

**ASSIGNMENT PAGE**

**RESOURCE CONSERVATION AND RECOVERY ACT  
HAZARDOUS WASTE MANAGEMENT PERMIT  
DOCUMENT**

Manual Number: 7

*SHARON HANKINS. YLF 9-24-01*

Assigned To: ~~Susan Nelson~~, Document Center

Date: 2-5-97

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## USERS GUIDE TO THE RCRA HAZARDOUS WASTE MANAGEMENT PERMIT

The RCRA hazardous waste permit issued to the Paducah Gaseous Diffusion Plant in 1991 is comprised of two parts. The first part is issued by the Kentucky Division of Waste Management (KDWM) is called the Hazardous Waste Management Permit and consists of five volumes. The second part is the Hazardous and Solid Waste Amendments (HSWA) Permit issued by the Environmental Protection Agency and consists of one volume. The full RCRA permit consists of both the KDWM portion and the EPA portion. For purposes of implementing working, usable, up-to-date controlled copies, the permit is divided into six volumes.

- Volume One - KDWM Permit Conditions and Authority
- Volume Two - Attachments I - IX
- Volume Three - Appendix B and Appendix C Drawings
- Volume Four - Appendix C Drawings continued
- Volume Five - Appendix D and Appendix E
- Volume Six - HSWA Permit

Modifications to the hazardous waste permit have occurred to both the KDWM portion and the EPA portion of the permit. Since the KDWM portion of the hazardous waste management permit covers corrective actions, treatment, storage, and disposal of hazardous waste, and the EPA portion covers corrective action, modifications have occurred that have affected only the KDWM section. Therefore, modification numbers do not correspond between the EPA's portion and KDWM's portion. Modifications to the hazardous waste permit are summarized in Table 1.0.

Where possible, modified or revised sections of the permit have been incorporated into the appropriate volume. If a section was modified and the change could not physically be inserted, a notation is made by the side of the condition affected as to the date modified and which modification to review for the correct language. Modifications are located in the front of Volumes One and Volumes Six and are specific to the KDWM portions or the EPA portion, respectively.

**TABLE 1.0**

<b>EPA HSWA Modification #</b>	<b>KDWM Modification #</b>	<b>Date of Issuance</b>	<b>Modification Type</b>	<b>Main Subject of Modification</b>
	1	February 3, 1992	Minor	Correct typographical errors and grant interim compliance extension.
	2	September 30, 1992	Major	Post-closure of the C-404 low-level radioactive waste landfill; revise management procedures, personnel training programs, and inspections schedules.
1	3	August 4, 1992	Minor	Revise RCRA Facility Investigation (RFI) Workplan Schedule
2	4	March 11, 1993	Minor	Change groundwater monitoring methods, frequency and reporting dates; add several Solid Waste management Units and Waste Area Groupings; revise compliance schedules.
3	5	June 30, 1993	Minor	Add United States Enrichment Corporation (USEC) as co-operator.
	6	February 1, 1994	Minor	Extend compliance schedule for RFI Workplan
4*	7	March 30, 1995	Major	Allow wastes generated at PGDP to be accepted back on site; withdraw treatment units that were never used; construct a hazardous waste storage building; consolidate quarterly reports into one, and add several SWMUs to RFI list. *(The HSWA modification only addressed consolidating the quarterly reports into one.)
	8	June 26, 1995	Major	Require submittal of final report for interim corrective measures, remedial design and describe remedial action and schedule.
	9	August 30, 1995	Minor	Revises interim corrective measures for the Northeast

<b>EPA HSWA Modification #</b>	<b>KDWM Modification #</b>	<b>Date of Issuance</b>	<b>Modification Type</b>	<b>Main Subject of Modification</b>
				Plume; Reduces number of sampling aliquots from the C-404 landfill.
5*	10	March 4, 1996	Major	Removes USEC as co-operator from the permit, changes name of Martin Marietta to Lockheed Martin, approves "no further action" for seven SWMU's, changes corrective measures workplan to corrective measures study. *The HSWA modification only removed USEC as cooperator. This was effective September 5, 1997.
	11	May 7, 1996	Minor	Incorporates six new waste codes, revises Attachment II "General Waste Handling Procedures, and other administrative changes.
	12	January 17, 1997	Major	Incorporates previous modification language, removes closed units, and updates/revises Attachments I-IX, where necessary.
	13	September 26, 1997	Major	Corrects text previously approved in Modification 12, revises Attachment IX remedial actions, and other corrections to text.
6*	14	April 1, 1998	Major	Changes Cooperator on permit from Lockheed Martin Energy Systems, Inc. to Bechtel Jacobs Company, LLC. Approves Revision 8 of the Contingency Plan.
	15	August 23, 1999	Major	Allows stabilization in containers to occur, removes C-746-R from permit, updates Appendix A, B, C, D, revises numerous attachments.

\* Minor Modification by EPA.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 4

ATLANTA FEDERAL CENTER  
61 FORSYTH STREET, SW  
ATLANTA, GEORGIA 30303-8909

*cc: C. Staw  
W: Hoide  
D. Geminshi  
a.*

4WD-RCRA

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

*Page  
Inserted  
in permit*

*JCM/ao 4/22/98*

Mr. Jimmie C. Hodges, Paducah Site Manager  
U.S. Department of Energy (DOE)  
Paducah Site Office  
P.O. Box 1410  
Paducah, Kentucky 42002-1410

**SUBJ:** Acceptance of **Class I** Permit Modification No. 6  
U.S. DOE/LMES, Inc./BJC  
Paducah Gaseous Diffusion Plant (PGDP)  
Paducah, Kentucky  
EPA I.D. No. KY8 890 008 982

Dear Mr. Hodges:

This letter is notification that the Environmental Protection Agency (EPA) has approved the Hazardous and Solid Waste Amendments (HSWA) Class I permit modification (in accordance with 40 CFR 122.63) requested by letter dated February 11, 1998 (U.S. DOE Paducah to EPA Region 4). Copies of this letter are also being sent to Mr. Jimmy C. Massey of the Lockheed Martin Energy Systems, Inc. (LMES) and to Mr. Joseph F. Nemec of the Bechtel Jacobs Company (BJC).

In the DOE Paducah letter referenced above, a HSWA permit revision was requested to effect a transfer of responsibilities from LMES to BJC as co-operator for the HSWA permit. The transfer to be effective April 1, 1998. It is stipulated in 40 CFR 270.40(b) that changes in the ownership or operational control of a facility may be made as a Class I modification with prior written approval of the Director (in accordance with 40 CFR 270.42). The new owner or operator must submit a revised permit application at least ninety (90) days prior to the scheduled change. A written agreement containing the specific date for the transfer of permit responsibilities from the current to the new permittee must also be submitted. The stipulation concerning compliance with the requirements of 40 CFR Part 264, Subpart H (Financial Requirements) is not applicable in this instance as DOE Paducah is a Federal facility.

Attached to the DOE Paducah permit revision request were a revised Part A permit application, dated February 9, 1998, as well as, a written agreement transferring co-operator responsibilities under the DOE Paducah Hazardous Waste Management Permit, effective April 1, 1998. The Part A application was not submitted in a timely manner, (i.e., it was submitted only forty-

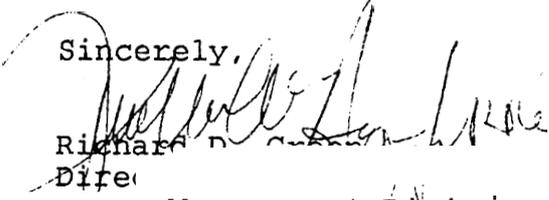
nine(49)days, rather than ninety (90) days, prior to the **sheduled change**). However, the **Part A application was deemed complete, and the permit** revision process initiated upon **receipt** of the **revision package**.

**As the requirements for a Class I HSWA permit modification with prior approval have been satisfactorily met, the HSWA permit cover page has been modified to reflect the removal of LMES from the permit as a co-operator, and the addition of BJC to the permit as a co-operator.**

Pursuant to 40 CFR 270.42, Class I permit modifications, which include changes in ownership or operational control, require **prior** Agency approval and notification by **the** Permittee to all persons on **the** facility mailing list and to appropriate state and local governments. For all Class I modifications which **require** prior Agency approval, the notification by **the** Permittee must be made within **ninety** (90) calendar days of the date **EPA** approves the request in writing.

Questions or comments concerning this matter should be directed to Mr. Larry E. Fitchhorn, P.E., of the North Programs Section, RCRA Programs Branch, at (404) 562-8497.

Sincerely,

  
Richard D. Dife

Dife

Management Division

Enclosure

cc: Mr. Tuss Taylor, KYDEP (FFOU)  
Mr, Mike Guffey, KYDEP (FFOU)  
Mr. Jimmy C. Massey, Site Manager, LMES  
Mr. Joseph F. Nemec, BJC



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 4  
ATLANTA FEDERAL CENTER  
100 ALABAMA STREET, S.W.  
ATLANTA, GEORGIA 30303-3104

SEP 10 1997

SEP 5 1997

4WD-RCRA

CERTIFIED MAIL  
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*Permit cover  
page inserted.*

Mr. Jimmie C. Hodges, Paducah Site Manager  
U.S. Department of Energy  
Paducah Site Office  
P.O. Box 1410  
Paducah, Kentucky 42002-1410

Mr. Jimmie C. Massey, Site Manager  
Environmental Management and Enrichment Facilities  
Lockheed Martin Energy Systems, Inc.  
761 Veterans Avenue  
Kevil, Kentucky 42053

Mr. T. Michael Taimi  
Environmental Assurance and Policies Manager  
United States Enrichment Corporation  
Two Democracy Center  
6903 Rockledge Drive, Third Floor  
Bethesda, Maryland 20817

SUBJ: Acceptance of Class I Permit Modification No. 5  
U.S. DOE/LMES, Inc./USEC  
Paducah Gaseous Diffusion Plant (PGDP)  
Paducah, Kentucky  
EPA I.D. No. KY8890 008 982

Dear Gentlemen:

This letter is notification that the Environmental Protection Agency (EPA) has approved the HSWA Class I permit modification (in accordance with 40 CFR § 122.63) requested by letter dated October 10, 1996 (U.S. DOE Paducah to EPA Region 4).

Martin Marietta Energy Systems, Inc., which is listed as a co-operator on the HSWA permit, has changed its name to Lockheed Martin Energy Systems, Inc. The permit cover page has been modified to reflect this name change.

On July 1, 1993, the United States Enrichment Corporation (USEC) began operating the uranium enrichment process at the PGDP pursuant to a lease with the U.S. Department of Energy (DOE). Although the USEC contended that its hazardous waste operations at the PGDP constituted RCRA generation only, the corporation nevertheless agreed at EPA's request that the RCRA permit for the PGDP (which includes the Federal HSWA permit) be modified to include USEC as a co-operator. Accordingly, on August 4, 1993, EPA modified the HSWA permit (Class I Permit Modification No. 3) to include USEC as a co-operator with the US DOE and the then Martin Marietta Energy Systems, Inc.

On October 27, 1995, DOE Paducah sent the Kentucky Division of Waste Management and EPA Region 4 a revised Part A application for the DOE PGDP. Among the changes to the Part A application was removal of USEC from the permit as a co-operator. Only the U.S. DOE and Lockheed Martin Energy Systems, Inc. were listed as co-operators. On March 4, 1996, the final version of Modification #10 to the Kentucky Hazardous Waste Permit for the PGDP was transmitted by the Kentucky Division of Waste Management to DOE Paducah. Modification #10 included removal of USEC from the permit, leaving US DOE and LMES, Inc. as co-operators. On October 10, 1996, DOE Paducah submitted to EPA Region 4 (following revisions to previous requests dated March 25 and May 10, 1996) a request for Minor Modification No. 5, which included removal of USEC from the Federal HSWA permit as a co-operator.

EPA has reviewed the RCRA Operation Plan for PGDP, dated February 1995. USEC operates 90-day accumulation areas at the facility. While USEC controls access to the site, DOE and USEC maintain access control to their respective waste management units (i.e. the DOE permitted storage areas and the USEC 90-day accumulation areas). Wastes that USEC cannot ship offsite within ninety (90) days are transferred to DOE for temporary storage. While USEC maintains ownership of its transferred wastes, DOE assumes control when the wastes enter its permitted storage areas. Wastes are stored and managed in accordance with DOE's hazardous waste permit. The services provided by USEC to DOE related to waste management activities at permitted units consists solely of providing, through Lockheed Martin Utilities Services (LMUS), laborers who are under the direct supervision of DOE/LMES and who have no managerial functions. All decisions with respect to storage and handling of wastes within the DOE storage facilities are made by DOE and/or LMES. In a letter dated July 31, 1995, from DOE Paducah to the Kentucky Division of Waste Management, it was stated that the PGDP RCRA Operations Plan prepared by USEC accurately depicted the current RCRA activities at Paducah. It was further asserted that DOE would take appropriate corrective measures in the event of a mishap in the DOE storage areas. Finally, it was stated that LMUS provided the PGDP site with all emergency service required to respond to any emergency, including cleanup of environmental spills.

Based on the information discussed in the preceding paragraph, EPA agrees that USEC is a RCRA generator, not an operator of a hazardous waste facility. Therefore, the HSWA permit cover page has been modified to reflect removal of USEC from the permit as a co-operator.

Pursuant to 40 **CFR** §270.42, Class I permit modifications, which include changes in ownership or operational control, require **prior** Agency approval and notification by the Permittee to all persons on the facility mailings list and to appropriate state and local governments. For all Class I modifications which require prior Agency approval, the notification by the Permittee must be made within ninety (**90**) calendar days of the date **EPA** approves the request in writing.

— Questions or comments concerning this matter should be directed to Mr. Larry E. Fitchhorn, P.E. of the North Programs Section, RCRA Programs Branch, at **(404) 562-8497**.

Sincerely,

  
Richard D. Green

Acting Director  
Waste Management Division

Enclosure

cc: Mr. Robert Sleeman, DOE- Oakridge  
Mr. Tuss Taylor, KYDEP (Federal Facilities Oversight Unit (**FFOU**))  
Mi. Randall Thomas, KYDEP (FFOU)



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11/28/94

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.  
ATLANTA, GEORGIA 30365



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NOV 17 1994

4WD - FFB

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Mr. Jimmie C. Hodges, Facility Manager  
U.S. Department of Energy  
Paducah Site Office  
P.O. Box 1410  
Paducah, Kentucky 42001

Mr. Jimmy C. Massey, Plant Manager  
Martin Marietta Energy Systems, Inc.  
P.O. Box 1410  
Paducah, Kentucky 42001

COPY

Mr. Robert C. Sleeman, Manager  
Enrichment Restoration Programs  
U.S. Department of Energy  
Oak Ridge Operations  
P.O. Box 2001  
Oak Ridge, Tennessee 37831-8541

SUBJ: Class I Permit Modification  
U.S. DOE and Martin Marietta Energy Systems, Inc.  
Paducah Gaseous Diffusion Plant, Paducah, KY  
**EPA ID No. KY8 890 008 982**

Gentlemen:

The Environmental Protection Agency (EPA) is hereby approving the permit modification requested (attached) in your letter from Mr. Jimmie Hodges, dated August 12, 1994, This is Class I modification pursuant to 40 CFR 270.42 of the Resource Conservation and Recovery Act (RCRA).

In general, your request is to consolidate all Quarterly Reports into a single date each quarter. Presently, the Quarterly Reports for various actions at Solid Waste Management Units (SWMUs) have individual submittal dates throughout the quarter. This modification will authorize a consolidated reporting date for all Quarterly Reports on the 30th day of the first month of each Quarter.

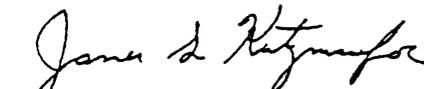
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This modification, in conjunction with the hazardous waste permit modification issued by the Kentucky Department for Environmental Protection (KDEP), and the previously issued RCRA and Hazardous and Solid Waste Amendments (HSWA) permits, constitute the full modified permit for this facility. KDEP has forwarded to *you* its permit modification under a separate cover. This letter is part of the HSWA portion of the Paducah Gaseous Diffusion Plant's (PGDP's) RCRA permit and should be kept with the facility's RCRA permit.

In accordance with the provision of 40 CFR 270.42 (a) (ii), you should notify all persons on the PGDP facility mailing list of EPA's approval within ninety (90) days after receipt of this letter.

If you have questions, please contact Mr. Tony Able of my staff at 404-347-3555 extension 6429.

Sincerely yours,



Joseph R. Franzmathes  
Director

Waste Management Division

Enclosure

cc: Robert Edwards, DOE-PGDP  
Arnold Guevara, DOE-HQ  
John W. Morgan, MMES  
Pat Haight, KDEP

Attachment I

NOV 17 1994

Condition II.D.3.a. currently states:

"If the time required to conduct the RFI(s) is greater than one hundred and eighty (180) calendar days, the Permittee shall provide the RA with quarterly RFI Progress Reports (90-day intervals) beginning ninety (90) calendar days from the start date specified by the RA in the RFI Work Plan approval letter. ~~The progress reports shall contain the following information a&a minimum:~~"

Condition II.D.3.a should be revised to state:

If the time required to conduct the RFI(s) **is** greater than one hundred and eighty (180) calendar days, the Permittee **shall** provide the RA with quarterly progress reports. These reports shall be submitted to the RA on or before the 30th day following the end of each fiscal Year quarter (i.e., January 30, April 30, July 30, and October 30). The progress reports may be combined for multiple projects and shall contain the following information at a **minimum:**

Condition II.E.3.a. currently states :

"If the time required for completion of interim **measures is** greater than one year, the Permittee shall provide EPA with quarterly **progress reports** (ninety (90)-day intervals) beginning ninety (90) calendar days from the start date specified by the RA in the IM Work Plan approval letter. The progress reports shall contain the following information at a minimum:"

Condition II.E.3.a. should be revised to state:

If the time required for completion of interim measures **is** greater **than one year**, the Permittee shall provide EPA with quarterly progress reports. These reports shall be submitted to the RA on or before the 30th day following the end of each fiscal year quarter (i.e., January 30, April 30, July 30, and October 30). The progress reports may be combined for multiple projects and shall contain the following information at a **minimum:**

EPA ID NO- KY8 890 008 982

Class I Permit Modification



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
 REGION IV

345 COURTLAND STREET, N.E.  
 ATLANTA, GEORGIA 30365

AUG 04 1993

4WD-RCRA

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Mr. Don Booher, Site Manager  
 U.S. Department of Energy  
 Paducah Site Office  
 P.O. Box 1410  
 Paducah, Kentucky 42001

*Approved into permit*

Mr. Steve Polston, Plant Manager  
 Martin Marietta Energy Systems, Inc.  
 P.O. Box 1410  
 Paducah, Kentucky 42001

Mr. Robert C. Sleeman, Manager  
 Enrichment Restoration Program  
 U.S. Department of Energy  
 Oak Ridge Operations  
 P.O. Box 2001  
 Oak Ridge, TN 37831-8541

Mr. William H. Timbers, Jr.  
 Transition Manager  
 United States Enrichment Corporation  
 2300 M Street, N.W. 5th Floor  
 Washington, D.C.

Re: Acceptance of Class I Permit Modification No. 3  
 U.S. DOE/MMES, Inc./USEC  
 Paducah Gaseous Diffusion Plant (PGDP), Paducah, Kentucky  
 EPA ID No. KY8 890 008 982

Dear Gentlemen:

This letter is notification that the Environmental Protection Agency (EPA) has approved the HSWA Class I permit modification requested by letter dated June 28, 1993, (Mr. Timbers to Mr. Guinyard).

EPA understands that as of July 1, 1993, the United States Enrichment Corporation (USEC), pursuant to the Energy Policy Act of 1992, will began operating the uranium enrichment process at the PGDP pursuant to a lease with the US DOE. Although the USEC contends that its hazardous waste operations at the PGDP constitute RCRA generation only, the USEC has requested that the RCRA permit for the PGDP (which includes the HSWA permit rider) be modified to include USEC as a co-operator. Thus, to ensure

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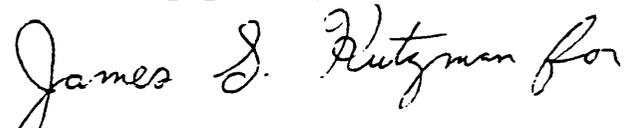
that USEC's operations at the PGDP remain legal, EPA is modifying the HSWA permit to include the USEC as a co-operator with the US DOE and the Martin Marietta Energy Systems, Inc.

The modification to the HSWA permit is reflected as bold and underlined print in the revised cover page to the "HSWA Portion of the RCRA Permit". This dated cover page is enclosed and should be attached to the facility's HSWA permit.

Pursuant to 40 CFR 270.42, Class I permit modifications, which include changes in ownership or operational control require prior Agency approval (verbally granted prior to July 1, 1993), and notification by the Permittee to all persons on the facility mailing list and appropriate State and local governments, For all Class I modifications which require prior Agency approval, the notification by the Permittee must be made within ninety (90) calendar days after EPA pre-approves the request in writing.

Questions or comments concerning this matter should be directed to Mr. Leo Romanowski, Jr., of the RCRA Permitting Section at 404/347-3433.

Sincerely yours,



~~Joseph R.~~ Franzmathes

Waste Management Division

Enclosure: HSWA Permit Cover Page

cc w/enc: Pat Haight, Director, KDEP

HSWA PORTION OF THE RCRA PERMIT

OWNER/OPERATOR  
U.S. Department of  
Energy  
Paducah Site Office  
P.O. Box 1410  
Paducah, KY 42001

CO-OPERATORS:  
Martin Marietta  
Energy Systems, Inc.  
United States Enrichment  
Corporation

I.D. Number KY8 890 008 982  
Permit Number KY8 890 008 982

Pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 USC §6901 et seq., commonly known as RCRA) and regulations promulgated thereunder by the U.S. Environmental Protection Agency (EPA) (codified and to be codified in Title 40 of the Code of Federal Regulations), a permit is issued to the U.S. Department of Energy (DOE), Martin Marietta Energy Systems, Inc. and the United States Enrichment Corporation (USEC), (hereafter jointly called the Permittee), who owns or operates a hazardous waste facility located at the Paducah Gaseous Diffusion Plant (PDGP) on 5600 Hobbs Road, in Paducah, Kentucky, latitude 37°06'55" North and longitude 88°45'45" West.

This Permit, in conjunction with the Hazardous Waste Management Permit issued by the State of Kentucky, constitutes the RCRA permit for this facility. The Permittee shall be required to investigate any releases of hazardous waste or hazardous constituents pursuant to this permit at the facility regardless of the time at which waste was placed in such unit and to take appropriate corrective action for any releases. The Permit also requires the Permittee to comply with all land disposal restrictions and organic air emission standards for process vents and equipment leaks applicable to this facility and to certify annually that on-site generation of hazardous waste is minimized to the extent practicable.

Permittee must comply with all terms and conditions of this permit and DOE must comply with the Administrative Consent Order (ACO) under CERCLA Sections 104 and 106. The ACO was signed by DOE and EPA and approved by the Department of Justice, with an effective date of November 23, 1988. This permit consists of the conditions contained herein (including those in any attachments) and applicable regulations contained in 40 CFR Parts 260 through 264, 266, 268, 270, and 124 as specified in the permit and statutory requirements of RCRA, as amended by the Hazardous and Solid Waste Amendments (HSWA) of 1984, P.L. 98-616. Nothing in this permit shall preclude the Regional Administrator from reviewing and modifying the permit at any time during its term in accordance with 40 CFR §270.41 and Appendix E, as contained herein.

This Permit is based on the premise that the information and reports submitted by the Permittee to date, and subsequent to issuance of this permit, are accurate. Any inaccuracies found in this information may be grounds for termination or modification of this permit in accordance with 40 CFR §270.41, §270.42, and §270.43 and potential enforcement action. The Permittee must inform EPA of any deviation from or changes in the information in the application which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

The authority to perform all actions necessary to issue, modify, enforce, or revoke this permit has been delegated by the Regional Administrator to the Waste Management Division Director.

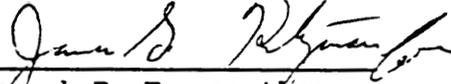
This Permit is effective as of August 19, 1991, and shall remain in effect until August 19, 2001, unless revoked and reissued, or terminated under 40 CFR §270.41 and §270.43 or continued in accordance with 40 CFR §270.51(a). All obligations for performance of Corrective Action are in effect until deemed complete by the Regional Administrator.

If any conditions of this permit *are* appealed in accordance with 40 CFR §124.19, the effective date of the conditions determined to be stayed in accordance with 40CFR §124.16 shall be determined by final agency action as specified under 40 CFR §124.19.

AUG 04 1993

August 4, 1993

Issued Date  
(Modification #3)



Joseph R. Franzmathes  
Director  
Waste Management Division



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

CI 93 002308

345 COURTLAND STREET, N E  
ATLANTA, GEORGIA 30365

MAR 17 1993

4WD-RCRA

**INFORMATION  
ONLY**

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Mr. Don Booher, Site Manager  
U.S. Department of Energy  
Paducah Site Office  
P.O. Box 1410  
Paducah, Kentucky 42001

Mr. Steve Polston, Plant Manager  
Martin Marietta Energy Systems, Inc.  
P.O. Box 1410  
Paducah, Kentucky 42001

Mr. Robert C. Sleeman, Manager  
Enrichment Restoration Program  
U.S. Department of Energy  
Oak Ridge Operations  
P.O. Box 2001  
Oak Ridge, TN 37831-8541

Re: Acceptance of Class I Permit Modification  
U.S. Department of Energy and Martin Marietta  
Energy Systems, Inc.  
Paducah Gaseous Diffusion Plant, Paducah, Kentucky  
EPA ID No. **KY8 890 008 982**

Dear Gentlemen:

This letter is notification that the Environmental Protection Agency (EPA) has approved with several minor changes the HSWA Class I permit modification requested by letter dated February 18, 1993, (Mr. Sleeman to Mr. Kutzman and Mr. Alauddin

EPA understands that the proposed permit modification includes the addition of eighty (80) newly identified SWMUs/AOCs, as well as, administrative changes and updated information to Appendices A-1, A-2, A-3 and A-5. Whereas proposed Appendix A-4 modifications include the addition of newly created and restructured Waste Area Groups (WAGs), re-prioritization of the schedule of investigation, and extension to the submission dates for the fifth (115 days) and sixth (90 days) series of phased RFI work plans. The modification to these appendices **are** reflected as **underlined** print in the revised **appendices**. These appendices are enclosed and should be attached to the facility's **HSWA permit**.

*Inserted into permit*

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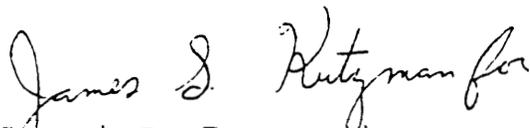
Note that EPA has made several minor changes to the appendices as follows :

- Appendix A-1(a): change description of SWMU 86 to C-631;  
add an asterisk (\*) to SWMU 157;
- Appendix A-1(b): delete SWMU 3 and the double asterisk  
(\*\*) explanation;  
delete "Groundwater";
- Appendix A-3: delete asterisk (\*) and explanation  
regarding SWMU 3

Pursuant to 40 CFR 270.42, Class I permit modifications, which include changes to the interim compliance due dates for RFI Workplan submittals, require prior Agency approval (granted above), and notification by the Permittee to all persons on the facility mailing list and appropriate State and local governments. For all Class I modifications which require prior Agency approval, the notification by the Permittee must be made within ninety (90) calendar days after EPA pre-approves the request.

Questions or comments concerning this matter should be directed to either Mr. Leo Romanowski, Jr., of the RCRA Permitting Section at 404/347-3433 or Mr. Jeff Crane of the Federal Facilities Branch at 404/347-3016.

Sincerely yours,



Joseph R. Franzmathes  
Director  
Waste Management Division

Enclosures: Appendices A-1, A-2, A-3, A-4 and A-5

cc/enclosure: Pat Haight, Director, KYDEP

## Appendix A-1

Solid Waste Management **Unit** Summary  
 U.S. DOE Paducah ~~Gaseous~~ Diffusion Plant  
 Paducah, Kentucky

A-1(a) List of Solid Waste Management **Units and Areas** of Concern **Requiring an RFI:**

<u>SWMU/AOC</u>	<u>DESCRIPTION</u>
<u>4</u>	<u>C-747 Contaminated Burial Ground</u>
<u>5</u>	<u>C-746-F Classified Burial Ground</u>
<u>6</u>	<u>C-747-B Burial Area</u>
<u>8</u>	<u>C-746-K Inactive Sanitary Landfill</u>
<u>11</u>	<u>C-400 Trichloroethylene Leak Site</u>
<u>12</u>	<u>C-747-A UF, Drum Yard</u>
<u>13</u>	<u>C-746-P Clean Scrap Yard</u>
<u>14</u>	<u>C-746-E Contaminated Scrap Yard</u>
<u>15</u>	<u>C-746-C Scrap Yard</u>
16	C-746-D Classified Scrap Yard
<u>17</u>	<u>C-616-E Sludge Lagoon</u>
<u>18</u>	<u>C-616-F Full Flow Lagoon</u>
<u>19</u>	<u>C-410-B HF Neutralization Lagoon</u>
<u>20</u>	<u>C-410-E HF Emergency Holding Pond</u>
<u>21</u>	<u>C-611-W Sludge Lagoon</u>
<u>22</u>	<u>C-611-Y Overflow Lagoon</u>
23	C-611-V Lagoon
<u>24</u>	<u>C-750-D Underground Storage Tank (UST)</u>
<u>26</u>	<u>C-400 To C-404 Underground Transfer Line</u>
<u>27</u>	<u>C-722 Acid Neutralization Tank</u>
<u>28</u>	<u>C-712 Acid Neutralization Lagoon</u>
<u>31</u>	<u>C-720 Compressor Pit Water Storage Tank</u>
<u>38</u>	<u>C-615 Sewage Treatment Plant</u>
<u>40</u>	<u>C-403 Neutralization Tank</u>
<u>41</u>	C-410-C Neutralization Tank
<u>42</u>	<u>C-616 Chromate Reduction Facility</u>
<u>47</u>	<u>C-400 Technetium Storage Tank Area</u>
<u>55</u>	<u>C-405 Incinerator</u>
58	N-S Diversion Ditch (outside security fence)
59	N-S Diversion Ditch (inside <b>security</b> fence)
60	C-375-E2 Effluent Ditch (KPDES 002)
61	C-375-E5 Effluent Ditch (KPDES 012)
62	C-375-SG Southwest Ditch (KPDES 009)
63	C-375-W7 Oil Skimmer Ditch (KPDES 008)

## Appendix A-1 (continued)

Solid Waste-Management Unit Summary  
 U.S. DOE Paducah Gaseous Diffusion Plant  
 Paducah, Kentucky

A-1(a) List of Solid Waste Management Units and Areas of Concern Requiring an RFI:

<u>SWMU/AOC</u>	<u>DESCRIPTION</u>
<u>66</u>	C-375-E3 Effluent Ditch ( <b>KPDES010</b> Ditch)
<u>67</u>	C-375-E4 Effluent Ditch (C-340 Ditch)
<u>68</u>	C-375-W8 Effluent Ditch ( <b>KPDES015</b> )
<u>69</u>	C-375-W9 Effluent Ditch ( <b>KPDES001</b> )
<u>70</u>	<u>C-333-A Vaporizer</u>
<u>71</u>	<u>C-337-A Vaporizer</u>
<u>75</u>	<u>C-633 PCB Spill Site</u>
<u>76</u>	C-632-B Sulfuric Acid Storage Tank
<u>77</u>	C-634-B H <sub>2</sub> SO <sub>4</sub> Storage Tank
<u>78</u>	<u>C-420 PCB Spill Site</u>
<u>82</u>	<u>C-531 Electric Switchyard</u>
<u>83</u>	<u>C-533 Electric Switchyard</u>
<u>84</u>	<u>C-535 Switchyard</u>
<u>85</u>	<u>C-537 Switchyard</u>
<u>86</u>	C-631 Pump <b>House</b> and <b>Cooling Tower</b>
<u>87</u>	C-633 Pump <b>House</b> and <b>Cooling Tower</b>
<u>88</u>	C-635 Pump <b>House</b> and <b>Cooling Tower</b>
<u>89</u>	C-637 Pump <b>House</b> and <b>Cooling Tower</b>
<u>90</u>	C-720 Underground Petroleum Naphtha Pipe
<u>91</u>	<u>UF, Cylinder Drop <b>Test Area</b></u>
<u>92</u>	<u>Fill Area for Dirt from the <b>C-420 PCB Spill Site</b></u>
<u>93</u>	Concrete Rubble Pile
<u>94*</u>	KOW Trickling Filter and Leach Field
<u>95*</u>	KOW Burn Area
<u>97</u>	<u>C-601 Diesel Spill</u>
<u>98</u>	<u>C-400 Basement <b>Sump</b></u>
<u>99</u>	<u>C-745 Kellogg <b>Building Site</b></u>
<u>100</u>	<u>Fire Training Area</u>
<u>101</u>	C-340 Hydraulic System
<u>102</u>	Plant Storm Sewer
<u>103-129</u>	<u>Concrete Rubble Pile(s)</u>
<u>130</u>	<u>C-611 550 Gallon Gasoline <b>UST</b></u>
<u>131</u>	<u>C-611 50 Gallon Gasoline <b>UST</b></u>
<u>132</u>	<u>C-611 2000 Gallon Oil <b>UST</b></u>

## Appendix A-1 (continued)

Solid Waste Management Unit Summary  
U.S. DOE Paducah Gaseous Diffusion Plant  
Paducah, Kentucky

A-1(a) List of Solid Waste Management **Units** and *Areas* of Concern **Requiring** an RFI:

<u>SWMU/AOC</u>	<u>DESCRIPTION</u>
<u>133</u>	<u>C-611 Unknown Size. Grouted UST</u>
<u>134</u>	<u>C-611 1000 Gallon Diesel/Gasoline Tank</u>
<u>135</u>	<u>C-333 PCB Soil Contamination</u>
<u>136</u>	<u>C-740 TCE Spill Site</u>
<u>137</u>	<u>C-746-A Inactive PCB Transformer Area</u>
<u>138</u>	<u>C-100 South Side <b>Berm</b></u>
<u>139</u>	<u>C-746-A1 Underground Storage Tank</u>
<u>140</u>	<u>C-746-A2 Undermound Storage Tank</u>
<u>145</u>	<u>Residential/Inert Landfill Borrow Area</u>
<u>146-152</u>	<u>Concrete Rubble Pile(s)</u>
<u>153</u>	<u>C-331 PCB Soil Contamination (West)</u>
<u>154</u>	<u>C-331 PCB Soil Contamination (Southeast')</u>
<u>155</u>	<u>C-333 PCB Soil Contamination (West)</u>
<u>156</u>	<u>C-310 PCB Soil contamination (West Side)</u>
<u>157</u> *	<u>KOW Toluene Spill Area</u>
<u>158</u>	<u>Chilled Water Svstem Leak Site</u>
<u>159</u>	<u>C-746-H3 Storage Pad</u>
<u>160</u>	<u>C-745 Cylinder Yard Spoils Area (<b>PCB</b> Soils)</u>
<u>161</u>	<u>C-743-TO1 Trailer Site (Soil Backfill)</u>
<u>162</u>	<u>C-617-A Sanitary Water Line (Soil Backfill)</u>
<u>163</u>	<u>C-304 Bldg/HVAC Piping Svstem (Soil Backfill)</u>
<u>164</u>	<u>KPDES Outfall Ditch <b>017</b> Flume (Soil Backfill)</u>
<u>165</u>	<u>C-616-L Pipeline and Vault Soil Contamination</u>
<u>166</u>	<u>C-100 Trailer Complex Soil contamination</u>
<u>167</u>	<u>C-720 Whiteroom Sump</u>
<u>168</u>	<u>KPDES Outfall Ditch <b>013</b></u>
<u>169</u>	<u>C-410-EHF Vent Surge Protection Tank</u>
<u>170</u>	<u>C-729 Acetvlene Building: Drain Pits</u>
<u>171</u>	<u>C-617-A Lagoons</u>
<u>172</u>	<u>C-726 Sandblasting Facility</u>
<u>175</u>	<u>Concrete Rubble Pile (28)</u>

## Appendix A-1 (continued)

A-1(b) List of Solid Waste Management Units and Areas of Concern suspected of contributing to off-site releases and currently undergoing a prioritized RFI investigation, focused feasibility study (FS/CMS), proposed plan, and interim/final record of decision under the CERCLA 104 and 106 Administrative Consent Order.

<u>SWMU/AOC</u>	<u>DESCRIPTION</u>
1	C-747-C Oil Landfarm
2	C-749 Uranium Burial Ground
7	C-747-A Burial Ground
30	C-747-A Bum Are3
32	C-728 Clean Waste Oil Tank
33	C-728 Motor Cleaning Facility
56	C-540-A PCB Staging Area
57	C-541-A PCB Waste Staging Area
64	Little Bayou Creek
65	Big Bayou Creek
74	C-340 PCB Transformer Spill Site
79	C-611 PCB Spill Site
80	C-540-A PCB Spill Site
81	C-541 PCB Spill Site

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\* Units 94 and 95 are facilities that were a part of the Kentucky Ordnance Works, which was a munitions production plant during World War II. **These** facilities were never used by PGDP. They are included with the **PGDP** SWMU list because they are within the existing DOE property boundary. A preliminary environmental investigation is currently being conducted at these SWMUs by the U.S. **Army** Defense Environmental Restoration Program.

## ..Appendix A-2

List of Solid Waste Management **Units** and **Areas** of Concern that Require No Further Investigation at this **time**:

<u>SWMU No.</u>	<u>SWMU Description</u>
<u>9**</u>	C-746-S Residential Landfill
10**.	C-746-T Inert Landfill
29	C-746 TRU Storage Area
34	<b>C-746-M</b> PCB Waste Storage Area
35	C-337 PCB Waste Storage Area
36	C-337 PCB Waste Staging Area
37	C-333 PCB Waste Staging Area
39	C-746-B PCB Waste Storage Area
48	C-400-A Gold Dissolver Storage Tank
52	C-400 Waste Decontamination Tanks
53	C-400 NaOH Precipitation Tank
54	C-400 Degreaser Solvent Recovery Unit
72*	C-200 Underground Gasoline Tanks (UST)
73*	C-710 Underground Gasoline Tanks (UST)
96	Cooling Tower Wood Scrap Pile
142*	C-750-A 10,000-Gallon Gasoline UST
143*	C-750-B 10,000-Gallon Diesel <b>UST</b>
173	<u>C-746-A Trash Sorting Facility</u>
174	<u>C-745-K Low Level Storage Area</u>

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\* Currently being addressed under the Commonwealth of Kentucky Underground Storage Tank (UST) program.

\*\* These SWMUs are permitted under a State of Kentucky Subtitle D Solid Waste Permit. Subtitle D contains provisions for groundwater monitoring and closure

## APPENDIX A-3

List of Solid Waste Management Units which are being ~~regulated by the State's portion of the RCRA permit:~~

<u>SWMU No.</u>	<u>PGDP Facility No.</u>	<u>SWMU Description</u>
3	C-404	Low-Level Radioactive Waste Burial Ground
<del>25</del>	<del>C-750-C</del>	<del>1000-Gallon Waste Oil Tank</del>
43	C-746-B	Waste Chemical Storage Area
44	c-733	Hazardous Waste Storage Area
45	C-746-R	Waste Solvent Storage Area
46A	C-746-Q	Hazardous and L.L. Mixed Waste Storage Building
46	C-409	Hazardous Waste Pilot Plant
49	C-400-B	Waste Solution Storage Tank
50	<del>c-400-c</del>	<del>Nickel Stripper Evaporation Tank</del>
51	C-400-D	Lime Precipitation Tank
141	<del>C-720</del>	<del>Inactive TCE Degreaser Unit</del>
144	C-746-A	Hazardous and Mixed Waste Storage Facility

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## APPENDIX A-4

**RFI Workplan Schedule for each Waste Area3 Group (WAG) at PGDP:**

<b>ORDER OF SUBMITTAL</b>	<b>WAGS INCLUDED IN RFI WORKPLAN</b>	<b>SCHEDULE</b>
First	WAGs 5 and 11	Due 300 days from the effective date of the permit (This due date is approximately 6 months after the EPA review of the CERCLA Phase II Reports).
Second	WAGs 7 and 1 SWMUs 94 and 95	90 days after the submittal of first RFI Workplan
Third	WAGs 2,3 and 14	210 days after the submittal of the RFI Workplan for Group 2
Fourth	WAG 13 and SWMU 138	90 days from last RFI Workplan Submittal
Fifth	<u>WAG 17</u>	<u>205 days from last RFI Workplan Submittal</u>
Sixth	<u>WAG 6</u>	<u>180 days from last RFI Workplan Submittal</u>
Seventh	<u>WAG 15</u>	90 days from last RFI Workplan Submittal
Eighth	<u>WAGs 8 &amp; 9</u>	90 days from last RFI Workplan Submittal
Ninth	<u>WAGs 10 &amp; 16</u>	90 days from last RFI Workplan Submittal
<del>Tenth</del>	<u>WAG 20</u>	<u>90 days from last RFI Workplan Submittal</u>
<u>Eleventh</u>	<u>WAG 21</u>	<u>90 days from last RFI Workplan Submittal</u>
<u>Twelfth</u>	<u>WAG 19</u>	<u>90 days from last RFI Workplan Submittal</u>
<u>Thirteenth</u>	<u>WAG 24</u>	<u>90 days from last RFI Workplan Submittal</u>
<u>Fourteenth</u>	<u>WAG 12</u>	<u>90 days from last RFI Workplan Submittal</u>
<u>Fifteenth</u>	<u>WAG 18</u>	<u>90 days from last RFI Workplan Submittal</u>

Schedule and phased submission of RFI Workplans for these WAGs have been prioritized to reflect the potential threat to human health and the environment.

## APPENDIX A-5

Waste Areas Groups for SWMUs and AOCs at the PGDP:

..

<b>WAG 1</b>		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	38	C-615 Sewage Treatment Plant
	94	KOW Trickling Filter and Leach Field
	95	KOW Bum Area
	100	Fire Training Area
	136	C-740 TCE Spill Site
<b>WAG 2</b>		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RF	4	C-747 Contaminated Burial Ground
<b>WAG 3</b>		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	5	C-746-F Classified Burial Ground
	6	C-747-B Burial Area
	13	C-746-P Clean Scrap Yard
<b>WAG 4</b>		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
UST Program	72	C-200 Underground Gasoline Tank
	73	C-710 Underground Gasoline Tank
	142	C-750-A 10,000 Gallon Gasoline UST
	143	C-750-B 10,000 Gallon Diesel UST
<b>WAG 5</b>		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	16	C-746-D Classified Scrap Yard
	75	C-633 PCB Spill Site
	76	C-632-B Sulfuric Acid Storage Tank
	82	C-531 Electric Switchyard
	83	C-533 Electric Switchyard
	87	C-633 Pumphouse and Cooling Tower
	99	C-745 Kellogg Building Site
	101	C-340 Hydraulic System

WAG 6		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	11	C-400 Trichloroethylene Leak Site
	47	C-400 Technetium Storage Tank <b>Area</b>
	78	C-420 PCB Spill Site
	98	C-400 Basement Sump
	40	<u>C-403 Neutralization Tank</u>
	91	<u>UF, Cylinder Drop <del>Test</del> Area</u>
WAG 7		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	8	<u>C-746-K Inactive Sanitary Landfill</u>
	130	C-611 550 Gallon Gasoline UST
	131	C-611 50 Gallon Gasoline UST
	132	C-611 2000 Gallon Oil UST
	133	C-611 Unknown Size, Grouted UST
	134	C-611 1000 Gallon Diesel/Gasoline Tank
	157	<u>KOW Toluene Spill Area</u>
WAG 8		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	71	C-337-A Vaporizer
	84	C-535 Switchyard
	85	c-537 Switchyard
	89	C-637 Pump House and Cooling Tower
WAG 9		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	27	C-722 Acid Neutralization Tank
	24	C-750-D Underground Storage Tank (UST)
	31	C-720 Compressor Pit Water Storage Tank
	90	C-720 Underground Petroleum Naphtha Pipe
	97	C-601 Diesel Spill
	159	<u>C-746-H3 Storage Pad</u>
	165	C-616-L Pipeline and Vault Soil Contamination
	167	C-720 <b>Whiteroom</b> Sump
	170	<u>C-729 Acetylene Building Drain Pits</u>
WAG 10		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	20	C-410-E HF Emergency <b>Holding Pond</b>
	77	C-634-B H <sub>2</sub> SO <sub>4</sub> Storage Tank
	86	C-637 Pump House and Cooling Tower
	92	Fill <b>Area</b> for Dirt <del>from</del> the C-420 PCB Spill Site

<u>WAG 11</u>		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	19 41 55- 8 8 - 145	C-410-B HF Neutralization Lagoon C-410-C Neutralization Tank C-405 Incinerator C-635 Pumphouse and Cooling Tower <u>Residential/Inert Landfill Barrow Area</u>
<u>WAG 12</u>		
<u>status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	17 18 42	C-616-E Sludge Lagoon C-6 16-F Full Flow Lagoon C-6 16 Chromate Reduction Facility
<u>WAG 13</u>		
<u>status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	21 22 23 <u>138</u>	C-611-W Sludge Lagoon C-611-Y Overflow Lagoon C-611-V Lagoon <u>C-100 South Side Berm</u>
<u>WAG 14</u>		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	26	C-400 To C-404 Underground Transfer Line
<u>WAG 15</u>		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	<u>28</u> 137 139 140	<u>C-712 Acid Neutralization Lagoon</u> C-746-A Inactive PCB Transformer Area C-746-A1 Underground Storage Tank C-746-A2 Underground Storage Tank
<u>WAG 16</u>		
<u>status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	70 135 169	C-333-A Vaporizer C-333 PCB Soil Contamination <u>C-410-E HF Vent Surge Protection Tank</u>
<u>WAG 17</u>		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	93 103-129 <u>146-152</u> <u>175</u>	Concrete Rubble Pile Concrete Rubble Pile(s) <u>Concrete Rubble Pile(s)</u> <u>Concrete Rubble Piles</u>

WAG 18

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<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	102	Plant <b>Storm Sewer</b>
	<u>61</u>	<u>C-375-ES Effluent Ditch (KPDES 012)</u>
	<u>66</u>	<u>C-375-E3 Effluent Ditch (KPDES 010 Ditch)</u>
	<u>67</u>	<u>C-375-E4 Effluent Ditch (C-340 Ditch)</u>
	<u>60</u>	<u>C-375-E2 Effluent Ditch (KPDES 002)</u>
	<u>58</u>	<u>N S Diversion Ditch (outside security fence)</u>
	<u>59</u>	<u>N S Diversion Ditch (inside security fence)</u>
	<u>62</u>	<u>C-37546 Southwest Ditch (KPDES 009)</u>
	<u>63</u>	<u>C-375-W7 Oil Skimmer Ditch (KPDES 008)</u>
	<u>68</u>	<u>C-375-W8 Effluent Ditch (KPDES 015)</u>
	<u>69</u>	<u>C-375-W9 Effluent Ditch (KPDES 001)</u>
	<u>168</u>	<u>KPDES Outfall Ditch 013</u>
<u>171</u>	<u>C-617-A Lagoons</u>	

WAG 19

<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	<u>153</u>	<u>C-331 PCB Soil Contamination (West)</u>
	<u>154</u>	<u>C-331 PCB Soil Contamination (Southeast)</u>
	<u>155</u>	<u>C-333 PCB Soil Contamination (West)</u>
	<u>156</u>	<u>C-310 PCB Soil contamination (West Side)</u>
	<u>160</u>	<u>C-745 Cylinder Yard Spoils Area (PCB Soils)</u>
	<u>161</u>	<u>C-743-T01 Traitor Site (Soil Backfill)</u>
	<u>162</u>	<u>C-617-A Sanitary Water Line (Soil Backfill)</u>
	<u>163</u>	<u>C-304 Bldg/HVAC Piping System (Soil Backfill)</u>
<u>164</u>	<u>KPDES Outfall Ditch 017 Flume (Soil Backfill)</u>	

(Reserved for newly identified low level PCB Sites)

WAG 20

<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	<u>166</u>	<u>C-100 Trailer Complex Soil Contamination</u>
	<u>172</u>	<u>C-726 Sandblasting Facility</u>

(Reserved for newly identified low level RAD Sites)

WAG 21

<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	<u>158</u>	<u>Chilled Water System Leak Site</u>

(Reserved for newly identified chromate spills)

WAG 22

<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
CERCLA ACO	<u>2</u>	<u>C-749 Uranium Burial Ground</u>
	<u>3</u>	<u>C-404 Low-level Radioactive Waste Burial Ground</u>
	<u>7</u>	<u>C-747-A Burial Ground</u>
	<u>30</u>	<u>C-747-A Bum Area</u>

WAG 23		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
CERCLA ACO	<u>1</u>	<u>C-747-C Oil Landfarm</u>
	<u>32</u>	<u>C-728 Clean Waste Oil Tank</u>
	<u>33</u>	<u>C-728 Motor Cleaning Facility</u>
	<u>56</u>	<u>C-540-A PCB Staging Area</u>
	<u>57</u>	<u>C-541-A PCB Waste Staging Area</u>
	<u>79</u>	<u>C-611 PCB Spill Site</u>
	<u>74</u>	<u>C-340 PCE Transformer Spill Site</u>
	<u>80</u>	<u>C-540-A PCB Spill Site</u>
	<u>81</u>	<u>C-541 PCB Spill Site</u>
WAG 24		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	<u>12</u>	<u>C-747-A UF, Drum Yard</u>
	<u>14</u>	<u>C-746-E Contaminated Scrap Yard</u>
	<u>15</u>	<u>C-746-C Scrap Yard</u>
Surface Water		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
CERCLA ACO	<u>64</u>	<u>Little Bayou Creek</u>
	<u>65</u>	<u>Big Bayou Creek</u>
Groundwater		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
CERCLA ACO	<u>Not Apply</u>	<u>Groundwater</u>



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IV  
345 COURTLAND STREET, N.E.  
ATLANTA, GEORGIA 30365

AUG 07 1992

4WD-RCRA

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

*Inserted into permit*

Mr. Don Booher, Site Manager  
U.S. Department of Energy  
Paducah Site Office  
P. O. Box 1410  
Paducah, Kentucky 42001

Mr. Steve Polston, Plant Manager  
Martin Marietta Energy Systems, Inc.  
P. O. Box 1410  
Paducah, Kentucky 42001

RE: Acceptance of Class I Permit Modification  
U. S. Department of Energy and Martin Marietta Energy  
Systems, Xnc.  
Paducah Gaseous Diffusion Plant, Paducah, Kentucky  
EPA I.D. No. KY8 890 008 982

Dear Messrs. Booher and Polston:

This letter is notification that the Environmental Protection Agency (EPA) has approved the HSWA Class I permit modifications requested by letter dated July 10, 1992, (Mr. Gist to Messrs. Alauddin and Kutzman). The proposed permit modifications include restructuring the order of the Waste Area Groups (WAGs) and SWMUs to be investigated and a one hundred and twenty (120) day time extension for submission of the 3rd series of phased RFI Workplans. These modifications are reflected (as underlined print) in the revised Appendix A-4 (enclosed) which should be attached to the facility's HSWA permit.

Pursuant to 40 CFR 230.42, Class I permit modifications, which include a change to the interim compliance due dates for RFI Workplan submittals, require prior Agency approval (granted above) and notification by the Permittee to all persons on the facility mailing list and appropriate units of State and local government. For all Class I modifications which require prior agency approval, the notification by the Permittee must be made within ninety (90) calendar days after EPA pre-approves the request.

APPENDIX A-4  
(Revised 8/92)

RFI Workplan Schedule for each Waste Area Group (WAG) at PGDP:

<u>ORDER OF SUBMITTAL</u>	<u>WAGS INCLUDED IN RFI WORKPLAN</u>	<u>SCHEDULE</u>
First	WAGs 5 and 11	Due 300 days from the effective date of the permit (This due date is approximately 6 months after the BPA review of the CERCLA Phase 11 Reports).
Second	WAGs 7 and 1 SWMUs 94 and 95	90 days after the submittal of first RFI Workplan
Third	<u>WAGs 2, 3 and 14</u>	<u>210 days after the submittal of the RFI Workplan for Group 2</u>
Fourth	WAG 13 and <u>SWMU 138</u>	90 days from last RFI Workplan Submittal
Fifth	WAGs 8 and 9	90 days from last RFI Workplan Submittal
Sixth	WAGs 15 and 12	90 days from last RFI Workplan Submittal
Seventh	WAGs 16 and 10	90 days from last RFI Workplan Submittal
Eighth	WAG 17	90 days from last RFI Workplan Submittal
Ninth	WAG 18	90 days from last RFI Workplan Submittal

Schedule and phased submission of RFI Workplans for these WAGs have been prioritized to reflect the potential threat to human health and the environment.

In many instances, WAGs contain both SWMUs requiring an RFI [APPENDIX A-1(a)] and SWMUs already being addressed under the CERCLA ACO [APPENDIX A-1(b)]. If it is determined that Phase II of the CERCLA ACO site investigation has adequately addressed those SWMUs in the WAG, then the WAG RFI Workplans will only address those SWMUs requiring an RFI [APPENDIX A-1(a)].

HSWA PORTION OF THE RCRA PERMIT

OWNER/OPERATOR

Department of Energy  
Paducah Site Office  
P.O. Box 1410  
Paducah, KY 42001

Co-OPERATOR:

Bechtel Jacobs Company

I.D. Number KY8 890 008 982

Permit Number KY8 890 008 982

Pursuant to the Solid ~~Waste~~ Disposal ~~Act~~, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 USC Section 6901 commonly known as RCRA) and regulations promulgated thereunder by the U.S. Environmental Protection Agency (EPA) (codified and to be codified in Title 40 of the Code of Federal Regulations), a permit is issued to the U.S. Department of Energy (DOE) and Bechtel Jacobs Company, (hereafter jointly called the Permittee), who owns or operates a hazardous waste facility located at the Paducah Gaseous Diffusion Plant (PDGP) on 5600 Hobbs Road, in Paducah, Kentucky, latitude 37°06'15.51 North and longitude 88°45'14.511 West.

This Permit, in conjunction with the Hazardous ~~Waste~~ Management Permit issued by the State of Kentucky, constitutes the RCRA permit for this facility. The Permittee shall be required to investigate any releases of hazardous waste or hazardous constituents pursuant to this permit at the facility regardless of the time at which waste was placed in such unit and to take appropriate corrective action for any releases. The Permit also requires the Permittee to comply with all land disposal restrictions and organic air emission standards for process vents and equipment leaks applicable to this facility and to certify annually that on-site generation of hazardous waste is minimized to the extent practicable.

The Permittee must comply with all terms and conditions of this permit and DOE must comply with the Administrative Consent Order (ACO) under CERCLA Sections 104 and 106. The ACO was signed by DOE and EPA and approved by the Department of Justice, with an effective date of November 23, 1988. This permit consists of the conditions contained herein (including those in any attachments) and applicable regulations contained in 40 CFR Parts 260 through 264, 266, 268, 270, and 124 as specified in the permit and statutory requirements of RCRA, as amended by the Hazardous and Solid Waste Amendments (HSWA) of 1984, P.L. 98-616. Nothing in this permit shall preclude the Regional Administrator from reviewing and modifying the permit at any time during its term in accordance with 40 CFR Section 270.41 and Appendix E, as contained herein.

This Permit is based on the premise that the information and reports submitted by the Permittee to date, and subsequent to issuance of this permit, are accurate. Any inaccuracies found in this information may be grounds for termination or modification of this permit in accordance with 40 CFR Sections 270.41, 270.42, and 270.43 and potential enforcement action. The Permittee must inform EPA of any deviation from or changes in the information in the application which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

The authority to perform all actions necessary to issue, modify, enforce, or revoke this permit has been delegated by the Regional Administrator to the Waste Management Division Director.

This Permit is effective as of ~~Aug. 19, 1991~~ and shall remain in effect until Aug. 19, 2001, unless revoked and reissued; or terminated under 40 CFR Sections 270.41 and 270.43 or continued in accordance with 40 CFR Section 270.51(a). All obligations for performance of corrective action are in effect until deemed complete by the Regional Administrator.

If any conditions of this permit are appealed in accordance with 40 CFR Section 124.19, the effective date of the conditions determined to be stayed in accordance with 40 CFR Section 124.16 shall be determined by final agency action as specified under 40 CFR Section 124.19.

APR 15 1990

Issued Date

(Modification No. 6)



Richard D. Green  
Acting Director  
Waste Management Division



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PART I - STANDARD CONDITIONS

I.A. EFFECT OF PERMIT

Compliance with this RCRA permit constitutes compliance, for purposes of enforcement, with Subtitle C of RCRA except for those requirements not included in the permit which become effective by statute, which are promulgated, or those which restrict placement of hazardous waste in or on the land. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local law or regulations. Compliance with the terms of this permit does not constitute a defense to any order issued or any action brought under Section 3008(a), 3008(h), 3007, 3013, 3004(v), 3008(c) or Section 7003 of RCRA, Sections 104, 106(a), 106(e), or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq., commonly known as CERCLA), or any other law providing for protection of public health or the environment.

I.B. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated for cause as specified in 40 CFR §§270.41, 270.42, and 270.43 except for the Schedule of Compliance which shall be modified in accordance with Condition II.H. of this permit. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition.

I.C. SEVERABILITY

The provisions of this permit are severable, as specified in 40 CFR §124.16 and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

I.D. DUTIES AND REQUIREMENTS

I.D.1. Duty to Comply

The Permittee shall comply with all conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any permit noncompliance, other than noncompliance authorized by an emergency permit, constitutes a violation of RCRA and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

I.D.2. Duty to Reapply

If the Permittee will continue an activity allowed or required by this permit after the expiration date of this permit, the Permittee shall submit a complete application for a new permit at least one hundred eighty (180) calendar days before this permit expires, unless permission for a later date has been granted by the Regional Administrator.

I.D.3. Obligation for Corrective Action

Owners and operators of hazardous waste management units must have all necessary permits during the active life (including the closure period) of the unit, and for any period necessary to comply with the corrective action requirements (HSWA section) of this permit.

I.D.4. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

I.D.5. Duty to Mitigate

In the event of noncompliance with the permit, the Permittee shall take all reasonable steps to minimize releases of hazardous waste or hazardous constituents to the environment, and shall carry out such measures as are reasonable to prevent significant adverse effects on human health or the environment.

I.D.6. Proper ~~erat~~ and ~~ce~~

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the condition of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the condition of the permit.

I.D.7. Duty to Provide Information

The Permittee shall furnish to the Regional Administrator, within a reasonable time, any relevant information which the Regional Administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Regional Administrator, upon request, copies of records required to be kept by this permit.

I.D.8. Inspection and Entry

The Permittee shall allow the Regional Administrator, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

- I.D.8.a. Enter at reasonable times upon the Permittee's premises where a regulated activity is located or conducted, or where records must be kept under the conditions of this permit;
- I.D.8.b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- I.D.8.c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated, or required under this permit; and
- I.D.8.d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location.

I.D.8.e. Access shall be subject to the applicable requirements of the Atomic Energy Act of 1954, ~~as~~ amended, 42 U.S.C. Section 2011, ~~et seq.~~, and Executive Orders concerning the handling of classified controlled nuclear information, restricted data, and national security information.

I.D.9. Monitoring and Records

I.D.9.a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample to be analyzed must be the appropriate method from Appendix I of 40 CFR Part 261 or an equivalent method approved by the Regional Administrator. Laboratory methods must be those specified in the most recent edition of Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. SW-846, or an equivalent method approved by the Regional Administrator, or the EPA Contract Laboratory Program (CLP) protocol.

I.D.9.b. The Permittee shall retain at the facility, or other appropriate location as provided for under 40 CFR Part 264, records of all monitoring information required under the terms of this permit, including all calibration and maintenance records, records of all data used to prepare documents required by this permit, copies of all reports and records required by this permit, the certification required by 40 CFR §264.73(b)(9), and records of all data used to complete the application for this permit for a period of at least three years from the date of the sample, measurement, report, certification or application, or until corrective action is completed, whichever date is later. As a generator of hazardous waste, the Permittee shall retain on-site a copy of all notices, certifications, demonstrations, waste analysis data, and other documentation produced pursuant to 40 CFR Part 268 for at least five years from the date that the waste which is the subject of such documentation was last sent to on-site or off-site treatment, storage, or disposal, or until corrective action is completed, whichever date is later. These periods may be extended by request of the Regional Administrator at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility.

I.D.9.c. Records of monitoring information shall specify:

- i. The dates, exact place, and times of sampling, or measurements;
- ii. The individuals who performed the sampling or measurements;

(I.D.9.c. Cont)

- iii. The dates analyses were performed;
- iv. The individuals who performed the analyses;
- v. The analytical techniques or methods used; and
- vi. The results of such analyses.

I.D.9.d. All environmental monitoring data collected pursuant to Part II of this permit shall be submitted to the Regional Administrator in a consistent format, with consistent parameters and concentration unite. This will facilitate collection and recording of such data in a computer data file. Within one (1) year from the effective date of the permit, this monitoring data shall also be routinely submitted electronically and on computer disc.

The Permittee shall implement electronic reporting of this environmental monitoring data by utilizing the Prototype Electronic Reporting System (PERS) developed by the EPA Region IV, Office of Integrated Environmental Analysis. This prototype is known both as the "Export Protocol for Toxics Compliance Monitoring Data" and as the "Interchange File Format for Environmental Monitoring Data". Both titles refer to the same document. This document, which we shall refer to as the IFF, describes a system of ordinary ASCII datafilea, in which data is reported in a printable form.

ix Planned

The Permittee shall give notice to the Regional Administrator as soon as possible of any planned physical alterations or additions to the permitted facility as defined in 40 CFR §270.2. This would apply to all contiguous land, structures, other appurtenances and improvements on the land, used for the treatment, storage or disposal of hazardous waste.

I.D.11. Anticipated Noncompliance

The Permittee shall give advance notice to the Regional Administrator of any planned changes in the permitted facility or activity which may result in noncompliance with the requirements of this permit.

I.D.12. Transfer of Permits

This permit may be transferred to a new owner or operator only after notice to the Regional Administrator and only if it is modified or revoked and reissued pursuant to 40 CFR §270.40(b) or §270.41(b)(2) to identify the new permittee and incorporate such other requirements as may be necessary under the

(II.D.12 Cont)

**appropriate Act.** Before transferring ownership or operation of the facility during its operating life, or of a disposal facility during the **post-closure care period**, the **Permittee** shall notify the new owner or operator in writing of the requirements of 40 CFR Parts 264 and 270, HSWA and this permit.

I.D.13. Compliance Schedules

Written notification of compliance or noncompliance with any item identified in the compliance schedule of this permit shall be submitted according to each schedule date. If the Permittee does not notify the Regional Administrator within fourteen (14) calendar days of its compliance or noncompliance with the schedule, the Permittee shall be subject to an enforcement action. Submittal of a required item according to the schedule constitutes notification of compliance.

I.D.14. Twenty-four Hour Reporting

I.D.14.a. The Permittee shall report any noncompliance which may endanger human health or the environment. **Any** such information shall be reported orally to the RA within **24 hours** from the time the Permittee becomes aware of the circumstances. This report shall include:

- i. Information concerning the release of any hazardous waste or hazardous constituents which may endanger public drinking water supplies.
- ii. Information concerning the release or discharge of any hazardous waste or hazardous constituents, or of a fire or explosion at the facility, which could threaten the environment or human health outside the facility.

I.D.14.b. The description of the occurrence and its cause shall include:

- i. Name, address, and telephone number of the owner or operator;
- ii. Name, address, and telephone number of the facility;
- iii. Date, time, and type of incident;
- iv. Name and quantity of materials involved;
- v. The extent of injuries, if any;
- vi. An assessment of actual or potential hazard to the environment and human health outside the facility; and
- vii. Estimated quantity and disposition of recovered material that resulted from the incident.

I.D.14.c. A written report shall also be provided to the Regional Administrator within fifteen (15) calendar days of the time the Permittee becomes aware of the circumstances. The written report shall contain the information specified under Conditions I.D.14.a and b; a description of the noncompliance and its cause; the periods of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

I.D.15. Other Noncompliance

The Permittee shall report all other instances of noncompliance not otherwise required to be reported above, at the time written reports as required by this permit are submitted. The reports shall contain the information listed in Condition I.D.14 as appropriate,

I.D.16. Other Information

Whenever the Permittee becomes aware that it failed to submit any relevant facts or submitted incorrect information in any document(s) submitted to the Regional Administrator, the Permittee shall promptly submit such facts or information.

I.E. SIGNATORY REQUIREMENT

All applications, reports, or information submitted to the Regional Administrator shall be signed and certified in accordance with 40 CFR §270.11.

The DOE has signed the application for the permitted facility as "owner and operator," and Energy Systems has signed as "co-operator." The DOE has determined that dual signatures best reflect the actual apportionment of responsibility under which DOE's RCRA responsibilities are for policy, programmatic, and funding and scheduling decisions', as well as general oversight; and the contractor's RCRA responsibilities are for day-to-day operations (in accordance with general directions given by DOE as part of its general oversight responsibility), including, but not limited to, the following responsibilities: waste analyses and handling, monitoring, record keeping, reporting, and contingency planning. For purposes of the certification required by 40 CFR Section 270.11(d), representatives of DOE and Energy Systems certify, to the best of their knowledge and belief, the truth, accuracy, and completeness of the application for their respective areas of responsibility.

**I.F. CONFIDENTIAL INFORMATION**

The Permittee may claim confidential any information required to be submitted by this permit in accordance with 40 CFR §270.12.

**1.0. DEFINITIONS**

For purposes of this permit, terms used herein shall have the same meaning as those in RCRA and 40 CFR Parts 124, 260, 261, 264, and 270, unless this permit specifically provides otherwise. Where terms are not defined in the regulation, the permit, or EPA guidelines or publications, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

- I.G.1.** The term "solid waste" means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under Section 402 of the Federal Water Pollution Control Act, as amended (86 Stat. 880), or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).
- I.G.2.** A "hazardous constituent" for purposes of this permit are those substances listed in 40 CFR Part 261 Appendix VIII.
- I.G.3.** A "solid waste management unit" (SWMU) for the purposes of this permit includes any unit which has been used for the treatment, storage, or disposal of solid waste at any time, irrespective of whether the unit is or ever was intended for the management of solid waste. RCRA regulated hazardous waste management units are also solid waste management units. SWMUs include areas that have been contaminated by routine and systematic releases of hazardous waste or hazardous constituents, excluding one-time accidental spills that are immediately remediated and cannot be linked to solid waste management activities (e.g. product or process spills).

- I.G.4. A "unit" for the purposes of this permit includes, but is not limited to, any landfill, surface impoundment, waste pile, land treatment unit, incinerator, injection well, tank, container storage area, septic tank, drain field, wastewater treatment unit, elementary neutralization unit, transfer station, recycling unit or areas of concern (AOCs).
- I.G.5. A "release" for purposes of this permit includes any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of any hazardous waste, hazardous constituents or hazardous substances.
- I.G.6. "Corrective measures" for purposes of this permit, include all corrective action necessary to protect human health and the environment for all releases of hazardous waste, hazardous constituents or hazardous substances from any solid waste management unit at the facility, regardless of the time at which waste was placed in the unit, as required under 40 CFR §264.101 and the CERCLA ACO. Corrective measures may address releases to air, soils, surface water or groundwater.
- I.G.7. "Area of concern" (AOC) for purposes of this permit includes any area having a probable release of a hazardous waste, hazardous constituent or hazardous substance which is not from a solid waste management unit and is determined by the Regional Administrator to pose a current or potential threat to human health or the environment. Such areas of concern may require investigations and remedial action as required under Section 3005(c)(3) of the Resource Conservation and Recovery Act and 40 CFR §270.32(b)(2) in order to ensure adequate protection of human health and the environment.
- I.G.8. "Facility" for purposes of this permit includes any contiguous property and structures, other appurtenances, and improvements on the property, under the control of the owner or operator seeking a permit under Subtitle C of RCRA.
- I.G.9. "Land Disposal" for purposes of this permit and 40 CFR Part 268 means placement in or on the land and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, underground mine or cave, or concrete vault or bunker intended for disposal purposes.
- I.G.10. "Hazardous Substances" for purposes of this permit shall have the meaning set forth by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

I.G.11. "Hazardous Waste" for purposes of this permit is a solid waste that meets the condition of 40 CFR Part 261 and has not been specifically excluded from regulation as a hazardous waste.

I.H. FUNDING

It is the expectation of the parties to this HSWA Permit that all obligations of DOE arising under this HSWA Permit will be fully funded. The DOE shall take all necessary steps and make efforts to obtain timely funding to meet its obligations under this HSWA Permit.

Any requirement for the payment or obligation of funds by DOE established by the terms of this HSWA Permit shall be subject to the availability of appropriated funds, and no provision herein shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 U.S.C. Section 1341. In cases where payment or obligation of funds would constitute a violation of the Anti-Deficiency Act, the dates established requiring the payment or obligation of such funds shall be appropriately adjusted.

I.I. DISPUTE RESOLUTION

This Dispute Resolution Clause, which is similar to the one in the CERCLA ACO, is as follows:

The procedure of this Condition I.I. shall apply only as specifically set forth under the terms of the Corrective Measures Study (Condition II.7.). The parties to this HSWA Permit shall make reasonable efforts to informally resolve disputes at the project coordinator or immediate supervisor level. If resolution cannot be achieved informally, the procedures of this Condition shall be implemented to resolve a dispute.

- A. Within thirty (30) calendar days after the review period of a document subject to dispute resolution under the terms of this HSWA Permit, the disputing party shall submit to the other party a written statement of dispute setting forth the nature of the dispute, the work affected by the dispute, the disputing party's position with respect to the dispute, and the information which the disputing party is relying upon to support its position.
- B. Prior to any party's issuance of a written statement of dispute, the disputing party shall engage the other party in informal dispute resolution among the project managers and/or their immediate supervisors. During this informal dispute resolution period, the parties shall meet as many times as necessary to discuss and attempt resolution of the dispute.

- C. If agreement cannot be reached on any issue within the thirty (30) calendar days informal dispute resolution period, the disputing party shall forward the written statement of dispute to the Dispute Resolution Committee (DRC), thereby elevating the dispute to the DRC for resolution.
- D. The DRC will serve as a forum for resolution of disputes for which agreement has not been reached through informal dispute resolution. The parties shall each designate one individual and an alternate to serve on the DRC. The individuals designated to serve on the DRC shall be employed at the policy level (SBS or equivalent) or be delegated the authority to participate on the DRC for the purposes of dispute resolution under this HSWA Permit. The EPA representative on the DRC is the Waste Management Division Director of EPA's Region IV. The DOE's designated member is the Director of the Environmental Restoration Division of DOE's Oak Ridge Operations office. The Kentucky Department of Environmental Protection (KDEP) designated member is the Director of the Division of Waste Management. Written notice of any delegation of authority from a party's designated representative on the DRC shall be provided to all other Parties, via certified mail, to the following representatives:
1. With respect to EPA:  
Mr. James H. Scarbrough, P.E., Chief  
RCRA and Federal Facilities Branch  
Waste Management Division  
Environmental Protection Agency  
Region IV  
345 Courtland Street  
Atlanta, Georgia 30365
  2. With respect to DOE:  
Mr. Robert C. Sleeman, Director  
Environmental Restoration Division  
Department of Energy  
Oak Ridge Operations  
Post Office Box 2001  
Oak Ridge, Tennessee 37831-8541
  3. With respect to PGDP:  
Mr. Steve Polston, Plant Manager  
Paducah Gaseous Diffusion Plant  
Martin Marietta Energy Systems, Inc.  
Post Office Box 1410  
Paducah, Kentucky 42001

4. With respect to KDEP:

Mr. Mohammad Alauddin  
Division of Waste Management  
Kentucky Department for Environmental  
Protection  
Fort Boone Plaza, Building #2  
18 Reilly Road  
Frankfort, Kentucky 40601

- E. Following elevation of a dispute to the DRC, the DRC shall have twenty-one (21) calendar days to unanimously resolve the dispute and issue a written decision. If the DRC is unable to unanimously resolve the dispute within this twenty-one (21) calendar day period, the written statement of dispute shall be forwarded to the Senior Executive Committee (SEC) for resolution.
- F. The SEC will serve as the forum for resolution of disputes for which agreement has not been reached by the DRC. The EPA representative on the SEC is the Regional Administrator of EPA's Region IV. The DOE's representative on the SEC is the DOE Oak Ridge Operations Manager. The KDEP's representative on the SEC is the Cabinet Commissioner. The SEC members shall, as appropriate, confer, meet, and exert their best efforts to resolve the dispute and issue a written decision. If unanimous resolution of the dispute is not reached within twenty-one (21) calendar days, EPA's Regional Administrator shall issue a written position on the dispute. The DOE or KDEP may, within twenty-one (21) calendar days of the Regional Administrator's issuance of a written position, issue a written notice elevating the dispute to the Administrator of the U. S. EPA for resolution, in accordance with all applicable laws and procedures. In the event that neither the DOE or the KDEP elects not to elevate the dispute to the Administrator within twenty-one (21) calendar days escalation period, the DOE or KDEP shall be deemed to have agreed with the Regional Administrator's written position, with respect to the dispute.
- G. Upon escalation of a dispute to the Administrator of the U. S. EPA pursuant to Condition I.I.F, the Administrator will review and resolve the dispute within twenty-one (21) calendar days. Upon request, and prior to resolving the dispute, the U. S. EPA Administrator shall confer with the Secretary of DOE or the Commissioner of the KDEP to discuss the issue(s) under dispute. Upon resolution, the Administrator shall provide DOE with a written final decision setting forth resolution of the dispute.
- H. The pendency of any dispute under this Condition shall not affect DOE's responsibility for timely performance of the work required by this HSWA Permit, except the time period for completion of work affected by such dispute shall be extended for a period of time usually not to exceed the actual time taken

(I.I. Cont)

to resolve any good faith dispute in accordance with the procedures specified herein. All elements of the work required by this HSWA Permit, which are not affected by the dispute, shall continue and be completed in accordance with the applicable schedule.

- I. When a dispute resolution is in progress, work affected by the dispute will immediately be discontinued if the Waste Management Division Director for EPA's Region IV requests, in writing, that work related to the dispute be stopped because, in EPA's opinion, such work is inadequate or ineffective, and such inadequacy or defect is likely to yield an adverse effect on human health or the environment, or is likely to have a substantial adverse effect on the interim measures or implementation process. To the extent possible, EPA shall give DOE prior notification that a work stoppage request is forthcoming. After stoppage of work, if DOE believes the work stoppage is inappropriate or may have potential significant adverse impacts, DOE may meet with the Division Director to discuss the work stoppage. Following this meeting, and further consideration of the issues, the Division Director will issue, in writing, a final decision with respect to the work stoppage. The final written decision of the Division Director may immediately be subjected to formal dispute resolution. Such dispute resolution may be brought directly to either DRC or the SEC, at the discretion of DOE or the KDEP.
- J. Within twenty-one (21) calendar days of the resolution of a dispute pursuant to the procedures specified in this Condition, DOE shall incorporate the resolution and final determination into the appropriate plan, schedule, or procedures, proceed to implement this HSWA Permit according to the amended plan, schedule, or procedures.
- K. Resolution of a dispute pursuant to this Condition of the HSWA Permit constitutes a final resolution of any dispute arising under this HSWA Permit. The DOE shall abide by all terms and conditions of any final resolution of dispute obtained pursuant to this Condition of this HSWA Permit.

## PART II - CORRECTIVE ACTION

### II.A. APPLICABILITY

The Conditions of this Part apply to:

- II.A.1. The solid waste management units (SWMUs) and areas of concern (AOCs) identified in APPENDIX A-1, which require further investigation.
- II.A.2. The SWMUs and AOCs identified in APPENDIX A-2, and A-3 which require no further investigation at this time or are addressed under the State permit.
- II.A.3. Any additional SWMUs or AOCs discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means.
- II.A.4. Corrective actions beyond the facility boundary, if necessary. The Permittee shall implement corrective actions beyond the facility boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates to the satisfaction of the Regional Administrator that, despite the Permittee's best efforts, as determined by the RA, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis.

### II.B. NOTIFICATION AND ASSESSMENT REQUIREMENTS FOR NEWLY IDENTIFIED SWMUs AND AOCs

- II.B.1. The Permittee shall notify the Regional Administrator in writing, within fifteen (15) calendar days of discovery, of any additional SWMUs as discovered under Condition II.A.3.
- II.B.2. The Permittee shall notify the Regional Administrator in writing, within fifteen (15) calendar days of discovery, of any additional AOCs as discovered under Condition II.A.3. The notification shall include, at a minimum, the location of the AOC and all available information pertaining to the nature of the release (e.g., media affected, hazardous constituents released, magnitude of release, etc.). If the Regional Administrator determines that further investigation of an AOC is required, the permit will be modified in accordance with 40 CFR §270.41.

- II.B.3. The Permittee shall prepare and submit to the Regional Administrator, within ninety (90) calendar days of notification, a SWMU Assessment Report (SAR) for each SWMU identified under Condition II.B.1 and II.C.1. At a minimum, the SAR shall provide the following information:
- a. Location of unit(s) on a topographic map of appropriate scale such as required under 40 CFR §270.14(b)(19).
  - b. Designation of type and function of unit(s).
  - c. General dimensions, capacities and structural description of unit(s) (supply any available plans/drawings).
  - d. Dates that the unit(s) was operated.
  - e. Specification of all wastes that have been managed at/in the unit(s) to the extent available. Include any available data on 40 CFR Part 261, APPENDIX VIII, constituents in the wastes.
  - f. All available information pertaining to any release of hazardous waste or hazardous constituents from such unit(s) (to include groundwater data, soil analyses, air, and/or surface water data).
- II.B.4. Based on the results of the SAR, the Regional Administrator shall determine the need for further investigations at the SWMUs covered in the SAR. If the Regional Administrator determines that such investigations are needed, the Permittee shall be required to prepare a plan for such investigations as outlined in Condition II.D.1.b.
- II.C. NOTIFICATION REQUIREMENTS FOR NEWLY DISCOVERED RELEASES AT PREVIOUSLY IDENTIFIED SWMUs [or AOCs]
- II.C.1. The Permittee shall notify the Regional Administrator in writing of any newly discovered release(s) of hazardous waste or hazardous constituents discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means, within fifteen (15) calendar days of discovery. Such newly discovered releases may be from SWMUs or AOCs identified in Condition II.A.2 or SWMUs identified in Condition II.A.3 for which further investigation under Condition II.B.4 was not required.

II.C.2. If the Regional Administrator determines that further investigation of the SWMUs or AOCs is needed, the Permittee shall be required to prepare a plan for such investigations as outlined in Condition II.D.1.b.

II.D. RCRA FACILITY INVESTIGATION (RFI)

II.D.1. RFI Workplan(s)

II.D.1.a. The Permittee shall prepare and submit to the Regional Administrator, in accordance with the schedule of APPENDIX A-4, a RCRA Facility Investigation (RFI) Workplan(s) for those units identified in Condition II.A.1. For the investigation, units have been prioritized and assembled into Waste Area Group8 (WAGs) according to APPENDIX A-5. This Workplan(s) shall be developed to meet the requirements of Condition II.D.1.c.

In many instances, WAGs contain both SWMUs requiring an RFI (APPENDIX A-1(a)) and SWMUs already being addressed under the CERCLA ACO (APPENDIX A-1(b)). If it is determined that Phase II of the CERCLA ACO site investigation has adequately addressed those SWMUs in the WAG, then the WAG RFI Workplans only need address those SWMUs requiring an RFI (APPENDIX A-1(a)).

II.D.1.b. The Permittee will prioritize the SWMUs/AOCs identified under Condition II.B.4. or Condition II.C.2. based on the threat the SWMUs/AOCs present to human health and the environment and assign the SWMUs/AOCs to a WAG in the RFI Workplan Schedule of APPENDIX A-4 that best reflects the priority of the SWMUs/AOCs. The Permittee shall notify the RA and recommend assigning the SWMUs/AOCs to a WAG in the RFI Workplan Schedule of APPENDIX A-4 within 30 days of submitting the SWMU Assessment Report (SAR) required under Condition II.B.3. The RA must approve the WAG and schedule assignments. The RFI Workplan(s) shall be developed to meet the requirements of Condition II.D.1.c.

II.D.1.c. The RFI Workplan(s) shall meet the requirements of APPENDIX B as applicable. The Workplan(s) shall include schedules of implementation and completion of specific actions necessary to determine the nature and extent of releases and the potential pathways of contaminant releases to the air, land, surface water, and groundwater. The Permittee must provide sufficient justification and/or documentation that a release is not probable if a unit or a media/pathway associated with a unit (groundwater, surface water, soil, subsurface gam, or air) is not included in the RFI Workplan(s). Such deletion8 of a unit, media or pathway from the RFI(s) are subject to the approval of the Regional Administrator. The Permittee shall provide sufficient written justification for any omissions or deviation8 from the applicable requirements of APPENDIX B. Such omissions or deviation8 are subject to the approval of the Regional Administrator. In addition, the scope of the RFI Workplan(s) shall include all investigations necessary to ensure compliance with 40 CFR §264.101(c).

II.D.1.d. The RFI Workplan(s) must be approved by the Regional Administrator, in writing, prior to implementation. The Regional Administrator shall specify the start date of the RFI Workplan schedule in the letter approving the RFI Workplan(s). If the Regional Administrator disapproves the RFI Workplan(s), the Regional Administrator (RA) shall either (1) notify the Permittee in writing of the RFI Workplan's deficiencies and specify a due date for submission of a revised RFI Workplan, or (2) revise the RFI Workplan and notify the Permittee of the revisions and the start date of the schedule within the approved RFI Workplan.

II.D.2. RFI Implementation

The Permittee shall implement the RFI(s) in accordance with the approved RFI Workplan(s) and APPENDIX g.

II.D.3. RFI Reports

II.D.3.a. If the time required to conduct the RFI(s) is greater than [one hundred and eighty (180)] calendar days, the Permittee shall provide the RA with quarterly RFI Progress Reports (90 day intervals) beginning ninety (90) calendar days from the start date specified by the Regional Administrator in the RFI Workplan approval letter. The Progress Reports shall contain the following information at a minimum:

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- i. A description of the portion of the RFI completed;
- ii. Summaries of findings;
- iii. Summaries of all deviations from the approved RFI Workplan during the reporting period;
- iv. Summaries of all problems or potential problems encountered during the reporting period;
- v. Projected work for the next reporting period; and
- vi. Copies of daily reports, inspection reports, laboratory/monitoring data, etc., as requested by the Regional Administrator.

II.D.3.b. The Permittee shall prepare and submit to the Regional Administrator Draft and Final RCRA Facility Investigation Report for: the investigations conducted pursuant to the Workplan(s) submitted under Condition II.D.1. The Draft RFI Report(s) shall be submitted to the RA for: review in accordance with the schedule in the approved RFI Workplan(s). The Final RFI Report(s) shall be submitted to the RA within forty-five (45) calendar days of receipt of the RA's comments on the Draft RFI Report. The RFI Report(s) shall include an analysis and summary of all required investigations of SWMUs and AOCs and their results. The summary shall describe the type and extent of contamination at the facility, including sources and migration pathway, and a description of actual or potential receptors. The Report(s) shall also describe the extent of contamination (qualitative/quantitative) in relation to background levels indicative of the area. The objective of this task shall be to ensure that the investigation data are sufficient in quality (e.g., quality assurance procedures have been followed) and quantity to describe the nature and extent of contamination, potential threat to human health and/or the environment, and to support a Corrective Measures Study, if necessary.

II.D.3.c. The Regional Administrator will review the Final RFI Report and notify the Permittee of the need for further investigative action and/or the need for a Corrective Measures Study to meet the requirements of Condition II.F., 40 CFR S264.101 and **\$270.32(b)(2)**, and the CERCLA ACO. The RA will notify the permittee of any no further action decision. NOTE: A Phased Investiation, will be conducted in accordance with the procedures established under Condition II.D.

I.E. INTERIM MEASURES (IM)

II.E.1. IM Workplan

II.E.1.a. Upon notification by the Regional Administrator, the Permittee shall prepare and submit an Interim Measures (IM) Workplan for any SWMU or AOC which the Regional Administrator determines poses a current or potential threat to human health or the environment. The IM Workplan shall be submitted within ninety (90) calendar days of such notification and shall include the elements listed in II.E.1.b. Such interim measures may be conducted concurrently with investigations required under the terms of this permit and the CERCLA ACO.

II.E.1.b. The IM Workplan shall ensure that the interim measures are designed to mitigate any current or potential threat(s) to human health or the environment and is consistent with and integrated into any long-term solution at the facility. The IM Workplan shall include: the interim measures objectives, procedures for implementation (including any designs, plans, or specifications), and schedules for implementation.

II.E.1.c. The IM Workplan must be approved by the Regional Administrator, in writing, prior to implementation. The Regional Administrator shall specify the start date of the IM Workplan schedule in the letter approving the IM Workplan. If the Regional Administrator disapproves the IM Workplan, the Regional Administrator shall either (1) notify the Permittee in writing of the IM Workplan's deficiencies and specify a due date for submission of a revised IM Workplan, or (2) revise the IM Workplan and notify the Permittee of the revisions and the start date of the schedule within the approved IM Workplan.

II.E.2. IM Implementation

II.E.2.a. The Permittee shall implement the interim measures in accordance with the approved IM Workplan.

II.E.2.b. The Permittee shall give notice to the Regional Administrator as soon as possible of any planned changes, reductions or additions to the IM Workplan.

II.E.2.c. Final approval of corrective action required under 40 CFR 5264.101 and §270.32(b)(2) which is achieved through interim measures shall be in accordance with 40 CFR §270.41 and Condition II.F as a permit modification and with the terms of the CERCLA ACO.

II.E.3. IM Reports

II.E.3.a. If the time required for completion of interim measures is greater than one year, the Permittee shall provide EPA with quarterly progress reports (ninety (90) day intervals) beginning ninety (90) calendar days from the start date specified by the Regional Administrator in the IM Workplan approval letter. The Progress Reports shall contain the following information at a minimum:

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see 1004*

- i. A description of the portion of the interim measures completed;
- ii. Summaries of all deviations from the IM Workplan during the reporting period;
- iii. Summaries of all problems or potential problems encountered during the reporting period;

(II.E.3.a. Cont)

iv. Projected work for the next reporting period; and

v. Copies of laboratory/monitoring data.

II.E.3.b. The Permittee shall prepare and submit to the Regional Administrator, within ninety (90) calendar days of completion of interim measures conducted under Condition II.E, an IM Report. The IM Report shall contain the following information at a minimum:

a. A description of interim measures implemented;

b. Summaries of results;

c. Summaries of all problems encountered;

d. Summaries of accomplishments and/or effectiveness of interim measures; and

e. Copies of all relevant laboratory/monitoring data, etc. in accordance with Condition I.D.9.

II.F. CORRECTIVE MEASURES STUDY

II.F.1. Corrective Measures Study (CMS) Plan

II.F.1.a. The Permittee shall prepare and submit a CMS Plan for those units requiring a CMS within one hundred and eighty (180) calendar days of notification by the Regional Administrator that a CMS is required. This CMS Plan shall be developed to meet the requirements of Condition II.F.1.b.

II.F.1.b. The CMS Plan shall meet the requirements of APPENDIX C as applicable. The CMS Plan shall include schedules of implementation and completion of specific actions necessary to complete a CMS. The Permittee must provide sufficient justification and/or documentation for any unit deleted from the CMS Plan. Such deletion of a unit is subject to the approval of the Regional Administrator. The CMS shall be conducted in accordance with the approved CMS Plan. The Permittee shall provide sufficient written justification for any omissions or deviations from the minimum requirements of APPENDIX C. Such omissions or deviations are subject to the approval of the Regional Administrator. The scope of the CMS Plan shall include all investigations necessary to ensure compliance with RCRA 3005(c)(3), 40 CFR §264.101, §270.32(b)(2) and the CERCLA ACO.

II.F.1.c. The Regional Administrator shall either approve or disapprove, in writing, the CMS plan. If the Regional Administrator disapproves the CMS Plan, the Regional Administrator shall either (1) notify the Permittee in writing of the CMS Plan's deficiencies and specify a due date for submittal of a revised CMS Plan, or (2) invoke dispute resolution in accordance with the terms of Condition 1.1.

II.F.2. Corrective Measures Study Implementation

The Permittee shall begin to implement the Corrective Measures Study according to the schedules specified in the CMS Plan, no later than fifteen (15) calendar days after the Permittee has received written approval from the Regional Administrator for the CMS Plan. Pursuant to Permit Condition II.F.1.c, the CMS shall be conducted in accordance with the approved CMS Plan.

II.F.3. CMS Report

II.F.3.a. The Permittee shall prepare and submit to the Regional Administrator a draft and final CMS Report for the study conducted pursuant to the approved CMS Plan. The draft CMS Report shall be submitted to the RA in accordance with the schedule defined in the approved CMS Plan. The final CMS Report shall be submitted to the RA within forty-five (45) days of receipt of the RA's comments on the draft CMS Report. The CMS Report shall summarize any bench-scale or pilot tests conducted. The CMS Report must include an evaluation of each remedial alternative. The CMS Report shall present all information gathered under the approved CMS Plan. The CMS Final Report must contain adequate information to support the Regional Administrator's decision on the recommended remedy, described under Permit Condition II.G.

II.F.3.b. If the Regional Administrator determines that the CMS Final Report does not fully satisfy the information requirements specified under Permit Condition II.F.3.a., the Regional Administrator may disapprove the CMS Final Report. If the Regional Administrator disapproves the CMS Final Report, the Regional Administrator shall notify the Permittee in writing of deficiencies in the CMS Final Report and specify a due date for submittal of a revised CMS Final Report. The RA will notify the Permittee of any no further action decision.

II.F.3.c. As specified under Permit Condition II.F.3.a., based on preliminary results and the CMS Final Report, the Regional Administrator may require the Permittee to evaluate additional remedies or particular elements of one or more proposed remedies.

II.G.

II.G.1 A remedy shall be selected from the remedial alternatives evaluated in the CMS. It will be based at a minimum on protection of human health and the environment, as per specific site condition,, existing regulations, and guidance.

II.G.2. Pursuant to 40 CFR §270.41, a permit modification will be initiated by the Regional Administrator after recommendation of a remedy under Condition II.G.1. This modification will serve to incorporate a final remedy into the permit.

II.H. MODIFICATION OF THE CORRECTIVE ACTION SCHEDULE OF COMPLIANCE

II.H.1. If at any time the Regional Administrator determines that modification of the Corrective Action Schedule of Compliance is necessary, the RA may initiate a modification to the Schedule of Compliance (APPENDIX D).

II.H.2. Modifications that are initiated and finalized by the Regional Administrator according to proper procedure, as outlined in APPENDIX E, shall not be subject to administrative appeal.

II.H.3. Modifications to the Schedule of Compliance do not constitute a reissuance of the Permit.

II.I. IMMINENT HAZARDS

II.I.1. The Permittee shall report to the Regional Administrator any imminent or existing hazard to public health or the environment from any release of hazardous waste or hazardous constituents. Such information shall be reported orally within 24 hours from such time the Permittee becomes aware of the circumstances. This report shall include the information specified under Conditions I.D.14.a and b.

II.I.2. A written report shall also be provided to the Regional Administrator within fifteen (15) calendar days of the time the Permittee becomes aware of the circumstances. The written report shall contain the information specified under Conditions I.D.14.a and b; a description of the release and its cause; the period of the release; whether the release has been stopped; and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the release.

II.J. PLAN AND REPORT REQUIREMENTS

II.J.1. All plans and schedules shall be subject to approval by the Regional Administrator prior to implementation. The Permittee shall revise all submittals and schedules as specified by the Regional Administrator. Upon approval the Permittee shall implement all plans and schedules as written.

II.J.2. The results of all plans and reports shall be submitted in accordance with the approved schedule. Extensions of the due date for submittals may be granted by the Regional Administrator based on the Permittee's demonstration that sufficient justification for the extension exists.

II.J.3. If the Permittee at any time determines that the SAR information required under Condition II.B, or RFI Workplan(s) required under Condition II.D, or the I.M. Workplan required under Condition II.E no longer satisfy the requirements of 40 CFR §264.101 or this permit for prior or continuing releases of hazardous waste or hazardous constituents from solid waste management units and/or areas of concern, the permittee shall submit an amended Workplan(s) to the Regional Administrator within ninety (90) calendar days of such determination.

II.J.4. All reports shall be signed and certified in accordance with 40 CFR §270.11.

II.J.5. Four (4) copies of all reports and plans shall be provided by the Permittee to the Regional Administrator in care of Mr. James H. Scarbrough at the following address:

Mr. James H. Scarbrough, P.E., Chief  
RCRA and Federal Facilities Branch  
Waste Management Division  
Environmental Protection Agency  
Region IV  
345 Courtland Street  
Atlanta, Georgia 30365

Attn: RPW for Federal Facilities

**PART III - WASTE MINIMIZATION**

- III.A. Pursuant to 40 CFR §264.73(b)(9), and Section 3005(h) of RCRA, 42 U.S.C. 6925(h), the Permittee must certify, no less often than annually, that:
- III.A.1. The permittee has a program in place to reduce the volume and toxicity of hazardous waste to the degree determined by the Permittee to be economically practicable; and
- III.A.2. The proposed method of treatment, storage or disposal is the most practicable method available to the permittee which minimizes the present and future threat to human health and the environment.
- III.B. The Permittee shall maintain copies of this certification in the facility operating record as required by 40 CFR §264.73(b)(9).
- III.C. The Waste Minimization program required under Condition III.A. above should address the objectives listed in APPENDIX F.

## PART IV - LAND DISPOSAL RESTRICTIONS

### IV.A. GENERAL RESTRICTIONS

IV.A.1. 40 CFR Part 268 identifies hazardous wastes that are restricted from land disposal and defines those limited circumstances which an otherwise prohibited waste may continue to be placed on or in a land treatment, storage or disposal unit. The Permittee shall maintain compliance with the requirements of 40 CFR Part 268 and/or a LDR Federal Facility Compliance Agreement (FFCA). Where the Permittee has applied for an extension, waiver or variance under 40 CFR Part 268 the Permittee shall comply with all restrictions on land disposal under this Part once the effective date for the waste has been reached pending final approval of such application.

### IV.B. LAND DISPOSAL PROHIBITIONS AND TREATMENT STANDARDS

IV.B.1. A restricted waste identified in 40 CFR Part 268 Subpart C may not be placed in a land disposal unit without further treatment unless the requirements of 40 CFR Part 268 Subparts C and/or D and/or the LDR FFCA are met.

IV.B.2. The storage of hazardous wastes restricted from land disposal under 40 CFR Part 268 is prohibited unless the requirements of 40 CFR Part 268 Subpart E and/or the LDR FFCA are met.

IV.B.3. A Federal Facility Compliance Agreement (FFCA) between EPA and DOE which addresses mixed waste restricted from land disposal pursuant to 40 CFR Part 268 is in the process of being negotiated. Once this agreement is signed, EPA and the Permittee agree that the activities covered by the FFCA will satisfy all requirements contained in 40 CFR Part 268.

**PART V - RCRA ORGANIC AIR EMISSION STANDARDS**

**V.A. GENERAL INTRODUCTION**

In the June 21, 1990, Federal Register, EPA promulgated the final rule for Phase I of the Organic Air Emission Standards (40 CFR Parts 264 and 265, Subparts AA and BB) for hazardous waste treatment, storage, and disposal (TSD) facilities. Subpart AA impacts on process vents associated with waste management units, specifically distillation, fractionation, thin-film evaporation, solvent extraction, and air or steam stripping operations. Subpart BB impacts on equipment (i.e., pumps, valves, compressors, etc.) that contain or contact hazardous wastestreams with greater than (10 wt.%) ten-percent-by-weight organics.

**V.B. ORGANIC AIR EMISSION STANDARDS**

The permittee shall comply with the organic air emission requirements of 40 CFR 264, Subpart AA (for process vents) and/or Subpart BB (for equipment leaks) as applicable and as specifically set forth in APPENDIX H.

**APPENDIX A**

**SOLID WASTE MANAGEMENT UNIT SUMMARY**

**U.S. DOE PADUCAH GASEOUS DIFFUSION PLANT**

**PADUCAH, KENTUCKY**

## Appendix A-1

Solid Waste Management Unit Summary  
U.S. DOE Paducah Gaseous Diffusion Plant  
Paducah, Kentucky

A-1(a) List of Solid Waste Management **Units and Areas** of Concern Requiring an RFI:

<u>SWMU/AOC</u>	<u>DESCRIPTION</u>
<u>4</u>	<u>C-747 Contaminated Burial Ground</u>
<u>5</u>	<u>C-746-F Classified Burial Ground</u>
<u>6</u>	<u>C-747-B Burial Area</u>
<u>8</u>	<u>C-746-K Inactive Sanitary Landfill</u>
<u>11</u>	<u>C-400 Trichloroethylene Leak Site</u>
<u>12</u>	<u>C-747-A UF, Drum Yard</u>
<u>13</u>	<u>C-746-P Clean Scrap Yard</u>
<u>14</u>	<u>C-746-E Contaminated Scrap Yard</u>
<u>15</u>	<u>C-746-C Scrap Yard</u>
16	C-746-D Classified Scrap Yard
<u>17</u>	<u>C-616-E Sludge Lagoon</u>
<u>18</u>	<u>C-616-F Full Flow Lagoon</u>
<u>19</u>	<u>C-410-B HF Neutralization Lagoon</u>
20	C-410-E HF Emergency Holding Pond
21	C-611-W Sludge Lagoon
22	C-611-Y Overflow Lagoon
23	C-611-V Lagoon
<u>24</u>	<u>C-750-D Underground Storage Tank (UST)</u>
<u>26</u>	<u>C-400 To C-404 Underground Transfer Line</u>
<u>27</u>	<u>C-722 Acid Neutralization Tank</u>
<u>28</u>	<u>C-712 Acid Neutralization Lagoon</u>
<u>31</u>	<u>C-720 Compressor Pit Water Storage Tank</u>
<u>38</u>	<u>C-615 Sewage Treatment Plant</u>
<u>40</u>	<u>C-403 Neutralization Tank</u>
41	C-310-C Neutralization Tank
<u>42</u>	<u>C-616 Chromate Reduction Facility</u>
<u>47</u>	<u>C-400 Technetium Storage Tank Area</u>
55	C-405 Incinerator
58	N-S Diversion Ditch (outside security fence)
59	N-S Diversion Ditch (inside <b>security</b> fence)
60	C-375-E2 Effluent Ditch (KPDES 002)
61	C-375-E5 Effluent Ditch (KPDES 012)
62	C-375-S6 Southwest Ditch (KPDES 009)
63	C-375-W7 Oil Skimmer Ditch (KPDES 008)

## Appendix A-1 (continued)

Solid Waste-Management Unit Summary  
 U.S. DOE Paducah Gaseous Diffusion Plant  
 Paducah, Kentucky

A-1(a) List of Solid Waste Management **Units** and Areas of Concern Requiring an RFI:

<u>SWMU/AOC</u>	<u>DESCRIPTION</u>
66	C-375-E3 Effluent Ditch (KPDES 010 Ditch)
67	C-375-E4 Effluent Ditch (C-340 Ditch)
68	C-375-W8 Effluent Ditch (KPDES 015)
69	C-375-W9 Effluent Ditch (KPDES 001)
<u>70</u>	<u>C-333-A Vaporizer</u>
<u>71</u>	<u>C-337-A Vaporizer</u>
<u>75</u>	<u>C-633 PCB Spill Site</u>
76	C-632-B Sulfuric Acid Storage Tank
77	C-634-B H <sub>2</sub> SO <sub>4</sub> Storage Tank
<u>78</u>	<u>C-420 PCB Spill Site</u>
<u>82</u>	<u>C-531 Electric Switchyard</u>
<u>83</u>	<u>C-533 Electric Switchyard</u>
<u>84</u>	<u>C-535 Switchyard</u>
<u>85</u>	<u>C-537 Switchyard</u>
86	C-631 Pump House and Cooling Tower
87	C-633 Pump House and Cooling Tower
88	C-635 Pump House and Cooling Tower
89	C-637 Pump House and Cooling Tower
90	C-720 Underground Petroleum Naphtha Pipe
<u>91</u>	<u>UF. Cylinder Drop Test Area</u>
<u>92</u>	<u>Fill Area for Dirt from the C-420 PCB Spill Site</u>
93	Concrete Rubble Pile
94*	KOW Trickling Filter and Leach Field
95*	KOW Burn Area
<u>97</u>	<u>C-601 Diesel Spill</u>
<u>98</u>	<u>C-400 Basement Sump</u>
<u>99</u>	<u>C-745 Kellogg Building: Site</u>
<u>100</u>	<u>Fire Training Area</u>
101	C-340 Hydraulic System
102	Plant Storm Sewer
<u>103-129</u>	<u>Concrete Rubble Pile(s)</u>
<u>130</u>	<u>C-611 550 Gallon Gasoline UST</u>
<u>131</u>	<u>C-611 50 Gallon Gasoline UST</u>
<u>1-32</u>	<u>C-611 2000 Gallon Oil UST</u>

## Appendix A-I (continued)

Solid Waste Management Unit Summary  
U.S. DOE Paducah Gaseous Diffusion Plant  
Paducah, Kentucky

A-1(a) List of Solid Waste Management Units and Areas of Concern **Requiring an RFI:**

<u>SWMU/AOC</u>	<u>DESCRIPTION</u>
<u>133</u>	<u>C-611 Unknown Size. Grouted UST</u>
<u>134</u>	<u>C-611 1000 Gallon Diesel/Gasoline Tank</u>
<u>135</u>	<u>C-333 PCB Soil Contamination</u>
<u>136</u>	<u>C-740 TCE Spill Site</u>
<u>137</u>	<u>C-746-A Inactive PCB Transformer Area</u>
<u>138</u>	<u>C-100 South Side <b>Berm</b></u>
<u>139</u>	<u>C-746-A1 Underground Storage Tank</u>
<u>140</u>	<u>C-746-A2 Underground Storage Tank</u>
<u>145</u>	<u>Residential/Inert Landfill Borrow Area</u>
<u>146-152</u>	<u>Concrete Rubble Pile(s)</u>
<u>153</u>	<u>C-331 PCB Soil Contamination (West)</u>
<u>154</u>	<u>C-331 PCB Soil Contamination (Southeast)</u>
<u>155</u>	<u>C-333 PCB Soil Contamination (West)</u>
<u>156</u>	<u>C-310 <b>PCB</b> Soil contamination (West Side)</u>
<u>157 *</u>	<u><b>KOW Toluene Spill Area</b></u>
<u>158</u>	<u>Chilled Water System Leak Site</u>
<u>159</u>	<u>C-746-H3 Storage Pad</u>
<u>160</u>	<u>C-745 Cylinder Yard Spoils <b>Area</b> (PCB Soils)</u>
<u>161</u>	<u>C-743-T01 Trailer Site (Soil Backfill)</u>
<u>162</u>	<u>C-617-A Sanitary Water Line (Soil Backfill)</u>
<u>163</u>	<u>C-304 Bldg/HVAC Piping System (Soil Backfill)</u>
<u>164</u>	<u>KPDES Outfall Ditch 017 Flume (Soil Backfill)</u>
<u>165</u>	<u>C-616-L Pipeline and Vault Soil contamination</u>
<u>166</u>	<u>C-100 Trailer Complex Soil Contamination</u>
<u>167</u>	<u>C-720 Whiteroom Sump</u>
<u>168</u>	<u>KPDES Outfall Ditch 013</u>
<u>169</u>	<u>C-410-E HF Vent Surge Protection Tank</u>
<u>170</u>	<u>C-729 Acetylene Building Drain Pits</u>
<u>171</u>	<u>C-617-A Lagoons</u>
<u>172</u>	<u>C-726 Sandblasting Facility</u>
<u>175</u>	<u>Concrete Rubble Pile (28)</u>

## Appendix A-1 (continued)

A-1(b) List of Solid Waste Management **Units** and Areas of Concern suspected contributing to off-site releases and currently undergoing a prioritized **RI** investigation, focused feasibility study (FS/CMS), **proposed plan**, and **interim/fin** record of decision under the CERCLA 104 and 106 Administrative Consent Order

<u>SWMU/AOC</u>	<u>DESCRIPTION</u>
1	C-747-C Oil Landfarm
2	C-749 Uranium Burial Ground
7	C-747-A Burial Ground
30	C-747-A Bum Area
32	C-728 Clean Waste Oil Tank
33	C-728 Motor Cleaning Facility
<b>56</b>	<b>C-540-A PCB Staging Area</b>
57	<b>C-541-A PCB Waste Staging Area</b>
<b>64</b>	Little Bayou Creek
<b>65</b>	Big Bayou Creek
74	C-340 PCB Transformer Spill Site
79	C-611 PCB Spill Site
80	C-540-A PCB Spill Site
81	C-541 PCB Spill Site

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\*

Units 94 and 95 are facilities that were a part of the Kentucky Ordnance Works, which was a munitions production plant during World War II. These facilities were never used by PGDP. They are included with the PGDP SWMU list because they are within the existing DOE property boundary. A preliminary environmental investigation is currently being conducted at these SWMUs by the U.S. Army Defense Environmental Restoration Program

## -- Appendix A-2

List of Solid Waste Management **Units** and Areas of Concern that Require No Further Investigation at this time:

<u>SWMU No.</u>	<u>SWMU Description</u>
<u>9**</u>	<u>C-746-S Residential Landfill</u>
<u>10**</u>	<u>C-746-T Inert Landfill</u>
<u>29</u>	C-746 TRU Storage Area
<u>34</u>	C-746-M PCB Waste Storage Area
<u>35</u>	C-337 PCB Waste Storage Area
<u>36</u>	C-337 PCB Waste Staging Area
<u>37</u>	C-333 PCB Waste Staging Area
<u>39</u>	C-746-B PCB Waste Storage Area
<u>48</u>	C-400-A Gold Dissolver Storage Tank
<u>52</u>	C-400 Waste Decontamination Tanks
<u>53</u>	C-400 NaOH Precipitation Tank
<u>54</u>	C-400 Degreaser Solvent Recovery Unit
<u>72*</u>	C-200 Underground Gasoline Tanks (UST)
<u>73*</u>	C-710 Underground Gasoline Tanks (UST)
<u>96</u>	Cooling Tower Wood Scrap Pile
<u>142*</u>	C-750-A 10,000-Gallon Gasoline UST
<u>143*</u>	C-750-B 10,000-Gallon Diesel UST
<u>173</u>	<u>C-746-A Trash Sorting Facility</u>
<u>174</u>	<u>C-745-K Low Level Storage Area</u>

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\* Currently being addressed under the Commonwealth of Kentucky Underground Storage Tank (UST) program.

\*\* These SWMUs are permitted under a State of Kentucky Subtitle D Solid Waste Permit  
Subtitle D contains provisions for groundwater monitoring and closure

## APPENDIX A-3

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List of Solid Waste Management **Units** which are being regulated by the State's portion of the RCRA permit:

<u>SWMU No.</u>	<u>PGDP Facility No.</u>	<u>SWMU Description</u>
3	C-404	Low-Level Radioactive Waste Burial Ground
<del>25</del>	<del>C-750-C</del>	<del>1000-Gallon Waste Oil Tank</del>
43	C-746-B	Waste Chemical Storage Area
44	c-733	Hazardous <b>Waste</b> Storage Area
45	C-746-R	Waste Solvent Storage Area
46A	C-746-Q	Hazardous and L.L. Mixed Waste Storage Building
46	C-409	Hazardous Waste Pilot Plant
49	C-400-B	Waste Solution Storage Tank
50	<del>c-400-c</del>	Nickel Stripper Evaporation Tank
51	C-400-D	<b>Lime</b> Precipitation Tank
<del>141</del>	<del>C-720</del>	<del>Inactive TCE Degreaser Unit</del>
144	C-746-A	Hazardous and Mixed Waste Storage Facility

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## APPENDIX A-4

RFI Workplan Schedule for each Waste Area Group (WAG) at PGDP:

ORDER OF SUBMITTAL	WAGS INCLUDED IN RFI WORKPLAN	SCHEDULE
First	WAGs 5 and 11	Due 300 days from the effective date of the permit (This due date is approximately 6 months after the EPA review of the CERCLA Phase II Reports).
Second	WAGs 7 and 1 SWMUs 94 and 95	90 days after the submittal of first RFI Workplan
Third	WAGs 2, 3 and 14	210 days after the submittal of the RFI Workplan for Group 2
Fourth	WAG 13 and SWMU 138	90 days from last RFI Workplan Submittal
Fifth	<u>WAG 17</u>	<u>205 days from last RFI Workplan Submittal</u>
Sixth	<b>WAG 6</b>	<u>180 days from last RFI Workplan Submittal</u>
Seventh	<u>WAG 15</u>	90 days from last RFI Workplan Submittal
Eighth	<u>WAGs 8 &amp; 9</u>	90 days from last RFI Workplan Submittal
Ninth	<u>WAGs 10 &amp; 16</u>	90 days from last RFI Workplan Submittal
<u>Tenth</u>	<u>WAG 20</u>	<u>90 days from last RFI Workplan Submittal</u>
<u>Eleventh</u>	<u>WAG 21</u>	<u>90 days from last RFI Workplan Submittal</u>
<u>Twelfth</u>	<u>WAG 19</u>	<u>90 days from last R R Workplan Submittal</u>
<u>Thirteenth</u>	<b>WAG 24</b>	<u>90 days from last R R Workplan Submittal</u>
<u>Fourteenth</u>	<b>WAG 12</b>	<u>90 days from last RFI Workplan Submittal</u>
<u>Fifteenth</u>	<u>WAG 18</u>	<u>Submittal from last RFI Workplan</u>

Schedule and phased submission of RFI Workplans for these WAGs have been prioritized to reflect the potential threat to human health and the environment.

## APPENDIX A-5

## Waste Areas Groups for SWMUs and AOCs at the PGDP:

WAG 1		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	38	C-615 Sewage Treatment Plant
	94	KOW Trickling Filter and Leach Field
	95	KOW Bum Area
	100	Fire Training Area
	136	C-740 TCE Spill Site
WAG 2		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	4	C-747 Contaminated Burial Ground
WAG 3		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	5	C-746-F Classified Burial Ground
	6	C-747-B Burial Area
	13	C-746-P Clean Scrap Yard
WAG 4		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
UST Program	72	C-200 Underground Gasoline Tank
	73	C-710 Underground Gasoline Tank
	142	C-750-A 10,000 Gallon Gasoline UST
	143	C-750-B 10,000 Gallon Diesel UST
WAG 5		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	16	C-746-D Classified Scrap Yard
	75	C-633 PCB Spill Site
	76	C-632-B Sulfuric Acid Storage Tank
	82	C-531 Electric Switchyard
	83	C-533 Electric Switchyard
	87	C-633 Pumphouse and Cooling Tower
	99	C-745 Kellogg Building Site
	101	C-340 Hydraulic System

WAG 6		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	11	C-400 Trichloroethylene Leak Site
	47	C-400 Technetium Storage Tank Area
	78	C320 PCB Spill Site
	98	C-400 Basement Sump
	40	C-403 Neutralization Tank
	91	UF <sub>6</sub> Cylinder Droop Test Area
WAG 7		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	8	C-746-K Inactive Sanitary Landfill
	130	C-611 550 Gallon Gasoline UST
	131	C-611 50 Gallon Gasoline UST
	132	C-611 2000 Gallon Oil UST
	133	C-611 Unknown Size, Grouted UST
	134	C-611 1000 Gallon Diesel/Gasoline Tank
	157	KOW Toluene Spill Area
WAG 8		
<u>status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	71	C-337-A Vaporizer
	84	C-535 Switchyard
	85	C-537 Switchyard
	89	C-637 Pump House and Cooling Tower
WAG 9		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	27	C-722 Acid Neutralization Tank
	24	C-750-D Underground Storage Tank (UST)
	31	C-720 Compressor Pit Water Storage Tank
	90	C-720 Underground Petroleum Naphtha Pipe
	97	C-601 Diesel Spill
	159	C-746-H3 Storage Pad
	165	C-616-L Pipeline and Vault Soil Contamination
	167	C-720 Whiteroom Sump
	170	C-729 Acetylene Building Drain Pits
WAG 10		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	20	C-410-E HF Emergency Holding Pond
	77	C-634-B H <sub>2</sub> SO <sub>4</sub> Storage Tank
	86	C-637 Pump House and Cooling Tower
	92	Fill Area for Dirt from the C-420 PCB Spill Site

<u>WAG 11</u>		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	19	C-410-B HF Neutralization Lagoon
	41	C-410-C Neutralization Tank
	55	C-405 Incinerator
	88	C-635 Pumphouse and Cooling Tower
	145	Residential/Inert Landfill Burrow Area
<u>WAG 12</u>		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI		C-616-E Sludge Lagoon
	18	C-616-F Full Flow Lagoon
	42	C-616 Chromate Reduction Facility
<u>WAG 13</u>		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	21	C-611-W Sludge Lagoon
	22	C-611-Y Overflow Lagoon
	23	C-611-V Lagoon
	138	C-100 South Side Berm
<u>WAG 14</u>		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI		C-400 To C-404 Underground Transfer Line
<u>WAG 15</u>		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI		C-712 Acid Neutralization Lagoon
	137	C-746-A Inactive PCB Transformer Area
	139	C-746-A1 Underground Storage Tank
	140	C-746-A2 Underground Storage Tank
<u>WAG 16</u>		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI		C-333-A Vaporizer
	153	C-333 PCB Soil Contamination
	169	C-410-E HF Vent Surge Protection Tank
<u>WAG 17</u>		
<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	93	Concrete Rubble Pile
	103-129	Concrete Rubble Pile(s)
	146-152	Concrete Rubble Pile(s)
	175	Concrete Rubble Piles

WAG 18

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<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	<u>102</u>	Plant Storm Sewer
	<u>61</u>	<u>C-375-E5 Effluent Ditch (KPDES 012)</u>
	<u>66</u>	<u>C-375-E3 Effluent Ditch (KPDES 010 Ditch)</u>
	<u>67</u>	<u>C-375-E4 Effluent Ditch (C-340 Ditch)</u>
	<u>60</u>	<u>C-375-E2 Effluent Ditch (KPDES 002)</u>
	<u>58</u>	<u>N S Diversion Ditch (outside security fence)</u>
	<u>59</u>	<u>N S Diversion Ditch (inside security fence)</u>
	<u>62</u>	<u>C-375-S6 Southwest Ditch (KPDES 009)</u>
	<u>63</u>	<u>C-375-W7 Oil Skimmer Ditch (KPDES 008)</u>
	<u>68</u>	<u>C-375-W8 Effluent Ditch (KPDES 015)</u>
	<u>69</u>	<u>C-375-W9 Effluent Ditch (KPDES 001)</u>
	<u>168</u>	<u>KPDES Outfall Ditch 013</u>
	<u>171</u>	<u>C-617-A Lagoons</u>

WAG 19

<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	<u>153</u>	<u>C-331 PCB Soil Contamination (West)</u>
	<u>154</u>	<u>C-331 PCB Soil Contamination (Southeast)</u>
	<u>155</u>	<u>C-333 PCB Soil Contamination (West)</u>
	<u>156</u>	<u>C-310 PCB Soil contamination (West Side)</u>
	<u>160</u>	<u>C-745 Cylinder Yard Spoils Area (PCB Soils)</u>
	<u>161</u>	<u>C-743-To1 Trailer Site (Soil Backfill)</u>
	<u>162</u>	<u>C-617-A Sanitary Water Line (Soil Backfill)</u>
	<u>163</u>	<u>C-304 Bldg/HVAC Piping System (Soil Backfill)</u>
	<u>164</u>	<u>KPDES Outfall Ditch 017 Flume (Soil Backfill)</u>

(Reserved for newly identified low level PCB Sites)

WAG 20

<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	<u>166</u>	<u>C-100 Trailer Complex Soil Contamination</u>
	<u>172</u>	<u>C-726 Sandblasting Facility</u>

(Reserved for newly identified low level RAD Sites)

WAG 21

<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
RFI	<u>158</u>	<u>Chilled Water System Leak Site</u>

(Reserved for newly identified chromate spills)

WAG 22

<u>Status</u>	<u>SWMUs</u>	<u>Description</u>
CERCLA ACO	<u>2</u>	<u>C-749 Uranium Burial Ground</u>
	<u>3</u>	<u>C-404 Low-level Radioactive Waste Burial Ground</u>
	<u>7</u>	<u>C-747-A Burial Ground</u>
	<u>30</u>	<u>C-747-A Bum Area</u>

WAG 23		
Status	SWMUs	Description
CERCLA ACO	<u>1</u>	<u>C-747-C Oil Landfarm</u>
	<u>32</u>	<u>C-728 Clean Waste Oil Tank</u>
	<u>33</u>	<u>C-728 Motor Cleaning Facility</u>
	<u>56</u>	<u>C-540-A PCB Staging Area</u>
	<u>57</u>	<u>C-541-A PCB Waste Staging Area</u>
	<u>79</u>	<u>C-611 PCB Spill Site</u>
	<u>74</u>	<u>C-340 PCB Transformer Spill Site</u>
	<u>80</u>	<u>C-540-A PCB Spill Site</u>
	<u>81</u>	<u>C-541 PCB Spill Site</u>
WAG 24		
Status	SWMUs	Description
RFI	<u>12</u>	<u>C-747-A UF, Drum Yard</u>
	<u>14</u>	<u>C-746-E Contaminated Scrap Yard</u>
	<u>15</u>	<u>C-746-C Scrap Yard</u>
Surface Water		
Status	SWMUs	Description
CERCLA ACO	<u>64</u>	<u>Little Bayou Creek</u>
	<u>65</u>	<u>Big Bayou Creek</u>
Groundwater		
Status	SWMUs	Description
CERCLA ACO	<u>Not Apply</u>	<u>Groundwater</u>

APPENDIX B

RCRA Facility Investigation (RFI)  
Workplan Outline

APPENDIX B

RCRA FACILITY INVESTIGATION (RFI) WORKPLAN OUTLINE

I. RFI WORKPLAN REQUIREMENTS

The Permittee shall prepare a RCRA Facility Investigation (RFI) Workplan that meets the requirements of Part II of this document and the RFI Guidance, EPA-530/SW-89-031. This Workplan shall also include the development of the following plans, which shall be prepared concurrently:

A. Project Management Plan

Permittee shall prepare a Project Management Plan which will include a discussion of the technical approach, schedules and personnel. The Project Management Plan will also include a description of qualifications of personnel performing or directing the RFI, including contractor personnel. This plan shall also document the overall management approach to the RCRA Facility Investigation.

B. Sampling and Analysis Plan(s)

The Permittee shall prepare a plan to document all monitoring procedures: field sampling, sampling procedures and sample analysis performed during the investigation to characterize the environmental setting, source, and releaser of hazardous constituents, so as to ensure that all information and data are valid and properly documented. The Sampling Strategy and Procedures shall be in accordance with Characterization of Hazardous Waste Sites A Methods Manual: Volume II., Available Sampling Methods, EPA-600/4-84-076, or EPA Region IV Engineering Support Branch's Standard Operating Procedure and Quality Assurance Manual (SOP). Any deviation8 from these references must be requested by the applicant and approved by EPA. The Sampling and Analysis Plan must specifically discuss the following unless the EPA-600/4-84-076 or SOP procedures are specifically referenced.

1. Sampling Strategy

- a. Selecting appropriate sampling locations, depths, etc.;
- b. Obtaining all necessary ancillary data;
- c. Determining condition. under which sampling should be conducted;

- d. **Determining which media are to be sampled (e.g., groundwater, air, soil, sediment, subsurface gas);**
- e. **Determining which parameters are to be measured and where;**
- f. **Selecting the frequency of sampling and length of sampling period;**
- g. **Selecting the types of samples (e.g., composites vs. grabs) and number of samples to be collected.**

2. **Sampling Procedures**

- a. **Documenting field sampling operations and procedures, including;**
  - i) **Documentation of procedures for preparation of reagents or supplies which become an integral part of the sample (e.g., filters, preservatives, and absorbing reagents);**
  - ii) **Procedures and forms for recording the exact location and specific considerations associated with sample acquisition;**
  - iii) **Documentation of specific sample preservation method;**
  - iv) **Calibration of field instruments;**
  - v) **Submission of field-biased blanks, where appropriate;**
  - vi) **Potential interferences present at the facility;**
  - vii) **Construction materials and techniques, associated with monitoring wells and piezometers;**
  - viii) **Field equipment listing and sampling containers;**
  - ix) **Sampling order; and**
  - x) **Decontamination procedures.**
- b. **Selecting appropriate sample containers;**
- c. **Sampling preservation; and**

d. Chain-of-custody, including:

- i) Standardized field tracking reporting forms to establish sample custody in the field prior to shipment; and
- ii) Pre-prepared sample labels containing all information necessary for effective sample tracking.

3. Sample Analysis

Sample analysis shall be conducted in accordance with SW-846: "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods" (third edition). The sample analysis section of the Sampling and Analysis Plan shall specify the following:

a. Chain-of-custody procedures, including:

- i) Identification of a responsible party to act as sampling custodian at the laboratory facility authorized to sign for incoming field samples, obtain documents of shipment, and verify the data entered onto the sample custody records;
- ii) Provision for a laboratory sample custody log consisting of aerially numbered standard lab-tracking report sheets; and
- iii) Specification of laboratory sample custody procedures for sample handling, storage, and dispersment for analysis.

b. Sample storage;

c. Sample preparation methods;

d. Analytical Procedures, including:

- i) Scope and application of the procedure;
- ii) Sample matrix;
- iii) Potential interferences;
- iv) Precision and accuracy of the methodology; and
- v) Method detection limits.

e. Calibration procedures and frequency;

f. Data reduction, validation and reporting;

- g. Internal quality control checks, laboratory performance and systems audits and frequency, including:
  - i) Method blank(s);
  - ii) Laboratory control sample(s);
  - iii) Calibration check sample(s);
  - iv) Replicate sample(s);
  - v) Matrix-spiked sample(s);
  - vii) Control chart;
  - viii) Surrogate samples;
  - ix) Zero and span gases; and
  - x) Reagent quality control checks.
- h. Preventive maintenance procedure8 and rchedules;
- i. Corrective action (for laboratory problems); and
- j. Turnaround time.

C. Data Hanaucment Plan

The Permittee shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures, project file requirements, and project-related progress reporting procedures and documents. The plan shall also provide the format to be used to present the raw data and conclusions of the investigation.

1. Data Record

The data record shall include the following:

- a. Unique sample or field measurement code;
- b. Sampling or field measurement location and sample or measurement type;
- c. Sampling or field measurement raw data;

- d. **Laboratory analysis ID number;**
- e. **Property or component measures;** and
- f. **Result of analysis (e.g. concentration).**

2. **Tabular Displays**

The following data shall be presented in tabular displays:

- a. Unsorted (raw) data;
- b. **Results for each medium, or for each constituent monitored;**
- c. Data reduction for statistical analysis, as appropriate;
- d. Sorting of data by potential stratification factors (e.g., location, soil layer, topography); and
- e. Summary data

3. **Graphical Displays**

The following data shall be presented in graphical formats (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transits, three dimensional graphs, etc.):

- a. Display sampling location and sampling grid;
- b. Indicate boundaries of sampling area, and area where more data are required;
- c. Display geographical extent of contamination;
- d. Illustrate changes in concentration in relation to distances from the source, time, depth or other parameters; and
- e. Indicate features affecting inter-media transport and show potential receptors.

11. RCRA Facility Investigation (RFI) Requirements

RCRA Facility Investigation:

The Permittee shall conduct those investigations necessary to: characterize the facility (Environmental Setting); define the source (Source Characterization); define the degree and extent of release of hazardous constituents (Contamination Characterization); and identify actual or potential receptors.

The investigations should result in data of adequate technical content and quality to support the development and evaluation of the corrective action plan if necessary. The information contained in a RCRA Part B permit application and/or RCRA Section 3019 Exposure Information Report may be referenced as appropriate.

All sampling and analyses shall be conducted in accordance with the Sampling and Analysis Plan. All sampling locations shall be documented in a log and identified on a detailed site map.

A. Environmental Setting

The Permittee shall collect information to supplement and/or verify Part B information on the environmental setting at the facility. The Permittee shall characterize the following as they relate to identified sources, pathways and areas of releases of hazardous constituents from Solid Waste Management Units.

1. Hydrogeology

The Permittee shall conduct a program to evaluate hydrogeologic conditions at the facility. This program shall provide the following information:

- a. A description of the regional and facility specific geologic and hydrogeologic characteristics affecting ground-water flow beneath the facility, including:
  - i) Regional and facility specific stratigraphy: description of strata including strike and dip, identification of stratigraphic contacts;
  - ii) Structural geology: description of local and regional structural features (e. g., folding, faulting, tilting, jointing, etc.);
  - iii) Depositional history;

- iv) Regional and facility specific ground-water flow patterns; and
  - v) Identification and characterization of areas and amounts of recharge and discharge.
- b. An analysis of any topographic features that might influence the ground-water flow system.
- c. Based on field data, tests, and cores, a representative and accurate classification and description of the hydrogeologic units which may be part of the migration pathways at the facility (i. e., the aquifers and any intervening saturated and unsaturated units), including:
- i) Hydraulic conductivity and porosity (total and effective);
  - ii) Lithology, grain size, sorting, degree of cementation;
  - iii) An interpretation of hydraulic interconnections between saturated zones; and
  - iv) The attenuation capacity and mechanisms of the natural earth materials (e. g., ion exchange capacity, organic carbon content, mineral content etc.).
- d. Based on data obtained from groundwater monitoring wells and piezometers installed upgradient and downgradient of the potential contaminant source, a representative description of water level or fluid pressure monitoring including:
- i) Water-level contour and/or potentiometric maps;
  - ii) Hydrologic cross sections showing vertical gradients;
  - iii) The flow system, including the vertical and horizontal components of flow; and
  - iv) Any temporal changes in hydraulic gradients, for example, due to tidal or seasonal influences.

e. A description of man-made influences that may affect the hydrology of the site, identifying:

i) Local water-supply and production wells with an approximate schedule of pumping; and

ii) Man-made hydraulic structures (pipelines, french drains, ditches, etc.).

## 2. Soils

The Permittee shall conduct a program to characterize the soil and rock units above the water table in the vicinity of contaminant release(s). Such Characterization may include, but not be limited to, the following types of information as appropriate:

- a. Surface soil distribution;
- b. Soil profile, including ASTM classification of soils;
- c. Transects of soil stratigraphy;
- d. Hydraulic conductivity (saturated and unsaturated);
- e. Relative permeability;
- f. Bulk density;
- g. Porosity;
- h. Soil adsorption capacity;
- i. Cation exchange capacity (CEC);
- j. Soil organic content;
- k. Soil pH;
- l. Particle size distribution;
- m. Depth of water table;
- n. Moisture content;
- o. Effect of stratification on unsaturated flow;
- p. Infiltration;
- q. Evapotranspiration;
- r. Storage capacity;
- s. Vertical flow rate; and
- t. Mineral content.

## 3. Surface Water and Sediment

The Permittee shall conduct a program to characterize the surface water bodies in the vicinity of the facility. Such characterization may include, but not be limited to, the following activities and information:

- a. Description of the temporal and permanent surface water bodies including:

- i) For lakes and estuaries: location, elevation, surface area, inflow, outflow, depth, temperature stratification, and volume;
  - ii) For impoundments: location, elevation, surface area, depth, volume, freeboard, and construction and purpose;
  - iii) For streams, ditches, and channels: location, elevation, flow, velocity, depth, width, seasonal fluctuations, flooding tendencies (i. e., 100 year event), discharge point(s), and general contents.
  - iv) Drainage patterns; and
  - v) Evapotranspiration.
- b. Description of the chemistry of the natural surface water and sediments. This includes determining the pH, total dissolved solids, total suspended solids, biological oxygen demand, alkalinity, conductivity, dissolved oxygen profiles, nutrients, chemical oxygen demand, total organic carbon, specific contaminant concentrations, etc.
- c. Description of sediment characteristics including:
- i) Deposition area;
  - ii) Thickness profile; and
  - iii) Physical and chemical parameters (e. g., grain size, density, organic carbon content, ion exchange capacity, pH, etc.)

#### 4. Air

The Permittee shall provide information characterizing the climate in the vicinity of the facility. Such information may include, but not be limited to:

- a. A description of the following parameters:
  - i) Annual and monthly rainfall averages;
  - ii) Monthly temperature averages and extremes;
  - iii) Wind speed and direction;

- iv) Relative humidity/dew pint;
  - v) Atmospheric pressure;
  - vi) Evaporation data;
  - vii) Development of inversions; and
  - viii) Climate extremes that have been known to occur in the vicinity of the facility, including frequency of occurrence. (i. e. Hurricanes)
- b. A description of topographic and man-made features which affect air flow and emission patterns, including:
- i) Ridges, hills or mountain areas;
  - ii) Canyons or valleys;
  - iii) Surface water bodies (e. g. rivers, lakes, bays, etc.); and
  - iv) Buildings.

**B. Source Characterization**

For those sources from which releases of hazardous constituents have been detected the Permittee shall collect analytical data to completely characterize the wastes and the areas where wastes have been placed, to the degree that is possible without undue safety risks, including: type, quantity; physical form; disposition (containment or nature of deposits); and facility characteristics affecting release (e. g., facility security, and engineering barriers). This shall include quantification of the following specific characteristics, at each source area:

**1. Unit/Disposal Area Characteristics:**

- a. Location of unit/disposal area;
- b. Type of unit/disposal area;
- c. Design feature.;
- d. Operating practice. (past and present)
- e. Period of operation;
- f. Age of unit/disposal area;
- g. General physical condition.; and
- h. Method used to close tho unit/disposal area.

**2. Waste Characteristics:**

**a. Type of wastes placed in the unit;**

- i) Hazardous classification (e. g., flammable, reactive, corrosive, oxidizing or reducing agent);**
- ii) Quantity; and**
- iii) Chemical composition.**

**b. Physical and chemical characteristics such as;**

- i) Physical form (solid, liquid, gas);**
- ii) Physical description (e. g., powder, oily sludge) ;**
- iii) Temperature;**
- iv) pH;**
- v) General chemical class (e. g., acid, base, solvent) ;**
- vi) Molecular weight;**
- vii) Density;**
- viii) Boiling point;**
- ix) Viscosity;**
- x) Solubility in water;**
- xi) Cohesiveness of the waste; and**
- xii) Vapor pressure.**

**c. Migration and dispersal characteristics of the waste such as:**

- i) Sorption capability;**
- ii) Biodegradability, bioconcentration, biotransformation;**
- iii) Photodegradation rates;**

iv) Hydrolysis rates; and

v) Chemical transformations.

The Permittee shall document the procedure used in making the above determinations.

C. Characterization of ~~SES~~ of Hazardous Constituents

The Permittee shall collect analytical data on groundwater, soils, surface water, sediment, and subsurface gas contamination in the vicinity of the facility in accordance with the sampling and analysis plan as required above. These data shall be sufficient to define the extent, origin, direction, and rate of movement of contamination. Data shall include time and location of sampling, media sampled, concentrations found, conditions during sampling, and the identity of the individuals performing the sampling and analysis. The Permittee shall address the following types of contamination at the facility:

1. Groundwater Contamination

The Permittee shall conduct a groundwater investigation to characterize any plumes of contamination detected at the facility. This investigation shall at a minimum provide the following information:

- a. A description of the horizontal and vertical extent of any plume(s) of hazardous constituents originating from or within the facility;
- b. The horizontal and vertical direction of contamination movement;
- c. The velocity of contaminant movement;
- d. The horizontal and vertical concentration profiles of hazardous constituents in the plume(s);
- e. An evaluation of factors influencing the plume movement; and
- f. An extrapolation of future contaminant movement.

The Permittee shall document the procedures used in making the above determinations (e. g., well design, well construction, geophysics, modeling, etc.).

## 2. Soil Contamination

The Permittee shall conduct an investigation to characterize the contamination of the soil and rock units above the saturated zone in the vicinity of any contaminant release. The investigation may include the following information:

- a. A description of the vertical and horizontal extent of contamination;
- b. A description of appropriate contaminant and soil chemical properties within the contaminant source area and plume. This may include contaminant solubility, speciation, absorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation and other factors that might affect contaminant migration and transformation;
- c. Specific contaminant concentrations;
- d. The velocity and direction of contaminant movement; and
- e. An extrapolation of future contaminant movement.

The Permittee shall document the procedures used in making the above determinations.

## 3. Surface Water and Sediment Contamination

The Permittee shall conduct a surface water investigation to characterize contamination in surface water bodies resulting from releases of hazardous constituents at the facility.

The investigation may include, but not be limited to, the following information:

- a. A description of the horizontal and vertical extent of any plume(s) originating from the facility, and the extent of contamination in underlying sediments;
- b. The horizontal and vertical direction of contaminant movement;
- c. The contaminant velocity;

- d. An evaluation of the physical, biological and chemical factors influencing contaminant movement;
- e. An extrapolation of future contaminant movement; and
- f. A description of the chemistry of the contaminated surface waters and sediments. This includes determining the pH, total dissolved solids, specific contaminant concentrations, etc.

4. Air Contamination

The Permittee shall conduct an investigation to characterize gaseous releases of hazardous constituents into the atmosphere or any structures or buildings. This investigation may provide the following information:

- a. A description of the horizontal and vertical direction and velocity of contaminant movement;
- b. The rate and amount of the release; and
- c. The chemical and physical composition of the contaminant(s) released, including horizontal and vertical concentration profiles.

The Permittee shall document the procedures used in making the above determinations.

D. Potential Receptors

The Permittee shall collect data describing the human populations and environmental systems that are susceptible to contaminant exposure from the facility. Chemical analysis of biological samples and/or data on observable effects in ecosystems may also be obtained as appropriate. The following characteristics shall be identified:

- 1. Current local uses and planned future uses of groundwater:
  - a. Type of use (e. g., drinking water source: municipal or residential, agricultural, domestic/non-potable, and industrial); and

- b. Location of ground water users, to include withdrawal and discharge wells, within one mile of the impacted area.

The above information should also indicate the aquifer or hydrogeologic unit used and/or impacted for each item.

2. Current local uses and planned future uses of surface water directly impacted by the facility:
  - a. Domestic and municipal (e. g., potable and lawn/gardening watering);
  - b. Recreational (e. g. swimming, fishing);
  - c. Agricultural;
  - d. Industrial; and
  - e. Environmental (e. g., fish and wildlife propagation).
3. Human use of or access to the facility and adjacent lands, including but not limited to:
  - a. Recreation;
  - b. Hunting;
  - c. Residential;
  - d. Commercial; and
  - e. Relationship between population locations and prevailing wind direction.
4. A general description of the biota in surface water bodies on, adjacent to, or affected by the facility.
5. A general description of the ecology within area the area adjacent to the facility.
6. A general demographic profile of the people who use or have access to the facility and adjacent land, including, but not limited to: age; sex; and sensitive subgroups.
7. A description of any known or documented endangered or threatened species near the facility.

**APPENDIX C**

**Corrective Measures Study (CMS)  
Plan Outline**

APPENDIX C

CORRECTIVE MEASURE STUDY (CMS) PLAN OUTLINE

I. Identification and Development of the Corrective Measure Alternatives

- A. Description of Current Situation
- B. Establishment of Corrective Action Objectives
- C. Screening of Corrective Measures Technologies
- D. Identification of the Corrective Measure

Alternatives

II. Evaluation of the Corrective Measure Alternatives

- A. Technical/Environmental/Human Health/Institutional
- B. Cost Estimate

III. Justification and Recommendation of the Corrective Measure or Measures

- A. Technical
- B. Environmental
- C. Human Health

IV. Reports

- A. Draft
- B. Final
- C. Public Review and Final Selection of Corrective Measure

I. IDENTIFICATION AND DEVELOPMENT OF THE CORRECTIVE MEASURES ALTERNATIVES

Based on the results of the RCRA Facility Investigation and consideration of the identified potential corrective measure technologies, the Permittee shall identify, screen and develop the alternatives for removal, containment, treatment and/or other remediation of the contamination based on the objectives established for the corrective action.

A. De scription of Current Situation

The Permittee shall submit an update to the information describing the current situation at the facility and the known nature and extent of the contamination as documented by the RCRA Facility Investigation (RFI) Report. The Permittee shall provide an update to information presented in the RFI regarding previous response activities and interim measures which have or are being implemented at the facility. The Permittee shall also make a facility-specific statement of the purpose for the response, based on the results of the RFI. The statement of purpose should identify the actual or potential exposure pathways that should be addressed by corrective measures.

B. Establishment of Corrective Action Objectives

The Permittee shall propose facility-specific objectives for the corrective action. These objectives shall be based on public health and environmental criteria, information gathered during the RFI, EPA guidance, and the requirements of any applicable Federal statutes. At a minimum, all corrective actions concerning ground water releases from regulated units must be consistent with, and as stringent as, those required under 40 CFR 5264.100.

C. Screening of Corrective Measure Technologies

The Permittee shall review the results of the RFI and assess the technologies which are applicable at the facility. The Permittee shall screen the corrective measure technologies to eliminate those that may prove infeasible to implement, that rely on technologies unlikely to perform satisfactorily or reliably, or that do not achieve the corrective measure objective within a reasonable time period. This screening process focuses on eliminating those technologies which have severe limitations for a given set of waste and site-specific conditions. The screening step may also eliminate technologies based on inherent technology limitations.

Site, waste, and technology characteristics which are used to screen inapplicable technologies are described in more detail below:

1. **Site Characteristics**

Site data should be reviewed to identify conditions that may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics should be eliminated from further consideration.

2. **Waste Characteristics**

Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by these waste characteristics should be eliminated from consideration. Waste characteristics particularly affect the feasibility of in-situ methods, direct treatment methods, and land disposal (on/off-site).

3. **Technology Limitations**

During the screening process, the level of technology development, performance record, and inherent construction, operation, and maintenance problems should be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process. For example, certain treatment methods have been developed to a point where they can be implemented in the field without extensive technology transfer or development.

D. Identification of the Corrective Measure Alternatives

The Permittee shall develop the corrective measure alternatives based on the corrective action objectives and analysis of potential corrective measure technologies. The Permittee shall rely on engineering practice to determine which of the previously identified technologies appear most suitable for the site. Technologies can be combined to form the overall corrective action alternatives. The alternatives developed should represent a workable number of option(s) that each appear to adequately address all site problems and corrective action objectives. Each alternative may consist of an individual technology or a combination of technologies. The Permittee shall document the reasons for excluding technologies.

I EVALUATION OF THE CORRECTIVE MEASURE I

The Permittee shall describe each corrective measure alternative that passes through the initial screening and evaluate each corrective measure alternative and its components. The evaluation shall be based on technical, environmental, human health and institutional concerns. The Permittee shall also develop cost estimates of each corrective measure.

A. Technical/Environmental/Human Health/Institutional

The Permittee shall provide a description of each corrective measure alternative which includes but is not limited to the following: preliminary process flow sheets; preliminary sizing and type of construction for buildings and structures; and rough quantities of utilities required. The Permittee shall evaluate each alternative in the four following areas:

1. Technical;

The Permittee shall evaluate each corrective measure alternative based on performance, reliability, implementability and safety.

- a. The Permittee shall evaluate performance based on the effectiveness and useful life of the corrective measure:
  - i) Effectiveness shall be evaluated in terms of the ability to perform intended function, such as containment, diversion, removal, destruction, or treatment. The effectiveness of each corrective measure shall be determined either through design specification or by performance evaluation. Any specific waste or site characteristics which could potentially impede effectiveness shall be considered. The evaluation should also consider the effectiveness of combinations of technologies; and
  - ii) Useful life is defined as the length of time the level of desired effectiveness can be maintained. Most corrective measure technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance, but the technology eventually may require replacement. Each corrective measure shall be evaluated in terms of the projected service lives of its component technologies. Resource availability in the future life of the technology, as well as appropriateness of the technologies, must be considered in estimating the useful life of the project.
- b. The Permittee shall provide information on the reliability of each corrective measure including their operation and maintenance requirements and their demonstrated reliability:
  - i) Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straightforward operation and maintenance. The availability of labor and materials to meet these requirements shall also be considered; and

- ii) **Demonstrated and expected reliability is a way of measuring the risk and effect of failure. The Respondent should evaluate whether the technologies have been used effectively under analogous conditions; whether the combination of technologies have been used together effectively; whether failure of any one technology has an immediate impact on receptors; and whether the corrective measure has the flexibility to deal with uncontrollable changes at the site.**
  
- c. **The Permittee shall describe the implementability of each corrective measure including the relative ease of installation (constructability) and the time required to achieve a given level of response:**
  - i) **Constructability is determined by conditions both internal and external to the facility condition. and include such items as location of underground utilities, depth to water table, heterogeneity of subsurface materials, and location of the facility (i.e., remote location vs. a congested urban area). The Permittee shall evaluate what measures can be taken to facilitate construction under these conditions. External factors which affect implementation include the need for special permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities; and**
  
  - ii) **Time has two components that shall be addressed: the time it takes to implement a corrective measure and the time it takes to actually see beneficial results. Beneficial results are defined as the reduction of contaminants to some acceptable, pre-established level.**
  
- d. **The Permittee shall evaluate each corrective measure alternative with regard to safety. This evaluation shall include threats to the safety of nearby communities and environments as well as those to workers during implementation. Factors to consider are fire, explosion, and exposure to hazardous substances.**

2. **Environmental;**

**The Permittee shall perform an Environmental Assessment for each alternative. The Environmental Assessment shall focus on the facility conditions and pathways of contamination actually addressed by each alternative. The Environmental Assessment for each alternative will include, at a minimum, an evaluation of: the short- and long-term beneficial and adverse effects of the response alternative; any adverse effects on environmentally sensitive areas; and an analysis of measures to mitigate adverse effects.**

### 3. Human Health

The Permittee shall assess each alternative in terms of the extent to which it mitigates short- and long-term potential exposure to any residual contamination and protects human health both during and after implementation of the corrective measure. The assessment will describe the concentrations and characteristics of the contaminants on-site, potential exposure routes, and potentially affected population. Each alternative will be evaluated to determine the level of exposure to contaminants and the reduction over time. For management of mitigation measures, the relative reduction of impact will be determined by comparing residual levels of each alternative with existing criteria, standards, or guidelines acceptable to EPA.

### 4. Institutional

The Permittee shall assess relevant institutional needs for each alternative. Specifically, the effects of Federal, state and local environmental and public health standards, regulations, guidance, advisories, ordinances, or community relations on the design, operation, and timing of each alternative. If the selected remedy is capping and closure in place, a notation must be made in the land deed.

## B. Cost Estimate

The Permittee shall develop an estimate of the cost of each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall include both capital and operation and maintenance costs.

1. Capital costs consist of direct (construction) and indirect (nonconstruction and overhead) costs.

a. Direct capital costs include:

- i) Construction costs: Costs of materials, labor (including fringe benefits and worker's compensation), and equipment required to install the corrective measure.
- ii) Equipment costs: Costs of treatment, containment, disposal and/or service equipment necessary to implement the action; these materials remain until the corrective action is complete;
- iii) Land and site-development costs: Expenses associated with purchase of land and development of existing property; and

- iv) Buildings and services costs: Costs of process and nonprocess buildings, utility connections, purchased services, and disposal costs.
- b. Indirect capital costs include:
- i) Engineering expenses: Costs of administration, design, construction supervision, drafting, and testing of corrective measure alternatives;
  - ii) Legal fees and license or permit costs: Administrative and technical costs necessary to obtain licenses and permits for installation and operation;
  - iii) Start-up and shakedown costs: Costs incurred during corrective measure start-up; and
  - iv) Contingency allowances: Funds to cover costs resulting from unforeseen circumstances, such as adverse weather conditions, strike, and inadequate facility characterization.
2. Operation and maintenance costs are post-construction costs necessary to ensure continued effectiveness of a corrective measure. The Permittee shall consider the following operation and maintenance cost components:
- a. Operating labor costs: Wages, salaries, training, overhead, and fringe benefits associated with the labor needed for post-construction operations;
  - b. Maintenance materials and labor costs: Costs for labor, parts, and other resources required for routine maintenance of facilities and equipment;
  - c. Auxiliary materials and energy: Costs of such items as chemicals and electricity for treatment plant operations, water and sewer service, and fuel;
  - d. Purchased services: Sampling costs, laboratory fees, and professional fees for which the need can be predicted;
  - e. Disposal and treatment costs: Costs of transporting, treating, and disposing of waste materials, such as treatment plant residues, generated during operations;
  - f. Administrative costs: Costs associated with administration of corrective measure operation and maintenance not included under other categories;

- g. **Insurance, taxes, and licensing costs:** Costs of such items as liability and sudden accident insurance; real estate taxes on purchased land or right-of-way; licensing fees for certain technologies; and permit renewal and reporting costs;
- h. **Maintenance reserve and contingency funds:** Annual payments into escrow funds to cover (1) costs of anticipated replacement or rebuilding of equipment and (2) any large unanticipated operation and maintenance costs; and
- i. **Other costs:** Items that do not fit any of the above categories.

**III. JUSTIFICATION AND RECOMMENDATION OF THE CORRECTIVE MEASURE OR MEASURES**

The Permittee shall justify and recommend a corrective measure alternative using technical, human health, and environmental criteria. This recommendation shall include summary tables which allow the alternative or alternatives to be understood easily. Trade-offs among health risks, environmental effects, and other pertinent factors shall be highlighted. The Regional Administrator will select the corrective measure alternative or alternatives to be implemented based on the results obtained from work completed under Section II and III. At a minimum, the following criteria will be used to justify the final corrective measure or measures.

**A. Technical**

- 1. **Performance** - corrective measure or measures which are most effective at performing their intended functions and maintaining the performance over extended periods of time will be given preference;
- 2. **Reliability** - corrective measure or measures which do not require frequent or complex operation and maintenance activities and that have proved effective under waste and facility conditions similar to those anticipated will be given preference;
- 3. **Implementability** - corrective measure or measures which can be constructed and operating to reduce levels of contamination to attain or exceed applicable standards in the shortest period of time will be preferred; and
- 4. **Safety** - corrective measure or measures which pose the least threat to the safety of nearby residents and environments as well as workers during implementation will be preferred.

**B. Human Health**

The corrective measure(s) must comply with existing U.S. EPA criteria, standards, or guidelines for the protection of human health. Corrective measures which provide the minimum level of exposure to contaminants and the maximum reduction in exposure with time are preferred.

**C. Environmental**

The corrective measure(s) posing the least adverse impact (or greatest improvement) over the shortest period of time on the environment will be favored.

**IV. REPORTS**

The Permittee shall prepare a Corrective Measure Study Report presenting the results obtained from Sections I through III and recommending a Corrective measure alternative. Copies of the preliminary report shall be provided by the Permittee to the Regional Administrator (RA) for review and approval.

**A. Draft**

The Report shall at a minimum include:

1. A description of the facility;
  - a. Site topographic map & preliminary layouts.
2. A summary of the corrective measure(s) and rationale for selection;
  - a. Description of the corrective measure(s) and rationale for selection;
  - b. Performance expectations;
  - c. Preliminary design criteria and rationale;
  - d. General operation and maintenance requirements; and
  - e. Long-term monitoring requirements.
3. A summary of the RCRA Facility Investigation and Impact on the selected corrective measure or measures;
  - a. Field studies (ground-water, surface water, soil, air); and
  - b. Laboratory studies (bench scale, pilot scale).

4. **Design and Implementation Precautions;**
  - a. **Special technical problems;**
  - b. **Additional engineering data required;**
  - c. **Permits and regulatory requirements;**
  - d. **Access, easements, right-of-way;**
  - e. **Health and safety requirements; and**
  - f. **Community relations activities.**
5. **Cost Estimates and Schedule;**
  - a. **Capital cost estimate;**
  - b. **Operation and maintenance cost estimate; and**
  - c. **Project schedule (design, construction, operation).**

Copies of the draft shall be provided by the Permittee to EPA.

B. Final

The Permittee shall finalize the Corrective Measure Study Report incorporating comments received from EPA on the Draft Corrective Measure Study Report. The report shall become final upon approval by the RA.

C. Public Review and Final Selection of Corrective Measures

Upon receipt of the Final Corrective Measure Study Report, EPA shall announce its availability to the public for review and comment. At the end of the comment period, the RA shall review the comments and then inform the Permittee of the final decision as to the approved Corrective Measures to be implemented.

**APPENDIX D**

**SCHEDULE OF COMPLIANCE**

**APPENDIX D**

Schedule of Compliance

<b>Schedule of Compliance</b>	<b>Due Date</b>
Notification of <b>Newly Identified SWMUs and AOCs</b> Condition II.B.1 and Condition II.B.2.	Within <b>fifteen (15)</b> calendar days of discovery
<b>SWMU Assessment</b> Report Condition II.B.3.	Within ninety (90) calendar days of notification
Notification for Newly Discovered Releases at Previously Identified <b>SWMUs and AOCs</b> Condition II.C.1.	Within <b>fifteen (15)</b> calendar days of discovery
RFI Workplan for <b>SWMU(s)</b> identified in APPENDIX A-1, Condition II.D.1.a	In accordance with the schedule of APPENDIX A-4
RFI Workplan for <b>SWMU(s)</b> and <b>AOC(s)</b> identified under Condition II.B.4., Condition II.C.2., and Condition II.D.1.b.	In accordance with the prioritized and RA approved <b>WAG</b> schedule of APPENDIX A-4. Recommended prioritization is due within thirty <b>(30)</b> calendar days of <b>SAR</b> submittal.
RFI Progress Reports Condition II.D.3.a.	Quarterly, beginning ninety (90) calendar days from the start date specified by the <b>RA*</b>
Draft RFI Report Condition II.D.3.b.	In accordance with the approved <b>RFI Workplan</b>
Final <b>RFI Report</b> Condition II.D.3.b.	Within forty five (45) calendar days after receipt of <b>RA comments</b> on Draft RFI Report
<b>Interim Measures Workplan</b> Condition II.B.1.a.	Within ninety <b>(90)</b> calendar days of notification by <b>RA</b>

<b>Schedule of Compliance</b>	<b>Due Date</b>
Interim Measures Progress Reports Condition II.E.3.a.	Quarterly, beginning 90 days from start date specified by the RA**
Interim Measure Report Condition II.E.3.b.	Within ninety (90) calendar days of completion
CMS Plan Condition II.F.1.a.	Within one hundred and eighty (180) calendar days of notification by RA that a CMS is needed
Draft CMS Report Condition II.F.3.a	In accordance with the schedule defined in the approved CMS plan
Final CMS Report Condition II.F.3.a.	Within forty-five (45) calendar days of RA's comments on draft CMS Report
Imminent Hazard Report Condition II.I.1. and II.I.2.	Oral within 24 hours; Written within fifteen (15) calendar days
Waste Minimization Certification Condition III	Annually from effective date of permit
Vent Monitoring/Inspection Schedule and Procedures APPENDIX H.II.C.3.	Within thirty (30) calendar days prior to anticipated process start-up
Vent Emission Non-Compliance & Unrepaired Equipment Leak Reports APPENDIX H.II.D.4. & H.III.C.6.	Semi-annually, beginning six (6) months after the effective date of permit

The above reports must be signed and certified in accordance with 40 CFR §270.11.

• This applies to Workplan execution that requires more than one hundred eighty (180) calendar days.

\*\* This applies to Workplan execution that requires more than one year.

**APPENDIX E**

**Modification of the Corrective Action  
Schedule of Compliance**

MODIFICATION OF THE CORRECTIVE ACTION SCHEDULE OF COMPLIANCE

- I. If at my time the Regional Administrator determines that modification8 of the Corrective Action Schedule of Compliance is necessary, he or she may initiate a modification to the Schedule of Compliance according to this procedure. If the Regional Administrator initiates a modification, he or rho shall:
- A. Notify the Permittee in writing of the proposed modification and the data by which comments on the proposed modification must be received; and
  - B. Publish a notice of the proposed modification in a locally distributed newspaper, mail a notice to all persons on the facility mailing list maintained according to 40 CFR §124.10(c)(viii), and place a notice in the facility's information repository (i.e., a central source of all pertinent documents concerning the remedial action, uaually maintained at the facility or some other public place, such as a public library, that is accessible to the public) if one is required,
    - 1. If the Regional Adminiattrator receives no written comment on the proposed modification, the modification shall become effective five (5) calendar days after the close of the comment period.
    - 2. If 'theRegional Administrator receives written comment on the proposed modification, the Regional Adminiattrator shall make a final determination concerning the modification after the end of the comment period.
  - C. Notify the Permittee in writing of the final decision.
    - 1. If no written comment was received, the Regional Administrator shall notify individuals on the facility mailing list in writing that the modification has become effective and shall place a copy of the modified Corrective Action Schedule of Compliance in the information repository, if a repository is required for the facility.
    - 2. If written comment was received, the Regional Administrator shall provide notice of the final modification decision in a locally distributed newspaper and place a copy of the modified Corrective Action Schedule of Compliance in the information repository, if a repository is required for the facility.
- II. Modifications that are initiated and finalized by the Regional Administrator according to thia procedure shall not be subject to administrative appeal.
- III. Modifications to the Corrective Action Schedule of Compliance do not constitute a reissuance of the Permit.

**APPENDIX F**

**Waste Minimization Objectives**

Waste Minimization Certification Objectives

The Waste Minimization Program should include the following elements:

1. Top Management Support

- Dated and signed policy describing management support for: waste minimization and for implementation of a waste minimization plan.
- Description of employee awareness and training programs designed to involve employees in waste minimization planning and implementation to the maximum extent feasible.
- Description of how a waste minimization plan has been incorporated into management practices so as to ensure ongoing efforts with respect to product design, capital planning, production operations, and maintenance.

2. Characterization of Waste Generation

- Identification of types, amounts, and hazardous constituents of waste streams, with the source and date of generation.

3. Periodic Waste Minimization Assessments

- Identification of all points in a process where materials can be prevented from becoming a waste, or can be recycled.
- Identification of potential waste reduction and recycling techniques applicable to each waste, with a cost estimate for capital investment and implementation.
- Description of technically and economically practical waste reduction/recycling options to be implemented, and a planned schedule for implementation.
- Specific performance goals, preferably quantitative, for the source reduction of waste by stream. Whenever possible, goals should be stated as weight of waste generated per standard unit of production, as defined by the generator.

4. Cost Allocation System

- Identification of waste management costs for each waste, factoring in liability, transportation, record keeping, personnel, pollution control, treatment, disposal, compliance and oversight costs to the extent feasible.
- Description of how departments are held accountable for the wastes they generate.
- Comparison of waste management costs with costs of potential reduction and recycling techniques applicable to each waste.

## 5. Technology Transfer

- Description of efforts to seek and exchange technical information on waste minimization from other parts of the company, other firms, trade associations, technical assistance programs, and professional consultants.

## 6. Program Evaluation

- Description of types and amounts of hazardous waste reduced or recycled.
- Analysis and quantification of progress made relative to each performance goal established and each reduction technique to be implemented.
- Amendments to waste minimization plan and explanation.
- Explanation and documentation of reduction efforts completed or in progress before development of the waste minimization plan.
- Explanation and documentation regarding impediments to hazardous waste reduction specific to the individual facility.

References: "Draft Guidance to Hazardous Waste Generators on the Elements of a Waste Minimization Program", 54 FR 25056, June 12, 1989.

"Waste Minimization Opportunity Assessment Manual", EPA/625/7-88/003, July 1988.

APPENDIX G

**RCRA/CERCLA TERMINOLOGY**

APPENDIX G

RCRA/CERCLA TERMINOLOGY

RCRA CORRECTIVE ACTION [3004(U)1	CERCLA REMEDIAL ACTION INCP1	COMBINATION [RCRA/CERCLA]
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ACRONYMS :

RFA: RCRA Facility Assessment	PA/SI: Preliminary Assessment/ Site Inspection	RFA-PA/SI
RFI: RCRA Facility Investigation	RI: Remedial Investigation (Phase I & II Site Investigation)	RFI/RI
CMS: Corrective Measure Study	FS: Feasibility Study	CMS/FS
CMP: Corrective Measures Plan	RAP: Remedial Action Plan	CMP/RAP
CMD: Corrective Measures Design	RD: Remedial Design	CMD/RD
CM: Corrective Measures	RA: Remedial Action	CM/RA

APPENDIX H

RCRA ORGANIC AIR EMISSION REQUIREMENTS

## APPENDIX H

### RCRA ORGANIC AIR EMISSION REQUIREMENTS

#### I.A. GENERAL INTRODUCTION

In the June 21, 1990, Federal Register, EPA promulgated the final rule for Phase I of the Organic Air Emission Standards (40 CFR Parts 264 and 265, Subparts AA and BB) for hazardous waste treatment, storage, and disposal (TSD) facilities. Subpart AA impacts on process vents associated with waste management units, specifically distillation, fractionation, thin-film evaporation, solvent extraction, and air or steam stripping operations. Subpart BB impacts on equipment (i.e., pumps, valves, compressors, etc.) that contain or contact hazardous wastestreams with greater than ten-percent-by-weight organics.

#### I.B. GENERAL : OF HAZARDOUS WASTE MANAGEMENT UNITS

Hazardous waste-generated by PGDP are primarily from those operations that provide support to the enrichment cascade. Hazardous waste generated in the C-400 chemical cleaning building include spent degreaser solvents, spent cleaning tank acids and bases, and heavy metal-laden solutions from stripping of cascade parts. Other small volume wastes which are currently generated or stored on-site are laboratory wastes or chemicals that were generated by some past operation.

All hazardous wastes generated by the C-710 laboratory facilities, other than dilute acids and bases and rinse waters, are collected for disposal according to the Technical Services Division (DOE-PGDP) waste disposal plan. The facility wastewater effluent is routed to the C-615 Sewage Treatment Plant under the provisions of 401 KAR 31:010, Section 3. Documentation supporting compliance with this regulation is to be maintained by the Environmental Compliance Department (DOE-PGDP).

#### C-746-R Waste Solvent Storage Area

The C-746-R Waste Solvent Storage Area is an outside-diked storage area. This area holds a number of liquid and solid wastes transferred from general plant areas. Typically, wastes that are stored here are spent solvents (i.e., 1,1,1-trichloroethane and trichloroethylene) and waste oil contaminated with halogenated solvents, uranium, and detectable amounts of polychlorinated biphenyls (PCBs).

(I.B. Cont)

#### **C-733 Hazardous Waste Storage Area**

The C-733 Hazardous Waste Storage Area is a roofed and diked storage area used to store spent solvents, painting wastes, mineral spirits, containers of waste chemicals, and other miscellaneous waste materials. The area is used for container and tank storage of hazardous waste.

#### **C-400-C Nickel Stripper Evaporation Unit.**

The C-400-C Nickel Stripper Evaporation Unit is a system used to treat waste generated by the stripping of nickel plating from process parts. The 120-gal process tank is constructed of stainless steel and is diked to contain *my* possible spills. It is utilized as a batch operation (90 gallon batch) with estimated annual volume of 2600 gal. After settling occurs, water is evaporated (at 180°F) leaving a sludge which is drummed and stored at C-746-Q prior to being shipped off-site for incineration. Vapors are vented by a 67-foot stack through the west wall of C-400. There is a particulate filter on the stack.

#### **C-409 Hazardous Waste Pilot Plant**

The C-409 Hazardous Waste Pilot Plant is a facility utilized for recovery and treatment of hazardous wastestreams. Equipment at the facility includes a thin film evaporator, centrifuge, rotary vacuum filter, portable filter press and solvent recovery system (15 gallon capacity), and related storage and chemical-feed equipment. Work at the facility includes laboratory development and small-scale, production-type activities.

#### **C-400-B Waste Solution Storage Tank**

The C-400-B Waste Solution Storage Tank is a new tank that was put into service in 1986. It may be used to store a number of PCDP wastes such as waste acids or miscellaneous aqueous solutions containing toxic metals. The tank is a 5000-gal, 304L stainless steel tank that is diked to contain any possible spills. The tank has never been used and will only be used in the event of an emergency.

#### **C-400-D Lime Precipitation Unit**

The C-400-D Lime Precipitation Unit is a 4300-gal stainless steel tank equipped with a mixing unit and is diked to contain any possible spills. The system is used to neutralize corrosive wastes and to remove metals from various plant wastestreams.

(I.B. Cont)

**C-746-Q Hazardous Waste Storage Area**

The C-746-Q Hazardous Waste Storage Area is an enclosed, diked area within the larger C-746-Q building. The area is used for the container storage of hazardous and mixed wastes.

In complying with information requirements stated in 40 CFR Part 270.24 and 270.25, the following is a summary of all regulated facilities/equipment at PGDP. Table H-1 is a summary of regulated facilities/equipment under Subpart AA along with historical operating records from 1986 through 1990. Table H-2 is a summary of regulated facilities/equipment under Subpart BB. Figure H-1 is a RCRA air emission facility plot plan which identifies the location of regulated equipment. Table H-3 is a list of all equipment to be monitored following EPA Method 21. All other affected equipment will be visually inspected in accordance with these new standards.

Table H-1. Regulated Facilities Equipment Under Subpart AA with Historical (1986-1990) Operating Record

Identification of Process Vents	Annual Throughput	Annual Operating Hours	Total Organics Emission Rates (lb/hr)	
			Uncontrolled	Controlled
Building C-409	500 gal/yr	100		
'Solvent Recovery System			Negligible	NA
'Thin-Film Evaporator			Negligible	NA
'Centrifuge&Filter			Negligible	NA
Total (from all applicable process vents at the TSDF)			Negligible	NA

**II.A. PERMITTED AND PROHIBITED WAS— IDENTIFICATION**

**II.A.1.- The Permittee may vent emissions from the following wastes subject to the terms of this Permit as follows:**

<u>Vent Identification</u>	<u>Hazardous Waste Management Unit</u>	<u>Description of Hazardous Waste</u>	<u>BPA Hazardous Waste Number</u>	<u>Maximum Waste Vol.</u>
Process Vent I.D. Nos. - 3000(A) 2000(a)	Bldg. C-409	Miscellaneous aqueous and oily waste and halogenated solvents	(See KYDEP RCRA Permit)	1000 gal/day

**II.A.2.** The Permittee is prohibited from managing hazardous waste that is not identified in the KYDEP RCRA Permit.

**II.B. OPERATING REQUIREMENTS**

The Permittee shall install a vapor recovery control device and operate such devices at an efficiency of 95 percent or greater unless total organic emission limits of 3 lb/hr or 3.1 ton/yr for all affected process vents can be attained at an efficiency of less than 95 weight percent. [40 CFR 264.1033(b)]

**II.C. MONITORING AND INSPECTION SCHEDULES AND PROCEDURES**

**II.C.1.** The Permittee shall monitor and inspect the closed vent system and any control devices in accordance with an approved monitoring and inspection schedule and procedures.

**II.C.2.** Currently the equipment in both buildings is not in use and no start-up date could be ascertained. When the equipment becomes operational again, visual inspections, monitoring, and all record-keeping requirements will be met to ensure overall compliance with the air emissions requirements of 40 CFR 264, Subpart AA (for process vents) and/or Subpart BB (for equipment leaks) as applicable.

**II.C.3.** A monitoring and inspection schedule and procedures shall be submitted to the RA, within thirty (30) calendar days prior to the anticipated start-up. The RA must approve this monitoring and inspection schedule and procedures prior to any continuous or intermittent operations.

**II.C.4. The Permittee shall document compliance with Permit Conditions II.A., II.B. and II.C. and place this documentation in the operating record for the facility. [40 CFR 264.1035]**

**II.D. RECORDKEEPING AND REPORTING**

**II.D.1. For facilities to comply with the standards for the closed-vent systems and control devices, the Permittee shall keep on-file at the facility the implementation schedule as required in 40 CFR 264.1033(a)(2). [40 CFR 264.1035(b)(1)]**

**II.D.2. The Permittee shall keep on-file up-to-date documentation of compliance with the process vent standards in 40 CFR 264.1032. [40 CFR 264.1035(b)(2)]**

**II.D.3. The Permittee shall keep on-file up-to-date information and data used to determine whether or not a process vent is subject to the requirements of 40 CFR 264.1032 including supporting documentation as required by 40 CFR 264.1034(d)(2) when application of the knowledge of the nature of the hazardous stream or the process by which it was produced is used. This supporting documentation shall include the date of each batch or continuous operation, the gallons of waste treated, estimated weight of the organic contained in the waste (including sampling and analytical results which support the estimated weight), hours of operation and the estimated emission rate (lbs/hr).**

**II.D.4. The Permittee shall report semiannually to the Regional Administrator (beginning 6 months from the effective date of the permit) the dates within each month during the reporting period when (1) total organic emissions from all affected process vents exceeded 3 lbs/hr or 3.1 tons/yr or (2) a control device exceeded or operated outside the design specifications as defined in 40 CFR 264.1035(c)(4) as indicated by the control device monitoring required by 40 CFR 264.1033(f) and was not corrected within 24 hours. [40 CFR 264.1036(a)(2)]**

**III.A PERMITTED AND PROHIBITED WASTE I N F I L D**

**III.A.1. The Permittee may manage only those hazardous waste8 identified in the KYDEP RCRA Permit with the equipment listed in Table H-3 subject to the terms of this permit as follows.**

**III.A.2. The Permittee is prohibited from managing hazardous waste that is not identified in the KYDEP RCRA Permit.**

### **III.B. MONITORING AND INSPECTION SCHEDULES AND PROCEDURES**

#### **III.B.1. Valves**

The valves listed in Table H-3 shall be monitored monthly using Reference Method 21, and must maintain a reading of less than 10,000 ppm. Any valve for which a leak is not detected for two successive months may be monitored the first month of each succeeding quarter until a leak is detected. If a leak is detected, the Permittee must resume monitoring the valve monthly until a leak is not detected for two successive months. All leaks must be repaired and in compliance no later than fifteen (15) calendar days after leak detection, and a first attempt at repair must be made no later than five (5) calendar days after leak detection. [40 CFR 264.1057(a)-(e)]

#### **III.B.2. Pumps**

The pumps listed in Table H-3 shall be inspected weekly and monitored monthly using Reference Methods 21, and must maintain a reading less than 10,000 ppm and must comply with the leak detection and repair program. (40 CFR 265.1052(a)-(c))

### **III.C. RECORDKEEPING AND REPORTING**

- III.C.1. The Permittee shall keep on-file the following equipment information: listing of an identification number for each piece of equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight; the respective hazardous waste management unit identification; each piece of equipment's specific location at the facility; and the type of equipment (i.e., valve, pump, compressor, pressure relief device, open-ended valve or line, flange or other connector, associated air emission control device or system); the hazardous waste state at the equipment; and the method of compliance with the standard. (40 CFR 264.1064(b)(1))
- III.C.2. The Permittee shall identify each piece of leaking equipment and provide required recordkeeping as provided in 40 CFR 264.1064(d).
- III.C.3. The Permittee shall keep on file and update design documentation and monitoring, operating, and inspection information for all closed vent systems and control devices required to comply with the provisions of 40 CFR 264.1064(e) and 264.1035(c). (40 CFR 264.1064(e))
- III.C.4. The Permittee shall comply with the information requirements for equipment subject to 40 CFR 264.1052 through 264.1060. [40 CFR 264.1064(g)]

- III.C.5. The Permittee shall keep on-file information used in determining exemptions. (40 CFR 264.1064(k))**
- III.C.6. The Permittee shall report semiannually to the Regional Administrator (beginning 6 months after the effective date of the permit) the information on valve, pump, and/or compressor leaks that were not repaired in accordance with requirements, the dates of hazardous waste management unit shutdowns, and where control devices are in use, the dates in each month during the reporting period when a control device exceeded or operated outside the design specifications as defined in 40 CFR 264.1035(c)(4) as indicated by the control device monitoring required by 40 CFR 264.1033(f) and was not corrected within twenty-four (24) hours. (40 CFR 264.1065(a))**

**THIS PAGE UNAVAILABLE  
FOR  
PUBLIC RELEASE**

**IF YOU WISH TO VIEW,  
PLEASE CALL  
BECHTEL JACOBS SECURITY  
(PHONE: 441-5037)**

**Table E-2** Regulated facilities/equipment under Subpart 88.

Equipment and Location	Pump	Valve	Compressor	Pressure Relief Devices	Open Valve	Open Line	Flange Connections
<b>Building C-400</b>							
Hazardous Waste Solution Storage Tank	X	X					X
<b>Building c-733</b>							
Hazardous Waste Storage Tanks	X	X					X
<b>Building C-746-R</b>							
Hazardous Waste Storage Tanks		X					
<b>Building c-109</b>							
Thin-Film-Evaporator	X	X					X
Centrifuge and Filter	X	X					X
Solvent Recovery System		X					X

Table E-3 Equipment monitored by EPA Method 21.

Facility	Percent by weight of total organics present	Light or heavy liquid	Valve ID No.	Pump ID No.	Method of compliance
Building C-400 Hazardous Waste Solution Storage Tank	>10 %	Light	C-400-4009 C-400-4014 C-400-4021	C-400-4010	Monthly leak detection and repair
Building c-733 Harardous Waste Storage Tanks	>10 %	Light	C-733-1006 C-733-1008 C-733-1009 C-733-1021 C-733-1023 C-733-1026 C-733-1031 C-733-1032 C-733-1033 C-733-1034 C-733-1035 C-733-1042 C-733-1046 C-733-1047 C-733-1053 C-733-1054 C-733-1055 C-733-1056 C-733-1061 C-733-1062 C-733-1082 C-733-1083 C-733-1086 C-733-1087 C-733-1088 C-733-1089 C-733-1094 C-733-1095	C-733-1027 C-733-1030 C-733-1038 C-733-1041	Monthly leak detection and repair
Building C-409 Thin Film Evaporator	>10 %	Light	C-409-2012 c-409-2050 C-409-2084 C-409-2133	C-409-2001 c-409-2002 C-409-2096 C-409-2152	Monthly leak detection and repair

Table H-4 Equipment monitored by EPA Method 21.  
(continued)

Facility	Percent by weight of total organics present	Light or heavy liquid	Valve ID No.	Pump ID No.	Method of compliance
and Centrifuge and Filter			C-409-2502 C-409-2508 C-409-2522 C-403-2523 C-409-2532 C-409-2572 C-409-2576 C-109-2581 C-409-2649 C-409-2656	C-409-2552 C-409-2565 C-409-2642 C-409-2678	
Building C-746-R Harardous Waste Storage Tanks	>10 %	Light	C-746R-3004 C-746R-3007 C-746R-3012 C-746R-3015 C-746R-3022 C-746R-3024 C-746R-3026 C-746R-3027 C-746R-3028 C-746R-3030 C-746R-3035		Monthly leak detection and repair
Building C-400 Waste Solution Storage Tank	>10 %	Light	C-400-4009 C-400-4014 C-400-4021	c-400-4010	Monthly leak detection and repair

**NOTICE OF RCRA (HSWA)  
FINAL PERMIT DECISION**



910906005

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.  
ATLANTA, GEORGIA 30365

COPY

JUL 16 1991

4WD-RCRA&FFB

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Mr. Don Booher, Site Manager  
U.S. Department of Energy  
Paducah Site Office  
P.O. Box 1410  
Paducah, Kentucky 42001

Mr. Steve Polston, Plant Manager  
Martin Marietta Energy Systems, Inc.  
Paducah Gaseous Diffusion Plant  
P.O. Box 1410  
Paducah, Kentucky 42001

RE: Issuance of HSWA Permit for 1984 RCRA Amendments  
U.S. Department of Energy and Martin Energy System, Inc.  
Paducah Gaseous Diffusion Plant, Paducah, Kentucky  
EPA I.D. No. KY8 890 008 982

Dear Messrs. Booher and Polston:

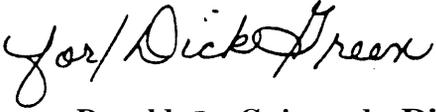
Enclosed is the HSWA Permit that EPA has prepared to cover those portions of the 1984 Hazardous and Solid Waste Amendments (HSWA) which affect your facility. This permit, together with the permit issued by the Commonwealth of Kentucky on July 16, 1991, constitutes a full RCRA permit. Please note that changes have been made from the previously joint public noticed draft permit of March 31, 1991. These changes reflect numerous comments received during the public comment period from the U.S. DOE and Martin Marietta Energy Systems, Inc.

This permit has been issued on July 16, 1991, in accordance with 40 CFR §124.15. The permit becomes effective August 19, 1991, unless review is requested under 40 CFR §124.19. A description of the procedures to request an administrative review is enclosed. If you wish to request a review, you must submit such a request (an original and two copies) to the Administrator, 401 M Street, S.W., Washington, D.C. 20460 within thirty (30) days from receipt of this letter. The request will be timely if mailed by certified mail within a thirty (30) day time period.

The applicable RCRA regulations in effect at the time of permit issuance and referenced in the permit shall be complied with throughout the life of the permit, unless the permittee requests modification of the permit in response to future amendments of the regulations.

If there are any questions concerning the permit or the appeal procedure, please contact Mr. James H. Scarbrough, of my staff, at (404) 347-3433.

Sincerely yours,



**Donald J. Guinyard, Director**  
Waste Management Division

**Enclosures:** Notice of Final Permit Decision with EPA Response to  
Comments, HSWA Permit and Procedures to Request Review

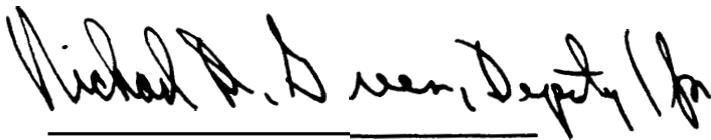
**cc/enclosure:** Mohammad Alauddin, KYDEP  
Robert Edwards, DOE-PGDP  
Beverly Spagg, EPA-FFS

**NOTICE OF RCRA (HSWA) FINAL PERMIT DECISION**

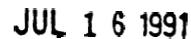
**Facility Name:** U.S. DOE-Paducah Gaseous Diffusion Plant  
**EPA I.D. Number:** KY8 890 008 982  
**Location:** 5600 Hobbs Road  
Paducah, Kentucky  
**Facility Operators:** U.S. Department of Energy/  
Martin Marietta Energy Systems, Inc.  
Paducah Gaseous Diffusion Plant  
P. O. Box 1410  
Paducah, Kentucky 42001

After due consideration of the facts applicable to the above-named facility as they appear in the administrative record and the requirements and policies expressed in the Resource Conservation and Recovery Act (RCRA) and appropriate regulations, I have determined that the permit should be issued. Changes from the tentative determination previously public noticed on March 31, 1991, and presented at the May 9, 1991, public hearing have been made. These changes are addressed in the "EPA Response to May 13, 1991, Comments from DOE/MCES" (ATTACHMENT I).

The administrative record with respect to this determination is maintained at the Agency's offices, 345 Courtland Street, N.E., Atlanta, Georgia 30365, and is available for public inspection between the hours of 8:15 a.m. and 4:30 p.m., Monday through Friday. For further information on this permit action, contact Mr. Leo Romanowski, Jr., at the above address.



Donald J. Guinyard, Director  
Waste Management Division



Date

Attachment

## ATTACHMENT I

EPA RESPONSE TO May 13, 1991, COMMENTS from DOE/MMES  
on the DRAFT EPA HSWA PERMIT for  
the DEPARTMENT OF ENERGY  
PADUCAH GASEOUS DIFFUSION PLANT (PGDP)  
PADUCAH, KENTUCKY  
EPA I.D. NUMBER KY8 890 008 982

### GENERAL COMMENTS:

#### COMMENT #1

A primary concern of the Department of Energy (DOE) and Martin Marietta Energy Systems, Inc., (Energy Systems) is the integration of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedial actions and HSWA corrective actions at the Paducah Gaseous Diffusion Plant (PGDP). The language in the draft permit indicates the Solid Waste Management Units/Area of Concern (SWMU)/(AOC) that are currently undergoing a Remedial Investigation/Alternatives Assessment (RI/AA) and Remedy Selection under the CERCLA Administrative Consent Order (ACO) will undergo corrective action design and implementation in accordance with the HSWA permit.

In addition, it appears likely that PGDP will soon be listed on the National Priorities List (NPL) and will be subject to CERCLA remedial action requirements and HSWA corrective action. In such a case, will the corrective action requirements of the HSWA permit continue to be the prime regulatory authority driving the clean up at Paducah, or will PGDP then be obligated to meet the regulatory, technical, and procedural requirements of both RCRA and CERCLA? Language in the Preamble of the Proposed Rule of HSWA Subpart S Regulations (55 FR 30858) states the following:

Many Federal facilities at which hazardous wastes are managed will be subject to both CERCLA remedial action and RCRA corrective action authorities. In such cases, EPA intends to coordinate the application of RCRA and CERCLA authorities through the use of IAGs, as provided under the authority of Section 120(e) of CERCLA. The IAGs will provide the vehicle for explicitly defining the procedural and technical requirements for corrective action, in satisfaction of the statutory and regulatory authorities of both RCRA and CERCLA.

DOE/Energy Systems is requesting that EPA Region IV provide clarification on this issue.

#### RESPONSE #1

EPA maintains those similar concerns of DOE and MMES regarding the integration of the CERCLA 106 Order with the HSWA permit.

The draft HSWA permit was carefully constructed to minimize any duplication of current CERCLA remedial actions to satisfy those corrective actions required under HSWA. For example, there are no additional RFI/RI requirements for those SWMUs/AOCs listed in APPENDIX A-1(b) as long as they have been adequately addressed in the current phases (Phase I and II) of the CERCLA 106 Administrative Consent Order (ACO). If, however, the SWMU/AOC of APPENDIX A-1(b) is dropped from the CERCLA investigation as "not contributing to off-site releases", the HSWA permit provides for three options:

1. "No Further Action Decision" under Condition II.D.3.C.
2. Additional source characterization required under Conditions II.D.1.a. and II.D.3.C.
3. Proceed to the CMS stage under Condition II.D.3.C. if adequately addressed in Phase II of the ACO.

While it is the responsibility of the DOE-PGDP to comply with the requirements of both the RCRA and the CERCLA 106 ACO, EPA plans to continue its current efforts to coordinate the investigative and clean-up activities required under both programs. As you may already be aware, the RCRA and Federal Facilities Branch at EPA Region IV is divided into three sections: Federal Facilities Section (FFS), Waste Engineering Section (WES) and Waste Compliance Section (WCS).

The primary functions of the FFS Remedial Project Managers (RPMs) will be to overview all CERCLA remedial action activities at federal facilities. This may include Federal Facilities that are carrying out their CERCLA obligations under the terms of a IAG/FFA, a CERCLA Order or a RCRA/HSWA permit.. In carrying out these duties the RPMs will be the primary contact for the federal facilities for all matters relating to these activities and will coordinate with appropriate WCS and/or WES staff.

With regard to the permit maintenance, the RPM will review all remedial/corrective action submissions required under the EPA RCRA/HSWA permit. For any NPL federal facilities, the RPM will be responsible for soliciting the Applicable or Relevant and Appropriate Requirements (ARARs) of RCRA as they apply to remedial activities.

Currently the workplans approved under the CERCLA 106 Order extend to a complete and thorough investigation with a focused feasibility study (PS) and remedy selection of only those SWMUs/AOCs which are responsible to off-site releases to the

groundwater. Since the PGDP has not yet been listed on the NPL, the HSWA permit will become the current vehicle for imposing a comprehensive investigation and necessary clean-up of all SWMUs/AOCs.

As you can see from the attached "Road Map" for the ACO/HSWA interface (Figure 1), your statement in the first paragraph of General Comment #1 is correct. Conditions II.D.3.c. and II.F.1.b. of the draft HSWA permit require that the scope of the CMS include all SWMUs/AOCs. This includes those SWMUs/AOCs currently undergoing remedial investigation under the CERCLA ACO (i.e., SWMUs/AOCs of APPENDIX A-1(b)).

The HSWA Permit provides another bridge for the expeditious initiation of CERCLA remedial actions through the use of interim measures. Interim measures could be recommended by the PGDP or imposed by the Regional Administrator (RA) under Condition I.E. to begin clean-up actions based on the remedy selection resulting from the focused FS from the CERCLA 106 Order.

Thus, until the CERCLA ACO is modified or PGDP is listed on the NPL (tentative options of Figure 1), the HSWA permit will be the prime regulatory authority driving the clean up. However, PGDP is still obligated to meet the regulatory, technical, and procedural requirements of both RCRA and the CERCLA 106 Order for the investiations and assessments at the appropriate SWMUs/AOCs.

EPA agrees that DOE should develop investigatory work plans and reports that are consistent with the National Contingency Plan (NCP) in the event the site is included on the NPL. The FFS Remedial Project Manager will provide guidance to DOE regarding demonstrating consistency with the NCP.

Regarding the language in the Preamble to the Proposed HSWA Subpart S Rule, an IAG or FFA, which coordinates the application of RCRA and CERCLA authorities, is generally developed only after the federal facility becomes listed on the NPL.

#### COMMENT #2

Upon completion of the RI/AA activities currently being conducted under the CERCLA ACO, it is DOE/Energy Systems intention to develop a Record of Decision (ROD) addressing only the CERCLA ACO units that are considered to be significant sources of off-site groundwater contamination. The remaining CERCLA ACO units that are not considered to be contributing to off-site groundwater contamination will be evaluated to determine the following: if the unit can be designated "No Further Action" by comparing contaminant concentrations detected during the CERCLA ACO activities to the Environmental Protection Agency (EPA) action levels; if additional source characterization is needed pursuant to a RCRA Facility

Investigation (RFI) under the HSWA permit; or, if sufficient data exist to advance the unit to the corrective measures study (CMS) phase of the HSWA corrective action program. SWMUs/AOC that are determined to require additional source characterization will be prioritized based on potential threat to human health and the environment and assigned to a Waste Area Group (WAG) listed in Appendix A-4. SWMUs/AOC that appear to present an immediate threat will be addressed with a high priority WAG. SWMUs/AOC that present a low threat will be assigned to a low priority WAG.

## RESPONSE #2

Refer to Response #1

## COMMENT #3

The Preamble to the HSWA Subpart Regulations, Proposed Rule (55 FR 30810), indicates the EPA will include action levels in the HSWA permit to serve as health-based criteria to determine if a SWMU/AOC can be designated "No Further Action," or if the unit should be advanced from the RFI phase to the CMS phase of the RCRA Corrective Action Program. Action levels were not included in the Paducah draft HSWA permit. Is it the intent of the EPA to include action levels later through a permit modification, or use the action levels listed in the proposed HSWA Subpart S Regulations?

## RESPONSE #3

It is the intent of EPA to use action levels derived from the most current health-based criteria available. The data used to derive the concentrations listed in Appendix A of the Proposed Subpart S Rule are available through the Integrated Risk Information System (IRIS), a computer-housed, electronically communicated catalogue of Agency risk assessment and risk management information for chemical substances. IRIS is designed especially for Federal, State and local environmental health agencies as a source of the latest information about Agency health assessment and regulatory decision for specific chemicals. (To establish an IRIS account, call Dialcom at (202) 488-0550.) The risk assessment information (i.e., RfDs and CSFs) contained in IRIS, except as specifically noted, has been reviewed and agreed upon by intra-agency review groups, and represents an Agency consensus. As EPA working groups continue to review and verify risk assessment values, additional chemicals and data components will be added to IRIS. IRIS hardcopy will be available through the National Technical Information Service (NTIS). In addition, EPA will routinely update Appendix A as new data on hazardous constituents are developed.

CORRECTIVE ACTION PROCESS FOR DOE-PGDP

**CERCLA 106 ORDER**

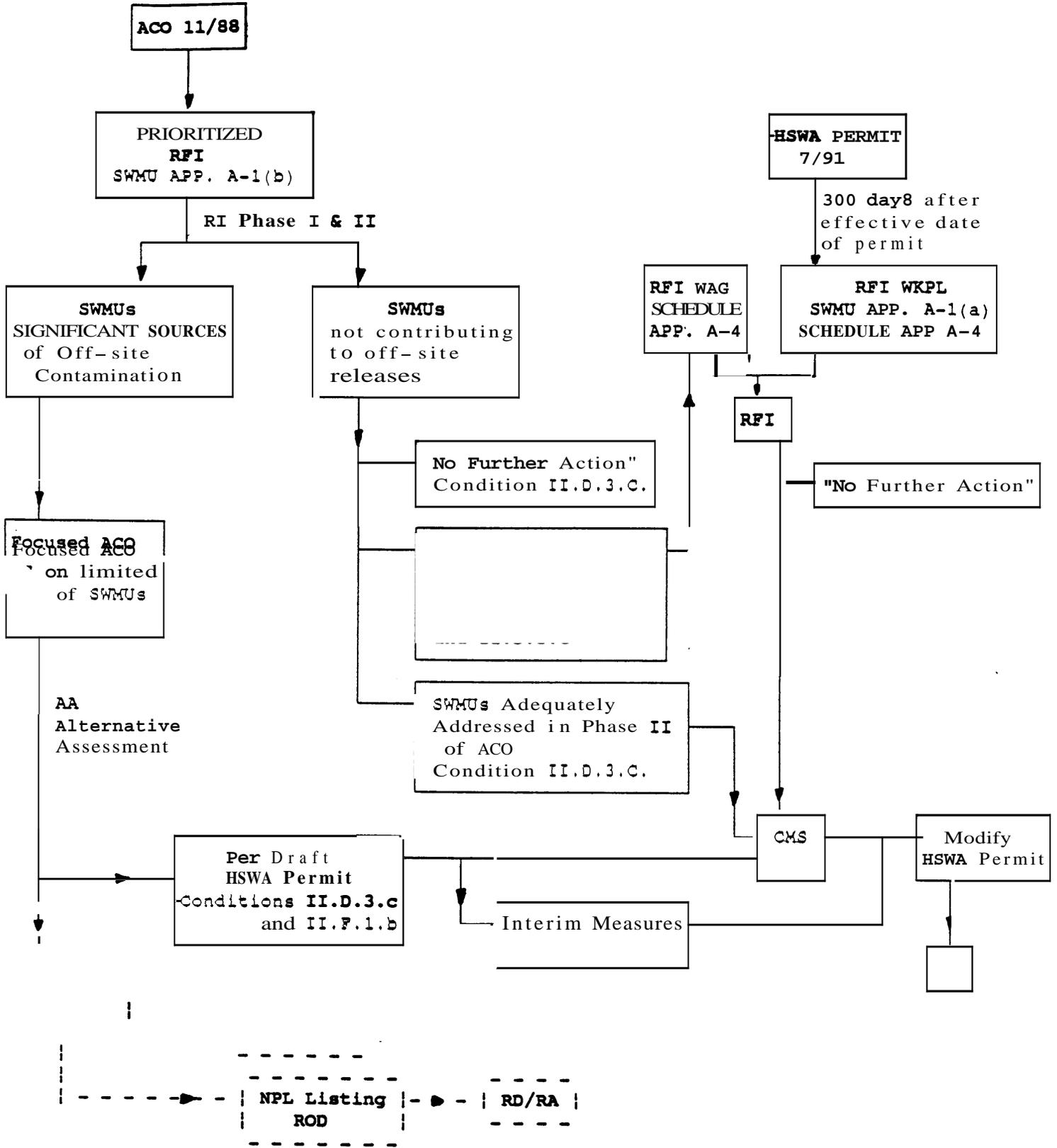


Figure 1: "Road Map" detailing the Administrative Consent Order/ESWA Interface

Thus, PGDP should use the most updated version of Appendix A available, which presently is included in the proposed Subpart S Regulations. These action levels should be documented (with the date and reference) in the RI/RFIs submitted by PGDP. Additionally, EPA will include these updated action levels during permit modification for final remedial action.

Although action levels are the appropriate trigger for conducting a CMS under the content of the proposed Subpart S regulations, DOE should evaluate the "No Action Alternative" for each WAGs in a "Baseline Risk Assessment," so as to demonstrate NCP consistency.

Additionally, DOE must also comply with any state clean-up standards which may be more stringent than those required by EPA.

#### COMMENT #4

DOE/Energy Systems request that the EPA and the State of Kentucky consolidate their comments on all work plans and reports and submit them to DOE as one document reflecting the joint opinion of both EPA and the State of Kentucky.

#### RESPONSE #4

EPA and the Commonwealth of Kentucky intend to consolidate comments and submit joint review letters to DOE/MMES as per their mutual Memorandum of Agreement (MOA).

#### COMMENT #5

DOE/Energy Systems request that EPA and the State of Kentucky include review schedules in the permit that will require the EPA and the State of Kentucky to return comments and approvals on all work plans and reports to DOE/Energy Systems within a specified time frame of submittal. This is necessary for budgeting resources, planning field activities, and maintaining contractor schedule commitments. As a result of General Comment No. 4 (consolidating EPA and State of Kentucky comments), DOE would like to extend the standard EPA comment period from 30 days to 60 days to allow EPA and the State of Kentucky sufficient opportunity to discuss and consolidate their comments. Once DOE/Energy Systems receive EPA and the State of Kentucky comments, DOE/Energy Systems would be required to submit a revised work plan/report within 45 days. Upon submittal of the revised work plan/report to EPA, EPA would have 15 days for final approval.

#### RESPONSE #5

EPA and the Commonwealth of Kentucky cannot commit within the permit to specific document review schedules, comment periods and approval dates. Coordinated EPA/KYDEP comment periods will

be established on a case-by-case basis depending on prior Agency commitments. However, due to the significance of the environmental releases at the PGDP site, DOE/MMS documents submissions will generally be evaluated at the highest priority review level.

COMMENT #6

Additional SWMUS/AOC have been identified since the issuance of the draft permit. One hundred and three (103) SWMUS/AOC identified in the permit should be corrected to reflect one hundred and forty four (144) SWMUS/AOC. The majority of newly added SWMUS/AOC are the twenty-seven (27) concrete rubble piles the EPA previously requested for inclusion in the permit. The Preliminary Assessments/RCRA Facility Assessments for the newly included areas will be submitted to the EPA and State of Kentucky within 90 days of the effective date of the permit. See Attachment A for the revised list of SWMU/AOC at PGDP.

RESPONSE #6

EPA, with the concurrence of the Commonwealth of Kentucky, believes the most prudent method for adding the additional thirty-one (31) SWMUs/AOCs is to employ the Notification and Assessment Requirements for Newly Identified SWMUs and AOCs, HSWA Permit Condition II.B. EPA received very limited information on these newly identified SWMUs/AOCs (27 of which are concrete rubble piles) only during the public notice period for the draft permit. Since no RFA-type information is currently available, EPA was unable to determine whether there is a need for further investigation and into which permit appendix they belong. Thus, these newly identified units will not be included in the soon-to-be-issued HSWA permit. However, after permit issuance, PGDP shall submit a SWMU Assessment Report (SAR) for each of these thirty-one (31) newly identified units as per Condition II.B.3. Based on the results of this SAR, EPA should be able to determine the need for any further investigation as per Condition II.B.4.

COMMENT #7

DOE/Energy Systems request the inclusion of a Force Majeure clause similar to the one negotiated in the CERCLA ACO.

RESPONSE #7

Delays in satisfying any compliance dates required under this HSWA permit will be handled on a case-by-case-basis and must be requested in writing. Thus, a Force Majeure Clause will not be added to the permit.

COMMENT #8

No. 94 [Kentucky Ordnance Works (KOW) Trickling Filter and Leach field] and SWMU No. 95 (KOW Burn Area) are facilities that were a part of the Kentucky Ordnance Works, which was a munitions production plant during World War II. These facilities were never used by PGDP and were only included as a SWMU because they are on DOE property. All future environmental investigations and remediation are the responsibility of the U.S. Department of Defense. Therefore, it is requested that these units be completely removed from this permit.

RESPONSE #8

The definition of "facility" as stated in the proposed Subpart S rule (55 FR 30810, S264.501) "means all contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA." Since SWMUs No. 94 and 95 are both located on DOE property, they must be included in the HSWA permit (refer to APPENDICES A-1(a) and A-4). Thus, no permit change has been made.

Although a preliminary investigation of these two SWMUs is being conducted as part of the U.S. Army Defense Environmental Restoration Program, PGDP has the complete responsibility to verify that these investigations satisfy the permit requirements. Note that the RFI Workplans for these two units has been intentionally placed in the "Second Submission" of APPENDIX A-4, so as to delay submission until approximately 390 days after the effective date of the permit. This should provide PGDP and the U.S. DOD adequate opportunity to satisfy the requirements for an acceptable RFI Workplan.

SPECIFIC COMMENTS:

FACT SHEET

COMMENT #9

Part III page 2 of 8, Paragraph 3 - Insert a comma after "Hazardous."

RESPONSE #9

The fact sheet released with the draft HSWA Permit is a final document. In the event that the PGDP permit is public noticed again, this comment will be considered.

COMMENT #10

Part III, page 3 of 8, Paragraph 6 - "One hundred and three (103) SWMUs and AOCs have been identified from information submitted by the Permittee." Change J03 to 144 SWMUS/AOC (See General Comment No. 6).

## RESPONSE #10

Permit is restricted to the 103 SWMUs/AOCs identified prior to the public notice period. HSWA Permit Condition II.B. must be used to notify and assess newly identified SWMUs/AOCs. (See General Response #6). Thus, no change was made to fact sheet or permit.

## HSWA PORTION OF THE RCRA PERMIT

### COMMENT #11

HSWA PORTION OF THE RCRA PERMIT (Cover Page) - The first sentence of the third paragraph should be rewritten since Energy Systems is not a signatory to the ACO. The inclusion of the following words are suggested: ". . . and DOE must comply with the Administrative Consent Order (ACO) under CERCLA Sections 104 and 106."

### RESPONSE #11

Cover page was revised as suggested.

## PART I - STANDARD CONDITIONS

### COMMENT #12

I.A., page 4 of 29 - This section states, "Compliance with the terms of this permit does not constitute a defense to any order issued or action brought under RCRA or CERCLA..... In the absence of an Interagency Agreement, language should be added to this paragraph indicating that SWMU/AOC that comply with RCRA Subtitle C Correction Action conditions of this permit will satisfy future statutory, regulatory, procedural, and technical requirements of CERCLA remedial action that is required by sites listed on the National Priorities List (NPL).

### RESPONSE #12

The HSWA permit corrective action conditions cannot concede "carte blanche" in allowing future statutory, regulatory, procedural, and technical requirements for a CERCLA NPL site to be satisfied. Prior to the need for an Interagency Agreement, it is advised that PGDP continue to satisfy both CERCLA and RCRA investigative and remedial requirements such that any completed RCRA action may be determined to be consistent with the CERCLA NCP. Thus, no change was made to the permit condition.

COMMENT #13

I.D.8.d., page 6 of 29 - PGDP would like to ask for clarification of what is considered "reasonable" with respect to collection of samples. As PGDP will have to support most sampling activities, through provision of escorts, equipment, collection and management of purge water, decontamination fluids, etc., PGDP interprets "reasonable" to mean during planned sampling events being carried out as a part of the RFI or environmental surveillance process. EPA or the State of Kentucky could then accompany PGDP's sampling teams and obtain split samples. Limiting EPA and the State of Kentucky split sampling activities to sampling events being performed by PGDP (or subcontractors) as a part of the RFI process or environmental surveillance process also minimizes generation of wastes, such as purge water and decontamination wastes.

RESPONSE #13

EPA concurs with the PGDP interpretation of the term "reasonable". No change in permit condition was required.

COMMENT #14

I.D.9.a., page 7 of 29 - The HSWA permit requires the permittee to utilize laboratory methods from SW-846. The CERCLA ACO requires DOE to use EPA Contract Laboratory Program (CLP) protocol as the laboratory method, which is more stringent than SW-846. The permit needs to stipulate both SW-846 or CLP methods. The continued use of CLP is necessary to maintain consistency with the data quality currently being generated from the activities being conducted under the CERCLA ACO. In addition, should PGDP be placed on the NPL in the future, the data generated from the HSWA corrective action activities would be of equivalent quality to the data required under the CERCLA program. Furthermore, language should be added to provide the permittee the option to use the Target Compound List (TCL) defined by the EPA CLP protocol or Appendix VIII of RCRA. The TCL was required during the CERCLA ACO and will be needed to satisfy future NPL requirements.

RESPONSE #14

Permit Condition I.D.9.a. stipulates that the permittee employ the laboratory methods from "SW-846, or an equivalent method approved by the Regional Administrator." Since the EPA CLP protocol represents an equivalent approved method, Permit Condition I.D.9.a. has been modified to include the CLP protocol.

If the TCL is required solely for the CERCLA ACO, then a combination of both the Appendix VIII list and TCL are required for the HSWA permit. However, the Permittee may recommend reductions to the quantitative analytical requirements by demonstrating that a SWMU specific "unit compound list" is functionally equivalent to both the TCL and Appendix VIII constituent lists. The recommendations and justifications for a tailored "unit compound list" are generally presented within the individual RFI workplans. Thus, no permit condition has been changed providing an option.

COMMENT #15

I.D.9.d, page 8 of 29 - "The Permittee shall implement electronic reporting of the environmental monitoring data.... " Currently, there are no regulatory requirements for transferring data electronically. The consolidated data base (CDB), which is under development to meet this requirement, will not be ready by the effective date of this permit. Therefore, it is recommended that language be included in this section that will require the submittal of the data electronically once the data system is complete. In addition, DOE/Energy Systems would like to request a copy of the document (IFF) the EPA references in I.D.9.d, to identify the format the described system requires for electronic transfer of data.

RESPONSE #15

EPA acknowledges that there are no regulatory requirements for transferring data electronically. However, due to the magnitude of data collection required for the investigation and characteristics of over 100 SWMUs/AOCs, it will be mutually beneficial for both EPA and PGDP to establish a common electronic data management system.

The draft Permit Condition I.D.9.d. requires that PGDP "implement electronic reporting.... utilizing the Prototype Electronic Reporting System (PERS) developed by EPA Region IV..." It was assumed that once this data system was completely established, PGDP would submit data accordingly. However, based on your recommendation, permit language has been included to require electronic submittal of the data. Thus, the draft Permit Condition I.D.9.d. has been revised to include "Within one (1) year from the effective date of the permit, this monitoring data shall also be routinely submitted electronically and on computer disc."

NOTE: A copy of the document PERS which contains the formatting requirements (IFF) referenced in Permit Condition I.D.9.d. has been enclosed.

COMMENT #16

I.G.10, page 11 of 29 - RCRA Corrective Action is limited to releases of hazardous waste and hazardous constituents as defined by 40 CFR 261. The HSWA permit has been expanded in scope to include the term "hazardous substances" as defined by Section 101(14) of CERCLA. While Energy Systems is a signatory as co-operator for the RCRA Part B permit and accepts the associated responsibilities outlined in Section I.E. (Signatory Requirements) of this HSWA permit, Energy Systems responsibilities and liabilities as co-operator do not include responses to releases of hazardous substances as defined by CERCLA.

RESPONSE #16

The scope of the HSWA permit was expanded to include the term "hazardous substances" as defined by CERCLA to provide a bridge between the ACO and the RCRA requirements prior to the development of any alternatives. As previously mentioned in Response #1 these alternatives include the tentative options of modifying the ACO or developing an IAG or Federal Facility Agreement (FFA) if listed on the NPL.

Since DOE is solely responsible for the funding of all obligations arising from this HSWA Permit (Permit Condition I.H.) as well as from the CERCLA ACO, Energy Systems responsibilities and liabilities as co-operator are not being challenged. No change to the permit was requested and none was made.

COMMENT #17

I.I., page 13 of 29 - The procedures of this Condition I.I. shall apply only as specifically set forth under the terms of the Corrective Measures Study (Condition II.F)". DOE/Energy Systems request to expand the Dispute Resolution Clause to include all sections under Part II (Correction Action) of the HSWA permit. PGDP is concerned about the impact of revision of RFI Work Plans and other plans by the Regional Administrator and the impacts that these changes may have upon the schedules and available resources for implementation of the plan or on other work under the HSWA permit.

RESPONSE #17

EPA is also concerned about the impact to schedules and resources from EPA required revisions of RFI Workplans and other plans. Such concerns have previously been expressed in the Administrative Order Denying Review of a HSWA permit issued to United Technology Corp./Pratt & Whitney Group (RCRA Appeal No. 88-34, dated February 12, 1990). Under the appeal, the

petitioner argued that the permit improperly made no provisions for an administrative appeal (or dispute resolution) of certain interim decision and approvals by the Region during the corrective action process. These interim decisions and approvals generally involve reviews of various workplans, schedule8 and even interim measures.

The Administrator decided that allowing an administrative appeal from such interim decisions and approvals would lead to unnecessary and undesirable delays in the corrective action process. Should the Petitioner be dissatisfied with an interim decision by the Region, they are free to pursue any available opportunities for judicial review.

The Administrator also declared that the permit properly gives to the Region final authority to make various interim decisions during the corrective action process, with the ultimate corrective measures to be added to the permit through a major modification. (This major modification affords the Petitioner the opportunity for administrative review at that time.) (Refer to Figure 1.)

As a result of this Order Denying Review, Region IV HSWA permits always state that:

- ° RA initiated modification to the Schedule of Compliance per Appendix E are not subject to administrative appeal. (Permit Condition II.H.2.) and
- ° Should any RFI Workplan be disapproved, the RA has the option of (a) sending deficiencies to the facility or (b) revising the workplan and notifying the Permittee of the revisions (i.e., no dispute resolution). (Refer to Permit Condition II.D.1.d.).

Thus, no changes to the draft permit are required.

COMMENT #18

I.I., page 13 of 29, Paragraph 3 - "Calander" is misspelled.

RESPONSE #18

Typo was corrected.

COMMENT #19

I.I., page 14 of 29 - Change "D. J. Bostock" to "Steve Polston" as the PGDP representative.

RESPONSE #19

Correction was made in the draft permit for the PGDP representative.

PART II - CORRECTIVE ACTION

COMMENT #20

II.D.1.b, page 19 of 29 - The first line states: "The permittee shall prepare and submit to the Regional Administrator (RA), within 180 calendar days of notification by the RA, an RFI work plan for those units identified under Condition II.B.4 or Condition II.C.2." DOE/Energy Systems request the sentence to read:

The permittee will prioritize the SWMUS/AOC identified under Condition II.B.4 or Condition II.C.2 based on the threat the SWMU/AOC presents to human health and the environment and assign the SWMU/AOC to WAG in Appendix A-4 that best reflects the priority of the SWMU/AOC. The permittee shall notify the RA and assign the SWMU/ACO to a WAG in Appendix A-4 within 30 days of submitting the Safety Analysis Report (SAR) report required under Condition II.B.3.

Revise the corresponding schedule in Appendix D accordingly.

SWMUs/AOC that appear to present an immediate threat will be assigned to a high priority WAG in Appendix A-4 and will be included in the RFI work plan that is developed to address the WAG it has been assigned to.. SWMUS/AOC that present a low threat will be assigned to a low priority WAG. This approach is necessary to ensure the available financial resources are used to address the highest priority SWMUs/AOC first.

RESPONSE #20

EPA concurs with the prioritization approach to address the most environmentally significant SWMUs/AOCs first. Permit Condition II.D.1.b. and APPENDIX D have been revised as follows:

The Permittee will prioritize the SWMUs/AOCs identified under Condition II.B.4. or Condition II.C.2. based on the threat the SWMU/AOCs presents to human health and the environment and assign the SWMU/AOC to a WAG in the RFI Workplan schedule of APPENDIX A-4 that best reflects the priority of the SWMUs/AOCs. The permittee shall notify the RA and recommend assigning the SWMUs/AOCs to a WAG in the RFI Workplan schedule of APPENDIX A-4 within 30 days of submitting the SWMU Assessment Report (SAR) required under Condition II.B.3. The RA must approve the WAG and schedule assignments. The RFI Workplan(s) shall be developed to meet the requirements of Condition II.D.1.c.

COMMENT #21

II.D.1.c., page 19 of 29, line 14 - Change "minimum" to "applicable."

RESPONSE #21

Permit Condition II.D.1.c., line 14, was revised for consistency. "Minimum" was changed to "applicable".

COMMENT #22

II.D.3.a, page 20 of 29 - RFI Reports; PGDP requests incorporation of a provision to allow all RFI Progress Reports to be combined into a single quarterly project report, rather than several different reports representing each individual RFI.

RESPONSE #22

Permit Condition II.D.3.a. does not prohibit combining individuals RFI Progress Reports into a single combined quarterly Progress Report. However, the PGDP must differentiate the minimum requirements of Permit Condition II.D.3.a. i through V.1 for each individual RFI.

Thus, this Permit Condition required no change.

COMMENT #23

II.D.3.a.iii and iv, page 20 of 29 - PGDP is concerned about the requirement to submit summaries of "all" deviations and all problems. PGDP prefers wording to allow significant deviations be submitted, and discussion of problems which may affect schedules or the overall integrity of the investigation.

RESPONSE #23

The approved RFI Workplan is a binding document which becomes a significant component of EPA's permitting authority. Therefore, EPA must be informed of all deviations and all problems associated with the approved RFI Workplans. These Permit Conditions were not changed.

COMMENT #24

II.E.1.a., page 21 of 29 - Change schedule for submitting interim measures work Plan from "90 days" to "120 days." DOE orders regarding conflict of interest rules prevent the RFI contractor from developing the interim measures work plans. Additional time is needed to allow for the procurement of a

separate subcontractor. In addition, the amount of time needed to generate project specifications and designs will be directly related to the scope of the interim measure and source - specific conditions, which are unpredictable at this time. Revise the corresponding schedule in Appendix D accordingly.

#### RESPONSE #24

Since the scope of any interim measures must be evaluated on a unit specific basis, extended scheduling changes from the 90 day8 required in the draft permit are premature at this time. Additionally any need for interim measures will normally be thoroughly discussed with DOE/MMES prior to final notification by the RA.

Furthermore, if additional scheduling time is required to prepare the IM Workplan, DOE/MMES should provide EPA with the appropriate rationale. The RA, on a case-by-case basis, can adjust the official notification of Permit Condition II.E.1.a. Thus, no change was made to the permit.

#### COMMENT #25

II.E.1.c., page 22 of 29 - The schedule for implementation of the Interim Measures must be revised if the work plan is revised by the RA. This revision must take into account the resources available to the PGDP at the time. The potential impacts on other activities under the HSWA Permit due to reallocation of resources must be considered (see comment No. 17).

#### RESPONSE #25

As long as DOE/MMES provides EPA with the appropriate justifications, the RA will consider resource reallocations in specifying the start dates for the IM Workplans schedules. No change to the permit is required.

#### COMMENT #26

II.E.3.a.ii and iii, page 22 of 29 - Again these require summaries of all deviations and summaries of all problems. PGDP prefers discussion of significant problems or deviations, and avoiding discussion of minor problems in the quarterly reports.

#### RESPONSE #26

Refer to Response #23.

COMMENT #27

II.E.3.a.v., page 23 of 29 - This requirement will result in voluminous quantities of laboratory and monitoring data. Will hard copy summaries and/or electronic transfer of data satisfy this requirement.

RESPONSE #27

Yes, summaries and/or electronic transfers of laboratory and monitoring data will generally suffice. Since there will be instances in which hard copies of all laboratory and monitoring data are required, this permit condition remains unchanged.

COMMENT #28

II.F.1.a., page 23 of 29 - Change schedule for submitting CMS plan from "180 days" to "210 days." DOE orders regarding conflict of interest rules prevent the RFI contractor from developing the CMS plan. Additional time is needed to allow for the procurement of a separate subcontractor. In addition; the amount of time needed to generate project specifications and designs will be directly related to the source specific conditions identified during the RFI, which are unpredictable at this time. Revise the schedule in Appendix D accordingly.

RESPONSE #28

The same rational used in Response #24 applies for the CMS Plans.

COMMENT #29

II.F.2, page 24 of 29 - The permit allows 15 days to implement the correct measures after approval. This should be changed to 45 days as demonstrated by past history at the site. Also Appendix D, "Schedule of Compliance" needs to add: "II.F.2 Implementation of CMS, 45 calendar days after RA written approval."

RESPONSE #29

Any additional time needed to implement the CMS Plan should be identified in the appropriate schedules. Since these schedules receive RA approval, no change to this permit condition is required.

COMMENT #30

II.H.2, page 25 of 29 - "Modifications that are initiated and finalized by the Regional Administrator according to proper procedure, are outlined in Appendix E, shall not be subject to administrative appeal." Since this is a modification to a

compliance schedule, the permit would be subject to a major modification under 40 CFR 270.41. When a Permit is modified, only the conditions subject to modification are reopened, and must follow the procedures in 40 CFR Part 124 for public notice of such Permit which includes petitioning the administrator for an administrative review only to the extent of the change from the draft to the final permit decision. Stating that modifications shall not be subject to administrative appeal does not follow the regulatory administrative process.

#### RESPONSE #30

APPENDIX E provides the Permittee an opportunity to comment on any modifications initiated by the RA. Prior to making any final determinations, the RA reviews and considers these comments. However, the Agency believes that the circumstances prompting the RA to initiate a modification to the compliance schedule would be of a nature that would require a timely and expeditious decision. As previously mentioned in Response #17, the Administrator has already denied a permit appeal (RCRA Appeal No. 88-34) on the premise that allowing an administrative appeal from interim decisions and schedule approvals would lead to unnecessary and undesirable delays in the corrective action process. For this reason, Condition II.H.2. will remain unchanged.

#### COMMENT #31

II.J.2, page 26 of 29 - What justifies an extension according to this permit? The permit needs clarifications such as a Force Majeure clause, or a statement such as found in Section XI, "Extensions," of the ACO.

#### RESPONSE #31

Many of the events indicated in the "Force Majeure" clause, similar to the one in the CERCLA ACO could be invoked by the facility to justify an extension. Some of these events, such as fires, national disasters, explosions, equipment breakage, inclement weather, etc., easily provide sufficient justification for an extension because they are beyond the control of the Permittee. However, other events such as the inability to obtain approvals, funding, permits or licenses are more subjective by nature and will require a case-by-case justification rather than a blanket invocation of "Force Majeure." For these reasons, the Permit Condition will remain unchanged.

COMMENT #32

II.J.3., page 26 of 29 - Change schedule for submitting an amended plan from "90 days" to "180 days." Additional time is needed to generate project specifications, designs, and contract development during subcontractor procurement. Revise the schedule in Appendix D accordingly.

RESPONSE #32

Submission of amended workplans within 90 days is considered generous if DOE/MMES considers that the First Submission of RFI Workplans for the SWMUs of APPENDIX A-1(a) are not due until 300 days after the effective date of the permit (schedule of APPENDIX A-4). Additionally, the IM Workplans are not due until 90 days after official notification by the RA. Permit Condition II.J.3 will remain unchanged.

PART IV - LAND DISPOSAL RESTRICTIONS

COMMENT #33

IV.A., page 28 of 29 - DOE/Energy Systems cannot agree to any language which states that we are in compliance with the Land Disposal Restrictions (LDR) contained in 40 CFR Part 268. PGDP has stored on-site 22,000 gallons of unused pentachlorophenol which cannot be disposed. PGDP has made a good faith effort to locate commercial treatment/disposal for this waste; however, at this time no off-site facility is willing to accept this waste. PGDP will continue this good faith effort to locate treatment/disposal for this pentachlorophenol waste. It is ORO's intention to begin negotiating with EPA Region IV to develop a LDR Federal Facility Compliance Agreement for PGDP. DOE/Energy Systems propose deleting the second sentence contained in Paragraph IV.A.1 and Paragraph I.B in its entirety. DOE/Energy Systems recommends replacing this language with the following:

A Federal Facility Compliance Agreement (FFCA) between EPA and DOE which addresses mixed waste restricted from land disposal pursuant to 40 CFR Part 268 is in the process of being negotiated. Once this agreement is signed, EPA and the Permittee agree that the activities covered by the FFCA will satisfy all requirements contained in 40 CFR Part 268.

RESPONSE #33

Permit Condition IV.A.1., second sentence has been modified by adding the underlined phrase as follows:

...requirements of 40 CFR Part 268 and/or a LDR Federal Facility Compliance Agreement (FFCA).

Both Permit Conditions IV.B.1. and IV.B.2. have been modified by adding the phrase "...and/or the LDR FFCA..."

Permit Condition IV.B.3. has been added as follows:

A Federal Facility Compliance Agreement (FFCA) between EPA and DOE which addresses mixed waste restricted from land disposal pursuant to 40 CFR Part 268 is in the process of being negotiated. Once this agreement is signed, EPA and the Permittee agree that the activities covered by the FFCA will satisfy all requirements contained in 40 CFR Part 268.

APPENDICES

COMMENT #34

Appendix A-1(a), page A-1 of 10 - Prior to implementing an RFI for the SWMUs/AOC listed on Appendix-1(a), DOE/Energy Systems request an option to conduct confirmatory sampling at a SWMU/AOC to determine if a "No further Action" designation can be assigned to the SWMU/AOC.

RESPONSE #34

This comment is adequately addressed in Permit Condition II.D.1.C., third paragraph. This Condition states "the Permittee must provide sufficient justification and/or documentation that a release is not probable if a unit or a media/pathway..... is not included in the RFI Workplan." Basically, if the Permittee can demonstrate that there are no releases, then the RA will approve a "No Further Action." Thus, DOE/MMES always maintains its option to conduct confirmatory sampling and demonstrate to the RA that a release is not probable. Of course, any deletions of a unit, media, or pathway from the RFI Workplans are subject to the approval of the RA. In conclusion, no changes to the permit are required.

COMMENT #35

Appendix A-1(a), page A-1 of 10 - SWMU/AOC No. 25 (C-750, 1000 gallon Waste Oil Tank) is located directly adjacent to the USTs that are being investigated under the State of Kentucky UST program. As a result of its close proximity to those tanks, and the fact that it is within the Waste Area Group that contains the State of Kentucky regulated USTs, DOE/Energy Systems request authorization to investigate and remediate this tank (No. 25) under the State of Kentucky UST program. Therefore we request that SWMU/AOC No. 25 be removed from the list of sites requiring an RFI and transferred to Appendix A-2 on page A-4 of 10. A copy of the work plan will be forwarded to you for your review.

## RESPONSE #35

EPA approves the request to allow DOE/MMES to investigate and remediate SNMU #25 under the Commonwealth of Kentucky UST Program. This decision is based on the EPA-Region IV position document (dated 6/15/89) clarifying the overlapping responsibilities between the RCRA Subtitle I (UST) program and the RCRA Subtitle C regulations.

The Regional position for the three potential situations at facilities that have a RCRA permit or are operating under interim status is as follows:

1. USTs that contain hazardous waste, solid waste or a mixture of hazardous waste and another regulated substance:

If the UST contains material that is classified as a hazardous waste defined under Subtitle C, this UST will be excluded from all the requirements of Subtitle I and will be regulated under Subtitle C.

USTs containing solid waste (but not hazardous) as defined in 1004 of the RCRA statute are only regulated under Subtitle C authority if a release occurs that contains hazardous constituents. Corrective actions for release of hazardous constituents from the USTs will be handled under 3004(u), 3008(h), or 3004(v) of RCRA.

2. Petroleum substance USTs:

Petroleum USTs will be regulated under 40 CFR Part 280. Corrective actions for releases from petroleum USTs will be conducted under Subtitle I. By definition (40 CFR 280.12), a "petroleum UST system" includes a "used oil" UST.

3. Hazardous substances USTs:

USTs containing hazardous substances (not defined as a hazardous waste) subject to Subtitle I regulations will be regulated under Subtitle I until a release occurs. Corrective action for releases that are determined to be hazardous waste or hazardous waste constituents at a RCRA permitted facility will be handled under Subtitle C. Any other releases of hazardous substances will be handled under Subtitle I.

Petroleum and hazardous substance releases at a RCRA permitted facility:

Where there is a possibility of a mixed plume, the two regulatory authorities will coordinate with each other to determine whether: Subtitle I or Subtitle C will have jurisdiction and which requirements will be followed.

Since SWMU #25 (C-750,1000 Gallon Waste Oil Tank) contains used, recyclable motor oil from vehicle maintenance operations, it is subject to Subtitle I as a petroleum substance UST. Thus, the Permit has been changed by transferring SWMU #25 from APPENDIX A-1(a) to APPENDIX A-2.

COMMENT #36

Appendix A-1(a), page A-1 of 10 - AOC B (C-340 Hydraulic System) has been assigned AOC No. 101 (see Attachment A for revised list of SWMUs/AOC).

RESPONSE #36

APPENDICES A-1(a) and A-5 have been revised to change AOC E to AOC 101.

COMMENT #37

Appendix A-1(a), page A-1 of 10 - SWMU/AOC No. 96 (Plant Storm Sewer) has been assigned No. 102.

\*RESPONSE #37

APPENDICES A-1(a) and A-5 have been revised to reassign SWMU 96 as SWMU 102.

COMMENT 138

Appendix A-1(b), page A-2 of 10 - The heading at the top of the page indicates the SWMUs/AOC included on this list are currently undergoing a prioritized RFI under the CERCLA ACO. Include language indicating the SWMUS/AOC are undergoing a RFI and CMS under the CERCLA ACO. It is the intent of DOE/Energy Systems to have generated sufficient data to develop a record of decision upon completion of Phase II of the ACO for the units that are contributing to off-site groundwater contamination. The remaining units that are not determined to be contributing to off-site groundwater contamination will be re-evaluated in accordance with general comment No. 2.

RESPONSE 138

The heading at the top of APPENDIX A-1(b) was changed to include the following (underlined) phase:

"...prioritized RFI investigation and focused Feasibility Study (FS/CMS) and Alternative Assessment under the CERCLA Administrative Consent Order (Phase I and II) Site Investigation Workplans:"

COMMENT #39

Appendix A-1(b), page A-3 of 10 - Remove SWMU No. 94 and No. 95 from the permit or indicate that the Department of Defense is responsible for the investigation and remediation of those units (see general comment No. 8).

RESPONSE #39

Refer to Response #8.

COMMENT #40

Appendix A-I(b), page A-3 of 10 - AOC A (Diesel Spill) has been assigned No. 97; AOC B (C-400 Basement Sump) has been assigned No. 98; AOC C (Kellogg Building) has been assigned No. 99; and, AOC D (Fire Training Area) has been assigned No. 100 (see Attachment A for complete revised list of SWMUs/AOC).

RESPONSE #40

These permit changes have been made to APPENDICES A-1(b) and A-5.

COMMENT #41

Appendix A-2, page A-4 of 10 - The wood scrap collected from upgrading the cooling towers has been assigned SWMU/AOC No. 96. Please add it to the list of sites requiring "No Further Action". The wood has been properly managed and stacked on a concrete pad and is covered with a durable plastic tarp.

RESPONSE #41

SWMU #96 (Cooling Tower Scrap Wood Pile) has been added to APPENDIX A-2.

COMMENT #42

Appendix A-3, page A-5 of 10 - List of SWMUs which are being regulated by the state's portion of the RCRA Permit. Add C-746-A, Hazardous and Mixed Waste Storage Facility, to the list. This facility meets the definition of a SWMU, and was also included in the PGDP state draft RCRA permit.

RESPONSE #42

SWMU #144, the C-746-A, Hazardous and Mixed Waste Storage Facility has been added to APPENDIX A-3, since it was included in the State RCRA permit.

**COMMENT #43**

**Appendix A-4, page A-6 of 10 - The additional SWMUS/AOC that have been identified since the issuance of the draft permit have been assigned to WAGs based on their geographic proximity. In some cases, existing WAGs were combined to create a new WAG (see Attachment B for a revised Appendix A-4).**

**RESPONSE #43**

Only two new SWMUs have been added to the HSWA permit. These two SWMUs are SWMU #96 (Cooling Tower Scrap Wood Pile) and SWMU 1144 (C-746-A, Hazardous and Mixed Waste Storage Facility). The status of the remaining additional SWMUs was previously addressed in Response #6. APPENDIX A-4 was substantially changed based on the new WAG designations recommended by DOE/MMES. These changes are reflected in ATTACHMENT I.A.

**COMMENT #44**

Appendix A-5, page A-7 of 10 - See Attachment C for a revised list of WAGs at PGDP. All SWMUS/AOC have been assigned to a WAG, excluding SWMUS/AOC No. 138 and No. 28. In addition, WAG 4 listed on Appendix A-5 that is currently in the draft permit contains the C-750 Gasoline UST and the C-750 Diesel Fuel UST. These two USTs have been assigned SWMU/AOC No. 142 (Gasoline UST) and No. 143 (Diesel UST). Both of these USTs are regulated under the State of Kentucky UST Program. Please add these two tanks to the list (Appendix A-2) of SWMUs/AOC that require no further action.

**RESPONSE #44**

The two USTs of WAG 4, SWMU #142 and SWMU #143 have been added to APPENDIX A-2. APPENDIX A-5 was substantially changed based on the new WAG designations recommended by DOE/MMES. These changes are reflected in ATTACHMENT I.B.

**COMMENT #45**

Appendix A-5, General Comment - Attachment D of these comments contains a revised set of maps illustrating the approximate locations of SWMUs the WAGS.

**RESPONSE #45**

These five sets of revised maps will become part of the Administrative Record. No change to the permit is required.

**COMMENT #46**

Appendix A-5, page A-10 of 10 - SWMU No. 20 has been assigned to WAG No. 10, as indicated on Attachment C.

**RESPONSE #46**

This change has been made to APPENDIX A-5.

**COMMENT #47**

Appendix H, page H-1 of 7 - Last sentence of the general introduction has "wastestreams" misspelled.

**RESPONSE #47**

Since no misspelled word was noted, no change was made to the permit.

**COMMENT #48**

Appendix H, RCRA Organic Air Emission Requirements, Table H-1, Page H-3 of 7 - The nickel stripper evaporation unit has been included under Subpart AA of the RCRA Air Emission Standards. PGDP does not agree with this determination. Subpart AA regulates distillation units, fractionation units, thin-film evaporation units, steam strippers, air strippers, and solvent extraction units that process hazardous waste with a concentration of 10 parts per million or greater by weight organics on an annual average basis. In a previous conversation with Mr. Leo Romanowski of EPA Region IV, there was some discussion as to whether or not the Nickel Stripper Evaporation Unit was regulated under Subpart AA of the RCRA Air Emission Standards. The unit was described as an open tank with calrod beaters; i.e., a simple evaporation unit. Mr. Romanowski suggested that PGDP provide the necessary information for incorporation in the draft permit. At the time the draft permit would go out for public notice, EPA would make a determination as to whether this unit is regulated under Subpart AA. This unit would be more appropriately regulated under the yet-to-be-promulgated Phase II of the RCRA Air Emission Standard<sup>8</sup> which will cover regulation of organic emissions from containers, tanks and surface impoundments. This issue need<sup>8</sup> to be resolved prior to issuance of the permit.

**RESPONSE #48**

EPA concurs that the Nickel Stripper Evaporation Unit should be regulated under the yet-to-be-promulgated Phase II of the RCRA Air Emission Standard<sup>8</sup> for organic emissions from containers, tanks and surface impoundments.

All references to the Nickel Stripper Evaporation Unit and Emission Point No. 94 at Bldg C-400 have been eliminated from Table H-1 and Permit Condition II.A.1.

**COMMENT #49**

Appendix H Page H-4, Section II.C.2. - Omit the phrase ... (for process vents) and/or Subpart BB (for equipment leaks) as applicable.

**RESPONSE #49**

No change was made to the APPENDIX H, Condition II.C.2.

**COMMENT 150**

Appendix H, Page H-6, Section III.B.2. - Include the words "detection and" to read "leak detection and repair plan."

**RESPONSE #50**

Condition III.B.2. was revised to include the underlined phrase as follows:

...with the leak detection and repair program.

**COMMENT #51**

Appendix I-L Figure H-1, RCRA Air Emission Facility Plot Plan - The map should only identify buildings C-733, C-400, C-409, and C-746R, for the Phase I standard.

**RESPONSE #51**

Buildings C-733, C-400, C-403 and C-746R were highlighted on Figure H-1.

*AJR* 6/27/91

**ATTACHMENT I.A.**

APPENDIX A-4

RFI Workplan Schedule for each Waste Area Group (WAG) at PGDP:

ORDER OF SUBMITTAL	WAGS INCLUDED IN RFI WORKPLAN	SCHEDULE
First	WAGs 5 and 11	Due 300 days from the effective date of the permit (This due date is approximately 6 months after the EPA review of the CERCLA Phase II Reports) .
Second	WAGs 7 and 1 SWMUs 94 and 95	90 days after the submittal of first RFI Workplan
Third	WAG 13	90 days from last RFI Workplan Submittal .
Fourth	WAGs 8 and 9	90 days from last RFI Workplan Submittal
Fifth	WAGs 15 and 12	90 days from last RFI Workplan Submittal
Sixth	WAGs 16 and 10	90 days from last RFI Workplan Submittal
Seventh	WAG 17	90 days from last RFI Workplan Submittal
Eighth	WAG 18	90 days from last RFI Workplan submittal

Schedule and phased submission of RFI Workplans for these WAGs have been prioritized to reflect the potential threat to human health and the environment.

In many instances, WAGs contain both SWMUs requiring an RFI [APPENDIX A-1(a)] and SWMUs already being addressed under the CERCLA ACO [APPENDIX A-1(b)]. If it is determined that Phase II of the CERCLA ACO site investigation has adequately addressed those SWMUs in the WAG, then the WAG RFI Workplans will only address those SWMUs requiring an RFI [APPENDIX A-1(a)].

**ATTACHMENT I.B.**

APPENDIX A-5

Waste Area Groups for SWMUs and AOCs at the PGDP:

WASTE AREA GROUPS				
WAG No.	SWMU No.	PGDP Facility No.	SWMU Description	Status
1	1	C-747-C	Oil Landfarm	CERCLA ACO
	38	C-615	Sewage Treatment Plant	CERCLA ACO
	44	C-733	Hazardous Waste Storage Area	STATE/RCRA
	100	Not Apply	Fire Training Area	CERCLA/ACO*
	136	C-740	TCE Spill Site	PA/RFA
2	3	C-404	Low-level Radioactive Waste Burial Ground	STATE RCRA & CERCLA ACO
	2	C-749	C-749 Uranium Burial Ground	CERCLA ACO
	4	C-747	Contaminated Burial Ground	CERCLA ACO*
	34	C-746-M	PCB Waste Storage Area	NFA
	91	Not Apply	UF <sub>6</sub> Cylinder Drop Test Area	CERCLA ACO
	7	C-747-A	Burial Ground (Gen. Plant Disposal)	CERCLA ACO
	12	C-747-A	UF <sub>6</sub> Drum Yard	CERCLA ACO
	13	C-746-P	Clean Scrap Yard	CERCLA ACO
	14	C-746-E	Contaminated Scrap Yard	CERCLA ACO
	15	C-746-C	Scrap Yard	CERCLA ACO
	30	C-747-A	Burn Area	CERCLA ACO
	5	C-746-F	Classified Burial Ground	CERCLA ACO
	6	C-747-B	Burial Area	CERCLA ACO
4	25	C-750	1,000-Gallon Waste Oil Storage Tank	STATE/UST
	72	C-200	Underground Gasoline Tank	STATE/UST
	73	C-710	Underground Gasoline Tank	STATE/UST
	142	C-750-A	10,000 Gallon Gasoline UST	STATE/UST*
	143	C-750-B	10,000 Gallon Diesel UST	STATE/UST*

WASTE AREA GROUPS				
WAG No.	No.	PGDP Facility No.	SWMU Description	Status
5	16	C-746-D	Classified Scrap Yard	RFI
	56	C-540-A	PCB staging Area	CERCLA ACO
	61	C-375-E5	Effluent Ditch (KPDES 012)	RFI
	64	Not Apply	Little Bayou Creek	CERCLA ACO
	66	C-375-E4	Effluent Ditch (KPDES 010 Ditch)	RFI
	67	C-375-E4	Effluent Ditch (C-340 Ditch)	RFI
	74	C-340	PCB Transformer Spin Site	CERCLA ACO
	75	C-633	PCB Spill Site	CERCLA ACO
	76	C-632-B	Sulfuric Acid Storage Tank Area	RFI
	80	C-540-A	PCB Spill Site	CERCLA ACO
	82	C-531	Electric Switchyard	CERCLA ACO
	83	C-533	Electric Switchyard	CERCLA ACO
	87	C-633	Pumphouse and Cooling Tower	RFI
	99	C-745	Kellogg Building Site	CERCLA ACO*
101	C-340	Hydraulic System	RFI*	
5	11	C-400	Trichloroethylene Leak Site	CERCLA ACO
	47	C-400	Technetium Storage Tank Area	CERCLA ACO
	48	C-400-A	Gold Dissolver Storage Tank	NFA
	49	C-400-B	Waste Solution Storage Tank	STATE/RCRA
	50	C-400-C	Nickel Stripper Evaporation Tank	STATE/RCRA
	51	C-400-D	Lime Precipitation Tank	STATE/RCRA
	52	C-400	Waste Decontamination Solution Storage Tanks	NFA
	53	C-400	NaOH Precipitation Tank	NFA
	54	C-400	Degreaser Solvent Recovery Unit	NFA
	78		PCB Spill Site	CERCLA ACO
98	C-400	Basement Sump	CERCLA ACO*	
7	79	C-611	PCB Spin Site	CERCLA ACO
	130	C-611	550 Gallon Gasoline UST	PARFA
	131	C-611	50 Gallon Gasoline UST	PARFA
	132	C-611	2000 Gallon Oil UST	PARFA
	133	C-611	Unknown Size, Grouted UST	PARFA
	134	C-611	1000 Gallon Diesel/Gasoline Tank	PARFA

## APPENDIX A-5 (continued)

WASTE AREA GROUPS				
WAG No.	SWMU No.	PGDP Facility No.	SWMU Description	Status
8	35	C-337	PCB Waste Storage Area	NFA
	36	C-337	PCB Waste Staging Area	NFA
	57	C-541-A	PCB Waste Staging Area	CERCLA ACO
	60	C-375-E2	Effluent Ditch (KPDES 002)	RFI
	71	C-337-A	Vaporizer	CERCLA ACO
	81	C-541	PCB Spill Site	CERCLA ACO
	84	C-535	Switchyard	CERCLA ACO
	85	c-537	Switchyard	CERCLA ACO
	89	c-637	Pump House and Cooling Tower	RFI
9	24	C-750-D	Underground Storage Tank (UST)	RFI
	27	C-722	Acid Neutralization Tank	CERCLA ACO
	31	C-720	Compressor Pit Water Storage Tank	CERCLA ACO
	32	C-728	Clean Waste Oil Tank	CERCLA ACO
	33	C-728	Motor Cleaning Facility	CERCLA ACO
	46	C-409	Hazardous Waste Pilot Plant	STATE/RCRA
	90	C-720	Underground Petroleum Naphtha Pipe	RFI
	97	C-601	Diesel Spill	CERCLA ACO*
	141	C-720	Inactive TCE Degreaser	PA/RFA
10	20	C-410-E	HF Emergency Holding Pond	RFI
	77	C-634-B	H <sub>2</sub> SO <sub>4</sub> Storage Tank	RFI
	86	C-637	Pump House and Cooling Tower	RFI
	92	Not Apply	Fill Area for Dirt from the C-420 PCB Spill Site	CERCLA ACO
11	9	C-746-S	Residential Landfill	CERCLA ACO
	10	C-746-T	Inert Landfill	CERCLA ACO
	19	C-410-B	HF Neutralization Lagoon	CERCLA ACO
	40	C-403	Neutralization Tank	CERCLA ACO
	41	C-410-C	Neutralization Tank	RFI
	55	C-405	Incinerator	RFI
	58	Not Apply	North-South Diversion Ditch (outside security fence)	RFI
	59	Not Apply	North-South Diversion Ditch (inside security fence)	RFI
88	C-635	Pumphouse and Cooling Tower	RFI	

APPENDIX A-5 (continued)

WASTE AREA GROUPS				
WAG No.	SWMU No.	PGDP Facility No.	SWMU Description	Status
12	17	C-616-E	Sludge Lagoon (unlined)	CERCLA ACO
	18	C-616-F	Full Flow Lagoon	CERCLA ACO
	42	C-616	Chromate Reduction Facility	RFI
13	8	C-746-K	Inactive Sanitary Landfill	CERCLA ACO
	21	C-611-W	Sludge Lagoon	RFI
	22	C-611-Y	Overflow Lagoon	RFI
	23	C-611-V	Lagoon	RFI
	62	C-375-S6	Southwest Ditch (KPDES 009)	RFI
	63	C-375-W7	Oil Skimmer Ditch (KPDES 008)	RFI
	65	Not Apply	Big Bayou Creek	CERCLA ACO
	68	C-375-W8	Effluent Ditch (KPDES 015)	RFI
	69	C-375-W9	Effluent Ditch (KPDES 001)	RFI
14	26	Not Apply	C-400 To C-404 Underground Transfer Line	CERCLA ACO*
15	29	C-746	TRU Storage Area	NFA
	39	C-746-B	PCB Waste Storage Area	NFA
	43	C-746-B	Waste Chemical Storage Area	STATE/RCRA
	137	C-746-A	Inactive PCB Transformer Area	PA/RFA
	139	C-746-A1	Underground Storage Tank	PA/RFA
	140	C-746-A2	Underground Storage Tank	PA/RFA
	144	C-746-A	Hazardous and Mixed Waste Facility	STATE/RCRA*
16	37	C-333	PCB Waste Staging Area	NFA
	45	C-746-R	Waste Solvent Storage Area	STATE/RCRA
	46A	C-746-Q	Hazardous and Low-Level Waste Storage Building	STATE/RCRA
	70	C-333-A	Vaporizer	CERCLA ACO*
	96	Not Apply	Cooling Tower Scrap Wood Pile	NFA
	135	C-333	PCB Soil Contamination	PA/RFA
17	93	Not Apply	Concrete Rubble Pile	RFI
	103-129	Not Apply	Concrete Rubble Pile(s)	PA/RFA
18	102	Not Apply	Plant Storm Sewer	RFI*
	28	C-712	Acid Neutralization Lagoon	CERCLA ACO
	94	-	KOW Trickling Filter & Leach Field	RFI
	95	-	KOW Burn Area	RFI

APPENDIX A-5 (continued)

CERCLA ACO - indicates the SWMU/AOC is currently being addressed under the CERCLA Administrative Consent Order.  
STATE/RCRA - indicates the SWMU/AOC is an operative RCRA-regulated unit that will be addressed during RCRA Closure.  
STATE/UST - indicates the SWMU/AOC is being addressed under the state of Kentucky UST Program.  
PA/RFA - indicates a newly identified SWMU/AOC undergoing a Preliminary Assessment/RCRA Facility Assessment.  
NFA - indicates the SWMU/AOC requires "No Further Action" under the HSWA Corrective Action Program.  
RFI - indicates the SWMU/AOC requires a RCRA Facility Investigation pursuant to the HSWA permit.  
SWMU/AOC No. 138 (C-100 South Side Lawn) - Not Assigned to a WAG - PA/RFA  
SWMU/AOC No. 28 (C-712 Acid Neutralization Lagoon) - Not Assigned to a WAG - CERCLA ACO  
\* - denotes the SWMU/AOC was assigned a status designation prior to receiving a PA/RFA; PA/RFA must still be completed.  
SWMUs 94/95 were not assigned to a WAG

SUMMARY OF REQUIREMENTS  
FOR  
NOTICE OF APPEAL / PETITION FOR REVIEW

Any person who files comments on the draft permit or participate in the public hearing on the draft permit may petition the EPA Administrator to review any condition of the permit decision that was raised by anyone during the public comment period (including the public hearing). A person who did not file comments or participate in the public hearing on the draft permit, may not petition for administrative review, except concerning those changes made from the draft to the final permit (e.g., new permit conditions that were not included in the draft permit).

The petition •

1. must be submitted within a 30-day period, beginning on the day after the Region serves notice of its permit decision, unless the notice specifies a later starting date for the 30-day, period.
2. must contain a statement of the reasons supporting that review, including a demonstration that any issues raised in the petition were previously raised during the public comment period or public hearing and, when appropriate, a showing that the initial decision contains:
  - a. a finding of fact or conclusion of law which is clearly erroneous, or
  - b. an exercise of discretion or policy which is important and which the Administrator should review.
3. must be sent (an original and one copy) to the Headquarters Hearing Clerk, at the following address:

Headquarters Hearing Clerk (A-110)  
Room M3708  
U.S. Environmental Protection Agency  
401 M. Street, SW  
Washington, DC 20460

A copy of the petition should also be sent to the Region IV Regional Administrator, at the following address:

U.S. Environmental Protection Agency  
Region IV  
345 Courtland Street, NE  
Atlanta, GA 30365