Title V Air Operation Permit Revision
Permit No. 0310166-015-AV

APPLICANT

The applicant for this project is City of Jacksonville, JEA. The applicant's responsible official and mailing address are: Mr. Brian J. Roche, VP/General Manager Water Wastewater Systems, JEA, 21 West Church Street, T -16, Jacksonville, FL 32202.

FACILITY DESCRIPTION

This existing facility is a municipal wastewater treatment plant with a maximum wastewater treatment capacity of 52.5 million gallons per day.

PROJECT DESCRIPTION

The purpose of this permit is to revise the Title V Air Operation Permit No. 0310166-011-AV to incorporate the terms and conditions of Construction Permit No. 0310166-013-AC issued on January 27, 2012, and extended until April 30, 2014.

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Application for a Title V Air Operation Permit Revision received January 30, 2014
Notice of Intent to Issue Air Permit issued February 25, 2014
Public Notice Published March 4, 2014

PRIMARY REGULATORY REQUIREMENTS

Title III: The facility is identified as a minor source of hazardous air pollutants (HAP).

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is not a Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility does operate units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60, specifically Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

NESHAP: The facility does operate emissions units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 61, specifically National Emissions Standard for Mercury of 40 CFR Part 61, Subpart E and Subpart A, General Provisions. The facility does operate emissions units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63, specifically National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

CAIR: The facility is not subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

CAM: Compliance Assurance Monitoring (CAM) does not apply to any of the emissions units at the facility.

PROJECT REVIEW

Changes that were made as part of this revision: Incorporation of the terms and conditions of Construction Permit No. 0310166-013-AC issued on January 27, 2012, and extended until April 30, 2014, the addition of a PM RACT and visible emissions RACT standards at EU 004 as a result of the severing of the connecting lines from the Flex-Kleen baghouse to the RTO and gravity belt thickener odor control unit at Emissions Unit 007 and the routing to the Odor Control Unit 2; the addition of an annual visible emissions compliance test at EU 004 as a result of this change; reclassification Boiler Nos. 1 (EU 018), 2 (EU 013) and 3 (EU 014) used to generate hot water and heat as not being subject to Rule 62-296.406, F.A.C., removal of Best Available Control Technology Determinations dated November 5, 2005, and January 20, 2011, the incorporation of the applicable requirements of 40 CFR 63 Subpart ZZZZ for the existing 1,071HP digester gas engine (EU015), the incorporation of the applicable requirements of 40 CFR 63 Subpart ZZZZ for the existing (currently classified as an insignificant emissions unit/activity) 300 kW emergency diesel engine, the incorporation of the applicable requirements of 40 CFR 63 Subpart ZZZZ for the newly installed 80 kW emergency diesel engine used for the newly constructed third digester, the incorporation of the applicable requirements of 40 CFR 60 Subpart IIII for the newly installed 80 kW emergency diesel engine, the reclassification of the existing 300 kW emergency diesel engine from insignificant to a regulated emissions unit, the addition of the Appendices have been updated to reflect the current Title V permit format (Appendix TV-6 is replaced with Appendix TV- Title V General Conditions, Appendices RR- Facility-wide Reporting Requirements, TR- Facility-wide Testing Requirements have been added), the Annual Operation Report and Annual Emissions Fee Form and Fee Facility-Wide Conditions are revised to reflect the changes to the statutes that went into effect for this year, and the Prevention of Accidental Releases Facility-wide condition is revised to reflect the correct reporting agency.

The following changes from Air Construction Permit No. 0310166-013-AC were incorporated:

- The modification of Odor Control System No. 1
- The modification of Odor Control System No. 2
- The addition of Odor Control System No. 2A
- The addition of Boiler No. 1

Revisions to Emissions Units 004 (Odor Control Unit 2) and EU 007 (Sludge Drum Dryer System):

- The applicant stated in the Title V Revision application that the connecting lines from the Flex-Kleen baghouse to the RTO as well as to the gravity belt thickener odor control unit have been severed, and moved to Odor Control Unit 2. It is further stated that since neither the RTO stack nor the Odor Control Unit 2 emits any appreciate amounts of PM, it is requested that permit condition #9 for EU 007 (Page 10 of 15) be removed or changed to “upon request”.

- With the Odor Control Unit 2 being the discharge point for the Flex-Kleen baghouse, the applicable RACT standards of Rule 62-296.712, F.A.C. are now applied to the Odor Control Unit 2 (the emission unit where the emissions are released to the atmosphere).
- Rule 62-296.712(3)(c), F.A.C. states that a visible emissions test indicated no visible emissions may be submitted in lieu of a particulate stack test for materials handling emissions subject to Rule 62-296.712, F.A.C., where the emissions unit is equipped with a baghouse.
- **A visible emissions test each federal fiscal year will be required pursuant to Rule 62-297.310(7)4.a., F.A.C.**

- In electronic correspondence dated February 13, 2014, the applicant stated that the air stream going to the RTO (after the scrubber) is gaseous. It is believed that VE testing is no longer warranted or it is requested that the testing frequency be reduced to upon Department request only.
    - The sludge dryer is subject to Rule 62-296.712, F.A.C., which establishes both a PM and visible emissions standard. Since the control device is not a baghouse, Rule 62-296.712(3)(c), F.A.C. does not apply which allows for the submittal of a visible emissions test in lieu of a particulate stack test.
    - Construction Permit No. 0310166-009-AC establishes the frequency of particulate matter stack test as upon Department request.
    - **A visible emissions test each federal fiscal year will be required pursuant to Rule 62-297.310(7)4.a., F.A.C.**

Reclassification of Emissions Unit Nos. 013, 014, and 018.

- Each of the three boilers are presently subject to Rule 62-296.406, F.A.C. However, it has been determined that each of the three boilers generate only hot water and not steam. As such, each of the three boilers do not meet the Rule 62-210.200(129), F.A.C. definition of a Fossil Fuel Steam Generating Unit. **This regulation has been removed from the Title V Operation Permit for each of the three boilers**.
- By not being classified as Fossil Fuel Steam Generating Units, each of the boilers are not subject to Rule 62-296.700 (RACT), F.A.C.
- The three boilers do not meet the applicability of 40 CFR 60 Subpart Dc- Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. In accordance with 40 CFR 60.40c(a) an affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h). The heat input capacity of Boiler Nos. 2, 3, and 1 are 3.8, 3.8, and 3.8 MMBtu/hr respectively.
- The three boilers do not meet the applicability of 40 CFR 63 Subpart JJJJJJ- National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources (as discussed below).

- Each of the three boilers are authorized to fire bio-gas as a fuel. As such, the categorical exemption in Rule 62-210.300(3)(a)34., F.A.C., is not applicable to any of the three boilers.
- The three boilers appear to be subject to the general visible emission standard of Rule 62-296.320(4)(b), F.A.C., which is a single valued opacity standard of 20%.
    - Historical Visible Emissions test results for each of the three boilers are such that the opacity levels were well below the 20% opacity standard.
- FDEP Guidance Memo DERM-PER-33 states that the general visible emissions standard in Rule 62-296.320(4)(b), F.A.C. is a facility-wide applicable standard. As such, it should not be included as a specific condition for an emissions unit, unless the process weight table is used, or it is carried forward from a previously-issued federally enforceable construction permit of FESOP. In addition, annual and prior to operation permit renewal VE testing is not required for such emissions units, unless the Department believes the standard is being violated. If this is the case, the Department may require that the owner or operator perform visible emissions compliance testing pursuant to Rule 62-297.310(7)(b), F.A.C. – Special Compliance Tests.
    - **The Department therefore revises the Title V Operation Permit to be in accordance with this FDEP Guidance**.
- The three boilers are subject to the established 175 ton per year sulfur dioxide emissions cap. As such, the three boilers are subject to an emissions limiting standard.

TITLE V PERMIT FORMAT CHANGES:

- Appendix TV-6 is replaced with Appendix TV- Title V General Conditions
- Appendix RR- Facility-wide Reporting Requirements is added
- Appendix TR- Facility-wide Testing Requirements is added
- Appendix NSPS, Subpart A – General Provisions is added
- Appendix NSPS, Subpart IIII – is added
- Appendix NESHAP, Part 61 Subpart E- is added
- Appendix NESHAP, Part 61 Subpart A – General Provisions is added
- Appendix NESHAP, Part 63 Subpart ZZZZ is added
- Appendix NESHAP, Part 63 Subpart A- General Provisions is added
- The Annual Operation Report and Annual Emissions Fee Form and Fee Facility-Wide conditions are replaced as follows:

FW9. Electronic Annual Operating Report and Title V Annual Emissions Fees. The information required by the Annual Operating Report for Air Pollutant Emitting Facility [Including Title V Source Emissions Fee Calculation] (DEP Form No. 62-210.900(5)) shall be submitted by April 1 of each year, for the previous calendar year, to the Department of Environmental Protection's Division of Air Resource Management. Each

Title V source shall submit the annual operating report using the DEP's Electronic Annual Operating Report (EAOR) software, unless the Title V source claims a technical or financial hardship by submitting DEP Form No. 62-210.900(5) to the DEP Division of Air Resource Management instead of using the reporting software. Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C. Each Title V source must pay between January 15 and April 1 of each year an annual emissions fee in an amount determined as set forth in subsection 62-213.205(1), F.A.C. The annual fee shall only apply to those regulated pollutants, except carbon monoxide and greenhouse gases, for which an allowable numeric emission-limiting standard is specified in the source's most recent construction permit or operation permit. Upon completing the required EAOR entries, the EAOR Title V Fee Invoice can be printed by the source showing which of the reported emissions are subject to the fee and the total Title V Annual Emissions Fee that is due. The submission of the annual Title V emissions fee payment is also due (postmarked) by April 1st of each year. A copy of the system-generated EAOR Title V Annual Emissions Fee Invoice and the indicated total fee shall be submitted to: **Major Air Pollution Source Annual Emissions Fee, P.O. Box 3070, Tallahassee, Florida 32315-3070.** Additional information is available by accessing the Title V Annual Emissions Fee On-line Information Center at the following Internet web site: http://www.dep.state.fl.us/air/emission/tvfee.htm. [Rules 62-210.370(3), 62-210.900 & 62-213.205, F.A.C.; and, §403.0872(11), Florida Statutes (2013); and Rule 2.301, JEPB; Rule 2.501, JEPB]

{Permitting Note: Resources to help you complete your AOR are available on the electronic AOR (EAOR) website at: http://www.dep.state.fl.us/air/emission/eaor. If you have questions or need assistance after reviewing the information posted on the EAOR website, please contact the Department by phone at (850) 717-9000 or email at eaor@dep.state.fl.us.}

{Permitting Note: The Title V Annual Emissions Fee form (DEP Form No. 62-213.900(1)) has been repealed. ***A separate Annual Emissions Fee form is no longer required to be submitted by March 1st each year.****}*

- The Prevention of Accidental Releases (Section 112® of CAA) Facility-Wide Condition is replaced as follows:

FW11. Prevention of Accidental Releases (Section 112® of CAA). If, and when, the facility becomes subject to 112®, the permittee shall:

b. Submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent electronically through EPA's Central Data Exchange system at the following address: https://cdx.epa.gov. Information on electronically submitting risk management plans using the Central Data Exchange system is available at: http://www.epa.gov/osweroe1/content/rmp/index.htm. The RMP Reporting Center can be contacted at: RMP Reporting Center, Post Office Box 10162, Fairfax, VA 22038, Telephone: (703) 227-7650.

b. Submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.

[40 CFR 68]

Comments on the Draft/Proposed Title V Permit Revision were received from the applicant on March 28, 2014.

The applicant requested that the rated capacities of Boilers 2 and 3 be changed from 5 MMBtu/hr (as stated in the original application) to 3.8 MMBtu/hr (as installed).

Based on the request, Subsection F., Condition Nos. F.1.and F.2. were changed in the Title V Permit as follows:

F.1. Permitted Capacity- Boiler No. 2. The boiler heat input shall be limited to 3.8 MMBtu per hour when firing natural gas, bio-gas, or a combination of both fuels.

[Rule 62-210.200(PTE), FAC, and Rule 2.301, JEPB; Permit No. 0310166-009-AC; Permit No. 0310166-013-AC]

F.2. Permitted Capacity- Boiler No. 3. The boiler heat input shall be limited to 3.8 MMBtu per hour when firing natural gas, bio-gas, or a combination of both fuels.

[Rule 62-210.200(PTE), FAC, and Rule 2.301, JEPB; Permit No. 0310166-009-AC; Permit No. 0310166-013-AC]

40 CFR 63 SUBPART JJJJJJ- NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL BOILERS AREA SOURCES APPLICABILITY:

Emissions Unit 013- Boiler No. 2. The 5 MMBtu/hr natural gas, bio-gas, or the combination of these two fuels, fired boiler is not subject to 40 CFR 63 Subpart JJJJJJ because the unit is a gas-fired boiler as defined in the Subpart (Rule 40 CFR 63.11195(e)).

Emissions Unit 014- Boiler No. 3. The 5 MMBtu/hr natural gas, bio-gas, or the combination of these two fuels, fired boiler is not subject to 40 CFR 63 Subpart JJJJJJ because the unit is a gas-fired boiler as defined in the Subpart (Rule 40 CFR 63.11195(e)).

Emissions Unit 018- Boiler No. 1. The 3.8 MMBtu/hr natural gas, bio-gas, or the combination of these two fuels, fired boiler is not subject to 40 CFR 63 Subpart JJJJJJ because the unit is a gas-fired boiler as defined in the Subpart (Rule 40 CFR 63.11195(e)).

40 CFR 63.11237 defines gaseous fuels and gas-fired boiler as follows:

Gaseous fuels includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, hydrogen, and biogas.

Gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

CONCLUSION

This project revises Title V air operation permit No. 0310166-011-AV. This Title V air operation permit revision is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210 and 62-213, F.A.C.