



Wheelabrator Ridge Energy Inc.

A Wheelabrator Technologies Company
3131 K-Ville Avenue
Auburndale, FL 33823

Phone 941.665.2255
Fax 941.665.0400

August 14, 1996

RECEIVED
AUG 19 1996
BUREAU OF
AIR REGULATION

Ms. Susan Pelz
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, FL 33619

SUBJECT: Renewal of Solid Waste Management Facility Insurance Certificate to demonstrate closure and/or long term care financial assurance.

Dear Susan:

In accordance with Rule 62-711.510(2) F.A.C., Ridge Generating Station has performed the annual re-estimate of the cost estimate and hereby submits it at least 60 days prior to the 10/15/96 anniversary date of the insurance policy used as the instrument to demonstrate financial assurance. The quantity estimates are unchanged from the Department approved closure cost estimate dated 2/9/95 by H. Wayne Jones P.E. (Copy attached). The closure cost re-estimate dated 8/13/96 by Geotech Industries (copy attached) for Ridge Generating Station is \$166,640.00. This amount again provides financial assurance which is 11% higher than required. Ridge will renew National Guaranty Insurance Company, Policy number CPCS93-0014 for another year and forward the revised SWM Fac. Insurance Certificate to Frances Keith.

Sincerely,

Ty Quinn
Controller

cc: J. Reynolds

cc: Bob Butera, FDEP SW Dist.
Frances Keith, FDEP, Tallahassee

ATTACHMENT 1

STOCKPILE CAPACITY

Ridge Generating Station's tire storage area includes four storage piles with maximum dimensions of 135 feet (length) x 50 feet (width), and an assumed maximum endloader stacking height of 15 feet (height). The capacity of the Facility's tire storage area was derived from the following volume calculation:

$$\begin{array}{r} 135 \\ \underline{\times 50} \\ 6,750 \text{ square feet} \\ \underline{\times 15} \\ 101,250 \text{ cubic feet} \\ \underline{\div 27} \\ 3,750 \text{ cubic yards per pile} \\ \underline{\times 4} \\ 15,000 \text{ cubic yards/total storage capacity} \end{array}$$

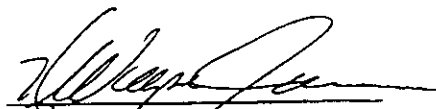
The Facility plans to store any combination of chipped tires or whole tires as market conditions would dictate. Scale data reflects an average density for two inch tire chips of approximately 1,000 lbs. per cubic yard and a volume reduction achieved by shredding of five to one.

Therefore, maximum capacity of each stockpile for 100% tire chip storage is 1,875 tons per pile or a total capacity of 7,500 tons. Conversely, the capacity of each tire pile assuming 100% whole tire storage is 375 tons per pile, resulting in a total capacity of 1,500 tons.

Dimension and calculations checked on this page only:

2-9-95

Date



H. Wayne Jones, P.E.

Reg. No: 46244



Tomorrow's Technology Today

August 13, 1996

Mr. Phil Tuohy
Director of Business Development
Wheelabrator Ridge Energy
3131 K-Ville Avenue
Auburndale, FL 33823

Sent Via Facsimile 941-665-0400

Dear Mr. Tuohy:

At your request, I have prepared the following estimate of Ridge Generating Station's capacity for tire storage.

Based on our conversation, the facility's tire storage area was designed to accommodate four storage piles with maximum dimensions of 150 feet (length) x 50 feet (width) x 15 feet (height). Therefore, in an effort to be conservative, I have based my capacity calculations on 4,166 cubic yards per pile. You indicated a desire to store any combination of chipped tires or whole tires as market conditions would dictate. GeoTech's experience indicates an average density for two-inch tire chips of 1,000 lbs. per yard (approximately 1 ton per 2 cubic yards). Maximum capacity of each tire pile, assuming 100% tire chip storage is 2,083 tons, resulting in a total capacity of 8,332 tons. The volume reduction achieved by shredding whole tires is five to one. Accordingly, the capacity of each tire pile, assuming 100% whole tire storage is 416 tons, resulting in a total capacity of 1,666 tons.

You asked that I estimate the cost of removing and disposing of the facility's maximum inventory if your facility was unable to process and dispose of the tires. Investigation revealed several Class III landfills within sixty (60) miles that accept chipped tires. Using any of these facilities, GeoTech would be able to load, transport, and dispose of Ridge's chipped tires for \$20.00 per ton. If the tire storage area were filled to capacity with chipped tires, the total cost of disposal would be \$166,640.00. GeoTech would charge \$75.00 per ton to load, transport, and dispose of Ridge Generating Station's whole tires. If the tire storage area were filled to capacity with whole tires, the total cost of disposal would be \$124,950.00.

Under the most likely circumstance that Ridge had a combination of whole tires and chipped tires on site, the total cost of disposal would fall between \$124,450.00 and \$166,640.00.

If I can be of any further assistance, please feel free to call.

Sincerely,

GEOTECH INDUSTRIES

A handwritten signature in black ink, appearing to read "Randall K. Thompson", is written over a horizontal line.

Randall K. Thompson
Executive Director

Please Note: Our area code for all calls has been changed from 904 to 352.



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

August 8, 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Matthew P. Killeen
Manager, Environmental Permitting
Wheelabrator Environmental Systems, Inc.
Liberty Lane
Hampton, New Hampshire 03842

RE: Final BACT Limits for Ridge Generating Station (PSD-FL-~~231~~¹⁸³/AC53-206244)

Dear Mr. Killeen:

This will confirm your conversation last week with John Reynolds concerning the appropriate strategy for setting final BACT emission limits for the Ridge Generating Station. You discussed whether or not an annual stack test in the worst case mode (60% wood/40% tires) might be preferable to 30-day rolling averages in view of the variability in emissions and fuel ratios. Though this would represent a departure from the Subpart Db compliance approach for SO₂, NO_x and CO, it might be justifiable on the basis of the emission swings not normally seen for Subpart Db units.

Another possibility is that of basing the limits on the CEMS data recorded only during operation at 90-100% of capacity while in the worst case mode (60/40). The data submitted on July 31 show that the currently proposed limit for CO of 114 lb/hr (30 DRA) can be met using that approach. Please indicate which approach is preferred by Wheelabrator.

If there are any questions, please call me or John Reynolds at 904-488-1344.

Sincerely,

A. A. Linero, P.E.
Administrator
New Source Review Section

AAL/JR

c: B. Thomas, SWD
R. Harwood, Polk County
J. Harper, EPA
J. Bunyak, NPS

is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
- 2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
 Matthew P. Killeen
 Wheelabrator Env. Systems
 Liberty Lane
 Hampton, New Hampshire
 03842

4a. Article Number
 P 339 251 137

- 4b. Service Type
- Registered Insured
 - Certified COD
 - Express Mail Return Receipt for Merchandise

7. Date of Delivery

8. Addressee's Address (Only if requested and fee is paid)

5. Signature (Addressee)

6. Signature (Agent)

PS Form 3811, December 1991

U.S. GPO: 1993-362-714

DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

P 339 251 137

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for international Mail (See reverse)

Sent to	Matt Killeen
Street & Number	Wheelabrator
Post Office, State, & ZIP Code	Hampton, NH
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	8-9-96
	PSD-FI-231

PS Form 3800, April 1995



Wheelabrator Environmental Systems Inc.

A Wheelabrator Technologies Company
Liberty Lane
Hampton, NH 03842

Phone 603.929.3000

July 31, 1996

Mr. John Reynolds
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED
AUG 1 1996
BUREAU OF
AIR REGULATION

Re: Ridge Generating Station
Permit Number AC53-206244 PSD-FL-183

Dear Mr. Reynolds:

Pursuant to our telephone conversations I am forwarding the following additional analyses of carbon monoxide (CO) data from the Ridge Facility:

1. Attachment 1 - Includes 30 day rolling averages (calculated as you described) for the time period between March 1, 1995 and April 20, 1995 including only those hours when the facility was operating at 44.5 MW or greater. You will note that the values do not agree with those that were included in the December 12, 1995 letter from C. Fancy to R. Williams. The values in the December 12, 1995 letter appear to correspond much more closely to the 720 hour rolling averages for all operating hours, which were submitted as Attachment A in our letter dated May 14, 1996.
2. Attachment 2 - Includes all of the hourly data that were used to calculate the 30-day rolling averages summarized in Attachment A. The 720 hour rolling averages at the top of the first page of Attachment 2 differ from the 30 day rolling average in Attachment 1 because they were calculated differently.

The 30 day rolling averages summarized in Attachment 1 can be found in the 720 hour column as the last value in that column for each day. These values represent an average of all operating hours at 44.5 MW, or above, during the last 30 operating days.

3. Attachment 3 - Includes 30 day rolling averages for the time period from May 1, 1995 through December 31, 1995, for all operating hours. New 30 day rolling average emission rates were calculated for each operating day as the average of all of the hourly emission data for the preceding 30 operating days. This replaces the analysis that was

Mr. John Reynolds
Bureau of Air Regulation
Florida Department of Environmental Protection
July 31, 1996
Page 2

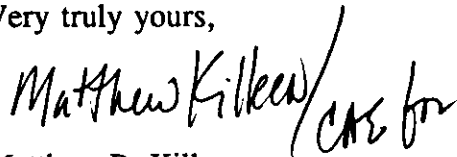
presented as Attachment B in our letter of May 14, 1996 because those values were calculated using an average of daily averages.

Attachment 4 - Includes 30 day rolling averages for the time period from August 10, 1995 through December 31, 1995 that were calculated in the same manner as the enclosed Attachment 3 but including only hours during which 44.5 MW or greater were generated (irrespective of tire consumption). This time period was chosen because the facility began combusting greater than 20 percent tires on August 10, 1995, following authorization to combust up to 40 percent tires on a heat input basis received on August 8, 1995.

Attachment 5 - Includes 30 day rolling averages for the time period from August 10, 1995 through December 31, 1995 using all operating hours when the facility was generating at least 44.5 MW for all operating days and where at least 20 percent tires (by heat input) were combusted.

Please call me at 603-929-3420 after you have had a chance to review the data, so that we can discuss appropriate permit limits for CO.

Very truly yours,

A handwritten signature in black ink that reads "Matthew Killeen" followed by a stylized signature element that appears to be "CPS for".

Matthew P. Killeen
Manager, Environmental Permitting

MPK352/ga

cc: C. Davis
A. Linero w/o attachments.
T. Porter

Is your RETURN ADDRESS completed on the reverse side?

Fold at line over top of envelope

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
*Rodney Williams, Plant Mgr
 Wheelabrator Ridge Energy
 3131 K-Ville Avenue
 Auburndale, FL 33823*

4a. Article Number
P 339 251 055

4b. Service Type
 Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

7. Date of Delivery
06/11/96

8. Addressee's Address (Only if requested and fee is paid)

5. Signature (Addressee)
[Signature]

6. Signature (Agent)
A. Colon

Thank you for using Return Receipt Service

PS Form 3811, December 1991 *U.S. GPO: 1993-352-714 **DOMESTIC RETURN RECEIPT**

P 339 251 055

US Postal Service
Receipt for Certified Mail
 No Insurance Coverage Provided.
 Do not use for International Mail (See reverse)

Sent to	
<i>Rodney Williams</i>	
Street & Number	
<i>Wheelabrator Ridge</i>	
Post Office, State, & ZIP Code	
<i>Auburndale, FL</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	<i>6-5-96</i>
<i>PSD-FI-183</i>	

PS Form 3800, April 1995



Wheelabrator Ridge Energy Inc.

A Wheelabrator Technologies Company
3131 K-Ville Avenue
Auburndale, FL 33823

Phone 941.665.2255
Fax 941.665.0400

RECEIVED

AUG 1 1996

BUREAU OF
AIR REGULATION

July 24, 1996

Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, FL 33619-8318

Attn: Mr. Bill Proses

Subject: Ridge Generating Station
Air Permit #AC53-206244
AIRS #1050216
Emissions Unit ID 001
Excess Emissions and Monitoring Systems Performance Report

Dear Sir:

Pursuant to 40CFR60, Subpart Db, and 40CFR60.7, please find enclosed Ridge Generating Station's Second Quarter 1996 Excess Emissions and Monitoring Systems Performance Report for Opacity. This covers the period from April 1, 1996 through June 30, 1996.

Also enclosed is a Cylinder Gas Audit (CGA) report for the CGA conducted during the second quarter of 1996. The report indicates that all of the accuracy results were within the 15 percent specifications.

Please feel free to contact Chuck Davis at (941) 665-2255 (Ext. 250) should you have any questions or concerns regarding this submittal.

Sincerely,

George Woodward
Plant Manager

cc: Chief Bureau of Air Regulation (w/o attachment)
EPA Region IV (w/o attachment)
T. Porter
F. Ferraro (w/o attachment)
Ridge File 6.2.1.4

Certification #P 597 437 527

SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

Pollutant (Circle One -- SO₂ / NO_x / TRS / H₂S / CO Opacity)

Reporting Period Dates: From 04/01/96 to 06/30/96

Company: Ridge Generating Station **Emission Limitation:** 10%

Address: 3131 K-Ville Ave.
Auburndale, FL 33823 **Monitor Manufacturer and Model Number:** Thermal Environmental Instruments, Inc. - Model 400B

Date of Latest CMS Certification or Audit: 06/26/96

Process Unit(s) Description: Wood and Tire Fired Boiler - Unit 1 **Total Source Operating Time in Reporting Period:** 106,607 ¹

Emission Data Summary		CMS Performance Summary	
1. Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Startup/shutdown	0	a. Monitor equipment malfunctions	618
b. Control equipment problems	118	b. Non-Monitor equipment malfunctions	1224
c. Process problems	0	c. Quality assurance calibration	1116
d. Other known causes	0	d. Other known causes	66
e. Unknown causes	0	e. Unknown causes	30
2. Total duration of excess emission	118	2. Total CMS Downtime	3054
3. Total duration of excess emissions x (100) (Total source operating time)	0.1% ²	3. Total CMS Downtime x (100) (Total source operating time)	2.86% ²

On a separate page, describe any changes since last quarter in CMS, process, or controls.
I certify that the information contained in this report is true, accurate, and complete.

George D. Woodward George D. Woodward Plant Manager 07/24/96
Name Signature Title Date

¹ For opacity, record all times in minutes. For gases, record all times in hours.
² For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 560.7(c) shall be submitted.

RIDGE GENERATING STATION

SECOND QUARTER 1996

OPACITY

START-UP EXCESS EMISSIONS				
Date	Parameter	Duration	Magnitude*	Corrective Action
NONE				
SHUT-DOWN EXCESS EMISSIONS				
Date	Parameter	Duration	Magnitude*	Corrective Action
NONE				
MALFUNCTION EXCESS EMISSIONS				
Date	Parameter	Duration	Magnitude*	Corrective Action
06/06/96	Opacity	118	61.1%	Isolated and repaired faulty fabric filter compartment.
OTHER EXCESS EMISSIONS				
Date	Parameter	Duration	Magnitude*	Corrective Action
NONE				

*Magnitude in %

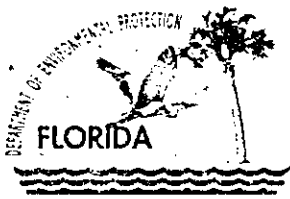
RIDGE GENERATING STATION

CEM DOWNTIME REPORT

SECOND QUARTER 1996

Analyzer	Date	Duration *	Nature of Repairs/Adjustments
Opacity	04/08/96	66	Changed clock from EST to EDT. Lost data.
Opacity	05/03/96	6	Unknown
Opacity	05/13/96	24	Unknown
Opacity	06/19/96	756	Data logging unit lost programming. Required manual re-program.
Opacity	06/20/96	468	Data logging unit lost programming. Required manual re-program.
Opacity	06/27/96	438	Erratic readings. Broken wire in data cable. Replaced cable.
Opacity	06/28/96	180	Erratic readings. Broken wire in data cable. Replaced cable.

*Duration in Minutes



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

June 5, 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Rodney Williams
Plant Manager
Wheelabrator Ridge Energy, Inc.
3131 K-Ville Avenue
Auburndale, Florida 33823

Dear Mr. Williams:

RE: Revised BACT Limits - Ridge Generating Station (PSD-FL-183)

On May 20 the Bureau of Air Regulation received your comments dated May 14 regarding the proposed final BACT limits. Apparently your submittal was mailed to the Southwest District and then forwarded here.

There are several statements in your submittal that we differ on. Page two contains the statement that the Department focused on the period March 1 through April 30, 1995 (the only period for 60% wood/40% tires) because we assumed it would represent the worst case for all of the pollutants. To the contrary, that period was selected because it represented the worst case for the pollutants in total. As indicated below, test program results showed average total emissions for the three major air pollutants (SO₂, NO_x and CO) at 45-50 MW to be 1,028 tons/yr for the 40% tire mix compared to 905 tons/yr for 0% tires. These two sets of conditions represent both ends of the emissions spectrum:

	<u>100% Wood (2/27/95-2/28/95)</u>		<u>60% Wood - 40% Tires</u>	
	<u>Avg. lb/hr</u>	<u>Avg. tons/yr</u>	<u>Avg. lb/hr</u>	<u>Avg. tons/yr</u>
SO ₂	48.2	211.1	75.0	328.5
NO _x	88.0	385.4	83.2	364.4
CO	70.4	<u>308.5</u>	76.4	<u>334.6</u>
		<u>Total 905.0</u>		<u>Total 1,027.5</u>

We recognize that the 100% wood averages are based on a smaller number of hourly averages available while operating at 45-50 MW. However, the data sufficiently show that the 60% wood/40% tire case generates the highest total emissions (about 14% more for the three major pollutants). The CEMS results indicate that CO emissions while burning 40% tires at 45-50 MW may actually be as high or possibly higher than those for 100% wood, which runs counter to the conclusion reached in your submittal. The manual testing results suggest to us that the higher CO emissions experienced there for 100% wood may have to do with excess air as well as moisture in the

Mr. Rodney Williams
June 5, 1996
Page Two

wood since the stack %O₂ was lower during the 100% wood tests.

The Department's standard practice in setting emission limits is to base them on operation at 90-100% of capacity using the most common feed or the feed generating the highest emissions. This means that emissions from the RGS facility while operating at 45-50 MW using 60% Wood/40% tires are of primary concern and must be the basis for final limits as well as compliance/enforcement. This means that your argument for retaining the initial PM/PM10 limit of 12.6 lb/hr on the ground that there were a few higher runs while burning 80% wood/20% tires is moot because you would only have to do a VE or Method 5 test in the 60%/40% mode. The same reasoning applies to your CO argument and makes it moot as well, since the Department will revise its proposal by clarifying that the 30 DRA's will be calculated using readouts from >20% tire firing only. (As you pointed out in the May 14 submittal, the "40%" mode actually turned out to be a range from about 20% to 30+%).

The Department believes that the proposed 65 lb SO₂/hr limit can be achieved by improving the response time of the SO₂ control system. This problem was discussed in the Draft Revised BACT and was depicted by plotting the values of SO₂ and MW for the longest sustained operating period at 45-50 MW in the 60%/40% mode. Had the SO₂ not moved in the opposite direction and tracked the MW more closely, about 200-250 lb. of SO₂ would not have been emitted over that 16-hour period, resulting in an average reduction of 225/16 = 14 lb SO₂/hr. Such a reduction more than compensates for the difference between the 72 lb/hr RGS has requested and the proposed 65 lb/hr.

The RGS facility has changed its targeted fuel mix on several occasions, seeking at one point to burn recycled plastic material from automobile salvaging operations, then switching to increased tire firing when wood supplies appeared to be diminishing. The Department acknowledges the need for flexibility in fuels due to the nature of this facility. Yet the emission limits must be based on the "worst case" fuel mix, that is, the one expected to generate the highest emissions in total. It would not be practicable to have separate limits for each mode of operation. Consequently, the Department plans to issue the Final Revised BACT as proposed except with the following revision:

"A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly emission data for the preceding 30 steam generating unit operating days during which greater than twenty percent of the fuel mix, on a heat input basis, is composed of tires."

Mr. Rodney Williams
June 5, 1996
Page Three

If you have questions or want to request a meeting regarding this, please contact me or John Reynolds at 904-488-1344 before the end of this month.

Sincerely,

Handwritten signature of A. A. Linero in cursive, with the date 6/5 written to the right.

A. A. Linero, P.E.
Administrator
New Source Review Section

AAL/JR

c: B. Thomas, SWD
R. Harwood, Polk County
J. Harper, EPA
J. Bunyak, NPS