

RESOLUTION OF THE UNION COUNTY UTILITIES AUTHORITY

Resolution No.: 50-2024
Date: September 18, 2024

Approved as to form:

Bianka Vargas, Clerk

Approved as to sufficiency of funds:

John Cuffo, Acting Comptroller
[] YES [] NO [X] NONE REQUIRED

RECOMMENDING AN ADMINISTRATIVE ACTION PLAN AMENDMENT TO THE UNION COUNTY DISTRICT SOLID WASTE MANAGEMENT PLAN TO REVISE THE UNITS FOR MEASURING AND RECORDING INCOMING FATS, OIL AND GREASE (FOG) FROM GALLONS TO TONS FOR A CLASS C RECYCLING FACILITY IN THE CITY OF ELIZABETH

WHEREAS, pursuant to the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. (the "SWMA"), each county within the State of New Jersey is designated a solid waste management district with responsibility for the development of a solid waste management plan setting forth the solid waste disposal strategy to be applied in the district; and

WHEREAS, the Union County District Solid Waste Management Plan (the "County Plan"), developed in accordance with the SWMA, was initially adopted by the County of Union (the "County") on June 7, 1979 and certified by the New Jersey Department of Environmental Protection ("NJDEP") on August 13, 1980, and has since been amended from time to time; and

WHEREAS, the Union County Utilities Authority ("UCUA") was created by the County, in accordance with the provisions of the Municipal and County Utilities Authorities Law, N.J.S.A. 40:14B-1 et seq., by an Ordinance adopted on June 5, 1986, as amended on December 11, 1986, and has been designated by the County, pursuant to and in accordance with the SWMA, as the agency responsible for implementation of the County Plan; and

WHEREAS, on or about March 21, 2024, Waste Management of New Jersey, Inc. ("WMI") filed an application with the UCUA, requesting an amendment of the County Plan to update the measurement and recording of incoming fats, oil and grease ("FOG") material from gallons to tons for WMI's Class C Recycling facility currently included in the County Plan and located at 847 Flora Street in the City of Elizabeth, New Jersey 07201 (referred to as the "Facility"), which is owned and operated by WMI; and

WHEREAS, the Facility is permitted to accept up to 500 tons per day ("TPD") of Class C material, including source separated food waste, vegetative food waste, and yard trimmings; and the Facility is permitted to accept up to 60,000 gallons per day ("GPD") of Class C recyclable material consisting of liquid food and/or beverage waste, including FOG material; and

WHEREAS, the liquid waste accepted at the Facility consists primarily of FOG material; and

WHEREAS, WMI filed the application to measure and record incoming FOG material on a tonnage basis rather than on a volumetric basis, which will allow all incoming Class C materials received at the Facility to be measured in tons per day, with the overall 500 TPD facility capacity remaining unchanged; and

WHEREAS, WMI proposed a density of 8.34 pounds per gallon (lbs/gal) for all incoming FOG material at the Facility for purposes of calculating the liquid wastes received as TPD; and

WHEREAS, on or about September 12, 2024, UCUA received a letter report from UCUA's Engineers, CME Associates (the "CME Report"), describing the proposed updates and recommending a conversion factor of 7.34 lbs/gal, based upon industry standards, which translates to a maximum daily mass of 220 TPD of Class C recyclable material consisting of liquid food and/or beverage waste including FOG material; and

WHEREAS, WMI has concurred with the recommendations of CME, including the updated conversion factor of 7.34 lbs/gal and the maximum daily mass of 220 TPD of such liquid food and/or beverage waste including FOG material; and

WHEREAS, the CME Report set forth no objections to permitting WMI to measure and record the approved 60,000 gallons per day of Class C recyclable material consisting of liquid food and/or beverage waste including FOG material, in the units of tons per day, to be adopted as an amendment to the County Plan, subject to County and NJDEP approval, as applicable; and

WHEREAS, the application seeks no other changes and the operational details for the Facility as currently specified in the County Plan (e.g., permitted waste types, hours of operation, recyclables classification, daily tonnages, etc.) as well as the site-specific NJDEP-issued permit and/or recycling general approval, remain unchanged; and

WHEREAS, the NJDEP's solid waste regulations (N.J.A.C. 7:26-1.1 et seq.) provide certain actions to amend a county solid waste management plan may be taken by administrative action ("AA") by the implementing agency without the necessity for a full plan amendment which would otherwise require notice and a public hearing before the governing body of the County; and

WHEREAS, UCUA has determined that the inclusion in the County Plan of the proposed Facility modifications does not warrant a full plan amendment and may be amended via administrative action, as set forth at N.J.A.C. 7:26-6.11; and

WHEREAS, the approval of WMI's application to amend the County Plan as described above is consistent with the Statewide Solid Waste Management Plan and the State's recycling goals, is in the best interests of the County and its citizens, and is necessary for UCUA's continued effective operation as the agency responsible for implementation of the County Plan; and

WHEREAS, based on the foregoing, UCUA desires to amend the County Plan based on WMI's application.

NOW, THEREFORE, BE IT RESOLVED, by the Union County Utilities Authority as follows:

Section 1. The aforesaid recitals are hereby incorporated by reference, as if set forth at length herein.

Section 2. UCUA hereby authorizes, by administrative action, an amendment to the County Plan to permit WMI to measure and record incoming Class C recyclable material consisting of liquid food and/or beverage waste including FOG material in tons per day (with a maximum of 220 TPD of such liquid waste) for the Facility, with the Facility's overall capacity of 500 TPD remaining unchanged.

Section 3. The amendment to the County Plan is subject to WMI's compliance with the UCUA Engineer's (CME Associates) comments and recommendations in its September 12, 2024 letter report and receipt of approval from the County and NJDEP, as applicable.

Section 4. The Acting Executive Director of UCUA and Special Counsel are hereby authorized and directed to submit the application from WMI and this Resolution to NJDEP as an administrative action in order to obtain such approvals as may be necessary under law.

Section 5. A copy of this Resolution, together with a copy of WMI's application to amend the County Plan, shall be made available for public inspection at the UCUA's administrative offices located at 1499 Routes 1 & 9 North, Rahway, New Jersey.

Section 6. This Resolution shall take effect immediately.

	PRESENT	ABSENT	AYE	NAY	ABSTAIN	MOTION	SECOND
<i>Eastman</i>	✓		✓				✓
<i>Figueiredo</i>	✓		✓				
<i>Holder</i>	✓		✓				
<i>Jackus</i>	✓		✓				
<i>Kahn</i>		✓					
<i>McManus</i>	✓		✓			✓	
<i>Rachlin</i>	✓		✓				
<i>Scutari</i>	✓		✓				
<i>Szpond</i>	✓		✓				
<i>Alma, Alternate No. 1</i>	✓		✓				
<i>Scott-Bey, Alternate No. 2</i>	✓						

JOHN H. ALLGAIR, PE, PP, LS (1983-2001)
DAVID J. SAMUEL, PE, PP, CME
JOHN J. STEFANI, PE, LS, PP, CME
JAY B. CORNELL, PE, PP, CME
MICHAEL J. McCLELLAND, PE, PP, CME
GREGORY R. VALES, PE, PP, CME



BRUCE M. KOCH, PE, PP, CME
LOUIS J. PLOSKONKA, PE, CME
TREVOR J. TAYLOR, PE, PP, CME
BEHRAM TURAN, PE, LSRP
LAURA J. NEUMANN, PE, PP
DOUGLAS ROHMEYER, PE, CFM, CME
ROBERT J. RUSSO, PE, PP, CME
JOHN J. HESS, PE, PP, CME
KEITH CHIARAVALLLO, PE, CME

September 12, 2024

Ms. Linda D. Stender, Acting Executive Director
Union County Utilities Authority
1499 Routes 1 & 9 North
Rahway, New Jersey 07065

**Re: Union County Utilities Authority
Application to Amend the Union County Solid Waste Management Plan
Waste Management of New Jersey
847 Flora Street, Elizabeth, NJ
Block 579, Lots 2, 3, 13
Our File No. PUC00035.P61**

Dear Ms. Stender:

As per the Authority's request, this office has reviewed the application package submitted by Mott Macdonald on behalf of Waste Management of New Jersey, Inc. ("WM"), dated March 21, 2024, regarding the above referenced Flora Street Facility ("Facility").

WM is requesting the following:

The modification of their existing Class C Recycling Facility Approval for the Facility to process 60,000 gallons per day of commercial and institutional liquid food and or beverage waste including fats, oil, and grease (FOG).

Description:

The Facility is currently permitted to accept up to 500 tons per day (TPD) of Class C material, including source separated food waste, vegetative food waste, and yard trimmings (grass clippings and leaves) and up to 60,000 gallons per day (GPD) of Class C recyclable material consisting of liquid food and or beverage waste including fats, oil, and grease (FOG). Currently, the liquid waste accepted is primarily FOG.

For ease of operation and to utilize the maximum permitted capacity of the Facility, WM is proposing to measure and record the incoming FOG material on a tonnage basis rather than on a volumetric basis. The conversion of incoming FOG from gallons to tons requires a knowledge of the FOG density.

WM proposed the use of a density of 8.34 pounds per gallon (lbs/gal) for all incoming FOG at the Facility. In Attachment 4 of the application, WM states that such density is a reasonable constant for converting incoming streams of FOG from volume to mass. A total suspended solids (TSS) concentration of 1,310 mg/L (0.131 %) as reported by Accredited Analytical Resources, LLC for a sample of the FOG is provided in Attachment 4 of the application. The justification provided by WM is that the incoming FOG stream is essentially water with 0.131 % of solids; thereby equating



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the density of water (8.34lbs/gal) to the density of FOG. With such density, the 60,000 GPD of FOG will equate to 250 tons per day (TPD).

Based on our experience and a review of pertinent literature, we do not concur with utilizing a FOG density of 8.34 lbs/gal as proposed by WM nor the TSS value of 1,310 mg/L provided.

TSS Observation

The Facility is authorized to process up to 60,000 gallons per day (GPD) of incoming liquid material. Total amount of solids (M) received is computed as follows:

$$M\left(\frac{lbs}{day}\right) = 0.00000834 \times Q (GPD) \times TSS \left(\frac{mg}{L}\right)$$
$$M\left(\frac{lbs}{day}\right) = 0.00000834 \times 60,000GPD \times 1,310 \left(\frac{mg}{L}\right)$$
$$M \cong 655 \frac{lbs}{day}$$

The computed mass of solids of only 655 lbs/day of FOG present in the incoming waste stream, based on a TSS value of 1,310 mg/L, is unrealistically low. We are of the opinion that such a low value would not economically sustain the Facility, indicating that the TSS value is probably higher.

Density of Incoming Raw FOG Stream

In the recycling industry and related literature, "Brown Grease" refers to the material found in grease interceptors in restaurants and industrial/commercial facilities and FOG. It consists of a combination of grease, oil, fats, and solids, along with chemicals, that are washed down the drains and captured before entering the sanitary sewer lines. In the literature, a density of 7.34 lbs/gal is often reported, which is about 12% lower than the 8.34 Lbs/gal density proposed by WM.

Conversion of 60,000 GPD to equivalent TPD

The approved 60,000 GPD of incoming FOG, on the basis of a 7.34 lbs/gal density, is equivalent to 220 TPD, compared to 250 TPD based on 8.34 lbs/gal density.

Recommendations:

Based on the review of the submitted application:



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1. We have no engineering objections to the Authority permitting WM to measure and record the approved 60,000 gallons per day of Class C recyclable material consisting of liquid food and or beverage waste including fats, oil, and grease (FOG) in the units of tons per day subject to concurrence by the Authority's Attorney.
2. We recommend a conversion factor of 7.34 lbs/gal, which translates to a maximum daily mass of 220 tons per day of Class C recyclable material consisting of liquid food and or beverage waste including fats, oil, and grease (FOG), subject to concurrence by the Authority's Attorney.

Should you have any questions in this matter, please do not hesitate to contact this office.

Very truly yours,

CME Associates

Mohammed Sidhoum, Ph.D., BCEEM
Office of the Authority Engineer

MS/blr
Attachments

cc: Lisa M. da Silva
Kraig Dowd, Esq.
Jeffrey Paul Hummel
John Napolitano, Esq.