Title V Air Operation Permit Revision
Permit No. 1050002-008-AV

APPLICANT

The applicant for this project is Citrus World, Inc. The applicant's responsible official and mailing address are: Charles Matthews, Vice President of Operations, Citrus World, Inc., Florida's Natural Growers, Inc., 20205 US Highway 27 North, Lake Wales, Florida 33853.

FACILITY DESCRIPTION

The applicant operates the Florida's Natural Growers, Inc, which is located at 20205 US Highway 27 North, Lake Wales, Florida.

This facility consists of three citrus peel dryers with waste heat evaporators; two counter flow pellet coolers; three Erie City Keystone Boilers; two natural gas fired gas turbines, one natural gas fired waste heat boiler, and multiple stationary engines.

Citrus Peel Dryer No. 1 has a maximum process input rate of 40.0 tons per hour of pressed peel and lime, with a maximum product output rate of 13.0 tons/hour of dried peel. The peel dryer is fired at a maximum heat input rate of 50 MMBtu/hour. The dryer is fueled with natural gas or No. 2 distillate fuel oil with a maximum of 0.10 percent sulfur, by weight. The exhaust gas from the peel dryer is sent to a 50,000 pound/hour (water removal capacity) waste heat evaporator which functions as an indirect heat exchanger to drive moisture from the press liquor (from the peel press), and also acts as a particulate scrubber control device.

Citrus Peel Dryer No. 2 has a maximum process input rate of 80.0 tons per hour of pressed peel and lime, with a maximum product output rate of 26.0 tons/hour of dried peel. The peel dryer is fired at a maximum heat input rate of 100 MMBtu/hour. The dryer is fueled with natural gas or No. 2 distillate fuel oil with a maximum of 0.10 percent sulfur, by weight. The exhaust gas from the peel dryer is sent to a 120,000 pound/hour (water removal capacity) waste heat evaporator which functions as an indirect heat exchanger to drive moisture from the press liquor (from the peel press), and also acts as a particulate scrubber control device.

Citrus Peel Dryer No. 3 has a maximum process input rate of 80.0 tons per hour of pressed peel and lime, with a maximum product output rate of 26.0 tons/hour of dried peel. The peel dryer is fired at a maximum heat input rate of 100 MMBtu/hour. The dryer is fueled with natural gas or No. 2 distillate fuel oil with a maximum of 0.10 percent sulfur, by weight. The exhaust gas from the peel dryer is sent to a 100,000 pound/hour (water removal capacity) waste heat evaporator which functions as an indirect heat exchanger to drive moisture from the press liquor (from the peel press), and also acts as a particulate scrubber control device.

Two Technostaal Schouten, Inc., Model No. PCF040, counter flow citrus pellet coolers, designated as CF1 and CF2, are used to cool citrus pellets produced in a citrus processing operation. Emissions from each of the pellet coolers are controlled by a Torit Downflo II Model DFT-36 cartridge style air filtration unit. Each unit has 36 Therm-Tek cartridge filters having 7,200 square feet of filter media surface area and an automatic high pressure air back flushing system.

Boiler No. 1 is an 875 horsepower boiler manufactured by Erie City Keystone. The boiler is fueled with natural gas or No. 2 distillate fuel oil with a maximum of 0.10 percent sulfur, by weight. It has a maximum heat input rate of 36.0 million Btu per hour and began operation in 1973.

Boiler No. 2 is a 2,000 horsepower boiler manufactured by Erie City Keystone. The boiler is fueled with natural gas or No. 2 distillate fuel oil with a maximum of 0.10 percent sulfur, by weight. It has a maximum heat input rate of 86.0 million Btu per hour and began operation in 1970.

Boiler No. 3 is a 2,000 horsepower boiler manufactured by Erie City Keystone. The boiler is fueled with natural gas or No. 2 distillate fuel oil with a maximum of 0.10 percent sulfur, by weight. It has a maximum heat input rate of 85.0 million Btu per hour and began operation in 1967.

Gas Turbine No. 1 is a Solar Turbines Incorporated Centaur Type H combined cycle natural gas-fired turbine with a peak heat input rating of 51.1 million Btu per hour at approximately 66°F ambient air temperature. The turbine operates without add-on air pollution controls. The actual peak heat input rate of the turbine is a function of the ambient temperature as shown on the graph of Peak Heat Input versus Ambient Temperature, not included with this permit. The turbine drives a 3449 kW electric power generator. The combined cycle system utilizes the exhaust gas from the turbine in a waste heat recovery steam boiler, equipped with a duct burner (see Waste Heat Boiler w/duct burner*)*.

Gas Turbine No. 2 is a Solar Turbines Inc. Taurus 70-T9701S GCS combined cycle natural gas-fired gas turbine with a heat input rating of 76.0 million Btu per hour at 40°F inlet air temperature. The turbine operates without add-on air pollution controls. The actual peak heat input rate of the turbine is a function of the inlet air temperature as shown on the graph of Peak Heat Input versus Inlet Temperature, not included with this permit. The turbine drives a 7266 kW electric power generator. The combined cycle system utilizes the exhaust gas from the turbine in a waste heat recovery steam boiler (without a duct burner and therefore not an emission source) rated at 31,100 lbs/hour of steam.

Waste Heat Boiler w/duct burner recovers heat from the exhaust gas stream of Gas Turbine No. 1 and utilizes a supplemental natural gas duct burner with a maximum heat input rate of 91 million Btu per hour, and has a maximum steam production capacity of 110,000 pounds per hour at 240 psig. This emissions unit is physically linked to emissions unit 012 (see Gas Turbine No. 1, above). The boiler was placed into service January 20, 1994.

There are seven emergency stationary compression ignition (CI) RICE engines at the facility. One of these engines, the emergency back-up generator to the Data Processing area, is regulated by 40 CFR 60 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Engines. The other six are regulated by 40 CFR 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

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

PROJECT DESCRIPTION

The purpose of this permitting project is to revise the existing Title V permit for the above referenced facility.

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Renewed Title V Air Operation Permit issued April 19, 2011
Department initiated revision for a Title V Air Operation Permit Revision logged April 30, 2012
Notice of Intent to Issue Air Permit issued **[Month day, year]**
Public Notice Published **[Month day, year]**

PRIMARY REGULATORY REQUIREMENTS

Title III: The facility is not identified as a major 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 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.

NESHAP: The facility does operate units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

CAM: Compliance Assurance Monitoring (CAM) does not apply to any of the units at the facility. The waste heat evaporators act as scrubbers for particulate matter but they are considered inherent process equipment to the peel dryers. The pellet coolers have cartridge filters to collect particulate matter (PM) emissions. The uncontrolled PM emissions from each cooler are well below 100 TPY.

PROJECT REVIEW

The emissions units regulating 11 reciprocating internal combustion engines (RICE) at the facility, EU Nos. 034, 035 and 036, were removed from the regulated emissions unit section of the permit and added to the insignificant source list. These engines were added to the facility's Title V permit during the last renewal because the Department thought they were subject to 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. After correspondence between the facility, EPA and Tallahassee it was determined that these engines are non-road engines and therefore not regulated by 40 CFR 63, Subpart ZZZZ. Appendix TV was replaced with the new version.

CONCLUSION

This project revises Title V air operation permit No. 1050002-007-AV, which was issued on April 19, 2011. 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.