Florida Department of

Environmental Protection

Memorandum

TO: Rick Bradburn
THROUGH: Armando I. Sarasua, P.E.
FROM: R. J. Prusa
DATE: August 8, 2012
SUBJECT: Evaluation Summary for Green Circle Bio Energy Inc., Cottondale Wood Pellet Plant, 0630058-012-AV, Jackson County

We recommend issuing a revision to Initial Title V permit 0630058-005-AV, effective March 17, 2011, which incorporates the terms and conditions of construction permits 0630058-008-AC, issued April 12, 2011, 0630058-009-AC, issued July 15, 2011, and 0630058-010-AC, issued March 23, 2012.

Process Description

This is a wood fuel pellet plant comprised of a wood fiber receiving and storage area, two dryer lines, three pelletizing lines and a pellet load-out area. Logs are debarked and milled into chips. The chips are dried and ground. Each Dryer Line consists of a bark fuel combustor exhausting into a rotary drum wood chip dryer, and a steam generator. A portion of the hot gases generated in each bark combustor is routed to each line's steam generator. A Dry Wood Truck Dump allows "as-delivered" dry wood chips to be fed directly into the existing Grinding Storage Bin. Each Pelletizing Line consists of hammer mills, pellet mills, a Pellet Cooler, twin cyclones, a single ID fan and an exhaust stack. The hammer mills grind the dry wood chips to proper size. Steam softens the wood fiber as it is drawn into the Pelletizer. Pellets exiting the pellet mills are conveyed via sealed chain conveyor to a counter flow pellet cooler and are then routed to Bulk Load-out for shipment.

Pollution Control Equipment

Each Dryer Line's exhaust gases go to a Wet Electro-static Precipitator (WESP) for particulate matter control and a Regenerative Thermal Oxidizer (RTO) for volatile organic compound emission control.
All chain conveyors in the Pelletizing Line area and the Bulk Load-out area are sealed with continuous air aspiration for dust and fire control. PM emissions are controlled by two cyclones and fabric filters for each Pelletizing Line. The Bulk Load-out area has a dust filter system to control PM emissions.

Environmental Impact

Airborne Contaminant Emitted	FAC Rule	Estimated Emissions		Allowable Emissions	
		lbs/hr	T/yr	lb/hr	T/yr
PM*	AC permit	N/A	220.51	N/A	220.51
SO2	N/A	N/A	0.34	N/A	N/A
VOC	N/A	N/A	243.10	N/A	243.1
NOx	N/A	N/A	245.30	N/A	245.3
CO	N/A	N/A	22.20	N/A	N/A
Objectionable Odors	62-296.320(2)	N/A	N/A	None allowed off plant property	

*Wood Fiber Receiving and Storage Area fugitives of 32.8 tpy PM_{10} and 168.3 T/yr PM are not included in estimated facility totals.

Applicable Rules & Regulations
This facility is regulated by Rule 62-213.440(1), F.A.C., as a Title V source and has established annual emission limits to avoid PSD Review.

Compliance Monitoring
Once every five year stack testing is conducted for PM, NO_X and VOC for the Dryer Lines and for PM and VOC for the Pelletizing Lines. VE testing will be conducted for filters and cyclones. A compliance monitoring plan (CMP) establishes operating, monitoring and recordkeeping procedures for determining compliance with permit requirements for each emission unit. Pellets produced as measured in the Bulk Load-out area, is used as a compliance determination measure.

Compliance History
No issues since initial construction permit issued July 13, 2007.

Fee Summary
Title V facility, no fee required.

RP/c