STATEMENT OF BASIS

North Florida / South Georgia Veterans Health System
Malcom Randall Veterans Affairs Medical Center
Gainesville Division

Facility ID No.: 0010041

Alachua County

Proposed Title V Air Operation Permit Revision No.: 0010041-008-AV

The purpose of this permit is to revise the Title V Air Operation Permit and incorporate the terms and conditions of Construction Permit No. 0010041-007-AC.

This existing facility is located at 1601 Southwest Archer Road, Gainesville, Alachua County, Florida; UTM Coordinates: Zone 17, 369.75 km East and 3279.13 km North; Latitude: 29° 38′ 13″ North and Longitude: 82°20′44″ West.

This Title V Air Operation Permit Revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Facility Description

The North Florida/South Georgia Veterans Health System, Malcom Randall Veterans Affairs Medical Center, Gainesville Division, is a functional hospital that provides a broad range of inpatient and outpatient health care services.

40 CFR 60 Subpart Ce Applicability

The facility's biological waste incinerator is subject to the requirements of 40 CFR 60 Subpart Ce - Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators. It meets the definition of a small HMIWI, a batch HMIWI whose maximum charge rate is less than or equal to 1,600 pounds per day. The control device utilized is a high efficiency wet scrubber.

Emissions Units Descriptions

Biological Waste Incinerator (Emissions Unit No. 006):

The incinerator is an Ecolaire Combustion Products, Inc., Model 1000TE natural gas fired dual-chamber unit, with the capacity to burn 495 pounds per hour of hospital, medical and infectious waste material. The low chamber (primary) and upper chamber (secondary) of the incinerator are fired with natural gas at a total maximum heat input rate of 3.5 MMBTU/hr. Typically, the under fire air blower turns on and remains on until the lower chamber temperature rises above 1000 °F. If the lower chamber temperature drops below 900 °F, then the under fire air blower will turn back on. Once the lower chamber reaches the appropriate temperature, an alarm horn will sound to indicate that the incinerator is ready to be loaded.

Waste is placed on the load scale. When the weight on the load scale is within range for four (4) seconds, an indicator light will illuminate signifying that the waste charge is acceptable to load into the incinerator. The waste is then loaded into a hopper. Once the waste has been deposited into the hopper, it is batch fed into the primary chamber of the incinerator by a ram that advances the waste into the incinerator, where the waste burns.

The exhaust from the incinerator lower chamber passes into the secondary chamber where it is fired with natural gas and excess air to control emissions. The gases are then cooled to saturation in a quench unit followed by a condenser/absorber. The condenser/absorber contains packing to increase the gas contact surface area and residence time with the absorber fluid, fifty (50%) caustic solution. The caustic solution is fed into the condenser/absorber by an electronic metering pump when pH, as measured by a pH sensor, drops below 7.5 units. Process water is recycled through a liquid cooling circuit, consisting of a plate and frame heat exchanger to cool the exhaust gases. The condenser/absorber aids in acid gas removal, sub-cooling, and particulate removal by condensing and removing of water with submicron contaminates.

After leaving the condenser/absorber, the gases pass through a high-efficiency Venturi scrubber followed by an entrainment separator for liquid droplet and entrained pollutant removal. The scrubber is an Envitech Model FC2B Flux Force Condensation Incinerator Gas Cleaning System. An induced draft fan vents the gases through the stack out into the atmosphere. The incinerator and the (3) boilers share a common stack.

The incinerator draft is controlled by a gas reflux system. The scrubber system is designed for the maximum gas flow condition. When the gas flow from the incinerator decreases, cleaned gas from the fan outlet is recycled through an electrically actuated damper to the scrubber inlet to make up the difference. The damper modulates to maintain the incinerator primary chamber draft pressure.

Particulate removal in an F/C scrubber system occurs in two stages. In the first stage, the particles are enlarged by acting as nuclei for the condensation of water vapor. In the second stage, the enlarged particles are removed in the high efficiency Venturi scrubber. This two stage process is necessary to ensure the removal of fine particles. The enlarged particles are then effectively removed in the Venturi scrubber.

The powdered activated carbon injection system provides additional control of dioxins and furans. Powdered activated carbon is injected into the gas stream between the quencher and the condenser/absorber. The carbon mixes with the gas stream and adsorbs the dioxins, furans, and mercury.

Continuous monitoring and data recordkeeping systems are in place pursuant to the requirements of 40 CFR 60 Subpart Ce. The systems give warnings if any of the operating parameters are approaching limits and will subsequently lock out any further charging of the incinerator until the issue has been corrected and the system return to compliant operating parameters.

The incinerator is subject to Compliance Assurance Monitoring (CAM) requirements due to hydrochloric acid emissions established in Rule 62-296.401(4), F.A.C. However, because the allowable hydrochloric acid emissions in 40 CFR 60, Subpart Ce, are more stringent than the allowable emissions established in Rule 62-296.401(4), F.A.C., this CAM Plan is only applicable when the allowable hydrochloric acid emissions of 40 CFR 60, Subpart Ce, are exceeded.

Nos. 1, 2, and 3, Boilers (Emissions Unit Nos. 001, 002, and 003):

Additionally, three (3) Keeler 250 Horsepower steam generating boilers, which are generally fired one at a time, are located at the facility. Each of the boilers has a maximum firing rate of 26 MMBtu/hr firing natural gas primarily and No.2 fuel oil as a secondary fuel. The sulfur content in the No. 2 fuel oil is limited to a maximum of 0.25 percent by weight. Each of the boilers was installed/constructed in 1966 and therefore meets the Rule 62-210.200(129), F.A.C. definition of an Existing Emissions Unit. Each boiler is subject to Rule 62-296.406, F.A.C., which required a Best Available Control Technology Determination. None of the boilers has an air pollution control device. As such these boilers are not subject Compliance Assurance Monitoring (CAM). Emissions from these boilers are exhausted to the atmosphere by a common stack shared with the incinerator.

Emergency Stationary Diesel Generators (Emissions Unit Nos. 007, 008, 009, 010):

The four emergency diesel generators are to supply power to varying electrical load for the duration of power interruption. The proposed units are considered emergency stationary internal combustion engine as defined by 40 CFR 60.4219. and are subject to NSPS, Subpart IIII--Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

Based on the Title V Air Operation Permit Renewal application dated February 13, 2008, this facility is not a major source of hazardous air pollutants (HAPs).