

005909



**REEDY CREEK
IMPROVEMENT DISTRICT**

P.O. BOX 10170 LAKE BUENA VISTA, FLORIDA 32830-0170 TELEPHONE (407) 828-2241

August 22, 1994

Mr. C. H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Reedy Creek Improvement District
Permit No. AO48-170280, PSD-FL-123
Customized Fuel Monitoring Schedule

Dear Mr. Fancy:

Enclosed is our check for \$250.00 that represents the application processing fee referenced in your letter of August 4, 1994. This fee references our June 15, 1994, letter request for approval of a customized fuel monitoring schedule for the subject source.

RCID appreciates the Department's consideration in this matter. We trust the processing of our permit amendment may now proceed. If you require additional information relative to this request please call Mr. Edward Godwin at (407) 824-4943.

Sincerely,

Thomas M. Moses
District Administrator

BK/TMM/BP
Enclosure

cc: Alex Alexander, FDEP Central District
Ed Godwin, Reedy Creek Energy Services, Inc.

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MAIL ROOM
SEP 08 1994

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BAR ASBESTOS

**REEDY CREEK
IMPROVEMENT DISTRICT**

UTILITIES DIVISION
P.O. BOX 10,175 LAKE BUENA VISTA, FL 32830-0175

SUN BANK MID FLORIDA, N.A.
OKEECHOBEE OFFICE

005909
225757

63-115
631 115

DATE 08/25/94

AMOUNT *****250.00**

PAY TO THE ORDER OF *****250.00 DOLLARS

FL DEPT OF ENVIRONMENTAL PROTECTION
TWIN TOWER OFFICE BLDG
2600 BLAIRSTONE RD
TALLAHASSEE, FL 32399-2400

James M. Moore

Cheryl L. Payne

⑈ 225757⑈ ⑆ 063101153 ⑆ 6990215053651⑈


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Rec'd 8/10/94 CW

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3. Article Addressed to: Mr. Thomas M. Moses District Administrator Reedy Creek Improvement District Utilities Division P. O. Box 10175 Lake Buena Vista, Florida 32830-0175	4a. Article Number P 872 562 711	4b. Service Type <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
5. Signature (Addressee) 6. Signature (Agent) 	7. Date of Delivery 8/8/94	
8. Addressee's Address (Only if requested and fee is paid)		

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PS Form 3811, December 1991 U.S. GPO: 1992-323-402 **DOMESTIC RETURN RECEIPT**

P 872 562 711



Receipt for Certified Mail
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Sent to Mr. Thomas M. Moses	
Street and No. P. O. Box 10175	
P.O., State and ZIP Code Lake Buena Vista, FL 32830-0175	
Postage	\$ 0175
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date Mailed: 8/4/94 A048-170280, PSD-FL-123	

PS Form 3800, JUNE 1991



file copy

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

August 4, 1994

CERTIFIED MAIL—RETURN RECEIPT REQUESTED

Mr. Thomas M. Moses
District Administrator
Reedy Creek Improvement District
Utilities Division
P. O. Box 10175
Lake Buena Vista, Florida 32830-0175

Dear Mr. Moses:

RE: Reedy Creek Improvement District
Permit No. A048-170280, PSD-FL-123
Customized Fuel Monitoring Schedule

The Bureau of Air Regulation has reviewed the above referenced request and determined that it will require a permit amendment and a \$250 processing fee. As soon as the fee is received, we will begin processing your request. If you have any questions, please call Patty Adams at (904)488-1344.

Sincerely,

Patty Adams

you C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/pa

cc: Teresa Heron

Patty copy: district
local
Mike Harley
orig for J. Le



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

JUL 18 1994

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JUL 23 1994

Bureau of
Air Regulation

4APT-AEB

Clair H. Fancy, P.E.
Chief
Bureau of Air Regulation
Florida Department of
Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

SUBJ: Approval of NSPS Custom Fuel Monitoring Schedule for:
Reedy Creek Improvement District (RCID) Gas Fired
Turbine with Heat Recovery System
Permit No. AO48-170280

Dear Mr. Fancy:

This is to acknowledge a letter from Mr. Thomas M. Moses of RCID dated June 15, 1994, requesting approval of a customized fuel monitoring schedule for the above referenced project. This letter was jointly transmitted to the U.S. Environmental Protection Agency (EPA), and to you. Since the authority for implementing §60.334(b) of 40 CFR Part 60, Subpart GG has not been delegated to the State of Florida, we have reviewed RCID's custom fuel monitoring schedule.

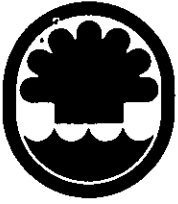
Based on our review, we have determined that the proposed schedule is acceptable, as long as this source also complies with items 2(d), 3, and 4 of the attachment to the custom fuel monitoring guidance memo issued by EPA Headquarters on August 14, 1987. A copy of this memo was included with RCID's request as an enclosure.

If you have any questions regarding this letter, please contact Mr. Mirza P. Baig of my staff at 404/347-5014.

Sincerely yours,

Jewell A. Harper
Chief
Air Enforcement Branch
Air, Pesticides, & Toxics
Management Division

cc: Thomas M. Moses, RCID



**REEDY CREEK IMPROVEMENT DISTRICT
UTILITIES DIVISION**

P.O. BOX 10175, LAKE BUENA VISTA, FLORIDA 32830-0175 TELEPHONE (407) 824-4913

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JUL 05 1994

Emissions Monitoring

June 15, 1994

RECEIVED

JUN 20 1994

Bureau of
Air Regulation

Ms. Jewel A Harper, Chief
Air Enforcement Branch
Air, Pesticides, and Toxics Management Division
U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, GA 30365

Mr. Clair H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

SUBJECT: Reedy Creek Improvement District
Gas Fired Turbine with Heat Recovery System
Permit No. AO48-170280

Dear Ms. Harper and Mr. Fancy:

This correspondence requests approval of custom fuel monitoring schedules for the determination of sulfur and nitrogen content as required by the New Source Performance Standards (NSPS) for Stationary Gas Turbines [40 Code of Federal Regulations (CFR) Part 60, Subpart GG]. Reedy Creek Improvement District (RCID) submits this request in accordance with the following requirements of Section (§) 60.334 (b):

(b) The owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

(1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.

(2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with paragraph (b) of this section.

As it is RCID's understanding that the U.S. Environmental Protection Agency (EPA) has not delegated the authority to implement § 60.334 (4) to the Florida Department of Environmental Protection (FDEP), this request is submitted concurrently to EPA Region IV and FDEP.

Section 60.334(b)(1) requires sulfur and nitrogen content of the fuel to be determined upon fuel transfer into the storage tank. RCID requests approval of the following procedure to assure adequate confidence in the fuel sulfur and nitrogen content of the liquid fuel. Fuel analyses are provided to RCID by the fuel vendor prior to purchase and delivery of the fuel. Upon delivery of the fuel, a sample is randomly taken from one compartment of each truck and composited for analysis (for verification of the vendor data) by a third party laboratory using ASTM Method D-3228 for nitrogen analyses, and ASTM Method D-4294 for sulfur analyses.

As indicated by §60.334(b)(2), the NSPS imply that daily sampling be performed when there is not an intermediate bulk storage tank, even if the fuel is pipeline natural gas. Discussions with EPA's Office of Air Quality Planning and Standards (OAQPS) and their guidance memorandum (Attachment I) confirm this interpretation of the rule. Specifically, a custom fuel monitoring schedule must be developed and approved for pipeline natural gas. The schedule should address the sulfur content of the fuel; the nitrogen content is natural gas is not required.

The sulfur content for natural gas submitted in this request was developed from data supplied by the Florida Gas Transmission Company (FGT). Attachment II provides a summary of the gas analyses. The natural gas burned by the RCID facility is provided by FGT who regularly samples for total sulfur in the natural gas to assure that the hydrogen sulfide content is low and the concentrations of Mercaptan (an odorant) are sufficient. NSPS require the sulfur content of the fuel be no more than 0.8 percent by weight. The highest recorded value of sulfur concentration over the 8-month study period (see Table 1) is 0.8 grains per 100 cf, therefore providing a significant margin for complying with the NSPS limit.

The EPA guidance memorandum suggests sampling be conducted twice monthly for the first six months, quarterly over the next six months, and during the first and third quarters of each calendar year. The eight months of data provided in Table 1, representing 3 to 4 samples per month, demonstrate the sulfur content of the natural gas meets the NSPS. Additional random analyses performed by FGT provided the following results:

<u>Date of Analyses</u>	<u>Sulfur Content (grains/100cf)</u>
03/10/92	0.50
06/30/92	0.40
09/29/92	0.26
01/05/93	0.31
03/02/93	0.27
06/01/93	0.16
09/28/93	0.12
12/14/93	0.42
02/09/94	0.04

Ms. Jewel Harper and Mr. Clair Fancy
June 15, 1994
Page 3

These data, collected over the past several years, have clearly demonstrated that the NSPS limit is easily met. RCID therefore respectfully requests EPA approval of a custom fuel monitoring schedule that requires this RCID facility to submit representative sulfur analyses supplied by the natural gas pipeline company on a quarterly basis with the excess emissions report submitted in accordance with the provisions of §60.7(c). This schedule will provide EPA and FDEP with assurance that the NSPS are being achieved.

Please contact Ed Godwin, P.E. of Reedy Creek Energy Services, Inc. [telephone (407) 824-4943] with any questions or concerns you may have relative to this request.

Sincerely,



Thomas M. Moses
District Administrator

TM/EP/skl

Attachment

cc: Alex Alexander, FDEP Central District
Ed Godwin, Reedy Creek Energy Services, Inc.

05 07-92 11:45AM FROM EPA FPS/SSCD



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 14 1992

OFFICE OF
AIR AND RADIATIONMEMORANDUM

SUBJECT: Authority for Approval of Custom Fuel Monitoring Schedules Under NSPS Subpart GG

FROM: John B. Rasnic, Chief *John B. Rasnic*
Compliance Monitoring Branch

TO: Air Compliance Branch Chiefs
Regions II, III, IV, V, VI and IX

Air Programs Branch Chiefs
Regions I-X

The NSPS for Stationary Gas Turbines (Subpart GG) at 40 CFR 60.334(b)(2) allows for the development of custom fuel monitoring schedules as an alternative to daily monitoring of the sulfur and nitrogen content of fuel fired in the turbines. Regional Offices have been forwarding custom fuel monitoring schedules to the Stationary Source Compliance Division (SSCD) for consideration since it was understood that authority for approval of these schedules was not delegated to the Regions. However, in consultation with the Emission Standards and Engineering Division, it has been determined that the Regional Offices do have the authority to approve subpart GG custom fuel monitoring schedules. Therefore it is no longer necessary to forward those requests to Headquarters for approval.

Over the past few years, SSCD has issued over twenty custom schedules for sources using pipeline quality natural gas. In order to maintain national consistency, we recommend that any schedules Regional Offices issue for natural gas be no less stringent than the following: sulfur monitoring should

05 07-92 11:45AM FROM EPA PFS/SSCD

TO 29195413470

PG06/007

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be bimonthly, followed by quarterly, then semiannual, given at least six months of data demonstrating little variability in sulfur content and compliance with §60.333 at each monitoring frequency; nitrogen monitoring can be waived for pipeline quality natural gas, since there is no fuel-bound nitrogen and since the free nitrogen does not contribute appreciably to NO_x emissions. Please see the attached sample custom schedule for details. Given the increasing trend in the use of pipeline quality natural gas, we are investigating the possibility of amending Subpart GG to allow for less frequent sulfur monitoring and a waiver of nitrogen monitoring requirements where natural gas is used.

Where sources using oil request custom fuel monitoring schedules, Regional Offices are encouraged to contact SSCD for consultation on the appropriate fuel monitoring schedule. However, Regions are not required to send the request itself to SSCD for approval.

If you have any questions, please contact Sally M. Farrell at FTS 382-2875.

Attachment

cc: John Crenshaw
George Walsh
Robert Ajax
Earl Sale

05-07-92 11:45AM FROM EPA FPS/SSCD

TO 89195413470

P007/007

Enclosure

Conditions for Custom Fuel Sampling Schedule for Stationary Gas Turbines

1. Monitoring of fuel nitrogen content shall not be required while natural gas is the only fuel fired in the gas turbine.
2. Sulfur Monitoring
 - a. Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are: ASTM D1072-80; ASTM D3031-81; ASTM D3246-81; and ASTM D4084-82 as referenced in 40 CFR 60.335(b)(2).
 - b. Effective the date of this custom schedule, sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted once per quarter for six quarters.
 - c. If after the monitoring required in item 2(b) above, or herein, the sulfur content of the fuel shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters of each calendar year.
 - d. Should any sulfur analysis as required in items 2(b) or 2(c) above indicate noncompliance with 40 CFR 60.333, the owner or operator shall notify the State Air Control Board of such excess emissions and the custom schedule shall be re-examined by the Environmental Protection Agency. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
3. If there is a change in fuel supply, the owner or operator must notify the State of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
4. Records of sample analysis and fuel supply pertinent to this custom schedule shall be retained for a period of three years, and be available for inspection by personnel of federal, state, and local air pollution control agencies.

Attachment II

Sulfur Content, Heat Content, and SO₂ Emission Factors for Natural Gas

Date	Sulfur content (gr/100 cf)	Heat Content (BTU/scf)	SO ₂ Emission Factor (lb/10 ⁶ BTU)	SO ₂ Emission Factor (lb/10 ⁶ cf)
02/06/90	0.03	1,031	0.00083	0.857
02/13/90	0.05	1,028	0.00014	0.143
02/20/90	0.35	1,025	0.00098	1.000
02/27/90	0.45	1,024	0.00126	1.286
03/06/90	0.45	1,025	0.00125	1.286
03/13/90	0.30	1,026	0.00084	0.857
03/20/90	0.35	1,026	0.00097	1.000
03/27/90	0.35	1,025	0.00098	1.000
04/03/90	0.60	1,026	0.00167	1.714
04/10/90	0.25	1,022	0.00070	0.714
04/17/90	0.40	1,026	0.00111	1.143
04/24/90	0.30	1,022	0.00084	0.857
05/01/90	0.40	1,020	0.00112	1.143
05/08/90	0.25	1,034	0.00069	0.714
05/15/90	0.20	1,023	0.00056	0.571
06/05/90	0.45	1,020	0.00126	1.286
06/12/90	0.40	1,018	0.00112	1.143
06/19/90	0.70	1,017	0.00197	2.000
06/26/90	0.45	1,019	0.00126	1.286
07/03/90	0.55	1,022	0.00154	1.571
07/10/90	0.35	1,022	0.00098	1.000
07/17/90	0.45	1,021	0.00126	1.286
07/30/90	0.30	1,021	0.00084	0.857
08/07/90	0.50	1,024	0.00140	1.429
08/14/90	0.45	1,022	0.00126	1.286
08/21/90	0.40	1,022	0.00112	1.143
08/28/90	0.70	1,022	0.00196	2.000
09/04/90	0.55	1,029	0.00153	1.571
09/11/90	0.40	1,025	0.00111	1.143
09/18/90	0.45	1,026	0.00125	1.286
09/25/90	0.40	1,026	0.00111	1.143
10/02/90	0.45	1,029	0.00125	1.286
10/09/90	0.45	1,025	0.00125	1.286
10/16/90	0.70	1,028	0.00195	2.000
10/28/90	0.80	1,024	0.00223	2.286
Average	0.43	1,024	0.00119	1.216
Maximum	0.80	1,034	0.00223	2.286
Minimum	0.05	1,017	0.00014	0.143
Std. Dev.	0.15	4	0.00042	0.427

Source: Florida Gas Transmission Company, 1990

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3. Article Addressed to: Mr. Thomas M. Moses District Administrator Reedy Creek Improvement District P. O. Box 10170 Lake Buena Vista, FL 32830-0170		4a. Article Number P 872562488	
		4b. Service Type <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise	
		7. Date of Delivery 11/3/93	
5. Signature (Addressee)		8. Addressee's Address (Only if requested and fee is paid)	
6. Signature (Agent) <i>Ben</i>			

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Postage	\$
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Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date Mailed: 11/01/93 AC48-137740 (A048-170280) PSDOFL-123	

PS Form 3800, JUNE 1991