

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date:

Region: Winston-Salem Regional Office
County: Guilford
NC Facility ID: 4100923
Inspector's Name: Hilary King
Date of Last Inspection: 07/21/2015
Compliance Code: 3 / Compliance - inspection

Facility Data			Permit Applicability (this application only)				
Applicant (Facility's Name): City of Greensboro - T.Z. Osborne Water Reclamation Facility Facility Address: City of Greensboro - T.Z. Osborne Water Reclamation Facility 2350 Huffine Mill Road McLeansville, NC 27301 SIC: 4953 / Refuse Systems NAICS: 562213 / Solid Waste Combustors and Incinerators Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V			SIP: 2D .0515, 2D .0516, 2D .0521, 2D .0605, 2D .0611, 2D .1204, 2D .1806, NSPS: Subpart O, Subpart III NESHAP: Subparts C & E, Subpart ZZZZ PSD: N/A PSD Avoidance: N/A NC Toxics: 2D .1100, 2Q .0711 112(r): N/A Other: Federal Plan Subpart LLL, 40 CFR 503 Subpart E				
Contact Data			Application Data				
Facility Contact	Authorized Contact	Technical Contact	Application Number: 4100923.14B Date Received: 03/14/2014 Application Type: Modification Application Schedule: TV-1st Time Existing Permit Data Existing Permit Number: 04489/R22 Existing Permit Issue Date: 03/30/2016 Existing Permit Expiration Date: 03/31/2022				
Bradley Flynt Water Reclamation Superintendent (336) 433-7262 2350 Huffine Mill Road McLeansville, NC 27301	Elijah Williams Water Reclamation Manager (336) 373-2055 2350 Huffine Mill Road McLeansville, NC 27301	Bradley Flynt Water Reclamation Superintendent (336) 433-7262 2350 Huffine Mill Road McLeansville, NC 27301					
Total Actual emissions in TONS/YEAR:							
CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2012	8.91	19.63	7.76	20.15	9.98	8.69	4.28 [Dichlorobenzene(p), 1,4-]
Review Engineer: Lori Ann Phillips				Comments / Recommendations:			
Review Engineer's Signature:		Date:					
				Issue: 04489T23 Permit Issue Date: Permit Expiration Date:			

1. Purpose of Application:

T.Z. Osborne Water Reclamation Facility (T.Z. Osborne) submitted permit application 4100923.14A, which was received on March 14, 2014 at the Raleigh Central Office. This application is for the wastewater treatment plant located at 2350 Huffine Road in McLeansville, Guilford County, NC and requests the change of the facility's status from a Synthetic Minor facility to a Title V facility due to the applicability of 40 CFR 62 Subpart LLL (Federal Plan Requirements for Sewage Sludge Incineration Units

Constructed On or Before October 14, 2010). Subpart LLL requires an affected facility to submit a Title V permit application by March 21, 2014 and to meet the sulfur dioxide (SO₂) emission limit prior to the compliance deadline of March 21, 2016. The facility recently requested and was issued an updated State permit, revision R22 issued on March 30, 2016, to add an additional wet tray scrubber that would help to meet the SO₂ limit requirement and also improve mercury removal.

2. Facility Description:

T.Z. Osborne is a wastewater treatment plant with a newer sewage sludge incinerator (ES-20) that first began burning sewage sludge on an intermittent test basis on August 10, 2011 and an older sewer sludge incinerator (ES-1) that ceased operation on September 1, 2011. At no time did the two incinerators operate simultaneously. The water reclamation facility operates around the clock, as does the incinerator, with the exception of short time periods (48-72 hours) when it is down for repairs or maintenance. The facility has stated that they plan to put ES-1 back in operation in during the summer of 2016.

Besides the two sludge incinerators, the facility also has a number of other existing emissions sources and control devices associated with wastewater treatment, as well as a pair of boilers (IES-4 and IES-20) and five diesel-fired emergency generators (ES-18, ES-19, ES-23, IES-3, and IES-16).

3. Application Chronology:

March 14, 2014	Received permit major modification application at RCO. Application included the following: authorized signature, forms, check for \$904.
July 30, 2014	Received Form C and P.E. seal at RRO. Application complete.

4. New Equipment/Changes in Emissions and Regulatory Review:

New Equipment:

There is no new equipment associated with this permit application.

Change in Emissions:

There are no changes in emissions associated with this permit application. The facility submitted a permit modification application in early 2016 and added an additional wet tray scrubber in order to remain in compliance with the SO₂ limit set forth in Federal Plan Subpart LLL.

Regulatory Review:

There are no major changes to the regulations that affect T.Z. Osborne. Since the facility will no longer have a Synthetic Minor permit, the Synthetic Minor permit stipulation has been removed. All of the limitations, recordkeeping, and reporting from the Synthetic Minor stipulation will no longer apply now that the facility will have a Title V permit.

The following regulations apply to the following equipment. Compliance with these regulations has previously been shown; therefore, the details of each regulation will not be discussed here. If needed, more information can be found in previous permit reviews.

- A. Fluidized bed sewage sludge incinerators (ES-1 and ES-20): 2D .0516, 2D .0521, 2D .0524 Subpart O, 2D .1100, 2D .1110 Subparts C & E, 2D .1204, 2D .1806, 2Q .0711, 40 CFR Part 503 Subpart E, and 40 CFR Part 62 Subpart LLL (Federally Enforceable Only).

*** A note regarding 40 CFR 62 Subpart LLL. An update to the existing Emissions Guidelines for Subpart LLL was issued in the Federal Register on April 29, 2016. The action finalized the federal plan for existing sewage sludge incineration units. The action implements the emissions guidelines adopted on March 21, 2011 in states that do not have an approved state plan in place by the effective date. The effective date of Federal Rule is May 31, 2016 and North Carolina does not have a state plan in place. Therefore, the placeholder stipulation for 40 CFR 62 Subpart LLL shall remain in the new Title V permit. The permittee shall be responsible for maintaining compliance with all dates, limits, testing, recordkeeping, and reporting found in the plan.

- B. Mechanical screens (ES-5), three sludge centrifuges (ES-6A through ES-6C), aerated grit chamber system (ES-11A and ES-11B), primary settling tank system (ES-12A through ES-12F), activated sludge tank system (ES-13A through ES-13L), four sludge thickener tanks (ES-15A through ES-15D), two sludge holding tanks (ES-15E and ES-15F) and two sludge receiving tanks (ES-22A and ES-22B): 2Q .0711 and 2D .0611.
- C. One sand storage silo (ES-17): 2D .0515, 2D .0521, and 2D .0611.
- D. Two No. 2 fuel oil-fired emergency generators (ES-18 and ES-19) and one diesel fuel-fired emergency generator (ES-23): 2D .0516, 2D .0521, 2D .0524 Subpart III, 2D .1111 Subpart ZZZZ, 2Q .0711, and 2D .1806.

5. Changes to Permit:

- Updated all dates and permit revision numbers. Converted the permit format from a State permit to a Title V permit.
- Removed the Synthetic Minor permit stipulation and all associated operation restrictions, recordkeeping, and reporting requirements.
- Removed 2D .0605 as that permit condition is found in Section JJ of the General Conditions.
- Removed 2D .1806 odor control requirements as wastewater treatment plants are exempt from this rule.
- Corrected the control device description for CD-21 to “wet tray scrubber”.
- Added IES-3 (100 kW emergency generator) to the insignificant/exempt equipment list as it had been inadvertently removed from the permit in 2014.

6. NSPS, NESHAPS, MACT, PSD, and Attainment Status:

T.Z Osborne’s sludge incinerators (ES-1 and ES-20) are subject to NSPS Subpart O (Standards of Performance for Sewage Treatment Plants) and Subpart LLL (Federal Plan Requirements for Sewage Sludge Incineration Units Constructed On or Before October 14, 2010). The incinerators are also subject to NESHAP Subpart C (National Emission Standard for Beryllium) and NESHAP Subpart E (National Emission Standard for Mercury).

The facility’s diesel-fired emergency generators (ES-18, ES-19, IES-3, IES-16, and ES-23) are subject to MACT Subpart ZZZZ (NESHAP for Stationary Reciprocating Internal Combustion Engines). ES-23 is also subject to NSPS Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

The facility’s two natural gas/diesel-fired boilers (IES-4 and IES-20) are subject to NESHAP Subpart JJJJJ (6J) (HAP Emission Standards for Industrial, Commercial, and Institutional Boilers at Area Sources); however, the facility has opted to take the Subpart 6J Avoidance Condition. If the facility combusts liquid fuel for reasons other than gas curtailment, gas supply interruption, startups, or periodic testing, the facility is no longer exempt from 6J and must provide notice within 30 days of the fuel switch and demonstrate compliance within 180 days of the effective date of the fuel switch.

T.Z. Osborne is a PSD minor source located in Guilford County, which is in attainment for PM₁₀ and ozone.

7. Facility Wide Air Toxics:

A toxics review was completed in early 2016 prior to the issuance of permit revision R22. No unsafe health risks were suggested at that time. No changes are being made to permitted equipment or control devices during this first time Title V permit application; therefore, no unsafe health risks would be expected.

8. Compliance Status:

The facility was in compliance during the most recent inspection conducted on July 21, 2015 by Hilary King.

9. Facility Emissions Review:

The emissions summary in the table below is based on the emissions summary from revision R22, which added the emissions associated with a new emergency generator, ES-23, to the previous emissions noted for revision R21.

Facility Emissions Summary

Pollutant	Uncontrolled Potential Emissions (tpy)	Controlled Potential Emissions (tpy)	Actual Emissions (CY2012) (tpy)
TSP	39.39	20.81	10.04
PM-10	39.39	20.81	9.98
PM-2.5	NC	NC	9.98
SO₂	75.97	64.55	8.91
NO_x	154.55	<100	19.63
VOC	26.23	14.81	7.76
CO	72.32	42.02	20.15
Highest HAP	13.66	<10	4.28
Total HAP	27.64	<25	8.69

From a potential emissions standpoint, this facility is classified as a Synthetic Minor. However, a Title V permit is required to demonstrate compliance with the Federal Plan Subpart LLL since this regulation brings the facility into the Title V permitting program.

10. Other Considerations:

- A P.E. seal is NOT required for this application.
- A zoning consistency determination is NOT required for this application.
- This facility is not subject to the 112(r) program as it does not store any of the listed chemicals in quantities above the program thresholds.

11. Public Notice Review:

A 30-day public notice and 45-day EPA review period is required for this first time Title V permit.

The 30-day public notice period was from **XX through XX.**

The EPA 45-day review period was from **XX through XX.**

12. Conclusions, Comments, and Recommendations:

This air permit application for the City of Greensboro – T.Z. Osborne Water Reclamation Facility, located at 2350 Huffine Road in McLeansville, NC, has been reviewed by DAQ to determine compliance with all procedures and requirements. The Winston-Salem Regional Office has made comments on the draft permit. Continued compliance with this air permit is expected. Recommend issuance of revised air permit No. 04489T23.