



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

DEC 19 2013

OFFICE OF  
ENFORCEMENT AND  
COMPLIANCE ASSURANCE

Jeff Snyder  
Chief Marketing Officer  
MaxWest Environmental Systems Incorporated  
1485 International Parkway  
Suite 1031  
Lake Mary, Florida 32746

RE: Request for Determination of Applicability under 40 CFR Part 60, Subpart Mmmm - Emissions Guidelines and Compliance Timelines for Existing Sewage Sludge Incineration Units

Dear Mr. Snyder:

This letter is in response to your email of November 7, 2013, in which you inquired on the status of a September 24, 2013, request for applicability submitted on behalf of MaxWest Environmental Systems, Incorporated (MaxWest) by Ms. Bernadette Rappold, of McGuire Woods. Ms. Rappold requested a determination of applicability under 40 CFR Part 60, Subpart Mmmm - Emissions Guidelines and Compliance Timelines for Existing Sewage Sludge Incineration Units (SSI EG Rule) for a sewage sludge gasifier located in Sanford, Florida and owned by MaxWest. Your November 7, 2013 email confirms that the McGuire Woods' request for applicability is being made on behalf of MaxWest.

For the reasons stated below, the Environmental Protection Agency (EPA) believes that the neither the MaxWest sewage sludge gasifier nor thermal oxidizer process heater are subject to the SSI EG Rule.

### **Background**

According to the McGuire Woods' request, MaxWest constructed a fixed bed downdraft gasifier for processing biosolids<sup>1</sup> in late 2008. Operation began during September 2009. The original fixed bed downdraft gasifier was replaced with a fluidized bed design; construction on this unit began September 26, 2011<sup>2</sup>. According to information provided in your letter, the current process involves a continuous feed of dried biosolids into the gasifier. The gasifier is operated in an oxygen-starved environment at a temperature of approximately 704 degrees celcius (°C). No flame is applied to the sewage sludge in the gasifier, nor is a flame propogated as a result of the heating. The gasifier produces what is called a synthetic gas or "syngas." Once the syngas exits the gasifier, it is routed through a particulate matter cyclone and then to a process heater and heat exchanger for heat recovery. The

<sup>1</sup> MaxWest provides that the biosolid feed to the gasifier is sewage sludge.

<sup>2</sup> In determining applicability to Subpart Mmmm, the EPA used the "commenced construction" dates as provided by MaxWest. In other words, we did not determine if the applicability of Subpart LLLL at Section 60.4775 applies instead.

syngas is combusted in the process heater to generate the heat needed to dry new incoming sludge. The flue gas exiting the process heater and heat exchanger is routed to a baghouse and a wet scrubber.

### EPA Response

As means of background, an emissions guideline (such as the SSI EG) does not apply directly to a source. Instead, the emissions guideline applies to Administrators of air quality programs in a state or in a United States protectorate. The emissions guideline directs those Administrators on the content, timing, and requirements for developing a state plan in order to implement the guideline. A state is required to submit a plan for approval to EPA, to implement and enforce the EG, not later than 1 year after EPA promulgates the EG. See U.S.C. §7429(b)(2). If a state has not submitted an approvable plan within two years after the date of promulgation of an EG, then the EPA shall develop, implement and enforce a federal plan. See U.S.C. §7429(b)(3). Emissions guidelines are not enforceable until the EPA approves a state plan (or adopts a federal plan that implements and enforces the guideline), and the state (or federal) plan has become effective. The SSI EG was promulgated on March 21, 2011, and Florida did not submit a state plan for the SSI EG by the March 21, 2012, deadline. See Section 60.5005(b). EPA is currently drafting a proposed federal implementation plan.

For the purposes of this response, we are determining whether MaxWest owns and operates an SSI as that term is defined in the SSI EG Rule, and therefore, whether the SSI Federal Plan would be applicable, once finalized.

According to Section 60.5060, the SSI EG rule applies to SSI units that are constructed on or before October 14, 2010, or modified on or before September 21, 2011.

An SSI unit is defined at Section 60.5250 as:

... an incineration unit combusting sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter. Sewage sludge incineration unit designs include fluidized bed and multiple hearth. A SSI unit also includes, but is not limited to, the sewage sludge feed system, auxiliary fuel feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The SSI unit includes all ash handling systems connected to the bottom ash handling system. The combustion unit bottom ash system ends at the truck loading station or similar equipment that transfers the ash to final disposal. The SSI unit does not include air pollution control equipment or the stack.

Sewage sludge is also defined at Section 60.5250 as:

... [a] solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash

generated during the firing of sewage sludge in a sewage sludge incineration unit or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

The preamble to March 21, 2011, final rule describes an SSI unit as “an enclosed device or devices using controlled flame combustion that burns sewage sludge for the purpose of reducing the volume of sewage sludge by removing combustible matter.” See 76 FR 15372. According to the information provided by MaxWest, no flame is applied or propagated in the gasifier and the gasifier prevents combustion by limiting the air-to-sludge ratio such that combustion cannot occur. Therefore, we do not believe that the gasifier is an SSI, because it does not combust sewage sludge.

With regard to the thermal oxidizer process heater, combustion of the syngas does take place in this unit. The definition of sewage sludge at Section 60.3930 includes “material derived from sewage sludge.” According to the information provided by Maxwest, the syngas is derived from sewage sludge through the gasification process. The definition of sewage sludge is expressly limited to the “solid, semisolid, or liquid residue generated during the treatment of domestic sludge in a treatment works.” Since syngas is a gas, and not a solid, semisolid, or liquid, it does not meet the definition of sewage sludge in the SSI EG rule (even though it is derived from sewage sludge). Therefore, EPA believes that the combustion of the syngas in MaxWest’s thermal oxidizer process heater is not subject to the SSI EG Rule.

On December 7, 2010, EPA issued an applicability determination under 40 CFR 61, Subpart E, for MaxWest's Sanford fixed bed downdraft gasifier and thermal oxidizer process heater. See enclosure. See also Control Number Z130001 at: [www.epa.gov/compliance/monitoring/programs/caa/adi.html](http://www.epa.gov/compliance/monitoring/programs/caa/adi.html). EPA promulgated the Part 61 emissions standards in 1975 under the authority of Section 112 (hazardous air pollutants) that existed at that time and prior to the enactment of Section 129 in the 1990 Clean Air Act Amendments. The provisions of the Part 61 regulations continue to apply as described in that determination and are unrelated to the SSI EG rule.

This response was coordinated with the Office of General Counsel, EPA Region 4, and the Office of Air Quality Planning and Standards, and is based on the information provided by MaxWest and counsel. If you have any additional questions, please contact Marcia Mia of my staff, at: (202) 564-7042 or by email at: [mia.marcia@epa.gov](mailto:mia.marcia@epa.gov).

Sincerely,



Edward Messina, Director  
Monitoring, Assistance, and Media Programs Division  
Office of Compliance

Enclosure

cc: Bernadette Rappold, McGuire Woods  
Cameron Prell, McGuire Woods  
Lisa Sharp, McGuire Woods