RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO

USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

Prepared By
BWXT of Ohio, Inc.
For the U.S. DOE
Miamisburg Environmental Management Project Office
Modification 004-April 2001 Renewal Submittal

OHIO ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF HAZARDOUS WASTE MANAGEMENT

APPLICATION FOR RENEWAL OF HAZARDOUS WASTE FACILITY INSTALLATION AND OPERATION PERMIT

Facility Name: U.S. DOE Miamisburg Environmental MANAGEMENT Project OFFICE

Facility Location: 1 MOUND ROAD
(Street)

Miamisburg (City) Ohio (State) 45343 (Zip Code)

Facility Mailing Address: P.O. Box 66
(If different from above) (Street)

Miamisburg (City) Ohio (State) 45342 (Zip Code)

U. S. EPA ID No.: OH 689 006 8984

Ohio Permit No.: 05-57-0677

Facility Contact: Oba L. Vincent (Name) DEPUTY Director (Title)

Facility Telephone: 937. 865. 3278

I hereby apply for renewal of the Ohio Hazardous Waste Facility Installation and Operation Permit issued for the facility indicated above.

CERTIFICATION STATEMENT

I certify under penalty of law that this document and attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for the knowing violations.

OBA L. VINCENT
(Name - *Type or Print*)

212010
Revenue I.D. (*Office Use*)

DEPUTY Director
(Title - *Type or Print*)

$ 1500.00
Amount Enclosed

[signature] 16 APR 01
(Signature & Date)

Check Receipt - Date & No. (*Office Use*)

TABLE OF UPDATES AND REVISIONS TO
PART B PERMIT APPLICATION
U.S. DOE MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG OHIO
US EPA ID No. OH6890008984
OHIO ID No. 05-57-0677
Modification 004-April 2001 Renewal Submittal

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT MIAMISBURG, OHIO

The changes to the Miamisburg Environmental Management Project (formerly "Mound") Part B Permit Application, Modification 004 are identified in the table below, by section number, and page number. All section and page references refer to the previous version of the Part B Permit Application as repaginated by the various modifications (001, 002, and 003). Modification 004 of the permit, a submittal for renewal of the permit originally granted in 1996, is a revision of the entire document, therefore, all pages of the previous submittals are superseded and are replaced by Modification 004.

CHANGE NUMBER	PREVIOUS PERMIT APPLICATION SECTION NUMBER	PREVIOUS PERMIT APPLICATION PAGE NUMBER	SECTION TITLE AND THE CHANGE TO THAT SECTION
SECTION A--PART A PERMIT APPLICATION			
1.	Section A	All text addition pages to the Standard Form	Change the document title in the header from "U.S. DOE Mound Plant" to "U.S. DOE Miamisburg Environmental Management Project." This change incorporates a name change for the project.
2.	Section A-1	Page A-1	Introduction. The first paragraph was edited.
3.	Section A-1	Page A-1	Introduction. Change operator name from Babcock and Wilcox of Ohio, Inc. to BWXTO of Ohio, Inc., to reflect recent reorganization of the operating company and resulting name changes and consolidations of DOE operations
4.	Section A-1	Page A-1	Introduction. Change "Mound plant" and "Mound" to Miamisburg Environmental Management Project. This change incorporates a name change for the project.
5.	Section A-3	Page A-19	Map (Environmental Drawings). Change "Mound" to Miamisburg Environmental Management Project. This change incorporates a name change for the project
6.	Section A-3	Page A-19	Map (Environmental Drawings). Delete the sentence "Liquid release points and off-site water sampling locations and water wells are shown in Drawing FSE920929, which includes water wells located near the facility", since the corresponding drawing is not required, and was deleted.
7.	Section A-3 and A-4	Page A-19	Change title of the Mound Part B Permit Application from "RCRA Part B Permit Application for the U.S. Department of Energy Mound Plant, Miamisburg, Ohio-Drawings" to "RCRA Part B Permit Application for the U.S. Department of Energy Miamisburg Environmental Management Project, Miamisburg, Ohio-Drawings." This change incorporates a name change for the project.
8.	Section A-4	Page A-19	Delete the third paragraph, because it was redundant.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT MIAMISBURG, OHIO

(continued)

9.	Section A, Table A-1	Page A-21	Table of active and inactive HWMUs. Update the table to reflect the status of the units, and to add a column on unit status.
10.	Section A, Item X	A-4	Section X Permits. This table was revised to incorporate the latest permits and delete permits that no longer exist.
11.	Section A, Item XIV	-	The table of waste codes was revised, as follows: 1. All of the 100-pound annual quantities were revised to state 10 pounds. 2. An introductory section was added to describe waste generation at the MEMP. 3. NEED TO AMEND TABLE
12.	Section A, Item XIV	A-4	Waste Code table. An introductory section was added that describes the waste types generating the wastes that carry the potential waste codes listed.
13.	Section A, XVIII	-	Certifications. The signature blocks were revised to incorporate the current names of the persons responsible for signing the permit application.
SECTION B--FACILITY DESCRIPTION			
14.	Section B-General	All	Change the document title in the header from "U.S. DOE Mound Plant" to "U.S. DOE Miamisburg Environmental Management Project." This change incorporates a name change for the project.
15.	Section B-General	Noted Pages and Sections	Section B-1, Page B-2; Section B-2a, Page B-2; Section B-a(2) Page B-2; Section B-2a(2), Page B-3; Section B-2a(3), Page B-3; Section B-2a(4), Page B-3; Section B-2a(5), Page B-6; ; Section B-2a(6), Page 6, ; Section B-2a(7), Page 6; Section 3b, Page 7; Page 6; Section 3b(1), Page 7; Section B-4a, Page 7; Section B-4b, Page 9. Change title of the Mound Part B Permit Application from "RCRA Part B Permit Application for the U.S. Department of Energy Mound Plant, Miamisburg, Ohio-Drawings" to "RCRA Part B Permit Application for the U.S. Department of Energy Miamisburg Environmental Management Project, Miamisburg, Ohio-Drawings." This change incorporates a name change for the project.
16.	Section B General	All	General Description, first paragraph, change "Mound plant" to "Miamisburg Environmental Management Project". Also, change "at Mound" to "at the project", and delete references to Mound, except where used in a historic context. This change incorporates a name change for the project from the "Mound Plant" or "Mound Facility", to the "Miamisburg Environmental Management Project".
17.	Section B-General	Affected Sections	The statement "As noted in the 1996 Permit Application and in the 1999 modification" was added as necessary to include references.

			associated reference in Section B has been deleted.
19.	Section B-1	Page B-1	General Description, first paragraph, change operator name from Babcock and Wilcox of Ohio, Inc. to BWXTO of Ohio, Inc., to reflect recent reorganization of the operating company and resulting name changes and consolidations of DOE operations.
20.	Section B-1	Page B-1	General Description, second paragraph, delete the phrase "the current mission assignment for Mound is to cleanup contaminated buildings and land and transition the facility into commercial economic development." Add the following: "the current mission assignment for Mound consists of two elements. The first is the cleanup of contaminated buildings and land and transitioning of the facility into commercial economic development. The second element of Mound's current mission is the continuation of the assembly-related operations in support of the RTG or Power Systems Technology operations." This change is necessary to reflect a change to MEMP's operational status and current mission.
21.	Section B-1	Page B-1	General Description, second paragraph, delete the last sentence which read "Mound Facility has 120 buildings on 1.24 km^2 of land." This sentence presents duplicative information and information better presented in the last paragraph of this section.
22.	Section B-1	Page B-1	General Description, third paragraph. Revise the phrase "The following list is a summary of hazardous waste operations that have or are generating waste at Mound" with "The following list is a summary of hazardous waste operations that are currently generating waste at Mound." This change more accurately reflects the current operational status of the MEMP and focuses on the current wastes generation of hazardous wastes. Also delete the following operations that no longer produce RCRA regulated wastes: • Paint operations. • Energetic materials analysis. • Printing/copying operations. • Inspections and calibrations. • Chemical analyses. • Security operations. • Decontamination and Decommissioning. • Environmental Restoration. This paragraph was also re-worded to reflect the current operational status of the site.
23.	Section B-1	Page B-1	General Description. A description of waste production at the MEMP was added.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

24.	Section B-1	Page B-1	General Description, fourth paragraph. Delete the sentence "Mound is located on a 306-acre site in southern Montgomery County in southwestern Ohio, at the southern boundary of the city of Miamisburg, 2000 feet due east of the Great Miami River." Add a fifth paragraph that reads " The Mound facility, at its height of operation, included 306-acres and as many as 125 buildings. As of April 2001, the date of this submittal, the DOE owns 179 acres of what is defined as the Mound site, and the Miamisburg Mound Community Improvement Corporation (MMCIC) owns 127 acres. This revision more accurately portrays the site today.
25.	Section B-1	Page B-2	General Description, Sixth paragraph. Delete the phrase "(the original Mound site) and the recently acquired property to the south", since the south property has been transferred to the MMCIC.
26.	Section B-2a(2)	Page B-3	Access Controls. Change phrase "The Mound installation" to "The Miamisburg Environmental Management Project. This change incorporates a name change for the project and better reflects MEMP's current mission.
27.	Section B-2a(2)	Page B-3	Access controls. Rewrite paragraph to reflect current security controls at the project.
28.	Section B-2a(7)	Page B-6	Fire Protection. Add a sentence that references a recent Mutual Aid Agreement for emergency response at the site that was developed by DOE and the City.
29.	Section B-3b	Page B-6	Flood Plain Standard. Delete the sentence "However, a small area in the southwestern corner of the recently acquired property is located within a 100-year flood plain," and the sentence "no structures are scheduled for construction, and no hazardous waste management facilities are planned for this particular corner of the property." Both sentences refer to the South Property. Ownership of that parcel of property will be transferred to the MMCIC and neither one of the hazardous waste storage units occupy the South Property.
30.	Section B-3b	Page B-6	Flood Plain Standard. The phrase "in the 1996 permit application and in the 1999 revision to the 1996 application" was added to the statement concerning the Miami Conservancy District conclusion on flood plains.
31.	Section B-3b(1)	Page B-7	Flood Plain Standard, third paragraph. Modify the second sentence which read "However, a small area in the southwestern corner of the recently acquired property is located within a 100-year flood plain" to Elevations in the DOE owned parts of the Miamisburg Environmental Management Project vary from 710 to 870 ft; most of the site is above 800 ft. This change was made because ownership of the referenced piece of property (the South Property) will be transferred to the MMCIC and neither one of the hazardous waste storage units occupy the South Property.
32.	Section B-3b(1)	Page B-7	Demonstration of Compliance. Delete the paragraph that reads "A small portion of the southwestern corner of the recently acquired property is located within the 100-year flood plain

			as shown in Drawing FSE920959." Drawing FSE920959 is included as an attachment to this Permit Application in the volume entitled "RCRA Part B Permit Application for the U.S. Department of Energy Mound Plant, Miamisburg, Ohio-Drawings". However, no structures or hazardous waste management facilities are planned for that area. As a result, there is no need to describe how the facility is designed, constructed, operated, and maintained to prevent washout of any hazardous waste during a flood. Compliance with the flood plain regulation has been demonstrated for the present time, making Subsections B-3b(1)(a) through B-3b(3) inapplicable. Replace this paragraph with "None of the DOE owned portions of the Mound Environmental Project is located within a flood plain, therefore Subsections B-3b(1)(a) through B-3b(3) do not apply." These changes were made because ownership of the referenced piece of property (the South Property) will be transferred to the MMCIC and neither one of the hazardous waste storage units occupy the South Property.
33.	Section B-4a	Page B-7	Volumes and Vehicle Types, first paragraph. 1) Modify the first sentence by changing the phrase "hazardous waste vehicles " to "hazardous waste collection vehicles." Remove the sentence "There are two classifications of hazardous waste vehicles on the Mound facilities: hazardous waste collection vehicles, and explosives/pyrotechnics vehicles." 2) Modify the sentences that stated "Hazardous waste collection vehicles make weekly rounds of the entire facility with approximately half of the facility serviced in the morning and the remainder in the afternoon. These vehicles may continue to the storage building at any time on their route when the truck is full. Only one vehicle type is used each week for both morning and afternoon runs" to read "Hazardous waste collection vehicles make periodic rounds of the facility to pick up wastes from the various satellite accumulation areas at the site. Only one vehicle type is used to make these runs." These changes result from the fact that the facility no longer produces pyrotechnic wastes, and by the fact that the waste pickup frequency has declined from weekly, to periodically, or as needed to maintain compliance with the satellite accumulation area requirements.
34.	Section B-4a	Page B-7	Volumes and Vehicle Types, second paragraph. Delete phrase "Approximately every 2 to 3 months" when referencing waste pickup by vendors. The frequency has dropped off, and shipment off to commercial disposal sites is done on an as needed basis, or as necessary to maintain compliance with the RCRA requirements and the conditions of this permit. The sentence that states vehicle type when referencing commercial transport vehicles was changed to note that the referenced types of vehicles might be included.
35.	Section B-4a	Page B-7 & B-8	Volumes and Vehicle Types. In the first paragraph, the word "various" was deleted in the discussion of Satellite Accumulation Areas (SAA), since the number of SAAs have diminished. Second paragraph. Delete the statement that in-bound vendors trucks proceed to Building 72 only. Since the last revision to the Part B, movement of wastes out of Building 23 has become more common place. Insert the word "traffic" in the first line of the fourth paragraph, to read "pedestrian

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

			traffic volumes."
36.	Section B-4b	Page B-9	Traffic Control Devices, second paragraph. Modify the first paragraph to reflect the fact that the MEMP no longer has an on-site traffic light for vehicle control.
37.	Section B-4b	Page B-9	Traffic Control Devices, second paragraph. Delete the phrase "in the plant", and replace it with "in the project" to more accurately reflect the current mission for MEMP.
38.	Section B-4c	Page B-10	Pavement, second paragraph. Delete the first sentence which read "Major construction traffic in the fall 1986 has badly deteriorated some roads in the southern portion of the property. These gravel roads are largely for emergency use only", since the affected property has been transferred to the MMCIC. The referenced studies have been deleted, because site roads are being reconditioned as part of a utility upgrade by the MMCIC, and the studies from the 1980s are no longer applicable.
39.	Section B-, Figure 2 and Figure 3	Page B-5 and B-8	Figure 2 was deleted, as noted above, and replaced by the former Figure 3.
40.	Section B-5(3)	Page B-4	Wells. All but the first paragraph was deleted, because the information provided was not required.
41.	Section B-All	All	The section was reformatted, in order to conform to the latest version of the Ohio EPA Part B Checklist for section B. Reformatting of the section resulted in the following changes and revisions to the text of the MEMP Part B: 1. Some sections were renamed and renumbered. 2. Original Section B-1, delete the reference to Figure B-1 and Drawing FSE920963 in the fourth paragraph. 3. Original Section B-1, delete the sixth through the eighth paragraphs. 4. Original Section B-2a, delete the reference to the Flood Insurance Map. 5. Original Section B-2a(3), reword the section. 6. Delete Figure B-2. 7. Delete original Section B-2a(5), Sanitary Sewage Treatment. 8. Original Section B-3, delete third paragraph (100 year flood plain), and add a new paragraph. 9. Delete Section B-3b(1). 10. Section B-4a, delete first paragraph., and move the fourth paragraph to New Section B2(2). 11. Reword Section B-4, Traffic Control Devices, delete reference to drawing FSE861318. 12. Delete first paragraph in Section B-4c, Pavement.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

SECTION C--WASTE CHARACTERISTICS			
42.	Section C-General	All	Change the document title in the header from "U.S. DOE Mound Plant" to "U.S. DOE Miamisburg Environmental Management Project." This change incorporates a name change for the project.
43.	Section C-General	All	Change "Mound plant" to "Miamisburg Environmental Management Project". Also, change "at Mound" to "at the project", and delete references to Mound, except where used in a historic context. This change incorporates a name change for the project from the "Mound Plant" or "Mound Facility", to the Miamisburg Environmental Management Project.
44.	Section C-general	All pages	Editorial change to convert "wastestreams" to "waste streams", "cleanup" became "clean up", and "plantwide" became "plant-wide".
45.	Section C	Multiple locations	The 4 page collection of pages (C-45 to C-49) that consisted of the "Waste Profile Declaration Form" was deleted. The corresponding references to the location of this form contained in various subsections of Section C were also deleted.
46.	Section C-1	Pages C-2 to C-40	Chemical and Physical Analyses. Sections C-1.1 to C-1.14, Figures C-1 to C_8, and Tables C-1a to C-1I have been deleted, and a more up-to-date discussion that reflects MEMP's current production status added. Parts of Section C-2 were also edited, and added to this revised discussion.
47.	Section C-0	C-1	"General." This section was deleted, it is not required, and it was repetitive, providing information already provided in the appropriate section in the Section C text.
48.	Section C-1a	Page C-40	Containerized Waste. Combine the two paragraphs to eliminate repetitive language.
49.	Section C-2	Page C-41	Waste Analysis Plan. The introductory paragraph was revised to reflect MEMP's current operational status.
50.	Section C-2	Page C-41	Waste Analysis Plan. The introductory paragraph was revised to delete the rationale for conducting the WAP. This discussion is not required.
51.	Section C-2	Page C-42	Waste Analysis Plan. Delete the reference to Figure C-10.
52.	Section C-2	All Affected	Waste Analysis Plan. Reformat and repaginate the section, to eliminate long paragraphs and wordiness, clarify and update language to reflect current conditions.
53.	Section C-2	Page C-41 and C-42	Waste Analysis Plan. Delete the references to environmental media, because any waste streams that may be dispositioned to Buildings 72 or 23 are not dispositioned as "environmental media" (i.e., soils containing a contaminant); these waste types delivered to Building 23 or 72 would be dispositioned as a solid (or liquid, as appropriate) containing a hazardous waste constituent.
54.	Section 2-a	C-40-42	Waste Analysis Plan. The portions of Section C-1 that are relevant to Section C-1 were removed, and moved to Section C-1.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

55.	Section C-2a	All Affected	Waste Analysis Plan. Reformat and repaginate the section, to eliminate long paragraphs and wordiness, clarify and update language to reflect current conditions.
56.	Section C-2a	Page C-42	Waste Analysis Plan. The second paragraph in this section was revised to reflect MEMP's current operational status.
57.	Section C-2a	Page C-49	Parameters or Rationale. The sixth and seventh paragraphs in this section were revised to reflect MEMP's current operational status.
58.	Section C-2a	Page C-49	Parameters and Rationale. The section of the third paragraph describing Waste Management Group activities related to verification sampling has been removed.
59.	Section C-2b	Page C-53	Test Methods, first sentence. Change the first sentence to read "The test methods Mound uses in implementing the Waste Analysis Plan are provided in "Test Methods for Evaluation of Solid Waste, Physical/Chemical Methods" (EPA Office of Solid Waste and Emergency Response, SW-846, latest edition) or other EPA- or OEPA-approved methods. This change was made to make the Part B more consistent with waste characterization activities today. Table C-3 was deleted for the same reason.
60.	Section C-2b	Page C-54	Test Methods. Delete the sentence "The Miamisburg Environmental Management Project does perform some on-site waste characterization analyses, including testing for explosives, reactivity, TC metals, and cyanide analyses." With the exception of the environmental laboratories, the laboratories involved in these operations are no longer operational.
61.	Section C-2c	Page C-55 to C-58	Sampling Methods. Delete Table C-4 and the references to that table, because, when compared to the text, the table is repetitive, and the methods listed were for example only.
62.	Section C-2d	Page C-58	Frequency of Analysis. The introductory paragraph was revised to reflect MEMP's current operational status.
63.	Section C-2d	Page C-58	Frequency of Analysis. Add the phrase "if necessary" and add a comma to the sentence that makes up this paragraph.
64.	Section C-3a	Page C-64	Waste Characteristics. The introductory paragraph was updated to incorporate the MEMP's current operational status.
65.	Section C-3a	Page C-64	Waste Characteristics. Delete the phrase "and summarized in the tables in that subsection", because these components are not always there (even in 1996).
66.	Section C-3a(2)	C-65	California List Wastes. Delete the paragraph which read: "The California List prohibitions on land disposal are the regulations developed by the State of California that restrict the land disposal of hazardous wastes. The California List was adopted as part of RCRA to provide a starting point for carrying out the Congressional mandate to minimize land disposal of hazardous wastes." This paragraph is not necessary.

67.	Section C-3a(3)	C-65	First Third Wastes. Delete the phrase "is subject to regulation under" and replace it with "is subject to the requirements of."
68.	Section C-3a(3)	C-65	First Third Wastes. Delete the paragraph which read: "The first third list was developed to establish treatment standards for at least one third of all listed hazardous wastes by August 8, 1988. The wastes for which standards were generated on August 8, 1988, became the first third list although they addressed less than one-third of all listed wastes." This paragraph is not necessary.
69.	Section C-3a(4)	C-65	Second Third Wastes. Delete the phrase "is subject to regulation under" and replace it with "is subject to the requirements of."
70.	Section C-3a(4)	C-65	Second Third Wastes. Delete the paragraph which read: "The second third list was developed to ensure that treatment standards would be in place for at least two-thirds of all listed hazardous wastes by June 8, 1989. The wastes for which standards were established on June 8, 1989 became the second third list although they addressed less than two-thirds of all listed wastes." This paragraph is not necessary.
71.	Section C-3a(5)	C-66	Third-Third Wastes. Delete the paragraph which read: "The third-third list was developed to establish treatment standards for all remaining listed hazardous wastes and selected characteristic wastes by May 8, 1990. The wastes for which standards were generated on August 8, 1990, became the third-third list. The third-third wastes are prohibited from land disposal unless they are treated according to the treatment standards contained in OAC 3745-59-41 through 3745-59-43." This paragraph is not necessary.
72.	Section C-3a(5)	C-66	Third Third Wastes. Delete the phrase "is subject to regulation under" and replace it with "is subject to the requirements of."
73.	Section C-3a(6)	C-66	Land Disposal Restrictions Phase II–Universal Treatment Standards, and Treatment Standards for Organic Toxicity Characteristic Wastes and Newly Listed Wastes. Put a hyphen (-) in "nonwastewater."
74.	Section C-3c	C-68	Additional Requirements Pertaining to storage of Restricted Wastes. Second paragraph. This paragraph was re-written to reflect the fact that materials discussed "can" be generated rather than "are" generated. This change was necessary to conform to the project's current operating context.
75.	Section 3c(1)	C-68	Restricted Wastes Stored in Containers. Delete the phrase "with a hazardous waste warning label" and replace it with "with an appropriate marking" to more accurately reflect what the regulations require.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

76.	Section C-3c(3)	C-69	The Storage of Liquid PCB Wastes. The spelled out calculations for Building 23 were deleted; in order to make the discussion consistent with that for Building 72.
77.	Section C Tables	Various	Tables C-2 and C-4 were deleted as noted above. Table C-6 as noted above, was deleted because it is no longer relevant. Table C-8, as noted above was deleted, because it is no longer representative of the inventory in Building 23, since the inventory of Building 23 is no longer static.
78.	Appendix C.1	C-71 to C-91	This appendix was deleted since the stable inventory of these types that was in storage in 1996 is no longer stable, and the inventory changes over time, therefore the table was no longer accurate.
79.	Appendix C.2	C-95 to C-107	LDR Documentation Package. Parts of the package have been reformatted and edited.
SECTION D--PROCESS INFORMATION			
Section D--Process Information for Building 72			
80.	Building 72-Section D-General	All	Change the document title in the header from "U.S. DOE Mound Plant" to U.S. DOE Miamisburg Environmental Management Project." This change incorporates a name change for the project.
81.	Building 72-Section D-General	All	Change title of the Mound Part B Permit Application from "RCRA Part B Permit Application for the U.S. Department of Energy Mound Plant, Miamisburg, Ohio-Drawings" to "RCRA Part B Permit Application for the U.S. Department of Energy Miamisburg Environmental Management Project, Miamisburg, Ohio-Drawings." This change incorporates a name change for the project.
82.	Building 72-Section D General	All	Change "Mound plant" to Miamisburg Environmental Management Project. Also, change "at Mound" to "at the project", and delete references to Mound, except where used in a historic context. This change incorporates a name change for the project from the "Mound Plant" or "Mound Facility", to the Miamisburg Environmental Management Project.
83.	Building 72-Section D-General	All	Editorial change. The page numbers have been changed. Where "non.." was used (i.e., "nonremovable", a hyphen (-) has been inserted.
84.	Building 72-Section D-1	D Building 72-1	Containers. The introductory paragraph has been rewritten to more accurately reflect MEMPs current operational status.
85.	Building 72-Section D-1	D Building 72-1	Containers. Delete the phrase "from mission-related activities and ancillary support operations." and replace it with "primarily from maintenance related operations, and from support operations such as limited photographic operations and environmental monitoring laboratories." This change better reflects MEMP's current mission activities.
86.	Building 72-Section D-1	D Building 72-1	Containers. Reword the last sentence in the first paragraph to state "At this time, the wastes stored in Building 72 potentially could include waste from the following ongoing operations", to better reflect MEMP's current mission activities.

87.	Building 72-Section D-1	D Building 72-1	Containers. To reflect the current operations for the Project, the list of processes was revised to state:
			• CERCLA removal actions.
			• General plant maintenance.
			  • Electrical in support of disconnection of utilities before building demolition.
			  • Plumbing in support of disconnection of utilities before building demolition.
			  • Heating, ventilation, and air conditioning (HVAC) maintaining service in administrative areas.
			  • Janitorial providing service in administrative areas.
			  • Grounds care providing service administrative areas.
			  • Vehicle maintenance operations in support of vehicles involved in soil removal.
			  • Photographic operations to support CERCLA documentation and communication.
			• Environmental Monitoring in support of media characterization data used in CERCLA decisions.
			• Radioactivity analysis in support of media characterization data used in CERCLA decisions.
			• Spill response/release operations.

88.	Building 72-Section D-1	D Building 72-1	Containers. A description of waste production at the MEMP was added.
89.	Building 72 Section D-1a	D Building 72-2	Containers. The paragraph describing Building 72 was edited.
90.	Building 72 Section D-1a	D Building 72-2	Containers with Free Liquids. The contents of this section have been modified, to more accurately reflect MEMP's current operational status.
91.	Building 72 Section D-1a(1)	D Building 72-2	Containers. Revise the container criteria related to "labeling" a container, to "marking" a container. The phrase "are new and" was deleted to allow for the re-use of formerly used containers.
92.	Building 72-Section D-1 and D-1a(2)	D Building 72-1, and D Building 72-6	Containers. Paragraph at the top of the page. Correct typographical errors. Change "flamable" to "flammable." Change "devided" to "divided." Change "ares" to "areas."
93.	Building 72-Section D-1	D Building 72-2	Containers. The photograph included in this section was relocated to the end of the section and the index number was added to the captions. The text citation was edited.
94.	Building 72-Section D-1a(2)	D Building 72-6 to D Building 72-7	Container Management Practices. Revise the container related statements referring to "labeling" a container, to "marking" a container.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

95.	Building 72-Section D-1a(2)	D Building 72-3	Container Management Practices. Change the phrase "these wastes" to "improperly packaged wastes" in the second to last sentence of the second paragraph.
96.	Building 72-Section D-1a(2)	D Building 72-6	Container Management Practices. Seventh paragraph. Change the phrase "from facilities throughout the plant" to "from the points of generation", to better reflect MEMP's current operational status and limited hazardous waste production.
97.	Building 72-Section D-1a(2)	D Building 72-7	Container Management Practices. Delete the references to vehicle inspection for off-site bound vehicles and delete Figure D-2 (Mound Vehicle Inspection Report- Transport Loading Oversight Checklist). While this inspection will continue under MEMP's existing set of procedures, the vehicle inspection requirement is not a RCRA requirement.
98.	Building 72-Section D-1a(2)	D Building. 72-7	Container Management Practices. The last two sentences of the paragraph beginning "Prevention of the mixing. . . " has been edited, to indicate the storage array included as an attachment is included as an example. The last sentence was deleted, because it provided duplicate information.
99.	Building 72-Section D-1a(2)	D Building 72-8	Container Management Practices. A new paragraph was added to include the additional terms and conditions established by the Ohio Hazardous Waste Facility Board in their Opinion and Final Orders, issued in October 1996.
100.	Building 72-Section D-1a(2)	D Building 72-8	Container Management Practices. This section was modified to incorporate operational changes and references to how waste management business is carried out since the site and the site's waste generation perspective have become devoted to the CERCLA clean up operations.
101.	Building 72-Section D-1a(2)	D Building 72-8	Container Management Practices. Table D.1 that list container types was deleted, and a paragraph was substituted that is more current and reflects MEMP's current operations.
102.	Building 72-Section D-1a(2)	D Building 72-6	Container Management Practices. The criteria at the bottom of the page was changed to enable MEMP to store waste containers with an aisle space in excess of 24 inches. As written, it implied that only 24-inch aisle space was allowable.
103.	Building 72-Section D-1a(2)	D Building 72-7	Container Management Practices. The criteria at the top of the page was modified to allow stacking of containers with a capacity of <5 gallons. Containers of this size can often be stacked.
104.	Building 72-Section D-1a(2)	D Building 72-7	Container Management Practices. The paragraph describing containers and the use of spark-proof tools was edited to state that those procedures apply to flammable containers only. Spark-proof tools are not necessary for non-flammable containers.
105.	Building 72-Section D-1a(2)	D Building 72-8	Container Management Practices. The paragraph describing general procedures related to container management of gas cylinders was updated to more accurately describe the current operational procedures.
106.	Building 72-Section D-1a(3)	D Building 72-8	Secondary Containment System Design and Operations. The first paragraph was edited to indicate that the storage array included as an attachment is included as an example.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT MIAMISBURG, OHIO

(continued)

107.	Building 72-Section D-1a(3)	D Building 72-8 and 72-11	Secondary Containment System Design and Operations. The last paragraph was edited.
108.	Building 72-Section D-1a(3)(a)	D Building 72-11 and 72-12	Requirement for the Base or Liner to Contain Liquids. Editorial changes were made to this section.
109.	Building 72-Section D-1a(3)(c)	D Building 72-12	Containment System Capacity. Editorial changes were made to the first paragraph. The first paragraph was edited to indicate that the storage array included as an attachment is included as an example.
110.	Building 72-Section D-1a(3)(c)	D Building 72-12	Containment System Capacity. The wording used in the conclusion statement was edited, and the list of containment trays in the paragraph that follows was indented.
111.	Building 72-Section D-1a(3)(d)	D Building 72-14 and 72-14	Control of Runon. Runon was globally replaced with run-on.
112.	Building 72-Section D-1a(3)(e)	D Building 72-15 and 72-16	Removal of Liquids from Containment System. The first paragraph was edited to note that the steps noted *would occur if a release were to occur.*
113.	Building 72-Section D-1a(3)(e)	D Building 72-15	Removal of Liquids from Containment System. The bullet list of the steps that would be take if a release were to occur was deleted for the sake of brevity.
114.	Building 72-Section D-1a(3)(e)	D Building 72-15	Removal of Liquids from Containment System. The fourth paragraph in the second step was edited to insert hyphens (-) to eliminate compound words such explosionproof, sealless, and nonincidental.
115.	Building 72-Section D-1a(3)(e)	D Building 72-16	Removal of Liquids from Containment System. The second step was amended to reflect the fact that metal containers meeting DOT specifications are used, and, also amend this step to state that containers, other than glass containers, are used.
116.	Building 72-Section D-1a(3)(e)	D Building 72-16	Removal of Liquids from Containment System. The third step was edited so that introductory sentence reads "in the event of a release . . ." Similar changes were made to the last paragraph.
117.	Building 72-Section D-1a(3)(e)	D Building 72-16	Removal of Liquids from Containment System. The fourth step was edited to insert language that states "in the event of a release. . ."
118.	Building 72-Sections D-3 to D-8	D Building 72-16 and 72-17	Sections D-3 through D-8 were consolidated into a paragraph, which states that these sections do not apply.
119.	Appendices	D Building 72-18 to the end and the text of Section D for Building 72	Delete references to Appendices D.1 "Compatibility Charts for Wastes, D.2 "Compatibility Chart for Selection of Laboratory Chemical trays", and Appendix D.4 "Specification and Compatibility Data for Drum/Sump Pumps." Delete the same appendices and change references in Appendix D.3 to D.1. Appendices D.4.1 and D.4.2 have also been deleted. The deleted charts are standard industry reference charts that are readily available in industry related literature. The remaining appendix for Building 72 (Appendix D-4.3) a "MasterShield-Chemical Resistance Bulletin" is information as is contained in the information for Building 23 in this section. Rather than repeating the same information twice, a single appendix is included at the end of Section D.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

120.	Building 23-Section D-General	All	Change "Mound plant" to Miamisburg Environmental Management Project. Also, change "at Mound" to "at the project", and delete references to Mound, except where used in a historic context. This change incorporates a name change for the project from the "Mound Plant" or "Mound Facility", to the Miamisburg Environmental Management Project.
121.	Building 23-Section D-1	D-Building 23-1	Containers. The first paragraph was edited, in order to reflect the current operations for the Project.
122.	Building 23-Section D-1	D-Building 23-1	To reflect the current operations for the Project, the list of processes was revised to state: • CERCLA removal actions. • General plant maintenance: • Electrical in support of disconnection of utilities before building demolition. • Plumbing in support of disconnection of utilities before building demolition. • Heating, ventilation, and air conditioning (HVAC) maintaining service in administrative areas. • Janitorial providing service in administrative areas. • Grounds care providing service administrative areas. • Vehicle maintenance operations in support of vehicles involved in soil removal. • Photographic operations to support CERCLA documentation and communication. • Environmental Monitoring in support of media characterization data used in CERCLA decisions. • Radioactivity analysis in support of media characterization data used in CERCLA decisions. • Spill response/release operations.
123.	Building 23-Section D-1	D-Building 23-1	• Containers. The second paragraph was edited, in order to reflect the current operations for the Project and to reflect the fact that the inventory in Building 23 is no longer static. The paragraph was also broken into two paragraphs.
124.	Building 23-Section D-1	Page D-Building 23-1	• Containers. This section was rewritten and waste streams that have been moved off site were deleted, in order to reflect the current operations for the Project.
125.	Building 23-Section D-1	Page D-Building 23-1	• Containers. The list of waste types covered by the permit was edited to delete the waste streams that were reflective of the legacy waste that once dominated Building 23's inventory.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT MIAMISBURG, OHIO

(continued)

126.	Building 23-Section D-1	Page D-Building 23-1	Containers. The discussion of TRU wastes possibly being stored in Building 23 was deleted.
127.	Building 23-Section D-1	Page D-Bldg. 23-2	Containers. The photographs included in this section were relocated to the end of the section and the index numbers added to the captions. The text citation was edited.
128.	Building 23 Section D-1a(1)	Page D Building 23-2	Containers. Revise the container criteria related to "labeling" a container, to "marking" a container.
129.	Building 23-Section D-1a(1)	D Building 23-1	Containers. Second paragraph, Replace "are used to store the following wastes", with "are designed for storing the following types of mixed waste", to reflect current operations at the MEMP, and because the inventory in Building 23 changes, and the noted waste types may not always be stored in this building.
130.	Building 23-Section D-1a(1)	D Building 23-2	Containers. Top of the page. Replace "ranging" with can range from", to reflect current operations at the MEMP, and because the inventory in Building 23 changes, and the noted waste types may not always be stored in this building.
131.	Building 32 Section D-1a(1)	Page D Building 23-2	Containers. Revise the container criteria related to "labeling" a container, to "marking" a container. The phrase "are new and" was deleted to allow for the re-use of formerly used containers.
132.	Building 23-Section D-1a(1)	D Building 23-1	Containers. A description of waste production at the MEMP was added.
133.	Building 23-Section D-1a(2)	Page D Building 23-5 to D Building 23-8	Container Management Practices. Revise the container related statements referring to "labeling" a container, to "marking" a container.
134.	Building 23-Section D-1a(2)	D Building 23-2	Container Management Practices. Delete the sentence: "However, the number of containers currently on hand is shown in Table D-2", because this inventory can and does vary.
135.	Building 23-Section D-1a(2)	D Building 23-2	Container Management Practices. Delete the table titled: "Table D-2 Current Container Inventory Building 23", because this inventory can and does vary.
136.	Building 23-Section D-1a(2)	D Building 23-2	Container Management Practices. A phrase that stated that containers would be marked with wording that denoted the contents **and** the words hazardous waste was changed to "or", to be consistent with the regulations.
137.	Building 23-Section D-1a(2)	D Building 23-4	Container Management Practices. Table D.1 that list container types was deleted, and substituted by a paragraph that is more current and reflects MEMPs current operations.
138.	Building 23-Section D-1a(2)	D Building 23-6	Container Management Practices. The first sentence of the paragraph that begins "Waste are transported . . " was changed to state that wastes are transported from the points of generation, rather that from throughout the site. This change was made to reflect the current operational status of the site.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT MIAMISBURG, OHIO

(continued)

139.	Building 23-Section D-1a(2)	D Building 23-7	Container Management Practices. Delete the references to vehicle inspection for off-site bound vehicles, delete Figure D-2 (Mound Vehicle Inspection Report). While this inspection will continue under Mound's existing set of procedures, the vehicle inspection requirement is not a RCRA requirement.
140.	Building 23-Section D-1a(2)	D Building 23-8	Container Management Practices. This section was modified to incorporate operational changes and references to how waste management business is carried out since the site and the sites waste generation perspective have become devoted to the CERCLA clean up operations.
141.	Building 23-Section D-1a(2)	Page D Building 23-8	Container Management Practices. A new paragraph was added to instill the additional terms and conditions established by the Ohio Hazardous Waste Facility Board in their Opinion and Final Orders, issued in October 1996.
142.	Building 23-Section D-1a(3)(a)	Page D Building 23-8	Requirement for the Base or Liner to Contain Liquids. Place a hyphen (-) in the word "subbase."
143.	Building 23-Section D-1a(3)(a)	Page D Building 23-11	Requirement for the Base or Liner to Contain Liquids. In the sentence "Construction techniques and application of the chemical resistant coating will ensure that the containment system is free of gaps and cracks" change "ensure" to "ensures" and remove the word "will".
144.	Building 23-Section D-1a(3)(a)	Page D Building 23-11	Requirement for the Base or Liner to Contain Liquids. The text discussing ASTM standard noted in this section has in the past been included as an appendix (Appendix D.4.1) and an OSWER Directive 9483.00-1 (Appendix D.4.1) have been modified and the appendices deleted, since the contained information is common industry standards that are readily available. These materials are now referenced.
145.	Building 23-Section D-1a(3)(c)	Page D Building 23-12	Containment System Capacity. The last two sentences in this section which read: "As a point of reference, the drums are typically stored in the configuration shown in Drawing FSD 920962. FSD 920962 is included as an attachment to this Permit Application in the volume entitled "RCRA Part B Permit Application for the U.S. Department of Energy Miamisburg Environmental Management Project, Miamisburg, Ohio-Drawings." were deleted, as this drawing reflects the building at its maximum extent of use in 1996, and is no longer reflective of the storage configuration in the Building. This drawing was, however, retained in another section as an "example" storage configuration.
146.	Building 23-Section D-1a(3)(d)	Page D Building 23-12 and 23-13	Control of Runon. Runon was globally replaced with run-on. The second paragraph was also split up.
147.	Building 23-Section D-1a(3)(e)	Page D Building 23-13	Removal of Liquids from Containment System. The second sentence of the introductory paragraph that read "The removal of liquid will be characterized, as discussed below for storage and disposal purposes." was deleted because it is redundant.
148.	Building 23-Section D-1b	Page D Building 23-14	Containers Without Free Liquids. The phrase "except their volume is excluded from containment system capacity determinations." was deleted to reflect the changing inventory in the building.

149.	Building 23-Sections D-3 to D-8	Page D Building 23-16 and 23-17	Sections D-3 through D-8 were consolidated into a paragraph, which states that these sections do not apply.
150.	Appendices	Page D Building 72-16 to the end and the text of Section D for Building 23	Delete references to Appendices D.1 "Compatibility Charts for Wastes, D.2 ", Appendix D.3 "Specification and Compatibility Data for Drum/Sump Pumps." Delete the same appendices, and change reference in Appendix D.2 to D.1. The deleted charts are standard industry reference charts that are readily available in industry related literature. The typical storage configuration for Building 23 was also deleted, because when that drawing was originally developed and inserted in this application, the inventory was static. Today, the inventory is changing over time; therefore, the drawing is not as meaningful. Appendix D.2, which was a repeat of the same information from and appendix in the Section D for Building 72 has been deleted, and replaced with an appendix common to the new combined (Sections 23 and 72, combined) Section D.
SECTION E--GROUNDWATER MONITORING			
151.	Section E General	All	Change the document title in the header from "U.S. DOE Mound Plant" to U.S. DOE Miamisburg Environmental Management Project." Change site name from "Mound" to "the Miamisburg Environmental Management Project." This change incorporates a name change for the project from the "Mound Plant" or "Mound Facility", to the Miamisburg Environmental Management Project.
152.	Section E	E-1	The citation for the Ohio Administrative Code was added, and the general Federal citation for the Code of Federal Regulations was enclosed in parentheses.
153.	Section E	E-1	Delete reference to RI/FS, under the Mound 2000 Work Plan RI/FS's are no longer done.
154.	Section E	E-1	Delete reference to other monitoring (i.e., environmental monitoring), as this program is not required as part of this RCRA permit.
155.	Section E	E-1	Change reference from Environmental Restoration to Soils Project to reflect the current project based organization in place at the project.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

SECTION F--PROCEDURES TO PREVENT HAZARDS			
156.	Section F	All	The section was reformatted, in order to conform to the latest version of the Ohio EPA Part B Checklist for section B. Reformatting of the section resulted in the following changes and revisions to the text of the MEMP Part B: 1. Some sections were renamed and renumbered. 2. New sections (i.e., F-1a(1)) were added. 3. The paragraph in old Section F-1 was deleted, because of redundancy. 4. The paragraphs in Old Section F-1a(1) were combined because they were redundant. 5. Old Section F-1a(3), the second paragraph was deleted because of redundancy. 6. Old Section F-2b, second sentence was deleted. 7. Add new section F-3f, including Sections F-3f(1) to F-3f(5) 8. Old Section F-2b(1)reference to Table F-2 was removed. 9. Old Section F-4a, fifth paragraph deleted. 10. Old Section F-4e, reference to Section H was deleted.
157.	Section F-General	All	Change the document title in the header from "U.S. DOE Mound Plant" to U.S. DOE Miamisburg Environmental Management Project." This change incorporates a name change for the project.
158.	Section F-General	All	Change the document title in the header from "U.S. DOE Mound Plant" to U.S. DOE Miamisburg Environmental Management Project." Change site name from "Mound" to "the Miamisburg Environmental Management Project." This change incorporates a name change for the project from the "Mound Plant" or "Mound Facility", to the Miamisburg Environmental Management Project.
159.	Section F-General	All	Change "Mound Fire Protection" to "the Fire Department", where applicable.
160.	Section F-Introduction	F-1	The last sentence of the introductory paragraph was deleted, because the information presented "The procedures outlined in this section are designed to ensure compliance with the Ohio Revised Code (OCR), and with the relevant portions of the Ohio Administrative Code (OAC), Chapter 3745." is not necessary.
161.	Section F-Introduction	F-1	A description of waste production at the MEMP was added.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT MIAMISBURG, OHIO

(continued)

162.	Section F-1	F-1	Delete the reference to 306 acres. Add reference to the fact that the DOE owns 179 acres of what is defined as the Mound site that formerly consisted of 306 acres. This revision more accurately portrays the MEMP site today.
163.	Section F 1a(1)	F-1	24-Hour Surveillance System, both paragraphs. Add the phrase "and if the area is unoccupied,". To better reflect the current operational status of both storage buildings, and to reflect the fact that neither building is continuously occupied during operational hours. Add a hyphen (-) to "nonworking." In the paragraph on Building 23, delete the phrase "except during loading, unloading, or inspection operations", because Building 23 and Building 72 now operate under the same conditions. Editorial changes were also made to this section
164.	Section F-1a(4)	F-2	Warning Sign. The notation for required safety glasses in Building 23 was deleted, because safety glasses are no longer required in Building 23.
165.	Section F-1	All	Change title of the Mound Part B Permit Application from ""RCRA Part B Permit Application for the U.S. Department of Energy Mound Plant, Miamisburg, Ohio-Drawings" to ""RCRA Part B Permit Application for the U.S. Department of Energy Miamisburg Environmental Management Project, Miamisburg, Ohio-Drawings." This change incorporates a name change for the project.
166.	Section F-2a	Page F-3	General Inspection Requirements, second paragraph, the word "deteriorations" was changed to "deterioration."
167.	Section F-2a(1)	Page F-3	Types of Problems. Reword the last sentence of the paragraph in this section to state problems that can be encountered. As this sentence was written, it assumed that problems were normal, and that is not the case.
168.	Section F-1a(2)	Page F-1	Barrier. Delete the sentence "Each entrance that has access to Buildings 23 and 72 is manned by security guards 24 hrs per day or is locked and patrolled" in the first paragraph, and add a new paragraph to explain the current accessing configuration for the Project. Revise the former second paragraph to address these updated accessing procedures.
169.	Section F-1a(3)	Page F-2	Means to Control Entry. Reword the first paragraph and delete "As discussed previously, access to Buildings 23 and 72 is controlled by security guards stationed at entry gates. After working hours, all entry gates are locked." These sections have been reworded to describe MEMP's current accessing configuration.
170.	Section F-2a(2)	Pages F-2 and F-3	Frequency of Inspections. Add a hyphen (-) to "nonemergency."
171.	Section F-3a(1)	Page F-8	Internal Communication. The second paragraph was edited to reflect the fact that not all employees carry two-way radios. As written, this paragraph implied that all employees carried two-way radios.
172.	Section F-3a(3)	Page F-9	Emergency Equipment. Third paragraph, add the phrase "within 100 ft of" to the sentence introducing the list, to clarify the exact locations.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

173.	Section F-3a(3)	Page F-9	Emergency Equipment. The following pieces of emergency equipment that were listed in the list contained in the 1996 Permit Application, have been deleted from the list of equipment maintained in Building 23 and in Building 23. The affected equipment is, as follows: • Acid, gas respirator cartridges. • Asbestos, dust, mist, fume, and radionuclide respirator cartridges. • Organic vapor respirator cartridges. • DOT Spec. 17C steel drums. • DOT Spec. 17H steel drums. • FIDLER radiation monitor (Building 23 only)
174.	Section F-3a(4)	Page F-10	Water for Fire Control. A reference to a Mutual Aid Agreement for emergency response with the City of Miamisburg was added, and a revision the reference to fire equipment was made.
175.	Section F-3b	Page F-10	Aisle Space Requirements. Reword the reference to indicate that containers containing corrosive wastes are stored in conjunction with spacers when stored, rather than as stored, because the inventory of wastes in the referenced Building (Building 23) changes over time. In 1996, and with previous modifications, the inventory in Building 23 was static.
176.	Section F-3b	Page F-10	Aisle Space Requirements. The reference to the use of spacers in building 23 was deleted; spacers are no longer used.
177.	Section F-4a	Page F-11	Unloading Operations. Delete the phrase "laboratories and" to better reflect the operational status of the project.
178.	Section F-4a	Page F-11	Unloading Operations. A reference is added to describe the use of a hydraulic loading dock for Building 72.
179.	Section F-4a	Page F-12	Unlading Operations. The reference to an intrusion alarm in Building 23 was deleted. That alarm is no longer operational.
180.	Section F-4b	Page F-12	Runoff. Hyphens (-) were added to "runon" and "runoff."
181.	Section F-4d	Page F-13	Equipment and Power Failure. The second paragraph was edited, to allow that paragraph to more accurately state the status of handling equipment in the event of a power or equipment failure.
182.	Section F-4e	Page F-13	Personnel Protective Equipment. The reference to the requirement for Level A PPE training for all waste management and fire protection personnel was deleted. This is no longer required.
183.	Section F-5d	Paged F-15 and F-15	Management of Incompatible Wastes in Containers. Second sentence, substitute the word "transfer" for "shipment" when referring to the movement of wastes from the point of generation to the storage buildings. This change was made because of the implication of using the word "shipment."

184.	Appendix F.1	Page F-19 and F-20	Building 23 and Building 72 Inspection forms. Reformat table. Delete the reference to drum labeling, and substitute in drum "marking", in order to maintain consistency with the regulations governing container management.
185.	Appendix F.1	Page F-20	Inspection form for Building 23. The referenced criteria "Sump pump (inoperable, damaged)" was deleted, because it was duplicative (the three inspection criteria above accomplish the same hazard prevention goal).
SECTION G--CONTINGENCY PLAN			
186.	Section G-General	Where Applicable	When referring to the MEMP fire protection organization, references to the "Fire Department" and other organizational names were changed to "Fire Protection" to conform to the current organizational name.
187.	Section G-General	All	Change the document title in the header from "U.S. DOE Mound Plant" to U.S. DOE Miamisburg Environmental Management Project." Change site name from "Mound" to "the Miamisburg Environmental Management Project." This change incorporates a name change for the project from the "Mound Plant" or "Mound Facility", to the Miamisburg Environmental Management Project.
188.	Section G-General	Where Applicable	The numbering of appendices in the text was changed to agree with the re-numbering of the appendices of Section G.
189.	Section G-0	Page G-1 to G-2	General. This section is not a required section, it was, therefore, deleted. As written, it contained a lot of internal information that is not germane to the Contingency Plan.
190.	Section G-1	Page G-2	General Information. First paragraph. 1) Delete the reference to 306 acres, and add a paragraph below that explains that the site continues to decrease in size over time. 2) Change Babcock & Wilcox Co. of Ohio Inc. to BWXT of Ohio, Inc., in order to reflect a recent reorganization and consolidation of DOE operations into one division.
191.	Section G-1	Page G-2	General Information, Second Paragraph. This paragraph was revised to remove the burn area units, change the unit number for units addressed in the plan from nine to three, and add the status of the three remaining units.
192.	Section G-1	Page G-2	General Information, third paragraph. Delete this paragraph, since the information contained (i.e., DOE contractor officer at DOE-OH) is not necessary.
193.	Section G-1	Page G-2	General Information. Fourth Paragraph. Reword this paragraph to accommodate the name change of the facility to MEMP (i.e., insert "Mound Plant or Facility as it has been called, was formerly. . ."

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

194.	Section G-1	Page G-2	General Information. Fifth Paragraph. Insert the sentence "The first is the cleanup of contaminated buildings and land and transitioning of the facility into commercial economic development. The second element of the Project's current mission is the continuation of the assembly-related operations in support of the RTG or Power Systems Technology operations." This change is necessary to accurately reflect MEMP's current operational status.

195.	Section G-1	Page G-2	General Information. Sixth paragraph. Delete the listed processes, and replace them with the following list:
			
			• CERCLA removal actions
			• General plant maintenance.
			  • Electrical in support of disconnection of utilities before building demolition.
			  • Plumbing in support of disconnection of utilities before building demolition.
			  • Heating, ventilation, and air conditioning (HVAC) maintaining service in administrative areas.
			  • Janitorial providing service in administrative areas.
			  • Grounds care providing service administrative areas.
			  • Vehicle maintenance operations in support of vehicles involved in soil removal.
			  • Photographic operations to support CERCLA documentation and communication.
			• Environmental Monitoring in support of media characterization data used in CERCLA decisions.
			• Spill response/release operations.
			
			This paragraph was also reworded to reflect the current operational status of the site. This list more accurately reflects MEMP's current operational status.

196.	Section G-1	Page G-3	A description of waste production at MEMP was added.

197.	Section G-1	Page G-3	General Information. Seventh paragraph. Delete the paragraph which read: "In addition to these wastes, Mound is undergoing closure of the Bum Area units. Process waste or residuals from these units (Magazine 53 Energetic Materials Storage Unit, Pyroshed Energetic Materials Waste Storage Unit, Retort Unit, Open Bum Energetic Materials Unit, Thermal Treatment Unit, and the Energetic Materials Pretreatment Unit) have been removed from the units and the units decontaminated prior to closure. These units are currently involved in RCRA closure, with closure certification anticipated." These units have been certified RCRA clean closed, and contain no hazardous waste and therefore need not be addressed by the Contingency Plan.
198.	Section G-1	Pages G-3 and G-4	General Information, and Table G-1. This table and the corresponding reference to the table in the text of Section G-1 has been deleted, because the annual quantities are not needed in the contingency plan, and because the waste types are discussed elsewhere.
199.	Section G-1	Pages G-3 and G-7	General Information, and Table G-1. This table and the corresponding reference to the table in the text of Section G-1 was deleted, because the annual quantities are not needed in the contingency plan, and because it provided summary information that was discussed elsewhere.
200.	Section G-1	Page G-3	General Information. The last paragraph just before the unit specific discussions has been edited, and broken into three small paragraphs. A reference to a new Appendix G.1 was added. The new Appendix 1 includes a list of wastes managed at Mound storage units, by waste code, waste constituent and storage location.
201.	Section G-1b	Page G-3	Building 72 Hazardous Waste Storage Unit. Process related information was updated, and the following process waste types were deleted: • Paint-related wastes and spent stripping solutions. • Printing wastes. • Spent surface preparations and solutions. • Decommissioning/Environmental Restoration wastes. • Scintillation wastes. These waste types are no longer produced at MEMP.
202.	Table G-2	Page G-5 and G-6	Table G-2 was changed to Table G-1 in the revised submittal. The reference to Scintillation Cocktail and PCBs in the last cell was also deleted. The Cell of the table that discussed cyanide wastes was also deleted. These changes reflect the fact that mixed wastes are now being shipped off the site due to increased options for the treatment and disposal of those wastes, as well as the fact that the referenced waste types are no longer stored at MEMP.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

203.	Section G-1c	Page G-7	Building 23 Radioactive Mixed Waste Storage Unit, introductory paragraph. This paragraph was rewritten to reflect the current operational status of the building, and the fact that mixed wastes are now being shipped off the site due to increased options for the treatment and disposal of those wastes.

204.	Section G-1c	Page G-7	Building 23 Radioactive Mixed Waste Storage Unit. Replace the listed waste types with the same list from Section D of this Permit, as follows:
			• CERCLA removal actions
			• General plant maintenance.
			  • Electrical in support of disconnection of utilities before building demolition.
			  • Plumbing in support of disconnection of utilities before building demolition.
			  • Heating, ventilation, and air conditioning (HVAC) maintaining service in administrative areas.
			  • Janitorial providing service in administrative areas.
			  • Grounds care providing service administrative areas.
			  • Vehicle maintenance operations in support of vehicles involved in soil removal.
			  • Photographic operations to support CERCLA documentation and communication.
			• Environmental Monitoring in support of media characterization data used in CERCLA decisions.
			• Spill response/release operations.

205.	Section G-1a	Page G-7	Building 27 Filtration Unit. The unit status for the Building 27 filtration unit was changed from "inactive" to "RCRA Clean Closed, Certification Pending." The discussion was changed to reflect the current status of this former unit.
206.	Section G-1d	Page G-8	Delete the section titled "G-1d Burn Area Units." These units have been certified RCRA clean closed, and contain no hazardous waste and therefore need not be addressed by the Contingency Plan.
207.	Section G-2	Page G-9	Emergency Coordinators. The first paragraph was deleted, because the information contained in that agreement has been superseded by the implementation of the Mutual Aid Agreement with the City. A new paragraph was inserted to define the current duties of the emergency coordinator.

208.	Section G-2	Page G-9 to G-13	Emergency Coordinators. The list of duties for the Incident Commander (Emergency Coordinator), Security Communications Center, Hazardous Waste Management Personnel, Public Affairs Manager, have been deleted. The relevant duties to a hazardous waste emergency at the site are covered in the sections that follow.
209.	Section G-2	Page G-10	Emergency Coordinators. The reference to Appendix G.1 was deleted, because that appendix contained duplicate information.
210.	Section G-2	Page G-10	Emergency Coordinators. The reference to Appendix G.5 was deleted, because that appendix has been deleted, because it contained 1) information already explained in the text and 2) unnecessary/non-regulatory required information.
211.	Section G-2	Page G-9 to G-13	Emergency Coordinators. This section was rewritten to incorporate the provisions established by the Mutual Aid Agreement with the City.
212.	Section G-3	Page G-13	Implementation. The first paragraph was deleted, because it does not address implementation of the plan with any specifics. The second paragraph was reworded, and the noted conditions for implementing the Contingency Plan form Section B.13 of the Opinion and Final Orders were added.
213.	Section G-3	Page G-13	Implementation. This section was rewritten to incorporate, and to state that the contingency plan would be implemented in any of the conditions as noted in the Opinion and Final Orders as issued on October 18, 1996, by the Ohio Hazardous Waste Facility Board were to occur.
214.	Section G-4	Page G-14	Emergency Response Procedures. The list of duties for the Incident Commander (Emergency Coordinator), Security Communications Center, Hazardous Waste Management Personnel, Public Affairs Manager, have been deleted. The relevant duties to a hazardous waste emergency at the site are covered In the sections that follow.
215.	Section G-4a	Page G-14	Notification. The introductory sentence was re-written to delete reference to nine hazardous waste management units, because the Burn Area Units have been certified RCRA clean closed, and contain no hazardous waste and therefore need not be addressed by the Contingency Plan.
216.	Section G-4a	Page G-14 and G-15	Notification. The lengthy discussion of the actual announcement procedure (i.e., "emergency tone followed by verbal message" and "a level tone for 3 to 5 min indicates . . ") was deleted, and a new description that generally tells of the notification mechanism added. The information formerly contained in the subject discussion is addressed in detail in site emergency procedures.
217.	Section G-4a	Page G-15	Notification. The instruction section that followed the plant sirens was rewritten to state "When activated, specific instructions will be provided over the PA system following the alert signal."
218.	Section G-4a	General	Change references to "Fire Services" to "Fire Protection."
219.	Section G-4a	Page G-15	Notification, fifth paragraph. This paragraph was rewritten to incorporate reference to the Mutual Aid Agreement with the city, and to reflect the new role of the MEMP IC.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

220.	Section G-4a	Page G-15	Notification, last paragraph. The noted appendix number was changed to reflect the current organization of the Contingency Plan; the references to "sitewide" or "site wide" evacuation plans and the reference to a copy of that plan in the appendix were deleted.
221.	Section G-4b	Page G-15	Identification of Hazardous Material. The condition "intensity of fire or explosion" was changed to "intensity of fire or explosion, if any", to clarify this condition. The condition "source" was changed to read "source of the release."
222.	Section G-4b	Page G-15	Identification of Hazardous Material. The second paragraph was rewritten to state that samples will be taken if necessary, to identify a spilled or released material. Using "process knowledge, involving for example the piece of equipment involved, and the MSDS sheet for the material involved would make taking a sample meaningless. Delete the phrase "from the Industrial Safety and Health group", as written, the sentence implied that that group provided all of the information listed. Editorial changes were also made to this paragraph.
223.	Section G-4c	Page G-16	Assessment. The reference appendix was changed to reflect the reorganization and repagination of the Contingency Plan. This section has bee rewritten to reflect the current conditions resulting at the site and the implementation of the Mutual Aid Agreement wit the City.
224.	Section G-4c	Page G-16	Assessment. The reference to Appendix G.5 was deleted, because that appendix has been deleted, because it contained 1) information already explained in the text and 2) unnecessary/non-regulatory required information.
225.	Section G-4c	Page G-16	Assessment. The references to the various MEMP organizations listed in this paragraph were deleted. Under the Mutual Aid Agreement, this may not be true.
226.	Section G-4c	Page G-16	Assessment, third paragraph. The phrase "and the Environmental Assessment Technology Division" was deleted. The third and fourth paragraphs were combined, and the last then sentence separated out as a paragraph.
227.	Section G-4c	Page G-16	Assessment, last Paragraph. Delete the reference to the Crisis Manager and the National Response Center.
228.	Section G-4d	Page G-16	Control Procedures. Change the word "may" to "could" when referring to the possibility of accidents at the MEMP.
229.	Section G-4d(1)	Page G-16 to G-20	Spill and Material Release. The reference to "hazardous materials" was changed to "hazardous wastes."
230.	Section G-4d(1)	Page G-16	Spills or Material Releases. The reference to verification sampling was rewritten to state: "Verification of cleanup will be by visual examination where the material is distinctive (e.g., an oil spill in soil) and would leave a distinctive stain. Where visual examination is not suitable, samples will be taken in the spill or release area to verify that proper cleanup activities have been completed."

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT MIAMISBURG, OHIO

(continued)

231.	Section G-4d(1)	Page-G-16	Spills or Material Releases. The reference to fire line drawings was deleted, since that drawing is no longer included in the permit application. The fire line drawing is, however, available in the EOC, therefore a sentence was added to note that fact.
232.	Section G-4d(1)	Page G-17	Spill and Material Release. The section pertaining to the levels of alerts has been deleted, since this discussion is actually related to the evacuation of areas where radiologic materials releases would occur.
233.	Section G-4d(1)	Page G-16 to G-20	Spill and Material Release. This section was re-worded, in order to qualify the responsibilities of the persons on the site, to incorporate new procedures resulting from the Mutual Aid Agreement, and to clarify responsibilities (i.e., new headings were added).
234.	Section G-4d(2)	Page G-20	Fire and/or Explosion. The reference to Appendix G.5 was deleted, because that appendix has been deleted, because it contained 1) information already explained in the text and 2) unnecessary/non-regulatory required information.
235.	Section G-4d(2)	Page G-20	Fire and/or Explosion. This section was re-worded in order to qualify the responsibilities of the persons on the site and to clarify responsibilities (i.e., new headings were added) and to incorporate new procedures resulting from the Mutual Aid Agreement.
236.	Section G-4e	Page G-21	Prevention of Recurrence of Spread of Fires, Explosions, or Releases. The summary recant of the appendix G.5 conditions was deleted, because it was redundant.
237.	Section G-4f	Page G-21	Storage and Treatment of Released Material, first paragraph. Parts of this paragraph were rewritten/reworded, without changes to the meaning of the paragraph.
238.	Section G-4f	Page G-21	Storage and Treatment of Released Material. Delete the phrase "will be treated by means of on-site treatment units, or" No treatment capacity exists.
239.	Section G-4g	Page G-21	Incompatible Wastes. The first paragraph was edited.
240.	Section G-4g	Page G-21	Incompatible Wastes. The reference to Compatibility Charts for Wastes, appendix G.7 has been deleted, and language stating that standard industry charts will be consulted used. The compatibility charts were deleted, because these charts are standard industry reference charts that are readily available in industry related literature.
241.	Section G-4h	Page G-21	Post-Emergency Equipment Maintenance. The table noting the locations of decontamination supplies for post emergency decontamination of equipment used during an emergency was deleted, as was the corresponding reference to this table in the text, because this table is not required. Rather this section describes the procedures for cleaning said equipment. This change makes this section consistent with the Section G portion of the Part B checklist.
242.	Section G-4I	Page G-21	Container Spills and Leaks. The single paragraph was divided into two paragraphs.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT MIAMISBURG, OHIO

(continued)

243.	Section G-5	Page G-23	Emergency Equipment. A statement that there is no emergency equipment in Building 27, and the reason there is no emergency equipment in that building is noted.
244.	Section G-5	Pages G-23 to G-25	Emergency Equipment. The table (G-6A) noting fire fighting equipment maintained by the City, at the City fire houses has been deleted, as has the corresponding reference to this table in the text. The regulations (3745-65-52(E)) require that equipment available at the facility be listed. Table 6 accomplishes what is required of the regulations. The corresponding discussion in Section G-5a has been revised to reflect the fact that table G-6A has been deleted. The discussion in this section was also revised to reflect the fact that the MEMP is under a mutual aid agreement, and the fact that that agreement makes available the City fire fighters and their equipment. The cell relating fire extinguisher locations in Table G-6A was modified to reflect the fact that fire extinguishers are located throughout the site
245.	Section G-5a	Page G-22	Fire-Fighting Equipment. Change references to the water tower to 200 feet high, and add sea level reference.
246.	Section G-5a	Page G-22	Fire-Fighting Equipment, Table G-6. Add recently acquired equipment and add the equipment identification number to the equipment already listed.
247.	Section G-5a	Page G-24	Fire-Fighting Equipment, last paragraph, below the old Table G-6A. The introductory sentence was rewritten. As written, it failed to acknowledge a similar statement in old Table G-6A (nor Table G-6).
248.	Section G-5b	Page G-25	Spill Control Equipment. Delete the discussion related to the Burn Area Units. These units have been certified RCRA clean closed, and contain no hazardous waste and therefore need not be addressed by the Contingency Plan.
249.	Section G-5b	Page G-25	Spill Control Equipment. Delete the discussion related to the City and to the availability of equipment through various spill response companies. The regulations (3745-65-52(E)) require that equipment available at the facility be listed. Table 6 accomplishes what is required of the regulations. The corresponding discussion in Section G-5a has been revised to reflect the fact that table G-6A has been deleted. The discussion in this section was also revised to reflect the fact that the MEMP is under a mutual aid agreement, and the fact that that agreement makes available the City fire fighters and their equipment.
250.	Section G-5b	Page G-23	Spill Control Equipment. Update the reference to discussion on Building 27.
251.	Section G-6	Page G-26	Coordination Agreement. Reword the second paragraph to note the reliance on coordination agreements and to reflect the current operational status for the MEMP.
252.	Section G-6	Page G-26	Coordination Agreement, second paragraph. Delete the sentence that reads "These divisions will be under the direct authority of the IC at the scene of the incident", and replace it with the

			following statement: "Incidents Involving the utilization of Miamisburg Fire Department response assets will utilize the Miamisburg Fire Department Incident Commander as the 'Lead Agency' concept, with assistance provided by the Mound Fire Department Chief or Foreman. Either Incident Command System must provide for proper notifications of non-response personnel to ensure protective actions can be implemented in a safe manner." This change conforms to Section F, and reflects the terms of the mutual aid agreement with the City.
253.	Section G-6	Page G-26	Coordination Agreement, third paragraph. This paragraph was clarified to indicate the role of the mutual aid agreement.
254.	Section G-6	Page G-26	Coordination Agreement. Change the section that notes that MEMP has an employed physician ion duty, to indicate that Mound has a physician on contract.
255.	Section G-6	Page G-27	Coordination Agreement (fourth paragraph). Where necessary insert references to the Mutual Aid Agreement.
256.	Section G-6	Page G-27	Coordination Agreement (fifth paragraph). Change references to lists of waste and health hazards to agree with the revised version of the Contingency Plan.
257.	Section G-6	Page G-30	Coordination Agreement. Last paragraph. Delete the paragraph which read: "No written agreement currently exists for the cleanup and supply contractors listed in Subsection G-5b. However, all contractors have been contacted and verbal agreements have been readied and written documentation of the agreements are presently on file. The basis of the verbal agreements is to ensure the accessibility of equipment and supplies during an emergency situation." The list of contractors is not required, and was deleted from Section G-5b.
258.	Section G-6	Page G-30	Coordination Agreement. A list of external recipients of the Contingency plan that was deleted form Section G-8 was edited and added to this section.
259.	Section G-7	Page G-30	Evacuation Plan. Delete the reference to weather emergencies.
260.	Section G-7	Page G-30	Evacuation Plan. Delete the reference to Appendix G.2. The information required of this section is explained in the remainder of the paragraph (i.e., emergency evacuation routes).
261.	Section G-8	Page G-30	Required Reports, second paragraph. The internal distribution of the contingency plan, as discussed in the second paragraph was deleted, since it is not necessary.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

262.	Section G-8	Page G-30 and G-31	Required Reports. The paragraph dealing with external distribution of the contingency plan has been deleted from this section, modified, and moved to Section G-6.
263.	Section G-8	Page G-30 and G-31	Required Reports. Editorial changes to change "phone" to "telephone", and to change the phrase that stated that MEMP must submit a report to the Ohio EPA to state that the report will be submitted.
264.	Section G-References	Page G-31	The references section is not required, and was therefore deleted.
265.	Appendix G.1	Page G-34	Appendix G.1 was deleted. The list of duties for the Incident Commander (Emergency Coordinator), Security Communications Center, Hazardous Waste Management Personnel, Public Affairs Manager, have been deleted. The relevant duties to a hazardous waste emergency at the site are covered In the sections that follow.
266.	New Appendix G.1	--	A new Appendix A as referenced in Section G-1 was added. A new Appendix G.1 was added. The new Appendix 1 includes a list of wastes managed at MEMP storage units, by waste code, waste constituent and storage location.
267.	Appendix G.2	Page G-37	Appendix G.2 was deleted. The information contained in the associated table was included elsewhere, or not required.
268.	Appendix G.3	Page G-41	Specific Emergency Procedures (including Appendix G.3.1 to G.3.6). The reference to Appendix G.5 was deleted, because that appendix has been deleted, because it contained 1) information already explained in the text and 2) unnecessary/non-regulatory required information. These procedures described in this appendix are also contained in site emergency response procedures.
269.	Appendix G.4	Page G-50	Hazardous Substances and Reportable Quantities (40 CFR 302). This appendix was deleted, and replaced with the list of wastes managed at MEMP storage units, by waste code, waste constituent and storage location (New Appendix G.1).
270.	Appendix G.5	Page G-118	Characterizing Released Material. Moved to Appendix G.3.
271.	Appendix G.6	Page G-120	Evacuation Plans. Moved to Appendix G.2
272.	Appendix G.7	Page G-124	Compatibility Charts for Wastes. The compatibility charts were deleted, because these charts are standard industry reference charts that are readily available in industry related literature.
273.	Appendix G.8	Page G-144	RCRA Permit Condition B.13. The contents of Appendix G-8 has been incorporated into Section G-3, and the appendix deleted.
274.	Appendix G.9	Page G-145	Mutual Aid Agreement with the City. Moved to Appendix G.4
275.	Section G Tables	Various	Tables G-1, G-3, and G-5 were deleted, causing a renumbering of All of the tables in Section G.

SECTION H--PERSONNEL TRAINING			
276.	Section H General	All	Change the document title in the header from "U.S. DOE Mound Plant" to U.S. DOE Miamisburg Environmental Management Project." Change site name from "Mound" to "the Miamisburg Environmental Management Project." This change incorporates a name change for the project from the "Mound Plant" or "Mound Facility", to the Miamisburg Environmental Management Project.
277.	Section H-General	All	Reformatting of Section H resulted in the assignment of new names to some sections an in cutting and pasting other sections. No deletions were made in conjunction with the reformat.
278.	Section H-1	Page H-1	Outline of Training Program, first paragraph. Re-word the first sentence
279.	Section H-1	Page H-1	Outline of Training Program, first paragraph. Delete the third, fourth, and fifth sentences, because these topics are addressed in the text of Section H.
280.	Section H-1	Page H-1	Outline of the Training Program. Because it simply restates the purpose of Section H, delete the second paragraph.
281.	Section H-1	Page H-1	Outline of Training Program. The following list and the discussion that follows it was added, in order to define the sites waste generation perspective: • CERCLA removal actions. • General plant maintenance: • Electrical in support of disconnection of utilities before building demolition. • Plumbing in support of disconnection of utilities before building demolition. • Heating, ventilation, and air conditioning (HVAC) maintaining service in administrative areas. • Janitorial providing service in administrative areas. • Grounds care providing service administrative areas. • Vehicle maintenance operations in support of vehicles involved in soil removal. • Photographic operations to support CERCLA documentation and communication. • Environmental Monitoring in support of media characterization data used in CERCLA decisions. • Radioactivity analysis in support of media characterization data used in CERCLA decisions. • Spill response/release operations.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

282.	Section H-1b	Page H-2	Training Content, Frequency, and Technique. Last paragraph. Delete the sentence "Appendix H.3 presents representative training lessons from the hazardous waste worker-training course.' Appendix H.3 was deleted with Revision 002 (June 1999), and the associated reference in Section H was not deleted.
283.	Section H-1c	Page H-2	Training Director. Replace reference to Human Resources Director as Training Director to reflect the current organizational structure in place at the site.
284.	Section H-1c	Page H-2	Training Director, third paragraph. Delete the first and last sentence of this paragraph, because these topics are covered elsewhere.
285.	Section H-1c	Page H-2	Training director. Reword the sentence that references persons serving as trainers. Editorial changes.
286.	Section H-1d	Page H-3	Relevance of Training to Job Description. Third paragraph, the first sentence, delete this sentence, because it does not refer to anything in particular, either above or below it (editorial change).
287.	Section H-1d	Page H-3	Relevance of Training to Job Description. Delete reference to DOT courses.
288.	Section H, Table H-2	Page H-5	Delete columns for "First Aid" and "CPR" because they are not relevant to the hazardous waste training. Delete row for "Drivers and Fork Lift Operators", these positions are no longer considered hazardous waste management related. Delete DOT course reference.
289.	Section H-1e	Page H-6	Training for Emergency Response. Delete the first sentence because it is redundant, and because it lacks relevance to the subject at hand.
290.	Section H-1e	Page H-6	Training for Emergency Response. Last paragraph, delete the phrase, reword the sentence to read " The Mound Fire Department will be the primary personnel to respond to a release, fire, or explosion", to more accurately portray roles and responsibilities at MEMP.
291.	Section H-1	Page H-6	Training for Emergency Response. Second paragraph, first line, insert a hyphen (-) in "nonroutine."
292.	Section H-1	Page H-6	Training for Emergency Response. Delete reference to emergency shut-off systems in the training criteria.
293.	Section H, Appendix H.1	Page H-9 to H-15	Position descriptions. Delete references to DOT training from positions where it was included (i.e., Environmental Coordinator).
294.	Section H, Appendix H.2	Page H-22 to H-25	Representative Course Descriptions. Delete the course descriptions for "First Aid", "CPR", 49 CFR (Transportation), and "Forklift Truck Operators", to correspond to deletions made in text and in Table H-2.
295.	Section H, Appendix H.3	Page H-29+	Hazardous Waste Worker Training. This appendix was deleted, as noted above.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

SECTION I--CLOSURE PLAN			
296.	Section I-General	All	Inconsistencies in the format between the Closure plans for Building 72 and for Building 23 were corrected in this revision. Examples of the inconsistencies that were changes is the use of Bold for headings, underlining, etc.
297.	Section I-0	Page 1 for Section I for both Building 23 and Building 72	General. In accordance with the Ohio EPA guidelines for closure plans, the following statement was added to both Section I Closure plans: "The Miamisburg Environmental Management Project, under DOE guidelines that are established under OSHA has developed a site wide Health and Safety Plan (HASP), as well as job specific HASPs. Under these requirements, a HASP will be developed for the closure of Building 23."
Section I--Closure Plan for Building 72			
298.	Section I-0	General	The photograph of Building 72 was relocated to the end of the section, and index numbers were added to the caption. The text citation was amended, to remove a reference to another photograph.
299.	Section I-General	All	Change the document title in the header from "U.S. DOE Mound Plant" to "U.S. DOE Miamisburg Environmental Management Project." Change site name from "Mound" to "the Miamisburg Environmental Management Project." This change incorporates a name change for the project from the "Mound Plant" or "Mound Facility", to the "Miamisburg Environmental Management Project".
300.	Section I-General	All	Change title of the Mound Part B Permit Application from ""RCRA Part B Permit Application for the U.S. Department of Energy Mound Plant, Miamisburg, Ohio-Drawings" to ""RCRA Part B Permit Application for the U.S. Department of Energy Miamisburg Environmental Management Project, Miamisburg, Ohio-Drawings." Replace references to "Mound Plant" to "Miamisburg Environmental Management Project." These changes incorporate a name change for the project.
301.	Section I General	All	Where drawings have been deleted (i.e., foundation plans) from the second volume, the associated reference in Section I has been deleted.
302.	Section I-0	Page I building 72-1	General. A new paragraph was added to describe how soil contamination that may be a result of Building 72 operations versus soil contamination from other operations will be addressed.
303.	Section I-0	I Building 72-1	General. The reference to the post-1998 acreage and the Post 1997 number of buildings on site was deleted from the building description, because it is not relevant to the closure.

304.	Section I-0	I Building 72-1	General. Replace the part of the second paragraph that reads: "This FFA, which was entered into pursuant to Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), requires Mound to complete a Remedial Investigation/Feasibility Study (RI/FS). The purpose of the RI/FS is to identify remedial actions that are consistent with CERCLA regulations and the FFA. To the extent possible, Mound plans to coordinate work conducted as part of the RI/FS with RCRA-related work." With" "This FFA, which was entered into pursuant to Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), has given way to the "Mound 2000 Work Plan." Under the Mound 2000 Work Plan, the Ohio EPA the US EPA, and the DOE will evaluate each Potential Release Site or building separately, to determine the need for cleanup. When a response action is warranted, Mound will use removal action authority to remediate those areas as needed or establish a goal for no additional remediation other than institutional controls for the final remedy documented in the Record of Decision. To evaluate any residual risk after all removals have been completed, a residual risk evaluation would be conducted to ensure the block or parcel is protective of human health for industrial reuse. Building 72 and the property underlying the building will also be evaluated using the "Mound 2000 Work Plan" approach. To the extent possible, Mound plans to coordinate work conducted as part of the Mound 2000 Approach with its RCRA-related work." Replace the sentence related to residual risk with : "To evaluate any residual risk after all removals have been completed, a residual risk evaluation would be conducted to ensure the selected remedy for the associated property block or land parcel is protective of human health under an industrial reuse scenario." The second paragraph was also separated into two paragraphs. The first sentence was also rewritten. These changes are needed to reflect changes to the CERCLA Approach that have taken place since 1996.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT MIAMISBURG, OHIO

(continued)

305.	Section I-0 and I-1	I-1 and I-2	Delete the references noting that the information that follows was submitted as mandated in the stated OAC citation.
306.	Section I-1	I-Building 72-2	Closure Plan. With reference to maintaining closure documentation, replace the phrase "by the Waste Management Group", with "through the Long Term Stewardship Program being developed by the DOE and the Ohio EPA." This change reflects the current trend for long-term maintenance of environmentally related documentation.
307.	Section I-1	I-Building 72-2	Closure Plan. The sentence, which read "This plan identifies activities that will be necessary to permanently Close Building 72 at the end of its operating life", was deleted from the first paragraph of this section, as it was not necessary.
308.	Section I-1a	I Building 72-3	Closure Performance Standard. Replace the paragraph that reads: "Analysis will be conducted to determine whether any of the waste in Building 72, as listed for Building 72 in the Part A application are present above their detection limit." With: "Analysis will be conducted to determine whether any of the waste in Building 72, that has historically been stored in Building 72 are present above their detection limit. The list of analytes will be based upon the Part A contained in the 1996 version of the Part B Permit, as issued in October 1996." This change is necessary, because the Part A in the April 2001 version of the Part B Permit Application is a list of waste that could potentially be managed in Building 72 as of April 2001; the list in the December 1996 Part B Permit application reflects the wastes that could historically have been stored in the building.
309.	Section I-1a	I Building 72-3	Closure Performance Standard. Correct typographical error--"know-ledge" to "knowledge."
310.	Section I-1a	I Building 72-3	Closure Performance Standard. The section discussing soil clean up effectiveness was modified to state that those standards would only be employed if there is soil contamination resulting from the storage operations in Building 72. Soil clean up from any other operations will be reserved to CERCLA, and addressed under the Mound 2000 Process.
311.	Section 1a(1) and 1e(4)	--	Respective sections, insert phrase "most recent version of its", when referencing OEPA's closure plan guidance.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

312.	Section I-b(1)	I Building 72-6	Partial Closure and Final Closure Activities. Replace the paragraph that reads: "Closure of other RCRA treatment and storage units at Mound will be prior to, or conjunctively with, cessation of all mission activities." With: "With the exception of Building 23, closure of Mound's other RCRA treatment and storage units (the historic units) was completed in the 1990s. Both Building 72 and Building 23 will be closed in conjunction with the cessation of all mission activities at the MEMP. This change more accurately reflects the status of regulated RCRA units at the Miamisburg Environmental Management Project today.
313.	Section I-1b	I Building 72-6	Partial Closure and Final Closure Activities. Change the anticipated year of closure of the facility from 2003 to 2006.
314.	Section I-1c	I Building 72-6	Maximum Waste Inventory. Delete the word "historically", because the waste types now stored are a subset of the types of waste that were historically stored in Building 72.
315.	Section I-1c	I Building 72-6	Table I-1. Change title from "Estimated Building 72 Historic Maximum Inventory" to "Estimated Building 72 Historic Lifetime Maximum Inventory", to more accurately reflect the volumes listed in the table, and to retain the historic perspective of maximum volumes stored form a closure perspective. Add the sentence "The actual volumes of waste stored currently are less than the volume listed" to the text discussion.
316.	Section I-1d	Page I Building 72-6	Schedule for Closure. A phrase stating soil samples will be compared to the noted criteria, if soil sampling becomes necessary. Soil clean up from any other operations will be reserved to CERCLA, and addressed under the Mound 2000 Process.
317.	Section I-1d	I Building 72-6	Schedule for Closure. Change the anticipated year of closure of the facility from 2003 to 2006.
318.	Section I-1e	I Building Page 72-7	Combine the non applicable sections into a paragraph, to consolidate text, add the paragraph " Building 72 is a container storage area, therefore, Sections 1e(5) (Tanks); I-1e(6) (Waste Piles); I-1e(7), (Surface Impoundments); I-1e(8) (Incinerators); I-1e(9) (Landfills); I-1e(10) (Land Treatment Facilities); and I-1e(11) (Miscellaneous Units) are not applicable."
319.	Section I-1e(1)	I Building 72-7	Inventory Removal. The phrase "and EPA Region V" was deleted from the statement pertaining to a notification that the MEMP would begin closure on Building 72. Notification of the OEPA is the only requirement. Also deleting this "requirement" makes this section of the closure plan consistent with the same section for Building 23.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT MIAMISBURG, OHIO

(continued)

320.	Section I-1e(2)	I Building Page 72-8	Disposal of Equipment, Structures, and Soils. A phrase stating soil samples will be compared to the noted criteria, if soil sampling becomes necessary. Soil clean up from any other operations will be reserved to CERCLA, and addressed under the Mound 2000 Process.
321.	Section I-3e(2)	I Building 72-10	Disposal or Decontamination of Equipment, Structures, and Soils Section. Last paragraph, insert the phrase "to be contaminated by Building 72 operations or activities" because any radiologically contaminated soils will be addressed under the Mound 2000 Work Plan process.
322.	Section I-1e(4)	I Building Page 72-13	Closure of Container Storage Area. Section related to Equipment and Building Decontamination. Add reference to the fact that site operating records will also be consulted to determine if spills have occurred in this building.
323.	Section I-1e(4)	I Building Page 72-13	Closure of Container Storage Area, Decontamination Verification Sampling section. The paragraph that read "Soil samples will be collected to verify that hazardous constituents have not migrated from the unit" and the first sentence in the paragraph that followed was deleted. With respect to soil samples, the fourth paragraph was modified. Site records indicate that there have been no releases from Building 72 mixed waste operations, and current operational controls will likely prohibit a release, and therefore the possibility of a release of hazardous waste or hazardous constituents to the soil. Additionally, if any releases were to occur from this unit, they would be addressed by Section G, the Contingency Plan. Soil clean up from any other operations will be reserved to CERCLA, and addressed under the Mound 2000 Process.
324.	Sections I-4 through I-9	I Building 72-14	Delete Sections I-4 to I-9, and replace them with a paragraph which states " Sections I-4 (Closure Cost Estimate), I-5 (Financial Assurance Mechanism for Closure), I-6 (Post-Closure Cost Estimate). I-7 (Financial Assurance Mechanism for Post-Closure), I-8 (Liability Requirements), 1-9 State Financial Mechanisms do not apply, because the Miamisburg Environmental Management Project is an entity of the U.S. federal government and is exempt from these requirements in accordance with OAC 3745-55-40(C).
325.	Section I Tables	Various	Insert the word "historically" in the table title of Table I-3, and renumber this table to Table I-1. Renumber former table I-1 and I-2 to I-2 and I-3 respectively.
Section I--Closure Plan Building 23			
326.	Section I	General	The photographs of Building 23 were relocated to the end of the section, and index numbers were added to the captions.
327.	Section I	All	Change the document title in the header from "U.S. DOE Mound Plant" to U.S. DOE Miamisburg Environmental Management Project." Change site name from "Mound" to "the Miamisburg Environmental Management Project." This change incorporates a name change for the project from the "Mound Plant" or "Mound Facility", to the "Miamisburg Environmental Management Project".

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE
VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
(continued)

328.	Section I	All	Change title of the Mound Part B Permit Application from ""RCRA Part B Permit Application for the U.S. Department of Energy Mound Plant, Miamisburg, Ohio-Drawings" to ""RCRA Part B Permit Application for the U.S. Department of Energy Miamisburg Environmental Management Project, Miamisburg, Ohio-Drawings." Replace references to "Mound Plant" to "Miamisburg Environmental Management Project." These changes incorporate a name change for the project.
329.	Section I	All	Where drawings have been deleted (i.e., floor plan elevations and sections) from the second volume, the associated reference in Section I has been deleted.
330.	Section I-0	I Building 72-1	General. The reference to the post-1998 acreage and the Post 1997 number of buildings on site was deleted from the building description, because it is not relevant to the closure.
331.	Section I-0	I Building 23-1	General. Replace the second paragraph with the same paragraph used in Section I for Building 72, and amend the remaining parts of this description to reflect the current mission of the project. The Second paragraph was also separated into two paragraphs. The first sentence was also rewritten. These changes are needed to reflect changes to the CERCLA Approach that have taken place since 1996.
332.	Section I-0 and I-1	Pages I-1 and I-2	Delete the references noting that the information that follows was submitted as mandated in the stated OAC citation.
333.	Section I-0	I Building 23-2	Unit Description. Replace the word "are" with "have been" when describing wastes that have been stored in Building 23. As off-site options for the treatment and disposal of mixed waste have become available recently, the inventory in Building 23 has become less static, and waste types can and do change. The description was also changed to reflect the current operational status, and to account for the fact that wastes for which there was once no capacity for treatment and disposal are now able to be treated and disposed of off site.
334.	Section I-0	I Building 23-2	Unit Description. The period of operation was added to the unit description.
335.	Section I-0	I building 72-1	General. A new paragraph was added to describe how soil contamination that may be a result of Building 23 operations versus soil contamination from other operations will be addressed was added.
336.	Section I-1	I-Building 23-2	Closure Plan. The sentence which read that this plan identifies activities that will be necessary to permanently close Building 23 at the end of its operating life was deleted from the first paragraph of this section, as it was not necessary.
337.	Section I-1	I Building 23-2	Closure Plan. With reference to maintaining closure documentation, replace the phrase "by the Waste Management Group", with "through the Long-term Stewardship Program being developed by the DOE and the Ohio EPA". This change reflects the current trend for long-term maintenance of environmentally related documentation.

338.	Section I-1a	I Building 23-2+	Closure Performance Standard. Revise section by insert the phrase "most recent version of its", when referencing OEPA's closure plan guidance.
339.	Section I-1a	I Building 23-2+	Closure Performance Standard. Clarify references to soil and groundwater clean up to state that any closure activities would be restricted to possible contamination resulting from hazardous waste storage operations in Building 23. When discussing the determination of the effectiveness of closure activities, the following criteria were removed: 1) "Sampling and analysis of potentially contaminated soils." 2) "Soil sampling may be conducted to confirm or refute this assumption" These criteria were removed, because 1) no soil contamination related to this operation has occurred in the past and 2) no future soil contamination is expected. Any soil clean up activities related to other activities in this area will be conducted under CERCLA.
340.	Section I-1a	I Building 23-2	Closure Performance Standard. Replace the paragraph that reads: "Analysis will be conducted to determine whether any of the waste in Building 72, as listed for Building 72 in the Part A application are present above their detection limit." With: "Analysis will be conducted to determine whether any of the waste in Building 72, that has historically been stored in Building 72 are present above their detection limit. The list of analytes will be based upon the Part A contained in the 1996 version of the Part B Permit, as issued in October 1996." This change is necessary, because the Part A in the April 2001 version of the Part B Permit Application is a list of waste that could potentially be managed in Building at that time; the list in the December 1996 Part B Permit application reflects the wastes that could historically have been stored in the building.
341.	Section I-1a	I Building 23-6	Closure Performance Standard. The section discussing soil clean up effectiveness was modified to state that those standards would only be employed if there were soil contamination from the storage operations in Building 23. Soil clean up from any other operations will be reserved to CERCLA, and addressed under the Mound 2000 Process.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT MIAMISBURG, OHIO

(continued)

342.	Section I-1b	I Building 23-6	Partial Closure and Final Closure Activities. Replace the paragraph that reads: "Closure of other RCRA treatment and storage units at Mound will be prior to, or conjunctively with, cessation of all mission activities." With: "With the exception of Building 23, closure of Mound's other RCRA treatment and storage units (the historic units) was completed in the 1990s. Both Building 72 and Building 23 will be closed in conjunction with the cessation of all mission activities at the MEMP." This change better reflects the status of regulated RCRA units at the Miamisburg Environmental Management Project.
343.	Section I-1c	Page I Building 23-6	Maximum Inventory. Replace the sentence "The maximum inventory stored in the unit during its active life is the current inventory of approximately 18,000 gal." with "The maximum inventory stored in the unit during its active life has been approximately 18,000 gal., when the stored materials in the building were not able to be shipped off-site for treatment and disposal. The volumes of material stored at this time is less than the maximum inventory of 18,000 gal., and the inventory in the building also changes over time as mixed wastes are shipped off-site." Reword the last sentence in this paragraph to state: "When the inventory was static and at or near its maximum, the inventory consisted of the following waste types:" Since off-site options for the treatment and disposal of mixed waste have become available recently, the inventory in Building 23 has become less static, and waste types can and do change.
344.	Section I-1c	Page I Building 23-7	Maximum Inventory, final paragraph. The discussion pertaining to uncharacterized wastes and characterization efforts on-going in Building 23 was deleted.
345.	Section I-1d	Page I Building 23-7	Schedule for Closure. A phrase stating soil samples will be compared to the noted criteria, if soil sampling becomes necessary. Soil clean up from any other operations will be reserved to CERCLA, and addressed under the Mound 2000 Process.
346.	Section I-1d	Page I Building 23-7	Schedule for Closure. Change the anticipated year of closure of the facility from 2003 to 2006.
347.	Section 1e(1)	Page I Building 23-8	Inventory Removal. The reference to FFCA was changed to STP.

348.	Section 1e(1)	Page I Building 23-8	Inventory Removal. Delete the paragraph that reads: Radioactive mixed wastes are currently stored on-site at Mound due to the lack of national capacity to treat the wastes so that they can be land disposed or recycled. Both DOE and commercial interests are making major efforts, in conjunction with negotiations under the FFCA, to develop and permit necessary treatment technologies. The technologies and the schedules for implementation of those technologies is being negotiated as part of the "Site Treatment Plan" under the FFCA. Off-site options for the treatment and disposal of mixed waste have become available recently, the inventory in Building 23 has become less static, and waste types can and do change.
349.	Section I-1e	I Building Page 23-7	Combine the non applicable sections into a paragraph, to consolidate text, add the paragraph " Building 23 is a container storage area, therefore, Sections 1e(5) (Tanks); I-1e(6) (Waste Piles); I-1e(7), (Surface Impoundments); I-1e(8) (Incinerators); I-1e(9) (Landfills); I-1e(10) (Land Treatment Facilities); and I-1e(11) (Miscellaneous Units) are not applicable."
350.	Section I-1e(2)	I Building Page 23-8	Disposal of Equipment, Structures, and Soils. A phrase stating soil samples will be compared to the noted criteria, if soil sampling becomes necessary. Soil clean up from any other operations will be reserved to CERCLA, and addressed under the Mound 2000 Process.
351.	Section 1e(4)	Page I Building 23-10	Closure of Container Storage Area. The reference to FFCA was changed to STP.
352.	Section I-1e(4)	I Building Page 23-12	Closure of Container Storage Area. Section related to Equipment and Building Decontamination. Add reference to the fact that site operating records will also be consulted to determine if spills have occurred in this building.
353.	Section 1e(4)	I Building 23-12	Closure of Container Storage Area, Waste Removal and Disposal. The reference labeling containers was changed to marking or labeling.
354.	Section I-1e(4)	I Building Page 23-12	Closure of Container Storage Area, Decontamination Verification Sampling section. The paragraph that read "Soil samples will be collected to verify that hazardous constituents have not migrated from the unit" and the first sentence in the paragraph that followed were deleted. With respect to soil samples, the fourth paragraph was modified. Site records indicate that there have been no releases from Building 23 mixed waste operations, and current operational controls will likely prohibit a release, therefore the possibility of a release of hazardous waste or hazardous constituents to the soil will occur. Additionally, if any releases were to occur form this unit, they would be addressed by Section G, the Contingency Plan. Soil clean up from any other operations will be reserved to CERCLA, and addressed under the Mound 2000 Process.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT MIAMISBURG, OHIO

(continued)

355.	Section I-3e(2)	I Building 23-10	Disposal or Decontamination of Equipment, Structures, and Soils Section. Last paragraph, insert the phrase "to be contaminated by Building 72 operations or activities", because any radiolgically contaminated soils will be addressed under the Mound 2000 Work Plan process. Delete the reference to the Table in Section C, the noted table was deleted from Section C.
356.	Section I-4 through I-9	Page I Building 23-1- and 16	Delete Sections I-4 to I-9, and replace them with a paragraph which states " Sections I-4 (Closure Cost Estimate), I-5 (Financial Assurance Mechanism for Closure), I-6 (Post-Closure Cost Estimate). I-7 (Financial Assurance Mechanism for Post-Closure), I-8 (Liability Requirements), 1-9 State Financial Mechanism do not apply, because the Miamisburg Environmental Management Project is an entity of the U.S. federal government and is exempt from these requirements in accordance with OAC 3745-55-40(C).
357.	Table I-1	I Building 23-1-10 to 12	This table was deleted because it contained standard analytical information and methods that would be mandated by Section C.
358.	Table I-2	I Building 23-17	Modify the table note that read: [a] Potential waste numbers are those RCRA waste codes that may apply if the anticipated constituent is determined to be present by quantitative analysis or the regulatory criteria are met. For some wastestreams (shop towels, plating wastewater sludges), the waste number is known to apply based on process knowledge. To read: [a] Potential waste numbers are those RCRA waste codes that may apply if the anticipated constituent is determined to be present by quantitative analysis or the regulatory criteria are met. For some wastestreams (shop towels), the waste number is known to apply based on process knowledge. This modification was made, because the site no longer produces wastewater sludge, and because the word "know" should have been "known."

SECTION J--CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS			
359.	Section J-General	All	Change the document title in the header from "U.S. DOE Mound Plant" to U.S. DOE Miamisburg Environmental Management Project." Change site name from "Mound" to "the Miamisburg Environmental Management Project." This change incorporates a name change for the project from the "Mound Plant" or "Mound Facility", to the "Miamisburg Environmental Management Project".
360.	Section J	Page J-1 to J-2	Clarify references to Environmental Restoration Program to reflect current Project organization.
361.	Section J, Appendix J-1	Pages J-5 to J-6	Appendix J-1, RSE Process. Replace the 1995 era flow chart with a collection of flow charts from the Mound 2000 Work Plan that illustrate the entire Mound 2000 Strategy. It is the Mound 2000 Strategy that addresses the CERCLA clean up process and the clean up of the SWMUs identified at the site.
362.	Section J-1	Page J-1	Solid Waste Management Units, paragraph 3. Change the number of PRSs evaluated from "over 400" to "approximately 440", to reflect the status today, with respect to Environmental Program and PRS packages evaluated.
363.	Section J-1	Page J-1	Solid Waste Management Units, paragraph 3. The third paragraph was edited, clarified, and separated into two paragraphs.
SECTION K--OTHER FEDERAL LAWS			
364.	Section K	K-1	The regulatory citation formerly included in the section heading was moved to the text body. Editorial change to the first sentence.
365.	Section K-General	K-1	Change the document title in the header from "U.S. DOE Mound Plant" to U.S. DOE Miamisburg Environmental Management Project." Change site name from "Mound" to "the Miamisburg Environmental Management Project." This change incorporates a name change for the project from the "Mound Plant" or "Mound Facility", to the "Miamisburg Environmental Management Project".
366.	Section K	K-1	Paragraph 1. Change "Mound facility" to "Miamisburg Environmental Management Project." This change incorporates a name change for the project.

CHANGE TABLE FOR MODIFICATION OF VOLUME I--RCRA PART B PERMIT APPLICATION FOR THE VOLUME I-- RCRA PART B PERMIT APPLICATION FOR THE U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT MIAMISBURG, OHIO

(continued)

SECTION L--PART B CERTIFICATION			
367.	Section L-General	L-1	Delete the regulatory citation in the section heading.
368.	Section L-General	L-1	Change the document title in the header from "U.S. DOE Mound Plant" to U.S. DOE Miamisburg Environmental Management Project." This change incorporates a name change for the project.
369.	Section L-All	L-1	Change all references to "Mound Plant" and or "Mound Facility" to "U.S. DOE Miamisburg Environmental Management Project." This change incorporates a name change for the project.
370.	Section L-All	L-1	Change references to "Babcock & Wilcox Co. of Ohio, Inc." to "BWXT of Ohio, Inc." to reflect recent reorganization of the operating company and resulting name changes and consolidations of DOE operations.
371.	Section L-1	L-1	The signature blocks were revised to incorporate the current names of the persons responsible for signing the permit application.

VOLUME II-- RCRA PART B PERMIT APPLICATION FOR THE U.S. DEPARTMENT OF ENERGY MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT MIAMISBURG, OHIO-- DRAWINGS

CHANGE NUMBER	SECTION	PAGE NUMBER	SECTION TITLE AND THE CHANGE TO THAT SECTION
372.	Volume II	1	Delete Drawing FIRM Flood Insurance Map, because this map presents duplicate information presented in Drawing FSE920959, "Mound Plant Flood Map."
373.	Volume II	6	Delete 307 201-01009 Electrical Details and Fence Details: Building 72. This drawing is not required for the Permit
374.	Volume II	7	Delete Drawing 307 201-01005 Framing Elevations and Typical Wall Section: Building 72. This drawing is not required for the Permit
375.	Volume II	8	Delete Drawing 307 201-01006 Foundation Plan and Sections: Building 72. This drawing is not required for the Permit
376.	Volume II	9	Delete Drawing 307 201-01007 Beam, Channel and Brace Details: Building 72. This drawing is not required for the Permit
377.	Volume II	10	Revise Drawing FSE861318, Sheet 1 Hazardous Waste Vehicle Route to reflect new site boundaries.
378.	Volume II	11	Revise Drawing FSD861469, Former and Current Hazardous Waste Management Units and Other Facilities to reflect new site boundaries.
379.	Volume II	12	Delete Drawing FSE880093 Off-Site Sampling Points. This drawing is not required for the Permit.
380.	Volume II	13	Delete Drawing FSD920915 Mound Plant Stormwater Retention and Discharge System, Operable Unit # - 9. This drawing is not required for the Permit.
381.	Volume II	15	Revise Drawing FSE920921, Mound Site with Surrounding Property Ownership to reflect current site boundaries.
382.	Volume II	16	Revise Drawing FSD920925, Current Hazardous Waste management Facilities to reflect current site boundaries
383.	Volume II	17	Delete Drawing FSE920926 Mound Plant Sanitary Sewer. This drawing is not required for the Permit
384.	Volume II	18	Delete Drawing FSE920927 Mound Storm Sewer. This drawing is not required for the Permit
385.	Volume II	19	Delete Drawing FSE920928 Mound Plant Fire Lines. This drawing is not required for the Permit.
386.	Volume II	20	Delete Drawing FSE920929 Existing Groundwater Monitoring Network. This drawing is not required for the Permit.
387.	Volume II	21	Delete Drawing FSE920930 Mound Plant Surface-Water Features. This drawing is not required for the Permit.

VOLUME II-- RCRA PART B PERMIT APPLICATION FOR THE
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO—DRAWINGS
(continued)

CHANGE NUMBER	SECTION	PAGE NUMBER	SECTION TITLE AND THE CHANGE TO THAT SECTION
388.	Volume II	22	Revise Drawing FSE920931, Mound Plant Topography to reflect current site boundaries.
389.	Volume II	23	Delete Drawing FSE920959, "Mound Plant Flood Map" Based upon the current site boundaries, as reconfigured after the transfer of four property parcels to the city, this drawing is not applicable.
390.	Volume II	27	Delete Drawing FSD930416-3 Building 23 RCRA Upgrade Architectural Details. This drawing is not required for the Permit
391.	Volume II	28	Delete FSD930435 Building 23 Electrical. This drawing is not required for the Permit.
392.	Volume II	29	Delete Drawing FSD930492-2 HVAC Upgrade Plan Sections & Details: Building 23. This drawing is not required for the Permit.
393.	Volume II	30	Delete Drawing FSD930492-3 HVAC Upgrade Plan Sections & Details: Building 23. This drawing is not required for the Permit.
394.	Volume II	31	Delete Drawing 302303-04001 Floor Plan Elevations and Sections: Building 23. This drawing is not required for the Permit.
395.	Volume II	32	Delete Drawing 352036-01002, Boundary Survey for Mound Facilities. This drawing is not required for this permit.

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO

USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

Part 1
Permit Application

Prepared By
BWXT of Ohio, Inc.
For the U.S. DOE
Miamisburg Environmental Management Project Office
Modification 004-April 2001 Renewal Submittal

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
US EPA ID No. OH6890008984
Ohio ID No. 05-57-0677

Modification 004-April 2001 Renewal Submittal

Prepared By
BWXT of Ohio, Inc.
For the U.S. DOE-Miamisburg Office

TABLE OF CONTENTS
U.S. DOE-MIAMISBURG ENVIRONMENTAL MANAGEMENT PROGRAM RCRA PART B PERMIT APPLICATION

PART 1--PERMIT APPLICATION

SECTION A-PART A PERMIT APPLICATION

Section A-1 Introduction A-1
Part A Permit Application A-2
Item X - Permits A-4
Item XIV Description of Hazardous Wastes A-9
Item XV - Map (Environmental Drawings) A-20
Item XVI - Facility Drawings A-20
Table A-1 Current and Inactive Hazardous Waste Management Units A-21
Item XVII - Photographs A-23
Figure A-1 Aerial View of Mound A-24
Figure A-2 Photograph of Building 72 ..... A-25
Figure A-3 Photograph of Building 23 ..... A-26

SECTION B-FACILITY DESCRIPTION

Section B-1 General Description B-1
Section B-2 Traffic Information B-3
Section B-2(1) Traffic Patterns on Site B-3
Section B-2(2) Estimated Volumes B-3
Section B-2(3) Traffic Control and Traffic Signals B-3
Section B-2(4) Access Road Surfacing and Load Bearing Capacity B-4
Section B-3 Flood Plain Standard B-4
Section B-4 Certain Waste Placement Prohibitions B-4
Section B-5 Topographic Maps B-4
Section B-5(1) Access Control B-4
Section B-5(2) Location of Specific Buildings and Facilities B-4
Section B-5(3) Wells B-5
Section B-5(4) Storm Runoff Treatment B-5
Section B-5(5) Fire Protection B-5

Figure B-1 Regional Location of Mound B-6
Figure B-2 1990 Wind Speeds and Direction B-7

SECTION C-WASTE CHARACTERISTICS

Section C-1 Chemical and Physical Analyses C-1
Section C-1a Containerized Waste C-2
Section C-2 Waste Analysis Plan C-2
Section C-2a Parameters and Rationale C-2
Section C-2b Test Methods C-5
Section C-2c Sampling Methods C-6
Section C-2c.1 Liquids C-6

Section C-2c.2 Sludges, Loosley Consolidated Sediments, and Other Solids C-6
Section C-2c.3 Rags Protective Equipment, and other Miscellaneous Wastes C-6
Section C-2c.4 Sample Preparation and Custody Procedure C-7
Section C-2d Frequency of Analyses C-8
Section C-2e Additional Requirements for Wastes Generated Off-Site C-8
Section C-3 Waste Analysis Requirements Pertaining to Land Disposal Restrictions C-8
Section C-3a Waste Characterization C-9
Section C-3a(1) Waste Characteristics: Solvent Wastes and Dioxin-Containing Wastes C-9
Section C-3a(2) Waste Characteristics: California List Wastes C-9
Section C-3a(3) Waste Characteristics: First Third Wastes with Treatment Standards C-10
Section C-3a(4) Waste Characteristics: Second Third Wastes with Treatment Standards C-10
Section C-3a(5) Waste Characteristics: Third Third Wastes with Treatment Standards C-10
Section C-3a(6) Land Disposal Restrictions Phase II-Universal Treatment Standards C-10
Section C-3a(7) Sampling and Analytical Procedures C-11
Section C-3b Notification and Certification Requirements C-11
Section C-3b(1) Retention of Generator Notices and Certifications C-11
Section C-3b(2) Notification and Certification of Wastes to be Further Managed C-11
Section C-3c Additional Requirements Pertaining to Storage of Restricted Wastes C-12
Section C-3c(1) Restricted Wastes Stored in Containers C-12
Section C-3c(2) Restricted Wastes Stored in Tanks C-12
Section C-3c(3) Storage of Liquid PCB Wastes C-12

Table C-1 Waste Constituents Parameters and Rationale C-3
Table C-2 Sampling Methods for Waste Characterization C-7
Table C-3 Required Sample Containers and Preservation C-7

Appendix C.1 LDR Documentation Package C-14
General Requirements C-15
Generator Requirements C-16
Form G1 Generator Certification that Waste Meets Treatment Standards C-17
Form G2 Generator Notification that Waste Does Not Meet Treatment Standards C-18
Form CL California List Notification C-19
Form LPO Generator Notification for Organic Lab Packs C-21
Form LPOM Generator Notification for Organometallic Lab Packs C-22
Form CW Generator/Treatment Facility Notification/Certification of Characteristic Hazardous Waste which no Longer Exhibits Characteristic C-23
Form WTS Mound Plant RCRA Hazardous Waste Treatment Standards C-24

SECTION D-PROCESS INFORMATION

Building 72 Process Information D-1
Section D-1 Containers D-1
Section D-1a Containers with Free Liquids D-2
Section D-1a(1) Descriptions of Containers D-2
Section D-1a(2) Container Management Practices D-2
Section D-1a(3) Secondary Containment System Design and Operations D-5
Section D-1a(3)(a) Requirements for Base or Liner to Control Liquids D-6
Section D-1a(3)(b) Containment System Drainage D-7
Section D-1a(3)(c) Containment System Capacity D-7
Section D-1a(3)(d) Control of Run-on D-9
Section D-1a(3)(e) Removal of Liquids from Containment System D-10

Figure D-1 Photograph of Building 72 ..... D-12

Building 23 Process Information D-13
Section D-1 Containers D-13
Section D-1a Containers with Free Liquids D-14
Section D-1a(1) Descriptions of Containers D-14
Section D-1a(2) Container Management Practices D-14
Section D-1a(3) Secondary Containment System Design and Operation D-17
Section D-1a(3)(a) Requirements for Base or Liner to Control Liquids D-17
Section D-1a(3)(b) Containment System Drainage D-17
Section D-1a(3)(c) Containment System Capacity D-18
Section D-1a(3)(d) Control of Run-on D-19
Section D-1a(3)(e) Removal of Liquids from Containment System D-19
Section D-1b Containers without Free Liquids D-20
Section D-1b(1) Test for Free Liquids D-20
Section D-1b(2) Description of Containers D-21
Section D-1b(3) Container Management Practices D-21
Section D-1b(4) Container Storage Area Drainage D-21

Figure D-1 Photograph of Building 23, Front View D-22

Appendix D.1 Floor Coating Compatibility D-23

SECTION E-GROUNDWATER MONITORING

Groundwater Monitoring E-1

SECTION F-PROCEDURES TO PREVENT HAZARDS

Section F-1 Security F-1

Section F-1a Wavier F-1
Section F-1b Security Procedures and Equipment F-1
Section F-1b(1) 24-Hour Surveillance System F-1
Section F-1b(2) Barrier F-2
Section F-1b(3) Means to Control Entry F-2
Section F-c Warning Signs F-2
Section F-2 Inspection Schedule F-3
Section F-2a General Inspection Requirements F-3
Section F-2a(1) Types of Problems F-3
Section F-2a(2) Frequency of Inspections F-3
Section F-2a(3) Remedial Actions F-3
Section F-2a(4) Inspection Logs F-4
Section F-2b Specific Process Inspection Requirements F-4
Section F-2b(1) Container Inspection F-4
Section F-3 Exemption from Documentation of Preparedness and Prevention Requirements F-6
Section F-3a Justification for Exemption Request F-6
Section F-3b Design and Operation of Facility F-6
Section F-3c Equipment Requirements F-6
Section F-3c(1) Internal Communications F-6
Section F-3c(2) External Communications F-7
Section F-3c(3) Emergency Equipment F-7
Section F-3c(4) Water for Fire Control F-7
Section F-3d Access to Communicatiosn or Alarm System F-8
Section F-3e Aisle Space Requirements F-8
Section F-3f Arrangements/Agreements with Local Authorities F-8
Section F-3f(1) Arrangements with Police, Fire Department, and Emergency Response F-8
Section F-3f(2) Primary Emergency Authority F-8
Section F-3f(3) Arrangements with Ohio EPA F-9
Section F-3f(4) Arrangements with Local Hospitals F-10
Section F-3f(5) Documenting Refusals F-10
Section F-4 Preventive Procedures, Structures, and Equipment F-10
Section F-4a Unloading Operations F-10
Section F-4b Run-off F-11
Section F-4c Water Supplies F-11
Section F-4d Equipment and Power Failure F-12
Section F-4e Personnel Protection Equipment F-12
Section F-5 Prevention of Reaction or Ignition of Ignitable, Reactive, and Incompatible Wastes F-12
Section F-5a Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Wastes F-12
Section F-5b General Precautions for Handling Ignitable or Reactive Wastes and Mixing of Incompatible Waste F-13
Section F-5c Documenting Compliance with the General Requirements for Ignitable or Reactive Wastes in Containers F-14
Section F-5d Management of Ignitable or Reactive Wastes in Containers F-14
Section F-5e Management of Incompatible Wastes in Containers F-14

Table F-1 Entry Check Points for Access to the Building 23 and Building 72 ..... F-2
Table F-2 General Inspection Schedule - Building 23 and Building 72 ..... F-4

Appendix F.1 Inspection Logs F-15
Appendix F.1.1 Building 23 Weekly Inspection Log F-16
Appendix F.1.2 Building 72 Weekly Inspection Log F-17

SECTION G-RCRA CONTINGENCY PLAN

Section G-1 General Information G-1
G-1a Building 27 Filtration System G-2
G-1b Building 72 Hazardous Waste Storage Unit G-2
G-1c Building 23 Radioactive Mixed Waste Storage Unit G-4
Section G-2 Emergency Coordinators G-4
Section G-3 Implementation G-6
Section G-4 Emergency Response Procedures G-6
G-4a Notification G-6
G-4b Identification of Hazardous Materials G-7
G-4c Assessment G-7
G-4d Control Procedures G-8
G-4d(1) Spills or Material Releases G-8
G-4d(2) Fire and/or Explosion G-9
G-4e Prevention of Recurrence or Spread of Fires, Explosion, or Releases G-10
G-4f Storage and Treatment of Released Material G-10
G-4g Incompatible Wastes G-11
G-4h Post-Emergency Equipment Maintenance G-11
G-4i Container Spills and Leakage G-11
Section G-5 Emergency Equipment G-11
G-5a Fire-Fighting Equipment G-11
G-5b Spill Control Equipment G-13
Section G-6 Coordination Agreements G-15
Section G-7 Evacuation Plan G-16
Section G-8 Required Reports G-16

Table G-1 Hazards Associated with Wastes Handled at the Miamisburg Environmental Management Project G-3
Table G-2 Incident Commander List G-5
Table G-3 Current Fire-Fighting Equipment G-12
Table G-4 Typical Examples of Emergency Equipment G-13
Table G-5 External RCRA Contingency Plan Distribution G-16

Appendix G.1 Wastes Managed by Waste Code, Waste Constituent , and Location G-18
Appendix G.2 Evacuation Plans G-23
Appendix G.3 Characterizing Released Materials G-26
Appendix G-4 Mutual Aid Agreement G-29

SECTION H-PERSONNEL TRAINING

Section H-1a Outline of the Training Program H-1
Section H-1b Training Director H-1
Section H-1c Relevance of Training to Job Position H-2
Section H-1d Emergency Response Training H-2
Section H-2 Implementation of Training Program H-3
Section H-3 Training Frequency H-3
Section H-4 Training Records and Documentation H-3
Section H-4a Job Titles H-3
Section H-4b Job Descriptions H-3
Section H-4c Training Descriptions H-3
Section H-4d Training Records H-4

Table H-1 Training Modules For The Mound Hazardous Waste Management Program H-5
Table H-2 Job Position Training Requirements H-5

Appendix H.1 Position Descriptions H-6
Appendix H.2 Representative Course Descriptions H-13

SECTION I-CLOSURE PLAN

Building 72 Clousre Plan I-1
Section I-0 General I-1
Section I-1 Closure Plan I-2
Section I-1a Closure Performance Standard I-2
Section I-1b Partial Closure and Final Closure Activities I-4
Section I-1c Maximum Waste Inventory I-4
Section I-1d Schedule for Closure I-5
Section I-1d(1) Time Allowed for Closure I-5
Section I-1d(2) Extensions for Closure Time I-5
Section I-1e Closure Procedures I-5
Section I-1e(1) Inventory Removal I-5
Section I-1e(2) Disposal or Decontamination of Equipment Structures, and Soils I-6
Section I-1e(3) Closure of Disposal Unit I-7
Section I-1e(4) Closure of Container Storage Area I-7
Section I-2 Post-Closure Plan/Contingent Post-Closure Plan I-10
Section I-3 Notices Required for Disposal Facilities I-10

Table I-1 Summary of Characteristics of Wastes that Have Been Managed at Building 72 ..... I-10
Table I-2 Estimated Building 72 Lifetime Maximum Inventory I-4
Table I-3 Analytical Test Methods, Building 72 Closure I-6

Figure I-1 Photograph of Building 72 - Exterior View I-21
Figure I-2 Closure Schedule for Building 72 ..... I-22

Building 23 Closure Plan I-23
Section I-0 General I-23

Section I-1 Closure Plan I-25
Section I-1a Closure Performance Standard I-25
Section I-1b Partial Closure and Final Closure Activities I-27
Section I-1c Maximum Waste Inventory I-27
Section I-1d Schedule for Closure I-27
Section I-1d(1) Time Allowed for Closure I-28
Section I-1d(2) Extensions for Closure Time I-28
Section I-1e Closure Procedure I-28
Section I-1e(1) Inventory Removal I-28
Section I-1e(2) Disposal or Decontamination of Equipment, Structures, and Soils I-28
Section I-1e(3) Closure of Disposal Unit I-30
Section I-1e(4) Closure of Container Storage Area I-30
Section I-2 Post-Closure Plan/Contingent Post-Closure Plan I-33
Section I-3 Notices Required for Disposal Facilities I-33

Table I-1 Analytical Test Methods for Building 23 Closure I-29
Table I-2 Summary of Wastes That Have Been Managed at Building 23 ..... I-33

Figure I-1 Photograph of Building 23 - Front View I-35
Figure I-2 Closure Schedule for Building 23 ..... I-36

SECTION J-CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS

Section J-1 Solid Waste Management Units J-1
Section J-2 Releases J-1
Section J-2a Characterize Releases J-2

Appendix J.1 Mound 2000 Strategy J-4

SECTION K-OTHER FEDERAL LAWS

Other Federal Laws K-1

SECTION L-PART B CERTIFICATION

Certifications L-1

PART 2--DRAWINGS

302 303-03001 Foundation and Framing Plans: Building 23 1

307 201-01004 Framing Plan and Partial Elevations: Building 72 2

307 201-01003 Site Plan and Site Details: Building 72 3

307 201-01002 General Notes and Estimated Quantities: Building 72 4

FSE861318 Sheet 1 Hazardous Waste Vehicle Route 5

FSD861469 Former, and Current Hazardous Waste Units and Other Facilities 6

FSD920920 Building 72 Bldg. and Drum Storage Layout 7

FSE920921 Mound Site with Surrounding Property Ownership 8

FSD920925 Current Hazardous Waste Management Facilities 9

FSE920931 Mound Plant Topography 10

FSD920962 Floor Plan Building 23 Storage Array 11

FSE920963 Topographic Map of Mound Showing Water and Land Uses Around Site 12

FSD930416-2 Bldg. 23 RCRA Upgrade Floor Plan Modification 13

FSD930416-3 Bldg. 23 RCRA Upgrade Architectural Details 14

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

SECTION A

PART A PERMIT APPLICATION

Prepared By
BWXT of Ohio, Inc.
For the U.S. DOE-Miamisburg Environmental Management Project Office
Modification 004-April 2001 Renewal Submittal

Department of Energy

Ohio Field Office
Miamisburg Closure Project
P.O. Box 66
Miamisburg, Ohio 45343-0066

MB-0120-03

January 21, 2003

RECEIVED
FEB 3 2003
Technical Support and Permits Section
Waste Management Branch
Waste, Pesticides and Toxics Division
U.S. EPA - Region 5

U. S. EPA, Region V
Attn.: Ms. Harriet Croke
RCRA Permitting Branch, DRP-8J
77W. Jackson Boulevard
Chicago, Illinois 60604

Dear Ms. Croke:

The United States Department of Energy (U.S.DOE) Mound facility, U.S. Environmental Protection Agency Number OH6890008984, Ohio Environmental Protection Agency (Ohio EPA) Number 05-57-0677 received a RCRA hazardous waste permit for the storage of hazardous waste in containers in two existing hazardous waste storage buildings from the Ohio Hazardous Waste Facility Board on October 18, 1996. The Miamisburg Closure Project (formerly the Mound Facility) is located in Miamisburg, OH southwest of the City of Dayton. During the process leading to receipt of that permit, you were identified as an interested party, or a stakeholder.

Recently, U.S.DOE has notified the Ohio EPA of proposed modifications to reflect the change in contractor, the co-operator of Mound, resulting from awarding of a new contract. The contractor change causes revisions to Section A, Section B, Section G, and Section L included in the Part B Permit Application where the contractor name is mentioned.

The modifications proposed by DOE, are Class 3 Modifications, requiring a public notice be published in a local newspaper, and that a public hearing be scheduled. A public meeting concerning the proposed permit modification is scheduled for February 20, 2003, in GH Building, located at the Mound facility. As required by the Ohio Administrative Code, stakeholders must be notified of all modifications. The U.S.DOE is opening a 60-day comment period, January 24, 2003, and ending March 25, 2003.

A copy of the revised pages for the impacted sections of the Part B Permit Application is attached for your information.

A copy of the submittal as prepared for the Ohio EPA director is maintained at the MCP's CERCLA Reading Room, located at the Miamisburg Senior Adult Center, 305 Central Avenue, in Miamisburg, OH, and at the Dayton & Montgomery Public Library, Miamisburg Branch, 35 South Fifth St., Miamisburg, Ohio. The reading room is open from 12 pm to 8 pm on Monday and Wednesday, from 8:30 am to 1 pm on Tuesdays, from 8:30 am to 1 pm on Thursdays, and from 11:00 am to 4:00 pm on Fridays.

If you require additional information from U.S. DOE, please contact Jane Greenwalt at (937) 865-3116. If you require additional information from the Ohio EPA, please contact Mr. Harold O'Connell at (937) 285-6078. The permittee's compliance history during the life of the permit being modified is available from the agency contact person.

Sincerely,

Richard B. Provencher

Richard B. Provencher
Director

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG CLOSURE PROJECT
MIAMISBURG, OHIO
USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

REPLACEMENT PAGES

SECTION A

for Revision 04, January 2003
Modification 004

SECTION A

PART A APPLICATION

A-1 INTRODUCTION

The Miamisburg Closure Project, located in Miamisburg, Ohio, is a former U.S. Department of Energy (DOE) nuclear and explosives processing facility that has been closed and is now, with the exception of a testing program in support of DOE's heat source programs, focused on site and building cleanup. Associated figures and photographs are also included in this section. Drawings are included as an attachment in Part 2 of this Permit Application.

The Miamisburg Closure Project is owned by the DOE and operated by CH2M Hill, Inc, under Contract No. DE-AC24-03OH-20152.

MAIL THE COMPLETED FORM TO: Ohio EPA, DHWM, P.O. Box 1049, Columbus, OH 43216-1049	Ohio Environmental Protection Agency **RCRA SUBTITLE C SITE IDENTIFICATION**	For Ohio EPA Use Only

1. Reason for Submittal	**Reason for Submittal:** ☐ To provide initial notification (to obtain an EPA ID Number for hazardous waste, universal waste, or used oil activities). ☐ To provide subsequent notification (to update site identification information). ☐ As a component of a First RCRA Hazardous Waste Part A Permit Application. ☒ As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment #_____) ☐ As a component of the Hazardous Waste Report for the year _____.
2. Site EPA ID No.	**EPA ID Number:** OH 6890008984
3. Site Name	**Name:** U.S. DEPARTMENT OF ENERGY - MOUND
4. Site Location Information	**Street Address:** 1 MOUND ROAD P.O. 66 **City, Town, or Village:** MIAMISBURG **State:** OH **County Name:** MONTGOMERY **Zip Code:** 45342
5. Site Land Type	**Site Land Type:** ☐ Private ☐ County ☐ District ☒ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other
6. North American Industry Class. System (NAICS) Code(s) for the Site	**A.** 562910 **B.** 235940 **C.** **D.**
7. Site Contact Person:	**First Name:** ROBERT **MI:** S **Last Name:** ROTHMAN **Phone Number:** 937-865-3823 **Phone Number Extension:** N/A **E-Mail Address:** **Fax Number:** **Fax Number Extension:** **Street or P.O. Box:** 1 MOUND ROAD P.O. BOX 3030 **City, Town or Village:** MIAMISBURG **State:** OHIO **Country:** U.S. **Zip Code:** 45343
8. Legal Owner and Operator of the Site List Additional Owners and/or Operators in the Comment Section or on another copy of this form page.	**A. Name of Site's Legal Owner:** U.S. DEPARTMENT OF ENERGY **Date Became Owner (mm/dd/yyyy):** 07/01/1948 **Owner Type:** ☐ Private ☐ County ☐ District ☒ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other **Street or P.O. Box:** 1 MOUND ROAD **City, Town, or Village:** MIAMISBURG **State:** OHIO **Country:** U.S. **Zip Code:** 45342 **B. Name of Site's Operator:** CH2MHILL - MOUND, INC. **Date Became Operator (mm/dd/yyyy):** 01/01/2003 **Operator Type:** ☐ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other **Street or P.O. Box:** 1 MOUND ROAD **City, Town, or Village:** MIAMISBURG **State:** OHIO **Country:** U.S. **Zip Code:** 45342

9. Type of Regulated Waste Activity (Mark "X" in the appropriate boxes.)

A. Hazardous Waste Activities

1. **Generator of Hazardous Waste**
(choose only one of the following three categories)

☑ a. **Large Quantity Generator (LQG):**
Greater than 1,000 kg/mo (2,200 lbs.) of non-acute hazardous waste; or

☐ b. **Small Quantity Generator (SQG)**
100 to 1,000 kg/mo (220-2,200 lbs.) of non-acute hazardous waste; or

☐ c. **Conditionally Exempt Small Quantity Generator (CESQG):**
Less than 100 kg/mo of non-acute hazardous waste

In addition, indicate other generator activities (check all that apply)

☐ d. United States Importer of Hazardous Waste
☐ e. Mixed Waste (hazardous and radioactive) Generator

2. **Hazardous Waste Report Generator Status**
(choose one if a Reason for Submittal is the Hazardous Waste Report)

☐ a. **Large Quantity Generator (LQG):**
Greater than 1,000 kg/mo (2,200 lbs.) of non-acute hazardous waste was generated at the site in any one month. or

☐ b. **Small Quantity Generator (SQG)**
In one or more months the site generated greater than 100kg (220 lbs) but in no month did it generate more than 1,000 kg/mo (220-2,200 lbs) of non-acute hazardous waste, or

☐ c. **Conditionally Exempt Small Quantity Generator (CESQG):**
The site generated no more than 100 kg (220 lbs) of non-acute hazardous waste in any one month.

☐ d. **Non-Generator**
The site did not generate any hazardous waste during the calendar year.

For Items 3 through 7, check all that apply:

☐ 3. **Transporter of Hazardous Waste**

☑ 4. **Treater, Storer or Disposer of Hazardous Waste (at your site)** Note: A hazardous waste permit is required for this activity.

☐ 5. **Recycler of Hazardous Waste (at your site)** Note: A hazardous waste permit may be required for this activity.

6. **Exempt Boiler and/or Industrial Furnace**

☐ a. Small Quantity On-site Burner Exemption
☐ b. Smelting, Melting, Refining Furnace Exemption

☐ 7. **Underground Injection Control**

B. Universal Waste Activities

1. **Large Quantity Handler of Universal Waste (accumulate 5,000 kg or more at any time). Indicate types of universal waste generated and/or accumulated at your site: (check all boxes that apply):**

	Generated	Accumulated
1. Batteries	☐	☐
2. Pesticides	☐	☐
3. Thermostats	☐	☐
4. Lamps	☐	☐
5. Other (specify) _____	☐	☐
6. Other (specify) _____	☐	☐
7. Other (specify) _____	☐	☐

☐ 2. **Destination Facility for Universal Waste**
Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities

1. **Used Oil Transporter**
Indicate Type(s) of Activity(ies)
☐ a. Transporter
☐ b. Transfer Facility

2. **Used Oil Processor and/or Re-refiner**
Indicate Type(s) of Activity(ies)
☐ a. Processor
☐ b. Re-refiner

☐ 3. **Off-Specification Used Oil Burner**

4. **Used Oil Fuel Marketer -**
Indicate Type(s) of Activity(ies)
☐ a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
☐ b. Marketer Who First Claims the Used Oil Meets the Specifications

10. Waste Codes for Federally Regulated Hazardous Wastes. Please list the codes for the federally regulated hazardous waste handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more space is needed.

	Please See Attached List					

11. Comments

MCP is located at latitude 39° 37' 55" North and Longitude 84° 17' 15" West

12. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of owner, operator, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm-dd-yyyy)
	Richard Provencher	1/21/03
	Director, DOE-MCP	
	John Fulton	01/21/2003
	Site Manager	
	CH2M Hill Mound, Inc.	

United States Environmental Protection Agency

HAZARDOUS WASTE PERMIT INFORMATION FORM

1. Facility Permit Contact (See instructions on page 35)	First Name:	MI:	Last Name:
	Phone Number:		Phone Number Extension:
2. Facility Permit Contact Mailing Address (See instructions on page 35)	Street or P.O. Box: Same as Site Contact		
	City, Town, or Village:		
	State:		
	Country:		Zip Code:
3. Legal Owner Mailing Address and Telephone Number (See instructions on page 36)	Street or P.O. Box: P.O Box 66		
	City, Town, or Village: Miamisburg		
	State: Ohio		
	Country: U.S.	Zip Code: 45343	Phone Number 937-865-3252
4. Operator Mailing Address and Telephone Number (See instructions on page 36)	Street or P.O. Box: P.O. Box 3030		
	City, Town, or Village: Miamisburg		
	State: Ohio		
	Country: U.S.	Zip Code: 45343	Phone Number
5. Facility Existence Date (See instructions on page 36)	Facility Existence Date (mm/dd/yyyy): ~~07/01/19~~ FEA 07/01/48		

6. Other Environmental Permits (See instructions on page 36)

A. Permit Type (Enter code)	B. Permit Number	C. Description
		See Attachment 1

7. Nature of Business (Provide a brief description; see instructions on page 37)

The MCP is an environmental restoration site involved in site and facility cleanup under CERCLA. The environmental remediation is in support of transitioning the facility to an economic development site.

ATTACHMENT 1, QUESTION 6.0. OTHER ENVIRONMENTAL PERMITS

A. Permit Type	B. Permit Number	C. Description
Water	OH0009857	NPDES permit
Water	1IN90010*AD	OU1 ATD
RCRA	OH6890008984	RCRA Part A and B permit for hazardous waste storage
Air	OH57091196B011	Generator 1 (R/SW)
Air	OH57091196B012	Generator 2 (38)
Air	OH57091196B010	Generator 3 (P-in)
Air	OH57091196B009	Generator 3A
Air	OH57091196B017	Generator 11 (T-W)
Air	OH57091196B013	Generator 6 (58)
Air	OH57091196B014	Generator 8 (57)
Air	OH57091196B015	Generator 9 (100)
Air	OH57091196B016	Generator 10 (T-E)
Air	OH57091196B008	HH/WD DG
Air	OH57091196T005	Fuel Oil tank
Air	OH57091196P012	SW2080001 Hood
Air	OH57091196P014	SW2190002
Air	OH57091196P015	SW2190002 Hood
Air	OH57091196P030	HEFS Stack
Air	OH57091196P008	Building 48
Air	POH57091196B001	Boiler 1
Air	POH57091196B006	Boiler 2
Air	08-5709-1196	Crusher

8. Process Codes and Design Capacities (See instructions on page 37)

A. PROCESS CODE - *Enter the code from the list of process codes below that best describes each process to be used at the facility. Thirteen lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), describe the process (including its design capacity) in the space provided in Item 9.*

B. PROCESS DESIGN CAPACITY- *For each code entered in column A, enter the capacity of the process.*

1. AMOUNT - *Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.*

2. UNIT OF MEASURE - *For each amount entered in column B(1), enter the code in column B(2) from the list of unit of measure codes below that describes the unit of measure used. Select only from the units of measure in this list.*

C. PROCESS TOTAL NUMBER OF UNITS - *Enter the total number of units for each corresponding process code.*

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	Disposal:	
D79	Underground Injection Well Disposal	Gallons; Liters; Gallons Per Day; or Liters Per Day
D80	Landfill	Acre-feet; Hectare-meter; Acres; Cubic Meters; Hectares; Cubic Yards
D81	Land Treatment	Acres or Hectares
D82	Ocean Disposal	Gallons Per Day or Liters Per Day
D83	Surface Impoundment Disposal	Gallons; Liters; Cubic Meters; or Cubic Yards
D99	Other Disposal	Any Unit of Measure Listed Below
	Storage:	
S01	Container	Gallons; Liters; Cubic Meters; or Cubic Yards
S02	Tank Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S03	Waste Pile	Cubic Yards or Cubic Meters
S04	Surface Impoundment Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S05	Drip Pad	Gallons; Liters; Acres; Cubic Meters; Hectares; or Cubic Yards
S06	Containment Building Storage	Cubic Yards or Cubic Meters
S99	Other Storage	Any Unit of Measure Listed Below
	Treatment:	
T01	Tank Treatment	Gallons Per Day; Liters Per Day; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; or Metric Tons Per Hour
T02	Surface Impoundment Treatment	Gallons Per Day; Liters Per Day; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Pounds Per Hour; Short Tons per Day; Kilograms Per Hour; Metric Tons Per Day; or Metric Tons Per Hour
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Gallons Per Day; Liters Per Hour; or Million Btu Per Hour
T80	Boiler	Gallons; Liters; Gallons Per Hour; Liters Per Hour; Btu Per Hour; or Million Btu Per Hour
T81	Cement Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour
T82	Lime Kiln	
T83	Aggregate Kiln	
T84	Phosphate Kiln	
T85	Coke Oven	
T86	Blast Furnace	
T87	Smelting, Melting, or Refining Furnace	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Gallons Per Hour; Liters Per Hour; or Million Btu Per Hour
T88	Titanium Dioxide Chloride Oxidation Reactor	
T89	Methane Reforming Furnace	
T90	Pulping Liquor Recovery Furnace	
T91	Combustion Device Used In The Recovery Of Sulfur Values From Spent Sulfuric Acid	
T92	Halogen Acid Furnaces Other Industrial Furnaces Listed In 40 CFR §260.10	
T93		
T94	Containment Building - Treatment	Cubic Yards; Cubic Meters; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour
	Miscellaneous (Subpart X)	
X01	Open Burning/Open Detonation	Any Unit of Measure Listed Below
X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; Kilograms Per Hour; Gallons Per Hour; Liters Per Hour; or Gallons Per Day
X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; or Million Btu Per Hour
X04	Geologic Repository	Cubic Yards; Cubic Meters; Acre-feet; Hectare-meter; Gallons; or Liters
X99	Other Subpart X	Any Unit of Measure Listed Below

UNIT OF MEASURE	UNIT OF MEASURE CODE
Gallons	G
Gallons Per Hour	E
Gallons Per Day	U
Liters	L
Liters Per Hour	H
Liters Per Day	V

UNIT OF MEASURE	UNIT OF MEASURE CODE
Short Tons Per Hour	D
Metric Tons Per Hour	W
Short Tons Per Day	N
Metric Tons Per Day	S
Pounds Per Hour	J
Kilograms Per Hour	R
Million Btu Per Hour	X

UNIT OF MEASURE	UNIT OF MEASURE CODE
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
Btu Per Hour	I

. Process Codes and Design Capacities (*Continued*)

EXAMPLE FOR COMPLETING Item 8 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number	A. Process Code (From list above)	B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	(2) Unit of Measure (Enter code)	C. Process Total Number of Units	For Official Use Only
X 1	S 0 2	5 3 3 . 7 8 8	G	0 0 1	
1	S 0 1	13285.00	G	0 0 1	
2	S 0 1	25000.00	G	0 0 1	
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					

***NOTE:** If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in Item 9.*

Other Processes (*See instructions on page 37 and follow instructions from Item 8 for D99, S99, T04 and X99 process codes*)

Line Number (Enter #s in sequence with Item 8)	A. Process Code (From list above)	B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	(2) Unit of Measure (Enter code)	C. Process Total Number of Units	D. Description of Process
X 1	T 0 4				In-situ Vitrification
1					
2					
3					
4					

10. Description of Hazardous Wastes (See instructions on page 37)

A. EPA HAZARDOUS WASTE NUMBER - *Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR Part 261, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.*

B. ESTIMATED ANNUAL QUANTITY - *For each listed waste entered in column A, estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A, estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.*

C. UNIT OF MEASURE - *For each quantity entered in column B, enter the unit of measure code. Units of measure which must be used and the appropriate codes are:*

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure, taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate the waste will be stored, treated, and/or disposed at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. *Enter the first two as described above.*
2. *Enter "000" in the extreme right box of Item 10.D(1).*
3. *Use additional sheet, enter line number from previous sheet, and enter additional code(s) in Item 10.E.*

2. PROCESS DESCRIPTION: *If a code is not listed for a process that will be used, describe the process in Item 10.D(2) or in Item 10.E(2).*

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. *Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.*
2. *In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.*
3. *Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.*

EXAMPLE FOR COMPLETING Item 10 (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operations. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES (1) PROCESS CODES (Enter code)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
X 1	K 0 5 4	900	P	T	0	3	D	8	0				
X 2	D 0 0 2	400	P	T	0	3	D	8	0				
X 3	D 0 0 1	100	P	T	0	3	D	8	0				
X 4	D 0 0 2												Included With Above

Item 10 Description of Hazardous Wastes
Attachment 2

The on-site generated clean up related processes at the Miamisburg Environmental Management Project which produce the wastes that are covered by this Permit and that are stored in Building 23 or in Building 72 come for the following CERCLA cleanup support related generator types:

- General plant maintenance.
  - Electrical.
  - Plumbing.
  - Heating, ventilation, and air conditioning (HVAC).
  - Grounds care.
  - Janitorial.
- Vehicle maintenance.
- Photographic operations.
- Environmental monitoring.
- Spill response/release operations.

In addition to these waste types, the Miamisburg Environmental Management Project, during the clean up of the site will generate wastes that will resemble wastes that traditionally were generated at the facility. Because these clean up wastes can resemble RCRA wastes, and because those wastes can contain RCRA hazardous waste constituents that are regulated under CERCLA, the site will continue to receive for storage the CERCLA response action generated wastes in the RCRA permitted storage areas. The use of the permitted storage buildings for the storage of CERCLA generated wastes takes advantage of the protectiveness afforded by the permitted facility standards, and allows the site to continue to operate in a manner that is protective both of human health and the environment.

Wastes generated under CERCLA are also often one-time in nature with respect to their point-of-generation and type, because the particular piece of equipment or the particular area from which it was generated will be clean up or disposed of. Therefore the subject equipment or the location being cleaned up will not be a continuing source of wastes nor will it be a continuing point-of-generation.

CERCLA waste types received for storage in either Building 23 or in Building 72 will be stored in those buildings only if the appropriate waste code is included as a waste-type in this permit as a waste-type that can be stored in the storage building receiving the waste. If the required waste type is not included in the permit, the permit will be modified before receiving that waste. Any CERCLA generated clean up wastes (i.e., environmental media, building clean out or cleanup wastes) that are sent to either Building 23 or Building 72 will be stored in those locations in compliance with this permit, pending the disposition of those response action generated wastes for off-site disposal.

Line No.	EPA Hazardous Waste No.
1.	D001
2.	D002
3.	D003
4.	D004
5.	D005
6.	D006
7.	D007
8.	D008
9.	D009
10.	D010
11.	D011
12.	D012
13.	D013
14.	D014
15.	D016
16.	D018
17.	D019
18.	D021
19.	D022
20.	D023
21.	D024
22.	D025
23.	D026
24.	D027
25.	D028
26.	D029
27.	D030
28.	D031
29.	D032
30.	D033
31.	D034
32.	D035
33.	D036
34.	D037
35.	D038
36.	D039
37.	D040
38.	D041

Line No.	EPA Hazardous Waste No.
39.	D042
40.	D043
41.	F001
42.	F002
43.	F003
44.	F004
45.	F005
46.	F007
47.	F009
48.	F027
49.	P002
50.	P003
51.	P004
52.	P005
53.	P008
54.	P009
55.	P010
56.	P011
57.	P012
58.	P013
59.	P015
60.	P017
61.	P021
62.	P022
63.	P023
64.	P024
65.	P026
66.	P028
67.	P029
68.	P030
69.	P031
70.	P044
71.	P047
72.	P048
73.	P064
74.	P068
75.	P072
76.	P076

Line No.	EPA Hazardous Waste No.
77.	P077
78.	P078
79.	P087
80.	P093
81.	P098
82.	P101
83.	P104
84.	P105
85.	P106
86.	P110
87.	P113
88.	P119
89.	P120
90.	U001
91.	U002
92.	U003
93.	U004
94.	U008
95.	U009
96.	U012
97.	U018
98.	U019
99.	U022
100.	U031
100.	U032
101.	U037
102.	U041
103.	U043
104.	U044
105.	U045
106.	U052
107.	U056
108.	U057
109.	U063
110.	U072
111.	U075
112.	U077
113.	U080

Line No.	EPA Hazardous Waste No.
114.	U081
115.	U102
116.	U108
117.	U110
118.	U112
119.	U117
120.	U122
121.	U127
122.	U129
123.	U131
124.	U133
125.	U134
126.	U140
127.	U151
128.	U154
129.	U159
130.	U160
131.	U161
132.	U165
133.	U169
134.	U188
135.	U196
136.	U201
137.	U210
138.	U211
139.	U213
140.	U215
141.	U216
142.	U217
143.	U219
144.	U220
145.	U223
146.	U226
147.	U227
148.	U228
149.	U239
150.	U240
151.	U359

11. Map (See instructions on page 38)

Attach to this application a topographic map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

12. Facility Drawing (See instructions on page 39)

All existing facilities must include a scale drawing of the facility (see instructions for more detail).

13. Photographs (See instructions on page 39)

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

14. Comments (See instructions on page 39)

TABLE A-1--CURRENT AND INACTIVE HAZARDOUS WASTE MANAGEMENT UNITS

CURRENT AND PAST STORAGE/ TREATMENT AREA	FUNCTION	APPROXIMATE UNIT DIMENSIONS	CURRENT STATUS
Building 72 Hazardous Waste Storage Unit	Containerized hazardous waste storage area.	40 ft x 60 ft	Storage Permit being renewed
Building 23 Radioactive Mixed Waste Storage Unit	Containerized radioactive mixed waste storage area.	30 ft x 40 ft	Storage Permit being renewed
Magazine 53 Energetic Materials Storage Unit (closed)	Containerized explosive waste storage magazine.	10 ft x 15-2 ft; 10 ft high	Closed under a RCRA Closure Plan, Certification of closure has been completed and certified. The underlying property will be transferred to the MMCIC. At the time of transfer, deed restrictions related to possible residual non-RCRA radiologic contamination will be imposed as part of the CERCLA clean up process and the transfer that follows..
Pyroshed Energetic Materials Waste Storage Unit (closed)	Containerized pyrotechnic waste storage area.	9 ft x 15 ft; 7 ft high	Closed under a RCRA Closure Plan, Certification of closure has been completed and certified. The underlying property will be transferred to the MMCIC. At the time of transfer, deed restrictions related to possible residual non-RCRA radiologic contamination will be imposed as part of the CERCLA clean up process and the transfer that follows.
Retort Thermal Treatment Unit (closed)	Retort for detonating energetic materials waste.	3 ft diameter, 10 ft long	Closed under a RCRA Closure Plan, Certification of closure has been completed and certified. The underlying property will be transferred to the MMCIC. At the time of transfer, deed restrictions related to possible residual non-RCRA radiologic contamination will be imposed as part of the CERCLA clean up process and the transfer that follows.
Open Burn Energetic Materials Unit (closed)	Location for open burning of nonliquid energetic materials waste.	Located in Burn Area, 10-ft x 10-ft x 10-ft structure	Closed under a RCRA Closure Plan, Certification of closure has been completed and certified. The underlying property will be transferred to the MMCIC. At the time of transfer, deed restrictions related to possible residual non-RCRA radiologic contamination will be imposed as part of the CERCLA clean up process and the transfer that follows.
Building 27 Filtration System (closed)	Treatment of solvent wastes for removal of energetic materials.	20 gpm-rated bladder pump and filter system	Closed under a RCRA Closure Plan, Certification filed with the Ohio EPA. The underlying property will be transferred to the MMCIC. At the time of transfer, deed restrictions related to possible residual non-RCRA radiologic contamination will be imposed as part of the CERCLA clean up process and the transfer that follows.

A-5 Item XVII X Photographs

The following photographs of current hazardous and radioactive mixed waste management units and an arial veiw of the Miamisburg Environmental Management Project are provided:

- Figure A-1 Aerial view of the Miamisburg Environmental Management Project.
- Figure A-2 Building 72 Hazardous Waste Storage Unit.
- Figure A-3 Building 23 Radioactive Mixed Waste Storage Unit.

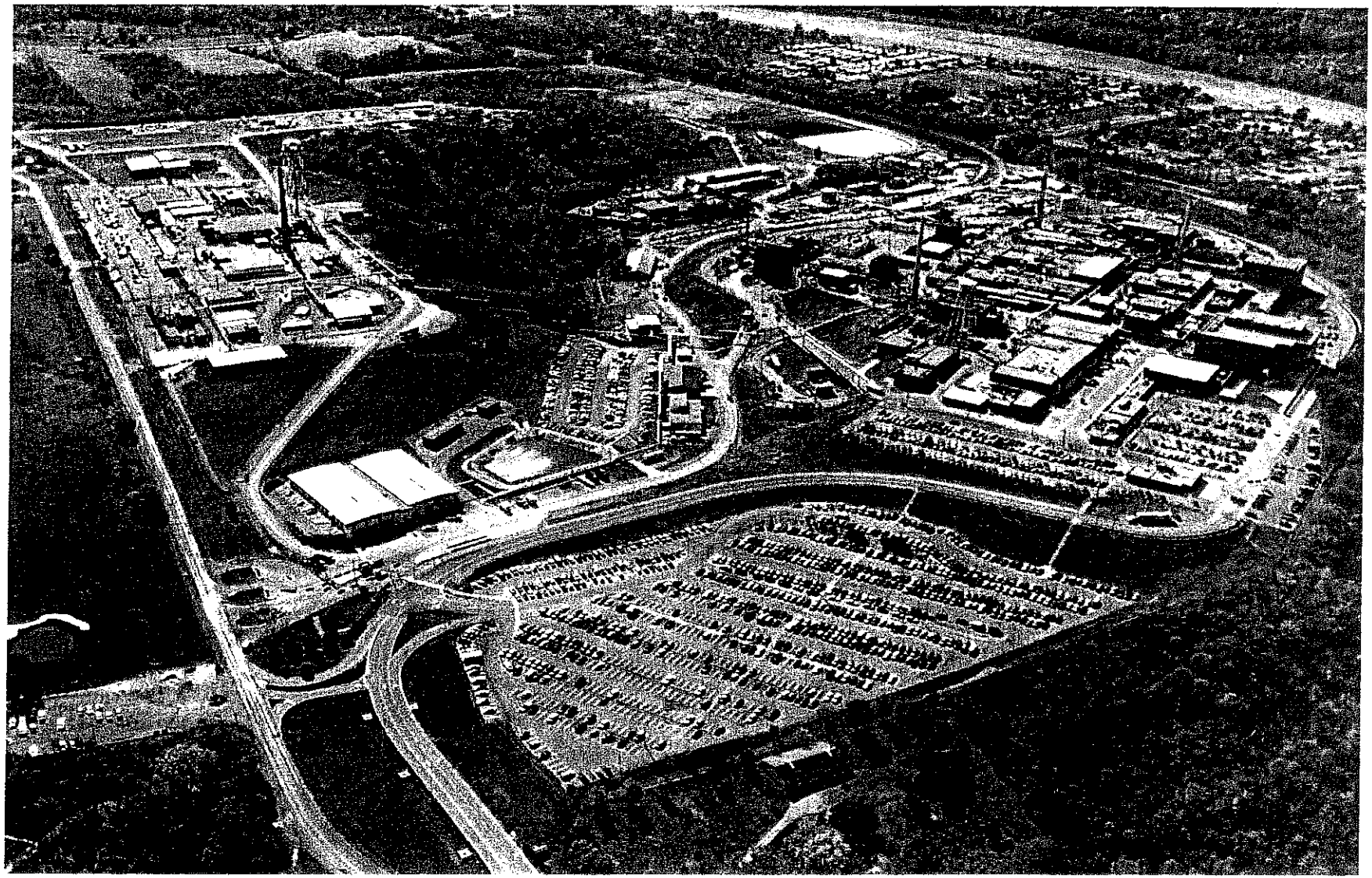


FIGURE A-1 AERIAL VIEW OF THE MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT

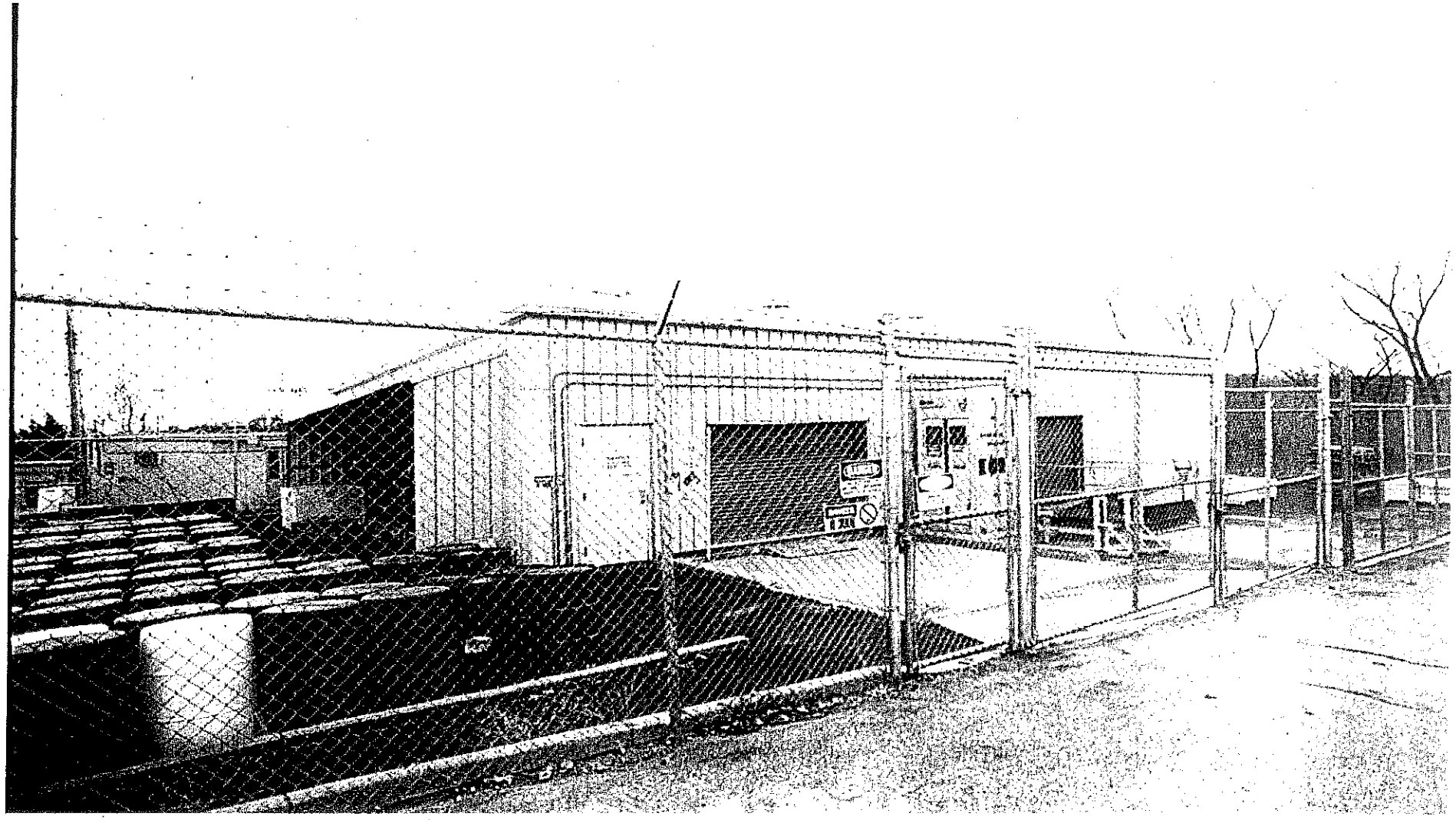


FIGURE A-2 BUILDING 72 HAZARDOUS WASTE STORAGE UNIT

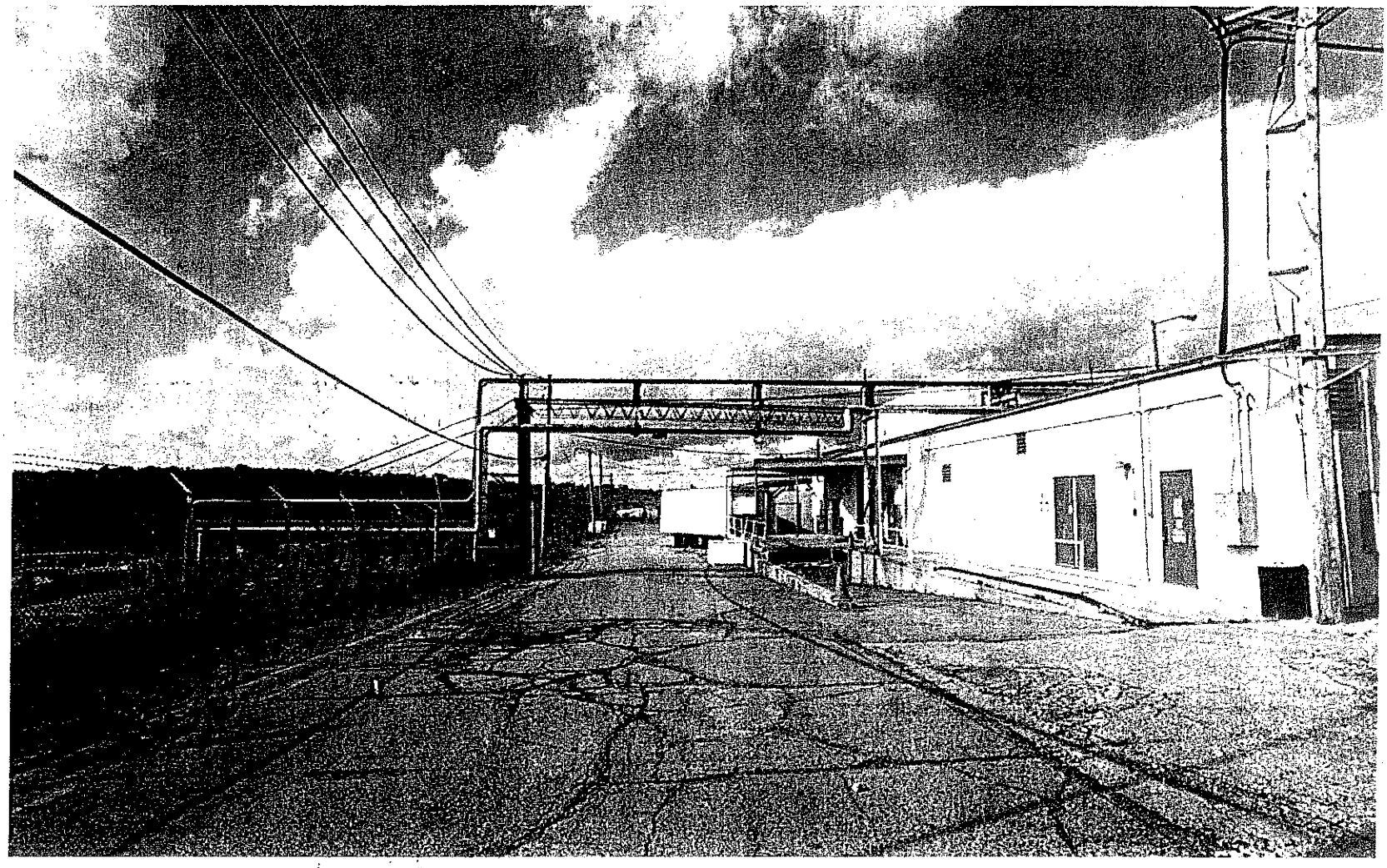


FIGURE A-3 BUILDING 23 RADIOACTIVE MIXED WASTE STORAGE UNIT

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG CLOSURE PROJECT
MIAMISBURG, OHIO
USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

REPLACEMENT PAGES

SECTION B

for Revision 04, January 2003
Modification 004

SECTION B
FACILITY DESCRIPTION

B-1 General Description [OAC 3745-50-44(A)(1)]

Established in 1946 as Mound Laboratory, the Miamisburg Closure Project, as it is called today, is operated under Contract No. DE-AC24-03OH-20152, by CH2MHill Mound, Inc. The U.S. Department of Energy (DOE) is the site owner. The contract is administered by the DOE's Miamisburg Closure Project Office (MCP), with offices located at the project site. The Ohio Field Office (OH) is the responsible DOE Field Office.

The Miamisburg Closure Project is located in southern Montgomery County in southwestern Ohio, at the southern boundary of the city of Miamisburg, 2000 feet due east of the Great Miami River. The site is 12 miles south-southwest of Dayton, Ohio, and 31 miles north-northeast of Cincinnati, Ohio. The regional location of the site is shown in Figure B-1.

The Mound facility, at its height of operation, included 306 acres and as many as 125 buildings. As of April 2001, the date of this submittal, the DOE owns 179 acres of the site, and the Miamisburg Mound Community Improvement Corporation (MMCIC) owns 127 acres.

The site plan is shown in Drawing FSD861469 and is included as an attachment in Part 2 of this Permit Application.

The Miamisburg Closure Project, or Mound, as it is often called, was formerly an integrated research, development, and production facility, performing work in support of DOE weapons and energy programs, with emphasis on explosives and nuclear technology. The weapons program missions included process development, production engineering, and manufacturing and surveillance of detonators, explosive timers, explosive actuated transducers, explosive pellets, nuclear components, and specific testing equipment. The energy program related activities included the research, development, and fabrication of radioisotope-fueled heat sources for space and terrestrial applications.

With the DOE consolidation of non-nuclear manufacturing, all former weapons programs have ceased operations. The current mission assignment for Mound consists of two elements. The first is the clean up of contaminated buildings and land and transitioning of the facility into commercial economic development. The second element of the Project's current mission is the continuation of the assembly-related operations in support of the Power Systems Technology (PST) Program. Eventually, PST Operations will be separated out from the clean up activities, the facilities isolated from the site, and the program administered under the authority of another DOE Office.

Thus, the only remaining vestige of Mound's production era is the PST Program. The PST program is a low environmental-impact assembly program that does not generate RCRA regulated wastes.

The MCP is directed at the accelerated clean up of the site and the transitioning of the site to the Mound Miamisburg Community Improvement Corporation (MMCIC) for commercial use. This plan is entirely focused on site clean up under a tri-party agreement with the Ohio EPA, the U.S. EPA, and the DOE, initiated under CERCLA Section 120. The Mound Exit Plan is addressing the clean up of the facility on a "building-by-building" and/or an area-by-area basis, with the ultimate goal of transferring the site to the local community. The regulatory mechanism used to implement this clean up is the *Mound 2000 Process*, which uses the CERCLA removal action framework to develop plans which address the physical clean up of the site. With the implementation of the new operating contract and the Mound Exit Plan in 1997, the Miamisburg Environmental Management Project totally completed the transition to an environmental restoration site.

With this shift to a CERCLA clean up site the facility has also changed perspective as a waste generator, moving from the more traditional production-type waste streams to the generation of CERCLA wastes associated with clean up activities.

RCRA HAZARDOUS WASTE CONTINGENCY PLAN

for the

U.S. DEPARTMENT OF ENERGY MIAMISBURG CLOSURE PROJECT MIAMISBURG, OHIO

USEPA ID No. OH6890008984

Ohio ID No. 05-57-0677

REPLACEMENT PAGES

SECTION G

Version 04, January 2003

Modification 004

SECTION G
RCRA CONTINGENCY PLAN

G-1 General Information (OAC 3745-65-52)

The U.S. Department of Energy (DOE) Miamisburg Closure Project is located in Miamisburg, Ohio, 12 miles south-southwest of Dayton, Ohio. The Miamisburg Environmental Management Project is owned by DOE and is operated by CH2MHill Mound, Inc. under Contract No. DE-AC24-03OH-20152. This contract is administered by the Miamisburg Closure Project office of DOE, which has offices located at the site. The U.S. DOE Ohio (DOE/OH) Field Office is the responsible field office for The Miamisburg Closure Project.

Drawing FSD861469 included as an attachment in Part 2 of this Permit Application., identifies three areas designated as hazardous waste management units that are addressed by this plan. There were previously nine units, however, six of those units have been formally closed. The three specified areas addressed by this plan include the following:

- Building 27 Filtration System (RCRA Clean Closed, Certification Pending)
- Building 72 Hazardous Waste Storage Unit (Active)
- Building 23 Radioactive Mixed Waste Storage Unit (Active)

The Mound Plant or Facility as it has been called, was formerly an integrated research, development, and production facility performing work in support of DOE weapons and energy programs, with emphasis on explosives and nuclear technology. The weapons program missions included process development, production engineering, manufacturing and surveillance of detonators, explosive timers, explosive actuated transducers, explosive pellets, nuclear components, and specific testing equipment. Energy-program-related activities included research, development, and fabrication of radioisotope-fueled heat sources for space and terrestrial applications.

At the peak of it's operations, the site occupied nearly 306 acres, including a 125 acre tract of unimproved property. In 1998, the DOE began transferring parts of the site to the local community for economic development. Because of these transfers, the number of acres and the numbers of buildings continue to decrease over time. As an example, by the time of preparation of this permit application, the number of acres remaining under DOE control was 179.

With the DOE consolidation of non-nuclear manufacturing, the current mission assignment for The Miamisburg Closure Project has changed to that of the cleanup of contaminated buildings and site lands along with commercial economic development of the site. Therefore, major mission element is the cleanup of contaminated buildings and land and transitioning of the facility into commercial economic development. A second mission element at the site is the continuation of the testing/assembly-related operations in support of the RTG or Power Systems Technology (PST) operations. The PST operations are to be transferred to another DOE operations office.

Today, the Miamisburg Closure Project is a clean up site, where building clean out and/or building or environmental clean up wastes are produced in conjunction with CERCLA-regulated field activities or in conjunction with CERCLA related investigative activities. Therefore, these wastes are no longer generated under the more traditional process, production, or research related activities that fit the definition of the traditional RCRA regulated activities.

As a consequence of the current site clean up plan, the Miamisburg Closure Project will continue to generate wastes that resemble the more traditional RCRA regulated wastes that were once

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG CLOSURE PROJECT
MIAMISBURG, OHIO
USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

REPLACEMENT PAGES

SECTION L

for Revision 04, January, 2003
Modification 004

SECTION L

PART B CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

U. S. Department of Energy
Miamisburg Closure Project
P. 0. Box 66
Miamisburg, Ohio 45342
EPA ID No. OH6890008984
Ohio ID NO. 05-57-0677

Owner

U. S. Department of Energy
Miamisburg Closure Project
P. 0. Box 66
Miamisburg, Ohio 45343-0066

Richard Provencher
Director, DOE-MCP

Operator

CH2MHill Mound, Inc.
P. 0. Box 3030
Miamisburg, Ohio 45343-3030

John Fulton
Site Manager, CH2MHill Mound, Inc.

SECTION A
PART A APPLICATION

A-1 INTRODUCTION

The Miamisburg Environmental Management Project, located in Miamisburg, Ohio, is a former U.S. Department of Energy (DOE) nuclear and explosives processing facility that has been closed and is now, with the exception of a testing program in support of DOE's heat source programs, focused on site and building cleanup. Associated figures and photographs are also included in this section. Drawings are included as an attachment in Part 2 of this Permit Application.

The Miamisburg Environmental Management Project is co-operated by DOE and BWXT of Ohio, Inc, under Contract No. DE-AC24-97OH-20044.

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0034 Expires 10/31/02
GSA No. 0248-EPA-OT

For EPA Regional Use Only

Date Received
Month Day Year

EPA
United States Environmental Protection Agency
Washington, DC 20460

Hazardous Waste Permit Application Part A

(Read the Instructions before starting)

I. Facility's EPA ID Number *(Mark 'X' in the appropriate box)*

[ ] A. First Part A Submission
[X] B. Revised Part A Submission (Amendment #_____)

C. Facility's EPA ID Number: OH6890008984

D. Secondary ID Number *(If applicable)*:

II. Name of Facility: MIAMISBURG ENV MGT PROJECT

III. Facility Location *(Physical address not P.O. Box or Route Number)*

A. Street: MOUND ROAD

Street *(Continued)*:

City or Town: MIAMISBURG
State: OH
Zip Code: 45343-0066

County Code *(If known)*: 57
County Name: MONTGOMERY

B. Land Type *(Enter code)*: F

C. Geographic Location
LATITUDE *(Degrees, minutes, & seconds)*: 39 37 55 N
LONGITUDE *(Degrees, minutes & seconds)*: 84 17 15 W

D. Facility Existence Date
Month Day Year: 01 02 1949

IV. Facility Mailing Address

Street or P.O. Box: P.O. BOX 66

City or Town: MIAMISBURG
State: OH
Zip Code: 45343-0066

V. Facility Contact *(Person to be contacted regarding waste activities at facility)*

Name *(Last)*: PROVENCHER
(First): RICHARD

Job Title: DIRECTOR
Phone Number *(Area Code and Number)*: 937-865-3252

VI. Facility Contact Address *(See Instructions)*

A. Contact Address
Location [ ] Mailing [X] Other [ ]

B. Street or P.O. Box:

City or Town:
State:
Zip Code: -

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0034 Expires 10/31/02
GSA No. 0248-EPA-OT

EPA ID Number *(Enter from page 1)*: OH6890008984

Secondary ID Number *(Enter from page 1)*:

VII. Operator Information *(See instructions)*

A. Name of Operator: BWXT of OHIO INC.

Street or P.O. Box: PO BOX 3030

City or Town: MIAMISBURG

State: OH

ZIP Code: 45343-3030

Phone Number *(Area Code and Number)*: 937-865-4020

B. Operator Type: P

C. Change of Operator Indicator: Yes [ ] No [X]

Date Changed: Month Day Year

VIII. Facility Owner *(See instructions)*

A. Name of Facility's Legal Owner: US DEPARTMENT OF ENERGY

Street or P.O. Box: PO BOX 66

City or Town: MIAMISBURG

State: OH

ZIP Code: 45343-0066

Phone Number *(Area Code and Number)*: 937-865-3278

B. Owner Type: F

C. Change of Owner Indicator: Yes [ ] No [X]

Date Changed: Month Day Year

IX. NAICS Codes *(In order of significance; start in left box)*

First: 336419

(Description) Heat Source Production

Second:

(Description)

Third:

(Description)

Fourth:

(Description)

X. Other Environmental Permits *(See instructions)*

A. Permit Type *(Enter code)*	B. Permit Number	C. Description
		See attachment 1

Item X. PERMITS
Attachment 1

A. PERMIT TYPE	B. PERMIT NUMBER	C. DESCRIPTION
N	1IO00005**HD	NPDES permit
R	05-07-0677	State Hazardous Waste Permit
E	B011	Generator 1 (R/SW)
E	B012	Generator 2 (38)
E	B010	Generator 3 (P-in)
E	B009	Generator 3A
E	B018	Generator 4 (P-out)
E	B013	Generator 6 (58)
E	B014	Generator 8 (57)
E	B015	Generator 9 (100)
E	B016	Generator 10 (T-E)
E	B008	HH/WD DG
E	B001	Boiler 1
E	B006	Boiler 2
E	T005	Fuel Oil tank
E	P012	SW2080001 Hood
E	P014	SW2190002
E	P015	SW2190002 Hood
E	P030	HFES Stack
E	P008	Building 48
E	G001	Gasoline/Diesel Fuel Tanks
E	F001	Roadways and Parking Lots
E	F003	Crusher

[a]Registration rather than permit.
[b]Registration cancellation requested.

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0034 Expires 10/31/02
GSA No. 0248-EPA-OT

EPA ID Number *(Enter from page 1)*	Secondary ID Number *(Enter from page 1)*
0 H 6 8 9 0 0 0 8 9 8 4	

XI. Nature of Business *(Provide a brief description)*

The MEMP (Miamisburg Environmental Management Project) is an environmental restoration site involved in site and facility cleanup under the Comprehensive Environmental Response Compensation and Liability Act. The Environmental Remediation is in support of transitioning the facility to an economic development site.

XII. Process Codes and Design Capacities

A. PROCESS CODE - *Enter the code from the list of process codes below that best describes each process to be used at the facility. Thirteen lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), describe the process (including its design capacity) in the space provided in item XIII.*

B. PROCESS DESIGN CAPACITY - *For each code entered in column A, enter the capacity of the process.*
1. AMOUNT - *Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.*
2. UNIT OF MEASURE - *For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.*

C. PROCESS TOTAL NUMBER OF UNITS - *Enter the total number of units used with the corresponding process code.*

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	Disposal:	
D79	Underground Injection Well Disposal	Gallons; Liters; Gallons Per Day; or Liters Per Day
D80	Landfill	Acre-feet; Hectare-meter; Acres; Cubic Meters; Hectares; Cubic Yards
D81	Land Treatment	Acres or Hectares
D82	Ocean Disposal	Gallons Per Day or Liters Per Day
D83	Surface Impoundment Disposal	Gallons; Liters; Cubic Meters; or Cubic Yards
D99	Other Disposal	Any Unit of Measure Listed Below
	Storage:	
S01	Container	Gallons; Liters; Cubic Meters; or Cubic Yards
S02	Tank Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S03	Waste Pile	Cubic Yards or Cubic Meters
S04	Surface Impoundment Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S05	Drip Pad	Gallons; Liters; Acres; Cubic Meters; Hectares; or Cubic Yards
S06	Containment Building Storage	Cubic Yards or Cubic Meters
S99	Other Storage	Any Unit of Measure Listed Below
	Treatment:	
T01	Tank Treatment	Gallons Per Day; Liters Per Day; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; or Metric Tons Per Hour
T02	Surface Impoundment Treatment	Gallons Per Day; Liters Per Day; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; or Metric Tons Per Hour
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Gallons Per Day; Liters Per Hour; or Million Btu Per Hour
T80	Boiler	Gallons; Liters; Gallons Per Hour; Liters Per Hour; Btu Per Hour; or Million Btu Per Hour
T81	Cement Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour
T82	Lime Kiln	
T83	Aggregate Kiln	
T84	Phosphate Kiln	
T85	Coke Oven	
T86	Blast Furnace	
T87	Smelting, Melting, Or Refining Furnace	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Gallons Per Hour; Liters Per Hour; or Million Btu Per Hour
T88	Titanium Dioxide Chloride Oxidation Reactor	
T89	Methane Reforming Furnace	
T90	Pulping Liquor Recovery Furnace	
T91	Combustion Device Used In The Recovery Of Sulfur Values From Spent Sulfuric Acid	
T92	Halogen Acid Furnaces	
T93	Other Industrial Furnaces Listed in 40 CFR §260.10	
T94	Containment Building - Treatment	Cubic Yards; Cubic Meters; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour
	Miscellaneous (Subpart X):	
X01	Open Burning/Open Detonation	Any Unit of Measure Listed Below
X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; Kilograms Per Hour; Gallons Per Hour; Liters Per Hour; or Gallons Per Day
X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; or Million Btu Per Hour
X04	Geologic Repository	Cubic Yards; Cubic Meters; Acre-feet; Hectare-meter; Gallons; or Liters
X99	Other Subpart X	Any Unit of Measure Listed Below

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
Gallons	G	Short Tons Per Hour	D	Cubic Yards	Y
Gallons Per Hour	E	Metric Tons Per Hour	W	Cubic Meters	C
Gallons Per Day	U	Short Tons Per Day	N	Acres	B
Liters	L	Metric Tons Per Day	S	Acre-feet	A
Liters Per Hour	H	Pounds Per Hour	J	Hectares	Q
Liters Per Day	V	Kilograms Per Hour	R	Hectare-meter	F
		Million Btu Per Hour	X	Btu Per Hour	I

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0034 Expires 10/31/02
GSA No. 0248-EPA-OT

EPA ID Number *(Enter from page 1)*	Secondary ID Number *(Enter from page 1)*
O H 6 8 9 0 0 0 8 9 8 4	

XII. Process Codes and Design Capabilities *(Continued)*

EXAMPLE FOR COMPLETING ITEM XII (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY 1. Amount (Specify)	B. 2. Unit Of Measure (Enter code)	C. Process Total Number Of Units	For Official Use Only
X	1	S	0	2	5 3 3 . 7 8 8	G	0 0 1	
	1	S	0	1	13285 . 00	G	0 0 1	
	2	S	0	1	25000 . 00	G	0 0 1	
	3				.			
	4				.			
	5				.			
	6				.			
	7				.			
	8				.			
	9				.			
1	0				.			
1	1				.			
1	2				.			
1	3				.			

NOTE: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in item XIII.

XIII. Other Processes *(Follow instructions from item XII for D99, S99, T04 and X99 process codes)*

Line Number (Enter #s in seq w/XII)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY 1. Amount (Specify)	B. 2. Unit Of Measure (Enter code)	C. Process Total Number Of Units	D. Description Of Process
X	1	T	0	4	.			In-situ Vitrification
	1				.			
	2				.			
	3				.			
	4				.			

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0034 Expires 10/31/02
GSA No. 0248-EPA-OT

EPA ID Number *(Enter from page 1)*	Secondary ID Number *(Enter from page 1)*
0 H 6 8 9 0 0 0 8 9 8 4	

XIV. Description of Hazardous Wastes

A. **EPA HAZARDOUS WASTE NUMBER** - *Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR, Part 261 Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.*

B. **ESTIMATED ANNUAL QUANTITY** - *For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.*

C. **UNIT OF MEASURE** - *For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:*

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. **PROCESSES**

1. **PROCESS CODES:**

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in item XII A. on page 3 to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in item XII A. on page 3 to indicate all the processes that will be used to store, treat, and/ or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. *Enter the first two as described above.*
2. *Enter "000" in the extreme right box of item XIV-D(1).*
3. *Use additional sheet, enter line number from previous sheet, and enter additional code(s) in item XIV-E.*

2. **PROCESS DESCRIPTION:** *If a code is not listed for a process that will be used, describe the process in the space provided on the form (D.(2)).*

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. *Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.*
2. *In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.*
3. *Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.*

EXAMPLE FOR COMPLETING ITEM XIV (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number	A. EPA HAZARD WASTE NO. (Enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESS (1) PROCESS CODES (Enter)	D. PROCESS (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
X 1	K 0 5 4	900	P	T 0 3 D 8 0	
X 2	D 0 0 2	400	P	T 0 3 D 8 0	
X 3	D 0 0 1	100	P	T 0 3 D 8 0	
X 4	D 0 0 2				Included With Above

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0034 Expires 10/31/02
GSA No. 0248-EPA-OT

EPA ID Number *(Enter from page 1)*	Secondary ID Number *(Enter from page 1)*
O H 6 8 9 0 0 0 8 9 8 4	

XIV. Description of Hazardous Wastes *(Continued; use additional sheets as necessary)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES (1) PROCESS CODES (Enter code)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1					See Attachment II
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					

Item XIV. Description of Hazardous Wastes
Attachment 2

The on-site generated clean up related processes at the Miamisburg Environmental Management Project which produce the wastes that are covered by this Permit and that are stored in Building 23 or in Building 72 come for the following CERCLA cleanup support related generator types:

- CERCLA removal actions.
- General plant maintenance:
    - Electrical in support of disconnection of utilities before building demolition.
    - Plumbing in support of disconnection of utilities before building demolition.
    - Heating, ventilation, and air conditioning (HVAC) maintaining service in administrative areas.
    - Janitorial providing service in administrative areas.
    - Grounds care providing service administrative areas.
- Vehicle maintenance operations in support of vehicles involved in soil removal.
- Photographic operations to support CERCLA documentation and communication.
- Environmental Monitoring in support of media characterization data used in CERCLA decions.
- Radioactivity analysis in support of media characterization data used in CERCLA decions.
- Spill response/release operations.

In addition to these waste types, the Miamisburg Environmental Management Project, during the clean up of the site will generate wastes that will resemble wastes that traditionally were generated at the facility. Because these clean up wastes can resemble RCRA wastes, and because those wastes can contain RCRA hazardous waste constituents that are regulated under CERCLA, the site will continue to receive for storage the CERCLA response action generated wastes in the RCRA permitted storage areas. The use of the permitted storage buildings for the storage of CERCLA generated wastes takes advantage of the protectiveness afforded by the permitted facility standards, and allows the site to continue to operate in a manner that is protective both of human health and the environment.

Wastes generated under CERCLA are also often one-time in nature with respect to their point-of-generation and type, because the particular piece of equipment or the particular area from which it was generated will be clean up or disposed of. Therefore the subject equipment or the location being cleaned up will not be a continuing source of wastes nor will it be a continuing point-of-generation. This type of waste is referenced in the table below.

CERCLA waste types received for storage in either Building 23 or in Building 72 will be stored in those buildings only if the appropriate waste code is included as a waste-type in this permit as a waste-type that can be stored in the storage building receiving the waste. If the required waste type is not included in the permit, the permit will be modified before receiving that waste. Any CERCLA generated clean up wastes (i.e., environmental media, building clean out or cleanup wastes) that are sent to either Building 23 or Building 72 will be stored in those locations in compliance with this permit, pending the disposition of those response action generated wastes for off-site disposal.

The table follows:

Line No.	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Unit of Measure	Processes	
				(1) Process Codes	(2) Process Description
1.	D001	8,000	P	S01	Building 72 Container Storage Unit
2.	D002	1,000	P	S01	Building 72 Container Storage Unit
3.	D003	200	P	S01	Building 72 Container Storage Unit
4.	D004	10	P	S01	Building 72 Container Storage Unit
5.	D005	100	P	S01	Building 72 Container Storage Unit
6.	D006	1,000	P	S01	Building 72 Container Storage Unit
7.	D007	1,000	P	S01	Building 72 Container Storage Unit
8.	D008	8,000	P	S01	Building 72 Container Storage Unit
9.	D009	700	P	S01	Building 72 Container Storage Unit
10.	D010	10	P	S01	Building 72 Container Storage Unit
11.	D011	800	P	S01	Building 72 Container Storage Unit
12.	D012	10	P	S01	Building 72 Container Storage Unit
13.	D013	10	P	S01	Building 72 Container Storage Unit
14.	D014	10	P	S01	Building 72 Container Storage Unit
15.	D016	10	P	S01	Building 72 Container Storage Unit
16.	D018	500	P	S01	Building 72 Container Storage Unit
17.	D019	200	P	S01	Building 72 Container Storage Unit
18.	D021	10	P	S01	Building 72 Container Storage Unit
19.	D022	200	P	S01	Building 72 Container Storage Unit
20.	D023	10	P	S01	Building 72 Container Storage Unit
21.	D024	10	P	S01	Building 72 Container Storage Unit
22.	D025	10	P	S01	Building 72 Container Storage Unit
23.	D026	10	P	S01	Building 72 Container Storage Unit
24.	D027	10	P	S01	Building 72 Container Storage Unit
25.	D028	10	P	S01	Building 72 Container Storage Unit
26.	D029	10	P	S01	Building 72 Container Storage Unit
27.	D030	10	P	S01	Building 72 Container Storage Unit
28.	D031	10	P	S01	Building 72 Container Storage Unit
29.	D032	10	P	S01	Building 72 Container Storage Unit
30.	D033	10	P	S01	Building 72 Container Storage Unit

Line No.	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Unit of Measure	Processes	
				(1) Process Codes	(2) Process Description
31.	D034	10	P	S01	Building 72 Container Storage Unit
32.	D035	200	P	S01	Building 72 Container Storage Unit
33.	D036	10	P	S01	Building 72 Container Storage Unit
34.	D037	10	P	S01	Building 72 Container Storage Unit
35.	D038	10	P	S01	Building 72 Container Storage Unit
36.	D039	200	P	S01	Building 72 Container Storage Unit
37.	D040	200	P	S01	Building 72 Container Storage Unit
38.	D041	10	P	S01	Building 72 Container Storage Unit
39.	D042	10	P	S01	Building 72 Container Storage Unit
40.	D043	1,000	P	S01	Building 72 Container Storage Unit
41.	F001	1,000	P	S01	Building 72 Container Storage Unit
42.	F002	4,000	P	S01	Building 72 Container Storage Unit
43.	F003	1,000	P	S01	Building 72 Container Storage Unit
44.	F004	10	P	S01	Building 72 Container Storage Unit
45.	F005	500	P	S01	Building 72 Container Storage Unit
46.	F007	10	P	S01	Building 72 Container Storage Unit
47.	F009	10	P	S01	Building 72 Container Storage Unit
48.	F027	10	P	S01	Building 72 Container Storage Unit
49.	P002	10	P	S01	Building 72 Container Storage Unit
50.	P003	10	P	S01	Building 72 Container Storage Unit
51.	P004	10	P	S01	Building 72 Container Storage Unit
52.	P005	10	P	S01	Building 72 Container Storage Unit
53.	P008	10	P	S01	Building 72 Container Storage Unit
54.	P009	10	P	S01	Building 72 Container Storage Unit
55.	P010	10	P	S01	Building 72 Container Storage Unit
56.	P011	10	P	S01	Building 72 Container Storage Unit
57.	P012	10	P	S01	Building 72 Container Storage Unit
58.	P013	10	P	S01	Building 72 Container Storage Unit
59.	P015	10	P	S01	Building 72 Container Storage Unit
60.	P017	10	P	S01	Building 72 Container Storage Unit
61.	P021	10	P	S01	Building 72 Container Storage Unit
62.	P022	10	P	S01	Building 72 Container Storage Unit

Line No.	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Unit of Measure	Processes	
				(1) Process Codes	(2) Process Description
63.	P023	10	P	S01	Building 72 Container Storage Unit
64.	P024	10	P	S01	Building 72 Container Storage Unit
65.	P026	10	P	S01	Building 72 Container Storage Unit
66.	P028	10	P	S01	Building 72 Container Storage Unit
67.	P029	10	P	S01	Building 72 Container Storage Unit
68.	P030	10	P	S01	Building 72 Container Storage Unit
69.	P031	10	P	S01	Building 72 Container Storage Unit
70.	P044	10	P	S01	Building 72 Container Storage Unit
71.	P047	10	P	S01	Building 72 Container Storage Unit
72.	P048	10	P	S01	Building 72 Container Storage Unit
73.	P064	10	P	S01	Building 72 Container Storage Unit
74.	P068	10	P	S01	Building 72 Container Storage Unit
75.	P072	10	P	S01	Building 72 Container Storage Unit
76.	P076	10	P	S01	Building 72 Container Storage Unit
77.	P077	10	P	S01	Building 72 Container Storage Unit
78.	P078	10	P	S01	Building 72 Container Storage Unit
79.	P087	10	P	S01	Building 72 Container Storage Unit
80.	P093	10	P	S01	Building 72 Container Storage Unit
81.	P098	10	P	S01	Building 72 Container Storage Unit
82.	P101	10	P	S01	Building 72 Container Storage Unit
83.	P104	10	P	S01	Building 72 Container Storage Unit
84.	P105	10	P	S01	Building 72 Container Storage Unit
85.	P106	10	P	S01	Building 72 Container Storage Unit
86.	P110	10	P	S01	Building 72 Container Storage Unit
87.	P113	10	P	S01	Building 72 Container Storage Unit
88.	P119	10	P	S01	Building 72 Container Storage Unit
89.	P120	10	P	S01	Building 72 Container Storage Unit
90.	U001	10	P	S01	Building 72 Container Storage Unit
91.	U002	10	P	S01	Building 72 Container Storage Unit
92.	U003	10	P	S01	Building 72 Container Storage Unit
93.	U004	10	P	S01	Building 72 Container Storage Unit
94.	U008	10	P	S01	Building 72 Container Storage Unit

Line No.	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Unit of Measure	Processes	
				(1) Process Codes	(2) Process Description
95.	U009	10	P	S01	Building 72 Container Storage Unit
96.	U012	10	P	S01	Building 72 Container Storage Unit
97.	U018	10	P	S01	Building 72 Container Storage Unit
98.	U019	10	P	S01	Building 72 Container Storage Unit
99.	U022	10	P	S01	Building 72 Container Storage Unit
100.	U031	10	P	S01	Building 72 Container Storage Unit
100.	U032	10	P	S01	Building 72 Container Storage Unit
101.	U037	10	P	S01	Building 72 Container Storage Unit
102.	U041	10	P	S01	Building 72 Container Storage Unit
103.	U043	10	P	S01	Building 72 Container Storage Unit
104.	U044	10	P	S01	Building 72 Container Storage Unit
105.	U045	10	P	S01	Building 72 Container Storage Unit
106.	U052	10	P	S01	Building 72 Container Storage Unit
107.	U056	10	P	S01	Building 72 Container Storage Unit
108.	U057	10	P	S01	Building 72 Container Storage Unit
109.	U063	10	P	S01	Building 72 Container Storage Unit
110.	U072	10	P	S01	Building 72 Container Storage Unit
111.	U075	10	P	S01	Building 72 Container Storage Unit
112.	U077	10	P	S01	Building 72 Container Storage Unit
113.	U080	10	P	S01	Building 72 Container Storage Unit
114.	U081	10	P	S01	Building 72 Container Storage Unit
115.	U102	10	P	S01	Building 72 Container Storage Unit
116.	U108	10	P	S01	Building 72 Container Storage Unit
117.	U110	10	P	S01	Building 72 Container Storage Unit
118.	U112	10	P	S01	Building 72 Container Storage Unit
119.	U117	10	P	S01	Building 72 Container Storage Unit
120.	U122	10	P	S01	Building 72 Container Storage Unit
121.	U127	10	P	S01	Building 72 Container Storage Unit
122.	U129	10	P	S01	Building 72 Container Storage Unit
123.	U131	10	p	S01	Building 72 Container Storage Unit
124.	U133	10	P	S01	Building 72 Container Storage Unit
125.	U134	10	P	S01	Building 72 Container Storage Unit

Line No.	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Unit of Measure	Processes	
				(1) Process Codes	(2) Process Description
126.	U140	10	P	S01	Building 72 Container Storage Unit
127.	U151	10	P	S01	Building 72 Container Storage Unit
128.	U154	10	P	S01	Building 72 Container Storage Unit
129.	U159	10	P	S01	Building 72 Container Storage Unit
130.	U160	10	P	S01	Building 72 Container Storage Unit
131.	U161	10	P	S01	Building 72 Container Storage Unit
132.	U165	10	P	S01	Building 72 Container Storage Unit
133.	U169	10	P	S01	Building 72 Container Storage Unit
134.	U188	10	P	S01	Building 72 Container Storage Unit
135.	U196	10	P	S01	Building 72 Container Storage Unit
136.	U201	10	P	S01	Building 72 Container Storage Unit
137.	U210	10	P	S01	Building 72 Container Storage Unit
138.	U211	10	P	S01	Building 72 Container Storage Unit
139.	U213	10	P	S01	Building 72 Container Storage Unit
140.	U215	10	P	S01	Building 72 Container Storage Unit
141.	U216	10	P	S01	Building 72 Container Storage Unit
142.	U217	10	P	S01	Building 72 Container Storage Unit
143.	U219	10	P	S01	Building 72 Container Storage Unit
144.	U220	10	P	S01	Building 72 Container Storage Unit
145.	U223	10	P	S01	Building 72 Container Storage Unit
146.	U226	10	P	S01	Building 72 Container Storage Unit
147.	U227	10	P	S01	Building 72 Container Storage Unit
148.	U228	10	P	S01	Building 72 Container Storage Unit
149.	U239	10	P	S01	Building 72 Container Storage Unit
150.	U240	10	P	S01	Building 72 Container Storage Unit
151.	U359	10	P	S01	Building 72 Container Storage Unit
152.	D001	6,000	P	S01	Building 23 Container Storage Unit
153.	D002	100	P	S01	Building 23 Container Storage Unit
154.	D003	100	P	S01	Building 23 Container Storage Unit
155.	D004	10	P	S01	Building 23 Container Storage Unit
156.	D005	100	P	S01	Building 23 Container Storage Unit
157.	D006	100	P	S01	Building 23 Container Storage Unit

Line No.	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Unit of Measure	Processes	
				(1) Process Codes	(2) Process Description
158.	D007	100	P	S01	Building 23 Container Storage Unit
159.	D008	10,000	P	S01	Building 23 Container Storage Unit
160.	D009	700	P	S01	Building 23 Container Storage Unit
161.	D010	10	P	S01	Building 23 Container Storage Unit
162.	D011	50	P	S01	Building 23 Container Storage Unit
163.	D012	10	P	S01	Building 23 Container Storage Unit
164.	D013	10	P	S01	Building 23 Container Storage Unit
165.	D014	10	P	S01	Building 23 Container Storage Unit
166.	D016	10	P	S01	Building 23 Container Storage Unit
167.	D018	10	P	S01	Building 23 Container Storage Unit
168.	D019	10	P	S01	Building 23 Container Storage Unit
169.	D021	10	P	S01	Building 23 Container Storage Unit
170.	D022	10	P	S01	Building 23 Container Storage Unit
171.	D023	10	P	S01	Building 23 Container Storage Unit
172.	D024	10	P	S01	Building 23 Container Storage Unit
173.	D025	10	P	S01	Building 23 Container Storage Unit
174.	D026	10	P	S01	Building 23 Container Storage Unit
175.	D027	10	P	S01	Building 23 Container Storage Unit
176.	D028	10	P	S01	Building 23 Container Storage Unit
177.	D029	10	P	S01	Building 23 Container Storage Unit
178.	D030	10	P	S01	Building 23 Container Storage Unit
179.	D031	10	P	S01	Building 23 Container Storage Unit
180.	D032	10	P	S01	Building 23 Container Storage Unit
181.	D033	10	P	S01	Building 23 Container Storage Unit
182.	D034	10	P	S01	Building 23 Container Storage Unit
183.	D035	10	P	S01	Building 23 Container Storage Unit
184.	D036	10	P	S01	Building 23 Container Storage Unit
185.	D037	10	P	S01	Building 23 Container Storage Unit
186.	D038	10	P	S01	Building 23 Container Storage Unit
187.	D039	10	P	S01	Building 23 Container Storage Unit
188.	D040	10	P	S01	Building 23 Container Storage Unit
189.	D041	10	P	S01	Building 23 Container Storage Unit

Line No.	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Unit of Measure	Processes	
				(1) Process Codes	(2) Process Description
190.	D042	10	P	S01	Building 23 Container Storage Unit
191.	D043	10	P	S01	Building 23 Container Storage Unit
192.	F001	10	P	S01	Building 23 Container Storage Unit
193.	F002	500	P	S01	Building 23 Container Storage Unit
194.	F003	500	P	S01	Building 23 Container Storage Unit
195.	F004	10	P	S01	Building 23 Container Storage Unit
196.	F005	100	P	S01	Building 23 Container Storage Unit
197.	F007	10	P	S01	Building 23 Container Storage Unit
198.	F009	10	P	S01	Building 23 Container Storage Unit
199.	F027	10	P	S01	Building 23 Container Storage Unit
200.	P002	10	P	S01	Building 23 Container Storage Unit
201.	P003	10	P	S01	Building 23 Container Storage Unit
202.	P004	10	P	S01	Building 23 Container Storage Unit
203.	P005	10	P	S01	Building 23 Container Storage Unit
204.	P008	10	P	S01	Building 23 Container Storage Unit
205.	P009	10	P	S01	Building 23 Container Storage Unit
206.	P010	10	P	S01	Building 23 Container Storage Unit
207.	P011	10	P	S01	Building 23 Container Storage Unit
208.	P012	10	P	S01	Building 23 Container Storage Unit
209.	P013	10	P	S01	Building 23 Container Storage Unit
210.	P015	10	P	S01	Building 23 Container Storage Unit
211.	P017	10	P	S01	Building 23 Container Storage Unit
212.	P021	10	P	S01	Building 23 Container Storage Unit
213.	P022	10	P	S01	Building 23 Container Storage Unit
214.	P023	10	P	S01	Building 23 Container Storage Unit
215.	P024	10	P	S01	Building 23 Container Storage Unit
216.	P026	10	P	S01	Building 23 Container Storage Unit
217.	P028	10	P	S01	Building 23 Container Storage Unit
218.	P029	10	P	S01	Building 23 Container Storage Unit
219.	P030	10	P	S01	Building 23 Container Storage Unit
220.	P031	10	P	S01	Building 23 Container Storage Unit
221.	P044	10	P	S01	Building 23 Container Storage Unit

Line No.	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Unit of Measure	Processes	
				(1) Process Codes	(2) Process Description
222.	P047	10	P	S01	Building 23 Container Storage Unit
223.	P048	10	P	S01	Building 23 Container Storage Unit
224.	P064	10	P	S01	Building 23 Container Storage Unit
225.	P068	10	P	S01	Building 23 Container Storage Unit
226.	P072	10	P	S01	Building 23 Container Storage Unit
227.	P076	10	P	S01	Building 23 Container Storage Unit
228.	P077	10	P	S01	Building 23 Container Storage Unit
229.	P078	10	P	S01	Building 23 Container Storage Unit
230.	P087	10	P	S01	Building 23 Container Storage Unit
231.	P093	10	P	S01	Building 23 Container Storage Unit
232.	P098	10	P	S01	Building 23 Container Storage Unit
233.	P101	10	P	S01	Building 23 Container Storage Unit
234.	P104	10	P	S01	Building 23 Container Storage Unit
235.	P105	10	P	S01	Building 23 Container Storage Unit
236.	P106	10	P	S01	Building 23 Container Storage Unit
237.	P110	10	P	S01	Building 23 Container Storage Unit
238.	P113	10	P	S01	Building 23 Container Storage Unit
239.	P119	10	P	S01	Building 23 Container Storage Unit
240.	P120	10	P	S01	Building 23 Container Storage Unit
241.	U001	10	P	S01	Building 23 Container Storage Unit
242.	U002	10	P	S01	Building 23 Container Storage Unit
243.	U003	10	P	S01	Building 23 Container Storage Unit
244.	U004	10	P	S01	Building 23 Container Storage Unit
245.	U008	10	P	S01	Building 23 Container Storage Unit
246.	U009	10	P	S01	Building 23 Container Storage Unit
247.	U012	10	P	S01	Building 23 Container Storage Unit
248.	U018	10	P	S01	Building 23 Container Storage Unit
249.	U019	10	P	S01	Building 23 Container Storage Unit
250.	U022	10	P	S01	Building 23 Container Storage Unit
251.	U031	10	P	S01	Building 23 Container Storage Unit
252.	U032	10	P	S01	Building 23 Container Storage Unit
253.	U037	10	P	S01	Building 23 Container Storage Unit

Line No.	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Unit of Measure	Processes	
				(1) Process Codes	(2) Process Description
254.	U041	10	P	S01	Building 23 Container Storage Unit
255.	U043	10	P	S01	Building 23 Container Storage Unit
256.	U044	10	P	S01	Building 23 Container Storage Unit
257.	U045	10	P	S01	Building 23 Container Storage Unit
258.	U056	10	P	S01	Building 23 Container Storage Unit
259.	U052	10	P	S01	Building 23 Container Storage Unit
260.	U057	10	P	S01	Building 23 Container Storage Unit
261.	U063	10	P	S01	Building 23 Container Storage Unit
262.	U072	10	P	S01	Building 23 Container Storage Unit
263.	U075	10	P	S01	Building 23 Container Storage Unit
264.	U077	10	P	S01	Building 23 Container Storage Unit
265.	U080	10	P	S01	Building 23 Container Storage Unit
266.	U081	10	P	S01	Building 23 Container Storage Unit
267.	U102	10	P	S01	Building 23 Container Storage Unit
268.	U108	10	P	S01	Building 23 Container Storage Unit
269.	U110	10	P	S01	Building 23 Container Storage Unit
270.	U112	10	P	S01	Building 23 Container Storage Unit
271.	U117	10	P	S01	Building 23 Container Storage Unit
272.	U122	10	P	S01	Building 23 Container Storage Unit
273.	U127	10	P	S01	Building 23 Container Storage Unit
274.	U129	10	P	S01	Building 23 Container Storage Unit
275.	U131	10	P	S01	Building 23 Container Storage Unit
276.	U133	10	P	S01	Building 23 Container Storage Unit
277.	U134	10	P	S01	Building 23 Container Storage Unit
278.	U140	10	P	S01	Building 23 Container Storage Unit
279.	U151	180	P	S01	Building 23 Container Storage Unit
280.	U154	10	P	S01	Building 23 Container Storage Unit
281.	U159	10	P	S01	Building 23 Container Storage Unit
282.	U160	10	P	S01	Building 23 Container Storage Unit
283.	U161	10	P	S01	Building 23 Container Storage Unit
284.	U165	10	P	S01	Building 23 Container Storage Unit
285.	U169	10	P	S01	Building 23 Container Storage Unit

Line No.	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Unit of Measure	Processes	
				(1) Process Codes	(2) Process Description
286.	U188	10	P	S01	Building 23 Container Storage Unit
287.	U196	10	P	S01	Building 23 Container Storage Unit
288.	U201	10	P	S01	Building 23 Container Storage Unit
289.	U210	10	P	S01	Building 23 Container Storage Unit
290.	U211	10	P	S01	Building 23 Container Storage Unit
291.	U213	10	P	S01	Building 23 Container Storage Unit
292.	U215	10	P	S01	Building 23 Container Storage Unit
293.	U216	10	P	S01	Building 23 Container Storage Unit
294.	U217	10	P	S01	Building 23 Container Storage Unit
295.	U219	10	P	S01	Building 23 Container Storage Unit
296.	U220	10	P	S01	Building 23 Container Storage Unit
297.	U223	10	P	S01	Building 23 Container Storage Unit
298.	U226	10	P	S01	Building 23 Container Storage Unit
299.	U227	10	P	S01	Building 23 Container Storage Unit
300.	U228	10	P	S01	Building 23 Container Storage Unit
301.	U239	10	P	S01	Building 23 Container Storage Unit
302.	U240	10	P	S01	Building 23 Container Storage Unit
303.	U359	10	P	S01	Building 23 Container Storage Unit

Item XV – Map (Environmental Drawings)

The topographic map (Drawing FSE920963) shows the boundary of the Miamisburg Environmental Management Project and the area one mile beyond the property boundary. The map was prepared from the U.S. Geologic Survey Maps for Miamisburg, Ohio and Franklin, Ohio. The map includes the Great Miami River, which is located west of the site, flows south, and is the major water supply in the vicinity of the site. No fluids are injected underground at this site. The Miamisburg Environmental Management Project's hazardous waste management units are shown in Drawing FSD920925.

The above referenced drawings are included as an attachment in Part 2 of this Permit Application.

Item XVI – Facility Drawings

The facility drawings showing the locations of the hazardous waste management units are included as an attachment in Part 2 of this Permit Application. Drawing FSD930416-2 is Building 23 RCRA Upgrades Floor Plan Modifications. Drawing FSD861469 shows the general layout of the facility, including the property boundaries; the areas occupied by all hazardous waste storage and treatment operations; and the areas of past storage, treatment, or disposal operations. The dimensions of Building 72 and Building 23 are listed in Table A-1.

TABLE A-1–CURRENT AND INACTIVE HAZARDOUS WASTE MANAGEMENT UNITS

CURRENT AND PAST STORAGE/ TREATMENT AREA	FUNCTION	APPROXIMATE UNIT DIMENSIONS	CURRENT STATUS
Building 72 Hazardous Waste Storage Unit	Containerized hazardous waste storage area.	40 ft x 60 ft	Storage Permit being renewed
Building 23 Radioactive Mixed Waste Storage Unit	Containerized radioactive mixed waste storage area.	30 ft x 40 ft	Storage Permit being renewed
Magazine 53 Energetic Materials Storage Unit (closed)	Containerized explosive waste storage magazine.	10 ft x 15-½ ft; 10 ft high	Closed under a RCRA Closure Plan, Certification of closure has been completed and certified. The underlying property will be transferred to the MMCIC. At the time of transfer, deed restrictions related to possible residual non-RCRA radiologic contamination will be imposed as part of the CERCLA clean up process and the transfer that follows..
Pyroshed Energetic Materials Waste Storage Unit (closed)	Containerized pyrotechnic waste storage area.	9 ft x 15 ft; 7 ft high	Closed under a RCRA Closure Plan, Certification of closure has been completed and certified. The underlying property will be transferred to the MMCIC. At the time of transfer, deed restrictions related to possible residual non-RCRA radiologic contamination will be imposed as part of the CERCLA clean up process and the transfer that follows.
Retort Thermal Treatment Unit (closed)	Retort for detonating energetic materials waste.	3 ft diameter, 10 ft long	Closed under a RCRA Closure Plan, Certification of closure has been completed and certified. The underlying property will be transferred to the MMCIC. At the time of transfer, deed restrictions related to possible residual non-RCRA radiologic contamination will be imposed as part of the CERCLA clean up process and the transfer that follows.
Open Burn Energetic Materials Unit (closed)	Location for open burning of nonliquid energetic materials waste.	Located in Burn Area, 10-ft x 10-ft x 10-ft structure	Closed under a RCRA Closure Plan, Certification of closure has been completed and certified. The underlying property will be transferred to the MMCIC. At the time of transfer, deed restrictions related to possible residual non-RCRA radiologic contamination will be imposed as part of the CERCLA clean up process and the transfer that follows.
Building 27 Filtration System (closed)	Treatment of solvent wastes for removal of energetic materials.	20 gpm-rated bladder pump and	Closed under a RCRA Closure Plan, Certification filed with the Ohio EPA.

CURRENT AND PAST STORAGE/ TREATMENT AREA	FUNCTION	APPROXIMATE UNIT DIMENSIONS	CURRENT STATUS
		filter system	The underlying property will be transferred to the MMCIC. At the time of transfer, deed restrictions related to possible residual non-RCRA radiologic contamination will be imposed as part of the CERCLA clean up process and the transfer that follows.
Energetic Materials Pretreatment Unit (closed)	Pretreatment of liquid energetic materials wastes.	1 ft diameter, 2 ft high cylinder in 30 in. x 30 in. x 6 in. tray	Closed under a RCRA Closure Plan, Certification of closure has been completed and certified. The underlying property will be transferred to the MMCIC. At the time of transfer, deed restrictions related to possible residual non-RCRA radiologic contamination will be imposed as part of the CERCLA clean up process and the transfer that follows.
Thermal Treatment Unit (closed)	Thermal treatment of energetic materials wastes.	55-gal. drum in 10-ft x 10-ft x 10-ft structure	Closed under a RCRA Closure Plan, Certification of closure has been completed and certified. The underlying property will be transferred to the MMCIC. At the time of transfer, deed restrictions related to possible residual non-RCRA radiologic contamination will be imposed as part of the CERCLA clean up process and the transfer that follows.

Item XVII — Photographs

The following photographs of current hazardous and radioactive mixed waste management units and an arial veiw of the Miamisburg Environmental Management Project are provided:

- Figure A-1 — Aerial view of the Miamisburg Environmental Management Project
- Figure A-2 — Building 72 Hazardous Waste Storage Unit.
- Figure A-3 — Building 23 Radioactive Mixed Waste Storage Unit.

FIGURE A-1 ARIAL VIEW OF THE MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT

FIGURE A-2 BUILDING 72 HAZARDOUS WASTE STORAGE UNIT

FIGURE A-3 BUILDING 23 RADIOACTIVE MIXED WASTE STORAGE UNIT

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0034 Expires 10/31/02
GSA No. 0248-EPA-OT

EPA ID Number *(Enter from page 1)*	Secondary ID Number *(Enter from page 1)*
0 H 6 8 9 0 0 0 8 9 8 4	

XV. Map

Attach to this application a topographic map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

XVI. Facility Drawing

All existing facilities must include a scale drawing of the facility (See instructions for more detail).

XVII. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

XVIII. Certification(s)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner Signature	Date Signed
Name and Official Title (Type or print) Richard Provencher, Director DOE MEMP	
Owner Signature Richard B Provencher	Date Signed 4/17/01
Name and Official Title (Type or print)	
Operator Signature	Date Signed
Name and Official Title (Type or print) John Krueger, Deputy Site Manager, BWXT of Ohio, Inc.	
Operator Signature John W. Krueger	Date Signed 4/12/01
Name and Official Title (Type or print)	

XIX. Comments

Note: Mail completed form to the appropriate EPA Regional or State Office. (Refer to instructions for more information)

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

SECTION B

FACILITY DESCRIPTION

Prepared By
BWXT of Ohio, Inc.
For the U.S. DOE-Miamisburg Environmental Management Project Office
Modification 004-April 2001 Renewal Submittal

SECTION B
FACILITY DESCRIPTION

B-1 General Description [OAC 3745-50-44(A)(1)]

Established in 1946 as Mound Laboratory, the Miamisburg Environmental Management Project, as it is called today, is operated under Contract No. DE-AC24-97OH-20044, by BWXT of Ohio, Inc. The U.S. Department of Energy (DOE) is the site owner. The contract is administered by the DOE's Miamisburg Environmental Management Project Office (MEMP), with offices located at the project site. The Ohio Field Office (OH) is the responsible DOE Field Office.

The Miamisburg Environmental Management Project is located in southern Montgomery County in southwestern Ohio, at the southern boundary of the city of Miamisburg, 2000 feet due east of the Great Miami River. The site is 12 miles south-southwest of Dayton, Ohio, and 31 miles north-northeast of Cincinnati, Ohio. The regional location of the site is shown in Figure B-1.

The Mound facility, at its height of operation, included 306 acres and as many as 125 buildings. As of April 2001, the date of this submittal, the DOE owns 179 acres of the site, and the Miamisburg Mound Community Improvement Corporation (MMCIC) owns 127 acres.

The site plan is shown in Drawing FSD861469 and is included as an attachment in Part 2 of this Permit Application.

The Miamisburg Environmental Management Project, or Mound, as it is often called, was formerly an integrated research, development, and production facility, performing work in support of DOE weapons and energy programs, with emphasis on explosives and nuclear technology. The weapons program missions included process development, production engineering, and manufacturing and surveillance of detonators, explosive timers, explosive actuated transducers, explosive pellets, nuclear components, and specific testing equipment. The energy program related activities included the research, development, and fabrication of radioisotope-fueled heat sources for space and terrestrial applications.

With the DOE consolidation of non-nuclear manufacturing, all former weapons programs have ceased operations. The current mission assignment for Mound consists of two elements. The first is the clean up of contaminated buildings and land and transitioning of the facility into commercial economic development. The second element of the Project's current mission is the continuation of the assembly-related operations in support of the Power Systems Technology (PST) Program. Eventually, PST Operations will be separated out from the clean up activities, the facilities isolated from the site, and the program administered under the authority of another DOE Office.

Thus, the only remaining vestige of Mound's production era is the PST Program. The PST program is a low environmental-impact assembly program that does not generate RCRA regulated wastes.

The Mound Exit Plan is directed at the accelerated clean up of the site and the transitioning of the site to the Mound Miamisburg Community Improvement Corporation (MMCIC) for commercial use. This plan is entirely focused on site clean up under a tri-party agreement with the Ohio EPA, the U.S. EPA, and the DOE, initiated under CERCLA Section 120. The Mound Exit Plan is addressing the clean up of the facility on a "building-by-building" and/or an area-by-area basis, with the ultimate goal of transferring the site to the local community. The regulatory mechanism used to implement this clean up is the *Mound 2000 Process*, which uses the CERCLA removal action framework to develop plans which address the physical clean up of the site. With the implementation of the new operating contract and the Mound Exit Plan in 1997, the Miamisburg Environmental Management Project totally completed the transition to an environmental restoration site.

With this shift to a CERCLA clean up site the facility has also changed perspective as a waste generator, moving from the more traditional production-type waste streams to the generation of CERCLA wastes associated with clean up activities.

During the clean up, the Miamisburg Environmental Management Project will generate clean up or CERCLA wastes that, in some cases, will resemble the traditional RCRA regulated wastes previously generated at the facility. Because the clean up wastes can resemble RCRA wastes, and because those wastes can contain RCRA hazardous waste constituents that are regulated under CERCLA, the site will continue to receive for storage CERCLA removal action generated wastes into the RCRA permitted storage areas. The permitted storage facilities will not receive waste other than that which is in support of the CERCLA governed mission.

Wastes generated under CERCLA are also often one-time in nature with respect to their point-of-generation and with respect to their waste-type, because of the particular piece of equipment or the particular area or building from which the waste was generated. Therefore the subject equipment or the location being cleaned up will not be a continuing source of wastes nor will be a continuing point of generation. This type of waste is reflected in the Part A application with the inclusion of possible waste code that is based on Mound's chemical inventory in the late 1990's.

CERCLA waste types received for storage in Building 23 or Building 72 will be stored in the building only if the appropriate waste code is included as a permissible waste type in the permit for the storage building. If the required waste type is not included in the permit, the permit will be modified prior to receiving the waste. Any CERCLA wastes sent to Building 23 or Building 72 will be stored under the conditions established by this permit, pending the disposition of the response action generated wastes for off-site disposal.

As required by CERCLA, and as required by the Federal Facility Agreement, the Miamisburg Environmental Management Project is required to manage CERCLA generated wastes that contain RCRA waste constituents, and CERCLA generated wastes that resemble or are sufficiently similar to RCRA wastes, in accordance with the ARARs as identified for the action generating the waste. ARARs are those requirements that are applicable to, or those requirements that are relevant and appropriate to, the action being taken. The technical standards contained in RCRA are applicable to wastes that contain RCRA constituents or that would otherwise be RCRA regulated. The RCRA requirements are relevant and appropriate for those CERCLA generated wastes that are sufficiently similar to RCRA regulated wastes, where handling of those wastes in compliance with the RCRA technical standards would be relevant and appropriate.

Examples of a CERCLA waste that might be generated at the Miamisburg Environmental Management Project under a CERCLA action (i.e., building clean out) that would resemble a RCRA waste would be a waste material generated in conjunction with a building clean out from a laboratory that has not been in use recently. The wastes generated under this CERCLA action that could be RCRA-like might include laboratory chemicals, vacuum pump oils, or bubbler oils. Another example would be a soil clean up.

The following list is a summary of CERCLA operations that could potentially generate the wastes that are covered by this Permit Application:

- CERCLA removal actions.
- General plant maintenance:
  - Electrical in support of disconnection of utilities before building demolition.
  - Plumbing in support of disconnection of utilities before building demolition.
  - Heating, ventilation, and air conditioning (HVAC) maintaining service in administrative areas.
  - Janitorial providing service in administrative areas.
  - Grounds care providing service administrative areas.
- Vehicle maintenance operations in support of vehicles involved in soil removal.
- Photographic operations to support CERCLA documentation and communication.
- Environmental Monitoring in support of media characterization data used in CERCLA decions.
- Radioactivity analysis in support of media characterization data used in CERCLA decions.
- Spill response/release operations.

B-2 Traffic Information [OAC 3745-50-44(A)(10)]

B-2 (1) Traffic Patterns On-Site

The hazardous waste vehicle traffic pattern at the Miamisburg Environmental Management Project is shown in Drawing FSE861318. Vendors' hazardous waste vehicles enter the facility via Mound Road (a public roadway) and travel the most direct route within the plant to waste storage buildings. Such vehicles can include one to three semi-trucks with a payload capacity of 30,000 to 45,000 pounds (lb). These vehicles have all U.S. Department of Transportation (DOT)-required placards. Drawing FSE861318 is included as an attachment in Part 2 of this Permit Application.

Other motor vehicles encountered on the facility's roadways are private vehicles, security patrols, and plant-owned vehicles. As noted in the 1996 permit application and in the 1999 revision a 15-minute (min.) count taken at the Mound Avenue entrance to the facility indicated that 20 trucks, 8 autos, 7 buses, and 4 pedestrians entered this area.

B-2 (2) Estimated Volume

There are three levels of road users at the Miamisburg Environmental Management Project. These road users include the following: hazardous waste collection vehicles, other motor vehicles, and pedestrians. Hazardous waste collection vehicles make periodic rounds of the facility to pick up wastes from the satellite accumulation areas at the site. Hazardous waste vehicles include a 2-ton stake-bed truck and a 2½-ton cargo-bed truck. Only one vehicle type is used at one time to make these runs. These trucks typically haul less than their rated capacity each week and do not have special markings or beacons.

Mound Road, the entrance road to the Project, experiences medium to light volumes of approximately 4,000 vehicles per day, most of which are apparently involved in facility activities because very prominent peaks occur. Based on a study of the City of Miamisburg traffic conducted by Shaw, Weiss, and DeNaples in 1983, and including the observation of traffic in the local area as noted in the 1996 permit, and in the 1999 revision, 315 trucks, 126 autos, 110 buses, and 63 pedestrians can be expected during the peak hour. Daily figures would be 1,801 trucks, 721 autos, 630 buses, and 360 pedestrians. Although extrapolation of this nature is uncommon and of dubious value, it is the best method available to approximate the daily and peak-hour distribution of vehicles.

Pedestrian traffic volumes are fairly light during working hours; however, at the beginning and end of the working day, the plant roadways carry many workers walking to and from the main parking areas. Most hazardous waste vehicles are active during the working day and are not on plant roadways during intense pedestrian activity.

B-2 (3) Traffic Control and Traffic Signals

Three distinct methods of traffic control are in force at the site. These include: regulatory signs, pavement markings, and access control. Most intersections on the grounds have either "Stop" or "Yield" signs. The plant speed limit is posted at 15 miles per hour.

Traffic signals at the Miamisburg Environmental Management Project consist of flashing beacons augmenting warning signs. All other plant roadways are either two lane, two-way or one lane, one-way.

Access control at the Miamisburg Environmental Management Project is accomplished by fencing and gates, security passes, and one-way roads. Various areas of the plant are cordoned off from other areas by fencing. The entire facility is fenced and patrolled to maintain security. Security is very tight on the grounds, and access to various parts of the plant is either by escort or by pass. The passes have the speed limit and other traffic regulations written on them. Safety awareness accompanies the security consciousness prevalent at the project. In the more congested area of the grounds, there is a one-way road that helps to control traffic at a main intersection and inherently increases the safety of on-site travel in the area.

B-2 (4) Access Road Surfacing and Load Bearing Capacity

Site roadways that are used by vehicles that carry hazardous wastes from the points of generation, and to carry wastes from the storage buildings, are either blacktopped or concrete. Studies conducted at the site indicate that the bearing capacity of the pavements is more than sufficient for the waste collection vehicles and will support the legal loads of the disposal vehicles.

B-3 Flood Plain Standard [OAC 3745-50-44(A)(11)(c), 3745-54-18(B)]

As referenced in the 1996 permit application and in the 1999 revision to that permit, according to Mr. Douglas Johnson at the Miami Conservancy District, the original land comprising the Mound site is not located within a 100-year flood plain. Since neither of the storage units are located in a floodplain, the standards in Section B-3b and B-3c do not apply to the Miamisburg Environmental Management Project.

B-4-Certain Waste placement Prohibitions [OAC 3745-54-18C]

The Miamisburg Environmental Management Project does not manage wastes in salt formations, salt bed formations, underground mines, or caves.

B-5 Topographic Maps

Bedrock bluffs that overlook the Great Miami River characterize the topography at the Miamisburg Environmental Management Project. The rugged topography is a remnant of glacial erosion where glacial outwash channels form gravel-filled valleys and the remaining bedrock highs form hills, bluffs, and uplands. A topographic map showing the site at a scale of 1 inch (in.) = 200 feet (ft) and a contour interval of 2 ft. is shown in Drawing FSE920931. Drawing FSE920921 summarizes the land use and property ownership surrounding the site. Public properties include residences and a golf course. Each of these drawings is included as an attachment in Part 2 of this Permit Application. A wind rose is presented in Figure B-2.

Drawings showing the legal boundaries of the Miamisburg Environmental Management Project (FSE920921) are included as an attachment in Part 2 of this Permit Application. These drawings include the survey record for fencing, the boundary survey, and the state plane coordinates.

B-5 (1) Access Control

The Miamisburg Environmental Management Project is completely fenced and staffed with security guards and electronically controlled access gates. Access is allowed to authorized personnel including DOE personnel, authorized MMCIC personnel, contractor staff, and authorized visitors. The Miamisburg Environmental Management Project is patrolled 24 hours per day by security guards. The RCRA units are located within the fenced area. Each of the entrances to the RCRA storage units remains locked when not occupied by staff assigned to that area. Access control is discussed in more detail, particularly with respect to the hazardous waste management facilities, in Sections F and G. Access points into the Miamisburg Environmental Management Project are shown in Drawing FSD861469, which is included as an attachment in Part 2 of this Permit Application.

B-5 (2) Location of Specific Buildings and Facilities

The Miamisburg Environmental Management Project site plan, shown in Drawing FSD861469 is included as an attachment in Part 2 of this Permit Application. This drawing shows the locations of the buildings and facilities currently located at the project. The numbers of buildings at the project is subject to change, due to the demolition of buildings under the project clean up plan. The operational units used for hazardous waste management are described in subsequent sections of this application. The permitted units are Building 72, the Hazardous Waste Storage Unit, and Building 23, the Radioactive Mixed Waste Storage Unit.

B-5 (3) Wells

The Miamisburg Environmental Management Project has no on-site or off-site injection wells. The three withdrawal wells for water use on-site are shown in Drawing FSE920929 which is included as an attachment in Part 2 of this Permit Application.

B-5 (4) Storm Runoff Treatment

Storm runoff at the site is treated by settling suspended solids in an asphalt-lined pond, an overflow pond, and in a series of concrete basins to help ensure compliance with National Pollutant Discharge Elimination System (NPDES) discharge limits.

The asphalt-lined pond is a stormwater retention basin located between the Main Hill and the SM/PP Hill. The pond collects stormwater runoff from the SM/PP Hill, as well as non-contact single-pass cooling water. Water from the pond is discharged to the on-site stream through a buried culvert.

A 5-million gallon overflow clay-lined pond was constructed to hold a combination of runoff and effluents before release to the stream and the Great Miami River. The pond, located near the western boundary of the site, is designed to store a 5-day supply should a spill or storm event necessitate containment. The pond also functions as a sediment trap.

Near the western boundary of the Project, on-site stream flow is diverted through a series of interconnected clay-lined concrete retention basins that regulate the rate and quality of discharge. During periods when the capacity of the concrete basins is exceeded, the stream flow is diverted into the overflow pond.

B-5 (5) Fire Protection

The Miamisburg Environmental Management Project has an on-site Fire Station, Building 98. The site also has Mutual Aid Agreement with the city of Miamisburg, for assistance in the event of a fire.

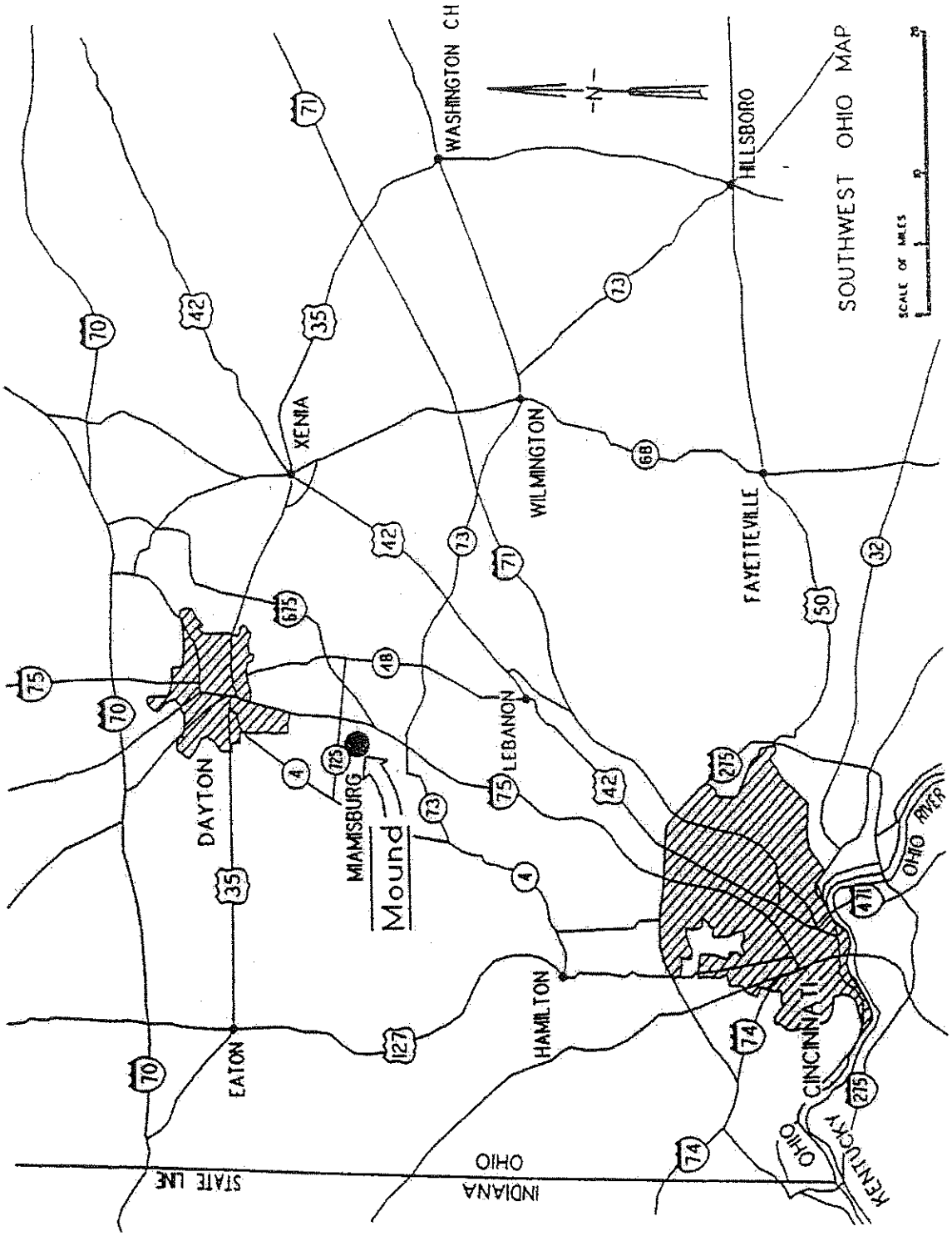


FIGURE B-1 REGIONAL LOCATION OF THE MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT

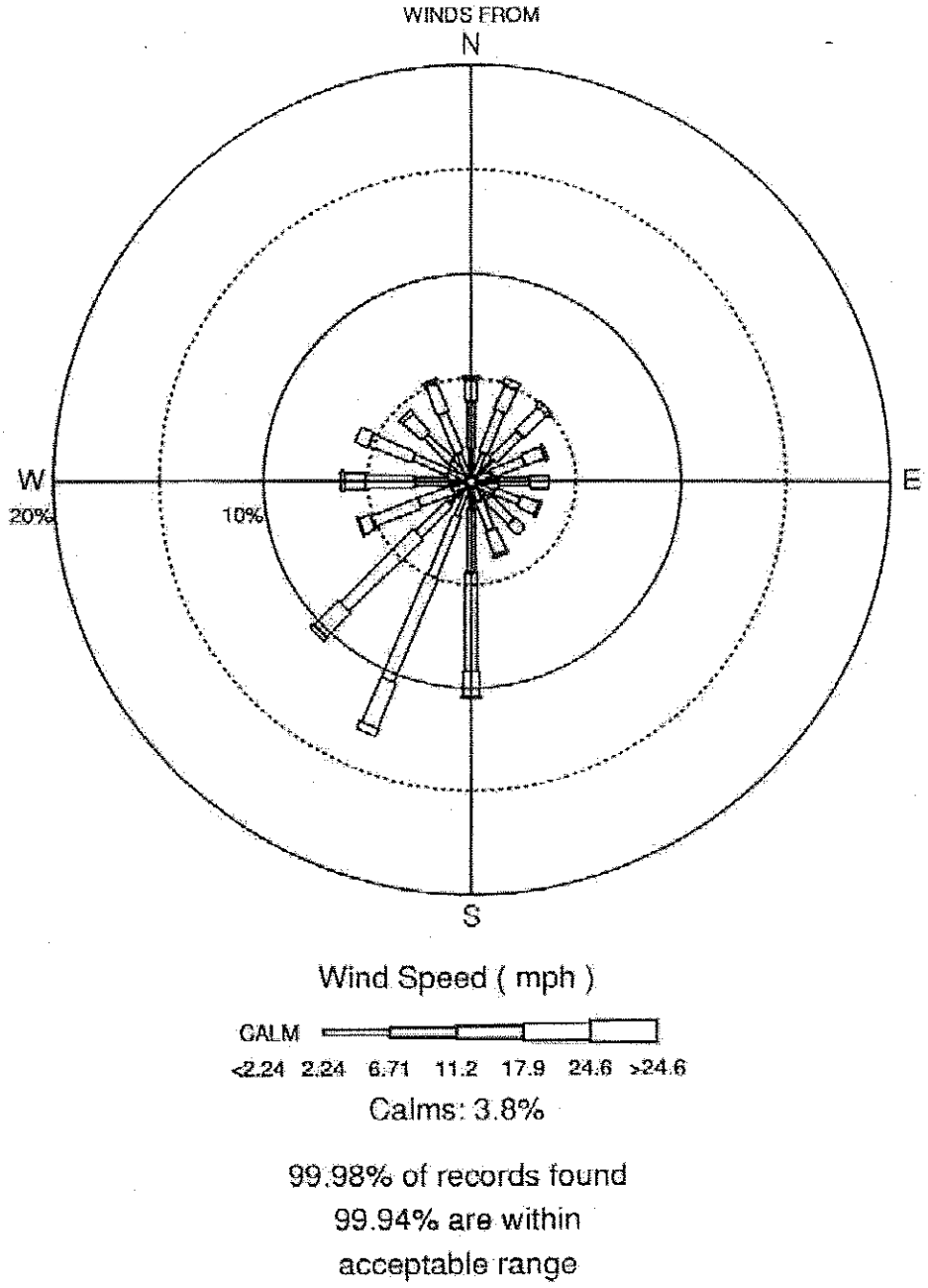


FIGURE B-2 1999 WIND SPEEDS AND DIRECTION

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

SECTION C

WASTE CHARACTERISTICS

Prepared By
BWXT of Ohio, Inc.
For the U.S. DOE-Miamisburg Environmental Management Project Office
Modification 004-April 2001 Renewal Submittal

SECTION C
WASTE CHARACTERISTICS

C-1 Chemical and Physical Analyses [OAC 3745-50-44(A)(2), 3745-54-13(A)]

From a waste generation standpoint, the Department of Energy has transitioned the former Mound site or Mound facility which was operated as a production facility into the Miamisburg Environmental Management Project. The Miamisburg Environmental Management Project is a CERCLA clean up site that is destined for community economic development. Because of this, the facility's research, development and production operations, the operations that were once dominant at the Mound facility, are no longer active processes. Today, the Miamisburg Environmental Management Project's primary mission is that of CERCLA clean up, site maintenance activities, site clean up, and the transitioning of properties and buildings to the Miamisburg Mound Community Improvement Corporation (MMCIC), for economic development.

With this shift to a CERCLA clean up site the facility has also changed perspective as a waste generator, moving from the more traditional production-type waste streams to the generation of CERCLA wastes associated with clean up activities.

Since wastes stored at the Miamisburg Environmental Management Project are generated on site, close coordination is maintained between waste generators and waste managers accepting waste for storage or off-site shipment for treatment or disposal. This coordination includes providing discussions and guidance necessary for the person responsible for the waste to adequately characterize the waste. If, for whatever reason, the person responsible for the waste cannot provide this characterization, the Waste Management Group will conduct the waste determination, and move the waste into storage.

The wastes covered by this Permit Application are uniquely identified with a tracking number. The waste generator is directed to provide the necessary process information to identify waste stream components, Material Safety Data Sheets (MSDSs), specifications or literature, and/or analytical data as appropriate. This information will be maintained in the operating record by waste management personnel for waste to be managed at the Miamisburg Environmental Management Project.

Site waste generators of the small volume of routinely generated wastes (i.e., maintenance wastes, vehicle maintenance wastes, photographic wastes) waste are required to notify waste management personnel if any changes are made to the operations that may affect the characteristics of the waste stream. All waste generated at the site is either directly related to the site clean up (i.e., clean up of soil or building demolition) or is in support of the site cleanup (i.e., environmental monitoring wastes, maintenance wastes). Process changes that affect waste characteristics may include the following:

- Replacement of integral process equipment.
- Change in process or reaction rate and catalyst.
- Change in clean up or interim procedures.
- Change, addition, or deletion of constituents.

Wastes generated under a CERCLA removal action are often one-time in nature with respect to their point-of-generation and with respect to their waste-type, because the particular piece of equipment or the particular area or building from which the waste was generated. Therefore the subject equipment or the location being cleaned up will not be a continuing source of wastes nor will not be a continuing point of generation. This type of waste is reflected in the Part A application with the inclusion of possible waste code that is based on Mound's chemical inventory in the late 1990's.

Waste generators generating wastes from the clean up-related processes included in this Permit Application are responsible for characterizing the wastes that they produce, to the degree necessary to ensure proper subsequent management.

In order to meet waste characterization requirements, each generator of waste must either have detailed and documented process knowledge with adequate quality control (QC) necessary to define every

constituent of a generated waste, or the generator is required to sample and analyze the waste. The most cost-effective, and often the most accurate waste characterization can be achieved by process control and in-line quality assurance (QA).

Routinely generated waste streams are re-characterized annually or whenever there is a change in the process generating the waste. This re-characterization ensures that current information is available to make the correct determination in order to identify appropriate waste management and disposal options.

Generating operations at the Miamisburg Environmental Management Project will notify waste management personnel when a new waste stream will be generated prior to or at the time the waste is first generated by the new process.

C-1a Containerized Waste [OAC 3745-50-44(c)(1)(b)(i), 3745-55-75(c)]

For the purposes of containerized hazardous waste storage at Building 72, all wastes and materials containing wastes are assumed to contain liquids and are stored within the bounds of containment systems that meet the requirements of OAC 3745-55-75(B). Accordingly, the requirements of OAC 3745-50-44(C)(1)(b) are not applicable to hazardous wastes stored at Building 23 are in Building 72.

The Miamisburg Environmental Management Project is not seeking an operating permit for hazardous waste storage in tanks or tank systems, in waste piles, in a landfill, in a hazardous waste incinerator, a land treatment unit, or Miscellaneous Units, therefore Sections C-1b to C-1g are not applicable.

C-2 Waste Analysis Plan

The determination as to whether or not a solid waste is hazardous by RCRA definition will be made by generators in accordance with OAC 3745-52-11.

Land Disposal Restrictions (LDR) documentation will be prepared using the LDR Documentation Package provided in Appendix C.1 or a comparable form as provided by the off site TSD. Completed LDR forms will be maintained by waste management personnel. These forms will accompany waste shipments to off-site treatment, storage, and disposal facilities (TSDFs), as required by the regulations.

Once a waste generated from a process that is covered by this Permit Application has been characterized, and that waste is determined to be non-radioactive, the generator, in accordance with The Miamisburg Environmental Management Project standard operating procedure contacts Waste Management in order to schedule a waste pickup. Non-radioactive hazardous wastes are transported, by Waste Management, to Building 72 for storage, and shipped off-site for disposal within one-year of the accumulation date.

Once a waste has been characterized, and if that waste is determined to be a radioactive hazardous waste, or a mixed waste, the generator, in accordance with site standard operating procedure contacts Waste Management in order to schedule a waste pickup.

Radioactive hazardous wastes, or mixed wastes, are transported, by Waste Management, to Building 23 for storage, and will be evaluated under the Site Treatment Plan (STP) and any legal agreements resulting from STP negotiations under the Federal Facility Compliance Act (FFCA).

C-2a Parameters and Rationale [OAC 3745-54-13(B)(1)]

In order to properly characterize its permit controlled wastes, the Miamisburg Environmental Management Project combines waste generator knowledge of the processes and materials used, with a waste analysis strategy that confirms the accuracy of generator-supplied information.

Routinely generated waste streams are re-characterized annually or whenever there is a change in the process generating the waste. This re-characterization ensures that current information is available to make the correct determination in order to identify appropriate waste management and disposal options.

Any sampling will require a sampling plan written in accordance with recognized industry methods and standards. Verification will serve as a quality assurance that the sampling plan conforms to SW 846 and USEPA sampling plan guidance.

Waste management personnel confer with waste generators to review and evaluate data provided by the generator. This interaction is conducted on a frequent basis, such that waste management staff is involved on a day-to-day basis with the generators. Waste management also reviews the waste generator characterization data, and provides input to the generator on his evaluation of the process. As a part of this review and evaluation, any waste constituents that can be identified as variable, due to normal generating process operations and/or reasonably anticipated process/material changes, or other factors are established as waste content variables. These variables, compiled in Table C-1, will be used to select parameters for which a waste must be tested to characterize the waste. Characterization of a waste will be considered accomplished when sufficient information has been gathered for a waste so that it can be properly managed on- or off-site, as appropriate, in accordance with any applicable regulations.

TABLE C-1 – WASTE CONSTITUENT PARAMETERS AND RATIONALE

WASTE CONTENT VARIABLE	PARAMETERS	POSSIBLE WASTE CODE(S)	DISPOSITION OF WASTE	RATIONALE
Halogenated solvents	VOCs: Methylene chloride Trichloroethylene 1,1,1-Trichloroethane Tetrachloroethylene Carbon tetrachloride Chlorinated fluorocarbons Chlorobenzene 1,1,2-Trichloro-1,2,2-trifluoroethane Ortho-dichlorobenzene Trichlorofluoromethane 1,1,2-Trichloroethane TC Organics: Carbon tetrachloride Chlorobenzene Chloroform 1,4-Dichlorobenzene 1,2-Dichloroethane 1,1-Dichloroethylene Hexachlorobenzene Hexachlorobutadiene Hexachloroethane Tetrachloroethylene Trichloroethylene Vinyl chloride	F001, F002, D019, D021, D022, D027, D028, D029, D032, D033, D034, D039, D040, D043	On-site container storage Off-site treatment/disposal	1. Generator waste characterization 2. Determination of composition for off-site TSDF acceptance 3. LDR compliance
Nonhalogenated solvents	VOCs: Xylene Acetone Ethyl acetate Ethyl benzene Ethyl ether Methyl isobutyl ketone n-Butyl alcohol Cyclohexanone Methanol Cresols Cresylic acid	F003, F004, F005, D018, D023, D024, D025, D026, D030, D035, D036, D038	On-site container storage Off-site treatment/disposal	1. Generator waste characterization 2. Determination of composition for off-site TSDF acceptance 3. LDR compliance

TABLE C-1– WASTE CONSTITUENT PARAMETERS AND RATIONALE				
WASTE CONTENT VARIABLE	PARAMETERS	POSSIBLE WASTE CODE(S)	DISPOSITION OF WASTE	RATIONALE
	Nitrobenzene Toluene Methyl ethyl ketone Carbon disulfide Isobutanol Pyridine Benzene 2-Ethoxyethanol 2-Nitropropane			
Nonhalogenated solvents (continued)	TC Organics: Benzene o-Cresol m-Cresol p-Cresol Cresol 2,4-Dinitrotoluene Methyl ethyl ketone Nitrobenzene Pyridine			
Cyanide	Total and amenable cyanide	F007, F009, D003	On-site container storage Off-site treatment/disposal	1. Generator waste characterization 2. Determination of composition for off-site TSDF acceptance 3. LDR compliance
Metals	TC Metals: Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silver	D004, D005, D006, D007, D008, D009, D010, D011	On-site container storage Off-site treatment/disposal	1. Generator waste characterization 2. Determination of composition for off-site TSDF acceptance 3. LDR compliance
Inorganics	TDS Cl F NO_2/NO_3 SO_3/SO_4 Na, Ca Mg		Off-site treatment/disposal	1. Quantify for off-site TSDF acceptance
Ignitability	Flash point	D001	On-site container storage Off-site treatment/disposal	1. Generation waste characterization 2. Determination of composition for off-site TSDF acceptance 3. LDR compliance
Corrosivity	Acidity Alkalinity	D002	On-site container storage Off-site treatment/disposal	1. Generator waste characterization 2. Determination of composition for off-site TSDF acceptance

TABLE C-1--WASTE CONSTITUENT PARAMETERS AND RATIONALE				
WASTE CONTENT VARIABLE	PARAMETERS	POSSIBLE WASTE CODE(S)	DISPOSITION OF WASTE	RATIONALE
				3. LDR compliance
Semivolatiles	TC Semivolatiles: Pentachlorophenol 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol	D037, D041, D042	On-site container storage Off-site treatment/disposal	1. Generator waste characterization 2. Determination of composition for off-site TSDF acceptance 3. LDR compliance
Pesticides	TC Pesticides: Chlordane 2,4-D Endrin Heptachlor (and its epoxide) Lindane Methoxychlor Toxaphene 2,4,5-TP	D020, D016, D012, D031, D013, D014, D015, D017	On-site container storage Off-site treatment/disposal	1. Generator waste characterization 2. Determination of composition for off-site TSDF acceptance 3. LDR compliance
Free liquids	Free liquids	NA	On-site container storage	1. Generator waste characterization 2. Determination of composition for off-site TSDF acceptance
Reactivity	Explosivity	D003	On-site container storage Off-site treatment/disposal	1. Generator waste characterization 2. Determination of composition for off-site TSDF acceptance 3. LDR compliance
Reactivity	Cyanides and sulfides	D003	On-site container storage Off-site treatment/disposal	1. Generator waste characterization 2. Determination of composition for off-site TSDF acceptance 3. LDR compliance
Heat value	Btu content	NA	Off-site incineration	1. Determination of properties for treatment acceptance

C-2b Test Methods [OAC 3745-54-13(B)(2)]

The test methods the Miamisburg Environmental Management Project uses in implementing the Waste Analysis Plan are provided in "Test Methods for Evaluation of Solid Waste, Physical/Chemical Methods" (EPA Office of Solid Waste and Emergency Response, SW-846, latest edition) or other EPA- or OEPA-approved methods. The Miamisburg Environmental Management Project has a rigorous off-site laboratory approval program that is used to approve laboratories destined to receive waste samples shipped by the plant in implementing the Waste Analysis Plan.

C-2c Sampling Methods [OAC 3745-54-13(B)(3)]

Sampling methods are taken from "Test Methods for Evaluation of Solid Waste, Physical/Chemical Methods" (EPA Office of Solid Waste and Emergency Response, SW-846, latest edition) or other EPA- or OEPA-approved methods. Numerous sampling techniques are used in collecting representative samples of hazardous wastes. The actual technique that will be used will depend on the physical nature of the waste, the container from which the sample is taken, and other physical constraints. A discussion of methods appropriate for different waste types and physical states is provided in the subsections that follow. Table C-1 illustrates sampling methods at Mound.

C-2c.1 Liquids

A Coliwasa is a device used to sample contained liquids and slurries. A Coliwasa is an open tube of nominal length that can be lowered into a container, allowed to fill as it is lowered, then sealed at the bottom when the desired depth is reached, thus obtaining a "core" sample. This provides a representative sample of layered or homogeneous materials. The Coliwasa may be a closed tube within a tube or an open tube with an external plug at its base. The device is usually made of glass. Sampling will be conducted in accordance with "Coliwasa" from EPA SW-846.

C-2c.2 Sludges, Loosely Consolidated Sediments, and Other Solids

A "Back Saver" hand corer is a device that consists of a thin-walled tube with a tapered nosepiece and a weighted "T" handle to facilitate driving the corer and any necessary extensions into sludges, sediments, or solids. The thin-walled tube has a check valve at its upper end to prevent washout during retrieval of a sludge through an overlying water layer. The corer is introduced into the sludge or closely consolidated sediment and then forced into the waste with a smooth continuous motion. After the corer is withdrawn, the nosepiece is removed and the sample is transferred to an appropriate container. This technique provides an undisturbed sample of the waste in question. A Coliwasa may also be used to sample sludges as an alternative to a corer.

Sample collection with a scoop or shovel provides a disturbed grab sample. Generally, these tools are used in collecting samples of the uppermost material. To obtain a sample, a scoop is simply inserted into the sludge or loosely consolidated material, removed with the sample, and then the sample is transferred to an appropriate container. When using a scoop or shovel, it is often desirable to remove the uppermost 1 to 2 in. of the waste and collect an unexposed sample.

A drum thief can be used to sample granular or other dry, loosely consolidated materials. The thief consists of two concentric metallic tubes (one tube inside the other) with elongated holes cut along the length of both tubes. The outer tube is fitted with a pointed, solid metallic end to facilitate penetration into the material. The sample is collected by forcing the thief into the material when the holes of the tubes are not aligned. When the pointed end of the thief reaches the bottom of the drum, the inner tube is twisted until the holes in both tubes are aligned, allowing the material to enter the thief. When the thief is filled, the inner tube is again twisted in order to retain the sample. The sample is then transferred to an appropriate container.

C-2c.3 Rags, Protective Equipment, and Other Miscellaneous Wastes

When sampling contaminated items such as rags, protective equipment (respirator cartridges, coveralls, etc.), and other miscellaneous wastes, it must be determined if the waste can be homogenized into a uniform or nearly uniform mass. If the waste can be homogenized, a grab sample is collected utilizing appropriate sampling equipment as described for sludges, loosely consolidated sediments, or other solids. Generally, homogenization of this type of waste cannot be accomplished; therefore, the sampling is aimed at retrieving the portion of the waste that exhibits the highest degree of contamination, which provides for conservative hazardous waste determinations.

TABLE C-2--SAMPLING METHODS FOR WASTE CHARACTERIZATION

WASTE FORM	WASTE PROPERTY	POSSIBLE SAMPLING METHODS	SAMPLING APPARATUS	DESCRIPTION
Liquids	Containerized liquid	Coliwasa from SW-846	Coliwasa	Representative composite sample
Sludges and slurries	Extremely viscous liquids	ASTM D140-70	Hand corer, Coliwasa, scoop, shovel	Representative composite sample
Solids	Crushed or powdered	ASTM D346-75	Thief or hand corer (as applicable)	Representative composite sample
	Soil or rock-like	ASTM D420-69	Thief or hand corer (as applicable)	Representative composite sample
	Soil-like	ASTM D1452-65	Thief or hand corer (as applicable)	Representative composite sample
	Ash-like	ASTM D2234-76	Thief or hand corer (as applicable)	Representative composite sample

Representative sampling of non-homogeneous wastes, such as rags, wipes, and personal protective equipment, is particularly difficult. Samples of this type of waste will consist of small pieces of the material cut from several sections of larger pieces. The smaller pieces will be cut from the visibly soiled areas of the larger pieces. Samples will be obtained from as deep in the containers as practical.

C-2c.4 Sample Preparation and Custody Procedures

Except for samples taken for volatile organic compounds (VOCs), wastes collected in the sampling device will be homogenized and placed in appropriate sample containers. Samples for VOCs will be taken directly from the sampling device to prevent alteration of the sample. After preservation of the sample in accordance with the analytical method, sample bottles will be sealed with chain-of-custody tape and placed in secure packaging for shipment to the laboratory. A completed chain-of-custody form will accompany the samples to the laboratory. Table C-2 provides the required sample containers and form of preservation.

TABLE C-3--REQUIRED SAMPLE CONTAINERS AND PRESERVATION

PARAMETER	CONTAINER	PRESERVATIVE	HOLDING TIME
Chloride	500 ml or 1 L polyethylene with polyethylene or polyethylene-lined closure	None	28 days
Cyanide (aqueous wastes)	1 L or 1/2 gallon polyethylene with polyethylene or polyethylene-lined closure	Ascorbic acid, sodium hydroxide, Ph>12, cool 4°C	ASAP
Cyanide (conc.)	8-oz widemouth glass with Teflon liner	None	ASAP
Metals	8-oz widemouth glass with Teflon liner	None	ASAP
Metals (aqueous)	1 L polyethylene with lined closure	50% HNO_3 to Ph <2	6 months
TCLP VOCs	2 to 60 ml VOA vials	None	28 days
TCLP semivolatiles	8-oz widemouth glass jar with Teflon liner	None	56 days
Volatile organics	2 to 60 ml VOA vials	None	14 days
Semivolatile organics	8-oz widemouth glass jar with Teflon liner	None	14 days
Total organic halides (TOX)	250-ml amber glass with Teflon-lined septum closure	Cool, 4°C	ASAP
Ph	In situ, beaker or bucket	None	Analyze immediately
Flash point and/or heat content	8-oz widemouth glass with Teflon liner	None	ASAP-NS

PARAMETER	CONTAINER	PRESERVATIVE	HOLDING TIME
Sulfides (aqueous)	500 ml or 1 L polyethylene with polyethylene or polyethylene-lined closure	2 ml zinc acetate conc. sodium hydroxide to Ph >9 Cool, 4°C	7 days
SOIL, SEDIMENT OR SLUDGE			
Metals	8-oz widemouth glass with Teflon liner	Cool, 4°C	6 months
TC metals	8-oz widemouth glass with Teflon liner	Cool, 4°C	56 days
Inorganics, including cyanide	500 ml polyethylene with polyethylene-lined closure or 8-oz widemouth glass with Teflon-lined closure	Cool, 4°C	ASAP
TCLP VOCs	2 to 60 ml VOA vials with Teflon liner	None	28 days
TCLP BNA extractable organics	8-oz widemouth glass jar with Teflon liner	None	54 days

Legend:
ASAP = As soon as possible
NS = Not specified

C-2d Frequency of Analyses [OAC 3745-54-13(B)(4)]

As noted previously, personnel involved in the generation of wastes generated in CERCLA clean up related support operations (those operations covered by this permit) and waste management personnel at the Miamisburg Environmental Management Project annually review waste generator data to verify that the processes generating the waste have not changed in such a way as to change the nature of the waste stream. In addition, generating operations noted in this Permit Application, must notify hazardous waste management personnel when the process has changed in such a way as to change the nature of the waste stream. Based on the variability of the generating process with regard to waste constituents, the need to sample and the frequency of analysis is established during these reviews this inforamtion. For example, some waste streams are quite variable and each drum is sampled and analyzed to identify hazardous waste constituents. Other waste streams do not vary as much, and annual sampling may be performed.

Additional analyses may be performed on samples collected by waste management personnel as deemed necessary to verify generator information, ensure compatibility, and if necessary further characterize the waste for off-site treatment and disposal.

C-2e Additional Requirements for Wastes Generated Off-Site [OAC 3745-54-13(C)]

The Miamisburg Environmental Management Project does not accept hazardous wastes from off-site.

C-3 Waste Analysis Requirements Pertaining to Land Disposal Restrictions

LDRs apply to hazardous wastes that require treatment prior to being land disposed. Land disposal includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, underground mine or cave, or concrete disposal vault. Waste-specific prohibitions were promulgated as solvent wastes, dioxin-containing wastes, California List wastes, first-third, second-third, and third-third wastes.

Wastes identified or listed as hazardous for which EPA has not promulgated a prohibition or treatment standard are not subject to LDRs. Treatment standards are either concentration-based or technology-based and are listed in the Universal Treatment Standards Table. Concentration-based treatment standards are based on either Constituent Concentrations in Waste Extract (CCWE) or Constituent Concentration in the Waste (CCW). Technology-based treatment standards are based on the Best Demonstrated Available Technology (BDAT).

C-3a Waste Characterization (OAC 3745-54-13)

Subsection C-1 describes the routinely generated waste that are generated as part of the support operations for the CERCLA clean up of the site are the wastes covered by this Permit Application. Process knowledge and supporting MSDSs, and where necessary, analytical results are used for the characterization of the clean up-support processes that are described in that section. Routinely generated land disposal restricted wastes are discussed in the subsections that follow. All of the Miamisburg Environmental Management Project's waste streams are considered in the evaluation-of LDRs. For waste streams that may contain listed wastes the Miamisburg Environmental Management Project will also provide process data. In keeping with the "derived-from" rule, these process data will be incorporated into the LDR certification packages prepared for the treatment residues.

For each container of hazardous waste a completed waste profile and appropriate LDR documentation form, either from Appendices C.1, or a comparable form as provided by the off-site TSD are provided indicating that either the waste does not meet applicable treatment standards or certifying that the waste meets treatment standards. The Miamisburg Environmental Management Project will identify both the treatability group (i.e., waste code and form) and a selected treatment option when more than one exists. A copy of this information will be maintained in the Miamisburg Environmental Management Project operating record.

C-3a(1) Waste Characteristics: Solvent Wastes and Dioxin-Containing Wastes (OAC 3745-59-07)

The solvent wastes generated and managed at the Miamisburg Environmental Management Project with EPA hazardous waste codes F001, F002, F003, F004, and F005 are prohibited from land disposal unless they are treated according to the treatment standards contained in OAC 3745-59-40 through 3745-59-44.

The Miamisburg Environmental Management Project laboratory operations have generated 2,4,5-trichlorophenol acid in lab pack quantities, which can be identified as F027 hazardous waste. F027 hazardous wastes are prohibited from land disposal unless they are treated according to the treatment standards in OAC 3745-59-40 through 3745-59-44.

F020 through F023, F026, and F028 are dioxin-containing wastes and are not generated at the Miamisburg Environmental Management Project.

For each container of hazardous wastes, including F001 through F005 spent solvents or F027 waste the appropriate forms from the LDR documentation package (Appendices C.2) or a comparable form as provided by the off site TSD, are provided by The Miamisburg Environmental Management Project indicating that either the waste does not meet applicable treatment standards or certifying that the waste meets treatment standards. The Miamisburg Environmental Management Project will identify both the treatability group (i.e., waste code and form) and a selected treatment option where more than one exists. A copy of this information will be maintained in the Miamisburg Environmental Management Project operating record.

C-3a(2) Waste Characteristics: California List Wastes [OAC 3745-54-13(A)(1), 3745-59-32]

For each container of hazardous waste, including California List wastes the appropriate forms from the LDR documentation package (Appendices C.2) or a comparable form as provided by the off site TSD, are provided by The Miamisburg Environmental Management Project indicating that either the waste does not meet applicable treatment standards or certifying that the waste meets treatment standards. The Miamisburg Environmental Management Project will identify both the applicable California List categories and the corresponding EPA waste code and treatment standard. Both the treatability group (i.e., waste code and form) and selected treatment option will be identified when more than one exists. A copy of this information will be maintained in the Miamisburg Environmental Management Project operating record.

C-3a(3) Waste Characteristics: First Third Wastes with Treatment Standards (OAC 3745-59-33, 3745-59-40 through 3745-59-43)

As allowed under OAC 3745-54-07, process knowledge may be used to determine whether a waste stream is subject to the requirements of the first third prohibition. Although The Miamisburg Environmental Management Project uses process knowledge to characterize the waste, the plant conservatively assumes that all hazardous wastes generated require treatment prior to land disposal until they are proven to meet treatment standards through analysis, as described in Subsection C-2. Analytical data will be provided as required to off-site commercial TSDFs.

For each container of hazardous waste, including first third wastes the appropriate forms from the LDR documentation package (Appendices C.2) or a comparable form as provided by the off site TSD, are provided by The Miamisburg Environmental Management Project indicating that either the waste does not meet applicable treatment standards or certifying that the waste meets treatment standards. The Miamisburg Environmental Management Project will identify both the treatability group (i.e., waste code and form) and a selected treatment option when more than one exists. A copy of this information will be maintained in the Miamisburg Environmental Management Project operating record.

C-3a(4) Waste Characteristics: Second Third Wastes with Treatment Standards (OAC 3745-59-34)

As allowed under OAC 3745-54-07, process knowledge may be used to determine whether a waste stream is subject to the requirements of the second third prohibition. Although The Miamisburg Environmental Management Project uses process knowledge to characterize the waste, the plant conservatively assumes that all hazardous wastes generated require treatment prior to land disposal until they are proven to meet treatment standards through analysis, as described in Subsection C-2.

For each container of hazardous waste, including second third wastes the appropriate forms from the LDR documentation package (Appendices C.2) or a comparable form as provided by the off site TSD, are provided by The Miamisburg Environmental Management Project indicating that either the waste does not meet applicable treatment standards or certifying that the waste meets treatment standards. The Miamisburg Environmental Management Project will identify both the treatability group (i.e., waste code and form) and a selected treatment option when more than one exists. A copy of this information will be maintained in the Miamisburg Environmental Management Project operating record.

C-3a(5) Waste Characteristics: Third-Third Wastes with Treatment Standards (OAC 3745-59-35)

As allowed under OAC 3745-54-07, process knowledge may be used to determine whether a waste stream is subject to the requirements of third-third prohibition. Although The Miamisburg Environmental Management Project uses process knowledge to characterize the waste, the plant conservatively assumes that all hazardous wastes generated require treatment prior to land disposal until they are proven to meet treatment standards through analysis, as described in Subsection C-2.

C-3a(6) Land Disposal Restrictions Phase II–Universal Treatment Standards, and Treatment Standards for Organic Toxicity Characteristic Wastes and Newly Listed Wastes

LDR Phase II, promulgated in September 1994, identified organic constituents (in addition to existing EP metals and pesticide constituents) and levels at which a waste is considered hazardous based on the characteristic of toxicity. It Included wastes identified with the codes D018 through D043 based on the toxicity characteristic leaching procedure (TCLP). The LDR Phase II rule also established treatment standards for each of these constituents as if they are managed in systems other than those regulated under the Clean Water Act (CWA), those engaging in CWA-equivalent treatment prior to land disposal, and those injected into Class I deep injection wells regulated under the Safe Drinking Water Act (SDWA) (The Miamisburg Environmental Management Project does not utilize underground injection wells). In addition, because wastes exhibiting the toxicity characteristic (TC) can contain treatable levels of other hazardous

constituents, this rule also established treatment standards for the underlying hazardous constituents. It also established standards for soil, debris, and radiologically contaminated waste.

This rule also promulgated universal treatment standards (UTS) for organic, metal, and cyanide constituents–one set for wastewaters and a different set for non-wastewaters, that replaced previously existing treatment standards for hazardous wastes.

This rule, by its promulgation of the Universal Treatment Standards, impacts all- of The Miamisburg Environmental Management Projects waste. In addition, soil, debris and radiologically contaminated waste that could potentially be generated at the Miamisburg Environmental Management Project could be regulated upon the respective effective dates.

For each container of hazardous waste, including third-third wastes the appropriate forms from the LDR documentation package (Appendices C.2) or a comparable form as provided by the off site TSD, are provided by The Miamisburg Environmental Management Project indicating that either the waste does not meet applicable treatment standards or certifying that the waste meets treatment standards. The Miamisburg Environmental Management Project will identify both the treatability group (i.e., waste code and form) and a selected treatment option when more than one exists. A copy of this information will be maintained in the Miamisburg Environmental Management Project operating record.

C-3a(7) Sampling and Analytical Procedures

Sampling and analytical procedures that the Miamisburg Environmental Management Project will use to ensure conformity with the land disposal restrictions are described in Subsection C-2.

C-3b Notification and Certification Requirements (OAC 3745-59-07)

The subsections that follow present procedures that the Miamisburg Environmental Management Project follows for preparing and maintaining applicable notifications and certifications for generators. These procedures are also specified as part of the Waste Analysis Plan presented in Subsection C-2.

C-3b(1) Retention of Generator Notices and Certifications (OAC 3745-59-07)

For each container of hazardous waste, including wastes restricted from land disposal the appropriate forms from the LDR documentation package (Appendices C.1) or a comparable form as provided by the off site TSD, are provided by the waste generator indicating that either the waste does not meet applicable treatment standards or certifying that the waste meets treatment standards. The Miamisburg Environmental Management Project will identify both the treatability group (i.e., waste code and form) and a selected treatment option when more than one exists. A copy of this information will be maintained for a minimum of 5 years in the Miamisburg Environmental Management Project operating record.

C-3b(2) Notification and Certification of Wastes to be Further Managed (OAC 3745-59-07)

Many of the hazardous wastes generated at the Miamisburg Environmental Management Project are required under the LDR's to meet specific treatment standards or are required to be treated in a specified manner. Wastes are subject to further regulation if it is determined that the waste belongs to any of the categories of wastes restricted from land disposal as described in Subsection C-3a. Upon transfer of any restricted wastes to an off-site TSDF, the Miamisburg Environmental Management Project waste management personnel will prepare a notification or certification in accordance with OAC 3745-59-07(A)(1) and (2) for the wastes (as provided in Appendix C.1) that will accompany the hazardous waste manifest. This notice/certification will be retained for 5 years in the Miamisburg Environmental Management Project operating record. At the conclusion of the Mound Exit Project, and with the exit of the contractor, these records will be maintained by DOE and/or the contractor for the required time-period.

The Miamisburg Environmental Management Project is not seeking an operating permit for on-site treatment, disposal, or the use of a landfill or surface impoundment, therefore, sections C-3b(3), C-3b(4), C-3b(5) do not apply.

C-3c Additional Requirements Pertaining to Storage of Restricted Wastes (OAC 3745-59-50)

The Miamisburg Environmental Management Project stores hazardous wastes in containers on-site until such time as the wastes can be transferred off-site for treatment and disposal. In general, plant wastes are transferred for disposal off-site as soon as sufficient volume exists for a transfer and such services can be arranged.

Some hazardous wastes at the Miamisburg Environmental Management Project can have very limited or no available treatment and disposal options. These wastes include primarily hazardous and radioactive mixed wastes, as well as a very small quantity of dioxin-containing wastes. These wastes will be treated and disposed of as soon as The Miamisburg Environmental Management Project is able to identify and secure available off-site treatment and disposal outlets for the wastes.

C-3c(1) Restricted Wastes Stored in Containers [OAC 3745-59-50(A)(2)(a)]

Each container of hazardous waste stored at the Miamisburg Environmental Management Project is marked with an appropriate marking that identifies the contents, the date when accumulation began, and the waste code(s) assigned to the waste.

The Miamisburg Environmental Management Project does not store hazardous wastes in tanks, therefore Section C-3c(2) does not apply.

C-3c(3) Storage of Liquid PCB Wastes [OAC 3745-59-50(F)]

Pursuant to OAC 3745-59-50(F), the owner/operator of a facility storing liquid hazardous wastes containing concentrations of PCBs greater than or equal to 50 parts per million (ppm) must demonstrate that the facility meets the requirements of 40 CFR 761.65(b).

As described in detail in section D-1a(3), the Building 72 Hazardous Waste Storage Unit has secondary containment systems consisting of a seamless impermeable concrete pad with 6-in. curbing surrounding it. The building is enclosed with walls on three sides and a weather-protective canopy on the fourth side. There are no drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to flow from the storage area. PCBs may be stored in large volumes in bay 1 or in lab pack quantities in bay 3. The containment volumes of these bays are equal to at least two times the internal volume of the largest PCB container, or 25% of the total internal volume of all PCB articles and PCB containers. More specifically, the containment volume of bays 1 and 3 is 380.25 cubic feet (ft^3) or 2,844.27 gallons each. This indicates that no more than 11,377.08 total gallons of PCBs may be stored in each containment area or no more than 5,688.54 gallons in a single PCB article or PCB container.

As described in detail in section D-1a(3), the Building 23 Radioactive Mixed Waste Storage Unit has a secondary containment system for storage of PCB wastes at the east end of the building. Building 23 is an enclosed concrete block structure with a roof that prevents precipitation from reaching stored wastes. The building has a concrete floor and surrounding the area designated for PCB storage is a 6-in. concrete dike. The floor of Building 23, including the diked PCB storage area, has been sealed with an epoxy sealant and is impervious to PCB liquids. There are no drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to flow from the storage area. The containment volume of these bays is equal to at least two times the internal volume of the largest PCB container, or 25% of the total internal volume of all PCB articles and PCB containers. More specifically, the containment for the location where PCB wastes are stored is 60 ft^3 or 448.8 gallons This indicates that no more than 1,795.2 total gallons of PCBs may be stored in the containment area or no more than 897.6 gallons in a single PCB article or PCB container.

As indicated in Subsection B-2a, neither the Building 72 Hazardous Waste Storage Unit nor the Building 23 Radioactive Mixed Waste Storage Unit is located within the 100-year flood plain.

Liquid PCBs stored in Building 72 are routinely removed from storage to off-site facilities on a 90-day basis. Liquid PCBs stored in Building 23 do not currently have a schedule for removal as no known treatment option is available.

The Miamisburg Environmental Management Project is not seeking an operating permit for on-site treatment, disposal, management in a surface impoundment, or other land disposal condition, therefore sections C-3d, C-3e, C-3f, and C-3g do not apply.

APPENDIX C.1
LDR DOCUMENTATION PACKAGE

APPENDIX C.1
LDR DOCUMENTATION PACKAGE

General Requirements

The generator must determine if the waste is restricted from land disposal under OAC 3745-59. If the generator manages a restricted waste, then the treatment, storage, disposal facility (TSDF) must be notified of the appropriate treatment standard and applicable prohibition(s).

The universal treatment standards (UTS) apply to all listed and characteristic wastes for which treatment standards have been promulgated, with two exceptions. The first exception is the TC metal wastes (D004-D011). These metal wastes will be addressed in a future LDR rule, until that time, the treatment standards are expressed as constituent concentrations in waste extract (CCWE), constituent concentrations in waste (CCW), or specified by technology apply. The second exception is those for which the treatment standard is a specified method of treatment. Most of these wastes must continue to be treated using those required technologies. For a small number of wastes with previously specified methods of treatment, the universal standards are an alternative, i.e. either use of the specified method or the universal standard will satisfy the LDR requirement. For those few situations where a mixture of wastes may be subject to different standards for the same constituent, the more stringent standard continues to apply.

Where the UTS do not apply, the treatment standards are expressed as constituent concentrations in waste extract (CCWE), constituent concentrations in waste (CCW), or specified by technology. Waste-specific prohibitions on land disposal are:

- Solvent wastes.
- Dioxin-containing wastes.
- California List wastes.
- First third wastes
- Second third wastes.
- Third-third wastes.

The generator sends the notification/certification by completing one of two forms stating either:

- Waste meets treatment standards.
- Waste does not meet treatment standards.

If the waste consists of small containers of hazardous waste in overpacked drums (i.e., lab packs) then an alternate treatment expressed as a specified technology may be requested. In addition to the generator notification form that the waste does not meet treatment standards, the generator must identify whether the lab pack is organic or organometallic.

A restricted waste, as identified above, may be land disposed if the treatment facility meets the treatment standard for the waste received. The TSDF certifies meeting the treatment standard in one of two ways:

- Meets performance standard.
- Meets technology treatment standard.

If the certification is based on treatment standards expressed as concentrations in waste and the non-wastewater organic constituents are below detection limits after incineration, then the waste will be additionally certified as being below the analytical detection limit.

Once a characteristic waste is rendered no longer hazardous, the generator or the TSDF need not send a notification with each shipment. However, a notification and certification must be sent to the State of Ohio Environmental Protection Agency (OEPA) representative authorized to implement OAC 3745-59 with the following information:

- Name and address for the Subtitle D facility receiving the waste.
- Description of the waste as initially generated [including the EPA hazardous waste number(s) and treatability group(s)].
- Applicable treatment standards at the initial point of generation.

The treatability group is defined by both the waste code and form.

There are no petitions for exemption within this plan.

Generator Requirements

The generator must test his waste, or use knowledge of the waste, to determine if the waste is restricted from land disposal. If the waste is a restricted waste, then the generator must notify the TSDF of the appropriate treatment standard or applicable prohibition.

The notification must contain the following:

- EPA hazardous waste number.
- Treatment standard.
- Manifest number of shipment.
- Waste analysis data (where available).

For waste movement at the Miamisburg Environmental Management Project a waste profile number is assigned.

The generator complies with these requirements by completing Form G1 (meets standard) or Form G2 (fails to meet standard). The EPA hazardous waste number and appropriate treatment subcategory are identified on the form. Attached to the form, in addition to the waste analysis data, will be form WTS identifying the appropriate Treatment Standard from OAC 3745-59. Indicating the treatment standard also identifies the desired treatment technology when more than one option is available. California List wastes are indicated by checking the applicable category on the California List Notification form (Form CL).

Lab packs for which treatment by incineration is requested, must be accompanied by Form LPO (organic lab pack) or Form LPOM (organometallic lab packs). Organic lab packs may only contain hazardous wastes specified in OAC 3745-59-42, Appendix II, and organometallic lab packs may only contain the hazardous wastes specified in OAC 3745-59-42, Appendix I.

For characteristic hazardous wastes (e.g., Dxxx) that are no longer hazardous after treatment, the generator notification/certification forms need not be sent to subsequent TSDFs. A notification and certification must be sent to the EPA Regional Administrator or state agency authorized to implement OAC 3745-59. Form CW will be sent to the OEPA representative identifying the following information:

- Name and address of the facility receiving the waste.
- Description of the waste as initially generated.
- Applicable treatment standards as initially generated.

Form G1

Generator Certification
that
Waste Meets Treatment Standards

Manifest Number_____

Waste Tracking Number_____

EPA HAZARDOUS WASTE NUMBER	SUBCATEGORY	EPA HAZARDOUS WASTE NUMBER	SUBCATEGORY

"I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in OAC 3745-59-40 through 44 and all applicable prohibitions set forth in OAC 3745-59-32 or RCRA Section 3004(d). I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment."

Signed:_____ Date:_____

This form must be accompanied by the California List Notification (Form CL) and Mound RCRA Hazardous Waste Treatment Standards (Form WTS), indicating the appropriate treatment standard.

Form G2

Generator Notification
that
Waste Does Not Meet Treatment Standards

Manifest Number_____

Waste Tracking Number_____

EPA HAZARDOUS WASTE NUMBER	SUBCATEGORY	EPA HAZARDOUS WASTE NUMBER	SUBCATEGORY

This shipment of hazardous waste contains waste(s) that are restricted from land disposal due to concentrations in excess of the treatment standards. If they are to be land disposed, they must first be treated such that the restricted components are below the treatment standard limits. The EPA Waste Number(s) and corresponding treatment standards are indicated on the attached sheets. A copy of the waste analyses is attached.

Signed: _____ Date: _____

This form must be accompanied by the California List Notification (Form CL) and Mound RCRA Hazardous Waste Treatment Standards (Form WTS), indicating the appropriate treatment standard.

Form CL

California List Notification

The California List [OAC 3745-59-32 and RCRA 3004(d)] is:

___ A. Liquid hazardous wastes, including free liquids associated with any solid or sludge, containing free cyanides at concentrations greater than or equal to 1,000 mg/L.

___ B. Liquid hazardous wastes, including free liquids associated with any solid or sludge, containing the following metals (or elements) or compounds of these metals (or elements) at concentrations greater than or equal to those specified below:

___(i) Arsenic and/or compounds (as As) 500 mg/L.

___(ii) Cadmium and/or compounds (as Cd) 100 mg/L

___(iii)Chromium [VI and/or compounds (as Cr VI)] 500 mg/L.

___(iv) Lead and/or compounds (as Pb) 500 mg/L.

___(v) Mercury and/or compounds (as Hg) 20 mg/L.

___(vi) Nickel and/or compounds (as Ni) 134 mg/L.

___(vii)Selenium and/or compounds (as Se) 100 mg/L.

___(viii)Thallium and/or compounds (as Tl) 130 mg/L.

___ C. Liquid hazardous waste having a pH less than or equal to 2 (2.0).

___ D. Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 50 ppm.

___ E. Hazardous wastes containing halogenated organic compounds in total concentration greater than or equal to 1,000 mg/kg.

Form CL
(Continued)

The halogenated organic compounds of "E" are identified in the appendix to OAC 3745-59-32 as:

Volatiles:

_____Bromodichloromethane
_____Bromomethane
_____Carbon tetrachloride
_____Chlorobenzene
_____2-Chloro-1,3-butadiene
_____Chlorodibromomethane
_____Chloroethane
_____2-Chloroethyl vinyl ether
_____Chloroform
_____Chloromethane
_____3-Chloropropene
_____1,2-Dibromo-3-chloropropane
_____1,2-Dibromomethane
_____Dibromomethane
_____Trans-1,4-Dichloro-2-butene
_____Dichlorodifluoromethane
_____1,1-Dichloroethane
_____1,2-Dichloroethane
_____1,1-Dichloroethylene
_____Trans-1,2-dichloroethene
_____1,2-Dichloropropane
_____Trans-1,3-dichloropropene
_____Cis-1,3-dichloropropene
_____Iodomethane
_____Methylene chloride
_____1,1,1,2-Tetrachloroethane
_____1,1,2,2-Tetrachloroethane
_____Tetrachloroethene
_____Tribromomethane
_____1,1,1-Trichloroethane
_____1,1,2-Trichloroethane
_____Trichloroethene
_____Trichloromonofluoromethane
_____1,2,3-Trichloropropane
_____Vinyl chloride

Semivolatiles:

_____Bis(2-chloroethoxy)ethane
_____Bis(2-chloroethyl)ether
_____Bis(2-chloroisopropyl)ether
_____p-Chloroaniline
_____Chlorobenzilate
_____p-Chloro-m-cresol
_____2-Chloronaphthalene
_____2-Chlorophenol
_____3-Chloropropionitrile
_____m-Dichlorobenzene
_____o-Dichlorobenzene
_____p-Dichlorobenzene
_____3,3-Dichlorobenzidine
_____2,4-Dichlorophenol
_____2,6-Dichlorophenol
Hexachlorobenzene
_____Hexachlorobutadiene
_____Hexachlorocyclopentadiene
_____Hexachloroethane
_____Hexachloroprophene
_____Hexachloropropene
_____4,4-Methylenebis(2-chloroaniline)
_____Pentachlorobenzene
_____Pentachloroethane
_____Pentachloronitrobenzene
_____Pentachlorophenol
_____Pronamide
_____1,2,4,5-Tetrachlorobenzene
_____2,3,4,6-Tetrachlorophenol
_____1,2,4-Trichlorobenzene
_____2,4,5-Trichlorophenol
_____2,4,6-Trichlorophenol
_____Tris(2,3-dibromopropyl)phosphate

Organochlorine Pesticides:

_____Aldrin
_____alpha-BHC
_____beta-BHC
_____delta-BHC
_____gamma-BHC
_____Chlordane
_____DDD
_____DDE
_____DDT
_____Dieldrin
_____Endosulfan I
_____Endosulfan II
_____Endrin
_____Endrin aldehyde
_____Heptachlor
_____Heptachlor epoxide
_____Isodrin
_____Kepone
_____Methoxyclor
_____Toxaphene

Phenoxyacetic Acid Herbicides:

_____2,4-Dichlorophenoxyacetic acid
_____Silvex
_____2,4,5-T

PCBs:

_____Aroclor 1016
_____Aroclor 1221
_____Aroclor 1232
_____Aroclor 1242
_____Aroclor 1248
_____Aroclor 1254
_____Aroclor 1260
_____PCBs not otherwise specified

Dioxins and Furans:

_____Hexachlorodibenzo-p-dioxins
_____Hexachlorodibenzofuran
_____Pentachlorodibenzo-p-dioxins
_____Pentachlorodibenzofuran
_____Tetrachlorodibenzo-p-dioxins
_____Tetrachlorodibenzofuran
_____2,3,7,8-Tetrachlorodibenzo-p-dioxin

Form LPO

Generator Notification
for
Organic Lab Packs
OAC 3745-59-42, Appendix II Wastes
Requesting Technology-Based Treatment

Manifest Number_____

Waste Tracking Number_____

"I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste and that the lab pack contains only organic wastes specified in OAC 3745-59-42, Appendix II or solid wastes not subject to regulation under RCRA. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

Signed: _____ Date: _____

This form must be accompanied by the Generator Notification (Form G2) and the Mound RCRA Hazardous Waste Treatment Standards (Form WTS), indicating the appropriate technology-based treatment.

Form LPOM

Generator Notification
for
Organometallic Lab Packs
OAC 3745-59-42, Appendix I Wastes
Requesting Technology-Based Treatment

Manifest Number_____

Waste Tracking Number_____

"I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack contains only the wastes specified in OAC 3745-59-42, Appendix I or solid wastes not subject to regulation under. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

Signed: _____ Date: _____

This form must be accompanied by the Generator Notification (Form G2) and the Mound RCRA Hazardous Waste Treatment Standards (Form WTS), indicating the appropriate technology-based treatment.

Form CW

Generator/Treatment Facility Notification/Certification of Characteristic Hazardous Waste which No Longer Exhibits Characteristic

Subtitle D Receiving Facility

Name:_____

Address:_____

_____

_____

Waste As Initially Generated

Manifest Number_____
Waste Tracking Number_____

EPA HAZARDOUS WASTE NUMBER	SUBCATEGORY	EPA HAZARDOUS WASTE NUMBER	SUBCATEGORY

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the performance levels specified in OAC 3745-59-40 through 44 and all applicable prohibitions set forth in OAC 3745-59-32 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

Signed: _____ Date: _____

This form must be accompanied by the California List Notification (Form CL) and Mound RCRA Hazardous Waste Treatment Standards (Form WTS), indicating the appropriate treatment standard.

Form WTS

The Miamisburg Environmental Management Project RCRA Hazardous Waste Treatment Standards

Waste Tracking Number_____

EPA HAZARDOUS WASTE NUMBER	WASTE DESCRIPTION AND SUBCATEGORY	CCW, CCWE, OR TBS	WASTEWATER OR NON-WASTEWATER	STANDARD* (UNITS)

*Identify applicable treatment standards, including units as appropriate.

"I certify under penalty of law that the applicable waste treatment standards have been identified in accordance with the requirements of OAC 3745-59-40. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment."

Signed: _____ Date: _____

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

SECTION D

PROCESS INFORMATION

Prepared By
BWXT of Ohio, Inc.
For the U.S. DOE-Miamisburg Environmental Management Project Office
Modification 004-April 2001 Renewal Submittal

SECTION D-BUILDING 72
PROCESS INFORMATION

D-1 Containers

The wastes covered by the provisions of this permit are generated at the Miamisburg Environmental Management Project, in support of CERCLA clean up of the facility. This section addresses that part of the wastes that are managed in the Building 72 Hazardous Waste Storage Unit (Building 72). The wastes stored in Building 72 consist of wastes that is either directly related to the site clean up (i.e., clean up of soil or building demolition) or is in support of the site cleanup (i.e., environmental monitoring wastes, maintenance wastes) that are generated in support of site cleanup. At this time, the wastes stored in Building 72 could potentially include waste from the following ongoing CERCLA operations:

- CERCLA removal actions
- General plant maintenance.
    - Electrical in support of disconnection of utilities before building demolition.
    - Plumbing in support of disconnection of utilities before building demolition.
    - Heating, ventilation, and air conditioning (HVAC) maintaining service in administrative areas.
    - Janitorial providing service in administrative areas.
    - Grounds care providing service administrative areas.
    - Vehicle maintenance operations in support of vehicles involved in soil removal.
    - Photographic operations to support CERCLA documentation and communication.
- Environmental Monitoring in support of media characterization data used in CERCLA decions.
- Spill response/release operations.

During the clean up, the Miamisburg Environmental Management Project will generate clean up or CERCLA wastes that in some cases will resemble the traditional RCRA regulated wastes previously generated at the facility. Because the clean up wastes can resemble RCRA wastes, and because those wastes can contain RCRA hazardous waste constituents that are regulated under CERCLA, the site will continue to receive for storage CERCLA removal action generated wastes into the RCRA permitted storage areas. The permitted storage facilities will not receive waste other than that which is in support of CERCLA governed mission.

Wastes generated under CERCLA are also often one-time in nature with respect to their point-of-generation and with respect to their waste-type, because of the particular piece of equipment or the particular area or building from which the waste was generated. Therefore the subject equipment or the location being cleaned up will not be a continuing source of wastes nor will not be a continuing point of generation. This type of waste is reflected in the Part A application with the inclusion of possible waste code that is based on Mound's chemical inventory in the late 1990's.

CERCLA waste types received for storage in Building 72 will be stored in the building only if the appropriate waste code is included as a permissible waste type in the permit for the storage building. If the required waste code is not included in the permit, the permit will be modified prior to receiving the waste. Any CERCLA wastes sent to Building 72 will be stored under the conditions established by this permit, pending the disposition of those response action generated wastes for off-site disposal.

Building 72 was constructed in 1986. The building is a 40-foot (ft) x 60-ft pre-engineered building constructed over an 8-inch (in.) thick concrete base. The concrete slab was developed from a series of monolithic pours to form three 20-ft x 40-ft diked areas. Typical construction techniques were used to develop a smooth crack-free, impervious surface. The concrete base of each bay is sloped to a sump located in the center of the area. Containers are stored on a steel grating that overlays each 20-ft x 40-ft bay. The floor has no drain to the outside of the building. A 24 in. x 24 in. deep concrete sump is located in the center of each bay to collect any container leaks or spills, these sumps vary from bay-to-bay from 24 in. to 32 in. deep. The side walls of the sump are 4.5 in. thick and the base of the sump is 6 in. thick. Portable

drum pumps are used to remove any wastes collected in these sumps. Building 72 is separated into three bays in order to separate incompatible wastes. The third bay is divided into two areas for flammable and non-flammable storage. The design capacity of Building 72 is 13,285 gal.

Vertical steel I beams, anchored at the base, support a steel roof, which is sloped for drainage. The entire structure is electrically grounded. Explosion proof overhead lighting and electrical outlets are provided as safety features. The eastern side of the building is open to the outside, but is fitted with a weather-protective canopy. To provide natural ventilation, the three remaining walls are open near the top and bottom. Six ventilators are located on the roof to increase the air circulation.

Positioning of waste containers within the building is normally performed using two-wheel hand carts. An electrically driven explosion-proof overhead crane assembly is also available for drum positioning or other container-handling operations.

Security against entry of unauthorized persons into Building 72 is provided by a 6-ft high chain-link fence with locked gates and warning signs. Figure D-1 is a photograph of Building 72.

D-1a Containers with Free Liquids

The physical form of wastes managed in this unit is discussed in Section C. The waste are primarily free liquids, although solids and sludges are also managed at Building 72. Although the physical form varies, all liquid hazardous waste that is accepted at Building 72, are stored inside the building for containment purposes.

D-1a(1) Descriptions of Containers (OAC 3745-55-72)

Containers used to store hazardous wastes at Building 72 are described in Table D-1. All containers used to package hazardous wastes meet the appropriate U.S. Department of Transportation (DOT) specifications as detailed in 49 CFR 178. In addition, the following criteria must be met for the containers picked up for transport to Building 72:

- The container must be free of significant rust, visible pitting, or corrosion.
- The container will not be used if the rust, visible pitting, or corrosion is present and judged to affect the structural integrity of the container.
- The container rolling hoops or chimes, walls, and heads must not be significantly creased or dented.
- The container construction material must be fully compatible with the waste that it contains.
- The container heads cannot be bulged or expanded.
- The container heads or walls must be free of evidence of spillage.
- The container must be marked to fully identify the waste it contains.
- The container must be provided with free headspace as defined in 49 CFR 173.24(h).
- The containers must be tightly closed.
- The waste accumulation date must be noted on the container, if applicable.

The number of each type of container varies considerably over time and cannot be estimated accurately; however, it is not anticipated that more than 200 containers of any one size will be on hand at any one time. Prior to shipment off-site, all containers are marked and labeled in accordance with DOT specifications. Such labeling and marking is required for shipping, not for storage.

D-1a(2) Container Management Practices (OAC 3745-55-73, 3745-54-35)

Container management practices at the Building 72 storage area involve a variety of interrelated activities, including the following:

- Selection of containers.

- Documentation.
- Prevention of spills and ruptures.
- Segregation of incompatible wastes.
- Container marking and as required labeling.
- Packaging of some wastes.
- Sampling.
- Lab packing.
- Inspections.
- Preparation for shipment off-site.

The containers used for storage of wastes are selected based on DOT compatibility requirements. Observance of this requirement ensures that the proper type of container is used. Each container to be stored at Building 72 is inspected prior to transfer from its source to ensure that the container meets the proper DOT specification for the type of waste indicated. Each container is appropriately marked as to its contents and the associated hazard. Containers used for waste shipment are tested for conformance with procurement quality control (QC) requirements.

For each container of hazardous waste managed at Building 72, a unique waste tracking number is assigned. In addition, information about the waste is required from the individual generating source. This information typically contains the following information:

- Waste identification.
- Generating activity.
- Bulk composition.
- Potential trace contaminants.
- Physical characteristics.

DOT containers used to store hazardous waste in Building 72 are primarily 55 gallon 1A1's and 1A2's, and 55 gallon 1H1's and 1H2's.

Material Safety Data Sheets (MSDSs) are required for discarded commercial products. For new wastes, analytical results are developed unless documented process knowledge is sufficient to fully characterize the waste (see Subsection C-2).

Each container must be marked with the words "Hazardous Waste" or with other labels or markings that identify the hazard and/or the contents of the container. At the time of pickup for transport, waste management personnel check the container markings for completeness and log the pertinent data on the waste tracking records.

Each container received from a generator is verified for its correct accumulation date if applicable and is either marked, or a tag is affixed to the container to indicate the date of receipt at Building 72.

Wastes are transported by truck from the points of generation to Building 72. Thus, unloading operations are required at the storage unit. Numerous precautions are taken to minimize the potential for spills and ruptures. Trucks used to transport containers are equipped with hydraulic tailgates to facilitate loading and unloading operations. Plant traffic rules are strictly obeyed. Trained waste management personnel accompany each waste during intra-plant transport. Containers are unloaded from the truck, utilizing the hydraulic loading dock at Building 72. Spare containers, overpacks, and absorbent booms are available to contain any spills that may occur. Section F describes the minimum amount of spill equipment maintained at Building 72.

Prior to pickup, each container is inspected for the following:

- To ensure that the bung and lid are properly closed.

- To assess the container's condition relative to the criteria described previously in this subsection.
- To ensure that the container is properly marked and/or labeled.

Once the containers are accepted and transported to Building 72, they are off-loaded and moved typically into the Building 72 one at a time. Containers are weighed and moved to their respective bays by category of waste, which prevents the mixing of incompatible wastes in the event of a spill. Each day that transfer operations are performed, the containers, containment system, and areas of operations are inspected, as indicated in Section F.

During movement within Building 72, large containers such as drums are usually moved, one container at a time, by either drum dollies or by a hoist. The hoist has a capacity of 1,000 pounds (lb), which is approximately twice the mass of the majority of wastes held in 55-gal. drums at Building 72. The hoist rail is rated at 1,500-lb capacity. If these items require replacement, the equipment selected for replacement will be of equivalent capacity.

The procedures for using only proper containers, inspection upon pickup, and the individual movement of containers are combined with a number of other operating procedures to prevent spills and ruptures. These procedures include the following requirements:

- Weekly inspection of containers, base, and containment system, as described in Section F.
- Separation of containers from accumulated liquids or precipitation, which is achieved by indoor storage on the grates that overlay the base.
- Maintenance of aisles at a minimum 24 in. in width to allow ease of movement, operation, and inspection.
- Prohibition of stacking of containers greater than 5 gallons in capacity.

To facilitate the storage, transport, and the disposal of the wastes, and to reduce costs through reduced handling, small quantities of the same or similar wastes occasionally are consolidated or bulked into containers of up to 55 gal. in size. During the bulking process, waste volumes are determined visually to prevent overflow using a funnel or drum pump. All bulking transfers conducted are for quantities of less than 55 gal.

Typical procedures followed to prevent spills during the consolidation operations include the following:

- Operator inspection of both containers involved in the transfer, and verification of the type of waste, waste code, container type, generating source, and volume in each container.
- Visual inspection of the receiving container during transfer to ensure adequate headspace is maintained.
- Use of a funnel inserted in the bung of the receiving container or a drum pump for transfers.
- Removal of the funnel or pump immediately after use and closure of container.
- Decontamination of drum pumps and funnels by a water rinse prior to subsequent use.

Waste containers managed at Building 72 are normally maintained in a closed condition. Any opening or closing of flammable waste containers within Building 72 will be done with spark-proof brass or cadmium alloy bung wrenches only. Procedures similar to those described for the movement of wastes into Building 72 are followed for the transfer of wastes to the transporter or for off-site disposition.

For discarded laboratory chemicals, the procedures used to prevent spills include the storage of wastes in the product container, placement of these waste containers in trays constructed from materials compatible with the waste, and standard operating procedures that ensure that these containers are maintained in a closed condition in a stable storage configuration. During overpacking operations for transport off-site, containers of wastes are inspected to ensure the container is tightly closed and are transferred, one container at a time, to the overpack. During these operations, the overpack container is placed adjacent to the packing tables to reduce handling requirements.

Additional measures used to prevent spills at Building 72 include the requirement that containers received at Building 72 have adequate headspace to prevent overflow, venting of liquids from the container, or the bulging of container heads due to changing temperatures. The indoor storage of containers provides protection from the weather.

Prevention of the mixing of incompatible wastes is ensured by several procedures. Containerized wastes are stored in one of three bays according to the general classification of solvent (flammable bay), acid (acids bay), or caustic (akaline bay) wastes. Discarded laboratory and small quantity chemicals are segregated and stored on shelves located in each bay. Drawing FSD920920, included as an attachment in Part 2 of this Permit Application, shows storage arrays that can be used to segregate incompatible wastes.

Discarded laboratory and small quantity chemicals are also segregated in the manner described for bulk wastes. These containers are segregated and separately placed in storage trays according to their compatabilities as defined in standard chemical compatibility charts. Incompatible wastes within the general categories are placed in separate trays, and vertical segregation is achieved by procedures that prohibit the storage of incompatibles above one another.

Gas cylinders determined to be RCRA hazardous waste are managed at Building 72. Cylinders are segregated by hazard class and stored in the appropriate bay. Most waste cylinders received at Building 72 are flammable, non-flammable, or inert gas cylinders. These cylinders are stored in accordance with OSHA cylinders storage requirements (i.e., cylinder identified, securely chained, and with a cap on them). A smaller number of cylinders are stored in the same way, but within the reactives bay. Cylinders stored in the reactives bay include oxidizers, corrosives, air reactives, and poisons.

Finally, as noted previously, the aisle space in Building 72 is maintained at a 24 in. minimum, as shown in Drawing FSD920920. The maximum storage volume based on this arrangement is 13,285 gal, and the maximum number of containers, other than small volume lab pack chemicals, will not exceed 650. Stacking of hazardous waste containers of larger than 5 gal. size in Building 72 is not allowed; thus, the maximum stack height is one container. Containers with a capacity of less than 5 gal are managed as lab-pack items, and are stored on shelves.

The following additional terms and conditions were established as part of the sites Permit during negotiations with the hazardous Waste Facility Board. Therefore, in accordance with the provisions established by the Ohio Hazardous Waste Facility Board in the Opinion and Final Orders issued for the permit, dated October 16, 1996, the Miamisburg Environmental Management Project:

1. "Shall not store secondary explosives in Building 72."
2. "Shall not store in excess of 2,500 pounds gross weight (i.e., the weight of the cylinders and contained gases) of D001 gaseous wastes in gas cylinders at any one time in Building 72."

D-1a(3) Secondary Containment System Design and Operations [OAC 3745-50-44(C)(1)(a)(i), (c) and (d), 3745-55-75(A) and (D)]

Design plans and specifications for Building 72, including the secondary containment system, are presented as an attachment in Part 2 of this Permit Application. Drawing FSD920920, also included as an attachment in the same volume, illustrates example storage arrays for wastes in each bay to ensure incompatible wastes are properly separated. Further, as shown in the drawings, each storage bay has a separate secondary containment system. The system consists of a monolithically poured reinforced concrete slab draining to a precast concrete sump. Waste containers sit on steel grating, which is supported 6 to 18 in. above the slab. Thus, even in the event of a release, incompatible wastes would remain separated.

Containers holding discarded laboratory chemicals and other small quantities of waste are also stored on shelves located in each bay. These wastes are segregated by their characteristics to ensure their similarity to, and their compatibility with the bulk wastes stored in each bay. To ensure the integrity of containment and to provide segregation of incompatible wastes, discarded laboratory chemicals are retained in the

product container and placed in storage trays located on the shelf. The maximum quantity of wastes that may be placed on a shelf is determined in most instances by the space available for the chemicals and their containment trays. In no case will the weight quantity stored on a shelf exceed the shelf design capacity of 250 lb. The total number of containers that will equal this weight cannot be estimated because the laboratory chemicals are in product containers that vary considerably in size from less than a gram to several pounds. Information regarding the secondary containment system design and operation is presented in the subsections that follow.

D-1a(3)(a) Requirement for the Base or Liners to Contain Liquids [OAC 3745-55-75(B)(1)]

As noted previously, each of the four storage bays in Building 72 has a separate secondary containment system. The base of the system consists of a monolithically poured reinforced concrete pad.

After completion of the monolithic slab and curbing, the base of the unit was sealed with an ASTM C309 Type I membrane-forming compound. This sealant is designed to enhance concrete curing and does not provide chemical resistance. However, with this sealant it is expected that the concrete will have a permeability on the order of 10^{-8} centimeters per second (cm/sec). The compatibility chart demonstrating the chemical resistance of concrete to the types of wastes stored in Building 72 are listed in OSWER Policy Directive No. 9483.00-1. As indicated by this directive concrete is generally compatible with the majority of materials stored in Building 72 with the exception of acids, concentrated alkalies, and certain chlorinated solvents under certain conditions.

The base of Building 72 has been coated with a glass-filled floor topping to enhance the resistance of the base to the wastes noted. The selected floor topping for the bays was Master Shield VNC Vinyl Ester Novolac Coating, a high molecular weight vinyl ester resin with glass-flake filling that is applied with a trowel. This floor coating is a multilayered topping consisting of a primer applied to the surface, a silica-filled vinyl ester base coat, a fiberglass reinforcing mat, and a silica-filled topcoat to provide a total coating thickness of 125 mils. This floor topping has been applied to the floor slab, sumps, and interior curbing of each bay to enhance the chemical resistance of these containment members. A table of floor topping compatibility is included in Appendix D.1 (The same coating is used in Bldg. 23).

The foundation plan for Building 72 is provided in Drawing 307 201-01006 included as an attachment in Part 2 of this Permit Application. The base of the structure was developed on a modified fill sub-base compacted to >95% with a minimum load-bearing capacity of >4,000 pounds per square foot (psf) (see Drawings 307 201-01002 and 307 201-01004 are included in attachment in Part 2 of this Permit Application.). The floor slab was developed from a series of 8-in. thick monolithic pours to form three separate storage cells separated by curbing. The base and curbs were constructed from Type I Portland cement reinforced with 6 x 6, W4 x W4 welded wire mat. The 28-day compressive strength for this concrete was specified as 4,000 pounds per square inch (psi) and verified by an ASTM C39 and C873 compressive test as >4,200 psi.

Containers are stored on a mild steel grating that is supported above the base of the containment system by 4-in. x 4-in. and 6-in. x 3-in. tubular steel framing that spans the length of each bay. The tubular steel framing is supported above the base by 3-in. x 3-in. tubular steel supports so that the grating is elevated above the lowest slab elevation by 18 in. The 2-in. steel grate is also isolated from the monolithic curb; therefore, the stored containers do not come into contact with the base.

Building foundations consist of 4 ft x 4 ft x 12 in. thick footings reinforced with #5 rebar. The footings are tied to vertical 12-in. x 12-in. column piers with #6 rebar, and the piers are reinforced with rebar cage consisting of #6 and #3 reinforcing bars. The column piers were not developed as part of the monolithic slab and are isolated from the slab with 0.5 in. of expansion joint material.

Based on this construction, the structural integrity of the base of the storage unit is adequate to support the design loads. Further, the foundation and containment system base were designed such that no cracking due to actual loadings is anticipated to occur.

Trays that are used to provide secondary containment for the laboratory and small quantity chemicals are rectangular containers constructed of high-density polyethylene (HDPE), nylon, polyvinylidene fluoride (PVDF), stainless steel, or glass. Selection of the materials for construction of the trays is based on compatibility with the chemical prior to use. The trays are visibly inspected to ensure they are free of cracks and gaps and are adequate to retain the quantity of any potential release from the container being held. Because these trays are placed on storage racks, only minimal structural strength is required.

D-1a(3)(b) Containment System Drainage [OAC 3745-50-44(C)(1)(a)(ii), 3745-55-75(B)(2)]

The base of the container storage unit is sloped (2.5% along the length and 5% along the width) toward a concrete sump located in each bay, as shown by Drawing 307 201-01006 included as an attachment in Part 2 of this Permit Application. This sump is 24 in. wide, 24 in. long, and 32 in. deep and is located at the center of each bay. A floor grating is provided over the sloped base to store containers and to eliminate contact with any standing liquids in the containment system. As indicated in Drawing 307 201-01006, the grating upon which the containers are stored ranges from 6 in. above the base at the interior curbing of each bay to 18 in. above the base at the mouth of the sump. Therefore, the design of Building 72 incorporates both the provisions of a sloped base and elevation of containers to minimize contact with free-standing liquids or spills.

The design of Building 72 also incorporates several other features to minimize contact between containers and precipitation. Building 72 is an enclosed structure with a roof and sheet-metal walls along three sides. The fourth side of the building is open, but is provided with a weather-protective canopy. These design features serve to prevent the entry of precipitation into the containment system. Run-on from stormwater is prevented from entering the structure because the building foundation is raised 4 to 8 in. above the surrounding ground surface.

The individual trays serving as secondary containment for the laboratory and small quantity chemicals are not equipped for drainage. Should a release occur, the release would be manually re-containerized in an appropriate container. The storage racks are located against the building walls and, thus, no precipitation will enter the trays.

D-1a(3)(c) Containment System Capacity [OAC 3745-50-44(C)(1)(a)(iii), 3745-55-75(B)(3)]

Within each storage bay, containers will be placed for storage in either single or double container rows separated by aisles no less than 24 in. in width to provide for ease of operation, inspection, and emergency response. To provide adequate space in the front of each bay for staging containers during transfer operations, an aisle space of 3 ft is retained along this face of the building. Storage shelves are located along the south wall of each bay for the storage of small quantity and laboratory chemicals. These storage shelves are rated for a total capacity of 250 lb per shelf. Based on this storage array, a total volume of 4,455 gal. could be stored in each bay. Drawing FSD920920, included as an attachment in Part 2 of this Permit Application, depicts this as an example of a storage array.

The containment capacity of each bay is calculated as follows:

- The volume that could be contained near the top of the containment system, which includes a 6-in. curb that completely surrounds the building is:

$$V_1 = a \times b \times c$$

Where: a = Internal width of bay (19.5 ft).
b = Height of the curbing from base at the edge (0.5 ft).
c = Internal length of the bay (39 ft).

$$V_1 = 19.5 \text{ ft} \times 0.5 \text{ ft} \times 39 \text{ ft} = 380.25 \text{ ft}^3$$

- The volume of the sloped portion near the bottom of the containment system is, which can be likened to the volume of the frustum of a pyramid, is:

$$V_2 = (h/3) \times [A_1 + A_2 + (A_1 \times A_2)^{1/2}]$$

Where: h= Height (1 ft).
A_1 = Area at the top of the bay (760.5 ft^2).
A_2 = Area at the bottom of the bay above the sump (4.0 ft^2).

$$V_2 = (1/3) \times [760.5 + 4.0 + (760.5 \times 4.0)^{1/2}] = 273.2\ ft^3$$

- The volume available in the sump is:

$$V_3 = l \times w \times h$$

Where: l = length of the sump (24 in.)
w = Width of the sump (24 in.)
h = Height of the sump (32 in.)

$$V_3 = 24\ in. \times 24\ in. \times 32\ in. = 18432\ in^3 = 10.7\ ft^3$$

Calculation of the containment capacity must consider the volume displaced by the volume occupied by the support beams, sump, and the curbs for the reactives bay. The volume displaced by the curb for the reactives bay is:

$$V_4 = l \times w \times h$$

Where: l = length of the curb (21 ft.)
w = Width of the curb (0.67 ft.)
h = Height of the curb (0.75 ft.)

$$V_4 = (21)(0.67)(0.75)$$

$$V_4 = 10.6\ ft^3$$

The volume occupied by the reactives bay sump may also be estimated as the product of its height, length and width:

$$V_5 = l \times w \times h$$

Where: l = length of the sump (2 ft.)
w = Width of the sump (2 ft.)
h = Height of the sump (2 ft.)

$$V_5 = (2)(2)(2)$$

$$V_5 = 8\ ft^3$$

The volume occupied by the support steel within each bay may be estimated as the product of its maximum height, total length and width, and the number of braces:

$$V_6 = nhwl$$

Where: n = Number of braces (4).
h = Maximum height of brace (1.5 ft).
l = Length of brace (39 ft).

w = Width of brace (0.25 ft).

V_6 = (4)(1.5 ft.) (39ft.) (0.25ft.)

$V_6 = 58.5\ ft^3$

The total capacity is the sum of the volume available minus the displaced volume:

$V_T = V_1 + V_2 + V_3 - V_4 - V_5 + V_6$

$V_T = 380.25 + 273.2 + 10.7 - 10.6 + 8 - 58.5$

$V_T = 603.05\ ft^3$

$V_T = 4511$ gal.

Therefore, the secondary containment capacity of 4,511 gal. exceeds the design capacity of 4,428 gal. for each storage bay. Thus, sufficient secondary capacity, significantly exceeding the required 10% of design capacity.

Containment trays used for the secondary containment of small quantities of chemicals are typically of four standards sizes:

- 8 in. x 8 in. x 8 in. = 2 gal.
- 12 in. x 12 in. x 12 in. = 7 gal.
- 24 in. x 12 in. x 12 in. = 15 gal.
- 24 in. x 12 in. x 18 in. = 22 gal.

The size of the containment trays used will be based on the available containment volume of the tray after the volume displaced by the product container is subtracted. Chemical product containers are stored in these trays in such a fashion that the available containment equals approximately 25% of the total volume or the volume of the largest container, whichever is greater.

D-1a(3)(d) Control of Run-on [OAC 3745-50-44(C)(1)(a)(iv), 3745-55-75(B)(4)]

As noted previously, Building 72 is a prefabricated steel building enclosed on three sides and covered with a roof. The open fourth side has an extended canopy to prevent precipitation from entering the secondary containment system of the unit. Further, as noted in the previous subsection, the secondary containment system capacity for the bay adjacent to the open side exceeds the required capacity by a factor of 8 (i.e., 79% of 4,455 gal. or 3,518 gal.) to a required 10% of design capacity. Thus, a significant factor of safety exists to compensate for the run-on of any precipitation.

To prevent surface-water run-on, several design aspects were included in construction of Building 72. The Building 72 site was developed on a slight grade sloping from the east-west centerline to north and south to facilitate drainage as shown in Drawing 307 201-01003. Drawing 307 201-01003 is included as an attachment in Part 2 of this Permit Application. The site is elevated above the existing grade along the eastern, western, and southern side. The embankment along the southern and eastern sides was sloped to grade at 4:1, and the embankment along the western side was sloped to grade at 2:1. An asphalt pavement surrounds the building facilitating drainage of surface flow to the north and south of the building centerline. Stormwater catch basins are located at each corner of the asphalt, to further aid in the removal of surface water. Finally, the building foundation (and the building floor) is elevated a minimum of 4 in. and up to 8 in. above the asphalt pavement. These design features will prevent surface-water run-on into Building 72.

D-1a(3)(e) Removal of Liquids from Containment System [OAC 3745-50-44(C)(1)(a)(v), 3745-55-75(B)(5)]

The subsections that follow detail how the removal of liquids from the secondary containment system that would occur if a release were to occur. In the unlikely event rain or snow enters the system, accumulated liquid will be removed from the sump as though it were a leak from multiple containers. The recovered liquid will be sampled and characterized, as discussed below for disposal purposes. In the event that there is a leak or spill in Building 72, the following actions will be undertaken:

1. Assessment of leak: An assessment will be made as to whether the spill or leak resulted from a single or multiple drums and an estimate made of the quantity of spilled material. If it is determined the leak resulted from a single drum, sampling is not necessary as the composition of the material is already known from waste tracking records and container markings. In this case, the material collected in the sump and the material remaining in the leaking container will be pumped to a new drum of the same type. Following transfer, markings will be applied to the new drum. The container found to be leaking will be rinsed with water and the rinsate will be transferred to a new container of equivalent DOT specification. If the released material is an acute hazardous waste, the leaking container will be triple rinsed and the rinsate containerized. If multiple containers are observed to have leaked, sampling will be necessary. Prior to sampling, the material from the leaking drums will be transferred to containers of equivalent DOT specification and properly marked and labeled. The greater potential occurrence for spillage is during waste transfer or bulking operations. In this event, the nature of the material is known and response will proceed as described in paragraph 2.

2. Removal of material: During the initial assessment, the volume of material involved will also be estimated. If the incident involves incidental spillage during transfer operations (compositing of wastes), the residue will be washed to the sump with ~5 gal. of water and removed with the drum pump. Incidental spillage is defined as droplet-type spills [generally < 100 milliliters (ml)]. The spill residue and water will be transferred to a container of equivalent DOT specification as the original container.

   Under these circumstances, the containment bay will not be decontaminated further. After removal of the spilled material, additional water will be passed through the pump to decontaminate it.

   For leaks or non-incidental spills, the spilled material will be collected from the sump with the portable drum pump and transferred to a DOT container of equivalent specification. If the spill or leak is of unknown composition, container selection will be based on the nature of the materials within the respective storage bays. Therefore, DOT metal containers would typically be used to receive spill residues in Bay 1 (flammables) and Bay 2 (alkalies). Spill residues of unknown composition in Bay 3 (acids) will be transferred to polyethylene DOT specification containers. Reactive wastes (Bay 4) are typically stored in small (<5 gallon) containers, and will be repackaged in an appropriate container of appropriate size.

   Removal of the spilled material is performed with the drum pump used for compositing bulk wastes. Two pumps are available for this application. The first drum pump is a seal-less pump constructed from SS316 with Teflon hose. The second unit is also a seal-less pump constructed from PVDF with Teflon hose. Both pumps are driven by a 0.75-horsepower (hp), 115-Volt (V) explosion-proof motor meeting NEMA or UL Type 7, Class I specifications. These materials of construction were selected to provide compatibility with the materials stored in Building 72 as defined in standard compatibility charts. For leaks and non-incidental spills, the sump will be decontaminated as described in paragraph 4.

3. Sampling: In the event of leaks or spillage from multiple containers, sampling will be necessary to determine the characteristics of the material. Subsection C-2 has identified the list of parameters of concern appropriate for materials stored at Building 72. Since only specific wastes are stored in

individual bays, the entire spectrum of analysis is not required. However, a limited analysis will be performed for the following parameters:

- Leaks or spills in Bay 1 - flammable wastes. Spilled or leaked material will be analyzed for flash point, volatile organics, and semivolatile organics.
- Leaks or spills in Bay 2 - alkaline wastes. Spilled or leaked material will be analyzed for pH, metals, and cyanide.
- Leaks or spills in Bay 3 - acid wastes. Spilled or leaked material will be analyzed for pH and metals.
- Leaks or spills in Bay 4 - reactive wastes. Spilled or leaked material will be analyzed for reactivity

Any materials spilled would likely be liquids and a Coliwasa sampler would be used to obtain a representative sample for analysis from the container to which the spill residue would be transferred.

4. Decontamination: Following removal of material from the sump, the pump and containment system would be decontaminated using water. Water would then be poured into the containment bay upon the affected area, allowed to collect in the sump, and the pump operated to transfer the decontamination water to the drum. Several washes would likely be used to ensure that both the sump and the pump are decontaminated. A minimum of three such washes will be used if acute hazardous wastes are included.

Sections D-2 Through D-8 do not apply to this application, because Building 23 is not a tank system; a waste pile; a surface impoundment; an incinerator; a landfill; a land treatment unit; are a miscellaneous unit.

FIGURE D-1--PHOTOGRAPH OF BUILDING 72 (INDEX NUMBER 960653)

SECTION D-BUILDING 23
PROCESS INFORMATION

D-1 Containers

The Building 23 Radioactive Mixed Waste Storage Unit (Building 23) is a concrete block storage building with interior dimensions of 117 feet (ft) x 30 ft and an interior height of 14 ft. Building 23 in the past was used primarily for the management of legacy types of mixed wastes that, due to the lack of treatment and disposal capacity, were not able to be treated and/or disposed of off site. Under the site treatment plan (STP) that was developed as required by the Federal Facility's Compliance Act of 1992, and with increased options for the treatment and disposal of mixed wastes off site the legacy wastes are being shipped off-site, and as a result, the waste inventory in Building 23 is no longer static.

Today the inventory of legacy wastes managed in Building 23 has diminished, and Building 23 is used primarily for the storage of containerized mixed wastes generated in conjunction with clean up and clean up related operations. The wastes managed at this unit consist of mixed wastes generated by clean up support activities, as well as non-RCRA regulated low-level wastes generated from mission-related clean up activities. CERCLA clean up wastes generated in conjunction with the execution of CERCLA Response Actions can also be stored in Building 23. The mixed wastes that are covered by the conditions established in this permit that are generated at the Miamisburg Environmental Management Project in support of the ongoing CERCLA operations:

- CERCLA removal actions.
- General plant maintenance:
    - Electrical in support of disconnection of utilities before building demolition.
    - Plumbing in support of disconnection of utilities before building demolition.
    - Heating, ventilation, and air conditioning (HVAC) maintaining service in administrative areas.
    - Janitorial providing service in administrative areas.
    - Grounds care providing service administrative areas.
- Vehicle maintenance operations in support of vehicles involved in soil removal.
- Photographic operations to support CERCLA documentation and communication.
- Environmental Monitoring in support of media characterization data used in CERCLA decions.
- Radioactivity analysis in support of media characterization data used in CERCLA decions.
- Spill response/release operations.

During the site clean up, the Miamisburg Environmental Management Project will generate clean up or CERCLA wastes that will resemble the traditional RCRA regulated wastes generated at the facility. Because the clean up wastes can resemble RCRA wastes, and because those wastes can contain RCRA hazardous waste constituents that are regulated under CERCLA, the site will continue to receive for storage CERCLA response action generated wastes in the RCRA permitted storage areas The permitted storage facilities will not receive waste other than that which is in support of the CERCLA governed mission.

Wastes generated under CERCLA are also often one-time in nature with respect to their point-of-generation and waste type, because the particular piece of equipment or the particular area from which it was generated will be cleaned up or disposed of. Therefore the subject equipment or the location being cleaned up will not be a continuing source of wastes or will not be a continuing point of generation. This type of waste is reflected in the Part A application with the inclusion of possible waste code that is based on Mound's chemical inventory in the late 1990's.

CERCLA waste types received for storage in Building 23 will be stored in the building only if the appropriate waste code is included as a waste-type in the permit that can be stored in the storage building receiving the waste. If the required waste type is not included in the permit, the permit will be modified prior to that building receiving the waste. Any CERCLA wastes sent to Building 23 will be stored

in accordance with the conditions established by this permit, pending the disposition of those response action-type wastes for off-site disposal.

An approximately 120-square foot (ft^2) section of the second area is reserved for radioactively contaminated polychlorinated biphenyls (PCBs) storage. Containment for the PCB waste is provided by a 6-Inch (in.) continuous curb.

The third area has dimensions of ~14 ft x 30 ft. This area is used for the storage of lab packs that are secondarily contained and lead waste.

Figure D-2 is a photograph of the front of Building 23.

D-1a Containers with Free Liquids

The physical form of the wastes that are managed at this unit is described in Waste Characteristics Subsection C-1. In general, these wastes are solidified, absorbed, or free-liquids in form. For the purpose of meeting regulatory containment requirements, all potentially radioactive mixed wastes stored at Building 23 are considered free liquid wastes, except for lead shielding and lead-lined glove wastes. Radioactively-contaminated PCB wastes are both solid and liquid, but are stored in a segregated area, as described above.

D-1a(1) Description of Containers (OAC 3745-55-72)

Containers' accepted for transport to the storage unit must meet the following criteria:

- The container must be free of significant rust, visible pitting, or corrosion.
- The container will not be used if the rust, visible. pitting, or corrosion is present and judged to affect the structural integrity of the container.
- The container rolling hoops or chimes walls and heads must not be creased or significantly dented.
- The container construction material must be fully compatible with the waste it contains.
- The container heads cannot be bulged or expanded.
- The container heads or walls must be free of evidence of spillage.
- The container must be marked to fully identify the waste it contains.
- The container must be provided with free headspace as defined in 49 CFR 173.24(h).
- The container must be tightly closed.
- The waste accumulation date must be noted on the container, if applicable.

The approximate number of each type of container varies considerably over time and cannot be estimated accurately. The design storage volume capacity for Building 23 is 25,000 gallons (gal.). All containers are marked as to their contents and the date received at Building 23. Prior to shipment off-site, all containers are marked and labeled in accordance with DOT specifications. Such labeling and marking is required for shipping, not for storage.

D-1a(2) Container Management Practices (OAC 3745-55-73, 3745-54-35)

Container management practices at Building 23 involve the following interrelated activities:

- Selection of containers.
- Documentation.
- Prevention of spills and ruptures.
- Segregation of incompatible wastes.
- Container marking or labeling.
- Packaging of some wastes.

- Sampling.
- Lab packing.
- Inspections.
- Preparation for shipment off-site.

The containers used for storage of wastes are selected based on U.S. Department of Transportation (DOT) compatibility requirements. Observance of this requirement ensures that the proper type of container is used. Each container to be stored at Building 23 is inspected prior to transfer from its source to ensure that the container meets the proper DOT specification for the type of waste indicated on the container marking. . Each container is appropriately marked as to its contents and the associated hazard. Containers used for waste shipment are tested for conformance with site procurement quality control (QC) requirements, which reflect DOT specifications.

For each container of hazardous waste accepted at Building 23, a unique waste tracking number is assigned. In addition, information about the waste is required from the individual generating source. This information typically contains the following information:

- Waste identification.
- Generating activity.
- Chemical composition.
- Trace contaminants.
- Waste code.
- Physical characteristics.
- Radionuclide type and activity level.

DOT containers used to store hazardous waste in Building 23 are primarily 55 gallon 1A1's and 1A2's, and 55 gallon 1H1's and 1H2's.

Material Safety Data Sheets (MSDSs) are required for discarded commercial products. Analytical results are required for all wastes unless documented process knowledge is sufficient to fully characterize the waste (see Subsection C-2).

Each container must be marked with markings that identify the contents or the words "Hazardous Waste". At the time of pickup for transport, waste management personnel check the container markings for completeness and log the pertinent data on the waste tracking records.

Each container received from a generator is either marked or a tag is affixed to the container to indicate the date of receipt at Building 23.

Wastes are transported from the points of generation to Building 23 by truck. Thus, unloading operations are required at the storage unit. Numerous precautions are taken to minimize the potential for spills and ruptures. Trucks used to transport containers are equipped with hydraulic tailgates to facilitate loading and unloading operations. Plant traffic rules are strictly obeyed. Trained waste management personnel accompany each waste during intra-plant transport. Containers are unloaded from the truck, one at a time. Spare containers, overpacks, and absorbent booms are available to contain any spills that may occur. Section F describes the spill equipment maintained at Building 23.

Prior to pickup, each container is inspected for the following:

- To ensure that the bung and lid are properly closed.
- To assess the container's condition relative to the criteria described previously in this subsection.
- To ensure that the container is properly marked or labeled.
- Accumulation date is noted, as appropriate.

Once the containers are accepted and transported to Building 23, they are off-loaded and moved typically into the Building 23 one at a time. Containers are moved to their respective areas by category of waste (i.e. acid, caustic, or solvent) which prevents the mixing of incompatible wastes in the event of a spill. Each day that transfer operations are performed, the containers, containment system, and areas of operations are inspected, as indicated in Section F.

During movement within Building 23, large containers such as drums are typically moved, one container at a time, by either drum dollies or a hand-operated hydraulic forklift, the latter known as a "walkie."

The procedures for using only proper containers, inspection upon pickup, and the individual movement of containers are combined with a number of other operating procedures to prevent spills and ruptures. These procedures include the following requirements:

- Containers, base, and containment system are inspected weekly, as described in Section F.
- Loading and unloading areas are inspected each day of transfer operations.
- Aisles 24 in. wide are maintained to allow ease of movement, operation, and inspection.
- Containers are maintained in a closed condition.
- Hand-operated hydraulic forklifts are utilized to stack containers no more than three high.
- Indoor climate-controlled storage is used to prevent corrosion.

Opening or closing of flammable waste containers within Building 23 will be done with spark-proof bung wrenches only. Procedures similar to those described for the movement of wastes into Building 23 are followed for the transfer of wastes for off-site disposition.

For discarded laboratory chemicals, the procedures used to prevent spills include the storage of these wastes in the product container, placement of these waste containers in trays or 5-gal. overpacks constructed from materials compatible with the waste, and Standard Operating Procedures (SOPs) that ensure that these containers are maintained in a closed condition in a stable storage configuration. During overpacking operations for transport off-site, containers of these wastes are inspected to ensure the container is tightly closed and the containers are transferred, one container at a time, to the overpack. During these operations, the overpack container is placed adjacent to the packing tables to reduce handling requirements.

An SOP is a controlling document that establish a procedure for conducting specified activities. In the cases where the activities addressed are regulated (such as RCRA waste management activities), the SOP's are developed based on the regulatory requirements.

Prevention of the mixing of incompatible wastes is ensured by several procedures. Containerized wastes are stored according to the general classification of solvent, acid, or caustic wastes. Discarded laboratory and small quantity chemicals are segregated and stored on shelves. A containment trench running down the center of Building 23 is separated into ten separate areas with small spill containment walls. A trench surrounding the acid storage area is divided into three containment areas.

Finally, as noted previously, the aisle space in Building 23 is maintained at a 2 ft minimum, as shown in Drawing FSD920962. The maximum storage volume based on this arrangement is 25,000 gal. and the maximum number of containers, other than small volume lab pack chemicals, will not exceed 500. Drawing FSD920962 is included as an attachment in Part 2 of this Permit Application.

The following additional terms and conditions were established as part of the sites Permit during negotiations with the hazardous Waste Facility Board. Therefore, in accordance with the provisions established by the Ohio Hazardous Waste Facility Board in the Opinion and Final Orders issued for the permit, dated October 16, 1996, the Miamisburg Environmental Management Project:

1. "Shall not store secondary explosives in Building 23."
2. "The limitations for the waste gas in gas cylinders (gross weight) that can be stored at any one time in Building 23 is as follows:

WASTE CODE	GAS CONSTITUENT	MAXIMUM GROSS WEIGHT OF THE CYLINDERS AND CONTAINED GASES ALLOWED IN STORAGE
P076	Nitric Oxide	5 lbs
P078	Nitrogen Dioxide	5 lbs
P031	Cyanogen	5 lbs
U045	Methyl chloride	5 lbs
D001	Ignitable Gaseous waste	500 lbs

D-1a(3) Secondary Containment System Design and Operation [OAC 3745-50-44(C)(1)(a)(i), 3745-50-44(C)(1)(c) and (d), 3745-55-75(A) and (D)]

The current secondary containment system was installed as part of the Building 23 upgrades in the summer of 1994. Trenches equipped with concrete spill containment walls were installed in Rooms 1 and 2 (Drawing FSD930416, Sheets 2 and 3 are included as an attachment in Part 2 of this Permit Application). The containment walls within the trench provide segregated containment for small volumes of incompatible wastes that could be released in the event of a spill within Building 23, lessening the chance for released material to spreadout over the entire length of the trench that is used for containment of the waste stored in that area. The spill containment walls are spaced approximately every ten feet along the trench, providing a containment volume of 128 gallons per segment.

In addition, a six-inch curb was constructed around the perimeter of the interior of Building 23. This curb is intended to provide containment volume within the inside of Building 23 that would be adequate to contain a 20-minute sprinkler flow, as required by DOE Order 5480.7A.

D-1a(3)(a) Requirement for the Base or Liner to Contain Liquids [OAC 3745-55-75(B)(1)]

The foundation plan for Building 23 is provided in Drawing 302 303-03001 and is included as an attachment in Part 2 of this Permit Application. The base of the structure was developed on a 6-in. compacted gravel sub-base that overlays a vapor barrier and a 1-ft layer of compacted soil. The load-bearing capacity of this sub-base is estimated at 1,100 pounds per square foot (psf).

The building floor slab was constructed of Type 1, 3,000 pounds per square inch (psi) concrete. The finished slab is 6 in. thick and reinforced with No. 3 bars at 12 on center each way. The construction joints and the control joints are doweled with ¾-in. coated roads at 24 in. on center. The 0.25-in. x 1.5-in. saw cut control joints were filled with bitumen to seal the joint and compensate for movement. The slab is slightly sloped to the center of the building, where a containment trench was constructed in 1994. The design maximum allowable floor loading is 600 psf. Thus, the structural integrity of the floor is more than adequate because the actual loading, which consists of drums stacked three high, is less than 500 psf.

A vinyl ester novolac coating was applied to the floor, curbs, and trenches in 1994 to enhance the chemical resistance of the concrete. Appendix D.1 at the end of this section, provides data for the compatibility of the coating with various hazardous chemicals (The same coating is used in Bldg. 72). The vinyl ester novolk system is compatible with the majority of wastes stored in Building 23, with the exception of the strongest acids and alkalies, and some solvents.

The containment trenches are equipped with concrete dividers to provide segregation between trench sections. Construction techniques and application of the chemical resistant coating ensures that the containment system is free of gaps and cracks.

D-1a(3)(b) Containment System Drainage [OAC 3745-50-44(C)(1)(a)(ii), 3745-55-75(B)(3)]

The floor in Building 23 is slightly sloped (< 1.0%) to the trenches serving as containment sumps. The trench in Room 1 has a capacity of 1885 gal., and the trench in Room 2 (Acids storage) has a capacity of 521 gal.

D-1a(3)(c) Containment System Capacity [OAC 3745-50-44(C)(1)(iii), 3745-55-75(B)(2)]

The containment system capacity was designed to hold a 20-minute sprinkler flow plus the volume of the largest container plus 200 gallons, as suggested by the site fire protection group. This capacity puts Building 23 in compliance with DOE Order 5480.7A. The total volume of the containment system is 14,050 gallons, or 56.2% of the design storage capacity of 25,000 gallons.

Containment volume requirements were calculated as follows:

1) Floor space in Building 23:

Room 1: (76.85 ft) (27.67 ft) = 2126.4 ft^2

Room 2: (25 ft) (27.67 ft) = 691.8 ft^2
-28.0 ft^2 (area occupied by PCBs containment curb)
663.8 ft^2

Room 3: (11.67 ft) (27.67 ft) = 332.9 ft^2

Total floor area = 3113.1 ft^2

2) Volume of a 20-minute sprinkler flow:

Fire protection sprinkler flow rate = 0.155 gal/min-ft^2

20-min volume = (0.155 gal/min_ft^2) (3269.0 ft^2) (20 min) = 10,133 gal.

3) Total containment volume required:

Total containment volume required = 20-min sprinkler flow + vol. of largest container + 200
gallons = 10,133 gal + 83 gal + 200 gal
=10,416 gal

4) Containment volume in floor trenches:

Room 1:Trench vol. = (length) (width) (depth) (7.481 gal/ft^3)
= (72 ft) (1.75 ft) (2 ft) (7.481 gal/ft^3)
= 1885 gal

Room 2: Trench vol.= (19.9 ft) (1.75 ft) (2 ft) (7.481 gal/ft^3)
= 521 gal

Total volume in floor trenches = 2406 gal

5) Volume contained by 6-in curb:

Volume contained = (floor area) (0.5 ft) (7.481 gal/ft^3)
= (3113.1ft^2) (0.5 ft) (7.481 gal/ft^3)
= 11,644 gal

6) Total containment volume

Total containment volume = total trench volume + volume contained by 6-in curb

= 2406 gal + 11,644 gal
= 14,050 gal

The difference between the total volume available (14,050 gal) and the containment volume required (10,416 gal) is 3634 gal. Some of this excess will be occupied by waste drums and other solid objects. The floor area that may be occupied by solid objects is:

Allowable occupied floor area = (excess containment volume) / (curb height)
= (3634 gal) (ft^3/7.481 gal) / (0.5 ft)
= 971.5 ft^2

Square footage occupied by:

55-gal drum = π $(2\ ft)^2$ / 4 = 3.14 ft^2

83-gal drum = π $(2.5\ ft)^2$ / 4 = 4.91 ft^2

The allowable occupied floor area will be adequate for storage of wastes and other solid objects in Building 23.

D-1a(3)(d) Control of Run-on [OAC 3745-50-44(C)(2)(a)(iv), 3745-55-75(B)(4)]

Building 23 is enclosed on all four sides by masonry block walls and is covered with a built-up roof. Runoff from the roof is transported by a gutter and downspout system to the stormwater system that surrounds the building.

Stormwater drainage within the vicinity of Building 23 flows from north to south and from east to west following the contours of the site. A stone-filled drainage swale, recently modified to include a slotted drain tile, is located along the north side of Building 23. This swale was developed to divert flow in opposite (east or west) directions along its midpoint. Therefore, runoff from the north side of Building 23 flows to this ditch along its north face and is diverted to the east along the eastern side of the building and to the west along this side of the north building face.

Flow diverted to the western side of the building enters a reinforced concrete catch basin and is transported below grade to an existing 12-in. diameter stormwater drain located ~30 ft southwest of the building.

Runoff along the eastern half of the north face is directed to the east by the 5 ft wide x 1 ft deep drainage swale and enters an invert located ~40 ft east of the building. From this point, the stormwater is transported in a 12-in. concrete pipe to the existing catch basin located west of Building 23.

Stormwater flow along the east side of the building is intercepted by the drainage swale and conveyed to the catch basin west of Building 23. Stormwater flow along the west or south sides of Building 23 is directed away from the building by the site grade.

Finally, the floor of Building 23 ranges from approximately 6 in. to 4 ft above the existing grade. Thus, run-on to the building is not likely to occur. As a result of the drainage avenues provided, the contour of the surrounding area, and the elevation of Building 23, run-on to this unit is highly unlikely.

D-1a(3)(e) Removal of Liquids from Containment System [OAC 3745-50-44(C)(1)(a)(v), 3745-55-75(B)(5)]

The subsections that follow detail how the removal of liquids form the secondary containment system will occur.

In the event there is a leak or spill in Building 23, the following actions will be undertaken:

1. Assessment of leak.
2. Removal of materials.

3. Sampling of accumulated material.
4. Decontamination of the containment system and pump.

1. Assessment of Leak: An assessment will be made to determine whether the spill or leak results from a single drum or multiple drums and the quantity of spilled material. If the leak is determined to result from a single drum, and the contents of that drum have been characterized, sampling will not be necessary as the composition of the material is already known. In this case, the material collected in the containment system and the materials from the leaking drum will be pumped to a new drum(s) of the same type and the new drum(s) will be properly marked. The container found to be leaking will be rinsed with water and the rinsate will be transferred to a new container of equivalent DOT specification. If the released material is an acute hazardous waste, the leaking container will be triple rinsed and the rinsate containerized. If the leak involves multiple containers, sampling will be necessary. Prior to sampling the material from the leaking drums will be transferred to containers of equivalent DOT specification, properly marked or labeled.

2. Removal of Material: During the initial assessment, the volume of the material involved will be estimated. If the release is small in volume (<1 gal.) and has not reached the containment system, the residue will be absorbed with an appropriate absorbent. After absorption, the residue will be transferred to a container of appropriate DOT specification. The affected floor area will be decontaminated with an aqueous surfactant solution and/or two or more water rinses. The liquids will be absorbed and the absorbent will be transferred to the same container as the other residues. For leaks or non-incidental spills, the material will be collected from the containment with an appropriate portable pump and transferred to a DOT container of equivalent specification. Spill residues of unknown composition will be transferred to the appropriate DOT container based on pH analysis.

3. Sampling: In the case of leaks or spillage from multiple containers, sampling will be necessary to determine the characteristics of resulting material. Subsection C-2 has identified the list of parameters of concern appropriate for wastes stored at Building 23. Residues will be analyzed for the following parameters:
   - Flash point.
   - Volatile organics.
   - Semivolatile organics.
   - TOX Toxicity characteristic (TC) metals.
   - Gross alpha.
   - Gross beta.
   - pH.

   Sampling and analysis will be performed as described in Subsection C-2.

4. Decontamination: Following removal of the spill residues from the containment system, the system will be decontaminated by a high pressure water rinse. As previously stated, decontamination of areas affected by small spills will be done in a localized fashion. After the rinsate has collected, it will be transferred to appropriate DOT containers using the pump. The pump will be decontaminated by pumping distilled water through the system after all spill residues and rinsates have been collected.

D-1(b) Containers without Free Liquids

Only the lead shielding and lead-lined glove wastes managed at Building 23 are solid in physical form and do not contain free liquids. These wastes generally are managed in accordance with practices used for free liquid wastes.

D-1b(1) Test for Free Liquids [OAC 3745-50-44(C)(1)(b)(i)]

The lead shielding and lead-lined glove wastes are not tested for free liquids based on process knowledge. Specifically, the lead waste consists of solid metal pieces and rubber gloves with lead linings. Based on

present and historical SOPs, liquids and non-liquids are strictly segregated during waste packaging since no free liquid may be present in wastes disposed of in DOE radioactive waste disposal facilities.

D-1b(2) Description of Containers [OAC 3745-55-71, 3745-55-72]

Subsection D-1a(1) describes containers that will be utilized for wastes with and without free liquids. Selection is based on the physical characteristics of the waste, and the chemical compatibility of wastes and containers.

D-1b(3) Container Management Practices [OAC 3745-55-73, 3745-54-35]

The container management practices described in Subsection D-1a(2) will be followed for containers without free liquids.

D-1b(4) Container Storage Area Drainage [OAC 3745-50-44(C)(1)(b)(ii), 3745-55-75(C)]

The drainage system and proposed renovation have been previously discussed in Subsection D-1a(3)(d).

Sections D-2 Through D-8 do not apply to this application, because Building 23 is not a tank system; a waste pile; a surface impoundment; an incinerator; a landfill; a land treatment unit; are a miscellaneous unit.

FIGURE D-2--PHOTOGRAPH OF BUILDING 23, FRONT VIEW (INDEX NUMBER 971904)

APPENDIX D.1

FLOOR COATING COMPATIBILITY

(Buildings 23 and 72)

MasterShield
Chemical Resistance

Bulletin

MasterShield polymer systems are manufactured by Polymerica, Inc. to satisfy critical performance requirements in the manufacturing, food processing, chemical processing and power generating industries.

This bulletin presents chemical resistance guidelines to be used when evaluating the potential performance of a polymer system in a given chemical exposure. Unless otherwise noted, data is based on service at 100°F/38°C. In many cases performance at higher temperatures is documented. In severe immersion or combination exposures we encourage field testing before making a final selection. Coupons are available on request for this purpose.

The information contained in this bulletin has been derived from evaluation of field installations, laboratory testing and analysis. Consideration of mechanical design requirements has not been incorporated in these evaluations. Again, consultation with our technical staff is encouraged in the process of selecting the proper coating, lining or surfacing system for individual chemical environments.

MasterShield systems outlined in this guide are grouped by polymer systems and include the following products:

Vinyl Ester Novolac Systems: VNB, VNC, VNL, VNS (Selected for use in both Buildings 23 and 72)
Epoxy Novolac Systems: NEB, NEC, NEL, NES, HPN
Chemically Resistant Epoxy Systems: CRB, CRC, CRL, CRS
Decorative & Industrial Epoxy Systems: DEC, DES, IEB, IEC, IES, SLE
Elastomeric Systems: CJC, EJC, EWV

I Suitable for continuous service or immersion.

C Suitable for secondary containment (72 hour immersion) or intermittent immersion followed by regulated clean up.

L Limit use to splash and spillage followed by regulated spill removal and clean up (within four hours)

T Consult Polymerica Technical Department for evaluation assistance.

NR Not recommended

* Requires seal coats of MasterShield HPN

** These chemicals will attack silica fillers and glass reinforcement. Carbon fillers and carbon or synthetic reinforcement may be required.

Polymerica Inc.

This Bulletin was retyped from the original Polymerica bulletin

Polymerica Inc. MasterShield Chemical Resistance

	Vinyl Ester Novolac Systems	Novolac Epoxy Systems	Chemically Resistant Epoxy Systems	Decorative & Industrial Epoxy Systems	Elastomeri Systems
ACETIC ACID 10%	I	I	C	L	L
ACETIC ACID 50%	I	C	L	L	L
ACETIC ACID 100%	I	L	NR	NR	NR
ACETONE	I	L	L	L	L
ACRYLIC ACID	I	C	L	NR	NR
ACRYLONITRILE	T	T	NR	NR	NR
ADIPIC ACID	I	I	C	L	L
ALCOHOL (ETHYL)	I	I*	C	L	L
ALCOHOL (METHYL)	I	I*	C	L	L
ALLYL CHLORIDE	I	I*	L	L	L
ALUM	I	I	C	C	C
ALUMINUM BROMIDE	I	I*	C	L	L
ALUMINUM CHLORIDE	I	I	C	L	L
ALUMINUM FLUORIDE**	I	I*	C	L	L
ALUMNUM HYDROXIDE	I	I	C	L	L
ALUMINUM NITRATE	I	I	C	L	L
ALUMINUM SULFATE	I	I*	C	L	L
AMMONIUM CHLORIDE	I	I	C	L	L
AMMONIUM FLUORIDE**	I	I	C	L	L
AMMONIUM HYDROXIDE	I	I	C	L	L
AMMONIUM LIGNO SULFATE 50%	I	I	C	L	L
AMMONIUM NITRATE	I	I	I	C	C
AMMONIUM PERSULFATE	I	I	I	C	C
AMMONIUM SULFATE	I	I	I	C	C
AMMONIUM SULFIDE	I	I	I	C	C
AMMONIUM SULFITE	I	I	I	C	C
AMYL ACETATE	I	C	L	L	L
AMYL ALCOHOL	I	I*	C	L	L
ANILINE	I	C*	NR	NR	NR
AQUA REGIA	I	NR	NR	NR	NR
ARSENIC ACID	I	I*	C	C	C
ARSENIOUS ACID	I	I*	C	C	C
BARIUM HYDROXIDE	I	I	C	C	C
BARIUM SULFATE	I	I	C	C	C
BENZALDEHYDE	I	L*	T	T	T
BENZENE	I	T	L	L	L
BENZENE SULFONIC ACID 50%	I	I*	L	L	L
BENZYL ALCOHOL	I	L*	NR	NR	NR
BENZYL CHLORIDE	I	T	NR	NR	NR
BLACK LIQUOR (PULP & PAPER)	I	I*	C	C	C
BLEACH LIQUOR (PULP & PAPER)**	I	C	C	L	L
BLEACH 5.5%	I	C*	L	L	L
BORIC ACID	I	I	I	I	I

This Bulletin was retyped from the original Polymerica bulletin

Polymerica Inc. MasterShield Chemical Resistance

	Vinyl Ester Novolac Systems	Novolac Epoxy Systems	Chemically Resistant Epoxy Systems	Decorative & Industrial Epoxy Systems	Elastomeric Systems
BRINE	I	I	I	I	I
BROMINE WATER 5%	I	C	L	L	L
BUTADIENE	T	T	L	L	L
BUTYL ACETATE	I	I*	L	L	L
BUTYL ALCOHOL	I	I*	C	L	L
BUTYL CARBITOL	I	I*	L	L	L
BUTYRIC ACID	I	I*	NR	NR	NR
CADMIUM PLATING (CYANIDE)	I	I*	L	L	L
CALCIUM BISULFITE **	I	I*	L	L	L
CALCIUM CARBONATE	I	I	I	I	I
CALCIUM CHLORIDE	I	I	I	I	I
CALCIUM HYDROXIDE **	I	I	I	I	I
CALCIUM HYPOCHLORITE 5% **	I	L	L	L	L
CALCIUM NITRATE	I	I	I	I	I
CAPRYLIC ACID	I	NR	NR	NR	NR
CARBON TETRACHLORIDE	I	I*	L	L	L
CASTOR OIL	I	I	I	I.	I
CHLORINE DIOXIDE **	I	NR	NR	NR	NR
CHLORINE WATER (S ATURATED) **	I	NR	NR	NR	NR
CHLOROACETIC ACID 50%	I	NR	NR	NR	NR
CHLOROBENZENE	I	L	L	NR	NR
CHLOROFORM	L	L	NR	NR	NR
CHLOROSULFONIC ACID	NR	NR	NR	NR	NR
CHROMIC ACID 10%	I	L	L	L	L
CHROMIC ACID 30%	C	NR	NR	NR	NR
CITRIC ACID	I	I	C	L	L
CORN OIL	I	I	C	L	L
CORN STARCH	I	I	C	L	L
CORN SUGAR	I	I	C	L	L
COTTONSEED OIL	I	I	C	L	L
CRESYLIC ACID	I	NR	NR	NR	NR
CRUDE OIL SOUR/SWEET	I	I	I	C	C
CYCLOHEXANE	I	I	I	L	L
DEMINERALIZED WATER	I	I	I	I	
DEXTROSE	I	I	C	L	L
DIBUTYL PHTHALATE	I	I	C	L	L
DICHLOROBENZENE		NR	NR	NR	NR
DIESEL FUEL		I	C	C	C
DIETHYLENE GLYCOL	I	I	C	C	C
DIMETHYL FORMAMIDE	T	L*	NR	NR	NR
ETHYL ACETATE	I	L	L	NR	NR

This Bulletin was retyped from the original Polymerica bulletin

Polymerica Inc. MasterShield Chemical Resistance

	Vinyl Ester Novolac Systems	Novolac Epoxy Systems	Chemically Resistant Epoxy Systems	Decorative & Industrial Epoxy Systems	Elastomeric Systems
ETHYL ALCOHOL	I	I	C	C	C
ETHYL BENZENE	I	L	L	L	L
ETHYL ETHER	T	T	T	T	T
ETHYL SULFATE	1	I *	L	L	L
ETHYLENE DICHLORIDE (TO 80^{0}F)	1	L	NR	NR	NR
ETHYLENE GLYCOL	I	I	C	C	C
FATTY ACIDS	I	L	T	T	T
FERRIC ACETATE	I	I	C	C	C
FERRIC CHLORIDE	I	I	C	C	C
FERRIC NITRATE	I	I	C	C	C
FERRIC SULFATE	I	I	C	C	C
FERROUS CHLORIDE	I	I	C	C	C
FERROUS NITRATE	I	I	C	C	C
FLUOBORIC ACID **	I	T	L	L	L
FLUORSILICIC ACID 35%	I	T	L	L	L
FORMALDEHYDE	I	I *	L	L	L
FORMIC ACID	I	L	NX	NR	NR
FURFURAL	NR	NR	NR	NR	NR
FURFURYL ALCOHOL	I	L	L	L	L
GASOLINE	I	I	I	C	C
GLUCOSE	I	I	C	L	L
GLYCERINE	I	I	I	I	I
GLYCOLIC ACID 70%	I	C *	NR	NR	NR
GRAPE JUICE	I	I	I	I	I
GREEN LIQUOR	I	C	C	L	L
HEPTANE.	I	I	C	C	C
HEXANE	I	I	C	C	C
HYDRAZINE 35%	T	NR	NR	NR	NR
HYDROBROMIC ACID 60%	1	L	L	L	L
HYDROCHLORIC ACID 37%	1	C	C	C	C
HYDROFLUORIC ACID 10%	1	NR	NR	NR	NR
HYDROGEN PEROXIDE 30%	1	L	NR	NR	NR
HYDROGEN SULFIDE, WET/DRY	I	T	T	T	T
HYPOCHLOROUS ACID 20%	1	NR	NR	NR	NR
ISOPROPYL ALCOHOL	I	I	C	C	C
JET FUEL, JP-4	I	I	C	C	C
KEROSENE	I	I	C	C	C

This Bulletin was retyped from the original Polymerica bulletin

Polymerica Inc. MasterShield Chemical Resistance

	Vinyl Ester Novolac Systems	Novolac Epoxy Systems	Chemically Resistant Epoxy Systems	Decorative & Industrial Epoxy Systems	Elastomeric Systems
LACTIC ACID 20%	I	C	C	L	L
LEAD ACETATE	I	I	I	C	C
LINSEED OIL	I	I	I	C	C
LITHIUM HYPOCHLORITE **	I	NR	NR	NR	NR
MAGNESIUM SULFATE	I	I	I	I	I
MALEIC ACID	I	I	C	C	C
METHYL ALCOHOL	I	I *	C	C	C
METHYL ETHYL KETONE	I	I *	L	L	L
METHYL ISOBUTYL KETONE	I	I *	L	L	L
METHYLENE CHLORIDE	I	I *	NR	NR	NR
MINERAL OIL	I	I	I	I	I
	I				
NAPTHA	I	I	C	L	L
NICKEL CHLORIDE	I	I	C	L	L
NITRIC ACID 10%	I	L	L	L	L
NITRIC ACID 40%	I	L *	NR	NR	NR
NITRIC ACID 60%	C	NR	NR	NR	NR
NITRIC ACID (FUMES)	I	NR	NR	NR	NR
OILS (ANIMAL)	I	I	I	C	C
OILS (MINERAL)	I	I	I	I	I
OILS (VEGETABLE)	I	I	I	I	I
OXALIC ACID (SATURATED)	I	L	L	L	L
PERCHLORIC ACID 30%	I	NR	NR	NR	NR
PERCHLOROETHYLENE	I	I *	L	L	L
PHENOL 10%	I	L	L	NR	NR
PHOSPHORIC ACID CONCENTRATED	I	NR	NR	NR	NR
SUPERPHOS	I	NR	NR	NR	NR
PHTHALIC ACID	I	I *	T	T	T
POTASSIUM ALUM SULFATE	I	I	C	C	C
POTASSIUM CYANIDE	I	I *	L	L	L
POTASSIUM DICHROMATE	I	I *	C	L	L
POTASSIUM FERRICYANIDE	I	I *	L	L	L
POTASSIUM HYDROXIDE 10% **	I	I	I	I	I
POTASSIUM HYDROXIDE CONCENTRATED **	NR	I *	L	L	L
POTASSIUM NITRATE	I	I	I	I	I
POTASSIUM PERMANGANATE	I	I *	C	L	L
POTASSIUM PERSULFATE	I	I *	C	L	L
POTASSIUM SULFATE	I	I	C	C	C
PROPYLENE GLYCOL	I	I	I	I	I
PULPSTOCK CHLORINATED	I	C *	L	L	L
PYRIDINE	I	T *	NR	NR	NR

This Bulletin was retyped from the original Polymerica bulletin

Polymerica Inc. MasterShield Chemical Resistance

	Vinyl Ester Novolac Systems	Novolac Epoxy Systems	Chemically Resistant Epoxy Systems	Decorative & Industrial Epoxy Systems	Elastomeric Systems
SALICYLIC; ACID	I	C	L	L	L
SEA WATER	I	I	I	I	I
SILVER NITRATE	I	I	C	C	C
SKYDROL 500B	I	I	C	C	C
SODIUM ACETATE	I	I	I	C	C
SODIUM BICARBONATE **	I	I	I	C	C
SODIUM BIFLUORIDE **	I	I *	L	L	L
SODIUM BISULFATE	I	I	I	I	I
SODIUM BISULFITE	I	I	I	I	I
SODIUM BROMATE	I	I *	C	C	C
SODIUM CARBONATE **	I	I	I	C	C
SODIUM CHLORATE	I	C *	L	L	L
SODIUM CHLORIDE	I	I	I	I	I
SODIUM CHLORITE 50% **	I	NR	NR	NR	NR
SODIUM CYANIDE	I	I *	L	L	L
SODIUM DICHROMATE	I	I *	C	L	L
SODIUM FLUORIDE **	I	I *	L	L	L
SODIUM HYDROSULFIDE	I	T	T	T	T
SODIUM HYDROXIDE 10%	I	I	I	I	I
SODIUM HYDROXIDE 50%	I	I	I	C	C
SODIUM HYPOCHLORITE 5%	I	C	NR	NR	NR
SODIUM HYPOCHLORITE 15%	I	NR	NR	NR	NR
SODIUM PHOSPHATE	I	I *	C	C	C
SODIUM SILICATE	I	I	C	L	L
SODIUM SULFATE	I	I	I	I	I
SODIUM TARTRATE	I	I	I	I	I
SODIUM THIOSULFATE	I	I	I	C	C
STYRENE	I	L	NR	NR	NR
SUCCINIC ACID	I	C	L	L	L
SUGAR	I	I	C	L	L
SULFATE/SULFITE LIQUORS (PULP & PAPER)	I	I	I	I	I
SULFURIC ACID 10%	I	I	I	I	I
SULFURIC ACID 20%	I	I	I	I	I
SULFURIC ACID 50%	I	I	C	L	L
SULFURIC ACID 70%	C	I	L	NR	NR
SULFURIC ACID 98%	L	I	L	NR	NR
TANNIC ACID	I	C	L	L	L
TARTARIC ACID	I	I	I	I	I
TETRATHYDROFURAN	T	T *	NR	NR	NR
THIONYL CHLORIDE	NR	T *	NR	NR	NR
TOLUENE	I	I *	C	C	C
TOLUENE SULFONIC ACID	I	C	C	L	L

This Bulletin was retyped from the original Polymerica bulletin

Polymerica Inc. MasterShield Chemical Resistance

	Vinyl Ester Novolac Systems	Novolac Epoxy Systems	Chemically Resistant Epoxy Systems	Decorative & Industrial Epoxy Systems	Elastomeric Systems
1-1-1 TRICHLOROETHANE	I	C	L	L	L
TRICHLOROETHYLENE	C	C	L	L	L
TRICHLOROACETIC ACID 20%	I	NR	NR	NR	NR
TRISODIUM PHOSPHATE	I	I	I	I	I
TURPENTINE	I	I	C	C	C
UREA SOLUTIONS	I	I	I	I	I
VINEGAR	I	I	I	C	C
VINYL TOLUENE	I	L	NR	NR	NR
WATER, DISTILLED & DEMINERALIZED	I	I	I	I	I
WHITE LIQUOR (PULP & PAPER)	I	I	I	I	I
XYLENE	I	I *	C	C	C
ZINC SALT	I	I	I	I	I

This Bulletin was retyped from the original Polymerica bulletin

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

SECTION E

GROUNDWATER MONITORING

Prepared By
BWXT of Ohio, Inc.
For the U.S. DOE-Miamisburg Environmental Management Project Office
Modification 004-April 2001 Renewal Submittal

SECTION E
GROUNDWATER MONITORING

The RCRA Groundwater monitoring requirements for hazardous waste management units as noted in OAC 3745-50-44(A)(22) (40 CFR 264) are not applicable because hazardous wastes at the Miamisburg Environmental Management Project are not managed in landfills, surface impoundments, waste piles, or land treatment units.

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

SECTION F

PROCEDURES TO PREVENT HAZARDS

Prepared By
BWXT of Ohio, Inc.
For the U.S. DOE-Miamisburg Environmental Management Project Office
Modification 004-April 2001 Renewal Submittal

SECTION F
PROCEDURES TO PREVENT HAZARDS

The Miamisburg Environmental Management Project is a clean up site, where building clean out and/or building or environmental clean up wastes are produced in conjunction with CERCLA regulated field activities or in conjunction with CERCLA related investigative activities. Therefore, these wastes are no longer generated under the more traditional process, production, or research related activities that fit the definition of the traditional RCRA regulated activities. The Miamisburg Environmental Management Project also generates process-related wastes such as maintenance waste, vehicle maintenance waste, and photographic waste that are generated in support of the cleanup activities.

The following list is a summary of CERCLA operations that could potentially generate the wastes that are covered by this Permit Application:

- CERCLA removal actions.
- General plant maintenance:
  - Electrical in support of disconnection of utilities before building demolition.
  - Plumbing in support of disconnection of utilities before building demolition.
  - Heating, ventilation, and air conditioning (HVAC) maintaining service in administrative areas.
  - Janitorial providing service in administrative areas.
  - Grounds care providing service administrative areas.
- Vehicle maintenance operations in support of vehicles involved in soil removal.
- Photographic operations to support CERCLA documentation and communication.
- Environmental Monitoring in support of media characterization data used in CERCLA decions.
- Radioactivity analysis in support of media characterization data used in CERCLA decions.
- Spill response/release operations.

As a consequence of the site clean up, the Miamisburg Environmental Management Project will continue to generate wastes that resemble the more traditional RCRA regulated wastes that were once generated at the site, because those wastes contain RCRA hazardous waste constituents. The subject wastes are, however, CERCLA generated wastes that are regulated under the requirement that CERCLA activities comply with applicable or relevant and appropriate requirements (a.k.a., the ARARs). In accordance with CERCLA the Miamisburg Environmental Management Project is required to manage CERCLA related or CERCLA generated wastes that contain RCRA waste constituents in accordance with the ARARs as identified for that action.

This section addresses security procedures, inspection requirements, preparedness requirements, procedures taken to prevent accidental ignition, methods to prevent the mixing of incompatible wastes, and means to reduce personnel exposure.

F-1 Security

F-1a Wavier [OAC 3745-50-44(A)(4), 3745-54-14(A)]

No waiver of the security procedures and equipment requirements is requested; therefore, Subsections F-1b(1) through F-1b(2) are applicable.

F-1b Security Procedures and Equipment [OAC 3745-54-14(A)(4), 3745-54-14(B)]

F-1b(1) 24-Hour Surveillance System [OAC 3745-54-14(B)(1)]

On-site personnel monitor Building 23 and Building 72 during normal working hours. During non-working hours, and if the area is unoccupied, the fence surrounding Building 72 and the doors on Building 23 are locked. Overhead lights illuminate the entrance to each building throughout the night. On-site security personnel patrol the Miamisburg Environmental Management Project around the clock, including the

Building 23 and Building 72 areas, at least once each night. Two-way radios allow security officers to report upset conditions immediately. These provisions ensure 24-hr surveillance of the storage areas. Table F-1 summarizes the entry checkpoints for both Building 72 and Building 23.

F-1b(2) Barrier [OAC 3745-54-14(B)(2)(a)]

The entire perimeter of the Miamisburg Environmental Management Project is surrounded by a 7- to 10-foot (ft) high chainlink security fence with barbed wire. Drawing FSE861318 shows the entry points, guard posts, and guard island at the plant. Drawing FSE861318 is included as an attachment in Part 2 of this Permit Application.

Access to the Miamisburg Environmental Management Project is controlled by electronically activated gates, turnstiles, and entry doors. Vehicle access gates are located in the plant valley, and on the SM/PP hill, adjacent to the Miamisburg Mound State Monument. There is an electronically controlled turnstile located at GP-1 Building. The turnstile allows entry from the lower parking lot and GH parking areas. Electronically controlled doors are located in Building 102, on the SM/PP Hill, in the OSE Building Lobby, and in OSW Building. Entry into these areas requires that the person seeking entry swipe their identification badge to activate the locks that allow the door, gate, or turnstiles to open. Entry into each of these controlled access points is restricted authorized personnel representing DOE personnel, MMCIC personnel, contractor staff, and authorized visitors. As a matter of procedure, not all persons have access to all gates, doors or the turnstiles. All staff has been instructed on the procedures and processes for entry, including the entry of unauthorized personnel.

Building 23 and Building 72 are located within the perimeter of the Miamisburg Environmental Management Project, in the area controlled by the access points referenced above. Building 72 itself is encircled by an 8-ft high chainlink security fence with a locked, 4-ft wide pedestrian gate and a locked 16-ft wide drive gate. These gates remain locked at all times except when waste management personnel are present. Building 72 contains two personnel doors with locks and one warehouse door that contains no locks. Building 23 contains two personnel doors with locks and two garage doors that cannot be opened from the outside. These doors remain locked at all times except during loading, unloading, or inspection operations.

TABLE F-1–ENTRY CHECK POINTS FOR ACCESS TO BUILDING 23 BUILDING 72

OPERATIONAL UNIT/AREA	PERIMETER GUARD POST	ADDITIONAL FENCE	LOCKED BUILDING UNIT
Radioactive mixed waste storage, Building 23	X		X
Hazardous waste storage, Building 72	X	X	

F-1b(3) Means to Control Entry [OAC 3745-54-14(B)(2)(b)]

As discussed previously, access to the project site and, therefore, access to the locations of Building 23 and Building 72 is controlled by electronically activated gates, doors, and turnstiles that control entry to the Project. Therefore, entry into the site, and entry to the locations of Building 23 and Building 72 is restricted to authorized personnel only. As discussed above, entry into Building 23 is through locked entry doors controlled by trained personnel. As discussed above, entry to Building 72 is through a locked entry gate also controlled by trained personnel.

F-1c Warning Signs [OAC 3745-54-14(C)]

Warning signs that indicate the controlled access nature of the Miamisburg Environmental Management Project are posted on the perimeter fence and at each entry point warning that the area is restricted and that unauthorized entry is illegal. The entrance to Building 23, the radiologic mixed waste storage building, is posted with the following signs:

- "Danger - Unauthorized Personnel Keep Out."

- "Danger - No Smoking."
- "Caution - Contains PCBs."

The entrance to Building 72 is posted with the following signs:

- "Danger - Unauthorized Personnel Keep Out"
- "Hazardous Waste Storage Area"
- "No Smoking"
- "PCBs are Stored in This Area"

All of these signs are legible at distances greater than 25 ft. The signs are written in English and are sufficient in number to be visible from any approach direction.

F-2 Inspection Schedule

F-2a General Inspection Requirements [OAC 3745-50-44(A)(5), 3745-54-15(A) and (B), 3745-54-33]

An inspection program has been established to inspect all components of the storage units and the waste containers for deterioration, signs of contaminant release that indicate the potential for migration of hazardous waste constituents to the environment, or the potential for human endangerment.

Table F-2 presents the general inspection schedule and responsible parties for inspecting safety and emergency equipment, security devices, structure equipment, monitoring equipment, the communication system, and operating equipment at the facility.

A current Weekly Inspection Log for Building 23 and Building 72 is given in Appendix F.1. The log includes spaces for the date of the inspection, identity of the inspector, and the specific items to be inspected, and provides for records of corrective action. Logs for inspection of response equipment and fire-fighting equipment are completed by the building personnel and the Fire Department. Copies of these logs are maintained for at least 3 years by the organization that performs the inspection.

F-2a(1) Types of Problems [OAC 3745-54-15(B)(3)]

Table F-2 presents the schedule for inspection of monitoring equipment, safety and emergency equipment, security devices, operating and structural equipment, communication equipment, and container storage areas. Items listed in the table are considered important because of their role in the prevention or response to potential environmental or human health hazards. A list of the problems that can normally be encountered and that are checked during each inspection is also provided in Table F-2.

A current Weekly Inspection Log for Building 23 and Building 72 is given in Appendix F.1.

F-2a(2) Frequency of Inspections [OAC 3745-54-15(B)(4)]

Table F-2 also provides the frequency of inspection for each item. The frequency depends on expected equipment deterioration, environmental or human health incidents, or equipment malfunction between inspections. Each storage unit dock is inspected daily by waste management personnel when loading and unloading wastes.

A copy of the current inspection logs for Building 23 and Building 72 is provided in Appendix F.1. The unit-specific inspection log for each building is completed and maintained by waste management personnel. Inspection logs for fire control equipment are completed and maintained by the Fire Department.

F-2a(3) Remedial Action OAC 3745-54-15C

The complexity and special nature of the activities conducted at the Miamisburg Environmental Management Project, result in delegation of responsibility for general inspection requirements among various groups. Corrective action for deficiencies found during these routine inspections, repair and

preventive maintenance of various items of equipment, and maintenance of inspection records is delegated among these various groups.

If inspections reveal that non-emergency maintenance is needed, the site will initiate immediate action(s) to preclude further damage and to reduce the need for emergency repairs. Non-emergency corrective actions will include the repair or replacement of items such as containers, dollies, tools, sump pumps, etc. If a hazard is imminent or has already occurred during the course of an inspection, or any time between inspections, then corrective action will be taken immediately.

F-2a(4) Inspection Logs OAC 3745-54-15(D)

All results of the waste management personnel's weekly inspections are recorded on log sheets (shown in Appendix F.1) that are maintained at the facility. The information on these log sheets includes the name of the inspector, date and time of inspection, item inspected, problems observed (if any), and the date and nature of repairs and corrective action(s). Any incidents occurring during loading and unloading operations and corrective actions taken will be noted at the time of the incident on the Weekly Inspection Form. All inspection logs will be maintained at the facility for a minimum of 3 years.

F-2b Specific Process Inspection Requirements

The only unit-specific process inspection discussed in the subsections that follow is container storage area inspection.

F-2b(1) Container Inspection (OAC 3745-55-74)

Inspections of the Building 23 and Building 72 container storage areas will be conducted. Table F-2 includes a summary of the anticipated problems discovered during inspection of the containers and the frequency of inspection. Inspections of containers that are being loaded or unloaded are conducted each day that these operations occur.

Sections F-2b(2) to F-2b(8) are not applicable, because the Miamisburg Environmental Management Project does not operate tanks, surface impoundments, incinerators, landfills, land treatment units, or miscellaneous units for hazardous waste treatment, storage, or disposal.

TABLE F - 2--GENERAL INSPECTION SCHEDULE - BUILDING 23 AND BUILDING 72

AREA/EQUIPMENT	SPECIFIC ITEM	TYPES OF PROBLEMS	FREQUENCY OF INSPECTION/ RESPONSIBLE PARTY[A]
Safety and Emergency Equipment	Standard industrial absorbents (sorb-all, vermiculite, etc.)	Insufficient mass, saturated with water	Weekly/1
	Spare containers and over pack drums	Corrosion, structural damage, inadequate number	Weekly/1
	Emergency shower and eye wash	Water pressure, leaking, drainage	Weekly/1
	Fire alarm system	Power failure	Weekly/2
	Protective clothing (impermeable full body coveralls, foot coverings)	Holes, normal wear and tear	Weekly[b]/1
	Fire extinguishers	In need of recharging	Monthly/2
	Fire hydrants	Pressure, flow	Monthly/2
	Pump truck and hose	See "Mobile Equipment (General)"	

AREA/EQUIPMENT	SPECIFIC ITEM	TYPES OF PROBLEMS	FREQUENCY OF INSPECTION/ RESPONSIBLE PARTY[A]
	Breathing air supply system (Building 23 only)	Inoperable, inadequate flow, impurities	Quarterly/2
	Self-contained breathing apparatus (SCBA)	Air quality in reserve, air delivery in tank (cold weather), O-rings missing	Weekly/2
Security Devices	Facility fence	Corrosion, damage to chainlink fence or barbed wire, holes	Weekly/1
	Warning signs	Illegible, missing	Weekly/1
	Main gate	Locking mechanism jammed	Daily/3
	Lighting	Burned out, switch inoperable	Upon failure/3
Operating and Structural Equipment	Dikes, ber s	Cracks, deterioration, spalling, wet spots	Weekly[b]/1
	Non sparking wrenches	Missing, insufficient quantity	Weekly[b]/1
	Container placement	Aisle space, insecure placement	Weekly[b]/1
	Labeling of container	Obscured, deteriorated, missing	Weekly[b]/1
	Container's structural integrity	Corrosion, leakage, structural, not closed	Weekly[b]/1
	Segregation of incompatible wastes	Storage of incompatible wastes in same cell, waste in wrong cell	Weekly[b]/1
	Fence, gate, and lock (Building 72 only)	Corrosion, damage to chainlink fence, sticking or corroding lock	Weekly[b]/1
	Doors	Sticking	Weekly[b]/1
	Structural	Cracks, spalling, uneven settlement, wet spots, erosion	Weekly[b]/1
	Debris and refuse	Fire hazard	Weekly[b]/1
	Containment area coating	Cracks, worn spots	Weekly[b]/1
	Containment sumps	Cracks, spalling, wet spots, erosion, settlement	Weekly[b]/1
Monitoring Equipment	Combustible gas indicator	Inoperable, calibration	Prior to use/4
	Fire detection system	Power failure, not operational	24-hour supervised system/2
	Gamma and alpha detectors (Building 23 only)	Inoperable, damaged	Quarterly/5
	OVA indicator	Inoperable, calibration	Prior to use/4
	Carbon monoxide monitors	Inoperable, damaged	Prior to use/4
Communication Equipment	Telephone	Power failure, poor transmission	Weekly[b]/1
	Radios	Inoperable, poor transmission	Weekly[b]/1
	Fire alarms	Power failure, nonoperational	Weekly[b]/2
	Evacuation alarm	Inoperable, poor operation	Annually/2
Mobile Equipment (Fire Pump Trucks)	General	See "Mobile Equipment (General)"	Weekly/2
	AFFF foam	Insufficient quantity, improper generation	Weekly/2
	Pumps	Low pressure, low flow	Weekly/2
	Hoses	Deterioration, cracking, leaks	Weekly/2
	Ladders	Deterioration	Weekly/2
	Tools	Missing, broken	Weekly/2
Mobile Equipment (General)	Brakes	Worn pads, rotors	Daily/6
	Lights - running/emergency	Burned out	Daily/6
	Horns	Inoperative	Daily/6
	Radiator solution	Leaking, low level	Daily/6
	Engine oil level	Low level, leaks	Daily/6
	Battery	Inoperative, low water level	Daily/6
	Tire condition	Worn, low pressure	Daily/6
	Safety equipment	Inoperative	Daily/6

AREA/EQUIPMENT	SPECIFIC ITEM	TYPES OF PROBLEMS	FREQUENCY OF INSPECTION/ RESPONSIBLE PARTY[A]
	General condition	Deficiencies	Daily/6
	Fuel level	Low level	Daily/6
	Instruments	Inoperative	Daily/6
Mobile Equipment (Forklifts)	General	See "Mobile Equipment (General)"	See "Mobile Equipment (General)"
	Lift operations	Inoperable, malfunction, low hydraulic level	Daily/6

[a] Responsible Party:
1. Waste management
2. Fire Department
3. Security
4. Industrial Hygiene
5. Health Physics
6. Vehicle operator

[b] Daily when loading/unloading

F-3 Exemption from or Documentation of Preparedness and Prevention Requirements OAC 3745-50-44(A)(1) to 3745-54-37

This application does not request a waiver of the preparedness and prevention requirements under OAC 3745-54-30 through 3745-54-37.

F-3a Justification for Exemption Request OAC 3745-50-44(A)(6)

This application does not request a waiver of the preparedness and prevention requirements therefore this section does not apply.

F-3b Design and Operation of Facility OAC 3745-54-31

Areas used for the storage of hazardous or mixed wastes at the Miamisburg Environmental Management Project are designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous wastes or hazardous waste constituents to air, soil, or water that could threaten human health or the environment.

F-3c Equipment Requirements [OAC 3745-50-44(A)(6), 3745-54-32]

F-3c(1) Internal Communications [OAC 3745-54-32(A)]

Immediate emergency instructions to facility personnel are provided by a sitewide public address (PA) system. Security guards have priority use of the PA system at all times. An emergency tone alerts employees to listen; the nature and location of the emergency are described; and designated personnel are instructed to respond to the situation. The PA system is located inside Building 23. The PA system for Building 72 is located on a telephone pole outside the building.

An employee can report an emergency by telephone, using the dedicated emergency number (extension 911) or by two-way radios used by some personnel. All site telephones have this emergency number posted on the telephone. Two telephones exist at Building 23 - one is located inside Room 3, just inside the door and the other is just inside Room 1. An explosion proof telephone is located inside Building 72, near the personnel door. In addition to this phone, an additional phone is located less than 100 ft on the outside of the building adjacent to Building 72 (Building 19). All of these telephones are capable of contacting all on-site telephone systems.

F-3c(2) External Communications [OAC 3745-54-32(B)]

The Miamisburg Environmental Management Project has 24-hr on-site emergency response personnel who are qualified and authorized to summon assistance from external agencies. This is further explained in the RCRA Contingency Plan (Section G).

F-3c(3) Emergency Equipment [OAC 3745-54-32(C)]

Appropriate equipment is available for response to hazards posed by the wastes handled at the project. These include alarm systems or other internal portable communications systems, telephones or hand-held radios, portable fire extinguishers, fire control equipment, spill control equipment, and water at adequate volume and pressure as described in the Miamisburg Environmental Management Project RCRA Contingency Plan, contained in Section G. This equipment is located throughout the facility, and, as appropriate, at the hazardous waste management units as described in this subsection. All equipment is tested and maintained as necessary to ensure its proper operation in time of an emergency.

The following minimal spill control and response equipment is located at or within 100 ft of Building 23 and within 100 ft. of Building 72:

Eye wash and shower unit (with alarm system).
Fire extinguisher.
Full-face shields.
Chemical-resistant goggles.
Neoprene gloves.
Butyl gloves.
Leather gloves.
Splash aprons.
Tyvek coveralls.
Spill rags and pads.
Spill pillows and booms.
Sprinkler system (Building 23 only).
Sodium carbonate for neutralization (Building 72 only).
Bags of vermiculite.
Utility brooms.
DOT Spec. steel drums.
Polyethylene drums.
Overpack drums.
Explosion proof flashlight.
Hand held radios
Alpha meters (Building 23 only)

F-3c(4) Water for Fire Control [OAC 3745-54-32(D)]

The Miamisburg Environmental Management Project has an underground water supply (8-in. diameter pipe) totally dedicated to site fire protection. Adequate water pressure and volume in the underground water supply are provided by the following:

- A 193 ft high, 250,000-gal. water tank.
- A fire pump that delivers 1,500 gallons per minutes (gpm) at 115 pounds per square inch (psi) pressure that is connected to a 350,000-gal. tank.

The total amount of fire protection water stored on-site is approximately 600,000 gal.

The Fire Department, in conjunction with the City of Miamisburg emergency response services (fire, ambulance, and Hazmat) through a Mutual Aid Agreement, provides 24-hour, seven-day-a-week emergency response capability. This capability is comprised of equipment and trained personnel

experienced in fire-fighting and emergency response. The site fire department equipment includes a pumper truck that can deliver 1,000 gpm at 150 psi. All fire hoses are located on the pumper trucks. Detailed information is located in the RCRA Contingency Plan, Section G.

Fire hydrants are located at <200-ft intervals throughout the active portion of the facility, which includes Building 23 and Building 72. The water pressure of these sitewide water hydrants varies from 85 to 90 psi, 100 to 110 psi, or 150 to 200 psi, depending on their location. An automatic sprinkler system exists within Building 23. This system has been designed for the specific occupancy of the building and is connected to the underground water supply described previously.

F-3d Access to Communications or Alarm System OAC 3745-54-34

Building 23 and 72 are both equipped with an alarm box.

F-3e Aisle Space Requirements (OAC 3745-54-35)

Sufficient aisle space for ease of operation, personnel, fire protection, emergency response, and inspection activities is provided in all hazardous and mixed waste container storage units.

The current Building 72 layout provides for storage of single and double rows of drums. Placement of these rows provides minimum 24-in. wide aisles. This aisle space is maintained to allow access to any container by a two-wheel drum dolly or by hoist. Allowing for such aisle space, 80 55-gal. drums can be stored, one drum high, in each of the three bays.

The current Building 23 layout provides for storage of single and double rows of containers. These rows form a stack maintained at a maximum height of three containers. Plywood sheets are placed between the levels to increase stack stability, to aid in the detection of leaks, and to prevent free-standing liquid from accumulating on the drum heads. Stacks contain only compatible wastes. The aisle space between stacks is maintained at a minimum of 24 in. to allow for easy access to any container. Access to stacks is provided by a main aisle with a minimum width of 6 ft.

F-3f Arrangements/Agreements with Local Authorities OAC 3745-54-37

The Miamisburg Environmental Management Project and the City of Miamisburg entered into a Mutual Aid Agreement in February 1999 to address emergency response and fire incidents at the site. Under this agreement, the Mound Facility is defined as Department of Energy (DOE) owned structures or areas, under the physical control of the DOE or its contractor, including leased facilities, located on Federal property within the jurisdictional boundaries of the City of Miamisburg.

This Mutual Aid Agreement assures adequate response capabilities to emergencies at the site through a mutual response plan between the Mound Fire Department and the Miamisburg Fire Division. Personnel safety for both the Mound Firefighters and Miamisburg Firefighters shall be paramount in the decision-making processes during an emergency.

F-3f(1) Arrangements with Police, Fire Department, and Emergency Response Teams OAC 3745-54-37(A)(1)

Both the Mound Fire Department and the Miamisburg Fire Department are participants in fire training activities and response drills, and emergency response drills at the Miamisburg Environmental Management Project.

F-3f(2) Primary Emergency Authority OAC 3745-54-37(A)(2)

The designation of emergency authority at the Miamisburg Environmental Management Project is included in a February 3, 1999 Mutual Aid agreement with the City of Miamisburg.

The Mound Fire Department Emergency Medical Services Unit shall serve as a first responder to all fire, emergency response, and emergency medical incidents. As the first responder, the Mound Fire Department makes the decision when to activate the Mutual Aid Agreement.

Any incident at the Facility will initially be under the direction of a Mound Incident Commander (Mound Fire Department Foreman/Officer in Charge), with assistance provided by the Miamisburg Chief, Captain or Lieutenant in those situations requiring Miamisburg Fire Department response.

Incidents Involving the utilization of Miamisburg Fire Department response assets will utilize the Miamisburg Fire Department Incident Commander as the 'Lead Agency' concept, with assistance provided by the Mound Fire Department Chief or Foreman. Either Incident Command System must provide for proper notifications of non-response personnel to ensure protective actions can be implemented in a safe manner.

The Mound Fire Department shall serve as first responder to any hazardous material (non-radioactive and/or radioactive) release on the Mound Facility. At the scene, Mound Fire Department personnel shall secure the perimeter and begin formulating information regarding the released product and other pertinent information. The on-scene Incident Commander shall request assistance from the Miamisburg Fire Division, the Dayton Regional Haz/Mat Team, and the Regional Haz/Mat Coordinator, as appropriate for the emergency.

F-3f(3) Arrangements with Ohio EPA OAC 3745-54-37(A)(3)

The contractors listed below contractors have been contacted and verbal agreements have been readied and written documentation of the agreements are presently on file. The basis of the verbal agreements is to ensure the accessibility of equipment and supplies during an emergency situation. The contractors included are:

1. Miamisburg Fire Department (8-911) and the
   Dayton-Montgomery County Regional HAZ/MAT Team
   937-224-9241
2. O.H. Materials Company
   P.O. Box 551
   Findlay, Ohio 45840
   19-423-3526 or 800-537-9540
3. Sheridan Safety
   3690 Dayton Park Drive
   Dayton, Ohio 45414
   937-233-4655
4. Orr Safety Supply
   11379 Grooms Road
   Cincinnati, Ohio 45242
   513-247-8506 or 800-669-1677

Memoranda of Understanding (MOUs) have been developed with these off-site organizations and these MOUs are part of Mound's Systems Manual 721, Emergency Plan Implementing Procedure. These MOUs include:

MOU between DOE's Albuquerque Operations Office (Dayton Area Office) and the U.S. Department of Justice, FBI's Cincinnati Field Office and Dayton Resident Agency. September 9, 1988.

MOU between DOE (Dayton Area Office) and the State of Ohio Emergency Management Agency. April 20, 1989.

Mutual Firefighting and Emergency Response Agreement between the City of Miamisburg, Ohio and DOE (Dayton Area Office). November 3,1988.

Mutual Use Permit Agreement between the City of Miamisburg, Ohio and DOE. January 10, 1983.

MOU between DOE (Dayton Area Office) Management Authority and the State of Ohio Miami Valley Emergency Management Authority. August 3, 1988.

MOU between DOE's Albuquerque Operations Office (Dayton Area Office) and Sycamore Hospital. April 15, 1988.

MOU between DOE/MEMP, City of Miamisburg, and Babcock & Wilcox of Ohio, dated February 3, 1999.

F-3f(4) Arrangements with Local Hospitals OAC 3745-54-37(B)

The Mound doctor and nurses on duty during normal working hours are familiar with the types of injuries and illnesses that could result from fires, explosions, or releases of oils, hazardous substances, and hazardous wastes. In addition, an MOU has been signed between DOE/MEMP and Sycamore Hospital, which will provide any emergency services required by Mound.

F-3f(5) Documenting Refusals OAC 3745-54-37(B)

No coordination agreements have been refused. Therefore, this section is not applicable.

F-4 Preventive Procedures, Structures, and Equipment

This section provides a description of the handling techniques and design standards that are present to prevent hazards from occurring that would endanger human health and the environment. The characteristics of the wastes, as described in Section C, indicate that such standards focus on spill prevention and control, fire safety, and prevention of mixing incompatible wastes.

F-4a Unloading Operations [OAC 3745-50-44(A)(8)(a)]

Loading/unloading operations at the Miamisburg Environmental Management Project can occur at the hazardous waste storage areas (Building 23 and Building 72). Standards to prevent spills or ruptures include container requirements and transport practices. These requirements are summarized in this subsection for convenience.

Only new U.S. Department of Transportation (DOT) specification, quality control (QC) inspected containers are used for packaging >5 gal. of RCRA hazardous liquid waste. Pre-acceptance inspections by trained waste management personnel are conducted to ensure that the waste is held in the proper container and that the container is free of dents, creases, bulges, evidence of spillage, or corrosion. These practices reduce the possibility of spillage during handling due to a weakened container.

Containerized hazardous and radioactive mixed wastes are collected from various on-site generating points (i.e., various buildings). During handling operations, trained personnel operate in 2- or 3-man teams with one member responsible for manually moving the container from the generating point to a vehicle using a drum cart. The other team member is responsible for holding doors open, ensuring clear passageway, and operating the hydraulic tailgate. Small containers, such as solvent cans, are carried by hand from the generating point to the collection vehicle. Containers are placed on the tailgate, then lifted from ground level to the truck-bed height. One member accompanies containers during the lifting process, while the other member operates the controls for the hydraulic tailgate. A forklift is used to load materials that have been placed on a wooden skid. One member operates the forklift, while the other member ensures that the load is secured and directs the loading. All waste containers are properly secured in the truck bed for safe transport to the storage area. Stacking of containers in the transport vehicle is prohibited. A trained waste management person is always included as one of the team members and provides oversight direction of the handling operations.

After the wastes have been transported to the storage area, they are unloaded in a manner that is the reverse of the loading procedure. All containers are unloaded by waste types, one at a time. The

containers are moved to the proper storage area, weighed, and then placed in storage. Containerized hazardous wastes are shipped off-site periodically for treatment or disposal at DOE-approved, RCRA-permitted, facilities. Vendor vehicles sent to the Miamisburg Environmental Management Project for waste pickup are tractor-trailer units used for freight hauling, roll-off trucks, flat-bed trucks with side rails, and step-up vans. Containers are loaded to the truck, utilizing the hydraulic loading dock at Building 72. Forklift equipment is used to load waste containers into the vendor's vehicles at Building 23.. Drum carts are then used to position the waste drums in the truck. Occasionally, drums of waste are placed on skids at the storage unit, and a forklift raises and transfers the skid of drums onto the trailer bed. In such cases, the structural integrity of the skid and the secure placement of drums on the skid are important and are carefully checked to ensure safe transfer of material. The maximum number of drums per skid is four. When a waste transporter provides a truck with a hydraulic lift, drums are moved from the storage unit directly onto the hydraulic tailgate of the vendor's truck by a drum cart. The hydraulic system is then used to raise the drums to the truck bed.

Prevention of ignition is accomplished during these activities by exclusion of open flames, smoking, or maintenance activities involving spark or flame during handling. Transport vehicles are turned off prior to any container entering the staging area, and remain off until all containers are transferred to the storage building or are resting on the off-site transport vehicle. Utilities in Building 23 are limited to the fire alarm, lighting, heating and ventilation system, and phone system. Utilities in Building 72 are limited to lighting and the phone system, and meet NEC, Class I or NEMA, Type F, Class 1, Group D standards.

Segregation of incompatible wastes during loading and unloading is ensured by the pre-operational inspection and operating practice that allows only a single waste type in the staging area. All containers are unloaded by waste types, one at a time. DOT standards are followed for loading transport vehicles to ensure that incompatible wastes are properly separated.

F-4b Run-off [OAC 3745-50-44(A)(8)(b)]

Storm water run-off treatment at the Miamisburg Environmental Management Project is described in Subsection B-2a; flooding prevention is described in Subsection B-3b. At Building 72, the principal storage unit for containerized hazardous waste, any spill within the building would be trapped in the containment system under the floor grating. To prevent run-on onto the area, the asphalt apron between the storage building and the fence surrounding the unit contains four drains that remove rainwater and snow melt. All drains are piped to a small holding basin connecting to concrete retention basins, which are part of the storm water run-off control system.

At Building 23, the principal storage unit for containerized mixed waste, any spill within the building will flow into the containment system (trenches and sumps) built into the floor. Containment trenches have dividing walls to prevent the mixture of materials spilled in different parts of the building. Spilled waste would thus be contained for analysis and disposal. In the event that a spill occurs during loading/unloading operations or the waste release is greater than the building's secondary containment, attempts will be made to block and direct any flow. Control measures to contain the spill will include absorption, diking, and trenching.

In the event of a spill that has the potential to reach the storm sewer, shunt valves are closed to divert the spilled liquid to the holding pond. The water in the holding pond is sampled to determine whether contamination is present and to determine the proper method of disposal.

F-4c Water Supplies [OAC 3745-50-44(A)(8)(c)]

Water supply contamination is prevented by the containment system within Building 23 and Building 72 and by the prompt cleanup capability afforded by trained waste management personnel and the on-site Fire Department personnel. Fire Department personnel respond to a spill within minutes, block or direct the flow of any fluid, and collect and containerize any freestanding, spilled waste. Soil contaminated by a hazardous liquid spill is promptly removed and containerized for shipment to an off-site treatment or disposal facility.

The system described in Subsection F-4b for run-off control would prevent the contamination of water supplies from a spill at Building 23 or Building 72. A street-level storm sewer located in the vicinity of

Building 72 can be diked with readily available spill control pillows and absorbent to prevent water contamination in the event of a waste spill during loading/unloading operations.

F-4d Equipment and Power Failure [OAC 3745-50-44(A)(8)(d)]

No significant impact potential exists at Building 23 or Building 72 as a result of equipment or power failure. Both buildings only store containerized wastes and, therefore, no automatic waste feed system exists. In the event of a brief power interruption, all waste handling or inspection activities cease until power is restored. Drum dollies will complete a single transfer operation, if so engaged. Any drum placed in the hoist used at Building 72 will be manually removed from the hoist during a power failure. Otherwise, only spill cleanup activities will continue under the circumstances. For emergency situations, such as a power failure, the Miamisburg Environmental Management Project maintains emergency power generators and lighting systems.

Forklift or transport vehicle equipment failure would result in delay, but would not result in no significant adverse impact to operations at Building 23 or Building 72.

F-4e Personnel Protection Equipment [OAC 3745-50-44(A)(8)(e)]

A description of available protective equipment for Building 23 and Building 72 is presented in Subsection F-3a(3). Protective equipment will include, but not be limited to, protective gloves, eye and face guards, and chemical-resistant overalls and boots. Full-face respirators equipped with chemical filtration cartridges are worn when the hazards of the material being handled require their use.

Prior to handling any hazardous wastes, the chemical inventory sheet, the Material Safety Data Sheet (MSDS), and/or other references are reviewed as necessary for the particular waste stream in question to determine the personal protective equipment (PPE) that is required.

The level of protective equipment used at Building 23 and at Building 72 is normally referred to as Level D or Modified Level D protection. In the event of a spill or other imminent hazard, the Fire Department is capable of Level A protection (fully encapsulating suit and SCBA). This equipment is available within minutes from the on-site Fire Department. The additional protective equipment maintained by the Fire Department is identified in Section G.

F-5 Prevention of Reaction or Ignition of Ignitable, Reactive, and Incompatible Wastes

The prevention of accidental ignition or unplanned reaction of ignitable, reactive, or incompatible wastes is achieved by a combination of design and operating practices. The design standards and operating practices related to accident prevention have been previously discussed in Subsections D-1a(2), D-1a(3), and F-4a. The following subsections summarize these procedures and design standards for convenience.

F-5a Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Waste [OAC 3745-50-44(A)(9), 3745-54-17(A)]

Both design standards and operating practices are relied upon to prevent accidental ignition of wastes. As previously indicated, the utilities at Building 72 are restricted to inside lighting, fire alarm, and phone systems. These items are all explosion proof and are designed and installed in accordance with NEC Class I and NEMA Type 7, Class 1, Group D, standards.

As specified in *Mound Design Criteria* for construction and renovation projects, all electrical work must be in accordance with the requirements of the National Electrical Code (NEC), ANSI/NFPA 70. Articles 500 through 504 address the special requirements for hazardous installations, including locations with flammable liquids and locations with combustible dusts. The intent of this portion of the code is to cover the requirements for electrical equipment and wiring for all voltages in locations where fire or explosion hazards may exist due to vapors, liquids, or dusts. Within Articles 500 through 504, there are provisions for sub classing hazardous areas based on the specific materials or liquids handled within the given area. The

subclasses impose requirements for electrical methods, equipment, and practices that are more stringent and conservative for areas with a greater fire or explosion hazard.

The utilities at Building 23 are restricted to inside lighting, fire alarm, heating and ventilation system, and phone system.

Only non-sparking tools are allowed in the flammable storage area for Building 23 and Building 72. During loading and unloading operations, transport vehicles will be turned off until all containers are loaded on the vehicle or are in the appropriate storage bay. Protection from ignition sources such as open flame, smoking, cutting/welding operations, hot surfaces, functional heat, sparks, and radiant heat is achieved by excluding unauthorized personnel, by prohibition of such articles/activities in the storage areas or within the fenced area surrounding the building (Building 72), and by signs posted on the building's exterior walls and along the surrounding fence (Building 72).

If emergency transfers are necessary, new DOT overpacks or proper specification containers are used for repacking the waste. Ground straps are used during all flammable and combustible liquid transfer operations. Spontaneous ignition is prevented by keeping waste containers closed and by the design and construction of the building, which is covered to keep containers out of direct sunlight and ventilated by the fully open east side of the building, the perimeter screening vent at the base and near the roof, and the roof ventilation.

Operations involving the transfer of combustible liquids are not normally conducted at Building 23. In the event that such transfers are necessary, ground straps are used during all combustible liquid transfer operations. Spontaneous ignition is prevented by keeping waste containers closed and by the design and construction of the building. The building construction and ventilation system maintain moderate building temperatures and reduced vapor pressures.

During storage, containers remain closed unless it is necessary to transfer the waste to another container due to container leakage, to sample the waste, or to consolidate the waste. If emergency transfers are necessary, new DOT overpacks or proper specification containers are used for repacking the waste.

F-5b General Precautions for Handling Ignitable or Reactive Wastes and Mixing of Incompatible Waste [OAC 3745-50-44(A)(9), 3745-54-17(B)]

General precautions for handling ignitable or reactive wastes are discussed in Subsections D-1a(2), D-1a(3), F-4a, and F-5a. Incompatible wastes are never deliberately mixed at the storage unit. Specific areas in Building 23 and Building 72 have been designated for the storage of particular types of wastes to ensure that incompatible wastes are not stored in close proximity to each other. In Building 72, separate sumps ensure that incompatible wastes do not commingle in the event of multiple leaking drums. In Building 23, containment trenches with dividing walls ensure that incompatible wastes do not commingle in the event of multiple leaking drums. Incompatible wastes, such as oxidizers and flammables, are separated into different bays in the storage building.

For consolidating operations at Building 23 and Building 72, the procedure described in Subsection F-5a and Subsection D-1a(2) will be followed to ensure precautions are observed for handling ignitable or reactive wastes. Consolidating in Building 23 and Building 72 consists of transferring wastes from smaller containers, such as 5-gal. containers, to larger 55-gal. drums.

Laboratory chemicals stored in Building 72 are segregated on shelves by waste classification (see Section D).

F-5c Documenting Compliance with General Requirements for Ignitable, reactive or incompatible Waste OAC 3745-50-44(A)(9), 3745-54-17(C)

The Building 23 mixed waste storage unit is located approximately 500 ft within the northwestern perimeter fence at the Miamisburg Environmental Management Project. Building 72 is located approximately 75 ft from the site property line. The buildings are bounded in all other directions by the site property under the control of DOE. A figure identifying Building 23 and Building 72 and these boundaries can be found on Drawing FSD861469. Drawing FSD861469 is included as an attachment in Part 2 of this Permit Application.

F-5d Management of Ignitable or Reactive Wastes in Containers [OAC 3745-50-44(C)(1)(c), 3745-55-76]

The waste generators select the proper type of container based on the physical and chemical properties of the waste. Waste management personnel review waste composition data obtained from the generator, process information, and/or analyses to confirm that the proper type of container for storing the waste was selected by the generator. After the wastes are containerized and placed in storage, the following precautions are taken to ensure that they are managed to prevent ignition or reaction:

Container lids remain closed.
Sources of ignition are not allowed where such wastes are stored.
Spontaneous ignition is prevented by keeping waste containers out of direct sunlight. Building 23 and Building 72 are well ventilated.
"No Smoking" signs are conspicuously placed wherever ignitable or reactive wastes are stored.

F-5e Management of Incompatible Wastes in Containers [OAC 3745-50-44(C)(1)(d), 3745-55-77]

Wastes are containerized at each process location by individuals who understand the properties of the waste being generated. Waste generators must provide waste characterization data to waste management personnel prior to transfer of waste to Building 23 or Building 72. Trained waste management personnel ensure that incompatible wastes are not mixed by reviewing the waste characterization data and process information and/or analyses. Wastes are generally shipped for disposal in the container in which they were received. When wastes are transferred, the operations are conducted by waste management personnel knowledgeable as to chemical incompatibility concerns. No mixing of inadequately characterized waste is permitted in the storage units since this waste is not accepted at Building 23 or Building 72.

Sections F-5e to F-5o are not applicable, because the Miamisburg Environmental Management Project does not operate tanks, surface impoundments, incinerators, landfills, land treatment units, or miscellaneous units for hazardous waste treatment, storage, or disposal.

APPENDIX F.1

BUILDING 23 AND BUILDING 72 WEEKLY INSPECTION LOGS

BUILDING 23 RADIOACTIVE MIXED WASTE STORAGE UNIT
WEEKLY INSPECTION LOG

DATE:	TIME:	AREA/BLDG.: BUILDING 23			INSPECTOR'S NAME(PRINT)
ITEM (POSSIBLE PROBLEMS)		STATUS		LOCATION AND PROBLEMS OBSERVED	DATE AND NATURE OF CORRECTIVE ACTION TAKEN
		ACC.	UNACC.		
SECURITY:					
Warning signs (not readable)					
Doors (not secured, inoperable)					
Locks (inoperable, missing, not closed)					
COMMUNICATIONS:					
PA system (inoperable, damaged)					
Telephone (inoperable, damaged)					
2-way radio (missing, inoperable, no power)					
STORED INVENTORY:					
Container marking (not marked)					
Container lid (not closed, missing, damaged)					
Container condition (damaged, leaking, deterioration)					
Container location (ignitables/ reactives improperly stored, incompatibles not segregated, improper location)					
Aisle space (blocked, inadequate, spillage)					
SECONDARY CONTAINMENT:					
Containment system (liquids or waste present)					
Sump (cracked, contains liquid)					
Structural (cracks, holes, or other deterioration)					
SAFETY SUPPLIES:					
Fire extinguisher (missing, empty, not properly charged)					
Explosion proof flashlight (missing, inoperable)					
PPE (inadequate supply)					
SPILL SUPPLIES:					
Spill control kit (missing, empty)					
Vermiculite (missing, degraded)					
Booms (missing, degraded)					
Spark-resistant tools (missing, damaged)					
Broom (missing, damaged)					
Emergency clothing (missing, damaged)					
GENERAL:					
Housekeeping (dirty, trash not picked up)					

Legend:
Acc. = Acceptable (i.e., item inspected is in satisfactory condition).
Unacc. = Unacceptable (i.e., item inspected is not in satisfactory condition and follow-up with corrective action is required).

Additional Comments or Observations: _____

Inspector's signature: _____

BUILDING 72 HAZARDOUS WASTE STORAGE UNIT
WEEKLY INSPECTION LOG

DATE:	TIME:	AREA/BLDG.: BUILDING 72			INSPECTOR'S NAME(PRINT)
ITEM (POSSIBLE PROBLEMS)		STATUS		LOCATION AND PROBLEMS OBSERVED	DATE AND NATURE OF CORRECTIVE ACTION TAKEN
		ACC	UNACC		
SECURITY:					
Warning signs (not readable, missing)					
Doors (not secured, not operable)					
Gates (not secured, not operable)					
Fences (damaged)					
Locks (not operable, missing, not closed)					
COMMUNICATIONS:					
2-way radio (missing, not operational, no power)					
STORED INVENTORY:					
Container marking (not marked)					
Container lid (not closed, missing, damaged)					
Container condition (damaged, leaking, deterioration)					
Container location (ignitables/ reactives improperly stored, incompatibles not segregated, improper location, liquids or sludges not in a secondary containment area)					
Aisle space (blocked, inadequate, spillage)					
SECONDARY CONTAINMENT:					
Containment system (liquids or waste present)					
Sump (cracked, contains liquid)					
Structural (cracks, holes or other deterioration)					
SAFETY SUPPLIES:					
PPE (inadequate supplies)					
Shower wash (not operational, not adequate volume/pressure)					
Fire extinguisher (missing, empty, not properly charged)					
SPILL SUPPLIES:					
Spill control kit (missing, empty)					
Vermiculite (missing, degraded)					
Booms (missing, degraded)					
Spark-resistant tools (missing, damaged)					
Broom (missing, damaged)					
GENERAL:					
Housekeeping (dirty, trash not picked up)					

Legend:
Acc. = Acceptable (i.e., item inspected is in satisfactory condition).
Unacc. = Unacceptable (i.e., item inspected is not in satisfactory condition and follow-up with corrective action is required).

Additional Comments or Observations: _____

Inspector's signature: _____

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

SECTION G

CONTINGENCY PLAN

Prepared By
BWXT of Ohio, Inc.
For the U.S. DOE-Miamisburg Environmental Management Project Office
Modification 004-April 2001 Renewal Submittal

SECTION G
RCRA CONTINGENCY PLAN

G-1 General Information (OAC 3745-65-52)

The U.S. Department of Energy (DOE) Miamisburg Environmental Management Project (Mound) is located in Miamisburg, Ohio, 12 miles south-southwest of Dayton, Ohio. The Miamisburg Environmental Management Project is owned by DOE and is operated by BWXT of Ohio, Inc. under Contract No. DE-AC24-97OH-20044. This contract is administered by the Miamisburg Environmental Management Project office of DOE, which has offices located at the site. The U.S. DOE Ohio (DOE/OH) Field Office is the responsible field office for The Miamisburg Environmental Management Project.

Drawing FSD861469 included as an attachment in Part 2 of this Permit Application, identifies three areas designated as hazardous waste management units that are addressed by this plan. There were previously nine units, however, six of those units have been formally closed. The three specified areas addressed by this plan include the following:

- Building 27 Filtration System (RCRA Clean Closed, Certification Pending)
- Building 72 Hazardous Waste Storage Unit (Active)
- Building 23 Radioactive Mixed Waste Storage Unit (Active)

The Mound Plan, or Facility, as it has been called, was formerly an integrated research, development, and production facility performing work in support of DOE weapons and energy programs, with emphasis on explosives and nuclear technology. The weapons program missions included process development, production engineering, manufacturing and surveillance of detonators, explosive timers, explosive actuated transducers, explosive pellets, nuclear components, and specific testing equipment. Energy-program-related activities included research, development, and fabrication of radioisotope-fueled heat sources for space and terrestrial applications.

At the peak of it's operations, the site occupied nearly 306 acres, including a 125 acre tract of unimproved property. In 1998, the DOE began transferring parts of the site to the local community for economic development. Because of these transfers, the number of acres and the numbers of buildings continue to decrease over time. As an example, by the time of preparation of this permit application, the number of acres remaining under DOE control was 179.

With the DOE consolidation of non-nuclear manufacturing, the current mission assignment for the Miamisburg Environmental Management Project has changed to that of the cleanup of contaminated buildings and site lands along with commercial economic development of the site. Therefore, the major mission element is the cleanup of contaminated buildings and land and transitioning of the facility into commercial economic development. A second mission element at the site is the continuation of the testing/assembly-related operations in support of the RTG or Power Systems Technology (PST) operations. The PST operations are to be transferred to another DOE operations office.

Today, the Miamisburg Environmental Management Project is a clean up site, where building clean out and/or building or environmental clean up wastes are produced in conjunction with CERCLA regulated field activities or in conjunction with CERCLA related investigative activities. Therefore, these wastes are no longer generated under the more traditional process, production, or research related activities that fit the definition of the traditional RCRA regulated activities.

As a consequence of the current site clean up plan, the Miamisburg Environmental Management Project will continue to generate wastes that resemble the more traditional RCRA regulated wastes that were once generated at the site, because those wastes contain RCRA hazardous waste constituents. The subject wastes are, however, CERCLA generated wastes that are regulated under the requirement that CERCLA activities comply with applicable or relevant and appropriate requirements (a.k.a., the ARARs). Under CERCLA the Miamisburg Environmental Management Project is required to manage CERCLA generated wastes that contain RCRA waste constituents, and to manage CERCLA wastes that resemble RCRA wastes or are sufficiently similar to RCRA wastes, in accordance with the ARARs as identified for that action. CERCLA requires that ARARs requirements such as RCRA waste management requirements

be identified if the clean up wastes contain RCRA-like waste constituents or if the wastes generated are sufficiently similar to RCRA wastes.

The following list is a summary of waste generating operations that generate wastes in support of the site clean up activities. It is these clean up support operations that are included in this Permit Application:

- CERCLA removal actions
- General plant maintenance.
    - Electrical in support of disconnection of utilities before building demolition.
    - Plumbing in support of disconnection of utilities before building demolition.
    - Heating, ventilation, and air conditioning (HVAC) maintaining service in administrative areas.
    - Janitorial providing service in administrative areas.
    - Grounds care providing service administrative areas.
    - Vehicle maintenance operations in support of vehicles involved in soil removal.
- Photographic operations to support CERCLA documentation and communication.
- Environmental Monitoring in support of media characterization data used in CERCLA decions.
- Spill response/release operations.

The hazards associated with the wastes typically handled at the Miamisburg Environmental Management Project are identified in Table G-1. Appendix G.1 includes a table of waste typically handled at the Miamisburg Environmental Management Project and the waste codes for wastes that can typically be stored in the storage units. This list is a subset of the waste codes listed in Section A of this Permit Application. The list in Section A reflects those additional waste codes for wastes types that could be generated as a result of CERCLA related cleanups, and, therefore, represents a list of additional waste codes for CERCLA wastes that may be stored in Building 23 or Building 72.

Subsections G-1a through G-1c that follow include summary descriptions of the wastes that could be managed in each of the units addressed by this Contingency Plan.

G-1a Building 27 Filtration System Hazardous Waste Unit

The Building 27 Filtration System was formerly used for the treatment of explosives contaminated solvents generated in the manufacture of explosives. Clean closure of this unit is complete, and at the time of the compilation of this Plan, the Miamisburg Environmental Management Project is awaiting acceptance of the closure certification by the Ohio EPA. There are currently no hazardous wastes from DOE related operations managed within the Building 27 Filtration System.

G-1b Building 72 Hazardous Waste Storage Unit

Building 72 is used primarily for the storage of containerized wastes prior to the off-site shipment of those wastes. The wastes managed at this unit can include:

- Spent solvents from cleaning and degreasing operations.
- Photographic processing wastes.
- Waste coolants.
- Miscellaneous discarded commercial chemical products.

The Building 72 structure consists of a 40-ft x 60-ft concrete base containing three 20-ft x 40-ft diked areas. The building is covered with a sloped steel roof and enclosed on three sides with corrugated siding down to 6 in. from the bottom. The 6 in space is covered with a screen. The fourth side of the building is open but covered with an extended sloped canopy. The containers are stored on steel grating, which is suspended above the sloped floor. A 24-in x 24-in x 32-in. concrete sump with 4.5-in. thick walls is located at the base of each bay. Any material that would ever [illegible] leak from a container or would ever be spilled would be trapped in the sumps and would be removed immediately [illegible]

leak from a container or would ever be spilled would be trapped in the sumps and would be removed immediately using a standard portable explosion proof pump. The material removed is characterized to determine if it is a hazardous waste prior to disposal. There is no fixed pump or piping installed in the containment system.

The aisle space of Building 72 is sufficient to allow ready access to all containers by means of a drum cart. Approximately 80-55-gal. drums can be stored, one-drum high, in each of the three bays. The maximum containment capacity within Building 72 is 13,285 gal.

TABLE G-1--HAZARDS ASSOCIATED WITH WASTES HANDLED AT THE MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT

WASTE TYPE	FIRE/EXPLOSION HAZARDS	HEALTH HAZARDS
Halogenated solvents (i.e., carbon tetrachloride, methyl ethyl ketone)	Some of these materials may burn, but none of them ignite easily.	Poisonous if swallowed. Fire may produce irritating or poisonous gases. Runoff from fire control or dilution water may cause pollution.
Non-halogenated solvents (i.e., acetone, ethyl alcohol, isopropyl alcohol, methyl alcohol, acetonitrile)	Flammable/combustible material; may be ignited by heat, sparks, or flames. Vapors may travel to a source of ignition and flash back. Container may explode in heat of fire. Vapor explosion hazard indoors, outdoors, or in sewers. Runoff to sewer may create fire or explosion hazard.	May be poisonous if inhaled or absorbed through skin. Vapors may cause dizziness or suffocation. Contact may irritate or burn skin and eyes. Fire may produce irritating or poisonous gases. Runoff from fire control or dilution water may cause pollution.
Corrosives (i.e., nitric acid, sulfuric acid, hydrofluoric acid, sodium hydroxide)	Some of these materials may burn but none of them ignite readily. Flammable/poisonous gases may accumulate in closed areas. Some of these materials may ignite combustibles (wood, paper, oil, etc.).	Contact causes burns to skin and eyes. If inhaled, may be harmful. Fire may produce irritating or poisonous gases. Runoff from fire control or dilution water may cause pollution.
Heavy metals (i.e., cadmium chlorine)	Some of these materials may burn but none of them ignite easily.	Inhalation of dust is poisonous. Runoff from fire control or dilution water may cause pollution.
Polymeric (i.e., acrylate resins, toluene diisocyanate, polybutylene, polystyrene, polyethylene, polyvinyl alcohol)	Flammable/combustible material; may be ignited by heat, sparks, or flames. Vapors may travel to a source of ignition and flash back. Container may explode in heat of fire. Vapor explosion hazard indoors, outdoors, or in sewers. Runoff to sewer may create fire or explosion hazard.	May be poisonous if inhaled or absorbed through skin. Vapors may cause dizziness or suffocation. Contact may irritate or burn skin and eyes. Fire may produce irritating or poisonous gases. Runoff from fire control or dilution water may cause pollution.
Miscellaneous laboratory (i.e., reagent chemicals)	May burn rapidly. May ignite other combustible materials (wood, paper, oil, etc.). Reaction with water may be violent. Flammable/poisonous gases may accumulate in closed areas. Runoff to sewer may create fire or explosion hazard.	Vapors or dust may be irritating. If poisonous, may be fatal if inhaled, swallowed, or absorbed through skin. Contact may cause burns to skin and eyes. Fire may produce irritating poisonous gases. Runoff from fire control or dilution water may cause pollution.
Oils/coolants (i.e., freon, waste oil)	Some of these materials may burn but none of them ignite readily. Flammable/poisonous gases may accumulate in closed areas. Some of these materials may ignite combustibles (wood, paper, oil, etc.).	If inhaled, may be harmful; contact may cause burns to skin and eyes. Fire may produce irritating or poisonous gases. Runoff from fire control or dilution water may cause pollution.
Radioactive mixed (i.e., oil)	Some of these materials may burn but none of them ignite readily.	External radiation from unshielded radioactive material. Internal radiation

WASTE TYPE	FIRE/EXPLOSION HAZARDS	HEALTH HAZARDS
		from inhalation, ingestion, or skin absorption. Radioactive material; degree of hazard will vary greatly, depending on type and quantity of radioactive material. Runoff from fire control or dilution water may cause pollution.

G-1c Building 23 Radioactive Mixed Waste Storage Unit

Building 23 in the past was used primarily for the management of legacy types of mixed wastes that due to the lack of capacity were not able to be treated and/or disposed of off site. Under the site treatment plan (STP), and with increased options for the treatment and disposal of mixed wastes, the waste inventory in Building 23 is no longer static. Today the inventory of legacy wastes managed in Building 23 has diminished, and Building 23 is used primarily for the storage of containerized mixed wastes generated from building and/or environmental clean outs, prior to the off-site shipment of those wastes. Mixed wastes generated at the Miamisburg Environmental Management Project can include:

- CERCLA removal actions
- General plant maintenance.
    - Electrical in support of disconnection of utilities before building demolition.
    - Plumbing in support of disconnection of utilities before building demolition.
    - Heating, ventilation, and air conditioning (HVAC) maintaining service in administrative areas.
    - Janitorial providing service in administrative areas.
    - Grounds care providing service administrative areas.
    - Vehicle maintenance operations in support of vehicles involved in soil removal.
- Environmental Monitoring in support of media characterization data used in CERCLA decions.
- Spill response/release operations.

The maximum storage capacity of Building 23 is 25,000 gal.

The 30-ft. x 117-ft. one-story structure contains three areas:

- Area B - a 30-ft x 77-ft storage area for storing radioactive and radioactive mixed wastes in drums and other containers prior to off-site shipment.
- Area C - a 25-ft x 30-ft storage area for holding miscellaneous radioactive and radioactive mixed wastes.
- Area A - a 14-ft x 30-ft room used for administrative purposes and secondarily contained labpacks.

Drums are stored in several layers (up to three high) and plywood sheets (4 ft. x 3/4 in.) are placed between levels of stacked drums to increase stack stability.

Building 23 is windowless and is constructed of concrete-block walls. The roof of the building is of "built-up" construction consisting of a flat metal deck, vapor barrier, 1-in. insulating board, and layers of bitumen. It is sloped for drainage of precipitation.

G-2 Emergency Coordinators [OAC 3745-65-52(D), 3745-65-55]

Initial response will be by the Emergency Coordinator for the site Fire Protection Services, who performs the function of Incident Commander (IC). The name, title, work telephone number, and home telephone number of the primary (IC) and designated alternates are presented in Table G-2.

In an emergency situation, the IC will make the determination on when the situation warrants the implementation of the Mutual aid Agreement with the City and when it is necessary to call in the Miamisburg Fire and Police Division. The IC then, if deemed necessary, contact the Miamisburg Fire and Police Division. Incidents Involving the utilization of Miamisburg Fire Department response assets will utilize the Miamisburg Fire Department Incident Commander as the 'Lead Agency' concept, with assistance provided by the site Fire Chief or Foreman. Either Incident Command System must provide for proper notifications of non-response personnel to ensure protective actions can be implemented in a safe manner.

TABLE G-2--INCIDENT COMMANDER LIST

TITLE	NAME	ON-SITE TELEPHONE NUMBER	HOME ADDRESS, NUMBER AND PAGER NUMBER
Fire Protection Supervisor (Primary IC)*	Thomas D. Beal	937-865-4897	57 Tranquil Tr. Centerville, OH 45459 Home: 937-435-6522 Pager: 937-234-1145
Assistant Fire Protection Supervisor (Alternate IC)	Stephen C. Etter	937-865-4322	4498 River Ridge Drive Dayton, OH 45415 Home: 937-890-3459 Pager: 937-234-1146
Senior Fire Protection Officer (Alternate IC)	Mark Phillabaum	937-865-3313	412 Lindell Dr. Germantown, OH 45327 Home: 937-855-7087 Pager: 937-234-1148
Senior Fire Protection Officer (Alternate IC)	Steven H. Ward	937-865-3313	50 California Street Farmersville, OH 45325 Home: 937-696-2142 Pager: 937-234-1149
Senior Fire Protection Officer (Alternate IC)	Daniel E. Bechtol	937-865-3313	647 Mears Drive Miamisburg, OH 45342 Home: 937-866-9844 Pager: 937-234-1135

Note: This chart may be revised periodically to reflect management changes at the facility.

G-3 Implementation [QAC 3745-65-52(A), 3745-65-56(D)]

In general, the RCRA Contingency Plan will be implemented in the event that any of the conditions as described in the conditions as outlined in Section B.13 of the Opinion and Final Orders issued on October 18, 1996, by the Ohio Hazardous Waste Facility Board, as follows:

1. Any spill or release of hazardous waste or hazardous waste constituent greater than or equal to 55 gallons;
2. Any spill or release of hazardous waste or hazardous waste constituent less than or equal to 55 gallons that may result in a fire or explosion hazard, as determined by the Emergency Coordinator;
3. Any spill or release of material that exhibits the characteristic of reactivity as defined in OAC 3745-51-23 and which results in the release of gases that may threaten human health or the environment;
4. Any spill on-site that may potentially cause on or off-site soil and/or ground or surface water contamination; or
5. Any spill or release of hazardous waste or hazardous waste constituent that is reported to the National Response Center or local (city or county) emergency response center because the spill exceeded the "RQ" limits.

G-4 Emergency Response Procedures

The initial response to any emergency will be to protect human health and safety. Therefore, the initial action will be to evacuate nonessential personnel from the incident area. Medical assistance for injured persons will be obtained immediately at the scene. Identification, containment, treatment, and disposal assessment will be the secondary response.

G-4a Notification [OAC 3745-65-56(A) and (D)]

Any on-site personnel discovering a potential emergency incident at the hazardous waste management units covered by this plan will report this potential emergency by calling the Miamisburg Environmental Management Project emergency telephone number, 911. The individual making the report will then, in a calm manner, identify to the Security dispatcher answering the call, the nature of the emergency, his/her name, personnel injuries involved (if any), and the incident location. The employee discovering the emergency will also activate the nearest fire alarm box and stand by to provide incident details to response personnel.

At the Miamisburg Environmental Management Project, employees and emergency control groups receive notification of an emergency in a variety of ways, including a a plant-wide public address system, and building specific alarm systems that can include evacuation bells and fire alarms.

Depending on the nature of the emergency, the security dispatcher will call the Fire Protection supervisor who is the IC, to respond to a specific location for a given problem. The IC is the on-duty Fire Protection supervisor, therefore, the notification of Fire Protection is a notification made to the IC.

Immediately upon notification of an emergency, a member of the Fire Protection organization (primary contact is the Fire Protection Supervisor) will act as the IC and when the EOC has been activated maintain contact with the EOC. The IC is responsible for managing the field group to control the emergency at the scene. (Normally, the field group involves the Fire Services, Safeguards and Security, Radiological Controls, and Building Managers, depending on the nature of the emergency.) The IC has the authority to request assistance from internal and external resources.

The IC will determine if outside help is needed, and contact the Miamisburg Fire Department under the terms and conditions of the Mutual Aid Agreement with the City, if necessary.

The evacuation routes to be used in the event of an emergency are the building exits and walkways to prescribed assembly areas. Appendix G.2 presents the evacuation routes for the two storage units described.

G-4b Identification of Hazardous Materials [OAC 3745-65-56(B)]

The IC will immediately identify the following:

- Incident type.
- Source of the release.
- Character of material.
- Estimated quantity and rate of release.
- Area affected by the release.
- Equipment involved.
- Intensity of fire or explosion, if any
- Other impending emergencies.
- Other possibly affected areas/people.
- Movement direction of spill/vapor/smoke.

The initial identification will be by visual inspection of the spilled material, the incident's effects, the location of the release, and the extent of migration. All Miamisburg Environmental Management Project on-site records, including waste inventories, process and waste log sheets, and Material Safety Data Sheets (MSDSs) will be available to aid in estimating the composition and quantity of released material. If necessary, a sample of the spilled material to verify hazardous material identification, to determine the boundaries of contaminated areas and contaminant concentrations.

Verification of cleanup will be by visual examination where the material is distinctive (e.g., an oil spill in soil) and would leave a distinctive stain. Where visual examination is not suitable, samples will be taken in the spill or release area to verify that proper cleanup activities have been completed.

Plant drawings, including plant storm lines (drawing FSE920927), sewer lines (FSE920926), are available at the EOC and in the command van, and will be used to determine control procedures. Fire line drawings are also available in the EOC. Copies of waste storage diagrams (FSD920920 and FSD920962), provided as attachment in Part 2 of this Permit Application.

G-4c Assessment [OAC 3745-65-56(C) and (D)]

The IC will determine the need for local evacuation and the notification of local authorities. The results of this assessment will be used to determine both the direct and indirect effects of the event on human health and welfare, and natural resources. In assessing the event, the potential for direct and indirect effects will include, but not be limited to, fire, explosion, further release probability, toxic gases, radioactivity, or migration by run-on add run-off.

Appendix G.3 provides additional information to characterize released materials. Action will be taken to control on-site and offsite releases, and to minimize effects if the situation involves the release, or potential release, of hazardous wastes.

The IC will determine whether the unit has experienced a release that could threaten human health or the environment outside the plant. The IC will establish protective boundaries around the contaminated areas.

Meteorological data, including wind speed, wind direction, temperature, dew point, and barometric pressure, are available from the Miamisburg Environmental Management Project meteorological station. These data, along with information about the source of an atmospheric release, can be used to predict the direction, extent, and estimated

concentration profile of a contaminant release. If it is determined that evacuation of areas downwind of the unit may be advisable, the IC will immediately notify the appropriate authorities.

G-4d Control Procedures [OAC 3745-65-52(A)]

Potential accidents at the hazardous waste management units could include an unplanned fire/explosion, inadvertent facility damage, or spill/release. Specific actions to be taken at these units are described in the subsections that follow.

G-4d(1) Spills or Material Releases

In the event of a hazardous waste spill or release, the following general procedures will be used for initial response and control of the situation. These are guidelines, and circumstances may dictate some alterations to these procedures.

Responsibilities The responsibilities of site personnel, including the discoverer and the responders in the event of a spill or a release are as follows:

Employee Discovering the Spill or Relaease If an employee discovers a spill resulting in a hazardous waste release, he or she will immediately dial the emergency telephone number, 911, and provide incident details to the Security dispatcher. After making this telephone call, the employee will immediately report to his/her supervisor. If the employee is trained in emergency response, he or she will attempt to containerize or direct the migration of the spill or release.

Supervisor of the Employee Discovering the Spill or Relaease The supervisor will account for all personnel and report any emergency-related information to the Building Manager. In case of a building evacuation, the supervisor will ensure all visitors are escorted from the area and accounted for to Security.

Building or Area Manager The Building or Area Manager will advise and instruct building personnel in actions relat the emergency; conduct a head count of building personnel; advise the IC of personnel accounting; and will advise and assist the IC as required.

Once the emergency telephone number (911) has been reached, Fire Services will automatically respond.

Fire Protection The on-duty Fire Protection Supervisor (the IC) will assume command of all on-scene emergency control activities. The IC will then make the determination on when the situation warrants the implementation of the Mutual aid Agreement with the City and when it is necessary to call in the Miamisburg Fire and Police Division. The IC will then contact the Miamisburg Fire and Police Division.

Miamisburg Fire Department Incidents Involving the utilization of Miamisburg Fire Department response assets will utilize the Miamisburg Fire Department Incident Commander as the 'Lead Agency' concept, with assistance provided by the site Fire Chief or Foreman. Either Incident Command System must provide for proper notifications of non-response personnel to ensure protective actions can be implemented in a safe manner.

IC Responsibilities The IC will obtain the following information from first responders:

- Personnel injuries involved.
- Types of waste released.
- Location and source of the spill.
- An estimate of the quantity released and the rate at which it is being released.
- Direction of the migration of the spill.

This information will help the IC to assess the magnitude and potential seriousness of the spill or release. The IC will contact and dispatch the necessary on-site organizations. The IC, once the EOC has been activated, maintain contact with the EOC through the Incident Command Communicator.

The IC has the authority to order immediate evacuation of The Miamisburg Environmental Management Project should an incident require such action. Normally, however, the decision to evacuate The Miamisburg Environmental Management Project will be made by the Crisis Manager. The EOC has technical and management branches that coordinate activities. The technical branch serves as an information resource to aid in the management decision-making process.

Initial Response Activities

The initial response to any emergency will be to protect human health and safety. Thus, the initial action will be to stop operations, treat injuries, and evacuate personnel if required by the type of incident. Medical assistance for injured persons will be obtained initially from paramedics, then from local hospitals, if necessary. Incident control, including release containment, will be initiated as soon as practical.

The major components of the waste will be determined by emergency response personnel to aid in assessing the situation. If the components of the waste are known the emergency response personnel will wear the appropriate protective clothing. However, if the components-are unknown, the highest level of protection will be worn by personnel. Emergency response personnel will attempt to eliminate or remove the source of the spill.

Initial containment activities will include application of dry sorbents placement of booms or sandbags, and, if necessary, construction of earthen berms. Potential ignition sources will be restricted from the area. If the spill is migrating, the emergency response personnel will make an effort to divert flow from surrounding areas. Vapor suppression actions will be taken, such as the application of spill blankets. Other waste containers in the vicinity will be moved to a safe distance away from the spill area. In the event's release occurs during rain or snowfall, the initial response will be to pump the liquids that have been contained by the dikes and sumps.

If the spill is not contained within a storage collection system, an appropriately sized area of isolation will be established around the spill. The size of the area will generally depend on the size of the spill and the materials involved. This area will be roped or otherwise blocked off. If a spill occurs, only those persons involved in overseeing or performing emergency operations will be allowed within the designated hazard area.

Management of Residues

All recovered liquid wastes will be placed in drums for removal to an approved treatment or disposal site. If the release cannot be completely contained and the flow may possibly enter the storm sewer, the IC would divert flow to the retention pond and no stormwater will be released from the site. The retention pond will be sampled to characterize the material and determine the proper disposal method.

Spilled waste will be placed into appropriate and compatible containers (normally DOT specification drums). All containment and cleanup materials will be decontaminated or placed into drums for disposal. Mixtures of absorbent and spilled material will be placed into appropriate and compatible containers. The residues will be removed by water/soap rinses and the rinsates will be containerized and characterized.

G-4d(2) Fire and/or Explosion

The general procedures for notification and hazard assessment are as described in the previous subsection.

In the event of a fire or explosion, the following general procedures will be used for initial response and control of the situation. The initial response is to protect human health and safety. Therefore, personnel will be evacuated from the area immediately. Only those personnel necessary for initial fire containment will remain in the area.

Initial fire containment will involve use of dry absorbent and control with hand-held fire extinguishers (or sprinkler systems, if applicable). All electrical service will be temporarily terminated at the area. Containers of flammable materials in the vicinity will be moved if such actions do not involve undue risk to the emergency responders.

If the fire involves spilled material, the spill control actions described previously will be performed, when feasible. Appendix G.3 describes the procedures for responding to releases and fires involving radioactive mixed wastes.

Initial response will be by the Emergency Coordinator for the site Fire Protection Services, who performs the function of Incident Commander (IC). The IC will then make the determination on when the situation warrants the implementation of the Mutual Aid Agreement with the City and when it is necessary to call in the Miamisburg Fire and Police Division. The IC will then contact the Miamisburg Fire and Police Division. Incidents Involving the utilization of Miamisburg Fire Department response assets will utilize the Miamisburg Fire Department Incident Commander as the 'Lead Agency' concept, with assistance provided by the site Fire Chief or Foreman. Either Incident Command System must provide for proper notifications of non-response personnel to ensure protective actions can be implemented in a safe manner. When the city is called in, the Mound IC relinguishes the responsibilities and authorities associated wit the position of IC, and passes those responsibilities and authorities to the city IC.

G-4e Prevention of Recurrence or Spread of Fires, Explosions, or Releases [OAC 3745-65-56(E)]

The Miamisburg Environmental Management Project Fire Protection organization, in conjunction with the City of Miamisburg emergency response services (fire, ambulance, and Hazmat), provides 24-hour, seven-day-a-week emergency response capability. This capability is comprised of equipment and trained personnel experienced in fire-fighting and emergency response. Detailed information is located in the Appendix G-4, "Mound Fire Department/Miamisburg Fire Division Mutual Response Guideline for Fire, Emergency Medical Service (EMS), and Hazardous Material (HAZMAT) Incidents, dated February 3, 1999.

The primary defense against recurrence and spread of fires and explosions at the Miamisburg Environmental Management Project is proactive preventive measures. Proactive measures implemented by the site Fire Protection organization include the following practices to prevent the spread of fires, explosions, or releases:

- Fire detection and suppression systems in place.
- Inspection programs.
- Employee training.
- Ongoing HAZMAT training.
- Building inventories.
- Operational readiness reviews (ORRs), walkthrough loss prevention and emergency countermeasures (LP&EC) reviews.

Building codes are strictly observed in new construction of buildings, and process modifications. Safety and housekeeping inspections are conducted on a quarterly basis in every plant building. The sites Fire Protection organization has an extensive program for the inspection and testing of fire detection and suppression systems throughout the facility.

G-4f Storage and Treatment of Released Material [OAC 3745-65-56(G)]

Immediately after an emergency, Waste Management will make arrangements for storage, treatment, and disposal of recovered waste, contaminated soil, surface water, or any other contaminated material resulting from a release. The recovered wastes and contaminated materials will be placed in compatible containers and stored with other hazardous wastes at the appropriate container storage facility.

Treatment, if applicable, and disposal will be at an off-site facility and in accordance with applicable land disposal requirements.

G-4g Incompatible Wastes [OAC 3745-65-56(H)(1)]

Emergency response personnel will consult standard industry compatibility charts to ensure that the incompatible wastes presented do not commingle. If a release occurs emergency response personnel will attempt to contain the material to prevent Incompatibles from mixing. Incompatible material will be removed as permissible, and the flow of the release will be diverted away from Incompatibles if containment is not fully achieved.

Waste Management will ensure that incompatible wastes from a released material are treated, stored, or located in the affected area until the site is adequately remediated. Information necessary to prevent incompatible waste storage or treatment will be acquired from knowledge of the released material and/or chemical and physical analyses. In addition, all standard operating procedures for the storage units will be consulted prior to placing any waste into inventory.

G-4h Post-Emergency Equipment Maintenance [OAC 3745-65-56(H)(2)]

Decontamination procedures after a spill/release will include the removal of all hazardous waste and residues from the contaminated equipment used to remediate the problem. The decontamination process requires identifying the contaminated items and determining the nature and extent of the contamination, selecting the appropriate cleaning procedures, decontaminating the items, and then collecting and containerizing the cleaning fluids and residues for off-site disposal. Items that cannot be properly decontaminated will be properly packaged and sent off-site for disposal.

Decontamination is accomplished by hand washing with soap and water, high temperature/high pressure washing, solvent flushing, hydraulic or sand scouring, or manual or mechanical scraping to remove outer surfaces. Equipment used for emergency response will be decontaminated at the incident site in a temporary containment area, or at the central environmental restoration/decontamination site.

The Fire Protection organization has the primary responsibility to maintain supplies for responding to emergencies. These supplies are maintained in an emergency response trailer and are replenished as used. Emergency response equipment is also provided at the storage and treatment units. The Fire Protection organization will verify that the emergency response equipment is properly maintained by conducting routine inspections.

G-4i Container Spills and Leakage (OAC 3746-65-52)

If container spills involve wastes without free liquids, the response will generally involve sweeping or shoveling up the wastes and re-containerizing them. If liquid wastes leak or spill from a container, the container will be overpacked or the waste will be transferred to another container. Sorbent materials and/or containment berms will be used if necessary to prevent further spread and to aid in recovery, as discussed in Subsection G-4d(1).

Wastes leaking from containers into secondary containment systems will be pumped into drums of appropriate construction as soon as adequately characterized. Following the removal of its contents, the leaking container will be rinsed as appropriate and treated as an empty container.

G-5 Emergency Equipment [OAC 3745-65-52(E)]

The Miamisburg Environmental Management Project's emergency response equipment consists of fire control equipment, spill response equipment, and decontamination equipment. With the exception of Building 27, the units described in this RCRA Contingency Plan will have spill response equipment available for emergency response. Building 27 has undergone closure, and the site is no longer required to maintain emergency response equipment in that area. The emergency equipment available for use at the two remaining regulated is identified in the subsections that follow.

G-5a Fire-Fighting Equipment

Site Fire Protection personnel are trained in emergency response and are HAZMAT-Technician Level certified. Fire-fighting equipment is maintained by Fire Protection and augmented by the City of Miamisburg Fire Department, persuant to a mutual support agreement with the City of Miamisburg. The equipment identified in Table G-3, Current Fire-Fighting Equipment, is maintained by Fire Protection. Emergency equipment available at the site is supplemented by emergency equipment available through the Miamisburg Fire Department.

Fire Protection depends on an underground water supply (8-in. diameter pipe), which is totally dedicated to on-site fire protection. Adequate water pressure and volume to supply the fire hydrants is provided by the following:

- A 200 ft high (1073 feet above sea level), 250,000-gal. water tank.
- A fire pump that delivers 1,500 gallons per minutes (gpm) at 150 pounds per square inch (psi) pressure that is connected to a 350,000-gal. tank.

The total amount of fire protection water stored on-site is approximately 600,000 gal.

Fire hydrants are located at < 200-ft intervals throughout the active portion of The Miamisburg Environmental Management Project. The static water pressure of these hydrants varies from 85 to 90 psi, 100 to 110 psi, or 150 to 200 psi, depending on the hydrant location. In addition to these water systems, sprinkler systems are also located in a majority of the operational buildings on-site. Non-operational buildings do not contain sprinkler systems.

The majority of the fire-fighting equipment listed in Table G-3 is located at the on-site fire station (Building 98).

TABLE G-3--CURRENT FIRE-FIGHTING EQUIPMENT

EQUIPMENT DESCRIPTION	LOCATION	EQUIPMENT CAPABILITIES
Class A fire pumper (Engine 21)	Building 98 (Fire Station)	For fire control. Includes 1,000-gpm pump; a 750-gal. Booster tank; 50-gal. AFFF foam concentrate tank; four air packs; tools/equipment for fighting fires; 800 ft of 3-in. supply hose, 800 ft of 2.5-in. hose, and 300 ft of pre-connected 1.5-in. hose.
Hazardous material trailer	Building 98 (Fire Station)	For controlling releases. Includes protective equipment, assorted booms, pads, chemical cleanup tools, mats, drums, air packs, pumps, absorbent chemicals, etc.
Utility Vehicle (Rescue 23)	Building 98 (Fire Station)	For towing HAZMAT trailer. Unit includes air packs, specialty tools, and other equipment.
Alcohol-resistant foam concentrates	Building 98 (Fire Station)	For fire control. Includes equipment for applying foam; 300 gal. On hand.
Ambulance (Medic 24)	Building 98 (Fire Station)	For personnel transportation. Includes standard equipment for EMT, basic life support level of emergency care, and transport of sick or injured persons.
Ambulance (Medic 20)	Building 98 (Fire Station)	Includes standard equipment for EMT, basic life support level of emergency care, and transport of sick or injured persons.
Incident Command Van	Building 98 (Fire Station)	Mobile command post.
Totally encapsulating suits	Building 98 (Fire Station)	For personnel protection. Provides protection against skin contact with acids.
Portable fire extinguishers	Numerous locations at the site, as well as at the storage units.	For immediate response to small fires.

Portable fire extinguishers located at each hazardous waste management area and at locations throughout the site, as noted in Table G-3 are of five types: Halon, ABC; water, A; carbon dioxide, BC; dry chemical, B or BC or ABC; and Met-L-X, D. These fire extinguishers are classified according to their capabilities and are appropriate for the potential hazard(s) in each waste management area. Class A extinguishers are capable of extinguishing fires involving ordinary combustible materials such as wood, cloth, paper, rubber, and many plastics. Class B extinguishers are capable of extinguishing fires involving flammable liquids, soils, greases, tars, oil-based paints, lacquers, and flammable gazes. Class C extinguishers are capable of extinguishing fires involving energized electrical equipment. Class D extinguishers are capable of extinguishing fires involving metals. All extinguishers comply with National Fire Code Standards for portable fire extinguishers, and they are inspected monthly and after each use. Records of these inspections are kept on file at the site Fire Station.

G-5b Spill Control Equipment

Equipment for use in containing and cleaning up spilled hazardous wastes is stored at and maintained at the on-site fire station (Building 98). The one exception is that Waste Management has skids of adsorbents at areas of potential need. Table G-4 lists other equipment and materials that are typically on hand or that can be deployed for use at the designated facilities. Specific quantities, types, sizes, and brands may vary.

Building 27 has undergone clean closure and is inactive as a hazardous waste management unit. There is no DOE owned waste in the building, therefore, no spill control equipment is maintained in the building.

The Miamisburg Environmental Management Project also maintains a mutual aid agreement with the City that makes available City emergency equipment, as well agreements with companies who possess the capability to respond to all levels of spill emergencies.

TABLE G-4–TYPICAL EXAMPLES OF EMERGENCY EQUIPMENT

EMERGENCY CATEGORY	EQUIPMENT LOCATION	EQUIPMENT DESCRIPTION	EQUIPMENT CAPABILITY
Facility communications	Security and Fire station	2-way portable radios	Communications among company employees.
	Building 72	Telephone and 2-way portable radios	Communications with The Miamisburg Environmental Management Project emergency responders, i.e., Fire Protection.
		PA system speaker	Receives all on-site emergency and nonemergency announcements.
	Building 23	Telephones	Communications with The Miamisburg Environmental Management Project emergency responders, i.e., Fire Protection.
		2-way portable radios	Communications among company employees.
		PA system speaker	Receives all on-site emergency and nonemergency announcements.
Fire extinguishing equipment	Building 72	ABC dry chemical fire extinguisher	Extinguishes class A, B, and C fires.
	Building 23	Halon fire extinguisher	Extinguishes electrical fires.
		Sprinkler system	Extinguishes fires within the building.
Spill control equipment	Building 72	Spill rags and pillows	Absorbs spilled material.
		Spill pillows (12 in. x 12 in.)	Absorbs spilled material.
		Spill pigs (3 ft long)	Absorbs spilled material and dikes small areas.

EMERGENCY CATEGORY	EQUIPMENT LOCATION	EQUIPMENT DESCRIPTION	EQUIPMENT CAPABILITY
		Sodium carbonate	Neutralizes acid spills.
		Vermiculite	Absorbs spilled material.
		Utility brooms	Sweeps area or removes contaminated debris.
	Building 23	Spill pillows	Absorbs spilled material.
		vermiculite and absorb-all	For use in containerizing spilled material.
		Hazardous waste disposal bags and ties	Contains dry hazardous waste material such as trash or debris.
		Utility brooms	Sweeps area or removes contaminated debris.
Personal protective equipment	Building 72	full-face shields	Protects the face from chemical splashes.
		Chemical-resistant goggles	Protects the eyes from chemical splashes.
		Neoprene gloves	Protects against caustics, acids, alcohols, and oils.
		Butyl gloves	Protects against many contaminants, except halogenated hydrocarbons and petroleum compounds.
		Leather gloves	Provides hand protection from rough/cutting surfaces.
		Splash aprons	Protects the human torso from chemical splashes.
		Full-face respirators*	Provides Level C respiratory protection.
		Acid-protective respirator cartridges*	Provides acid or gas respiratory protection.
		Asbestos, dust, mist, fume, and radionuclide respirator cartridges*	Provides asbestos dust, mist, fume, and radionuclide respiratory protection.
		Organic vapor respirator cartridges*	Provides organic vapor respiratory protection.
		Tyvek coveralls	Provides full body protection from chemical splashes.
		Eyewash and shower unit	Provides decontamination or flushing of contaminated personnel.
	Building 23	Full-face and half-face respirators*	Provides Modified Level D and Level C respiratory protection.
		Acid-protective respirator cartridges*	Provides acid/gas respiratory protection.
		Asbestos, dust, mist, fume, and radionuclide respirator cartridges*	Provides asbestos, dust, mist, fume, and radionuclide respirator protection.
		Organic vapor respirator cartridges*	Provides organic vapor respiratory protection.
		Booties	Provides footwear protection from various contaminants and splashes.

* Respirators and respirator cartridges are not physically maintained at Building 23 or Building 72, they are maintained in DS Building and issued by the Industrial Health and Safety Group.

G-6 Coordination Agreements [OAC 375-65-52(C), 3745-65-37]

In addition to The Miamisburg Environmental Management Project organizations and personnel assigned to the response effort, provisions have been made to include off-site organizations in the Miamisburg Environmental Management Project response organization when on-site spill response resources and expertise are insufficient, and when off-site water, land, or air are adversely affected. Memoranda of Understanding (MOUs) have been developed with these off-site organizations and these MOUs are part of The Miamisburg Environmental Management Project's Systems Manual 721, Emergency Plan Implementing Procedure. These agreements include:

- MOU between DOE's Albuquerque Operations Office (Dayton Area Office) and the U.S. Department of Justice, FBI's Cincinnati Field Office and Dayton Resident Agency. September 9, 1988.
- MOU between DOE (Dayton Area Office) and the State of Ohio Emergency Management Agency. April 20, 1989.
- Mutual Firefighting and Emergency Response Agreement between the City of Miamisburg, Ohio and DOE (Dayton Area Office). November 3,1988.
- Mutual Use Permit Agreement between the City of Miamisburg, Ohio and DOE. January 10, 1983.
- MOU between DOE (Dayton Area Office) Management Authority and the State of Ohio Miami Valley Emergency Management Authority. August 3, 1988.
- MOU between DOE's Albuquerque Operations Office (Dayton Area Office) and Sycamore Hospital. April 15, 1988.
- MOU between DOE/MEMP, City of Miamisburg, and Babcock & Wilcox of Ohio, dated February 3, 1999.

The on-site fire station is manned 24 hrs a day. In conjunction with the City of Miamisburg emergency response services (fire, ambulance, and Hazmat), the onsite Fire Protection organization under a Mutual Aid Agreement provides 24-hour, seven-days-a-week emergency response capability. This capability is comprised of personnel trained and experienced in fire-fighting and in responding to emergency situations. On-site fire protection personnel reach any of the hazardous waste storage within approximately 2 min.

In the event of a major fire or emergency MEMP's Fire Protection organization will call the Miamisburg Fire and Police Divisions who will respond and provide the necessary assistance. Incidents Involving the utilization of Miamisburg Fire Department response assets will utilize the Miamisburg Fire Department Incident Commander as the 'Lead Agency' concept, with assistance provided by the site Fire Chief or Foreman. Either Incident Command System must provide for proper notifications of non-response personnel to ensure protective actions can be implemented in a safe manner. The Miamisburg Fire Division has participated in practice drills at the Miamisburg Environmental Management Project with the Fire Protection organization.

The Miamisburg Environmental Management Project doctor on contract, and nurses on duty during normal working hours. These health professionals are familiar with the types of injuries and illnesses that could result from fires, explosions, or releases of oils, hazardous substances, and hazardous wastes. In addition to on-site capabilities, an MOU has been signed between DOE/MEMP and Sycamore Hospital, which will provide any emergency services required by The Miamisburg Environmental Management Project.

Appendix G.1 of this RCRA Contingency Plan lists the principal waste types generated at the Miamisburg Environmental Management Project. Table G-1 lists the health hazards associated with these wastes. In the cover letter accompanying the copy of the RCRA Contingency Plan sent to the local hospital the site has provided guidance regarding the number of potential exposures in the event of fire, explosion, or release of hazardous waste or hazardous waste constituents that could threaten human health or the environment.

Although it is believed that the Miamisburg Environmental Management Project emergency response personnel and equipment, in conjunction with the Miamisburg Fire Division, can satisfactorily handle any emergency on-site involving hazardous waste, copies of the RCRA Contingency Plan have also been sent to the organizations shown in Table G-5.

TABLE G-5–EXTERNAL RCRA CONTINGENCY PLAN DISTRIBUTION

ORGANIZATION	TELEPHONE
City of Miamisburg, Fire and Police Division, Miamisburg, OH 45342	937-866-3303
Sycamore Hospital,* 2150 Leiter Road, Miamisburg, OH	937-866-0551
Ohio EPA Emergency Response Team, P.O. Box 1049, 1800 Watermark Drive Columbus, OH 43266-1049	800-282-9378
Ohio Emergency Management Agency 2855 West Dublin-Granville Road Columbus, OH 43235-2206	614-889-7150
Miami Valley Emergency Management Authority 4200 Lake Center Drive Trotwood, OH 45426	937-854-4822

*Sycamore Hospital has been provided with guidance regarding the number of potential exposures at Mound in the event of a fire, explosion, or release of hazardous waste or hazardous waste constituents that could threaten human health or the environment.

G-7 Evacuation Plan [OAC 3745-65-52(F)]

The evacuation of a particular area or building at the Miamisburg Environmental Management Project will be determined on a case-by-case basis by the IC. Depending on the area and the prevailing wind direction, all persons not participating in responding to the emergency will evacuate by proceeding to the nearest area designated on each building evacuation plan (Appendix G.2). All persons will remain at these locations until the "All Clear" has been sounded or until advised by the IC to leave the area.

While at the evacuation site, all persons will stand clear of the movement of emergency response personnel and equipment.

The Miamisburg Environmental Management Project emergency warning signals for an evacuation and the signal to take shelter are listed on each evacuation plan posted at the Miamisburg Environmental Management Project and are as follows:

- Evacuation: Continuous bells
- Take shelter: 2 bells - pause - 2 bells

Instructions to take cover or to evacuate buildings are provided over the PA system. Maps and signs in each building show specific evacuation routes and assembly areas. The Building Manager is responsible for maintaining and posting these diagrams on bulletin boards and other prominent locations in each building on-site, as noted in Appendix G.2. Site emergency response personnel review these evacuation routes annually.

G-8 Required Reports [OAC 3745-65-56(J)]

For any incident that requires implementing this Contingency Plan, Miamisburg Environmental Management Project personnel will note in the operating record the time, date, and details of the incident.

Within 15 days after the incident, a written report will be submitted to the OEPA director. The report will include the following information:

- Name, address, and telephone number of owner/operator.
- Name, address, and telephone number of facility.
- Date, time, and type of incident (e.g., fire, spill, etc.).
- Name and quantity of material(s) involved.
- Extent of injuries, if any.
- Assessment of actual or potential hazards to human health or the environment, if applicable.
- Estimated quantity and disposition of material recovered from the incident.

APPENDIX G.1
WASTES MANAGED BY WASTE CODE, WASTE CONSTITUENT AND STORAGE LOCATION.

APPENDIX G.1 WASTES MANAGED AT THE MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT			
EPA Hazardous Waste No.	Annual Estimated Quantity	Unit of Measure	Process Description
D001	8,000	P	Building 72 Container Storage Unit
D002	1,000	P	Building 72 Container Storage Unit
D003	200	P	Building 72 Container Storage Unit
D004	10	P	Building 72 Container Storage Unit
D005	100	P	Building 72 Container Storage Unit
D006	1,000	P	Building 72 Container Storage Unit
D007	1,000	P	Building 72 Container Storage Unit
D008	2,000	P	Building 72 Container Storage Unit
D009	700	P	Building 72 Container Storage Unit
D010	10	p	Building 72 Container Storage Unit
D011	10	p	Building 72 Container Storage Unit
D012	800	p	Building 72 Container Storage Unit
D013	10	p	Building 72 Container Storage Unit
D014	10	p	Building 72 Container Storage Unit
D015	10	p	Building 72 Container Storage Unit
D016	10	p	Building 72 Container Storage Unit
D018	500	p	Building 72 Container Storage Unit
D019	200	p	Building 72 Container Storage Unit
D021	10	p	Building 72 Container Storage Unit
D022	200	p	Building 72 Container Storage Unit
D024	10	p	Building 72 Container Storage Unit
D025	10	p	Building 72 Container Storage Unit
D026	10	p	Building 72 Container Storage Unit
D027	10	p	Building 72 Container Storage Unit
D028	10	p	Building 72 Container Storage Unit
D029	10	p	Building 72 Container Storage Unit
D030	10	p	Building 72 Container Storage Unit
D031	10	p	Building 72 Container Storage Unit
D032	10	p	Building 72 Container Storage Unit
D033	10	p	Building 72 Container Storage Unit
D034	10	p	Building 72 Container Storage Unit

APPENDIX G.1 WASTES MANAGED AT THE MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT			
EPA Hazardous Waste No.	Annual Estimated Quantity	Unit of Measure	Process Description
D035	200	p	Building 72 Container Storage Unit
D036	10	p	Building 72 Container Storage Unit
D037	10	p	Building 72 Container Storage Unit
D038	10	p	Building 72 Container Storage Unit
D039	200	p	Building 72 Container Storage Unit
D040	200	p	Building 72 Container Storage Unit
D041	10	p	Building 72 Container Storage Unit
D042	10	p	Building 72 Container Storage Unit
D043	1,000	p	Building 72 Container Storage Unit
F001	1,000	P	Building 72 Container Storage Unit
F002	8,000	P	Building 72 Container Storage Unit
F003	1,000	P	Building 72 Container Storage Unit
F004	10	P	Building 72 Container Storage Unit
F005	500	P	Building 72 Container Storage Unit
F007	10	P	Building 72 Container Storage Unit
F009	10	P	Building 72 Container Storage Unit
P015	10	P	Building 72 Container Storage Unit
U002	10	P	Building 72 Container Storage Unit
U044	10	P	Building 72 Container Storage Unit
U045	10	P	Building 72 Container Storage Unit
U080	10	P	Building 72 Container Storage Unit
U134	10	P	Building 72 Container Storage Unit
U151	180	P	Building 72 Container Storage Unit
D001	6,000	P	Building 23 Container Storage Unit
D002	600	P	Building 23 Container Storage Unit
D003	100	P	Building 23 Container Storage Unit
D004	100	P	Building 23 Container Storage Unit
D005	100	P	Building 23 Container Storage Unit
D006	100	P	Building 23 Container Storage Unit
D007	100	P	Building 23 Container Storage Unit
D008	10,000	P	Building 23 Container Storage Unit
D009	700	P	Building 23 Container Storage Unit

APPENDIX G.1 WASTES MANAGED AT THE MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT			
EPA Hazardous Waste No.	Annual Estimated Quantity	Unit of Measure	Process Description
D010	10	P	Building 23 Container Storage Unit
D011	100	P	Building 23 Container Storage Unit
D012	10	P	Building 23 Container Storage Unit
D013	10	P	Building 23 Container Storage Unit
D014	10	P	Building 23 Container Storage Unit
D015	10	P	Building 23 Container Storage Unit
D016	10	P	Building 23 Container Storage Unit
D018	10	P	Building 23 Container Storage Unit
D019	10	P	Building 23 Container Storage Unit
D021	10	P	Building 23 Container Storage Unit
D022	10	P	Building 23 Container Storage Unit
D023	10	P	Building 23 Container Storage Unit
D024	10	P	Building 23 Container Storage Unit
D025	10	P	Building 23 Container Storage Unit
D026	10	P	Building 23 Container Storage Unit
D027	10	P	Building 23 Container Storage Unit
D028	10	P	Building 23 Container Storage Unit
D029	10	P	Building 23 Container Storage Unit
D030	10	P	Building 23 Container Storage Unit
D031	10	P	Building 23 Container Storage Unit
D032	10	P	Building 23 Container Storage Unit
D033	10	P	Building 23 Container Storage Unit
D034	10	P	Building 23 Container Storage Unit
D035	10	P	Building 23 Container Storage Unit
D036	10	P	Building 23 Container Storage Unit
D037	10	P	Building 23 Container Storage Unit
D038	10	P	Building 23 Container Storage Unit
D039	10	P	Building 23 Container Storage Unit
D040	10	P	Building 23 Container Storage Unit
D041	10	P	Building 23 Container Storage Unit
D042	10	P	Building 23 Container Storage Unit
D043	10	P	Building 23 Container Storage Unit

APPENDIX G.1 WASTES MANAGED AT THE MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT			
EPA Hazardous Waste No.	Annual Estimated Quantity	Unit of Measure	Process Description
F001	10	P	Building 23 Container Storage Unit
F002	500	P	Building 23 Container Storage Unit
F003	500	P	Building 23 Container Storage Unit
F004	10	P	Building 23 Container Storage Unit
F005	100	P	Building 23 Container Storage Unit
F007	10	P	Building 23 Container Storage Unit
F009	10	P	Building 23 Container Storage Unit
F027	10	P	Building 23 Container Storage Unit
P015	10	P	Building 23 Container Storage Unit
U002	10	P	Building 23 Container Storage Unit
U044	10	P	Building 23 Container Storage Unit
U045	10	P	Building 23 Container Storage Unit
U080	10	P	Building 23 Container Storage Unit
U134	10	P	Building 23 Container Storage Unit
U151	180	P	Building 23 Container Storage Unit

APPENDIX G.2
EVACUATION PLANS
FOR

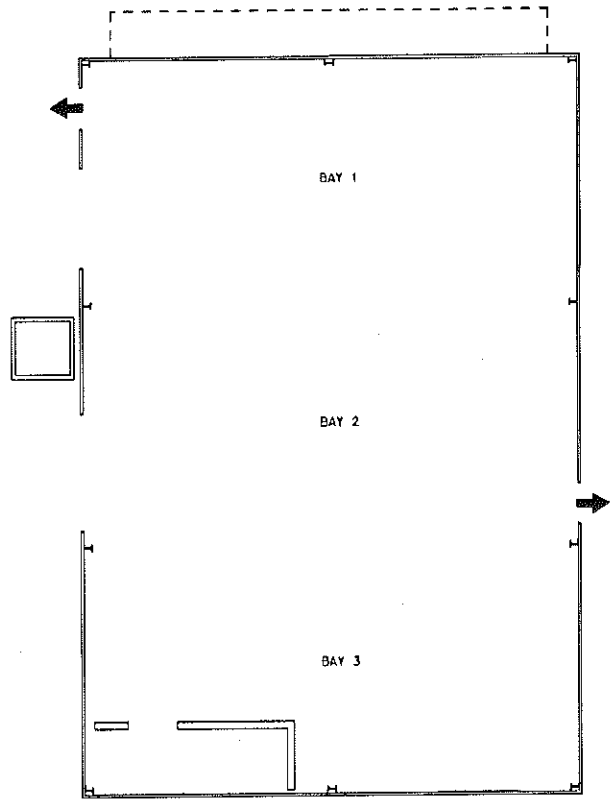
BUILDING 72

&

BUILDING 23

EMERGENCY TELEPHONE 911

ASSEMBLY AREA



➡ SYMBOL FOR EMERGENCY EXITS

EMERGENCY SHELTER #26

LOCATED ON BUILDING 57
FIRST FLOOR

ADDITIONAL BUILDINGS
WITH "SHELTER AREAS"
NEAR THIS BUILDING:

98

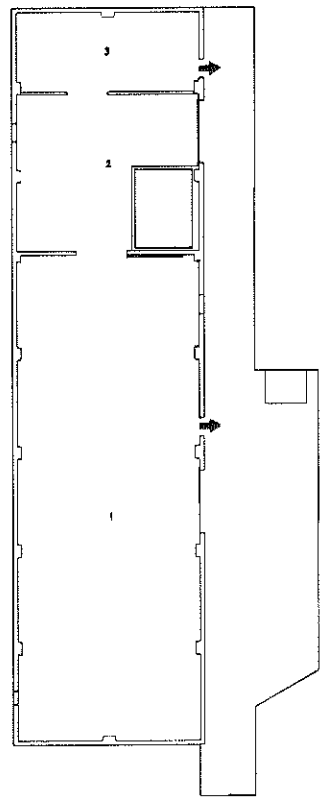
BUILDING - 72
FIRST FLOOR

CLASSIFICATION: UNCL.

EMERGENCY BELLS

EVACUATION: CONTINUOUS BELLS
TAKE SHELTER: 2 BELLS - PAUSE - 2 BELLS

EMERGENCY TELEPHONE 911



ASSEMBLY AREA
(NORTH OF BUILDING)

➡ SYMBOL FOR EMERGENCY EXITS

EMERGENCY SHELTER #21

LOCATED IN WD BUILDING SUB BASEMENT

ADDITIONAL BUILDINGS WITH "SHELTER AREAS" NEAR THIS BUILDING:

HH

BUILDING - 23 ,
FIRST FLOOR

CLASSIFICATION: UNCL.

EMERGENCY BELLS

EVACUATION: CONTINUOUS BELLS
TAKE SHELTER: 2 BELLS - PAUSE - 2 BELLS

APPENDIX G.3
CHARACTERIZING RELEASED MATERIAL

APPENDIX G.3
CHARACTERIZING RELEASED MATERIALS

To assess possible hazards to human health and the environment that may result from any release, fire, or explosion, the IC will contact hazardous waste management personnel, Industrial Safety and Health personnel, and other qualified personnel as needed to implement the following identification and assessment procedures.

IDENTIFICATION OF HAZARDOUS MATERIALS

To identify hazardous materials that may be involved in an emergency, proceed as follows:

- If a material handling operation was underway at the time the emergency occurred, assume that material is the material involved, subject to confirmation. Seek evidence at the scene; for example, a marked container that was obviously in use in the area at the time of the incident would be a good indicator of the chemical sought. In addition, contact the person(s) involved in or associated with the incident to confirm the composition of a material in use or to obtain clues that lead to identifying the involved substance. By examining the evidence and talking to the persons involved, attempt to determine the exact source, amount, and extent of released material.

- If no material handling operation was underway at the time of the emergency, observe the situation and use knowledge of and records from the room, building, or facility to determine the operations conducted there and the chemical substances used or stored there. Also, contact the person(s) involved in or associated with work performed in the area for help in identifying the material involved in the emergency. If necessary and if time allows, take a sample of the material and have it chemically analyzed. From these sources, attempt to determine the exact source, amount, and extent of released material.

- Once the material has been identified, use chemical handbooks and other reference documents to determine whether the material is hazardous based on material properties.

ASSESSMENT

To assess possible hazards to human health and the environment resulting from a fire, release, or explosion and to assess the need for evacuation and for notification of authorities, proceed as follows:

- Determine the hazardous properties of the material involved in the incident using Material Safety Data Sheets, chemical handbooks, and other reference information.

- Assess the nature of the incident to determine:

  The estimated amount of material involved.
  The size of the area involved.
  The degree of confinement of the incident and the potential to spread to adjacent areas.
  The amount of control that has been or will likely be achieved.
  The potential type and quantity of any toxic, irritating, or asphyxiating gases or combustion products that could be generated.
  The potential type and quantity of runoff that could result from a spill or from water or chemical agents used to control the incident.
  The potential for heat-induced explosion.
  The population density and use of areas that could be impacted by the emergency.
  The presence of any other materials or operations near the incident that could be adversely impacted by the emergency or its aftereffects.

- Assess the above findings and report conclusions regarding the release, fire, or explosion to the Senior Safety Manager, who will notify the site General Manager and the DOE/MEMP Area Manager.

If evacuation of local areas appears advisable, recommend evacuation to the Senior Safety Manager, who will inform the site General Manager and the DOE/MEMP Area Manager. The DOE/MEMP representative will ensure that the proper authorities are notified.

APPENDIX G.4
MUTUAL AID AGREEMENT WITH THE CITY OF MIAMISBURG

MOUND FIRE DEPARTMENT/MIAMISBURG FIRE DIVISION MUTUAL RESPONSE GUIDELINE FOR FIRE, EMERGENCY MEDICAL SERVICE (EMS), AND HAZARDOUS MATERIAL (HAZMAT) INCIDENTS

PURPOSE

This guideline shall serve as a practical and effective approach to responding to emergencies occurring at the Mound Facility. For the purposes of this guideline, the Mound Facility is defined as Department of Energy (DOE) - owned structures or areas, under the physical control of the DOE or its contractor to include MMCIC/MATC leased facilities, located on Federal property within the jurisdictional boundaries of the City of Miamisburg. This guideline shall assure adequate response capabilities to emergencies at the Mound Facility through a mutual response plan between the Mound Fire Department and the Miamisburg Fire Division. Personnel safety for both the Mound Firefighters and Miamisburg Firefighters shall be paramount in the decision making processes during an emergency.

Emergency Medical Services (BLS)

The Mound Fire Department EMS Unit shall serve as a first responder to any EMS requests on the Mound Facility. In most cases, an EMS request subsequently identified as a Basic Life Support (BLS) emergency will be the responsibility of the Mound EMS Unit for treatment and transport to the nearest appropriate medical facility. If the Mound EMS Unit is temporarily out of service, involved in an EMS call/transport, or multiple patients are involved, BLS requests shall be routed to the Miamisburg Fire Division or Mutual Aid responder.

Emergency Medical Services (ALS)

The Mound Fire Department EMS Unit shall serve as a first responder to any EMS request on the Mound Facility. If the EMS request is initially or subsequently identified as an Advanced Life Support (ALS) emergency, the Miamisburg EMS Unit will be requested as Lead Agency in the treatment of the ALS patient and then transport the patient, once stabilized, to the nearest appropriate medical facility.

Emergency Medical Services (Contaminated Victims)

The Mound Fire Department EMS Unit shall serve as a first responder to any EMS request on the Mound Facility. If the EMS request involves a patient who is suspected of being, or is determined to be, contaminated with any non-radioactive product, treatment and transportation shall be provided in accordance with the extent of the patient's illness/injuries as described above in Emergency Medical Services (BLS) or Emergency Medical Services (ALS). If the EMS request involves a patient who is suspected of being, or is determined to be, contaminated with any radioactive material, treatment shall be provided in accordance with the extent of the patient's illness/injuries as described above in the BLS and ALS paragraphs. To the extent possible, the Mound Fire Department EMS Unit shall be used to transport radioactively contaminated patients. However, if the Mound EMS Unit is temporarily out of service, involved in an EMS call/transport, or multiple contaminated patients are involved, transportation of radioactively contaminated patients shall be provided by the Miamisburg EMS Unit or Mutual Aid responder. Radioactively contaminated patients shall be transported to Sycamore Hospital or an appropriate medical facility.

Rescue Response

Any incident that requires technical rescue techniques and equipment shall be initially addressed by the Mound Fire Department, with assistance from the Miamisburg Fire Division. At an incident where the rescue needs exceed the capabilities of the Mound FD and the Miamisburg FD, assistance shall be requested from the Miami Valley Urban Search & Rescue Team.

MOUND FIRE DEPARTMENT/MIAMISBURG FIRE DIVISION MUTUAL RESPONSE GUIDELINE FOR FIRE, EMERGENCY MEDICAL SERVICE (EMS), AND HAZARDOUS MATERIAL (HAZMAT) INCIDENTS has been retyped from the oringinal aggreement yhr signiture page has been scanned in and is the original

Hazardous Materials (Minor Release)

Incidents where Hazardous Materials(non-radioactive and/or radioactive) have leaked, spilled, or been released in some manner, in a minor capacity as determined by the Mound Fire Department Foreman or knowledgeable facility representative, shall be addressed by the Mound Fire Department.

Hazardous Materials (Major Release)

The Mound Fire Department shall serve as first responder to any hazardous material (non-radioactive and/or radioactive) release on the Mound Facility. At the scene, Mound FD personnel shall secure the perimeter and begin formulating information regarding the released product and other pertinent information. The on-scene Incident Commander shall request assistance from the Miamisburg Fire Division, the Dayton Regional Haz/Mat Team, and the Regional Haz/Mat Coordinator, as appropriate for the emergency.

Fire Alarm Activation

The Mound Fire Department shall respond and assess all Fire Alarm activations in buildings at the Mound Facility, unless building-specific response alternatives are coordinated, in writing, between the Mound Fire Department and the Miamisburg Fire Division.

Structural Fire (Active Fire)

If there is a confirmed Structural Fire or Immediately Dangerous to Life and Health (IDLH) Condition at the Mound Facility, the Mound Fire Department will immediately request assistance from the Miamisburg Fire Division. The Mound Fire Department crews shall respond to the scene and begin preparatory actions until Miamisburg Fire crews arrive. Once on scene, the Miamisburg fire crews will begin the incident mitigation along with one (1) member of the Mound FD crews assigned to each Miamisburg crew. This assignment of Mound personnel to Miamisburg crews shall assure adequate information release as needed to firefighting crews. Additional Mutual Aid companies will be summoned as needed for mitigation.

On-Scene Incident Commander

Any incident at the Mound Facility will initially be under the direction of a Mound Incident Commander (Mound Fire Department Foreman/Officer in Charge), with assistance provided by the Miamisburg Chief, Captain or Lieutenant in those situations requiring Miamisburg FD response. Incidents involving the utilization of Miamisburg FD response assets will utilize the Miamisburg FD Incident Commander as the □Lead Agency□ concept, with assistance provided by the Mound Fire Department Chief or Foreman. Either Incident Command System must provide for proper notifications of non-response personnel to assure protective actions can be implemented in a safe manner.

Mound Fire Department Response Assignment

EMS BLS	- (1) BLS EMS Unit
Fire Alarm	- (1) Engine & (1) Foreman
Structure Fire	(1) Engine, (1) Attack Response Unit & (1) Foreman
Haz/Mat Response	- (1) Engine, (1) Haz/Mat Trailer, (1) Foreman
Rescue Responses	- (1) Engine, (1) BLS EMS Unit, (1) Foreman

Mound Fire Department Staffing

BLS Unit	- 2 Basic EMT□s
Engine	- 1-2 FF□s
Foreman	- 1 Supervisor
Attack Response	- 1 FF

MOUND FIRE DEPARTMENT/MIAMISBURG FIRE DIVISION MUTUAL RESPONSE GUIDELINE FOR FIRE, EMERGENCY MEDICAL SERVICE (EMS), AND HAZARDOUS MATERIAL (HAZMAT) INCIDENTS has been retyped from the oringinal aggreement yhr signiture page has been scanned in and is the original

Miamisburg Fire Division Response Assignment

EMS BLS	- (1) Medic Unit
EMS ALS	- (1) Medic Unit & (1) Engine
EMS Contaminated	-(1) Medic Unit & (1) Engine
Rescue Responses	-(1) Medic Unit, (2) Engines, (1) Air/Rescue Unit, (1) Ladder Truck and (1) Chief Officer
Haz/Mat Responses	-(1) Medic Unit, (1) Engine, (1) Air/Rescue Unit, and (1) Chief Officer
Structure Fire	-(2) Engines, (1) Ladder Truck, (1) Medic Unit and (1) Chief Officer

Additional Mutual Aid - as required by the Incident Commanders.

Miamisburg Fire Division Response Assignment

Medic Unit	- 2 Paramedics
Engine	- 1 Officer/OIC & 1-2 Firefighters
Ladder Truck	- 2-3 Firefighters (Officers as available)
Air Unit	- 1-2 Firefighters (Officers as available)

Emergency Medical Services Incident Identification

Advanced Life Support (ALS)	Basic Life Support (BLS)
Cardiac Arrest	Extremity Fracture
Respiratory Arrest	Minor Lacerations
Chest Pain	General Illness Complaints
Possible Heart Attack	Weakness Fatigue
Uncontrollable Bleeding	Nausea/Vomiting
Poisoning	Strains/Sprains
Difficulty Breathing	Childbirth
Shock	Back Injuries
Diabetic Emergencies	

MOUND FIRE DEPARTMENT/MIAMISBURG FIRE DIVISION MUTUAL RESPONSE GUIDELINE FOR FIRE, EMERGENCY MEDICAL SERVICE (EMS), AND HAZARDOUS MATERIAL (HAZMAT) INCIDENTS has been retyped from the oringinal aggreement yhr signiture page has been scanned in and is the original

MOUND FIRE DEPARTMENT/MIAMISBURG FIRE DIVISION MUTUAL RESPONSE GUIDELINE FOR FIRE, EMERGENCY MEDICAL SERVICE (EMS), AND HAZARDOUS MATERIAL (HAZMAT) INCIDENTS

Richard B. Provencher
Director, MEMP
U.S. Department of Energy
Miamisburg Environmental Management Project

Date: 2/3/99

John Weithofer
City Manager
Miamisburg, Ohio

Date: 2/3/99

Peyton S. Baker
Site Manager
Babcock & Wilcox of Ohio, Inc.

Date: 3 FEB 1999

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO

USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

SECTION H

PERSONNEL TRAINING

Prepared By
BWXT of Ohio, Inc.
For the U.S. DOE-Miamisburg Environmental Management Project Office
Modification 004-April 2001 Renewal Submittal

SECTION H
PERSONNEL TRAINING

H-1a Outline of the Training Program [OAC 3745-54-16(A)(1)]

Waste Management personnel who work at or who oversee operations of hazardous or radioactive mixed waste units and whose actions or failure to act may result in non-compliance with the RCRA standards must successfully complete a program of instruction and on-the-job training. The purpose of this training is to teach the affected personnel to perform their duties in a way that ensures unit operations are conducted in a safe and environmentally sound manner. The level of training provided to facility personnel as their positions are related to the management of the sites CERCLA related clean up wastes that are covered by this Permit is consistent with their job duties and responsibilities.

The on-site generated clean up related processes at the Miamisburg Environmental Management Project which produce the wastes that are covered by this Permit and that are stored in Building 23 or Building 72 come from the following CERCLA cleanup support related generator types:

- CERCLA removal actions.
- General plant maintenance:
    - Electrical in support of disconnection of utilities before building demolition.
    - Plumbing in support of disconnection of utilities before building demolition.
    - Heating, ventilation, and air conditioning (HVAC) maintaining service in administrative areas.
    - Janitorial providing service in administrative areas.
    - Grounds care providing service administrative areas.
    - Vehicle maintenance operations in support of vehicles involved in soil removal.
- Photographic operations to support CERCLA documentation and communication.
- Environmental Monitoring in support of media characterization data used in CERCLA decions.
- Radioactivity analysis in support of media characterization data used in CERCLA decions.
- Spill response/release operations.

In addition to these waste types, the Miamisburg Environmental Management Project, during the clean up of the site will generate wastes that will resemble wastes that traditionally were generated at the facility. These wastes, however, under CERCLA are also often one-time in nature with respect to their point-of-generation and type, because the particular piece of equipment or the particular area from which it was generated will be clean up or disposed of. Therefore the subject equipment or the location being cleaned up will not be a continuing source of wastes nor will it be a continuing point-of-generation.

H-1b Training Director [OAC 3745-54-16(A)(2)]

The Miamisburg Environmental Management Project's personnel training program is extensive in covering a wide variety of topics outside the waste management area, such as computer training, managerial skills, career development, problem-solving, and decision-making. The Training Department Manager has the function of training director, and is therefore responsible for coordinating the site-training program. The Waste Management Training Coordinator coordinates the various waste management-related training sessions, and ensures that training sessions are directed by persons trained in hazardous waste management.

The qualifications of the Waste Management Training Coordinator are provided in Appendix H.1. Records of the specific individual filling this position are maintained on file at the Miamisburg Environmental Management Project.

Persons holding positions as trainers, are qualified employees of the site contractor, DOE, or consultants employed by organizations that professionally develop and provide training information in seminars, workshops, or audiovisual presentations.

H-1c Relevance of Training to Job Position [OAC 3745-54-16(A)(2)]

The Waste Management Training Coordinator and the training staff are responsible for teaching hazardous waste management procedures, including contingency plan implementation, to waste handling personnel. As shown in Table H-1, the program is designed to provide training to personnel that is consistent with their job function and responsibilities.

The Basic RCRA course provides all positions involved in hazardous waste management, as listed in Appendix H.1 with an overview of RCRA regulations and compliance issues. This course includes information on how to properly identify hazardous wastes and on issues regarding pollution prevention. The hazardous waste workers course is required of all personnel listed in Appendix H.1. This course has the following objectives:

- Make workers aware of the potential hazards they may encounter.
- Provide the knowledge and skills necessary to perform the work with minimal risk to worker health and safety.
- Make workers aware of the purpose and limitations of safety equipment.
- Ensure that workers can safely avoid or escape from emergencies.

The hazardous waste workers class satisfies the requirements of OSHA 1910.120 for personnel with the potential to work directly with hazardous waste and their supervisors. The waste management managers are not required to participate in this course since the responsibilities and duties associated with that position do not potentially put the managers in direct contact with field activities.

H-1d Emergency Response Training [OAC 3745-54-16(A)(3)]

The emergency response program trains hazardous waste handling/management personnel to maintain compliance under both normal operating conditions and emergency conditions. However, the Emergency Response Coordinator (ERC) and his/her support personnel are responsible for planning, organizing, and implementing emergency response activities at the Miamisburg Environmental Management Project. These persons have all received basic hazardous waste management training and advanced emergency response training.

Training elements addressing non-routine and emergency situations (unscheduled shutdowns and startups related to storms, power outages, fires, explosions, spills) include:

- Procedures for locating, using, inspecting, repairing, and replacing facility emergency and monitoring equipment.
- Emergency communication procedures and alarm systems.
- Response to fires or explosions.
- Response to incidents and procedures for containing, controlling, and mitigating spills that may potentially migrate to groundwater.
- Shutdown of operations and power failure procedures.
- Procedures for evacuation of nearby areas.

Appendix H.2 (Representative Course Descriptions) outlines the content of the RCRA training class for all employees at the site. The Mound Fire Department will be the primary personnel to respond to a release, fire, or explosion.

H-2 Implementation of Training Program [OAC 3745-54-16(B), (D)(4) and (E)]

All new personnel must complete the training program necessary for his/her duties and responsibilities within 6 months of assignment to an active hazardous waste storage area or within 6 months of their date of employment, whichever is later. No employee assigned to work at a hazardous waste management unit will work unsupervised prior to completion of the training program.

H-3 Training Frequency OAC 3745-54-16(C)

All employees involved in hazardous waste operations are required to successfully complete the initial and annual orientation to RCRA.

H-4 Training Records and Documents OAC 3745-54-16 (D) & (E)

H-4a Job Titles OAC 3745-54-16 (D)(1)

Several Miamisburg Environmental Management Project employees have responsibilities involving compliance with RCRA regulations, but are not actually involved in the handling of the wastes. Maintenance personnel (i.e., electricians) work in waste handling areas, but they do not handle wastes directly.

Waste Management positions for which training is required and training records are maintained include:

- Waste Management Manager
- Waste Management Training Coordinator
- Waste Management Environmental Coordinator
- Waste Management Engineer
- Waste Management Technician

Table H-2 relates the training requirements to the position titles.

H-4b Job Description OAC 3745-54-16(D)(2)

The typical duties, responsibilities, and qualifications of each Waste Management representative are included in Appendix H.1; changes may be made periodically to these position descriptions during the life of the permit.

H-4c Training Descriptions OAC 3745-54-16(D)(3)

The ongoing site program for training employees in the safe handling of hazardous wastes has been organized into a series of modules. Provisions are made for updating or revising the course content as necessary for compliance with the terms of the RCRA permit. Employees are given handouts in the training sessions and can retain them for reference. This training program may be periodically revised to reflect current regulations, operations, and technical advancements. Training records are kept on file in Central Training, and are available to regulatory agency officials for review. Hazardous waste management training update sessions are held annually.

During the initial and annual refresher training programs, employees are instructed in the following:

- Hazardous nature of chemicals and chemical wastes in general.
- Purpose of RCRA and the importance of maintaining compliance with RCRA regulations.
- Hazardous nature of the wastes being stored at the facility.
- Proper handling and storage procedures for wastes.
- Emergency procedures and contingency plan.

Site training modules also include the proper procedures, equipment, and systems to be used in managing hazardous wastes. Table H-1 provides a list of the training program modules. Appendix H.2 presents representative training course outlines for the ongoing program. Employee course requirements are relevant to their respective job function and responsibilities.

H-4d Training Records OAC 3745-54-16(D)(4)&(E)

Successful completion of training courses, seminars, drills, and safety meetings are documented in the employee training files maintained in Central Training Records. This record is maintained on-site for each employee for a minimum of 3 years. Specifically, individual employee files will be destroyed 75 years after separation. At the conclusion of the Mound Exit Project and with the exit of the contractor training records will be maintained by DOE and/or the contractor for the required time-period.

TABLE H-1--TRAINING MODULES FOR THE MOUND HAZARDOUS WASTE MANAGEMENT PROGRAM

PROGRAM TITLE AND LESSONS

- Program Title: Basic RCRA/Mixed Waste Handling
  - Lesson: RCRA Hazardous Waste Regulations
  - Lesson: RCRA Land Disposal Restrictions
  - Lesson: Pollution Prevention/Waste Minimization
  - Lesson: Radioactive Mixed Waste Compliance Issues

- Program Title: Hazardous Waste Workers Course (24 hours, minimum)
  - Lesson: 29 CFR 1910.120 Overview
  - Lesson: Hazardous Waste Site: Hazard Overview
  - Lesson: Decontamination
  - Lesson: Handling Drums and Other Containers
  - Lesson: Medical Surveillance
  - Lesson: Air Monitoring
  - Lesson: Confined Spaces
  - Lesson: Site Control
  - Lesson: Polychlorinated Biphenyls
  - Lesson: Personal Protective Equipment
  - Lesson: Emergency Response
  - Lesson: Lockout/Tagout
  - Lesson: Heat Stress
  - Lesson: Noise

- Program Title: Hazardous Waste Workers Refresher Course (8 hours)
  - Lesson: Job Hazard Analysis
  - Lesson: Personnel Roles, Lines of Authority, and Communication
  - Lesson: Emergency Recognition and Prevention
  - Lesson: Safe Distances and Places of Refuge
  - Lesson: Site Security and Control
  - Lesson: Evacuation Routes and Procedures
  - Lesson: Emergency Alerting and Response Procedures
  - Lesson: Critique of Response and Follow up
  - Lesson: CERCLA Liability
  - Lesson: PCBs
  - Lesson: Personal Protective Equipment

- Program Title: Hazardous Materials Safety for Drums
  - Lesson: Hazardous Materials Regulations

TABLE H-2--JOB POSITION TRAINING REQUIREMENTS

JOB TITLE	BASIC RCRA	HAZARDOUS WASTE WORKERS	HAZARDOUS WASTE WORKERS ANNUAL REFRESHER
Waste Management Training Coordinator	R	R	R
Waste Management Manager	R	R	R
Waste Management Environmental Coordinator	R	R	R
Waste Management Engineers	R	R	R
Waste Management Technicians	R	R	R
Fire Department		R	R

Key:
R = Required training

APPENDIX H.1

POSITION DESCRIPTIONS

Title of Position: Waste Management Training Coordinator

Functions: Coordinate training associated with waste management activities.

Duties:

- Develop and maintain a comprehensive waste management training program.
- Coordinate in-house and ongoing waste management training for the Miamisburg Environmental Management Project.
- Develop waste management training materials.
- Coordinate attendance in relevant seminars and conferences, including professional papers, graphic displays, and promotional material distribution.
- Support company activities for waste management regulatory compliance.

Training and Qualifications:

- Ability to communicate clearly.
- A minimum of 3 years experience in the waste management and training fields is desired.
- Must be a person trained in hazardous waste management as stipulated by RCRA.
- Minimum of a bachelor's degree or equivalent.
- RCRA initial and contingency training, and annual reviews and updates as appropriate.

Title of Position: Waste Management Manager

Functions: Manage waste management activities associated with hazardous wastes, radioactive mixed wastes, and related activities.

Duties:

- Responsible for site waste management activities.
- Assume the coordination of safety activities with the Safety Manager to establish and adjust, as necessary, the level of safety precautions appropriate to the personnel working in hazardous waste sites.
- Assume the direction of workers to conduct their work in accordance with the work plans and safety rules.
- Assume the establishment of procedures and instruction of personnel as to the handling and storage of materials, transportation procedures, proper disposal, and decontamination of equipment.
- Assume compliance for appropriate units.
- Ensure programs, plans, recordkeeping, etc., are maintained for compliance with all local, state, and federal requirements.

Training and Qualifications:

- Ability to communicate clearly.
- Ability to manage.
- Ability to ensure the recognition of hazardous conditions and correction of problem areas.
- Minimum of a college degree in a technical field or equivalent.
- RCRA initial training.

Title of Position: Waste Management Environmental Coordinator

Functions: Coordinate all aspects of waste generation, management, and disposal for area of responsibility.

Duties:

- Provide day-to-day direction on maintaining RCRA compliance in the packaging, storage, and disposal of generated wastes.
- Coordinate the activities related to the generation, storage, and disposal of wastes generated in the area of responsibility.
- Act as a liaison between the generators and Waste Management staff.
- Provide assistance to waste generators in packaging and logistics of wastes.
- Prepare documentation such as Waste Stream Characterization and Certification, Five-Year plans.
- Maintain knowledge of waste generating processes regarding types of waste generated, procedures for proper transfer and storage of waste, recordkeeping, and general requirements of RCRA regulations.
- Coordinate safety activities with the Safety Manager to establish and adjust, as necessary, the level of safety precautions appropriate to the personnel working at hazardous waste sites.

Training and Qualifications:

- Ability to communicate.
- Ability to manage projects.
- Ability to recognize hazardous conditions and correct problem areas.
- College degree in a technical field or equivalent.
- RCRA initial and contingency training, and appropriate annual reviews and updates.
- Trained in proper safety procedures involved in the management of hazardous waste disposal.
- Familiar with the capabilities of appropriate waste management units on-site.
- Aware of the site safety procedures.
- Minimum of a college degree in a technical field or equivalent.
- RCRA initial and contingency training.
- Familiarity with the CAA, CWA, CERCLA, and other environmental regulations impacting the environmental coordinators area of responsibility.
- Familiarity with NEPA.

Title of Position: Waste Management Engineer

Functions: Responsible for the technical definition and implementation of waste management activities. These activities include the handling and storage of hazardous and radioactive mixed wastes. Responsible for preparation of procedures, plans, and project management documents.

Duties:

- Provide day-to-day direction on maintaining RCRA compliance in the packaging and storage disposal of generated wastes.
- Provide assistance to waste generators in packaging and logistics of wastes.
- Prepare documentation such as Waste Stream Characterization and Certification, Five-Year Plans, Mound Waste Management Site Plan, and other required reports.
- Maintain knowledge of waste generating processes regarding types of waste generated, procedures for proper transfer and storage of waste, record keeping, and general requirements of RCRA regulations.
- Understand job-related waste management emergency and contingency plans, and ensure that they are understood by the appropriate employees.
- Define and document waste management operations and procedures.

Training and Qualifications:

- Trained in proper safety procedures involved in the management of hazardous waste disposal.
- Familiar with the capabilities of appropriate waste management units on-site.
- Aware of the site safety procedures.
- Minimum of a college degree in a technical field or equivalent experience.
- Three years of experience in hazardous waste management is desirable.
- RCRA initial and contingency training.

Title of Position: Waste Management Technician

Functions: Responsible for maintenance of hazardous waste storage facilities, waste inventory control, and preparation of containerized waste for off-site shipments.

Duties:

- Maintain and operate the waste storage units in a manner that satisfies applicable state and federal regulations.
- Perform hands-on work related to the storage of wastes.
- Conduct inspections of storage units.
- Control waste inventory and appropriate on-site movement of wastes generated on-site and properly store such wastes.
- Inspect unit equipment and ensure that the equipment is maintained and in proper working condition.

Training and Qualifications:

- Ability to communicate.
- Ability and knowledge to use safety equipment and procedures.
- Ability to implement instructions on safe hazardous waste management operations.
- High school graduate or equivalent.
- RCRA initial and contingency training, and appropriate annual reviews and updates.

Title of Position: Fire Department Personnel

Functions: Perform various tasks and duties, as required, regarding emergency incidents that may occur at the Miamisburg Environmental Management Project. These functions include: fighting fires, implementation of the evacuation plan, and responding to other emergency situations as required by the Contingency Plan.

Duties:

- Perform duties as outlined in the Miamisburg Environmental Management Project Contingency Plan.
- Participate in training activities of the Fire Department, including approximately 10-hr per month continuing training, annual drills, and specialized training courses.

Training and Qualifications:

- Ability to communicate.
- Ability to recognize obvious hazards involving working conditions and chemicals.
- Ability to safely perform various emergency response tasks.
- Full-time paid professional Fire-Fighter II.
- Emergency medical technician (EMT-A).
- Certified to "Operations Level" or "Technician Level" under the State of Ohio and guidelines from OSHA 29 CFR 1910.120.

APPENDIX H.2

REPRESENTATIVE COURSE DESCRIPTIONS

Course: **Orientation to RCRA**
Module: **Basic RCRA/Mixed Waste Handling Training (8 hours)**

Outline:

This module has been designed in compliance with the training requirements of 40 CFR 264.16. The requirement is that "facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of RCRA."

- RCRA Hazardous Waste Regulations:

  1. Definition of hazardous waste
  2. Exclusions
  3. Criteria for listing hazardous waste
  4. Lists of hazardous waste:
     a. Nonspecific sources
     b. Spent solvents
     c. Specific sources
     d. Commercial chemical products
  5. Status of residuals from treatment and disposal
  6. Delisting
  7. Criteria for characteristic hazardous waste
  8. Characteristics of hazardous waste:
     a. Ignitability
     b. Corrosivity
     c. Reactivity
     d. Toxicity characteristic
  9. Toxicity Characteristic Leaching Procedure (TCLP)
  10. Radioactive mixed waste
     a. Low-level radioactive mixed waste
     b. Transuranic (TRU) radioactive mixed waste
     c. High-level radioactive mixed waste
  11. Generator status
  12. Storage requirements
  13. Transportation requirements
  14. Lab packs

- RCRA Land Disposal Restrictions

  1. Key provisions
  2. Definition of land disposal
  3. Overview of the land disposal restrictions:
     a. Solvents and dioxins
     b. California List
     c. First third
     d. Second third
     e. Third third
  4. Best Demonstrated Available Technology (BDAT)
  5. Treatment standards for radioactive mixed waste
  6. Storage provision

- Pollution Prevention/Waste Minimization:

  1. Definition
  2. Generator requirements
  3. Advantages
  4. Waste minimization activities
  5. DOE waste minimization activities:
     a. Oak Ridge
     b. Rocky Flats

- Radioactive Mixed Waste Compliance Issues:

  1. Waste characterization
  2. Waste management
  3. Land disposal restrictions

Training Objectives:

- To increase participant awareness of basic fundamentals of the RCRA hazardous waste regulations.
- To provide basic skills required for identification of hazardous wastes and radioactive mixed wastes.
- To identify and characterize potential environmental radioactive mixed waste compliance issues at DOE facilities.
- To introduce participants to highlights of the RCRA Land Disposal Restrictions (LDR) program.
- To explain and clarify the relationship between the basic RCRA program and LDR program.
- To address the purpose, scope, and advantages of pollution prevention/waste minimization.
- To involve participants in discussions and question/answer sessions.

Steps in Training:

- Present the content information listed.

Trainee Behaviors:

The trainees should be able to:

- Respond effectively to facility emergencies. (Note: Completion of the training modules of other courses further enhances the employee's abilities to respond effectively.)

Evaluation Methods:

- Observation of employee behavior and performance during emergency drills.
- Observation of employee performance during operational activities.

Special Course: **Hazardous Waste Workers Annual Refresher: OSHA 1910.120 (8 hours)**

Outline:

This course is designed to address elements of the Miamisburg Environmental Management Project emergency response plan, standard operating procedures (SOPs), the personal protective equipment (PPE) to be worn, and procedures for handling emergency incidents consistent with 29 CFR 1910.210, paragraph P(8). Some of the topics include:

- Job hazard analysis.
- Personnel roles, lines of authority, and communication.
- Emergency recognition and prevention.
- Safe distances and places of refuge.
- Site security and control.
- Evacuation routes and procedures.
- Emergency alerting and response procedures.
- Critique of response and follow up.
- CERCLA liability.
- Polychlorinated biphenyls (PCBs).
- Personal protective equipment.

Training Objectives:

To train appropriate site employees to be able to demonstrate general knowledge of the Mound Emergency Preparedness System and know the specific procedures to follow in the event of an emergency.

Steps in Training:

- Present content information table-top exercises, and mock site response incidents to monitor decision-making of employees in command and control relationships.
- Use written operating and emergency procedure handouts and overhead transparencies to supplement instruction.

Trainee Behaviors:

The trainees should be able to:

- Apply the information learned by performing their jobs within the scope of site SOPs and the emergency response program.

Evaluation Methods:

- Observation of employee behavior and performance during emergency response drills.
- Observation of employee performance during standard operations.
- Post-incident analyses.
- Use written operating and emergency procedure handouts and overhead transparencies to supplement instruction.

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

SECTION I

CLOSURE PLAN

Prepared By
BWXT of Ohio, Inc.
For the U.S. DOE-Miamisburg Environmental Management Project Office
Modification 004-April 2001 Renewal Submittal

SECTION I--CLOSURE PLANS, POST-CLOSURE PLANS, AND FINANCIAL REQUIREMENTS - BUILDING 72 HAZARDOUS WASTE STORAGE UNIT

I-0 General

This section identifies the activities that will be necessary to permanently close the Building 72 Hazardous Waste Storage Unit (Building 72).

At the Miamisburg Environmental Management Project RCRA closure actions may be impacted by the ongoing actions of the Environmental Restoration (ER) Program in order to achieve compliance with the requirements of the August 6, 1990 U.S. Department of Energy (DOE)/U.S. Environmental Protection Agency (EPA) Federal Facilities Agreement (FFA). This FFA, which was entered into pursuant to Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), has given way to the "Mound 2000 Work Plan."

Under the Mound 2000 Work Plan, the Ohio EPA, the US EPA, and the DOE will evaluate each Potential Release Site or building separately to determine the need for cleanup. When a response action is warranted, the Project will use removal action authority to remediate those areas as needed or establish a goal for no additional remediation other than institutional controls for the final remedy documented in the Record of Decision. To evaluate any residual risk after all removals have been completed, a residual risk evaluation will be conducted to ensure the selected remedy for the associated property block or land parcel is protective of human health under an industrial reuse scenario. Building 72 and the property underlying the building will also be evaluated using the Mound 2000 Work Plan approach. To the extent possible, the Miamisburg Environmental Management Project plans to coordinate work conducted as part of the Mound 2000 Approach with its RCRA-related work.

If it is determined that soil contamination has occurred as a result of Building 72 operations, any contamination associated with the Building 72 operation will be addressed as a part of this closure plan. Any soil contamination resulting from other operations or plant activities currently, or that may be discovered, in the area of Building 72 will be addressed under the Mound 2000 Process.

The Miamisburg Environmental Management Project, under DOE guidelines that are established under OSHA, has developed a site wide Health and Safety Plan (HASP), as well as job specific HASPs. Under these requirements, a HASP will be developed for the closure of Building 23.

Building 72 Description: Building 72 is a hazardous waste management unit located at the DOE Miamisburg Environmental Management Project (formerly the Mound Plant or Site) in Montgomery County, Ohio. Mound was, until recently, an integrated research, development, and production facility working to support the DOE weapon and non-weapon programs, particularly in the areas of chemical explosives and nuclear technology. The former Mound facility is currently undergoing a clean up, as part of the process of its transition to a commercialized facility, as a consequence, the remaining DOE support work is related to environmental cleanup and the generation and management of building clean out waste.

The general configuration of the site and the location of Building 72 are illustrated in Drawing FSD920925. A map illustrating the topography at the site is provided in Drawing FSE920963. Both drawings are included as an attachment in Part 2 of this Permit Application.

The major topographic feature in the region is the Great Miami River, which flows from north to south approximately 2,000 feet (ft.) due west of the site. The Miamisburg Environmental Management Project is situated on two hills overlooking the river and the City of Miamisburg. These hills consist of virtually impermeable calcareous shale beds with thin interbedded limestone, covered by a thin veneer of unconsolidated deposits. The unconsolidated deposits consist of glacial till, residual soils that developed from weathering of the shale and limestone bedrock, and engineered fill. The total thickness of these

unconsolidated materials on the hills ranges from 0 ft (at bedrock exposures) to 20 ft. The depth to bedrock beneath Building 72 is estimated to be approximately 10 ft below ground surface. The two hills are separated by a tributary valley of the Great Miami River, referred to as the MEMP Valley. The valley contains the plant drainage ditch, which is underlain by fill material generated from plant grading, and interbedded glacial till and outwash deposits, the latter possibly comprising a small tongue of the Buried Valley Aquifer. The Buried Valley Aquifer, an important source of drinking water in the region, occupies a deep bedrock channel that roughly follows the course of the Great Miami River.

Unit Description: Building 72 is a pre-engineered structure with a 40-ft x 60-ft concrete base containing three bays consisting of three 20-ft x 40-ft diked areas and a diked area for reactives storage. Building 72 has been in use since 1986. The concrete floor slab was developed from a series of monolithic pours. Typical construction techniques were used to develop a smooth, crack-free impervious surface. The floor of each bay is sloped to a sump located in the center of the area. Containers are stored on a steel grating, which overlays each bay. The floor of Building 72 has no drains to the outside of the building. A 24-inch (in.) x 24-in. x 32-in. concrete sump with 4.5-in. thick walls is located at the base of each bay to collect any container leaks or spills. Each sump is lined with stainless steel. Portable drum pumps are used to remove any wastes collected in these sumps. The storage area is separated into three bays to separate incompatible wastes and to separate reactive wastes. Laboratory pack chemicals are also stored in this building.

The steel roof, which is sloped for drainage, is supported by vertical steel I-beams. The structure is electrically grounded, and explosion proof overhead lighting and electrical outlets are provided as safety features. The eastern side of the building is open to the outside, but is fitted with a weather-protective canopy. To provide natural ventilation, the three remaining walls are open near the top and bottom. Six ventilators are located on the roof to increase the air circulation in Building 72. Positioning and relocation of the containers is performed by a hand cart or by an electrically driven explosion-proof overhead crane assembly. A sloping asphalt apron surrounds the building to allow for control of rainwater/stormwater. A fence that surrounds Building 72 prevents entry by unauthorized persons.

A Photograph of Building 72 is provided in Figure I-1.

I-1 Closure Plan [OAC 3745-50-44(A)(13), 3745-55-10 through 55-20]

Building 72 will be closed in accordance with this Closure Plan, and a qualified, independent, registered professional engineer or his/her representative will be present at all critical activities during closure. Documentation of closure activities will be maintained at the site through the Long Term Stewardship Program being developed by the DOE and the Ohio EPA.

A copy of the Closure Plan and all revisions thereto will be maintained by the Waste Management Group at the site until certification of closure has been submitted and accepted by the State of Ohio. The plan will be amended in accordance with the amendment procedures defined in OAC 3745-55-12 if any changes occur in the operating plans or unit design.

I-1a Closure Performance Standard (OAC 3745-55-11)

This Closure Plan is designed to ensure that Building 72 will be closed in accordance with OAC 3745-66 and will be closed in a manner that will minimize or eliminate threats to human health and the environment, and avoid escape of any possible hazardous wastes, hazardous constituents, leachate, or waste decomposition products to groundwater, surface water, or the atmosphere upon cessation of operations. The need for further maintenance after closure will be eliminated by ensuring that no hazardous wastes or hazardous constituents remain at Building 72. Building 72 will be closed in such a manner that all hazardous wastes will be removed and structures and equipment will be decontaminated. The hazardous wastes will be shipped off-site to a permitted treatment, storage, and disposal facility (TSDF). After all wastes have been removed, the floor and berms for each bay will be inspected for cracks, and if determined

to be free of cracks that could potentially cause transmission of hazardous waste or hazardous constituents to the environment all equipment and structures will be decontaminated using a wash with detergent and high-pressure water.

Decontamination operations (including walls, internal furnishings, grating, equipment, and slab surface) will be conducted within the Building 72 enclosure when necessary, based on visible evidence of spills, spill records and process knowledge, using the existing secondary containment systems to collect the rinsate. Rinsates will be pumped into the appropriate containers from the sumps on a continuous basis. This will allow for sequential evaluation of the decontamination process and eliminate the possibility of breaching containment. Equipment will be decontaminated within the respective bays to minimize the potential mixing of incompatible rinsates. Each container of rinsate will be managed as hazardous waste until such time as it is characterized. Once characterized, and a determination made, the container will be dispositioned as either hazardous waste or non-hazardous waste. Decontamination will be confirmed, based on an analysis of a second rinse and collection of that rinsate which will be analyzed for the constituents historically stored in Building 72.

Two actions have been incorporated into this Closure Plan to serve as indicators of clean closure:

- Sampling and analysis of rinsate fluids.
- A final inspection and assessment of Building 72.

Analysis will be conducted to determine whether any of the wastes that have historically been stored in Building 72 are present above their detection limit. The list of analytes will be based upon the Part A contained in the 1996 version of the Part B Permit, as issued in October 1996. The October 1996 Part A information for Building 72 represents the maximum extent of operations, and is included as Table I-1, at the end of this section.

To provide a definite plan of action for closure of the Building 72 storage unit, assumptions based on available information have been made. These assumptions are as follows:

- Groundwater and soil contamination has not resulted due to waste management practices at this unit.
- The walls and floor of the unit have remained intact and breaches have not occurred. Inspections performed on the unit document the structural integrity of the building and any breaches.
- Hot-water pressure washing with a detergent solution will be sufficient to remove contamination from the unit's surfaces. Pressure washing as a form of decontamination is referenced in OEPA's most recent version of its Closure Guidance Document.
- The exterior walls and ceiling of Building 72 have not been contaminated. This is assumed due to the fact that no basic avenue for the waste to these areas is provided.

The following criteria taken from OEPA's most recent version of its Closure Guidance Document will be used to determine if successful decontamination has been achieved:

- Attaining 15 times the public drinking water maximum contaminant level (MCL) for hazardous waste constituents as promulgated in OAC 3745-81-11 for inorganics and OAC 3745-81-12 for organics.
- If an MCL is unavailable for a particular contaminant, then 15 times the (non-zero) maximum contaminant level goal (MCLG) as promulgated in 40 CFR 141.50 will be used as the clean standard.
- If the product of 15 times the MCL or MCLG exceeds 1 milligram per liter (mg/L) or if neither an MCL nor MCLG is available for a particular contaminant, 1 mg/L will be used as the clean standard.

If laboratory results indicate levels above these criteria, the decontamination procedure as previously described will be repeated until these standards are met.

While past operations do not indicate that there is the possibility of Building 72 operations related soil contamination and the current operational controls will prohibit any future soil contamination it is still possible that soil contamination could occur from Building 72 operations. As such, if there has been a breach to the structural integrity of the building and if a soil clean up is necessary, any soil samples are collected they will be evaluated against the criteria that follow. The sampled material will be considered contaminated if:

- Concentrations of RCRA metals in the sample, using total metals analysis, exceed the mean concentration plus two standard deviations of the background sample concentrations.
- Concentrations of "not naturally occurring" compounds are present above analytical detection limits using the methods defined in SW-846. "Not naturally occurring" refers to elements/compounds not found in background sample.

Risk-based cleanup standards, as allowed by the latest version of the OEPA closure plan guidance, will be proposed if the Miamisburg Environmental Management Project determines that it is unable to achieve the cleanup levels noted above.

I-1b Partial Closure and Final Closure Activities [OAC 3745-55-12(B)(1) through (B)(7)]

The closure of Building 72 will be a final closure of this unit. With the exception of Building 23, closure of the site's other RCRA treatment and storage units (the historic units) was completed in the 1990s. Both Building 72 and Building 23 will be closed in conjunction with the cessation of all mission activities at the site. This closure will be consistent with the closure requirements and the closure performance standard. The anticipated date for closure of Building 72 is 2012.

I-1c Maximum Waste Inventory [OAC 3745-55-12(B)(3)]

The maximum capacity of waste storage for Building 72 [13,285 gallons (gal.)] has never been exceeded. The maximum inventory stored in Building 72 during the active life of this unit is approximately 10,000 gal. Table I-2 provides an estimated point-in-time maximum inventory at Building 72 over the life of the unit by waste type. The actual volumes of waste stored currently are less than the volume listed. The wastes managed at Building 72 are non-radioactive hazardous wastes that have been produced at the site.

Table I-2–Estimated Building 72 Historic Lifetime Maximum Inventory

WASTE TYPE	TYPICAL WASTE CODES	GALLONS
Halogenated solvents	F001/F002/D–*	800-2,000
Nonhalogenated solvents	F003/F004/F005/D001	1,000-3,000
Corrosives	D002	500-2,000
Cyanides	F006-F009/F019	100-500
Heavy metals	D004-D011	2,000-3,000
Polymerics	D003	50-300
Miscellaneous laboratory chemicals	U--/P--/D--/F--*	100-250
Oils/coolants	D001/F--/D--*	1,000-2,000

*-- = Multiple waste codes.

Section C of this permit application describes in detail the physical and chemical characteristics of wastes currently managed at Building 72.

1-1d Schedule for Closure [OAC 3745-55-12(B)(6) and (7)]

The closure of Building 72 is independent of the closure of the other units at the site and is not expected to occur until 2012. The closure will be supervised and certified by the owner/operator and an independent professional engineer registered in the State of Ohio, and will include the following steps:

1. Notification of the State of Ohio of the intent to close the unit 45 days prior to initiation of closure activities.
2. Receipt of the final volume of waste will not occur after 15 days from the date of notification.
3. Removal and treatment of the final waste inventory within 90 days of receipt of the final volume of waste or 90 days after approval of the Closure Plan by the Director of OEPA, whichever is later.
4. Visual inspection of the unit for signs of structure contamination; decontamination of the structure if necessary; collection and containerization of cleaning fluids and residues.
5. Verification sampling (rinsate and soils if necessary) and analysis as needed to demonstrate that contamination no longer exists. (The OEPA inspector will be contacted at least 5 business days prior to critical activities.)
6. Return and review of analytical results.
7. Additional structure decontamination (if required) and verification sampling and analysis to demonstrate that contamination no longer exists.
8. Completion of closure within 180 days of receipt of the final volume of waste or 180 days after approval of the Closure Plan if that occurs later.
9. Certification submittal to the State of Ohio within 60 days from the completion of closure.

I-1d(1) Time Allowed for Closure (OAC 3745-55-13)

Figure I-2 presents a schedule for closure, which gives the total time required to close the unit. This schedule does not account for any delays that may be caused by natural or man-induced disasters, including fires, weather, floods, riots, or strikes. The schedule also does not account for delays resulting from the OEPA approval process.

I-1d(2) Extensions for Closure Time [OAC 3745-55-13(A) and (B)]

No need for an extension to the closure time is anticipated; however, if an extension is necessary to properly close Building 72, then a request for an extension will be submitted to the State of Ohio. An extension request could be required because of inclement weather, the detection of unanticipated contamination, or other unavoidable circumstances.

If circumstances require an extension to the closure schedule provided in Figure I-2, a letter explaining the need for the extension, including a revised schedule proposal, will be sent to OEPA.

I-1e Closure Procedures

Building 72 will be closed in accordance with this Closure Plan and the closure procedures as discussed in the closure performance standard section of this plan.

I-1e(1) Inventory Removal [OAC 3745-55-12(B)(3)]

Upon formal notification to OEPA that the Miamisburg Environmental Management Project expects to proceed with closure of Building 72, no additional wastes will be accepted from generators. The waste inventory in the unit will be removed within 90 days after closure commences. The hazardous wastes will be transported by a licensed hauler to a permitted TSDF.

The transport of hazardous wastes will be accompanied by the appropriate paperwork. Hazardous waste manifests will be used to track the wastes. All appropriate land disposal restriction notifications and other appropriate certifications will also accompany the waste.

The following types of TSDFs may be utilized to dispose of the wastes at Building 72:

- Hazardous waste incinerators.
- Hazardous waste landfills.
- Hazardous waste treatment facilities (stabilization or physical/chemical treatment).
- Recycle/reclamation facilities.

The determination of which facilities will be used is dependent on contracts in place at that time, and will be determined at the time of closure.

I-1e(2) Disposal or Decontamination of Equipment, Structures, and Soils [OAC 3745-55-12(B)(4), 3745-55-14]

Building 72 structures, equipment, base, and sumps will be decontaminated using a high pressure detergent wash. All washwater will be collected, containerized, and sampled to determine the proper disposal method. Sampling of the structures, equipment, and containment system will be performed using rinsate samples to verify clean closure. Soil sampling will only be necessary if contamination results from Building 72 operations; contamination from other operations will be addressed under the Mound 2000 Process. These samples will be analyzed in accordance with the protocols presented in Table I-3 and outlined in Section C. The criteria listed in Subsection I-1a will be used to determine if successful unit decontamination has been achieved.

Rinsates determined to contain listed hazardous waste will be managed as listed hazardous. Although characteristic wastes have been managed in Building 72, rinsates will not be managed as characteristic hazardous wastes unless they continue to exhibit one of the characteristics specified in OAC 3745-51. Rinsates may be managed as wastewater if such activity is in compliance of the Mound National Pollutant Discharge Elimination System (NPDES) permit, the Clean Water Act, and Ohio Water Pollution Control Law.

Personnel, equipment, and supplies used during the decontamination process will be decontaminated as described in Subsection I-1a. All washwaters will be collected and characterized for proper disposal. RCRA contaminated rinsates will be shipped to an off-site permitted TSDF. If washwaters are not contaminated, they can be taken to the site wastewater treatment facility. Any disposable items will undergo appropriate disposal.

Table I-3–Analytical Test Methods for Building- 72 Closure

ANALYTE	PHASE[a]	PREPARATION METHOD	ANALYTICAL METHOD
Flash point	L	1010,1020	1010,1020
PH	L	9040	9040
Reactivity	L, SL	SW-846, Section 7.3	SW-846, Section 7.3
Metals[b]	L	3010	6010/7000A
	OM	3030/3040	6010/7000A
	S	3050	6010/7000A
	SL	3050	6010/7000A
Toxicity characteristic (for TC analytes)	L	1311	1311
	OM	1311,1330	1311
	S	1311	1311
	SL	1311	1311
Halogenated volatile organics	L	5030	8010, 8240
	S, SL, OM	5030, 1311[d]	8010, 8240

ANALYTE	PHASE[A]	PREPARATION METHOD	ANALYTICAL METHOD
Non-halogenated volatile organics	L	5030	8015, 8240
	S, SL, OM	5030, 1311[d]	8015, 8240
Halogenated semivolatile organics	L	3510, 3520	8250, 8270
	S, SL	3540, 3550	8250, 8270
	OM	3550, 3580	8250, 8270
	L	3510, 3520	8250, 8270
	S, SL	3540, 3550	8250, 8270
	OM	3550, 3580	8250, 8270
Chloride	L	3520	9250
Total or amenable cyanide	L	9010, 9012	9010, 9012
	S, OM	9011	9011
Total organic halides	L	9020	9020
	OM	ASTM[e] D-2988, E-442	ASTM D-2988, E-442
Heat of combustion	L	ASTM D-240	ASTM D-240
	OM	ASTM D-240	ASTM D-240
Free liquids	S	9095, 9096	9095, 9096
	OM	9095, 9096	9095, 9096

[a]L = liquid, S = solid, SL = sludge, OM = organic matrix
[b]Metals include arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, nickel, titanium, antimony, bismuth, zinc, copper, tin, and scandium.
[c]Toxicity characteristic analytes include metals, volatiles, and semivolatiles listed under Method 1311.
[d]For those solid phase or organic matrix waste streams where volatile organics are specified in addition to the toxicity characteristic, the sample will be extracted according to Method 1311.
[e]ASTM = American Society for Testing and Materials

Soil discovered to be contaminated by Building 72 operations or activities will be disposed of in accordance with the following process. Depending on the location of any soil contamination that may be discovered, the appropriate remedial technology will be implemented. Those soils that can be removed without affecting the structural integrity of Building 72 will be excavated and, based on the analytical results, disposed of at an appropriate TSDF. Soils will be transported to the TSDF by a licensed waste hauler and the appropriate paperwork [i.e., manifest, Land Disposal Restriction (LDR) notification, etc.] will accompany the waste. In the event the soil cannot be removed because of structural concerns, the required remedial technology will be selected to treat the contaminated soils in situ.

I-1e(3) Closure of Disposal Unit

Building 72 is not classified as a disposal unit; therefore, Subsection I-1e(3) is not applicable.

I-1e(4) Closure of Container Storage Area (OAC 3745-55-78)

The closure activity at Building 72 will be accomplished in the following five steps:

1. Waste removal and disposal.
2. Decontamination.
3. Decontamination verification sampling.
4. Decontamination of closure equipment.
5. Closure certification.

Waste Removal and Disposal: All waste containers in the building will be inspected for proper labeling and physical condition in accordance with OAC 3745-55-70 and OAC 3745-54-30. Any containers that are damaged, leaking, or show signs of excessive corrosion will be placed in appropriate DOT overpack drums and filled with a sorbent material such as vermiculite. Damaged containers will be handled only by

personnel wearing appropriate PPE. Building 72 will be used for any necessary overpacking or repackaging. After it has been determined that all wastes have been properly labeled and containerized in DOT-approved containers, the wastes will be removed. The wastes will be manifested and shipped by a licensed hauler to a permitted TSDF for proper disposal. This may include incineration for liquids, and landfilling in a secure hazardous waste landfill for solids. Waste removal will take place within 90 days of the date closure of Building 72 has begun.

Decontamination: Following removal of the final volume of waste, the internal surfaces of the unit and any equipment will be visually inspected for signs of contamination. Signs of contamination will include inspection of the floor, sump, ramps, and curbs for discoloration, for residual waste, for evidence of structural damage, for evidence of leakage, and for evidence of spills. Site operations record will also be consulted to determine if spills have occurred in this building. The inspector will determine the potential for penetration of waste into the concrete structure from leaks or spills. Areas of cracks, spalling, and/or visible staining will be carefully examined using visual inspection. Particular attention will be paid to these areas during decontamination. Clean cloth rags, paper wipes, and nonmetallic brushes or scrapers will be used to clean or remove any residual wastes from these surfaces. Any collected residue will be containerized for disposal as a hazardous waste. The potential for soil contamination is addressed in the following section.

Any areas where contamination may migrate from the internal foundation structure of the building, such as doorways or ventilation ports, will be sealed or covered. Doorways will be covered with synthetic sheeting to prevent potentially contaminated cleaning fluids from splashing outside the containment area. Temporary sandbags or dikes, wrapped with an impermeable material, will be positioned to contain the rinsate. In order to avoid the potential for migration of potentially contaminated rinsate, spalled or cracked areas in the concrete where decontamination fluids could potentially migrate (i.e., structural cracks) will be sealed with an appropriate sealant, that is compatible with the existing floor sealant and the decontamination fluid.

Once the area has been prepared, equipment and internal surfaces will be high-pressure washed with detergent and hot water. Cleaning solutions and residue will be collected and containerized in clean 55-gal. drums using a pump, vacuum, or other appropriate equipment. This waste will then be sampled using the protocols and criteria discussed previously. Sampling results will be used to determine the proper disposal method.

Decontamination Verification Sampling: Subsequent to cleaning the unit surfaces, the surfaces and equipment will be rinsed with high pressure water. The water will then be wiped or squeegeed to the sump, and then pumped from the sump into a new drum. Rinsate samples will be collected and placed into sample containers that are appropriate for the sample medium and analytical method. The samples will be analyzed as outlined in Section C and evaluated against the clean closure criteria presented in Subsection I-1a. If contamination levels in the samples exceed the clean closure criteria, the rinse process will be repeated. Once the verification samples meet the criteria, the unit surfaces will be considered clean.

In addition to rinsate verification samples, blank samples will be collected, handled in the same manner as the contamination samples, and analyzed to identify possible sources of contamination during the sample collection, preservation, handling, and transport process.

Sampling and analytical procedures for determining waste constituents and decontamination verification will be consistent with OAC 3745-51-01, and SW-846.

Soil sampling under Building 72 will only occur if there is evidence of structural damage (i.e., cracks) to the concrete floor or sumps. Soil sampling outside Building 72 will be initially conducted using the current OEPA Closure Plan Guidance Document methodology for selecting a grid pattern size. The sampling will initially extend 30 feet from the building. Grid boundaries will be extended outward if contamination is detected.

If structural damage is detected in Building 72, soil sampling will start at the cracked or spalled area and proceed in a radial pattern until the extent of contamination, if present, is determined. Field screening

techniques will be used to initially determine the extent of contamination and will consist of visual inspection and the use of portable field instruments [i.e., organic vapor analyzer (OVA), HNu]. Verification soil samples will be collected on the grid system to confirm or refute the presence of waste constituents. These verification soil samples will be analyzed for the constituents identified in Table I-1 (at the end of this section) according to EPA SW-846. Soil samples will be screened and collected outside Building 72 in the same manner as discussed for the interior of Building 72.

If soil samples become necessary, any soil samples collected will be screened and collected in the following manner:

- In locations where concrete is present, the concrete will be cut and the core removed to expose subsurface soils.
- Stainless steel bucket augers and split spoons will be used to remove soil and collect the samples.
- Soils will be screened at 1-ft depth intervals using the field screening techniques to an initial maximum depth of 3 ft.
- Samples will be composited to facilitate analysis.

Background samples will be collected to determine appropriate clean criteria. The background samples collected as part of the ongoing CERCLA remedial investigation at the site may be used as appropriate for the RCRA closure program using the CERCLA Background samples, action levels will be calculated using the methodology discussed in the current OEPA Closure Plan Guidance Document.

For all rinsate and soil samples, the parameters to be analyzed for will be those constituents present in the waste that have been managed at Building 72 as noted in Table I-1, at the end of this section.

Decontamination of Closure Equipment and Personnel: The decontamination pad, which is equipped with washwater containment and collection capabilities constructed for the ER Program, will be used in RCRA closure. This pad will be constructed in such a manner that it will prevent the release of any contamination to the soils or groundwater. The decontamination pad will be constructed and used in a program under the direct oversight of OEPA, similar to the RCRA closure. Washwaters will be containerized and sampled to determine disposal methodology.

Personnel involved in decontamination procedures will practice good personal hygiene. Existing DOE directives will be followed pertaining to the fit of respiratory protection equipment, corrective lenses, contact lenses, eating and smoking areas, and toilet facilities. Personnel will be decontaminated at the decontamination pad before leaving the work site. Impermeable clothing will be flushed with water before being removed by the person wearing it. Boots will be scrubbed with decontamination water or soap and water. Clothes will be placed in marked containers for laundering. Specific procedures will be adjusted depending on the seriousness of the potential contamination.

Closure Certification: Once closure and decontamination at Building 72 has been completed, the unit will be inspected by the owner/operator and an independent professional engineer registered in the State of Ohio. A certification report will be submitted to the State of Ohio within 60 days of closure by registered mail by both the owner/operator and by the independent, registered professional engineer. The wording of the certification statement and signatures will meet the requirements of OAC 3745-50-42. The report will include a summary of the closure activities performed and analytical sample results. The report will also include the results of visual inspections completed during closure and after closure completion. Following closure, the building will be returned to use for purposes other than RCRA-related operations.

Building 72 is a container storage area, therefore, Sections 1e(5) (Tanks), I-1e(6) (Waste Piles), I-1e(7), (Surface Impoundments), I-1e(8) (Incinerators), I-1e(9) (Landfills), I-1e(10) (Land Treatment Facilities), and I-1e(11) (Miscellaneous Units) are not applicable.

I-2 Post-Closure Plan/Contingent Post-Closure Plan

A post-closure plan will not be needed because Building 72 is a hazardous waste container storage unit, not a disposal unit. Additionally, all wastes will be removed and the unit will be decontaminated at closure. Final closure will be supervised and certified by an independent professional engineer registered in the State of Ohio.

I-3 Notices Required for Disposal Facilities

This unit is not classified as a disposal facility; therefore, this subsection is not applicable.

Sections I-4 (Closure Cost Estimate), I-5 (Financial Assurance Mechanism for Closure), I-6 (Post-Closure Cost Estimate), I-7 (Financial Assurance Mechanism for Post-Closure), I-8 (Liability Requirements), 1-9 State Financial Mechanism do not apply, because the Miamisburg Environmental Management Project is an entity of the U.S. federal government and is exempt from these requirements in accordance with OAC 3745-55-40(C).

TABLE I-1–SUMMARY OF CHARACTERISTICS OF WASTES THAT HAVE BEEN MANAGED AT BUILDING 72

HAZARDOUS WASTE NO.	CHEMICAL ABSTRACT NO.	SUBSTANCE
D004	7440-38-2	Arsenic
D005	7440-39-3	Barium
D018	71-43-2	Benzene
D006	7440-43-9	Cadmium
D019	56-23-5	Carbon tetrachloride
D020	57-74-9	Chlordane
D021	108-90-7	Chlorobenzene
D022	67-66-3	Chloroform
D007	744-47-3	Chromium
D023	95-48-7	o-Cresol
D024	108-39-4	m-Cresol
D025	106-44-5	p-Cresol
D026		Cresol
D016	94-75-7	2,4-D
D027	106-46-7	1,4-Dichlorobenzene
D028	107-06-2	1,2-Dichloroethane
D029	75-35-4	1,1-Dichloroethylene
D030	121-14-2	2,4-Dinitrotoluene
D012	72-20-8	Endrin
D031	76-44-8	Heptachlor (and its epoxide)
D032	118-74-1	Hexachlorobenzene
D033	87-68-3	Hexachlorobutadiene
D034	67-72-1	Hexachloroethane
D008	7439-92-1	Lead
D013	58-89-9	Lindane
D009	7439-97-6	Mercury
D014	72-43-5	Methoxychlor
D035	78-93-3	Methyl ethyl ketone
D036	98-95-3	Nitrobenzene
D037	87-86-5	Pentachlorophenol
D038	110-86-1	Pyridine

HAZARDOUS WASTE NO.	CHEMICAL ABSTRACT NO.	SUBSTANCE
D010	7782-49-2	Selenium
D011	7440-22-4	Silver
D039	127-18-4	Tetrachloroethylene
D015	8001-35-2	Toxaphene
D040	79-01-6	Trichloroethylene
D041	95-95-4	2,4,5-Trichlorophenol
D042	88-06-2	2,4,6-Trichlorophenol
D017	93-72-1	2,4,5-TP (Silver)
D043	75-01-4	Vinyl Chloride
F001	NA	Following spent halogenated solvents from degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons.
F002	NA	Following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoro-methane, 1,1,2-trichloroethane
F003	NA	Following spent nonhalogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, methanol
F004	NA	Following spent nonhalogenated solvents: cresols and cresylic acid, nitrobenzene
F005	NA	Following spent nonhalogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, 2-nitropropane
F006	NA	Wastewater treatment sludges from electroplating except from following processes: (1) sulfuric acid analyzing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.
F007	NA	Spent cyanide plating bath solutions from electroplating operations.
F008	NA	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.
F009	NA	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.
U001	75-07-0	Acetaldehyde
U002	67-64-1	Acetone
U003	75-05-8	Acetonitrile
U004	98-86-2	Acetophenone
U006	75-36-5	Acetyl chloride
U005	53-96-3	2-Acetylaminefluorene
P002	591-08-2	1-Acetyl-2-thiourea
P003	107-02-8	Acrolein
U007	79-06-1	Acrylamide
U008	79-10-7	Acrylic acid
U009	107-13-1	Acrylonitrile
	1402-68-2	Aflatoxins

HAZARDOUS WASTE NO.	CHEMICAL ABSTRACT NO.	SUBSTANCE
P070	116-06-3	Aldicarb
P004	309-00-2	Aldrin
P005	107-18-6	Allyl alcohol
	107-05-1	Allyl chloride
P006	20859-73-8	Aluminum phosphide
	92-67-1	4-Aminobiphenyl
P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol
P008	504-24-5	4-Aminopyridine
U011	61-82-5	Amitrole
P009	131-74-8	Ammonium picrate
P119	7803-55-6	Ammonium vanadate
U012	62-53-3	Aniline
	120-12-7	Anthracene
		Antimony compounds, N.O.S.
	7440-36-0	Antimony
	140-57-8	Aramite
P010	7778-39-4	Arsenic acid
		Arsenic compounds, N.O.S.
P011	1303-28-2	Arsenic pentoxide
P012	1327-53-3	Arsenic trioxide
U014	492-80-8	Auramine
U015	115-02-6	Azaserine
		Barium compounds, N.O.S.
P013	542-62-1	Barium cyanide
U018	56-55-3	Benz[a]anthracene
U016	225-51-4	Benz[c]acridine
U017	98-87-3	Benzal chloride
U019	71-43-2	Benzene
	98-05-5	Benzenearsonic acid
U020	98-09-9	Benzenesulfonyl chloride
U021	92-87-5	Benzidine
	205-99-2	Benzo[b]fluoranthene
	205-82-3	Benzo[j]fluoranthene
	207-08-9	Benzo[k]fluoranthene
U022	50-32-8	Benzo[a]pyrene
U197	106-51-4	p-Benzoquinone
U023	98-07-7	Benzotrichloride
P028	100-44-7	Benzyl chloride
P015	7440-41-7	Beryllium
		Beryllium compounds, N.O.S.
U085	1464-53-5	2,2'-Bioxirane
P017	598-31-2	Bromoacetone
U225	75-25-2	Bromoform
U030	101-55-3	4-Bromophenol phenyl ether
P018	357-57-3	Brucine
U031	71-36-3	n-Butyl alcohol
	85-68-7	Butyl benzyl phthalate
U136	75-60-5	Cacodylic acid
		Cadmium compounds, N.O.S.

HAZARDOUS WASTE NO.	CHEMICAL ABSTRACT NO.	SUBSTANCE
U032	13765-19-0	Calcium chromate
P021	592-01-8	Calcium cyanide
P022	75-15-0	Carbon disulfide
U033	353-50-4	Carbon oxyfluoride
U211	56-23-5	Carbon tetrachloride
U034	75-87-6	Chloral
U035	305-03-3	Chlorambucil
U036	57-74-9	Chlordane, alpha and gamma isomers
		Chlorinated benzenes, N.O.S.
		Chlorinated ethane, N.O.S.
		Chlorinated fluorocarbons, N.O.S.
		Chlorinated naphthalene, N.O.S.
		Chlorinated phenol, N.O.S.
U026	494-03-1	Chlornaphazine
P023	107-20-0	Chloroacetaldhyde
		Chloroalkyl ethers, N.O.S.
P024	106-47-8	p-Chloroaniline
U037	108-90-7	Chlorobenzene
U038	510-15-6	Chlorobenzilate
U039	59-50-7	p-Chloro-m-cresol
U042	110-75-8	2-Chloroethyl vinyl ether
U044	67-66-3	Chloroform
U046	107-30-2	Chloromethyl methyl ether
U047	91-58-7	beta-Chloronaphthalene
U048	95-57-8	o-Chlorophenol
P026	5344-82-1	1-(o-Chlorophenyl)thiourea
	126-99-8	Chloroprene
P027	542-76-7	3-Chloropropionitrile
U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride
		Chromium compounds, N.O.S.
U050	218-01-9	Chrysene
	6358-53-8	Citrus red No. 2
	8007-45-2	Coal tar creosote
P029	544-92-3	Copper cyanide
U051		Creosote
U052	1319-77-3	Cresol (Cresylic acid)
U053	4170-30-3	Crotonaldehyde
U055	98-82-8	Cumene
	57-12-5	Cyanide
P030		Cyanides (soluble salts and complexes), N.O.S.
P031	460-19-5	Cyanogen
U246	506-68-3	Cyanogen bromide
P033	506-77-4	Cyanogen chloride
	14901-08-7	Cycasin
U056	110-82-7	Cyclohexane
U057	108-94-1	Cyclohexanone
P034	131-89-5	2-Cyclohexyl-4,6-dinitrophenol
U058	50-18-0	Cyclophosphamide
U240		2,4-D, salts, esters

HAZARDOUS WASTE NO.	CHEMICAL ABSTRACT NO.	SUBSTANCE
U240	94-75-7	2,4-D
U060	72-54-8	DDD
	72-55-9	DDE
U061	50-29-3	DDT
U059	20830-81-3	Daunomycin
U062	2303-16-4	Diallate
	226-36-8	Dibenz[a,h]acridine
	224-42-0	Dibenz[a,j]acridine
U063	53-70-3	Dibenz[a,h]anthracene
	194-59-2	7H-Dibenzo[c,g]carbazole
	192-65-4	Dibenzo[a,e]pyrene
	189-64-0	Dibenzo[a,h]pyrene
U064	189-55-9	Dibenzo[a,i]pyrene
U066	96-12-8	1,2-Dibromo-3-chloropropane
U069	84-74-2	Dibutyl phthalate
	25321-22-6	Dichlorobenzene, N.O.S.
U071	541-73-1	m-Dichlorobenzene
U070	95-50-1	o-Dichlorobenzene
U072	106-46-7	p-Dichlorobenzene
U073	91-94-1	3,3'-Dichlorobenzidine
U074	764-41-0	1,4-Dichloro-2-butene
U075	75-71-8	Dichlorodifluoromethane
U025	111-44-4	Dichloroethyl ether
U078	75-35-4	1,1-Dichloroethylene
U079	156-60-5	1,2-Dichloroethylene
	25323-30-2	Dichloroethylene, N.O.S.
U027	108-60-1	Dichloroisopropyl ether
U024	111-91-1	Dichloromethoxy ethane
P016	542-88-1	Dichloromethyl ether
U081	120-83-2	2,4-Dichlorophenol
U082	87-65-0	2,6-Dichlorophenol
P036	696-28-6	Dichlorophenylarsine
	26638-19-7	Dichloropropane, N.O.S.
	26545-73-3	Dichloropropanol, N.O.S.
U084	542-75-6	1,3-Dichloropropene
	26952-23-8	Dichloropropene, N.O.S.
P037	60-57-1	Dieldrin
P038	692-42-2	Diethylarsine
U108	123-91-1	1,4-Diethyleneoxide
U028	117-81-7	Diethylhexyl phthalate
U086	1615-80-1	N,N-Diethylhydrazine
U087	3288-58-2	O,O-Diethyl S-methyl dithiophosphate
P041	311-45-5	Diethyl-p-nitrophenyl phosphate
U088	84-66-2	Diethyl phthalate
P040	297-97-2	O,O-Diethyl O-pyrazinyl phosphorothioate
U089	56-53-1	Diethylstilbestrol
U090	94-58-6	Dihydrosafrole
P043	55-91-4	Diisopropylfluorophosphate (DFP)
P044	60-51-5	Dimethoate

HAZARDOUS WASTE NO.	CHEMICAL ABSTRACT NO.	SUBSTANCE
U091	119-90-4	3,3'-Dimethoxybenzidine
U092	124-40-3	Dimethylamine
U093	60-11-7	p-Dimethylaminoazobenzene
U094	57-97-6	7,12-Dimethylbenz[a]anthracene
U095	119-93-7	3,3'-Dimethylbenzidine
U096	80-15-9	alpha,alpha-Dimethylbenzylhydroperoxide
U097	79-44-7	Dimethylcarbamoyl chloride
U099	540-73-8	1,2-Dimethylhydrazine
U098	57-14-7	1,1-Dimethylhydrazine
P046	122-09-8	alpha, alpha-Dimethylphenethylamine
U101	105-67-9	2,4-Dimethylphenol
U102	131-11-3	Dimethyl phthalate
U102	121-14-2	Dinitrotoulene (2,4)
U103	77-78-1	Dimethyl sulfate
	25154-54-5	Dinitrobenzene, N.O.S.
P047	534-52-1	4,6-Dinitro-o-cresol
P047		4,6-Dinitro-o-cresol salts
P048	51-28-5	2,4-Dinitrophenol
U105	121-14-2	2,4-Dinitrotoluene
U106	606-20-2	2,6-Dinitrotoluene
P020	88-85-7	Dinoseb
	122-39-4	Diphenylamine
U109	122-66-7	1,2-Diphenylhydrazine
U110	142-84-7	Dipropylamine
P039	298-04-4	Disulfoton
P049	541-53-7	Dithiobiuret
P050	115-29-7	Endosulfan
P088	145-73-3	Endothall
P051	72-20-8	Endrin
P051		Endrin metabolites
U041	106-89-8	Epichlorohydrin
P042	51-43-4	Epinephrine
U112	141-78-6	Ethyl acetate
U113	140-88-5	Ethyl acrylate
U238	51-79-6	Ethyl carbamate (urethane)
P101	107-12-0	Ethyl cyanide
U114	111-54-6	Ethylenebisdithiocarbamic acid
U114		Ethylenebisdithiocarbamic acid, salts and esters
U067	106-93-4	Ethylene dibromide
U077	107-06-2	Ethylene dichloride
U359	110-80-5	Ethylene glycol monoethyl ether
P054	151-56-4	Ethyleneimine
U115	75-21-8	Ethylene oxide
U116	96-45-7	Ethylenethiourea
U117	60-29-7	Ethyl ether
U076	75-34-3	Ethylidine dichloride
U118	97-63-2	Ethyl methacrylate
U119	62-50-0	Ethyl methanesulfonate
P097	52-85-7	Famphur

HAZARDOUS WASTE NO.	CHEMICAL ABSTRACT NO.	SUBSTANCE
U120	206-44-0	Fluoranthene
P056	7782-41-4	Fluorine
P057	640-19-7	Fluoroacetamide
P058	62-74-8	Fluoroacetic acid, sodium salt
U122	50-00-0	Formaldehyde
U123	64-18-6	Formic acid
U124	110-00-9	Furan
U125	98-01-1	Furfural
U126	765-34-4	Glycidylaldehyde
		Halomethanes, N.O.S.
P059	76-44-8	Heptachlor
	1024-57-3	Heptachlor epoxide
		Heptachlor epoxide (alpha, beta, and gamma isomers)
		Heptachlorodibenzo-p-dioxins
		Heptachlorodibenzofurans
U127	118-74-1	Hexachlorobenzene
U128	87-68-3	Hexachlorobutadiene
U130	77-47-4	Hexachlorocyclopentadiene
		Hexachlorodibenzo-p-dioxins
		Hexachlorodibenzofurans
U131	67-72-1	Hexachloroethane
U132	70-30-4	Hexachlorophene
U243	1888-71-7	Hexachloropropene
P062	757-58-4	Hexaethyl tetraphosphate
U133	302-01-2	Hydrazine
P063	74-90-8	Hydrogen cyanide
U134	7664-39-3	Hydrogen fluoride
U135	7783-06-4	Hydrogen sulfide
U137	193-39-5	Indeno[1,2,3-cd]pyrene
U139	9004-66-4	Iron Dextran
U140	78-83-1	Isobutyl alcohol
P060	465-73-6	Isodrin
U141	120-58-1	Isosafrole
U142	143-50-0	Kepone
U143	303-34-4	Lasiocarpine
U144	301-04-2	Lead acetate
		Lead compounds, N.O.S.
U145	7446-27-7	Lead phosphate
U146	1335-32-6	Lead subacetate
U129	58-89-9	Lindane
U163	70-25-7	MNNG
U147	108-31-6	Maleic anhydride
U148	123-33-1	Maleic hydrazide
U149	109-77-3	Malononitrile
U150	148-82-3	Melphalan
U151	7439-97-6	Mercury
		Mercury compounds, N.O.S.
P065	628-86-4	Mercury fulminate
U152	126-98-7	Methacrylonitrile

HAZARDOUS WASTE NO.	CHEMICAL ABSTRACT NO.	SUBSTANCE
U154	67-56-1	Methanol
U155	91-80-5	Methapyrilene
P066	16752-77-5	Methomyl
U247	72-43-5	Methoxychlor
U029	74-83-9	Methyl bromide
U045	74-87-3	Methyl chloride
U156	79-22-1	Methylchlorocarbonate
U226	71-55-6	Methyl chloroform
U157	56-49-5	3-Methylcholanthrene
U158	101-14-4	4,4-Methylenebis(2-chloroaniline)
U068	74-95-3	Methylene bromide
U080	75-09-2	Methylene chloride
U159	78-93-3	Methyl ethyl ketone (MEK)
U160	1338-23-4	Methyl ethyl ketone peroxide
P068	60-34-4	Methyl hydrazine
U138	74-88-4	Methyl iodide
U161	108-10-1	Methyl isobutyl ketone
P064	624-83-9	Methyl isocyanate
P069	75-86-5	2-Methyllactonitrile
U162	80-62-6	Methyl methacrylate
	66-27-3	Methyl methanesulfonate
P071	298-00-0	Methyl parathion
U164	56-04-2	Methylthiouracil
U010	50-07-7	Mitomycin C
	505-60-2	Mustard gas
U165	91-20-3	Naphthalene
U166	130-15-4	1,4-Naphthoquinone
U167	134-32-7	alpha-Naphthylamine
U168	91-59-8	beta-Naphthylamine
P072	86-88-4	alpha-Naphthylthiourea
	7440-02-0	Nickel
P073	13463-39-3	Nickel carbonyl
		Nickel compounds, N.O.S.
P074	557-19-7	Nickel cyanide
P075	54-11-5	Nicotine
P075		Nicotine salts
P076	10102-43-9	Nitric oxide
P077	100-01-6	p-Nitroaniline
U169	98-95-3	Nitrobenzene
U181	99-55-8	5-Nitro-o-toluidine
P078	10102-44-0	Nitrogen dioxide
	51-75-2	Nitrogen mustard
		Nitrogen mustard, hydrochloride salt
	126-85-2	Nitrogen mustard, N-oxide
		Nitrogen mustard, N-oxide, hydrochloride salt
P081	55-63-0	Nitroglycerin
U170	100-02-7	p-Nitrophenol
U171	79-46-9	2-Nitropropane
	35576-91-1	Nitrosamines, N.O.S.

HAZARDOUS WASTE NO.	CHEMICAL ABSTRACT NO.	SUBSTANCE
U172	924-16-3	N-Nitrosodi-n-butylamine
U173	1116-54-7	N-Nitrosodiethanolamine
U174	55-18-5	N-Nitrosodiethylamine
P082	62-75-9	N-Nitrosodimethylamine
U176	759-73-9	N-Nitroso-N-ethylurea
	10595-95-6	N-Nitrosomethylethylamine
U177	684-93-5	N-Nitroso-N-methylurea
U178	615-53-2	N-Nitroso-N-methylurethane
P084	4549-40-0	N-Nitrosomethylvinylamine
	59-89-2	N-Nitrosomorpholine
	16543-55-8	N-Nitrosonornicotine
U179	100-75-4	N-Nitrosopiperidine
U180	930-55-2	N-Nitrosopyrrolidine
	13256-22-9	N-Nitrososarcosine
P085	152-16-9	Octamethylpyrophosphoramide
U107	117-84-0	Di-n-octyl phthalate
P087	20816-12-0	Osmium tetroxide
U182	123-63-7	Paraldehyde
P089	56-38-2	Parathion
U183	608-93-5	Pentachlorobenzene
		Pentachlorodibenzo-p-dioxins
U184	76-01-7	Pentachloroethane
U185	82-68-8	Pentachloronitrobenzene (PCNB)
See F027	87-86-5	Pentachlorophenol
U186	504-60-9	1,3-Pentadiene
U187	62-44-2	Phenacetin
U188	108-95-2	Phenol
	25265-76-3	Phenylenediamine
P092	62-38-4	Phenylmercury acetate
P093	103-85-5	Phenylthiourea
P094	298-02-2	Phorate
P095	75-44-5	Phosgene
P096	7803-51-2	Phosphine
U189	1314-80-3	Phosphorus sulfide
		Phthalic acid ester, N.O.S.
U190	85-44-9	Phthalic anhydride
U191	109-06-8	2-Picoline
		Polychlorinated biphenyls, N.O.S.
P098	151-50-8	Potassium cyanide
P099	506-61-6	Potassium silver cyanide
U192	23950-58-5	Pronamide
U193	1120-71-4	1,3-Propane sultone
P102	107-19-7	Propargyl alcohol
U194	107-10-8	n-Propylamine
U083	78-87-5	Propylene dichloride
P067	75-55-8	1,2-Propyleneimine
U111	621-64-7	Di-n-propylnitrosamine
	51-52-5	Propylthiouracil
U196	110-86-1	Pyridine

HAZARDOUS WASTE NO.	CHEMICAL ABSTRACT NO.	SUBSTANCE
U200	50-55-5	Reserpine
U201	108-46-3	Resorcinol
U202	81-07-2	Saccharin
U202		Saccharin salts
U203	94-59-7	Safrole
		Selenium compounds, N.O.S.
U204	7783-00-8	Selenium dioxide
U205	7488-56-4	Selenium sulfide
P103	630-10-4	Selenourea
		Silver compounds, N.O.S.
P104	506-64-9	Silver cyanide
See F027	93-72-1	Silvex
P105	26628-22-8	Sodium azide
P106	143-33-9	Sodium cyanide
U206	18883-66-4	Streptozotocin
P108	57-24-9	Strychnine
P108		Strychnine salts
See F027	93-76-5	2,4,5-T
	1746-01-6	TCDD
See F027	93-72-1	2,4,5-TP
U207	95-94-3	1,2,4,5-Tetrachlorobenzene
		Tetrachlorodibenzo-p-dioxins
		Tetrachlorodibenzofurans
U208	630-20-6	1,1,1,2-Tetrachloroethane
U209	79-34-5	1,1,2,2-Tetrachloroethane
	25322-20-7	Tetrachloroethane, N.O.S.
U210	127-18-4	Tetrachloroethylene
See F027	58-90-2	2,3,4,6-Tetrachlorophenol
P109	3689-24-5	Tetraethyldithiopyrophosphate
P110	78-00-2	Tetraethyl lead
P111	107-49-3	Tetraethyl pyrophosphate
U213	109-99-9	Tetrahydrofuran
P112	509-14-8	Tetranitromethane
P113	1314-32-5	Thallic oxide
	7440-28-0	Thallium
U214	563-68-8	Thallium(I) acetate
U215	6533-73-9	Thallium(I) carbonate
U216	7791-12-0	Thallium(I) chloride
		Thallium compounds, N.O.S.
U217	10102-45-1	Thallium(I) nitrate
P114	12039-52-0	Thallium selenite
P115	7446-18-6	Thallium(I) sulfate
U218	62-55-5	Thioacetamide
P045	39196-18-4	Thiofanox
U153	74-93-1	Thiomethanol
P014	108-98-5	Thiophenol
P116	79-19-6	Thiosemicarbazide
U219	62-56-6	Thiourea
U244	137-26-8	Thiram

HAZARDOUS WASTE NO.	CHEMICAL ABSTRACT NO.	SUBSTANCE
U220	108-88-3	Toluene
U221	25376-45-8	Toluenediamine
	823-40-5	Toluene-2,6-diamine
	95-80-7	Toluene-2,4-diamine
	496-72-0	Toluene-3,4-diamine
U223	26471-62-5	Toluene diisocyanate
U328	95-53-4	o-Toluidine
U353	106-49-0	p-Toluidine
U222	636-21-5	o-Toluidine hydrochloride
P123	8001-35-2	Toxaphene
	120-82-1	1,2,4-Trichlorobenzene
U227	79-00-5	1,1,2-Trichloroethane
U228	79-01-6	Trichloroethylene
P118	75-70-7	Trichloromethanethiol
U121	75-69-4	Trichloromonofluoromethane
See F027	95-95-4	2,4,5-Trichlorophenol
See F027	88-06-2	2,4,6-Trichlorophenol
See F027	93-76-5	2,4,5-Trichlorophenoxyacetic acid
	96-18-4	1,2,3-Trichloropropane
	25735-29-9	Trichloropropane, N.O.S.
	126-68-1	O,O,O-Triethylphosphorothioate
U234	99-35-4	1,3,5-Trinitrobenzene
	52-24-4	Tris(1-aziridinyl)phosphine sulfide
U235	126-72-7	Tris(2,3-dibromopropyl) phosphate
U236	72-57-1	Trypan blue
U237	66-75-1	Uracil mustard
P120	1314-62-1	Vanadium pentoxide
U043	75-01-4	Vinyl chloride
U043		Poly vinyl chloride
P001	81-81-2	Warfarin, when present at concentrations greater than 0.3%
P001		Warfarin salts, when present at concentrations greater than 0.3%
U248	81-81-2	Warfarin, when present at concentrations less than 0.3%
U248		Warfarin salts, when present at concentrations less than 0.3%
U239	1330-20-7	Xylene
P121	557-21-1	Zinc cyanide
P122	1314-84-7	Zinc phosphide, when present at concentrations greater than 10%
U249	1314-84-7	Zinc phosphide, when present at concentrations of 10% or less.

NA = Not Applicable.

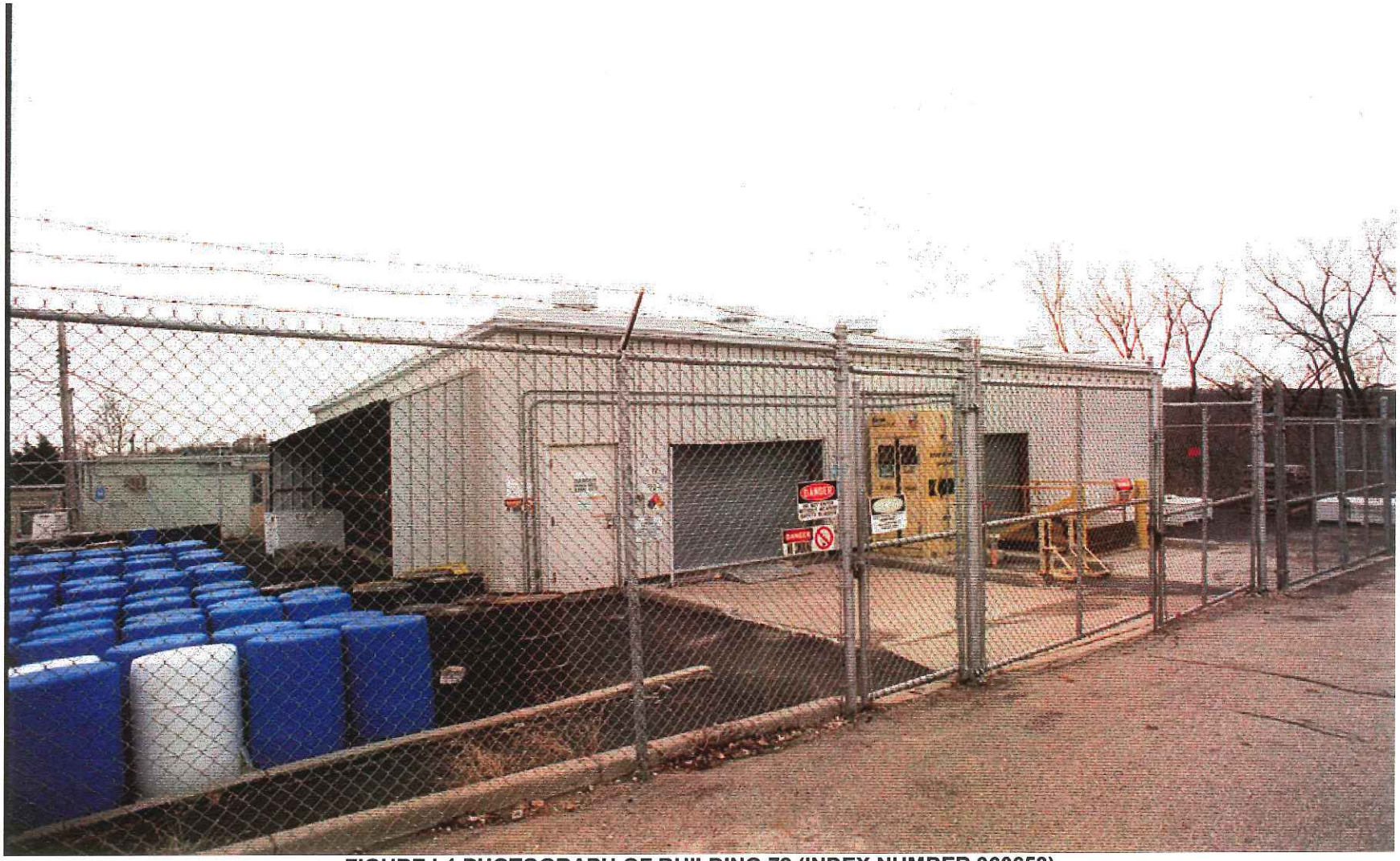


FIGURE I-1 PHOTOGRAPH OF BUILDING 72 (INDEX NUMBER 960653)

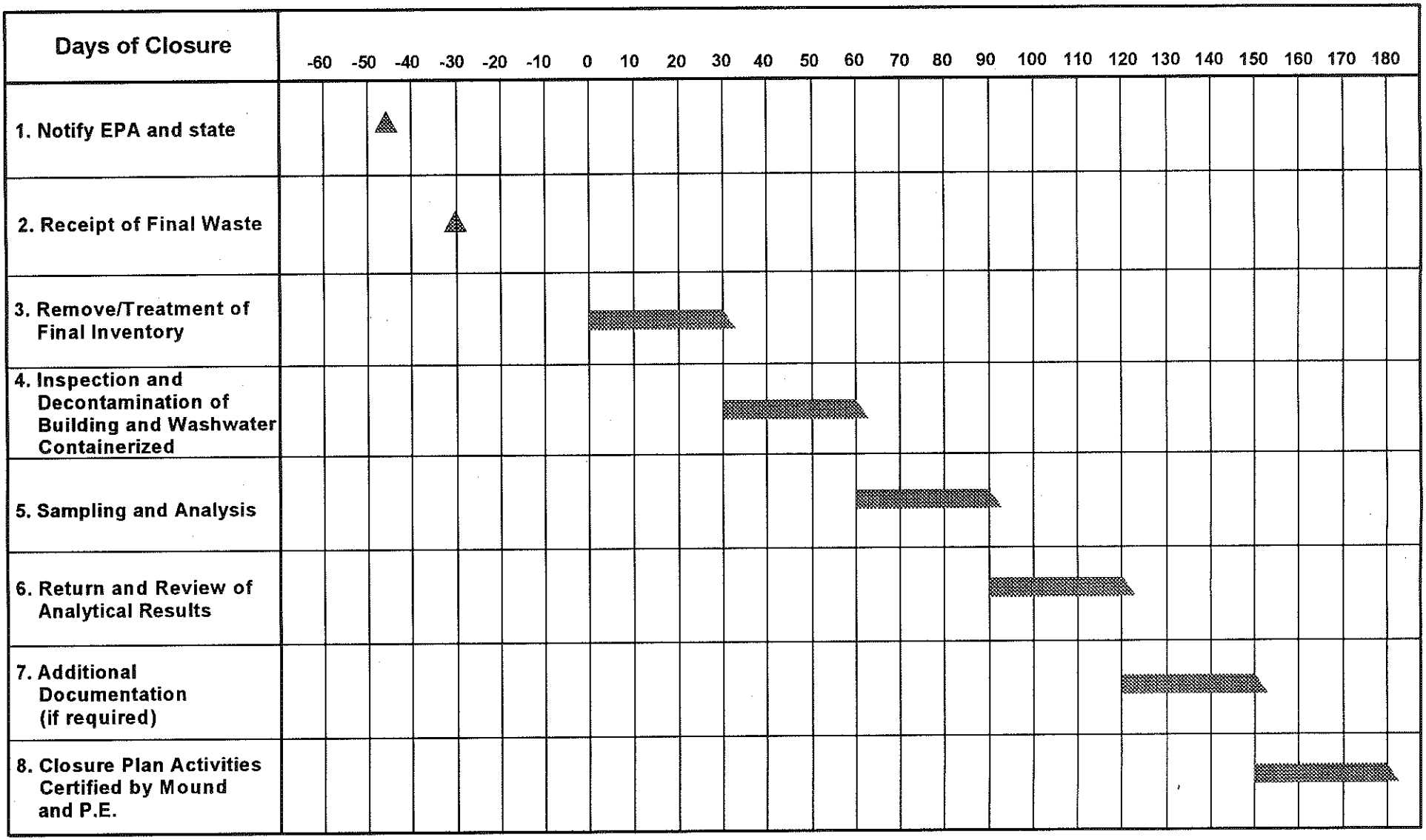


FIGURE I-2 CLOSURE SCHEDULE FOR BUILDING 72

SECTION I--CLOSURE PLANS, POST-CLOSURE PLANS, AND FINANCIAL REQUIREMENTS FOR BUILDING 23 RADIOACTIVE MIXED WASTE STORAGE UNIT

I-0 General

This section identifies activities that will be necessary to permanently close the Building 23 Radioactive Mixed Waste Storage Unit (Building 23).

At the Miamisburg Environmental Management Project RCRA closure actions may be impacted by the ongoing actions of the Environmental Restoration (ER) Program in order to achieve compliance with the requirements of the August 6, 1990 U.S. Department of Energy (DOE)/U.S. Environmental Protection Agency (EPA) Federal Facilities Agreement (FFA). This FFA, which was entered into pursuant to Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), has given way to the "Mound 2000 Work Plan."

Under the Mound 2000 Work Plan, the Ohio EPA the US EPA, and the DOE will evaluate each Potential Release Site or building separately, to determine the need for cleanup. When a response action is warranted, the Project will use removal action authority to remediate those areas as needed or establish a goal for no additional remediation other than institutional controls for the final remedy documented in the Record of Decision. To evaluate any residual risk after all removals have been completed, a residual risk evaluation would be conducted to ensure the selected remedy for the associated property block or land parcel is protective of human health under an industrial reuse scenario. Building 23 and the property underlying the building will also be evaluated using the "Mound 2000 Work Plan" approach. To the extent possible, the Miamisburg Environmental Management Project plans to coordinate work conducted as part of the Mound 2000 Approach with its RCRA-related work.

If it is determined that soil contamination has occurred as a result of Building 23 operations, any contamination associated with the Building 23 operation will be addressed as a part of this closure plan. Any soil contamination resulting from other operations or plant activities currently in or that may be discovered in the area of Building 23 will be addressed under the Mound 2000 Process.

The Miamisburg Environmental Management Project, under DOE guidelines that are established under OSHA has developed a site wide Health and Safety Plan (HASP), as well as job specific HASPs. Under these requirements, a HASP will be developed for the closure of Building 23.

Building 23 Description: Building 23 is a hazardous waste management unit located at the DOE's Miamisburg Environmental Management Project (formerly the Mound site or Plant) in Montgomery County, Ohio. The Mound site was an integrated research, development, and production facility working to support the DOE weapon and non-weapon programs, particularly in the areas of chemical explosives and nuclear technology. The Miamisburg Environmental Management Project is currently undergoing a site clean up, as part of the process of its transition to a commercialized facility, as a consequence, the remaining DOE support work is being conducted and the wastes beuing generated in support of this environmental.

The general configuration of the Miamisburg Environmental Management Project today, and the location of Building 23 are illustrated in Drawing FSD920925. A map illustrating the topography at the Miamisburg Environmental Management Project is provided in Drawing FSE920963. Both drawings are included as an attachment to this Permit Application in the volume entitled "RCRA Part B Permit Application for the U.S. Department of Energy Miamisburg Environmental Management Project, Miamisburg, Ohio-Drawings".

The major topographic feature in the region is the Great Miami River, which flows from north to south approximately 2,000 feet (ft.) due west of the site. The Miamisburg Environmental Management Project is situated on two hills overlooking the river and the City of Miamisburg. These hills consist of virtually impermeable calcareous shales with thin interbedded of limestones, covered by a thin veneer of unconsolidated deposits. The unconsolidated deposits consist of glacial till, residual soils that developed from weathering of the shale and limestone bedrock, and engineering fill. The total thickness of these unconsolidated materials on the hills range from 0 ft. (at bedrock exposures) to 20 ft. The depth to bedrock beneath Building 23 is estimated to be approximately 5 ft. below ground surface. The two hills are separated by a tributary valley of the Great Miami River, referred to as the Miamisburg Environmental Management Project Valley. The valley contains the plant drainage ditch, which is underlain by fill material generated from plant grading, and interbedded glacial till and outwash deposits, the latter possibly comprising a small tongue of the Buried Valley Aquifer. The Buried Valley Aquifer, an important source of drinking water in the region, occupies a deep bedrock channel that roughly follows the course of the Great Miami River.

Unit Description: Building 23 is a concrete block storage building with interior dimensions of 117 ft. x 30 ft. and an interior height of 14 ft. The wastes managed at Building 23 consist of radioactive mixed wastes (Waste with both a RCRA hazardous and a radioactive component) that are generated from mission-related activities and ancillary operations.

Building 23, which was constructed in 1966, and converted to a mixed waste disposal storage area in 1980, has in the past primarily been used for for the management of legacy types of mixed wastes that due to the lack of capacity were not able to be treated and/or disposed of off site. Under the Site Treatment Plan (STP), and with increased options for the treatment and disposal of mixed wastes, the waste inventory in Building 23 is no longer static. Today the inventory of legacy wastes managed in Building 23 has diminished, and Building 23 is used primarily for the storage of containerized mixed wastes generated from building and/or environmental clean outs, prior to the off-site shipment of those wastes. The wastes managed at this unit consist of mixed wastes, as well as non-RCRA regulated low-level wastes generated from mission-related clean up activities.

Section C provides a detailed discussion of plant processes and the wastes they generate.

The interior floor space is divided by masonry walls into three areas. The larger area has approximate dimensions of 77 ft x 30 ft, while the second area has approximate dimensions of 25 ft x 30 ft. Both of these areas have been used to store the following wastes:

Waste oils.
Scintillation vials.
Acids.
Bases.
Solvents.
Miscellaneous laboratory chemicals.
Lead.

These wastes are contaminated or potentially contaminated with radioactivity levels ranging from trace to transuranic (TRU). A section of the second area, approximately 120-square foot (ft^2), is reserved for radioactively contaminated polychlorinated biphenyls (PCBs) storage. Containment for the PCB waste is provided by a 6-inch (in.) continuous curb.

The third area has dimensions of ~14 ft x 30 ft. This area is used for administrative purposes and storage of labpacks that are secondarily contained.

A Photograph of Building 23 is provided in Figure I-1 at the end of this section.

I-1 Closure Plan [OAC 3745-50-44(a)(13), 3745-55-10 through 55-20]

Building 23 will be closed in accordance with this Closure Plan, and a qualified, independent, registered professional engineer or his/her representative will be present at all critical activities during closure. Documentation of closure activities will be maintained at the Miamisburg Environmental Management Project through the Long-term Stewardship Program being developed by the DOE and the Ohio EPA.

A copy of the Closure Plan and all revisions thereto will be maintained by the Waste Management Group at the Miamisburg Environmental Management Project until certification of closure completeness has been submitted and accepted by the State of Ohio. The plan will be amended in accordance with the amendment procedures defined in OAC 3745-55-12 if any changes occur in the operating plans or unit design.

I-1a Closure Performance Standard (OAC 3745-55-11)

This Closure Plan is designed to ensure that Building 23 will be closed in accordance with OAC 3745-66, and will be closed in a manner that will minimize or eliminate threats to human health and the environment and prevent the escape of any possible hazardous wastes, hazardous constituents, leachate, or waste decomposition products resulting from this building and its associated operations to groundwater, surface water, or the atmosphere upon cessation of operations. The need for further maintenance after closure will be eliminated by ensuring that no hazardous wastes or constituents remain at Building 23. The hazardous wastes will be shipped off-site to a permitted treatment, storage, and disposal facility (TSDF). After the waste has been removed, and after sealing all cracks or potential breaches in the containment, all equipment and structures will be decontaminated using a wash with detergent solution and high-pressure water.

All decontamination operations (including walls, internal furnishings, grating, equipment, and slab surface) will be conducted within the Building 23 enclosure when necessary, based on visible evidence of spills, spill records and process knowledge using the existing secondary containment systems to collect the rinsate using the existing secondary containment systems to collect the rinsate. Rinsates will be pumped into the appropriate containers from the sumps on a continuous basis. This will allow for sequential evaluation of the decontamination process and eliminate the possibility of breach of containment. Equipment will be decontaminated within their respective areas to minimize the potential mixing of incompatible rinsates. It is not anticipated that rinsates will be radioactively contaminated. The container of rinsate will be managed as hazardous waste until such time as it is characterized. Once characterized, and a determination made, the container will be dispositioned as either hazardous waste or non-hazardous waste. Decontamination will be confirmed, based on an analyses of a second rinse and collection of that rinsate which will be analyzed for the constituents historically stored in Building 23.

To determine if closure has been completed, the following actions have been incorporated into this Closure Plan to serve as indicators of clean closure:

Sampling and analysis of rinsate fluids.
A final visual inspection and assessment of Building 23.

Analysis will be conducted to determine whether any of the wastes in Building 23, that have historically been stored in Building 23 are present above their detection limit. The list of analytes will be based upon the Part A contained in the 1996 version of the Part B Permit, as issued in October 1996.

To provide a definite plan of action for closure of Building 23, assumptions have been made based on available information. These assumptions are as follows:

- Groundwater and soil contamination have not resulted due to waste management practices at this unit.
- The walls and floor of the unit have remained intact and breaches have not occurred. Inspections performed on the unit document the structural integrity of the building and any breaches.
- Hot water pressure washing with a detergent solution will be sufficient to remove contamination from the unit surfaces. Pressure washing as a form of decontamination is referenced in OEPA's most recent version of its Closure Guidance Document.
- The exterior walls and ceiling of Building 23 have not become contaminated with RCRA hazardous wastes. This is assumed due to the fact that no basic avenue for the waste to these areas is provided.

The following criteria, as outlined in the OEPA's most recent version of its Closure Plan Review Guidance will be used to determine if successful decontamination/cleanup has been achieved.

The collected rinsate samples will be evaluated against the following criteria to determine if successful decontamination has been achieved:

1. Attaining 15 times the public drinking water maximum contaminant level (MCL) for hazardous waste constituents as promulgated in OAC 3745-81-11 for inorganics and OAC 3745-81-12 for organics.
2. If an MCL is unavailable for a particular contaminant, then 15 times the (non-zero) maximum contaminant level goal (MCLG) as promulgated in 40 CFR 141.50 will be used as the clean standard.
3. f the product of 15 times the MCL or MCLG exceeds 1 milligram per liter (mg/L), or if neither an MCL nor MCLG is available for a particular contaminant, 1 mg/L will be used as the clean standard.

If laboratory results indicate levels above these criteria, the decontamination procedure will be repeated until these standards are met.

While past operations do not indicate that there is the possibility of Building 23 operations related soil contamination and the current operational controls will prohibit any possible future soil contamination it is still possible that soil contamination could occur form Building 23 operations. As such, if there has been a breach to the structural integrity of the building and if a soil clean up is necessary, any soil samples are collected they will be evaluated against the criteria that follow. The sampled material will be considered contaminated if:

1. Concentrations of RCRA metals in the sample, using total metals analysis, exceed the mean concentration plus two standard deviations of the background sample concentrations.
2. Concentrations of "not naturally occurring" compounds are present above analytical detection limits using the methods defined in SW-846. "Not naturally occurring" refers to elements/compounds not found in background sample.

Risk-based cleanup standards, as allowed by the latest version of the OEPA closure plan guidance, will be proposed if the Miamisburg Environmental Management Project determines that it is unable to achieve the cleanup levels noted above.

I-1b Partial Closure and Final Closure Activities [OAC 3745-55-12(B)(1) through (B)(7)]

The closure of Building 23 will be a final closure of this unit. With the exception of Building 23 and 72, closure of the Miamisburg Environmental Management Project's other RCRA treatment and storage units (the historic units) was completed in the 1990s. Both Building 72 and Building 23 will be closed in conjunction with the cessation of all mission activities at the site. This closure will be consistent with the closure requirements and the closure performance standard. The anticipated date for closure of Building 23 is 2012.

I-1c Maximum Waste Inventory [OAC 3745-55-12(B)(3)]

The maximum capacity for hazardous waste storage in Building 23 [25,000 gallons (gal.)] has never been exceeded. The maximum inventory stored in the unit during its active life has been approximately 18,000 gal., when the stored materials in the building were not able to be shipped off-site for treatment and disposal. The volumes of material stored at this time is less than the maximum inventory of 18,000 gal., and the inventory in the building also changes over time as mixed wastes are shipped off-site. When the inventory was static and at or near its maximum, the inventory consisted of the following waste types:

1.	Waste oils	38%
2.	Scintillation vials	57%
3.	Acids	3%
4.	Bases	<1%
5.	Solvents	<1%
6.	Miscellaneous laboratory chemicals	1%

The wastes previously listed are all in liquid form. As discussed in previous sections, Building 23 also stores lead waste in the solid form. This lead waste adds an additional 582 cubic feet (ft^3) (~4,000 gal.) to the total inventory of the unit, which still yields a total volume below the maximum capacity.

I-1d Schedule for Closure [OAC 3745-55-12(B)(6) and (7)]

The closure of Building 23 is independent of the closure of the other RCRA-regulated units at the Miamisburg Environmental Management Project and is not expected until 2012. The closure will be supervised and certified by the owner/operator and an independent professional engineer registered in the State of Ohio, and will include the following steps:

1. Notification of the State of Ohio of the intent to close the unit 45 days prior to initiation of closure activities.
2. Receipt of the final volume of waste will not occur after 15 days from the date of notification.
3. Removal of the final waste inventory within 90 days of the approval of the Closure Plan by the Director of OEPA.
4. Visual inspection of unit for signs of structure contamination; decontamination of the structure if necessary; collection and containerization of wastes and residues.
5. Verification sampling (rinsate and soils if a soil clean up is required) and analysis as needed to demonstrate that contamination no longer exists. (Contact OEPA inspector at least 5 business days prior to critical activities.)
6. Return and review of analytical results.
7. Additional structure decontamination (if required) and verification sampling and analysis

to demonstrate that contamination no longer exists.

8. Completion of closure within 180 days of receipt of the final volume of waste, or 180 days after approval of the Closure Plan if that occurs later.
9. Certification submittal to the State of Ohio within 60 days from the completion of closure.

I-1d(1) Time Allowed for Closure (OAC 3745-55-13)

Figure I-3 presents a schedule for closure, which gives an estimate of the total time required to close the unit. This schedule does not account for any delays that may be caused by natural or man-induced disasters, including fires, weather, floods, riots, or strikes. The schedule also does not account for delays resulting from the OEPA approval process.

I-1d(2) Extensions for Closure Time [OAC 3745-55-13(A) and (B)]

No need for an extension to the closure time is anticipated; however, if an extension is necessary to properly close Building 23, then a request for an extension will be submitted to the State of Ohio. An extension request could be required because of inclement weather, the detection of unanticipated contamination, or other unavoidable circumstances.

If circumstances require an extension to the closure schedule provided in Figure I-3, a letter explaining the need for the extension, including a revised schedule proposal, will be sent to OEPA.

I-1e Closure Procedure

Building 23 will be closed in accordance with this Closure Plan and the closure procedures as discussed in the closure performance standard section of this plan.

I-1e(1) Inventory Removal [OAC 3745-55-12(B)(3)]

Upon formal notification to OEPA that the Miamisburg Environmental Management Project expects to proceed with closure of Building 23, no additional wastes will be accepted from generators. The waste inventory in the unit will be removed within 90 days after notification of closure. The hazardous wastes will be transported by a licensed hauler to a permitted DOE-approved radioactive mixed waste treatment/disposal facility, in compliance with the STP.

The transport of hazardous wastes will be accompanied by the appropriate paperwork. Hazardous waste manifests will be used to track the waste. All appropriate land disposal restriction (LDR) notifications and other appropriate certifications will also accompany the waste.

I-1e(2) Disposal or Decontamination of Equipment, Structures, and Soils [OAC 3745-55-12(B)(4), 3745-55-14]

The Building 23 structure, equipment, base, and sumps will be decontaminated using a high-pressure detergent wash. All washwater will be collected, containerized, and sampled to determine the proper disposal method. Sampling of the structures, equipment, and containment system will be performed using rinsate and soil samples to verify clean closure. Soil sampling will only be necessary if contamination results from Building 23 operations; contamination from other operations will be addressed under the Mound 2000 Process. These samples will be analyzed in accordance with the protocols presented in Table I-2 and outlined in Section C. The criteria listed in Subsection I-1a will be used to determine if successful unit decontamination has been achieved.

Rinsates will be analyzed, as required by the latest edition of the OEPA's closure guidance to determine if there are listed constituents present. Those rinsates determined to contain listed hazardous waste, using the OEPA's latest edition of the closure guidance, will be managed as listed hazardous. Although characteristic wastes have been managed in Building 23, rinsates will not be managed as characteristic hazardous wastes unless they continue to exhibit one of the characteristics specified in OAC 3745-51. Rinsates may be managed as wastewater if such activity is in compliance of the Mound National Pollutant Discharge Elimination System (NPDES) permit, the Clean Water Act, and Ohio Water Pollution Control Law.

Table I-2--Analytical Test Methods for Building- 23 Closure

Analyte	Phase[a]	Preparation Method	Analytical Method
Flash point	L	1010,1020	1010,1020
PH	L	9040	9040
Reactivity	L, SL	SW-846, Section 7.3	SW-846, Section 7.3
Metals[b]	L	3010	6010/7000A
	OM	3030/3040	6010/7000A
	S	3050	6010/7000A
	SL	3050	6010/7000A
Toxicity characteristic (for TC analytes)	L	1311	1311
	OM	1311,1330	1311
	S	1311	1311
	SL	1311	1311
Halogenated volatile organics	L	5030	8010, 8240
	S, SL, OM	5030, 1311[d]	8010, 8240
Non-halogenated volatile organics	L	5030	8015, 8240
	S, SL, OM	5030, 1311[d]	8015, 8240
Halogenated semivolatile organics	L	3510, 3520	8250, 8270
	S, SL	3540, 3550	8250, 8270
	OM	3550, 3580	8250, 8270
	L	3510, 3520	8250, 8270
	S, SL	3540, 3550	8250, 8270
	OM	3550, 3580	8250, 8270
Chloride	L	3520	9250
Total or amenable cyanide	L	9010, 9012	9010, 9012
	S, OM	9011	9011
Total organic halides	L	9020	9020
	OM	ASTM[e] D-2988, E-442	ASTM D-2988, E-442
Heat of combustion	L	ASTM D-240	ASTM D-240
	OM	ASTM D-240	ASTM D-240
Free liquids	S	9095, 9096	9095, 9096
	OM	9095, 9096	9095, 9096

[a]L = liquid, S = solid, SL = sludge, OM = organic matrix
[b]Metals include arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, nickel, titanium, antimony, bismuth, zinc, copper, tin, and scandium.
[c]Toxicity characteristic analytes include metals, volatiles, and semivolatiles listed under Method 1311.
[d]For those solid phase or organic matrix wastestreams where volatile organics are specified in addition to the toxicity characteristic, the sample will be extracted according to Method 1311.
[e]ASTM = American Society for Testing and Materials

Personnel, equipment, and supplies used during the decontamination process will be decontaminated as described in Subsection I-1a. All washwaters will be collected and characterized for proper disposal. RCRA contaminated rinsates will be shipped to an off-site permitted TSDF. If washwaters are not contaminated, they can be taken to the site wastewater treatment facility. Any disposable items will undergo appropriate disposal.

Soil discovered to be contaminated by Building 23 operations or activities will be disposed of in accordance with the following process. Depending on the location of any soil contamination that may be discovered, the appropriate remedial technology will be implemented. Those soils that can be removed without affecting the structural integrity of Building 23 will be excavated and, based on the analytical results, disposed of at the appropriate TSDF. Soils will be transported to the TSDF by a licensed waste hauler and the appropriate paperwork (i.e., manifest, LDR notification, etc.) will accompany the waste. In the event the soil cannot be removed because of structural concerns, the appropriate remedial technology will be selected to treat the contaminated soils in-place.

I-1e(3) Closure of Disposal Unit [OAC 3745-50-44(A)(13), et al.]

Building 23 is not classified as a disposal unit; therefore, Subsection I-1e(3) is not applicable.

I-1e(4) Closure of Container Storage Area (OAC 3745-55-78)

The closure activity at Building 23 will be accomplished in the following five steps:

1. Waste removal and disposal.
2. Equipment and building decontamination.
3. Decontamination verification sampling.
4. Decontamination of closure equipment.
5. Closure certification.

The determination of which disposal facilities will used is dependent on contracts in place at that time and the requirements established under the STP, and will be determined at the time of closure.

Waste Removal and Disposal: All waste containers in the building will be inspected for proper markings or labels and physical condition in accordance with OAC 3745-55-70 and OAC 3745-54-30. Any containers that are damaged, leaking, or show signs of excessive corrosion will be placed into 85-gal. overpack drums and filled with a sorbent material such as vermiculite. Damaged containers will only be handled by personnel wearing appropriate PPE. The wastes will be manifested and shipped by a licensed hauler to a DOE-approved, permitted radioactive mixed waste treatment facility.

Equipment and Building Decontamination: Any portable equipment will be taken to a pre-designated area to be decontaminated. Any materials that cannot be decontaminated will be containerized and transported to a permitted facility for treatment/disposal.

Following removal of the final volume of waste, the internal surfaces of the unit and any equipment will be visually inspected for signs of contamination. Signs of this will include inspection of the floor, sump, ramps and curbs for discoloration, for residual waste, for evidence of structural damage, for leakage, and for evidence of spills. Site operations record will also be consulted to determine if spills have occurred in this building. The inspector will determine the potential for penetration of waste into the concrete structure from leaks or spills. Areas of cracks, spalling, and/or visible staining will be carefully examined using visual inspection. Particular attention will be paid to these areas during decontamination. Clean cloth rags, paper wipes, and nonmetallic brushes or scrapers will be used to clean or remove any

residual wastes from these surfaces. Any collected residue will be containerized for disposal as a hazardous waste. The potential for soil contamination is addressed in the following section.

Any areas where contamination may migrate from the internal structure of the building will be sealed or covered. Doorways will be covered with synthetic sheeting to prevent potentially contaminated cleaning fluids from splashing outside the contained area. Temporary sandbags wrapped in synthetic sheeting, or sorbent booms, will be positioned to contain the rinsate. In order to avoid the potential for migration of potentially contaminated rinsate, spalled or cracked areas in the concrete where decontamination fluids could potentially migrate (i.e., structural cracks) will be sealed with an appropriate sealant, that is compatible with the existing floor sealant and the decontamination fluid.

Once the unit has been prepared as described, equipment and internal foundation surfaces will be high-pressure washed with a detergent solution and hot water. Cleaning solutions and residue will be collected and containerized in clean 55-gal. drums using a pump, vacuum, or other appropriate equipment. Wastes will then be sampled using the protocols and criteria previously discussed to determine the proper disposal method. The surfaces will then be rinsed with pressurized hot water, which will also be collected and analyzed using the same method for disposal.

Decontamination Verification Sampling: Lower portions of the Building 23 walls, the slab surface, equipment in the room, sumps, and decontamination equipment will be verified as decontaminated by analysis of washes and rinses. At least three sequential high pressure rinse operations of surfaces will be conducted. Water from each rinse will be separately wiped or squeegeed to the nearest sump, and then pumped from the sump into DOT specification containers. Sampling of the containerized rinsate will be conducted according to the appropriate methods as defined by EPA SW-846 and detailed in Section C. All method quality control (QC) measures will be followed, including preparation of blanks and "chain-of-custody" procedures. Final rinsate samples will be analyzed by EPA SW-846 methods as outlined in Section C for all hazardous constituents that have been managed in Building 23. Analytical results will be evaluated against the clean closure criteria presented in Subsection I-1a. If contamination levels in the samples exceed the clean closure criteria, the decontamination process will be repeated. Once the verification samples meet the criteria, the area will be considered clean.

Soil sampling under Building 23 will only occur if there is evidence of structural damage (i.e., cracks) to the concrete floor or sumps. Soil sampling outside Building 23 will be initially conducted using the current OEPA Closure Plan Guidance Document methodology for selecting a grid pattern size. The sampling will initially extend 30 feet from the building. Grid boundaries will be extended outward if contamination is detected.

If structural damage is detected in Building 23, soil sampling will start at the cracked or spalled area and proceed in a radial pattern until the extent of contamination, if present, is determined. Field screening techniques will be used to initially determine the extent of contamination and will consist of visual inspection and the use of portable field instruments [i.e., organic vapor analyzer (OVA), HNu]. Verification soil samples will be collected on the grid system to confirm or refute the presence of waste constituents. These verification soil samples will be analyzed for the constituents identified in Table I-1 according to EPA SW-846. Soil samples will be screened and collected outside Building 23 in the same manner as discussed for the interior of Building 23.

In soil samples become necessary, any soil samples collected will be screened and collected in the following manner:

1. In locations where concrete is present, the concrete will be cut and the core will be removed

to expose the subsurface soils.

2. Stainless-steel bucket augers and split spoons will be used to remove soil and collect the samples.
3. Soils will be screened at 1-ft. depth intervals, using the field screening techniques, to an initial maximum depth of 3 ft.
4. Samples will be composited to facilitate analysis.

Background samples will be collected to determine the appropriate clean criteria. The background samples collected as part of the ongoing CERCLA remedial investigation at the facility will be used as appropriate for the RCRA closure program. Using the CERCLA background samples, action levels will be calculated using the methodology discussed in the latest version of OEPA's Closure Plan Guidance Document.

In addition to rinsate verification samples, blank samples will be collected, handled in the same manner as the contamination samples, and analyzed to identify possible sources of contamination during the sample collection, preservation, handling, and transport process.

Sampling and analytical procedures for determining waste constituents and decontamination verification will be those outlined in Section C. These procedures are consistent with OAC 3745-51-01 and EPA Report SW-846.

Decontamination of Closure Equipment and Personnel: The decontamination pad equipped with washwater containment and collection capabilities constructed for the ER Program will be used for closure. This pad will be constructed under the CERCLA program in such a manner that it will prevent the release of any contamination to the soils or groundwater. Once the decontamination solution from the closure equipment has met the closure criteria, the equipment will be considered decontaminated and released.

Personnel involved in decontamination procedures will practice good personal hygiene. Existing DOE directives will be followed pertaining to the fit of respiratory protection equipment, corrective lenses, contact lenses, eating and smoking areas, and toilet facilities. Such personnel will be decontaminated at the decontamination pad before leaving the work site. Impermeable clothing will be flushed with water before being removed by the person wearing it. Boots will be scrubbed with a decontamination solution or soap and water. Clothes will be placed in marked containers for laundering. Specific procedures will be adjusted, depending on the seriousness of the potential contamination.

Closure Certification: Once closure and decontamination at Building 23 have been completed, the unit will be inspected by the owner/operator and an independent professional engineer registered in the State of Ohio. A certification report will be submitted to the State of Ohio within 60 days of closure by registered mail by both the owner/operator and by an independent, registered professional engineer. The wording of the certification statement, and signatures applied, will meet the requirements of OAC 3745-50-42. The report will include a summary of the closure activities performed and the analytical sample results. The report will also include the results of visual inspections completed during closure and after closure completion. Following closure, the building will be returned to use for purposes other than RCRA-related operations.

Building 23 is a container storage area, therefore, Sections 1e(5) (Tanks); I-1e(6) (Waste Piles), I-1e(7), (Surface Impoundments), I-1e(8) (Incinerators), I-1e(9) (Landfills), I-1e(10) (Land Treatment Facilities), and I-1e(11) (Miscellaneous Units) are not applicable.

I-2 Post-Closure Plan/Contingent Post-Closure Plan

A post-closure plan will not be needed because Building 23 is a radioactive mixed waste storage unit, not a disposal unit. Additionally, all wastes will be removed and the unit will be decontaminated at closure. Final closure will be supervised and certified by an independent, qualified professional engineer registered in the State of Ohio.

I-3 Notices Required for Disposal Facilities

Building 23 is not a disposal facility; therefore, Subsection I-3 is not applicable. Sections I-4 (Closure Cost Estimate), I-5 (Financial Assurance Mechanism for Closure), I-6 (Post-Closure Cost Estimate). I-7 (Financial Assurance Mechanism for Post-Closure), I-8 (Liability Requirements), I-9 State Financial Mechanism, do not apply, because the Miamisburg Environmental Management Project is an entity of the U.S. federal government and is exempt from these requirements in accordance with OAC 3745-55-40(C).

TABLE I-2--SUMMARY OF WASTES WHICH HISTORICALLY BEEN MANAGED AT BUILDING 23

HAZARDOUS WASTE CONSTITUENTS	MAXIMUM INVENTORY (LB)	POTENTIAL WASTE CODES[A]
Waste Lead Metal Solids LLW & TRU	12,263	D008
Waste Absorbed Corrosive TRU (Nitric Acid)	2,208	D001, D002
Waste Mercury Metal Liquid	73	D009
Scintillation Vials Xylene, Pseudocumene, 1,4-Dioxane, Toluene (Based on 8 lb/gal)	84,920	D001, F003, F005
Waste Oils: Liquid	51,600	D001, F002
Beryllium Metal Solid	3	P015
Silver - 110M	0	D011
Antimony - 12S Solid	0	C
Thorium Nitrate Solid	5.75	D011
Uranyl Nitrate Solid	0.5	D001
Thorin (1-(0-Arseno Phenylazo)-2-Naphthde-3,6-Disulfunic Acid	0.088	D004
Thorium Perchlorate Solid	0.22	D001
Cerous Nitrate Solid	1	D001
Freon T.F. Liquid	2	F001
Naval Jelly (Phosphoric Acid) Liquid	9	D002
Presto Black Rust Retarder (Selenous Acid) Liquid	3	D010
Sodium Peroxide Solid	1	D001, D003
Thallium - 204 Solid	0	C
Octene Liquid	2	D001
Cyclohexane Liquid	1	D001, D056
Metal Polish (Chromium)	2	D007
AB Gamma Polishing Alumina # 3 (Xylene) Liquid	0.375	F003
Ethylene Dichloride Liquid	5	D001
Paint Thinner Liquid (Turpentine)	75	D001
Sulfuric Acid Solution	90	D002

Anisole Liquid	1	D001
Acetic Acid Solution	1	D002
Hypophosphorous Acid Solution	1	D002
Solder Flux (Zinc Chloride) Liquid	1	D002
Octane (Absorbed)	286	-D001
Gold Cyanide Solution	240	D003, F007
Barium Nitrate Solid	5	D001, D005
Calcium Nitrate Solid	0.15	D001
PCB/Kerosene (Hydraulic Press Rinse) Liquid	3,740	D001
Total	155,547.383	

[a] Potential waste numbers are those RCRA waste codes that may apply if the anticipated constituent is determined to be present by quantitative analysis or the regulatory criteria are met. For some waste streams (shop towels, plating wastewater sludges), the waste number is known to apply based on process knowledge.

FIGURE I-1 PHOTOGRAPH OF BUILDING 23 FRONT VIEW (INDEX NUMBER 971904)

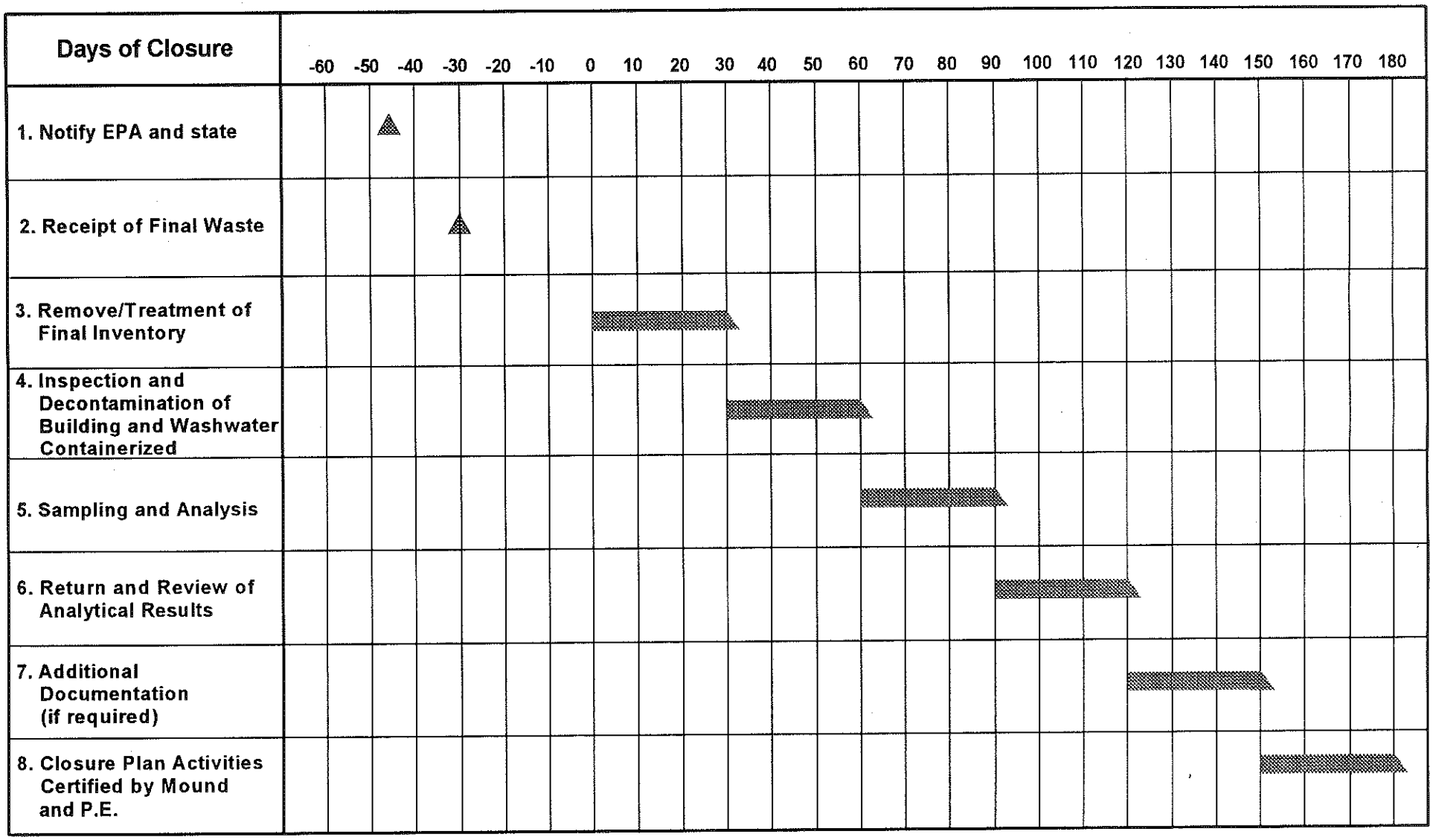


FIGURE I-2 CLOSURE SCHEDULE FOR BUILDING 23

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

SECTION J

CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS

Prepared By
BWXT of Ohio, Inc.
For the U.S. DOE-Miamisburg Environmental Management Project Office
Modification 004-April 2001 Renewal Submittal

SECTION J
CORRECTIVE ACTION FOR WASTE MANAGEMENT UNITS

J-1 Solid Waste Management Units [OAC 3745-55-011]

More than 100 Solid Waste Management Units (SWMUs) and potential release sites have been identified at Mound through a number of mechanisms, including the following:

- An installation assessment (DOE, 1986).
- A RCRA facility assessment preliminary review and visual site inspection (RFA, 1988).
- Visual site inspections by DOE, U.S. EPA, and Ohio EPA.

Mound, as it was calledat that time, was placed on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) National Priorities List (NPL) on November 21, 1989 (54 *Federal Register* 48184). Pursuant to that status, a CERCLA Section 120 Federal Facility Agreement (FFA) was signed by DOE and EPA on August 6, 1990. This agreement was renegotiated between the OEPA and DOE in 1993. The renegotiated agreement includes the OEPA as a party. Activities covered by this agreement are being conducted through the Environmental Restoration group, which has been established to identify, assess, and remediate environmental contamination associated with release sites that resulted from spills or inadequate management of hazardous substances.

In 1988, EPA conducted the preliminary review (PR) and visual site inspection (VSI) for a "RCRA Facility Assessment for Mound." The inspection was performed as required by the RCRA regulations for facilities seeking RCRA Operating Permits, to identify SWMUs and other areas of concem, to assess their potential for releases of hazardous waste, and to assess the need for further action. The PR included review of files and materials from Ohio EPA offices, data evaluations, and personnel interviews. The VSI (conducted May 3-5, 1988) identified 124 SWMUs.

The 124 SWMU sites that were identified by the VSI have been incorporated into the Mound 2000 process and the CERCLA clean up of the site. As part of the CERCLA clean up a comprehensive evaluation of all the potential release sites has been performed as part of the scoping process. As part of this process, to date, over 440 potential release sites have been evaluated for 1) release or threat of release; 2) identification of regulated units and the regulatory authorities responsible for operation, contaminant release, spill response and closure. These potential release sites will be addressed through the Mound 2000 process (see SubSection J-2a) and under the requirements of the FFA.

J-2 Releases [OAC 3745-55-01]

As discussed in Subsection J-1, the Miamisburg Environmental Management Project is an NPL site currently being investigated and ultimately to be cleaned up under CERCLA, in accordance with the FFA. This agreement dictates the manner in which the Miamisburg Environmental Management Project will address releases and threatened releases of hazardous substances to the environment. Moreover, the FFA specifically provides requirements for actions taken by the Project in response to releases of hazardous wastes. According to Section VII.B. of the FFA:

> "The Parties agree that with respect to releases of hazardous waste develop by this Agreement, RCRA shall be considered an applicable or relevant and appropriate requirement [ARAR] pursuant to Section 121 of CERCLA."

Furthermore, in the same section, the FFA states that:

> "[R]emediation of releases covered by this Agreement shall obviate the need for further corrective action under RCRA."

Finally, relative to the permitting process for hazardous waste activities at the Miamisburg Environmental Management Project, the FFA in Section VII.C. provides that:

> "If a permit is issued to U.S. DOE for on-going hazardous waste management activities at the Site, U.S. EPA shall reference and incorporate any appropriate provisions, including appropriate schedules (and the provision for extension of such schedules), of this Agreement into such permit. The Parties intend that the judicial review of any permit conditions which reference this Agreement shall, to the extent authorized by law, only be reviewed under the provisions of CERCLA."

Relative to real or potential releases of hazardous substances (including hazardous wastes and hazardous constituents) from SWMUs, areas of concern, and other units or areas at the Miamisburg Environmental Management Project, any necessary investigation and remediation will be conducted according to the requirements of the FFA.

In compliance with the CERCLA, the NCP and the FFA, activities conducted under CERCLA will comply with all ARARs including, but not limited to, 40 CFR 264.101 and 264.111 (OAC 3745-55-01), the RCRA provisions for corrective action and closure performance, respectively.

The FFA jurisdiction over hazardous substance investigation and remediation previously discussed includes activities relative to the leach pits at Buildings 1 and 27 and the pyrotechnic waste disposal area. These units (see pp. 9 and 10 of Appendix A of the Operable Unit 9 Work Plan), inactive since 1985, were identified as hazardous waste management units since they received hazardous waste after 1980. These units were identified as SWMUs, however, during the visual site inspection portion of the RCRA Facility Assessment conducted in 1988. Pursuant to their designation as SWMUs needing further investigation, it was determined that the Mound Environmental Restoration Program will include the sites in planned remedial investigation activities and, as necessary, in subsequent remedial actions. As a result, because these units are currently being addressed by the Environmental Restoration Program, which will follow all substantive requirements of RCRA and OAC 3745 as ARARs, no other investigation or cleanup actions are necessary.

J-2a Characterize Releases [OAC 3745-55-01]

More than 400 potential release sites currently identified at the Miamisburg Environmental Management Project will be addressed under the Environmental Restoration Program utilizing the Mound 2000 Strategy. The Mound 2000 Strategy involves the consolidation of the original six Operable Units (OUs) into three OUs. OU2, 5 and 6 were eliminated and OU9 was redefined as an all encompassing sitewide (onsite and offsite) Remedial Investigation/Feasibility Study (RI/FS). Core team members (DOE, USEPA and OEPA) developed this strategy in order to reduce the administration redundancies involved in the preparation of RI/FS and Record of Decision (ROD) documents for OU2, 5, and 6. It is beneficial to maintain OU1 and OU4 due to the completion of OU1 RI/FS documentation and due to OU4 being an offsite removal action. The cumulative environmental effects of onsite and offsite residual contamination will be analyzed and documented within the scope of OU9.

As a dramatic change in the remediation paradigm (i.e., years of RI/FS assessments prior to remedial action), this strategy focuses on the performing actual cleanup activities prior to the issuance of RODs. This removal action strategy is applied in accordance with the National Contingency Plan (NCP) and is consistent with the FFA. The basis for the Mound 2000 Strategy allows for the:

- Integration of the the Miamisburg Environmental Management Project s commercial end user's priorities, building availability, and ease of cleanup into geographic parcels.

- Use of removal action documentation to close out all potential release sites and No Further Action (NFA) sites.

- Use of the "core team" approach in the removal process to expeditiously transition the parcels.

This specific strategy has prioritized over 200 potential release sites and areas of concerns by coordinating with current building transition schedules and evaluating environmental risk. A removal action will be considered for each of these sites consistent with the NCP requirements.

As each activity in the removal action process is performed a determination as to whether continuing on to the next activity is warranted is made. For example, if an area has adequate historic evidence and sampling data that indicates no contamination concerns then no further action is necessary and the removal action would consist of a removal site evaluation (RSE) only. Each significant activity in the removal action process would receive review by the OEPA and USEPA.

Appendix J.1 is a set of flow charts from the Mound 2000 Work Plan that illustrate the Mound 2000 Process.

APPENDIX J.1

THE MOUND 2000 PROCESS

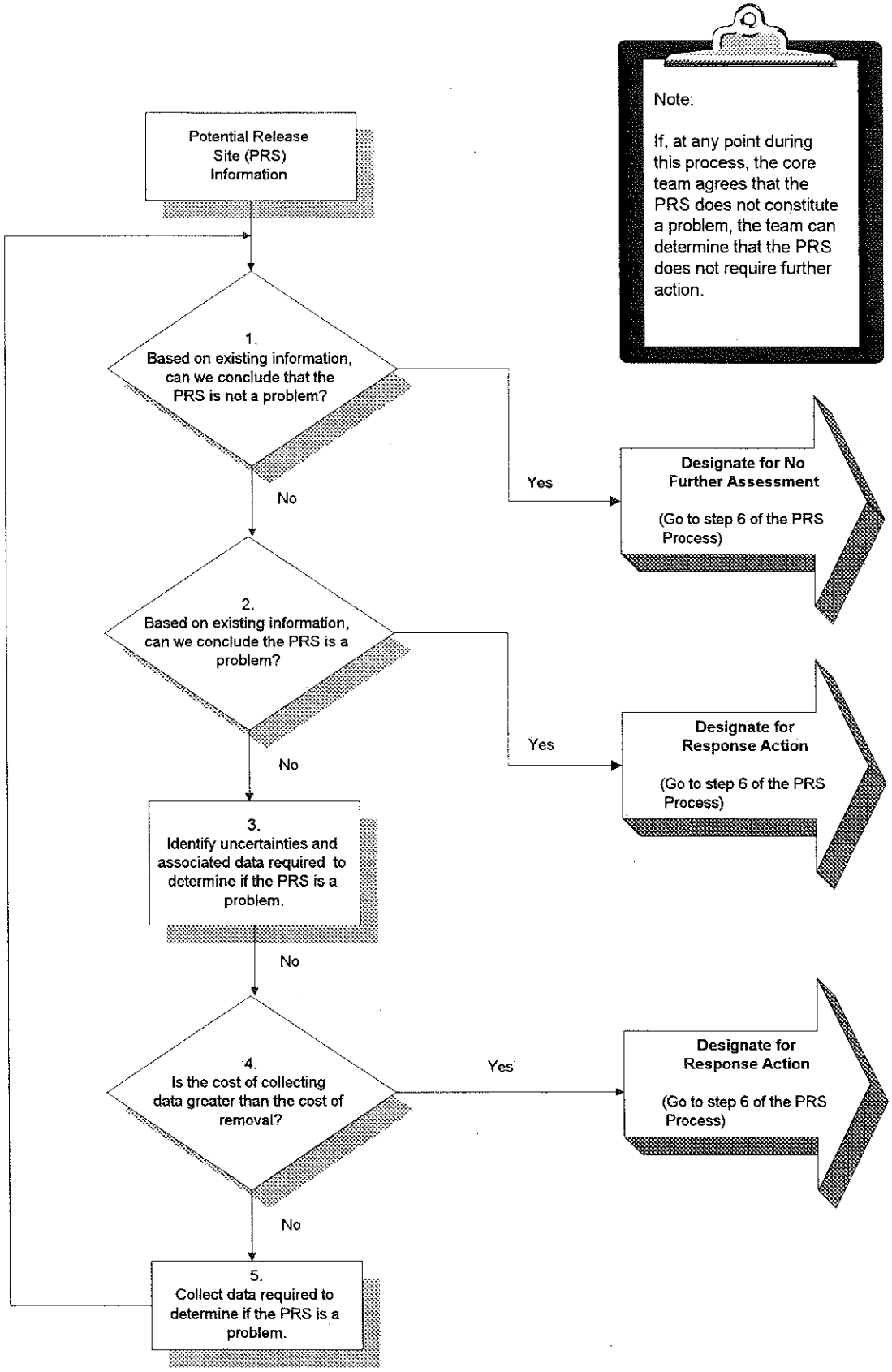


Figure 4.1 The PRS Process

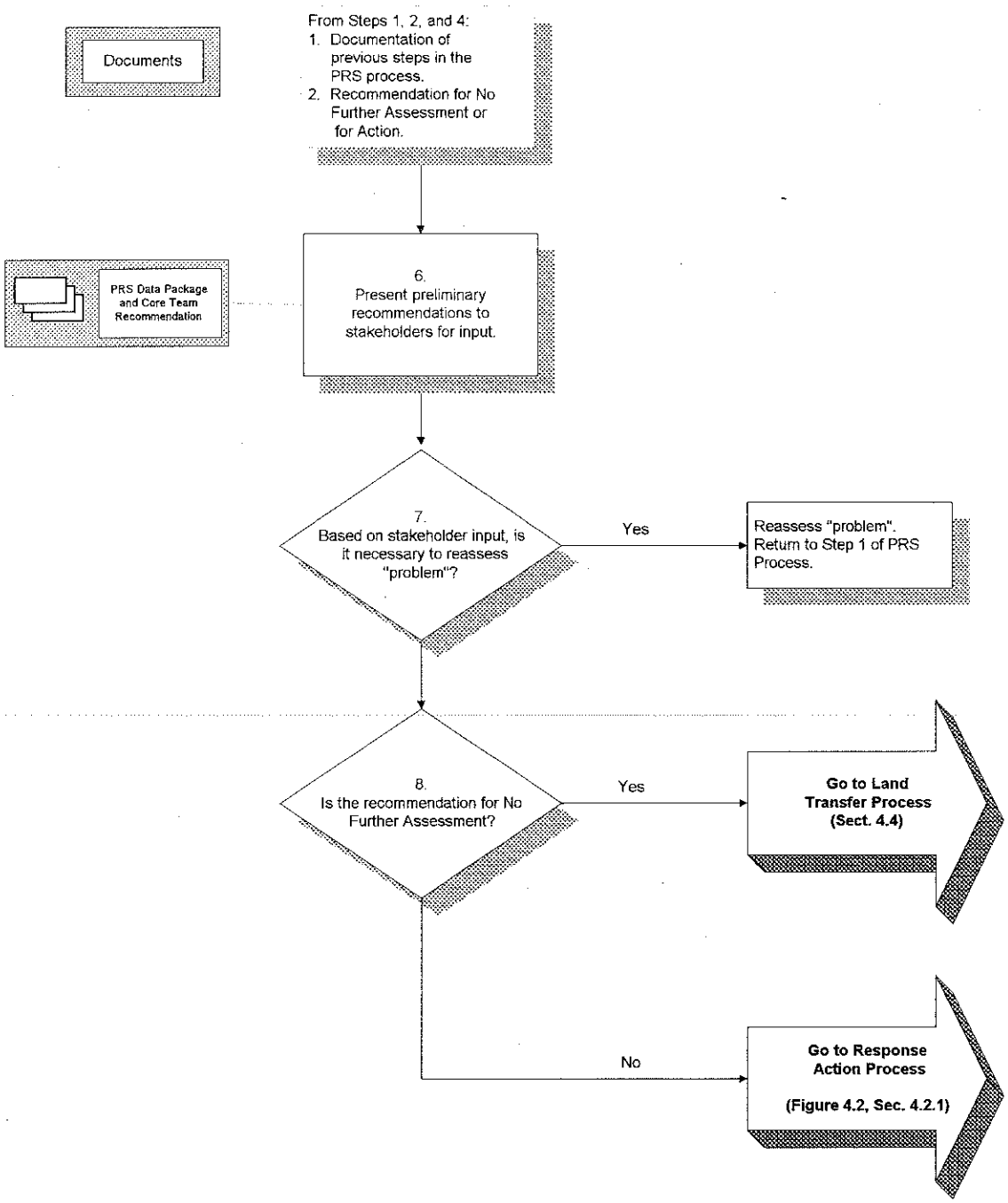


Figure 4.1 The PRS Process (continued)

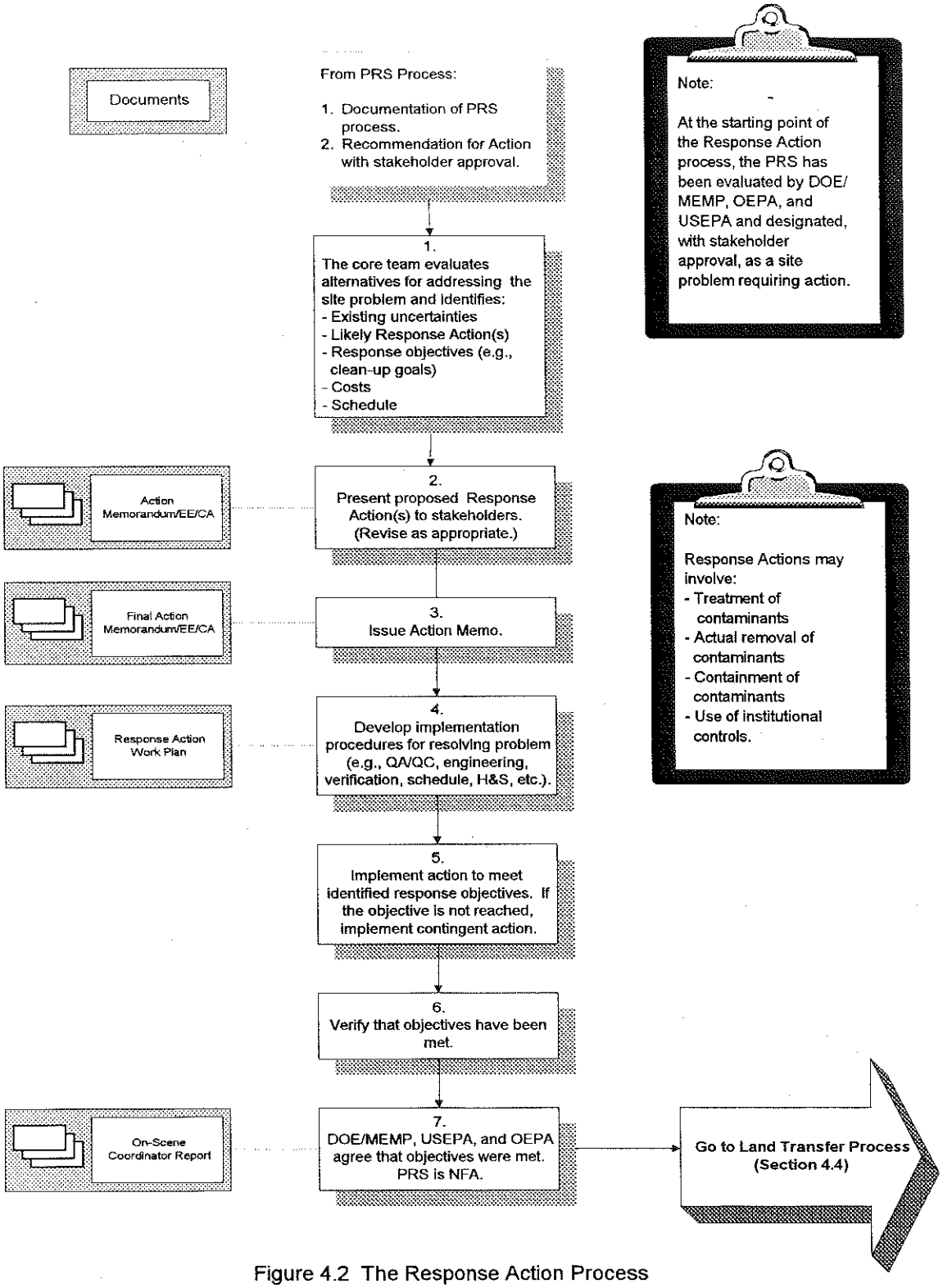


Figure 4.2 The Response Action Process

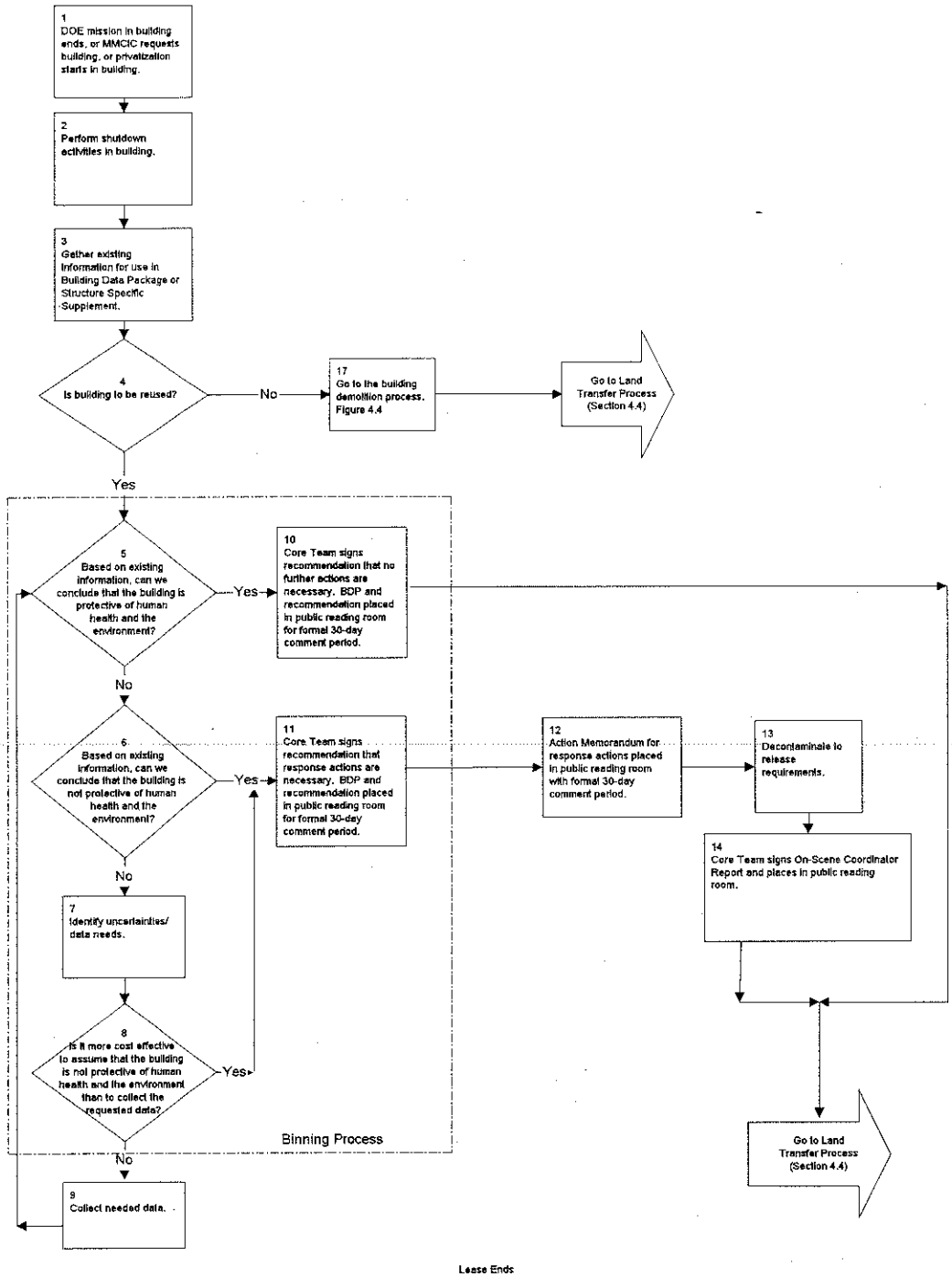
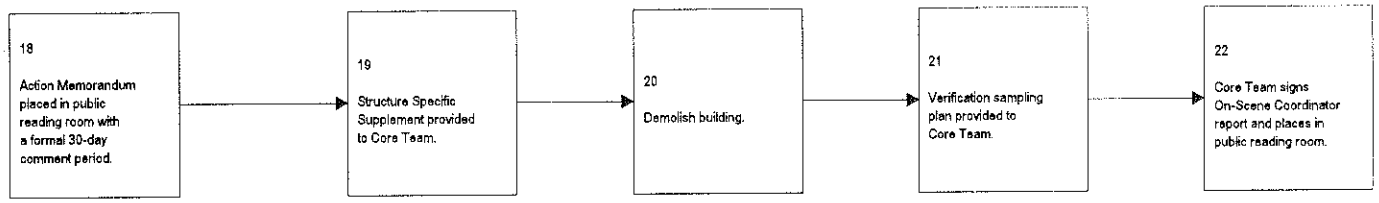


Figure 4.3 Building Disposition Process

For buildings whose environmental condition justifies a removal action according to 40CFR300.415(b)(2)

Demolition = CERCLA Removal Action



For buildings whose environmental condition does not justify a removal action according to 40CFR300.415(b)(2)

Demolition = Construction Project

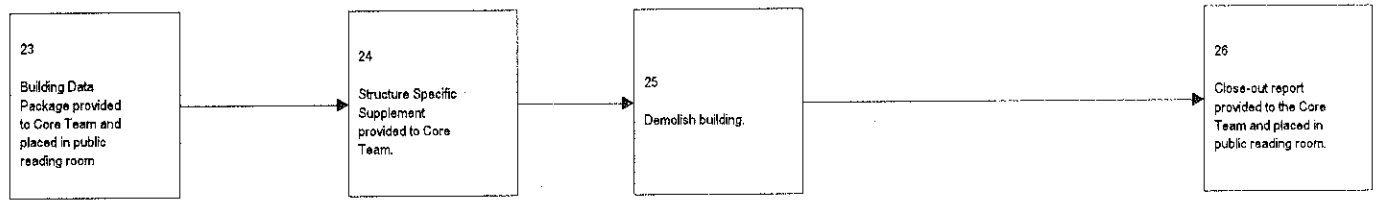


Figure 4.4 Building Demolition Process

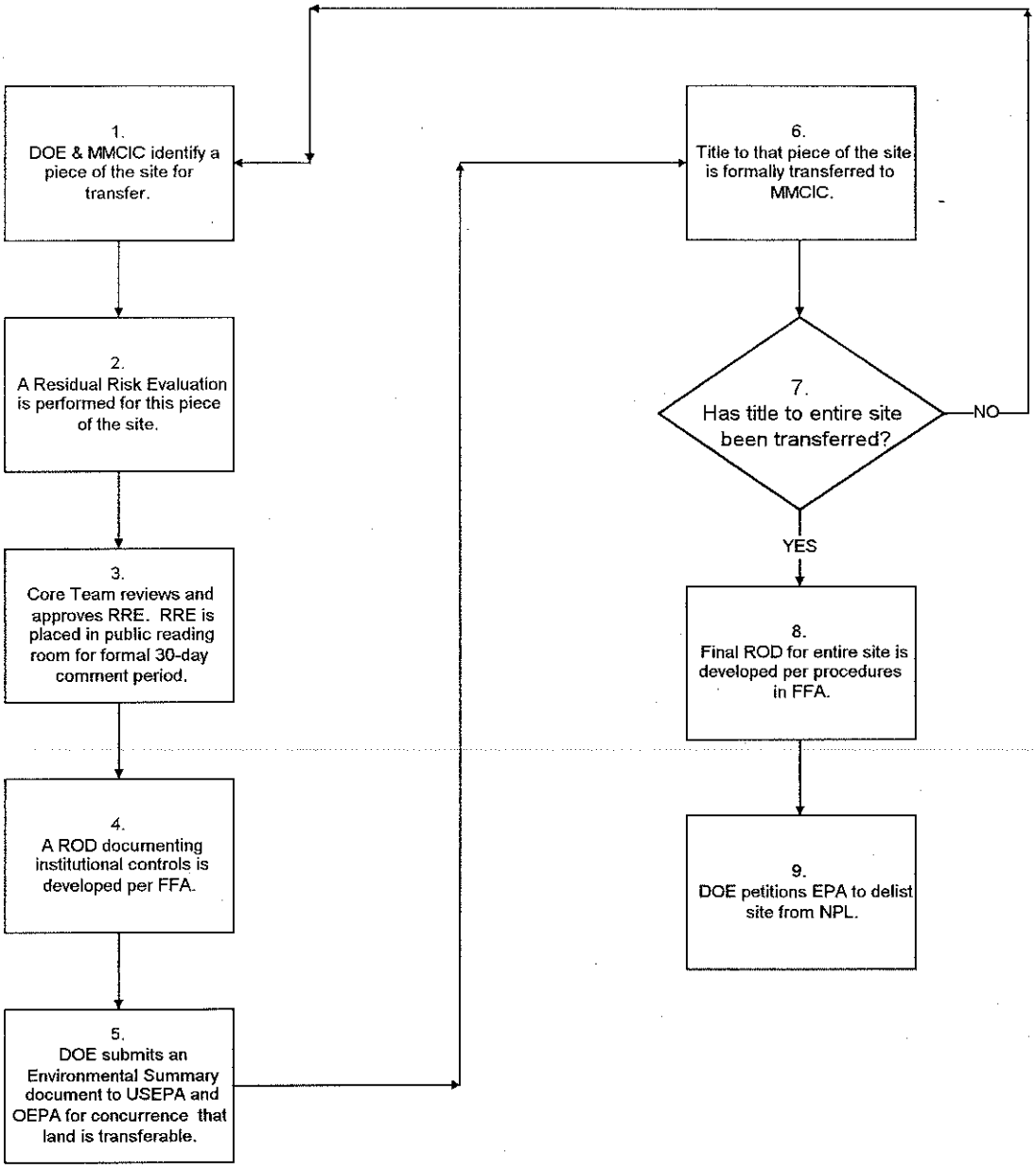


Figure 4.5 The Land Transfer Process

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

SECTION K

OTHER FEDERAL LAWS

Prepared By
BWXT of Ohio, Inc.
For the U.S. DOE-Miamisburg Environmental Management Project Office
Modification 004-April 2001 Renewal Submittal

SECTION K
OTHER FEDERAL LAWS

In accordance with the provisions of OAC 3745-50-44(A)(20) (40 CFR 270.3), the Miamisburg Environmental Management Project notes that it is affected by the following legislative acts:

- National Historic Preservation Act of 1966
- Endangered Species Act
- Fish and Wildlife Coordination Act

However, no special permit conditions are necessary with respect to these laws.

The Miamisburg Environmental Management Project is in compliance with its obligations as a Federal Facility, and prepares National Environmental Policy Act (NEPA) documentation for proposed actions that have the potential to significantly affect the quality of human health or the environment. In compliance with the NEPA process, Mound ensures compliance with these acts.

Because of its location, the Miamisburg Environmental Management Project is not affected by the following legislative acts:

- Wild and Scenic Rivers Act
- Coastal Zone Management Act

The site was placed on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) National Priorities List (NPL) on November 21, 1989 (54 *Federal Register* 48184). Pursuant to its NPL status, the U.S. Department of Defense (DOE) signed a CERCLA Section 120 Federal Facility Agreement (FFA) with the U.S. Environmental Protection Agency (EPA) on August 6, 1990. This agreement was renegotiated between the DOE and the Ohio EPA, Ohio Environmental Protection Agency (OEPA) in 1993.

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO
USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

SECTION L

PART B CERTIFICATION

Prepared By
BWXT of Ohio, Inc.
For the U.S. DOE-Miamisburg Environmental Management Project Office
Modification 004-April 2001 Renewal Submittal

SECTION L

PART B CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

U. S. Department of Energy
Miamisburg Environmental Management Project
P. 0. Box 66
Miamisburg, Ohio 45342
EPA ID No. OH6890008984
Ohio ID NO. 05-57-0677

Owner

U. S. Department of Energy
Miamisburg Environmental Management Project
P. 0. Box 66
Miamisburg, Ohio 45343-0066

Richard Provencher
Director, DOE-MEMP

Operator

BWXT of Ohio, Inc.
P. 0. Box 3030
Miamisburg, Ohio 45343-3030

John W Krueger
Deputy Manager, BWXTO of Ohio, Inc.

RCRA PART B PERMIT APPLICATION
for the
U.S. DEPARTMENT OF ENERGY
MIAMISBURG ENVIRONMENTAL MANAGEMENT PROJECT
MIAMISBURG, OHIO

USEPA ID No. OH6890008984
Ohio ID No. 05-57-0677

Part 2
Facility Drawings

Prepared By
BWXT of Ohio, Inc.
For the U.S. DOE
Miamisburg Environmental Management Project Office
Modification 004-April 2001 Renewal Submittal