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DOE Contract No. DE-AC05-98OR22700
Job No. 23900
March 28, 2003

Ms. Dianna Feireisel
Acting Paducah Site Manager
Department of Energy
P.O. Box 1410
Paducah, KY 42002-1410

Subject: *The Site Treatment Plan Annual Update for the United States Department of Energy, Paducah Gaseous Diffusion Plant, Paducah, Kentucky,* BJC/PAD-~~337~~ 517
per Barbara Redfern CB

Dear Ms. Feireisel:

Enclosed are five copies of the Site Treatment Plan (STP) Annual Update. This report is required by the Federal Facility Compliance Act/Agreed Order issued by the Kentucky Division of Waste Management (KDWM) on September 10, 1997.

Please forward two copies of the STP Annual Update to the following:

Mr. Carlos Merizalde
U.S. Environmental Protection Agency
Region IV
61 Forsyth Street
Atlanta, GA 30303

Mr. Robert H. Daniell, Director
Division of Waste Management
Kentucky Department for Environmental Protection
14 Reilly Road
Frankfort Office Park
Frankfort, KY 40601

H-00015-1346

This update is due in their office no later than March 31, 2003. Suggested text for the transmittal letter is enclosed for your use.

If you should have any questions or should require additional information, please contact Steve Davis at (270) 441-5216.

Sincerely,

for Gordon L. Dover
Paducah Manager of Projects

GLD:bar
LTR-PAD/WO-BR-03-0036

Enclosures: 1) *Site Treatment Plan Annual Update for the United States Department of Energy, Paducah Gaseous Diffusion Plant, Paducah, Kentucky,* BJC/PAD-337
2) Suggested cover letter from DOE to KDWM

c/enc: Distribution

Distribution

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Date

Mr. Robert H. Daniell, Director
Division of Waste Management
Kentucky Department of Environmental Protection
14 Reilly Road
Frankfort Office Park
Frankfort, Kentucky 40601

Mr. Carlos Merizalde
United States Environmental Protection Agency
Region IV
61 Forsyth Street
Atlanta, Georgia 30303

Dear Mr. Daniell and Mr. Merizalde:

THE SITE TREATMENT PLAN ANNUAL UPDATE FOR THE DEPARTMENT OF ENERGY, PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, BJC/PAD 337

Enclosed is the Site Treatment Plan (STP) Annual Update. This update is required by the Federal Facility Compliance Act/Agreed Order issued by the Kentucky Division of Waste Management (KDWM) on September 10, 1997.

DOE has added some newly identified waste streams that are potentially mixed waste to the STP. This waste is environmental media and debris generated as a result of remediation activities. These newly identified wastes may be contaminated with Resource Conservation and Recovery Act (RCRA) hazardous constituents and also have a radioactive component. On January 24, 2003, DOE notified KDWM that of approximately 33,000 containers of waste currently being managed as low-level radioactive waste and/or Toxic Substances Control Act waste at the facility, "an unknown, but potentially significant portion" may contain listed hazardous waste. DOE has completed an initial process knowledge review of the 33,000 containers of waste. Based on this review thus far, approximately 12,000 containers are suspected to contain listed hazardous waste. For mixed waste with inadequate characterization, the STP requires DOE to

propose and implement a characterization plan. The containers are being added to Table 8 for further characterization. If the waste is not a listed waste, DOE will remove it from the STP in accordance with the terms of the Agreed Order.

DOE submitted a proposed revision to the STP to KDWM as Appendix C of the 2001 STP Annual Update. These proposed revisions included updating the tables to reflect then current waste streams and volumes and added detail to the proposed treatment options. DOE is continuing to operate under the existing STP until the revision has been approved.

If you have any questions or require additional information, please call W. David Tidwell at (270) 441-6807.

Sincerely,

Dianna Feireisel, Acting Site Manager
Paducah Site Office

Enclosure

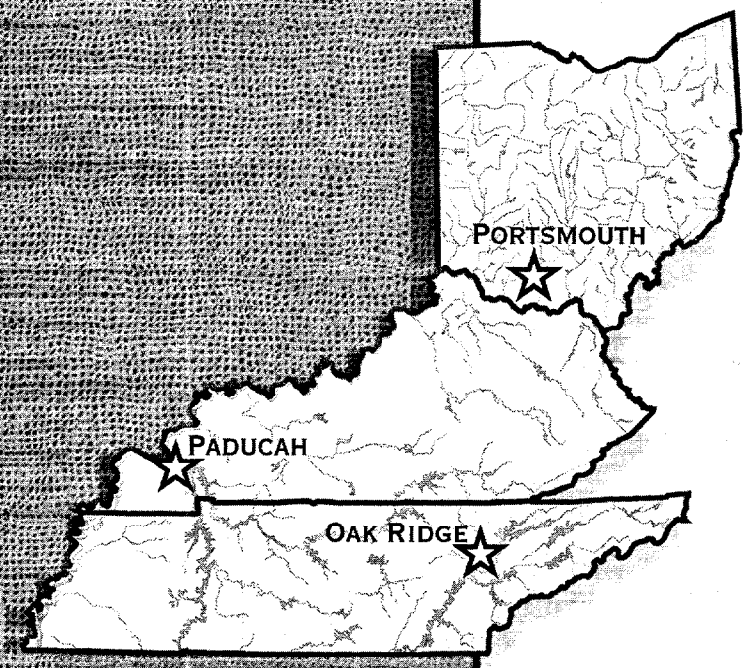
cc w/o enclosure:
N. L. Carnes, CC-10
S. J. Davis, BJC/Kevil
DMC/Kevil
G. L. Dover, BJC/Kevil
C. A. Hudson, CJE/Kevil
R. G. Kuehn, BJC/Kevil
G. L. Shaia, BJC/Kevil

BECHTEL JACOBS
Bechtel Jacobs Company LLC

BJC/PAD-517

ENVIRONMENTAL MANAGEMENT
& ENRICHMENT FACILITIES
MANAGEMENT AND INTEGRATION CONTRACT

THE SITE TREATMENT PLAN ANNUAL UPDATE FOR THE UNITED STATES DEPARTMENT OF ENERGY PADUCAH GASEOUS DIFFUSION PLANT PADUCAH, KENTUCKY



MANAGED BY
BECHTEL JACOBS COMPANY LLC
FOR THE UNITED STATES
DEPARTMENT OF ENERGY

BJC-4 (8-98)

This document is approved for public release per review by:
C. J. Winkler 3-24-03
PGDP Classification & Information Office Date

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BJC/PAD-517

THE SITE TREATMENT PLAN ANNUAL UPDATE FOR THE UNITED STATES DEPARTMENT OF ENERGY PADUCAH GASEOUS DIFFUSION PLANT PADUCAH, KENTUCKY

Date Issued — March 2003

Prepared by
WESKEM, LLC
Under subcontract 23900-BA-RM005F

Prepared for the
U.S. Department of Energy
Office of Environmental Management

BECHTEL JACOBS COMPANY LLC
managing the
Environmental Management Activities at the
East Tennessee Technology Park
Oak Ridge Y-12 Plant Oak Ridge National Laboratory
Paducah Gaseous Diffusion Plant Portsmouth Gaseous Diffusion Plant
Under contract DE-AC05-98OR22700
for the
U.S. DEPARTMENT OF ENERGY

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WESKEM, LLC

contributed to the preparation of this document and should not be considered an eligible contractor for its review.

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ACRONYMS

ATG	Allied Technologies Group
BOA	Basic Ordering Agreements
CFR	Code of Federal Regulations
CY	Calendar Year
DOE	U.S. Department of Energy
DMSA	Department of Energy Material Storage Areas
EPA	Environmental Protection Agency
FFC Act	Federal Facility Compliance Act
FY	Fiscal Year
INEEL	Idaho National Engineering and Environmental Laboratory
KAR	Kentucky Administrative Regulations
KDEP	Kentucky Department for Environmental Protection
KPDES	Kentucky Pollutant Discharge Elimination System
KDWM	Kentucky Division of Waste Management
Kg	Kilogram
LDR	Land Disposal Restrictions
MLLW	Mixed Low-Level Waste
MTRU	Mixed Transuranic Waste
NTS	Nevada Test Site
ORR	Oak Ridge Reservation
PCB	Polychlorinated Biphenyls
PGDP	Paducah Gaseous Diffusion Plant
RCRA	Resource Conservation and Recovery Act
SAP	Sampling and Analysis Plan
STP	Site Treatment Plan
TCA	Trichlorethane
TCE	Trichloroethylene
TDEC	Tennessee Department of Environmental Conservation
TRU	Transuranic Waste
TSCA	Toxic Substances Control Act
USEC	United States Enrichment Corporation
WAC	Waste Acceptance Criteria
WCS	Waste Control Specialist
WERF	Waste Experimental Reduction Facility
WIPP	Waste Isolation Pilot Plant

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EXECUTIVE SUMMARY

The Department of Energy (DOE) is required by Section 3021(b) of the Resource Conservation and Recovery Act (RCRA), and the Federal Facility Compliance Act (FFC Act), to prepare Site Treatment Plans (STPs) describing the development of treatment capacities and technologies for treating mixed waste, defined by the FFC Act as waste containing both a hazardous waste subject to RCRA and a source, special nuclear or by-product material, subject to the Atomic Energy Act of 1954. On April 3, 1995, DOE/Paducah Gaseous Diffusion Plant (PGDP) submitted a proposed STP to the Kentucky Natural Resources and Environmental Protection Cabinet (hereinafter "the Cabinet"). Following review by both the Cabinet and other stakeholders, the Cabinet modified the proposed STP and approved the modified version on October 5, 1995. On October 5, 1995, the Cabinet also issued an order to DOE, which required DOE to comply with the approved STP. On November 2, 1995, DOE filed a petition for hearing, which challenged portions of the STP and the Order. The Cabinet amended the contested sections and the Agreed Order was signed by both the Cabinet and DOE. This Agreed Order became effective September 10, 1997. This annual update is a requirement of the STP and the Agreed Order.

During the reporting period from January 1, 2002, to December 31, 2002, DOE/PGDP continued characterization of waste to support STP compliance dates, evaluation of wastestreams, shipment of liquid waste to the Toxic Substances Control Act (TSCA) Incinerator, and pursuit of additional treatment options. The amount of mixed waste stored on-site and shown in the STP during Calendar Year (CY) 2002 were reduced by the following activities:

1. Between February and September DOE/PGDP treated and discharged approximately 90,000 gallons of mixed wastewater (PA-C011) that was initially contaminated with cadmium, polychlorinated biphenyls (PCBs) and radioactive components.

2. All 24 containers of waste photographic fixers (PA-W036) and developers (PA-B049) previously shown on Table 5 were shipped to Perma-Fix/Materials and Energy Corporation (M&EC) for treatment on April 30, 2002, in compliance with the STP and extension granted by the Cabinet.

3. On August 28, 2002, DOE/PGDP shipped a tanker of liquid waste, TSCA 01-01, to the TSCA Incinerator that contained approximately 2800 gallons of waste previously shown on Table 2 of the STP. DOE/PGDP shipped a second tanker of liquid waste, TSCAL 02-01, to the TSCA Incinerator on September 27, 2002, that contained approximately 2300 gallons of waste also previously shown on Table 2.

4. On November 24, 2002, DOE/PGDP shipped a load of 57 containers of acids and bases to Perma-Fix of Florida, Inc., for elementary neutralization and two containers to Perma-Fix/M&EC for thermal treatment.

5. A total of 200 containers of newly generated mixed wastes comprised of soil (PA-G038) and debris (PA-J038) from the Six-Phase Soil Heating Project was shipped to Perma-Fix/M&EC on November 26, 2002, for thermal desorption.

Also in 2002, DOE/PGDP undertook a reassessment of the RCRA classification of trichloroethylene (TCE) and other materials formerly used at the facility. The results of this reassessment have led to additional newly identified mixed waste and an on-going effort to determine which of those wastestreams should fall under the STP.

In the 2001 Annual Report, DOE/PGDP proposed an update to the original STP that reflected current wastestreams, volumes and treatment options. DOE/PGDP is continuing to operate under the existing STP until the revision has been approved.

1. INTRODUCTION

The Paducah Gaseous Diffusion Plant (PGDP) operated by the United States Department of Energy (DOE) and is located in western Kentucky in McCracken County. The principal site process is the separation of uranium isotopes through gaseous diffusion. In October 1992, congressional passage of the Energy Policy Act of 1992 established the United States Enrichment Corporation (USEC). In accordance with the Energy Policy Act, USEC leases and operates the uranium enrichment facility at PGDP. The primary mission of DOE is environmental restoration and waste management.

DOE is required by Section 3021(b) of the Resource Conservation and Recovery Act (RCRA), and the Federal Facility Compliance Act (FFC Act), to prepare Site Treatment Plans (STPs) describing the development of treatment capacities and technologies for treating mixed waste, defined by the FFC Act as waste containing both a hazardous waste subject to RCRA and a source, special nuclear or by-product material, subject to the Atomic Energy Act of 1954. On April 3, 1995, DOE/PGDP submitted a proposed STP to the Kentucky Natural Resources and Environmental Protection Cabinet (hereinafter "the Cabinet"). Following review by both the Cabinet and other stakeholders, the Cabinet modified the proposed STP and approved the modified version on October 5, 1995. On October 5, 1995, the Cabinet also issued an order to DOE, which required DOE to comply with the approved STP. On November 2, 1995, DOE filed a petition for hearing, which challenged portions of the STP and the Order. The Cabinet amended the contested sections and an Agreed Order was signed by both the Cabinet and DOE. This Agreed Order became effective September 10, 1997. This annual update is a requirement of the STP and the Agreed Order.

The purpose of the Annual Report is to update the STP to include all amendments and revisions made during the following year, to update the tables of DOE/PGDP MLLW, to propose new amendments and revisions and to summary the work conducted in implementing the approved STP during the previous year.

DOE/PGDP currently stores approximately 642 cubic meters of mixed waste as listed in Table 1 in Appendix A of this STP annual update. The following are the treatment options for DOE/PGDP's wastestreams (all volumes are considered estimates based on the currently available information):

- 35 cubic meters of liquids containing polychlorinated biphenyls (PCBs) targeted for treatment at the Toxic Substances Control Act (TSCA) Incinerator in Oak Ridge, Tennessee;
- 80 cubic meters of solids containing PCBs targeted for treatment at the TSCA Incinerator in Oak Ridge, Tennessee;
- 150 cubic meters of solids (non-PCB) targeted for treatment at the TSCA Incinerator in Oak Ridge, Tennessee;
- 165 cubic meters of solid, sludge, and liquid waste targeted for commercial stabilization;
- 29 cubic meters of debris waste targeted for commercial macro encapsulation;
- 5 cubic meters of mixed transuranic (MTRU) waste targeted for disposal at the Waste Isolation Pilot Plant (WIPP); and

- 180 cubic meters of waste targeted for further characterization to determine a proper treatment method-almost half of which is newly generated soil and debris resulting from remediation activities pertaining to groundwater.

In addition to the above, over 3000 cubic meters of newly identified hazardous waste is being evaluated. This includes soil, debris and wastewater that was generated as the result of past environmental restoration projects and had been considered non-hazardous low-level waste until recently. DOE/PGDP is in the process of reviewing each source and making determinations as to its potential to be a RCRA regulated waste (see Section 4.1).

The PGDP was considering vitrification as an option for treatment of some DOE/PGDP waste. This is no longer feasible and vitrification potential wastestreams are no longer listed in Table 11. DOE made a decision to discontinue pursuing the vitrification project due to the availability of other treatment options. The vitrification potential wastes have a primary treatment option and are listed in Table 3 through Table 10 in Appendix A of this STP update.

The STP Annual Report is included in Appendix B of this STP update. This STP Annual Report describes the actions that DOE has taken during the previous year to implement the requirements of the approved STP and the Agreed Order.

2. MIXED LOW-LEVEL WASTE

The compliance dates for the mixed low-level waste (MLLW) streams generated and stored by DOE/PGDP are specified in Tables 2 through 12 in Appendix A of the STP. Compliance dates are those dates by which DOE shall complete the activities identified in the approved STP. All MLLW streams generated by DOE/PGDP are considered to be contact handled. Table 1 in Appendix A of this STP update lists DOE/PGDP MLLW streams and gives weight and volume information available as of December 31, 2002.

Treatment of MLLW streams will be implemented in accordance with the standards specified in 401 KAR Chapter 37 and 268 Subpart D of Section 40 CFR. Two categories of treatment standards for Land Disposal Restriction (LDR) wastes are specified in Subpart D, the technology-based treatment standards, and the concentration-based treatment standards. LDR "Treatment Standards for Hazardous Waste" are currently listed in 401 KAR 37:040 Section 1 and 40 CFR 268.40. The majority of MLLW is required to meet the concentration-based treatment standards.

All MLLW at DOE/PGDP have been ranked according to risks associated with storage of each waste wastestream. Factors affecting wastestream ranking included:

- risk to public safety and health;
- risk to site personnel safety and health;
- risk to the environment;
- risk for STP and other regulatory non-compliance; and
- mortgage reduction to DOE/PGDP upon disposition of the waste wastestream.

Forty-two waste populations composed of one or more of the MLLW streams in storage were ranked. DOE/PGDP shall focus on waste with the higher risk rankings as treatment and disposal becomes available for these wastestreams.

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3. MIXED LOW-LEVEL WASTESTREAMS FOR WHICH TECHNOLOGY EXISTS

This section identifies schedules for treatment of mixed wastes where treatment technology exists.

3.1 TSCA INCINERATOR

DOE/PGDP is currently using the TSCA Incinerator in Oak Ridge, Tennessee for treatment of liquid and soft solid mixed waste with or without PCBs. On October 23, 1997, DOE/PGDP completed its last shipment of legacy wastes that met the Waste Acceptance Criteria (WAC) for the TSCA Incinerator. Liquids that did not meet the WAC of the TSCA Incinerator were either moved to other tables within the STP with more appropriate treatment options or combined into other wastestreams with more appropriate treatment options. DOE/PGDP waste currently listed in Table 2 is newly generated liquid waste in calendar year 2002 (CY02). This table identifies the individual wastestreams and includes information about quantities and hazardous waste codes.

Pre-approval waste acceptance forms were submitted to DOE-Oak Ridge (DOE/OR) for DOE/PGDP liquid wastestreams targeted for treatment at the TSCA Incinerator. In response to these forms, DOE Oak Ridge Reservation (DOE/ORR) accepted this liquid waste and DOE/PGDP made one shipment in August 2002 to the TSCA Incinerator. This shipment consisted of 2800 gallons as manifested, excluding weight and volume of the empty containers. A second shipment (TSCA-02-01) was made in September 2002, which contained 2300 gallons as manifested.

DOE/PGDP currently has two loads of liquid waste (TSCAL 03-01 and TSCAL 03-02) scheduled on the TSCA Incinerator Burn Plan for FY03.

Since the Idaho National Engineering and Environmental Laboratory/Waste Experimental Reduction Facility (INEEL/WERF) Incinerator is no longer an available treatment option for the PGDP, the soft solids are currently slated for treatment at the TSCA Incinerator and Perma-Fix. Tables 3.1 and 3.2 in Appendix A of this STP identifies the individual wastestreams and includes information about quantities and hazardous waste codes.

A preliminary application for approximately 600 containers of soft solids has been submitted to the TSCA Incinerator. DOE/PGDP anticipates shipping six loads of soft solids to the TSCA Incinerator during FY03. Profiles for Perma-Fix are currently being prepared; this waste is scheduled to ship in FY04.

3.1.1 Compliance Dates for Organic Containing Liquids

If additional organic containing liquid wastestreams are generated or identified through characterization and this waste meets the WAC of the TSCA Incinerator, these wastestreams shall be scheduled for shipment to the TSCA Incinerator within one calendar year. As of December 31, 2002, 112 pounds (247 kilograms (kg)) has exceeded the one-year compliance date for newly generated waste. This waste is slated for shipment to the TSCA Incinerator in FY03 pending approval from Tennessee Department of Environment and Conservation (TDEC).

3.1.2 Compliance Dates for Solids

The solids listed in Table 3.1 and Table 3.2 shall be shipped to the TSCA Incinerator and Perma-Fix by January 31, 2004. The Cabinet shall be notified of any waste that does not meet the WAC for these facilities. Within ten days of the last shipment of the wastes listed in Table 3.1 and Table 3.2, DOE/PGDP shall send written documentation to the Cabinet that the activities required by the compliance date have been completed.

3.1.3 Treatment Residues

The TDEC has agreed that all treatment residues from DOE/PGDP liquid and soft solid wastestreams can remain in storage at the ORR pending shipment to the Envirocare of Utah, Inc., mixed waste disposal facility. However, the TDEC agreement is contingent upon the treatment residues from the TSCA Incinerator being shipped to Envirocare within a fixed period of time. If DOE or PGDP fails to ship the treatment residues to Envirocare within this time frame, it may be necessary for the treatment residues from DOE/PGDP wastestreams to be shipped back to DOE/PGDP for storage pending final disposal. DOE/PGDP submitted the Residues Management Contingency Plan to the Cabinet for review December 31, 1995, and the Cabinet granted approval for liquid shipments on April 10, 1996. DOE/PGDP will develop a residuals management plan for soft solids and request approval from the Cabinet prior to any solid shipments to the TSCA Incinerator. A draft Residues Management Contingency Plan for soft solids has been submitted to the operator of the TSCA Incinerator for tentative approval. Once the plan has been finalized it will be submitted to the Cabinet for approval.

3.2 C-400-D LIME PRECIPITATION UNIT

In December 1997, DOE/PGDP completed its treatment and/or treatability study of waste listed in Table 4 "Waste Targeted for C-400-D On-Site Treatment." Wastes that were not approved for treatment were moved to other tables within the STP with more appropriate treatment options, combined into other wastestreams with more appropriate treatment options, shipped for treatment at the TSCA Incinerator, or utilized in stabilization treatability studies. No wastestreams are currently being shown in Table 4.

3.2.1 Compliance Dates

This treatment unit was removed from the DOE/PGDP RCRA permit and is no longer a viable option for treating DOE/PGDP waste.

3.3 COMMERCIAL TREATMENT OF WASTE

Initially, Table 5 was dedicated to those wastestreams that could be commercially recycled. DOE/PGDP recycled all the wastestreams on this table that were recyclable. The spent carbon from the water treatment filters (PA-J049) were characterized and approved for "no rad added." These filters were shipped to Envirotrol in May 2000. This wastestream is no longer managed as mixed waste. It is handled as hazardous waste and recycling/reuse activities are contracted by CDM Federal Programs Corporation. Table 5 in Appendix A of this STP update lists DOE/PGDP wastestreams targeted for commercial treatment at commercial facilities. The remaining wastestreams in this table were shipped for treatment and disposal on April 30, 2002. No wastestreams are currently being shown in Table 5.

3.3.1 Compliance Dates

For PA-W036 (photographic fixer solutions) and PA-B049 (photographic developer solutions), DOE/PGDP utilized the Broad Spectrum contracts awarded in June 1998 to commercial vendors for the treatment of mixed waste from DOE sites. DOE/PGDP was to have shipped this wastestream to Allied Technologies Group (ATG) by January 31, 2002. However, in November 2001, ATG shut down all of its operations due to financial problems. As a result, at the present time, this facility is not a viable candidate for treating waste. A request to include these wastestreams on Table7.2 with the acids and bases resulted in the Cabinet granting DOE/PGDP until May 1, 2002, for shipment of these wastestreams for treatment. The photographic fixers and developer were shipped to Perma-Fix/M&EC for treatment and disposal on April 30, 2002. DOE/PGDP submitted written documentation to the Cabinet within ten days that the waste had been shipped by the compliance date as required.

3.4 CYANIDE TREATMENT FACILITY AT OAK RIDGE RESERVATION

Table 6 in Appendix A of this STP update previously listed DOE/PGDP wastestreams which were scheduled for treatment at the Y-12 Cyanide Treatment located at ORR. Treatability studies were performed by OHM Remediation Services Corporation, Findlay, Ohio, for the containers of cyanide-containing wastes from Table 6 wastestreams. All containers were shipped to OHM Remediation Services Corporation on November 6, 1997. The treated wastes were returned to DOE/PGDP and remain on site in storage as non-RCRA, low-level waste. The last drum on this Table, wastestream PA-I048 (sodium azide) was sent to IT Corporation in Knoxville, Tennessee on July 12, 1999, for a treatability study. It was also returned to DOE/PGDP after being treated to meet LDRs standards. No wastestreams are currently being shown in Table 6.

3.4.1 Compliance Dates

DOE/PGDP shall take no further compliance action since Table 6 wastestreams have been depleted and no further generation is expected. Should additional DOE/PGDP cyanide wastes be generated, these shall be treated utilizing treatment formulas and processes developed during previous cyanide waste treatability studies, upon approval of the Cabinet. Treatment may be deferred until such time as sufficient quantities are collected for treatment and appropriate permits for treatment are in place.

3.5 COMMERCIAL STABILIZATION

Tables 7.1 and 7.2 in Appendix A of this STP update the list of DOE/PGDP wastestreams scheduled for treatment at a commercial stabilization facility. Table 7.2 represents wastestreams newly identified in the previous STP update as candidates for neutralization or stabilization treatment at a commercial stabilization facility. Tables 7.1 and 7.2 identify the individual wastestreams and include information about quantities and hazardous waste codes. In November 2002, DOE/PGDP shipped a total of 57 drums of non-PCB acids and bases previously identified in Tables 7.1 and 7.2 to Perma-Fix for treatment. As a result, those tables were reduced by 9183 pounds (4174 kg) of acids and bases in the 2002 Annual Report.

Table 7.3 in Appendix A of this STP update lists DOE/PGDP wastestreams scheduled for macroencapsulation treatment at a commercial stabilization facility. This table identifies the individual wastestreams and includes information about quantities and hazardous waste codes.

3.5.1 Compliance Dates

DOE/PGDP is utilizing the Broad Spectrum contracts awarded in June 1998 to commercial vendors for the treatment of mixed waste from DOE sites. DOE/PGDP shall ship all the wastestreams listed in Table 7.1 and Table 7.3 to commercial stabilization facilities by January 31, 2008. Within ten days of each compliance date, DOE/PGDP shall send written documentation to the Cabinet that the activities required by the compliance date have been completed.

For the wastestreams listed in Table 7.2, DOE/PGDP is also utilizing the Broad Spectrum contracts, and if appropriate, DOE/PGDP may employ on-site waste stabilization to treat the Table 7.2 acid and bases wastestreams. DOE/PGDP shall ship to commercial stabilization facilities or otherwise treat all the wastestreams listed in Table 7.2 by January 31, 2008. Within ten days of each compliance date, DOE/PGDP shall send written documentation to the Cabinet that the activities required by the compliance date have been completed.

3.6 ASH RECEIVERS ASH RESIDUE

As reported in the March 2000 Annual Report, four containers (approximately 10.87 cubic meters) of ash receiver ash residue material listed in Table 9 of Appendix A, sent to Envirocare for treatment and disposal failed the treatment standard for the underlying hazardous constituent (nickel). The four containers were returned to the PGDP.

3.6.1 Compliance Dates

DOE/PGDP was originally scheduled to ship the returned ash receiver ash residue to a commercial treatment facility in FY02. The project was delayed pending negotiation of a contract for treatment of the waste. The previous contract under which the ash residue had originally been shipped expired during CY 2002. A new treatability study and profile were also required. Current plans are to ship the waste to Envirocare during the third quarter of FY03. Within ten days after the shipment of this waste, DOE/PGDP shall send written documentation to the Cabinet that these activities have been completed.

4. MIXED LOW-LEVEL WASTESTREAMS REQUIRING FURTHER CHARACTERIZATION/SORTING

Table 8 in Appendix A of this STP updates the lists of DOE/PGDP wastes requiring further characterization to determine the proper treatment method. This table identifies the individual wastestreams and includes information about quantity and hazardous waste codes. Depending upon the results of the characterization efforts, four likely scenarios are foreseeable:

(1) the wastestream will meet LDR treatment standards and require no further treatment, and DOE/PGDP will ship the waste to an approved disposal facility;

(2) the wastestream will be characterized as mixed waste and incorporated into a treatment group of the STP;

(3) the wastestream may be characterized as other than mixed waste, and DOE/PGDP shall comply with the procedures outlined in paragraph 28 of the Agreed Order, for handling wastes that have been determined to be hazardous only; or

(4) the regulatory agency could make a determination pursuant to Environmental Protective Agency (EPAs) contained in policy that environmental media and debris that meet treatment standards or an alternative treatment standard are considered to no longer contain hazardous waste and, thus, would no longer be considered a hazardous waste.

4.1 COMPLIANCE DATES FOR TABLE 8 WASTESTREAMS NEEDING FURTHER CHARACTERIZATION

In CY 2002, DOE/PGDP undertook a reassessment of the RCRA classification of environmental media and debris contaminated with trichloroethylene (TCE) and trichloroethane (TCA) from former degreasing operations at PGDP. As a result of that reassessment, DOE/PGDP determined that TCE/TCA contamination in the groundwater and in the soil at many locations on-site may be classified as RCRA listed hazardous. On January 24, 2003, DOE notified the Cabinet that of approximately 33,000 containers of waste currently being managed as LLW and/or TSCA waste at the facility, "an unknown, but potentially significant portion" may contain listed hazardous waste. DOE has completed an initial process knowledge review of the 33,000 containers of waste. Based on this review thus far, approximately 12,000 containers are suspected to contain listed hazardous waste. For mixed waste with inadequate characterization, the STP requires DOE to propose and implement a characterization plan. The containers are being added to Table 8 for further characterization.

4.1.1 Compliance Dates

DOE/PGDP shall complete characterization of the wastestreams in Table 8 by January 31, 2006. DOE/PGDP shall submit a treatment plan with proposed schedules for the wastestreams by July 1, 2006, in accordance with the revision and amendment provisions of the Agreed Order. Within ten days of achieving compliance, DOE/PGDP shall send written documentation to the Cabinet that the activities required by the compliance date have been completed.

4.2 SURFACE RADIOLOGICAL CHARACTERIZATION

Table 10 in Appendix A of this STP update previously listed DOE/PGDP wastestreams scheduled for surface radiological characterization. DOE/PGDP completed surface radiological characterization of the Table 10 wastestreams prior to the July 31, 2001, compliance date. The batteries (PA-A004, PA-B004, PA-C004 and PA-D004), gas cylinders (PA-Q001), mercury rectifier tubes (PA-D033) and capacitors (PA-C052) either remained classified as mixed waste or were determined to be hazardous only. Those wastes that were determined to be hazardous only were shipped off-site for recycling/treatment/disposal July 2002. The remaining mixed wastes were added to other tables in accordance with their appropriate treatment/disposal technologies, provided that one is available.

4.2.1 Compliance Dates

All wastestreams in Table 10 had surface radiological characterization completed by the compliance date of July 31, 2001. For those wastes determined to be mixed wastes, DOE/PGDP submitted a treatment plan with proposed schedules by January 31, 2002, in accordance with the revision and amendment provisions of the Agreed Order. For those wastes that DOE/PGDP determined were not mixed wastes, DOE/PGDP is following the procedures outlined in paragraph four of Section V of the Agreed Order. The batteries, compressed gas cylinders, rectifiers and non-PCB capacitors determined to be hazardous only were shipped for recycling, treatment and/or disposal prior to the one-year storage date of July 31, 2002. DOE/PGDP submitted written documentation to the Cabinet within ten days of achieving compliance as required by the STP.

5. VITRIFICATION POTENTIALS

Wastestreams that were listed in Table 11 have primary treatment options listed in Tables 3 through 10 of Appendix A in this STP update. These wastestreams were previously listed as potential candidates for vitrification. The vitrification treatment option is not considered feasible at this time. DOE made a decision to discontinue pursuing the vitrification project because of pending lawsuits and the availability of other treatment options.

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6. MIXED TRANSURANIC WASTE

DOE's national strategy to achieve compliance with the requirements of the FFC Act for MTRU waste is to ship the MTRU waste to the WIPP in New Mexico under the no-migration variance petition approach described in 40 CFR 268.6. Under this strategy, DOE/PGDP intends to continue interim storage of MTRU waste, continue preparation of such wastes for shipment to WIPP, and then ship and dispose of such wastes at WIPP. DOE/PGDP shall continue to identify, develop, and evaluate treatment technologies for MTRU waste consistent with the requirements of the FFC Act and this STP.

Table 12 in Appendix A of this STP lists DOE/PGDP MTRU wastestreams proposed for shipment to WIPP. This table identifies information about quantity and hazardous waste codes.

6.1 COMPLIANCE DATES

DOE/PGDP shall complete characterization, processing, and packaging and shipment of the wastestreams listed in Table 12 to meet the WAC for WIPP by January 31, 2016. Within ten days of the compliance date, DOE shall send written documentation to the Cabinet that the activities required by the compliance date have been completed.

If DOE's national efforts to identify, develop, and evaluate treatment technologies for MTRU waste result in a treatment technology for the wastestreams in Table 12 prior to the compliance date for shipment to WIPP, DOE/PGDP shall notify the Cabinet and submit a treatment plan with proposed schedules for treatment of the wastestreams in Table 12 within six months of the notification, in accordance with the revision and amendment provisions of the Agreed Order. Within ten days of each compliance date, DOE shall send written documentation to the Cabinet that the activities required by the compliance date have been completed.

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7. IMPLEMENTATION OF THE SITE TREATMENT PLAN

7.1 GENERATED WASTE

In Table 13 of Appendix A of this annual update to the STP, DOE/PGDP proposes to include additional MLLW streams generated during CY02 in the STP as a revision to the STP. These wastes are included in the inventory in Table 1 and are included in the appropriate treatment option in Tables 2 through 12.

Over the next five years, an estimate of the amount of MLLW to be generated has been prepared. The estimate per year is as follows:

- FY03: 180 cubic meters
- FY04: 150 cubic meters
- FY05: 150 cubic meters
- FY06: 150 cubic meters
- FY07: 150 cubic meters

7.2 DELETED WASTE

In Table 14 of Appendix A of this annual update, DOE/PGDP proposes to delete the mixed wastes characterized as low-level waste or treated during CY02. These waste deletions have been removed from the totals of the inventory for Table 1 and have been removed from the treatment option Tables 2 through 12. Any mixed waste, both generated and treated within the CY02, is not included in this annual update. Reasons for the proposed deletions are noted in Table 14.

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APPENDIX A

TABLES

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Table 1. The DOE/PGDP MLLW streams, weights, and volumes

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Table
PA-A001	MISC. FLAMMABLE MATERIALS- Aqueous	22.7	0.04	L	D001 D018	2
PA-D001	MISC. FLAMMABLE MATERIALS-Fuels	54.4	0.23	L	D001 D018	2
PA-G001	MISC. FLAMMABLE MATERIALS-Paints	3980.4	7.83	SL	D001 D007 D008 D009 F001 F003 U075 U080	3.1, 3.2
PA-H001	MISC. FLAMMABLE MATERIALS-Diesel Sludge	840.0	0.42	SL	D001 D008	3.2
PA-I001	MISC. FLAMMABLE MATERIALS - Adhesives Solid	910.8	2.83	SL	D001 D002 D035 U122	3.1, 3.2
PA-J001	MISC. FLAMMABLE MATERIALS - Metal Debris	118.4	0.42	S	D001	7.2
PA-K001	MISC. FLAMMABLE MATERIALS-Paper/Cloth Debris	89.8	0.21	S	D001	3.2
PA-L001	MISC. FLAMMABLE MATERIALS-Hetero Debris	564.3	1.07	S	D001 D038 D040	3.1, 3.2
PA-M001	MISC. FLAMMABLE MATERIALS-Oxidizer	331.6	0.76	S	D001 D002 D006 D007	7.2
PA-O001	MISC. FLAMMABLE MATERIALS - Waste Samples	44.9	0.21	L	D001 D004 D006 D007 F001 F002 F003 F005	2
PA-Q001	MISC. FLAMMABLE MATERIALS-Compressed Gas	15.0	0.01	S	D001 D003	8
PA-W003	WASTE MINERAL SPIRITS-Paint Wastes	2141.9	3.08	SL	D001 D005 D007 D008 D009	3.2
PA-A004	DISCARDED BATTERIES-Lead	4847.2	5.35	S	D002 D004 D006 D008	7.3
PA-B004	DISCARDED BATTERIES-Cadmium	313.0	0.65	S	D002 D006 D008	7.3
PA-C004	DISCARDED BATTERIES-Mercury	315.3	0.65	S	D002 D004 D006 D008 D009 D011 F001 F003 F007	8
PA-A006	MISC. ACIDS AND BASES-Acidic	6207.1	8.63	SL	D002 D004 D005 D006 D007 D008 D009 D010 D011 D018 D027 D030 D032 D035 D039 F001 F002 F003 F005 F007 F039 U002 U075 U080 U159 U211 U226 U227 U228	7.2, 8
PA-B006	MISC. ACIDS AND BASES-Basic	1156.7	1.48	SL	D002 D006 D007 D009 D010 D011 D018 D040 F001	7.2
PA-C006	MISC. ACIDS AND BASES-Other Waste Waters	226.8	0.44	SL	D002 D004 D006 D007 D008 D009 F001 F003	7.2
PA-D006	MISC. ACIDS AND BASES-Aqueous Org Liquid	7.7	0.02	SL	F001 D002	8
PA-J006	MISC. ACIDS AND BASES-Unknown	11.8	0.06	SL	D002	7.2

Table 1. The DOE/PGDP MLLW wastestreams, weights, and volumes (continued)

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Table
PA-K006	MISC. ACIDS AND BASES-Aqueous Labpacks	274.9	0.86	L	D002 D006 D007 D008 F001 F002 F003 F005 F007	8
PA-M006	MISC. ACIDS AND BASES-Solid Labpacks	120.2	0.42	SL	D001 D002 D008 F003	8
PA-C011	MISC. AQUEOUS SOLUTION CONTAIN/TOX METALS- Other Wastewaters	1065.5	1.56	L	D004 D006 D007 D008 F007	7.2
PA-A013	NICKEL STRIPPER SOLID RESIDUE-Sludge	2123.3	3.44	SL	D002 D040	3.2
PA-W014	TRANSURANIC WASTE LIQUID	2723.4	3.04	SL	D002 D008	12
PA-A015	TRANSURANIC AND TECHNETIUM WASTE	1714.6	2.35	S	D007	12
PA-D015	TECHNETIUM WASTE-Solid/Sludge	1258.7	1.26	SL	D004 D007 D009	7.1
PA-C018	MISC. REACTIVE MATERIALS- Solid Labpack	0.9	0.08	S	D003	8
PA-C019	MISC. ARSENIC-BEARING WASTE-Organic Debris	5.0	0.02	S	D004	3.2
PA-A020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Sandblasting Media	4576.4	4.30	S	F001 D006 D007 D008	7.1
PA-B020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Absorbed Org Liquids	1045.5	1.71	S	D006 D030 D032	3.1, 3.2
PA-C020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Inorganic Sludges	5770.2	8.59	SL	D001 D004 D006 D007 D008 D009 D010 D018 D040	7.1
PA-D020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Inorg Homog Solids	66,279.1	93.12	SL	D002 D004 D006 D007 D008 D009	7.1
PA-E020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Metal Debris	5587.4	15.50	S	D006 D007 D008 D009 D011	7.2, 7.3
PA-F020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Light Bulbs	235.4	1.58	S	D006 D008 D009	7.3
PA-G020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Plastic Debris	3514.5	13.63	S	D006 D007 D008 D040	3.1, 3.2
PA-H020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Paper/Cloth Debris	5972.1	24.61	S	D005 D006 D007 D008 D011 F001	3.1, 3.2, 8, 7.3
PA-I020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Organic Debris	1723.9	3.63	S	D002 D006 D007 D008 D011 D018 D040	3.1, 3.2

Table 1. The DOE/PGDP MLLW wastestreams, weights, and volumes (continued)

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Table
PA-J020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Organic Debris	2743.4	6.41	S	D004 D005 D006 D007 D008 D009 D011	7.2, 8
PA-W023	GOLD DISSOLVER SLUDGE	2.7	0.02	S	D006 D008	7.1
PA-A024	MISC. CHROMATE-BEARING WASTE-Inorg Particulates	467.7	0.70	S	D002 D007 F001 F002 F003 F007	3.2, 8
PA-B024	MISC. CHROMATE-BEARING WASTE-Solids	10,266.3	17.24	S	D004 D007 D009 F001	3.1, 7.2, 8, 9
PA-D024	MISC. CHROMATE-BEARING WASTE-Paper/Cloth Debris	4.5	0.02	S	F001	3.1
PA-G024	MISC. CHROMATE-BEARING WASTE-Labpacks	1038.3	1.29	S	D007 D008 D040	8
PA-W025	MAGNESIUM FLUORIDE PELLETS	3180.6	5.22	S	D004 D007	7.1
PA-W028	CASCADE VACUUM DUST	675.4	0.80	S	D004 D006 D007 D008 D010	7.1
PA-C030	MISC. LEAD-BEARING WASTE- Soil	10.4	0.02	S	D006 D008	7.1
PA-D030	MISC. LEAD-BEARING WASTE- Metal Debris	589.2	0.86	S	D008	7.3
PA-F030	MISC. LEAD-BEARING WASTE- Organic Debris	362.0	0.86	S	D008	3.2
PA-G030	MISC. LEAD-BEARING WASTE-Filters	45.4	0.21	S	D008	7.3
PA-H030	MISC. LEAD-BEARING WASTE-Hetero Debris	11.3	0.08	S	D008	7.3
PA-I030	MISC. LEAD-BEARING WASTE- Lab Waste Samples	1194.8	1.94	S	D004 D006 D007 D008 D009 D011 D040 F001	3.1, 8
PA-K030	MISC. LEAD-BEARING WASTE- Lead Metal	200.9	0.63	S	D008	7.3
PA-L030	MISC. LEAD-BEARING WASTE-Inorganic Chemicals	37.2	0.21	S	D008	7.2
PA-W031	HOT WATER RINSE TANK-Sludge	5864.1	7.14	SL	D006 D008 D040	7.1
PA-A033	MISC. MERCURY-BEARING WASTE -Inorg Particulates	32.2	0.21	S	D009	8
PA-C033	MISC. MERCURY-BEARING WASTES-Metal Debris	219.5	0.86	S	D009	8
PA-D033	MISC. MERCURY-BEARING WASTES-Fluor Light bulbs	1789.5	3.42	SL	D002 D008 D009	8
PA-F033	MISC. MERCURY-BEARING WASTES-Organic Debris	118.4	0.44	S	D009	3.2
PA-G033	MISC. MERCURY-BEARING WASTES-Hetero Debris	502.6	2.32	SL	D009 D011	7.3

Table 1. The DOE/PGDP MLLW wastestreams, weights, and volumes (continued)

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Table
PA-H033	MISC. MERCURY-BEARING WASTES-Labpacks	268.5	0.48	SL	D009	8
PA-I033	MISC. MERCURY-BEARING WASTES-Labpacks	258.6	0.80	SL	D009 U151	8
PA-A038	SPENT SOLVENT SOLIDS - Aqueous Organic Liquids NonHOC	4019.8	11.54	L	D007 F001 F003 U228	2, 8
PA-B038	SPENT SOLVENT SOLIDS-Absorbed Org Liquids	1043.7	3.19	S	F001 F002 F003 F005 U075 U080 U228	3.1, 3.2
PA-C038	SPENT SOLVENT SOLIDS-Inorganic Sludges	472.7	1.06	S	F001	3.1, 3.2
PA-E038	SPENT SOLVENT SOLIDS-HOC Organic Sludge	9170.9	10.34	SL	D006 D008 D011 D018 D019 D022 D028 D029 D039 D040 F001 F002	3.1, 3.2
PA-F038	SPENT SOLVENT SOLIDS-Org Homog Solids	777.9	0.80	S	D001 D008 D040 F002	3.1, 3.2
PA-G038	SPENT SOLVENT SOLIDS-Soils	101,688.0	77.57	S	D040 F001 F002 U228	3.2, 8
PA-H038	SPENT SOLVENT SOLIDS-Metal Debris	8450.6	19.87	S	F001 F002 F003 F005 U002 U075 U080 U211	8
PA-I038	SPENT SOLVENT SOLIDS-Glass Debris	366.1	1.28	S	F001 F002 F003 F005 F007 U075 U080 U228	8
PA-J038	SPENT SOLVENT SOLIDS-Plastic Debris	11632.6	43.01	S	D006 D007 D008 F001 F002 F003 F005 F007 F039 U002 U075 U080 U159 U211 U226 U227 U228	3.1, 3.2, 8
PA-K038	SPENT SOLVENT SOLIDS-Wood	3260.3	7.33	S	D004 D008 D010 D018 D019 D022 D027 F001 F002 F003 U075 U080	3.1, 3.2
PA-L038	SPENT SOLVENT SOLIDS-Paper/Cloth Debris	10441.5	36.22	S	D004 D006 D007 D008 D009 D037 D039 D040 D043 F001 F002 F003 F004 F005 F007 F039 U002 U075 U080 U159 U211 U226 U227 U228	3.1, 3.2, 8
PA-M038	SPENT SOLVENT SOLIDS-Organic Debris	23,419.0	40.1	S	D006 D007 D008 D018 D019 D022 D028 D029 D035 D039 D040 D043 F001 F002 F003 F005	3.1, 3.2
PA-N038	SPENT SOLVENT SOLIDS-Hetero Debris	1160.3	4.87	S	D006 D007 D008 D019 D028 D029 D035 D040 F001 F002 F003 F005 F007 U002 U075 U080 U154 U159 U211 U226 U227 U228	3.1, 3.2

Table 1. The DOE/PGDP MLLW wastestreams, weights, and volumes (continued)

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Table
PA-O038	SPENT SOLVENT SOLIDS-Labpacks	746.6	2.47	SL	D001 D004 D006 D007 D008 D009 D010 D018 D019 D022 D026 D027 D028 D030 D032 D033 D034 D036 D037 D040 F001 F002 F003 F005 U228	3.1, 8
PA-A039	TRICHLOROETHYLENE-Aqueous HOC Organic Liquids	32,431.9	54.68	L	D040 F001 F002 F039 U228	2, 8
PA-C039	TRICHLOROETHYLENE-HOC Organic Sludges	799.7	2.89	S	D018 F001	3.1, 3.2
PA-D039	TRICHLOROETHYLENE-HOC Organic Sludges	12,297.1	14.71	S	D040	3.1, 3.2
PA-W046	SILVER CYANIDE (Treated)	699.9	0.74	S	F007	B-2
PA-W047	PENTACHLOROPHENOL	14.5	0.21	L	F027 D037	3.2
PA-E048	MISC. DISCARDED LABORATORY CHEMICALS-Unk Solid	46.7	0.15	S	D001 D002	8
PA-F048	MISC. DISCARDED LABORATORY CHEMICALS-Asbestos Debris	122.9	0.21	S	U080	8
PA-G048	MISC. DISCARDED LABORATORY CHEMICALS-Cleanup Debris	39.0	0.21	S	U080 D008	3.2
PA-H048	MISC. DISCARDED LABORATORY CHEMICALS-Lab Waste	96.6	0.38	SL	D040 U044 U210 U211 U226 U228	3.1, 8
PA-I048	MISC. DISCARDED LABORATORY CHEMICALS -(Treated Sodium Azide)	5.9	0.02	S	P105	B-2
PA-F049	MISC. TCLP WASTES-Absorbed Org Liquids	40.4	0.21	S	D001 D027 D030 D033 D034 D036 D038 D042	3.2
PA-G049	MISC. TCLP WASTES-Inorg Sludges	459.5	0.74	S	D006 D007 D008 D009 D010 D011	7.1
PA-I049	MISC. TCLP WASTES - Inorganic Homogeneous Solids	627.8	0.42	S	D040	3.2
PA-J049	MISC. TCLP WASTE - Carbon Filters	4268.3	3.39	S	D040	3.1, 3.2
PA-K049	MISC. TCLP WASTES-Organic Sludge	3306.2	12.25	SL	D001 D005 D006 D007 D008 D009 D010 D018 D028 D033 D040 F001 F002 F003 U002 U211	3.1, 3.2
PA-L049	MISC. TCLP WASTES-Organic Chemicals	281.2	0.40	L	D001 D025 D026	8
PA-N049	MISC. TCLP WASTES-Plastic Debris	37.6	0.21	S	D007	3.2
PA-O049	MISC. TCLP WASTES-Paper/Cloth Debris	162.4	0.46	S	D001 D007 D008 D040	3.1, 3.2

Table 1. The DOE/PGDP MLLW wastestreams, weights, and volumes (continued)

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Table
PA-P049	MISC. TCLP WASTES-Organic Debris	516.7	1.08	S	D006 D007 D008 D037 F001	3.2
PA-Q049	MISC. TCLP WASTES-Labpacks	753.4	2.04	SL	D002 D004 D006 D007 D008 D009 D010 D011 D018 D040 F001 U075 U080	8
PA-A051	AEROSOL CANS	62.6	0.42	SL	D001	2
PA-B051	AEROSOL CANS-containing 1,1,1 Trichlor	16.8	0.11	SL	D001	2
PA-A052	WASTE OILS- Aqueous Non HOC Organic Liquids	20.9	0.63	L	D008	2
PA-B052	WASTE OILS-Non HOC Organic Liquids	3165.2	9.25	L	D006 D007 D008 D018	2
PA-C052	WASTE OILS-Capacitors	3314.0	9.86	SL	D006 D007 D008 D011 D018	8
	SUBTOTAL	**396,311.5**	**641.59**			
PA-G038**	SPENT SOLVENT SOLIDS-Soils	1,337,748.0	1854.60	S	D040 F001 F002 U228	8
PA-J038**	SPENT SOLVENT SOLIDS-Plastic Debris	891,832.0	1236.40	S	D040 F001 F002 U228	8
PA-A039**	TRICHLOROETHYLENE-Aqueous HOC Organic Liquids	42,369.2	42.39	L	D040 F001 F002 U228	8
	SUBTOTAL	**2,271,949.2**	**3133.39**			
	TOTALS	**2,668,260.7**	**3774.98**			

*L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated.

**Newly identified waste.

Table 2. The DOE/PGDP liquid waste targeted for TSCA incinerator

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Compliance Date
PA-A001	MISC. FLAMMABLE MATERIALS-Aqueous	22.7	0.04	L	D001 D018	12/31/2003
PA-D001	MISC. FLAMMABLE MATERIALS-Fuels	54.4	0.23	L	D001 D018	12/31/2003
PA-O001	MISC. FLAMMABLE MATERIALS-Waste Samples	44.9	0.21	L	D001 D004 D006 D007 D008 D009 D010 D018 D019 D028 F001 F002 F003 F005	12/31/2003
PA-A038	SPENT SOLVENT SOLIDS - Aqueous Organic Liquids NonHOC	14.1	0.11	L	F001 F003 D007 U228	12/31/2003
PA-A039	TRICHLOROETHYLENE-Aqueous HOC Organic Liquids	11,310.1	18.28	L	F001 F002 D040 F039 U228	12/31/2003
PA-A051	AEROSOL CANS-Paint	106.6	0.55	L	D001	12/31/2003
PA-A052	WASTE OILS- Aqueous NonHOC Organic Liquids	20.9	0.63	L	D001 D018 D006 D008	12/31/2003
PA-B051	AEROSOL CANS-containing 1,1,1 Trichloro	16.8	0.11	L	D001 D003 U226	12/31/2003
PA-B052	WASTE OILS-NonHOC Organic Liquids - Vent Duct Oil, Compressor Oil	3707.5	13.58	L	D006 D007 D008 D018	12/31/2003
	TOTALS	**15297.9**	**33.74**			

*L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated.

Note: This Table represents recently generated waste to be shipped to the TSCA Incinerator. On October 23, 1997, PGDP completed its last shipment of the original Table 2 Organic Liquids meeting the TSCA Incinerator WAC. Liquids that did not meet the WAC of the TSCA Incinerator were either moved to other tables within the STP with more appropriate treatment options or combined into other wastestreams. Organic containing liquid wastestreams were to be scheduled for shipment to the TSCA Incinerator within one calendar year. Upon approval of the KDEP, shipment for treatment may be deferred until such time as sufficient quantities are collected for shipment.

Table 3.1 The DOE/PGDP solid waste targeted for TSCA incinerator

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Compliance Date
PA-G001	MISC. FLAMMABLE MATERIALS-Paints	699.0	0.85	SL	D001 D007 D008 D009 F001 F003	1/31/2004
PA-I001	MISC. FLAMMABLE MATERIALS - Adhesives Solid	36.7	0.21	SL	D001 D002 D008 D035 U122	1/31/2004
PA-L001	MISC. FLAMMABLE MATERIALS-Hetero Debris	438.6	0.84	S	D001 D038 D040	1/31/2004
PA-B020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Absorbed Org Liquids	714.0	0.97	S	D006 D030 D032	1/31/2004
PA-G020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Plastic Debris	294.8	1.05	S	D006 D007 D008	1/31/2004
PA-H020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Paper/Cloth Debris	1341.3	5.02	S	D006 D007 D008 D011	1/31/2004
PA-I020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Organic Debris	834.4	0.86	S	D002 D006 D007 D008 D009 D011 D018 D040 F007	1/31/2004
PA-B024	MISC. CHROMATE-BEARING WASTE-Solids	12.7	0.06	S	D004 D007 D009 F001	1/31/2004
PA-D024	MISC. CHROMATE-BEARING WASTE-Paper/Cloth Debris	4.5	0.02	S	F001	1/31/2004
PA-I030	MISC. LEAD-BEARING WASTE- Lab Waste Samples	277.6	0.42	S	D008	1/31/2004
PA-B038	SPENT SOLVENT SOLIDS-Absorbed Org Liquids	111.6	0.42	S	F001 F002 F003 F005 U075 U080	1/31/2004
PA-C038	SPENT SOLVENT SOLIDS-Inorganic Sludges	382.8	0.85	S	F001	1/31/2004
PA-E038	SPENT SOLVENT SOLIDS-HOC Organic Sludge	1481.0	1.41	SL	D006 D008 D011 D018 D019 D022 D028 D029 D039 D040 F001 F002	1/31/2004
PA-F038	SPENT SOLVENT SOLIDS-Org Homog Solids	248.6	0.17	S	D001 D008 D040 F002 F005	1/31/2004
PA-J038	SPENT SOLVENT SOLIDS-Plastic Debris	1955.9	8.83	S	D006 D007 D008 F001 F002 F003 F005 U002 U075 U080 U159 U211 U226 U227 U228	1/31/2004
PA-K038	SPENT SOLVENT SOLIDS-Wood	2652.5	5.24	S	D004 D006 D008 D010 D018 D019 D022 D027 F001 F002 F003 U002 U075 U080 U211	1/31/2004

Table 3.1 The DOE/PGDP solid waste targeted for TSCA incinerator (continued)

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Compliance Date
PA-L038	SPENT SOLVENT SOLIDS-Paper/Cloth Debris	3387.5	15.00	S	D004 D006 D007 D008 D009 D037 D039 D040 D043 F001 F002 F003 F004 F005 F007 U002 U075 U080 U151 U154 U159 U211 U226 U227	1/31/2004
PA-M038	SPENT SOLVENT SOLIDS-Organic Debris	14,456.4	24.14	S	D006 D007 D008 D018 D019 D022 D028 D029 D035 D039 D040 D043 F001 F002 F003 F005	1/31/2004
PA-N038	SPENT SOLVENT SOLIDS-Hetero Debris	593.7	2.57	S	D006 D007 D008 D018 D019 D028 D029 D035 D040 F001 F002 F003 F005 F007 U002 U075 U080 U154 U159 U211 U226 U227 U228	1/31/2004
PA-C039	TRICHLOROETHYLENE-HOC Organic Sludges	534.8	1.38	S	D018 F001	1/31/2004
PA-D039	TRICHLOROETHYLENE-HOC Organic Sludges	1893.3	2.58	S	D040	1/31/2004
PA-O038	SPENT SOLVENT SOLIDS-Labpack	117.5	0.66	S	F001 F002 F003 D040	1/31/2004
PA-H048	MISC. DISCARDED LABORATORY CHEMICALS-Lab Waste	68.9	0.32	S	D040 U228	1/31/2004
PA-J049	MISC. TCLP WASTES-Carbon Filters	2757.4	2.34	S	D040	1/31/2004
PA-K049	MISC. TCLP WASTES-Organic Sludge	843.2	3.10	SL	D001 D005 D006 D007 D008 D009 D010 D018 D028 D033 D040 F001 F002 F003 U002 U211	1/31/2004
PA-O049	MISC. TCLP WASTES-Paper/Cloth Debris	150.6	0.42	S	D001 D007 D008 D040	1/31/2004
	TOTALS	**36,289.5**	**79.76**			

*L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated..

Table 3.2. The DOE/PDGP solid waste targeted for broad spectrum thermal treatment

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Compliance Date
PA-G001	MISC. FLAMMABLE MATERIALS-Paints	3281.4	6.98	SL	D001 D007 D008 D009 F001 F003	1/31/2004
PA-H001	MISC. FLAMMABLE MATERIALS-Diesel Sludge	366.5	0.42	SL	D001 D008	1/31/2004
PA-I001	MISC. FLAMMABLE MATERIALS - Adhesives Solid	840.1	2.34	SL	D001 D002 D008 D035 U122	1/31/2004
PA-K001	MISC. FLAMMABLE MATERIALS-Paper/Cloth Debris	89.8	0.21	S	D001	1/31/2004
PA-L001	MISC. FLAMMABLE MATERIALS-Hetero Debris	125.6	0.23	S	D001 D038 D040	1/31/2004
PA-W003	WASTE MINERAL SPIRITS-Paint Wastes	2141.9	3.08	SL	D001 D005 D007 D008 D009	1/31/2004
PA-A013	NICKEL STRIPPER SOLID RESIDUE-Sludge	2123.3	3.44	S	D002 D006 D007 D008	1/31/2004
PA-C019	MISC. ARSENIC-BEARING WASTE-Organic Debris	5.0	0.02	S	D004	1/31/2004
PA-B020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Absorbed Org Liquids	331.6	0.74	S	D006 D030 D032	1/31/2004
PA-G020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Plastic Debris	3219.7	12.58	S	D006 D007 D008	1/31/2004
PA-H020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Paper/Cloth Debris	578.3	1.56	S	D006 D007 D008 D011	1/31/2004
PA-I020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Organic Debris	889.5	2.78	S	D002 D006 D007 D008 D009 D011 D018 D040 F007	1/31/2004
PA-F030	MISC. LEAD-BEARING WASTE- Organic Debris	362.0	0.86	S	D008	1/31/2004
PA-F033	MISC. MERCURY-BEARING WASTES-Organic Debris	118.4	0.44	S	D009	1/31/2004
PA-B038	SPENT SOLVENT SOLIDS- Absorbed Org Liquids	932.2	2.77	S	F001 F002 F003 F005 U075 U080	1/31/2004
PA-C038	SPENT SOLVENT SOLIDS- Inorganic Sludges	89.8	0.21	S	F001	1/31/2004
PA-E038	SPENT SOLVENT SOLIDS- HOC Organic Sludge	7689.9	8.93	SL	D006 D008 D011 D018 D019 D022 D028 D029 D039 D040 F001 F002	1/31/2004

Table 3.2. The DOE/PDGP solid waste targeted for broad spectrum thermal treatment (continued)

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Compliance Date
PA-F038	SPENT SOLVENT SOLIDS- Org Homog Solids	529.4	0.63	S	D001 D008 D040 F002 F005	1/31/2004
PA-G038	SPENT SOLVENT SOLIDS-Soils	41,630.5	29.11	S	D040 F001 F002 U228	1/31/2004
PA-J038	SPENT SOLVENT SOLIDS- Plastic Debris	2488.9	7.53	S	F001	1/31/2004
PA-K038	SPENT SOLVENT SOLIDS- Wood	607.8	2.09	S	F001 D040	1/31/2004
PA-L038	SPENT SOLVENT SOLIDS- Paper/Cloth Debris	4837.2	18.08	S	D004 D006 D007 D008 D009 D037 D039 D040 D043 F001 F002 F003 F004 F005 F007 U002 U075 U080 U151 U154 U159 U211 U226 U227	1/31/2004
PA-M038	SPENT SOLVENT SOLIDS- Organic Debris	8962.6	15.96	S	D006 D007 D008 D018 D019 D022 D028 D029 D035 D039 D040 D043 F001 F002 F003 F005	1/31/2004
PA-N038	SPENT SOLVENT SOLIDS- Hetero Debris	566.6	2.30	S	D006 D007 D008 D018 D019 D028 D029 D035 D040 F001 F002 F003 F005 F007 U002 U075 U080 U154 U159 U211 U226 U227 U228	1/31/2004
PA-C039	TRICHLOROETHYLENE-HOC Organic Sludges	264.9	1.50	S	D018 F001	1/31/2004
PA-D039	TRICHLOROETHYLENE-HOC Organic Sludges	10,403.8	12.13	S	D040	1/31/2004
PA-W047	PENTACHLOROPHENOL	14.5	0.21	L	D037 F027	1/31/2004
PA-G048	MISC. DISCARDED LABORATORY CHEMICALS-Cleanup Debris	39.0	0.21	S	D008 U080	1/31/2004
PA-F049	MISC. TCLP WASTES-Absorbed Org Liquids	40.4	0.21	S	D001 D027 D030 D033 D034 D036 D038 D042	1/31/2004
PA-I049	MISC. TCLP WASTES - Inorganic Homogeneous Solids	627.8	0.42	S	D040	1/31/2004
PA-J049	MISC. TCLP WASTES-Carbon Filters	1510.9	1.05	S	D040	1/31/2004

Table 3.2. The DOE/PDGP solid waste targeted for broad spectrum thermal treatment (continued)

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Compliance Date
PA-K049	MISC. TCLP WASTES-Organic Sludge	2463.0	9.15	SL	D001 D005 D006 D007 D008 D009 D010 D018 D028 D033 D040 F001 F002 F003 U002 U211	1/31/2004
PA-N049	MISC. TCLP WASTES-Plastic Debris	37.6	0.21	S	D007	1/31/2004
PA-O049	MISC. TCLP WASTES-Paper/Cloth Debris	11.8	0.04	S	D001 D007 D008 D040	1/31/2004
PA-P049	MISC. TCLP WASTES-Organic Debris	487.6	0.97	S	D006 D007 D008 D037 F001	1/31/2004
	TOTALS	**98,709.2**	**149.4**			

*L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated.

Table 4. The DOE/PGDP waste targeted for C-400-D on-site treatment

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes
	TOTALS	0.0	0.00		

*L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated.

Table 5. The DOE/PGDP waste targeted for commercial treatment

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Compliance Date
	TOTALS	0.0	0.00			May 1, 2002

*L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated.

Table 6. The DOE/PGDP waste targeted for cyanide treatment facility

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes
	TOTALS	0.0	0.00		

*L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated.

Table 7.1. The DOE/PGDP waste targeted for commercial stabilization

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Compliance Date
PA-D015	TECHNETIUM WASTE-Solid/Sludge	1258.7	1.26	SL	D004 D007 D009	1/31/2008
PA-A020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Sandblasting Media	4576.4	4.30	S	D006 D007 D008	1/31/2008
PA-C020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Inorganic Sludges	5770.2	8.59	SL	D001 D004 D005 D006 D007 D008 D009 D010 D018 D040	1/31/2008
PA-D020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Inorg Homog Solids	65,356.5	93.12	SL	D002 D004 D006 D007 D008 D009	1/31/2008
PA-W023	GOLD DISSOLVER SLUDGE	2.7	0.02	S	D006 D008	1/31/2008
PA-A024	MISC. CHROMATE-BEARING WASTE-Inorg Particulates	460.9	0.50	S	D007	1/31/2008
PA-W025	MAGNESIUM FLUORIDE PELLETS	3180.6	5.22	S	D007	1/31/2008
PA-W028	CASCADE VACUUM DUST	693.5	0.82	S	D004 D006 D007 D008 D010	1/31/2008
PA-C030	MISC. LEAD-BEARING WASTE- Soil	10.4	0.02	S	D006 D008	1/31/2008
PA-W031	HOT WATER RINSE TANK-Sludge	5864.1	7.14	SL	D006 D008 D040	1/31/2008
PA-G049	MISC. TCLP WASTES-Inorg Sludges	445.9	0.65	S	D006 D007 D008 D009 D010 D011	1/31/2008
	TOTALS	**87,620.0**	**121.63**			

*L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated.

Table 7.2. The DOE/PGDP waste targeted for commercial stabilization

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Compliance Date
PA-J001	MISC. FLAMMABLE MATERIALS-Metal Debris	118.4	0.42	S	D001	1/31/2008
PA-M001	MISC. FLAMMABLE MATERIALS-Oxidizer	331.6	0.76	S	D001 D002 D006 D007	1/31/2008
PA-A006	MISC. ACIDS AND BASES-Acidic	4846.3	5.79	SL	D002 D004 D005 D006 D007 D008 D009 D010 D011 D027 D030 D032 D033 D034 D035 D038 D039 D040 F001 F002 F003 F005 F007 U002 U075 U080 U159 U211 U226 U227 U228	1/31/2008
PA-B006	MISC. ACIDS AND BASES-Basic	1165.8	1.50	SL	D002 D007 D008 D010	1/31/2008
PA-C006	MISC. ACIDS AND BASES-Other Waste Waters	226.8	0.44	SL	D002 D004 D006 D007 D008 D009 F001 F003	1/31/2008
PA-J006	MISC. ACIDS AND BASES-Unknown	24.5	0.27	SL	D001 D002 D007	1/31/2008
PA-C011	MISC. AQUEOUS SOLUTION CONTAIN/TOX METALS- Other Wastewaters	1065.5	1.56	L	D004 D006 D007 D008 F007	1/31/2008
PA-E020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Metal Debris	962.5	1.47	S	D006 D007 D008 D009	1/31/2008
PA-J020	MISC. SOLID MATTER CONTAIN/ TOXIC METALS-Heterog Debris	2716.2	6.20	S	D004 D005 D006 D007 D008 D009 D011	1/31/2008
PA-B024	MISC. CHROMATE-BEARING WASTE-Solids	424.1	1.07	S	D004 D007 D009 F001	1/31/2008
PA-L030	MISC. LEAD-BEARING WASTE-Inorganic Chemicals	37.2	0.21	S	D008	1/31/2008
	TOTALS	**11,918.9**	**19.69**			

*L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated.

Table 7.3. The DOE/PGDP waste targeted for commercial stabilization (macroencapsulation)

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Compliance Date
PA-A004	DISCARDED BATTERIES-Lead	3005.1	3.88	S	D002 D004 D006 D008	1/31/2008
PA-B004	DISCARDED BATTERIES-Mercury	337.5	0.86	S	D002 D006 D008	1/31/2008
PA-E020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Metal Debris	962.5	1.47	S	D006 D007 D008 D009	1/31/2008
PA-F020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Light Bulbs	235.4	1.58	S	D006 D008 D009	1/31/2008
PA-H020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Paper/Cloth Debris	3323.1	16.56	S	D005 D006 D007 D008 D011 F001	1/31/2008
PA-D030	MISC. LEAD-BEARING WASTE- Metal Debris	645.5	1.07	S	D006 D008	1/31/2008
PA-G030	MISC. LEAD-BEARING WASTE-Filters	45.4	0.21	S	D008	1/31/2008
PA-H030	MISC. LEAD-BEARING WASTE-Hetero Debris	11.3	0.08	S	D008	1/31/2008
PA-K030	MISC. LEAD-BEARING WASTE- Lead Metal	200.9	0.63	S	D008	1/31/2008
PA-G033	MISC. MERCURY-BEARING WASTES-Hetero Debris	502.6	2.32	SL	D009 D011	1/31/2008
	TOTALS	**9269.3**	**28.66**			

*L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated.

Table 8. The DOE/PGDP waste requiring further characterization/sorting

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Compliance Date
PA-Q001	MISC.FLAMMABLE MATERIALS-Compressed Gases	15.0	0.01	S	D001 D003	Treatment Plan by 7/01/06
PA-C004	DISCARDED BATTERIES-Mercury	315.3	0.65	S	D002 D006 D008 D009 D011	Treatment Plan by 7/01/06
PA-A006	MISC. ACIDS AND BASES-Acidic	1360.8	2.66	SL	D002 D004 D005 D006 D007 D008 D009 D010 D011 D027 D030 D032 D033 D034 D035 D038 D039 D040 F001 F002 F003 F005 F007 U002 U075 U080 U159 U211 U226 U227 U228	Treatment Plan by 7/01/06
PA-D006	MISC. ACIDS AND BASES-Aqueous Org Liquid	7.7	0.02	SL	D002 F001	Treatment Plan by 7/01/06
PA-K006	MISC. ACIDS AND BASES-Aqueous Labpacks	308.2	1.12	L	D002	Treatment Plan by 7/01/06
PA-M006	MISC. ACIDS AND BASES-Solid Labpacks	179.2	0.63	SL	D001 D002 D008 F003	Treatment Plan by 7/01/06
PA-C018	MISC. REACTIVE MATERIALS- Solid Labpack	0.9	0.08	S	D003	Treatment Plan by 7/01/06
PA-H020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Paper/Cloth Debris	729.4	1.47	S	D006 D007 D008 D011	Treatment Plan by 7/01/06
PA-J020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Organic Debris	27.2	0.21	S	D004 D005 D006 D007 D008 D009 D011	Treatment Plan by 7/01/06
PA-B024	MISC. CHROMATE-BEARING WASTE-Solids	1014.2	2.11	S	D004 D007 D009 F001	Treatment Plan by 7/01/06
PA-G024	MISC. CHROMATE-BEARING WASTE-Labpacks	1038.3	1.29	S	D007	Treatment Plan by 7/01/06
PA-I030	MISC. LEAD-BEARING WASTE- Lab Waste Samples	917.2	1.52	S	D008	Treatment Plan by 7/01/06
PA-A033	MISC. MERCURY-BEARING WASTE -Inorg Particulates	32.2	0.21	S	D009	Treatment Plan by 7/01/06
PA-C033	MISC. MERCURY-BEARING WASTES-Metal Debris	206.9	0.88	S	D009	Treatment Plan by 7/01/06
PA-D033	MISC. MERCURY-BEARING WASTES-Fluor Light bulbs	1981.4	4.04	SL	D009	Treatment Plan by 7/01/06

Table 8. The DOE/PGDP waste requiring further characterization/sorting (continued)

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S	EPA Codes	Compliance Date
PA-H033	MISC. MERCURY-BEARING WASTES-Labpacks	268.5	0.48	SL	D009	Treatment Plan by 7/01/06
PA-I033	MISC. MERCURY-BEARING WASTES-Labpacks	297.1	0.91	SL	D009 U151	Treatment Plan by 7/01/06
PA-A038	SPENT SOLVENT SOLIDS - Aqueous Organic Liquids NonHOC	4005.7	11 43	L	D007 F001 F003 U228	Treatment Plan by 7/01/06
PA-G038	SPENT SOLVENT SOLIDS-Soils	60,057.5	48.46	S	D040 F001 F002 U228	Treatment Plan by 7/01/06
PA-H038	SPENT SOLVENT SOLIDS-Metal Debris	8450.6	19.87	S	F001 F002 F003 F005 U075 U080	Treatment Plan by 7/01/06
PA-I038	SPENT SOLVENT SOLIDS-Glass Debris	186.4	0.86	S	F001 F002 F003 F005 F007 U075 U080	Treatment Plan by 7/01/06
PA-J038	SPENT SOLVENT SOLIDS-Plastic Debris	7187.7	26.64	S	F001 F002 F003 F005 F007 U075 U080	Treatment Plan by 7/01/06
PA-L038	SPENT SOLVENT SOLIDS-Paper/Cloth Debris	2216.8	3.14	S	D035 D040 F001 F002 F003 F005 F007 U075 U080	Treatment Plan by 7/01/06
PA-O038	SPENT SOLVENT SOLIDS-Labpacks	629.1	2.25	SL	D001 D004 D005 D006 D007 D008 D009 D010 D018 D019 D022 D025 D026 D027 D028 D030 D032 D033 D034 D036 D037 D040 F001 F002 F003 F005	Treatment Plan by 7/01/06
PA-A039	TRICHLOROETHYLENE-Aqueous HOC Organic Liquids	21,121.9	36.39	L	F001 F002 D040 F039 U228	Treatment Plan by 7/01/06
PA-E048	MISC. DISCARDED LABORATORY CHEMICALS-Unk Solid	46.7	0.15	S	D001 D002	Treatment Plan by 7/01/06
PA-F048	MISC. DISCARDED LABORATORY CHEMICALS-Asbestos Debris	122.9	0.21	S	U080	Treatment Plan by 7/01/06
PA-H048	MISC. DISCARDED LABORATORY CHEMICALS-Lab Waste	27.7	0.06	SL	D040 U044 U210 U211 U226 U228	Treatment Plan by 7/01/06
PA-L049	MISC. TCLP WASTES-Organic Chemicals	281.2	0.40	L	D001 D025 D026	Treatment Plan by 7/01/06
PA-Q049	MISC. TCLP WASTES-Labpacks	889.0	2.78	SL	D001 D002 D006 D007 D008 D009 D011 D040 F001	Treatment Plan by 7/01/06

Table 8. The DOE/PGDP waste requiring further characterization/sorting (continued)

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Compliance Date
PA-C052	WASTE OILS-Capacitors	3165.2	9.25	SL	D006 D007 D008 D011 D018	Treatment Plan by 7/01/06
	SUBTOTAL	**11,7088.0**	**180.17**			
PA-G038**	SPENT SOLVENT SOLIDS-Soils	1,337,748.0	1854.60	S	D040 F001 F002 U228	
PA-J038**	SPENT SOLVENT SOLIDS- Plastic Debris	891,832.0	1236.40	S	D040 F001 F002 U228	
PA-A039**	TRICHLOROETHYLENE-Aqueous HOC Organic Liquids	42,369.2	42.39	L	D040 F001 F002 U228	
	SUBTOTAL	**2,271,949.2**	**3133.39**			
	TOTALS	**2,389,037.2**	**3313.56**			

*L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated.

**Newly identified waste.

Table 9. Ash receivers ash residue

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes
PA-B024	Treated Ash Receiver Ash	8815.3	14.0	S	D007*
	TOTALS	**8815.3**	**14.0**		

*L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated.

****NOTE:** Ash has been treated for Chromium and is no longer hazardous but does not meet the UHC for nickel.

Table 10. The DOE/PGDP waste targeted for surface radiological characterization

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Compliance Date
	TOTALS	0.0	0.00			

*L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated.

Table 11. The DOE/PGDP waste previously targeted for potential vitrification

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S	EPA Codes
	TOTALS	0.0	0.00		

*L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated.

Table 12. The DOE/PGDP MTRU

Waste Stream	Name	Weight (Kg)	Volume (M^3)	L/S*	EPA Codes	Compliance Date
PA-W014	TRANSURANIC WASTE LIQUID	2723.4	3.04	SL	D002	1/31/2016
PA-A015	TRANSURANIC WASTE SOLID	1714.6	2.35	S	D007	1/31/2016
	TOTALS	**4438.0**	**5.39**			

*L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated.

Table 13. The DOE/PGDP mixed/mixed TRU waste generated in 2002

Waste Stream	Name	Weight (Kg)	Volume (M^3)	EPA Codes
PA-A001	MISC. FLAMMABLE MATERIALS-Fuels	22.7	0.04	D001 D018
PA-G001	MISC. FLAMMABLE MATERIALS-Paint	30.4	0.21	D001
PA-A004	DISCARDED BATTERIES-Lead	1728.3	1.26	D002 D006 D008
PA-B004	DISCARDED BATTERIES-Cadmium	2.7	0.02	D006 D008
PA-A006	MISC. ACIDS AND BASES-Acidic	30.4	0.04	D002 F039
PA-K006	MISC. ACIDS AND BASES-Aqueous Labpacks	5.9	0.02	D002
PA-E020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Metal Debris	1682.8	3.59	D006 D008 D010 D011
PA-F020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Light Bulbs	89.4	0.63	D006 D008 D009
PA-H020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Paper/Cloth Debris	1357.5	3.36	D006 D008
PA-I020	MISC. SOLID MATTER CONTAIN/TOXIC METALS-Organic Debris	10.9	0.02	D007 D008
PA-J020	MISC. SOLID MATTER CONTAIN/ TOXIC METALS-Heterog Debris	27.2	0.21	D006 D008 D009
PA-B024	MISC. CHROMATE-BEARING WASTE-Solids	345.1	0.63	D007
PA-C030	MISC. LEAD-BEARING WASTE-Soil	10.4	0.02	D006 D008
PA-A038	SPENT SOLVENT SOLIDS-Aqueous Organic Liquids Non HOC	3991.7	11.32	F001 U228
PA-B038	SPENT SOLVENT SOLIDS-Absorbed Org Liquids	357.0	1.28	F001 F002 U228
PA-G038	SPENT SOLVENT SOLIDS-Soils	88,392.5	66.58	D040 F001 F002 U228
PA-J038	SPENT SOLVENT SOLIDS-Plastic Debris	6460.4	22.63	F001F002 F003 F005 F007 F039 U075 U080 U159 U211 U228
PA-L038	SPENT SOLVENT SOLIDS-Paper/Cloth Debris	2152.9	2.89	D0069 D007 F001F002 F039 U228
PA-A039	TRICHLOROETHYLENE-Aqueous HOC Organic Liquids	32,432.0	54.70	D040 F001 F002 F039 U228
PA-A051	AEROSOL CANS	30.8	0.21	D001
PA-A052	WASTE OILS-Non HOC Organic Liquids	17.7	0.42	D008
PA-B052	WASTE OILS- Aqueous Non HOC Organic Liquids	1742.7	11.85	D006 D007 D008
	TOTALS	**140,921.4**	**181.93**	

*L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated.

Table 14. The DOE/PGDP waste deleted from STP in 2002

Waste Stream	Name	Weight (kg)	Volume (m3)	Reason for Deletion from Site Treatment Plan
PA-C001	MISC. FLAMMABLE MATERIALS-Solvents	57.6	0.11	Contents were treated at TSCA Incinerator (TSCA 01-01); container RCRA empty.
PA-G001	MISC. FLAMMABLE MATERIALS-Paints	5.4	0.02	Contents treated at TSCA Incinerator (TSCA 01-01); containers RCRA empty.
PA-A006	MISC. ACIDS AND BASES-Acidic	1618.4	2.95	Waste was shipped to Perma-Fix for treatment or container was determined to be "empty" during the Acids and Bases Project.
PA-B006	MISC. ACIDS AND BASES-Basic	24.1	0.69	Waste was shipped to Perma-Fix for treatment or container was determined to be "empty" during the Acids and Bases Project.
PA-C006	MISC. ACIDS AND BASES-Other Waste Waters	1402.1	1.88	Waste was shipped to Perma-Fix for treatment as part of the Acids and Bases Project.
PA-D006	MISC. ACIDS AND BASES-Aqueous Organic Liquid	69.0	0.53	Waste was shipped to Perma-Fix for treatment and disposal.
PA-J006	MISC. ACIDS AND BASES-Unknown	644.6	2.09	Waste was shipped to Perma-Fix for treatment or container was determined to be "empty" during the Acids and Bases Project.
PA-K006	MISC. ACIDS AND BASES-Aqueous Labpacks	147.2	0.69	Waste was shipped to Perma-Fix for treatment or container was determined to be "empty" during the Acids and Bases Project.
PA-M006	MISC. ACIDS AND BASES - Other Labpacks	59.0	0.21	Determined to be "Empty" during the Acids and Bases Project.
PA-C011	MISC. AQUEOUS SOLUTION CONTAIN/TOX METALS- Other Wastewaters	278,949.7	325.10	Treated on site in a Clean Water Act unit to meet LDR and KPDES standards; Discharged to water of the Commonwealth.
PA-A017	AQUEOUS CLEANER-Acidic Wastewater	205.5	0.21	Waste was shipped to Perma-Fix for treatment.
PA-W036	PHOTOGRAPHIC FIXER SOLUTION	2394.6	3.19	Contents treated at Perma-Fix ; containers RCRA empty.
PA-G038	SPENT SOLVENT SOLIDS-Soils	55,221.8	39.70	Six-Phase Soil Heating Project Waste shipped to Perma-Fix for thermal desorption.
PA-J038	SPENT SOLVENT SOLIDS-Plastic Debris	767.9	2.30	Six-Phase Soil Heating Project Waste shipped to Perma-Fix for thermal desorption.
PA-A039	TRICHLOROETHYLENE-Aqueous HOC Organic Liquids	15,867.8	22.65	Contents treated at TSCA Incinerator (TSCA 01-01, 02-01); containers RCRA empty.
PA-A048	MISC. DISCARDED LAB CHEMICALS - Acid Liquid	4.1	0.02	Determined to be "Empty" during the Acids and Bases Project.
PA-B049	MISC. TCLP WASTES-Developer Solution/Photo Chemicals	1839.4	2.62	Contents treated at Perma-Fix ; containers RCRA empty.
PA-B052	WASTE OILS - Aqueous Non HOC Organic Liquids	5296.4	5.70	Contents treated at TSCA Incinerator (TSCA 01-01, 02-01); containers RCRA empty.
	TOTALS	**364,574.6**	**410.66**	

L/S: Liquid (L), Solid (S) or Sludge (SL)

NOTE: Weights and Volumes are taken from the database records and may vary slightly due to actual weight verses estimated.

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APPENDIX B

STP ANNUAL REPORT

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1. DESCRIPTION OF ACTIVITIES FOR STP IMPLEMENTATION

1.1 EVALUATION OF WASTE DATA AND COMPOSITIONAL CHARACTERIZATION

This activity includes the performance of detailed evaluations of available characterization data and waste process knowledge. This information is then used to group similar wastes into treatment categories; identify treatment needs; establish potential options for development and demonstration; and define further characterization requirements in order to proceed with treatment studies and treatment and disposal options.

Evaluation of existing waste data is an ongoing activity that entails review of waste data residing in waste tracking databases, inspection of more detailed data included in Requests for Disposal, and conduct of generator interviews where appropriate. Data acquired is used to assign treatment groups and identify additional characterization requirements. All of PGDP's mixed wastes have undergone preliminary review and assignment to treatment groups. The existing waste information is now being used to define the needs for obtaining the additional compositional characterization data needed to facilitate future treatability studies and treatment.

A Sampling and Analysis Plan (SAP) was prepared for Project LDR99006 consisting of 62 containers of miscellaneous sludges from various PGDP wastestreams requiring consolidation and sampling. The containers were consolidated into 23 containers in March 1999, and sampling was conducted in April and May 1999. An approved laboratory has provided data that was loaded into the DOE analytical database. A data assessment report has been prepared.

A SAP was prepared for the LDR 99006A project that was comprised of 41 containers of miscellaneous sludges from various DOE/PGDP wastestreams. The containers were sampled in April, May, and June 1999 and were sent to a DOE/PGDP approved laboratory for analysis. The laboratory has provided data and the data has been assessed and loaded into the DOE analytical database. An assessment report has been prepared and additional hazardous waste codes may be applied to some of the sludges.

TSCA 01-01 project consisted of 21 containers totaling approximately 3100 gallons of liquid waste. A SAP was prepared and approved with sampling completed during the third quarter of FY 2001. The analytical data was provided by an approved laboratory and loaded into the DOE analytical database. After an initial review, the TSCA Incinerator and TDEC requested additional information. All the required analytical and characterization data has been submitted to the TSCA Incinerator. The operator of the TSCA Incinerator and TDEC issued approval for this project on June 3, 2002.

TSCAL 02-01 consisted of 25 containers totaling approximately 2581 gallons of liquid waste. A SAP was prepared and approved on April 16, 2002, with sampling completed during the first week of May 2002. The analytical data was provided by an approved laboratory and loaded into the DOE analytical database. The operator of the TSCA Incinerator and TDEC issued approval for this project on September 3, 2002.

An evaluation of 236 containers of acid and bases characterization data was initiated. These wastes were identified in Tables 5 and 7.2 of the STP. Originally, these acids and bases were to be shipped to ATG for treatment. However, with the operational problems of that facility, Perma-Fix was the best available option for treatment of these wastestreams (see Section 1.3). The existing data was reviewed against the Waste Acceptance Criteria (WAC) and it was determined that there was sufficient information to prepare profiles. The first profiles

prepared were for the photographic fixers and developers formerly shown on Table 5. These wastestreams had a May 1, 2002, compliance date. Since Perma-Fix is not permitted for PCBs the PCB-regulated containers were set aside for another project. Of the non-PCB acids and bases still being considered, only 57 containers were able to meet the WAC and had sufficient data for profiling. Confirmation data was performed to verify the data.

A SAP representing 723 containers of soft solids was submitted to the TSCA Incinerator for review on September 13, 2001. The soft solids consist of containers of various sludges, pieces of wood (pallets), personal protective equipment (suits, gloves and booties), paints and other similar materials. The SAP was approved on December 5, 2001. Sampling was tentatively scheduled to begin in February 2002. However, operational difficulties prevented sampling from occurring. In March 2002, these containers were evaluated for potential treatment under the Broad Spectrum Subcontracts and 147 containers were subsequently removed from the list and scheduled for treatment at Perma-Fix. The pre-application for the TSCA soft solids wastestreams was submitted to the TSCA Incinerator on December 10, 2002. Sampling of approximately 600 containers of soft solids currently being considered by the TSCA Incinerator for treatment will be completed during the second quarter of FY02.

A container list has been prepared for the newly generated mixed waste. This project has been expanded to include the FY 2003 newly generated wastestreams and consists of approximately 26 cubic meters of RCRA mixed wastes that will be sent to Broad Spectrum Subcontractors and the TSCA Incinerator for treatment and/or to Envirocare of Utah (Envirocare) for treatment and/or disposal. A SAP for the FY 2002 waste is currently in the development process and a container list has already been developed for the FY 2003 waste. These lists include the waste being generated as a result of cleanup and inventory activities in the Department of Energy Material Storage Areas (DMSA).

A container list has been prepared for the TSCAL 03-01 shipment. This shipment will consist of the remaining containers of organic liquids that have been in storage over one year and several containers of oils, transmission fluid, gasoline and diesel fuel that were newly generated by the DMSA Project. A SAP has been prepared and submitted to the TSCA Incinerator for approval. Sampling of the containers is anticipated to begin the second quarter of FY 2003.

A container list and SAP is also being prepared for the TSCAL 03-02 shipment. This shipment will contain the newly generated liquid wastestreams.

Historical data is currently being reviewed for the 140 cubic meters of mixed waste that will be shipped to Perma-Fix under the Broad Spectrum Subcontract for treatment and disposal. The project is comprised of 504 containers from 56 different wastestreams. Approximately half of the containers have sufficient data for a profile. A SAP will be developed to address the remaining drums. The wastestreams are being divided into profiles based on characteristics.

Historical data is also being reviewed and evaluated for the 133 containers included in the on-site treatment project to determine if additional sampling will be required.

1.2 TREATABILITY STUDIES AND ENGINEERING/DESIGN IMPLEMENTATION

This activity is focused on proof-of-principle evaluations of selected technologies on the bench-scale or pilot-scale with the goal of providing the technical basis for final waste treatment selection and/or engineering data for facility design. The three major areas of investigation under this activity are (1) stabilization of wastes in

final waste forms to meet regulatory performance criteria, (2) thermal desorption for removal of organics and mercury, and (3) aqueous, organic, and decontamination wastes treatment evaluation. Activities related to MTRU waste treatment are also covered.

As the result of a broken pipe that was part of a fire suppression system, approximately 75,000 gallons of wastewater was pumped from the basement of the C-410 building in August of 2001. This wastewater was determined to be hazardous for cadmium (D006), PCB-detectable, and radioactively contaminated. This waste was added to the STP Tables as newly generated waste and slated for treatment on-site.

A sample of the C-410 basement waste (PA-C011) was sent to Florida International University/Materials and Chemistry Laboratories, Inc. for a treatability study in October of 2001. The study was completed in January 2002. The wastewater was treated on-site in a Clean Water Act unit and after testing to confirm adequate treatment, the wastewater was discharged through a KPDES permitted outfall. Treatment and discharge of approximately 90,000 gallons of wastewater (including decon and rinse water) for cadmium (D006), detectable PCBs and radioactive components began on February 5, 2002, and was completed on September 10, 2002.

Upon completion of the treatment of the C-410/C-420 basement water, the Clean Water Act system was re-evaluated for the treatment of C-403 Neutralization Pit wastewater, a listed waste containing TCE and PCBs and radioactive constituents that required treatment to meet discharge criteria. Based on bench-scale studies the process was modified slightly by adding a step for pH adjustment to make the wastewater more amenable to treatment: Approximately 11,100 gallons of wastewater was treated, sampled and analyzed to ensure that the treated waste met water discharge criteria. This water will be discharged during the first quarter of CY03.

Three containers of radioactive acidic waste (PA-A006) were selected for on-site elementary neutralization. During August 2002 the three drums of highly radioactive acids were neutralized on-site in a special enclosure set up inside the permitted facility that is designed to contain radioactive contamination. The purpose of this project was to make the waste safer for handling and disposal. The waste was repackaged into Department of Transportation (DOT) approved containers for treatment and disposal at a later date.

A Work Plan has been developed for the on-site treatment of 133 containers of mixed waste. These drums have been previously characterized and are to be treated to meet LDR standards, repacked in DOT approved containers and prepared for disposal. Treatment will involve several types of technology including chemical oxidation, pH adjustment, stabilization microencapsulation and macroencapsulation. Treatment, which is scheduled to begin in 2003, will depend on the type of waste, contaminants and the results of the bench-scale studies.

1.3 TREATMENT ACTIVITIES

As per the DOE initiative to consolidate procurements, several Basic Ordering Agreements (BOA) for Broad Spectrum Treatment have been established using the DOE Integrated Contracting Procurement Team terms and conditions. Through these Broad Spectrum BOAs, DOE waste generators have the opportunity to participate in this nationwide privatization initiative for treating and disposing of legacy waste and currently generated mixed low-level waste.

On April 30, 2002, DOE/PGDP shipped twelve containers (2124 kg) of photographic fixer solution (PA-W036) and twelve containers (2343 kg) of developer solution/photo chemicals (PA-B049) to the Perma-Fix Environmental Services facility in Gainsville, Florida for treatment. A letter from DOE to the Cabinet, "Site Treatment Plan Milestone for DOE-PGDP Waste Targeted for Commercial Treatment – Table 5 (Photographic

Fixes and Developers)", issued on May 8, 2002, served as notice that DOE/PGDP had complied with the terms of the Agreed Order. All of the Table 5 wastestreams were shipped off-site for treatment/disposal by the May 1, 2002, extended deadline.

A total of 57 containers of acids and bases from wastestreams PA-A006, PA-B006, PA-C006, PA-D006, PA-J006, PA-K006, PA-M006, PA-A017and PA-A048 (STP Tables 7.1 and 7.2), representing 4184 kg were repackaged and shipped to Perma-Fix for treatment on November 25, 2002. The hydrofluoric acid and overpacked empty container (202 kg) were shipped to Perma-Fix/M&EC. The other 55 containers of corrosive waste were shipped to Perma-Fix of Florida, Inc. in Gainsville, Florida.

There were two shipments of liquid wastes from Table 2 to the TSCA Incinerator during 2002. TCSA 01-02 shipped to the TSCA incinerator on August 28, 2002. In addition to PCB mixed waste, the shipment contained approximately 2096 kg of vent duct oil (PA-B052), 65 kg of C-404 landfill leachate (PA-A039), 58 kg of flammable solvents and five kg of Screen Print Ink (PA-G001). On September 27, 2002, TSCA 02-01 was shipped to the TSCA Incinerator. The shipment contained approximately 3100 kg of compressor oil and ventilation duct oil (PA-B052) and 6715 kg of C-404 landfill leachate (PA-A039).

The Six-Phase Soil Heating Project is an environmental restoration technology demonstration project being conducted at one of DOE/PGDPs major TCE sources. The Six-Phase Heating Project involves drilling and installing peizometers, electrodes and vapor extraction piping into the area around the former TCE storage tank and transfer station. This project generated 350 drums of mixed waste consisting of soil, drilling mud, and personal protective equipment. Based on historical data and new data generated during the installation of equipment, these drums were profiled and approved by Perma-Fix for treatment and disposal. The waste is being treated by thermal desportion at Perma-Fix to remove and capture the organic portion of the waste so that it will meet LDR standards. An initial shipment of 200 containers (51,653 kg) occurred on November 26, 2002. The remaining containers will be shipped during the second quarter of FY2003 because of a backlog of containers in storage at Perma-Fix.

The batteries, rectifiers and compressed gas cylinders, previously shown on Table 10 have been shipped to various commercial facilities for recycling/treatment/disposal prior to the July 31, 2002, compliance date. A notice was sent to the Cabinet that this was completed as required by the Agreed Order.

1.4 SCHEDULE OF UPCOMING ACTIVITIES

DOE/PGDP is currently included in Oak Ridge's Broad Spectrum contracts awarded to Perma-Fix Environmental Services, Inc. (formerly Materials and Energy Corporation) and WCS for mixed solids and sludges waste treatment. A broad range of PGDP solids and sludges can be treated under the awarded contract as long as these fall into one of the Broad Spectrum categories. PGDP has successfully shipped waste for treatment to a Broad Spectrum contract vendor and plans to pursue treatment of other wastes under these Broad Spectrum contracts in 2003.

DOE/PGDP will submit characterization information to the TSCA Incinerator and TDEC for newly generated STP Table 3.1 liquids and STP Table 3.2 soft solids to be included in several shipments to the TSCA Incinerator. These shipments are pending submittal of all the required profiles and approval by the TSCA Incinerator and the TDEC. The Burn Plan for FY03 includes two shipments of liquids and several loads of soft solids (approximately 600 containers) from Tables 3.1 and 3.2.

The remaining 150 containers of soil and debris (PA-G038 and PA-J038) from the Six-Phase Project (see Section 1.3) are scheduled to be shipped to Perma-Fix during the second quarter of FY03.

Approximately 140 cubic meters of MLLW (approximately 500 containers) are scheduled for shipment to Perma-Fix for treatment and disposal. A review of historical data has been completed. Approximately half of the containers have sufficient analytical data for profiling. A SAP will be developed for the remaining containers. Profiles will be submitted for approval in anticipation that the container will be ready to ship by the end of CY03.

A contract has been awarded for the on-site treatment of mixed waste. Currently, approximately 32 cubic meters (133 containers) of mixed waste identified in the STP are slated for on-site treatment, including the MTRU. A work plan has been submitted and approved. Preparations for this project will begin during the last quarter of FY03.

DOE/PGDP is planning to ship at least 40 cubic meters of newly generated mixed waste during 2003. A large part of this waste is debris that will be shipped to Envirocare of Utah for treatment and disposal.

Finally, the four containers of ash receiver ash residue previously returned from Envirocare (because they did not meet the Envirocare WAC based on the underlying hazardous constituent standard for nickel) will be shipped to Envirocare for further treatment and disposal during FY03.

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2. PROJECTION OF DIFFICULTIES FOR STP COMPLIANCE

No compliance dates are being projected as being missed at this time.

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3. DOE FUNDING FOR APPROVED STP ACTIVITIES

The funding for PGDP's STP activities for FY03 is approximately $8,391,000. At this time, there are no funding issues likely to significantly impact any compliance dates mandated by the STP.

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4. STP AMENDMENTS OR REVISIONS

Initially the Table 5 wastes (Photographic fixers and developers) were to have been shipped off by January 31, 2002. These wastestreams had been included in with the acids and bases group for shipment to ATG. However, due to financial difficulties ATG was forced to cease operation prior to shipment of the waste. An extension was requested and the Cabinet granted an extension until May 1, 2002, for the treatment/disposal of these wastestreams. The waste shipped on April 30, 2002 to meet the compliance milestone as amended by the extension.

Surface radiological characterization was completed for the wastestreams listed in Table 10. As a result of this characterization, those wastestreams that were found to be hazardous only were shipped for recycling, treatment and/or disposal by July 31, 2002, and have been deleted from the STP. The mixed waste was addressed in the STP-Table 10 Treatment and Disposal Plan and Schedule for Compliance, submitted on January 28, 2002. While there are viable options for the MLLW streams at the present time. DOE/PGDP is continuing to search for new options for the MLLW streams that do not presently have a means of treatment/disposal. MLLW with viable options have been moved to the appropriate table within the STP.

Several changes have occurred since the original STP was approved. Some options are no longer available and new options are now available. The wastestreams that are easier to handle have been shipped to other facilities for treatment/disposal and what remains are more challenging. In light of these changes, DOE/PGDP initiated discussion with KDEP concerning revising/updating the original STP.

DOE/PGDP proposed a revised STP that was submitted with the 2001 Annual Update Report. These proposed changes/revisions include updating the tables to reflect current wastestreams and volumes and adding detail to the treatment options to reflect DOE's current treatment plans. DOE/PGDP is continuing to operate under the existing STP until the revision has been approved.

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5. NEW WASTESTREAMS/ADDITIONAL WASTE CHARACTERIZATION INFORMATION

Based on reviews of information related to site characterization, and a more comprehensive understanding of the groundwater plume at Paducah, it has been determined that TCE present in the groundwater originated from sources that would now be classified as listed under the RCRA regulations. F and U listed codes for TCE (F001, F002 and/or U228) have been applied to the newly generated wastestreams that resulted from remediation activities involving groundwater. Also, the F039 code has been added to the landfill leachate for the C-404 landfill. Table B.1 reflects changes to hazardous waste codes for each wastestream as a result of additional waste characterization information obtained through waste characterization activities or as a result of hazardous waste code deletions due to waste shipment or treatment. All of the newly generated wastes for 2002 were placed into wastestreams that have previously existed and been identified in the STP Tables.

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6. MIXED WASTE MEETING LDRs

Some of the newly identified MLLW streams that were generated as a result of the F001, F002 and U228 codes are known as a result of characterization activities to meet the treatment standards of the LDRs. However, these wastes are not listed in the Table B-2 at the present time pending resolution of the enforcement action. The wastestreams shown in Table B-2 meet the treatment standards in the LDRs as a result of treatment activities.

Table B-1. Additional waste characterization information

Waste Stream	2001 STP EPA Codes	2002 STP EPA Codes	Reason for Change
PA-A006	D001	D002 D004 D005 D006 D007 D008 D009 D010 D011 D018 D027 D030 D032 D035 D039 F001 F002 F003 F005 F007 **F039** U002 U075 U080 U159 U211 U226 U227 U228	Newly generated and/or newly identified waste contaminated with TCE.
PA-G038		**F001 F002 U228**	Newly generated and/or newly identified waste contaminated with TCE.
PA-J038	F001 F002 F003 F005 D006 D007 D008 U002 U075 U080 U159 U211 U226 U227 U228	D006 D007 D008 F001 F002 F003 F005 F007 **F039** U002 U075 U080 U159 U211 U226 U227 U228	Newly generated and/or newly identified waste contaminated with TCE.
PA-A039		**D040 F001 F002 F039 U228**	Newly generated and/or newly identified waste contaminated with TCE.

Bolded EPA codes denote additional EPA codes added as result of wastestream characterization.

Table B-2. The DOE/PGDP waste determined to meet LDR in 2002

Waste Stream	Container #	RFD #	Description	EPA Codes	Reason	Year
PA-I048	1031037-01	1031037	Sodium Azide in Concrete	P105	Treated to meet LDR	2001
PA-W046	55558-01	55558	Treated Cyanide Waste	F007	Treated to meet LDR	2001
PA-W046	55558-02	55558	Treated Cyanide Waste	F007	Treated to meet LDR	2001
PA-C011	102420-01	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-02	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-03	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-04	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-05	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-06	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-07	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-08	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-09	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-10	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-11	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-12	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-13	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-14	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-15	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-16	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-17	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-17	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-18	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-19	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-20	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-21	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-22	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-23	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-24	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-25	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-26	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-27	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-28	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-29	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-30	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-31	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-32	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-33	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-34	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	102420-35	102420	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	105027-01	105027	C-410/C-420 Wastewater	D006	Treated to meet LDR	2002

Table B-2. The DOE/PGDP waste determined to meet LDR in 2002

Waste Stream	Container #	RFD #	Description	EPA Codes	Reason	Year
PA-C011	105027-02	105027	C 410/C 420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	105027-03	105027	C 410/C 420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	105061-01	105061	C 410/C 420 Wastewater	D006	Treated to meet LDR	2002
PA-C011	105061-02	105061	C 410/C 420 Wastewater	D006	Treated to meet LDR	2002

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