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Fernald Environmental

FERMCO

Restoration Management Corporation

(now renamed Fluor Daniel Fernald)

P. O. Box 538704 Cincinnati, Ohio 45253-8704 (513) 648-3000

May 7, 1997

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6-6017

Fernald Environmental Management Project
Letter No. C:FCDP:97-0005

Mr. Peter Sturdevant, Compliance Specialist
Air Quality Management
Hamilton County Department of Environmental Services
1632 Central Parkway
Cincinnati, Ohio 45210

Dear Mr. Sturdevant:

PERMIT TO OPERATE APPLICATION FOR 100 MM BTU/HR NATURAL GAS-/OIL-FIRED BOILER; FEMP ID NO. 10-007 (OEPA) PREMISE NO. 1431110128B006

Enclosed is a Permit to Operate application for the 100 MM BTU Natural Gas-/Oil-Fired Boiler identified as B006. This PTO application is for the use of this existing boiler as a multi-fueled boiler.

This source is subject to 40 CFR Part 60 Standards of Performance for New Stationary Sources for Small Industrial-Commercial-Institutional Steam Generating Units (NSPS) and will comply with all requirements of the NSPS. The administrative controls identified in PTI 14-4253 will be utilized to create a Synthetic Minor and to prevent the triggering of PSD requirements.

If you have any questions concerning this application, please contact Ervin Fisher of my staff at (513) 648-5293.

Sincerely,

Woodrow B. Jameson
Vice President
Facility Closure & Demolition Projects

WBJ:EF:mhv
Enclosure

PTOB006.LTR

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c: With Enclosure

S. L. Blankenship, FDF/MS60
W. J. Naber, FDF/MS75
E. P. Skintik, DOE-FEMP/MS45
T. J. Walsh, FDF/MS65-2
AR Coordinator/MS78
File Record Storage Copy 108.6
PSI(EC) Files

Without Enclosure

W. E. Pasko, DOE-FEMP/MS45
P. B. Spotts, FDF/MS65-2
L. C. Goidell, FDF/MS65-2
C. L. Turner, FDF/MS44

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FOR OHIO EPA USE ONLY:
DATE APPLICATION RECEIVED: _____
FACILITY ID: _____
EMISSIONS UNIT(s) ID(s): _____

OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA)
APPLICATION FOR STATE PERMIT(S) TO OPERATE AN EMISSIONS UNIT (S)

(Do not complete application without reading instructions.)

1. Facility Information:

a. Applicant Name: U.S. Dept. of Energy

b. Facility Name: Fernald Environmental Management Project

c. Facility Location:

Street: 7400 Willey Road

City/Village/Township: Fernald

County: Hamilton Zip Code: 45030

d. Primary Facility Contact Name: Lewis C. Goidell

e. Primary Facility Contact Mailing Address/Phone Number:

Street: P.O. Box 538705

City/Village/Township: Cincinnati

State: Ohio Zip Code: 45239

Phone Number: (513) 648-4124

f. OEPA Facility Identification (ID) Number (10-digit number): 1431110128

g. Facility Primary Standard Industrial Classification (SIC) Code Number (4-digit number): 4953

h. Authorized Individual Signature:

I, being the individual specified in Ohio Administrative Code (OAC) rule 3745-35-02(B), hereby apply for Permit(s) to Operate (PTO) the emissions unit(s) described herein.

Woodrow B. Jameson
Authorized Individual's Name (Please type or print)

[signature] for WBJ
Authorized Individual's Signature

5/7/97
Date Signed

Vice President Facilities Closure & Demolition Projects
Title

Operation of an emissions unit without an effective permit to operate, variance to operate, or registration status is prohibited by OAC rule 3745-35-02 and Section 3704.05 of the Ohio Revised Code.

I. Identification of Emissions Unit(s) at Facility (Identify the following information for each emissions unit(s) for which this application is being completed. List each emissions unit on a separate line. Mark "NE" (not established) if no OEPA ID (Identification) has been assigned to an emissions unit):

NOTE: Do not list emissions units that have been registered by the Ohio EPA in accordance with OAC rule 3745-35-05(B).

4-Digit OEPA ID	Company ID for Emissions Unit
B006	10-007 100 MMBTU Gas/Oil Fired boiler

(If additional entries for emissions units are needed, copy this page and attach the additional page(s) with additional emissions units entered and indicate below.) Check here if additional copies of this page are attached: _____

2. Emissions Unit Information (make a copy of pages 3-6 and attach for each emissions unit listed on page 2):

a. OEPA Emissions Unit ID (4-digit) number: B006

b. Company ID for Emissions Unit: 10-007 100 MMBTU Gas/Oil Fired Boiler

c. Emissions Unit Activity Description: Fuel burning operations

d. Equipment Description: 100 MMBTU Gas/Oil fired boiler unit

e. Initial Installation Date (month/year): 02/92
Initial Startup Date (month/year): 02/92
Most Recent Modification Date (if applicable)
(as defined in OAC rule 3745-31-01(J)) (month/year): TBD

f. Emissions Information:

Complete the following table for each criteria air pollutant proposed to be emitted from the emissions unit at a rate greater than one ton/year (list each pollutant on a separate line), and for any pollutant for which an emissions limit has been established (per a state or federal regulation or Permit to Install) which limits air emissions of the pollutant to less than one ton/year.

Pollutant Name	Proposed Maximum Hourly Emissions (pounds/hour)	Proposed Maximum Annual Emissions (tons/year)
Particulate	gas 0.60 / Oil 1.43	Total 4.46
SO2	gas 0.06 / Oil 30.4	Total 40.19
NOx	gas 10.0 / Oil 14.3	Total 62.55
CO	gas 3.30 / Oil 3.57	Total 30.13
VOC	gas 0.29 / Oil 0.04	Total 2.61

(If additional pollutants need to be identified, copy this page and attach the additional page(s). Check here ____ if additional copies of this page are attached.)

g. Proposed Operating Schedule:

Average: Hours/Day: 24 Hours/Year: 8760

Maximum: Hours/Day: 24 Hours/Year: 8760

h. Control Equipment Information:

Provide the following for each add-on emissions control device to be employed for the emissions unit:
Note: A Todd Low NOx Burner provides BAT for Natural gas.
Check here _____ if no emissions control device is proposed to be employed for the emissions unit and proceed to item "I" below.

Control Equipment Type Codes:

A.	Fabric Filter/Baghouse	G.	Condenser
B.	Electrostatic Precipitator	H.	Carbon Adsorber
C.	Catalytic Incinerator	I.	Concentrator
D.	Thermal Incinerator	J.	Cyclone/Multiclone
E.	Flare	K.	Settling Chamber
F.	Wet Scrubber	L.	Other, describe: _____

Item	Control Device #1	Control Device #2	Control Device #3
i. Type (see above codes)			
ii. Configuration			
iii. Manufacturer's Name			
iv. Company ID			
v. Month/Year Installed			
vi. Pollutant(s) Controlled			
vii. Operating Capture Efficiency (%)			
viii. Design Control Efficiency (%)			
ix. Operating Control Efficiency (%)			
x. Inlet Gas Flow (acfm)			
xi. Inlet Gas Temperature (°F)			
xii. Maximum Controlled Emissions Rate for Each Pollutant Controlled (lb/hr, grain/dscf, or ppmv)			

xiii. Supplemental control device information (see instructions)

Control Device #1 _____

Control Device #2 _____

Control Device #3 _____

l. Emissions Egress Point(s) Information: (Provide the following information for each point at which emissions are released into the ambient air from the emissions unit and list each individual egress point on a separate line.)

Egress point description codes:

A. Vertical stack (unobstructed)
B. Horizontal/downward stack
C. Vertical stack (obstructed)
D. Fugitive

Company ID for Egress Point	Description Code
EP-B006-01	C

j. A Process or Activity Flow Diagram must be submitted for each emissions unit included in the application. Include the OEPA Emission Unit ID and company identification for the emissions unit on each process or activity flow diagram submitted. Show entry and exit points of all raw materials, intermediate products, by-products and finished products. Label all materials, including air pollution emissions and other waste materials and identify material and exhaust gas flow rates. Label the process equipment, emissions control equipment, and emissions egress points utilized.

k. Continuous emissions monitoring equipment: (Provide the following information if any continuous emission monitoring equipment is employed for any egress point(s) associated with this emissions unit.)

Company ID for Egress Point	Type of Monitor	Manufacturer/ Model No.	Serial No.	Pollutant(s) Monitored

l. Federally Enforceable Emissions Limits: (Provide the following information only if applying for federally enforceable limits, per OAC rule 3745-35-07, for the emissions unit.)

Check here __X__ if applying, per OAC rule 3745-35-07, for federally enforceable limits as part of this permit issuance.

If applying for such limits, attach a separate piece of paper providing the following information:

i. identification of the proposed operation/production limitation(s) for the emissions unit(s);

ii. identification of the proposed short term emission limit for each pollutant, corresponding to the proposed operational/production limit;

iii. proposed method(s), including identification of applicable methods, including any contained within 40 CFR, Parts 51 and 60, which will be utilized to demonstrate compliance with the federally enforceable limits; and

iv. a summary of the total facility "potential to emit" (tons/year) for each applicable pollutant (PM, NO_x, SO_2, CO, VOC, HAPs, etc.) as of implementation of the proposed federally enforceable limits (include supporting calculations).

m. Confidentiality Claims:

Check here _____ if requesting any information included in this application for this emissions unit to be claimed as a trade secret per Ohio Revised Code (ORC) 3704.08:

If a claim is being made, attach a separate piece of paper to this application and include the following information to justify the claim:

i. identification of the specific information (item # and description) submitted within the application for the emissions unit which is being claimed as a trade secret;

ii. an explanation of why the information specified is indeed a trade secret;

iii. confirmation that the alleged trade secret is not revealed by inspection or analysis of any marketed product (example: "reverse chemistry"); and

iv. identification of security measures which have been adopted to ensure secrecy, and confirmation that reasonable or enforceable agreements or other confidential relationships prohibiting use or disclosure of the secret existed with those whom the secret was revealed (example: employee secrecy agreements and/or contractor agreements).

Finally, if a confidentiality claim is being submitted, two copies of the application need to be submitted, one completed version with all the information requested and one "sanitized" version containing all information requested except that information upon which a trade secret claim is being made.

n. Emissions Activity Category Forms:

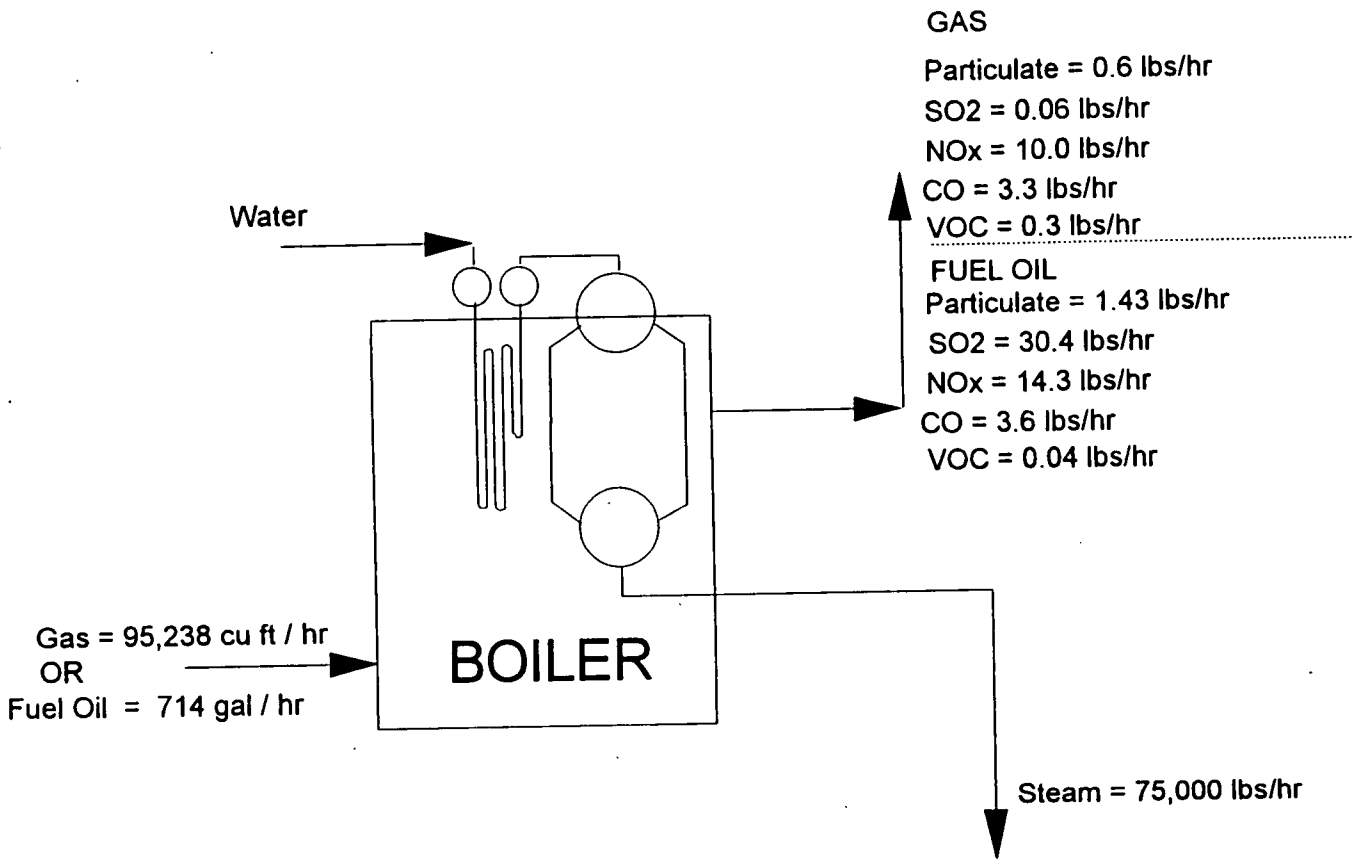
The appropriate Emissions Activity Category (EAC) form(s) must be completed and attached for each emission unit. At least one complete EAC form must be submitted for each emission unit for the application to be considered complete. Please identify each EAC form completed and being submitted with this application for this emissions unit:

EAC form ID number (see instructions for list of EAC forms)

i. 3101 iii. _____

ii. _____ iv. _____

PROCESS FLOW DIAGRAM
EU-B006-96
BOILER B006



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FOR OHIO EPA USE ONLY
DATE APPLICATION RECEIVED: _____
FACILITY ID: _____

EMISSIONS ACTIVITY CATEGORY FORM
FUEL BURNING OPERATION

OEPA EMISSIONS UNIT ID __B006_____ (if established)

1. Input capacities (million btu/hr): Rated: _100_____ Note: Indicate units if different
   Maximum: _100_____
   Normal: ___60_____
   Output capacities (lbs steam/hr): Rated: __75,000____
   Maximum: __75,000_____
   Normal: ___45,000_____

   Note: Only provide output capacities for steam producing operations.

2. Percent used for: Space heat ___80___% Process ___20___% Power ___-0-___%

3. Type of fuel fired (check one or more): ☐ coal X oil X natural gas
   ☐ wood ☐ LPG ☐ other (specify) _____

4. Type of draft (check one): ☐ natural ☐ induced X forced

5. Type of combustion monitoring (check one or more):
   ☐ fuel/air ratio ☐ oxygen ☐ opacity ☐
   X other (describe) _Fireeye E100 flame monitor system

COAL-FIRED UNITS

6. Type of coal firing (check one): ☐ hand-fired ☐ underfeed stoker
   ☐ traveling grate ☐ chain grate
   ☐ spreader stoker ☐ cyclones
   ☐ pulverized-dry bottom ☐ pulverized-wet bottom
   ☐ other (describe) _____

7. Fly ash reinjection (check one): ☐ yes ☐ no

OIL-FIRED UNITS

8. Type of oil (check one or more): X no. 2 ☐ no. 6
   ☐ other (describe) _____

9. Type of atomization (check one or more): ☐ oil pressure X steam pressure
   X compressed air ☐ rotary cup
   ☐ other (describe) _____

10. Oil preheater (check one): ☐ yes X no
    If yes, indicate temperature _____°F

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FOR OHIO EPA USE ONLY
DATE APPLICATION RECEIVED: _____
FACILITY ID: _____

11. *Complete the following table for fuels identified in item 3:*

Fuel	Heat Content (BTU/unit)	% Ash	% Sulfur	Fuel Usage		
				Estimated Maximum Per Year	Normal Per Hr.	Max. Per Hr.
Coal	BTU/lb			tons	lbs	lbs
Gas	1050 BTU/cu ft	N/A	N/A	834 MM cu ft	57,143 cu ft	95,238 cu ft
Oil	140M BTU/gal	0.01	0.3	1,875 Mgal	214 gal	714 gal
Wood	BTU/lb			tons	lbs	lbs
LPG	BTU/gal			gal	gal	gal
Other						

FEDERALLY ENFORCEABE EMISSIONS LIMITS

1. The proposed limitation for this emission unit is that the total amount of No. 2 fuel oil used by emission unit B006 shall not exceed 1,875,000 gals. The sulfur content of No. 2 fuel oil conbusted shall not exceed 0.3 percent.

2. For the first year of operations this emission unit the No. 2 fuel oil usage shall not exceed the following:

Month	Total Usage of No. 2 Oil
1-6	936,500 gals
1-7	1,093,750 gals
1-8	1,250,000 gals
1-9	1,406,250 gals
1-10	1,562,500 gals
1-11	1,718,750 gals
1-12	1,875,000 gals

3. To demonstrate compliance with these limit, the facility shall submit to the agency, on a quarterly basis, a monthly summary of the amounts of fuel oil combusted each month and copies of the oil supplier's analyses of each shipment of oil received. Visible emissions from this unit shall not exceed 20 % opacity, except for one 6 minute period per hour that can be no more that 27 % opacity. Opacity shall be checked by using Reference Method 9 of 40 CFR Part 60, appendix A.

4. The facility's estimated "total potential to emit" for each pollutant in tons/year is as follows:

PM	11 tons/year
Nox	88 tons/year
SO2	90 tons/year
CO	37 tons/year
OC	6 tons/year