



North Carolina Department of Environment and Natural Resources

Division of Air Quality

Beverly Eaves Perdue
Governor

Sheila C. Holman
Director

Dee Freeman
Secretary

December 30, 2010

Mr. Jamie Revels
Utilities Director
Western Wake Regional Water Reclamation Facility
400 James Jackson Avenue
Cary, NC 27513

Subject: Air Permit No. 10101R00
Western Wake Regional Water Reclamation Facility
Apex, Wake County, North Carolina
Permit Class: Synthetic Minor
Facility ID# 9200818

Dear Mr. Revels:

In accordance with your completed application received October 19, 2010, we are forwarding herewith Permit No. 10101R00 to Western Wake Regional Water Reclamation Facility, Apex, Wake County, North Carolina for the construction and operation of air emissions sources or air cleaning devices and appurtenances. Please note the records retention requirements are contained in General Condition 2 of the General Conditions and Limitations.

If any parts, requirements, or limitations contained in this permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. Such a request will stay the effectiveness of the entire permit. This hearing request must be in the form of a written petition, conforming to G.S. 150B-23 of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Unless a request for a hearing is made pursuant to G.S. 150B-23, this air permit shall be final and binding.

You may request modification of your air permit through informal means pursuant to G.S. 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that the permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under G.S. 150B-23.

Raleigh Regional Office - Division of Air Quality
3800 Barrett Drive, Raleigh, North Carolina 27609
Phone: (919) 791-4200 \ FAX: (919) 571-4718 \ Internet: www.ncair.org/

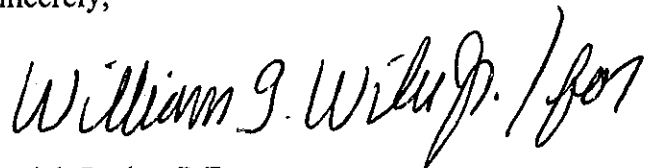
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Unless exempted by a condition of this permit or the regulations, construction of new air pollution sources or air cleaning devices, or modifications to the sources or air cleaning devices described in this permit must be covered under a permit issued by the Division of Air Quality prior to construction. Failure to do so is a violation of G.S. 143-215.108 and may subject the Permittee to civil or criminal penalties as described in G.S. 143-215.114A and 143-215.114B.

This permit shall be effective from December 30, 2010 until November 30, 2015, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Changes have been made to the permit stipulations. The Permittee is responsible for carefully reading the entire permit and evaluating the requirements of each permit stipulation. The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application. Should you have any questions concerning this matter, please contact Charles McEachern at (919) 791-4200.

Sincerely,



Patrick Butler, P.E.
Regional Air Quality Supervisor

cmm
Enclosures

c: RRO files

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

DIVISION OF AIR QUALITY

AIR PERMIT NO. 10101R00

Issue Date: December 30, 2010

Effective Date: December 30, 2010

Expiration Date: November 30, 2015

Replaces Permit: (new)

To construct and operate air emission source(s) and/or air cleaning device(s), and for the discharge of the associated air contaminants into the atmosphere in accordance with the provisions of Article 21B of Chapter 143, General Statutes of North Carolina (NCGS) as amended, and other applicable Laws, Rules and Regulations,

Western Wake Regional Water Reclamation Facility
Shearon Harris Road
Apex, Wake County, North Carolina
Permit Class: Synthetic Minor
Facility ID# 9200818

(the Permittee) is hereby authorized to construct and operate the air emissions sources and/or air cleaning devices and appurtenances described below:

Emission Source ID	Emission Source Description	Control System ID	Control System Description
ES-GEN9301 (NSPS,NESHAP)	diesel-fired emergency/peak shaving generator (3,260 brake horsepower and 2,250 kilowatts electric)	CD-GEN9301	selective catalytic reduction using aqueous ammonia injection and a diesel particulate filter
ES-GEN9302 (NSPS,NESHAP)	diesel-fired emergency/peak shaving generator (3,260 brake horsepower and 2,250 kilowatts electric)	CD-GEN9302	selective catalytic reduction using aqueous ammonia injection and a diesel particulate filter
ES-GEN9303 (NSPS,NESHAP)	diesel-fired emergency/peak shaving generator (3,260 brake horsepower and 2,250 kilowatts electric)	CD-GEN9303	selective catalytic reduction using aqueous ammonia injection and a diesel particulate filter

in accordance with the completed application 9200818.10A received October 19, 2010 including any plans, specifications, previous applications, and other supporting data, all of which are filed with the Department of Environment and Natural Resources, Division of Air Quality (DAQ) and are incorporated as part of this permit.

This permit is subject to the following specified conditions and limitations including any **TESTING, REPORTING, OR MONITORING REQUIREMENTS:**

A. SPECIFIC CONDITIONS AND LIMITATIONS

1. Any air emission sources or control devices authorized to construct and operate above must be operated and maintained in accordance with the provisions contained herein. The Permittee shall comply with applicable Environmental Management Commission Regulations, including Title 15A North Carolina Administrative Code (NCAC), Subchapter 2D .0202, 2D .0516, 2D .0521, 2D .0524 (40 CFR 60, Subpart III), 2D .0535, 2D .0540, 2D .0611, 2D .1100, 2D .1111 (40 CFR 63, Subpart ZZZZ), 2D .1806, 2Q .0315 and 2Q .0711.
2. PERMIT RENEWAL AND EMISSION INVENTORY REQUIREMENT - The Permittee, at least 90 days prior to the expiration date of this permit, shall request permit renewal by letter in accordance with 15A NCAC 2Q .0304(d) and (f). Pursuant to 15A NCAC 2Q .0203(i), no permit application fee is required for renewal of an existing air permit (without a modification request). The renewal request (with AA application form) should be submitted to the Regional Supervisor, DAQ. Also, at least 90 days prior to the expiration date of this permit, the Permittee shall submit the air pollution emission inventory report (with Certification Sheet) in accordance with 15A NCAC 2D .0202, pursuant to N.C. General Statute 143 215.65. The report shall be submitted to the Regional Supervisor, DAQ and shall document air pollutants emitted for the 2014 calendar year.
3. SULFUR DIOXIDE CONTROL REQUIREMENT - As required by 15A NCAC 2D .0516 "Sulfur Dioxide Emissions from Combustion Sources," sulfur dioxide emissions from the combustion sources shall not exceed 2.3 pounds per million Btu heat input.
4. VISIBLE EMISSIONS CONTROL REQUIREMENT - As required by 15A NCAC 2D .0521 "Control of Visible Emissions," visible emissions from the emission sources, manufactured after July 1, 1971, shall not be more than 20 percent opacity when averaged over a six-minute period, except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. However, sources which must comply with 15A NCAC 2D .0524 "New Source Performance Standards" or .1110 "National Emission Standards for Hazardous Air Pollutants" must comply with applicable visible emissions requirements contained therein.
5. 15A NCAC 2D .0524 "NEW SOURCE PERFORMANCE STANDARDS" - For the following equipment, The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60, Subpart indicated below, and including Subpart A "General Provisions."

Emission Source(s)	Regulation
three diesel-fired emergency/peak shaving generators (ID Nos. ES-GEN9301, ES-GEN9302, and ES-GEN9303)	Subpart III "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)"

- a. Emission Standards:
 - i. For the 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder, the Permittee must comply with the emission standards for new CI engines in 40 CFR 60.4201, as applicable.
- b. Fuel Requirements:
 - i. Engines subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the following requirements:
 - A. Has a maximum sulfur content of 15 ppm; and
 - B. Has a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.
- c. Monitoring Requirements:
 - i. The diesel particulate filter must be installed with a backpressure monitor that notifies the Permittee when the high backpressure limit of the engine is approached.
- d. Compliance Requirements:
 - i. The Permittee must operate and maintain the stationary CI ICE and control device according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. In addition, the Permittee may only change those settings that are permitted by the manufacturer. The Permittee must also meet the requirements of 40 CFR part 89, as applicable.
 - ii. For the 2007 model year and later stationary CI ICE the Permittee must comply by purchasing an engine certified to the emission standards in 40 CFR 60.4204(b) for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.
- e. Notification Requirements: In addition to any other notification requirements to the Environmental Protection Agency (EPA), the Permittee is required to notify the Regional Supervisor, DAQ, in WRITING, of the following:
 - i. The date construction (40 CFR 60.7) or reconstruction (40 CFR 60.15) of an affected source is commenced, postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
 - ii. A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
 - iii. The Permittee must submit an initial notification as required in 40 CFR 60.7(a)(1). The notification must include the information listed in 40 CFR 60.4214(a)(1).

f. Recordkeeping Requirements:

i. The Permittee must keep records of the following:

- A. All notifications submitted to comply with 40 CFR 60 Subpart IIII and all documentation supporting any notification;
- B. Maintenance conducted on the engine;
- C. If the stationary CI ICE is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards;
- D. If the stationary CI ICE is not a certified engine, documentation that the engine meets the emissions standards;
- E. If the stationary CI ICE is equipped with a diesel particulate filter, the Permittee must keep records of any corrective action taken after the backpressure monitor has notified the Permittee that the high backpressure limit of the engine is approached.
- F. All records required under this section shall be maintained for a period of two (2) years following the date of such record. All records shall be kept on-site and made available to DAQ personnel upon request. The Permittee shall be deemed in non-compliance with 15A NCAC 2D .0524 if recordkeeping requirements are not maintained.

6. NOTIFICATION REQUIREMENT - As required by 15A NCAC 2D .0535, the Permittee of a source of excess emissions that last for more than four hours and that results from a malfunction, a breakdown of process or control equipment or any other abnormal conditions, shall:

- a. Notify the Director or his designee of any such occurrence by 9:00 a.m. Eastern time of the Division's next business day of becoming aware of the occurrence and describe:
 - i. the name and location of the facility,
 - ii. the nature and cause of the malfunction or breakdown,
 - iii. the time when the malfunction or breakdown is first observed,
 - iv. the expected duration, and
 - v. an estimated rate of emissions.
- b. Notify the Director or his designee immediately when the corrective measures have been accomplished.

This reporting requirement does not allow the operation of the facility in excess of Environmental Management Commission Regulations.

7. FUGITIVE DUST CONTROL REQUIREMENT - As required by 15A NCAC 2D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 2D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

8. TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REPORTING REQUIREMENT - Pursuant to 15A NCAC 2D .1100 "Control of Toxic Air Pollutants," and in accordance with the approved application for an air toxic compliance demonstration, the following permit limits shall not be exceeded:

Affected Source(s)	Toxic Air Pollutant	Emission Limit
diesel-fired emergency/peak shaving generator (3,260 brake horsepower and 2,250 kilowatts electric) (ES-GEN9301)	Benzene (71-43-2)	160 pounds per year
diesel-fired emergency/peak shaving generator (3,260 brake horsepower and 2,250 kilowatts electric) (ES-GEN9302)	Benzene (71-43-2)	160 pounds per year
diesel-fired emergency/peak shaving generator (3,260 brake horsepower and 2,250 kilowatts electric) (ES-GEN9303)	Benzene (71-43-2)	160 pounds per year

No restrictions or recordkeeping are necessary to demonstrate compliance with the modeled emission rates.

9. 15A NCAC 2D .1111 "MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY", for the three diesel-fired emergency/peak shaving engines (ID Nos. ES-GEN9301, ES-GEN9302, and ES-GEN9303), which are new or reconstructed compression ignition reciprocating internal combustion engines, the Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, reporting and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology" as promulgated in 40 CFR 63, Subpart ZZZZ, "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines", including Subpart A "General Provisions." According to 40 CFR 63.6590(c), the Permittee will comply with 40 CFR 63, Subpart ZZZZ by complying with 40 CFR 60 "New Source Performance Standards" Subpart IIII. No further requirements apply for these sources under 40 CFR 63, Subpart ZZZZ.

10. CONTROL AND PROHIBITION OF ODOROUS EMISSIONS - As required by 15A NCAC 2D .1806 "Control and Prohibition of Odorous Emissions" the Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.
11. LIMITATION TO AVOID 15A NCAC 2Q .0501 - Pursuant to 15A NCAC 2Q .0315 "Synthetic Minor Facilities," to avoid the applicability of 15A NCAC 2Q .0501 "Purpose of Section and Requirement for a Permit," as requested by the Permittee, facility-wide emissions shall be less than the following:

Pollutant	Emission Limit (Tons per consecutive 12-month period)
CO	100

- a. Inspection and Maintenance Requirements -
- i. Catalytic Oxidizer Requirements - Emissions shall be controlled as described in the permitted equipment list. To comply with the provisions of this permit and ensure that emissions do not exceed the regulatory limits, the Permittee shall perform periodic inspections and maintenance (I&M) as recommended by the manufacturer. As a minimum, the I&M program will include an annual (for each 12 month period following the initial inspection) internal inspection of each primary heat exchanger and associated inlet/outlet valves to ensure structural integrity.
- b. Monitoring Requirements -
- i. Catalytic Oxidizer Requirements - The Permittee shall ensure the proper performance of each catalytic oxidizer by monitoring the following operational parameters:
- A. The Permittee shall record the maximum temperature before each catalyst bed (range = 572 to 889 degrees F) daily;
- B. The Permittee shall record the pressure drop across each catalyst bed (range = 16.6 to 18.5 inches of water) daily.
- c. Recordkeeping Requirements
- i. A log book shall be kept on site for the three selective catalytic reduction using aqueous ammonia injection and a diesel particulate filter (CD-GEN9301, CD-9302, and CD-9303) and made available to Division of Air Quality personnel upon request. The Permittee shall record all inspection, maintenance and monitoring requirements listed above in the log book. Any variance from the manufacturer's recommendations shall be investigated with corrections made and date of actions recorded in the log book.

d. Reporting Requirements - Within 30 days after each calendar year, regardless of the actual emissions, the Permittee shall submit the following:

i. emissions and/or operational data listed below. The data should include monthly and 12 month totals for the previous 12 month period.

A. carbon monoxide emissions

ii. summary of all control device monitoring and recordkeeping activities described above for the previous 12 months

12. TOXIC AIR POLLUTANT EMISSIONS LIMITATION REQUIREMENT - Pursuant to 15A NCAC 2Q .0711 "Emission Rates Requiring a Permit," for each of the below listed toxic air pollutants (TAPs), the Permittee has made a demonstration that facility-wide actual emissions do not exceed the Toxic Permit Emission Rates (TPERs) listed in 15A NCAC 2Q .0711. The facility shall be operated and maintained in such a manner that emissions of any listed TAPs from the facility, including fugitive emissions, will not exceed TPERs listed in 15A NCAC 2Q .0711.

a. A permit to emit any of the below listed TAPs shall be required for this facility if actual emissions from all sources will become greater than the corresponding TPERs.

b. PRIOR to exceeding any of these listed TPERs, the Permittee shall be responsible for obtaining a permit to emit TAPs and for demonstrating compliance with the requirements of 15A NCAC 2D .1100 "Control of Toxic Air Pollutants".

c. In accordance with the approved application, the Permittee shall maintain records of operational information demonstrating that the TAP emissions do not exceed the TPERs as listed below:

Pollutant	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
Acetaldehyde (75-07-0)				6.8
Acrolein (107-02-8)				0.02
Benzo(a)pyrene (Component of 83329/POMTV & 56553/7PAH) (50-32-8)	2.2			
Formaldehyde (50-00-0)				0.04
Toluene (108-88-3)		98		14.4
Xylene (mixed isomers) (1330-20-7)		57		16.4

B. GENERAL CONDITIONS AND LIMITATIONS

1. TWO COPIES OF ALL DOCUMENTS, REPORTS, TEST DATA, MONITORING DATA, NOTIFICATIONS, REQUESTS FOR RENEWAL, AND ANY OTHER INFORMATION REQUIRED BY THIS PERMIT shall be submitted to the:

Regional Air Quality Supervisor
North Carolina Division of Air Quality
Raleigh Regional Office
3800 Barrett Drive
Raleigh, NC 27609
(919) 791-4200

For identification purposes, each submittal should include the facility name as listed on the permit, the facility identification number, and the permit number.

2. RECORDS RETENTION REQUIREMENT - Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. These records must be kept on site for a minimum of 2 years, unless another time period is otherwise specified.
3. ANNUAL FEE PAYMENT - Pursuant to 15A NCAC 2Q .0203(a), the Permittee shall pay the annual permit fee within 30 days of being billed by the DAQ. Failure to pay the fee in a timely manner will cause the DAQ to initiate action to revoke the permit.
4. EQUIPMENT RELOCATION - A new air permit shall be obtained by the Permittee prior to establishing, building, erecting, using, or operating the emission sources or air cleaning equipment at a site or location not specified in this permit.
5. REPORTING REQUIREMENT - Any of the following that would result in previously unpermitted, new, or increased emissions must be reported to the Regional Supervisor, DAQ:
 - a. changes in the information submitted in the application regarding facility emissions;
 - b. changes that modify equipment or processes of existing permitted facilities; or
 - c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

6. This permit is subject to revocation or modification by the DAQ upon a determination that information contained in the application or presented in the support thereof is incorrect, conditions under which this permit was granted have changed, or violations of conditions contained in this permit have occurred. The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution.

Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air cleaning device(s) and appurtenances.

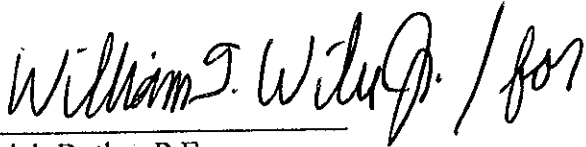
7. This permit is nontransferable by the Permittee. Future owners and operators must obtain a new air permit from the DAQ.
8. This issuance of this permit in no way absolves the Permittee of liability for any potential civil penalties which may be assessed for violations of State law which have occurred prior to the effective date of this permit.
9. This permit does not relieve the Permittee of the responsibility of complying with all applicable requirements of any Federal, State, or Local water quality or land quality control authority.
10. Reports on the operation and maintenance of the facility shall be submitted by the Permittee to the Regional Supervisor, DAQ at such intervals and in such form and detail as may be required by the DAQ. Information required in such reports may include, but is not limited to, process weight rates, firing rates, hours of operation, and preventive maintenance schedules.
11. A violation of any term or condition of this permit shall subject the Permittee to enforcement pursuant to G.S. 143-215.114A, 143-215.114B, and 143-215.114C, including assessment of civil and/or criminal penalties.
12. Pursuant to North Carolina General Statute 143-215.3(a)(2), no person shall refuse entry or access to any authorized representative of the DAQ who requests entry or access for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
13. The Permittee must comply with any applicable Federal, State, or Local requirements governing the handling, disposal, or incineration of hazardous, solid, or medical wastes, including the Resource Conservation and Recovery Act (RCRA) administered by the Division of Waste Management.
14. PERMIT RETENTION REQUIREMENT - The Permittee shall retain a current copy of the air permit at the site. The Permittee must make available to personnel of the DAQ, upon request, the current copy of the air permit for the site.
15. CLEAN AIR ACT SECTION 112(r) REQUIREMENTS - Pursuant to 40 CFR Part 68 "Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, Section 112(r)," if the Permittee is required to develop and register a risk management plan pursuant to Section 112(r) of the Federal Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.
16. PREVENTION OF ACCIDENTAL RELEASES - GENERAL DUTY - Pursuant to Title I Part A Section 112(r)(1) of the Clean Air Act "Hazardous Air Pollutants - Prevention of Accidental Releases - Purpose and General Duty," although a risk management plan may not

be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release. **This condition is federally-enforceable only.**

17. GENERAL EMISSIONS TESTING AND REPORTING REQUIREMENTS - If emissions testing is required by this permit, or the DAQ, or if the Permittee submits emissions testing to the DAQ in support of a permit application or to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 2D .2600 and follow all DAQ procedures including protocol approval, regional notification, report submittal, and test results approval.

Permit issued this the 30th of December, 2010.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION



Patrick Butler, P.E.

Regional Air Quality Supervisor

By Authority of the Environmental Management Commission

Air Permit No. 10101R00