



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

VIA EMAIL ONLY

URGENT LEGAL MATTER

Dated via electronic signature

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Re: Manchester Sewage Sludge Incinerator; Alternative Testing Procedure Request

Dear Messrs. Sheppard, Smith, and Ms. Rice:

On April 29, 2020, Woodard and Curran, on behalf of the city of Manchester, sent the U.S. Environmental Protection Agency ("EPA") a letter titled "Manchester Wastewater Treatment Plant Sewage Sludge Incinerator Request for Alternative Testing Procedure - 40 CFR §62.16015." On June 1, 2020, EPA's former Chief of the Air Compliance Section responded in a letter titled, "Manchester Sewage Sludge Incinerator; Operating Limits and Test Procedures." On June 12, 2020, Woodard and Curran sent EPA a further letter titled "Manchester Wastewater Treatment Plant Sewage Sludge Incinerator, Revised Plan to Address Operating Limit Deviations, Revised Request for Alternative Testing Procedure - 40 CFR §62.16015," that addressed EPA's comments regarding the April 29 letter. Manchester's Alternative Testing Procedure Request, described in the letters, concerns the sewage sludge incinerator ("SSI") located at 300 Winston Street, Manchester, New Hampshire ("Facility"), which is subject to the

Federal Plan Requirements for Sewage Sludge Incineration Units Constructed on or Before October 14, 2010, at 40 CFR Part 62, Subpart LLL (“Federal Plan”).

Background

Under 40 CFR § 62.16015(a)(7)(iii), EPA may approve the use of an alternative test method if the Agency has determined that it is adequate for indicating whether a source is in compliance.

According to 40 CFR § 62.16015(a)(11), owners/operators of SSIs are required to operate the SSI during emissions testing at a minimum of 85% of the maximum permitted capacity.

In the June 12 letter, Manchester explains that the freeboard temperature of the SSI is primarily driven by the sludge feed rate and the water and volatile solids content of the sludge. In addition, the permitted capacity of the SSI is 6.2 wet tons per hour (“WTPH”), while the average actual throughput of the SSI is approximately 4 WTPH, or 65% of the permitted capacity. The June 12 letter states that during the 2019 performance test, the average sludge feed rate was 5.5 WTPH (89% capacity), and that based on this test the freeboard operating temperature range was established as 1582°F to 1634°F. Manchester’s June 12 letter states that the Facility has difficulties operating within the established temperature range under normal conditions.

Alternative Testing Procedure Request

Manchester proposes to test at a sludge feed rate below 85% of the maximum allowable sludge feed rate, and to limit its feed rate to 110% of the tested feed rate from the time of the test until a following successful test is conducted.

EPA has allowed a similar approach to set the maximum throughput at municipal waste combustors under 40 CFR § 60.53b(b). Under those provisions, municipal waste combustors cannot operate at load levels greater than 110% of the maximum demonstrated municipal waste combustor unit load measured during stack testing for dioxins and furans.

Method of Calculating the Maximum Allowable Sludge Feed Rate

Manchester proposes to conduct a series of performance test “blocks” at a sludge feed rate that is representative of typical operation, to establish the minimum operating limits including freeboard temperature, venturi scrubber differential pressure, venturi scrubber flow rate, tray scrubber differential pressure, tray scrubber flow rate, and tray scrubber upper and lower tray pH. Manchester proposes that the maximum allowable sludge feed rate would be 110% of the average feed rate measured during these test blocks.

EPA’s Approval of the Request

Under EPA’s authority in 40 CFR § 62.16015 and § 60.8(c), and in light of the Facility’s difficulties operating within the established temperature range under normal conditions, EPA approves Manchester’s request to test at a sludge feed rate below 85% of the maximum permitted rate. If Manchester tests at a feed rate below 85% of the maximum permitted rate, the

maximum allowable sludge feed rate will be limited to 110% of the average feed rate determined during the test until a following successful test (in which Manchester meets all the applicable testing requirements and Federal Plan emission limits) is conducted. To the extent practicable, during the test Manchester shall operate to maintain consistent sludge feed rates among the test blocks. Manchester will calculate the maximum allowable sludge feed rate using the methods described in this letter and apply for and adhere to a permit restriction that limits operation to the calculated maximum allowable sludge feed rate.

This approval of Manchester's requested alternative testing procedure is subject to revision or withdrawal for subsequent testing, based on changed circumstances or operating conditions at the Facility.

Proposal for Setting Maximum Freeboard Temperature

Manchester proposes that, for the purpose of establishing a maximum freeboard temperature, it conduct three additional one-hour nitrogen oxide ("NOx") runs at a higher than normal sludge feed rate. These runs would not be used to establish the maximum allowable sludge feed rate, only the maximum freeboard temperature. EPA accepts this approach for the sole purpose of establishing a maximum freeboard operating temperature limit for NOx. All other operating parameters will be established during the testing at the sludge feed rate authorized above for the alternative testing procedure.

If you have any questions, please contact Darren Fortescue, Environmental Engineer, at (617) 918-1162.

Sincerely,

**DENNIS
DEZIEL**

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Dennis Deziel
Regional Administrator
U.S. EPA, Region 1

By electronic cc: Sheri Eldridge, NH DES
Frederick J. McNeill, P.E., Chief Engineer, City of Manchester