G-000-709.42

2514

QUARTERLY REPORT LIQUID RADIATION DISCHARGES JULY THROUGH SEPTEMBER, 1991

XX/XX/XX

77
ENCLOSURE

[redacted]

2514

ENCLOSURE 2

QUARTERLY REPORT
LIQUID RADIATION DISCHARGES
JULY THROUGH SEPTEMBER, 1991

1

2514

QUARTERLY REPORT
LIQUID RADIATION DISCHARGES
JULY THROUGH SEPTEMBER, 1991

FEDERAL FACILITIES COMPLIANCE AGREEMENT
RADIATION DISCHARGE INFORMATION SECTION - ITEM A.1

U. S. DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

LIQUID DISCHARGE MONITORING DATA IN RESPONSE TO ITEM A.1. OF THE RADIATION DISCHARGE INFORMATION SECTION FEDERAL FACILITY COMPLIANCE AGREEMENT

Introduction

This report is submitted in response to Item A.1. of the Radiation Discharge Information Section of the Federal Facility Compliance Agreement (FFCA), specifically, the U.S. EPA has required the following action:

> "Maintain continuous liquid discharge sample collectors at all discharge points, monitor and report results quarterly to U.S. EPA, Ohio EPA and Ohio Department of Public Health."

Attached are Monthly Discharge Monitoring Reports and Effluent Radiation Reports (except Discharge 602) for Discharges 001, 002, 601 through 606 for the period July through September, 1991. These reports detail the monthly operation of each of the discharge points. Also included is radionuclide monthly/quarterly composite sample data for Discharge 001 for 1990 and 1991. Analysis of some composite samples has not been completed; results will be provided in a subsequent quarterly report.

Discharge 001 - Total Discharge

This discharge consists of the combined treated sanitary and industrial wastewaters, and stormwater. The industrial wastewaters are from the chemical and metallurgical refining of uranium. The principal product of the FEMP was uranium metal. The monitoring point for this discharge is Manhole 175. The treated effluents are discharged to the Great Miami River via Manhole 175.

Discharge 001 is continuously monitored for flow and pH. Discharges are analyzed daily for alpha and beta radiation, and uranium. The alpha, beta, and uranium data are tabulated, converted to activity units and reported to the U.S. EPA, Ohio EPA, and the Ohio Department of Public Health. Copies of these reports are included in this submittal. In addition, at an average frequency of once every 7 days, this discharge is also analyzed for oil and grease, total suspended solids, fluorides, nitrate-nitrogen, ammonia-nitrogen, dissolved oxygen, CBOD, cyanide, copper, hexavalent and total chromium, lead, silver, and nickel. These data are tabulated and reported monthly to the Ohio EPA, as required by the NPDES permit. Copies of these reports are included in this submittal. Weekly grab samples are analyzed for thorium-234. These results have been tabulated on a monthly basis and are included in this submittal. The daily samples are composited and analyzed monthly for neptunium-237, plutonium-238, plutonium-239/240, technetium-99, potassium-40, actinium-227, lead-210, thorium-228, thorium-230, thorium-232, uranium-233, uranium-234, uranium-235, uranium-236, uranium-238, radium-226, and radium-228. The daily samples are composited and analyzed quarterly for cesium-137, ruthenium-106, and strontium-90. Available results have been tabulated, converted to activity units and are included in this submittal.

Discharge 002 - Stormwater Retention Basin Spillway

The Stormwater Retention Basin is designed to contain a 10-year, 24-hour precipitation event. Occasionally, the Stormwater Retention Basin does overflow into a ditch leading to Paddy's Run.

During these infrequent overflows to the ditch, Discharge 002 is monitored daily for flow and pH. Each overflow is also analyzed daily for alpha and beta radiation and uranium. The alpha, beta, and uranium data have been tabulated, converted to activity units and included in this submittal. Discharges from 002 are also analyzed daily for oil and grease, total suspended solids, hexavalent and total chromium, copper, nickel, silver, ammonia-nitrogen, nitrate-nitrogen and fluorides. These data are tabulated and reported monthly to the Ohio EPA, as required by the NPDES permit. Copies of these reports are included in this submittal.

Discharge 601 - Sanitary Treatment Plant

Sanitary sewage is generated at the restrooms, locker rooms, and laundry. The Sewage Treatment Plant is a secondary-type facility (trickling filter). The treated effluent is discharged to Manhole 175.

Discharge 601 is continuously monitored for flow and pH. Discharges are analyzed daily for uranium. The uranium data has been tabulated, converted to activity units and included in this submittal. In addition, at an average frequency of once every 7 days, this discharge is also analyzed for total suspended solids, BOD, fecal coliform bacteria (May through October), fluorides, total chromium, copper, nickel, and ammonia-nitrogen. These data are tabulated and reported monthly to the Ohio EPA, as required by the NPDES permit. Copies of these reports are included in this submittal.

Discharge 602 - General Sump

The General Sump is capable of receiving three types of industrial wastewaters. First are untreated wastewaters from the Refinery. These are raffinate and evaporator condensate, which are combined, neutralized, and transferred to Plant 8 for filtration. The filtrate is returned to the General Sump and pumped to the BDN facility for further treatment. Uranium and pH are analyzed for process control purposes. These data are not reported to any outside organization.

Second are the effluents from the pretreatment facilities serving the refinery, recovery, and metals operations. These are accumulated and pumped to the BDN facility for further treatment. Uranium, copper, and pH are analyzed for process control purposes. These data are not reported to any outside organization.

Third are the potable water production and powerhouse waste streams. These are combined and decanted. The supernate is grab-sampled and discharged on a batch basis to Manhole 175. The sludge is pumped to storage lagoons. At an average frequency of once every 7 days, this discharge is analyzed for pH, hexavalent and total chromium, copper, and nickel. These data, along with daily flows are tabulated and reported monthly to the Ohio EPA, as required by the NPDES permit. Copies of these reports are included in this submittal. Discharge 602 is considered to be uncontaminated; accordingly, radionuclides are not analyzed.

Discharge 603 - Clearwell

This discharge consists of the collected stormwater runoff from the waste pit area. This effluent is pumped to the biosurge lagoon as necessary to control the water level. Approval of OEPA would be required prior to any discharges to Manhole 175. Such discharges would be continuously monitored for flow and analyzed daily for pH, alpha and beta radiation, and uranium.

Discharge 604 - Storm Sewer Lift Station

This discharge consists of the stormwater runoff from the production area. It is monitored at Manhole 34, from which the stormwater is pumped to Manhole 175. If the pumps are surcharged, the excess overflows to the Stormwater Retention Basin.

Discharge 604 is continuously monitored for flow and pH. Discharges are also analyzed daily for uranium. The uranium data are tabulated, converted to activity units, and included in this submittal. In addition, at an average frequency of once every 7 days, this discharge is also analyzed for total suspended solids, oil and grease, fluorides, and nitrate-nitrogen. These data are tabulated and reported monthly to the Ohio EPA, as required by the NPDES permit. Copies of these reports are included in this submittal.

Discharge 605 - Biodenitrification (BDN) Effluent Treatment

This discharge consists of denitrified industrial wastewaters. These wastewaters originate primarily from the pretreatment facilities serving the recovery, refinery, and metals plants. Denitrified effluent from the BDN towers undergoes biological treatment in the BDN Effluent Treatment System before being discharged to Manhole 175.

Discharge 605 is continuously monitored for flow and pH. Discharges are also analyzed daily for alpha and beta radiation and uranium. The alpha, beta and uranium data are tabulated, converted to activity units and are included in this submittal. In addition, at an average frequency of once every 7 days, this discharge is also analyzed for total suspended solids, BOD, nitrate-nitrogen, fluorides, hexavalent and total chromium, copper, nickel, and ammonia-nitrogen. These data are tabulated and reported monthly to the Ohio EPA, as required by the NPDES permit. Copies of these reports are included in this submittal.

Discharge 606 - Stormwater Retention Basin

This discharge consists of the collected stormwater runoff from the employee parking areas and excess stormwater from the production area. It is pumped to Manhole 175.

Discharge 606 is continuously monitored for flow and pH (when it is pumped). It is also analyzed daily for total suspended solids and oil and grease (when it is pumped). These data are tabulated and reported monthly to the Ohio EPA, as required by the NPDES permit. Copies of these reports are included in this submittal.

MH 175 - Thorium 234

Third Quarter - 1991

JULY

Day	Flow (MGD)	Th-234 pCi/l *
5	0.294	<0.41
12	1.056	<0.37
19	1.100	<0.36
26	0.313	<0.41
Total	2.763	<1.55
Avg	0.691	<0.37
Max	1.100	<0.41
Min	0.294	<0.36

AUGUST

Day	Flow (MGD)	Th-234 pCi/l *
2	0.379	<0.33
9	0.714	20
16	0.442	100
23	0.876	13
30	0.466	33
Total	2.877	166.33
Avg	0.575	29.67
Max	0.876	100
Min	0.379	<0.33

SEPTEMBER

Day	Flow (MGD)	Th-234 pCi/l *
6	1.132	<0.41
13	0.428	30
20	0.362	<0.38
27	0.410	<0.38
Total	2.332	<31.17
Avg	0.583	<5.83
Max	1.132	30
Min	0.362	<0.38

* Average values presented are flow-weighted.

Feed Materials Production Center
U.S. Department of Energy
7400 Willey Road, P.O.Box 398704
Cincinnati, Ohio 45239 Hamilton
9002 M 9501 900212

2514

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Manhole 175 (Effluent to Great Miami River)
11000004001 Total Discharge

Monthly/Quarterly Composites

Radionuclide	Jan (pCi/l)	Feb (pCi/l)	Mar (pCi/l)	Apr (pCi/l)	May (pCi/l)	Jun (pCi/l)	Jul (pCi/l)	Aug (pCi/l)	Sep (pCi/l)	Oct (pCi/l)	Nov (pCi/l)	Dec (pCi/l)	MIN. (pCi/l)	MAX. (pCi/l)	AVG.* (pCi/l)	DOE DCG	% DOE DCG #
Ac-227	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.0	10	< 10.0
K-40	276	< 170	< 130	151	240	115	< 130	< 180	< 170	< 130	< 170	< 120	115	276	< 163	7000	< 2.3
Np-237	< 0.07	< 0.18	< 1.0	< 0.29	< 0.06	< 0.14	< 0.14	< 0.13	< 0.12	< 0.12	< 0.15	< 0.12	< 0.06	< 1.0	< 0.21	30	< 0.7
Pb-210	< 20	< 20	< 20	< 20	< 3.0	< 3.0	< 3.0	3.0	3.12	< 3.0	3.20	3.52	< 3.0	< 20.0	< 8.5	30	< 28.2
Pu-238	< 0.072	0.250	< 0.17	< 0.048	< 0.070	< 0.049	< 0.052	< 0.051	0.102	< 0.088	< 0.15	< 0.059	< 0.048	0.250	< 0.10	40	< 0.2
Pu-239/240	< 0.18	0.375	< 0.25	< 0.048	< 0.13	< 0.065	< 0.039	< 0.051	< 0.087	< 0.088	< 0.057	< 0.059	< 0.039	0.375	< 0.13	30	< 0.4
Th-228	< 0.18	< 0.17	< 0.41	< 0.25	0.201	0.133	< 0.22	0.168	0.515	0.374	0.302	0.286	0.13	0.52	< 0.3	400	< 0.1
Th-230	1.06	1.70	0.551	0.580	0.814	1.06	0.644	0.805	0.538	0.386	< 0.17	< 0.18	< 0.17	1.70	0.7	300	0.2
Th-232	0.723	1.39	< 0.41	< 0.25	< 0.15	< 0.13	< 0.22	< 0.16	0.560	0.881	0.567	0.381	< 0.13	1.39	< 0.5	50	< 1.0
Cs-137	N/R	N/R	< 15	N/R	N/R	< 12	N/R	N/R	< 9.6	N/R	N/R	< 6.7	< 6.7	< 15	< 11	3000	< 0.4
Ru-106	N/R	N/R	< 92	N/R	N/R	< 110	N/R	N/R	< 88	N/R	N/R	< 73	< 73	< 110	< 90	6000	< 1.5
Sr-90	N/R	N/R	0.662	N/R	N/R	0.312	N/R	N/R	0.289	N/R	N/R	0.320	0.289	0.662	0.40	1000	0.04
Ra-226	1.9	8.9	< 2.9	< 0.9	< 1.9	< 1.8	28	8.9	< 0.9	< 0.7	1.4	< 1.5	< 0.7	28.0	< 4.9	100	< 4.9
Ra-228	< 4.0	9.0	< 3.3	< 3.4	23	40	< 3.8	< 3.6	< 5.2	10.4	11	< 5.3	< 3.3	40.0	< 10.6	100	< 10.6
Tc-99	< 290	290	< 5300	< 5300	< 5300	< 650	< 650	< 22	< 240	530	< 290	< 290	< 22	< 5300	< 1692	100000	< 1.7
U-233	< 98.8	< 90.5	< 84.3	< 68.8	< 93.8	< 92.7	< 61.4	< 54.4	< 54.4	< 77.7	< 73.5	< 62.9	< 54.4	< 98.8	< 77.1	500	< 15.4
U-234	319.9	117.2	163.7	178.1	243.0	240.2	119.3	105.7	105.6	251.6	190.3	162.8	105.6	319.9	185.2	500	37.0
U-235	15.3	12.8	11.5	10.0	12.2	12.3	9.2	7.9	8.3	12.5	11.0	9.2	7.9	15.3	11.1	600	1.9
U-236	12.6	7.9	9.0	6.0	7.6	8.1	7.0	5.5	5.1	4.2	6.9	5.1	4.2	12.6	7.0	500	1.4
U-238	341.8	313.2	291.7	238.0	325.0	321.2	212.4	188.3	188.0	268.7	254.3	217.6	188.0	341.8	267.0	600	44.5

AVG.* is flow-weighted and shown as <, if more than one quarter of the values are less than the detection limit.

% DOE DCG is based on the average concentration for the previous twelve months.

AH - Sample collected, but not yet analyzed. N/R - Not Required, quarterly composite.

Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

EFFLUENT RADIATION REPORT 1991

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Manhole 175 (Effluent to Great Miami River)
1I000004001 Total Discharge

Monthly/Quarterly Composites

Radionuclide	Jan (pCi/l)	Feb (pCi/l)	Mar (pCi/l)	Apr (pCi/l)	May (pCi/l)	Jun (pCi/l)	Jul (pCi/l)	Aug (pCi/l)	Sep (pCi/l)	Oct (pCi/l)	Nov (pCi/l)	Dec (pCi/l)	MIN. (pCi/l)	MAX. (pCi/l)	AVG.* (pCi/l)	DOE DCG	% DOE DCG #
Ac-227	AH	AH	AH	AH	AH	AH	AH	AH	AH	AH			0.0	0.0	0.0	10	AE
K-40	AH	AH	AH	AH	AH	AH	AH	AH	AH	AH			0.0	0.0	0.0	7000	AE
Np-237	AH	AH	AH	AH	AH	AH	AH	AH	AH	AH			0.0	0.0	0.0	30	AE
Pb-210	AH	AH	AH	AH	AH	AH	AH	AH	AH	AH			0.0	0.0	0.0	30	AE
Pu-238	AH	AH	AH	AH	AH	AH	AH	AH	AH	AH			0.0	0.0	0.0	40	AE
Pu-239/240	AH	AH	AH	AH	AH	AH	AH	AH	AH	AH			0.0	0.0	0.0	30	AE
Th-228	AH	AH	AH	AH	AH	AH	AH	AH	AH	AH			0.0	0.0	0.0	400	AE
Th-230	AH	AH	AH	AH	AH	AH	AH	AH	AH	AH			0.0	0.0	0.0	300	AE
Th-232	AH	AH	AH	AH	AH	AH	AH	AH	AH	AH			0.0	0.0	0.0	50	AE
Cs-137	NR	NR	AH	NR	NR	AH	NR	NR	AH	NR	NR		0.0	0.0	0.0	3000	AE
Ru-106	NR	NR	AH	NR	NR	AH	NR	NR	AH	NR	NR		0.0	0.0	0.0	6000	AE
Sr-90	NR	NR	AH	NR	NR	AH	NR	NR	AH	NR	NR		0.0	0.0	0.0	1000	AE
Ra-226	< 1.0	< 0.9	< 0.9	< 0.9	AH	AH	AH	AH	AH	AH			0.9	1.0	0.9	100	4.3
Ra-228	10	4.1	3.6	< 2.5	5.5	12.0	AH	AH	AH	AH			2.5	12.0	6.0	100	7.0
Tc-99	< 160	< 4500	< 2700	< 3300	< 810	< 810	< 830	< 1500	< 1500	AH		<	160	< 4500	1901.3	100000	1.6
U-233	< 112.5	216.7	< 52.4	< 53.9	< 85.0	< 35.0	< 28.2	AH	AH	AH			28.2	216.7	91.9	500	< 17.3
U-234	218.6	842.0	135.7	139.7	165.1	90.5	91.3	AH	AH	AH			90.5	842.0	265.2	500	48.4
U-235	14.4	24.8	8.0	8.1	10.5	4.9	4.4	AH	AH	AH			4.4	24.8	11.7	600	2.0
U-236	9.8	21.8	4.6	5.4	7.4	3.3	2.6	AH	AH	AH			2.6	21.8	8.6	500	1.5
U-238	389.7	751.0	181.2	186.6	294.3	121.0	97.5	AH	AH	AH			97.5	751.0	318.2	600	49.9

AVG.* is flow-weighted and shown as <, if more than one quarter of the values are less than the detection limit.

% DOE DCG is based on the average concentration for the previous twelve months. AE - Insufficient data available, results will be included in subsequent report.

AH Sample collected, but not yet analyzed. N/R Not Required, quarterly composite.

02 M 9501 900212

4500

NTHLY RLPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO00004001 JUL 1991 1 2 03/24/90 OH000

Feed Materials Prod. Center
P.O. Box 398705 001 MANHOLE 175, FINAL EFFLUENT TO GREAT MI
Fernald 45239 Hamilton

FORM

	1	1	1	3	2	3	2	2	3	2
	999	999	999	1	998	1	998	998	1	99
	pH (MAX) S.U.	pH (MIN) S.U.	CONDUI FLOW MGD	DISS. OXYGEN MG/L	RESIDU T. NFL MG/L	O&G TOTAL MG/L	AMMONI NH3-N MG/L	NITRAT NO3-N MG/L	CYANID CN MG/L	FLU F,T MG
	00401	00402	50050	00300	00530	00550	00610	00620	00720	009
01	7.8	7.3	0.346							
02	7.9	7.3	0.282	8.0	2	AA	AA	5.5	AH	0.
03	7.6	7.4	0.249							
04	8.2	7.4	0.228							
05	8.1	6.9	0.294							
06	7.9	7.3	0.259							
07	8.1	7.4	0.293							
08	7.9	7.2	0.508							
09	7.7	7.1	0.802							
10	8.1	7.0	1.293	6.3	2	AA	AA	2.3	AA	0.
11	7.9	7.2	0.995							
12	7.6	7.2	1.056							
13	7.7	7.2	1.015							
14	7.7	7.3	0.970							
15	7.9	7.4	0.368							
16	8.3	6.9	0.871							
17	7.7	7.1	1.038							
18	8.3	7.4	1.020	8.3	AA	AA	0.11	2.2	AA	0.
19	8.2	7.4	1.100							
20	8.1	7.3	0.218							
21	7.6	7.4	0.170							
22	8.1	7.2	0.343	7.9	AA	AA	AA	4.3	0.006	0.
23	7.8	7.4	0.263							
24	7.7	7.1	0.319							
25	8.0	7.3	0.278							
26	7.9	7.3	0.313							
27	8.4	7.4	0.242							
28	8.2	7.5	0.269							
29	8.1	7.5	0.363							
30	8.1	7.3	0.349							
31	8.1	7.2	0.317							
	N/A	N/A	16.431	30.5	8	AA	0.41	14.3	0.016	2.
	N/A	N/A	0.530	7.3	2	AA	0.10	2.8	0.005	0.
	8.4	7.5	1.293	8.3	2	AA	0.11	5.5	0.006	0.
	7.6	6.9	0.170	6.3	AA	AA	AA	2.2	AA	0.

FLJ 8/29/91

AA: 00530 - 2.0 mg/l; 00550 - 5.0 mg/l; 00610 - 0.10 mg/l; 00720 - 0.005 mg

AH: Administrative error; sample collected but not analyzed.

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AGENCY

U.S. DEPARTMENT OF ENERGY 1IO00004001 JUL 1991 2 2 03/24/90 OH00

Feed Materials Prod. Center
P.O. Box 398705 001 MANHOLE 175, FINAL EFFLUENT TO GREAT M
Fernald 45239 Hamilton

FORM

	2 998 CHROM CR,TOT UG/L 01034	2 998 COPPER CU,TOT UG/L 01042	2 998 LEAD PB,TOT UG/L 01051	2 998 NICKEL NI,TOT UG/L 01067	2 998 SILVER AG,TOT UG/L 01077	2 998 CHROMI HEX-DS UG/L 01220	2 998 CB-BOD 5 DAY MG/L 80082
01							
02	43.0	AA	AA	AA	AA	AA	0.55
03							
04							
05							
06							
07							
08							
09							2.71
10	AA	17.2	AA	AA	AA	AA	
11							
12							
13							
14							
15							
16							0.48
17							
18	AA	AA	AA	AA	AA	AA	
19							
20							
21							
22	AA	16.0	AA	AA	AA	AA	
23							0.82
24							
25							
26							
27							
28							
29							
30							1.66
31							
	61.0	61.2	AA	AA	AA	AA	6.22
	9.6	15.6	AA	AA	AA	AA	1.38
	43.0	17.2	AA	AA	AA	AA	2.71
	AA	AA	AA	AA	AA	AA	0.48

AA: 01034 - 6.0 ug/l; 01042 - 14.0 ug/l; 01051 - 3.0 ug/l; 01067 - 17.0 ug/
AA: 01077 - 10.0 ug/l; 01220 - 6.0 ug/l.

10

AGENCY

U.S. DEPARTMENT OF ENERGY 1IO00004002 JUL 1991 1 2 03/24/90 OH00

Feed Materials Prod. Center
P.O. Box 398705
Fernald 45239 Hamilton

002 SPILLWAY FROM STORMWATER RETENTION BAS

FORM

	3	2	3	2	2	2	2	2	2	
	1	4	1	4	4	4	4	4	4	
	pH S.U.	RESIDUT. NFL MG/L	O & G Total MG/L	AMMONI NH3-N MG/L	NITRAT NO3-N MG/L	FLUORI F,TOT MG/L	CHROM CR,TOT UG/L	COPPER CU,TOT UG/L	NICKEL NI,TOT UG/L	SI AG U
	00400	00530	00550	00610	00620	00951	01034	01042	01067	01
01										
02										
03										
04										
05										
06										
07										
08										
09										
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22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

N/A
N/A

NO WATER OVERFLOWED FROM THE STORMWATER RETENTION BASIN.

FLJ
8/8/91

11

AGENCY

9002 M 9501 900212

2514

MONTHLY REPORT FORM

4500

U.S. DEPARTMENT OF ENERGY 1IO00004002 JUL 1991 2 2 03/24/90 OH00

Feed Materials Prod. Center
P.O. Box 398705
Fernald 45239 Hamilton

SAMPLING STATION DESCRIPTION
002 SPILLWAY FROM STORMWATER RETENTION BAS

FORM

	2 4 CHROMI HEX-DS UG/L 01220	2 4 CONDUI FLOW MGD 50050							
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
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16									
17									
18									
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20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

NO WATER OVERFLOWED FROM THE STORMWATER RETENTION BASIN.

FLJ 8/8/91

12

AGENCY

DOE FMPC Site Man.

9005 M 9009 900212

MONTHLY REPORT FORM

4500

U.S. DEPARTMENT OF ENERGY 1IO00004601 JUL 1991 1 2 03/24/90 OH00

Feed Materials Prod. Center
P.O. Box 398705
Fernald 45239 Hamilton

601 SEWAGE TREATMENT PLANT EFFLUENT

FORM

	1 999 CONDUI FLOW MGD 50050	2 998 BOD 5 DAY MG/L 00310	2 998 RESIDU T. NFL MG/L 00530	2 998 AMMONI NH3-N MG/L 00610	2 998 FLUORI F,TOT MG/L 00951	2 998 CHROM CR,TOT UG/L 01034	2 998 COPPER CU,TOT UG/L 01042	2 998 NICKEL NI,TOT UG/L 01067	2 998 FEC CO MF-FCB #/100M 31616
01	0.164								
02	0.128	1.15	3	AA	0.3	23.2	AA	AA	450
03	0.136								
04	0.054								
05	0.135								
06	0.085								
07	0.116								
08	0.135								
09	0.133	2.83							
10	0.204		5	AA	0.3	AA	18.2	AA	1500
11	0.172								
12	0.211								
13	0.128								
14	0.132								
15	0.178								
16	0.160	0.82	AA						
17	0.172								
18	0.162		AA	AA	0.3	AA	18.0	AA	4
19	0.201								
20	0.099								
21	0.083								
22	0.189		AA	AA	0.3	AA	16.8	AA	1
23	0.188	0.20	AA						
24	0.211								
25	0.170								
26	0.206								
27	0.128								
28	0.101								
29	0.180								
30	0.210	1.60	AA						
31	0.193								
	4.764	6.60	18	AA	1.2	41.2	67.0	AA	1955
	0.154	1.26	3	AA	0.3	9.2	17.0	AA	41
	0.211	2.83	5	AA	0.3	23.2	18.2	AA	1500
	0.054	0.20	AA	AA	0.3	AA	AA	AA	1

FLJ 8/8/91

AA: 00530 - 2.0 mg/l; 00610 - 0.10 mg/l; 01034 - 6.0 ug/l; 01042 - 14.0 u
AA: 01067 - 17.0 ug/l.

AGENCY

DOE FMPC Site Mana

9005 M 9009 900212

2514

ONTHLY REPORT FORM

4500

U.S. DEPARTMENT OF ENERGY 1IO00004601 JUL 1991 2 2 03/24/90 OHO

Feed Materials Prod. Center
P.O. Box 398705
Fernald 45239 Hamilton

601 SEWAGE TREATMENT PLANT EFFLUENT

FORM

	1 999 pH (MAX) S.U. 00401	1 999 pH (MIN) S.U. 00402
01	7.6	7.4
02	7.6	7.3
03	7.5	7.3
04	7.7	7.2
05	8.0	7.3
06	8.0	7.4
07	8.0	7.5
08	7.6	7.4
09	7.6	7.4
10	7.6	7.3
11	7.4	7.2
12	7.6	7.3
13	7.7	7.4
14	7.8	7.4
15	7.8	7.4
16	7.7	7.4
17	7.5	7.2
18	7.3	7.1
19	7.6	7.1
20	7.8	7.3
21	8.0	7.3
22	7.8	7.3
23	7.7	7.3
24	7.4	7.1
25	7.6	7.0
26	7.6	7.4
27	7.8	7.4
28	7.9	7.5
29	7.9	7.4
30	7.7	7.4
31	7.6	7.3
	N/A	N/A
	N/A	N/A
	8.0	7.5
	7.3	7.0

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9002 M 9501 900212

MONTHLY REPORT FORM

4500

U.S. DEPARTMENT OF ENERGY 1IO00004602 JUL 1991 1 1 03/24/90 OH00

SAMPLING STATION DESCRIPTION

Feed Materials Prod. Center
P.O. Box 398705 602 GENERAL SUMP EFFLUENT TO MANHOLE 175
Fernald 45239 Hamilton

FORM

	1 999 CONDUI FLOW MGD 50050	3 1 pH S.U. 00400	2 1 CHROM CR,TOT UG/L 01034	2 1 COPPER CU,TOT UG/L 01042	2 1 NICKEL NI,TOT UG/L 01067	2 1 CHROMI HEX-DS UG/L 01220			
01	0.040								
02	0.040	7.4	AA	15.7	AA	AA			
03	0.040								
04	0.040								
05	0.040								
06	0.040								
07	0.040								
08	0.078								
09	0.040								
10	0.040	7.3	AA	34.9	AA	AA			
11	0.080								
12	0.040								
13	0.040								
14	0.040								
15	0.040								
16	0.040								
17	0.040								
18	0.040	7.3	AA	AA	AA	AA			
19	0.080								
20	0.040								
21	0.000								
22	0.040	8.5	AA	AA	AA	AA			
23	0.000								
24	0.040								
25	0.040								
26	0.040								
27	0.040								
28	0.080								
29	0.080								
30	0.040								
31	0.040								
	1.358	N/A	AA	78.6	AA	AA			
	0.044	N/A	AA	19.7	AA	AA			
	0.080	8.5	AA	34.9	AA	AA			
	0.000	7.3	AA	AA	AA	AA			

AA: 01034 - 6.0 ug/l; 01042 - 14.0 ug/l; 01067 - 17.0 ug/l; 01220 - 6.0 u

FVJ
8/8/91

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DOE FMPC Site Mana

9002 M 9501 900212 4500 2514 Ohio

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO00004604 JUL 1991 1 1 03/24/90 OHOC

Feed Materials Prod. Center
P.O. Box 398705 604 STORM SEWER LIFT STATION EFFLUENT TO M
Fernald 45239 Hamilton FORM

	1	1	1	2	3	2	2		
	999	999	999	998	1	998	998		
	pH (MAX) S.U.	pH (MIN) S.U.	CONDUI FLOW MGD	RESIDU T. NFL MG/L	O&G TOTAL MG/L	NITRAT NO3-N MG/L	FLUORI F,TOT MG/L		
	00401	00402	50050	00530	00550	00620	00951		
01	7.7	7.6	0.095						
02	7.7	7.6	0.090	4	AA	2.1	0.3		
03	7.7	7.6	0.054						
04	7.8	7.7	0.084						
05	7.7	7.2	0.077						
06	7.9	7.5	0.091						
07	7.7	7.6	0.096						
08	7.7	7.6	0.248						
09	7.9	7.3	0.056						
10	7.8	7.2	0.335	AA	AA	1.4	0.6		
11	8.1	7.2	0.039						
12	7.8	7.3	0.130						
13	7.9	7.6	0.160						
14	7.9	7.6	0.140						
15	7.9	7.8	0.131						
16	7.8	7.6	0.101						
17	7.8	7.7	0.113						
18	7.8	7.6	0.091	AA	AA	2.6	0.5		
19	7.7	7.5	0.101						
20	7.8	7.6	0.080						
21	7.8	7.6	0.086						
22	7.8	7.6	0.074	AA	AA	2.2	0.4		
23	7.9	7.6	0.075						
24	7.9	7.6	0.068						
25	7.8	7.6	0.068						
26	7.9	7.7	0.066						
27	7.9	7.6	0.074						
28	7.9	7.8	0.066						
29	8.0	7.7	0.061						
30	8.0	7.8	0.058						
31	8.1	7.9	0.042						
	N/A	N/A	3.050	10	AA	8.3	1.8		
	N/A	N/A	0.098	2	AA	1.8	0.5		
	8.1	7.9	0.335	4	AA	2.6	0.6		
	7.7	7.2	0.039	AA	AA	1.4	0.3		

AA: 00530 - 2.0 mg/l; 00550 - 5.0 mg/l.

FLJ 8/8/91

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MONTHLY REPORT FORM

4500

2514

U.S. DEPARTMENT OF ENERGY 1IO000004605 JUL 1991 1 2 03/24/90 OH0C

Feed Materials Prod. Center
P.O. Box 398705 605 BIODENITRIFICATION EFFLUENT TO MANHOLE
Fernald 45239 Hamilton

FORM

	1 999 pH (MAX) S.U. 00401	1 999 pH (MIN) S.U. 00402	1 999 CONDUI FLOW MGD 50050	2 998 BOD 5 DAY MG/L 00310	2 998 RESIDU T. NFL MG/L 00530	2 998 AMMONI NH3-N MG/L 00610	2 998 NITRAT NO3-N MG/L 00620	2 998 FLUORI F,TOT MG/L 00951	2 998 CHROM CR,TOT UG/L 01034	9 CC CU U 01
01	7.9	7.7	0.047							
02	7.9	7.6	0.024	5.76	6	0.10	1.2	3.6	22.3	
03	8.0	7.6	0.019							
04	8.0	7.9	0.050							
05	8.0	7.9	0.043							
06	8.0	7.7	0.043							
07	8.0	7.9	0.041							
08	8.0	7.9	0.047							
09	8.0	7.9	0.043	4.65						
10	8.0	7.8	0.045		5	AA	0.7	3.6	AA	1
11	8.0	7.9	0.043							
12	8.0	7.9	0.044							
13	8.1	7.9	0.042							
14	8.1	8.0	0.039							
15	8.0	7.9	0.019							
16	AC	AC	AC							
17	AC	AC	AC							
18	AC	AC	AC							
19	AC	AC	AC							
20	AC	AC	AC							
21	AC	AC	AC							
22	8.1	8.0	0.040		2	0.40	1.3	AH	AA	1
23	AC	AC	AC							
24	AC	AC	AC							
25	AC	AC	AC							
26	AC	AC	AC							
27	AC	AC	AC							
28	8.3	8.0	0.022							
29	8.1	7.9	0.042							
30	8.2	7.9	0.041	7.55						
31	8.1	7.9	0.042							
	N/A	N/A	0.776	17.96	13	0.60	3.2	7.2	34.3	4
	N/A	N/A	0.039	6.00	4	0.21	1.0	3.6	9.6	1
	8.3	8.0	0.050	7.55	6	0.40	1.3	3.6	22.3	1
	7.9	7.6	0.019	4.65	2	AA	0.7	3.6	AA	

AA: 00530 - 2.0 mg/l; 00610 - 0.10 mg/l; 01034 - 6.0 ug/l; 01042 - 14.0 u

FLY 8/8/91

AH: Effluent limitation and monitoring requirement deleted effective 7/15

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MONTHLY REPORT FORM

4500

2514

U.S. DEPARTMENT OF ENERGY 1IO000004605 JUL 1991 2 2 03/24/90 OH00

Feed Materials Prod. Center
P.O. Box 398705
Fernald 45239 Hamilton

605 BIODENITRIFICATION EFFLUENT TO MANHOLE

FORM

	2 998 NICKEL NI,TOT UG/L 01067	2 998 CHROMI HEX-DS UG/L 01220
01		
02	AA	AA
03		
04		
05		
06		
07		
08		
09		
10	AA	AA
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22	20.7	AA
23		
24		
25		
26		
27		
28		
29		
30		
31		
	54.7	AA
	18.4	AA
	20.7	AA
	AA	AA

AA: 01067 - 17.0 ug/l; 01220 - 6.0 ug/l.

FLJ 8/8/91

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DOE FMPC Site Mana

9002 M 9501 900212

ONTHLY REPORT FORM

4500

2514

U.S. DEPARTMENT OF ENERGY 1I000004606 JUL 1991 1 1 03/24/90 OH0

Feed Materials Prod. Center
P.O. Box 398705 606 STORMWATER RETENTION BASIN EFFLUENT TO
Fernald 45239 Hamilton

FORM

	1 999 pH (MAX) S.U. 00401	1 999 pH (MIN) S.U. 00402	1 999 CONDUI FLOW MGD 50050	2 998 RESIDU T, NFL MG/L 00530	3 1 O&G TOTAL MG/L 00550				
01	AC	AC	AC	AC	AC				
02	AC	AC	AC	AC	AC				
03	AC	AC	AC	AC	AC				
04	AC	AC	AC	AC	AC				
05	AC	AC	AC	AC	AC				
06	AC	AC	AC	AC	AC				
07	AC	AC	AC	AC	AC				
08	AC	AC	AC	AC	AC				
09	7.7	7.5	0.530	20	AH				
10	7.6	7.5	0.669	4	AA				
11	7.6	7.5	0.661	6	AA				
12	7.6	7.3	0.631	10	AA				
13	7.5	7.3	0.645	11	AA				
14	7.7	7.4	0.620	20	AA				
15	AC	AC	AC	AC	AC				
16	7.6	7.2	0.570	4	AA				
17	7.7	7.2	0.713	3	AA				
18	8.5	7.6	0.728	3	AA				
19	8.5	7.8	0.718	AA	AA				
20	AC	AC	AC	AC	AC				
21	AC	AC	AC	AC	AC				
22	AC	AC	AC	AC	AC				
23	AC	AC	AC	AC	AC				
24	AC	AC	AC	AC	AC				
25	AC	AC	AC	AC	AC				
26	AC	AC	AC	AC	AC				
27	AC	AC	AC	AC	AC				
28	AC	AC	AC	AC	AC				
29	AC	AC	AC	AC	AC				
30	AC	AC	AC	AC	AC				
31	AC	AC	AC	AC	AC				
	N/A	N/A	6.485	83	AA				
	N/A	N/A	0.649	8	AA				
	8.5	7.8	0.728	20	AA				
	7.5	7.2	0.530	AA	AA				

AA: 00530 - 2.0 mg/l; 00550 - 5.0 mg/l.

FLJ 8/8/91

AH: Administrative oversight, sample collected but not analyzed.

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DOE FMPC Site Man

02 M 9501 900212 4500 2514

NTHLY REPORT FORM

OhioE

U.S. DEPARTMENT OF ENERGY 1IO00004001 AUG 1991 1 2 03/24/90 OH000

SAMPLING STATION DESCRIPTION

Feed Materials Prod. Center
P.O. Box 398705
Fernald 45239 Hamilton

001 MANHOLE 175, FINAL EFFLUENT TO GREAT MI

NOTE THIS FORM MUST BE

ENTER 1 FOR CONTINUOUS 2 FOR COMPOSITE 3 FOR GRAB SAMPLE
ENTER FREQUENCY OF SAMPLING

REPORTING LAB

	1	1	1	3	2	3	2	2	3	2
	999	999	999	1	998	1	998	998	1	99
	pH (MAX) S.U.	pH (MIN) S.U.	CONDUI FLOW MGD	DISS. OXYGEN MG/L	RESIDU T. NFL MG/L	O&G TOTAL MG/L	AMMONI NH3-N MG/L	NITRAT NO3-N MG/L	CYANID CN MG/L	FLU F,T MG
	00401	00402	50050	00300	00530	00550	00610	00620	00720	009
01	8.1	7.2	0.294							
02	8.5	7.2	0.379							
03	7.8	7.2	0.211							
04	8.5	7.2	0.377							
05	8.3	7.1	0.720	6.0	4	AA	0.16	3.2	AA	0.
06	7.7	7.3	1.084							
07	7.7	7.2	1.081							
08	8.6	7.2	0.936							
09	8.1	7.0	0.714							
10	8.2	7.5	0.281							
11	8.0	7.0	0.196							
12	8.4	7.4	0.767							
13	8.3	7.3	1.056	8.1	AA	AA	AA	2.5	AA	0.
14	8.4	7.4	1.133							
15	8.6	7.2	0.979							
16	7.7	7.1	0.442							
17	7.7	7.3	0.394							
18	7.7	7.3	0.417							
19	7.5	7.0	0.542							
20	7.7	7.4	0.461	8.1	4	AA	AA	3.8	AA	1.
21	8.1	7.3	1.019							
22	8.3	7.5	1.060							
23	7.9	7.4	0.876							
24	8.2	7.5	0.216							
25	8.0	7.6	0.227							
26	9.0	7.5	0.602							
27	7.9	7.6	0.425							
28	8.0	7.5	0.376	8.4	AA	AA	AA	4.1	AA	1.
29	8.1	7.4	0.464							
30	8.2	7.4	0.466							
31	8.4	7.3	0.370							
	N/A	N/A	18.565	30.6	12	AA	0.46	13.6	AA	3.
	N/A	N/A	0.599	7.6	3	AA	0.12	3.2	AA	0.
	9.0	7.6	1.133	8.4	4	AA	0.16	4.1	AA	1.
	7.5	7.0	0.196	6.0	AA	AA	AA	2.5	AA	0.

ONAL REMARKS AH REPORTING CODES MUST BE EXPLAINED IN THIS SECTION.

AA: 00530 - 2.0 mg/1; 00550 - 5.0 mg/1; 00610 - 0.10 mg/1; 00720 - 0.005 mg/

LJ 12/23/91

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DISTRIBUTION
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CANARY - AGENCY
GREEN - REPORTER

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DATE REPORT COMPLETED SIGNATURE OF REPORTER TITLE OF REPORTER

DOE FMPC Site Manag

9002 M 9501 900212 4500 2514

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO00004001 AUG 1991 2 2 03/24/90 OH000

Feed Materials Prod. Center
P.O. Box 398705 001 MANHOLE 175, FINAL EFFLUENT TO GREAT MI
Fernald 45239 Hamilton

FORM

	2 998	2 998	2 998	2 998	2 998	2 998	2 998
	CHROM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	NICKEL NI,TOT UG/L	SILVER AG,TOT UG/L	CHROMI HEX-DS UG/L	CB-BOD 5 DAY MG/L
	01034	01042	01051	01067	01077	01220	80082
01							
02							
03							
04							
05	AA	17.1	3.1	AA	AA	AA	
06							1.18
07							
08							
09							
10							
11							
12							
13	AA	AA	AA	AA	AA	AA	1.06
14							
15							
16							
17							
18							
19							
20	AA	AA	4.6	AA	AA	AA	2.13
21							
22							
23							
24							
25							
26							
27							3.00
28	AA	AA	7.5	AA	AA	AA	
29							
30							
31							
	AA	59.1	18.2	AA	AA	AA	7.37
	AA	14.9	4.0	AA	AA	AA	1.54
	AA	17.1	7.5	AA	AA	AA	3.00
	AA	AA	AA	AA	AA	AA	1.06

FLJ AA: 01034 - 6.0 ug/l; 01042 - 14.0 ug/l; 01051 - 3.0 ug/l; 01067 - 17.0 ug
9/10/91 AA: 01077 - 10.0 ug/l; 01220 - 6.0 ug/l.

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MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1I000004002 AUG 1991 1 2 03/24/90 OH0009

Feed Materials Prod. Center
P.O. Box 398705 002 SPILLWAY FROM STORMWATER RETENTION BASIN
Fernald 45239 Hamilton FORM

3	2	3	2	2	2	2	2	2	2
1	4	1	4	4	4	4	4	4	4
pH	RESIDU T. NFL	O & G Total	AMMONI NH3-N	NITRAT NO3-N	FLUORI F,TOT	CHROM CR,TOT	COPPER CU,TOT	NICKEL NI,TOT	SILV AG/
S.U.	MG/L	MG/L	MG/L	MG/L	MG/L	UG/L	UG/L	UG/L	UG/
00400	00530	00550	00610	00620	00951	01034	01042	01067	010

N/A
N/A

NO WATER OVERFLOWED FROM THE STORMWATER RETENTION BASIN.

FLJ
9/10/91

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DOE FMPC Site Mana

9002 M 9501 900212 4500 2514

THLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1I000004002 AUG 1991 2 2 03/24/90 OH000

Feed Materials Prod. Center
P.O. Box 398705 002 SPILLWAY FROM STORMWATER RETENTION BASI
Fernald 45239 Hamilton

FORM

2	2
4	4
CHROMI HEX-DS UG/L	CONDUI FLOW MGD
01220	50050

NO WATER OVERFLOWED FROM THE STORMWATER RETENTION BASIN.

FCJ
9/10/91

23

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DOE FMPC Site Ma

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO00004601 AUG 1991 1 2 03/24/90 OH000

Feed Materials Prod. Center
P.O. Box 398705 601 SEWAGE TREATMENT PLANT EFFLUENT
Fernald 45239 Hamilton FORM

	1 999	2 998	2 998	2 998	2 998	2 998	2 998	2 998	2 998
	CONDUI FLOW MGD	BOD 5 DAY MG/L	RESIDU T. NFL MG/L	AMMONI NH3-N MG/L	FLUORI F,TOT MG/L	CHROM CR,TOT UG/L	COPPER CU,TOT UG/L	NICKEL NI,TOT UG/L	FEC CO MF-FCB #/100M
	50050	00310	00530	00610	00951	01034	01042	01067	31616
01	0.177								
02	0.221								
03	0.121								
04	0.091								
05	0.196		AA	AA	0.2	AA	AA	AA	70
06	0.219	2.18	AA						
07	0.202								
08	0.216								
09	0.234								
10	0.123								
11	0.065								
12	0.158								
13	0.171	2.06	AA	AA	0.3	AA	AA	AA	1000
14	0.173								
15	0.176								
16	0.184								
17	0.095								
18	0.100								
19	0.190								
20	0.169	2.79	AA	AA	0.3	AA	AA	AA	1000
21	0.155								
22	0.170								
23	0.175								
24	0.078								
25	0.082								
26	0.158								
27	0.164	3.46	3						
28	0.107		AA	AA	0.3	AA	AA	AA	7
29	0.209								
30	0.171								
31	0.081								
	4.831	10.49	13	AA	1.1	AA	AA	AA	2077
	0.156	2.58	2	AA	0.3	AA	AA	AA	149
	0.234	3.46	3	AA	0.3	AA	AA	AA	1000
	0.065	2.06	AA	AA	0.2	AA	AA	AA	7

FLJ 9/10/91

AA: 00530 - 2.0 mg/l; 00610 - 0.10 mg/l; 01034 - 6.0 ug/l; 01042 - 14.0
AA: 01067 - 17.0 ug/l.

24

AGENCY

DOE FMPC Site Ma

9005 M 9009 900212 4500 2514

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1I000004601 AUG 1991 2 2 03/24/90 OHOC

Feed Materials Prod. Center
P.O. Box 398705 601 SEWAGE TREATMENT PLANT EFFLUENT
Fernald 45239 Hamilton FORM

	1	1
	999	999
	pH (MAX) S.U.	pH (MIN) S.U.
	00401	00402
01	7.6	7.3
02	7.5	7.2
03	7.6	7.3
04	8.0	7.4
05	7.7	7.5
06	7.6	7.5
07	7.5	7.2
08	7.4	7.2
09	7.6	7.0
10	8.0	7.4
11	7.8	7.1
12	7.9	7.5
13	7.7	7.5
14	7.7	7.5
15	7.7	7.4
16	8.0	7.4
17	7.7	7.5
18	7.9	7.5
19	7.9	7.5
20	8.2	7.9
21	7.6	7.4
22	7.7	7.4
23	7.9	7.4
24	8.0	7.5
25	8.2	7.7
26	7.9	7.6
27	7.8	7.6
28	7.7	7.5
29	7.7	7.5
30	7.9	7.5
31	7.7	7.5
	N/A	N/A
	N/A	N/A
	8.2	7.9
	7.4	7.0

FLJ 9/10/91

AGENCY

DOE FMPC Site Ma

9002 M 9501 900212 4500 2514

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO00004602 AUG 1991 1 1 03/24/90 OH000

Feed Materials Prod. Center
P.O. Box 398705 602 GENERAL SUMP EFFLUENT TO MANHOLE 175
Fernald 45239 Hamilton

FORM

	1	3	2	2	2	2
	999	1	1	1	1	1
	CONDUI FLOW MGD	pH S.U.	CHROM CR,TOT UG/L	COPPER CU,TOT UG/L	NICKEL NI,TOT UG/L	CHROMI HEX-DS UG/L
	50050	00400	01034	01042	01067	01220
01	0.080					
02	0.040					
03	0.038					
04	0.040					
05	0.040	7.8	AA	15.9	42.3	AA
06	0.080					
07	0.040					
08	0.080					
09	0.080					
10	0.040					
11	0.040					
12	0.000					
13	0.040	8.5	AA	AA	AA	AA
14	0.120					
15	0.040					
16	0.078					
17	0.000					
18	0.040					
19	0.040					
20	0.040	7.8	AA	AA	165.7	AA
21	0.040					
22	0.040					
23	0.040					
24	0.040					
25	0.000					
26	0.040					
27	0.040					
28	0.040	7.8	AA	AA	AA	AA
29	0.040					
30	0.080					
31	0.040					
	1.436	N/A	AA	57.9	242.0	AA
	0.046	N/A	AA	14.5	60.5	AA
	0.120	8.5	AA	15.9	165.7	AA
	0.000	7.8	AA	AA	AA	AA

AA: 01034 - 6.0 ug/l; 01042 - 14.0 ug/l; 01067 - 17.0 ug/l; 01220 - 6.0 u

FLJ 9/10/91

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AGENCY

DOE FMPC Site Man

9002 M 9501 900212 4500 2514

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO00004604 AUG 1991 1 1 03/24/90 OH000

Feed Materials Prod. Center
P.O. Box 398705 604 STORM SEWER LIFT STATION EFFLUENT TO MH
Fernald 45239 Hamilton

FORM

	1 999	1 999	1 999	2 998	3 1	2 998	2 998
	pH (MAX) S.U.	pH (MIN) S.U.	CONDUI FLOW MGD	RESIDU T. NFL MG/L	O&G TOTAL MG/L	NITRAT NO3-N MG/L	FLUORI F,TOT MG/L
	00401	00402	50050	00530	00550	00620	00951
01	AC	AC	AC				
02	AC	AC	AC				
03	AC	AC	AC				
04	AC	AC	AC				
05	AC	AC	AC				
06	AC	AC	AC				
07	8.3	7.6	0.039	AA	AA	3.5	0.8
08	8.9	7.9	0.088				
09	8.2	7.9	0.332				
10	8.2	8.0	0.118				
11	8.2	8.1	0.092				
12	8.2	7.9	0.100				
13	8.3	8.1	0.080	AA	AA	3.4	0.6
14	8.3	7.8	0.071				
15	7.8	7.7	0.069				
16	8.2	7.8	0.067				
17	8.2	7.8	0.181				
18	8.2	7.9	0.172				
19	8.3	7.7	0.192				
20	8.3	8.0	0.157	6	AA	2.6	0.7
21	8.3	7.7	0.109				
22	8.4	7.8	0.082				
23	8.2	7.8	0.094				
24	8.2	8.1	0.097				
25	8.3	8.1	0.088				
26	8.3	8.0	0.083				
27	8.3	8.1	0.099				
28	8.1	7.7	0.102	AA	AA	1.7	0.3
29	7.9	7.7	0.098				
30	8.0	7.9	0.090				
31	8.0	7.5	0.117				
	N/A	N/A	2.817	12	AA	11.2	2.4
	N/A	N/A	0.113	4	AA	2.6	0.6
	8.9	8.1	0.332	6	AA	3.5	0.8
	7.8	7.5	0.039	AA	AA	1.7	0.3

AA: 00530 - 2.0 mg/l; 00550 - 5.0 mg/l.

FLJ 9/10/91

27

AGENCY

DOE FMPC Site Man.

9002 M 9501 900212

MONTHLY REPORT FORM

4500

2514

U.S. DEPARTMENT OF ENERGY 11000004605 AUG 1991 1 2 03/24/90 OH000

Feed Materials Prod. Center
P.O. Box 398705 605 BIODENITRIFICATION EFFLUENT TO MANHOLE
Fernald 45239 Hamilton

FORM

	1	1	1	2	2	2	2	2	2	
	999	999	999	998	998	998	998	998	998	9
	pH (MAX) S.U.	pH (MIN) S.U.	CONDUI FLOW MGD	BOD 5 DAY MG/L	RESIDU T. NFL MG/L	AMMONI NH3-N MG/L	NITRAT NO3-N MG/L	FLUORI F,TOT MG/L	CHROM CR,TOT UG/L	CO CU. U
	00401	00402	50050	00310	00530	00610	00620	00951	01034	01
01	8.1	8.0	0.037							
02	8.1	7.3	0.002							
03	8.0	7.8	0.005							
04	8.1	7.9	0.014							
05	8.0	7.8	0.046		AA	0.18	1.0	AH	AA	1
06	7.8	7.7	0.060	3.05						
07	7.9	7.7	0.077							
08	7.7	7.6	0.082							
09	7.8	7.6	0.067							
10	AC	AC	AC							
11	AC	AC	AC							
12	7.8	7.5	0.043							
13	7.8	7.6	0.061	2.79	16	0.17	2.2	AH	9.8	1
14	7.9	7.5	0.083							
15	7.8	7.5	0.110							
16	7.8	7.4	0.113							
17	7.5	7.2	0.117							
18	7.3	7.1	0.104							
19	7.4	7.2	0.120							
20	7.3	7.1	0.096	3.66	6	0.15	0.5	AH	AA	
21	7.4	7.0	0.033							
22	7.4	7.0	0.051							
23	7.5	6.8	0.022							
24	7.3	6.9	0.001							
25	7.4	7.1	0.057							
26	7.4	7.2	0.123							
27	7.3	7.2	0.123	6.97						
28	7.2	7.0	0.127		6	0.10	0.7	AH	AA	
29	7.2	7.1	0.117							
30	7.3	7.1	0.124							
31	7.3	7.2	0.132							
	N/A	N/A	2.147	16.47	30	0.60	4.4	AH	27.8	5
	N/A	N/A	0.074	4.59	7	0.14	1.0	AH	6.7	1
	8.1	8.0	0.132	6.97	16	0.18	2.2	AH	9.8	1
	7.2	6.8	0.001	2.79	AA	0.10	0.5	AH	AA	

AA: 00530 - 2.0 mg/l; 00610 - 0.10 mg/l; 01034 - 6.0 ug/l; 01042 - 14.0 u

FLJ 9/10/91

AH: Effluent limitation and monitoring requirement deleted effective 7/15

AGENCY

DOE FMPC Site Man

U.S. DEPARTMENT OF ENERGY 11000004605 AUG 1991 2 2 03/24/90 OH000

Feed Materials Prod. Center
P.O. Box 398705 605 BIODENITRIFICATION EFFLUENT TO MANHOLE
Fernald 45239 Hamilton FORM

	2 998 NICKEL NI,TOT UG/L 01067	2 998 CHROMI HEX-DS UG/L 01220
01		
02		
03		
04		
05	AA	AA
06		
07		
08		
09		
10		
11		
12		
13	AA	AA
14		
15		
16		
17		
18		
19		
20	AA	AA
21		
22		
23		
24		
25		
26		
27		
28	AA	AE
29		
30		
31		
	AA	AA
	AA	AA
	AA	AA
	AA	AA

AA: 01067 - 17.0 ug/l; 01220 - 6.0 ug/l.

FLW 9/10/91

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO00004606 AUG 1991 1 1 03/24/90 OH00(

Feed Materials Prod. Center
P.O. Box 398705 606 STORMWATER RETENTION BASIN EFFLUENT TO MI
Fernald 45239 Hamilton FORM

	1	1	1	2	3
	999	999	999	998	1
	pH (MAX) S.U.	pH (MIN) S.U.	CONDUI FLOW MGD	RESIDU T, NFL MG/L	O&G TOTAL MG/L
	00401	00402	50050	00530	00550
01	AC	AC	AC	AC	AC
02	8.7	7.6	0.117	8	AA
03	8.2	7.7	0.047	11	AA
04	8.8	7.4	0.232	18	AA
05	8.2	7.5	0.438	AA	AA
06	7.8	7.6	0.725	2	AA
07	8.1	7.2	0.722	5	AA
08	8.8	7.6	0.470	AA	AA
09	AC	AC	AC	AC	AC
10	AC	AC	AC	AC	AC
11	AC	AC	AC	AC	AC
12	8.8	7.3	0.466	AA	AA
13	8.6	7.2	0.704	AA	AA
14	8.7	7.4	0.686	AA	AA
15	8.8	7.6	0.585	AA	AA
16	AC	AC	AC	AC	AC
17	AC	AC	AC	AC	AC
18	AC	AC	AC	AC	AC
19	AC	AC	AC	AC	AC
20	AC	AC	AC	AC	AC
21	8.4	7.3	0.682	AA	AA
22	8.4	7.7	0.717	AA	AA
23	7.7	7.4	0.545	AA	AA
24	AC	AC	AC	AC	AC
25	AC	AC	AC	AC	AC
26	9.3	7.4	0.198	31	AA
27	AC	AC	AC	AC	AC
28	AC	AC	AC	AC	AC
29	AC	AC	AC	AC	AC
30	AC	AC	AC	AC	AC
31	AC	AC	AC	AC	AC
	N/A	N/A	7.334	93	AA
	N/A	N/A	0.489	4	AA
	9.3	7.7	0.725	31	AA
	7.7	7.2	0.047	AA	AA

AA: 00530 - 2.0 mg/l; 00550 - 5.0 mg/l.

FLJ 9/10/91

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AGENCY

2514

9002 M 9501 900212

MONTHLY REPORT FORM

4500

U.S. DEPARTMENT OF ENERGY 1IO00004001 SEP 1991 1 2 03/24/90 OH00
Fernald Environmental
Management Project
P.O. Box 398705 001 MANHOLE 175, FINAL EFFLUENT TO GREAT MIAM
Cincinnati 45239-8705 Hamilton

FORM

	1	1	1	3	2	3	2	2	3	
	999	999	999	1	998	1	998	998	1	9
	pH (MAX) S.U.	pH (MIN) S.U.	CONDUI FLOW MGD	DISS. OXYGEN MG/L	RESIDU T. NFL MG/L	O&G TOTAL MG/L	AMMONI NH3-N MG/L	NITRAT NO3-N MG/L	CYANID CN MG/L	FI F,
	00401	00402	50050	00300	00530	00550	00610	00620	00720	0(
01	8.1	7.5	0.201							
02	7.9	7.6	0.174							
03	8.0	7.6	0.403							
04	7.9	7.4	0.646	7.8	4	AA	0.11	3	AA	1
05	8.0	7.5	0.571							
06	7.8	7.6	1.132							
07	8.2	7.1	0.971							
08	8.3	7.6	0.890							
09	8.7	7.7	0.385							
10	8.4	7.6	0.800	9.3	3	AA	AA	AE	AA	1
11	8.2	7.5	0.335							
12	8.1	7.5	0.342							
13	7.9	7.4	0.428							
14	8.1	7.4	0.293							
15	7.9	7.5	0.287							
16	7.9	7.4	0.393	6.7	AA	AA	0.13	4	AE	
17	8.6	7.0	0.569							
18	7.9	7.4	0.629							
19	8.1	7.0	1.069							
20	8.3	7.3	0.362							
21	8.1	7.5	0.156							
22	8.5	7.2	0.261	8.5	2	AA	0.10	4	AA	(
23	8.0	7.3	0.341							
24	8.4	7.5	0.393							
25	8.0	7.6	0.237							
26	9.1	7.6	0.333							
27	8.1	7.6	0.410							
28	8.4	7.5	0.320							
29	8.1	7.5	0.232							
30	7.9	7.5	0.334							
31										
	N/A	N/A	13.897	32.3	11	AA	0.44	11	AA	4
	N/A	N/A	0.463	8.3	3	AA	0.11	4	AA	1
	9.1	7.7	1.132	9.3	4	AA	0.13	4	AA	1
	7.8	7.0	0.156	6.7	AA	AA	AA	3	AA	0

FL) 10/16/91 AA: 00530 - 2.0 mg/l; 00550 - 5.0 mg/l; 00610 - 0.10 mg/l; 00620 - 1.0 mg/
AA: 00720 - 0.005 mg/l.

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AGENCY

9002 M 9501 900212 4500

NTHLY REPORT FORM

AME ADDRESS CITY COUNTY ZIP STATION CODE DATE MONTH YEAR PAGE

U.S. DEPARTMENT OF ENERGY 11000004001 SEP 1991

Fernald Environmental Management Project

P.O. Box 398705 001 MANHOLE 175, FINAL EFFLUENT TO GREAT MIAMI

Cincinnati 45239-8705 Hamilton NOTE

(1)	2	2	2	2	2	2				
(2)	998	998	998	998	998	998				
	CHROM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	NICKEL NI,TOT UG/L	SILVER AG,TOT UG/L	CHROMI HEX-DS UG/L	CB-BOD 5 DAY MG/L			
	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORT
DAY	01034	01042	01051	01067	01077	01220	80082			
01										
02										
03							4.48			
04	AA	AA	AA	AA	AA	AA				
05										
06										
07										
08										
09										
10	AA	AA	3.3	AA	AA	AA	3.22			
11										
12										
13										
14										
15										
16	AA	AA	AA	AA	AA	AA				
17							[illegible]			
18										
19										
20										
21										
22	AA	AA	AA	AA	AA	AA				
23										
24							2.30			
25										
26										
27										
28										
29										
30										
31										
TOTAL	AA	AA	12.3	AA	AA	AA	12.01			
AVG.	AA	AA	3.1	AA	AA	AA	2.97			
MAX	AA	AA	3.3	AA	AA	AA	4.48			
MIN.	AA	AA	AA	AA	AA	AA	2.01			

ADDITIONAL REMARKS (AH REPORTING CODES MUST BE EXPLAINED IN THIS SECTION)

FL 10/9/91 AA: 01034 - 6.0 ug/l; 01042 - 14.0 ug/l; 01051 - 3.0 ug/l; 01067 - 17.0 ug/l

AA: 01077 - 10.0 ug/l; 01220 - 6.0 ug/l.

32

DISTRIBUTION
WHITE - AGENCY
CANARY - AGENCY

I CERTIFY UNDER THE PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED AND BASED ON MY INQUI THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLET AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

DATE REPORT COMPLETED SIGNATURE OF REPORTER TITLE OF REPORTER

2514

002 M 9501 900212 4500 REPORTED

MONTHLY REPORT FORM

NAME, ADDRESS CITY, COUNTY, ZIP	STATION CODE	DATE (MONTH, YEAR)	PAGE OF	PRINTING DATE	APPLIC
U.S. DEPARTMENT OF ENERGY Fernald Environmental Management Project P.O. Box 398705 Cincinnati 45239-8705	1I000004002	SEP 1991	1 2	03/24/90	OH00

SAMPLING STATION DESCRIPTION

002 SPILLWAY FROM STORMWATER RETENTION BASIN
Hamilton

NOTE: THIS FORM MUST BE

(1) ENTER 1 FOR CONTINUOUS, 2 FOR COMPOSITE, 3 FOR GRAB SAMPLE
(2) ENTER FREQUENCY OF SAMPLING

REPORTING LAB

ANALYST

	pH S.U.	RESIDUT. NFL MG/L	O & G Total MG/L	AMMONI NH3-N MG/L	NITRAT NO3-N MG/L	FLUORI F,TOT MG/L	CHROM CR,TOT UG/L	COPPER CU,TOT UG/L	NICKEL NI,TOT UG/L	SI AC U
(1)	3	2	3	2	2	2	2	2	2	
(2)	1	4	1	4	4	4	4	4	4	
REPORTING CODE										REPO
DAY	00400	00530	00550	00610	00620	00951	01034	01042	01067	01
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
TOTAL	N/A									
AVG.	N/A									
MAX										
MIN.										

ADDITIONAL REMARKS (ALL REPORTING CODES MUST BE EXPLAINED IN THIS SECTION)

FL 10/4/91

AA: 00530 - 2.0 mg/l; 00550 - 5.0 mg/l; 00610 - 0.10 mg/l; 00620 - 1.0 mg/
AA: 01034 - 6.0 ug/l; 01042 - 14.0 ug/l; 01067 - 17.0 ug/l; 01077 - 10.0

33

NO WATER OVERFLOWED FROM THE STORMWATER RETENTION BASIN.

DISTRIBUTION
AGENCY
AGENCY

I CERTIFY UNDER THE PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS AND THAT BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

2514

9002 M-9501-900212 4500

MONTHLY REPORT FORM — REPORTED

NAME, ADDRESS CITY, COUNTY, ZIP | STATION CODE | DATE (MONTH, YEAR) | PAGE OF | PRINTING DATE | APPLICA

U.S. DEPARTMENT OF ENERGY
Fernald Environmental
Management Project
P.O. Box 398705
Cincinnati 45239-8705

1I000004002 SEP 1991 2 OF 2 03/24/90 OH00

SAMPLING STATION DESCRIPTION

002 SPILLWAY FROM STORMWATER RETENTION BASIN
Hamilton

NOTE: THIS FORM MUST BE

IN(1) - ENTER 1 FOR CONTINUOUS, 2 FOR COMPOSITE, 3 FOR GRAB SAMPLE
IN(2) - ENTER FREQUENCY OF SAMPLING

REPORTING LAB | ANALYST

(1)	2	2								
(2)	4	4								
	CHROMI HEX-DS UG/L	CONDUI FLOW MGD								
	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPOR
DAY	01220	50050								
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
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21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
TOTAL										
AVG										
MIN										
MAX										

ADDITIONAL REMARKS (AH REPORTING CODES MUST BE EXPLAINED IN THIS SECTION)

AA: 01220 - 6.0 ug/l.

NO WATER OVERFLOWED FROM THE STORMWATER RETENTION BASIN.

34

DISTRIBUTION
WHITE - AGENCY
CANARY - AGENCY

CERTIFY UNDER THE PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

9005 M 9009 900212 4500

MONTHLY REPORT FORM

NAME, ADDRESS CITY, COUNTY, ZIP	STATION CODE	REPORTED DATE (MONTH, YEAR)	PAGE OF	PRINTING DATE	APPLICA
U.S. DEPARTMENT OF ENERGY Fernald Environmental Management Project P.O. Box 398705 Cincinnati 45239-8705	11000004601 SAMPLING STATION DESCRIPTION 601 SEWAGE TREATMENT PLANT EFFLUENT Hamilton	SEP 1991	1 2	03/24/90	OH000

NOTE: THIS FORM MUST BE

N(1) - ENTER 1 FOR CONTINUOUS 2 FOR COMPOSITE 3 FOR GRAB SAMPLE
N(2) - ENTER FREQUENCY OF SAMPLING

REPORTING LAB

ANALYST

(1)	1	2	2	2	2	2	2	2	2
(2)	999	998	998	998	998	998	998	998	998
	CONDUI FLOW MGD	BOD 5 DAY MG/L	RESIDU T. NFL MG/L	AMMONI NH3-N MG/L	FLUORI F,TOT MG/L	CHROM CR,TOT UG/L	COPPER CU,TOT UG/L	NICKEL NI,TOT UG/L	FEC CO MF-FCB #/100M
	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE
DAY	50050	00310	00530	00610	00951	01034	01042	01067	31616
01	0.043								
02	0.043								
03	0.156	2.80	2						
04	0.234		2	AA	0.3	AA	AA	AA	1000
05	0.134								
06	0.185								
07	0.101								
08	0.072								
09	0.149								
10	0.166	3.63	2	0.12	0.3	AA	14.4	24.8	14
11	0.167								
12	0.163								
13	0.190								
14	0.066								
15	0.059								
16	0.166		AA	AA	0.3	AA	AA	AA	15
17	0.154	1.76	AA						
18	0.166								
19	0.182								
20	0.159								
21	0.070								
22	0.052		AA	AA	0.2	AA	AA	AA	6
23	0.182								
24	0.185	2.34	AA						
25	0.134								
26	0.156								
27	0.159								
28	0.116								
29	0.045								
30	0.175								
31									
TOTAL	4.029	10.53	14	0.42	1.1	AA	56.4	75.8	1035
AVG.	0.134	2.64	2	0.11	0.3	AA	14.1	19.1	34
MAX	0.234	3.63	2	0.12	0.3	AA	14.4	24.8	1000
MIN	0.043	1.76	AA	AA	0.2	AA	AA	AA	6

ADDITIONAL REMARKS (AH REPORTING CODES MUST BE EXPLAINED IN THIS SECTION)

AA: 00530 - 2.0 mg/l; 00610 - 0.10 mg/l; 01034 - 6.0 ug/l; 01042 - 14.0 u
AA: 01067 - 17.0 ug/l.

FLJ 10/4/91

35

DISTRIBUTION
WHITE - AGENCY
CANARY - AGENCY

I CERTIFY UNDER THE PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

2514

9005 M 9009 900212 4500

MONTHLY REPORT FORM

NAME ADDRESS CITY, COUNTY, ZIP	STATION CODE	DATE (MONTH, YEAR)	PAGE
U.S. DEPARTMENT OF ENERGY Fernald Environmental Management Project P.O. Box 398705 Cincinnati 45239-8705	1I000004601	SEP 1991	2 2 0

SAMPLING STATION DESCRIPTION

601 SEWAGE TREATMENT PLANT EFFLUENT
Hamilton

NOTE: THIS FORM MUST BE

(1) - ENTER 1 FOR CONTINUOUS, 2 FOR COMPOSITE, 3 FOR GRAB SAMPLE
(2) - ENTER FREQUENCY OF SAMPLING

REPORTING LAB

ANALYST

(1)	1	1								
(2)	999	999								
	pH (MAX) S.U.	pH (MIN) S.U.								
	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORT
DAY	00401	00402								
01	7.9	7.5								
02	8.2	7.6								
03	8.0	7.7								
04	7.7	7.5								
05	7.8	7.4								
06	7.6	7.4								
07	7.6	7.4								
08	7.9	7.5								
09	7.9	7.5								
10	7.9	7.6								
11	7.7	7.5								
12	7.7	7.5								
13	7.8	7.5								
14	8.0	7.5								
15	8.0	7.6								
16	8.0	7.6								
17	7.9	7.6								
18	7.7	7.5								
19	7.8	7.5								
20	7.9	7.6								
21	7.8	7.7								
22	8.0	7.7								
23	7.9	7.7								
24	8.0	7.7								
25	7.9	7.7								
26	8.0	7.6								
27	7.9	7.6								
28	7.8	7.6								
29	7.9	7.6								
30	7.9	7.6								
31										
TOTAL	N/A	N/A								
AVG.	N/A	N/A								
MAX.	8.2	7.7								
MIN.	7.6	7.4								

ADDITIONAL REMARKS (AH REPORTING CODES MUST BE EXPLAINED IN THIS SECTION)

FCJ
10/9/91

36

DISTRIBUTION
WHITE - AGENCY

CERTIFY UNDER THE PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

2514

9002 M 9501 900212

ONTHLY REPORT FORM 4500 REPORTED

AME, ADDRESS CITY, COUNTY, ZIP

U.S. DEPARTMENT OF ENERGY
Fernald Environmental
Management Project
P.O. Box 398705
Cincinnati 45239-8705

STATION CODE: 1IO00004602
DATE (MONTH, YEAR): SEP 1991
PAGE 1 OF 1
PRINTING DATE: 03/24/90
APPLICAT: OH000

SAMPLING STATION DESCRIPTION

602 GENERAL SUMP EFFLUENT TO MANHOLE 175
Hamilton

NOTE: THIS FORM MUST BE T

IN(1) - ENTER 1 FOR CONTINUOUS, 2 FOR COMPOSITE, 3 FOR GRAB SAMPLE
IN(2) - ENTER FREQUENCY OF SAMPLING

REPORTING LIST

ANALYST

(1)	1	3	2	2	2	2				
(2)	999	1	1	1	1	1				
	CONDUI FLOW MGD	pH S.U.	CHROM CR,TOT UG/L	COPPER CU,TOT UG/L	NICKEL NI,TOT UG/L	CHROMI HEX-DS UG/L				
	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORT
DAY	50050	00400	01034	01042	01067	01220				
01	0.000									
02	0.000									
03	0.040									
04	0.038	7.9	AA	AA	AA	AA				
05	0.078									
06	0.000									
07	0.040									
08	0.000									
09	0.040									
10	0.040	7.9	AA	17.2	100.7	AA				
11	0.040									
12	0.040									
13	0.040									
14	0.040									
15	0.040									
16	0.040	7.7	AA	AA	82.7	AA				
17	0.080									
18	0.040									
19	0.000									
20	0.040									
21	0.040									
22	0.040	8.0	AA	AA	AA	AA				
23	0.040									
24	0.080									
25	0.040									
26	0.040									
27	0.078									
28	0.040									
29	0.038									
30	0.040									
31										
TAL	1.152	N/A	AA	59.2	217.4	AA				
G	0.038	N/A	AA	14.8	54.8	AA				
X	0.080	8.0	AA	17.2	100.7	AA				
N	0.000	7.7	AA	AA	AA	AA				

DITIONAL REMARKS (AH REPORTING CODES MUST BE EXPLAINED IN THIS SECTION)

AA: 01034 - 6.0 ug/l; 01042 - 14.0 ug/l; 01067 - 17.0 ug/l; 01220 - 6.0 u

FLJ
10/9/91

37

DISTRIBUTION
WHITE - AGENCY
CANARY - AGENCY

I CERTIFY UNDER THE PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED AND BASED ON MY INQU THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION. I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLET AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT

2514

9002 M 9501 900212 4500

MONTHLY REPORT FORM — REPORTED — Ohio E

NAME, ADDRESS CITY, COUNTY, ZIP — STATION CODE — DATE (MONTH, YEAR) — PAGE — PRINTING DATE — APPLICAT

U.S. DEPARTMENT OF ENERGY — 11000004604 — SEP 1991 — 1 1-03/24/90 OH000
Fernald Environmental
Management Project
P.O. Box 398705 — 604 STORM SEWER LIFT STATION EFFLUENT TO MH 17
Cincinnati 45239-8705 — Hamilton

SAMPLING STATION DESCRIPTION

NOTE: THIS FORM MUST BE T

IN(1) - ENTER 1 FOR CONTINUOUS, 2 FOR COMPOSITE, 3 FOR GRAB SAMPLE
IN(2) - ENTER FREQUENCY OF SAMPLING — REPORTING LAB — ANALYST

(1)	1	1	1	2	3	2	2			
(2)	999	999	999	998	1	998	998			
	pH (MAX) S.U.	pH (MIN) S.U.	CONDUI FLOW MGD	RESIDU T. NFL MG/L	O&G TOTAL MG/L	NITRAT NO3-N MG/L	FLUORI F,TOT MG/L			
	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORT
DAY	00401	00402	50050	00530	00550	00620	00951			
01	8.2	7.8	0.084							
02	8.2	8.1	0.079							
03	8.2	7.7	0.079							
04	8.2	7.7	0.254	7	AA	2	0.7			
05	8.3	8.0	0.233							
06	8.2	8.0	0.121							
07	8.2	8.1	0.100							
08	8.3	8.2	0.085							
09	8.2	7.9	0.078							
10	8.0	7.9	0.100	3	AA	2	0.9			
11	8.0	7.8	0.072							
12	8.1	8.0	0.073							
13	8.1	7.8	0.078							
14	8.1	8.0	0.063							
15	8.1	8.0	0.065							
16	8.1	8.0	0.064	AA	AA	2	0.4			
17	8.2	8.0	0.058							
18	8.2	7.7	0.111							
19	8.1	7.9	0.053							
20	8.2	7.9	0.048							
21	8.5	8.2	0.046							
22	8.2	6.8	0.169	2	AA	2	0.5			
23	8.9	6.8	0.119							
24	8.4	8.0	0.056							
25	AC	AC	AC							
26	8.4	7.5	0.009							
27	8.0	7.7	0.054							
28	8.1	8.0	0.047							
29	8.0	7.9	0.050							
30	8.0	7.7	0.048							
31										
TOTAL	N/A	N/A	2.488	14	AA	8	2.5			
AVG.	N/A	N/A	0.086	4	AA	2	0.6			
MAX.	8.9	8.2	0.254	7	AA	2	0.9			
MIN.	8.0	6.8	0.009	AA	AA	2	0.4			

ADDITIONAL REMARKS (ALL REPORTING CODES MUST BE EXPLAINED IN THIS SECTION)

AA: 00530 - 2.0 mg/l; 00550 - 5.0 mg/l; 00620 - 1.0 mg/l.

FW 10/9/91

38

DISTRIBUTION
WHITE - AGENCY
PINK - AGENCY

I CERTIFY UNDER THE PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

9002 M 9501 900212 4500

MONTHLY REPORT FORM — REPORTED

NAME, ADDRESS CITY, COUNTY, ZIP | STATION CODE | DATE (MONTH, YEAR) | PAGE OF | PRINTING DATE | APPLICAT

U.S. DEPARTMENT OF ENERGY
Fernald Environmental
Management Project
P.O. Box 398705
Cincinnati 45239-8705

1I000004605 SEP 1991 1 2 03/21/90 OH000

SAMPLING STATION DESCRIPTION

605 BIODENITRIFICATION EFFLUENT TO MANHOLE 175
Hamilton

NOTE: THIS FORM MUST BE T

(1) - ENTER 1 FOR CONTINUOUS, 2 FOR COMPOSITE, 3 FOR GRAB SAMPLE
(2) - ENTER FREQUENCY OF SAMPLING

REPORTING OFF | ANALYST

	pH (MAX) S.U.	pH (MIN) S.U.	CONDUI FLOW MGD	BOD 5 DAY MG/L	RESIDU T. NFL MG/L	AMMONI NH3-N MG/L	NITRAT NO3-N MG/L	FLUORI F,TOT MG/L	CHROM CR,TOT UG/L	COP CU, UG
(1)	1	1	1	2	2	2	2	2	2	2
(2)	999	999	999	998	998	998	998	998	998	99
	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORT
DAY	00401	00402	50050	00310	00530	00610	00620	00951	01034	010
01	7.4	7.2	0.074							
02	7.5	7.2	0.052							
03	7.6	7.4	0.128	4.49						
04	7.6	7.5	0.120		3	AA	1	AH	AA	A
05	7.7	7.5	0.126							
06	7.6	7.5	0.120							
07	7.6	7.5	0.126							
08	7.6	7.5	0.124							
09	7.7	7.6	0.122							
10	7.7	7.6	0.123	3.09	5	AA	AA	AH	7.5	19
11	7.7	7.5	0.056							
12	7.7	7.5	0.066							
13	7.7	7.4	0.124							
14	7.5	7.3	0.124							
15	7.4	7.2	0.123							
16	7.3	7.1	0.123		8	0.55	1	AH	AA	A
17	7.2	7.1	0.124	4.99						
18	7.2	7.1	0.124							
19	7.4	7.1	0.122							
20	7.3	7.2	0.115							
21	AC	AC	AC							
22	AC	AC	AC							
23	AC	AC	AC							
24	7.6	7.0	0.072	4.91	12	0.11	1	AH	AA	21
25	7.6	7.2	0.063							
26	7.5	7.3	0.128							
27	7.5	7.3	0.119							
28	7.2	7.1	0.117							
29	7.2	7.1	0.099							
30	7.2	7.1	0.071							
31										
TOTAL	N/A	N/A	2.885	17.48	28	0.86	4	AH	25.5	69
AVG.	N/A	N/A	0.107	4.31	6	0.23	1	AH	6.4	16
MAX	7.7	7.6	0.128	4.99	12	0.55	1	AH	7.5	21
MIN	7.2	7.0	0.052	3.09	3	AA	AA	AH	AA	A

ADDITIONAL REMARKS (AH REPORTING CODES MUST BE EXPLAINED IN THIS SECTION)

FLJ 10/9/91

AA: 00530 - 2.0 mg/l; 00610 - 0.10 mg/l; 00620 - 1.0 mg/l; 01034 - 6.0 ug/
AA: 01042 - 14.0 ug/l.

AH: Effluent limitation and monitoring requirement deleted effective 7/15/

DISTRIBUTION:
WHITE - AGENCY

UNDER THE PENALTY OF LAW 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 THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

9002 M 9501 900212 4500 REPORTED

ONTHLY REPORT FORM

NAME, ADDRESS CITY, COUNTY, ZIP	STATION CODE	DATE (MONTH, YEAR)	PAGE	PRINTING DATE	APPLICA
U.S. DEPARTMENT OF ENERGY Fernald Environmental Management Project P.O. Box 398705 Cincinnati 45239-8705	11000004605	SEP 1991	2 05	03/24/90	OH00(

SAMPLING STATION DESCRIPTION

605 BIODENITRIFICATION EFFLUENT TO MANHOLE 17!
Hamilton

NOTE: THIS FORM MUST BE

(1) - ENTER 1 FOR CONTINUOUS 2 FOR COMPOSITE, 3 FOR GRAB SAMPLE
(2) - ENTER FREQUENCY OF SAMPLING

REPORTING LAB

ANALYST

(1)	2	2								
(2)	998	998								
	NICKEL NI,TOT UG/L	CHROMI HEX-DS UG/L								
	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPOR
DAY	01067	01220								
01										
02										
03										
04	AA	AA								
05										
06										
07										
08										
09										
10	AA	AA								
11										
12										
13										
14										
15										
16	AA	AA								
17										
18										
19										
20										
21										
22										
23										
24	AA	AA								
25										
26										
27										
28										
29										
30										
31										
TAL	AA	AA								
G.	AA	AA								
X	AA	AA								
	AA	AA								

ITIONAL REMARKS (AH REPORTING CODES MUST BE EXPLAINED IN THIS SECTION)

AA: 01067 - 17.0 ug/l; 01220 - 6.0 ug/l.

FVJ 10/9/91

40

DISTRIBUTION
WHITE - AGENCY

I CERTIFY UNDER THE PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

SIGNATURE OF REPORTER

9002 M 9501 900212 4500 REPORTED 2

NTHLY REPORT FORM

OhioE

ME, ADDRESS CITY, COUNTY, ZIP

U.S. DEPARTMENT OF ENERGY
Fernald Environmental
Management Project
P.O. Box 398705
Cincinnati 45239-8705

STATION CODE: 1IO000004606

DATE (MONTH/YEAR): SEP 1991

PAGE 1 OF 1

PRINTING DATE: 03/24/90

APPLICA: OH00(

SAMPLING STATION DESCRIPTION

606 STORMWATER RETENTION BASIN EFFLUENT TO MH
Hamilton

NOTE: THIS FORM MUST BE

IN(1) - ENTER 1 FOR CONTINUOUS, 2 FOR COMPOSITE, 3 FOR GRAB SAMPLE
IN(2) - ENTER FREQUENCY OF SAMPLING

REPORTING LAB

ANALYST

(1)	1	1	1	2	3					
(2)	999	999	999	998	1					
	pH (MAX) S.U.	pH (MIN) S.U.	CONDUI FLOW MGD	RESIDU T, NFL MG/L	O&G TOTAL MG/L					
	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPORTING CODE	REPOR
DAY	00401	00402	50050	00530	00550					
01	AC	AC	AC	AC	AC					
02	AC	AC	AC	AC	AC					
03	AC	AC	AC	AC	AC					
04	AC	AC	AC	AC	AC					
05	AC	AC	AC	AC	AC					
06	8.0	7.7	0.706	2	AA					
07	8.5	7.2	0.603	AA	AA					
08	8.7	7.7	0.609	AA	AA					
09	AC	AC	AC	AC	AC					
10	8.6	7.7	0.372	6	AA					
11	AC	AC	AC	AC	AC					
12	AC	AC	AC	AC	AC					
13	AC	AC	AC	AC	AC					
14	AC	AC	AC	AC	AC					
15	AC	AC	AC	AC	AC					
16	AC	AC	AC	AC	AC					
17	8.7	6.9	0.152	5	AA					
18	8.1	7.2	0.187	6	AA					
19	8.2	6.9	0.712	AA	AA					
20	AC	AC	AC	AC	AC					
21	AC	AC	AC	AC	AC					
22	AC	AC	AC	AC	AC					
23	AC	AC	AC	AC	AC					
24	AC	AC	AC	AC	AC					
25	AC	AC	AC	AC	AC					
26	AC	AC	AC	AC	AC					
27	AC	AC	AC	AC	AC					
28	AC	AC	AC	AC	AC					
29	AC	AC	AC	AC	AC					
30	AC	AC	AC	AC	AC					
31										
TAL	N/A	N/A	3.341	25	AA					
G	N/A	N/A	0.477	3	AA					
AX	8.7	7.7	0.712	6	AA					
N	8.0	6.9	0.152	AA	AA					

DITIONAL REMARKS (AH REPORTING CODES MUST BE EXPLAINED IN THIS SECTION)

AA: 00530 - 2.0 mg/l; 00550 - 5.0 mg/l.

FLJ 10/9/91

41

DISTRIBUTION
WHITE - AGENCY
CANARY - AGENCY

CERTIFY UNDER THE PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED AND BASED ON MY INQUIRY THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT

EFFLUENT RADIATION REPORT

FACILITY: Feed Materials Production Center
U.S. Department of Energy
7400 Willey Road, P.O.Box 398704
Cincinnati, Ohio 45239 Hamilton
9002 M 9501 900212

LOCATION: 1I000004001
001 Total Discharge
Manhole 175 (Effluent to Great Miami River)

DATE: JULY 1991

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.346	126	225	0.32	0.42	108
2	0.282	126	99	0.30	0.32	101
3	0.249	113	36	0.22	0.21	74
4	0.228	131	72	0.34	0.29	115
5	0.294	158	77	0.28	0.31	95
6	0.259	167	117	0.36	0.35	122
7	0.293	171	149	0.40	0.44	135
8	0.508	257	117	0.46	0.88	155
9	0.802	176	117	0.40	1.21	135
10	1.293	86	117	0.24	1.17	81
11	0.995	176	153	0.22	0.83	74
12	1.056	239	126	0.26	1.04	88
13	1.015	216	86	0.28	1.08	95
14	0.970	198	68	0.26	0.95	88
15	0.368	221	153	0.32	0.45	108
16	0.871	167	135	0.28	0.92	95
17	1.038	270	90	0.28	1.10	95
18	1.020	270	117	0.26	1.00	88
19	1.100	185	144	0.34	1.41	115
20	0.218	212	207	0.28	0.23	95
21	0.170	279	104	0.46	0.30	155
22	0.343	207	90	0.36	0.47	122
23	0.263	167	158	0.26	0.26	88
24	0.319	198	72	0.22	0.27	74
25	0.278	167	68	0.22	0.23	74
26	0.313	122	72	0.16	0.19	54
27	0.242	194	95	0.28	0.26	95
28	0.269	153	68	0.28	0.28	95
29	0.363	419	248	0.40	0.55	135
30	0.349	252	189	0.30	0.40	101
31	0.317	194	99	0.32	0.38	108
Total	16.431				18.21	

5-8-9.

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 001 Total Discharge

DATE: JULY 1991

	Flow (MGD)	Total Alpha (pCi/l)(2)	Total Beta (pCi/l)(2)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.530	197	118	0.29	0.59	99
Max.	1.293	419	248	0.46	1.41	155
Min.	0.170	86	36	0.16	0.19	54

The average uranium concentration for the previous twelve months was 0.84 mg/l. This is 94.4 percent of the Derived Concentration Guide(DOE Order 5400.5) for ingested water.

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

LJG
8-8-91

EFFLUENT RADIATION REPORT

FACILITY: Feed Materials Production Center
U.S. Department of Energy
7400 Willey Road, P.O.Box 398704
Cincinnati, Ohio 45239 Hamilton
9002 M 9501 900212

LOCATION: 1I000004002
002 Discharge (Overflow) to Storm Sewer Outfall Ditch
Stormwater Retention Basin Spillway (Effluent to Paddy's Run)

DATE: JULY 1991

There was no discharge to Paddy's Run from the Stormwater Retention Basin.

Based on 2.58 inches of rainfall for the month, the uranium discharge to Paddy's Run from uncontrolled areas of the FMPC is estimated to be 11.61 kgs.

RTP
9-8-91

EFFLUENT RADIATION REPORT

FACILITY: Feed Materials Production Center
U.S. Department of Energy
7400 Willey Road, P.O.Box 398704
Cincinnati, Ohio 45239 Hamilton
9002 M 9004 900212

LOCATION: 1I000004601
601 Sanitary Treatment Plant
Ultraviolet Unit/Contact Tank (Effluent to Manhole 175)

DATE: JULY 1991

Day	Flow (MGD)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.164	0.02	0.01	7
2	0.128	0.01	0.00	3
3	0.136	0.01	0.01	3
4	0.054	0.01	0.00	3
5	0.135	0.01	0.01	3
6	0.085	0.01	0.00	3
7	0.116	0.01	0.00	3
8	0.135	0.01	0.01	3
9	0.133	0.02	0.01	7
10	0.204	0.02	0.02	7
11	0.172	0.02	0.01	7
12	0.211	0.02	0.02	7
13	0.128	0.02	0.01	7
14	0.132	0.02	0.01	7
15	0.178	0.03	0.02	10
16	0.160	0.02	0.01	7
17	0.172	0.01	0.01	3
18	0.162	0.01	0.01	3
19	0.201	0.01	0.01	3
20	0.099	0.01	0.00	3
21	0.083	0.01	0.00	3
22	0.189	0.01	0.01	3
23	0.188	0.01	0.01	3
24	0.211	0.01	0.01	3
25	0.170	0.01	0.01	3
26	0.206	0.01	0.01	3
27	0.128	0.01	0.00	3
28	0.101	0.01	0.00	3
29	0.180	0.02	0.01	7
30	0.210	0.01	0.01	3
31	0.193	0.01	0.01	3
Total	4.764		0.25	

8-8-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 601 Sanitary Treatment Plant

DATE: JULY 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.154	0.01	0.01	5
Max.	0.211	0.03	0.02	10
Min.	0.054	0.01	0.00	3

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

LZP
8-6-91

EFFLUENT RADIATION REPORT

FACILITY: Feed Materials Production Center
U.S. Department of Energy
7400 Willey Road, P.O.Box 398704
Cincinnati, Ohio 45239 Hamilton
9002 M 9501 900212

LOCATION: 1I000004603
603 Clearwell
Clearwell (Effluent to Manhole 175)

DATE: JULY 1991

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.000	0	0	0.00	0.00	0
2	0.000	0	0	0.00	0.00	0
3	0.000	0	0	0.00	0.00	0
4	0.000	0	0	0.00	0.00	0
5	0.000	0	0	0.00	0.00	0
6	0.000	0	0	0.00	0.00	0
7	0.000	0	0	0.00	0.00	0
8	0.000	0	0	0.00	0.00	0
9	0.000	0	0	0.00	0.00	0
10	0.000	0	0	0.00	0.00	0
11	0.000	0	0	0.00	0.00	0
12	0.000	0	0	0.00	0.00	0
13	0.000	0	0	0.00	0.00	0
14	0.000	0	0	0.00	0.00	0
15	0.000	0	0	0.00	0.00	0
16	0.000	0	0	0.00	0.00	0
17	0.000	0	0	0.00	0.00	0
18	0.000	0	0	0.00	0.00	0
19	0.000	0	0	0.00	0.00	0
20	0.000	0	0	0.00	0.00	0
21	0.000	0	0	0.00	0.00	0
22	0.000	0	0	0.00	0.00	0
23	0.000	0	0	0.00	0.00	0
24	0.000	0	0	0.00	0.00	0
25	0.000	0	0	0.00	0.00	0
26	0.000	0	0	0.00	0.00	0
27	0.000	0	0	0.00	0.00	0
28	0.000	0	0	0.00	0.00	0
29	0.000	0	0	0.00	0.00	0
30	0.000	0	0	0.00	0.00	0
31	0.000	0	0	0.00	0.00	0
Total	0.000				0.00	

8-13-91

EFFLUENT RADIATION REPORT

FACILITY: Feed Materials Production Center
U.S. Department of Energy
7400 Willey Road, P.O.Box 398704
Cincinnati, Ohio 45239 Hamilton
9002 M 9501 900212

LOCATION: 1I000004604
604 Storm Sewer Lift Station
Manhole 34 (Stormwater to Manhole 175)

DATE: JULY 1991

Day	Flow (MGD)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.095	0.54	0.19	182
2	0.090	0.56	0.19	189
3	0.054	0.54	0.11	182
4	0.084	0.52	0.17	176
5	0.077	0.54	0.16	182
6	0.091	0.68	0.23	230
7	0.096	0.70	0.25	236
8	0.248	0.80	0.75	270
9	0.056	0.88	0.19	297
10	0.335	0.46	0.58	155
11	0.039	1.30	0.19	439
12	0.130	1.10	0.54	372
13	0.160	0.92	0.56	311
14	0.140	0.84	0.44	284
15	0.131	0.76	0.38	257
16	0.101	0.60	0.23	203
17	0.113	0.66	0.28	223
18	0.091	0.76	0.26	257
19	0.101	0.72	0.28	243
20	0.080	0.78	0.24	264
21	0.086	0.68	0.22	230
22	0.074	0.74	0.21	250
23	0.075	0.74	0.21	250
24	0.068	0.84	0.22	284
25	0.068	0.84	0.22	284
26	0.066	0.66	0.16	223
27	0.074	0.64	0.18	216
28	0.066	0.66	0.16	223
29	0.061	0.80	0.18	270
30	0.058	0.82	0.18	277
31	0.042	0.62	0.10	209
Total	3.050		8.26	

LAG
8-5-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 604 Storm Sewer Lift Station

DATE: JULY 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.098	0.72	0.27	242
Max.	0.335	1.30	0.75	439
Min.	0.039	0.46	0.10	155

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

dHG
6-8-91

EFFLUENT RADIATION REPORT

FACILITY: Feed Materials Production Center
U.S. Department of Energy
7400 Willey Road, P.O.Box 398704
Cincinnati, Ohio 45239 Hamilton
9002 M 9501 900212

LOCATION: 1I000004605
605 Bioreactor
Bioreactor (Effluent to Manhole 175)

DATE: JULY 1991

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.047	802	374	1.32	0.23	446
2	0.024	455	432	0.80	0.07	270
3	0.019	383	437	0.77	0.06	260
4	0.050	401	387	0.79	0.15	267
5	0.043	369	374	0.74	0.12	250
6	0.043	297	482	0.65	0.11	220
7	0.041	423	387	0.56	0.09	189
8	0.047	356	324	0.45	0.08	152
9	0.043	*	*	*	*	*
10	0.045	297	329	0.47	0.08	159
11	0.043	243	176	0.47	0.08	159
12	0.044	243	297	0.43	0.07	145
13	0.042	221	266	0.51	0.08	172
14	0.039	239	315	0.45	0.07	152
15	0.019	153	311	0.43	0.03	145
16	0.000	0	0	0.00	0.00	0
17	0.000	0	0	0.00	0.00	0
18	0.000	0	0	0.00	0.00	0
19	0.000	0	0	0.00	0.00	0
20	0.000	0	0	0.00	0.00	0
21	0.000	0	0	0.00	0.00	0
22	0.040	347	468	0.64	0.10	216
23	0.000	0	0	0.00	0.00	0
24	0.000	0	0	0.00	0.00	0
25	0.000	0	0	0.00	0.00	0
26	0.000	0	0	0.00	0.00	0
27	0.000	0	0	0.00	0.00	0
28	0.022	599	568	1.21	0.10	409
29	0.042	626	595	1.24	0.20	419
30	0.041	644	608	1.13	0.18	382
31	0.042	640	518	1.11	0.18	375
Total	0.776				2.06	

* Sample collected, but lost prior to analysis.

LFP
8-8-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 605 Bioreactor

DATE: JULY 1991

	Flow (MGD)	Total Alpha (pCi/l)(2)	Total Beta (pCi/l)(2)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.025	388	375	0.70	0.07	237
Max.	0.050	802	608	1.32	0.23	446
Min.	0.000	0	0	0.00	0.00	0

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

5-6-91

EFFLUENT RADIATION REPORT

FACILITY: Feed Materials Production Center
U.S. Department of Energy
7400 Willey Road, P.O.Box 398704
Cincinnati, Ohio 45239 Hamilton
9002 M 9501 900212

LOCATION: 1I000004606
606 Stormwater Retention Basin
Stormwater Retention Basin (Effluent to Manhole 175)

DATE: JULY 1991

Day	Flow (MGD)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.000	0.00	0.00	0
2	0.000	0.00	0.00	0
3	0.000	0.00	0.00	0
4	0.000	0.00	0.00	0
5	0.000	0.00	0.00	0
6	0.000	0.00	0.00	0
7	0.000	0.00	0.00	0
8	0.000	0.00	0.00	0
9	0.530	0.22	0.44	74
10	0.669	0.22	0.56	74
11	0.661	0.18	0.45	61
12	0.631	0.18	0.43	61
13	0.645	0.20	0.49	68
14	0.620	0.24	0.56	81
15	0.000	0.00	0.00	0
16	0.570	0.28	0.60	95
17	0.713	0.28	0.76	95
18	0.728	0.36	0.99	122
19	0.718	0.36	0.98	122
20	0.000	0.00	0.00	0
21	0.000	0.00	0.00	0
22	0.000	0.00	0.00	0
23	0.000	0.00	0.00	0
24	0.000	0.00	0.00	0
25	0.000	0.00	0.00	0
26	0.000	0.00	0.00	0
27	0.000	0.00	0.00	0
28	0.000	0.00	0.00	0
29	0.000	0.00	0.00	0
30	0.000	0.00	0.00	0
31	0.000	0.00	0.00	0
Total	6.485		6.26	

DP
8-8-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 606 Stormwater Retention Basin

DATE: JULY 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.209	0.26	0.20	86
Max.	0.728	0.36	0.99	122
Min.	0.000	0.00	0.00	0

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

ITG
9-8-91

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: 1I000004001
001 Total Discharge
Manhole 175 (Effluent to Great Miami River)

DATE: AUGUST 1991

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.294	198	180	0.26	0.29	88
2	0.379	194	72	0.28	0.40	95
3	0.211	149	95	0.24	0.19	81
4	0.377	194	117	0.28	0.40	95
5	0.720	180	117	0.28	0.76	95
6	1.084	131	108	0.42	1.72	142
7	1.081	194	77	0.40	1.64	135
8	0.936	185	86	0.46	1.63	155
9	0.714	432	266	0.68	1.84	230
10	0.281	662	153	0.98	1.04	331
11	0.196	599	144	0.80	0.59	270
12	0.767	387	140	0.54	1.57	182
13	1.056	252	126	0.52	2.08	176
14	1.133	239	90	0.38	1.63	128
15	0.979	221	117	0.44	1.63	149
16	0.442	212	198	0.32	0.54	108
17	0.394	284	122	0.52	0.78	176
18	0.417	293	95	0.74	1.17	250
19	0.542	387	59	0.52	1.07	176
20	0.461	383	167	0.64	1.12	216
21	1.019	239	90	0.48	1.85	162
22	1.060	293	257	0.64	2.57	216
23	0.876	293	207	0.46	1.52	155
24	0.216	230	203	0.42	0.34	142
25	0.227	509	356	1.12	0.96	378
26	0.602	505	176	0.86	1.96	291
27	0.425	365	135	0.60	0.96	203
28	0.376	239	158	0.40	0.57	135
29	0.464	243	167	0.34	0.60	115
30	0.466	243	144	0.44	0.78	149
31	0.370	243	135	0.46	0.64	155
Total	18.565				34.82	

9/19/91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: 001 Total Discharge

DATE: AUGUST 1991

	Flow (MGD)	Total Alpha (pCi/l)(2)	Total Beta (pCi/l)(2)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.599	275	140	0.50	1.12	167
Max.	1.133	662	356	1.12	2.57	378
Min.	0.196	131	59	0.24	0.19	81

The average uranium concentration for the previous twelve months was 0.83 mg/l. This is 93.3 percent of the Derived Concentration Guide(DOE Order 5400.5) for ingested water.

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

LFG
9-15-91

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: 1I000004002
002 Discharge (Overflow) to Storm Sewer Outfall Ditch
Stormwater Retention Basin Spillway (Effluent to Paddy's Run)

DATE: AUGUST 1991

There was no discharge to Paddy's Run from the Stormwater Retention Basin.

Based on 4.73 inches of rainfall for the month, the uranium discharge to Paddy's Run from uncontrolled areas of the FEMP is estimated to be 21.29 kgs.

9-19-91

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9004 900212

LOCATION: 1I000004601
601 Sanitary Treatment Plant
Ultraviolet Unit/Contact Tank (Effluent to Manhole 175)

DATE: AUGUST 1991

Day	Flow (MGD)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.177	0.01	0.01	3
2	0.221	0.01	0.01	3
3	0.121	0.01	0.00	3
4	0.091	0.02	0.01	7
5	0.196	0.01	0.01	3
6	0.219	0.01	0.01	3
7	0.202	0.01	0.01	3
8	0.216	0.01	0.01	3
9	0.234	0.02	0.02	7
10	0.123	0.02	0.01	7
11	0.065	0.03	0.01	10
12	0.158	0.03	0.02	10
13	0.171	0.02	0.01	7
14	0.173	0.02	0.01	7
15	0.176	0.01	0.01	3
16	0.184	0.01	0.01	3
17	0.095	0.01	0.00	3
18	0.100	0.01	0.00	3
19	0.190	0.02	0.01	7
20	0.169	0.02	0.01	7
21	0.155	0.01	0.01	3
22	0.170	0.01	0.01	3
23	0.175	0.01	0.01	3
24	0.078	0.02	0.01	7
25	0.082	0.02	0.01	7
26	0.158	0.02	0.01	7
27	0.164	0.02	0.01	7
28	0.107	0.01	0.00	3
29	0.209	0.01	0.01	3
30	0.171	0.01	0.01	3
31	0.081	0.01	0.00	3
Total	4.831		0.26	

EJD
9-19-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: 601 Sanitary Treatment Plant

DATE: AUGUST 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.156	0.01	0.01	5
Max.	0.234	0.03	0.02	10
Min.	0.065	0.01	0.00	3

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

ATP
9-19-91

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: 1I000004603
603 Clearwell
Clearwell (Effluent to Manhole 175)

DATE: AUGUST 1991

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.000	0	0	0.00	0.00	0
2	0.000	0	0	0.00	0.00	0
3	0.000	0	0	0.00	0.00	0
4	0.000	0	0	0.00	0.00	0
5	0.000	0	0	0.00	0.00	0
6	0.000	0	0	0.00	0.00	0
7	0.000	0	0	0.00	0.00	0
8	0.000	0	0	0.00	0.00	0
9	0.000	0	0	0.00	0.00	0
10	0.000	0	0	0.00	0.00	0
11	0.000	0	0	0.00	0.00	0
12	0.000	0	0	0.00	0.00	0
13	0.000	0	0	0.00	0.00	0
14	0.000	0	0	0.00	0.00	0
15	0.000	0	0	0.00	0.00	0
16	0.000	0	0	0.00	0.00	0
17	0.000	0	0	0.00	0.00	0
18	0.000	0	0	0.00	0.00	0
19	0.000	0	0	0.00	0.00	0
20	0.000	0	0	0.00	0.00	0
21	0.000	0	0	0.00	0.00	0
22	0.000	0	0	0.00	0.00	0
23	0.000	0	0	0.00	0.00	0
24	0.000	0	0	0.00	0.00	0
25	0.000	0	0	0.00	0.00	0
26	0.000	0	0	0.00	0.00	0
27	0.000	0	0	0.00	0.00	0
28	0.000	0	0	0.00	0.00	0
29	0.000	0	0	0.00	0.00	0
30	0.000	0	0	0.00	0.00	0
31	0.000	0	0	0.00	0.00	0
Total	0.000				0.00	

9-21-91

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: 1I000004604
604 Storm Sewer Lift Station
Manhole 34 (Stormwater to Manhole 175)

DATE: AUGUST 1991

Day	Flow (MGD)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.000	0.00	0.00	0
2	0.000	0.00	0.00	0
3	0.000	0.00	0.00	0
4	0.000	0.00	0.00	0
5	0.000	0.00	0.00	0
6	0.000	0.00	0.00	0
7	0.039	1.24	0.18	419
8	0.088	0.86	0.29	291
9	0.332	1.06	1.33	358
10	0.118	1.82	0.81	615
11	0.092	1.70	0.59	574
12	0.100	1.18	0.45	399
13	0.080	1.24	0.38	419
14	0.071	1.40	0.38	473
15	0.069	1.10	0.29	372
16	0.067	1.20	0.30	405
17	0.181	0.86	0.59	291
18	0.172	1.42	0.92	480
19	0.192	1.10	0.80	372
20	0.157	1.24	0.74	419
21	0.109	1.28	0.53	432
22	0.082	1.36	0.42	459
23	0.094	0.98	0.35	331
24	0.097	0.82	0.30	277
25	0.088	0.88	0.29	297
26	0.083	1.02	0.32	345
27	0.099	0.62	0.23	209
28	0.102	0.56	0.22	189
29	0.098	0.56	0.21	189
30	0.090	0.78	0.27	264
31	0.117	0.50	0.22	169
Total	2.817		11.40	

SYG
9-19-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: 604 Storm Sewer Lift Station

DATE: AUGUST 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.091	1.07	0.37	361
Max.	0.332	1.82	1.33	615
Min.	0.000	0.00	0.00	0

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

EJD
9-19-91

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: 1I000004605
605 Bioreactor
Bioreactor (Effluent to Manhole 175)

DATE: AUGUST 1991

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.037	622	486	1.27	0.18	429
2	0.002	802	477	1.26	0.01	426
3	0.005	748	419	1.43	0.03	483
4	0.014	*	*	*	*	*
5	0.046	730	568	1.33	0.23	449
6	0.060	622	626	1.09	0.25	368
7	0.077	523	234	1.06	0.31	358
8	0.082	468	275	0.73	0.23	247
9	0.067	649	482	0.90	0.23	304
10	0.000	0	0	0.00	0.00	0
11	0.000	0	0	0.00	0.00	0
12	0.043	*	*	*	*	*
13	0.061	1293	991	2.41	0.56	814
14	0.083	793	586	1.57	0.49	530
15	0.110	523	514	1.03	0.43	348
16	0.113	500	437	0.68	0.29	230
17	0.117	324	342	0.52	0.23	176
18	0.104	234	378	0.56	0.22	189
19	0.120	234	514	0.51	0.23	172
20	0.096	230	356	0.53	0.19	179
21	0.033	401	257	0.76	0.09	257
22	0.051	802	486	1.68	0.32	568
23	0.022	1086	667	2.22	0.18	750
24	0.001	1126	865	2.36	0.01	797
25	0.057	1113	486	2.12	0.46	716
26	0.123	1122	559	1.82	0.85	615
27	0.123	568	428	1.01	0.47	341
28	0.127	279	347	0.61	0.29	206
29	0.117	360	554	0.58	0.26	196
30	0.124	405	617	0.64	0.30	216
31	0.132	360	631	0.73	0.36	247
Total	2.147				7.70	

* Administrative error; no sample collected.

SJB
9-14-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: 605 Bioreactor

DATE: AUGUST 1991

	Flow (MGD)	Total Alpha (pCi/l)(2)	Total Beta (pCi/l)(2)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.069	521	472	0.95	0.25	320
Max.	0.132	1293	991	2.41	0.85	814
Min.	0.000	0	0	0.00	0.00	0

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

ATG
9-19-91

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: 1I000004606
606 Stormwater Retention Basin
Stormwater Retention Basin (Effluent to Manhole 175)

DATE: AUGUST 1991

Day	Flow (MGD)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.000	0.00	0.00	0
2	0.117	0.64	0.28	216
3	0.047	0.80	0.14	270
4	0.232	0.36	0.32	122
5	0.438	0.32	0.53	108
6	0.725	0.28	0.77	95
7	0.722	0.34	0.93	115
8	0.470	0.36	0.64	122
9	0.000	0.00	0.00	0
10	0.000	0.00	0.00	0
11	0.000	0.00	0.00	0
12	0.466	0.34	0.60	115
13	0.704	0.24	0.64	81
14	0.686	0.26	0.67	88
15	0.585	0.26	0.58	88
16	0.000	0.00	0.00	0
17	0.000	0.00	0.00	0
18	0.000	0.00	0.00	0
19	0.000	0.00	0.00	0
20	0.000	0.00	0.00	0
21	0.682	0.34	0.88	115
22	0.717	0.44	1.19	149
23	0.545	0.44	0.91	149
24	0.000	0.00	0.00	0
25	0.000	0.00	0.00	0
26	0.198	0.52	0.39	176
27	0.000	0.00	0.00	0
28	0.000	0.00	0.00	0
29	0.000	0.00	0.00	0
30	0.000	0.00	0.00	0
31	0.000	0.00	0.00	0
Total	7.334		9.46	

9-19-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: 606 Stormwater Retention Basin

DATE: AUGUST 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.237	0.34	0.31	115
Max.	0.725	0.80	1.19	270
Min.	0.000	0.00	0.00	0

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

ATP
9-29-91

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: 1I000004001
001 Total Discharge
Manhole 175 (Effluent to Great Miami River)

DATE: SEPTEMBER 1991

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.201	171	149	0.48	0.36	162
2	0.174	284	171	0.44	0.29	149
3	0.403	248	122	0.44	0.67	149
4	0.646	243	149	0.44	1.08	149
5	0.571	405	320	0.86	1.86	291
6	1.132	234	59	0.38	1.63	128
7	0.971	212	108	0.28	1.03	95
8	0.890	171	81	0.28	0.94	95
9	0.385	149	122	0.34	0.50	115
10	0.800	185	144	0.32	0.97	108
11	0.335	158	63	0.14	0.18	47
12	0.342	306	171	0.26	0.34	88
13	0.428	279	225	0.24	0.39	81
14	0.293	257	90	0.36	0.40	122
15	0.287	329	176	0.36	0.39	122
16	0.393	180	225	0.30	0.45	101
17	0.569	270	275	0.48	1.03	162
18	0.629	180	95	0.40	0.95	135
19	1.069	171	90	0.38	1.54	128
20	0.362	275	176	0.48	0.66	162
21	0.156	243	216	0.42	0.25	142
22	0.261	248	140	0.54	0.53	182
23	0.341	275	198	0.36	0.46	122
24	0.393	293	180	0.46	0.68	155
25	0.237	234	144	0.30	0.27	101
26	0.333	225	279	0.56	0.71	189
27	0.410	356	374	0.60	0.93	203
28	0.320	351	378	0.46	0.56	155
29	0.232	360	315	0.62	0.54	209
30	0.334	275	176	0.42	0.53	142
Total	13.897				21.10	

10-10-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: 001 Total Discharge

DATE: SEPTEMBER 1991

	Flow (MGD)	Total Alpha (pCi/l)(2)	Total Beta (pCi/l)(2)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.463	241	162	0.40	0.70	136
Max.	1.132	405	378	0.86	1.86	291
Min.	0.156	149	59	0.14	0.18	47

The average uranium concentration for the previous twelve months was 0.82 mg/l. This is 92.1 percent of the Derived Concentration Guide(DOE Order 5400.5) for ingested water.

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

10-10 91

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: 1I000004002
002 Discharge (Overflow) to Storm Sewer Outfall Ditch
Stormwater Retention Basin Spillway (Effluent to Paddy's Run)

DATE: SEPTEMBER 1991

There was no discharge to Paddy's Run from the Stormwater Retention Basin.

Based on 2.08 inches of rainfall for the month, the uranium discharge to Paddy's Run from uncontrolled areas of the FMPC is estimated to be 9.36 kgs.

10-10-91

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9004 900212

LOCATION: 1I000004601
601 Sanitary Treatment Plant
Ultraviolet Unit/Contact Tank (Effluent to Manhole 175)

DATE: SEPTEMBER 1991

Day	Flow (MGD)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.043	0.01	0.00	3
2	0.043	0.01	0.00	3
3	0.156	0.02	0.01	7
4	0.234	0.02	0.02	7
5	0.134	0.02	0.01	7
6	0.185	0.02	0.01	7
7	0.101	0.02	0.01	7
8	0.072	0.03	0.01	10
9	0.149	0.03	0.02	10
10	0.166	0.04	0.03	14
11	0.167	0.01	0.01	3
12	0.163	0.02	0.01	7
13	0.190	0.01	0.01	3
14	0.066	0.01	0.00	3
15	0.059	0.01	0.00	3
16	0.166	0.01	0.01	3
17	0.154	0.02	0.01	7
18	0.166	0.02	0.01	7
19	0.182	0.02	0.01	7
20	0.159	0.02	0.01	7
21	0.070	0.01	0.00	3
22	0.052	0.03	0.01	10
23	0.182	0.03	0.02	10
24	0.185	0.03	0.02	10
25	0.134	0.02	0.01	7
26	0.156	0.03	0.02	10
27	0.159	0.02	0.01	7
28	0.116	0.02	0.01	7
29	0.045	0.02	0.00	7
30	0.175	0.03	0.02	10
Total	4.029		0.32	

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: 601 Sanitary Treatment Plant

DATE: SEPTEMBER 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.134	0.02	0.01	7
Max.	0.234	0.04	0.03	14
Min.	0.043	0.01	0.00	3

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

EJB
10-10-91

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: 1I000004603
603 Clearwell
Clearwell (Effluent to Manhole 175)

DATE: SEPTEMBER 1991

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.000	0	0	0.00	0.00	0
2	0.000	0	0	0.00	0.00	0
3	0.000	0	0	0.00	0.00	0
4	0.000	0	0	0.00	0.00	0
5	0.000	0	0	0.00	0.00	0
6	0.000	0	0	0.00	0.00	0
7	0.000	0	0	0.00	0.00	0
8	0.000	0	0	0.00	0.00	0
9	0.000	0	0	0.00	0.00	0
10	0.000	0	0	0.00	0.00	0
11	0.000	0	0	0.00	0.00	0
12	0.000	0	0	0.00	0.00	0
13	0.000	0	0	0.00	0.00	0
14	0.000	0	0	0.00	0.00	0
15	0.000	0	0	0.00	0.00	0
16	0.000	0	0	0.00	0.00	0
17	0.000	0	0	0.00	0.00	0
18	0.000	0	0	0.00	0.00	0
19	0.000	0	0	0.00	0.00	0
20	0.000	0	0	0.00	0.00	0
21	0.000	0	0	0.00	0.00	0
22	0.000	0	0	0.00	0.00	0
23	0.000	0	0	0.00	0.00	0
24	0.000	0	0	0.00	0.00	0
25	0.000	0	0	0.00	0.00	0
26	0.000	0	0	0.00	0.00	0
27	0.000	0	0	0.00	0.00	0
28	0.000	0	0	0.00	0.00	0
29	0.000	0	0	0.00	0.00	0
30	0.000	0	0	0.00	0.00	0
Total	0.000				0.00	

10-10-91

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: 1I000004604
604 Storm Sewer Lift Station
Manhole 34 (Stormwater to Manhole 175)

DATE: SEPTEMBER 1991

Day	Flow (MGD)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.084	0.70	0.22	236
2	0.079	0.62	0.19	209
3	0.079	0.70	0.21	236
4	0.254	0.74	0.71	250
5	0.233	1.46	1.29	493
6	0.121	1.30	0.60	439
7	0.100	1.04	0.39	351
8	0.085	1.02	0.33	345
9	0.074	1.26	0.35	426
10	0.100	0.78	0.30	264
11	0.072	0.76	0.21	257
12	0.073	0.92	0.25	311
13	0.074	0.82	0.23	277
14	0.063	0.76	0.18	257
15	0.065	0.70	0.17	236
16	0.064	0.74	0.18	250
17	0.058	0.90	0.20	304
18	0.111	0.88	0.37	297
19	0.053	1.08	0.22	365
20	0.048	0.92	0.17	311
21	0.046	1.24	0.22	419
22	0.169	0.66	0.42	223
23	0.119	1.08	0.49	365
24	0.056	0.74	0.16	250
25	0.000	0.00	0.00	0
26	0.009	0.76	0.03	257
27	0.054	1.22	0.25	412
28	0.047	1.20	0.21	405
29	0.050	1.22	0.23	412
30	0.048	0.94	0.17	318
Total	2.488		8.92	

dZ
10-10-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: 604 Storm Sewer Lift Station

DATE: SEPTEMBER 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.083	0.95	0.30	320
Max.	0.254	1.46	1.29	493
Min.	0.000	0.00	0.00	0

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

dtQ
10-10-91

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: 1I000004605
605 Bioreactor
Bioreactor (Effluent to Manhole 175)

DATE: SEPTEMBER 1991

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.074	257	541	0.62	0.17	209
2	0.052	257	293	0.52	0.10	176
3	0.128	297	486	0.69	0.33	233
4	0.120	284	505	0.60	0.27	203
5	0.126	329	599	0.62	0.30	209
6	0.120	293	577	0.60	0.27	203
7	0.126	293	518	0.56	0.27	189
8	0.124	234	432	0.50	0.23	169
9	0.122	252	302	0.50	0.23	169
10	0.123	176	342	0.34	0.16	115
11	0.056	198	446	0.41	0.09	139
12	0.066	203	577	0.27	0.07	91
13	0.124	333	590	0.68	0.32	230
14	0.124	333	459	0.45	0.21	152
15	0.123	311	581	0.65	0.30	220
16	0.123	324	500	0.46	0.21	155
17	0.124	329	676	0.51	0.24	172
18	0.124	464	653	0.74	0.35	250
19	0.122	401	613	0.74	0.34	250
20	0.115	383	532	0.70	0.30	236
21	0.000	0	0	0.00	0.00	0
22	0.000	0	0	0.00	0.00	0
23	0.000	0	0	0.00	0.00	0
24	0.072	671	766	1.15	0.31	389
25	0.063	550	730	1.07	0.26	361
26	0.128	577	721	1.05	0.51	355
27	0.119	482	604	0.85	0.38	287
28	0.117	563	730	0.97	0.43	328
29	0.099	523	604	0.83	0.31	280
30	0.071	387	608	0.76	0.20	257
Total	2.885				7.18	

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: 605 Bioreactor

DATE: SEPTEMBER 1991

	Flow (MGD)	Total Alpha (pCi/l)(2)	Total Beta (pCi/l)(2)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.096	359	555	0.66	0.24	222
Max.	0.128	671	766	1.15	0.51	389
Min.	0.000	0	0	0.00	0.00	0

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

dzg
10-10-91

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: 1I000004606
606 Stormwater Retention Basin
Stormwater Retention Basin (Effluent to Manhole 175)

DATE: SEPTEMBER 1991

Day	Flow (MGD)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.000	0.00	0.00	0
2	0.000	0.00	0.00	0
3	0.000	0.00	0.00	0
4	0.000	0.00	0.00	0
5	0.000	0.00	0.00	0
6	0.706	0.24	0.64	81
7	0.603	0.22	0.50	74
8	0.609	0.26	0.60	88
9	0.000	0.00	0.00	0
10	0.372	0.26	0.37	88
11	0.000	0.00	0.00	0
12	0.000	0.00	0.00	0
13	0.000	0.00	0.00	0
14	0.000	0.00	0.00	0
15	0.000	0.00	0.00	0
16	0.000	0.00	0.00	0
17	0.152	0.28	0.16	95
18	0.187	0.28	0.20	95
19	0.712	0.28	0.75	95
20	0.000	0.00	0.00	0
21	0.000	0.00	0.00	0
22	0.000	0.00	0.00	0
23	0.000	0.00	0.00	0
24	0.000	0.00	0.00	0
25	0.000	0.00	0.00	0
26	0.000	0.00	0.00	0
27	0.000	0.00	0.00	0
28	0.000	0.00	0.00	0
29	0.000	0.00	0.00	0
30	0.000	0.00	0.00	0
Total	3.341		3.22	

DJP
10-10-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: 606 Stormwater Retention Basin

DATE: SEPTEMBER 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.111	0.25	0.11	86
Max.	0.712	0.28	0.75	95
Min.	0.000	0.00	0.00	0

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

EJD
10-10-91