Title V Air Operation Permit Renewal
Permit No. 1050045-012-AV

APPLICANT

The applicant for this project is Bartow Citrus Products, LLC. The applicant's responsible official and mailing address are: Bart Plymale, Vice President of Operations, Bartow Citrus Products, LLC, P.O. Box 730, Arcadia, FL 34265.

FACILITY DESCRIPTION

The applicant operates the Bartow Citrus Products facility, which is located at 2020 US Hwy 17 South, Bartow, Florida.

This facility consists of two citrus peel dryers connected to one 100,000 pound per hour waste heat evaporator, one citrus peel pellet cooler, one emergency stationary diesel engine, and process equipment (which includes fruit washers, oil and juice extraction equipment, cooling towers, fruit and peel conveyance equipment, lime storage silo, and peel storage). Steam for the process is provided by the adjacent Orange Cogeneration facility (ID No. 1050231).

Two citrus dryers exhaust through one waste heat evaporator (WHE). Waste citrus peel and pulp ("wet peel") are pressed to remove oils and some water. This press liquor is concentrated (termed "citrus molasses") using waste heat from the dryer(s), and is added to the dried peel as a binder for pelletizing. The peel discharged from the press ("pressed peel") is then fed to the dryer(s) for removal of remaining water. Only one dryer can operate at a time.

The primary dryer is designed to evaporate a maximum of 60,000 pounds per hour of water. The secondary dryer is designed to evaporate a maximum of 30,000 pounds per hour of water. Maximum heat input for both dryers is 100 million Btu per hour. The primary dryer processes a total maximum of 90,000 pounds per hour of pressed peel (including water). The secondary dryer processes a total design maximum of 45,000 pounds per hour of pressed peel (including water). The evaporator processes a maximum of approximately 100,000 pounds per hour of liquid waste and converts it to approximately 29,630 pounds per hour of citrus molasses. Approximately 26,620 pounds per hour of dry feed containing approximately 10 percent moisture is produced.

Particulate matter emissions are reduced in the waste heat evaporator during the continuous washing of the waste heat evaporator's tubes. Primary removal of particulate matter is accomplished by use of a cyclone common to both dryers. Particulate matter emissions are vented to the atmosphere through the evaporator stack. In the event of an emergency, emissions are vented to a relief stack.

The pellet mill cooler has a maximum rated capacity of 20.0 tons per hour. Dried citrus peel from peel dryers is sent to the pelletizer where molasses is added and then to the pellet cooler where pellets are formed for use as an animal feed supplement. Particulate emissions from the cooler are controlled by one small cyclone and one large cyclone. Each cyclone has its own emission stack.

The emergency stationary diesel engine on site is an existing compression ignition (CI) reciprocating internal combustion engine (RICE) for the fire pump. It was manufactured in 1976 by Detroit Diesel; Model 671. The engine is rated at 238 HP.

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

PROJECT DESCRIPTION

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

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Initial (after Citrus Statute repermitting) Title V Air Operation Permit issued April 30, 2006

Application for a Title V Air Operation Permit Renewal received October 14, 2010

Additional Information Request dated December 7, 2010

Additional Information Response received December 20, 2010

Notice of Intent to Issue Air Permit issued February 17, 2011

Public Notice published March 30, 2011

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 not 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.

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 units at the facility since the primary pollution control devices (cyclones) are considered inherent process equipment (i.e. collected dust is recycled back into the process).

PROJECT REVIEW

The following changes were made as part of this renewal:

Permit was written using the new Tallahassee Title V template.

New Emissions Unit 013 was added for the existing emergency stationary CI RICE diesel engine. This unit is subject to NESHAP 40 CFR 63, Subpart ZZZZ.

Boilers #1 and #2 (Emissions Units 010 and 011) were deleted since they were never constructed. As mentioned in Facility Description above, steam for the process is provided by the adjacent Orange Cogeneration facility. Bartow Citrus Products currently does not have any boilers on site.

Description for Emissions Unit 007 (Citrus Peel Pellet Cooler) was modified to correct unit's rated capacity from 14.0 tons/hour to 20.0 tons/hour. This change does not affect unit's permitted capacity as the capacity of the pellet cooler is determined by the capacity of the operating citrus peel dryer(s). Emissions Unit 006 (Two Citrus Peel Dryers Vented to One Waste Heat Evaporator) is capable of producing approximately 26,620 pounds per hour of dry feed (13.3 tons/hour).

CONCLUSION

This project renews Title V air operation permit No. 1050045-011-AV, which was issued on April 30, 2006. This Title V air operation permit renewal is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210 and 62-213, F.A.C.