

**INSPECTION REPORT FORM
AIR POLLUTION EMISSION SOURCES**

FACILITY: Maxwest-Sanford LLC		DISTRICT: Central District	COUNTY: Seminole
ADDRESS: 3540 Cameron Ave Sanford, Florida 32773		CONTACT: Donnie Webb (Plant Manager) (407) 328-4992	
AIRS# 1170409	PERMIT #: 1170409-003-AC 1170409-002-AC	ISSUED DATE: 9/18/2011 & 11/18/2012 EXPIRATION DATE: 3/30/2013 & 11/30/13	
SOURCE DESCRIPTION: EU 01 – Waste-to-Energy Gasification System			
INSPECTION DATE: December 19, 2012	AUDIT TYPE: On-Site Inspection & Stack Test	COMPLIANCE STATUS: In-Compliance	
<u>Facility Observations:</u>			

The facility has redesigned the gasification system per Air permit 1170409-002-AC and constructed a fluidized bed gasification system. No areas were observed where precautions had not been taken to minimize pollutant emissions or prevent the release of unconfined particulate.

Process Observations:

The facility receives liquid waste sludge from various waste treatment facilities.

The sludge drying system: The liquid sludge is pumped into a belt filter press for dewatering and then to a sludge storage hopper. The hopper feeds a batch dryer. Once dried the biosolids are stored in the gasification holding hopper.

The gasification system: The feeder tank batch feeds the fluidized bed. Biosolids are conveyed from the holding hopper if the feeder tank is empty or below the feed rate. The fluidized bed operates between 1100°-1400°F. The syngases are sent into a high efficiency, high temperature cyclone to remove the particulate matter (ash). The syngas is then sent into thermal oxidizer equip with a natural gas primer burner and a primary syngas burner. The syngas enters two oxygen rings to encourage combustion. The gas enters a heat exchanger which sends heated oil back to the sludge drying system. The gas enters a spark arrestor, lime baghouse and then a wet scrubber. The pH of the scrubber is ~12.75.

Control Equipment Observations:

A high efficiency, high temperature cyclone is used between the fluidized bed and the thermal oxidizer for ash collection. The ash is conveyed by a screw into one of two closed dumpsters.

A lime baghouse is used to help control the green house gases with the help of the single-pass scrubbers. The system is designed to have the facility inspect the pressure drop across the baghouse and the pH of the scrubber daily when the facility is in operation.

Records Observations:

The facility is still in the construction phase and no records were reviewed at the time of the inspection.

No pollution control devices appeared to be circumvented or improperly operated.

No objectionable odors were detected on or off the site.

No visible emission were observed coming from the various exhaust stacks. A method-9 observation was not necessary.

Source Test and Test Team Observations:

Mr. Bruno A. Ferraro and Ms. Sara Greivell with Grove Scientific & Engineering are the Maxwest consultants overseeing the testing of the gasification system preformed by Analytical Testing Consultants, Inc. (ATC). The testing crew consisted of five people, lead by Mr. J. Kent Childers, Senior Project Manager, and Mr. Ilya Alimov, Technical Director. The following methods were being preformed: EPA Method 1, 2, 3, 4, 5, 6C, 7E, 9 10, 22, 23, 26A, & 29. At the time of the testing the unit was running at a feed rate of 1,100 lbs per hour dry sludge.

INSPECTOR(S) NAME(S): Michael Young	
SIGNATURE(S):	DATE: 1/2/2012

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INSPECTION COMMENTS/RECOMMENDATIONS:			

At the time of inspection the facility was performing an initial stack test on the gasification system. ATC started a metals and dioxin furan (D/F) test at ~7:30am and ended ~11:35am. At 11:37am the exhaust stack oxygen sensor malfunctioned. The gasification system was shutdown at ~11:45am by Mr. Donnie Webb, Plant Manager. At 12:40pm Mr. Paul Cairney informed inspectors that the facility plans to thoroughly investigate the malfunction. After the investigation and the oxygen sensor will be replaced and the facility plans on retesting the unit by the end of February 2013. The reason for the delay is because of the holiday season the week of December 24th, and ATC's testing schedule. Mr. Bruno Ferraro stated that he would submit a written letter stating what happened by Thursday, December 20th.

On Thursday December 20th, 2012 at 9:09am the Department received an e-mail from Mr. Bruno Ferraro explaining what happened during the test and the reason for the delay in retesting.

INSPECTION PHOTOS:



Biosolid Holding Hopper



High efficiency high temperature cyclone



Start of the thermal oxidizer Syngas primary burner
The white rings are the oxygen rings



Spark arrestor



Lime Baghouse



Stack test platform.
Black tube is the exhaust stack
Blue tank is the single pass wet scrubber

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