



The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

Thomas S. Burack, Commissioner



September 30, 2010

Mr. Douglas York
Plant Manager
DG Whitefield, LLC
260 Airport Road
Whitefield, NH 03598

RE: Inspection Report

Dear Mr. York:

The New Hampshire Department of Environmental Services, Air Resources Division conducted a Full Compliance Evaluation at your facility on April 22, 2010. Enclosed is a copy of the Inspection Report for your records.

In a letter dated September 1, 2010, DES required that DG Whitefield submit a VOC Emissions Statement for 2009 to DES by October 1, 2010. On September 16, 2010, DES received the 2009 VOC Emissions Statement from DG Whitefield.

There were no other deficiencies identified during the inspection.

If you have any questions, please contact me by telephone at (603) 271-6797 or by email at Alan.Moulton@des.nh.gov

Sincerely,

Alan H. Moulton
Compliance Assessment Engineer
Air Resources Division

Enclosure: Inspection Reports

cc: Duane Hall, Chairman, Whitefield Board of Selectmen



ON-SITE FULL COMPLIANCE EVALUATION

**DG Whitefield, LLC
260 Airport Road
Whitefield, New Hampshire 03598
Coos County
(603) 837-9328**

AFS # 3300700010

**Inspection Date: April 22, 2010
Final Report: September 30, 2010**

Inspected and Report Prepared by:

**New Hampshire Department of Environmental Services
Air Resources Division
29 Hazen Dr., P.O. Box 95
Concord, New Hampshire 03302-0095**

A handwritten signature in blue ink that reads "Alan H. Moulton".

**Alan H. Moulton
Compliance Assessment Engineer**

I. Inspection

On April 22, 2010, the New Hampshire Department of Environmental Services, Air Resources Division (“DES”) conducted an On-site Full Compliance Evaluation of DG Whitefield, LLC (“DG Whitefield”), located in Whitefield, NH. DG Whitefield was targeted for inspection based on DES inspection criteria, which requires that a major source with a Title V Permit be inspected once every two years.

DES contacted DG Whitefield on April 21, 2010 to schedule a compliance inspection for April 22, 2010. Mr. Douglas York indicated that he would not be available and scheduled the inspection with Stephen Thomas.

Date/Time of Inspection:	April 22, 2010, 10:35 AM - 3:30 PM
Type of Inspection:	On-site Full Compliance Evaluation
Inspected by:	Alan Moulton, DES Compliance Assessment Engineer Erick Russell, DES Permit Engineer
Weather:	Sunny and 50° to 60°F
Source Contact(s):	Stephen Thomas, Maintenance Engineer Bob Hall
Last compliance inspection conducted at facility:	July 10, 2008, Off-site
Inspection Result:	<p>There were some deficiencies found as a result of the off-site inspection.</p> <ul style="list-style-type: none"> ● DG Whitefield did not report in its annual emissions report the fuel usage in the waste oil heaters and the diesel fuel oil used in the two RSCR heaters. ● DG Whitefield did not include in its annual emissions report the sulfur content of the fuel oil burned at the facility. ● DG Whitefield is not permitted to burn waste oil; however, it is listed in the annual emissions reports as a secondary fuel. DES asked DG Whitefield to resolve this question. ● The “Certification of Accuracy” statement was missing on several report submittals. DG Whitefield was reminded that all submittals should include this statement. ● The permit contained Steven Mueller as the responsible official. Douglas York has been signing as the responsible official. DES asked DG Whitefield to resolve this question.
Permit Number(s):	<p>TV-OP-007</p> <p>Issued : September 30, 2005, with Minor Modification issued July 23, 2007, and Minor Modification issued November 10, 2009</p> <p>Expires: September 30, 2010</p>

The purpose of the inspection was discussed as well as the rules pertaining to claims of

confidentiality and facility safety concerns. DG Whitefield agreed to the inspection and authorized access to the facility. No material provided during the inspection was stated to be confidential.

During the tour of the facility, DES observed the control room, the wood-fired boiler, the multi-clone, the electrostatic precipitator, the waste oil furnace, the emergency diesel generator, the diesel fire pump, and the Regenerative Selective Catalytic Reduction (“RSCR”) System. Currently, the RSCR system is reducing DG Whitefield’s NOx emissions to the required levels. No odors were detected outside the facility.

The wood-fired boiler was in operation during the inspection and the emissions from the stack had an opacity less than 10%. The waste oil furnace, the emergency diesel generator, and the diesel fire pump were not in operation during the inspection. There was a small amount of steam being emitted from the cooling tower during the inspection.

Details are discussed in later sections.

II. Facility Description

DG Whitefield is a wood-fired power plant that has a gross electricity generation capacity of 18.8 MWe. DG Whitefield produces electricity by the combustion of whole wood chips, sawmill residue, and chipped wood pallets in a Babcock and Wilcox Wood-Fired Boiler. The boiler has a maximum heat input rate of 220 MMBtu/hr. The heat generated by the combustion heats water to produce steam on the tube side of the boiler, which turns the turbine to generate electricity. The steam, after passing through the blades to turn the turbine, is condensed back to liquid water in the condenser and returned to the boiler to be re-heated. DG Whitefield is permitted to operate continuously, 24 hours per day and seven days per week.

Additional permitted sources of emissions at this facility include a 470 hp Cummins emergency generator, a 187 hp diesel fire pump, and a cooling tower.

The RSCR system includes two diesel oil-fired burners to heat the catalyst bed. Through the operation of the RSCR, DG Whitefield discovered that the exhaust stream contained enough heat to bring the catalyst bed up to temperature. DG Whitefield discontinued the use of the two diesel oil-fired burners and eventually removed the two burners.

DG Whitefield is operating a 140,000 Btu/hr Reznor used oil burner to provide space heat in the laboratory room and to dispose of used oil. DG Whitefield consumes about 800 to 1,000 gallons of used oil annually, all of which is generated on-site. There is also a 126,000 Btu/hr Thermopride #2 fuel oil-fired space heater that is used to heat a utility shed.

DG Whitefield is a publicly-owned company, employing approximately 20 people who operate the power plant on a 43.66-acre parcel of property. Construction of the facility occurred in 1987-1988. The facility came on line in 1988. DG Whitefield operates two 12-hour shifts for the continuous production of electricity 24 hours per day, seven days per week.

The facility is a major source of NOx and CO emissions and, therefore, requires a Title V Operating Permit.

III. Emission Unit Identification and Operating Conditions

Table 1: Emission Unit Identification, Operating Restrictions and Fuel Usage Data

Emission Unit	Description	Permitted Operational Restrictions	Reported Operational & Fuel Usage Data
EU1	Wood-fired Boiler Babcock and Wilcox Model #: Towerpak CCZ Serial #: 757801 Heat Rating: 220 MMBtu/hr Fuel: Wood Chips Max. Design Fuel Flow Rate: 24.4 tons/hr Installed: 1987	Wood usage limitation: See note 1 below. Opacity: 20%	2009: 219,197.34 tons of wood 2008: 190,988.00 tons of wood
EU2	Emergency Diesel Generator Cummins Model #: NTTA855G2 Serial #: P3711/2 Rating: 470 hp 3.5 MMBtu/hr Fuel: Diesel Fuel Max. Design Fuel Flow Rate: 25.5 gal/hr Installed: 1987	Shall not exceed 500 hours of operation during any consecutive 12-month period. Opacity: 20%	Hour Meter Reading: 2010: 972.1 hrs 2009: 29.50 hrs. #2: 413.59 gal. 2008: 34.70 hrs. #2: 486.20 gal.
EU3	Fire Pump Diesel Engine Cummins Model #: V-504-F2 Serial #: 20245711 Rating: 187 hp 2.4 MMBtu/hr Fuel: Diesel Fuel	Shall not exceed 500 hours of operation during any consecutive 12-month period. Opacity: 20%	Hour Meter Reading: 2010: 147.1 hrs 2009: 69.8 hrs. #2: 1,203.3 gal. 2008: 52.90 hrs. #2: 978.30 gal.

Table 1: Emission Unit Identification, Operating Restrictions and Fuel Usage Data

Emission Unit	Description	Permitted Operational Restrictions	Reported Operational & Fuel Usage Data
	Max. Design Fuel Flow Rate: 17.5 gal/hr Installed: 1987		
EU4	Cooling Tower Installed: 1987	Drift Factor = 0.00088% Circulation Rate = 11,473 gal/minute	Not tested.

- 1 Wood-fired Boiler, maximum firing rate:
- 220 MMBtu/hr for wood, equivalent to 180,000 lb/hr of steam averaged over 24-hour period at 900°F and 920 psig.
 - 252,000 tons/yr for wood chips at 55% moisture.

DG Whitefield is allowed to burn the following fuels in the wood-fired boiler:

- Whole tree wood chips at 55% moisture (approximately 7.65 MMBtu/ton);
- Saw dust;
- Clean processed wood fuel at approximately 55%-20% moisture (equivalent to 7.65 MMBtu/ton to 13.5 MMBtu/ton); and
- Combination of whole tree wood chips, saw dust and clean processed wood fuel.

Facility-wide emissions for calendar years 2008-2009 are included in Table 2. Facility emissions are calculated using the facility's fuel usage data, CEM data, stack testing data, and EPA's AP-42 Emission Factors. The fuel usage data and the facility emissions reported by DG Whitefield were confirmed during this inspection.

Table 2: Facility-Wide Emissions

	Nitrogen Oxides (tpy)	Sulfur Dioxide (tpy)	Carbon Monoxide (tpy)	Particulate Matter -PM ₁₀ (tpy)	VOCs (tpy)	Ammonia (tpy)
Permitted Emission Limits	<250	<100	<250	<96.36	<50.0	<14.24
2009	72.24	0.71 ²	230.36	27.32	16.35	1.25
2008	68.63	7.19	198.10	11.09	1.85	2.84

² SO₂ emissions from the wood-fired boiler are based on CEM data.

	Nitrogen Oxides Average of Calendar Quarter³	Nitrogen Oxides 12-Month Consecutive (tons)	Nitrogen Oxides 365-Day Rolling Average (lb/hr)	Carbon Monoxide 365-Day Rolling Average (lb/hr)	Carbon Monoxide Averaged Over Calendar Day (lb/hr)
Permitted Emission Limits	0.075 Lb/MMBtu	111.12	57.0	57.0	225
2009	No quarterly exceedances.	72.23	No 365-day exceedances.	No 365-day exceedances.	No daily exceedances.
2008	No quarterly exceedances.	68.27	No 365-day exceedances.	No 365-day exceedances.	No daily exceedances.

³ The facility chose to comply with a NOx emission limit based on the Renewable Portfolio Standard. This is a voluntary limit.

IV. Control Equipment

Pollution Control Equipment #	Description of Equipment	Activity	Emission Unit #
PCE1	Multicyclone (“Multiclone”)	Primary particulate matter control	EU1
PCE2	Electrostatic Precipitator (“ESP”)	Secondary particulate matter control	EU1
PCE3	Regenerative Selective Catalytic Reduction System (“RSCR”) with NOx and optional CO catalyst	NOx control and optional CO control	EU1

Whitefield chose to install the CO catalyst to have an option of using catalyst to optimize combustion. The RSCR originally had two diesel oil-fired burners with a combined rating of 1.8 MMBTU/hr. Whitefield has removed these units.

V. Stack Criteria

The following devices at the Facility are required to have exhaust stacks that discharge without obstruction and which meet the criteria in Table 5:

Stack Number	Emission Unit or Pollution Control Equipment ID	Minimum Height (feet above ground surface)	Maximum Exit Diameter (feet)	Stack Orientation
1	EU1	145	6.5	Vertical
2	EU2	8.5	0.67	Vertical
3	EU3	14.2	0.42	Horizontal

VI. Compliance with Permitting Requirements

CHAPTER Env-A 300 – Ambient Air Quality Standards (“AAQS”)

During the review period, DES has not conducted modeling on this facility to determine compliance with the AAQS.

CHAPTER Env-A 500 – Standards Applicable to Certain New or Modified Facilities and Sources of Hazardous Air Pollutants

DG Whitefield is subject to Env-A 503.01 and the New Source Performance Standard (“NSPS”), 40 CFR 60, Subpart Db, *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units*. See Section XIV Compliance with Applicable Federal Rules of this report.

DG Whitefield does not emit any of the Hazardous Air Pollutants (“HAPs”) regulated pursuant to the National Emission Standards for Hazardous Air Pollutants (“NESHAP”) specified in 40 CFR 61, as incorporated by reference in Env-A 504.01.

DG Whitefield is not subject to the NESHAP for Source Categories (Maximum Achievable Control Technology, or MACT, Standards), 40 CFR 63, Subpart DDDDD, *NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters*, as specified in Env-A 505.01. DG Whitefield is not a major source of HAPs and, therefore, is exempt from this MACT.

CHAPTER Env-A 600 - Statewide Permit System

DG Whitefield exceeds the Title V major source threshold (100 tons per consecutive 12-month period) for NO_x and CO emissions and, therefore, requires a Title V Operating Permit. On September 30, 2005, DES issued Title V Operating Permit TV-OP-007 (“the Permit”) to DG Whitefield. DES issued Minor Modifications on July 23, 2007 and November 10, 2009. On March 4, 2010, DG Whitefield filed a Title V renewal application with DES. The Title V Permit expires September 30, 2010. A complete permit renewal application was filed at least six months prior to the expiration date and, therefore, application shield applies. During the inspection, the DES reminded DG Whitefield of the permit renewal deadlines.

Part Env-A 606 (modeling)

During the review period, DES has not conducted modeling on this facility.

Part Env-A 609 – Title V Operating Permits

Env-A 609.04 – Insignificant Activities

DG Whitefield has identified the following insignificant activities:

- Reznor Waste Oil Furnace

DG Whitefield burns self-generated waste oil in this unit.

Part Env-A 618 – Additional Requirements in Non-Attainment Areas and the New Hampshire Portion of the Northeast Ozone Transport Region

DG Whitefield is an existing major source of NO_x located in Coos County of New Hampshire and is in the Northeast Ozone Transport Region. Coos County is unclassified with respect to attainment of the ozone National Ambient Air Quality Standard. However, the entire state of New Hampshire is considered to be part of the Northeast Ozone Transport Region. By becoming part of this region, New Hampshire has committed to implement the NSR regulations for any source with projected emissions above 100 tpy for NO_x (50 tpy in Merrimack, Hillsborough, Strafford and Rockingham Counties) and/or 50 tpy for VOCs anywhere in the state (see Env-A 618.02). DG Whitefield is not a new major stationary source nor has it made any major modifications during the review period, of which DES is aware. A NO_x limit on the wood-fired boiler (EU01) of 111.12 tons per consecutive 12-month period, previously established in the Temporary Permit, is included in the Title V Permit, to avoid NSR major modification.

Part Env-A 619 – Prevention of Significant Deterioration (PSD) of Air Quality Permit Requirements

With respect to PSD, DG Whitefield is a synthetic minor source for NO_x and CO. The Title V Permit limits NO_x and CO emissions below the PSD major source threshold of 250 tons per

consecutive 12-month period.

VII. Compliance with Permit Fee System

CHAPTER Env-A 700 - Permit Fee System

Env-A 705.04 – Payment of Emission-Based Fee

Emission-based fees are due by April 15 of the year following the emissions year.

DG Whitefield submitted timely payment of its emission-based fees for calendar years 2008 and 2009.

VIII. Source Testing and Monitoring

CHAPTER Env-A 800 - Testing and Monitoring Procedures

The Permit requires DG Whitefield to conduct monitoring in several areas.

- DG Whitefield shall conduct annual EPA Method stack tests for ammonia emission from the wood-fired boiler and control its equipment at maximum operating rate, and/or at the request of the Division, at any other operating rate at which maximum emissions might occur.

DG Whitefield conducts testing for ammonia emissions with its annual Relative Accuracy Test Audit (“RATA”). Ammonia emissions are limited to 20.0 ppm_{dv}. Stack test results indicate DG Whitefield is in compliance with this limit.

- DG Whitefield shall conduct compliance stack testing on the wood-fired boiler for Total Suspended Particulate once every five years, within 90 days of the anniversary of the last stack test.

DG Whitefield conducts particulate matter testing annually with its annual RATA. Results from the test indicated that DG Whitefield is in compliance with the particulate matter standard.

- DG Whitefield shall calibrate, maintain, and operate a continuous monitoring system on the wood-fired boiler for measuring each of the following: opacity of emissions, NO_x emissions, CO emissions, and CO₂ emissions.

DG Whitefield operates a CEM system on the wood-fired boiler and is required to perform periodic tests to show the system meets State and Federal requirements. The CEM system monitors opacity of emissions, and emissions of NO_x, CO, and CO₂. DG Whitefield calculates its emissions daily and conducts quarterly Relative Accuracy Audits (“RAA”) and annual

RATAs of the CEMs. (See *Appendix A: the Full Compliance Evaluation Records Review* at the end of this report.)

- DG Whitefield shall operate and maintain a continuous emission rate monitoring (“CERM”) system.

DG Whitefield uses data from the stack volumetric flow measuring device, combined with the NO_x and CO concentrations obtained from the CEM to calculate NO_x and CO mass emission rates and demonstrate that it is in compliance with the NO_x and CO limits stated in the Permit.

- DG Whitefield shall maintain and annually review a quality assurance/quality control (“QA/QC”) Plan. DG Whitefield is required to revise or update the QA/QC Plan as necessary.

DG Whitefield updated its QA/QC Plan on July 19, 2010 and DES received the revision on July 26, 2010. On August 21, 2009, DES received the August 10, 2009 revision to the QA/QC Plan. DES reviewed both QA/QC Plans and they appear to meet the requirements. DG Whitefield made no changes to the document in 2008 and therefore did not send a copy to DES. DG Whitefield only sends a copy to DES when it makes changes to the document. DES determined that DG Whitefield meets these audit requirements.

- DG Whitefield is required to conduct and submit the results to DES of quarterly audits.

DG Whitefield is conducting cylinder gas audits (“CGAs”), RAAs and RATAs as required. DES determined that DG Whitefield meets these audit requirements.

- DG Whitefield is required to conduct and submit the results to DES of quarterly CEM opacity audits.

DG Whitefield is conducting quarterly opacity audits as required. DES determined that DG Whitefield meets this audit requirement.

- DG Whitefield is required to operate and maintain a continuous steam flow rate monitoring/recording system.

DG Whitefield continuously monitors and records the steam flow rate. DG Whitefield calibrates the steam flow transducer once annually and records the results in a log book.

- DG Whitefield is required to operate and maintain an ammonia flow meter to continuously monitor the ammonia flow to PCE3.

DG Whitefield calculates and records the ammonia usage daily.

- DG Whitefield is required to continuously monitor the RSCR Catalyst Bed temperature.

DG Whitefield calculates and records the average daily temperature of the RSCR Catalyst Bed.

- DG Whitefield is required to daily calculate the ratio of the average daily ammonia flow to the average daily NOx emission rate.

DG Whitefield, on a daily basis, calculates and records the ratio of the average daily ammonia flow to the average daily NOx emission rate.

Permit Table 6A - Compliance Assurance Monitoring – 40 CFR 64 – ESP

Measurement of the secondary voltage with a voltage transducer.

Inspections shall be performed according to an inspection and maintenance checklist, and maintenance performed as required.

DG Whitefield performs the inspections daily.

Secondary voltage range is 15 kV to 60 kV. An excursion from this range triggers an inspection, a corrective action, and a reporting requirement. Failure to perform inspection and equipment failures trigger a reporting requirement.

DG Whitefield performs the inspections daily.

Minimum accuracy for voltage transducer is +/-2% of span, calibrated annually and results recorded. Equipment shall be properly inspected and maintained. Both ESP fields shall be operational. Secondary voltage is recorded each shift in a standard operating log. Inspection results recorded in a log book.

DG Whitefield performs the inspections daily.

Permit Table 6B - Compliance Assurance Monitoring – 40 CFR 64 – Multiclone

Measurement of the pressure differential across the multiclone is done with a pressure transmitter.

Inspections shall be performed according to an inspection and maintenance checklist, and maintenance shall be performed as required.

DG Whitefield performs the required inspections daily.

The required pressure range is 2” to 5” of water column. An excursion from this range triggers an inspection, a corrective action, and a reporting requirement. Failure to perform the inspection and equipment failures trigger a reporting requirement.

DG Whitefield performs the inspections as required, and data is collected in a computer database.

Minimum accuracy for pressure transmitter is +/-0.5" of water column, calibrated annually and results recorded. Equipment shall be properly inspected and maintained. Multiclone shall be operated under negative pressure. Pressure drop is recorded each shift in a standard operating log. Inspection results shall be recorded in a log book.

DG Whitefield performs the inspections as required, and data is collected in a computer database.

Since DG Whitefield has not accumulated exceedances of the indicator ranges over 5% of the rolling 12-month total operating time for each pollution control device, it is not required to prepare and submit a Quality Improvement Plan ("QIP").

IX. Compliance with Recordkeeping and Reporting

CHAPTER Env-A 900 - Owner or Operator Recordkeeping and Reporting Obligations

Part Env-A 902 Availability of Records

DG Whitefield demonstrated that it maintains records for a minimum of 5 years.

Part Env-A 903 General Recordkeeping Requirements

DG Whitefield shall maintain records of all monitoring requirements as specified in Table 6 of the Permit including but not limited to:

- Summary of maintenance and repair records for pollution control equipment;
- Summary of maintenance and repair records of all the monitoring devices including CEM, COM, and CERM systems;
- Summary of maintenance, calibration, and repair records associated with steam and ammonia flow measuring devices;
- Stack test results for CO, NO_x, and PM; and
- Summary of testing and/or delivery ticket certifications for sulfur content limitation provision.

DG Whitefield has all the required monitoring data and records to show that it meets the conditions of the Permit. DG Whitefield has submitted all required reports.

DES determined that DG Whitefield meets these recordkeeping requirements.

Env-A 903.02 – General Recordkeeping Requirements for Process Operations

The Title V Permit requires DG Whitefield to maintain records regarding the total quantities of all chemicals utilized in the cooling tower, which are required to calculate emissions.

DG Whitefield maintains monthly chemical inventory records of the quantity of chemicals used

in the cooling tower.

Env-A 903.03 – General Recordkeeping Requirements for Combustion Devices

DG Whitefield is required to maintain the following records for each combustion device, on a monthly basis:

- Amount of fuel consumed;
- Type of fuel consumed; and
- For liquid fuels, sulfur content as percent sulfur by weight.

DG Whitefield maintains records of the consumption, fuel type, and sulfur content of the liquid fuel used in each device. Wood consumption is recorded daily, which is used to generate a monthly report. Fuel oil consumption is recorded when the devices operate. DG Whitefield receives documentation on the sulfur content of the fuel oil with each fuel delivery.

DES determined that DG Whitefield meets the requirements of this part.

Env-A 903.04 – General Recordkeeping Requirements for Sources with Continuous Emissions Monitoring Systems

DG Whitefield maintains the required records for its CEM systems. The facility submits to DES the audit data on these systems quarterly. Upon receipt of each report by DES, the Stack Testing Section reviews the report and, if necessary, addresses any compliance issues found in the report. The DES Stack Testing Section has not identified any compliance issues with the reports submitted for the review period.

Part Env-A 904 – VOC Emission Statements Recordkeeping Requirements

Actual VOC emissions from DG Whitefield are greater than 10 tpy, thus subjecting the Facility to this part. DG Whitefield is required to maintain the following records:

- Identification of each VOC-emitting device.
- Operating schedule during the high ozone season for each VOC-emitting device, including:
 - The typical hours of operation per day; and
 - Typical days of operation per calendar month.
- The following VOC emission data:
 - Actual calendar year VOC emissions, in tons, from each VOC-emitting device; and
 - Typical high ozone season day VOC emissions, in pounds per day, from each VOC-emitting device.

DG Whitefield is maintaining the operational data required by this section.

Part Env-A 905 – NO_x Emission Statements Recordkeeping Requirements

DG Whitefield emits greater than 10 tons per year of NO_x, thus subjecting the Facility to this part. DG Whitefield is required to maintain the following records:

- Identification of each combustion device
- Operating schedule during the high ozone season for each combustion device, including:
 - The typical hours of operation per day;
 - The typical days of operation per calendar month;
 - Number of weeks of operation; and
 - Heat input rate in million Btu per hour.
- The following NO_x emission data:
 - Actual calendar year NO_x emissions, in tons, from each NO_x-emitting device; and
 - Typical high ozone season day NO_x emissions, in pounds per day, from each NO_x-emitting device.

DG Whitefield is maintaining the operational data required by this section.

Part Env-A 906 – Additional Recordkeeping Requirements

RSCR Systems Records

DG Whitefield is required to maintain the following records for the RSCR System, on a daily basis:

- Ammonia usage in gallons;
- Average daily ammonia flow in lb/hr;
- Ratio of the average daily ammonia flow (lb/hr) to the average daily NO_x flow (lb/hr).
- Average daily temperature of the RSCR catalyst bed; and
- Hours of PCE3 operation in high and low temperature mode.

DG Whitefield normally operates the RSCR in the low temperature mode. DG Whitefield is maintaining the operational data required by this section.

CAM Recordkeeping

DG Whitefield shall have a CAM monitoring report that includes the following information:

- Summary information on the number, duration, and cause of excursions or exceedances and the corrective actions taken; and
- Summary information on the number; duration, and cause for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks).

DG Whitefield is maintaining the operational data required by this section.

Quality Improvement Plan

DG Whitefield shall prepare and submit to DES a Quality Improvement Plan (“QIP”) when conditions in Table 6, Item 2 of the Permit are met.

DG Whitefield has not exceeded the conditions in Table 6, Item 2 of the Permit; therefore, the facility has not had to prepare and submit a QIP.

NOx Emissions Recordkeeping

DG Whitefield shall maintain records of the 12-month rolling average NOx emissions from the Wood-fired Boiler.

DG Whitefield is maintaining the operational data required by this section.

Part Env-A 907 – General Reporting Requirements

The Full Compliance Evaluation Records Review is included in Appendix A to this report. The appendix lists all of the reports that were received and reviewed in order to complete this compliance evaluation. The records review attachment includes a determination of each report’s timeliness with regard to the required submittal date, and if the report was acceptable in terms of its content.

DES reviews the reports as they are received. Based on the review of the reports, DES determined that DG Whitefield meets the requirements of this part.

Part Env-A 908 – VOC Emission Statements Reporting Requirements

In 2009, DG Whitefield had actual emissions greater than 10 tons per year and, therefore, was required to submit an annual VOC Emission Statement. DG Whitefield has not submitted a 2009 VOC Emissions Statement to DES. During discussions with DG Whitefield, the company has decided to stack test for VOC emissions to more accurately determine VOC emissions from the wood-fired boiler. DES is requesting that DG Whitefield submit a VOC Emissions Statement for 2009. See attachment *090110AHM01D*.

Part Env-A 909 – NOx Emission Statements Reporting Requirements

DG Whitefield has actual emissions greater than 10 tons per year and, therefore, is required to submit annual NOx emission statements. DG Whitefield is submitting NOx Emissions statements as part of its Annual Emissions reports.

DES determined that DG Whitefield meets the requirements of this part

Part Env-A 911 – Recordkeeping and Reporting Requirements for Permit Deviations

DG Whitefield is aware of the recordkeeping and reporting requirements for Permit Deviations. DG Whitefield maintains records of the deviations occurring during the Facility operation and promptly reports the deviations to DES. Deviations are summarized in the Annual Compliance Certification and in the Semi-Annual Permit Deviation and Monitoring reports.

A review was conducted of the deviation reports that DG Whitefield filed between 2008 and 2009. DES received 19 reports in 2008 and 59 reports in 2009. In 2008, 13 reports were for opacity exceedances, three reports were for equipment issues, two reports were for calibration failures, and one was for a late report filing. In 2009, 57 reports were for opacity exceedances and two reports were for calibration failures.

To date, DES has received five reports for 2010, three for mechanical problems, one for opacity, and one for calibration failure.

X. Compliance with Reasonably Available Control Technology (“RACT”)

CHAPTER Env-A 1200 – Prevention, Abatement, and Control of Stationary Source Air Pollution

Part Env-A 1204 – Stationary Sources of VOCs

DG Whitefield has no devices or processes that are subject to RACT requirements for VOCs. DG Whitefield does not have the potential to emit VOCs equaling or exceeding 50 tons during any consecutive 12-month period. Therefore, it is not subject to this part.

Part Env-A 1211 – Nitrogen Oxides

The wood-fired boiler at DG Whitefield is subject to control requirements in Env-A 1211.04 (d) and Env-A 1211.05 (d)(5)a. DG Whitefield is required to comply with a NOx emissions rate of 0.33 lb/MMBtu, based on a 24-hour calendar day average. This is less stringent than the 0.075 lb NOx/MMBtu emission limit based on a quarterly average that DG Whitefield has voluntarily chosen to comply with for the purpose of qualifying for generating renewable energy certificates. DG Whitefield has a NOx CEM which records this data daily. DG Whitefield compiles this data into monthly reports. During the inspection, DES reviewed a representative sample of monthly reports, and DG Whitefield was in compliance with the NOx emissions limits.

The emergency diesel generator and the diesel fire pump at DG Whitefield are exempt from the NOx RACT provisions of Env-A 1211.11. The engines on these devices each operate less than 500 hours during any consecutive 12-month period and the engines have combined theoretical potential NOx emissions less than 25 tons per any consecutive 12-month period.

XI. Compliance with Toxics Regulations

CHAPTER Env-A 1400 – Regulated Toxic Air Pollutants (“RTAPs”)

Fuel burning devices burning virgin fuels and biomass are exempt from an Env-A 1400 compliance determination.

DG Whitefield uses ammonia in the RSCR system. An air toxics compliance determination was conducted as part of the application DG Whitefield filed with DES on June 23, 2004, for the installation of the RSCR and SNCR systems. The adjusted in-stack concentration method was used to verify compliance with Env-A 1400 for the ammonia emissions from the RSCR and SNCR systems.

DG Whitefield has emissions of Sodium Hydroxide, Sulfuric Acid, and Potassium Hydroxide from its cooling tower. As part of this inspection, an air toxics compliance determination was conducted to determine if the emissions of these compounds were in compliance with Env-A 1400. Data from the wind and drift losses from the cooling pond and Total Dissolved Solids (“TDS”) emissions were used to verify that the emissions of the three compounds were in compliance with Env-A 1400.

The Air Toxics Program also conducted a study on the impacts of toxic air pollutants from used-oil furnaces. As a result of the study, a criteria list was developed such that if the used-oil furnace met each item on the list, then the impacts from toxics are below the Ambient Air Limits, and the facility passes the air toxics compliance determination without further analysis. DG Whitefield’s used-oil furnace met each item on the list; therefore, the facility passes the air toxics compliance determination without further analysis.

As a result of this inspection, DG Whitefield conducted a review to determine if the November 25, 2009 changes in Env-A 1400 impacted DG Whitefield’s toxics analysis. The results of this air toxics compliance determination indicate that DG Whitefield is in compliance with Env-A 1400.

XII. Compliance with Process/Particulate/Opacity Regulations

CHAPTER Env-A 1600 - Fuel Specifications

Env-A 1603.01 – Applicable Liquid Fuels

DG Whitefield uses #2 fuel oil in the emergency generator and the fire pump engine.

Env-A 1604.01 – Maximum Sulfur Content Allowable in Liquid Fuels

Env-A 1604.01 limits the sulfur content of the #2 fuel oil used in the emergency generator and the fire pump engine to 0.4% sulfur by weight. DG Whitefield provided delivery slips from Irving Oil Company. The delivery slips indicated that Ultra-Low Sulfur diesel fuel was delivered

to the fuel tanks for the emergency generator and the fire pump engine. By definition, Ultra-Low Sulfur diesel fuel has a sulfur content of 0.0015% by weight, which is below regulatory requirements. DES determined that DG Whitefield meets the requirements of this part.

CHAPTER Env-A 2000 - Fuel Burning Devices

Env-A 2002.02 – Visible Emission Standard for Fuel Burning Devices Installed After May 13, 1970 (eff. 4/23/05; formerly Env-A 2003.02, eff. 5/1/97)

For this facility, Env-A 2002.02 and the Permit limit the emissions from the fuel burning devices subject to this part to 20% opacity. During the inspection, the visible emissions from the boiler stack had an opacity less than 10%. At the time of inspection, the emergency generator and fire pump engine were not in operation; therefore, opacity readings were not taken.

Env-A 2002.08 – Particulate Emission Standards for Fuel Burning Devices Installed On or After January 1, 1985

(eff. 4/23/05; formerly Env-A 2003.08, eff. 5/1/97)

For this facility, Env-A 2002.08 and the Permit limit the emissions of particulate matter from the fuel burning devices subject to this part to not exceed 0.30 lb/MMBtu.

For the emergency generator and the fire pump engine, applicable particulate emission standards are based on specific requirements in the Permit and the formula in Env-A 2002.08. Compliance with emission standards for these fuel burning devices can only be determined through stack testing which has not been required for these devices, to date.

The wood-fired boiler is subject to 40 CFR 60 Subpart Db, which states that the particulate matter emissions shall not exceed 0.10 lb/MMBtu heat input. Particulate matter testing on the wood-fired boiler is conducted as part of the annual RATAs. Results from the May 20, 2010 RATA indicate the particulate matter emissions are 0.012 lb/MMBtu.

Env-A 2103.02 – Visible Emission Standards

(eff. 11/12/04; formerly Env-A 2107.01, eff. 1/18/97)

This facility is subject to Env-A 2103.02 which limits visible emissions to 20% opacity. During the inspection, opacity was determined to be less than 10%.

XIII. Compliance with other Miscellaneous Provisions

CHAPTER Env-A 1000 – Prevention, Abatement, and Control of Open Source Air Pollution

Part Env-A 1002 – Fugitive Dust

This Part requires that DG Whitefield shall take precautions at all times to prevent, abate, and control the emission of fugitive dust, including but not limited to such measures as wetting, covering, or vacuuming.

The roadways are paved. The greatest potential for dust emissions is the area where the wood chips are delivered. DG Whitefield has covered this area and monitors this area when chips are being delivered and removes any dirt and debris after unloading is complete. DES determined that DG Whitefield meets the requirements of this part.

XIV. Compliance With Applicable Federal Rules

40 CFR 60, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

The wood-fired boiler at DG Whitefield is subject to the NSPS, 40 CFR 60 Subpart Db, which requires the facility to limit its particulate matter emissions. DG Whitefield conducts stack testing for particulate matter on the wood-fired boiler on an annual basis at the same time as the RATAs are conducted and monitors the opacity from the wood-fired boiler using an Opacity CEM.

Subpart Db requires DG Whitefield to meet a particulate emission standard that is less than 0.10 lb/MMBtu for the wood-fired boiler, which is less than the Env-A 2002.08 requirement of 0.30 lb/MMBtu. On May 20, 2010, DG Whitefield conducted stack testing on the wood-fired boiler. Results from the particulate matter tests were 0.012 lb/MMBtu. The wood-fired boiler meets the particulate matter standards.

In the Permit, the wood-fired boiler has an opacity limit of 20%, except for one 6-minute period per hour of not more than 27%. DG Whitefield has an opacity CEM and is meeting this requirement.

40 CFR 68 - Chemical Accident Prevention Provisions

Storage of regulated chemicals at DG Whitefield is less than the applicable threshold quantities in 40 CFR 68. The Facility is subject to the Purpose and /General Duty clause of the 1990 Clean Air Act, section 112r. DG Whitefield has developed a SPCC Plan, which it updated in September 2005 and is scheduled for review in September 2010. DG Whitefield also has a Storm Water Pollution Prevention Plan, which it updated on January 5, 2009.

40 CFR 70.6 (a)(3) Permit Content, Monitoring, Record Keeping, and Reporting Requirements

DG Whitefield is meeting these Title V permit requirements (see *Appendix A: Full Compliance Evaluation Records Review* at the end of this report.)

XV. Enforcement History and Status

On May 21, 2009, DES issued a Notice of Past Violation (“NPV”) to DG Whitefield for reporting 555 opacity permit deviations between December 10, 2008 and February 1, 2009. The cause of the opacity exceedances was significant internal damage to the ESP. The NPV also noted that DG Whitefield did not submit the fuel usage or the sulfur content from fuel consumed by the insignificant activities, did not consistently provide a certification of accuracy statement on reports or other correspondence submitted to DES, and did not notify DES within 30 days of a change in the identity of the responsible official.

DG Whitefield provided the missing fuel usage information upon DES request and agreed to include fuel usage and specification for insignificant activities on the annual emissions report in the future.

DG Whitefield agreed to include the certification of accuracy statement with all reports and submittals in the future.

On August 5, 2008, DG Whitefield submitted an application to DES to change the identity of the responsible official.

Since it did not appear that the ESP malfunction occurred as a result of poor maintenance, and since DG Whitefield promptly repaired the ESP, DES took no further action.

XVI. Conclusions & Recommendations

In a letter dated September 1, 2010, DES required that DG Whitefield submit a VOC Emissions Statement for 2009 to DES by October 1, 2010.

On September 16, 2010, DES received the 2009 VOC Emissions Statement from DG Whitefield. See attachment *091610AHM01D*.

There were no other deficiencies identified during the inspection.

Attachments: Appendix A: Full Compliance Evaluation Records Review.
080510AHM01D – Email from Douglas York with Example of CAM Compliance Logs.
(9 Pages) (DES file only.)
082310AHM01D – DG Whitefield’s Updated Env-A 1400 Review. (40 Pages) (DES
file only.)
090110AHM01D – Letter Dated September 1, 2010, from DES to DG Whitefield
Concerning VOC Emissions Reporting. (1 Pages) (DES file only.)
091610AHM01D – DG Whitefield’s 2009 VOC Emission Statement. (2 Pages) (DES
file only.)

Appendix A: Full Compliance Evaluation Records Review

Facility: DG Whitefield, LLC
Date of FCE: April 22, 2010
Reviewer: Alan Moulton

Annual Emission Reports (incl. NOx, VOC etc.):

Reporting Period	When Rec'd	Report OK	In Database
2009	2/18/10	Yes	Yes
2008	3/03/09	Yes	Yes

Annual Emissions-Based Fee Payments:

Reporting Period	When Rec'd	In Database
2009	3/01/10	Yes, in DES Emission Section's Spreadsheet.
2008	4/06/09	Yes, in DES Emission Section's Spreadsheet.

TV Annual Compliance Certifications:

Reporting Period	When Rec'd	Report OK	In Database
2009	3/01/10	Yes	Yes
2008	4/13/09	Yes	Yes

TV Semi-Annual Permit Deviation and Monitoring Reports:

Reporting Period	When Rec'd	Report OK	In Database
Jul – Dec 2009	1/31/10	Yes	Yes
Jan – Jun 2009	7/28/09	Yes	Yes
Jul – Dec 2008	2/03/09	Yes	Yes
Jan – Jun 2008	8/19/08	Yes	Yes

Individual Permit Deviations Reports:

DG Whitefield has submitted 19 Permit Deviation Reports in 2008 and 59 Permit Deviation Reports in 2009. To date, DES has received five Permit Deviation Reports for 2010. Each report is submitted to DES and is summarized in the Semi-Annual Permit Deviation and Monitoring reports and in the Annual Compliance Certification Report.

Reporting Period	When Rec'd	Report OK	In Database
See Files...			

Quarterly Continuous Emission Monitoring Excess Emission Reports (CEM EERs):

Reporting Period	When Rec'd	Report OK	In Database
2 nd Qtr. 2010	8/02/10	Yes	Yes
1 st Qtr. 2010	4/26/10	Yes	Yes
4 th Qtr, 2009	2/03/10	Yes	Yes
3 rd Qtr. 2009	9/28/09	Yes	Yes
2 nd Qtr. 2009	7/27/09	Yes	Yes
1 st Qtr. 2009	4/29/09	Yes	Yes
4 th Qtr. 2008	1/30/09	Yes	Yes
3 rd Qtr. 2008	10/23/08	Yes	Yes
2 nd Qtr. 2008	8/01/08	Yes	Yes
1 st Qtr. 2008	5/06/08	Yes	Yes

CEM Audits (OPAs, CGAs, RAAs, RATAs):

Reporting Period	Report Type	When Rec'd	Report OK	In Database
2 nd Qtr. 2010	2010 RATA	7/14/10	Yes	Yes
2 nd Qtr.2010	Opacity	6/24/10	Yes	Yes
1 st Qtr. 2010	RAA	3/02/10	Yes	Yes
1 st Qtr.2010	Opacity	4/05/10	Yes	Yes
1 st Qtr. 2010	CGA	4/05/10	Yes	Yes
4 th Qtr. 2009	RAA	1/22/10	Yes	Yes
4 th Qtr. 2009	Opacity	12/21/09	Yes	Yes
4 th Qtr. 2009	CGA	12/21/09	Yes	Yes
4 th Qtr. 2009	7-Day Drift Test	10/23/09	Yes	Yes
3 rd Qtr. 2009	RAA	10/19/09	Yes	Yes
3 rd Qtr. 2009	Opacity	9/21/09	Yes	Yes
3 rd Qtr. 2009	CGA	9/21/09	Yes	Yes
2 nd Qtr. 2009	2009 RATA	8/04/09	Yes	Yes
2 nd Qtr. 2009	Opacity	7/08/09	Yes	Yes
1 st Qtr. 2009	RAA	3/12/09	Yes	Yes
1 st Qtr. 2009	Opacity	3/22/09	Yes	Yes
1 st Qtr. 2009	CGA	3/24/09	Yes	Yes
4 th Qtr. 2008	RAA	1/26/09	Yes	Yes
4 th Qtr. 2008	Opacity	1/07/09	Yes	Yes
4 th Qtr. 2008	CGA	1/07/09	Yes	Yes
4 th Qtr. 2008	7-Day Drift Test	10/21/08	Yes	Yes
3 rd Qtr. 2008	RAA	10/15/08	Yes	Yes
3 rd Qtr. 2008	Opacity	9/18/08	Yes	Yes
3 rd Qtr. 2008	CGA	9/19/08	Yes	Yes
2 nd Qtr. 2008	2008 RATA	7/23/09	Yes	Yes
2 nd Qtr. 2008	Opacity	7/14/08	Yes	Yes
1 st Qtr. 2008	RAA	3/25/08	Yes	Yes
1 st Qtr. 2008	Opacity	4/10/08	Yes	Yes
1 st Qtr. 2008	CGA	4/07/08	Yes	Yes

Stack Tests:

Stack Test Date	Device Tested	When Rec'd	Report OK	In Database
5/09/10	Wood Boiler Ammonia/PM	7/14/10	Yes	Yes
5/20/09	Wood Boiler Ammonia/PM	8/04/09	Yes	Yes
6/30/08	Wood Boiler Ammonia/PM	8/11/08	Yes	Yes

Other reports:

Reporting Period	Report Type	When Rec'd	Report OK	In Database
2009	NOx Report	3/15/10	Yes	Yes
2008	NOx Report	3/30/09	Yes	Yes
2010	QA/QC Plan	7/26/10	Yes	Yes
2009	QA/QC Plan	8/21/09	Yes	Yes

QA/QC Plan was unchanged in 2008, so no plan was filed.