}Pu have decayed. Table 5 summarizes the different types of weapons grade plutonium correcting for the 48 years of decay. The two most prevalent TRU nuclides in the waste are ^{239}Pu and ^{240}Pu. Total gram values for plutonium along with the ^{240}Pu content were recorded on the solid waste burial records, nuclear accountability forms, shipping records, or content inventory sheets.[TRU-WST-11.4.4-0809200526583, TRU-WST-11.4.3-0601200630575 (p. 14), TRU-WST-11.4.3-0607200628030]

Uranium was an impurity in the plutonium that was received from the various operating facilities (section 2.6.1), which ranged from slightly depleted (about 0.6% ^{235}U) to slightly enriched (less than 1% ^{235}U). As a result, a range of values has been estimated for this waste stream. The isotopic ratios are not exact and may vary significantly from the values listed in Table 5 based on the radiation history and the enrichment process that produced the uranium and the composition when manufactured. For example, the ^{236}U could vary from 0.00% to a high of 2.0%. This variance depends on the radiation history as well as the source of the uranium (i.e., was it produced from natural uranium or recycled uranium).[TRU-WST-11.4.4-0809200526583, TRU-WST-11.4.3-0417200648927 page 32, TRU-WST-11.4.3-0518200645820 (p. 7.4)]

Table 5. Estimated 241-Z-8 Isotopic Distributions.

Plutonium and Associated Distributions		Uranium Distributions	
Isotope	Wt % Distribution	Isotope	Wt % Distribution
^{238}Pu	0.01 – 0.03	^{233}U	Trace
^{239}Pu	92.62 – 90.24	^{234}U	0.006 – 0.008
^{240}Pu	4.28 – 6.96	^{235}U	0.57 – 0.97
^{241}Pu	0.04 – 0.13	^{236}U	0.08 – 0.07
^{242}Pu	0.01 – 0.05	^{238}U	99.35 – 98.95
^{241}Am	1.89 – 2.43		
^{237}Np	0.14 – 0.17		

If there is any ^{137}Cs present then the ^{90}Sr would be calculated by using the following activity ratio.

Ci ^{90}Sr/Ci ^{137}Cs = 0.91

3.3.2 1973–1978 216-Z-12 Effluent Wastes

This evaluation summarizes the radionuclides and isotopic distributions expected to be in the PFP liquid effluent associated solid wastes from 1973 through 1978. The radionuclides include weapons-grade plutonium and fuels-grade plutonium (^{238}Pu, ^{239}Pu, ^{240}Pu, ^{241}Pu, and ^{242}Pu), uranium (^{233}U, ^{234}U, ^{235}U, ^{236}U, and ^{238}U), trace amounts of americium (^{241}Am), thorium (^{232}Th) and neptunium (^{237}Np). Mixed fission product radionuclides such as cesium (^{137}Cs), strontium (^{90}Sr), europium (^{154}Eu), or activation product radionuclides such as cobalt (^{60}Co) would only be expected in trace amounts because the plutonium was purified prior to receipt at PFP.[TRU-WST-11.4.4-0809200526583]

Table 6 shows the TRU isotopic distribution in the waste, which ranges from approximately 2.2% to 27% ^{240}Pu. The data has been decayed 45 years[14] which is based on the average age of the waste. Since an exact isotopic ratio was not available, similar isotopic ratios were used. The primary TRU nuclides present in the waste will be ^{239}Pu and ^{240}Pu. NDA analyses will provide the official inventory of each container.[TRU-WST-11.4.4-0809200526583, TRU-WST-11.4.3-1003200638396, TRU-WST-11.4.3-0410200732940]

Based on the burial records, uranium was not present; however, it may be present as a trace material. The uranium isotopics are based on the uranium types processed at Hanford which varied from slightly depleted to less than 1% ^{235}U. Table 6 summarizes this information.[TRU-WST-11.4.4-0809200526583, TRU-WST-11.4.3-0518200645820 (Chapt 7, p. 7.4), TRU-WST-11.4.3-0417200648927 (p. 32)]

[14] The crib was used from 1951 to 1973 (1962 average). 1962 to 2007 is 45 years.

Table 6. 216-Z-12 Transuranic and Uranium Distributions.

Transuranic Distributions		Uranium Distributions	
Isotope	Wt % Distribution	Isotope	Wt % Distribution
^{238}Pu	0.006 – 0.15	^{233}U	Trace
^{239}Pu	96.09 – 64.64	^{234}U	0.006 – 0.008
^{240}Pu	2.13 – 26.39	^{235}U	0.57 – 0.97
^{241}Pu	0.01 – 0.62	^{236}U	0.08 – 0.07
^{242}Pu	0.001 – 1.74	^{238}U	99.35 – 98.95
^{241}Am	1.64 – 6.12		
^{237}Np	0.12 – 0.34		

If it is determined that there is ^{137}Cs in the waste, the ^{90}Sr will be determined using the following ratio:

$^{137}Cs/^{90}Sr \sim 1.1$ [TRU-SPO-11.1.1-0819200238988]

3.3.3 1980–1981 216-Z-1A and 216-Z-12 Effluent Wastes

This evaluation summarizes the radionuclides and isotopic distributions expected to be in the waste received from the 216-Z-1A and 216-Z-12 containers from 1980 and 1981. The 216-Z-1A was operable from 1949 to 1959 and from 1964 to 1969. The 216-Z-12 Crib was active from 1959 to 1973. The radionuclides present in the waste includes plutonium (^{238}Pu, ^{239}Pu, ^{240}Pu, ^{241}Pu, and ^{242}Pu), americium (^{241}Am), traces of neptunium (^{237}Np), and traces of uranium (U). Since the materials came from the PFP facility, the radioactive impurities in the plutonium would be discharged to the crib. Based on the analytical data there could be a small amount of ^{99}Tc and ^{90}Sr and possibly ^{137}Cs. [TRU-WST-11.4.3-0721200544286, TRU-WST-11.4.3-0726200544049 (p. 11)]

Burial records do not completely break down the transuranic isotopic content; however, other documentation does provide similar isotopic content for the waste stream when the wastes were manufactured. The plutonium isotopic ratios of the material sent to the crib varied from weapons grade to fuels grade, and may have included some additional ^{241}Am and ^{237}Np. The 216-Z-12 Crib samples from 1987 indicate that there was approximately 0.029 grams of ^{241}Am per gram of ^{239}Pu. Since the material is now approximately 46 years,[15] this means that significant quantities of ^{241}Pu have decayed into ^{241}Am. Table 7 summarizes this information allowing for the years of decay and is representative of the materials disposed. The two predominate radionuclides by weight are ^{239}Pu and ^{240}Pu. Based on the materials processed at Hanford, the plutonium isotopic ratios varied from of approximately 2.2% ^{240}Pu to 27%. Table 7 has been adjusted for this material. [TRU-WST-11.4.3-0726200544049, TRU-WST-11.4.3-0721200544286]

[15] The cribs operated from 1949 to 1973 (1961 average). 1961 to 2007 is 46 years.

Based on the solid waste burial records, uranium was not present; however, it may be present as a trace material. The uranium isotopics are based on the uranium types processed at Hanford which varied from slightly depleted to less than 1% ^{235}U. Table 7 summarizes this information. TRU-WST-11.4.3-0518200645820, TRU-WST-11.4.3-0417200648927

Table 7. Estimated 216-Z-1A and 216-Z-12 Transuranic and Uranium Distributions.

Transuranic Distributions		Uranium Distributions	
Isotope	Wt % Distribution	Isotope	Wt % Distribution
^{238}Pu	0.006 – 0.15	^{233}U	Trace
^{239}Pu	96.09 – 64.64	^{234}U	0.006 – 0.008
^{240}Pu	2.13 – 26.39	^{235}U	0.57 – 0.97
^{241}Pu	0.010 – 0.59	^{236}U	0.08 – 0.07
^{242}Pu	0.001 – 1.74	^{238}U	99.35 – 98.95
^{241}Am	1.63 – 6.14		
^{237}Np	0.12 – 0.35		

Based on the analytical results, the following ratios to total Pu for ^{99}Tc and ^{90}Sr apply. TRU-WST-11.4.3-0721200544286

Ci ^{99}Tc/Ci Pu = 0.001

Ci ^{90}Sr/Ci Pu = 0.001

4.0 ACCEPTABLE KNOWLEDGE SOURCE DOCUMENTS

The AK source document reference list for the PFP Complex Effluent Waste Stream is shown in Table 8.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-SPO-11.4.3-0908200434377	A History of Solid Waste Packaging at the Hanford Site	D. R. Duncan	Westinghouse Hanford Company	WHC-SA-2772-FP	PR8 WS6	All	This document provides an overview of historical waste packaging and waste acceptance criteria at Hanford.
TRU-WST-11.4.4-0728200524505	Record of Communication with D. A. Marsh	R. J. Swan	Fluor Hanford	N/A	PR6 PR7 WS6 WS7	All	Provides an overview of the waste packaged in 1980 at the 216-Z-12 Crib.
TRU-WST-11.4.4-0809200526583	Solid Waste Burial Records	Rockwell Hanford	N/A	N/A	WS6 WS9	All	Provides the shipping records from Rockwell Hanford Operations, D&D - ORS, to Burial Grounds 218-W-4C.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.4.4-0912200550383 [superseded]	216-Z-12 Waste Designation	M. S. Watson	Fluor Hanford	Z12-DES-01-00	WS1 WS3 WS6 WS7 WS10 WS12	All	Provides the basis for assigning the RCRA codes.
TRU-WST-11.4.3-0317200647908 [superseded]	216Z12-DES-01-01 TRU Debris Waste Stream Designation	Mike Watson	Fluor Hanford	216Z12-DES-01-01	WS1 WS3 WS6 WS7 WS10 WS12	All	Provides the basis for assigning the RCRA codes.
TRU-WST-11.9-0412200748928	PFP Complex Effluent TRU Waste Stream Designations	John Evans	Fluor Hanford	216Z12DES01-02 216Z12DES03-00 216Z12DES04-00 241Z8DES-01-00	WS1 WS3 WS6 WS7 WS10 WS12	All	Provides the basis for assigning the RCRA codes.
TRU-WST-11.4.3-0708200528858	216-Z-12 Crib Status Report	R. B. Kasper	Rockwell Hanford Operations, Rockwell International	RHO-LD-166	PR1 PR2 PR3 PR4 PR7 WS9	All	Provides a status report on the 216-Z-12 Crib, an underground liquid waste disposal facility.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.4.3-0720200533922	216-Z-12 Transuranic Crib Characterization: Operational History and Distribution of Plutonium and Americium	R. B. Kasper	Rockwell Hanford Operations, Rockwell International	RHO-ST-44	PR1 PR2 PR4 PR7 WS9 WS10	All	Discusses the results from a study of Transuranic elements that were discharged to the 216-Z-12 Crib.
TRU-WST-11.4.3-0712200524082	241-Z-361 Sludge Characterization Sampling and Analysis Plan	F. R. Crawford	Babcock and Wilcox Hanford Corporation	HNF-4371, Rev. 1	PR1 PR2 WS5 WS9 WS10 Supp	All	Discusses the requirements for collection and analysis of samples of residual solids or sludge from Tank 241-Z-361.
TRU-WST-11.4.3-0801200534680	Tank 241-Z-361 Waste Characterization Data Quality Objective: Headspace and Tank Structure	L. J. Olguin, A. M. Hopkins, D. L. Banning	Fluor Daniel Hanford	FDH-9855079R1, HNF-2176, Rev. 0	PR2 WS10	All	Provides information regarding the basis for developing a sampling and analysis plan.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.4.3-0721200544677	Waste Information Data System General Summary Report for 216-Z-12, 241-Z-12 Crib	N/A	U. S. Department of Energy	N/A	PR4 PR7 WS2	All	Provides an overview of the status of the 216-Z-12 Crib.
TRU-WST-11.4.3-0726200544049	National Environmental Policy Act (NEPA) Information for the In Situ Vitrification Large Scale Radioactive Test; (Environmental Evaluation, 216-Z-12 Crib)	U. S. Department of Energy and Pacific Northwest Laboratory	U. S. Department of Energy	N/A	PR1 PR2 WS2 WS9 WS10	17 - 97	Provides the NEPA data for the planning of the Large-Scale Radioactive Test at the 216-Z-12 Crib.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.4.3-0801200555127	Existing Data on the 216-Z Liquid Waste Sites	K. W. Owens	Rockwell Hanford Operations, Rockwell International	RHO-LD-114	PR2 WS2 WS9	67 - 75	Discusses liquid wastes at the Hanford site that were disposed in cribs, trenches, French drains, reverse wells, ditches and ponds.
TRU-WST-11.4.3-0721200544286	Tank 241-Z-361, Cores 263 and 264 Analytical Results for the Final Report	R. A. Esch	U. S. DOE	HNF-1692, Rev. 0B	WS9 WS10	139-172 28-136, App B	Provides the final laboratory report for the samples taken from 241-Z-361.
TRU-WST-11.4.3-0801200528154	Final Environmental Statement, Waste Management Operations, Hanford Reservation, Richland, Washington	J. L. Liverman	U.S. Energy Research and Development Agency	ERDA-1538	Supp	4	Provides an assessment of the environmental impacts at Hanford and includes general data on cribs and ponds.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.4.1-0805200531025	Rad Weight in the 216-Z-12 Soil Drums	J. D. Anderson	N/A	N/A	WS9	All	Indicates plutonium weight of 2 grams and uranium weight ~0.5 grams.
TRU-WST-11.4.3-0801200555175	Recent Site-Wide Transport Modeling Related to the Carbon Tetrachloride Plume at the Hanford Site	M. P. Bergeron, C. R. Cole	Pacific Northwest National Laboratory	September 2004	WS12	All	Discusses chemicals described as Plutonium Finishing Plant organic liquid waste stream discharges.
TRU-WST-11.4.4-0810200534426	Waste Information Data System General Summary Report (for Site Code: 216-Z-1A)	N/A	U. S. Department of Energy	N/A	PR4 PR7 WS2	All	Provides an overview of the status of the 216-Z-1A Drain/Tile Field.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.4.3-0810200534996	Distribution of Plutonium and Americium beneath the 216-Z-1A Crib: A Status Report	S. M Price, R. B. Kasper, et al.	Rockwell Hanford Operations, Rockwell International	RHO-ST-17	PR1 PR2 WS9	All	Discusses the distribution of plutonium and americium in sediments beneath the 216-Z-1A Crib.
TRU-WST-11.4.3-0815200524862	Tank 241-Z-361 Process and Characterization History	S. A. Jones	B&W Hanford Company	HNF-1989, Rev. 1	PR2 WS2 WS3 WS5 WS6 WS7 WS12	All All 2 1 All All All	Discusses the processes that sent waste to Tank 241-Z-361 and includes records of transfers, characterization, and the basis to estimate the tank's contents.
TRU-WST-11.4.3-0815200524635	Z Plant Aggregate Area Management Study Technical Baseline Report	D. H. DeFord	Bechtel Hanford, Inc.	BHI-00175	PR2 PR3 WS2 WS9	All	Provides a technical description and operational history of liquid and solid waste disposal sites in the vicinity of Z Plant.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.4.3-0815200525375	A Study of ARHCO Radioactive Gaseous and Liquid Effluent Release Points to the Environs From 220 Area Facilities	L. L. Lundgren	Atlantic Richfield Hanford Company	ARH-1172	WS2	All	Discusses the Z Plant liquid effluent system including 216-Z-12 and 216-Z-1A.
TRU-WST-11.4.3-1026200445132	The Hanford Site Historic District for Manhattan Project 1943-1990	T. E. Marceau, D. W. Harvey, et al.	Department of Energy	DOE/RL-97-1047	Supp	D.1-D.6	Provides key dates.
TRU-TS-11.4.3-0426199933131	PFP Final Safety Analysis Report	J.E. Shapely	WHC	SD-CP-SAR-021	WS4 WS5 WS7 WS8 WS10	All Chapt 5 Chapt 7	Describes the processes, safety systems, waste generation, and operational activities.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.4.3-0913200542772	Hanford Facility Dangerous Waste Closure Plan for 241Z Treatment and Storage Tanks	N/A	U.S. DOE	DOE/RL-96-82	PR3	All	Provides the closure plan for the 241-Z treatment and storage tanks.
TRU-WST-11.4.4-0915200523481	Hydrogen-Oxygen Recombination Catalyst Package	N/A	Rockwell Hanford Operations	Drawing H-2-28818	WS7	All	Provides the assembly of the hydrogen-oxygen recombination catalyst package.
TRU-WST-11.4.3-0913200542526	241-Z-361 Sludge Characterization Data Quality Objectives	D. L. Banning	B&W Hanford Company	HNF-4225, Rev. 0	PR2 WS10	17-21 100-110	Provides information regarding the basis for developing a sampling and analysis plan.
TRU-SPO-11.4.3-1129199941447	Plutonium Purification and Fabrication Technical Manual	Plant Processing Unit Separations Technology Sub-Section	General Electric	HW-29200-DEL	WS3 WS4 WS10 WS11 WS12	804	This one page describes the use of carbon tetrachloride and isopropyl alcohol for degreasing the plutonium piece prior to coating.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-SPO-11.4.1-0823200032461	Final Low Pressure Reactor Fuel Processing Campaign—PUREX Plant Contract AT (45-1)-2130	R. P. Corlew	Atlantic Richland Hanford Company	ARH-2440	WS9	1	The document provides supporting internal correspondence from PUREX Vice President - Operations.
TRU-TS-11.4.3-0423199947115	History and Stabilization of the Plutonium Finishing Plant Complex, Hanford Site	M. S. Gerber	U. S. DOE	HNF-EP-0924	PR2	All	Document provides historical PFP data.
TRU-WST-11.4.3-1004200524269	PCBs	Agency for Toxic Substances and Disease Registry	ECO-USA.net	N/A	WS12	All	Discusses polychlorinated biphenyls.
TRU-WST-11.4.3-0620200635667	Solid Waste Management History of the Hanford Site	D.R. Duncan	Westinghouse Hanford Company	WHC-EP-0845, Rev. 0	WS11	5-1	Describes the waste handling and packaging procedures and practices from 1944 to 1995.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.4.3-0601200630575	Spent Fuel Isotopic Inventory Counted by Fuel Elements	W. D. Wittekind, R. L. Richardson	UNC Nuclear Industries	UNI-1983	WS9	3B-22, 14	This document provides the isotopic inventories of spent fuels stored in K-East, K-West, and the N-Reactor basins which were calculated on an element by element basis.
TRU-WST-11.4.3-0607200628030	216-Z-9 Crib History and Safety Analysis	K. R. Ridgway M. D. Veatch D. T. Crawley	Atlantic Richfield Hanford Company	ARH-2207	PR1 PR2 PR3 PR4 PR6 PR7 WS1 WS2 WS3 WS4 WS9 WS12	3, 6 2 2-17 2-17 2-24 2-17 7 2-17 2-17 2-17 18-33 2-17	History of PFP the Facility including the Recuplex Facility

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.4.3-0112200626371	Isotopic Composition and Specific Activity of Chalk River Plutonium	F. P. Brauer	General Electric Company	HW-53433	PR8 WS9	5	Provides data regarding the radioactive isotope content of the 300 Area waste
TRU-WST-11.4.3-1003200638396	Addendum to Isotopics per Can for Mark IA and Mark IV Fuel	P. Dessaules	Westinghouse Hanford Company	WHC88-00032RD ADD1	WS9	Various	Document provides detailed information on the isotopic ratios of plutonium produced at N Reactor. Many isotopic ratios are listed in the document.
TRU-WST-11.4.3-0410200732940	26% Pu-240 Production Data	F. C. Black L. L. Thomas, D. H. Underwood G. E. Wilber	Atlantic Richfield Hanford Company	ARH-1164 RD	WS9	505-507	This document provides the isotopic content of 26% Pu-240 production runs at Hanford.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.4.2-0607200627147	Disposal of Recuplex Liquid Waste Streams	J. M. Smith	N/A	DDTS-GENERATED-612	WS1 WS12	1, 2 All	Document discusses the cost savings of cribbing un-neutralized Recuplex waste vs. neutralization and tank storage.
TRU-WST-11.4.3-0629200642251	Z Plant Liquid Waste Disposal Through the 241-Z Vault	R. J. Smetana	Atlantic Richfield Hanford Company	ARH-CD-323	WS4 WS8 WS9	5 3, 4 19, 23	This document describes reasonable estimates of Z Plant waste composition and volume, particularly that which was pumped to the 242-T Evaporator via the D-5 Tank in the 241-Z Vault.
TRU-SPO-11.9-0708200431435	A History of Solid Waste Packaging at the Hanford Site	D. I. Weyns-Rollosson J. A. Pottmeyer T. J. Stratton	Westinghouse Hanford Company	WHC-SA-2772-FP	N/A	N/A	Describes waste packaged after 1974 at Hanford.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.4.3-0401200747426	Recuplex Operating Manual	234-5 Development Plant Processes Sub-Section	Hanford Atomic Products Operation	HW-35030	PR2 PR3 PR7 WS2 WS4 WS5 WS7 WS8 WS9 WS11 WS12	7 7 7-8 7-8 12 34 1 1 1 1 8-11	This is a technical manual which provides a reference of the plant's technical basis and serves as an aid in the instruction of operating personnel. The manual is comprised of five sections, physical arrangement of the plant; the remaining sections contain detailed procedures for the major operations in the SC Process hood, RB Process hood, SE Process hood, and the Chemical Preparation room.
TRU-WST-11.9-0418200734986	Engineering Evaluation/Cost Analysis for the Plutonium Finishing Plant Sub-Grade Structures and Installations	L. Oates, J. A. Teal, A. M. Hopkins, A. R. Sherwood, D. C. Lini	Fluor Hanford	HNF-30862	PR2 PR3 PR7 WS2 WS8 WS9 WS12 S13	2-13 2-13 2-13 2-13 2-13 2-29, 2-30 2-14, 2-29 to 2-33 A2-2 to A2-8	This document was used primarily for the information about the historical PFP effluent structures.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.9-0418200735224	Radiological History of the Plutonium Finishing Plant (1954-1997)	A. L. Ehlert	B&W Hanford Company	FSP-PFP-IP-003, Rev. 0	WS2 WS3	24 11	This is an historical reference manual about the radiological history of PFP. The purpose of the manual is to provide a guide with regard to the results of radiological incidents and the status of the PFP Complex in relation to daily work and future D&D efforts.
TRU-WST-11.4.3-0417200750314	MSDS for Diatomaceous Earth	N/A	Sigma-Aldrich	MSDS # 065143	WS12	All	This is an MSDS for Silica, Amorphous, Diatomaceous Earth (CAS # 61790-53-2). The product name is Celite ® 500, Filter Aid, Calcined. The MSDS # is 065143
TRU-WST-11.9-0418200735075	History of the Plutonium Production Facilities at the Hanford Site Historic District 1943-1990	M. S. Gerber	Department of Energy/Richland	DOE/RL-97-1047	PR4 WS2 WS9 WS12 S13	28 24 24 24 24, 27	Chapter 2 and Section 5 describe plutonium finishing at the Hanford Site.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.9-0418200734818	Waste Information Data System General Summary Report for 216-Z-1 and 216-Z-2	Various	U. S. Department of Energy	Site Code: 216-Z-1&2	PR2 PR3 PR7 WS2 WS7 WS8 WS9 WS12	1 2 1 1 1 1, 2 1 1	The WIDS General Summary Report provides information about the site description, location, process description, associated structures, site comment, cleanup activities, environmental monitoring description, references, waste information, dimensions, field work, and regulatory information.
TRU-WST-11.9-0418200734893	Handbook for 200 Area Waste Sites, Volume II	H. L. Maxfield	Rockwell Hanford Operations	RHO-CD-673, Vol II	WS3 WS12	144 144	This is the second of three volumes written by Maxfield. Volume 2 was written as a handbook of radioactive waste sites and associated radiation areas within the 200 Areas and related environs. Volume 2 contains information about those sites within the 200 West Area.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.9-0418200734726	Waste Information Data System General Summary Report for 232-Z Waste Incineration Facility	Various	U. S. Department of Energy	Site Code: 232-Z	PR2 PR7 WS2	1 1 1	The WIDS General Summary Report provides information about the site description, location, process description, associated structures, site comment, cleanup activities, environmental monitoring description, references, waste information, dimensions, field work, and regulatory information.
TRU-WST-11.4.3-0410200635059	Nuclear Weapons Frequently Asked Questions, Section 8.0 The First Nuclear Weapons	Carey Sublette	Internet/World Wide Web	http://nuclearweaponarchive.org/Nwfaq/Nfaq8.html Link accessible on 4/18/07	WS9	2	Discusses the isotope values for Pu and plutonium used in atomic bombs.
TRU-WST-11.4.3-0411200631609	The Isotopic Content and Specific Activity of Pile Produced Plutonium	G. J. Alkire H. R. Schmidt E. M. Kinderman	General Electric	HW-23487	WS9 WS12	18 18	This document provides applicable isotopic ratio information.

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.9-0418200751635	Engineering Evaluation/Cost Analysis for the Plutonium Finishing Plant Above-Grade Structures	Not Available	Department of Energy	DOE/RL-2004-05, Rev. 1	WS2 WS3	All All	This document presents the results of an engineering evaluation/cost analysis that evaluates options for the disposition of contaminated Plutonium Finishing Plant above-grade structures. The document was used as a reference primarily for PFP Complex building descriptions.
TRU-WST-11.4.3-0417200648927	Experimental Isotopic Analysis Of Point Exposure Data In Hanford Production Reactor Fuels	H. Toffer A.F. Kupinski	Douglas United Nuclear, INC.	DUN-7243 RD	WS9	32	Isotopic Analysis of Hanford Production Reactor Fuels

Table 8. Acceptable Knowledge Source Document Reference List.

Site: Hanford							
Waste Stream/Waste Stream Lot: PFP Complex Effluent Waste Stream							
Waste Stream/Waste Stream Lot Number:							
RMS Tracking #	Title	Author	Publisher	Document/ Revision Number	AK #	Source Doc. Page Number	Summary
TRU-WST-11.4.3-0518200645820	Methods and Models of the Hanford Internal Dosimetry Program	E. H. Carbaugh	Pacific Northwest Laboratory	Not Available	WS9	7.4	This manual provides the scientific and technical foundations for bioassay program design and interpretation, and for the assessment of occupational intakes and internal doses. This manual describes the basic methods and biokinetic models used for bioassay program design, interpretation, and internal dose assessment.
TRU-SPO-11.1.1-0819200238988	Calculations of Hanford Sr^{90} Isotopic Ratio Based on its Isotopic Ratio to Cs^{137}	N. M. Abdurrahman	Fluor Hanford	02-NMA-006	WS9	All	Provides updated isotopic profile data for the Hanford Site.

5.0 FIGURES

Figure 1. Map of the Hanford Site.

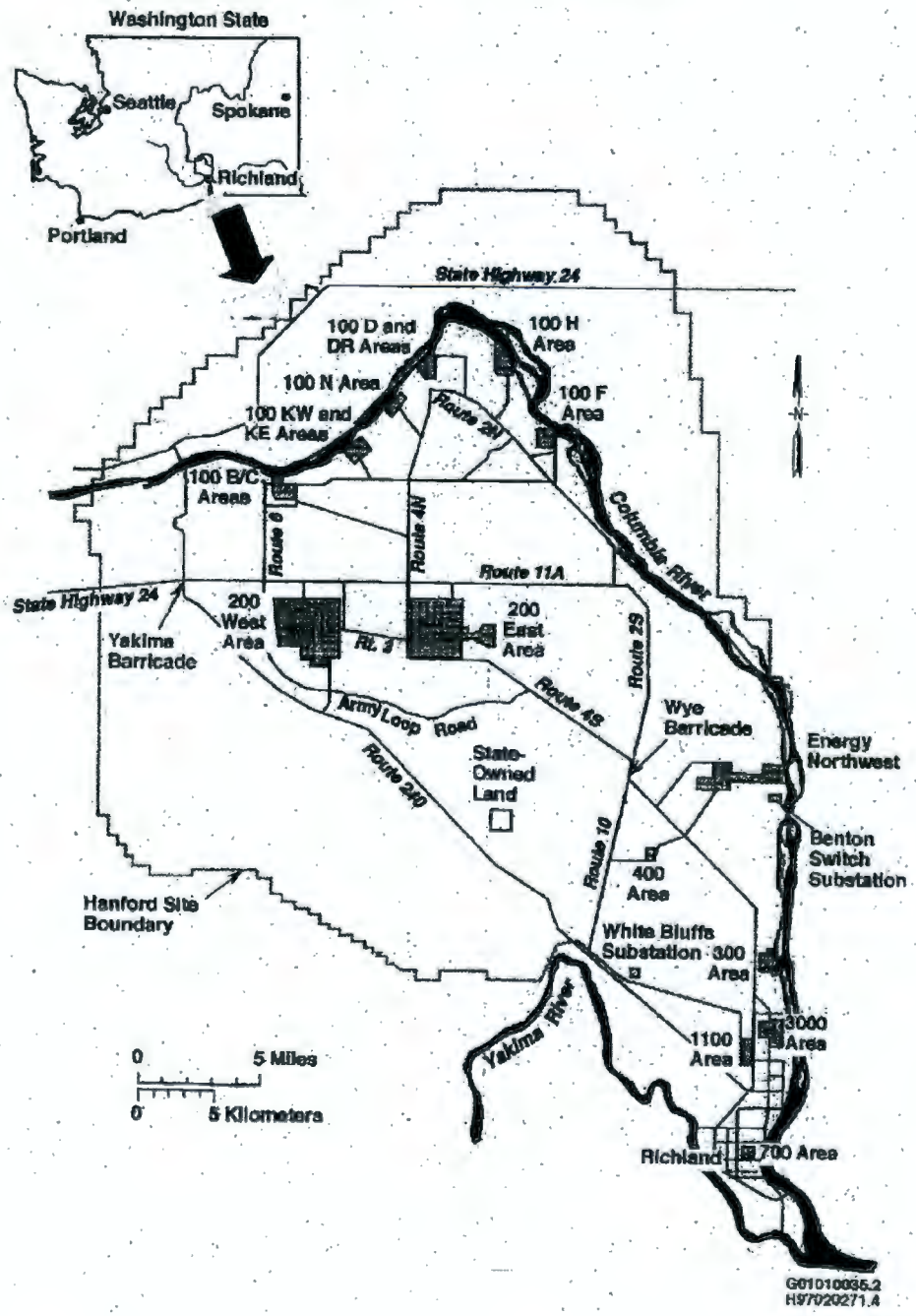


Figure 2. Location of the 216-Z-1A and 216-Z-12 Cribs.

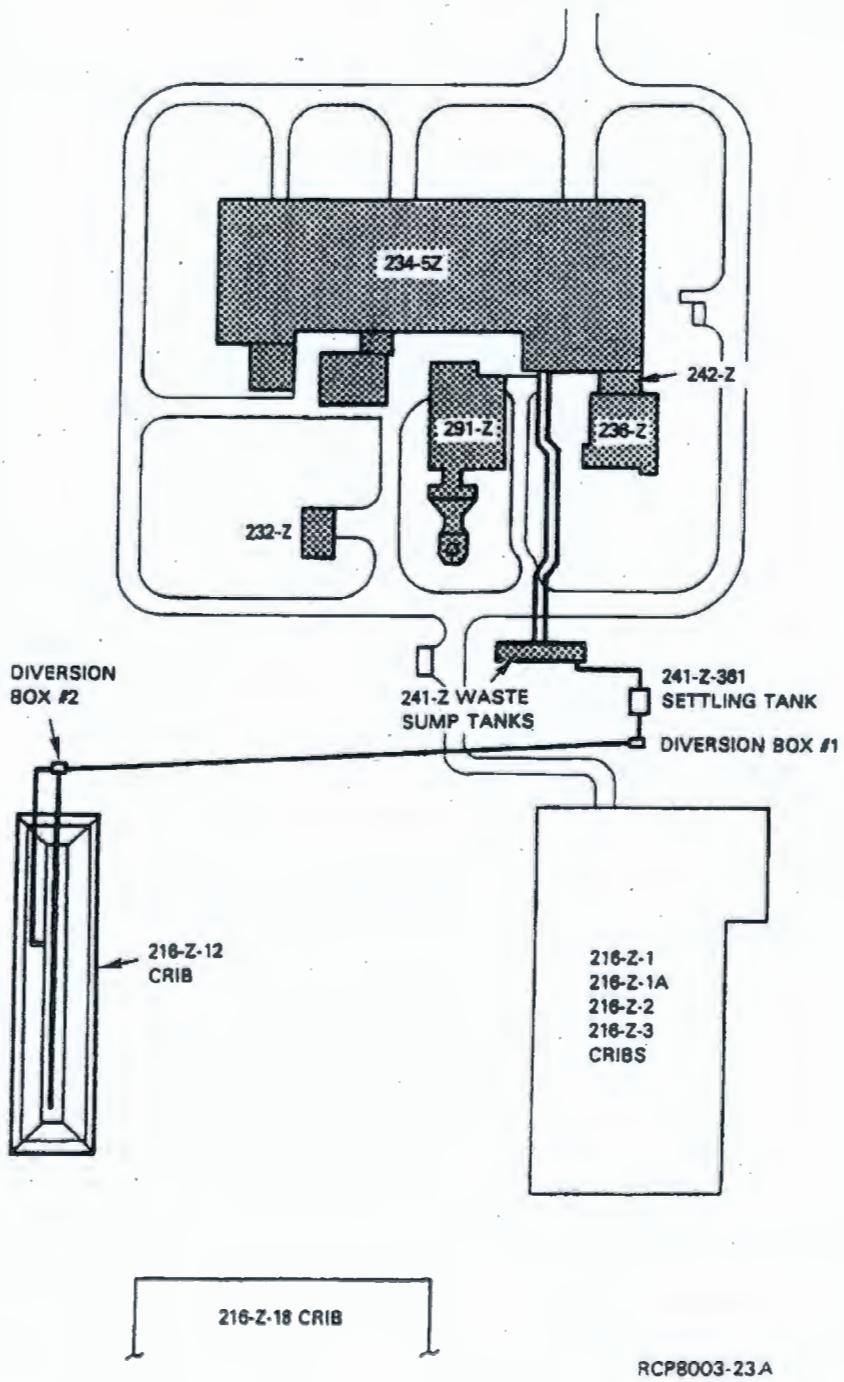


Figure 3. PFP and Associated Disposal Sites.

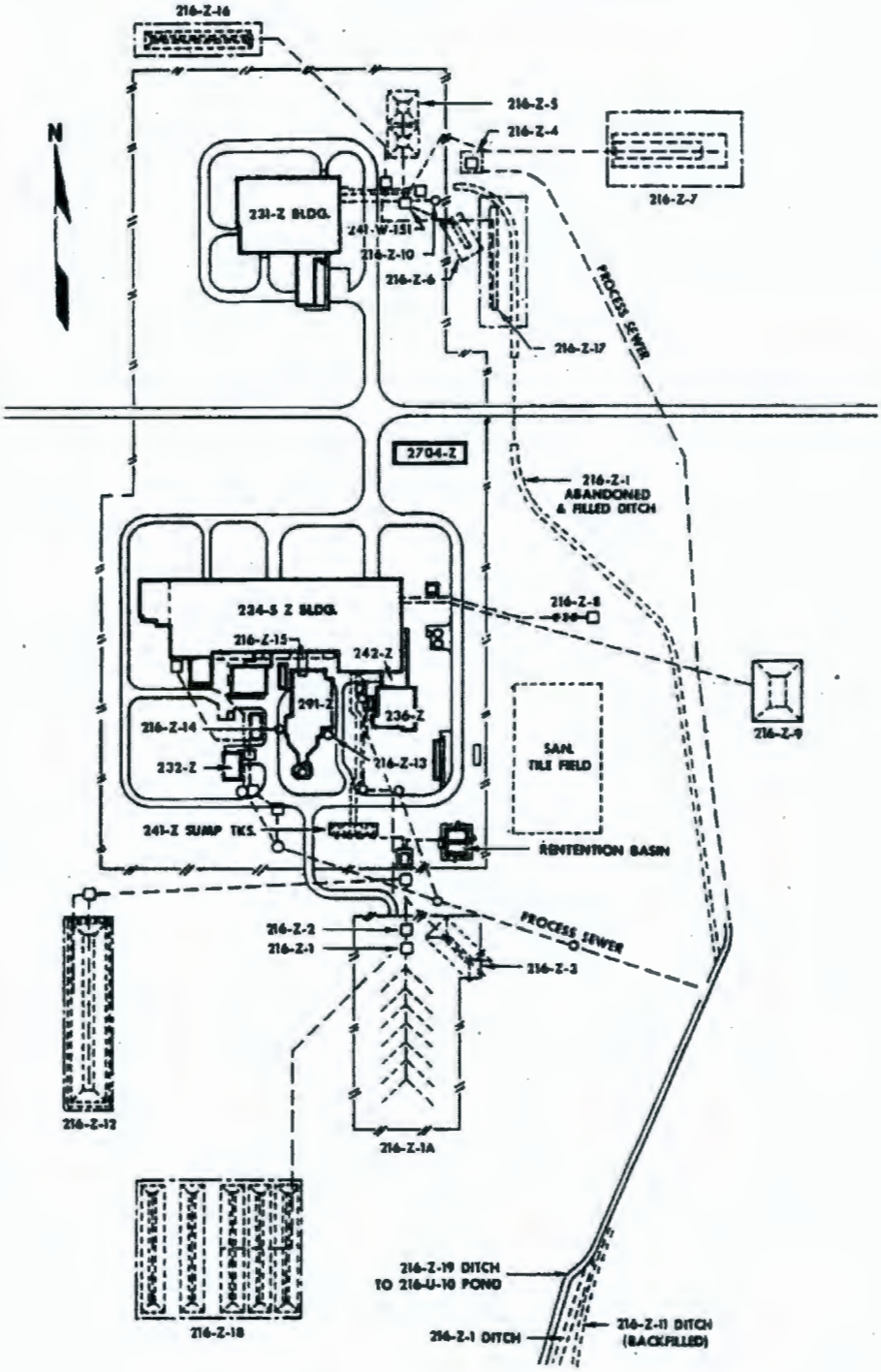


Figure 4. PFP Processes and Liquid Waste Disposal Arrangements 1949–1955.

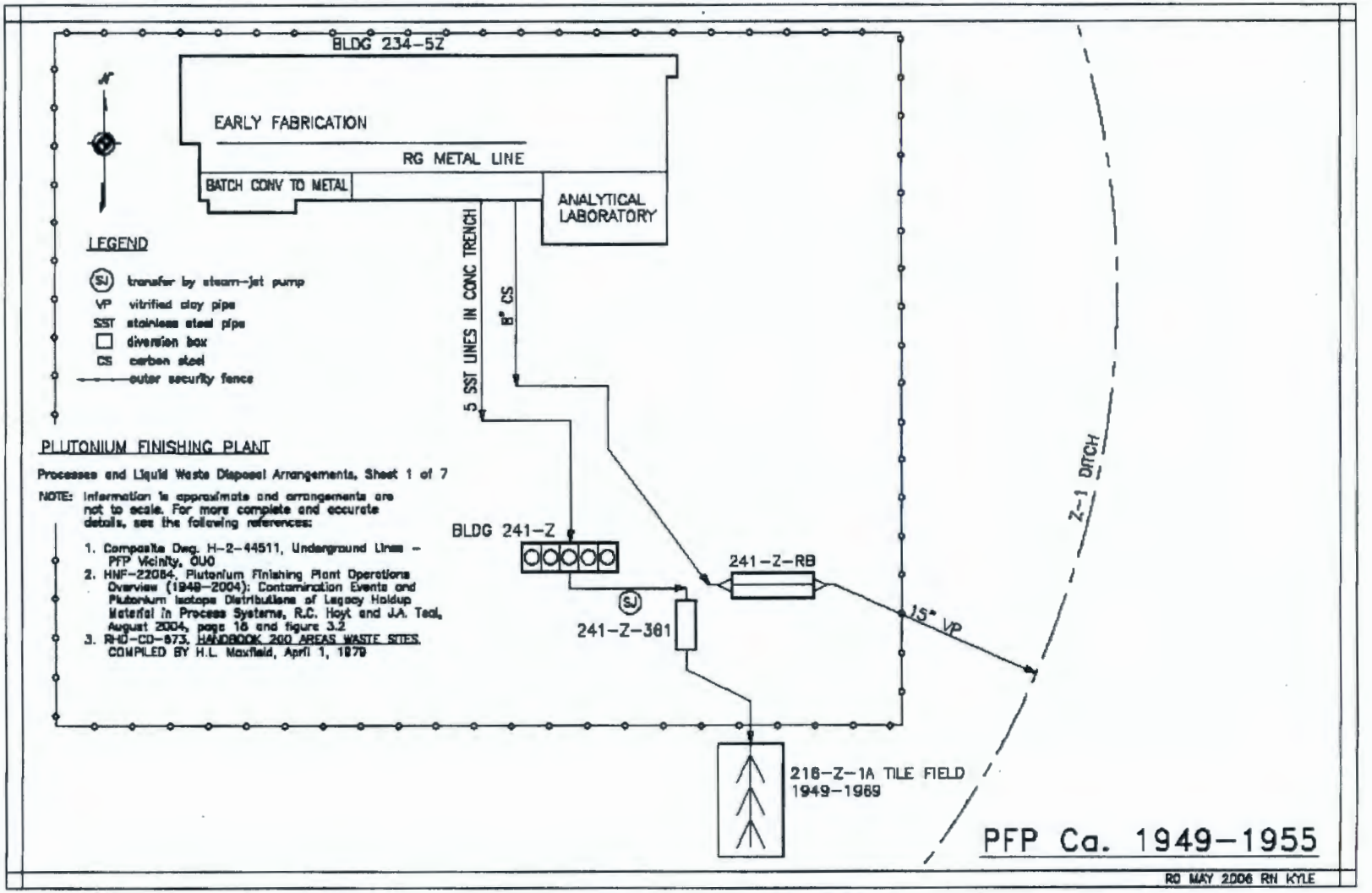


Figure 5. PFP Processes and Liquid Waste Disposal Arrangements 1955–1960.

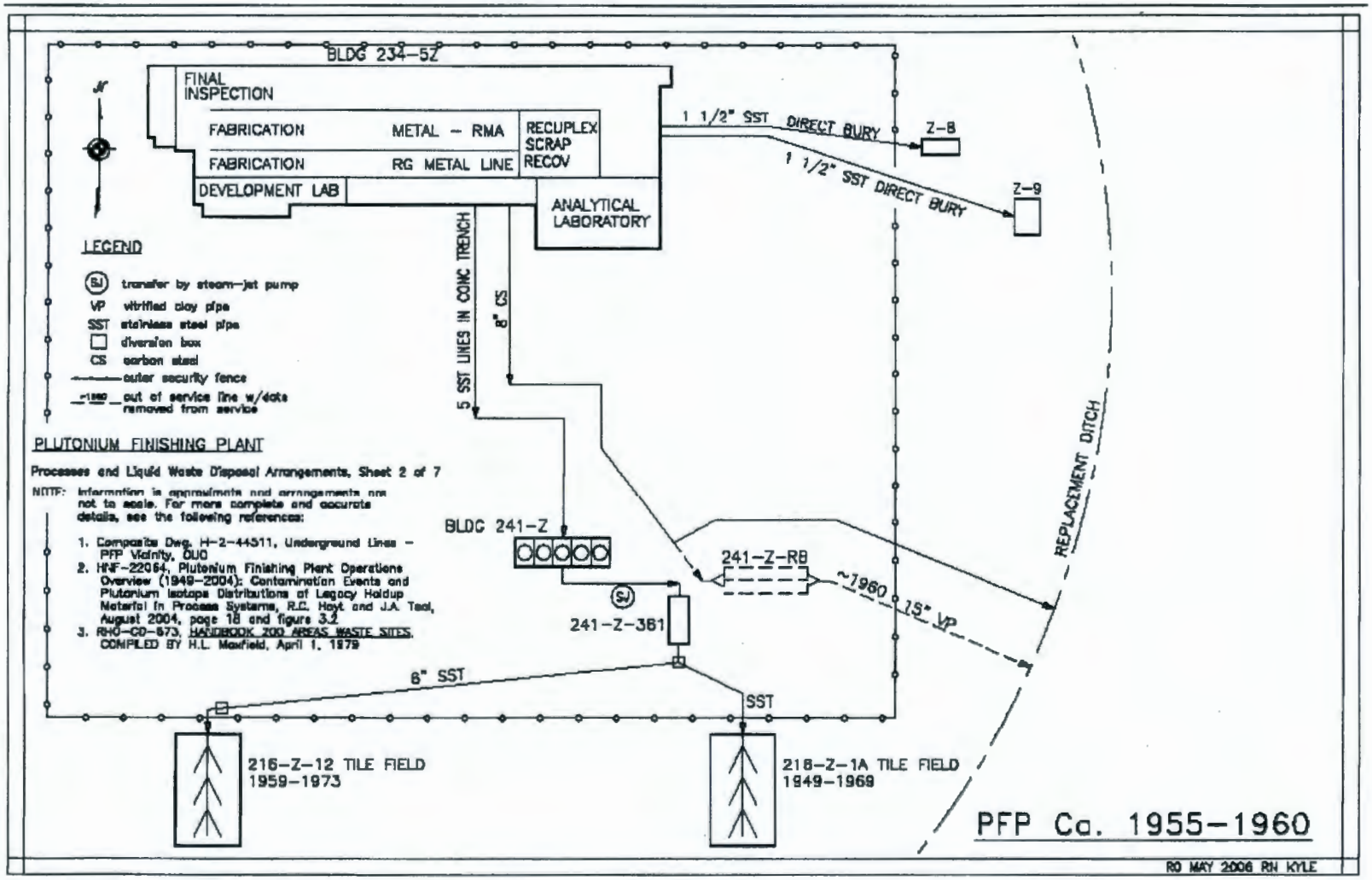


Figure 6. PFP Processes and Liquid Waste Disposal Arrangements 1960–1962.

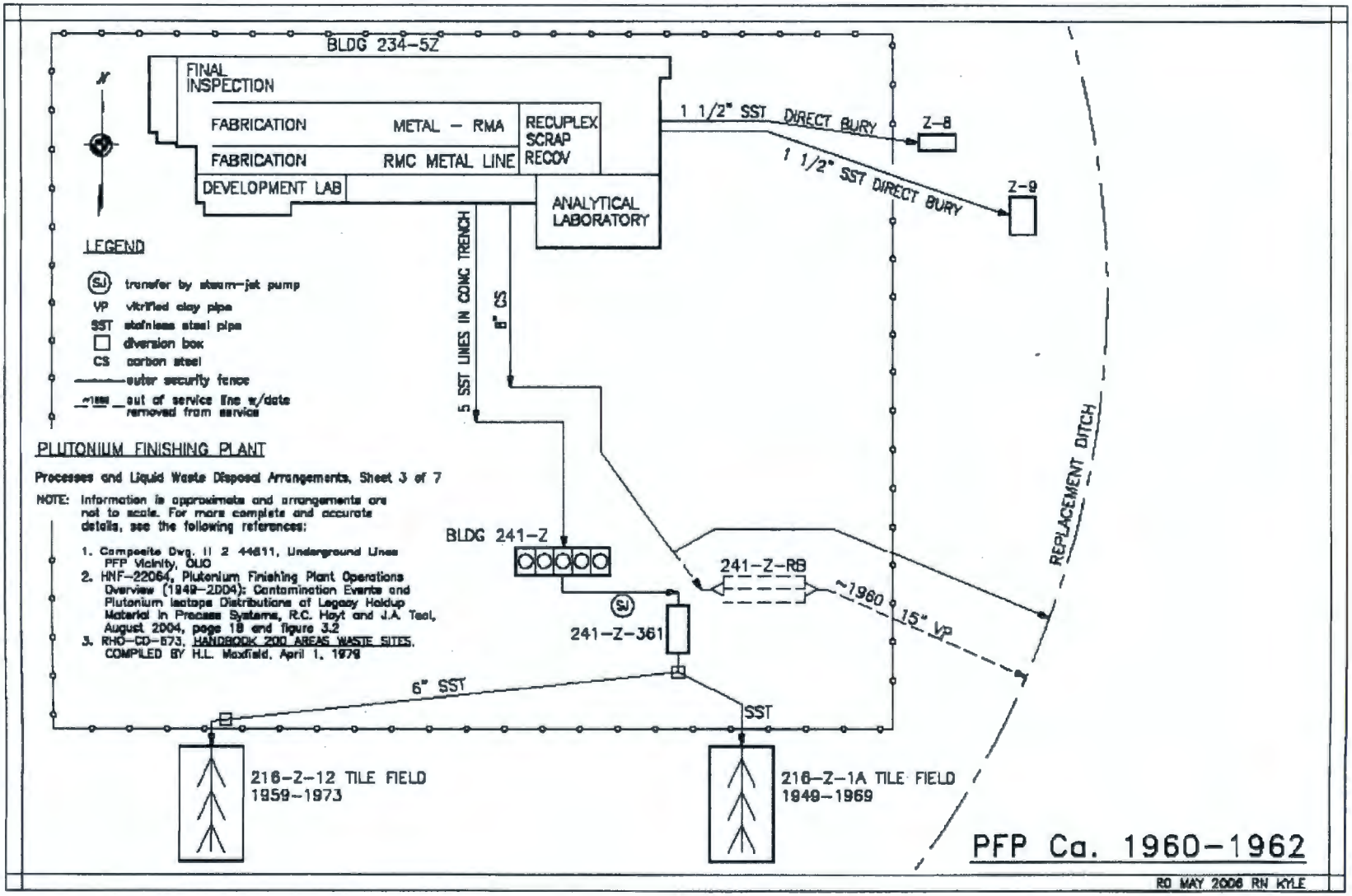


Figure 7. PFP Processes and Liquid Waste Disposal Arrangements 1962–1966.

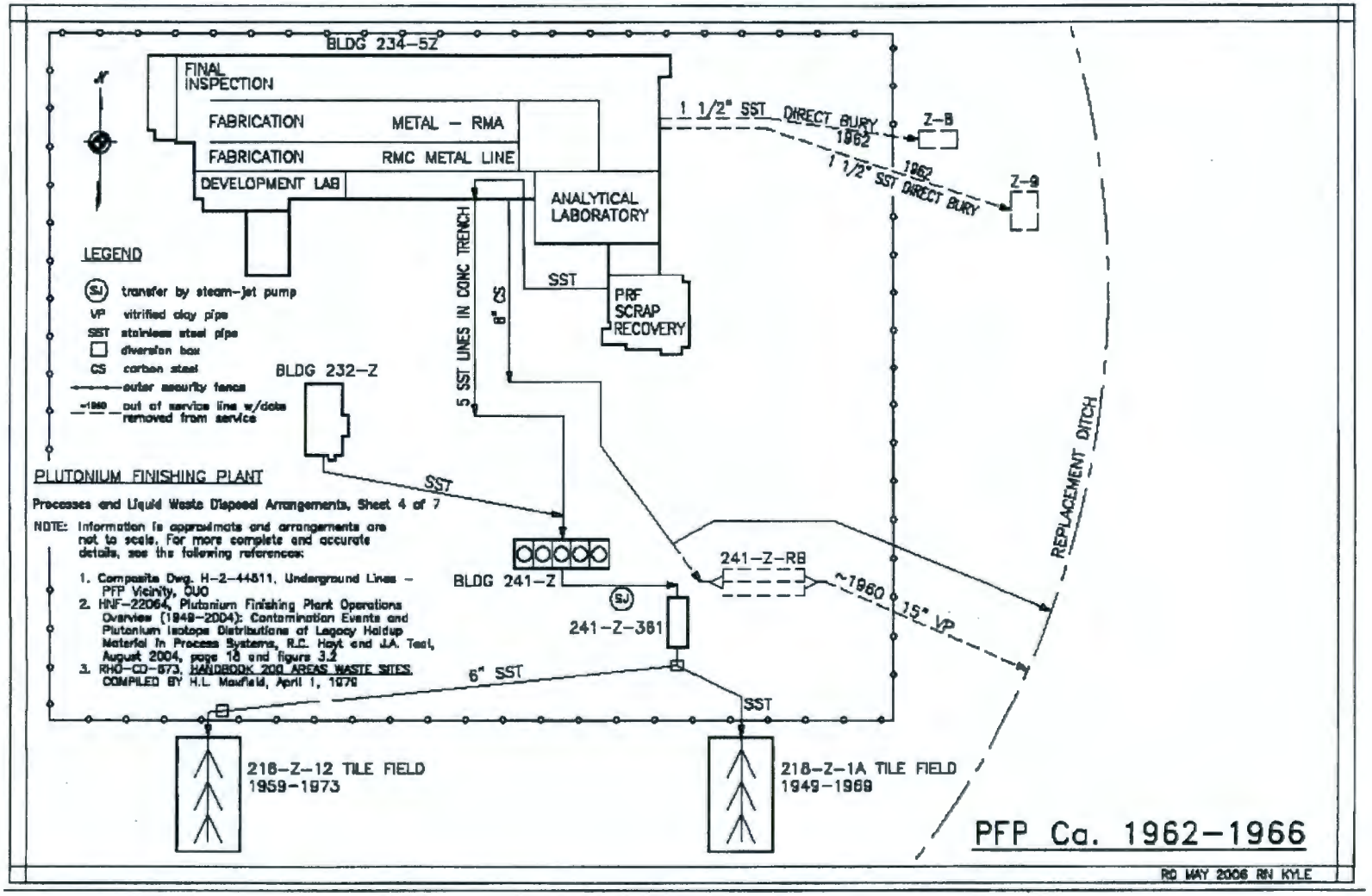


Figure 8. PFP Processes and Liquid Waste Disposal Arrangements 1966–1973.

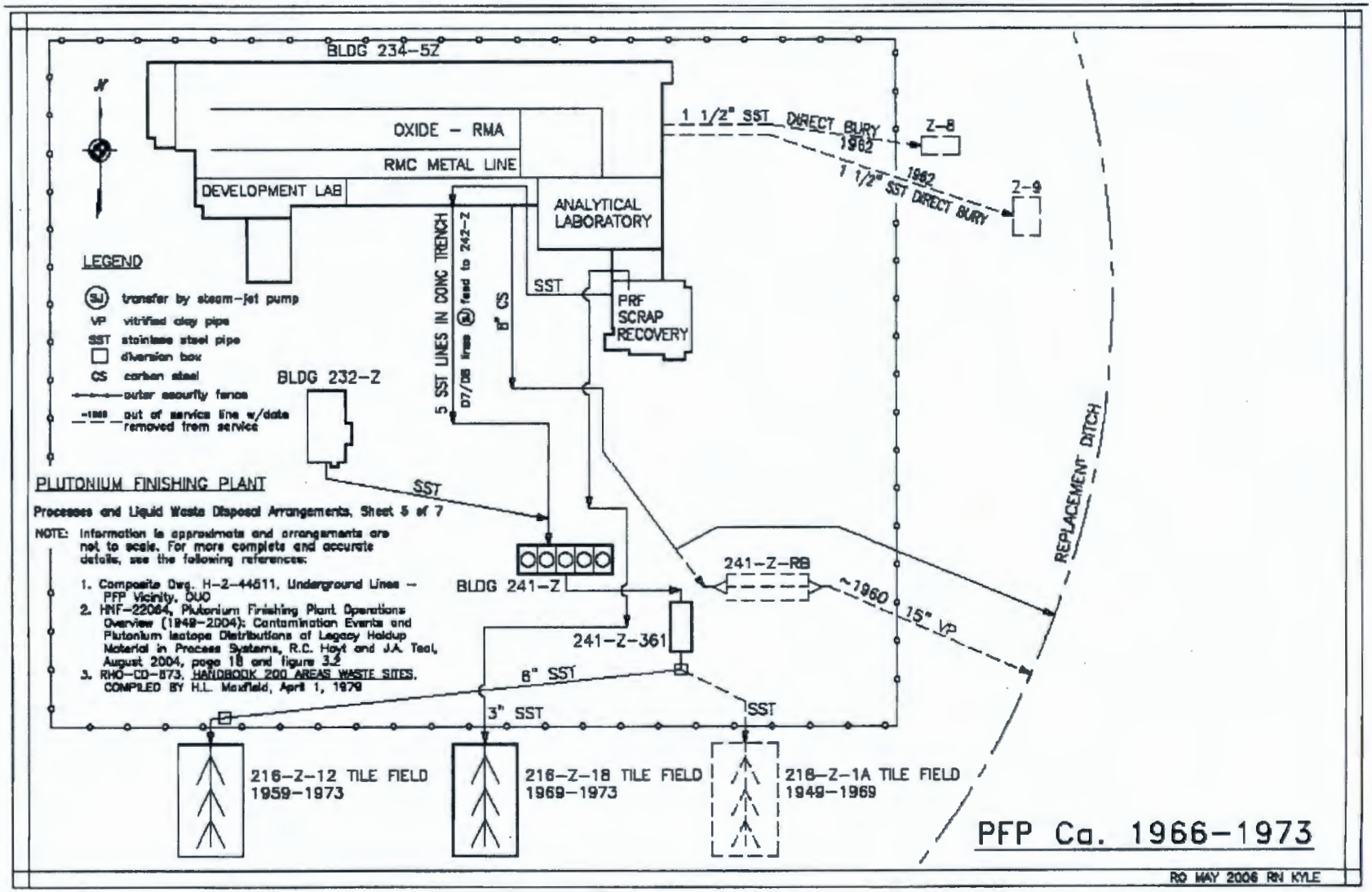


Figure 9. PFP Processes and Liquid Waste Disposal Arrangements 1973–1989.

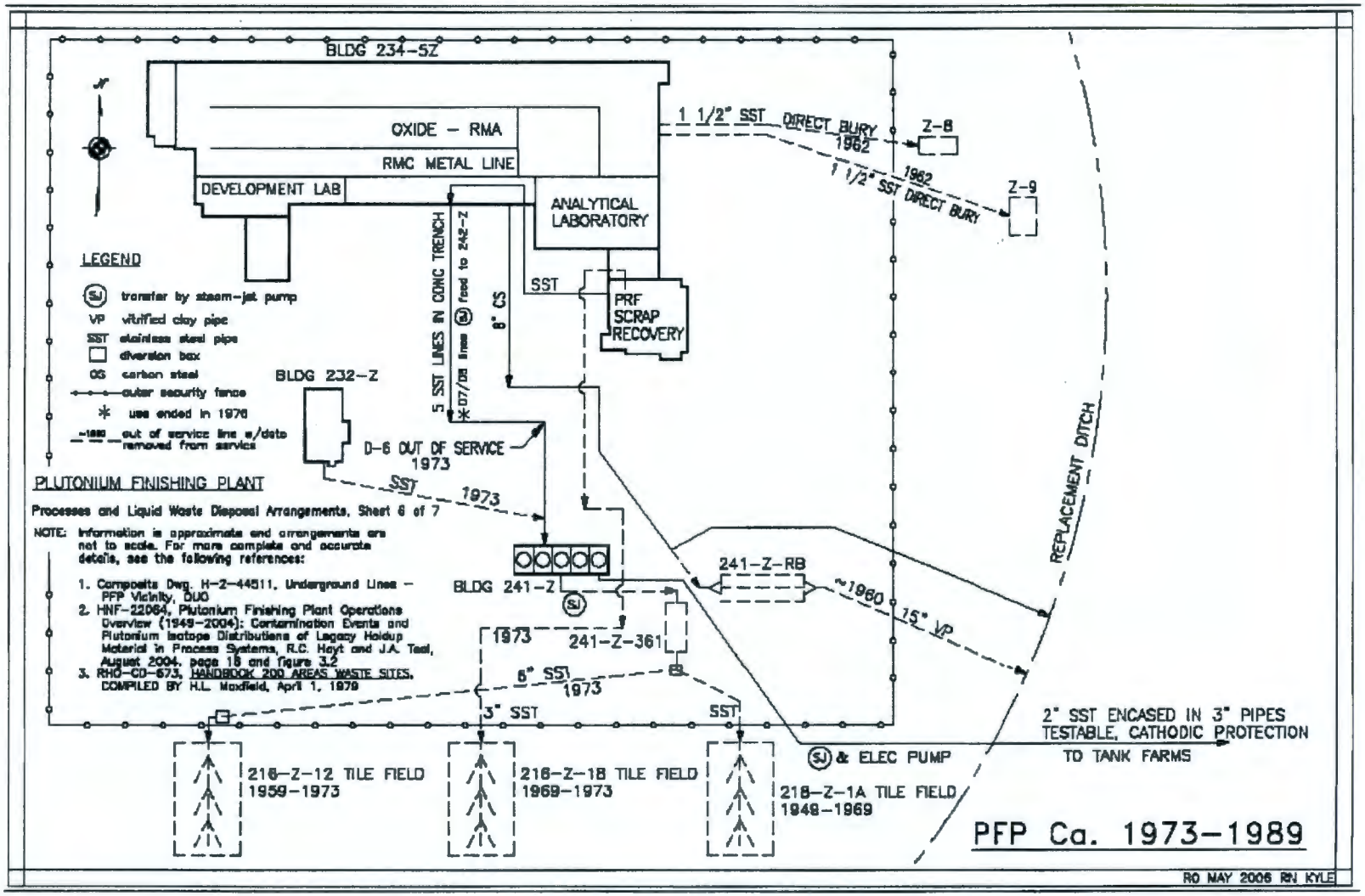


Figure 10. PFP Processes and Liquid Waste Disposal Arrangements 1990–2003.

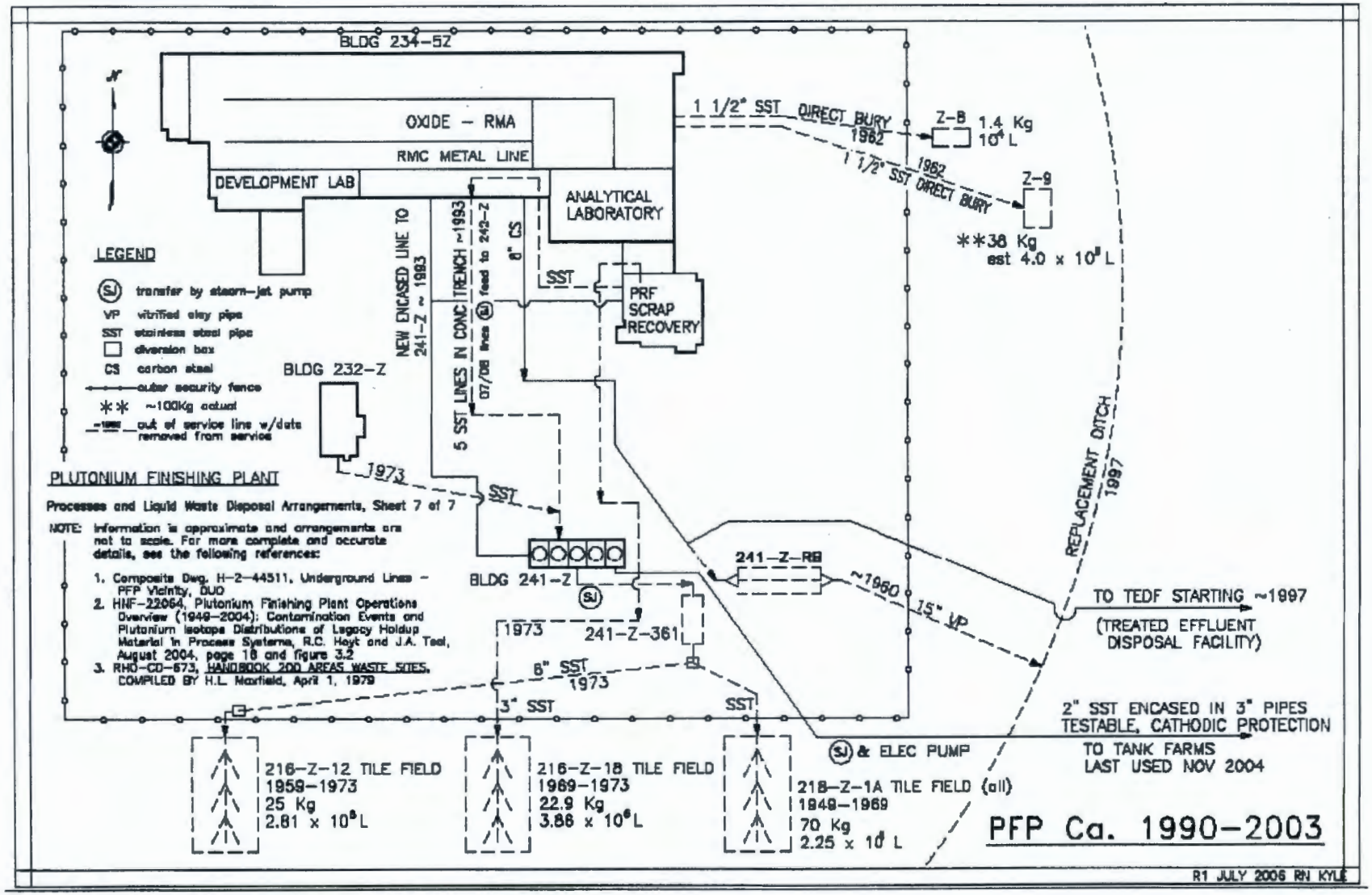


Figure 11. Silica Slurry Tank.

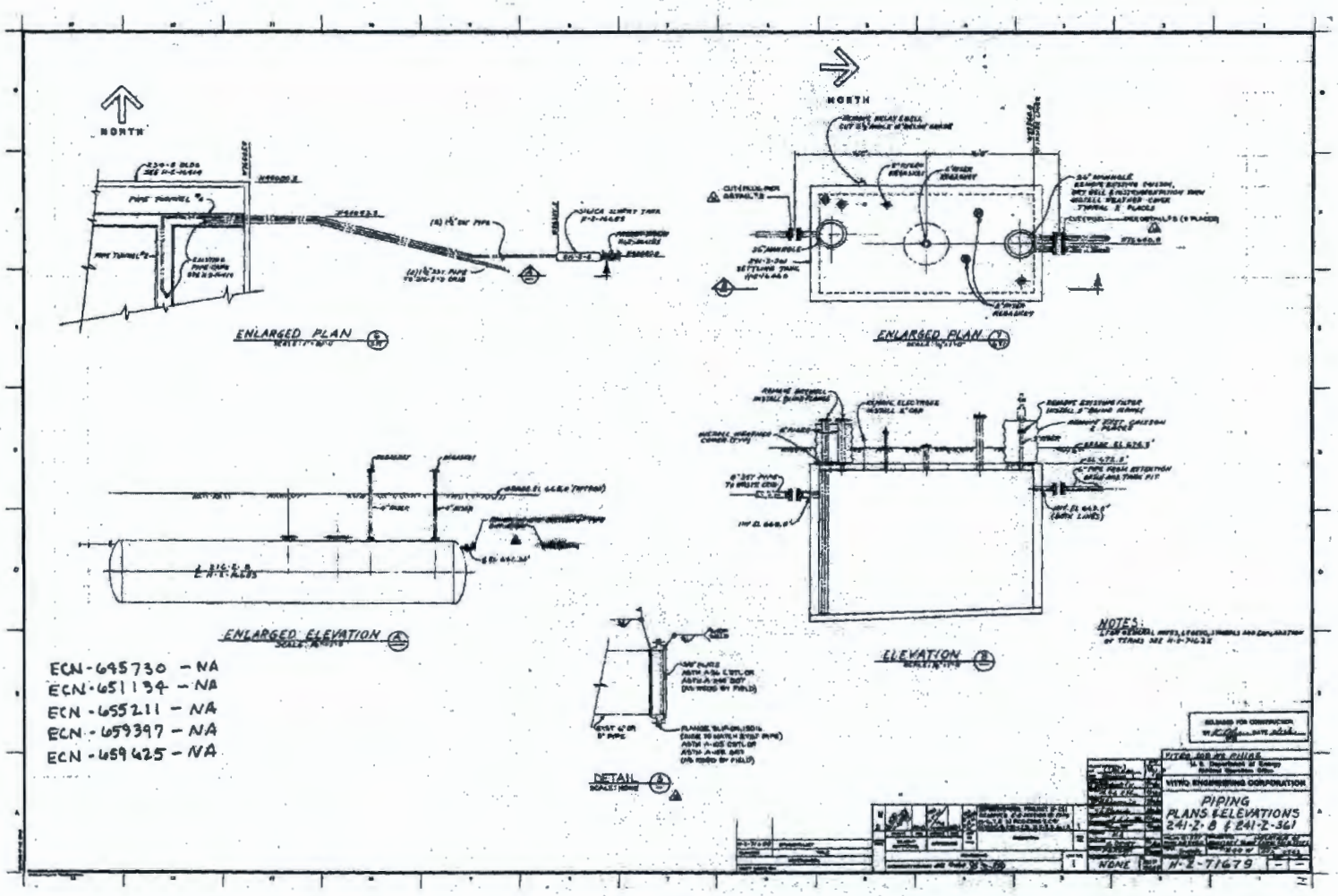


Figure 12. 241-Z Treatment and Storage Tanks.

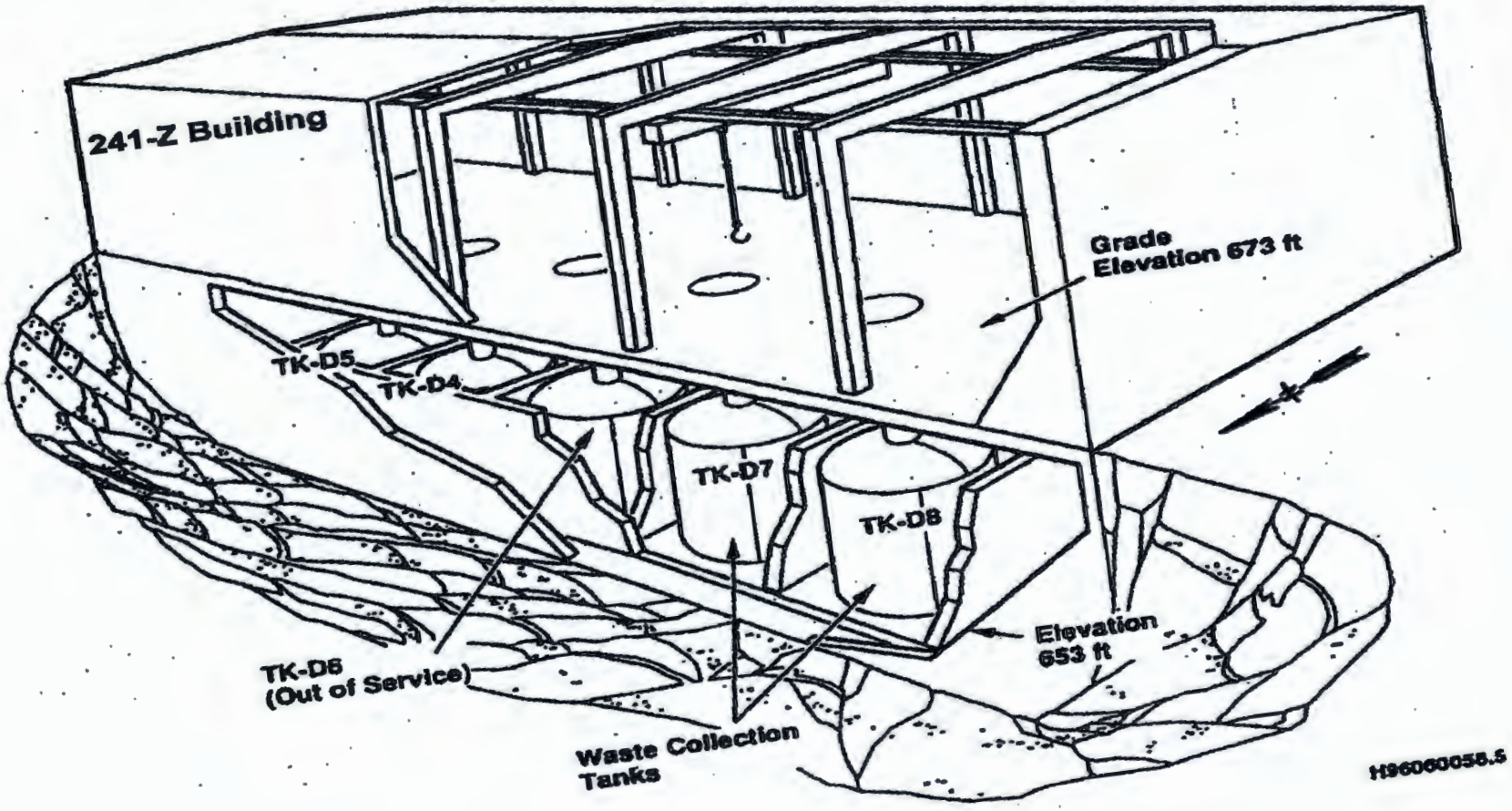


Figure 13. 241-Z Holding Tanks.

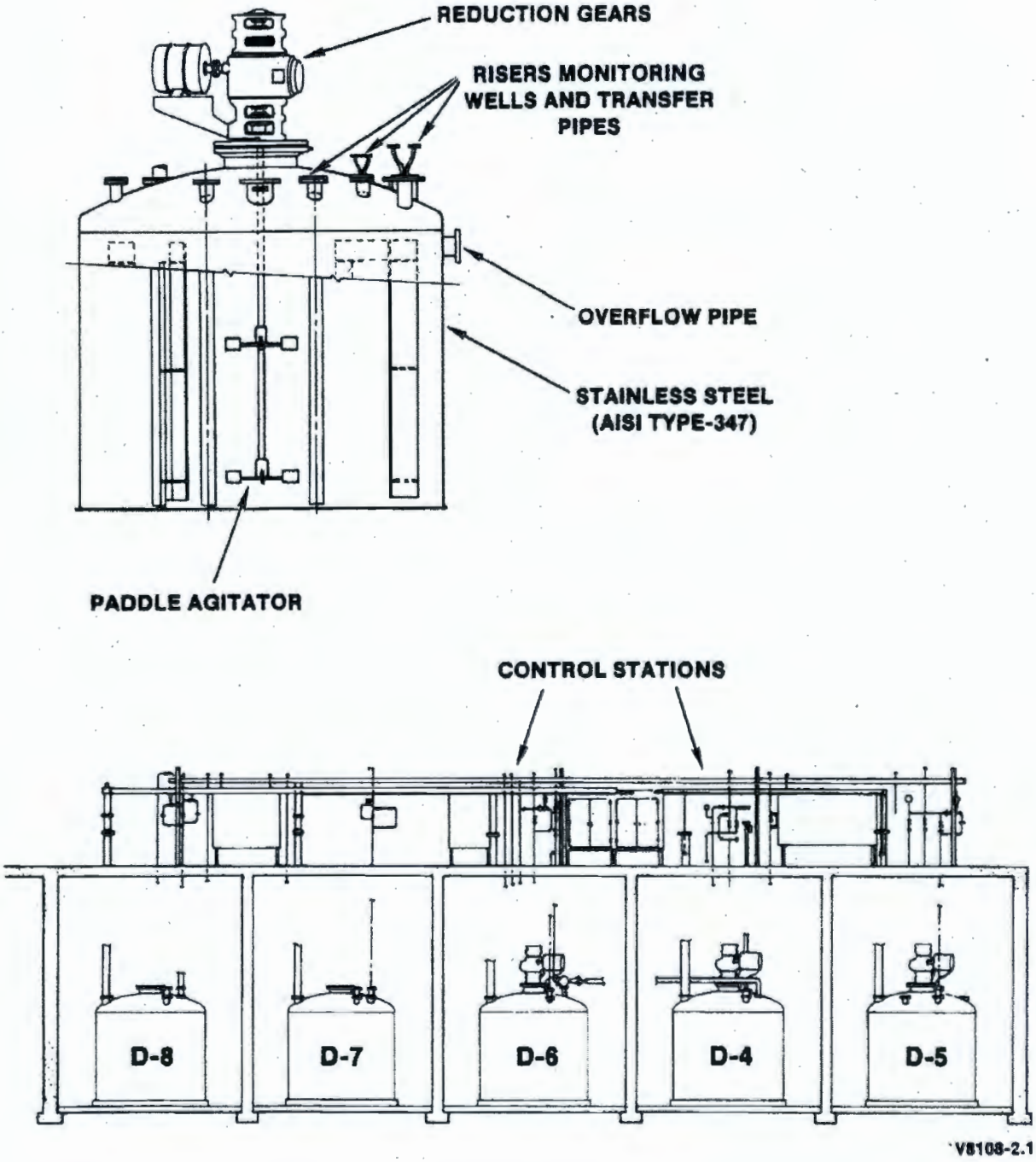


Figure 14. 241-Z-361 Settling Tank Details.

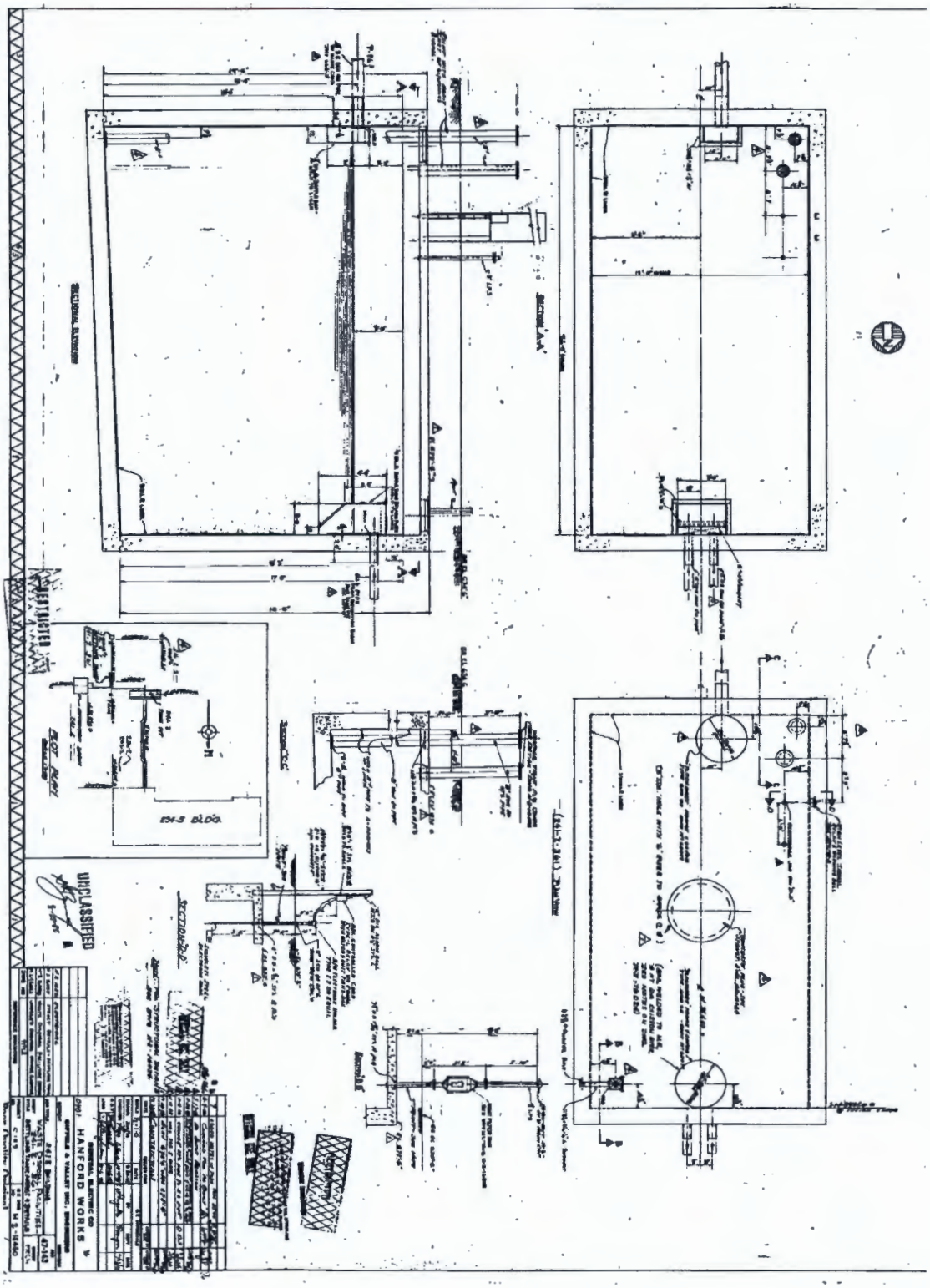
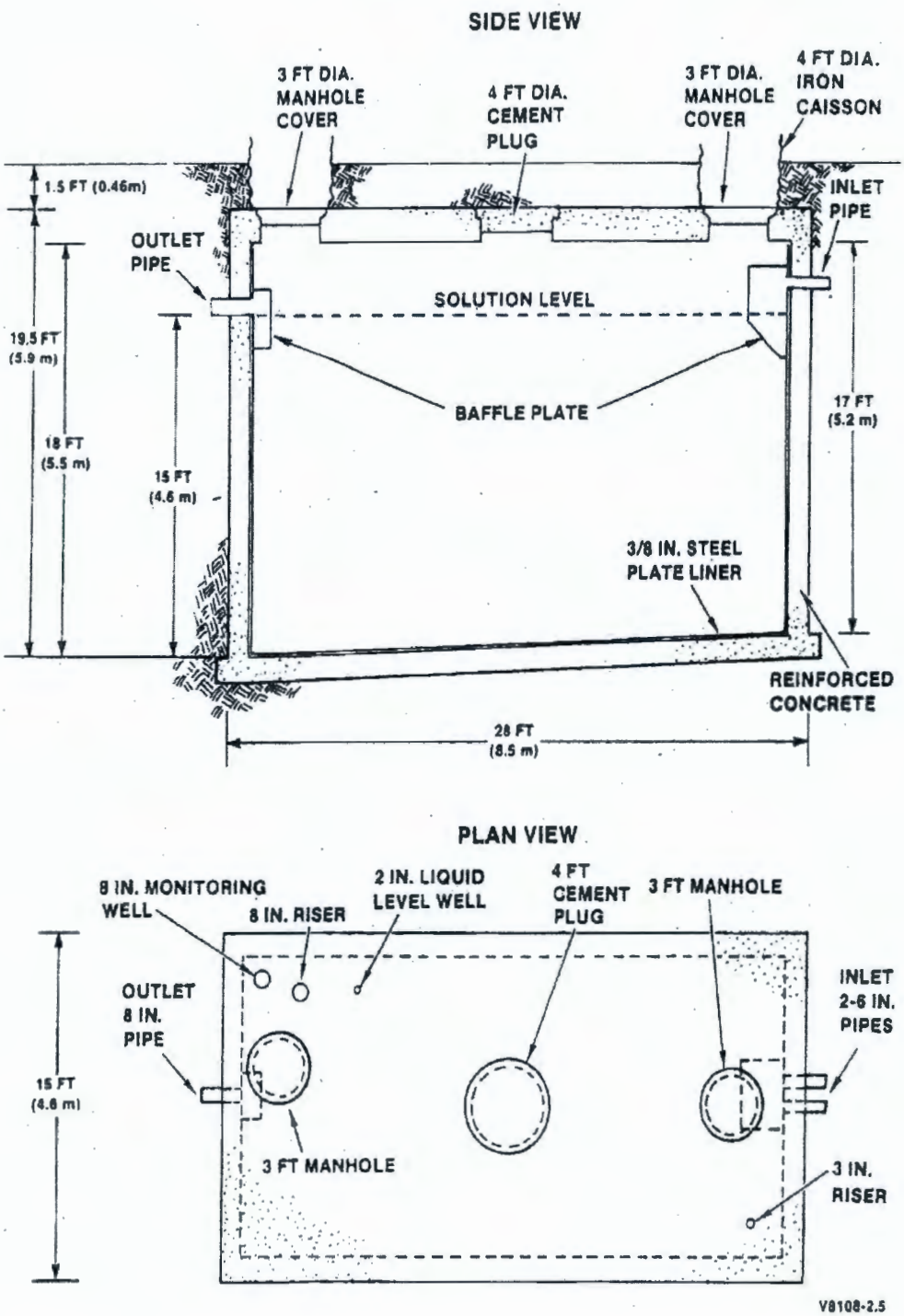


Figure 15. 241-Z-361 Settling Tank.



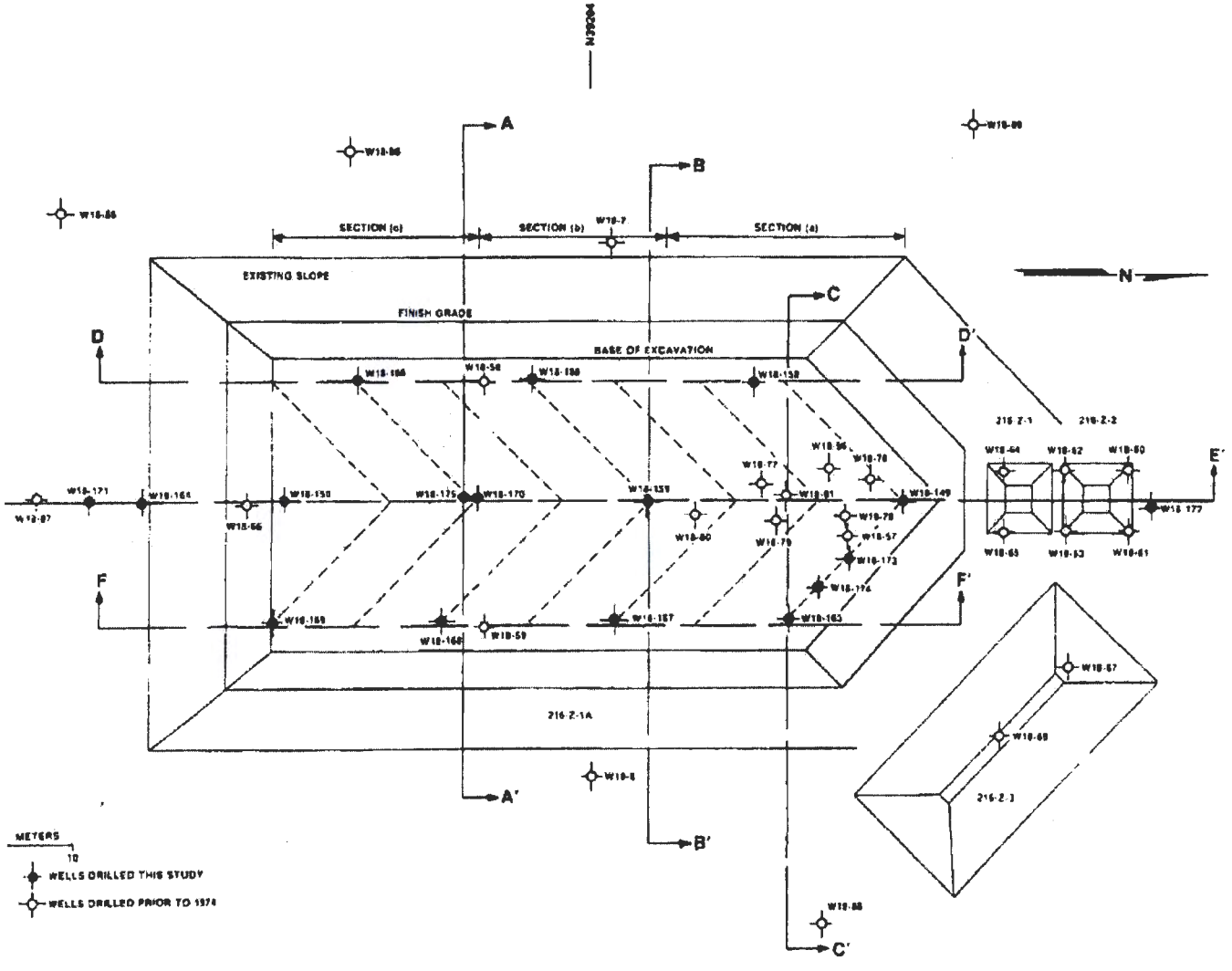


Figure 16. 216-Z-1A Plot Plan.
Includes 216-Z-1, 216-Z-2, and 216-Z-3.

Figure 17. 216-Z-12 Crib Construction Details.

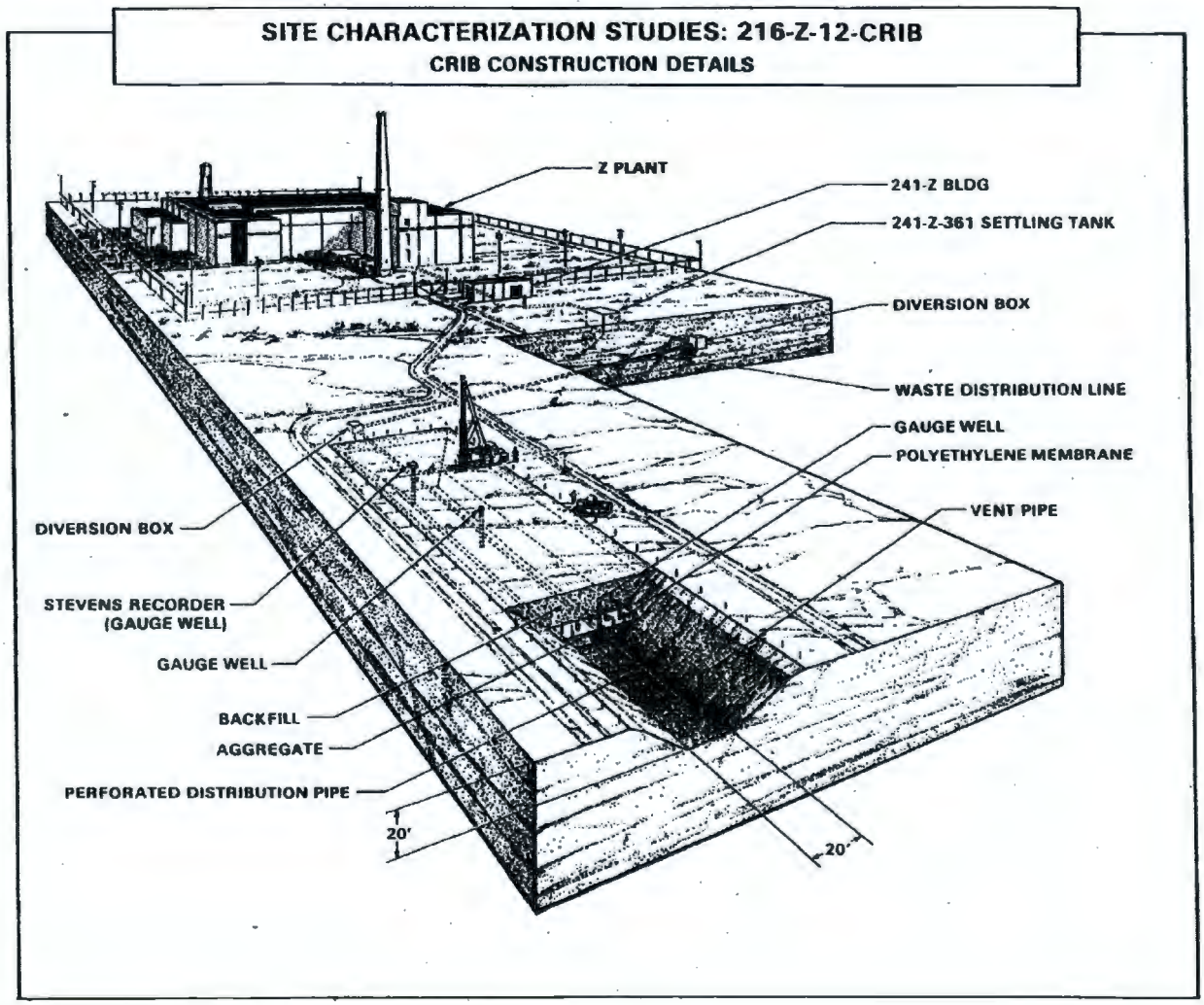


Figure 18. Location of the 216-Z-12 and 216-Z-1A Cribs. Includes the PFP Buildings.

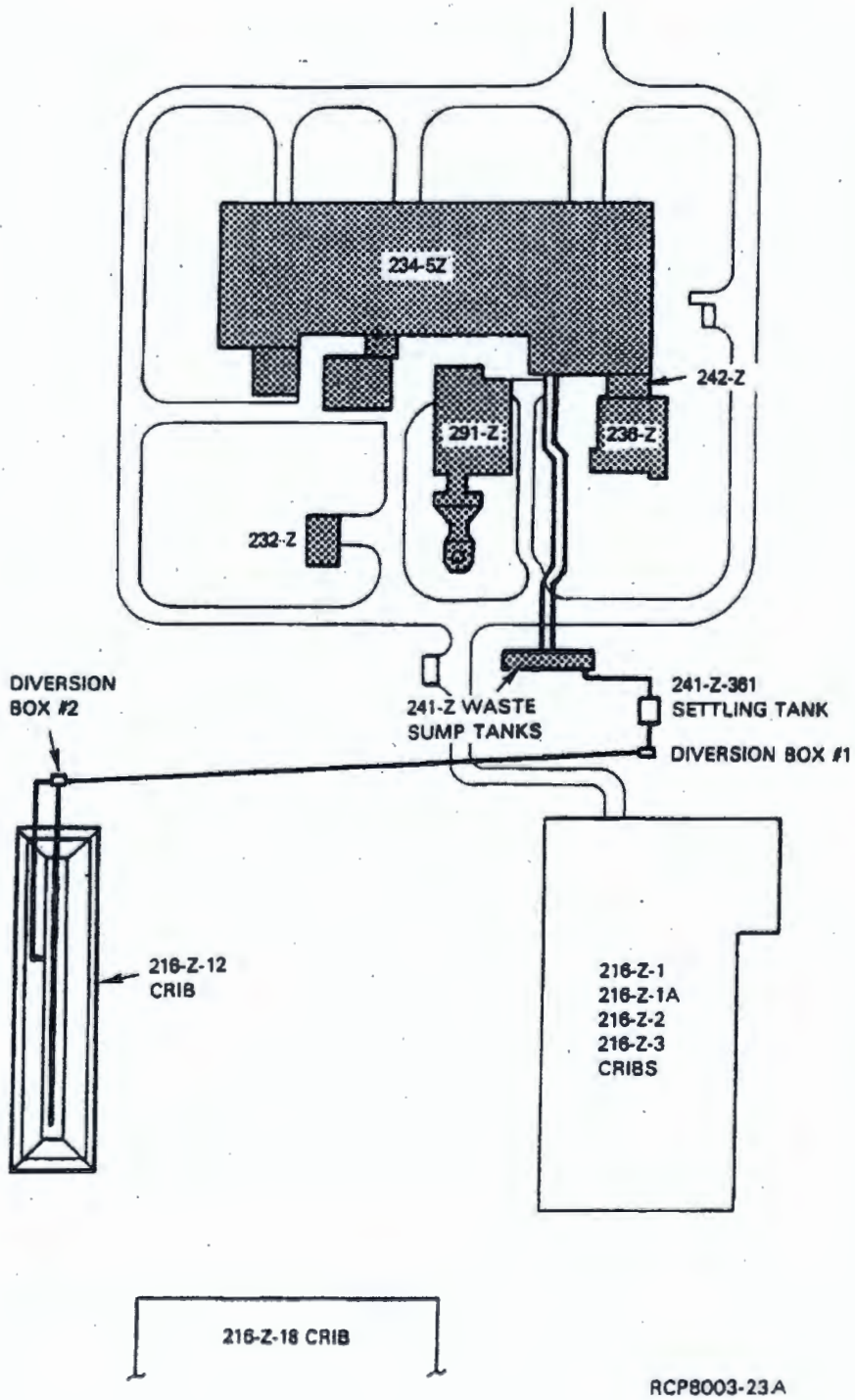


Figure 19. PFP Complex Effluent Wastes.

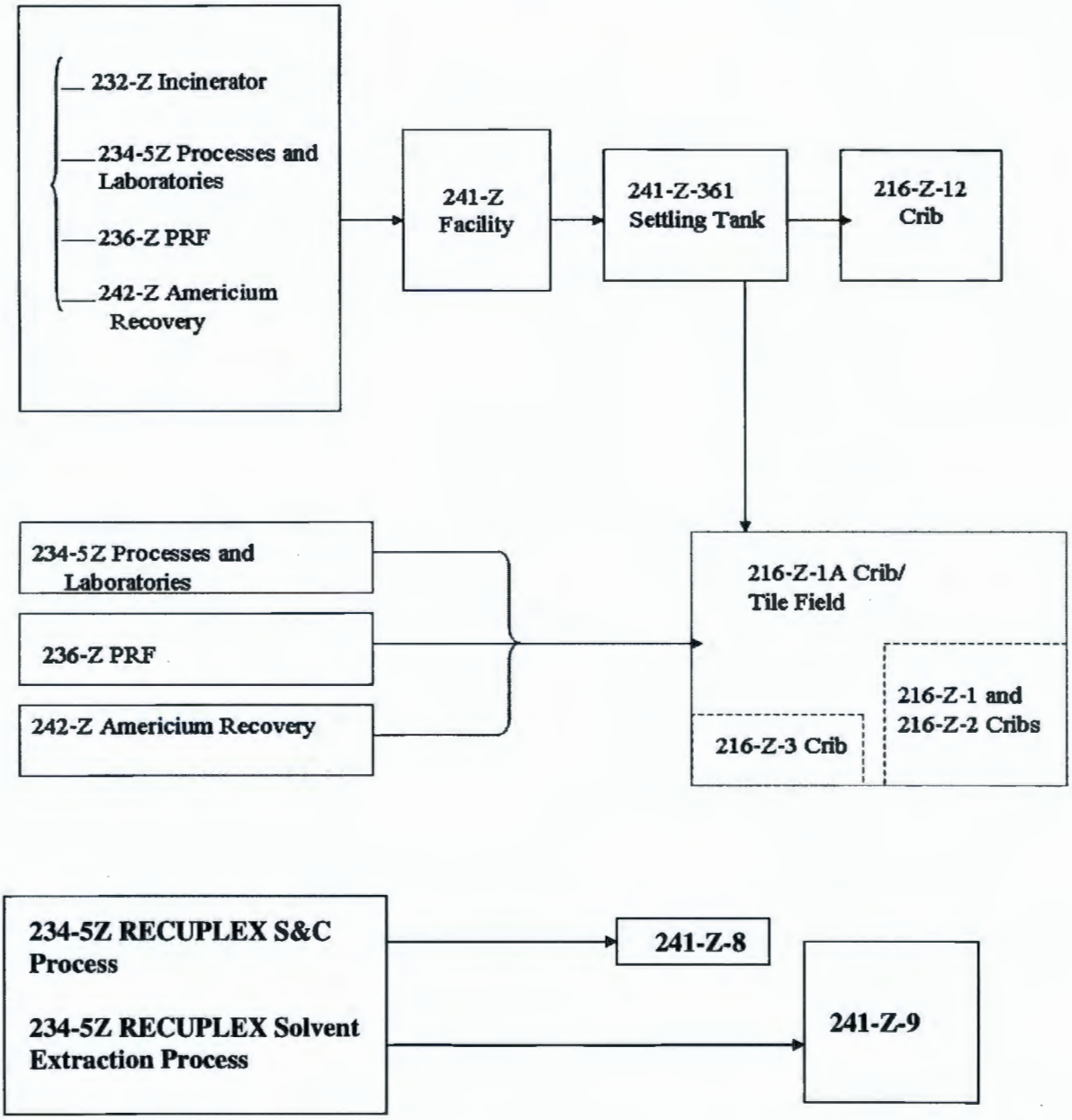


Figure 20. Flow Diagram of Recuplex Process Operations.

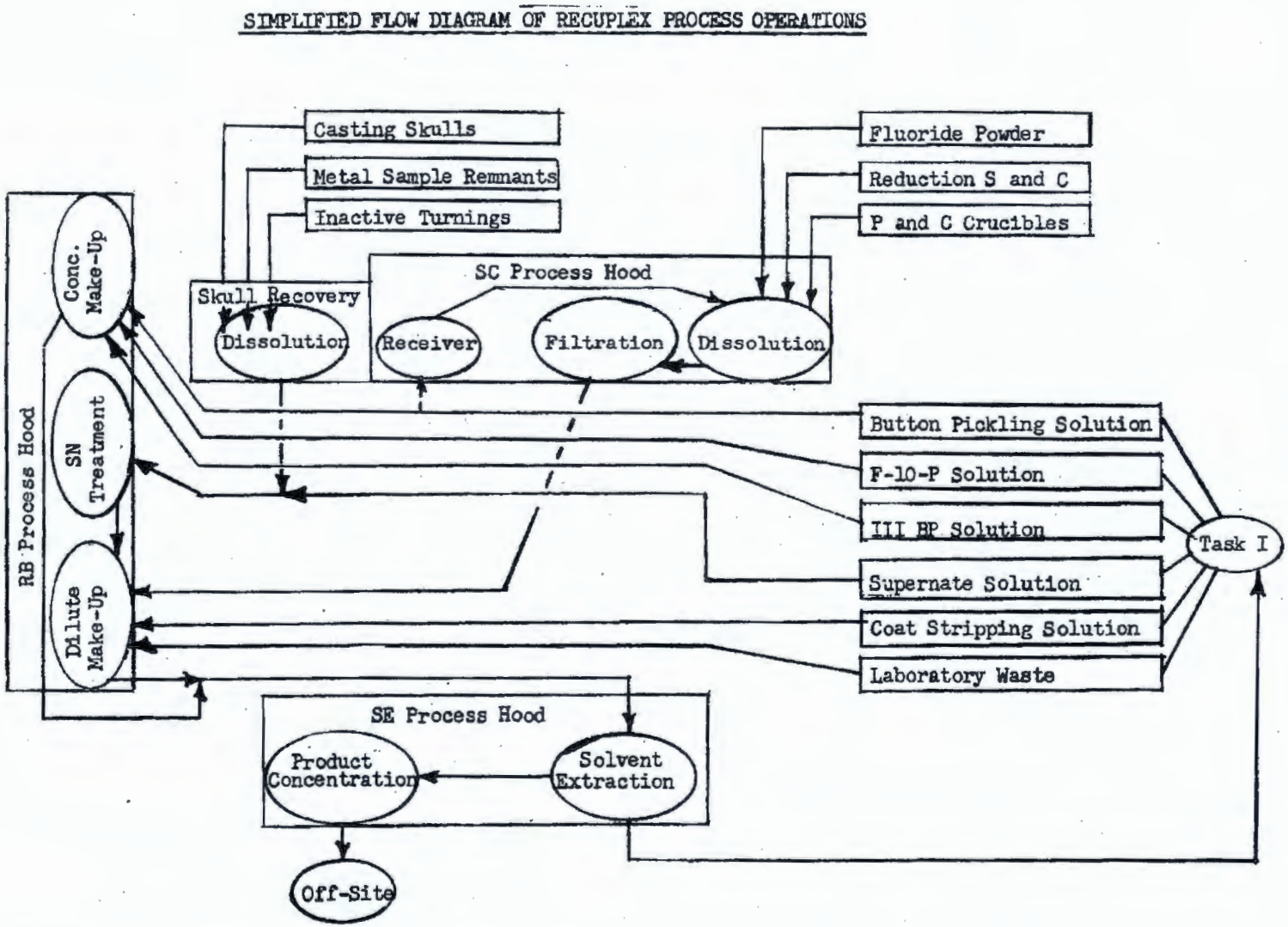


Figure 21. Drill Location and Greenhouse.

APPENDIX A

WASTE DESIGNATIONS

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H2048869 | WASTE DESIGNATION WORKSHEET | SWIR601

For Designation # 216Z12DES01-02

Sum of Weight%: 100.0000000

Characteristic WAC-173-303-090-5-7

Flashpoint < 60C IGNITABLE	D001 DW	N/A
* OXIDIZER	D001 DW	N/A
pH <=2 or >= 12.5 (Liquids)	D002 DW	N/A
(Solids Only)	WSC2 DW	N/A
Reactive	D003 DW	N/A

*Oxidizer defined in 49CFR 173.127 & 173.128

Toxic Dangerous Waste WAC 173-303-100

Total EC %: .0135976

No data or EC% < .001	Non-Reg	
EC% >=.001 & <1	WT02 DW	6b
EC% >= 1	WT01 EHW	

Persistent Dangerous Waste WAC-173-303-100

Total HOC%: .0914000 Total PAH%: .0000000

No HOC/PAH or below limits	Non-Reg	
HOC% > 1	WP01 EHW	
HOC% 0.01 to 1	WPC2 DW	6d
PAH% > 1%	WP03 EHW	

Toxicity Characteristic WAC 173-303-090-8

TC CODES D004, D005, D006, D007, D008, D009, D011, D022

MATERIAL USED AS SOLVENTS: F001, F002, F003, F005

APPLICABLE WASTE CODES: D004, D005, D006, D007, D008, D009, D011, D022, F001, F002, F003, F005

APPLICABLE LDR CODES: NOT APPLICABLE FOR TRUE WASTE WASTE CLASS: DW

COMMENTS: TSCA PCBs REGULATED AT 160 ppm

Designation Specialist: John P. Evans (Print Name) (Signature) 4 Apr 07 (Date)

For Designation # 216Z12DES01-02

Description: PFP EFFLUENT COMPLEX
216-Z-1A AND 216-Z-12 SOIL SAMPLING DEBRIS DRUMS FROM 1980-1

Entry Date: 04/03/07 **Physical State:** Solid **pH:** >2<12.5 **Flashpoint:** C

Designator: JP EVANS **Old/Spill/Used:** Old

Comments:

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
100-21-0	TEREPHTHALIC ACID	NA	N	NA	NA	~~Y~~ Sj	.055 mg/l	28 mg/kg	

Source	ID#	Weight %	EC %	TOX: N
WC	100-21-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
10124-37-5	CALCIUM NITRATE	~~0~~ 3e	N	NA	NA	N			~~D001; W002~~ 3e 6b

Source	ID#	Weight %	EC %	TOX: C
WC	10124-37-5	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
10377-60-3	MAGNESIUM NITRATE	~~0~~ 3e	N	NA	NA	N			~~D001~~ 3e

Source	ID#	Weight %	EC %	TOX: N
WC	10377-60-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
10421-48-4	FERRIC NITRATE (TOX PER CAS 7782-61-8)	~~0~~ 3e	N	NA	NA	N			~~D001; W002~~ 3e 6b

Source	ID#	Weight %	EC %	TOX: D
WC	10421-48-4	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
107-66-4	DIBUTYL PHOSPHATE	NA	N	~~Y~~ 3e	NA	N			~~D002~~ 3e

Source	ID#	Weight %	EC %	TOX: D
WC	107-66-4	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
108-88-3	TOLUENE	3e ~~Y~~	N	NA	NA	~~Y~~ 5d	.08 mg/kg	10 mg/kg	~~D001~~ F005; ~~U220~~ 1; ~~WT02~~ 6b 3e

Source	ID#	Weight %	EC %	TOX: D
WC	108-88-3	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
112-40-3	DODECANE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	112-40-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
112-80-1	OLEIC ACID	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	112-80-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
115-40-2	BROMOCRESOL PURPLE	NA	N	NA	HOC	N			~~WP01~~ 6c

Source	ID#	Weight %	EC %	TOX: N
WC	115-40-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
120-82-1	1,2,4-TRICHLOROBENZENE	NA	N	NA	HOC	5j	.055 mg/l	19 mg/kg	

Source	ID#	Weight %	EC %	TOX: D
WC	120-82-1	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
122-32-7	1,2,3-TRI(CIS-9-OCTADECENOYL)GLYCEROL	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	122-32-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
124-18-5	DECANE	~~IL~~	N	NA	NA	N			~~D001~~ 3e

Source	ID#	Weight %	EC %	TOX: N
WC	124-18-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
125-20-2	THYMOLPHTHALEIN	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	125-20-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
126-73-8	TRIBUTYL PHOSPHATE (TBP)	NA	N	NA	NA	N			~~U102~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	126-73-8	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

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For Designation # 216Z12DES01-02

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
12672-29-6	POLYCHLORINATED BIPHENYLS (AROCLOR 1248)	NA	N	NA	HOC	~~Y~~ 5 J	.1 mg/l	10 mg/kg	~~WP01~~; ~~WP03~~ 6c 6f

Source	ID#	Weight %	EC %	TOX: N
WC	12672-29-6	.0160000	.0000000	
Totals per CAS #:		.0160000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
127-18-4	TETRACHLOROETHYLENE	NA	N	NA	HOC	~~Y~~ 5d	.056 mg/kg	6 mg/kg	4 ~~D039 (.7000)~~; F001; F002; ~~U210~~; ~~WP01~~; ~~WP02~~ 1 6c 6b

Source	ID#	Weight %	EC %	TOX: D
WC	127-18-4	.0014000	.0000001	
Totals per CAS #:		.0014000	.0000001	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
131-70-4	MONOBUTYL PHTHALATE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	131-70-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
1310-58-3	POTASSIUM HYDROXIDE	NA	N	~~Y~~ 3e	NA	N			~~D002~~ 3e

Source	ID#	Weight %	EC %	TOX: C
WC	1310-58-3	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
1310-73-2	SODIUM HYDROXIDE	NA	N	~~Y~~ 3e	NA	N			~~D002~~ 3e

Source	ID#	Weight %	EC %	TOX: N
WC	1310-73-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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For Designation # 216Z12DES01-02

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
1330-20-7	XYLENE (MIXED ISOMERS)	~~E~~ 3e	N	NA	NA	~~Y~~ S	.32 mg/l	30 mg/kg	~~D001~~; F003; ~~U239~~ 1; ~~WT02~~ 66 3e

Source	ID#	Weight %	EC %	TOX: D
WC	1330-20-7	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
1333-86-4	CARBON BLACK	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	1333-86-4	6.0000000	.0000000	
Totals per CAS #:		6.0000000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
134-32-7	NAPHTHYLAMINE, 1-E (TOXIC PER SAX)	NA	N	NA	NA	N			~~U167~~ 1

Source	ID#	Weight %	EC %	TOX: N
WC	134-32-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
1344-28-1	ALUMINUM OXIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	1344-28-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
13494-80-9	TELLURIUM	NA	N	NA	NA	N			~~WT02~~ 66

Source	ID#	Weight %	EC %	TOX: C
WC	13494-80-9	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
135-20-6	CUPFERRON	NA	N	NA	NA	N			~~WT02~~ 6b

Source	ID#	Weight %	EC %	TOX: C
WC	135-20-6	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
13709-38-1	LANTHANUM FLUORIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	13709-38-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
14265-44-2	ORTHO-PHOSPHATE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	14265-44-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
144-62-7	OXALIC ACID	NA	N	~~Y~~ 3e	NA	N			~~D002~~ 3e

Source	ID#	Weight %	EC %	TOX: N
WC	144-62-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
14797-55-8	NITRATE	~~O~~ 3e	N	NA	NA	N			~~D001~~ 3e

Source	ID#	Weight %	EC %	TOX: N
WC	14797-55-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
14797-65-0	NITRITE	3e ~~0~~	N	NA	NA	N			~~D001~~ 3e

Source	ID#	Weight %	EC %	TOX: N
WC	14797-65-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
14808-79-8	SULFATE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	14808-79-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
16887-00-6	CHLORIDE (ION)	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	16887-00-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
16984-48-8	FLUORIDE	NA	N	NA	NA	~~Y~~ 5i	35 mg/l		

Source	ID#	Weight %	EC %	TOX: N
WC	16984-48-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
2243-76-7	MORDANT ORANGE 1	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	2243-76-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
24959-67-9	BROMIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	24959-67-9	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
25549-16-0	TRIISOOCTYLAMINE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	25549-16-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
302-01-2	HYDRAZINE	3e ~~PL~~	N	3e ~~S~~	NA	N			3e ~~D001~~; 3e ~~D002~~; 1 ~~U133~~; 6a ~~WT01~~

Source	ID#	Weight %	EC %	TOX: A
WC	302-01-2	.0100000	.0010000	
Totals per CAS #:		.0100000	.0010000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
326-91-0	THENOYLTRIFLUOROACETONE	NA	N	NA	HOC	N			

Source	ID#	Weight %	EC %	TOX: N
WC	326-91-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
3812-32-6	CARBON TRIOXIDE ION(2-)	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	3812-32-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
497-19-8	SODIUM CARBONATE	NA	N	NA	NA	N			~~WT02~~ 6b

Source	ID#	Weight %	EC %	TOX: C
WC	497-19-8	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
56-23-5	CARBON TETRACHLORIDE	NA	N	NA	HOC	~~Y~~ 5d	.057 mg/l	6 mg/kg 4	~~D019 (.5000)~~, F001; ~~U211~~; ~~WP01~~; ~~WT02~~ 6c 6b 1

Source	ID#	Weight %	EC %	TOX: D
WC	56-23-5	.0010000	.0000001	
Totals per CAS #:		.0010000	.0000001	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
57-12-5	CYANIDE	NA	~~Y~~ 3e	NA	NA	~~Y~~ 5j	1.2 mg/l	590 mg/kg	~~D003~~; ~~P030~~

Compatibility

Reactivity 3e 1

CYANIDE BEARING WASTE

Source	ID#	Weight %	EC %	TOX: N
WC	57-12-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
57-13-6	UREA	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	57-13-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
57-50-1	SUCROSE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	57-50-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

For Designation # 216Z12DES01-02

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
58-08-2	CAFFEINE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: C
WC	58-08-2	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
64-19-7	ACETIC ACID	~~FL~~ 3e	N	~~Y~~ 3e	NA	N			~~D001~~ 3e; ~~D002~~ 3e

Source	ID#	Weight %	EC %	TOX: C
WC	64-19-7	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
67-56-1	METHANOL	~~FL~~ 3e	N	NA	NA	~~Y~~ 5d	5.6 mg/l	.75 mg/l TCLP	~~D001~~ 3e; F003; ~~U154~~ 1; ~~WT02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	67-56-1	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
67-64-1	ACETONE	~~FL~~ 3e	N	NA	NA	~~Y~~ 5d	.28 mg/kg	160 mg/kg	~~D001~~ 3e; F003; ~~U002~~ 1

Source	ID#	Weight %	EC %	TOX: N
WC	67-64-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
67-66-3	CHLOROFORM	NA	N	NA	HOC	~~Y~~ 5e	.046 mg/l	6 mg/kg	D022 (6.0000); ~~U044~~ 1; ~~WT01~~ 6c; ~~WT02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	67-66-3	.0120000	.0000012	
Totals per CAS #:		.0120000	.0000012	

For Designation # 216Z12DES01-02

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
68131-37-3	CORN SYRUP SOLIDS	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	68131-37-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
68131-74-8	MICRO HOLLOW BALLS	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	68131-74-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
69011-15-0	CHLOROMETHYLATED COPOLYMER	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	69011-15-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
71-36-3	BUTYL ALCOHOL	~~EX~~ 3a	N	NA	NA	~~Y~~ 5c	5.6 mg/kg	2.6 mg/kg	~~D001~~ 3e; F003; U031; WT02

Source	ID#	Weight %	EC %	TOX: D
WC	71-36-3	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
71-43-2	BENZENE	~~EX~~ 3a	N	NA	NA	~~Y~~ 5b	.14 mg/l	10 mg/kg	3e ~~D001~~; ~~D018 (1.5000)~~ 4; F005; ~~U019~~ 1; ~~WT02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	71-43-2	.0010000	.0000001	
Totals per CAS #:		.0010000	.0000001	

For Designation # 216Z12DES01-02

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7429-90-5	ALUMINUM	~~RS~~ 3e	~~Y~~ 3e	NA	NA	N			~~D001~~; ~~D003~~

Compatibility

Reactivity 3e 3e

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7429-90-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7439-89-6	IRON	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7439-89-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7439-92-1	LEAD	NA	N	NA	NA	~~Y~~ 3e	.69 mg/l	.75 mg/l TCLP	D008 (5.0000)

Source	ID#	Weight %	EC %	TOX: N
WC	7439-92-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7439-93-2	LITHIUM	~~RS~~ 3e	~~Y~~ 3e	B	NA	N			~~D001~~; ~~D003~~; ~~WC2~~

Compatibility

Reactivity 3e 3e 3d

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7439-93-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7439-95-4	MAGNESIUM	~~YS~~ 3e	~~X~~ 3e	NA	NA	N			~~D001~~; ~~D003~~

Compatibility

Reactivity 3e 3e

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7439-95-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7439-96-5	MANGANESE	~~YS~~ 3e	N	NA	NA	N			~~D001~~ 3e

Source	ID#	Weight %	EC %	TOX: N
WC	7439-96-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7439-97-6	MERCURY	NA	N	NA	NA	~~N~~ 3e	.15 mg/1	.025 mg/1 TCLP	D009 (.2000); ~~U151~~

Source	ID#	Weight %	EC %	TOX: N
WC	7439-97-6	.0004000	.0000000	
Totals per CAS #:		.0004000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7439-98-7	MOLYBDENUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7439-98-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-02-0	NICKEL	NA	N	NA	NA	~~N~~ 5j	3.98 mg/1	11 mg/1 TCLP	

Source	ID#	Weight %	EC %	TOX: N
WC	7440-02-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-03-1	NIOBIUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-03-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-05-3	PALLADIUM	~~ES~~	N	NA	NA	N			~~D001~~
		3e							3e

Source	ID#	Weight %	EC %	TOX: N
WC	7440-05-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-06-4	PLATINUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-06-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-07-5	PLUTONIUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-07-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-09-7	POTASSIUM	~~ES~~	~~X~~	~~S~~	NA	N			~~D001; D002; D003~~
		3e	3e	Compatibility 3e				Reactivity WATER REACTIVE	3e 3e 3e

Source	ID#	Weight %	EC %	TOX: N
WC	7440-09-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-14-4	RADIUM	NA	~~Y~~ 3e	NA	NA	N			~~D003~~ 3e

Compatibility

Reactivity

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7440-14-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-16-6	RHODIUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-16-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-21-3	SILICON	~~N~~ 3e	N	NA	NA	N			~~D011~~ 3e

Source	ID#	Weight %	EC %	TOX: D
WC	7440-21-3	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-22-4	SILVER	NA	N	NA	NA	~~Y~~ 3e	.43 mg/l	.14 mg/l TCLP	D011 (5.0000)

Source	ID#	Weight %	EC %	TOX: N
WC	7440-22-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

A-16

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-23-5	SODIUM	~~RS~~ 3e	~~X~~ 3e	B	NA	N			~~D001~~; ~~D003~~; ~~WSC2~~

Compatibility

Reactivity 3e 3e 3e

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7440-23-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-24-6	STRONTIUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-24-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-25-7	TANTALUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-25-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-32-6	TITANIUM	~~RS~~ 3e	N	NA	NA	N			~~D001~~ 3e

Source	ID#	Weight %	EC %	TOX: N
WC	7440-32-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-33-7	TUNGSTEN	~~RS~~ 3e	N	NA	NA	N			~~D001~~ 3e

Source	ID#	Weight %	EC %	TOX: N
WC	7440-33-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-38-2	ARSENIC	NA	N	NA	NA	~~Y~~ 5e	1.4 mg/l	5 mg/l TCLP	D004 (5.0000); ~~WT02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	7440-38-2	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-39-3	BARIUM	~~FS~~ 3e	~~Y~~ 3e	NA	NA	~~Y~~ 5e	1.2 mg/l	21 mg/l TCLP	~~D001~~; ~~D003~~ 3e 3e; D005 (100.0000)

Compatibility

Reactivity

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7440-39-3	.2000000	.0000000	
Totals per CAS #:		.2000000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-41-7	BERYLLIUM	~~FS~~ 3e	N	NA	NA	~~Y~~ 5e	.82 mg/l	1.22 mg/l TCLP	~~D001~~; ~~P013~~ 3e 1

Source	ID#	Weight %	EC %	TOX: N
WC	7440-41-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-42-8	BORON	~~FS~~ 3e	N	NA	NA	N			~~D001~~ 3e

Source	ID#	Weight %	EC %	TOX: D
WC	7440-42-8	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-43-9	CADMIUM	NA	N	NA	NA	~~Y~~ 5e	.69 mg/l	.11 mg/l TCLP	D006 (1.0000); ~~WT01~~ 6a

Source	ID#	Weight %	EC %	TOX: A
WC	7440-43-9	.0020000	.0002000	
Totals per CAS #:		.0020000	.0002000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-47-3	CHROMIUM	NA	N	NA	NA	~~Y~~ 3e	2.77 mg/l	.6 mg/l TCLP	D007 (5.0000)

Source	ID#	Weight %	EC %	TOX: N
WC	7440-47-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-48-4	COBALT	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-48-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-50-8	COPPER	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-50-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-55-3	GALLIUM	NA	N	~~C~~	NA	N			~~D002~~ 3e

Source	ID#	Weight %	3e EC %	TOX: N
WC	7440-55-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-61-1	URANIUM	~~Y~~ 3e	~~Y~~ 3e	NA	NA	N			~~D001; D003~~ 3e 3e

Compatibility

Reactivity

PYROPHORIC

Source	ID#	Weight %	EC %	TOX: N
WC	7440-61-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-66-6	ZINC	~~FS~~ Ze	~~Y~~ Ze	NA	NA	~~Y~~ S	2.61 mg/l	4.3 mg/l TCLP	~~D001~~; ~~D003~~

Compatibility

Reactivity Ze Ze

PYROPHORIC, WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7440-66-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-67-7	ZIRCONIUM	~~FS~~ Ze	N	NA	NA	N			~~D001~~ Ze

Source	ID#	Weight %	EC %	TOX: N
WC	7440-67-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-69-9	BISMUTH	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: D
WC	7440-69-9	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-70-2	CALCIUM	~~FS~~ Ze	~~Y~~ Ze	NA	NA	N			~~D001~~; ~~D003~~

Compatibility

Reactivity Ze Ze

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7440-70-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
75-09-2	DICHLOROMETHANE	NA	N	NA	HOC	~~N~~ 5d	.089 mg/l	30 mg/kg	F001; F002; ~~U080~~; ~~WP01~~; ~~WP02~~ 1 6c 6b

Source	ID#	Weight %	EC %	TOX: D
WC	75-09-2	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
75-69-4	TRICHLOROFLUOROMETHANE	NA	N	NA	HOC	~~N~~ 5d	.02 mg/l	30 mg/kg	F001; F002; ~~U121~~; ~~WP01~~ 1 6c

Source	ID#	Weight %	EC %	TOX: N
WC	75-69-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7553-56-2	IODINE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7553-56-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
76-01-7	PENTACHLOROETHANE	NA	N	NA	NA	~~N~~ 5j	.055 mg/l	6 mg/kg	~~U184~~; ~~WP02~~ 1 6b

Source	ID#	Weight %	EC %	TOX: D
WC	76-01-7	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7631-86-9	SILICON DIOXIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7631-86-9	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7632-00-0	SODIUM NITRITE	~~0~~ 3e	N	NA	NA	N			~~D001~~ 3e

Source	ID#	Weight %	EC %	TOX: X
WC	7632-00-0	.0100000	.0100000	
Totals per CAS #:		.0100000	.0100000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7664-39-3	HYDROFLUORIC ACID	NA	N	~~X~~ 3e	NA	N			~~D002; U134; W001~~ 3e 1 6a

Source	ID#	Weight %	EC %	TOX: B
WC	7664-39-3	.0100000	.0001000	
Totals per CAS #:		.0100000	.0001000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7664-41-7	AMMONIA	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: B
WC	7664-41-7	.0100000	.0001000	
Totals per CAS #:		.0100000	.0001000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7697-37-2	NITRIC ACID	3e ~~0~~	N	~~X~~ 3e	NA	N			~~D001; D002; W001~~ 3e 3e 6a

Source	ID#	Weight %	EC %	TOX: A
WC	7697-37-2	.0100000	.0010000	
Totals per CAS #:		.0100000	.0010000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
77-86-1	2-AMINO-2-(HYDROXYMETHYL)-1-3-PROPANNEDIOL	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	77-86-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7704-34-9	SULFUR	~~F~~ 3e	N	NA	NA	N			~~D001~~ 3e

Source	ID#	Weight %	EC %	TOX: N
WC	7704-34-9	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7723-14-0	PHOSPHORUS (RED, WHITE/YELLOW, BLACK/VIOLET)	~~FS~~ 3e	~~Y~~ 3e	NA	NA	N			~~D001; D003; WT02~~ 3e 3e 6b

Compatibility

Reactivity

OTHER

Source	ID#	Weight %	EC %	TOX: A
WC	7723-14-0	.0100000	.0010000	
Totals per CAS #:		.0100000	.0010000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7732-18-5	WATER	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7732-18-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7784-18-1	ALUMINUM FLUORIDE HYDRATE	NA	N	NA	NA	N			~~WT02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	7784-18-1	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7784-27-2	ALUMINUM NITRATE	~~O~~ 3e	N	NA	NA	N			~~D001~~ 3e

Source	ID#	Weight %	EC %	TOX: D
WC	7784-27-2	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7789-23-3	POTASSIUM FLUORIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: C
WC	7789-23-3	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
78-46-6	DIBUTYL BUTYLPHOSPHONATE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	78-46-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
79-01-6	TRICHLOROETHYLENE	NA	N	NA	HOC	~~Y~~ 5b	.054 mg/l	6 mg/kg 4	~~8040 (.5000)~~; F001; F002; U228; ~~WP01~~; ~~WT02~~ 1 6c 6b

Source	ID#	Weight %	EC %	TOX: D
WC	79-01-6	.0010000	.0000001	
Totals per CAS #:		.0010000	.0000001	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
79-27-6	TETRABROMOETHANE, 1,1,2,2-	NA	N	NA	HOC	N			~~WP01~~; ~~WT01~~ 6c 6a

Source	ID#	Weight %	EC %	TOX: B
WC	79-27-6	.0100000	.0001000	
Totals per CAS #:		.0100000	.0001000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
8016-28-2	ANIMAL FATTY OIL	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	8016-28-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
8042-47-5	WHITE MINERAL OIL	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	8042-47-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
9003-53-6	POLYSTYRENE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	9003-53-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
92-31-9	TOLONIUM CHLORIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	92-31-9	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
GCN056	INERT NON-HAZARDOUS MATERIAL	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	GCN056	92.7152000	.0000000	
Totals per CAS #:		92.7152000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
GCNASH	ASH	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	GCNASH	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

Designation # 216Z12DES01-02

Designation Codes

(1) **Not a discarded chemical product (old/unused or sole active ingredient) (WAC 173-303-9903)**

(2) **Not a dangerous waste source (used/spent) (WAC 173-303-9904)**

(3) **Does not exhibit dangerous waste characteristic / criteria per:**

a) MSDS

b) Lab analysis

c) Generator knowledge

d) Insufficient concentration

e) Not in this waste form

(4) **Federal listed waste code takes precedence (40 CFR 268.9)**

(5) **Underlying Hazardous Constituent(s) not applicable per:**

a) Alternative treatment standard - hazardous debris (40 CFR 268.45)

b) Transuranic waste

c) Federal waste code assigned that does not specify meeting 40 CFR 268.48 universal treatment standards

d) Federal listed waste code assigned

e) Federal characteristic waste code assigned

f) Federal characteristic waste code not assigned

g) Insufficient concentration (40 CFR 268.48)

h) Not an UHC in characteristic wastes, according to the definition at 40 CFR 268.2(i)

i) No waste code assigned that specifies meeting 40 CFR 268.48 universal treatment standards

j) To be determined based on treatment/disposal path

(6) ****Exclude:**

a) WT01 EHW Washington State waste code, because Federal listed and/or characteristic waste code(s) assigned. Additional designation not required in accordance with WAC 173-303-070(5)

b) WT02 DW Washington State waste code, because Federal listed and/or characteristic waste code(s) assigned. Additional designation not required in accordance with WAC 173-303-070(5)

c) WP01 EHW Washington State waste code, because Federal listed and/or characteristic waste code(s) assigned. Additional designation not required in accordance with WAC 173-303-070(5)

d) WP02 DW Washington State waste code, because Federal listed and/or characteristic waste code(s) assigned. Additional designation not required in accordance with WAC 173-303-070(5)

e) WP03 EHW Washington State waste code, because Federal listed and/or characteristic waste code(s) assigned. Additional designation not required in accordance with WAC 173-303-070(5)

f) Exclude Washington State waste code, waste regulated under CERCLA and/or TSCA, not RCRA or WAC 173-303

04/04/2007 01:43:36 PM

H2048869 | WASTE DESIGNATION WORKSHEET | SWIR601

For Designation # 216Z12DES03-00

Sum of Weight%: 99.9840000

Characteristic WAC-173-303-090-5-7

Flashpoint < 60C IGNITABLE	D001 DW	N/A
* OXIDIZER	D001 DW	N/A
pH <=2 or >= 12.5 (Liquids)	D002 DW	N/A
(Solids Only)	WSC2 DW	N/A
Reactive	D003 DW	N/A

*Oxidizer defined in 49CFR 173.127 & 173.128

Toxic Dangerous Waste WAC 173-303-100

Total EC %: .0135976

No data or EC% < .001	Non-Reg	
EC% >=.001 & <1	WT02 DW	6b
EC% >= 1	WT01 EHW	

Persistent Dangerous Waste WAC-173-303-100

Total HOC%: .0754000 Total PAH%: .0000000

No HOC/PAH or below limits	Non-Reg	
HOC% > 1	WP01 EHW	
HOC% 0.01 to 1	WP02 DW	6d
PAH% > 1%	WP03 EHW	

Toxicity Characteristic WAC 173-303-090-8

TC CODES D022, D008, D009, D011, D004, D005, D006, D007

MATERIAL USED AS SOLVENTS: F005, F001, F002, F003

APPLICABLE WASTE CODES: D004, D005, D006, D007, D008, D009, D011, D022, F001, F002, F003, F005

APPLICABLE LDR CODES: NOT APPLICABLE TO TRU WASTE WASTE CLASS: DW

COMMENTS: SEE COMMENT SHEET

Designation Specialist: John P. Evans (Print Name) [signature] (Signature) 19 APR 2007 (Date)

For Designation # 216Z12DES03-00

Description: PFP EFFLUENT COMPLEX
SOIL OR SAND FROM 1973-1977

Entry Date: 04/19/07 Physical State: Solid pH: >2<12.5 Flashpoint: C

Designator: JP EVANS Old/Spill/Used: Old

Comments:

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
100-21-0	TEREPHTHALIC ACID	NA	N	NA	NA	~~N~~ 5j	.055 mg/l	28 mg/kg	

Source	ID#	Weight %	EC %	TOX: N
WC	100-21-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
10124-37-5	CALCIUM NITRATE	~~N~~ 3d	N	NA	NA	N			~~D001~~ 3d; ~~W002~~ 6b

Source	ID#	Weight %	EC %	TOX: C
WC	10124-37-5	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
10377-60-3	MAGNESIUM NITRATE	~~N~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	10377-60-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
10421-48-4	FERRIC NITRATE (TOX PER CAS 7782-61-8)	~~N~~ 3d	N	NA	NA	N			~~D001~~ 3d; ~~W002~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	10421-48-4	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

For Designation # 216Z12DES03-00

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
107-66-4	DIBUTYL PHOSPHATE	NA	N	~~X~~ 3d	NA	N			~~D002~~ 3d

Source	ID#	Weight %	EC %	TOX: D
WC	107-66-4	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
108-88-3	TOLUENE	~~X~~ 3d	N	NA	NA	~~X~~ 3d	.08 mg/kg	10 mg/kg	~~D001~~ 3d; F005; ~~U220~~ 1; ~~WP02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	108-88-3	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
112-40-3	DODECANE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	112-40-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
112-80-1	OLEIC ACID	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	112-80-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
115-40-2	BROMOCRESOL PURPLE	NA	N	NA	HOC	N			~~WP01~~ 6c

Source	ID#	Weight %	EC %	TOX: N
WC	115-40-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
120-82-1	1,2,4-TRICHLOROBENZENE	NA	N	NA	HOC	~~X~~ Si	.055 mg/l	19 mg/kg	

Source	ID#	Weight %	EC %	TOX: D
WC	120-82-1	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
122-32-7	1,2,3-TRI(CIS-9-OCTADECENOYL)GLYCEROL	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	122-32-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
124-18-5	DECANE	~~NL~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	124-18-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
125-20-2	THYMOLPHTHALEIN	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	125-20-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
126-73-8	TRIBUTYL PHOSPHATE (TBP)	NA	N	NA	NA	N			~~U402~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	126-73-8	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
127-18-4	TETRACHLOROETHYLENE	NA	N	NA	HOC	~~X~~ 5d	.056 mg/kg	6 mg/kg	4 ~~D039 (.7000)~~; F001; F002; ~~U210~~; ~~WP01~~; ~~WP02~~ 1 6c 6b

Source	ID#	Weight %	EC %	TOX: D
WC	127-18-4	.0014000	.0000001	
Totals per CAS #:		.0014000	.0000001	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
131-70-4	MONOBUTYL PHTHALATE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	131-70-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
1310-58-3	POTASSIUM HYDROXIDE	NA	N	~~X~~ 3d	NA	N			~~D002~~ 3d

Source	ID#	Weight %	EC %	TOX: C
WC	1310-58-3	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
1310-73-2	SODIUM HYDROXIDE	NA	N	~~X~~ 3d	NA	N			~~D002~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	1310-73-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
1330-20-7	XYLENE (MIXED ISOMERS)	~~FL~~ 3d	N	NA	NA	~~X~~ 5d	.32 mg/l	30 mg/kg	~~D001~~ 3d; F003; ~~U239~~ 1; ~~WP02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	1330-20-7	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
1333-86-4	CARBON BLACK	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	1333-86-4	6.0000000	.0000000	
Totals per CAS #:		6.0000000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
134-32-7	NAPHTHYLAMINE, 1-E (TOXIC PER SAX)	NA	N	NA	NA	N			~~U167~~ 1

Source	ID#	Weight %	EC %	TOX: N
WC	134-32-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
1344-28-1	ALUMINUM OXIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	1344-28-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
13494-80-9	TELLURIUM	NA	N	NA	NA	N			~~W202~~ 6b

Source	ID#	Weight %	EC %	TOX: C
WC	13494-80-9	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
135-20-6	CUPFERRON	NA	N	NA	NA	N			~~W202~~ 6b

Source	ID#	Weight %	EC %	TOX: C
WC	135-20-6	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
13709-38-1	LANTHANUM FLUORIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	13709-38-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
14265-44-2	ORTHO-PHOSPHATE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	14265-44-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
144-62-7	OXALIC ACID	NA	N	~~N~~ 6b	NA	N			~~D002~~ 6b

Source	ID#	Weight %	EC %	TOX: N
WC	144-62-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
14797-55-8	NITRATE	~~O~~ 6b	N	NA	NA	N			~~D001~~ 6b

Source	ID#	Weight %	EC %	TOX: N
WC	14797-55-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
14797-65-0	NITRITE	~~O~~ 6b	N	NA	NA	N			~~D001~~ 6b

Source	ID#	Weight %	EC %	TOX: N
WC	14797-65-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
14808-79-8	SULFATE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	14808-79-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
16887-00-6	CHLORIDE (ION)	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	16887-00-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
16984-48-8	FLUORIDE	NA	N	NA	NA	~~Y~~ Sj	35 mg/l		

Source	ID#	Weight %	EC %	TOX: N
WC	16984-48-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
2243-76-7	MORDANT ORANGE 1	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	2243-76-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
24959-67-9	BROMIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	24959-67-9	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
25549-16-0	TRIISOOCTYLAMINE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	25549-16-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
302-01-2	HYDRAZINE	~~N~~ 3d	N	~~N~~ 3d	NA	N			~~D001~~ 3d; ~~D002~~ 3d; ~~U133~~ 1; ~~W001~~ 6a

Source	ID#	Weight %	EC %	TOX: A
WC	302-01-2	.0100000	.0010000	
Totals per CAS #:		.0100000	.0010000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
326-91-0	THENOYLTRIFLUOROACETONE	NA	N	NA	HOC	N			

Source	ID#	Weight %	EC %	TOX: N
WC	326-91-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
3812-32-6	CARBON TRIOXIDE ION(2-)	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	3812-32-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
497-19-8	SODIUM CARBONATE	NA	N	NA	NA	N			~~W002~~ 6b

Source	ID#	Weight %	EC %	TOX: C
WC	497-19-8	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

For Designation # 216Z12DES03-00

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
56-23-5	CARBON TETRACHLORIDE	NA	N	NA	HOC	~~Y~~ 5d	.057 mg/l	6 mg/kg	4 ~~D019 (.5000)~~; F001 ~~D211~~ 1; ~~WP01; WP02~~ 6a 6b

Source	ID#	Weight %	EC %	TOX: D
WC	56-23-5	.0010000	.0000001	
Totals per CAS #:		.0010000	.0000001	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
57-12-5	CYANIDE	NA	~~Y~~ 3d	NA	NA	~~Y~~ 5j	1.2 mg/l	590 mg/kg	~~D003~~; ~~P030~~

Compatibility

Reactivity 3d 1

CYANIDE BEARING WASTE

Source	ID#	Weight %	EC %	TOX: N
WC	57-12-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
57-13-6	UREA	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	57-13-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
57-50-1	SUCROSE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	57-50-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
58-08-2	CAFFEINE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: C
WC	58-08-2	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

For Designation # 216Z12DES03-00

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
64-19-7	ACETIC ACID	~~FL~~ 3d	N	~~X~~ 3d	NA	N			~~D001~~ 3d; ~~D002~~ 3d

Source	ID#	Weight %	EC %	TOX: C
WC	64-19-7	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
67-56-1	METHANOL	~~FL~~ 3d	N	NA	NA	~~X~~ 5d	5.6 mg/l	.75 mg/l TCLP	~~D001~~ 3d; F003; ~~U154~~ 1; ~~WP02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	67-56-1	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
67-64-1	ACETONE	~~FL~~ 3d	N	NA	NA	~~X~~ 5d	.28 mg/kg	160 mg/kg	~~D001~~ 3d; F003; ~~U002~~ 1

Source	ID#	Weight %	EC %	TOX: N
WC	67-64-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
67-66-3	CHLOROFORM	NA	N	NA	HOC	~~X~~ 5e	.046 mg/l	6 mg/kg	D022 (6.0000); ~~U044~~ 1; ~~WP01~~ 6c; ~~WP02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	67-66-3	.0120000	.0000012	
Totals per CAS #:		.0120000	.0000012	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
68131-37-3	CORN SYRUP SOLIDS	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	68131-37-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
68131-74-8	MICRO HOLLOW BALLS	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	68131-74-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
69011-15-0	CHLOROMETHYLATED COPOLYMER	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	69011-15-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
71-36-3	BUTYL ALCOHOL	FL	N	NA	NA	~~Y~~ 5b	5.6 mg/kg	2.6 mg/kg	~~D001~~; F003; ~~U031~~; ~~W002~~ 3b 1 6b

Source	ID#	Weight %	EC %	TOX: D
WC	71-36-3	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
71-43-2	BENZENE	~~FL~~ 3b	N	NA	NA	~~Y~~ 5b	.14 mg/l	10 mg/kg 3b	~~D001~~; ~~D018 (1.5000)~~; F005; ~~U019~~; ~~W002~~ 1 6b

Source	ID#	Weight %	EC %	TOX: D
WC	71-43-2	.0010000	.0000001	
Totals per CAS #:		.0010000	.0000001	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7429-90-5	ALUMINUM	~~FS~~ 3b	~~Y~~ 3b	NA	NA	N			~~D001~~; ~~D003~~

Compatibility

Reactivity ~~3b~~ ~~3b~~

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7429-90-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7439-89-6	IRON	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7439-89-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7439-92-1	LEAD	NA	N	NA	NA	~~N~~ 5e	.69 mg/l	.75 mg/l TCLP	D008 (5.0000)

Source	ID#	Weight %	EC %	TOX: N
WC	7439-92-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7439-93-2	LITHIUM	~~S~~ 3d	~~Y~~ 3d	~~S~~ 3d Compatibility	NA	N		Reactivity WATER REACTIVE	~~D001~~ 3d; ~~D003~~ 3d; ~~WRC2~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	7439-93-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7439-95-4	MAGNESIUM	~~S~~ 3d	~~Y~~ 3d	NA Compatibility	NA	N		Reactivity WATER REACTIVE	~~D001~~ 3d; ~~D003~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	7439-95-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7439-96-5	MANGANESE	~~NS~~ 3L	N	NA	NA	N			~~D001~~ 3L

Source	ID#	Weight %	EC %	TOX: N
WC	7439-96-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7439-97-6	MERCURY	NA	N	NA	NA	~~5e~~	.15 mg/l	.025 mg/l TCLP	D009 (.2000) ; ~~U151~~ 1

Source	ID#	Weight %	EC %	TOX: N
WC	7439-97-6	.0004000	.0000000	
Totals per CAS #:		.0004000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7439-98-7	MOLYBDENUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7439-98-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-02-0	NICKEL	NA	N	NA	NA	~~5j~~	3.98 mg/l	11 mg/l TCLP	

Source	ID#	Weight %	EC %	TOX: N
WC	7440-02-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-03-1	NIOBIUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-03-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-05-3	PALLADIUM	~~YS~~ 3L	N	NA	NA	N			~~D001~~ 3L

Source	ID#	Weight %	EC %	TOX: N
WC	7440-05-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-06-4	PLATINUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-06-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-07-5	PLUTONIUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-07-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-09-7	POTASSIUM	~~YS~~ 3L	~~Y~~ 3L	~~S~~ 3L	NA	N			~~D001~~; ~~D002~~; ~~D003~~

Compatibility

Reactivity 3L 3L 3L

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7440-09-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-14-4	RADIUM	NA	~~Y~~ 3d	NA	NA	N			~~D003~~ 3d

Compatibility

Reactivity

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7440-14-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-16-6	RHODIUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-16-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-21-3	SILICON	~~S~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: D
WC	7440-21-3	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-22-4	SILVER	NA	N	NA	NA	~~Y~~ 5d	.43 mg/l	.14 mg/l TCLP	D011 (5.0000)

Source	ID#	Weight %	EC %	TOX: N
WC	7440-22-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-23-5	SODIUM	~~PS~~ 3d	~~X~~ 3d	~~S~~ 3d	NA	N			~~D001~~; ~~D003~~; ~~WSC2~~

Compatibility

Reactivity 3d 3d 3d

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7440-23-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-24-6	STRONTIUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-24-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-25-7	TANTALUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-25-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-32-6	TITANIUM	~~PS~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	7440-32-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-33-7	TUNGSTEN	~~PS~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	7440-33-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-38-2	ARSENIC	NA	N	NA	NA	~~Y~~ 5e	1.4 mg/l	5 mg/l TCLP	D004 (5.0000); ~~WT02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	7440-38-2	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-39-3	BARIUM	~~PS~~ 3d	~~Y~~ 3d	NA	NA	~~Y~~ 5e	1.2 mg/l	21 mg/l TCLP	~~D001~~; ~~D003~~; D005 (100.0000)

Compatibility

Reactivity 3d 3d

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7440-39-3	.2000000	.0000000	
Totals per CAS #:		.2000000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-41-7	BERYLLIUM	~~PS~~ 3d	N	NA	NA	~~Y~~ 5j	.82 mg/l	1.22 mg/l TCLP	~~D001~~; ~~P015~~ 3d 1

Source	ID#	Weight %	EC %	TOX: N
WC	7440-41-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-42-8	BORON	~~PS~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: D
WC	7440-42-8	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-43-9	CADMIUM	NA	N	NA	NA	~~Y~~ 5c	.69 mg/l	.11 mg/l TCLP	D006 (1.0000); ~~WT01~~ 6a

Source	ID#	Weight %	EC %	TOX: A
WC	7440-43-9	.0020000	.0002000	
Totals per CAS #:		.0020000	.0002000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-47-3	CHROMIUM	NA	N	NA	NA	~~Y~~ 3d	2.77 mg/l	.6 mg/l TCLP	D007 (5.0000)

Source	ID#	Weight %	EC %	TOX: N
WC	7440-47-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-48-4	COBALT	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-48-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-50-8	COPPER	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-50-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-55-3	GALLIUM	NA	N	~~Y~~ 3d	NA	N			~~D002~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	7440-55-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-61-1	URANIUM	~~Y~~ 3d	~~Y~~ 3d	NA	NA	N			~~D001~~; ~~D003~~

Compatibility

Reactivity 3d 3d

PYROPHORIC

Source	ID#	Weight %	EC %	TOX: N
WC	7440-61-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-66-6	ZINC	~~YS~~ 3d	~~Y~~ 3d	NA	NA	~~Y~~ S	2.61 mg/l	4.3 mg/l TCLP	~~D001~~; ~~D003~~
				Compatibility				Reactivity	3d 3d
								PYROPHORIC, WATER REACTIVE	

Source	ID#	Weight %	EC %	TOX: N
WC	7440-66-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-67-7	ZIRCONIUM	~~YS~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	7440-67-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-69-9	BISMUTH	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: D
WC	7440-69-9	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-70-2	CALCIUM	~~YS~~ 3d	~~Y~~ 3d	NA	NA	N			~~D001~~; ~~D003~~
				Compatibility				Reactivity	3d 3d
								WATER REACTIVE	

Source	ID#	Weight %	EC %	TOX: N
WC	7440-70-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
75-09-2	DICHLOROMETHANE	NA	N	NA	HOC	~~Y~~ 5d	.089 mg/l	30 mg/kg	F001 F002 ~~U080~~; ~~WP01~~; ~~WT02~~ 1 6c 6b

Source	ID#	Weight %	EC %	TOX: D
WC	75-09-2	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
75-69-4	TRICHLOROFLUOROMETHANE	NA	N	NA	HOC	~~Y~~ 5d	.02 mg/l	30 mg/kg	F001 F002 ~~U121~~; ~~WP01~~ 1 6c

Source	ID#	Weight %	EC %	TOX: N
WC	75-69-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7553-56-2	IODINE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7553-56-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
76-01-7	PENTACHLOROETHANE	NA	N	NA	NA	~~Y~~ 5j	.055 mg/l	6 mg/kg	~~U184~~; ~~WT02~~ 1 6b

Source	ID#	Weight %	EC %	TOX: D
WC	76-01-7	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7631-86-9	SILICON DIOXIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7631-86-9	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7632-00-0	SODIUM NITRITE	~~O~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: X
WC	7632-00-0	.0100000	.0100000	
Totals per CAS #:		.0100000	.0100000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7664-39-3	HYDROFLUORIC ACID	NA	N	~~X~~ 3d	NA	N			~~D002~~ 3d; ~~U134~~ 1; ~~W001~~ 6a

Source	ID#	Weight %	EC %	TOX: B
WC	7664-39-3	.0100000	.0001000	
Totals per CAS #:		.0100000	.0001000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7664-41-7	AMMONIA	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: B
WC	7664-41-7	.0100000	.0001000	
Totals per CAS #:		.0100000	.0001000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7697-37-2	NITRIC ACID	~~O~~ 3d	N	~~X~~ 3d	NA	N			~~D001~~ 3d; ~~D002~~ 3d; ~~W001~~ 6a

Source	ID#	Weight %	EC %	TOX: A
WC	7697-37-2	.0100000	.0010000	
Totals per CAS #:		.0100000	.0010000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
77-86-1	2-AMINO-2-(HYDROXYMETHYL)-1-3-PROPANNEDIOL	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	77-86-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7704-34-9	SULFUR	~~PS~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	7704-34-9	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7723-14-0	PHOSPHORUS (RED, WHITE/YELLOW, BLACK/VIOLET)	~~PS~~ 3d	~~1~~ 3d	NA	NA	N			~~D001~~ 3d; ~~D003~~ 3d; ~~W002~~ 6b

Compatibility

Reactivity

OTHER

Source	ID#	Weight %	EC %	TOX: A
WC	7723-14-0	.0100000	.0010000	
Totals per CAS #:		.0100000	.0010000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7732-18-5	WATER	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7732-18-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7784-18-1	ALUMINUM FLUORIDE HYDRATE	NA	N	NA	NA	N			~~W002~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	7784-18-1	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7784-27-2	ALUMINUM NITRATE	~~O~~ 3b	N	NA	NA	N			~~D001~~ 3b

Source	ID#	Weight %	EC %	TOX: D
WC	7784-27-2	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7789-23-3	POTASSIUM FLUORIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: C
WC	7789-23-3	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
78-46-6	DIBUTYL BUTYLPHOSPHONATE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	78-46-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
79-01-6	TRICHLOROETHYLENE	NA	N	NA	HOC	~~Y~~ 5d	.054 mg/l	6 mg/kg	4 ~~D040 (1.5000)~~; F001 F002; U228; WP01; WT02 1 6a 6b

Source	ID#	Weight %	EC %	TOX: D
WC	79-01-6	.0010000	.0000001	
Totals per CAS #:		.0010000	.0000001	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
79-27-6	TETRABROMOETHANE, 1,1,2,2-	NA	N	NA	HOC	N			WP01; WT01

Source	ID#	Weight %	EC %	TOX: B
WC	79-27-6	.0100000	.0001000	
Totals per CAS #:		.0100000	.0001000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
8016-28-2	ANIMAL FATTY OIL	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	8016-28-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
8042-47-5	WHITE MINERAL OIL	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	8042-47-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
9003-53-6	POLYSTYRENE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	9003-53-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
92-31-9	TOLONIUM CHLORIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	92-31-9	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
GCN056	INERT NON-HAZARDOUS MATERIAL	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	GCN056	92.7152000	.0000000	
Totals per CAS #:		92.7152000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
GCNASH	ASH	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	GCNASH	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

Designation # 216Z12D5503-00

Designation Codes

(1) **Not a discarded chemical product (old/unused or sole active ingredient) (WAC 173-303-9903)**
(2) **Not a dangerous waste source (used/spent) (WAC 173-303-9904)**
(3) **Does not exhibit dangerous waste characteristic / criteria per:**
- a) MSDS
- b) Lab analysis
- c) Generator knowledge
- d) Insufficient concentration
- e) Not in this waste form

(4) **Federal listed waste code takes precedence (40 CFR 268.9)**
(5) **Underlying Hazardous Constituent(s) not applicable per:**
- a) Alternative treatment standard - hazardous debris (40 CFR 268.45)
- b) Transuranic waste
- c) Federal waste code assigned that does not specify meeting 40 CFR 268.48 universal treatment standards
- d) Federal listed waste code assigned
- e) Federal characteristic waste code assigned
- f) Federal characteristic waste code not assigned
- g) Insufficient concentration (40 CFR 268.48)
- h) Not an UHC in characteristic wastes, according to the definition at 40 CFR 268.2(i)
- i) No waste code assigned that specifies meeting 40 CFR 268.48 universal treatment standards
- j) To be determined based on treatment/disposal path

(6) ****Exclude:**
- a) WT01 EHW Washington State waste code, because Federal listed and/or characteristic waste code(s) assigned. Additional designation not required in accordance with WAC 173-303-070(5)
- b) WT02 DW Washington State waste code, because Federal listed and/or characteristic waste code(s) assigned. Additional designation not required in accordance with WAC 173-303-070(5)
- c) WP01 EHW Washington State waste code, because Federal listed and/or characteristic waste code(s) assigned. Additional designation not required in accordance with WAC 173-303-070(5)
- d) WP02 DW Washington State waste code, because Federal listed and/or characteristic waste code(s) assigned. Additional designation not required in accordance with WAC 173-303-070(5)
- e) WP03 EHW Washington State waste code, because Federal listed and/or characteristic waste code(s) assigned. Additional designation not required in accordance with WAC 173-303-070(5)
- f) Exclude Washington State waste code, waste regulated under CERCLA and/or TSCA, not RCRA or WAC 173-303

04/19/2007 01:58:55 PM

H2048869 | WASTE DESIGNATION WORKSHEET | SWIR601

For Designation # 216Z12DES04-00

Sum of Weight%: 99.9840000

Characteristic WAC-173-303-090-5-7

Flashpoint < 60C IGNITABLE	D001 DW	N/A
* OXIDIZER	D001 DW	N/A
pH <=2 or >= 12.5 (Liquids)	D002 DW	N/A
(Solids Only)	WSC2 DW	N/A
Reactive	D003 DW	N/A

*Oxidizer defined in 49CFR 173.127 & 173.128

Toxic Dangerous Waste WAC 173-303-100

Total EC %: .0135976

No data or EC% < .001	Non-Reg	
EC% >=.001 & <1	WT02 DW	66
EC% >= 1	WT01 EHW	

Persistant Dangerous Waste WAC-173-303-100

Total HOC%: .0754000 Total PAH%: .0000000

No HOC/PAH or below limits	Non-Reg	
HOC% > 1	WP01 EHW	
HOC% 0.01 to 1	WP02 DW	66
PAH% > 1%	WP03 EHW	

Toxicity Characteristic WAC 173-303-090-8

TC CODES D022, D008, D009, D011, D004, D005, D006, D007,

MATERIAL USED AS SOLVENTS: F005, F001, F002, F003

APPLICABLE WASTE CODES: F001, F002, F003, F005, D004, D005, D006, D007, D008, D009, D011, D022

APPLICABLE LDR CODES: NOT APPLICABLE TO TRU WASTE WASTE CLASS: DW

COMMENTS: SEE COMMENT SHEET

Designation Specialist: John P. Evans (Print Name) [signature] (Signature) 19 APR 2007 (Date)

For Designation # 216Z12DES04-00

Description: PFP EFFLUENT COMPLEX
DEBRIS FROM 1973-1977

Entry Date: 04/19/07 **Physical State:** Solid **pH:** >2<12.5 **Flashpoint:** C

Designator: JP EVANS **Old/Spill/Used:** Old

Comments:

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
100-21-0	TEREPHTHALIC ACID	NA	N	NA	NA	~~N~~ 5j	.055 mg/l	28 mg/kg	

Source	ID#	Weight %	EC %	TOX: N
WC	100-21-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
10124-37-5	CALCIUM NITRATE	~~C~~ 3d	N	NA	NA	N			~~D001~~ 3d: ~~W002~~ 6b

Source	ID#	Weight	EC %	TOX: C
WC	10124-37-5	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
10377-60-3	MAGNESIUM NITRATE	~~C~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	10377-60-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
10421-48-4	FERRIC NITRATE (TOX PER CAS 7782-61-8)	~~C~~ 3d	N	NA	NA	N			~~D001~~ 3d: ~~W002~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	10421-48-4	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

For Designation # 216E12DES04-00

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
107-66-4	DIBUTYL PHOSPHATE	NA	N	~~N~~ 3d	NA	N			~~D002~~ 3d

Source	ID#	Weight %	EC %	TOX: D
WC	107-66-4	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
108-88-3	TOLUENE	~~N~~ 3d	N	NA	NA	~~N~~ 5d	.08 mg/kg	10 mg/kg	~~D001~~ 3d; D005; ~~U220~~ 1; ~~W002~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	108-88-3	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
112-40-3	DODECANE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	112-40-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
112-80-1	OLEIC ACID	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	112-80-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
115-40-2	BROMOCRESOL PURPLE	NA	N	NA	HOC	N			~~W001~~ 6e

Source	ID#	Weight %	EC %	TOX: N
WC	115-40-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
120-82-1	1,2,4-TRICHLOROBENZENE	NA	N	NA	HOC	~~Y~~ 5j	.055 mg/l	19 mg/kg	

Source	ID#	Weight %	EC %	TOX: D
WC	120-82-1	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
122-32-7	1,2,3-TRI(CIS-9-OCTADECENOYL)GLYCEROL	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	122-32-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
124-18-5	DECANE	~~Y~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	124-18-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
125-20-2	THYMOLPHTHALEIN	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	125-20-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
126-73-8	TRIBUTYL PHOSPHATE (TBP)	NA	N	NA	NA	N			~~U202~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	126-73-8	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

For Designation # 216Z12DES04-00

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
127-18-4	TETRACHLOROETHYLENE	NA	N	NA	HOC	~~Y~~ 5d	.056 mg/kg	6 mg/kg	4 ~~D039 (.7000)~~; F001, F002; U210; ~~WP01~~; ~~WP02~~ 1 6c 6b

Source	ID#	Weight %	EC %	TOX: D
WC	127-18-4	.0014000	.0000001	
Totals per CAS #:		.0014000	.0000001	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
131-70-4	MONOBUTYL PHTHALATE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	131-70-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
1310-58-3	POTASSIUM HYDROXIDE	NA	N	~~Y~~ 3d	NA	N			~~D002~~ 3d

Source	ID#	Weight %	EC %	TOX: C
WC	1310-58-3	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
1310-73-2	SODIUM HYDROXIDE	NA	N	~~Y~~ 3d	NA	N			~~D002~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	1310-73-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
1330-20-7	XYLENE (MIXED ISOMERS)	~~Y~~ 3d	N	NA	NA	~~Y~~ 5d	.32 mg/l	30 mg/kg	~~D001~~ 3d, F003, ~~U239~~ 1; ~~WP02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	1330-20-7	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
1333-86-4	CARBON BLACK	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	1333-86-4	6.0000000	.0000000	
Totals per CAS #:		6.0000000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
134-32-7	NAPHTHYLAMINE, 1-E (TOXIC PER SAX)	NA	N	NA	NA	N			~~D267~~ 1

Source	ID#	Weight %	EC %	TOX: N
WC	134-32-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
1344-28-1	ALUMINUM OXIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	1344-28-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
13494-80-9	TELLURIUM	NA	N	NA	NA	N			~~NT02~~ 66

Source	ID#	Weight %	EC %	TOX: C
WC	13494-80-9	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
135-20-6	CUPFERRON	NA	N	NA	NA	N			~~NT02~~ 66

Source	ID#	Weight %	EC %	TOX: C
WC	135-20-6	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
13709-38-1	LANTHANUM FLUORIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	13709-38-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
14265-44-2	ORTHO-PHOSPHATE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	14265-44-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
144-62-7	OXALIC ACID	NA	N	~~Y~~ 3d	NA	N			~~D002~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	144-62-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
14797-55-8	NITRATE	~~O~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	14797-55-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
14797-65-0	NITRITE	~~O~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	14797-65-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
14808-79-8	SULFATE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	14808-79-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
16887-00-6	CHLORIDE (ION)	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	16887-00-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
16984-48-8	FLUORIDE	NA	N	NA	NA	~~Y~~ Sj	35 mg/l		

Source	ID#	Weight %	EC %	TOX: N
WC	16984-48-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
2243-76-7	MORDANT ORANGE 1	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	2243-76-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
24959-67-9	BROMIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	24959-67-9	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
25549-16-0	TRIISOOCTYLAMINE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	25549-16-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
302-01-2	HYDRAZINE	~~E~~ 3d	N	~~E~~ 3d	NA	N			~~D001~~ 3d; ~~D002~~ 3d; ~~U133~~ 1; ~~WT01~~ 6a

Source	ID#	Weight %	EC %	TOX: A
WC	302-01-2	.0100000	.0010000	
Totals per CAS #:		.0100000	.0010000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
326-91-0	THENOYLTRIFLUOROACETONE	NA	N	NA	HOC	N			

Source	ID#	Weight %	EC %	TOX: N
WC	326-91-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
3812-32-6	CARBON TRIOXIDE ION(2-)	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	3812-32-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
497-19-8	SODIUM CARBONATE	NA	N	NA	NA	N			~~WT02~~ 6b

Source	ID#	Weight %	EC %	TOX: C
WC	497-19-8	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

For Designation # 216Z12DES04-00

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
56-23-5	CARBON TETRACHLORIDE	NA	N	NA	HOC	~~N~~ 5d	.057 mg/l	6 mg/kg.	4 ~~D019 (.5000)~~; F001; ~~U211~~ 1; ~~WP01~~ 6c; ~~WP02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	56-23-5	.0010000	.0000001	
Totals per CAS #:		.0010000	.0000001	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
57-12-5	CYANIDE	NA	~~1~~ 3d	NA	NA	~~N~~ 5j	1.2 mg/l	590 mg/kg	~~D003~~; ~~P030~~

Compatibility

Reactivity 3d 1

CYANIDE BEARING WASTE

Source	ID#	Weight %	EC %	TOX: N
WC	57-12-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
57-13-6	UREA	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	57-13-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
57-50-1	SUCROSE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	57-50-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
58-08-2	CAFFEINE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: C
WC	58-08-2	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

For Designation # 216Z12DES04-00

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
64-19-7	ACETIC ACID	~~FL~~ 3d	N	~~X~~ 3d	NA	N			~~D001~~ 3d; ~~D002~~ 3d

Source	ID#	Weight %	EC %	TOX: C
WC	64-19-7	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
67-56-1	METHANOL	~~FL~~ 3d	N	NA	NA	~~X~~ 5d	5.6 mg/l	.75 mg/l TCLP	~~D001~~ 3d; F003; ~~U154~~ 1; ~~WP02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	67-56-1	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
67-64-1	ACETONE	~~FL~~ 3d	N	NA	NA	~~X~~ 5d	.28 mg/kg	160 mg/kg	~~D001~~ 3d; F003; ~~U002~~ 1

Source	ID#	Weight %	EC %	TOX: N
WC	67-64-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
67-66-3	CHLOROFORM	NA	N	NA	HOC	~~X~~ 5e	.046 mg/l	6 mg/kg	D022 (6.0000); ~~U044~~ 1; ~~WP01~~ 6c; ~~WP02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	67-66-3	.0120000	.0000012	
Totals per CAS #:		.0120000	.0000012	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
68131-37-3	CORN SYRUP SOLIDS	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	68131-37-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
68131-74-8	MICRO HOLLOW BALLS	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	68131-74-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
69011-15-0	CHLOROMETHYLATED COPOLYMER	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	69011-15-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
71-36-3	BUTYL ALCOHOL	~~N~~ 3d	N	NA	NA	~~N~~ 5d	5.6 mg/kg	2.6 mg/kg	~~D001~~ 3d; F003; ~~D001~~ 1; ~~W002~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	71-36-3	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
71-43-2	BENZENE	~~N~~ 3d	N	NA	NA	~~N~~ 5d	.14 mg/l	10 mg/kg 3d	~~D001~~; D018 4 (.5000); F005; ~~D019~~ 1; ~~W002~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	71-43-2	.0010000	.0000001	
Totals per CAS #:		.0010000	.0000001	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7429-90-5	ALUMINUM	~~N~~ 3d	Y	NA	NA	N			~~D001~~; ~~D003~~

Compatibility

Reactivity 3d 3d

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7429-90-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7439-89-6	IRON	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7439-89-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7439-92-1	LEAD	NA	N	NA	NA	~~N~~ 5e	.69 mg/l	.75 mg/l TCLP	D008 (5.0000)

Source	ID#	Weight %	EC %	TOX: N
WC	7439-92-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7439-93-2	LITHIUM	~~FS~~ 3d	~~Y~~ 3d	~~B~~ 3d Compatibility	NA	N		Reactivity WATER REACTIVE	~~D001~~; ~~D003~~ 3d 3d; ~~WSC2~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	7439-93-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7439-95-4	MAGNESIUM	~~FS~~ 3d	~~Y~~ 3d	NA Compatibility	NA	N		Reactivity WATER REACTIVE	~~D001~~; ~~D003~~ 3d 3d

Source	ID#	Weight %	EC %	TOX: N
WC	7439-95-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7439-96-5	MANGANESE	~~YS~~ 31	N	NA	NA	N			~~D001~~ 31

Source	ID#	Weight %	EC %	TOX: N
WC	7439-96-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7439-97-6	MERCURY	NA	N	NA	NA	~~Y~~ Se	.15 mg/l	.025 mg/l TCLP	D009 (.2000) ; ~~U151~~ 1

Source	ID#	Weight %	EC %	TOX: N
WC	7439-97-6	.0004000	.0000000	
Totals per CAS #:		.0004000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7439-98-7	MOLYBDENUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7439-98-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-02-0	NICKEL	NA	N	NA	NA	~~Y~~ S	3.98 mg/l	11 mg/l TCLP	

Source	ID#	Weight %	EC %	TOX: N
WC	7440-02-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-03-1	NIOBIUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-03-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-05-3	PALLADIUM	~~PS~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	7440-05-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-06-4	PLATINUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-06-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-07-5	PLUTONIUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-07-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-09-7	POTASSIUM	~~PS~~ 3d	~~X~~ 3d	~~X~~ 3d	NA	N			~~D001~~; ~~D002~~; ~~D003~~

Compatibility

Reactivity 3d 3d 3d

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7440-09-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-14-4	RADIUM	NA	~~Y~~ 3d	NA	NA	N			~~D003~~ 3d

Compatibility

Reactivity

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7440-14-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-16-6	RHODIUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-16-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-21-3	SILICON	~~Y~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: D
WC	7440-21-3	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-22-4	SILVER	NA	N	NA	NA	~~Y~~ 5e	.43 mg/l	.14 mg/l TCLP	D011 (5.0000)

Source	ID#	Weight %	EC %	TOX: N
WC	7440-22-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-23-5	SODIUM	~~PS~~ 3d	~~Y~~ 3d	~~B~~ 3d	NA	N			~~D001~~; ~~D003~~; ~~WSC2~~

Compatibility

Reactivity 3d 3d 3d

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7440-23-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-24-6	STRONTIUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-24-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-25-7	TANTALUM	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-25-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-32-6	TITANIUM	~~PS~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	7440-32-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-33-7	TUNGSTEN	~~PS~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	7440-33-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-38-2	ARSENIC	NA	N	NA	NA	~~Y~~ 5e	1.4 mg/l	5 mg/l TCLP	D004 (5.0000); ~~WT02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	7440-38-2	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-39-3	BARIUM	~~Y~~ 3d	~~Y~~ 3d	NA	NA	~~Y~~ 5e	1.2 mg/l	21 mg/l TCLP	~~D001~~; ~~D003~~; D005 (100.0000)

Compatibility

Reactivity ~~3d~~ 3d

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7440-39-3	.2000000	.0000000	
Totals per CAS #:		.2000000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-41-7	BERYLLIUM	~~Y~~ 3d	N	NA	NA	~~Y~~ 5j	.82 mg/l	1.22 mg/l TCLP	~~D001~~; ~~P015~~ 3d 1

Source	ID#	Weight %	EC %	TOX: N
WC	7440-41-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-42-8	BORON	~~Y~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: D
WC	7440-42-8	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-43-9	CADMIUM	NA	N	NA	NA	~~Y~~ 5e	.69 mg/l	.11 mg/l TCLP	D006 (1.0000); ~~WT01~~ 6a

Source	ID#	Weight %	EC %	TOX: A
WC	7440-43-9	.0020000	.0002000	
Totals per CAS #:		.0020000	.0002000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-47-3	CHROMIUM	NA	N	NA	NA	~~Y~~ 5e	2.77 mg/l	.6 mg/l TCLP	D007 (5.0000)

Source	ID#	Weight %	EC %	TOX: N
WC	7440-47-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-48-4	COBALT	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-48-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-50-8	COPPER	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7440-50-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-55-3	GALLIUM	NA	N	~~C~~ 3d	NA	N			~~D002~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	7440-55-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7440-61-1	URANIUM	~~Y~~ 3d	~~Y~~ 3d	NA	NA	N			~~D001~~; ~~D003~~ 3d 3d

Compatibility

Reactivity

PYROPHORIC

Source	ID#	Weight %	EC %	TOX: N
WC	7440-61-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-66-6	ZINC	FS	~~X~~ 3d	NA	NA	~~X~~ 5	2.61 mg/l	4.3 mg/l TCLP	~~D001~~ 3d; ~~D003~~ 3d

Compatibility 5

Reactivity

PYROPHORIC, WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7440-66-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-67-7	ZIRCONIUM	~~FS~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	7440-67-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-69-9	BISMUTH	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: D
WC	7440-69-9	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7440-70-2	CALCIUM	~~FS~~ 3d	~~X~~ 3d	NA	NA	N			~~D001~~ 3d; ~~D003~~ 3d

Compatibility

Reactivity

WATER REACTIVE

Source	ID#	Weight %	EC %	TOX: N
WC	7440-70-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
75-09-2	DICHLOROMETHANE	NA	N	NA	HOC	~~Y~~ 5d	.089 mg/l	30 mg/kg	F001; F002; ~~U080~~ 1; ~~WP01~~ 6c; ~~WT02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	75-09-2	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
75-69-4	TRICHLOROFLUOROMETHANE	NA	N	NA	HOC	~~Y~~ 5d	.02 mg/l	30 mg/kg	F001; F002; ~~U121~~ 1; ~~WP01~~ 6c

Source	ID#	Weight %	EC %	TOX: N
WC	75-69-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7553-56-2	IODINE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7553-56-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
76-01-7	PENTACHLOROETHANE	NA	N	NA	NA	~~Y~~ 5j	.055 mg/l	6 mg/kg	~~U184~~ 1; ~~WT02~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	76-01-7	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7631-86-9	SILICON DIOXIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7631-86-9	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7632-00-0	SODIUM NITRITE	~~0~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: X
WC	7632-00-0	.0100000	.0100000	
Totals per CAS #:		.0100000	.0100000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7664-39-3	HYDROFLUORIC ACID	NA	N	~~X~~ 3d	NA	N			~~D002~~ 3d; ~~U134~~ 1; ~~W001~~ 6a

Source	ID#	Weight %	EC %	TOX: B
WC	7664-39-3	.0100000	.0001000	
Totals per CAS #:		.0100000	.0001000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7664-41-7	AMMONIA	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: B
WC	7664-41-7	.0100000	.0001000	
Totals per CAS #:		.0100000	.0001000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
7697-37-2	NITRIC ACID	~~0~~ 3d	N	~~X~~ 3d	NA	N			~~D001~~ 3d; ~~D002~~ 3d; ~~W001~~ 6a

Source	ID#	Weight %	EC %	TOX: A
WC	7697-37-2	.0100000	.0010000	
Totals per CAS #:		.0100000	.0010000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
77-86-1	2-AMINO-2-(HYDROXYMETHYL)-1-3-PROPANNEDIOL	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	77-86-1	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

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CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7704-34-9	SULFUR	~~FS~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	7704-34-9	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7723-14-0	PHOSPHORUS (RED, WHITE/YELLOW, BLACK/VIOLET)	~~FS~~ 3d	~~X~~ 3d	NA	NA	N			~~D001~~; ~~D003~~; ~~W102~~ 3d 0d 6b

Compatibility

Reactivity: OTHER

Source	ID#	Weight %	EC %	TOX: A
WC	7723-14-0	.0100000	.0010000	
Totals per CAS #:		.0100000	.0010000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7732-18-5	WATER	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	7732-18-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7784-18-1	ALUMINUM FLUORIDE HYDRATE	NA	N	NA	NA	N			~~W102~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	7784-18-1	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7784-27-2	ALUMINUM NITRATE	~~O~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: D
WC	7784-27-2	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
7789-23-3	POTASSIUM FLUORIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: C
WC	7789-23-3	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
78-46-6	DIBUTYL BUTYLPHOSPHONATE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	78-46-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
79-01-6	TRICHLOROETHYLENE	NA	N	NA	HOC	~~Y~~ 5d	.054 mg/l	6 mg/kg	~~D040 (.5000)~~; F001; F002; U228; WP01; WT02 4 1 6c 6b

Source	ID#	Weight %	EC %	TOX: D
WC	79-01-6	.0010000	.0000001	
Totals per CAS #:		.0010000	.0000001	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
79-27-6	TETRABROMOETHANE, 1,1,2,2-	NA	N	NA	HOC	N			WP01; WT01 6c 6a

Source	ID#	Weight %	EC %	TOX: B
WC	79-27-6	.0100000	.0001000	
Totals per CAS #:		.0100000	.0001000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
8016-28-2	ANIMAL FATTY OIL	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	8016-28-2	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
8042-47-5	WHITE MINERAL OIL	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	8042-47-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
9003-53-6	POLYSTYRENE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	9003-53-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
92-31-9	TOLONIUM CHLORIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	92-31-9	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
GCN056	INERT NON-HAZARDOUS MATERIAL	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	GCN056	92.7152000	.0000000	
Totals per CAS #:		92.7152000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
GCNASH	ASH	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	GCNASH	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

Designation # 216E12DES04-00

Designation Codes

(1) **Not a discarded chemical product (old/unused or sole active ingredient) (WAC 173-303-9903)**

(2) **Not a dangerous waste source (used/spent) (WAC 173-303-9904)**

(3) **Does not exhibit dangerous waste characteristic / criteria per:**

a) MSDS

b) Lab analysis

c) Generator knowledge

d) Insufficient concentration

e) Not in this waste form

(4) **Federal listed waste code takes precedence (40 CFR 268.9)**

(5) **Underlying Hazardous Constituent(s) not applicable per:**

a) Alternative treatment standard - hazardous debris (40 CFR 268.45)

b) Transuranic waste

c) Federal waste code assigned that does not specify meeting 40 CFR 268.48 universal treatment standards

d) Federal listed waste code assigned

e) Federal characteristic waste code assigned

f) Federal characteristic waste code not assigned

g) Insufficient concentration (40 CFR 268.48)

h) Not an UHC in characteristic wastes, according to the definition at 40 CFR 268.2(i)

i) No waste code assigned that specifies meeting 40 CFR 268.48 universal treatment standards

j) To be determined based on treatment/disposal path

(6) ****Exclude:**

a) WT01 EHW Washington State waste code, because Federal listed and/or characteristic waste code(s) assigned. Additional designation not required in accordance with WAC 173-303-070(5)

b) WT02 DW Washington State waste code, because Federal listed and/or characteristic waste code(s) assigned. Additional designation not required in accordance with WAC 173-303-070(5)

c) WP01 EHW Washington State waste code, because Federal listed and/or characteristic waste code(s) assigned. Additional designation not required in accordance with WAC 173-303-070(5)

d) WP02 DW Washington State waste code, because Federal listed and/or characteristic waste code(s) assigned. Additional designation not required in accordance with WAC 173-303-070(5)

e) WP03 EHW Washington State waste code, because Federal listed and/or characteristic waste code(s) assigned. Additional designation not required in accordance with WAC 173-303-070(5)

f) Exclude Washington State waste code, waste regulated under CERCLA and/or TSCA, not RCRA or WAC 173-303

04/19/2007 02:02:36 PM

H2048869 | WASTE DESIGNATION WORKSHEET | SWIR601

For Designation # 241Z8DES-01-00

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
GCNDEBRIS	MISC. COMPACTIBLE DEBRIS (PAPER, PLASTIC, METAL, WOOD, ETC)		N						

Source	ID#	Weight %	EC %	TOX:
WC	GCNDEBRIS	92.0500000		
Totals per CAS #:		92.0500000		

Sum of Weight%: 100.0000000

Characteristic WAC-173-303-090-5-7

Flashpoint < 60C IGNITABLE D001 DW N/A
* OXIDIZER D001 DW N/A
pH <=2 or >= 12.5 (Liquids) D002 DW N/A
(Solids Only) WSC2 DW N/A
Reactive D003 DW N/A
*Oxidizer defined in 49CFR 173.127 & 173.128

Toxic Dangerous Waste WAC 173-303-100

Total EC %: .0019618
No data or EC% < .001 Non-Reg ____
EC% >=.001 & <1 WT02 DW 6b
EC% >= 1 WT01 EHW ____

Persistent Dangerous Waste WAC-173-303-100

Total HOC%: 6.0100000 Total PAH%: .0000000
No HOC/PAH or below limits Non-Reg ____
HOC% > 1 WP01 EHW 6c
HOC% 0.01 to 1 WP02 DW ____
PAH% > 1% WP03 EHW ____

Toxicity Characteristic WAC 173-303-090-8

TC CODES D008, D007, D006, D009, D011, D005,

MATERIAL USED AS SOLVENTS: F001, F003, F002, F005
APPLICABLE WASTE CODES: F001, F002, F003, F005, D005, D006, D007, D008, D009, D011
APPLICABLE LDR CODES: NOT APPLICABLE TO TRU WASTE WASTE CLASS: DW
COMMENTS: SEE COMMENT SHEET

Designation Specialist: John P. Evans (Print Name) [signature] (Signature) 19 APR 2007 (Date)

For Designation # 241Z8DES-01-00

Description: 1974 DEBRIS FROM AROUND THE 241-Z-8 SILICA SLURRY TANK ASSOCIATED WITH RECUPLEX OPERATIONS

Entry Date: 04/13/07 Physical State: Solid pH: >2 <12.5 Flashpoint: N/A C

Designator: JP EVANS Old/Spill/Used: Used

Comments: ACID ADJUSTED TO PH 2.5 BEFORE DISPOSAL .

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
10028-22-5	FERRIC SULFATE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	10028-22-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
10043-01-3	ALUMINUM SULFATE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	10043-01-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
10099-59-9	LANTHANUM NITRATE	~~O~~ 3L	N	NA	NA	N			~~D001~~ 3L; ~~W002~~ 6b

Source	ID#	Weight %	EC %	TOX: D
WC	10099-59-9	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
10099-74-8	LEAD NITRATE	~~O~~ 3L	N	NA	NA	~~N~~ 5e	.69 mg/l	.75 mg/l TCLP	~~D001~~ 3L D008 (5.0000)

Source	ID#	Weight %	EC %	TOX: N
WC	10099-74-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
10101-41-4	CALCIUM SULFATE (PLASTER OF PARIS)	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	10101-41-4	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
10102-68-8	CALCIUM IODIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	10102-68-8	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
10103-47-6	CHROMIUM NITRATE	~~0~~ 3d	N	NA	NA	~~N~~ 5e	2.77 mg/l	.6 mg/l TCLP	~~D001~~ 3d; D007 (5.0000)

Source	ID#	Weight %	EC %	TOX: N
WC	10103-47-6	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
10124-37-5	CALCIUM NITRATE	~~0~~ 3d	N	NA	NA	N			~~D001~~ 3d; ~~WT02~~ 6b

Source	ID#	Weight %	EC %	TOX: C
WC	10124-37-5	.0100000	.0000100	
Totals per CAS #:		.0100000	.0000100	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
10257-55-3	CALCIUM SULFITE, DIHYDRATE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	10257-55-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

For Designation # 241Z8DES-01-00

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
10377-60-3	MAGNESIUM NITRATE	~~Y~~ 3d	N	NA	NA	N			~~D001~~ 3d

Source	ID#	Weight %	EC %	TOX: N
WC	10377-60-3	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
10421-48-4	FERRIC NITRATE (TOX PER CAS 7782-61-8)	~~Y~~ 3d	N	NA	NA	N			~~D001, W002~~ 3d 6b

Source	ID#	Weight %	EC %	TOX: D
WC	10421-48-4	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
107-66-4	DIBUTYL PHOSPHATE	NA	N	~~Y~~ 3d	NA	N			~~D002~~ 3d

Source	ID#	Weight %	EC %	TOX: D
WC	107-66-4	.0100000	.0000010	
Totals per CAS #:		.0100000	.0000010	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
112945-52-5	AMORPHOUS SILICA	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: D
WC	112945-52-5	.1776000	.0000178	
Totals per CAS #:		.1776000	.0000178	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes(limit mg/l)
12054-48-7	NICKEL HYDROXIDE	NA	N	NA	NA	~~Y~~ 5j	3.98 mg/l	11 mg/l TCLP	

Source	ID#	Weight %	EC %	TOX: B
WC	12054-48-7	.0100000	.0001000	
Totals per CAS #:		.0100000	.0001000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
12059-95-9	PLUTONIUM DIOXIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	12059-95-9	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
12254-64-7	AMERICIUM(III) OXIDE (RADIOACTIVE)	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	12254-64-7	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
126-73-8	TRIBUTYL PHOSPHATE (TBP)	NA	N	NA	NA	N			~~U102~~ 66

Source	ID#	Weight %	EC %	TOX: D
WC	126-73-8	1.0000000	.0001000	
Totals per CAS #:		1.0000000	.0001000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
1302-74-5	CORUNDUM OR EMERY	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	1302-74-5	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

CAS#	Chemical Name	IGNT	REAC	CORR	PERS	UHC	WW Limit	NWW Limit	Listed/TC Codes (limit mg/l)
1305-62-0	CALCIUM HYDROXIDE	NA	N	NA	NA	N			

Source	ID#	Weight %	EC %	TOX: N
WC	1305-62-0	.0100000	.0000000	
Totals per CAS #:		.0100000	.0000000	

Form Approved. OMB No. 2050-0039

Emergency Contact Telephone Number
(509) 373-3800

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No.	Manifest Document No.	2. Page 2 of	Information in the shaded area is not required by Federal law.
	WA7890008967	GC032		

GENERATOR

3. Generators Name and Mailing Address CWC/200W
U.S. Department of Energy In Care of Fluor Hanford Compnay,
2355 Stevens Dr., Richland, WA, 99354
4. Generator's Phone (509) 373-5187

A. State Manifest Document Number
B. State Generators ID

5. Transporter 1 Company Name
6. US EPA ID Number: WA7890008967
C. State Transporter's ID
D. Transporter's Phone Number: 800-376-0971

7. Transporter 2 Company Name: N/A
8. US EPA ID Number: N/A
E. State Transporter's ID
F. Transporter's Phone Number

9. Designated Facility Name and Site Address
U.S. Department of Energy, Richland
2355 Stevens Dr., Richland, WA, 99354
10. US EPA ID Number: WA7890008967
G. State Facility's ID
H. Facility's Phone

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	Waste, Radioactive material, low specific activity (LSA-II), 7, UN 3321, Solid, Oxide, Fissile Excepted, Pu-239, AM-241, Pu-240, Sr-90, 2.86E+00 MBq	X	1	DM	56.8	KG	D002
b.		X					
c.		X					
d.		X					

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Return to Generator if not delivered. Carrier possesses the most current Emergency Response Guide Book #162. Truck Placarded: Radioactive. Exclusive Use Shipment. Attachments and NRC 540 reference document #GC032 and show all waste codes

16. GENERATORS CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping and are classified, packed marked and labeled, and are in all aspects in proper condition for transport by highway according to applicable international and national governmental regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimized the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. On behalf of DOE-RL

Printed/Typed Name: **Joelle Stamm "on behalf of DOE-RL"** | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgment of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certificate of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name | Signature | Month Day Year

EPA Form 8700-22

INPUT FORM

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z73-4-014	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 Gal drums containing paper, plastic, metal & glass, etc. One 55 gal drum of waste from 241-Z area. JA Jones waste. Combustible, rags, paper, etc.
Z73-4-018	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 Gal drums containing paper, plastic, metal & glass, etc. One 55 gal drum of waste from 241-Z area. JA Jones waste - Combustible.
Z73-4-065	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; glass, metal, plastic, paper, & etc. One 55 gal drum of sump waste 241-Z. Glass & metal only [11% Pu-240]
Z73-4-066	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; glass, metal, plastic, paper, & etc. 1 55 gal drum of sump waste 241-Z - combustible [11% Pu-240]
Z73-4-067	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; glass, metal, plastic, paper, & etc. 1 55 gal drum of sump waste 241-Z - combustible [11% Pu-240]
Z73-4-068	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; glass, metal, plastic, paper, & etc. 1 55 gal drum of sump waste 241-Z - combustible [11% Pu-240]
Z73-4-069	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; glass, metal, plastic, paper, & etc. 1 55 gal drum of sump waste 241-Z - combustible [11% Pu-240]
Z73-4-070	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; glass, metal, plastic, paper, & etc. 1 55 gal drum of sump waste 241-Z - combustible [11% Pu-240]
Z73-4-071	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; glass, metal, plastic, paper, & etc. 1 55 gal drum of sump waste 241-Z - combustible [11% Pu-240]
Z73-4-072	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; glass, metal, plastic, paper, & etc. 1 55 gal drum of sump waste 241-Z - combustible [11% Pu-240]
Z73-4-075	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; glass, metal, plastic, paper, & etc. 1 55 gal drum of sump waste 241-Z - combustible [11% Pu-240]

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z73-4-076	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; glass, metal, plastic, paper, & etc. 1 55 gal drum of sump waste 241-Z - combustible [11% Pu-240]
Z73-4-078	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; glass, metal, plastic, paper, & etc. 1 55 gal drum of sump waste 241-Z - combustible [11% Pu-240]
Z73-5-001	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; metal, plastic, paper, glass, & etc. 1 - 55 gal drum of sump waste 241-Z - combustible
Z73-5-002	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; metal, plastic, paper, glass, & etc. 1 - 55 gal drum of sump waste 241-Z - combustible
Z73-5-007	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; metal, plastic, paper, glass, & etc. 1 - 55 gal drum of sump waste 241-Z - metal and junk - non combustible
Z73-5-008	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; metal, plastic, paper, glass, & etc. 1 - 55 gal drum of sump waste 241-Z - combustible
Z73-5-009	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; metal, plastic, paper, glass, & etc. 1 - 55 gal drum of sump waste 241-Z - combustible
Z73-5-013	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain; metal, plastic, paper, glass, & etc. 1 - 55 gal drum of sump waste 241-Z - combustible
Z73-5-112	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 1 - 55 gallon drum of waste from 241Z - combustible [10-13% Pu 240]
Z73-5-115	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 1 - 55 gallon drum of waste from 241Z sump - combustible [10-13% Pu 240]
Z73-5-118	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 1 - 55 gallon drum of waste from 241Z sump - combustible [10-13% Pu 240]

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z73-7-139	2345Z	218-W-4B	T07	08/21/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain: metal, rubber, paper, plastic, & etc. One standard 55 gal barrel containing waste from 241-Z sumps - combustible. 4.7% Pu240 Transfer Authority is ARH-2122
Z73-8-094	2345Z	218-W-4B	T07	09/24/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain: paper, cloth, plastic, paper, metal, & etc. One 55 gal drum of Z-1A waste - combustible
Z73-9-001	2345Z	218-W-4B	T07	09/25/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain: metal, plastic, paper, glass, & etc. 1 - 55 gallon drum of 241Z waste - combustible
Z73-9-016	2345Z	218-W-4B	T07	09/25/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal. drums contain: paper, plastic, metal, crystals, glass, rags, & etc. One standard 55 gallon barrel containing room waste from 241Z - combustible
Z7310-068	2345Z	218-W-4B	T07	10/16/73	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal. drums contain: glass, metal, paper, rags, rubber, & etc. Standard 55 gal. waste drum of 241Z sump area waste - combustible
Z7402-079	2345Z	218-W-4B	T07	02/08/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums containing metal and scrap waste. From 234-5Z. One standard 55 gallon barrel containing waste from Z-1A Crib Operations. Combustible
Z7401-060	2345Z	218-W-4B	T07	02/08/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain: metal, glass, plastic, paper, rubber, & etc. One 55 gal drum of 241Z waste - combustible
Z7401-061	2345Z	218-W-4B	T07	02/08/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain: metal, glass, plastic, paper, rubber, & etc. One 55 gal drum of 241Z waste - combustible
Z7401-063	2345Z	218-W-4B	T07	02/08/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain: metal, glass, plastic, paper, rubber, & etc. One 55 gal drum of 241Z waste - non-combustible
Z7401-065	2345Z	218-W-4B	T07	02/08/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain: metal, glass, plastic, paper, rubber, & etc. One 55 gal drum of 241Z waste - combustible

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z7401-066	2345Z	218-W-4B	T07	02/08/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain: metal, glass, plastic, paper, rubber, & etc. One 55 gal drum of 241Z waste - combustible
Z7401-068	2345Z	218-W-4B	T07	02/08/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums contain: metal, glass, plastic, paper, rubber, & etc. One 55 gal drum of 241Z waste - combustible
Z7402-022	2345Z	218-W-4B	T07	02/12/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal. drums contain: metal, glass, plastic, paper, rags, & etc. L-10 Drum. One 55 gal of Z1A Crib Waste - combustible
Z7402-023	2345Z	218-W-4B	T07	02/12/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal. drums contain: metal, glass, plastic, paper, rags, & etc. L-10 Drum. One 55 gal of Z1A Crib Waste - combustible
Z7403-022.A	2345Z	218-W-4B	T07	03/08/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal. drums contain: metal, glass, rags, paper, plastic, & etc. Flowmeter. One standard 55 gallon barrel containing waste from Z-1A - combustible. [note: PIN was listed as Z-74-3-22 on Long-Term Underground Storage Data sheet]
Z74-4-050	2345Z	218-W-4B	T07	04/29/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal. drums contain: metal, glass, plastic, paper, rubber, & etc. One 55 gal drum of Z1A Crib Waste - combustible
Z74-5-024	2345Z	218-W-4B	T07	05/10/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal. drums contain: metal, glass, plastic, paper, & etc. One standard 55 gallon barrel from crib containing room waste from Z-1-A - combustible
Z74-5-032	2345Z	218-W-4B	T07	05/10/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal. drums contain: metal, glass, plastic, paper, & etc. One standard 55 gallon barrel containing waste from Z-1A - combustible
Z74-5-044	2345Z	218-W-4B	T07	05/17/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal. drums contain: metal, glass, plastic, paper, rags, & etc. 1 - 55 gallon drum of room waste from 241Z - combustible
Z74-6-128	2345Z	218-W-4B	T07	06/28/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums - solid waste, paper, plastic, rags. One 55 gal drum of 241-Z Crib waste - combustible

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z74-6-132	2345Z	218-W-4B	T07	06/28/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums - solid waste, paper, plastic, rags. One 55 gal drum of 241-Z Crib waste - combustible
Z74-6-133	2345Z	218-W-4B	T07	06/28/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums - solid waste, paper, plastic, rags. One 55 gal drum of 241-Z Crib waste - combustible
Z74-6-136	2345Z	218-W-4B	T07	06/28/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums - solid waste, paper, plastic, rags. One 55 gallon barrel containing waste from 241Z sump area - combustible
Z74-6-137	2345Z	218-W-4B	T07	06/28/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums - solid waste, paper, plastic, rags. One standard 55 gallon barrel containing room waste from 241-Z sump area - combustible
Z74-6-138	2345Z	218-W-4B	T07	06/28/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums - solid waste, paper, plastic, rags. One standard 55 gallon barrel containing room waste from 241-Z sump area - combustible
Z74-6-139	2345Z	218-W-4B	T07	06/28/74	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drums - solid waste, paper, plastic, rags. One standard 55 gallon barrel containing room waste from 241-Z sump area - combustible
Z74-7-011	2345Z	218-W-4B	T07	07/16/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, rags, room waste, hood waste. One 55 gal drum of Z-1A waste - combustible
Z74-7-012	2345Z	218-W-4B	T07	07/16/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, rags, room waste, hood waste. One 55 gal drum of Z-1A waste - combustible
Z74-7-013	2345Z	218-W-4B	T07	07/16/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, rags, room waste, hood waste. One 55 gal drum of Z-1A waste - combustible
Z74-7-026	2345Z	218-W-4B	T07	07/16/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, rags, room waste, hood waste. One 55 gal drum of Z-1A waste - combustible

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z74-7-037	2345Z	218-W-4B	T07	07/23/74	55 GAL	216Z12DES 04-00	234-5Z Building. 16, 55 gal drums contain: paper, metal, glass, rubber, & etc. One 55 gal drum of Z1A Crib waste - combustible
Z74-7-038	2345Z	218-W-4B	T07	07/23/74	55 GAL	216Z12DES 04-00	234-5Z Building. 16, 55 gal drums contain: paper, metal, glass, rubber, & etc. One 55 gal drum of Z1A Crib waste - combustible
Z74-7-042	2345Z	218-W-4B	T07	07/23/74	55 GAL	216Z12DES 04-00	234-5Z Building. 16, 55 gal drums contain: paper, metal, glass, rubber, & etc. One 55 gal drum of Z1A Crib waste - combustible
Z74-7-044	2345Z	218-W-4B	T07	07/23/74	55 GAL	216Z12DES 04-00	234-5Z Building. 16, 55 gal drums contain: paper, metal, glass, rubber, & etc. One 55 gal drum of Z1A Crib waste - combustible
Z74-7-045	2345Z	218-W-4B	T07	07/23/74	55 GAL	216Z12DES 04-00	234-5Z Building. 16, 55 gal drums contain: paper, metal, glass, rubber, & etc. One 55 gal drum of Z1A Crib waste - combustible
Z74-7-047	2345Z	218-W-4B	T07	07/23/74	55 GAL	216Z12DES 04-00	234-5Z Building. 16, 55 gal drums contain: paper, metal, glass, rubber, & etc. One 55 gal drum of Z1A Crib waste - combustible
Z74-8-021	2345Z	218-W-4B	T07	08/22/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, rags, hood waste, laboratory waste, plastic. Standard 55 gal. drum of contaminated waste from 241Z sump - combustible
Z74-8-022	2345Z	218-W-4B	T07	08/22/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, rags, hood waste, laboratory waste, plastic. Standard 55 gal. waste drum of combustible waste from 241Z sump.
Z74-8-059	2345Z	218-W-4B	T07	09/03/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, rags, hood waste, laboratory waste, (maints) piping and scrap. One 55 gal drum of room waste from the 241-Z sump area. Paper, plastic, rubber gloves, etc. Combustible
Z74-8-060	2345Z	218-W-4B	T07	09/03/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, rags, hood waste, laboratory waste, (maints) piping and scrap. One 55 gal drum of room waste from the 241-Z sump area. Contains paper, plastic, rubber gloves, etc. Combustible

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z74-9-037	2345Z	218-W-4B	T07	09/27/74	55 GAL	216Z12DES 03-00	234-5Z Building. Hood waste, room waste, rags, paper, plastic. One 55 gal drum of 241Z sump waste contaminated sand - non-combustible
Z7410-016	2345Z	218-W-4B	T07	10/30/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, glass, rags, room waste, laboratory waste. One 55 gallon barrel from 241-Z waste - combustible
Z7410-017	2345Z	218-W-4B	T07	10/30/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, glass, rags, room waste, laboratory waste. One 55 gallon barrel from 241-Z waste - combustible
Z7410-018	2345Z	218-W-4B	T07	10/30/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, glass, rags, room waste, laboratory waste. One 55 gallon barrel from 241-Z waste has combustibles.
Z7410-023	2345Z	218-W-4B	T07	10/30/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, glass, rags, room waste, laboratory waste. One 55 gallon barrel from 241-Z waste - combustible
Z7410-024	2345Z	218-W-4B	T07	10/30/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, glass, rags, room waste, laboratory waste. One 55 gallon barrel from 241-Z waste - combustible
Z7410-025	2345Z	218-W-4B	T07	10/30/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, glass, rags, room waste, laboratory waste. One 55 gallon barrel from 241-Z waste - combustible
Z7410-027	2345Z	218-W-4B	T07	10/30/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, glass, rags, room waste, laboratory waste. One 55 gallon barrel from 241-Z waste - combustible
Z7410-029	2345Z	218-W-4B	T07	10/30/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, glass, rags, room waste, laboratory waste. One 55 gallon barrel from 241-Z waste - combustible
Z7410-030	2345Z	218-W-4B	T07	10/30/74	55 GAL	216Z12DES 04-00	234-5Z Building. Paper, glass, rags, room waste, laboratory waste. One 55 gallon barrel 241 Z waste - combustible
Z7410-057	2345Z	218-W-4B	T07	10/30/74	55 GAL	241Z8DES-01-00	234-5Z Building. 26/55 gal. drums contain: metal, glass, rags, rubber, paper, & etc. One 55 gallon barrel from Z-8 - combustible

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z7410-061	2345Z	218-W-4B	T07	10/30/74	55 GAL	241Z8DES-01-00	234-5Z Building. 26/55 gal. drums contain: metal, glass, rags, rubber, paper, & etc. One 55 gallon barrel from Z-8 - combustible
Z7411-005.A	2345Z	218-W-4B	T07	11/10/74	55 GAL	216Z12DES 04-00	234-5Z Building. 1 - 55 gallon drum of combustible waste from 241-Z sump area.
Z7411-020	2345Z	218-W-4B	T07	11/10/74	55 GAL	216Z12DES 04-00	234-5Z Building. 1 - 55 gallon steel drum containing general waste from 241Z sump area - combustible
Z7411-021	2345Z	218-W-4B	T07	11/10/74	55 GAL	216Z12DES 04-00	234-5Z Building. 1 - 55 gallon drum containing combustible material from 241-Z sump area.
Z7411-065	2345Z	218-W-4B	T07	12/13/74	55 GAL	241Z8DES-01-00	234-5Z Building. 55 gal. drums contains: metal, glass, rubber, paper, plastic, & etc. One 55 gal drum sand & scrap from Z-8 - combustible.
Z7411-068	2345Z	218-W-4B	T07	12/13/74	55 GAL	241Z8DES-01-00	234-5Z Building. 1 - steel 55 gallon drum of non-combustible waste from Z-8.
Z7411-090	2345Z	218-W-4B	T07	12/13/74	55 GAL	216Z12DES 04-00	234-5Z Building. 18 - 55 gallon drums of contaminated waste material. One standard 55 gallon barrel containing waste from 241-Z sump area - combustible.
Z7411-092	2345Z	218-W-4B	T07	12/13/74	55 GAL	216Z12DES 04-00	234-5Z Building. 18 - 55 gallon drums of contaminated waste material. One standard 55 gallon barrel containing waste from 241-Z sump area - combustible.
Z7412-015.A	2345Z	218-W-4B	T07	12/13/74	55 GAL	241Z8DES-01-00	234-5Z Building. 25 - 55 gal. drums contain: metal, glass, rubber, paper, plastic, & etc. One 55 gal drum of waste - green house from Z-8 Crib tank - combustible.
Z7412-022.A	2345Z	218-W-4B	T07	12/13/74	110 GAL	216Z12DES 04-00	234-5Z Building. 25 - 55 gal. drums contain: metal, glass, rubber, paper, plastic, & etc. One standard "Red" barrel containing metal from 241-Z area - non-combustible.

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z7412-026	2345Z	218-W-4B	T07	12/13/74	55 GAL	216Z12DES 04-00	234-5Z Building. One standard 55 gallon barrel containing waste from D-5 sump pit - combustible.
Z7412-027	2345Z	218-W-4B	T07	12/13/74	55 GAL	216Z12DES 04-00	234-5Z Building. One standard 55 gallon "Red" barrel containing metal from D-5 sump pit - non-combustible.
Z7412-028	2345Z	218-W-4B	T07	12/13/74	55 GAL	216Z12DES 04-00	234-5Z Building. One standard 55 gallon barrel containing waste from D-5 sump - combustible.
Z7412-032	2345Z	218-W-4B	T07	12/13/74	55 GAL	216Z12DES 04-00	234-5Z Building. One standard 55 gallon barrel containing waste from 241-Z sump area - combustible.
Z7412-037	2345Z	218-W-4B	T07	12/13/74	55 GAL	216Z12DES 04-00	234-5Z Building. One standard 55 gallon "Red" barrel containing metal from D-5 sump pit - non-combustible.
Z75-1-011.A	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 04-00	234-5Z Building. Room wastes, hood wastes, glass & metal, paper towels, plastic, packaging cartons & equipment, sump waste. One standard 55 gallon barrel containing waste from 241-Z sump - combustible.
Z75-1-028	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.
Z75-1-029	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.
Z75-1-030	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.
Z75-1-031	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z75-1-032	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.
Z75-1-033	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 04-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing room waste from the 241-Z sump area - combustible.
Z75-1-034	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.
Z75-1-035	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.
Z75-1-036	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.
Z75-1-037	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.
Z75-1-038	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.
Z75-1-039	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z area - non-combustible.
Z75-1-040	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z75-1-041	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.
Z75-1-042	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 04-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing room waste from the 241-Z area - combustible.
Z75-1-043	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 04-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing room waste from the 241-Z area - combustible.
Z75-1-044	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 04-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing room waste from 241-Z - combustible.
Z75-1-045	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z area - non-combustible.
Z75-1-046	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z area - non-combustible.
Z75-1-047	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from 241-Z area - non-combustible.
Z75-1-048	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from 241-Z area - non-combustible.
Z75-1-049	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z75-1-050	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.
Z75-1-051	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.
Z75-1-052	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.
Z75-1-053	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.
Z75-1-054	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard 55 gallon barrel containing detritus from the 241-Z sump pits - non-combustible.
Z75-1-055	2345Z	218-W-4B	T07	01/18/75	55 GAL	216Z12DES 03-00	234-5Z Building. Room waste, sump area waste, compactor room waste. One standard barrel containing detritus from the 241-Z sump pits - non-combustible.
Z75-1-098	2345Z	218-W-4B	T07	02/12/75	55 GAL	216Z12DES 04-00	234-5Z Building. One standard 55 gallon barrel containing waste from 241-Z sump area - combustible.
Z75-1-099	2345Z	218-W-4B	T07	02/12/75	55 GAL	216Z12DES 04-00	234-5Z Building. One standard 55 gallon barrel containing waste from 241-Z sump area - combustible.
Z75-1-107	2345Z	218-W-4B	T07	02/12/75	55 GAL	216Z12DES 03-00	234-5Z Building. One 55 gallon drum of contaminated waste and sand from 241Z sump - non-combustible
Z75-1-108	2345Z	218-W-4B	T07	02/12/75	55 GAL	216Z12DES 03-00	234-5Z Building. One 55 gallon drum of contaminated waste and sand from 241Z sump - non-combustible

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z75-1-122	2345Z	218-W-4B	T07	02/12/75	55 GAL	216Z12DES 04-00	234-5Z Building. One 55 gal drum of 241Z sump waste - combustible.
Z75-1-123	2345Z	218-W-4B	T07	02/12/75	55 GAL	216Z12DES 04-00	234-5Z Building. One 55 gal drum of 241Z sump waste - combustible.
Z75-1-136	2345Z	218-W-4B	T07	02/12/75	55 GAL	216Z12DES 04-00	234-5Z Building. One 55 gal drum of 241Z sump waste - combustible.
Z75-1-144	2345Z	218-W-4B	T07	02/12/75	55 GAL	216Z12DES 04-00	234-5Z Building. One 55 gal drum of 241Z sump waste - combustible.
Z75-2-002.B	2345Z	218-W-4B	T07	03/03/75	55 GAL	216Z12DES 04-00	234-5Z Building. One standard 55 gallon barrel containing room waste from 241-Z sump area - combustible.
Z75-2-003.B	2345Z	218-W-4B	T07	03/03/75	55 GAL	216Z12DES 04-00	234-5Z Building. One standard 55 gallon barrel containing room waste from 241-Z sump area - combustible.
Z75-2-004.B	2345Z	218-W-4B	T07	03/03/75	55 GAL	216Z12DES 04-00	234-5Z Building. One standard 55 gallon barrel containing room waste from 241-Z sump area - combustible.
Z75-2-005.B	2345Z	218-W-4B	T07	03/03/75	55 GAL	216Z12DES 04-00	234-5Z Building. One standard 55 gallon barrel containing waste from 241-Z sump - combustible.
Z75-2-025.A	2345Z	218-W-4B	T07	03/03/75	55 GAL	216Z12DES 04-00	234-5Z Building. One standard 55 gal. barrel containing waste from 241-Z sump area - combustible
Z75-2-026.A	2345Z	218-W-4B	T07	03/03/75	55 GAL	216Z12DES 04-00	234-5Z Building. One standard 55 gal. barrel containing waste from 241-Z sump area - combustible
Z75-2-027.A	2345Z	218-W-4B	T07	03/03/75	55 GAL	216Z12DES 04-00	234-5Z Building. One standard 55 gal. barrel containing waste from 241-Z sump area - combustible
Z75-2-028.A	2345Z	218-W-4B	T07	03/03/75	55 GAL	216Z12DES 04-00	234-5Z Building. One standard 55 gal. barrel containing waste from 241-Z sump area - combustible

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z75-3-049	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Misc scrap. 1 black steel drum containing dirt from D-8 sump pit area - non-combustible.
Z75-4-021	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 black steel drum containing dirt from D-8 pit - non-combustible.
Z75-4-022	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 black steel barrel containing non combustible material from D-8 pit (dirt) - non-combustible.
Z75-4-023	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 black steel drum containing dirt from D-8 pit - non-combustible.
Z75-4-024	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 black steel drum from D-8 containing dirt - non-combustible.
Z75-4-025	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 black steel drum from D-8 sump pit area containing dirt - non-combustible.
Z75-4-026	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 black steel drum containing dirt from D-8 pit - non-combustible.
Z75-4-027	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 55 gallon black steel drum containing dirt from D-8 pit - non-combustible.
Z75-4-028	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 55 gallon black steel drum filled with dirt from D-8 pit - non-combustible.
Z75-4-029	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 black steel 55 gallon drum containing dirt from D-8 pit - non-combustible.
Z75-4-030	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 black steel drum containing dirt from D-8 pit - non-combustible.
Z75-4-031	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 black steel drum filled with dirt from D-8 pit - non-combustible.

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z75-4-032	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 black steel drum from D-8 sump pit area containing dirt - non-combustible.
Z75-4-033	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 55 gallon steel black drum dirt - non-combustible.
Z75-4-034	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 black steel drum from D-8 sump pit area containing dirt - non-combustible.
Z75-4-035	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 55 gall black steel drum filled with dirt from pit-8 - non-combustible.
Z75-4-036	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 black steel drum from D-8 sump pit area containing dirt - non-combustible.
Z75-4-037	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 black steel drum from D-8 sump pit area containing dirt - non-combustible.
Z75-4-038	2345Z	218-W-4B	T07	04/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 1 black steel barrel containing dirt from D-8 pit - non-combustible.
Z75-4-040	2345Z	218-W-4B	T07	05/05/75	55 GAL	216Z12DES 03-00	234-5Z Building. Scrap waste. 55 gal. drum. D-5 sump sweepings - non-combustible
Z75-4-043	2345Z	218-W-4B	T07	05/05/75	55 GAL	216Z12DES 04-00	234-5Z Building. Scrap waste. 55 gal. drum. D-5 sump sweepings - combustible
Z75-4-044	2345Z	218-W-4B	T07	05/05/75	55 GAL	216Z12DES 04-00	234-5Z Building. Scrap waste. 55 gal. drum. D-5 sump sweepings - combustible
Z75-4-045	2345Z	218-W-4B	T07	05/05/75	55 GAL	216Z12DES 04-00	234-5Z Building. Scrap waste. 55 gal. drum. D-5 sump sweepings - combustible
Z75-4-046	2345Z	218-W-4B	T07	05/05/75	55 GAL	216Z12DES 04-00	234-5Z Building. Scrap waste. 55 gal. drum. D-5 sump sweepings - combustible

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
ZB754-002	2345Z	218-W-4B	T07	05/05/75	16.5*7.1*5.2	216Z12DES 04-00	234-5Z Building. Wood & metal junk from the 241-Z sump pits - non-combustible. [Type II Burial Box]
Z75-8-012	2345Z	218-W-4B	T07	08/04/75	55 GAL	216Z12DES 04-00	234-5Z Building. Misc waste. 1 black 55 gal waste drum from Z-1-A - non-combustible.
Z75-8-017	2345Z	218-W-4B	T07	08/04/75	55 GAL	216Z12DES 04-00	234-5Z Building. Misc waste. 1 black waste drum from Z1A - combustible.
Z75-8-059	2345Z	218-W-4B	T07	09/24/75	55 GAL	216Z12DES 04-00	234-5Z Building. Misc. waste. Room waste from 241Z - combustible.
Z75-8-067	2345Z	218-W-4B	T07	09/24/75	55 GAL	216Z12DES 04-00	234-5Z Building. Misc. waste. One 55 gallon waste drum from 241Z sump pad - combustible.
Z7510-085	2345Z	218-W-4B	T07	10/28/75	55 GAL	216Z12DES 04-00	234-5Z Building. 55 gal drum of 241-Z sump area waste - combustible.
Z7512-094	2345Z	218-W-4B	T07	12/30/75	55 GAL	216Z12DES 04-00	234-5Z Building. 1 - 55 gal drum 361Z waste - combustible.
Z7512-095	2345Z	218-W-4B	T07	12/30/75	55 GAL	216Z12DES 04-00	234-5Z Building. 1 - 55 gal drum waste 361Z - combustible.
Z7512-098	2345Z	218-W-4B	T07	12/30/75	55 GAL	216Z12DES 04-00	234-5Z Building. 1 - 55 gal drum waste 361Z - combustible.
Z7512-100	2345Z	218-W-4B	T07	12/30/75	55 GAL	216Z12DES 04-00	234-5Z Building. 1 - 55 gal drum waste 361Z - combustible.
Z7512-101	2345Z	218-W-4B	T07	12/30/75	55 GAL	216Z12DES 04-00	234-5Z Building. 1 - 55 gal drum waste 361Z - combustible.
Z76-1-018	2345Z	218-W-4B	T07	01/09/76	55 GAL	216Z12DES 04-00	234-5Z Building. Z-12 waste – combustible.
Z76-3-033	2345Z	218-W-4B	T07	03/12/76	55 GAL	216Z12DES 04-00	234-5Z Building. One 55 gal barrel from 241-Z - combustible

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z76-3-055	2345Z	218-W-4B	T07	03/23/76	55 GAL	216Z12DES 04-00	234-5Z Building. Room, hood, & building waste. Combustible waste barrel from Z-1-A.
Z76-3-057.A	2345Z	218-W-4B	T07	03/23/76	55 GAL	216Z12DES 04-00	234-5Z Building. Room, hood, & building waste. Combustible waste barrel from Z-1-A.
Z76-3-058	2345Z	218-W-4B	T07	03/23/76	55 GAL	216Z12DES 04-00	234-5Z Building. Room, hood, & building waste. Combustible waste barrel from Z-1-A.
Z76-3-059	2345Z	218-W-4B	T07	03/23/76	55 GAL	216Z12DES 04-00	234-5Z Building. Room, hood, & building waste. Combustible waste barrel from Z-1-A.
Z76-3-060	2345Z	218-W-4B	T07	03/23/76	55 GAL	216Z12DES 04-00	234-5Z Building. Room, hood, & building waste. Non-combustible waste barrel from Z-1-A.
Z76-3-061	2345Z	218-W-4B	T07	03/23/76	55 GAL	216Z12DES 04-00	234-5Z Building. Room, hood, & building waste. Combustible waste barrel from Z-1-A.
Z76-11-1	2345Z	218-W-4B	T07	04/14/78	15*6*4	216Z12DES 04-00	234-5Z Building. D-4 agitator motor and gearbox. Misc. scrap from 241-Z sump area. Metal box [10080 lbs] non-combustible
Z76-8-016	2345Z	218-W-4B	T07	08/10/76	55 GAL	216Z12DES 04-00	234-5Z Building. Room, hood, building waste. 55 gal black barrel - hose from manhole #4 to D-8 sump - combustible.
Z76-8-018	2345Z	218-W-4B	T07	08/10/76	55 GAL	216Z12DES 04-00	234-5Z Building. Room, hood, building waste. Black 55 gal barrel - hose from manhole #4 to D-8 sump - combustible.
Z7610-119	2345Z	218-W-4B	T07	10/15/76	55 GAL	216Z12DES 04-00	234-5Z Building. Misc. room, hood & building waste. One 55 gallon room waste drum from 241Z sump shack - combustible.
Z7611-034	2345Z	218-W-4B	T07	11/12/76	55 GAL	216Z12DES 04-00	234-5Z Building. Misc. room, bldg & hood waste. 55 gal drum. Metal waste from 241-Z sump area - non-combustible (none combustible).
Z7611-039	2345Z	218-W-4B	T07	11/12/76	55 GAL	216Z12DES 04-00	234-5Z Building. Misc. room, bldg & hood waste. Waste from 241-Z sump area - combustible.

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z7611-040	2345Z	218-W-4B	T07	11/12/76	55 GAL	216Z12DES 04-00	234-5Z Building. Misc. room, bldg & hood waste. 55 gal drum. Waste from 241-Z sump area - combustible.
Z77-1-103	2345Z	218-W-4B	T07	01/28/77	55 GAL	216Z12DES 04-00	234-5Z Building. Misc. room, hood & building scrap. D-5 sump waste barrel - combustible.
Z77-1-105	2345Z	218-W-4B	T07	01/28/77	55 GAL	216Z12DES 04-00	234-5Z Building. Misc. room, hood & building scrap. D-5 waste drum - metal, glass - non-combustible.
Z77-2-10	2345Z	218-W-4B	T07	02/04/77	55 GAL	216Z12DES 04-00	234-5Z Building. Misc. room, building and hood waste. 55 gal drum, 241-Z waste - combustible.
Z77-4-56	2345Z	218-W-4B	T07	04/15/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc. room, hood and building waste. 55 gal drum. Sand from Z1-A - non-combustible.
Z77-4-58	2345Z	218-W-4B	T07	04/15/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc. room, hood and building waste. 55 gal drum. Sand from Z1-A - non-combustible.
Z77-4-59	2345Z	218-W-4B	T07	04/15/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc. room, hood and building waste. 55 gal drum. Sand from Z1-A - non-combustible.
Z77-4-60	2345Z	218-W-4B	T07	04/15/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc. room, hood and building waste. 55 gal drum. Sand from Z1-A - non-combustible.
Z77-4-61	2345Z	218-W-4B	T07	04/15/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc. room, hood and building waste. 55 gal drum. Sand from Z1-A - non-combustible.
Z77-4-62	2345Z	218-W-4B	T07	04/15/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc. room, hood and building waste. 55 gal drum. Sand from Z1-A - non-combustible.
Z77-4-63	2345Z	218-W-4B	T07	04/15/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc. room, hood and building waste. 55 gal drum. Sand from Z1-A - non-combustible.
Z77-4-65	2345Z	218-W-4B	T07	04/22/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc room, bldg and hood waste. 55 gal drum. Sand from Z1-A - non-combustible.

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z77-4-66	2345Z	218-W-4B	T07	04/22/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc room, bldg and hood waste. 55 gal drum. Sand from Z1-A - non-combustible.
Z77-4-72	2345Z	218-W-4B	T07	04/22/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc room, bldg and hood waste. 55 gal drum. Sand from Z1-A - non-combustible.
Z77-4-73	2345Z	218-W-4B	T07	04/22/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc room, bldg and hood waste. 55 gal drum. Sand from Z1-A - non-combustible.
Z77-4-78	2345Z	218-W-4B	T07	04/22/77	55 GAL	216Z12DES 04-00	234-5Z Building. Misc room, bldg and hood waste. One 55 gal.Bl. drum. Z-12 Rm. Waste - non-combustible.
Z77-4-79	2345Z	218-W-4B	T07	04/22/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc room, bldg and hood waste. 55 gal drum. Sand from Z1-A - non-combustible.
Z77-4-83	2345Z	218-W-4B	T07	04/22/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc room, bldg and hood waste. 55 gal drum. Sand from Z1-A - non-combustible.
Z77-4-88	2345Z	218-W-4B	T07	04/22/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc room, bldg and hood waste. 55 gal drum. Z1A soil drum - non-combustible.
Z77-4-89	2345Z	218-W-4B	T07	04/22/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc room, bldg and hood waste. Z1A soil - non-combustible.
Z77-4-90	2345Z	218-W-4B	T07	04/22/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc room, bldg and hood waste. Z1A soil - non-combustible.
Z77-4-91	2345Z	218-W-4B	T07	04/22/77	55 GAL	216Z12DES 03-00	234-5Z Building. Misc room, bldg and hood waste. 55 gal drum. Z1A soil - non-combustible.
Z77-5-11	2345Z	218-W-4B	T07	05/06/77	55 GAL	216Z12DES 04-00	234-5Z Building. Misc. room, hood and bldg. waste. One standard steel 55 gallon drum containing room waste from 241-Z building - combustible

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z77-5-36	2345Z	218-W-4B	T07	05/06/77	55 GAL	216Z12DES 04-00	234-5Z Building. Misc. room, hood and bldg waste. One standard steel 55 gallon drum containing room waste from 241-Z - combustible.
Z77-5-48	2345Z	218-W-4B	T07	05/24/77	55 GAL	216Z12DES 04-00	234-5Z Building. Misc. room, hood and bldg. waste. Z-1-A waste - combustible.
Z77-5-50	2345Z	218-W-4B	T07	05/24/77	55 GAL	216Z12DES 04-00	234-5Z Building. Misc. room, hood and bldg. waste. Z-1-A waste - combustible.
Z77-5-51	2345Z	218-W-4B	T07	05/24/77	55 GAL	216Z12DES 04-00	234-5Z Building. Misc. room, hood and bldg. waste. Z-1-A waste - combustible.
Z12806-1	2345Z	218-W-4C	T04	10/07/80	55 GAL	216Z12-DES-01-02	Miscellaneous hood waste (greenhouse) plastic, rags, etc. 90% combustible, Pu contaminated soil
Z12806-2	2345Z	218-W-4C	T04	10/07/80	55 GAL	216Z12-DES-01-02	Miscellaneous hood waste (greenhouse) plastic, rags, etc. 90% combustible, Pu contaminated soil
Z12806-3	2345Z	218-W-4C	T04	10/07/80	55 GAL	216Z12-DES-01-02	Miscellaneous hood waste (greenhouse) plastic, rags, etc. 90% combustible, Pu contaminated soil
Z12806-5	2345Z	218-W-4C	T04	10/07/80	55 GAL	216Z12-DES-01-02	Miscellaneous hood waste (greenhouse) plastic, rags, etc. 90% combustible, Pu contaminated soil
Z12806-6	2345Z	218-W-4C	T04	10/07/80	55 GAL	216Z12-DES-01-02	Miscellaneous hood waste (greenhouse) plastic, rags, etc. 90% combustible, Pu contaminated soil
Z12806-7	2345Z	218-W-4C	T04	10/07/80	55 GAL	216Z12-DES-01-02	Miscellaneous hood waste (greenhouse) plastic, rags, etc. 90% combustible, Pu contaminated soil
Z12806-8	2345Z	218-W-4C	T04	10/07/80	55 GAL	216Z12-DES-01-02	Miscellaneous hood waste (greenhouse) plastic, rags, etc. 90% combustible, Pu contaminated soil
387404150	2345Z	218-W-4C	T04	04/16/81	55 GAL	216Z12-DES-01-02	Miscellaneous plastic and cloth scrap (greenhouse), 60% combustible, Pu contaminated sediments

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
387404151	2345Z	218-W-4C	T04	04/16/81	55 GAL	216Z12-DES-01-02	Miscellaneous plastic and cloth scrap (greenhouse), 60% combustible, Pu contaminated sediments
387405362	2345Z	218-W-4C	T04	04/16/81	55 GAL	216Z12-DES-01-02	Miscellaneous plastic and cloth scrap (greenhouse), 60% combustible, Pu contaminated sediments
387404415	2345Z	218-W-4C	T04	04/16/81	55 GAL	216Z12-DES-01-02	Miscellaneous plastic and cloth scrap (greenhouse), 60% combustible, Pu contaminated sediments
Z12806013	2345Z	218-W-4C	T04	04/16/81	55 GAL	216Z12-DES-01-02	Miscellaneous plastic and cloth scrap (greenhouse), 60% combustible, Pu contaminated sediments
Z12806011	2345Z	218-W-4C	T04	04/16/81	55 GAL	216Z12-DES-01-02	Miscellaneous plastic and cloth scrap (greenhouse), 60% combustible, Pu contaminated sediments
Z12806010	2345Z	218-W-4C	T04	04/16/81	55 GAL	216Z12-DES-01-02	Miscellaneous plastic and cloth scrap (greenhouse), 60% combustible, Pu contaminated sediments
Z1280-609	2345Z	218-W-4C	T04	04/16/81	55 GAL	216Z12-DES-01-02	Miscellaneous plastic and cloth scrap (greenhouse), 60% combustible, Pu contaminated sediments
Z12806012	2345Z	218-W-4C	T04	04/16/81	55 GAL	216Z12-DES-01-02	Miscellaneous plastic and cloth scrap (greenhouse), 60% combustible, Pu contaminated sediments
Z7510-039	2345Z	218-W-4B	T07	10/28/1975	55 GAL	216Z12DES 04-00	Combustible room waste from 2904-ZA
Z75-1-129	2345Z	218-W-4B	T07	2/12/1975	55 GAL	216Z12DES 04-00	Combustible room waste from 2904-ZA
Z7512-110	2345Z	218-W-4B	T07	12/31/1975	55 GAL	216Z12DES 04-00	Combustible room waste from 2904-ZA
Z75-8-002.A	2345Z	218-W-4B	T07	8/4/1975	55 GAL	216Z12DES 04-00	Combustible room waste from 2904-ZA

Package ID Number	Waste Stream Source	Burial Ground Location	Trench Location	Shipment Date	Container Size and Type	Designation	Waste Description
Z76-6-030	2345Z	218-W-4B	T07	6/29/1976	55 GAL	216Z12DES 04-00	Room & Hood Waste (2904ZA)
Z76-9-036	2345Z	218-W-4B	T07	9/9/1976	55 GAL	216Z12DES 04-00	Room & Hood Waste (2904ZA)
Z77-1-106	2345Z	218-W-4B	T07	1/28/1977	55 GAL	216Z12DES 04-00	Misc. Room, Hood & Building Scrap. 2904-ZA Waste.
Z77-2-99	2345Z	218-W-4B	T07	2/25/1977	55 GAL	216Z12DES 04-00	Misc. Room, Hood and Building Waste. 2904-Z-A Room Waste.

APPENDIX C

CHEMICAL LISTS

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Table C1. Chemicals/Compounds in the PFP Complex Effluent Waste.

Products	Chemical/Compound	CAS #	Description/Use/Probable Source	EPA/State Hazardous Waste Codes
N/A	Cyanide	57-12-5	Reference: TRU-WST-11.4.3-0721200544286, p. 62 TRU-WST-11.4.3-0721200524082, p. 47	N/A
N/A	Mercury	7439-97-6	Reference: TRU-WST-11.4.3-0721200544286, p. 51 TRU-WST-11.4.3-0721200524082, p. 46	D009
N/A	Dibutyl phosphate (DBP)	107-66-4	Process/Reference: Degradation of TBP TRU-WST-11.4.3-0721200524082, p. 46 TRU-WST-11.4.3-0721200544286, p. 51 TRU-WST-11.4.3-0801200534680, p. 15	N/A
N/A	Tributyl phosphate (TBP)	126-73-8	Process/Reference: Pu reclamation, waste treatment TRU-WST-11.4.3-0721200544286, pp. 28, 81 TRU-WST-11.4.3-0801200534680, p. 15 TRU-WST-11.4.3-0801200555175, p. 8 TRU-WST-11.4.3-0712200524082, pp. 29, 46	N/A
N/A	Ammonia	7664-41-7	Reference: TRU-WST-11.4.3-0721200544286, p. 62 TRU-WST-11.4.3-0721200524082, pp. 23, 47	N/A
N/A	Fluoride	16984-48-8	Process/Reference: low-salt aqueous waste stream, slag & crucible dissolution TRU-WST-11.4.3-0721200544286, p. 53 TRU-WST-11.4.3-0708200528858, p. 14 TRU-WST-11.4.3-0721200524082, p. 47	N/A
N/A	Chloride	92-31-9	Reference: TRU-WST-11.4.3-0721200544286, p. 62	N/A
N/A	Nitrite	14797-65-0	Reference: TRU-WST-11.4.3-0721200544286, p. 65 TRU-WST-11.4.3-0721200524082, p. 47	N/A
N/A	Bromide	24959-67-9	Reference: TRU-WST-11.4.3-0721200544286, p. 79	N/A
N/A	Nitrate	14797-55-8	Process/Reference: low-salt aqueous waste stream TRU-WST-11.4.3-0721200544286, p. 74 TRU-WST-11.4.3-0708200528858, p. 14	N/A
N/A	Phosphate	14265-44-2	Process/Reference: Product precipitation TRU-WST-11.4.3-0721200544286, p. 62 TRU-WST-11.4.3-0721200524082, p. 47	N/A

Table C1. Chemicals/Compounds in the PFP Complex Effluent Waste.

Products	Chemical/Compound	CAS #	Description/Use/Probable Source	EPA/State Hazardous Waste Codes
N/A	Sulfate	14808-79-8	Reference: TRU-WST-11.4.3-0721200544286, pp. 47, 65 TRU-WST-11.4.3-0721200524082, p. 47	N/A
N/A	Silver	7440-22-4	Process/Reference: Lab film Processing TRU-WST-11.4.3-0721200544286, p. 67 TRU-WST-11.4.3-0801200534680, p. 15 TRU-WST-11.4.3-0721200524082, p. 46 TRU-WST-11.4.3-0726200544049 p. 19	D011
N/A	Arsenic	7440-38-2	Reference: TRU-WST-11.4.3-0721200544286, p. 67 TRU-WST-11.4.3-0721200524082, p. 46	D004
N/A	Barium	7440-39-3	Reference: TRU-WST-11.4.3-0721200544286, p. 67 TRU-WST-11.4.3-0721200524082, p. 46 TRU-WST-11.4.3-0726200544049 p. 19	D005
N/A	Beryllium	7440-41-7	Reference: TRU-WST-11.4.3-0721200544286, p. 67 TRU-WST-11.4.3-0721200524082, p. 46	N/A
N/A	Cadmium	7440-43-9	Process/Reference: Analytical artifact TRU-WST-11.4.3-0721200544286, p. 79 TRU-WST-11.4.3-0801200534680, p. 15	D006
N/A	Chromium	7440-47-3	Process/Reference: Corrosion of SS Equipment TRU-WST-11.4.3-0721200544286, p. 67 TRU-WST-11.4.3-0801200534680, p. 15 TRU-WST-11.4.3-0721200524082, p. 46 TRU-WST-11.4.3-0726200544049 p. 19	D007
N/A	Potassium	7440-09-7	Reference: TRU-WST-11.4.3-0721200544286, p. 79	N/A
N/A	Lithium	7439-93-2	Reference: TRU-WST-11.4.3-0721200544286, p. 79	N/A
N/A	Nickel	7440-02-0	Process/Reference: Corrosion of SS Equipment, Pu button coating TRU-WST-11.4.3-0721200544286, p. 74 TRU-WST-11.4.3-0801200534680, p. 15 TRU-WST-11.4.3-0721200524082, p. 46	N/A
N/A	Phosphorus	7723-14-0	Process/Reference: Degradation of TBP TRU-WST-11.4.3-0721200544286, p. 67 TRU-WST-11.4.3-0801200534680, p. 15	N/A

Table C1. Chemicals/Compounds in the PFP Complex Effluent Waste.

Products	Chemical/Compound	CAS #	Description/Use/Probable Source	EPA/State Hazardous Waste Codes
N/A	Lead	7439-92-1	Process/Reference: Incinerator off-gas treatment TRU-WST-11.4.3-0721200544286, p. 67 TRU-WST-11.4.3-0801200534680, p. 15 TRU-WST-11.4.3-0721200524082, p. 46	D008
N/A	Sulfur	7704-34-9	Process/Reference: Waste treatment TRU-WST-11.4.3-0721200544286, pp. 67, 75 TRU-WST-11.4.3-0801200534680, p. 15 TRU-WST-11.4.3-0721200524082, pp. 25, 46	N/A
N/A	Zinc	7440-66-6	Reference: TRU-WST-11.4.3-0721200544286, p. 67 TRU-WST-11.4.3-0721200524082, p. 47	N/A
N/A	Zirconium	7440-67-7	Reference: TRU-WST-11.4.3-0721200544286, p. 74 TRU-WST-11.4.3-0721200524082, p. 47 TRU-WST-11.4.3-0726200544049 p. 19	N/A
N/A	Aluminum	7429-90-5	Process/Reference: Waste treatment, Batch ion exchange, slag & crucible dissolution TRU-WST-11.4.3-0721200544286, p. 61 TRU-WST-11.4.3-0801200534680, p. 15 TRU-WST-11.4.3-0708200528858, p. 13 TRU-WST-11.4.3-0721200524082, p. 46 TRU-WST-11.4.3-0726200544049 p. 19	N/A
N/A	Calcium	7440-70-2	Process/Reference: Waste treatment, Batch ion exchange, slag & crucible dissolution TRU-WST-11.4.3-0721200544286, p. 68 TRU-WST-11.4.3-0801200534680, p. 15 TRU-WST-11.4.3-0708200528858, p. 13 TRU-WST-11.4.3-0721200524082, p. 46 TRU-WST-11.4.3-0726200544049 p. 19	N/A
N/A	Iron	7439-89-6	Reference: TRU-WST-11.4.3-0721200544286, p. 52 TRU-WST-11.4.3-0721200524082, pp. 24, 46 TRU-WST-11.4.3-0726200544049 p. 19	N/A
N/A	Magnesium	7439-95-4	Process/Reference: Waste treatment, Batch ion exchange, slag & crucible dissolution TRU-WST-11.4.3-0721200544286, p. 63 TRU-WST-11.4.3-0801200534680, p. 15 TRU-WST-11.4.3-0708200528858, p. 13 TRU-WST-11.4.3-0721200524082, p. 46 TRU-WST-11.4.3-0726200544049 p. 19	N/A

Table C1. Chemicals/Compounds in the PFP Complex Effluent Waste.

Products	Chemical/Compound	CAS #	Description/Use/Probable Source	EPA/State Hazardous Waste Codes
N/A	Manganese	7439-96-5	Process/Reference: Waste treatment TRU-WST-11.4.3-0721200544286, p. 75 TRU-WST-11.4.3-0801200534680, p. 15 TRU-WST-11.4.3-0721200524082, p. 46 TRU-WST-11.4.3-0726200544049 p. 19	N/A
N/A	Sodium	7440-23-5	Process/Reference: Incinerator off-gas treatment TRU-WST-11.4.3-0721200544286, p. 54 TRU-WST-11.4.3-0801200534680, p. 15 TRU-WST-11.4.3-0721200524082, p. 46	N/A
N/A	Silicon	7440-21-3	Process/Reference: Incinerator off-gas treatment TRU-WST-11.4.3-0721200544286, p. 66 TRU-WST-11.4.3-0801200534680, p. 15 TRU-WST-11.4.3-0721200524082, p. 46	N/A
N/A	Titanium	7440-32-6	Reference: TRU-WST-11.4.3-0721200544286, p. 52 TRU-WST-11.4.3-0721200524082, p. 46 TRU-WST-11.4.3-0726200544049 p. 19	N/A
N/A	1,2,4-Trichlorobenzene	120-82-1	Reference: TRU-WST-11.4.3-0721200524082, pp. 23, 46	N/A
N/A	Acetic acid	64-19-7	Process/Reference: Incinerator off-gas treatment TRU-WST-11.4.3-0721200524082, p. 23 TRU-WST-11.4.3-0801200534680, p. 15	N/A
N/A	Acetone	67-64-1	Reference: TRU-WST-11.4.3-0721200524082, pp. 23, 46	F003
N/A	Alizarin yellow (Mordant Orange 1)	2243-76-7	Reference: TRU-WST-11.4.3-0721200524082, p. 23	N/A
N/A	Napthylamine, 1-E	134-32-7	Reference: TRU-WST-11.4.3-0721200524082, p. 23	N/A
N/A	Benzene	71-43-2	Process/Reference: Incinerator off-gas treatment TRU-WST-11.4.3-0721200524082, pp. 23, 46 TRU-WST-11.4.3-0801200534680, p. 15	F005
N/A	Bismuth	7440-69-9	Process/Reference: Product precipitation TRU-WST-11.4.3-0721200524082, p. 23	N/A
N/A	Boron	7440-42-8	Reference: TRU-WST-11.4.3-0721200524082, p. 23	N/A
N/A	Bromocresol purple	115-40-2	Reference: TRU-WST-11.4.3-0721200524082, p. 23	N/A

Table C1. Chemicals/Compounds in the PFP Complex Effluent Waste.

Products	Chemical/Compound	CAS #	Description/Use/Probable Source	EPA/State Hazardous Waste Codes
N/A	Petroleum oil (bulk oil) [White mineral oil]	8042-47-5	Reference: TRU-WST-11.4.3-0721200524082, p. 23	N/A.
N/A	Caffeine	58-08-2	Reference: TRU-WST-11.4.3-0721200524082, p. 23	N/A
N/A	Carbon	1333-86-4	Process/Reference: Incinerator off-gas treatment TRU-WST-11.4.3-0721200524082, pp. 23, 47, 234 TRU-WST-11.4.3-0801200534680, p. 15	N/A
N/A	Carbon Tetrachloride	56-23-5	Process/Reference: Waste treatment, Pu recovery and refining operations and laboratory disposal, Pu button cleaning TRU-WST-11.4.3-0721200524082, pp. 30, 46, 164-165, 239 TRU-WST-11.4.3-0801200534680, p. 15 TRU-WST-11.4.3-0801200555175, p. 8	F001
N/A	Carbonate [Carbon trioxide ion(2-)]	3812-32-6	Process/Reference: Incinerator off-gas treatment TRU-WST-11.4.3-0721200524082, p. 23 TRU-WST-11.4.3-0801200534680, p. 15	N/A
N/A	Chloride	16887-00-6	Reference: TRU-WST-11.4.3-0721200524082, p. 23	N/A
N/A	Chloroform	67-66-3	Reference: TRU-WST-11.4.3-0721200524082, pp. 23, 46	D022
N/A	Cobalt	7440-48-4	Reference: TRU-WST-11.4.3-0721200524082, p. 23	N/A
N/A	Copper	7440-50-8	Reference: TRU-WST-11.4.3-0721200524082, p. 23 TRU-WST-11.4.3-0726200544049 p. 19	N/A
N/A	Cupferron	135-20-6	Reference: TRU-WST-11.4.3-0721200524082, p. 23	N/A
N/A	Decane	124-18-5	Reference: TRU-WST-11.4.3-0721200524082, p. 23	N/A
N/A	Gallium	7440-55-3	Reference: TRU-WST-11.4.3-0721200524082, p. 24	N/A
N/A	Hydrazine	302-01-2	Reference: TRU-WST-11.4.3-0721200524082, p. 24	N/A
N/A	Iodine	7553-56-2	Process/Reference: Slag & crucible dissolution TRU-WST-11.4.3-0721200524082, p. 24	N/A
N/A	Corn syrup (solids)	68131-37-3	Reference: TRU-WST-11.4.3-0721200524082, p. 24	N/A

Table C1. Chemicals/Compounds in the PFP Complex Effluent Waste.

Products	Chemical/Compound	CAS #	Description/Use/Probable Source	EPA/State Hazardous Waste Codes
N/A	Lard oil (Animal fatty oil)	8016-28-2	Process/Reference: Waste treatment, Pu recovery TRU-WST-11.4.3-0721200524082, p. 24 TRU-WST-11.4.3-0801200555175, p. 8	N/A
N/A	Methanol	67-56-1	Reference: TRU-WST-11.4.3-0721200524082, p. 24	F003
N/A	Molybdenum	7439-98-7	Reference: TRU-WST-11.4.3-0721200524082, p. 24	N/A
N/A	n-Butanol	71-36-3	Process/Reference: Degradation of TBP TRU-WST-11.4.3-0721200524082, pp. 24, 46 TRU-WST-11.4.3-0801200534680, p. 15	F003
N/A	n-Dodecane	112-40-3	Reference: TRU-WST-11.4.3-0721200524082, p. 24	N/A
N/A	Niobium	7440-03-1	Reference: TRU-WST-11.4.3-0721200524082, p. 24	N/A
	Nitric acid	7697-37-2	Process/Reference: recovery, solvent TRU-WST-11.4.3-0721200524082, pp. 29, 178, 240	N/A
N/A	Water	7732-18-5	Process/Reference: recovery, solvent TRU-WST-11.4.3-0721200524082, pp. 29, 178, 240	N/A
	Hydrofluoric acid	7664-39-3	Process/Reference: Button line, S&C dissolution TRU-WST-11.4.3-0721200524082, pp. 178, 240 TRU-WST-11.4.3-0708200528858, p. 13	N/A
N/A	Water	7732-18-5	Process/Reference: Button line, S&C dissolution TRU-WST-11.4.3-0721200524082, pp. 178, 240 TRU-WST-11.4.3-0708200528858, p. 13	N/A
N/A	Oleic acid	112-80-1	Reference: TRU-WST-11.4.3-0721200524082, p. 24	N/A
N/A	Oxalic acid	144-62-7	Process/Reference: Waste treatment TRU-WST-11.4.3-0721200524082, p. 24 TRU-WST-11.4.3-0801200534680, p. 15	N/A
N/A	Pentachloroethane	76-01-7	Process/Reference: Solvent extraction diluent TRU-WST-11.4.3-0721200524082, pp. 24, 46	N/A
N/A	Platinum	7440-06-4	Reference: TRU-WST-11.4.3-0721200524082, p. 24	N/A

Table C1. Chemicals/Compounds in the PFP Complex Effluent Waste.

Products	Chemical/Compound	CAS #	Description/Use/Probable Source	EPA/State Hazardous Waste Codes
N/A	Plutonium	7440-07-5	Process/Reference: Process residues TRU-WST-11.4.3-0721200524082, pp. 24, 46 TRU-WST-11.4.0809200526583 TRU-WST-11.4.1-0805200531025	N/A
N/A	Polystyrene	9003-53-6	Reference: TRU-WST-11.4.3-0721200524082, p. 25	N/A
N/A	Radium	7440-14-4	Reference: TRU-WST-11.4.3-0721200524082, p. 25	N/A
N/A	Rhodium	7440-16-6	Reference: TRU-WST-11.4.3-0721200524082, p. 25	N/A
N/A	Sucrose	57-50-1	Process/Reference: Process/Reference: Sugar used as moderating material by Critical Mass Physics Dept. TRU-WST-11.4.3-0721200524082, pp. 25, 28	N/A
N/A	Tantalum	7440-25-7	Reference: TRU-WST-11.4.3-0721200524082, p. 25 TRU-WST-11.4.3-0726200544049 p. 19	N/A
N/A	Tellurium	13494-80-9	Reference: TRU-WST-11.4.3-0721200524082, p. 25	N/A
N/A	Tetrabromoethane	79-27-6	Reference: TRU-WST-11.4.3-0721200524082, p. 25	N/A
N/A	Tetrachloroethylene	127-18-4	Reference: TRU-WST-11.4.3-0721200524082, pp. 25, 46, 240	F001 F002
N/A	Thenoyltrifluoroacetone	326-91-0	Reference: TRU-WST-11.4.3-0721200524082, p. 25	N/A
N/A	Thymolphthalein	125-20-2	Reference: TRU-WST-11.4.3-0721200524082, p. 25	N/A
N/A	Toluene	108-88-3	Reference: TRU-WST-11.4.3-0721200524082, pp. 25, 46	F005
N/A	Triisooctylamine	25549-16-0	Reference: TRU-WST-11.4.3-0721200524082, p. 25	N/A
N/A	Tris (hydroxymethyl)amino methane	77-86-1	Reference: TRU-WST-11.4.3-0721200524082, p. 25	N/A
N/A	Tungsten	7440-33-7	Reference: TRU-WST-11.4.3-0721200524082, p. 25	N/A
N/A	Uranium	7440-61-1	Process/Reference: Process residues TRU-WST-11.4.3-0721200524082, pp. 25, 46 TRU-WST-11.4.4-0809200526583 TRU-WST-11.4.1-0805200531025	N/A

Table C1. Chemicals/Compounds in the PFP Complex Effluent Waste.

Products	Chemical/Compound	CAS #	Description/Use/Probable Source	EPA/State Hazardous Waste Codes
N/A	Urea	57-13-6	Process/Reference: Scrubber solution, Incinerator off-gas treatment TRU-WST-11.4.3-0721200524082, pp. 25, 28 TRU-WST-11.4.3-0801200534680, p. 15	N/A
N/A	Chloromethylated copolymer (used anion exchange resins)	69011-15-0	Reference: TRU-WST-11.4.3-0721200524082, p. 25	N/A
N/A	Xylene	1330-20-7	Reference: TRU-WST-11.4.3-0721200524082, pp. 25, 46	F003
N/A	Sodium hydroxide	1310-73-2	Process/Reference: Used to raise pH, scrubber solution TRU-WST-11.4.3-0721200524082, pp. 21, 28, 178	N/A
N/A	Fly (incinerator) ash	GCNASH	Process/Reference: Ash from incinerator TRU-WST-11.4.3-0721200524082, p. 178	N/A
N/A	Micro hollow balls Fly ash	68131-74-8	Process/Reference: Raised the pH TRU-WST-11.4.3-0721200524082, p. 21	N/A
N/A	Silica (silicon dioxide)	7631-86-9	Process/Reference: Undetermined sources TRU-WST-11.4.3-0721200524082, p. 178	N/A
N/A	Dichloromethane	75-09-2	Reference: TRU-WST-11.4.3-0721200524082, p. 46	F001 F002
N/A	Polychlorinated biphenyls (PCBs)	12672-29-6	Reference: TRU-WST-11.4.3-0721200524082, p. 46 TRU-WST-11.4.3-0721200544286, p. 229	TSCA
N/A	Trichloromonofluoromethane	75-69-4	Reference: TRU-WST-11.4.3-0721200524082, p. 46	F001 F002
N/A	p-Phthalic acid	100-21-0	Reference: TRU-WST-11.4.3-0721200524082, p. 46	N/A
N/A	Phthalic acid (MBP) (Monobutyl phthalate)	131-70-4	Process/Reference: Incinerator off-gas treatment; Degradation of TBP TRU-WST-11.4.3-0801200534680, p. 15	N/A
N/A	Triolein	122-32-7	Process/Reference: Waste treatment, Pu recovery TRU-WST-11.4.3-0801200534680, p. 15 TRU-WST-11.4.3-0801200555175, p. 8	N/A
N/A	Lanthanum	13709-38-1	Process/Reference: Precipitation TRU-WST-11.4.3-0726200544049, p. 19	N/A
N/A	Dibutyl butylphosphonate (DBBP)	78-46-6	Process/Reference: PFP lab tests TRU-WST-11.4.3-0721200524082, pp. 24, 46	N/A

Table C1. Chemicals/Compounds in the PFP Complex Effluent Waste.

Products	Chemical/Compound	CAS #	Description/Use/Probable Source	EPA/State Hazardous Waste Codes
	Tributyl phosphate (TBP)	126-73-8	Process/Reference: PFP lab tests TRU-WST-11.4.3-0721200524082, pp. 24, 46	N/A
N/A	Trichloroethylene	79-01-6	Reference: TRU-WST-11.4.3-0721200524082, p. 46	F001 F002
N/A	Strontium	7440-24-6	Reference: TRU-WST-11.4.3-0726200544049, p. 19	N/A
Catalyst pack	Aluminum oxide	1344-28-1	Process/Reference: Vapor absorber TRU-WST-11.4.4-0728200524505	N/A
	Palladium	7440-05-3	Process/Reference: Vapor absorber TRU-WST-11.4.4-0728200524505	N/A
N/A	Sodium nitrite	7632-00-0	Reference: TRU-WST-11.4.3-0815200524635, p. 20	N/A
N/A	Ferric nitrate	10421-48-4	Reference: TRU-WST-11.4.3-0815200524635, p. 20	N/A
N/A	Sodium carbonate	497-19-8	Reference: TRU-WST-11.4.3-0815200524862, p. 9	N/A
N/A	Aluminum nitrate	7784-27-2	Reference: TRU-WST-11.4.3-0815200524635, p. 20	N/A
N/A	Aluminum fluoride	7784-18-1	Reference: TRU-WST-11.4.3-0815200524635, p. 20	N/A
N/A	Potassium hydroxide	1310-58-3	Reference: TRU-WST-11.4.3-0815200524635, p. 20	N/A
N/A	Potassium fluoride	7789-23-3	Reference: TRU-WST-11.4.3-0815200524635, p. 20	N/A
N/A	Magnesium nitrate	10377-60-3	Reference: TRU-WST-11.4.3-0815200524635, p. 20	N/A
N/A	Calcium nitrate	10124-37-5	Reference: TRU-WST-11.4.3-0815200524635, p. 20	N/A
N/A	Inert material	GCN056	Process/Reference: Special Work Permit, greenhouse TRU-WST-11.4.0809200526583	N/A

Table C2. Chemicals/Compounds in the 241-Z-8 Silica Slurry Tank Waste Stream.

Product/Chemical Compound	CAS #	Description/Use/Source Per RHO-LD-114 (pg 61) unless otherwise specified	EPA/State Haz Waste Codes
Acetone	67-64-1	Identified in well 84. Assumed to be part of generic degreasers used at Recuplex	F003
Aluminum nitrate nonahydrate	7784-27-2	Identified as used in controlled fluoride process	N/A
Aluminum nitrate	13473-90-0	Recuplex Process chemical	N/A
Aluminum hydroxide	21645-51-2	Recuplex Process chemical	N/A
Aluminum oxide	1344-28-1	Recuplex Process chemical	N/A
Aluminum +3	7429-90-5	Recuplex Process chemical	N/A
Aluminum Sulfate	10043-01-3	Recuplex Process chemical (assumed typo on document – formula (Al3(SO4)2)doesn't exist) – identified in sulfate discussion	N/A
Aluminum Chloride)	7446-70-0	Recuplex Process chemical (assumed typo on document – formula (AlC3) doesn't exist	N/A
Americium oxide	12254-64-7	Recuplex Process chemical	N/A
Americium trinitrate	25933-53-3	Recuplex Process chemical	N/A
Amorphous silica	61790-53-2	Filter aid - TRU-WST-11.4.3-0417200750314	N/A
Barium	7440-39-3	Identified in well 84. Assumed to be present in the soil.	D005
Bismuth	7440-69-9	Leached from soil taken in 1973	N/A
Cadmium hydroxide	21041-95-2	Recuplex Process chemical	D006
Calcium fluoride	7789-75-5	Recuplex Process chemical	N/A
Calcium hydroxide	1305-62-0	Recuplex Process chemical	N/A
Calcium iodine	10102-68-8	Recuplex Process chemical	N/A
Calcium nitrate	10124-37-5	Recuplex Process chemical	N/A
Calcium sulfate	7789-75-5	Recuplex Process chemical	N/A
Calcium sulfite	10257-55-3	Recuplex Process chemical	N/A
Carbon tetrachloride	56-23-5	Recuplex Process chemical	F001
Chromium hydroxide	1308-14-1	Recuplex Process chemical	D007
Chromium nitrate	10103-47-6	Recuplex Process chemical	N/A
Corundum	1302-74-75	Recuplex Process chemical	N/A
Dibutyl Phosphate	107-66-4	Degraded from radiolysis of TBP. Documents identified several metal DBPs	N/A
Dibutyl butyl phosphonate	78-46-6	Recuplex Process chemical	N/A
Dichloromethane	75-09-2	Identified in well 46. Assumed to be part of generic degreasers used at Recuplex	F001, F002
Ferric fluoride	7783-50-8	Recuplex Process chemical	N/A
Ferric hydroxide	1309-33-7	Recuplex Process chemical	N/A
Ferric nitrate	10421-48-4	Recuplex Process chemical	N/A
Ferric sulfate	10028-22-5	Recuplex Process chemical	N/A

Table C2. Chemicals/Compounds in the 241-Z-8 Silica Slurry Tank Waste Stream.

Product/Chemical Compound	CAS #	Description/Use/Source Per RHO-LD-114 (pg 61) unless otherwise specified	EPA/State Haz Waste Codes
Gadolinium	7440-54-2	Identified in soil taken in 1973	N/A
Hydrochloric acid	7647-01-0	Break down product of CCl4.	N/A
Hydrofluoric acid	7664-39-3	.1 g/l in CAW	N/A
Lanthanum nitrate	10099-59-9	21 g/l in CAW	N/A
Lard oil	8016-28-2	Recuplex Process chemical	N/A
Lead hydroxide	1311-11-1	Lini/Teal document identifies with metal nitrates and hydroxides	D008
Lead Nitrate	10099-74-8	Lini/Teal document identifies with metal nitrates and hydroxides	D008
Magnesium nitrate	10377-60-3	Recuplex Process chemical	N/A
Magnesium hydroxide	1309-42-8	Recuplex Process chemical	N/A
Magnesium sulfate	7487-88-9	Recuplex Process chemical	N/A
Magnesium carbonate	546-93-0	Recuplex Process chemical	N/A
Magnesium chloride	7786-30-3	Recuplex Process chemical	N/A
Magnesium oxide	1309-48-4	Recuplex Process chemical	N/A
Mercury	7439-97-6	Identified in well 84 & well 95. Assumed to be present in mined soil.	D009
Methyl ethyl ketone	78-93-3	Identified in well 46. Assumed to be part of generic degreasers used at Recuplex	F003
Monobutyl Phosphate	131-70-4	Recuplex Process chemical	N/A
Nickel nitrate	13138-45-9	Recuplex Process chemical	N/A
Nickel hydroxide	11113-74-9	Recuplex Process chemical	N/A
Nitric acid	7697-37-2	190 g/l in CAW , flush solution	N/A
Oxalate acid	144-62-7	Recuplex Process chemical [Pu Finishing Chap 5]	N/A
Potassium nitrate	7757-79-1	2 g/l in CAW	N/A
Plutonium dioxide	12059-95-9	Recuplex Process chemical	N/A
Plutonium fluoride	13709-56-3	Recuplex Process chemical	N/A
Plutonium nitrate(Pu(N03)4)	14913-29-2	Recuplex Process chemical	N/A
Rubidium nitrate	13126-12-0	Recuplex Process chemical	N/A
Rubidium hydroxide	1310-82-3	Recuplex Process chemical	N/A
Silicon dioxide (crystalline silica)	60676-86-0	Recuplex Process chemical	N/A
Silver	7440-22-4	Identified in 1973 soil leaching test.	D011
Sodium hydroxide	1310-73-2	Used to neutralize the waste	N/A
Sodium nitrate	7631-99-4	Part of slag and crucible slurry (Lini/Teal)	N/A
Titanium	7440-32-6	Identified in 1973 soil leaching test	N/A
Tributyl phosphate	126-73-8	Recuplex Process chemical	N/A
Inert material	GCN056	Miscellaneous combustible waste	N/A

CAW = current acid waste

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APPENDIX D

ASSUMPTIONS/CALCULATIONS

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PFP COMPLEX EFFLUENT ASSUMPTIONS

Designation: 216Z12DES01-02[TRU-WST-11.9-0412200748928]

Sixteen containers were generated from 216-Z-1A and 216-Z-12 Crib sampling soil spoils during 1980-1981. Even though greater than 50% of the wastes in these containers were debris items, the soil represented a significant amount of the total.

241-Z-361 Settling Tank was in the effluent path for the 216-Z-1A and 216-Z-12 Cribs. The 241-Z-361 Settling Tank served as a primary solids settling tank for low-salt liquid (primarily aqueous) waste. Historic flows during the operating history of the tank were approximately 2,000,000 gal/yr of process and laboratory wastewater. Tank 241-Z-361 received a high volume of waste water, which included inorganic waste from PRF, organic, inorganic and laboratory mixed waste from PFP, inorganic and organic waste from the Incinerator Building and Building 242-Z from the americium recovery process. The supernate from the 241-Z-361 Settling Tank was routed to 216-Z-1, 216-Z-2, 216-Z-3, 216-Z-12, and 216-Z-1A Cribs for disposal to ground.[TRU-WST-11.4.3-0712200524082, TRU-WST-11.4.3-0810200534996, TRU-WST-11.9.0418200734818]

Analytical data from baseline characterization of the 241-Z-361 Settling Tank sludge assisted with the designation of this debris type waste. For each of the following assumptions listed below, it was assumed that the debris waste contained no free liquids, however, information gathered during the AK process identified several constituents that may be present at residual amounts in the debris. Therefore, the following assumptions were made where analytical data from sample analysis or published chemical information about a process could not be referenced:

1. Heavy Metal compounds, regulated as D004-D011 not associated with a product and identified as being present in the waste matrix, were assumed to be present at their regulatory level.

2. Organic compounds, regulated as D012-D022, D027-D034, D036-D040, D042, and D043 not associated with a product and identified as being present in the waste matrix, were assumed to have a weight percentage at 0.01% (100 ppm).

3. Organic compounds, regulated as D023-D026, D035, and D041 not associated with a product, identified as being present in the waste matrix, and not contributing to a listed waste code were assumed to have a weight percentage at 0.04% (400 ppm).

4. All other constituents (including listed waste code constituents) not associated with a product in the waste matrix were listed at a weight percentage of 0.01% (100 ppm).

5. If a constituent was in a product with an available MSDS, the product was assumed to be present at 0.01% (100 ppm). Therefore, the weight percentage of each individual constituent in the MSDS was multiplied by 0.01% (100 ppm).

6. PCBs were present in 241-Z-361 Settling Tank analytical results at 160 ppm.

These conservative assumptions will trigger all RCRA codes for which relevant constituents are present in the waste stream.

Designation: 216Z12DES03-00[TRU-WST-11.9-04122007489 28]

Sixty-four containers were generated from locations within the 241-Z Areas including the sump pits. Solid Waste Burial Records were not specific as to whether or not these containers were generated as a result of general cleanup of the areas prior to maintenance activities or what the reason was. What was known, however, was the waste matrix. The waste matrix was either listed as dirt, detritus, or sand and in each case, noncombustible.

The same Analytical data from baseline characterization of the 241-Z-361 Settling Tank sludge was used for the designation of this solid waste matrix. Once again, it was assumed that the solid waste contained no free liquids, however, for this designation PCBs were not assigned at any concentration since none of the waste came directly through any of the process effluent infrastructure (drains, tanks, etc.). The only chemical contamination that would be possible would be slight residual amounts and only then because of the close proximity of the effluent infrastructure.

1. Heavy Metal compounds, regulated as D004-D011 not associated with a product and identified as being present in the waste matrix, were assumed to be present at their regulatory level.

2. Organic compounds, regulated as D012-D022, D027-D034, D036-D040, D042, and D043 not associated with a product and identified as being present in the waste matrix, were assumed to have a weight percentage at 0.01% (100 ppm).

3. Organic compounds, regulated as D023-D026, D035, and D041 not associated with a product, identified as being present in the waste matrix, and not contributing to a listed waste code were assumed to have a weight percentage at 0.04% (400 ppm).

4. All other constituents (including listed waste code constituents) not associated with a product in the waste matrix were listed at a weight percentage of 0.01% (100 ppm).

5. If a constituent was in a product with an available MSDS, the product was assumed to be present at 0.01% (100 ppm). Therefore, the weight percentage of each individual constituent in the MSDS was multiplied by 0.01% (100 ppm).

These conservative assumptions will trigger all RCRA codes for which relevant constituents are present in the waste stream.

Designation: 216Z12DES04-00[TRU-WST-11.9-0412200748928]

There were containers were generated from areas located outside of the PFP building but near the effluent infracture. Some of these areas were the 241-Z Crib, 241-Z sump area, D-5 sump pit, D-5 sump, 361Z, or the 2904-ZA. Solid Waste Burial Records were not specific as to whether or not these containers were generated as a result of general cleanup of the areas prior to maintenance activities or what the reason was. In most cases the waste matrix was listed as combustible or simply a generic statement of room waste and then the location.

The same Analytical data from baseline characterization of the 241-Z-361 Settling Tank sludge was used for the designation of this debris waste matrix. Once again, it was assumed that the solid waste contained no free liquids, however, for this designation PCBs were not assigned at any concentration since none of the waste came directly through any of the process effluent infrastructure (drains, tanks, etc.). The only chemical contamination that would be possible would be residual slight amounts and only then because of the close proximity of the effluent infrastructure.

1. Heavy Metal compounds, regulated as D004-D011 not associated with a product and identified as being present in the waste matrix, were assumed to be present at their regulatory level.

2. Organic compounds, regulated as D012-D022, D027-D034, D036-D040, D042, and D043 not associated with a product and identified as being present in the waste matrix, were assumed to have a weight percentage at 0.01% (100 ppm).

3. Organic compounds, regulated as D023-D026, D035, and D041 not associated with a product, identified as being present in the waste matrix, and not contributing to a listed waste code were assumed to have a weight percentage at 0.04% (400 ppm).

4. All other constituents (including listed waste code constituents) not associated with a product in the waste matrix were listed at a weight percentage of 0.01% (100 ppm).

5. If a constituent was in a product with an available MSDS, the product was assumed to be present at 0.01% (100 ppm). Therefore, the weight percentage of each individual constituent in the MSDS was multiplied by 0.01% (100 ppm).

These conservative assumptions will trigger all RCRA codes for which relevant constituents are present in the waste stream.

Designation: 241Z8DES-01-00[TRU-WST-11.9-0412200748928]

Five containers were generated from around the location of the 241-Z-8 Silica Slurry Tank. Solid Waste Burial Records indicate these containers are debris waste, with one of the containers being a greenhouse. A greenhouse usually represents a job being performed. Records are not specific as to the nature of the job.

Lab analysis and monitoring results of well drilling soils were used to confirm the constituents expected to be in the waste stream for the 216-Z-9 Crib. This information, for the 216-Z-9 Crib, along with the caustic solution used for neutralization of the aqueous waste and the Slag & Crucible Filter Slurry identified in TRU-WST-11.4.3-0401200747426, provide the characterization knowledge used for the designation of the contents associated with the 241-Z-8 Silica Settling Tank. Differences between the waste routed to 241-Z-8 are the addition of diatomaceous earth used as a filter aid in coagulating solids from the SC Process Hood and lack of evidence of Cadmium nitrate added as a poison to 216-Z-9 Crib to prevent criticality.

It was assumed that the solid waste contained no free liquids. The only chemical contamination that would be possible would be residual slight amounts and only then because of the close proximity of the effluent infrastructure.

1. Heavy Metal compounds, regulated as D004-D011 not associated with a product and identified as being present in the waste matrix, were assumed to be present at their regulatory level.

2. Organic compounds, regulated as D012-D022, D027-D034, D036-D040, D042, and D043 not associated with a product and identified as being present in the waste matrix, were assumed to have a weight percentage at 0.01% (100 ppm).

3. Organic compounds, regulated as D023-D026, D035, and D041 not associated with a product, identified as being present in the waste matrix, and not contributing to a listed waste code were assumed to have a weight percentage at 0.04% (400 ppm).

4. All other constituents (including listed waste code constituents) not associated with a product in the waste matrix were listed at a weight percentage of 0.01% (100 ppm).

5. If a constituent was in a product with an available MSDS, the product was assumed to be present at 0.01% (100 ppm). Therefore, the weight percentage of each individual constituent in the MSDS was multiplied by 0.01% (100 ppm).

These conservative assumptions will trigger all RCRA codes for which relevant constituents are present in the waste stream.