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G-000-709.39

QUARTERLY REPORT LIQUID RADIATION DISCHARGES APRIL THROUGH JUNE, 1991

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ENCLOSURE

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2058

ENCLOSURE 2

QUARTERLY REPORT
LIQUID RADIATION DISCHARGES
APRIL THROUGH JUNE, 1991

QUARTERLY REPORT
LIQUID RADIATION DISCHARGES
APRIL THROUGH JUNE, 1991

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

U. S. DEPARTMENT OF ENERGY
FEED MATERIALS PRODUCTION CENTER
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 April through June 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 FMPC 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.

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

EFFLUENT RADIONUCLIDE REPORT 1990

2058

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	< 20.0	< 20.0	< 20.0	< 20.0	AH	AH	AH	AH	3.12	< 3.0	3.20	3.52	< 3.0	< 20.0	< 11.1	30	37.0
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.

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EFFLUENT RADIONUCLIDE REPORT 1990

2058

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

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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
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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
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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
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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.

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EFFLUENT RADIATION REPORT 1991

2058

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

Monthly/Quarterly Composites

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Ac-227	AH	AH	AH	AH	AH	AH	AH						0.0	0.0	0.0	10	AE
K-40	AH	AH	AH	AH	AH	AH	AH						0.0	0.0	0.0	7000	AE
Np-237	AH	AH	AH	AH	AH	AH	AH						0.0	0.0	0.0	30	AE
Pb-210	AH	AH	AH	AH	AH	AH	AH						0.0	0.0	0.0	30	AE
Pu-238	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						0.0	0.0	0.0	30	AE
Th-228	AH	AH	AH	AH	AH	AH	AH						0.0	0.0	0.0	400	AE
Th-230	AH	AH	AH	AH	AH	AH	AH						0.0	0.0	0.0	300	AE
Th-232	AH	AH	AH	AH	AH	AH	AH						0.0	0.0	0.0	50	AE
Cs-137	AH	AH	AH	AH	AH	AH	AH						0.0	0.0	0.0	3000	AE
Ru-106	AH	AH	AH	AH	AH	AH	AH						0.0	0.0	0.0	6000	AE
Sr-90	AH	AH	AH	AH	AH	AH	AH						0.0	0.0	0.0	1000	AE
Ra-226	< 1.0	< 0.9	< 0.9	< 0.9	AH	AH	AH						0.9	1.0	0.9	100	4.0
Ra-228	10	4.1	3.6	< 2.5	AH	AH	AH						2.5	10.0	5.4	100	11.3
Tc-99	< 160	< 4500	< 2700	< 3300	< 810	< 810	AH						160.0	4500.0	2144.5	100000	1.2
U-233	< 112.5	216.7	< 52.4	< 53.9	< 85.0	AH	AH						52.4	216.7	106.3	500	< 17.6
U-234	218.6	842.0	135.7	139.7	165.1	AH	AH						135.7	842.0	306.5	500	48.0
U-235	14.4	24.8	8.0	8.1	10.5	AH	AH						8.0	24.8	13.4	600	2.0
U-236	9.8	21.8	4.6	5.4	7.4	AH	AH						4.6	21.8	10.0	500	1.6
U-238	389.7	751.0	181.2	186.6	294.3	AH	AH						181.2	751.0	368.2	600	50.7

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.

MH 175 - Thorium 234

Second Quarter - 1991

APRIL

Day	Flow (MGD)	Th-234 pCi/l *
5	0.440	<0.39
12	0.580	<0.43
19	1.271	<0.44
26	0.393	<0.39
Total	2.684	<1.65
Avg	0.671	<0.42
Max	1.271	<0.44
Min	0.393	<0.39

MAY

Day	Flow (MGD)	Th-234 pCi/l *
3	0.395	<0.40
10	0.400	<0.38
17	0.324	<0.40
24	0.392	<0.40
31	0.368	<0.42
Total	1.879	<2.00
Avg	0.376	<0.40
Max	0.400	<0.42
Min	0.324	<0.38

JUNE

Day	Flow (MGD)	Th-234 pCi/l *
7	0.565	<0.35
14	0.465	<0.40
21	0.441	<0.40
28	0.315	<0.41
Total	1.786	<1.56
Avg	0.447	<0.39
Max	0.565	<0.41
Min	0.315	<0.35

* Average values presented are flow-weighted.

9002 M 9501 900212 4500 2058

HLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO00004001 APR 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
1	8.2	7.4	1.254	8.1	4	AA	AA	1.6	AA	0.
2	8.4	7.5	0.911							
3	8.5	7.3	0.502							
4	8.0	7.4	0.369							
5	7.9	7.3	0.440							
6	7.9	7.2	0.401							
7	7.6	7.3	0.355							
8	7.6	7.3	0.418							
9	7.6	7.2	0.493	8.7	4	AA	0.21	3.3	AE	1.
0	8.1	7.1	0.855							
1	8.9	6.7	0.580							
12	8.0	7.1	0.580							
13	8.0	7.4	0.990							
14	8.0	7.4	1.156							
15	8.1	7.2	1.031							
16	8.5	7.5	1.106							
17	8.5	7.6	0.468	10.6	8	AA	AA	2.1	AE	0
18	9.0	7.4	1.103							
19	8.2	7.1	1.271							
20	8.1	7.4	1.048							
21	8.0	7.5	0.928							
22	8.2	7.5	1.083							
23	9.0	7.3	0.983							
24	8.1	7.2	0.982							
25	7.7	7.2	0.904	9.3	AA	AA	AA	1.6	AA	0
26	8.0	7.4	0.393							
27	8.0	7.4	0.235							
28	7.9	7.4	0.256							
29	8.6	7.5	0.367							
30	8.0	7.3	0.382							
31										
	N/A	N/A	21.844	36.7	18	AA	0.51	8.6	AA	3
	N/A	N/A	0.728	8.9	4	AA	0.12	1.9	AA	0
	9.0	7.6	1.271	10.6	8	AA	0.21	3.3	AA	1
	7.6	6.7	0.235	8.1	AA	AA	AA	1.6	AA	0

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

AGENCY

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DCE FMPC Site Mar

9002 M 9501 900212 4500 2058

THLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO00004001 APR 1991 2 2 03/24/90 OH0009

Feed Materials Prod. Center
P.O. Box 398705 001 MANHOLE 175, FINAL EFFLUENT TO GREAT MIA
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	AA	AA	AA	AA	AA	AA	
02							3.82
03							
04							
05							
06							
07							
08							
09	AA	AA	9.1	14.3	AA	AA	3.59
10							
11							
12							
13							
14							
15							
16							1.57
17	AA	AA	AA	AA	AA	AA	
18							
19							
20							
21							
22							
23							0.40
24							
25	AA	AA	AA	AA	AA	AA	
26							
27							
28							
29							
30							1.37
31							
	AA	AA	27.1	41.3	AA	AA	10.75
	AA	AA	6.5	9.8	AA	AA	2.04
	AA	AA	9.1	14.3	AA	AA	3.82
	AA	AA	AA	AA	AA	AA	0.40

AA: 01034 - 6.0 ug/l; 01042 - 14.0 ug/l; 01051 - 6.0 ug/l; 01067 - 9.0 ug/l.
AA: 01077 - 3.0 ug/l; 01220 - 6.0 ug/l.

FL 5/19/91

AGENCY

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DOE FMPC Site Manag

.02 M 9501 900212 4500 2058

THLY REPORT FORM

*U.S. DEPARTMENT OF ENERGY 1IO00004002 APR 1991 1 2 03/24/90 OH000955

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

FORM

3 1	2 4	3 1	2 4	2 4	2 4	2 4	2 4	2 4	2 4
pH S.U.	RESIDU T. 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	SILVER AG/TOT UG/L
00400	00530	00550	00610	00620	00951	01034	01042	01067	01077
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									
N/A									
N/A									

NO WATER OVERFLOWED FROM THE STORMWATER RETENTION BASIN.

FLJ
5/9/91

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AGENCY

DOE FMPC Site Manager

9002 M 9501 900212
HLY REPORT FORM

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U.S. DEPARTMENT OF ENERGY 1I000004002 APR 1991 2 2 03/24/90 CHI.

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

FORM

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

01
02
03
04
05
06
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31

NO WATER OVERFLOWED FROM THE STORMWATER RETENTION BASIN.

FLJ
5/9/91

13

AGENCY

DOE FMPC Site Manag

9005 M 9009 900212 4500 2058

HLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO00004601 APR 1991 1 2 03/24/90 OH20095

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

FORM

	1	2	2	2	2	2	2	2	1	1
	999	998	998	998	998	998	998	998	999	999
	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	pH (MAX) S.U.	pH (MIN) S.U.
	50050	00310	00530	00610	00951	01034	01042	01067	00401	00402
01	0.168		2	AA	0.4	AA	AA	AA	7.6	7.4
02	0.148	6.18	2						7.8	7.5
03	0.231								7.6	7.3
04	0.113								7.5	7.2
05	0.134								7.5	7.2
06	0.059								7.7	7.0
07	0.053								7.4	7.3
08	0.150								7.7	7.3
09	0.182	6.76	AA	0.40	0.4	AA	AA	AA	7.6	7.4
10	0.201		2						7.4	7.2
11	0.162								7.3	7.0
12	0.170								7.4	7.0
13	0.179								7.5	7.2
14	0.158								7.6	7.3
15	0.197								8.0	7.5
16	0.187	2.56	2						7.9	7.5
17	0.197		3	0.20	0.4	AA	AA	AA	7.6	7.3
18	0.183								7.6	7.3
19	0.197								7.4	7.2
20	0.127								7.5	7.3
21	0.095								7.6	7.5
22	0.180								7.7	7.4
23	0.162	1.61	2						7.5	7.4
24	0.162								7.5	7.2
25	0.164		AA	0.20	0.3	AA	AA	AA	7.3	7.1
26	0.176								7.5	7.1
27	0.128								7.9	7.2
28	0.123								7.6	7.3
29	0.164								7.7	7.4
30	0.153	3.55	6						7.6	7.3
31										
	4.703	20.66	23	0.90	1.5	AA	AA	AA	N/A	N/A
	0.157	4.12	3	0.23	0.4	AA	AA	AA	N/A	N/A
	0.231	6.76	6	0.40	0.4	AA	AA	AA	8.0	7.5
	0.053	1.61	AA	AA	0.3	AA	AA	AA	7.3	7.0

FLJ 5/9/91

AA: 00530 - 2.0 mg/l; 00610 - 0.10 mg/l; 01034 - 6.0 ug/l; 01042 - 14.0 ug
AA: 01067 - 9.0 ug/l.

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AGENCY

DOE FMPC Site Manag

9002 M 9501 900212 4500 2058

HLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO00004602 APR 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	0.120	7.6	AA	AA	AA	AA
02	0.080					
03	0.040					
04	0.040					
05	0.040					
06	0.080					
07	0.040					
08	0.000					
09	0.040	7.4	AA	AA	AA	AA
10	0.080					
11	0.040					
12	0.040					
13	0.040					
14	0.040					
15	0.040					
16	0.078					
17	0.040	7.9	AA	AA	AA	AA
18	0.040					
19	0.080					
20	0.040					
21	0.000					
22	0.040					
23	0.040					
24	0.080					
25	0.040	7.0	AA	AA	AA	AA
26	0.080					
27	0.000					
28	0.040					
29	0.040					
30	0.078					
31						
	1.476	N/A	AA	AA	AA	AA
	0.049	N/A	AA	AA	AA	AA
	0.120	7.9	AA	AA	AA	AA
	0.000	7.0	AA	AA	AA	AA

AA: 01034 - 6.0 ug/l; 01042 - 14.0 ug/l; 01067 - 9.0 ug/l; 01220 - 6.0 u

FLJ 5/9/91

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AGENCY

DOE FMPC Site Man

THLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO00004604 APR 1991 1 1 03/24/90 OH0009

Feed Materials Prod. Center
P.O. Box 398705 604 STORM SEWER LIFT STATION EFFLUENT TO MH 1
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	8.0	7.7	0.099	AA	AA	2.4	0.5
02	8.3	7.9	0.102				
03	8.1	8.0	0.088				
04	8.1	8.0	0.069				
05	8.2	7.8	0.129				
06	8.2	8.1	0.102				
07	8.2	8.0	0.110				
08	8.2	7.8	0.096				
09	8.0	7.5	0.095	AA	AA	1.3	2.3
10	8.1	7.9	0.170				
11	8.0	7.9	0.121				
12	8.1	7.6	0.156				
13	8.2	7.6	0.133				
14	8.6	7.8	0.331				
15	8.4	7.5	0.170				
16	8.1	7.9	0.210				
17	8.1	7.9	0.156	AA	AA	2.5	0.8
18	8.1	8.0	0.138				
19	8.2	7.7	0.295				
20	8.1	8.0	0.170				
21	8.1	8.0	0.141				
22	8.3	7.7	0.109				
23	8.0	7.6	0.080				
24	8.1	7.6	0.041				
25	8.3	7.5	0.039	2	AA	1.4	0.5
26	8.9	7.8	0.137				
27	8.0	7.6	0.107				
28	8.0	7.8	0.093				
29	8.0	7.7	0.090				
30	8.1	8.0	0.082				
31							
	N/A	N/A	3.859	8	AA	7.6	4.1
	N/A	N/A	0.129	2	AA	2.1	1.1
	8.9	8.1	0.331	2	AA	2.5	2.3
	8.0	7.5	0.039	AA	AA	1.3	0.5

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

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5/9/91

AGENCY

DOE FMPC Site Manag

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ILY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1I000004605 APR 1991 1 2 03/24/90 OH00095

Feed Materials Prod. Center
P.O. Box 398705 605 BIODENITRIFICATION EFFLUENT TO MANHOLE 17
Fernald 45239 Hamilton

FORM

	1	1	1	2	2	2	2	2	2	2
	999	999	999	998	998	998	998	998	998	998
	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	COPPER CU,TO UG/L
	00401	00402	50050	00310	00530	00610	00620	00951	01034	01042
	7.0	6.7	0.115		6	0.17	0.6	3.8	8.5	AA
2	7.4	6.6	0.128	44.4						
3	7.4	7.1	0.143							
4	7.8	7.2	0.147							
5	7.5	7.2	0.137							
6	7.8	7.1	0.160							
07	7.3	7.0	0.152							
08	7.2	7.1	0.172							
09	7.2	7.1	0.176	37.7	3	0.22	0.7	3.5	6.0	AA
10	7.5	7.1	0.174							
11	7.3	7.2	0.054							
12	AC	AC	AC							
13	AC	AC	AC							
14	AC	AC	AC							
15	AC	AC	AC							
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	AC	AC	AC							
23	AC	AC	AC							
24	AC	AC	AC							
25	AC	AC	AC							
26	AC	AC	AC							
27	AC	AC	AC							
28	AC	AC	AC							
29	8.1	7.5	0.073		6	AA	3.1	2.7	11.8	AA
30	8.2	8.0	0.069	5.5						
31										
	N/A	N/A	1.700	87.6	15	0.49	4.4	10.0	26.3	AA
	N/A	N/A	0.131	34.0	5	0.18	1.1	3.4	8.0	AA
	8.2	8.0	0.176	44.4	6	0.22	3.1	3.8	11.8	AA
	7.0	6.6	0.054	5.5	3	AA	0.6	2.7	6.0	AA

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

FLJ 5/9/91

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AGENCY

DOE FMPC Site Manag

9002 M 9501 900212 4500 2058

ILY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IC00004605 APR 1991 2 2 03/24/90 OH00095

Feed Materials Prod. Center
P.O. Box 398705 605 BIODENITRIFICATION EFFLUENT TO MANHOLE 17
Fernald 45239 Hamilton

FORM

	2 998 NICKEL NI,TOT UG/L 01067	2 998 CHROMI HEX-DS UG/L 01220
01	26.7	AA
02		
03		
04		
05		
06		
07		
08		
09	19.5	AA
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29	18.6	AE
30		
31		
	64.8	AA
	21.6	AA
	26.7	AA
	18.6	AA

AA: 01067 - 9.0 ug/l; 01220 - 6.0 ug/l.

FLJ 5/19/91

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AGENCY

DOE FMPC Site Mar

9002 M 9501 900212 4500 2058

THLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 11000004606 APR 1991 1 1 03/24/90 OH0009

Feed Materials Prod. Center
P.O. Box 398705 606 STORMWATER RETENTION BASIN EFFLUENT TO MH
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	8.6	8.2	0.752	3	AA
02	8.6	8.2	0.453	6	AA
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	AC	AC	AC	AC	AC
10	9.2	8.8	0.231	AA	AA
11	8.8	7.0	0.203	AA	AA
12	8.6	7.5	0.214	22	AA
13	8.6	7.8	0.638	16	AA
14	8.3	8.0	0.627	16	AA
15	8.5	7.4	0.625	12	AA
16	8.8	7.7	0.632	9	AA
17	8.6	7.8	0.075	12	AA
18	9.0	7.0	0.742	23	AA
19	8.8	7.2	0.695	6	AA
20	8.8	8.2	0.711	8	AA
21	8.7	8.1	0.692	3	AA
22	8.6	7.6	0.754	7	AA
23	8.3	7.6	0.701	AA	AA
24	8.2	7.5	0.699	AA	AA
25	8.2	7.6	0.661	AA	AA
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					
	N/A	N/A	10.105	153	AA
	N/A	N/A	0.561	8	AA
	9.2	8.8	0.754	23	AA
	8.2	7.0	0.075	AA	AA

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

FLJ 5/9/91

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AGENCY

DOE FMPC Site Ma

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HLY REPORT FORM

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U.S. DEPARTMENT OF ENERGY 1IO00004001 MAY 1991 1 2 03/24/90 OH00095

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

FORM

	1	1	1	3	2	3	2	2	3	2
	999	999	999	1	998	1	998	998	1	998
	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	FLUOR F,TOT MG/L
	00401	00402	50050	00300	00530	00550	00610	00620	00720	00951
1	8.2	7.4	0.353	7.8	AA	AA	0.19	5.0	AA	1.1
2	8.0	7.3	0.322							
3	8.0	7.3	0.395							
4	8.0	7.2	0.322							
5	8.0	7.3	0.323							
6	8.2	7.4	0.366							
7	8.0	7.4	0.355							
8	8.0	7.4	0.354							
9	8.3	7.3	0.421							
10	8.1	7.4	0.400							
11	7.9	7.3	0.281							
12	8.0	7.2	0.244	8.5	2	AA	0.65	2.6	AA	0.9
13	7.8	7.3	0.245							
14	8.4	7.4	0.647							
15	8.2	7.5	0.922							
16	8.6	7.3	0.583							
17	8.2	7.2	0.324							
18	8.1	7.0	0.449							
19	7.9	7.3	1.072							
20	7.9	7.2	1.095	7.4	3	AA	0.14	2.6	AA	0.4
21	8.6	7.2	0.786							
22	7.8	7.2	0.421							
23	7.9	7.3	0.326							
24	8.0	7.1	0.392							
25	8.0	7.4	0.328							
26	8.1	7.4	0.355							
27	8.9	7.4	0.547							
28	8.8	7.1	0.285	6.5	14	AA	0.03	3.9	AA	1.3
29	8.2	7.1	0.412							
30	8.2	7.2	0.411							
31	8.1	7.1	0.368							
	N/A	N/A	14.104	30.2	21	AA	1.01	14.1	AA	3.7
	N/A	N/A	0.455	7.5	4	AA	0.20	3.2	AA	0.7
	8.9	7.5	1.095	8.5	14	AA	0.65	5.0	AA	1.3
	7.8	7.0	0.244	6.5	AA	AA	0.03	2.6	AA	0.4

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

FLJ 7/19/91

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AGENCY

DOE FMPC Site Manag

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MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO00004001 MAY 1991 2 2 03/24/90 OH0095

Feed Materials Prod. Center
P.O. Box 398705 001 MANHOLE 175, FINAL EFFLUENT TO GREAT MIAM
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	9.4	17.5	11.5	15.3	AA	AA	
02							
03							
04							
05							
06							
07							0.75
08							
09							
10							
11							
12	6.0	AA	AA	9.4	AA	AA	
13							
14							0.64
15							
16							
17							
18							
19							
20	AA	AA	AA	AA	AA	AA	
21							
22							1.78
23							
24							
25							
26							
27							
28	6.4	15.8	6.2	18.8	AA	AA	1.92
29							
30							
31							
	27.8	61.3	29.7	52.5	AA	AA	5.09
	6.7	14.9	7.0	11.6	AA	AA	1.16
	9.4	17.5	11.5	18.8	AA	AA	1.92
	AA	AA	AA	AA	AA	AA	0.64

FLJ 10/91 AA: 01034 - 6.0 ug/l; 01042 - 14.0 ug/l; 01051 - 6.0 ug/l; 01067 - 9.0 ug/l.
AA: 01077 - 3.0 ug/l; 01220 - 6.0 ug/l.

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AGENCY

DOE FMPC Site Manager

9002 M 9501 900212

4500

2058

ITHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO00004002 MAY 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/T
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	0107

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N/A
N/A

NO WATER OVERFLOWED FROM THE STORMWATER RETENTION BASIN.

FLJ 6/10/91

22

AGENCY

DOE FMPC Site Manage

.002 M 9501 900212

4500

2058

THLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 11000004002 MAY 1991 2 2 03/24/90 OH0009

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

FORM

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

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NO WATER OVERFLOWED FROM THE STORMWATER RETENTION BASIN.

FLJ
6/10/91

23

AGENCY

DOE FMPC Site Manage

9005 M 9009 900212

THLY REPORT FORM

4500

2058

U.S. DEPARTMENT OF ENERGY 11000004601 MAY 1991 1 2 03/24/90 OH00095

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

FORM

	1	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
	50050	00310	00530	00610	00951	01034	01042	01067	31616
01	0.156		3	0.28	0.3	AA	AA	AA	36
02	0.152								
03	0.165								
04	0.067								
05	0.047								
06	0.104								
07	0.102	1.98	4						
08	0.106								
09	0.096								
10	0.122								
11	0.029								
12	0.038		AH	1.22	AH	AA	AA	AA	31
13	0.120								
14	0.112	3.21	6						
15	0.126								
16	0.134								
17	0.105								
18	0.128								
19	0.051								
20	0.156		AA	0.25	0.3	AA	AA	AA	170
21	0.123								
22	0.128	2.54	9						
23	0.135								
24	0.142								
25	0.118								
26	0.074								
27	0.075								
28	0.080	2.36	AA	0.06	0.3	AA	AA	AA	90
29	0.135								
30	0.138								
31	0.140								
	3.404	10.09	26	1.81	0.9	AA	AA	AA	327
	0.110	2.55	4	0.31	0.3	AA	AA	AA	64
	0.165	3.21	9	1.22	0.3	AA	AA	AA	170
	0.029	1.98	AA	0.06	0.3	AA	AA	AA	31

FL 6/10/91

AA: 00530 - 2.0 mg/l; 00610 - 0.10 mg/l; 01034 - 6.0 ug/l; 01042 - 14.0 ug/
AA: 01067 - 9.0 ug/l.

AH: Samples improperly preserved.

24

AGENCY

DOE FMPC Site Manag

9005 M 9009 900212

4500

2058

THLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 11000004601 MAY 1991 2 2 03/24/90 OH00095

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	7.4	7.2
02	7.4	7.2
03	7.4	7.1
04	7.7	7.1
05	7.6	7.1
06	7.4	7.2
07	7.5	7.3
08	7.4	7.2
09	7.3	7.2
10	7.4	7.1
11	7.7	7.3
12	7.4	7.2
13	7.6	7.2
14	7.6	7.4
15	7.4	7.2
16	7.3	7.1
17	7.6	7.2
18	7.6	7.4
19	7.6	7.5
20	7.7	7.4
21	7.5	7.3
22	7.4	7.2
23	7.2	6.9
24	7.5	6.9
25	7.6	7.2
26	7.6	7.3
27	7.5	7.3
28	7.5	7.3
29	7.4	7.3
30	7.5	7.3
31	7.6	7.2
	N/A	N/A
	N/A	N/A
	7.7	7.5
	7.2	6.9

FLJ
6/10/91

25

AGENCY

DOE FMPC Site Manager

9002 M 9501 900212 4500 2058

LY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO00004602 MAY 1991 1 1 03/24/90 OH00095

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
1	0.040	8.2	AA	17.4	21.1	AA
2	0.038					
3	0.040					
4	0.040					
5	0.040					
6	0.040					
7	0.040					
8	0.040					
9	0.080					
0	0.040					
1	0.040					
2	0.040	7.2	AA	AA	AA	AA
3	0.040					
4	0.040					
5	0.040					
6	0.040					
7	0.038					
8	0.038					
9	0.038					
20	0.078	7.9	AA	AA	AA	AA
21	0.040					
22	0.040					
23	0.038					
24	0.038					
25	0.000					
26	0.076					
27	0.038					
28	0.040	7.7	AA	AA	AA	AA
29	0.038					
30	0.040					
31	0.038					
	1.296	N/A	AA	59.4	48.1	AA
	0.042	N/A	AA	14.7	11.4	AA
	0.080	8.2	AA	17.4	21.1	AA
	0.000	7.2	AA	AA	AA	AA

AA: 01034 - 6.0 ug/l; 01042 - 14.0 ug/l; 01067 - 9.0 ug/l; 01220 - 6.0 ug/l

FLJ 6/10/91

26

AGENCY

DOE FMPC Site Manage

9002 M 9501 900212 4500 2058

THLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO000004604 MAY 1991 1 1 03/24/90 OH000958

Feed Materials Prod. Center
P.O. Box 398705 604 STORM SEWER LIFT STATION EFFLUENT TO MH 17
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	2 998 NITRAT NO3-N MG/L 00620	2 998 FLUORI F,TOT MG/L 00951
01	8.1	8.0	0.087	AA	AA	2.9	0.7
02	8.1	8.0	0.065				
03	8.1	7.9	0.072				
04	8.0	7.9	0.077				
05	8.0	7.6	0.090				
06	8.9	7.8	0.082				
07	8.1	8.0	0.074				
08	8.1	7.8	0.060				
09	8.0	7.5	0.106				
10	8.0	7.8	0.106				
11	8.0	7.7	0.066				
12	8.0	7.8	0.080	AA	AA	2.9	0.5
13	8.0	7.8	0.081				
14	8.6	7.9	0.053				
15	7.8	7.2	0.088				
16	8.9	7.6	0.051				
17	8.3	7.3	0.046				
18	8.4	8.0	0.140				
19	8.2	8.1	0.133				
20	8.2	7.9	0.100	AA	AA	3.1	0.9
21	8.0	7.9	0.089				
22	7.9	7.7	0.085				
23	7.9	7.7	0.096				
24	7.7	7.4	0.085				
25	7.9	7.6	0.082				
26	7.9	7.3	0.095				
27	7.7	7.5	0.310				
28	8.0	7.0	0.087	2	AA	2.9	0.8
29	8.5	7.4	0.110				
30	8.5	7.6	0.107				
31	8.2	7.7	0.085				
	N/A	N/A	2.888	8	AA	11.8	2.9
	N/A	N/A	0.093	2	AA	3.0	0.7
	8.9	8.1	0.310	2	AA	3.1	0.9
	7.7	7.0	0.046	AA	AA	2.9	0.5

TIONAL REMARKS AND REPORTING CODES MUST BE EXPLAINED IN THIS SECTION.

AA: 00530 - 2.0 mg/1; 00550 - 5.0 mg/1.

FLJ 6/10/91

00530 and 00620 samples were not maintained at the required 4°C during compositing.

DATE REPORT COMPLETED SIGNATURE OF REPORTER TITLE OF REPORTER

DOE FMPC Site Manager

9002 M 9501 900212 4500 2058

NTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IO00004605 MAY 1991 1 2 03/24/90 OH0009

Feed Materials Prod. Center
P.O. Box 398705 605 BIODENITRIFICATION EFFLUENT TO MANHOLE 1
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	2 998 COPPI CU,TC UG/1 01042
01	8.2	8.1	0.070		AA	AA	2.5	2.8	AA	AA
02	8.2	8.1	0.067							
03	8.2	8.1	0.118							
04	8.2	7.9	0.138							
05	8.0	7.9	0.146							
06	8.1	7.9	0.140							
07	8.1	8.0	0.139	9.09						
08	8.1	7.9	0.147							
09	8.0	7.9	0.139							
10	8.0	7.8	0.132							
11	7.9	7.8	0.147							
12	7.9	7.8	0.086		5	0.12	0.6	3.2	7.1	AA
13	7.8	7.6	0.004							
14	7.9	7.6	0.058	7.58						
15	7.9	7.8	0.095							
16	8.0	7.8	0.103							
17	7.9	7.8	0.135							
18	8.0	7.9	0.143							
19	8.0	7.9	0.138							
20	7.9	7.8	0.043		12	AA	0.8	3.4	AA	AA
21	AC	AC	AC							
22	AC	AC	AC							
23	8.1	7.7	0.056	7.63						
24	8.1	7.9	0.128							
25	8.0	7.9	0.128							
26	8.0	7.9	0.111							
27	8.0	7.9	0.123							
28	8.0	7.8	0.078	7.50	7	0.16	0.9	3.4	7.7	14.
29	8.0	7.8	0.128							
30	7.9	7.8	0.126							
31	7.9	7.7	0.105							
	N/A	N/A	3.171	31.80	26	0.48	4.8	12.8	26.8	56.
	N/A	N/A	0.109	8.20	6	0.12	1.2	3.2	6.8	14.
	8.2	8.1	0.147	9.09	12	0.16	2.5	3.4	7.7	14.
	7.8	7.6	0.004	7.50	AA	AA	0.6	2.8	AA	AA

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

FLJ 6/10/91

28

AGENCY

DOE FMPC Site Manag

9002 M 9501 900212

LY REPORT FORM

4500 2058

U.S. DEPARTMENT OF ENERGY 1IO00004605 MAY 1991 2 2 03/24/90 OH000958

Feed Materials Prod. Center
P.O. Box 398705 605 BIODENITRIFICATION EFFLUENT TO MANHOLE 175
Fernald 45239 Hamilton

FORM

2 998 NICKEL NI,TOT UG/L 01067	2 998 CHROMI HEX-DS UG/L 01220
18.0	AA
17.7	AA
19.4	AA
22.6	AA
77.7	AA
19.4	AA
22.6	AA
17.7	AA

AA: 01067 - 9.0 ug/l; 01220 - 6.0 ug/l.

VJ
6/10/91

29

AGENCY

DATE REPORT COMPLETED SIGNATURE OF REPORTER TITLE OF REPORTER

DOE FMPC Site Manager

U.S. DEPARTMENT OF ENERGY 11000004001 JUN 1991 1 2 03/24/90 OH00095

Feed Materials Prod. Center
P.O. Box 398705 001 MANHOLE 1.75, FINAL EFFLUENT TO GREAT MIAM
Fernald 45239 Hamilton

FORM

	1	1	1	3	2	3	2	2	3	2
	999	999	999	1	998	1	998	998	1	998
	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	FLUOP F,TOT MG/I
	00401	00402	50050	00300	00530	00550	00610	00620	00720	0095
1	7.7	7.1	0.223							
2	7.9	7.3	0.314	6.4	AA	AA	AA	4.2	AA	1.4
3	7.7	7.3	0.386							
4	8.3	7.3	0.314							
5	8.0	7.0	0.388							
6	7.7	7.2	0.294							
7	8.4	6.9	0.565							
8	8.1	7.1	0.648							
9	8.9	7.4	0.633							
10	8.7	7.4	0.454	8.2	AA	AA	0.26	4.9	AA	1.3
11	8.7	7.5	0.355							
12	7.9	7.4	0.383							
13	7.8	7.2	0.400							
14	8.1	7.3	0.465							
15	7.7	7.3	0.288							
16	7.6	7.3	0.371							
17	7.8	6.8	0.374							
18	7.8	7.4	0.375	7.7	AA	AA	AA	5.4	AA	1.1
19	7.6	7.4	0.346							
20	7.9	7.4	0.388							
21	8.0	7.3	0.441							
22	7.8	7.2	0.249							
23	7.7	7.4	0.209							
24	7.9	7.3	0.243							
25	7.6	7.0	0.327							
26	7.6	7.0	0.339	8.2	AA	AA	AA	5.7	AA	0.8
27	7.5	7.1	0.368							
28	8.1	7.0	0.315							
29	7.6	7.3	0.207							
30	7.6	7.3	0.188							
31										
	N/A	N/A	10.850	30.5	AA	AA	0.56	20.2	AA	4.6
	N/A	N/A	0.362	7.7	AA	AA	0.15	5.1	AA	1.2
	8.9	7.5	0.648	8.2	AA	AA	0.26	5.7	AA	1.4
	7.5	6.8	0.188	6.4	AA	AA	AA	4.2	AA	0.8

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

cj
1/19/91

U.S. DEPARTMENT OF ENERGY 1IO00004001 JUN 1991 2 2 03/24/90 OH00095

Feed Materials Prod. Center
P.O. Box 398705 001 MANHOLE 175, FINAL EFFLUENT TO GREAT MIAM
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	AA	AA	AA	9.3	AA	AA	
03							
04							0.51
05							
06							
07							
08							
09							
10	AA	AA	AA	14.8	AA	AA	
11							0.16
12							
13							
14							
15							
16							
17							
18	AA	AA	AA	AA	AA	AA	0.02
19							
20							
21							
22							
23							
24							
25							2.01
26	AA	AA	AA	AA	AA	AA	
27							
28							
29							
30							
31							
	AA	AA	AA	42.1	AA	AA	2.70
	AA	AA	AA	10.8	AA	AA	0.64
	AA	AA	AA	14.8	AA	AA	2.01
	AA	AA	AA	AA	AA	AA	0.02

AA: 01034 - 6.0 ug/l; 01042 - 14.0 ug/l; 01051 - 6.0 ug/l; 01067 - 9.0 ug/l.
AA: 01077 - 3.0 ug/l; 01220 - 6.0 ug/l.

LJ 7/3/91

AGENCY

DOE FMPC Site Manag

.02 M 9501 900212 4500 2058

HLY REPORT FORM

.U.S. DEPARTMENT OF ENERGY 11000004002 JUN 1991 1 2 03/24/90 OH00095

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 S.U.	RESIDU T. 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	SILVE AG/TC UG/L
00400	00530	00550	00610	00620	00951	01034	01042	01067	01077

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N/A
N/A

NO WATER OVERFLOWED FROM THE STORMWATER RETENTION BASIN.

FW 7/8/91

32

AGENCY

DOE FMPC Site Manag

9002 M 9501 900212 4500 2058

ONLY RECORD FORM

• U.S. DEPARTMENT OF ENERGY 1I000004002 JUN 1991 2 2 03/24/90 OH00095

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

FORM

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

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NO WATER OVERFLOWED FROM THE STORMWATER RETENTION BASIN.

FLJ 7/8/91

33

AGENCY

DOE FMPC Site Manag.

U.S. DEPARTMENT OF ENERGY 11000004601 JUN 1991 1 2 03/24/90 OH000958

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

FCFM

	1	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
	50050	00310	00530	00610	00951	01034	01042	01067	31616
01	0.115								
02	0.095		4	AA	0.3	AA	AA	AA	2
03	0.128								
04	0.132	2.68							
05	0.130								
06	0.122								
07	0.149								
08	0.034								
09	0.020								
10	0.182		AA	0.18	0.3	AA	26.0	11.8	3
11	0.142	1.84	2						
12	0.136								
13	0.142								
14	0.199								
15	0.087								
16	0.108								
17	0.144								
18	0.174	0.98	AA	AA	0.3	AA	AA	AA	10
19	0.198								
20	0.236								
21	0.247								
22	0.169								
23	0.124								
24	0.150								
25	0.167	3.30	AA						
26	0.179		2	AA	0.2	AA	AA	AA	6
27	0.249								
28	0.193								
29	0.121								
30	0.130								
31									
	4.402	8.80	14	0.48	1.1	AA	68.0	38.8	21
	0.147	2.17	2	0.12	0.3	AA	17.5	9.8	4
	0.249	3.30	4	0.18	0.3	AA	26.0	11.8	10
	0.020	0.98	AA	AA	0.2	AA	AA	AA	2

FLJ 7/3/91 AA: 00530 - 2.0 mg/l; 00610 - 0.10 mg/l; 01034 - 6.0 ug/l; 01042 - 14.0 u
AA: 01067 - 9.0 ug/l.

LY REPORT FORM

U.S. DEPARTMENT OF ENERGY 11000004601 JUN 1991 2 2 03/24/90 OH000956

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
1	7.6	7.4
2	7.6	7.4
3	7.6	7.4
4	7.7	7.4
5	7.6	7.1
6	7.4	7.0
7	7.7	7.0
8	7.8	7.4
9	7.6	7.4
10	7.6	7.4
11	7.6	7.4
12	7.5	7.1
13	7.3	7.0
14	7.3	6.9
15	7.8	6.9
16	8.2	7.1
17	7.8	7.3
18	7.5	7.4
19	7.4	7.2
20	7.3	7.1
21	7.5	7.1
22	7.6	7.4
23	8.0	7.4
24	8.0	7.6
25	7.6	7.3
26	7.3	7.1
27	7.5	7.1
28	7.7	7.0
29	7.7	7.3
30	7.8	7.4
31		
	N/A	N/A
	N/A	N/A
	8.2	7.6
	7.3	6.9

F.L.J. 7/8/91

AGENCY

DOE FMPC Site Manage

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 11000004602 JUN 1991 1 1 03/24/90 OH0009

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	0.000					
02	0.040	7.4	AA	AA	AA	AA
03	0.040					
04	0.040					
05	0.040					
06	0.040					
07	0.000					
08	0.040					
09	0.040					
10	0.040	7.7	AA	AA	AA	AA
11	0.000					
12	0.040					
13	0.040					
14	0.035					
15	0.000					
16	0.040					
17	0.040					
18	0.040	7.9	AA	AA	AA	AA
19	0.040					
20	0.080					
21	0.120					
22	0.040					
23	0.039					
24	0.040					
25	0.040					
26	0.040	8.2	AA	AA	AA	AA
27	0.000					
28	0.040					
29	0.000					
30	0.000					
31						
	1.034	N/A	AA	AA	AA	AA
	0.034	N/A	AA	AA	AA	AA
	0.120	8.2	AA	AA	AA	AA
	0.000	7.4	AA	AA	AA	AA

AA: 01034 - 6.0 ug/l; 01042 - 14.0 ug/l; 01067 - 9.0 ug/l; 01220 - 6.0 ug

FLJ
7/8/91

AGENCY

DOE FMPC Site Mana

9002 M 9501 900212 4500 2058

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 11000004604 JUN 1991 1 1 03/24/90 CH1009

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

604 STORM SEWER LIFT STATION EFFLUENT TO MH

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	8.0	7.8	0.059				
02	8.0	7.8	0.068	3	AA	3.2	0.6
03	7.9	7.2	0.094				
04	8.3	7.6	0.064				
05	8.2	7.6	0.094				
06	8.3	7.7	0.095				
07	8.2	7.7	0.099				
08	8.1	7.7	0.093				
09	7.8	7.7	0.095				
10	8.8	7.6	0.110	AA	AA	1.9	0.3
11	8.6	7.8	0.088				
12	8.1	7.7	0.097				
13	8.0	7.8	0.094				
14	8.0	7.7	0.107				
15	7.9	7.6	0.074				
16	7.9	7.5	0.099				
17	7.7	7.5	0.069				
18	7.7	7.6	0.068	AA	AA	2.6	0.4
19	7.7	7.6	0.070				
20	7.7	7.5	0.072				
21	7.6	7.5	0.074				
22	7.8	7.3	0.040				
23	7.8	7.5	0.046				
24	7.7	7.5	0.041				
25	7.7	7.5	0.075				
26	7.6	7.5	0.077	AA	AA	2.5	0.4
27	7.7	7.6	0.076				
28	7.7	7.6	0.072				
29	7.3	7.2	0.087				
30	7.3	7.1	0.057				
31							
	N/A	N/A	2.354	9	AA	10.2	1.7
	N/A	N/A	0.078	2	AA	2.5	0.4
	8.8	7.8	0.110	3	AA	3.2	0.6
	7.3	7.1	0.040	AA	AA	1.9	0.3

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

FV 7/3/91

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AGENCY

DOE FMPC Site Mon

U.S. DEPARTMENT OF ENERGY 1I000004605 JUN 1991 1 2 03/24/90 OH0009

Feed Materials Prod. Center
P.O. Box 398705 605 BIODENITRIFICATION EFFLUENT TO MANHOLE 1
Fernald 45239 Hamilton FORM

	1	1	1	2	2	2	2	2	2	2
	999	999	999	998	998	998	998	998	998	998
	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	COPP CU, UG/
	00401	00402	50050	00310	00530	00610	00620	00951	01034	010
01	8.3	7.5	0.049							
02	8.5	7.7	0.111		4	AA	0.6	3.5	AA	A
03	8.4	7.8	0.123							
04	8.3	7.8	0.079	4.07						
05	8.4	7.9	0.124							
06	8.3	7.8	0.037							
07	8.1	7.9	0.070							
08	8.1	7.9	0.120							
09	8.1	7.7	0.127							
10	8.2	7.7	0.122		AA	AA	0.6	3.7	AA	A
11	8.1	7.6	0.125	6.73						
12	8.0	7.7	0.110							
13	8.0	7.7	0.124							
14	8.1	7.7	0.124							
15	8.2	7.7	0.127							
16	8.1	7.7	0.124							
17	8.1	7.6	0.121							
18	8.0	7.5	0.093	6.50	2	AA	0.6	3.7	AA	A
19	8.1	7.5	0.038							
20	AC	AC	AC							
21	AC	AC	AC							
22	AC	AC	AC							
23	AC	AC	AC							
24	8.1	7.8	0.013							
25	8.3	7.8	0.045	20.5						
26	8.1	7.8	0.043		5	AA	1.3	3.5	6.0	A
27	8.4	7.7	0.043							
28	8.2	7.8	0.011							
29	AC	AC	AC							
30	AC	AC	AC							
31										
	N/A	N/A	2.103	37.80	13	AA	3.1	14.4	24.0	A
	N/A	N/A	0.088	7.86	3	AA	0.7	3.6	6.0	A
	8.5	7.9	0.127	20.50	5	AA	1.3	3.7	6.0	A
	8.0	7.5	0.011	4.07	AA	AA	0.6	3.5	AA	A

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

FLJ 7/8/91

U.S. DEPARTMENT OF ENERGY 11000004605 JUN 1991 2 2 03/24/90 OH00095

Feed Materials Prod. Center
P.O. Box 398705 605 BIODENITRIFICATION EFFLUENT TO MANHOLE 17
Fernald 45239 Hamilton FCPM

2	2
998	998
NICKEL NI,TOT UG/L	CHROMI HEX-DS UG/L
01067	01220
21.4	AA
15.6	AA
11.1	AA
13.4	AA
61.5	AA
16.0	AA
21.4	AA
11.1	AA

AA: 01067 - 9.0 ug/l; 01220 - 6.0 ug/l.

FLJ 7/3/91

U.S. DEPARTMENT OF ENERGY 11000004606 JUN 1991 1 1 03/24/90 OH00091

Feed Materials Prod. Center
P.O. Box 398705 606 STORMWATER RETENTION BASIN EFFLUENT TO MH
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	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	8.6	7.4	0.247	6	AA
08	8.6	7.5	0.361	9	AA
09	9.1	7.6	0.351	6	AA
10	AC	AC	AC	AC	AC
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	AC	AC	AC	AC	AC
18	AC	AC	AC	AC	AC
19	AC	AC	AC	AC	AC
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					
	N/A	N/A	0.959	21	AA
	N/A	N/A	0.320	7	AA
	9.1	7.6	0.361	9	AA
	8.6	7.4	0.247	6	AA

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

FLJ 7/8/91

AGENCY

DOE FMPC Site Mana

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: APRIL 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	1.254	189	104	0.40	1.90	135
2	0.911	189	171	0.48	1.65	162
3	0.502	302	207	0.62	1.18	209
4	0.369	306	293	0.76	1.06	257
5	0.440	347	203	0.78	1.30	264
6	0.401	347	216	0.80	1.21	270
7	0.355	441	149	0.88	1.18	297
8	0.418	405	324	1.00	1.58	338
9	0.493	347	158	0.84	1.57	284
10	0.855	419	207	0.86	2.78	291
11	0.580	414	77	0.88	1.93	297
12	0.580	212	72	0.44	0.97	149
13	0.990	284	77	0.40	1.50	135
14	1.156	410	153	0.44	1.92	149
15	1.031	329	122	0.40	1.56	135
16	1.106	338	95	0.40	1.67	135
17	0.468	302	90	0.48	0.85	162
18	1.103	212	108	0.40	1.67	135
19	1.271	360	90	0.50	2.40	169
20	1.048	306	77	0.48	1.90	162
21	0.928	297	99	0.44	1.54	149
22	1.083	257	99	0.38	1.56	128
23	0.983	212	90	0.40	1.49	135
24	0.982	248	108	0.42	1.56	142
25	0.904	212	90	0.46	1.57	155
26	0.393	351	135	0.86	1.28	291
27	0.235	270	104	0.68	0.60	230
28	0.256	383	90	0.80	0.77	270
29	0.367	523	293	1.26	1.75	426
30	0.382	577	252	1.66	2.40	561
Total	21.844				46.32	

6-30-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 001 Total Discharge

DATE: APRIL 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.	0.728	307	129	0.56	1.54	189
Max.	1.271	577	324	1.66	2.78	561
Min.	0.235	189	72	0.38	0.60	128

The average uranium concentration for the previous twelve months was 0.90 mg/l. This is 101.1 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.

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: APRIL 1991

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

Based on 4.48 inches of rainfall for the month, the uranium discharge to Paddy's Run from uncontrolled areas of the FMPC is estimated to be 20.16 kgs.

5-20-91

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: APRIL 1991

Day	Flow (MGD)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.168	0.11	0.07	37
2	0.148	0.07	0.04	24
3	0.231	0.06	0.05	20
4	0.113	0.03	0.01	10
5	0.140	0.03	0.02	10
6	0.059	0.03	0.01	10
7	0.053	0.04	0.01	14
8	0.150	0.05	0.03	17
9	0.182	0.03	0.02	10
10	0.201	0.03	0.02	10
11	0.162	0.02	0.01	7
12	0.170	0.02	0.01	7
13	0.179	0.06	0.04	20
14	0.158	0.20	0.12	68
15	0.197	0.19	0.14	64
16	0.187	0.10	0.07	34
17	0.197	0.06	0.04	20
18	0.183	0.05	0.03	17
19	0.197	0.04	0.03	14
20	0.127	0.04	0.02	14
21	0.095	0.08	0.03	27
22	0.180	0.06	0.04	20
23	0.162	0.03	0.02	10
24	0.162	0.03	0.02	10
25	0.164	0.03	0.02	10
26	0.176	0.03	0.02	10
27	0.128	0.05	0.02	17
28	0.123	0.03	0.01	10
29	0.164	0.05	0.03	17
30	0.153	0.03	0.02	10
Total	4.709		1.03	

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 601 Sanitary Treatment Plant

DATE: APRIL 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.157	0.06	0.03	20
Max.	0.231	0.20	0.14	68
Min.	0.053	0.02	0.01	7

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.

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: APRIL 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	

5-20-91

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: 11000004604
604 Storm Sewer Lift Station
Manhole 34 (Stormwater to Manhole 175)

DATE: APRIL 1991

Day	Flow (MGD)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.099	1.28	0.48	432
2	0.102	1.26	0.49	426
3	0.088	1.14	0.38	385
4	0.069	1.12	0.29	378
5	0.129	1.36	0.66	459
6	0.102	1.28	0.49	432
7	0.110	1.34	0.56	453
8	0.096	1.26	0.46	426
9	0.095	1.18	0.42	399
10	0.170	1.40	0.90	473
11	0.121	1.32	0.60	446
12	0.156	0.74	0.44	250
13	0.133	0.52	0.26	176
14	0.331	1.08	1.35	365
15	0.170	0.70	0.45	236
16	0.210	0.52	0.41	176
17	0.156	1.44	0.85	486
18	0.138	1.44	0.75	486
19	0.295	1.14	1.27	385
20	0.170	1.40	0.90	473
21	0.141	1.28	0.68	432
22	0.109	1.06	0.44	358
23	0.080	0.96	0.29	324
24	0.041	0.48	0.07	162
25	0.039	0.78	0.12	264
26	0.137	0.84	0.44	284
27	0.107	1.40	0.57	473
28	0.093	1.42	0.50	480
29	0.090	1.54	0.52	520
30	0.082	1.42	0.44	480
Total	3.859		16.49	

5-30-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 604 Storm Sewer Lift Station

DATE: APRIL 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.129	1.13	0.55	382
Max.	0.331	1.54	1.35	520
Min.	0.039	0.48	0.07	162

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.

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: 11000004605
605 Bioreactor
Bioreactor (Effluent to Manhole 175)

DATE: APRIL 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	0.115	392	315	0.83	0.36	280
2	0.128	414	500	0.80	0.39	270
3	0.143	432	441	0.95	0.51	321
4	0.147	459	541	0.95	0.53	321
5	0.137	441	730	1.02	0.53	345
6	0.160	405	455	0.98	0.59	331
7	0.152	523	333	1.03	0.59	348
8	0.172	563	405	1.20	0.78	405
9	0.176	486	545	0.91	0.61	307
10	0.176	635	572	1.28	0.85	432
11	0.054	1284	563	2.34	0.48	791
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	0.073	2374	878	4.62	1.28	1561
30	0.069	2261	860	4.31	1.13	1456
Total	1.702				8.62	

dfp
5-30-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 605 Bioreactor

DATE: APRIL 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.	0.057	661	521	1.34	0.29	452
Max.	0.176	2374	878	4.62	1.28	1561
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.

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: APRIL 1991

Day	Flow (MGD)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.752	0.38	1.08	128
2	0.453	0.46	0.79	155
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	0.000	0.00	0.00	0
10	0.231	0.48	0.42	162
11	0.203	0.48	0.37	162
12	0.214	0.32	0.26	108
13	0.638	0.26	0.63	88
14	0.627	0.36	0.85	122
15	0.625	0.30	0.71	101
16	0.632	0.44	1.05	149
17	0.075	0.54	0.15	182
18	0.742	0.46	1.29	155
19	0.695	0.44	1.16	149
20	0.711	0.36	0.97	122
21	0.692	0.34	0.89	115
22	0.754	0.34	0.97	115
23	0.701	0.40	1.06	135
24	0.699	0.42	1.11	142
25	0.661	0.38	0.95	128
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	10.105		14.71	

175
5-20-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 606 Stormwater Retention Basin

DATE: APRIL 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.337	0.38	0.49	130
Max.	0.754	0.54	1.29	182
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.

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

DATE: MAY 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	0.353	351	95	0.56	0.75	189
2	0.322	824	342	1.74	2.12	588
3	0.395	824	333	1.92	2.87	649
4	0.322	703	275	1.78	2.17	601
5	0.323	635	248	1.52	1.86	514
6	0.366	459	315	1.14	1.58	385
7	0.355	491	275	1.10	1.48	372
8	0.354	459	342	0.96	1.29	324
9	0.421	464	221	1.02	1.62	345
10	0.400	419	342	1.14	1.73	385
11	0.281	473	374	0.98	1.04	331
12	0.244	293	144	0.58	0.54	196
13	0.245	212	99	0.40	0.37	135
14	0.647	329	180	0.84	2.06	284
15	0.922	459	86	0.88	3.07	297
16	0.583	586	126	1.30	2.87	439
17	0.324	622	297	1.62	1.99	547
18	0.449	455	248	0.98	1.66	331
19	1.072	297	63	0.62	2.51	209
20	1.095	230	63	0.30	1.24	101
21	0.786	171	81	0.30	0.89	101
22	0.421	270	122	0.52	0.83	176
23	0.326	293	117	0.68	0.84	230
24	0.392	360	207	0.54	0.80	182
25	0.328	329	306	0.66	0.82	223
26	0.355	342	239	0.74	0.99	250
27	0.547	351	252	0.96	1.99	324
28	0.285	207	122	0.56	0.60	189
29	0.412	477	185	0.98	1.53	331
30	0.411	428	239	1.10	1.71	372
31	0.368	414	194	0.94	1.31	318
Total	14.104				47.11	

6-27-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 001 Total Discharge

DATE: MAY 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.	0.455	405	186	0.88	1.52	298
Max.	1.095	824	374	1.92	3.07	649
Min.	0.244	171	63	0.30	0.37	101

The average uranium concentration for the previous twelve months was 0.88 mg/l. This is 98.9 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.

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: MAY 1991

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

Based on 2.61 inches of rainfall for the month, the uranium discharge to Paddy's Run from uncontrolled areas of the FMPC is estimated to be 11.75 kgs.

6-27-91

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: MAY 1991

Day	Flow (MGD)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.156	0.03	0.02	10
2	0.152	0.03	0.02	10
3	0.165	0.06	0.04	20
4	0.067	0.05	0.01	17
5	0.047	0.03	0.01	10
6	0.104	0.03	0.01	10
7	0.102	0.03	0.01	10
8	0.106	0.03	0.01	10
9	0.096	0.03	0.01	10
10	0.122	0.05	0.02	17
11	0.029	0.05	0.01	17
12	0.038	0.03	0.00	10
13	0.120	0.04	0.02	14
14	0.112	0.03	0.01	10
15	0.126	0.03	0.01	10
16	0.134	0.02	0.01	7
17	0.105	0.02	0.01	7
18	0.128	0.02	0.01	7
19	0.051	0.03	0.01	10
20	0.156	0.04	0.02	14
21	0.123	0.03	0.01	10
22	0.128	0.02	0.01	7
23	0.135	0.02	0.01	7
24	0.142	0.01	0.01	3
25	0.118	0.02	0.01	7
26	0.074	0.02	0.01	7
27	0.075	0.02	0.01	7
28	0.080	0.02	0.01	7
29	0.135	0.03	0.02	10
30	0.138	0.03	0.02	10
31	0.140	0.03	0.02	10
Total	3.404		0.38	

L7a
6-22-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 601 Sanitary Treatment Plant

DATE: MAY 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.110	0.03	0.01	10
Max.	0.165	0.06	0.04	20
Min.	0.029	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.

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: MAY 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: MAY 1991

Day	Flow (MGD)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.087	1.32	0.43	446
2	0.065	1.60	0.39	541
3	0.072	1.48	0.40	500
4	0.077	1.28	0.37	432
5	0.090	1.30	0.44	439
6	0.082	1.34	0.42	453
7	0.074	1.52	0.43	514
8	0.060	1.16	0.26	392
9	0.106	0.96	0.38	324
10	0.106	1.30	0.52	439
11	0.066	1.16	0.29	392
12	0.080	1.16	0.35	392
13	0.081	1.06	0.32	358
14	0.053	1.04	0.21	351
15	0.088	1.32	0.44	446
16	0.051	1.68	0.32	568
17	0.046	3.62	0.63	1223
18	0.140	1.66	0.88	561
19	0.133	1.82	0.92	615
20	0.100	1.80	0.68	608
21	0.089	1.52	0.51	514
22	0.085	1.40	0.45	473
23	0.096	1.46	0.53	493
24	0.085	1.40	0.45	473
25	0.082	1.28	0.40	432
26	0.095	1.40	0.50	473
27	0.310	1.40	1.64	473
28	0.087	1.32	0.43	446
29	0.110	1.46	0.61	493
30	0.107	1.44	0.58	486
31	0.085	1.56	0.50	527
Total	2.888		15.71	

6 27-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 604 Storm Sewer Lift Station

DATE: MAY 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.093	1.44	0.51	486
Max.	0.310	3.62	1.64	1223
Min.	0.046	0.96	0.21	324

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.

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: MAY 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	0.070	2473	829	4.08	1.08	1378
2	0.067	1968	919	4.25	1.08	1436
3	0.118	1941	874	3.76	1.68	1270
4	0.138	1342	712	2.68	1.40	905
5	0.146	928	694	1.68	0.93	568
6	0.140	721	505	1.58	0.84	534
7	0.139	739	527	1.19	0.63	402
8	0.147	459	446	1.17	0.65	395
9	0.139	613	495	1.15	0.60	389
10	0.132	527	477	1.19	0.59	402
11	0.147	622	545	1.07	0.60	361
12	0.086	635	405	1.45	0.47	490
13	0.004	937	279	2.03	0.03	686
14	0.058	1167	486	1.87	0.41	632
15	0.095	1072	644	2.29	0.82	774
16	0.103	2221	1036	5.00	1.95	1689
17	0.135	1721	698	3.81	1.95	1287
18	0.143	865	658	1.87	1.01	632
19	0.138	545	401	1.17	0.61	395
20	0.043	491	743	1.01	0.16	341
21	0.000	509	221	0.90	0.00	304
22	0.000	464	333	1.01	0.00	341
23	0.056	459	288	1.01	0.21	341
24	0.128	432	468	0.98	0.47	331
25	0.128	378	500	0.78	0.38	264
26	0.111	437	369	0.81	0.34	274
27	0.123	788	477	2.06	0.96	696
28	0.078	838	577	1.86	0.55	628
29	0.128	874	689	1.81	0.88	611
30	0.126	662	527	1.41	0.67	476
31	0.105	590	396	1.05	0.42	355
Total	3.171				22.37	

6-27-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 605 Bioreactor

DATE: MAY 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.	0.102	908	578	1.86	0.72	630
Max.	0.147	2473	1036	5.00	1.95	1689
Min.	0.000	378	221	0.78	0.00	264

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.

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: MAY 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	0.000	0.00	0.00	0
10	0.000	0.00	0.00	0
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	0.383	0.40	0.58	135
15	0.573	0.46	1.00	155
16	0.255	0.46	0.44	155
17	0.000	0.00	0.00	0
18	0.000	0.00	0.00	0
19	0.712	0.36	0.97	122
20	0.718	0.26	0.71	88
21	0.534	0.34	0.69	115
22	0.168	0.28	0.18	95
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	3.343		4.56	

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 606 Stormwater Retention Basin

DATE: MAY 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.108	0.36	0.15	122
Max.	0.718	0.46	1.00	155
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.

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

DATE: JUNE 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	0.223	221	198	0.54	0.46	182
2	0.314	392	279	0.82	0.97	277
3	0.386	414	288	0.74	1.08	250
4	0.314	311	117	0.52	0.62	176
5	0.388	329	239	0.68	1.00	230
6	0.294	320	167	0.58	0.65	196
7	0.565	342	149	0.52	1.11	176
8	0.648	189	149	0.46	1.13	155
9	0.633	320	131	0.44	1.05	149
10	0.454	198	171	0.30	0.52	101
11	0.355	405	167	0.36	0.48	122
12	0.383	113	90	0.22	0.32	74
13	0.400	140	158	0.36	0.54	122
14	0.465	135	90	0.30	0.53	101
15	0.288	140	122	0.28	0.31	95
16	0.371	207	162	0.40	0.56	135
17	0.374	117	140	0.20	0.28	68
18	0.375	180	162	0.26	0.37	88
19	0.346	140	131	0.16	0.21	54
20	0.388	140	90	0.14	0.21	47
21	0.441	122	81	0.16	0.27	54
22	0.249	144	140	0.16	0.15	54
23	0.209	180	248	0.30	0.24	101
24	0.243	194	180	0.26	0.24	88
25	0.327	198	122	0.30	0.37	101
26	0.339	189	216	0.20	0.26	68
27	0.368	167	234	0.24	0.33	81
28	0.315	167	122	0.22	0.26	74
29	0.207	162	77	0.26	0.20	88
30	0.188	153	108	0.28	0.20	95
Total	10.850				14.91	

7-25-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 001 Total Discharge

DATE: JUNE 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.	0.362	219	156	0.36	0.50	123
Max.	0.648	414	288	0.82	1.13	277
Min.	0.188	113	77	0.14	0.15	47

The average uranium concentration for the previous twelve months was 0.86 mg/l. This is 96.6 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.

DJD
7-25-91

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: JUNE 1991

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

Based on 0.17 inches of rainfall for the month, the uranium discharge to Paddy's Run from uncontrolled areas of the FMPC is estimated to be 0.76 kgs.

LYB
7-25-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 601 Sanitary Treatment Plant

DATE: JUNE 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.147	0.01	0.01	4
Max.	0.249	0.03	0.01	10
Min.	0.020	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.

7-25-91

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: JUNE 1991

Day	Flow (MGD)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.115	0.03	0.01	10
2	0.095	0.03	0.01	10
3	0.128	0.02	0.01	7
4	0.132	0.02	0.01	7
5	0.130	0.02	0.01	7
6	0.122	0.02	0.01	7
7	0.149	0.01	0.01	3
8	0.034	0.01	0.00	3
9	0.020	0.01	0.00	3
10	0.182	0.02	0.01	7
11	0.142	0.02	0.01	7
12	0.136	0.01	0.01	3
13	0.142	0.01	0.01	3
14	0.199	0.01	0.01	3
15	0.087	0.01	0.00	3
16	0.108	0.01	0.00	3
17	0.144	0.01	0.01	3
18	0.174	0.01	0.01	3
19	0.198	0.01	0.01	3
20	0.236	0.01	0.01	3
21	0.247	0.01	0.01	3
22	0.169	0.01	0.01	3
23	0.124	0.01	0.00	3
24	0.150	0.01	0.01	3
25	0.167	0.01	0.01	3
26	0.179	0.01	0.01	3
27	0.249	0.01	0.01	3
28	0.193	0.01	0.01	3
29	0.121	0.01	0.00	3
30	0.130	0.01	0.00	3
Total	4.402		0.21	

7-25-91

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: 11000004603
603 Clearwell
Clearwell (Effluent to Manhole 175)

DATE: JUNE 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	

8-73-41

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: JUNE 1991

Day	Flow (MGD)	Total U (mg/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.059	1.72	0.38	581
2	0.068	1.58	0.41	534
3	0.094	1.32	0.47	446
4	0.064	1.46	0.35	493
5	0.094	0.72	0.26	243
6	0.095	0.76	0.27	257
7	0.099	0.66	0.25	223
8	0.093	0.66	0.23	223
9	0.095	0.66	0.24	223
10	0.110	0.58	0.24	196
11	0.088	0.46	0.15	155
12	0.097	0.58	0.21	196
13	0.094	0.62	0.22	209
14	0.107	0.50	0.20	169
15	0.074	0.66	0.18	223
16	0.099	0.80	0.30	270
17	0.069	0.76	0.20	257
18	0.068	0.80	0.21	270
19	0.070	0.76	0.20	257
20	0.072	0.64	0.17	216
21	0.074	0.72	0.20	243
22	0.040	0.50	0.08	169
23	0.046	0.48	0.08	162
24	0.041	0.74	0.11	250
25	0.075	0.76	0.22	257
26	0.077	0.74	0.22	250
27	0.076	0.70	0.20	236
28	0.072	0.70	0.19	236
29	0.087	0.56	0.18	189
30	0.057	0.48	0.10	162
Total	2.354		6.74	

7-25-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 604 Storm Sewer Lift Station

DATE: JUNE 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.078	0.76	0.22	256
Max.	0.110	1.72	0.47	581
Min.	0.040	0.46	0.08	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.

7-25-91

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: 11000004605
605 Bioreactor
Bioreactor (Effluent to Manhole 175)

DATE: JUNE 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	0.049	477	568	0.85	0.16	287
2	0.111	572	351	1.28	0.54	432
3	0.123	842	698	1.58	0.74	534
4	0.079	788	554	1.36	0.41	459
5	0.124	635	477	1.31	0.61	443
6	0.037	824	653	1.47	0.21	497
7	0.070	*	•	•	*	*
8	0.120	604	563	1.23	0.56	416
9	0.127	468	545	0.81	0.39	274
10	0.122	284	140	0.51	0.24	172
11	0.125	266	189	0.46	0.22	155
12	0.110	284	297	0.48	0.20	162
13	0.124	414	419	0.61	0.29	206
14	0.124	387	550	0.84	0.39	284
15	0.127	392	383	0.71	0.34	240
16	0.124	288	392	0.67	0.31	226
17	0.121	347	473	0.76	0.35	257
18	0.093	342	351	0.66	0.23	223
19	0.038	455	423	0.68	0.10	230
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	0.013	559	523	1.16	0.06	392
25	0.045	342	532	0.73	0.12	247
26	0.043	432	414	0.87	0.14	294
27	0.043	514	441	0.63	0.10	213
28	0.011	532	514	1.24	0.05	419
29	0.000	0	0	0.00	0.00	0
30	0.000	0	0	0.00	0.00	0
Total	2.103				6.75	

* Facility on external recycle, no sample collected.

ATD
7-25-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 605 Bioreactor

DATE: JUNE 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.	0.070	446	422	0.85	0.22	287
Max.	0.127	842	698	1.58	0.74	534
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.

7-25-91

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: 11000004606
606 Stormwater Retention Basin
Stormwater Retention Basin (Effluent to Manhole 175)

DATE: JUNE 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	0.247	0.42	0.39	142
8	0.361	0.28	0.38	95
9	0.351	0.22	0.29	74
10	0.000	0.00	0.00	0
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	0.000	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	0.000	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	0.959		1.07	

7-25-91

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Feed Materials Production Center

LOCATION: 606 Stormwater Retention Basin

DATE: JUNE 1991

	Flow (MGD)	Total U (mg/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.032	0.29	0.04	99
Max.	0.361	0.42	0.39	142
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.

7-25-91