Department of Energy

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NOV 18 2011

Ms. Maria Galanti
Site Coordinator
Ohio Environmental Protection Agency
Southeast District Office
2195 Front Street
Logan, Ohio 43138

PPPO-03-1334678-12

Dear Ms. Galanti:

REMOVAL ACTION COMPLETION REPORT FOR PHASES I AND II OF THE X-334 TRANSFORMER CLEANING/STORAGE BUILDING AT THE PORTSMOUTH GASEOUS DIFFUSION PLANT, PIKETON, OHIO

Enclosed for your review and concurrence, please find the *Removal Action Completion Report for Phases I and II of the X-334 Transformer Cleaning/Storage Building at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio* (DOE/PPPO/03-0224&D1). This document was prepared in accordance with the *Director's Final Findings and Orders for Removal Action and Remedial Investigation and Feasibility Study and Remedial Design and Remedial Action for the Portsmouth Gaseous Diffusion Plant (Decontamination and Decommissioning Project),* as amended on September 12, 2011.

This Removal Action Completion Report documents completion of the Phase I and Phase II activities for the X-334 Building Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) non-time-critical removal action, as described in the *Removal Action Work Plan for the X-334 Transformer Cleaning/Storage Building at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio* (RAWP). Removal action alternatives for the X-334 Building were evaluated in the *Engineering Evaluation/Cost Analysis for Group 1 Buildings X-103, X-334, and X-344B at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio*, and the decision to remove the X-334 Building was documented in the *Action Memorandum for the Group 1 Buildings X-103, X-334, and X-344B at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio* (Action Memorandum).

Phase I activities included demolition of the X-334 Building superstructure, demobilization of equipment, and recycling or disposal of the Phase I demolition materials. The Phase II activities included removal of the X-334 Building slab, restoration of the site, demobilization, and disposal of the Phase II demolition materials. The extent of the non-time-critical removal action was limited to the footprint of the X-334 Building. The Phase I and Phase II activities were

completed in accordance with the RAWP and the applicable or relevant and appropriate requirements outlined in the Action Memorandum.

If you have any questions or require additional information, please contact Kristi Wiehle of my staff at (740) 897-5020.

Sincerely,

Joel B. Bradburne
Portsmouth Site Lead
Portsmouth/Paducah Project Office

Enclosure:
Removal Action Completion Report for Phases I and II of the X-334 Transformer Cleaning/ Storage Building

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Removal Action Completion Report for Phases I and II of the X-334 Transformer Cleaning/Storage Building at the Portsmouth Gaseous Diffusion Plant Piketon, Ohio

U.S. Department of Energy

DOE/PPPO/03-0224&D1

November 2011

This document is approved for public release per review by:	
Henry H. Thomas	3/22/11
PORTS Classification/Information Office	Date

Removal Action Completion Report for Phases I And II of the X-334 Transformer Cleaning/Storage Building at the Portsmouth Gaseous Diffusion Plant Piketon, Ohio

U.S. Department of Energy

DOE/PPPO/03-0224&D1

November 2011

Prepared by:

Fluor-B&W Portsmouth LLC, under Contract DE-AC30-10CC40017

FBP-ER-RDRA-RPT-0037, Revision 3

CONTENTS

FIGURES

TABLES

ACRONYMS

ARAR	applicable or relevant and appropriate requirement
CFR	*Code of Federal Regulations*
CRO	Community Reuse Organization
DOE	U.S. Department of Energy
D&D	decontamination and decommissioning
DFF&O	*Director's Final Findings and Orders for Removal Action and Remedial Investigation and Feasibility Study and Remedial Design and Remedial Action for the DOE Portsmouth Gaseous Diffusion Plant (Decontamination and Decommissioning Project)*
dpm	disintegrations per minute
EE/CA	Engineering Evaluation/Cost Analysis
NPDES	National Pollutant Discharge Elimination System
OAC	Ohio Administrative Code
Ohio EPA	Ohio Environmental Protection Agency
PCB	polychlorinated biphenyl
PORTS	Portsmouth Gaseous Diffusion Plant
RACR	Removal Action Completion Report
RAWP	Removal Action Work Plan
RCRA	Resource Conservation and Recovery Act
SAP	Sampling and Analysis Plan
TCLP	toxicity characteristic leaching procedure
TSCA	Toxic Substances Control Act of 1976
VOC	volatile organic compound

EXECUTIVE SUMMARY

This Removal Action Completion Report (RACR) documents completion of Phases I and II of a removal activity in accordance with the *Director's Final Findings and Orders for Removal Action and Remedial Investigation and Feasibility Study and Remedial Design and Remedial Action for the DOE Portsmouth Gaseous Diffusion Plant (Decontamination and Decommissioning Project)* (DFF&O) (Ohio Environmental Protection Agency[Ohio EPA] 2010) for the X-334 Transformer Cleaning/Storage Building (hereinafter "the X-334 Building") at the Portsmouth Gaseous Diffusion Plant (PORTS). The X-334 Building was located at coordinates N 11800 and E 8200 in the northern portion of PORTS. The *Removal Action Work Plan for the X-334 Transformer Cleaning/Storage Building at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio* (X-334 RAWP) (DOE 2011a) described the removal action in two phases: Phase I was to involve the removal of the building superstructure and Phase II was to address removal of the underlying slab and underground piping and utilities located beneath the footprint of the X-334 Building. There were no underground piping or utilities located beneath the building superstructure.

Built in 1985, the X-334 Building was a 2500 sq-ft, one-story, steel building on a diked concrete slab. The slab sloped towards a blind sump located in the north central part of the slab. The building housed storage tanks containing polychlorinated biphenyl (PCB) oils and PCB-contaminated kerosene. Previous operations included repair of electrical equipment. Most recently, the building was used to store PCB items and other material. No water supply was present at the X-334 Building, and there were no floor drains or catch basins. An electric power line was the only utility present in the building.

Based on historical information and the U.S. Department of Energy's (DOE) process knowledge, contaminants of concern associated with the X-334 Building included PCBs and radiological constituents (DOE 2010a). The historical information and process knowledge were supplemented by sampling and analyses of the building components that remained after the pre-decontamination and decommissioning (pre-D&D) activities were completed. Those components were limited to the concrete slab and the steel superstructure. Based on the analytical data, the superstructure debris was not a regulated Toxic Substances Control Act (TSCA) waste; however, the concrete slab debris required management as TSCA waste and low level waste.

The X-334 Building DFF&O removal action Phase I activities included demolition of the X-334 Building superstructure, demobilization of equipment, and recycling or disposal of the Phase I demolition materials. The Phase II activities included removal of the X-334 Building slab, restoration of the site, demobilization, and disposal of the Phase II demolition materials. The extent of the removal action was limited to the footprint of the X-334 Building. The Phase I and Phase II activities were completed in accordance with the *Removal Action Work Plan for the X-334 Transformer Cleaning/Storage Building at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio* (DOE 2011a) and the applicable or relevant and appropriate requirements outlined in the *Action Memorandum for the Group 1 Buildings X-103, X-334, and X-344B at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio* (DOE 2010b).

1. INTRODUCTION

The U.S. Department of Energy (DOE) has completed the activity in accordance with the *Director's Final Findings and Orders for Removal Action and Remedial Investigation and Feasibility Study and Remedial Design and Remedial Action for the DOE Portsmouth Gaseous Diffusion Plant (Decontamination and Decommissioning Project)* (DFF&O) (Ohio Environmental Protection Agency[Ohio EPA] 2010) for the X-334 Transformer Cleaning/Storage Building (hereinafter "the X-334 Building") at the Portsmouth Gaseous Diffusion Plant (PORTS). This Removal Action Completion Report (RACR) documents the completion of both Phase I (removal of the building superstructure) and Phase II (removal of the underlying slab) of the DFF&O removal action.

The X-334 Building was located at coordinates N 11800 and E 8200 in the northern portion of PORTS. Figure 1 shows the location of the former X-334 Building at the plant site and Figure 2 shows the former site layout. A photograph of the X-334 Building before demolition is presented in Figure 3.

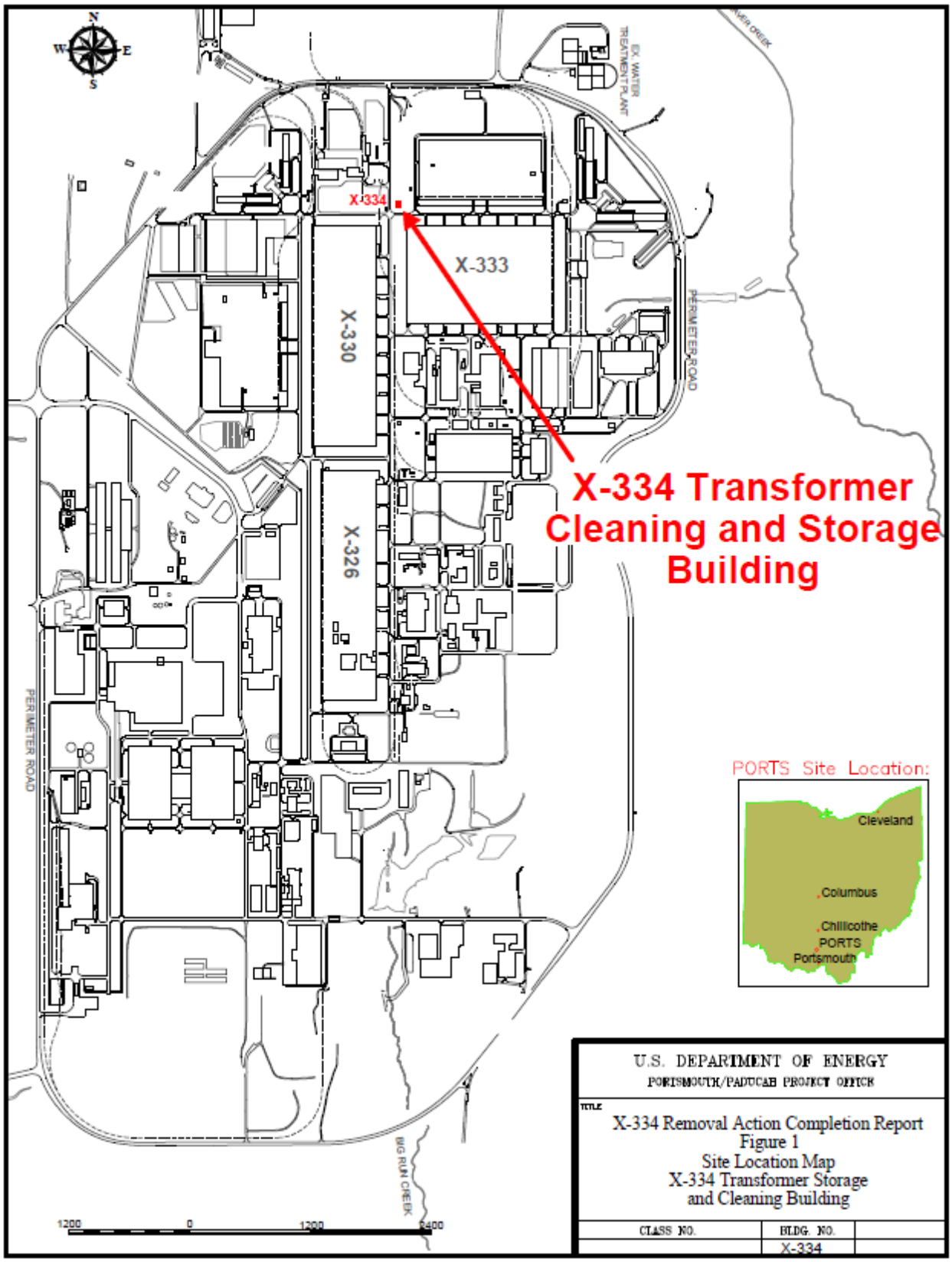
1.1 REMOVAL ACTION COMPLETION REPORT PURPOSE AND SCOPE

This RACR documents completion of the X-334 Building as described in the *Removal Action Work Plan for the X-334 Transformer Cleaning/Storage Building at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio* (DOE 2011a) (RAWP). Removal action alternatives for the X-334 Building were evaluated in the *Engineering Evaluation/Cost Analysis for Group 1 Buildings X-103, X-334, and X-344B at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio* (EE/CA) (DOE 2010a), and the decision to remove the X-334 Building was documented in the *Action Memorandum for the Group 1 Buildings X-103, X-334, and X-344B at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio* (Action Memorandum) (DOE 2011b). These documents were prepared in accordance with the DFF&O.

1.2 SITE DESCRIPTION AND HISTORY

The X-334 Building was located in the northern portion of PORTS in the area identified as Quadrant IV. Groundwater monitoring and remediation activities at PORTS have been conducted in four areas (or quadrants) defined by the direction of groundwater and surface water flow in accordance with the Consent Decree and the *Integrated Groundwater Monitoring Plan for the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio* that was in effect at the time the samples were collected. The X-334 Building was located in the north-central portion of Quadrant IV.

Built in 1985, the X-334 Building was a 2500 sq-ft, one-story, steel building on a diked concrete slab. The slab sloped towards a blind sump located in the north central part of the slab. The building housed storage tanks containing polychlorinated biphenyl (PCB) oils and PCB-contaminated kerosene. Liquids recovered in the sump were pumped to a storage tank pending their final disposition. Previous operations included repair of electrical equipment from the X-530A and X-533A Switchyards and the X-600 Steam Plant. The facility was used for this purpose from its construction through the middle of 1994. A 2000-gallon fiberglass reinforced plastic underground storage tank was installed in 1985 outside of the southeast corner of the building. The tank, formerly used to store kerosene, was removed on August 19, 2003, in accordance with the State of Ohio's underground storage tank regulations. The Ohio Bureau of Underground Storage Tank Regulations issued a No Further Action letter on March 8, 2004. In


N
W
E
S
EX. WATER TREATMENT PLANT
X-334
X-333
X-330
X-326
PERIMETER ROAD
PERIMETER ROAD
BIG RUN CREEK
X-334 Transformer Cleaning and Storage Building
PORTS Site Location:
Cleveland
Columbus
Chillicothe
PORTS
Portsmouth
1200
0
1200
2400
U.S. DEPARTMENT OF ENERGY
PORTSMOUTH/PADUCAH PROJECT OFFICE
TITLE
X-334 Removal Action Completion Report
Figure 1
Site Location Map
X-334 Transformer Storage
and Cleaning Building
CLASS NO.
BLDG. NO.
X-334

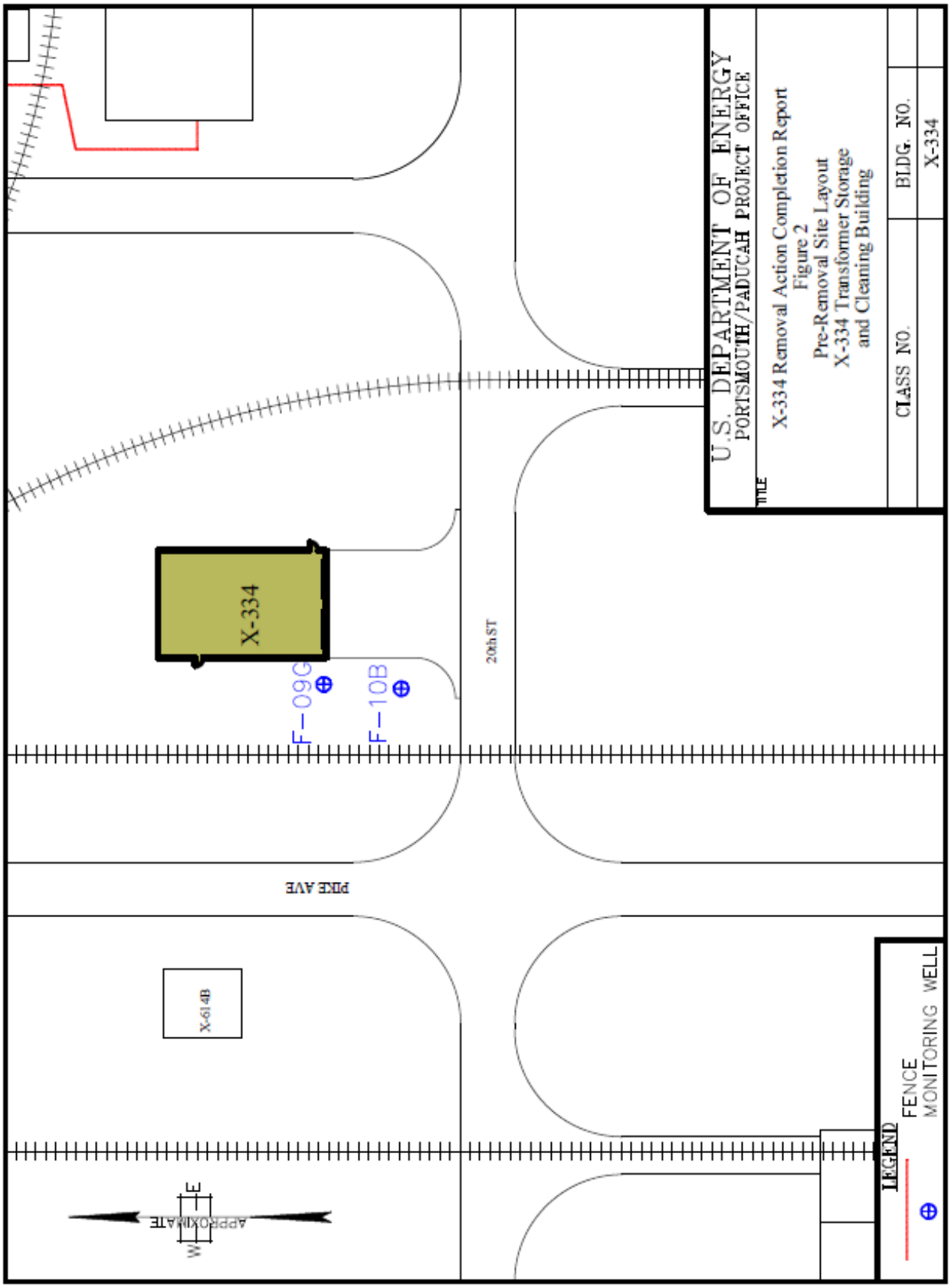

U.S. DEPARTMENT OF ENERGY
PORTSMOUTH/PADUCAH PROJECT OFFICE
TITLE
X-334 Removal Action Completion Report
Figure 2
Pre-Removal Site Layout
X-334 Transformer Storage
and Cleaning Building
CLASS NO.
BLDG. NO.
X-334
LEGEND
FENCE
MONITORING WELL
X-334
F-09G
F-10B
20th ST
PIKE AVE
X-614B
APPROXIMATE
N
W
E

Figure 3. Photograph of X-334 Building before demolition, facing northeast

addition, universal wastes were stored in the X-334 Building from 2007 until 2010. Most recently, the building was used to store PCB items, including two 2000-gallon above-ground storage tanks, and other material.

No water supply was present at the X-334 Building, and there were no floor drains or catch basins. The only water discharge from the facility was stormwater from a roof drain, which was plugged prior to the start of the non-time-critical removal action. No septic tank, drain systems or leach fields were present at the site (TPMC 2006). An electric power line was the only utility present in the building.

1.3 CONTAMINANTS OF CONCERN

Based on historical information and DOE's process knowledge, contaminants of concern associated with the X-334 Building included PCBs and radiological constituents (DOE 2010a). PCB items were stored at the building prior to demolition. Bechtel Jacobs Company (2001) reported that there was PCB contamination on the floor prior to 1994. After the contamination was identified, a sealant was placed on the floor to isolate the contamination. Tanks and containers stored at the facility prior to demolition were labeled as containing PCBs, radiological constituents, or both (DOE 2010a). There was no visible or documented evidence of asbestos-containing material or lead-based paint at the facility.

This historical information and process knowledge were supplemented by sampling and analyses of the building components that remained after the pre-decontamination and decommissioning (pre-D&D) activities were completed. Those components were limited to the concrete slab and the steel superstructure. Sampling and analyses were conducted per the *Sampling and Analysis Plan for the X-334 Transformer Cleaning/Storage Building at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio* (SAP, DOE 2010b). The results were reported in the RAWP and are summarized in Section 1.3.1 below.

Because the Phase II activities were added to the RAWP after implementation of the SAP, additional sampling and analyses were conducted to further characterize the concrete slab. The results are reported in Section 1.3.2 below.

Quality control samples (e.g., duplicates, field blanks, trip blanks, equipment rinsate samples) were also collected and analyzed. For the convenience of the reader, only positive results (i.e., results showing detections) are included in the summaries.

1.3.1 Summary of Data Reported in the X-334 RAWP

In August 2010, wipe samples were collected from the slab in accordance with the SAP. Forty PCB wipe samples were collected from the surface of the slab (i.e., the floor of the building) by wiping a 100 square centimeter area using a hexane-saturated wipe provided by the laboratory. This method is approved by the waste receiving facility. Total PCB concentrations in these samples ranged from 6.75 µg/100 cm^2 to 393,000 µg/100 cm^2. Fifteen additional PCB samples were collected from the interior walls with results (total PCBs) ranging from 0.452 to 5.31 µg/100 cm^2. Five PCB samples were also collected from concrete surfaces below vents outside of the building. These included samples from sidewalks and from the building foundation where no sidewalk was present. Total PCB concentrations in these samples ranged from 0.29 to 1.1 µg/100 cm^2.

In accordance with 40 *Code of Federal Regulations (CFR)* 761.1(b)(3) surfaces contaminated at concentrations above 10 µg/100 cm^2 are regulated as if the material had a PCB concentration of between 50 and 500 parts per million (ppm) and surfaces with contamination at concentrations above 100 µg/100 cm^2 are regulated as if the material had a PCB concentration in excess of 500 ppm. The wipe sample data is presented in Appendix A and summarized in Table 1 below. Sampling locations are depicted in the figures in Appendix A.

Table 1. Summary of wipe sample analysis

Sampling Location	No. Detects/ No. Samples	Maximum Result Sample ID	Maximum Sample Result (µg/wipe)	Location of Maximum Result
Floor Wipes	39/40*	334-WP-02-32	393,000	Northwest corner of slab
Wall Wipes	15/15	334-WP-02-55	5.31	Center of south wall
Outside Wipes	3/5	334-WP-02-59	1.11	Northern portion of east wall

*The extract for sample 334-WP-02-30 was lost during laboratory preparation.

Based on these data, debris from demolition of the steel superstructure was not a regulated Toxic Substances Control Act (TSCA) waste; however, the debris resulting from demolition of the X-334 Building slab required management as a TSCA waste. Prior to the initiation of Phase II, additional core samples were collected and analyzed for PCBs, Resource Conservation and Recovery Act (RCRA) metals (including mercury), and radiological constituents in order to further characterize the Phase II waste stream (see Section 1.3.2).

1.3.1.1 Steel Superstructure

In September 2010, a composite sample of the X-334 Building superstructure was collected in accordance with the SAP. This method is approved by the waste receiving facility. Tin snips were used to obtain small samples (aliquots) of the steel which were manually placed in the sample jar. Any further size reduction required by the relevant analytical methods was performed by the laboratory.

The composite, which consisted of five aliquots, was analyzed for PCBs and total RCRA metals. Sample locations were biased based on observable conditions (e.g., staining) to provide worst-case results. Given

the high degree of homogeneity expected in the metal superstructure, the five random aliquots were considered more than adequate to ensure the data was representative of the metal superstructure.

The analytical results are presented in Tables A.4 and A.5 and the sample locations shown on Figure A.3 in Appendix A.

Total PCBs were present in the sample at a concentration of 456 µg/kg, well below the regulatory threshold. Total chromium was reported at 175 mg/kg which is above the concentration at which the composite may be characteristically hazardous due to chromium toxicity.[1] The sample was, therefore, re-analyzed using the toxicity characteristic leaching procedure (TCLP). The results are provided in Table A.5 in Appendix A. The metal concentrations were below the RCRA TCLP regulatory limits.

1.3.1.2 Radiological Surveys

A radiological survey of this facility was performed on September 25, 2001, and included the floor, hoses, drip trays, tops of pumps, fan top, fan motor, etc. The survey results indicated that total alpha radioactivity was less than (<) 66 disintegrations per minute per 100 square centimeters (dpm/100 cm^2) and the total beta/gamma was < 633 dpm/100 cm^2 (DOE 2010a).

An additional radiological survey was underway at the time the RAWP was finalized. That survey was completed December 12, 2010. The results confirmed the data from 2001. All accessible surfaces of the X-334 Building (including installed equipment) were scanned, including the roof but excluding the upper half of the east side exterior due to power lines. Smears and static counts were performed approximately every 2 sq meters of all accessible surfaces. Direct scans were also conducted on all accessible surfaces. On the building structure, no readings were found in excess of Radiological Engineering release limits (i.e., all were less than 80% of 10 CFR 835 values).

1.3.2 Summary of Data Collected Post-RAWP

A total of four concrete core samples were collected from the building slab on February 14, 2011 and analyzed for PCBs, RCRA metals including mercury (using TCLP), and radiological constituents (Technetium-99 and uranium isotopes). The sampling locations are shown in Figure A-4 in Appendix A.

The PCB and RCRA metal results are provided in Tables A.6 and A.7, respectively, in Appendix A. Total PCB concentrations less than 50 ppm were detected in three of the samples, and a total PCB concentration of 118 ppm was detected in one sample. The RCRA metal concentrations were all below the TCLP regulatory limits.

The radiological results are provided in Table A.8 in Appendix A. Technetium-99 was detected in one sample, and uranium was detected in three samples. Based on these additional data, the debris resulting from demolition of the X-334 Building slab required management as low level waste as well as TSCA waste.

[1] The comparison between total concentrations and TCLP concentrations in a solid sample is a factor of 20. Thus, the maximum total concentration that could fail TCLP is 20 times the TCLP limit. Alternatively, the reported total concentration can be divided by 20 and compared directly to the TCLP limit. See, e.g., http://www.epa.gov/osw/hazard/testmethods/faq/faq_tclp.htm.

1.4 PRE-DECONTAMINATION AND DECOMMISSIONING

Pre-D&D activities were conducted prior to the initiation of the DFF&O removal action described in this document. The pre-D&D activities were performed in accordance with the DFF&O, with Ohio EPA's agreement per Ohio EPA letter dated September 13, 2010.

Significant pre-D&D activities at the X-334 Building included the draining and disposition of liquids from tanks; the removal and disposition of RCRA, TSCA, and universal wastes; and the removal of fixed and loose equipment and interior piping from the building. Upon completion of the pre-D&D activities, only the concrete slab and steel superstructure remained.

As part of the pre-D&D activities, two layers of poly sheeting and two layers of plywood were placed over the X-334 Building slab in order to avoid cross contamination of the structural steel when it came in contact with the floor while ensuring the concrete slab was not cracked or damaged.

1.5 REMOVAL ACTION PURPOSE AND OBJECTIVES

The X-334 Building removal action activities were divided into two phases. The Phase I activities included demolition of the X-334 Building superstructure, demobilization of equipment, and recycling or disposal of the Phase I demolition materials. The Phase II activities included removal of the X-334 Building slab, restoration of the site, demobilization, and disposal of the Phase II demolition materials. The real extent of the non-time-critical removal action was limited to the footprint of the X-334 Building.

As outlined in the Action Memorandum, the following objectives were identified for this removal action:

- Meet applicable and relevant or appropriate requirements (ARARs) to the extent practicable,
- Be protective of relevant receptors, and
- Be cost effective.

2. SUMMARY OF TASKS COMPLETED

The X-334 Building removal action activities have been completed in accordance with the X-334 RAWP and the ARARs outlined in the Action Memorandum (DOE 2011b). Associated activities outlined in the X-334 Building ARARs were completed to meet the substantive requirements of the National Historic Preservation Act. Photographs of the X-334 Building before, during, and after demolition are provided in Appendix B.

Figure 2 shows the locations of the two groundwater monitoring wells (F-09G and F-10B) located near the former X-334 Building. Neither well is part of the PORTS Integrated Ground Water Monitoring Program. To protect the wells from unintentional damage during the demolition of the X-334 Building, concrete jersey barriers were installed around the wells prior to demolition.

2.1 PHASE I ACTIVITIES

2.1.1 Demolition of Above-Grade Structure

After the slab was covered with poly sheeting and plywood (see Section 1.5), controlled demolition of the X-334 above-grade structure was performed by positioning equipment and waste/recycling containers strategically to maximize demolition rates, minimize the distance between debris and containers, and prevent unsafe conditions. Demolition of the above-grade structure was completed in a manner such that the underlying slab was not cracked or otherwise damaged. Excavators were used to demolish the building frame and walls and shear the rubble to reduce it to a manageable size. The X-334 Building structural steel, steel siding and other demolition debris were loaded into containers and disposed. (See Table 2.) During Phase I, water was sprayed to minimize fugitive dust emissions.

2.1.2 Demobilization of Equipment

Except for the fogging machine used to control fugitive air emissions (which was retained on-site for use during Phase II), the demolition equipment utilized for Phase I was demobilized from the site.

2.2 PHASE II ACTIVITIES

2.2.1 Removal of Slab

An excavator equipped with a power chisel was used to break the X-334 concrete slab, and an excavator equipped with a concrete processor was used to size reduce the concrete pieces. The processed concrete was then loaded into containers for disposal. Small quantities of soil which adhered to the slab were managed with the concrete.

During Phase II, a fine water spray was again used to minimize fugitive dust emissions. A sediment fence was installed close to the slab to capture any sediment that washed from the slab. The concrete slab was loaded into containers then moved from the X-334 area for final disposal.

2.2.1.1 Site Restoration

Following completion of the Phase II demolition activities, the site was re-contoured to promote natural drainage and prevent pooling of stormwater. The site was then seeded and mulched with straw to promote rapid growth of grass cover.

2.2.2 Equipment Decontamination

Prior to being demobilized from the site, demolition equipment was decontaminated, as necessary, using dry techniques such as shovels and scrapers and wiping down. Decontamination wastes were managed with the demolition wastes.

2.3 POST-REMOVAL STATE

At the completion of this removal action, the X-334 Building superstructure and underlying slab have been removed. The electric power line to the building has been disconnected. No underground pipes or utilities were located beneath the footprint of the X-334 Building. Wastes generated to date from the X-334 Building removal action have been removed from the project site and shipped to a disposal facility.

3. WASTE MANAGEMENT AND TRANSPORTATION ACTIVITIES

This section describes the management and transport of wastes generated during the X-334 Building removal action. Wastes were managed and disposed in accordance with the X-334 Building RAWP and ARARs. Facility characterization was conducted to assure waste streams were compliant with applicable waste acceptance criteria.

The quantities and types of solid waste generated during this removal action and waste disposal locations are provided in Table 2. A detailed listing of shipped solid waste and waste disposal locations are provided as Appendix C.

During Phase I, structural steel from the demolition of the above-grade structure was disposed as sanitary/industrial waste. During Phase II, the concrete slab was disposed as TSCA waste/low level waste. Personal protective equipment used during the removal action (e.g., gloves, earplugs) and wastes generated during dry decontamination activities were disposed with these waste streams.

Table 2. Summary of solid waste and recyclables

Waste Material	Type	Total Volume (cu yd)	Total Weight (lbs)	Disposition Location
Phase I structural steel	Recycle	80	13,220	JVC Metals
Phase I demolition debris	Sanitary/industrial waste	249	334,260	Pike County Landfill
Phase II concrete slab	TSCA waste/low level waste	557	817,121	Energy*Solutions* Clive, Utah facility

4. PROJECT SCHEDULE

A project schedule for the removal action activities presented in this RACR is provided in Table 3.

Table 3. Schedule for the X-334 Building removal action

Activity	Start Date	Completion Date
Mobilization*	October 5, 2010	February 16, 2011
Demolition (including slab removal)	February 22, 2011	June 9, 2011
Dispose or otherwise remove all staged wastes from the project area*	January 31, 2011	June 23, 2011
Site restoration (fill, reseeding)	June 23, 2011	June 30, 2011
Demobilization	June 30, 2011	June 30, 2011
Removal Action Completion Report*	August 3, 2011	Due by November 27, 2011

*These activities are Milestones within the meaning of the DFF&O.

5. REFERENCES

Bechtel Jacobs 2001. *Due Diligence for the Return of Portsmouth Leased Facilities from the United States Enrichment Corporation to the U. S. Department of Energy*. BJC/PORTS-251. June.

DOE 2010a. *Engineering Evaluation/Cost Analysis for Group 1 Buildings X-103, X-334, and X-344B at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio.* DOE/PPPO/03-0145&D2. November.

DOE 2010b. *Sampling and Analysis Plan for the X-334 Transformer Cleaning/Storage Building at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio.* DOE/PPPO/03-0138&D2. October.

DOE 2011a. *Removal Action Work Plan for the X-334 Transformer Cleaning/Storage Building at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio*, DOE/PPPO/03-0165&D1. January.

DOE 2010b. *Action Memorandum for the Group 1 Buildings X-103, X-334, and X-344B at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio*. DOE/PPPO/03-0177&D3. January.

Ohio EPA 2010. *Directors Final Findings and Orders for Removal Action and Remedial Investigation and Feasibility Study and Remedial Design and Remedial Action for the DOE Portsmouth Gaseous Diffusion Plant (Decontamination and Decommissioning Project).* April.

TPMC 2006. *Facility Condition Survey of the Portsmouth Gaseous Diffusion Plant Facilities, Piketon, Ohio. TPMC/PORTS-59/R1*. August.

APPENDIX A

X-334 ANALYTICAL DATA

Notes to Appendix A

Data Qualifiers (Flags)

Data qualifiers provide information from the laboratory that assists in interpreting the reported qualitative and quantitative data. The qualifiers applicable to this data set are:

U – Indicates that the compound was analyzed for but not detected. U-qualified data was not included in the data summaries in this Appendix.

J – For non-radiological constituents, indicates an estimated value. This flag is used in cases where a target analyte (constituent) is detected at a level less than the lower quantification level. When the J-flag is reported, the lower quantification limit is also reported in parentheses following the qualifier.

For radiological constituents, indicates that no U flag has been assigned and the result is below the requested reporting limit or the report value is estimated.

D – Indicates the compound was identified in an analysis at a secondary dilution factor.

Sample IDs

Sample IDs are in the general form of Building Number-Sample Type-Analysis Requested-Sequential Sample Number. For example, 334-WP-02-01 indicates the first (-01) wipe sample (WP) collected from the X-334 Building (334) to be analyzed for PCBs (-02). Similarly, 334-BC-04-02 indicates this is the second (-02) building component (BC) sample from the X-334 Building with requested analysis for total RCRA metals (-04).

Table A.1
PCB wipes – inside floor

Sample ID	Constituent	Results (µg/100cm^2)	Flag
334-WP-02-01	PCB-1254	1.47	D
334-WP-02-02	PCB-1254	6.38	D
334-WP-02-03	PCB-1254	30.6	D
334-WP-02-04	PCB-1254	2.54	
334-WP-02-05	PCB-1254	2.88	D
334-WP-02-06	PCB-1254	13.4	D
334-WP-02-07	PCB-1254	4.06	D
334-WP-02-08	PCB-1254	3.14	D
334-WP-02-09	PCB-1254	2.42	
334-WP-02-10	PCB-1254	15.6	D
334-WP-02-11	PCB-1254	9.5	D
334-WP-02-12	PCB-1254	18	D
334-WP-02-13	PCB-1254	9.43	D
334-WP-02-14	PCB-1254	6.56	D
334-WP-02-15	PCB-1254	14.4	D
334-WP-02-16	PCB-1254	11.6	D
334-WP-02-17	PCB-1254	12.4	D
334-WP-02-18	PCB-1254	10.2	D
334-WP-02-19	PCB-1254	10.8	D
334-WP-02-20	PCB-1254	7.58	D
334-WP-02-21	PCB-1254	13.6	D
334-WP-02-22	PCB-1254	13.5	D
334-WP-02-23	PCB-1254	7.5	DJ (8)
334-WP-02-24	PCB-1254	2.61	D
334-WP-02-25	PCB-1254	6.48	D
334-WP-02-26	PCB-1254	10.5	D
334-WP-02-27	PCB-1254	7.01	D
334-WP-02-28	PCB-1254	9.77	D
334-WP-02-29	PCB-1254	24.8	D
334-WP-02-31	PCB-1254	2.38	D
334-WP-02-32	PCB-1254	288000	D
334-WP-02-33	PCB-1254	2930	D
334-WP-02-34	PCB-1254	516	D
334-WP-02-35	PCB-1254	6.18	DJ (8)
334-WP-02-36	PCB-1254	311	D
334-WP-02-37	PCB-1254	20.1	D
334-WP-02-38	PCB-1254	2280	D
334-WP-02-39	PCB-1254	2.96	DJ (4)
334-WP-02-40	PCB-1254	4.29	D

Table A.1
PCB wipes – inside floor (continued)

Sample ID	Constituent	Results (µg/100cm$^{2)}$	Flag
334-WP-02-01	PCB-1260	5.28	D
334-WP-02-02	PCB-1260	39.7	D
334-WP-02-03	PCB-1260	20.1	D
334-WP-02-04	PCB-1260	4.86	
334-WP-02-05	PCB-1260	6.09	D
334-WP-02-06	PCB-1260	22.4	D
334-WP-02-07	PCB-1260	10	D
334-WP-02-08	PCB-1260	6.51	D
334-WP-02-09	PCB-1260	6	
334-WP-02-10	PCB-1260	46.1	D
334-WP-02-11	PCB-1260	24.6	D
334-WP-02-12	PCB-1260	42	D
334-WP-02-13	PCB-1260	21	D
334-WP-02-14	PCB-1260	13.2	D
334-WP-02-15	PCB-1260	49.5	D
334-WP-02-16	PCB-1260	31.7	D
334-WP-02-17	PCB-1260	34.5	D
334-WP-02-18	PCB-1260	27.5	D
334-WP-02-19	PCB-1260	29.6	D
334-WP-02-20	PCB-1260	19.9	D
334-WP-02-21	PCB-1260	39	D
334-WP-02-22	PCB-1260	46.3	D
334-WP-02-23	PCB-1260	36.1	D
334-WP-02-24	PCB-1260	7.72	D
334-WP-02-25	PCB-1260	13.6	D
334-WP-02-26	PCB-1260	33.2	D
334-WP-02-27	PCB-1260	49.1	D
334-WP-02-28	PCB-1260	57.4	D
334-WP-02-29	PCB-1260	172	D
334-WP-02-31	PCB-1260	6.44	D
334-WP-02-32	PCB-1260	105000	D
334-WP-02-33	PCB-1260	5810	D
334-WP-02-34	PCB-1260	258	D
334-WP-02-35	PCB-1260	62.3	D
334-WP-02-36	PCB-1260	141	D
334-WP-02-37	PCB-1260	14.8	D

Table A.1
PCB wipes – inside floor (continued)

Sample ID	Constituent	Results (µg/100cm$^{2)}$	Flag
334-WP-02-38	PCB-1260	10000	D
334-WP-02-39	PCB-1260	14.9	D
334-WP-02-40	PCB-1260	26.2	D
334-WP-02-01	PCB-Total	6.75	D
334-WP-02-02	PCB-Total	45.9	D
334-WP-02-03	PCB-Total	50.6	D
334-WP-02-04	PCB-Total	7.4	
334-WP-02-05	PCB-Total	8.96	D
334-WP-02-06	PCB-Total	35.8	D
334-WP-02-07	PCB-Total	14.1	D
334-WP-02-08	PCB-Total	9.65	D
334-WP-02-09	PCB-Total	8.42	
334-WP-02-10	PCB-Total	61.7	D
334-WP-02-11	PCB-Total	34.1	D
334-WP-02-12	PCB-Total	59.9	D
334-WP-02-13	PCB-Total	30.4	D
334-WP-02-14	PCB-Total	19.8	D
334-WP-02-15	PCB-Total	63.9	D
334-WP-02-16	PCB-Total	43.2	D
334-WP-02-17	PCB-Total	46.8	D
334-WP-02-18	PCB-Total	37.7	D
334-WP-02-19	PCB-Total	40.4	D
334-WP-02-20	PCB-Total	27.4	D
334-WP-02-21	PCB-Total	52.6	D
334-WP-02-22	PCB-Total	59.8	D
334-WP-02-23	PCB-Total	43.6	D
334-WP-02-24	PCB-Total	10.3	D
334-WP-02-25	PCB-Total	20.1	D
334-WP-02-26	PCB-Total	43.7	D
334-WP-02-27	PCB-Total	56.1	D
334-WP-02-28	PCB-Total	67.2	D
334-WP-02-29	PCB-Total	197	D
334-WP-02-31	PCB-Total	8.82	D
334-WP-02-32	PCB-Total	393000	D
334-WP-02-34	PCB-Total	774	D
334-WP-02-35	PCB-Total	68.4	D
334-WP-02-36	PCB-Total	452	D
334-WP-02-38	PCB-Total	12300	D
334-WP-02-39	PCB-Total	17.8	D
334-WP-02-40	PCB-Total	30.5	D

Table A.2
PCB wipes – inside walls

Sample ID	Constituent	Results (µg/100cm$^{2)}$	Flag
334-WP-02-41	PCB-1254	0.325	J (0.4)
334-WP-02-42	PCB-1254	0.685	
334-WP-02-43	PCB-1254	0.232	J (0.4)
334-WP-02-44	PCB-1254	0.532	
334-WP-02-45	PCB-1254	0.278	J (0.4)
334-WP-02-46	PCB-1254	0.161	J (0.4)
334-WP-02-47	PCB-1254	0.288	J (0.4)
334-WP-02-48	PCB-1254	0.238	J (0.4)
334-WP-02-49	PCB-1254	0.571	
334-WP-02-50	PCB-1254	0.183	J (0.4)
334-WP-02-51	PCB-1254	0.334	J (0.4)
334-WP-02-52	PCB-1254	0.426	
334-WP-02-53	PCB-1254	0.573	
334-WP-02-54	PCB-1254	0.208	J (0.4)
334-WP-02-55	PCB-1254	0.861	
334-WP-02-41	PCB-1260	0.463	
334-WP-02-42	PCB-1260	1.05	
334-WP-02-43	PCB-1260	0.292	J (0.4)
334-WP-02-44	PCB-1260	0.958	
334-WP-02-45	PCB-1260	0.359	J (0.4)
334-WP-02-46	PCB-1260	0.291	J (0.4)
334-WP-02-47	PCB-1260	0.344	J (0.4)
334-WP-02-48	PCB-1260	0.564	
334-WP-02-49	PCB-1260	0.688	
334-WP-02-50	PCB-1260	0.423	
334-WP-02-51	PCB-1260	0.666	
334-WP-02-52	PCB-1260	0.808	
334-WP-02-53	PCB-1260	1.14	
334-WP-02-54	PCB-1260	0.801	
334-WP-02-55	PCB-1260	2.32	
334-WP-02-55	PCB-1268	2.13	
334-WP-02-41	PCB-Total	0.788	J (1.2)
334-WP-02-42	PCB-Total	1.74	
334-WP-02-43	PCB-Total	0.524	J (1.2)
334-WP-02-44	PCB-Total	1.49	
334-WP-02-45	PCB-Total	0.637	J (1.2)
334-WP-02-46	PCB-Total	0.452	J (1.2)
334-WP-02-47	PCB-Total	0.632	J (1.2)
334-WP-02-48	PCB-Total	0.802	J (1.2)

Table A.2
PCB wipes – inside walls (continued)

Sample ID	Constituent	Results (µg/100cm$^{2)}$	Flag
334-WP-02-49	PCB-Total	1.26	
334-WP-02-50	PCB-Total	0.606	J (1.2)
334-WP-02-51	PCB-Total	1	J (1.2)
334-WP-02-52	PCB-Total	1.23	
334-WP-02-53	PCB-Total	1.72	
334-WP-02-54	PCB-Total	1.01	J (1.2)
334-WP-02-55	PCB-Total	5.31	

Table A.3
PCB wipes – outside near vents

Sample ID	Constituent	Results (µg/100cm$^{2)}$	Flag
334-WP-02-59	PCB-1254	0.519	
334-WP-02-57	PCB-1260	0.29	J (0.4)
334-WP-02-59	PCB-1260	0.595	
334-WP-02-60	PCB-1260	0.299	J (0.4)
334-WP-02-57	PCB-Total	0.29	J (1.2)
334-WP-02-59	PCB-Total	1.11	J (1.2)
334-WP-02-60	PCB-Total	0.299	J (1.2)

Table A.4
Building components – PCBs and total RCRA metals

Sample ID	Constituent	Results	Units	Flag
334-BC-02-01	PCB-1254	381	µg/kg	
334-BC-02-01	PCB-1260	75.5	µg/kg	
334-BC-02-01	PCB-Total	456	µg/kg	
334-BC-04-01	Arsenic	2.87	mg/kg	J (3.53)
334-BC-04-01	Barium	2.8	mg/kg	
334-BC-04-01	Cadmium	1.08	mg/kg	
334-BC-04-01	Chromium	175	mg/kg	
334-BC-04-01	Lead	72.5	mg/kg	
334-BC-04-01	Selenium	1.95	mg/kg	J (2.94)

Table A.5
Building components – TCLP metals

Sample ID	Constituent	Results	Units	Flag
334-BC-04-01	Barium	0.295	mg/L	
334-BC-04-01	Cadmium	0.00319	mg/L	J (0.018)
334-BC-04-01	Chromium	0.561	mg/L	
334-BC-04-01	Lead	1.25	mg/L	

Table A.6
Concrete core samples – PCBs

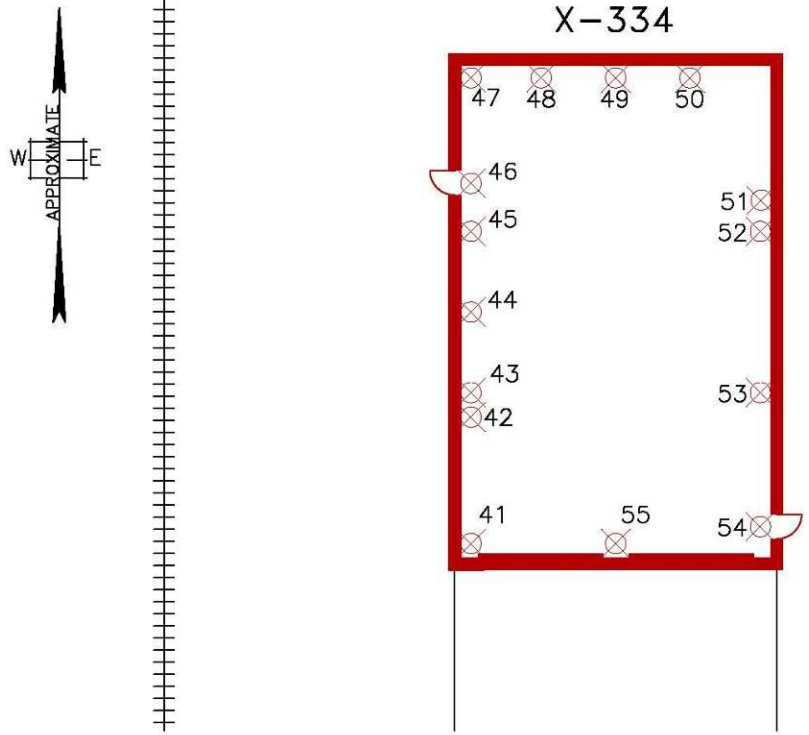
Sample ID	Constituent	Result (µg/kg)	Flag
334-CCE-02-01	PCB-1254	16000	D
334-CCE-02-01	PCB-1260	15400	D
334-CCE-02-01	Polychlorinated biphenyl	31400	D
334-CCE-02-02	PCB-1254	1680	D
334-CCE-02-02	PCB-1260	4820	D
334-CCE-02-02	Polychlorinated biphenyl	6510	D
334-CCE-02-03	PCB-1254	15000	D
334-CCE-02-03	PCB-1260	103000	D
334-CCE-02-03	Polychlorinated biphenyl	118000	D
334-CCE-02-04	PCB-1254	9010	D
334-CCE-02-04	PCB-1260	6410	D
334-CCE-02-04	Polychlorinated biphenyl	15400	D

Table A.7
Concrete core samples – TCLP metals

Sample ID	Constituent	Result (mg/L)	Flag
334-CCE-04-01	Barium	0.418	
334-CCE-04-02	Barium	0.44	
334-CCE-04-03	Barium	0.39	
334-CCE-04-04	Barium	0.383	
334-CCE-04-01	Cadmium	0.00966	J (0.015)
334-CCE-04-03	Chromium	0.0073	J (0.025)
334-CCE-04-04	Chromium	0.0062	J (0.025)

Table A.8
Concrete core samples – radiological constituents

Sample ID	Constituent	Result	Units	Flag	TPU
334-CCE-03-04	Technetium-99	0.132	pCi/g	J	0.083
334-CCE-03-01	Uranium	1.39	µg/g		0.25
334-CCE-03-03	Uranium	1.57	µg/g		0.28
334-CCE-03-04	Uranium	1.42	µg/g		0.25
334-CCE-03-01	Uranium-233/234	0.548	pCi/g		0.095
334-CCE-03-03	Uranium-233/234	0.581	pCi/g		0.1
334-CCE-03-04	Uranium-233/234	0.505	pCi/g		0.089
334-CCE-03-01	Uranium-235/236	0.0219	pCi/g	J	0.011
334-CCE-03-01	Uranium-235/236	0.729	%		0
334-CCE-03-03	Uranium-235/236	0.0198	pCi/g	J	0.012
334-CCE-03-03	Uranium-235/236	0.585	%		0
334-CCE-03-04	Uranium-235/236	0.041	pCi/g	J	0.017
334-CCE-03-04	Uranium-235/236	1.33	%		0
334-CCE-03-01	Uranium-238	0.464	pCi/g	J	0.083
334-CCE-03-03	Uranium-238	0.524	pCi/g		0.094
334-CCE-03-04	Uranium-238	0.472	pCi/g	J	0.084



X-334 INTERIOR WALL SAMPLES

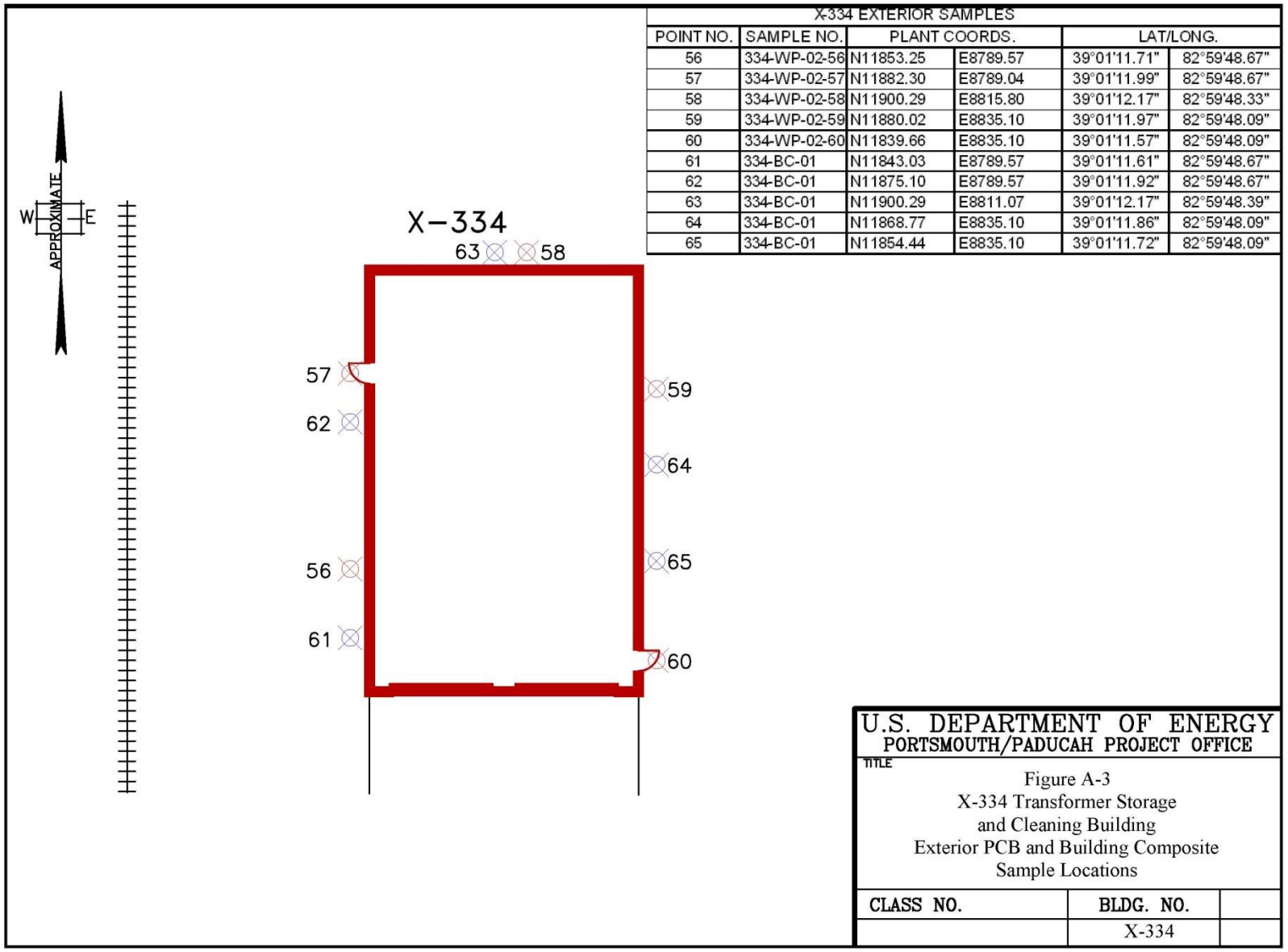
POINT NO.	SAMPLE NO.	PLANT COORDS.		LAT/LONG.	
41	334-WP-02-41	N11835.09	E8792.50	39°01'11.14"	82°59'48.93"
42	334-WP-02-42	N11853.25	E8792.50	39°01'11.14"	82°59'48.79"
43	334-WP-02-43	N11856.30	E8792.50	39°01'11.14"	82°59'48.66"
44	334-WP-02-44	N11866.30	E8792.50	39°01'11.14"	82°59'48.52"
45	334-WP-02-45	N11876.30	E8792.50	39°01'11.14"	82°59'48.38"
46	334-WP-02-46	N11882.24	E8792.50	39°01'11.22"	82°59'48.93"
47	334-WP-02-47	N11897.59	E8792.50	39°01'11.22"	82°59'48.79"
48	334-WP-02-48	N11897.59	E8803.20	39°01'11.22"	82°59'48.66"
49	334-WP-02-49	N11897.59	E8812.42	39°01'11.22"	82°59'48.52"
50	334-WP-02-50	N11897.59	E8821.63	39°01'11.22"	82°59'48.38"
51	334-WP-02-51	N11880.13	E8832.33	39°01'11.29"	82°59'48.93"
52	334-WP-02-52	N11876.30	E8832.33	39°01'11.29"	82°59'48.79"
53	334-WP-02-53	N11856.30	E8832.33	39°01'11.29"	82°59'48.66"
54	334-WP-02-54	N11839.66	E8832.33	39°01'11.29"	82°59'48.52"
55	334-WP-02-55	N11835.09	E8812.42	39°01'11.29"	82°59'48.38"

U.S. DEPARTMENT OF ENERGY
PORTSMOUTH/PADUCAH PROJECT OFFICE

TITLE

Figure A-2
X-334 Transformer Storage
and Cleaning Building
Wall PCB Sampling Locations

CLASS NO.	BLDG. NO.	
	X-334	



X-334 EXTERIOR SAMPLES

POINT NO.	SAMPLE NO.	PLANT COORDS.		LAT/LONG.	
56	334-WP-02-56	N11853.25	E8789.57	39°01'11.71"	82°59'48.67"
57	334-WP-02-57	N11882.30	E8789.04	39°01'11.99"	82°59'48.67"
58	334-WP-02-58	N11900.29	E8815.80	39°01'12.17"	82°59'48.33"
59	334-WP-02-59	N11880.02	E8835.10	39°01'11.97"	82°59'48.09"
60	334-WP-02-60	N11839.66	E8835.10	39°01'11.57"	82°59'48.09"
61	334-BC-01	N11843.03	E8789.57	39°01'11.61"	82°59'48.67"
62	334-BC-01	N11875.10	E8789.57	39°01'11.92"	82°59'48.67"
63	334-BC-01	N11900.29	E8811.07	39°01'12.17"	82°59'48.39"
64	334-BC-01	N11868.77	E8835.10	39°01'11.86"	82°59'48.09"
65	334-BC-01	N11854.44	E8835.10	39°01'11.72"	82°59'48.09"

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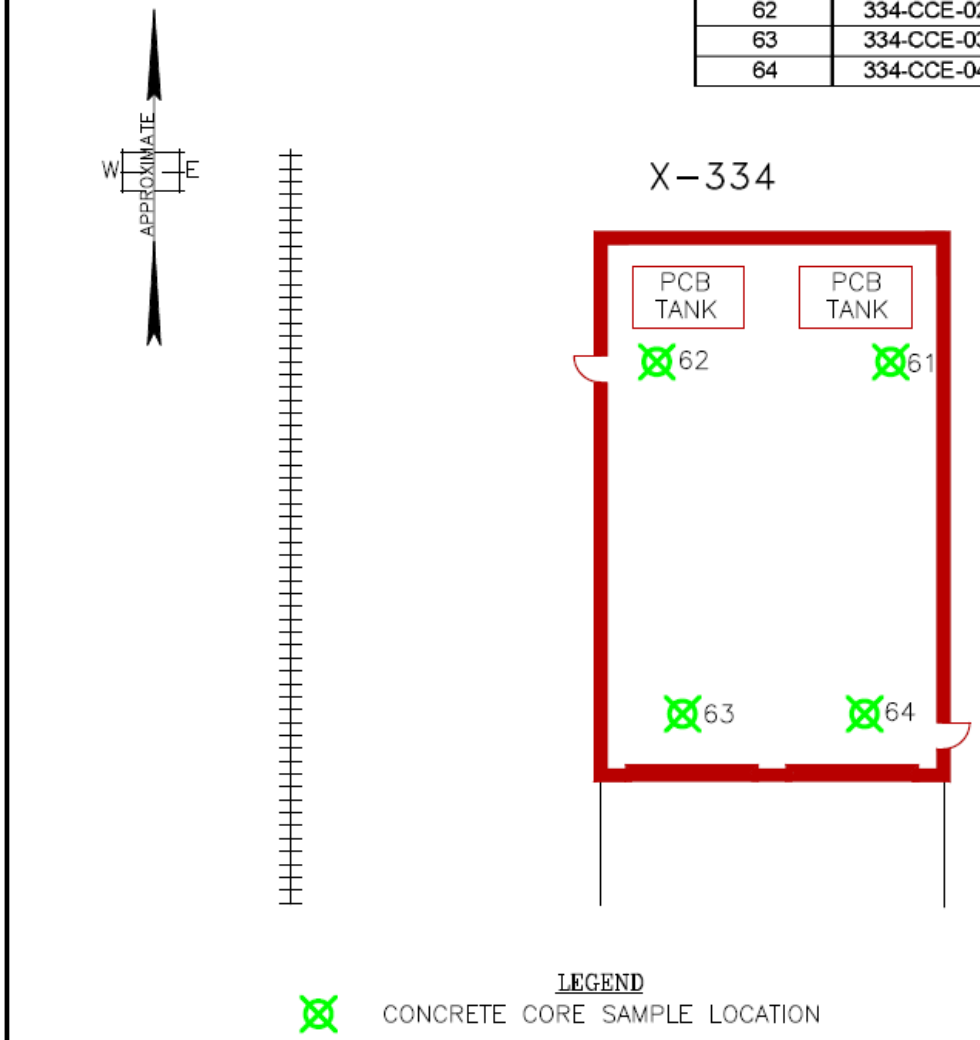
TITLE

Figure A-3
X-334 Transformer Storage
and Cleaning Building
Exterior PCB and Building Composite
Sample Locations

CLASS NO.	BLDG. NO.	
	X-334	

X-334 SLAB SAMPLES					
POINT NO.	SAMPLE NO.	PLANT COORDS.		LAT/LONG.	
61	334-CCE-01	N11883.17	E8826.22	39°01'12.00"	82°59'48.20"
62	334-CCE-02	N11883.17	E8799.00	39°01'12.00"	82°59'48.55"
63	334-CCE-03	N11842.18	E8802.01	39°01'11.60"	82°59'48.51"
64	334-CCE-04	N11842.18	E8823.21	39°01'11.60"	82°59'48.24"



U.S. DEPARTMENT OF ENERGY
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TITLE

Figure A-4
X-334 Transformer Storage
and Cleaning Building
Concrete Core Sample Locations

CLASS NO.	BLDG. NO.	
	X-334	

APPENDIX B

PHOTOGRAPHS

Photo 1. X-334 Building facing northeast

Photo 2. East side of the X-334 Building

Photo 3. Rear and west side of the X-334 Building facing southeast

Photo 4. Interior of the X-334 Building

Photo 5. X-334 Building demolition

Photo 6. X-334 Building demolition

Photo 7. X-334 Building demolition

Photo 8. Slab removal

Photo 9. Former X-334 Building site

APPENDIX C

WASTE SHIPMENT SUMMARY

Table C.1. X-334 TSCA Mixed Waste

Container ID	Gross Wt (kg)	Vol (ft3)	Vol (m3)	Gross Wt (lbs)	Waste Wt (lbs)	Origin	Phys Form	ASB Y/N	TSCA Y/N	RCRA Y/N	RAD Y/N	Profile Name	Waste Category	Origin Dt	Active	Disposition Site	Disposed Dt
11-001394	88.90	7.35	0.21	196.00	141.00	X-334	LIQUID	N	Y	N	Y	PCB Aqueous Liquids	TSCA MIXED WASTE	04-Jan-11	Y	* See Note 1	
Totals	**88.90**	**7.35**	**0.21**	**196.00**	**141.00**												
11-001491	53,331.30	2,400.00	67.96	117,576.00	31,876.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	27-Dec-04	N	ENERGY SOL - CLIVE	27-Jun-11
11-000493	7,847.11	512.00	14.50	17,300.00	8,740.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	02-Nov-10	N	ENERGY SOL - CLIVE	18-Jan-11
11-001494	23,532.25	580.50	16.44	51,880.00	42,970.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	24-Mar-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002036	21,554.60	580.50	16.44	47,520.00	38,430.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	24-Mar-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002037	14,886.82	580.50	16.44	32,820.00	24,120.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	24-Mar-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002049	12,410.22	240.00	6.80	27,360.00	18,280.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	25-Apr-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002078	10,877.09	240.00	6.80	23,980.00	15,420.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	26-Apr-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002050	12,954.53	240.00	6.80	28,560.00	19,660.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	27-Apr-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002051	12,900.10	240.00	6.80	28,440.00	18,840.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	27-Apr-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002079	10,813.59	240.00	6.80	23,840.00	14,840.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	27-Apr-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002052	14,832.39	240.00	6.80	32,700.00	23,960.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	04-May-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002053	15,204.34	240.00	6.80	33,520.00	24,470.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	04-May-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002054	8,504.81	240.00	6.80	18,750.00	9,740.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	04-May-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002080	15,712.36	240.00	6.80	34,640.00	25,770.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	05-May-11	N	ENERGY SOL - CLIVE	03-Aug-11

Table C.1. X-334 TSCA Mixed Waste

Container ID	Gross Wt (kg)	Vol (ft3)	Vol (m3)	Gross Wt (lbs)	Waste Wt (lbs)	Origin	Phys Form	ASB Y/N	TSCA Y/N	RCRA Y/N	RAD Y/N	Profile Name	Waste Category	Origin Dt	Active	Disposition Site	Disposed Dt
11-002187	11,217.28	240.00	6.80	24,730.00	16,000.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	05-May-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002188	8,237.19	240.00	6.80	18,160.00	9,300.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	09-May-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002189	8,885.83	240.00	6.80	19,590.00	10,800.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	09-May-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002190	5,606.37	240.00	6.80	12,360.00	4,100.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	09-May-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002191	19,540.66	240.00	6.80	43,080.00	34,280.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	23-May-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002192	14,052.22	240.00	6.80	30,980.00	21,940.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	26-May-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002317	13,861.71	240.00	6.80	30,560.00	21,780.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	26-May-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002266	9,371.17	240.00	6.80	20,660.00	11,960.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	31-May-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002267	12,827.53	240.00	6.80	28,280.00	19,150.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	31-May-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002356	16,111.52	240.00	6.80	35,520.00	26,780.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	06-Jun-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002357	14,923.11	240.00	6.80	32,900.00	24,550.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	06-Jun-11	N	ENERGY SOL - CLIVE	03-Aug-11
11-002358	11,974.78	240.00	6.80	26,400.00	17,540.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	07-Jun-11	N	ENERGY SOL - CLIVE	16-Aug-11
11-002359	13,516.98	240.00	6.80	29,800.00	22,340.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	07-Jun-11	N	ENERGY SOL - CLIVE	16-Aug-11
11-002360	17,599.29	240.00	6.80	38,800.00	29,930.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	07-Jun-11	N	ENERGY SOL - CLIVE	16-Aug-11
11-002373	18,778.63	240.00	6.80	41,400.00	32,765.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	08-Jun-11	N	ENERGY SOL - CLIVE	16-Aug-11
11-002378	20,683.71	240.00	6.80	45,600.00	36,965.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	08-Jun-11	N	ENERGY SOL - CLIVE	16-Aug-11

Table C.1. X-334 TSCA Mixed Waste

Container ID	Gross Wt (kg)	Vol (ft3)	Vol (m3)	Gross Wt (lbs)	Waste Wt (lbs)	Origin	Phys Form	ASB Y/N	TSCA Y/N	RCRA Y/N	RAD Y/N	Profile Name	Waste Category	Origin Dt	Active	Disposition Site	Disposed Dt
11-002379	19,413.65	240.00	6.80	42,800.00	34,165.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	08-Jun-11	N	ENERGY SOL - CLIVE	16-Aug-11
11-002380	18,506.47	433.00	12.26	40,800.00	32,165.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	08-Jun-11	N	ENERGY SOL - CLIVE	16-Aug-11
11-002302	18,687.91	240.00	6.80	41,200.00	32,565.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	09-Jun-11	N	ENERGY SOL - CLIVE	16-Aug-11
11-002310	17,236.42	240.00	6.80	38,000.00	29,365.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	09-Jun-11	N	ENERGY SOL - CLIVE	16-Aug-11
11-002311	18,234.32	240.00	6.80	40,200.00	31,565.00	X-334	SOLID	N	Y	N	Y	PCB Debris	TSCA MIXED WASTE	09-Jun-11	N	ENERGY SOL - CLIVE	16-Aug-11
Totals	**544,628.27**	**15,032.47**	**425.68**	**1,200,706.00**	**817,121.00**												
Note 1 - This drum of oil was generated during Pre-D&D activities andisbeingstored in a TSCA approved storage facility at PORTS until enough similar waste is generated for a full shipment to be transported to a Treatment/Disposal Facility.																	

Table C.2. X-334 Pike Landfill Sanitary Waste

Container ID	Gross Wt (kg)	Vol (ft3)	Vol (m3)	Gross Wt (lbs)	Waste Wt (lbs)	Origin	Phys Form	ASB Y/N	TSCA Y/N	RCRA Y/N	RAD Y/N	Profile Name	Waste Category	Origin Dt	Active	Disposition Site	Disposed Dt
11-002041	17,163.85	590.00	16.71	37,840.00	5,960.00	X-334	SOLID	N	N	N	N	Non-Rad, Non-RCRA Demolition Debris	SANITARY/INDUSTRIAL WASTE	17-Mar-11	N	PIKE LANDFILL	17-Mar-11
11-002042	36,414.21	2,160.00	61.17	80,280.00	9,800.00	X-334	SOLID	N	N	N	N	Non-Rad, Non-RCRA Demolition Debris	SANITARY/INDUSTRIAL WASTE	17-Mar-11	N	PIKE LANDFILL	17-Mar-11
11-002343	47,273.15	633.00	17.92	104,220.00	50,620.00	X-334	SOLID	N	N	N	N	Non-Rad, Non-RCRA Demolition Debris	SANITARY/INDUSTRIAL WASTE	22-Jun-11	N	PIKE LANDFILL	22-Jun-11
11-002344	103,826.76	1,424.00	40.32	228,900.00	113,940.00	X-334	SOLID	N	N	N	N	Non-Rad, Non-RCRA Demolition Debris	SANITARY/INDUSTRIAL WASTE	22-Jun-11	N	PIKE LANDFILL	22-Jun-11
11-002561	51,917.91	761.00	21.55	114,460.00	60,860.00	X-334	SOLID	N	N	N	N	Non-Rad, Non-RCRA Demolition Debris	SANITARY/INDUSTRIAL WASTE	23-Jun-11	N	PIKE LANDFILL	23-Jun-11
11-002562	81,328.69	1,164.00	32.96	179,300.00	93,080.00	X-334	SOLID	N	N	N	N	Non-Rad, Non-RCRA Demolition Debris	SANITARY/INDUSTRIAL WASTE	23-Jun-11	N	PIKE LANDFILL	23-Jun-11
Totals	**337,924.57**	**6,732.00**	**190.63**	**745,000.00**	**334,260.00**												

Table C.3. X-334 Recyclable/Universal Material

Container ID	Gross Wt (kg)	Vol (ft3)	Vol (m3)	Gross Wt (lbs)	Waste Wt (lbs)	Origin	Phys Form	ASB Y/N	TSCA Y/N	RCRA Y/N	RAD Y/N	Profile Name	Waste Category	Origin Dt	Active	Disposition Site
11-001613	20,121.25	1,080.00	30.58	44,360.00	9,720.00	X-334	SOLID	N	N	N	N	SODI RECYCLABLE METAL	RECYCLE	02-Jun-11	N	JVC METALS CO.
11-001614	16,701.18	1,080.00	30.58	36,820.00	3,500.00	X-334	SOLID	N	N	N	N	SODI RECYCLABLE METAL	RECYCLE	02-Jun-11	N	JVC METALS CO.
Totals	**36,822.44**	**2,160.00**	**61.17**	**81,180.00**	**13,220.00**											

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