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**FEDERAL FACILITY COMPLIANCE AGREEMENT
(FFCA) - CLEAN AIR ACT AND LIQUID
DISCHARGE REPORTS - FMPC APRIL 11, 1988 TO
JULY 5, 1988**

10/14/88

**DOE-1445-88
DOE-FMPC /USEPA
12
REPORT**



5835

Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—

October 14, 1988
DOE-1445-88

Chief, Environmental Review Branch
U. S. Environmental Protection Agency
John C. Kluezynski Federal Building
Region V - 5ME-16
230 S. Dearborn Street
Chicago, Illinois 60604

Dear Sir:

**FEDERAL FACILITY COMPLIANCE AGREEMENT (FFCA) - CLEAN AIR ACT
AND LIQUID DISCHARGE REPORTS - FEED MATERIALS PRODUCTION
CENTER**

This letter transmits the seventh quarterly reports for Clean Air Act and Liquid Discharge requested under the Federal Facilities Compliance Agreement (FFCA).

Enclosure 1 is the Quarterly Report of Airborne Emissions which covers the period April 11, 1988 through July 5, 1988. This report is provided pursuant to the Clean Air Act (CAA) Section of the FFCA, Item E.

Enclosure 2 is the Quarterly Report of Radiation Discharge Information which covers the months of April, May, and June, 1988. This report is provided pursuant to the Radiation Discharge Information (RDI) Section of the FFCA, Item A1.

Please contact Mary Stone of my staff at (513) 738-6656/FTS 774-6656, if you have any questions on these reports.

Sincerely,

James A. Reafsnnyder
Site Manager

DP-84:Stone

Enclosures: As stated

cc w/encl.:

T. Winston, OEPA - Dayton
R. L. Shank, OEPA - Columbus
R. Quillen, ODH
C. Schumann, SWOAPCA

cc w/o encl.:

M. Wilson, SE-31, ORO
W. Dillow, SE-31, ORO
G. Fess, GC-21, FORSTL
C. McCord, USEPA-5
A. Blumberg, USEPA-5
G. Mitchell, OEPA - Dayton
J. Steven Rogers, Dept. of Justice
B. Hawkins, Frost & Jacobs
B. Weidner, NLO
C. R. Conner, WMCO

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ENCLOSURE 1

FMPC

QUARTERLY REPORT OF
AIRBORNE EMISSIONS

CLEAN AIR ACT
ITEM E

APRIL 11, 1988 TO JULY 5, 1988

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TABLE 1

SUMMARY OF URANIUM EMISSIONS FROM PARTICULATE STACKS AND SCRUBBERS
FOR THE PERIOD: 4/11/88 TO 7/5/88

Emission Point Number	Control Equip.	Stack Sampler Status	U Emissions (kg)	
			Stack Total	% of FMPC total
PLANT 1				
001	G2-172	I	0	0.0
002	G2-6042	I	0	0.0
003	G2-76	I	0	0.0
005	G2-2	I	0	0.0
006	G2-64	I	0	0.0
007	G2-1	I	0	0.0
009	G2-6015	I	0	0.0
010	G2-6014	I	0	0.0
015	G2-171	I	0	0.0
016	G2-235	I	0	0.0
TOTAL PLANT I EMISSIONS			0	0.0
PLANT 2/3				
001		S		
012	G1-856	I	0	0.0
022	G2-252	I	0	0.0
023	G1-94	I	0	0.0
092		S		
093		S		
148	G2-103	I	0	0.0
149	G2-104	I	0	0.0
TOTAL PLANT 2/3 EMISSIONS			0	0.0
PLANT 4				
001	G4-7	I	0	0.0
002		S		
003	G4-13	I	0	0.0
004	G4-14	I	0	0.0
005	G4-2	I	0	0.0
006	G4-12	I	0	0.0
007	G4-15	I	0	0.0
008	G4-1	I	0	0.0
009	G4-5	I	0	0.0
025	G4-4	I	0	0.0
TOTAL PLANT 4 EMISSIONS			0	0.0

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 FOR THE PERIOD: 4/11/88 TO 7/5/88

Emission Point Number	Control Equip.	Stack Sampler Status	U Emissions (kg)	
			Stack Total	% of FMPC total
PLANT 5				

2	G5-247	I	0	0.0
3	G5-248	I	0	0.0
4	G5-249	I	0	0.0
5	G5-250	I	0	0.0
6	G5-251	I	0	0.0
8	G5-253	I	0	0.0
9	G5-254	I	0	0.0
10	G5-256	I	0	0.0
11	G5-258	I	0	0.0
12	G5-259	I	0	0.0
13	G5-260	I	0	0.0
14	G5-261	I	0	0.0
15	G5A-100	I	0	0.0
16	G5A-101	I	0	0.0
17	G5-262	I	0	0.0
18	G55-E100	I	0	0.0
19	G5-267	I	0	0.0
TOTAL PLANT 5 EMISSIONS			0	0.0
PLANT 6				

1	G6-6057	I	0	0.0
2	G6-3579	I	0	0.0
3	G6-3578	I	0.1	2.1
6		S		
TOTAL PLANT 6 EMISSIONS			0.1	2.1

TABLE 1

SUMMARY OF URANIUM EMISSIONS FROM PARTICULATE STACKS AND SCRUBBERS
FOR THE PERIOD: 4/11/88 TO 7/5/88

Emission Point Number	Control Equip.	Stack Sampler Status	U Emissions (kg)	
			Stack Total	% of FMPC total
PLANT 8				
001	G43-27	I	0	0.0
002	Rotary Kiln	S	3.138	66.0
003	G8-021	I	0	0.0
004	G8-024	I	0	0.0
005	Primary Calciner	S	0.235	4.9
006	G8-035	I	0	0.0
007	Oxidation No. 1	S	0.678	14.3
008	G8-7	I	0	0.0
009	Oxidation No. 2	S	0	0.0
010	Box Furnace	S	0.506	10.6
011	G43-29	I	0	0.0
020	G8-057	I	0	0.0
TOTAL PLANT 8 EMISSIONS			4.557	95.8
PLANT 9				
001	G9E2-400	I	0	0.0
002	G9N1-1039	I	0	0.0
007	G42A-100	I	0	0.0
TOTAL PLANT 9 EMISSIONS			0	0.0
PILOT PLANT				
015	G-1	I	0	0.0
016	G-2	I	0.1	2.1
R-14	735-13-7041	I	0	0.0
R-50	735-13-7051	I	0	0.0
TOTAL PILOT PLANT EMISSIONS			0.1	2.1

TABLE 1

SUMMARY OF URANIUM EMISSIONS FROM PARTICULATE STACKS AND SCRUBBERS
FOR THE PERIOD: 4/11/88 TO 7/5/88

Emission Point Number	Control Equip.	Stack Sampler Status	U Emissions (kg)	
			Stack Total	% of FMPC total

INCINERATOR STACKS* * None of these sources have operated since May, 1986.

SOLID WASTE			0	0.0
LIQUID WASTE			0	0.0
GRAPHITE BURNER			0	0.0
TOTAL INCINERATOR EMISSIONS			<u>0</u>	<u>0.0</u>

LABORATORY

001	615-001	I	0	0.0
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SUM OF ALL FMPC AIR EMISSIONS TO DATE 4.757

KEY: I - Stack sampler is installed.
S - Scrubber system emissions, where available, are estimated.

ENCLOSURE 2

FMPC

QUARTERLY RADIATION
DISCHARGE REPORT

RADIATION DISCHARGE
INFORMATION ITEM A.1

APRIL 1987 TO JUNE 1988

EFFLUENT RADIATION REPORT

FACILITY: Feed Materials Production Center
 U.S. Department of Energy
 7400 Willey Road, P.O.Box 398704
 Cincinnati, Ohio 45239 Hamilton
 8502-M 8612 801002

5935

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

DATE: January 1988 through June 1988

Month	Ave. Flow (mgd)	Ra-226 (pCi/l)	Ra-228 (pCi/l)	Total Radium (pCi/l)
January	0.699	7.2	<4.5	<11.2
February	0.977	<4.5	<4.5	<9.0
March	0.800	<4.5	<4.5	<9.0
April	0.566	AH	AH	
May	0.337	AH	AH	
June	0.313	AH	AH	

AH Samples collected but not yet analyzed

LIQUID DISCHARGE MONITORING DATA IN RESPONSE TO ITEM A1
OF THE RADIATION DISCHARGE INFORMATION SECTION
FEDERAL FACILITIES COMPLIANCE AGREEMENT

Introduction

This report is submitted in response to Item A1 of the Radiation Discharge Information Section of the Federal Facilities 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 for Discharges 001, 001A through 001E, and 002 for the period April through June, 1988.

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 is 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 analyzed daily for pH, alpha and beta radiation, and uranium. The alpha, beta, and uranium data are tabulated, converted to activity units and reported to the 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 seven (7) days, this discharge is also analyzed for oil and grease, dissolved and total suspended solids, chlorides, fluorides, nitrates, residual chlorine, ammonia, dissolved oxygen, and temperature. The pH, total suspended solids, oil and grease, flow, residual chlorine, ammonia, and nitrate 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. The daily samples are composited and analyzed monthly for Radium-226 and Radium-228. These have been tabulated, converted to activity units and are included in this submittal.

Discharge 001A - Sanitary Treatment Plant

This discharge consists of combined sanitary and industrial wastewater. The industrial wastewater is denitrified Bionitrification (BDN) effluent. The sanitary sewage is generated by 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 001A is continuously monitored for flow and analyzed daily for pH and uranium. The uranium data has been tabulated, converted to activity units and included in this submittal. In addition, at a frequency of once every

seven (7) days, this discharge is also analyzed for total, dissolved, suspended, and settleable solids; BOD; dissolved oxygen; volatile acids; and fecal coliform bacteria. The flow, pH, total suspended solids, BOD and fecal coliform bacteria 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 001B - General Sump

This discharge consists of the combined treated industrial wastewaters. These consist primarily of the effluents from the pretreatment facilities serving the refinery, recovery, and metal operations, potable water production; and powerhouse. These streams are accumulated, analyzed, transferred to uranium recovery at Plant 8, or pumped to the Bio-Surge Lagoon for further treatment or discharged to Manhole 175, depending on uranium, heavy metals, nitrate and TSS concentrations.

Discharge 001B is grab sampled and discharged on a batch basis. At an average frequency of once every seven (7) days, this discharge is analyzed for total suspended solids, hexavalent and total chromium, copper, iron, 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.

Discharge 001C - Clearwell

This discharge consists of the collected stormwater runoff from the waste pit area. This effluent is pumped to Manhole 175 as necessary to control the water level.

Discharge 001C is continuously monitored for flow and analyzed daily for pH, alpha and beta radiation, and uranium (when it is pumped). In addition, this discharge is also analyzed, when pumped, for total suspended solids, hexavalent and total chromium, copper, iron, and nickel (at an average frequency of once every seven (7) days). 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 001D - Storm Sewer Lift Station

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

Discharge 001D is continuously monitored for flow and analyzed daily for uranium. The uranium data is tabulated, converted to activity units, and included in this submittal. In addition, at an average frequency of once every seven (7) days, this discharge is also analyzed for pH, total suspended solids, alpha and beta radiation, oil and grease, chlorides, fluorides, and nitrates. The flow, total suspended solids and oil and grease 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 001E - Bioreactor

This discharge consists of denitrified industrial wastewaters. These wastewaters originate primarily from the refinery and metals plants. The denitrified BDN effluent is discharge to the Sanitary Treatment Plant.

The Bioreactor effluent is monitored daily, or more frequently, for methyl alcohol, TSS, nitrate, pH, uranium, gross alpha and gross beta activities. The alpha, beta and uranium data were tabulated, converted to activity units and are included in this submittal. BOD, Fecal Coliform, Na, Ca, Mg, off gases, Cr +6, Cr total, Ni, Cu, Fe, and U, gross alpha, gross beta, PO₄, SO₄, and CO₃ are analyzed between 5 and 1 days per week. The flow, ammonia and nitrate 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 002 - Discharge Prior Ditch to Paddy's Run

This discharge consists of the overflow to Paddy's Run a via spillway from the Emergency Spill Containment - Stormwater Retention Basin.

Discharge 002 is monitored during overflows for flow, and each overflow is analyzed for pH, alpha and beta radiation, uranium, oil and grease, total suspended solids and residual chlorine. The pH, oil and grease, and total suspended solids data are tabulated and reported monthly to the Ohio EPA, as required by the NPDES permit. Copies of these monitoring reports are included in this submittal.