

4408

**OHIO EPA PERMIT NO. 11O00004*DD FACILITY
NAME: US DEPARTMENT OF ENERGY FERNALD
ENVIRONMENTAL MANAGEMENT PROJECT**

05/20/93

**OEPA/DOE-FN
13
LETTER**



State of Ohio Environmental Protection Agency

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AR 4408

George V. Voinovich
Governor

Donald R. Schregardus
Director

May 20, 1993

Re: Ohio EPA Permit No. 11O00004*DD
Facility Name: U.S. Department of Energy,
Fernald Environmental Management Project

U.S. Department of Energy
Fernald Environmental Management Project
P.O. Box 398705
Fernald, OH 45235

Ladies and Gentlemen:

Transmitted herewith is one copy of final Modification to the above-referenced permit. Ohio EPA has made the following changes:

<u>Page</u>	<u>Correction</u>
M6	Deleted Dissolved Hexavalent Chromium limits and monitoring requirements, and deleted pH monitoring requirement (paragraph 2).
M10a	Added language pertaining to radioactive and/or hazardous waste in sludge.

Please refer to the attached revised modification. This modification is effective on May 20, 1993.

If you have any questions, please contact the Ohio EPA Southwest District Office.

Robert E. Phelps, P.E., Manager
Permit Administration Section
Division of Water Pollution Control

REP/mtk

Enclosure

CERTIFIED MAIL

cc: Tim Henry, U.S. EPA Region V
Southwest District Office
File

Ohio Environmental Protection Agency
Modification of National Pollutant Discharge
Elimination System (NPDES) Permit

4408

Issue Date: April 5, 1993

Existing Permit No.: 1IO00004*CD

Effective Date: May 20, 1993

Application No.: OH0009580

Entity Name: U.S. Department of Energy, Fernald Environmental Management Project

Facility Location: 7400 Willey Road, Fernald, Ohio, Hamilton County

In accordance with Rule 3745-33-06 of the Ohio Administrative Code (formerly Ohio EPA Regulation EP-31-06), the above referenced NPDES Permit is hereby modified as follows:

<u>Page</u>	<u>Revision</u>
*M1	Changed name of facility.
M2	1) Deleted monitoring and limits for Cyanide, Lead and Silver. *2) Changed sample type for Dissolved Hexavalent Chromium from 24-hour composite to grab. *3) Modified paragraph 2.
*M3	Changed sample type for Dissolved Hexavalent Chromium from 24-hour composite to grab.
*M4	Deleted this page.
M5	1) Deleted limits and revise monitoring requirements for Fluoride, Chromium, Copper and Nickel. *2) Changed sample type for Fecal Coliform from 24-hour composite to grab. 3) Modified paragraph 2.
M6	*1) Removed Dissolved Hexavalent Chromium limits and monitoring requirements. 2) Removed paragraph 2.
*M8	Deleted this page.
MM9	*1) Changed sample type for Dissolved Hexavalent Chromium from 24-hour composite to grab. 2) Modified paragraph 2.
*M10	Deleted this page.
*M10A	Added sludge monitoring requirements.
*M11	Deleted this page.
*M12	1) Deleted sampling stations 1IO00004604 and 1IO00004606 along with location descriptions. 2) Deleted paragraph D. 3) Added sludge sampling station 1IO00004589.

* Denotes Agency-Initiated Modificaiton

Attached are the modified pages to the NPDES permit.

All terms and conditions of the existing permit not recommended for modification by this document will remain in effect. Any modified term or condition contained in this modification shall supersede, on the date this modification is effective, the existing respective term or condition of the permit.

When the modification is effective, the Ohio EPA permit number will be changed to 1IO00004*DD. The application number will remain OH0009580.



Donald R. Schregardus
Director

Part I, A. - FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from the following outfall: 1IO00004001. See Part II, OTHER REQUIREMENTS, for location of effluent sampling.

EFFLUENT CHARACTERISTIC			DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
Reporting Code	Units	Parameter	Concentration Specified Units		Loading* kg/day		Meas. Frequency	Sample Type
			30 Day	Daily	30 Day	Daily		
00300	mg/l	Dissolved Oxygen	-	(5.0 Min)	-	-	1/Week	Grab
00530	mg/l	Residue, Total Nonfilterable	30	45	99	149	1/Week	24 Hr. Composite
00550	mg/l	Oil and Grease, Total	15	15	50	50	1/Week	Grab
00610	mg/l	Nitrogen, Ammonia (NH ₃)	-	-	-	-	1/Week	24 Hr. Composite
00620	mg/l	Nitrogen, Nitrate (NO ₃)	-	-	-	-	1/Week	24 Hr. Composite
00720	DELETED							
00951	mg/l	Fluoride, Total (F)	-	-	-	-	1/Week	24 Hr. Composite
01034	µg/l	Chromium, Total (Cr)	-	-	-	-	1/Week	24 Hr. Composite
01042	µg/l	Copper, Total (Cu)	23	94	0.077	0.310	1/Week	24 Hr. Composite
01051	DELETED							
01067	µg/l	Nickel, Total (Ni)	-	-	-	-	1/Week	24 Hr. Composite
01077	DELETED							
01220	µg/l	Chromium, Dissolved Hexavalent	-	-	-	-	1/Week	Grab
50050	MGD	Flow Rate	-	-	-	-	Daily	24 Hr. Total
80082	mg/l	CBOD ₅	20	30	66	99	1/Week	24 Hr. Composite

* Loadings are based on 0.872 MGD.

- The pH (Reporting Codes 00402 (minimum) and 00401 (maximum)) shall not be less than 6.5 S.U. nor greater than 9.0 S.U. and shall be monitored continuously and the critical values reported. See Part II, Item E.
- Samples taken in compliance with monitoring requirements specified above shall be taken at sampling stations described in Part II, OTHER REQUIREMENTS.

Part I, A. - FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from the following outfall: 1IO00004002. See Part II, OTHER REQUIREMENTS, for location of effluent sampling.

EFFLUENT CHARACTERISTIC			DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
Reporting Code	Units	Parameter	Concentration Specified Units		Loading kg/day		Meas. Frequency	Sample Type
			30 Day	Daily	30 Day	Daily		
00530	mg/l	Residue, Total Nonfilterable	-	100	-	-	Daily	Composite
00550	mg/l	Oil and Grease, Total	-	15	-	-	Daily	Grab
00610	mg/l	Nitrogen, Ammonia (NH ₃)	-	-	-	-	Daily	Composite
00620	mg/l	Nitrogen, Nitrate (NO ₃)	-	-	-	-	Daily	Composite
00951	mg/l	Fluoride, Total (F)	-	-	-	-	Daily	Composite
01034	µg/l	Chromium, Total (Cr)	-	3986	-	-	Daily	Composite
01042	µg/l	Copper, Total (Cu)	-	45	-	-	Daily	Composite
01067	µg/l	Nickel, Total (Ni)	-	3137	-	-	Daily	Composite
01077	µg/l	Silver, Total (Ag)	-	11.6	-	-	Daily	Composite
01220	µg/l	Chromium, Dissolved Hexavalent	-	19	-	-	Daily	Grab
50050	MGD	Flow Rate	-	-	-	-	Daily	24 Hr. Total Estimate

- When discharging.

** Four grab samples shall be composited at varying times throughout the discharge event.

This discharge shall consist only of storm water.

2. The pH (Reporting Code 00400) shall not be less than 6.5 S.U. nor greater than 9.0 S.U. and shall be monitored daily by grab sample.*
3. Samples taken in compliance with monitoring requirements specified above shall be taken at sampling stations described in Part II, OTHER REQUIREMENTS.

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Ohio EPA Permit No. 11000004*DD

Part I, A. - INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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Part I, A. - FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from the following outfall: 1IO00004601. See Part II, **OTHER REQUIREMENTS**, for location of effluent sampling.

<u>EFFLUENT CHARACTERISTIC</u>			<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
Reporting Code	Units	Parameter	Concentration Specified Units		Loading* kg/day		Meas. Frequency	Sample Type
			30 Day	Daily	30 Day	Daily		
00310	mg/l	Biochemical Oxygen Demand, 5 Day	20	40	9.5	19	1/Week	24 Hr. Composite
00530	mg/l	Residue, Total Nonfilterable	20	40	9.5	19	1/Week	24 Hr. Composite
00610	mg/l	Nitrogen, Ammonia (NH ₃)	-	-	-	-	1/Week	24 Hr. Composite
00951	mg/l	Fluoride, Total (F)	-	-	-	-	1/Month	24 Hr. Composite
01034	µg/l	Chromium, Total (Cr)	-	-	-	-	1/Month	24 Hr. Composite
01042	µg/l	Copper, Total (Cu)	-	-	-	-	1/Month	24 Hr. Composite
01067	µg/l	Nickel, Total (Ni)	-	-	-	-	1/Month	24 Hr. Composite
31616	#/100ml	Fecal Coliform (Summer Only)	1000	2000	-	-	1/Week	Grab
50050	MGD	Flow Rate	-	-	-	-	Daily	24 Hr. Total

* Loadings are based on a flow rate of 0.125 MGD.

2. The pH (Reporting Code 00400) shall be monitored daily by grab sample.
3. Samples taken in compliance with monitoring requirements specified above shall be taken at sampling stations described in Part II, **OTHER REQUIREMENTS**.

Part I, A. - FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from the following outfall: 1IO00004602. See Part II, **OTHER REQUIREMENTS**, for location of effluent sampling.

<u>EFFLUENT CHARACTERISTIC</u>			<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
Reporting Code	Units	Parameter	Concentration Specified Units		Loading* kg/day		Meas. Frequency	Sample Type
			30 Day	Daily	30 Day	Daily		
01034	µg/l	Chromium, Total (Cr)	41	54	0.010	0.013	1/Week	24 Hr. Composite
01042	µg/l	Copper, Total (Cu)	66	111	0.016	0.027	1/Week	24 Hr. Composite
01067	µg/l	Nickel, Total (Ni)	91	165	0.022	0.040	1/Week	24 Hr. Composite
01220	DELETED							
50050	MGD	Flow Rate	-	-	-	-	Daily	24 Hr. Total

- Loadings are based on 0.064 MGD.

2. DELETED

3. Samples taken in compliance with monitoring requirements specified above shall be taken at sampling stations described in Part II, **OTHER REQUIREMENTS**.

Part I, A. - FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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Part I, A. - FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from the following outfall: 11O00004605. See Part II, OTHER REQUIREMENTS, for location of effluent sampling.

EFFLUENT CHARACTERISTIC			DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
Reporting Code	Units	Parameter	Concentration Specified Units		Loading* kg/day		Meas. Frequency	Sample Type
			30 Day	Daily	30 Day	Daily		
00310	mg/l	Biochemical Oxygen Demand, 5 Day	30	45	26	38	1/Week	24 Hr. Composite
00530	mg/l	Residue, Total Nonfilterable	30	45	26	38	1/Week	24 Hr. Composite
00610	mg/l	Nitrogen, Ammonia (NH ₃)	-	-	-	-	1/Week	24 hr. Composite
00620	mg/l	Nitrogen, Nitrate (NO ₃)	72.7	145	62	124	1/Week	24 Hr. Composite
00951	DELETED							
01034	μg/l	Chromium, Total (Cr)	12	27	0.0101	0.0226	1/Week	24 Hr. Composite
01042	μg/l	Copper, Total (Cu)	45	90	0.0387	0.0770	1/Week	24 Hr. Composite
01067	μg/l	Nickel, Total (Ni)	29	42	0.0251	0.0361	1/Week	24 Hr. Composite
01220	μg/l	Chromium, Dissolved Hexavalent	-	-	-	-	1/Week	Grab
50050	MGD	Flow Rate	-	-	-	-	Daily	24 Hr. Total

* Loadings are based on 0.2252 MGD.

2. The pH (Reporting Code 00400) shall be monitored daily by grab sample.
3. Samples taken in compliance with monitoring requirements specified above shall be taken at sampling stations described in Part II, OTHER REQUIREMENTS.

Part I, A. - FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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Part I, B. - ADDITIONAL MONITORING REQUIREMENTS

1. Sludge. The permittee shall monitor the treatment works' final sludge at Station Number 1IO00004589, and report to the Ohio EPA in accordance with the following table. See Part II, OTHER REQUIREMENTS, for location of sludge sampling.

CHARACTERISTIC Reporting Code			MONITORING REQUIREMENTS*	
Units**	Parameter	Measurement Frequency	Sample Type	
01028	mg/kg	Cadmium	1/Year	Grab
01029	mg/kg	Chromium	1/Year	Grab
01043	mg/kg	Copper	1/Year	Grab
01052	mg/kg	Lead	1/Year	Grab
01068	mg/kg	Nickel	1/Year	Grab
01093	mg/kg	Zinc	1/Year	Grab
70316	Dry Tons	Sludge Weight***	1/Month	Total
71921	mg/kg	Mercury	1/Year	Grab

If the permittee can demonstrate that the 1IO00004601 WWTP sludge is a low-level radioactive waste as defined under the Atomic Energy Act or a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA), then this monitoring table and sampling station description may be removed by the permittee submitting a permit modification request.

* When sludge is removed from the wastewater treatment facility and disposed of after plant 8 dewatering. If no sludge is removed during month, leave data area blank and enter "No sludge removed during month" in the "Additional Remarks" section (signature still required).

** Units of mg/kg on dry weight basis.

*** Calculated total for the sampling period.

Part I.C. - SCHEDULE OF COMPLIANCE

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Part II - OTHER REQUIREMENTS

A. Description of the location of the required sampling stations are as follows:

<u>Sampling Station</u>	<u>Description of Location</u>
1IO00004001	Manhole 175, final effluent before Great Miami River.
1IO00004002	Spillway from stormwater retention basin to Paddy's Run.
1IO00004589	Sewage treatment plant sludge disposed of through Plant 8 sump operations.
1IO00004601	Sewage treatment plant effluent, after disinfection, prior to mixing with other wastestreams discharged via manhole 175 and final outfall (001).
1IO00004602	General sump, effluent directed to manhole 175 then discharged via final outfall (001).
1IO00004603	Clearwell effluent pumped through 605, manhole 175 and discharged via final outfall (001).
1IO00004604 DELETED	
1IO00004605	Effluent from biodenitrification after settling and/or biological treatment discharged via manhole 175 and final outfall (001).
1IO00004606 DELETED	

- B. In the event that the permittee's operation requires the use of cooling water treatment additives, written permission must be obtained from the Ohio Environmental Protection Agency. The permittee shall demonstrate that the use of the additive in the concentrations expected will not be harmful or inimical to aquatic life as determined by acute static bioassays.
- C. Permit limitations may be revised in order to meet water quality standards after a stream use determination and waste load allocation are completed and approved. This permit may be modified, or alternatively, revoked and reissued, to comply with any applicable water quality effluent limitations.
- D. DELETED.