FREDDIE O'CONNELL
MAYOR

METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY

DEPARTMENT OF WATER AND SEWERAGE SERVICES

Wastewater Hearing Authority Minutes

Meeting Date: March 21, 2024

Call to Order: 1:31 pm

Adjourn: 2:39 pm

Authority Members: Dr. Thackston, Dr. Wingfield, Mr. Tant, Mr. Gilles, and Ms. Cherry

In Attendance: **MWS Representatives:** Chase Block, Bren Freeman, Claude Grant Jr., Tara Ladd, Sara Wilson, Marty Mast, Nikki Brahmbhatt, Dr. Manny Ojo, Al Pogue, Ted Taylor, Andy Welch, and Megan Woodring.

I. Review and Approval of Minutes

The minutes were approved with edits suggested by Dr. Thackston in Section III. and Section IV.

Dr. Thackston addressed that he has a calendar conflict with the proposed meeting date for June. If a quorum is unavailable, the meeting will be rescheduled.

II. Calypso Café

The line beneath the restaurant was televised in February 2023 per Agreed Order 2023-01 issued in January 2023. Mr. Block offered the footage for viewing, but the Authority did not deem it necessary. MWS Environmental Compliance (MWS EC) and the Authority members agreed that there had been no imminent need for action from the permit holder.

III. Welcome to 1979

This Industrial Permit holder makes vinyl records, repairs old recording equipment, and has a recording studio. The issue with their compliance is related to a high concentration of metals in a low-volume discharge due to their record production process involving a nickel solution.

Although the last sampling did have a silver violation (the organization is still working to install silver-removing processes), Mr. Pogue reported significant improvements in compliance. Since hiring a new plant manager with experience in maintaining permit requirements, MWS EC anticipates that *Welcome to 1979* will be in compliance by the next WWHA meeting this June.

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IV. Onsite Environmental Agreed Order Status Update:

The Onsite Environmental Operating Plan (Agreed Order 2023-02 Attachment E.) involves a sampling schedule and defines sampling parameter limits.

a. Sampling: MWS Environmental Compliance recently performed a week of secret sampling concurrent with the Onsite schedule and found reasonable consistency between the two reports. The sole exception to this consistency was in pH, which showed a higher alkalinity in the secret samples over 3 hours than the regular sample. The schedule for submitting additional regular samples to MWS EC began at the beginning of this week.

b. Compliance: In both February and March, OE's submitted samples showed exceedances in p-cresol (the historic exceedance parameters have been ammonia, metals, solids, FOGs, and pH). P-cresol is an organic compound arriving from burnt materials in landfill leachate (ash, soot, etc.) Water reclamation facilities do not test for p-cresol concentrations, but leachate does impact BOD. Onsite is only required to test quarterly as part of an organics screening, and Environmental Compliance officers are unsure of the impacts on the POTW. Onsite's permit limit for p-cresol is set based on the EPA Standard Methods manual. This new violation will lead to additional fines. Dr. Wingfield inquired about Onsite Environmental's fine-payment history, and Mr. Welch reported that all penalties have been paid consistently and on time.

Onsite Environmental
1501 Baptist World Center Drive, Nashville, Tennessee 37207

Parameter Limits (1)				
Frequency	**Parameter**	**Concentration**		**Basis**
Weekly	Total Suspended Solids	325 (2)		CP-0219
	BOD	300 (2)		CP-0219
	Ammonia	300 (3)		CP-0219
	Oil & Grease	100 (2)		CP-0219
	Categorial Metals (4)	**Max. Daily**	**Max. Mo. Avg.**	
	Chromium, total	0.947	0.487	437.42(e)
	Cobalt	56.4	18.8	437.42(e)
	Copper	0.405	0.301	437.42(e)
	Lead	0.222	0.172	437.42(e)
	Tin	0.249	0.146	437.42(e)
	Zinc	6.95	4.46	437.42(e)
Monthly	**Categorical Organics (4)**	**Max. Daily**	**Max. Mo. Avg.**	
	Bis(2-ethlhexyl) phthalate	0.267	0.158	437.42(e)
	Carbazole	0.392	0.276	437.42(e)
	o-Cresol	1.92	0.561	437.42(e)
	p-Cresol	0.698	0.205	437.42(e)
	n-Decane	5.79	3.31	437.42(e)
	Fluoranthene	0.787	0.393	437.42(e)
	n-Octadecane	1.22	0.925	437.42(e)
	2,4,6-Trichlorophenol	0.155	0.106	437.42(e)

Notes:
(1) All units are mg/L
(2) Surcharge threshold
(3) Ammonia surcharge threshold is 30 mg/L, limit is 300 mg/L.
(4) 40 CFR 437.42(e), Combined waste receipts from subparts b (Oils) and c (Organics), for existing sources
(5) Categorical metals, but not required by MWS permit: Arsenic, Cadmium, Mercury per A. Welch, 06/16/23
(6) Categorical Organics, but not required by MWS permit: Acetone, Acetophenone, Phenol, Pyridine per A. Welch, 06/16/23

Onsite Environmental Operating Plan Sampling Schedule Parameter Limits

Onsite Environmental has already significantly improved its permitted compliance by refusing third-party waste. Their current waste stream categories by volume are grease trap waste, petroleum, and periodic landfill leachate. The refusal of petroleum waste and landfill leachate has the potential to eliminate virtually all of the issues Onsite has created for MWS. By removing petroleum and leachate from the waste stream, Onsite Environmental would be reclassified as a Non-Categorical Centralized Waste Treater. The discharge volume would decrease by about a third, sampling for organics and metals would no longer be required, and OE would merely be subject to local permit limits.

Ms. Cherry inquired as to who would be collecting petroleum waste should Onsite decide to remove it from their stream. Mr. Welch shared that other waste haulers are likely to pick up the clients, such as Tradebe, which is received by the Dry Creek WRF in Madison, TN.

Additionally, the construction of the new facility has ceased, and the treated waste streams no longer threaten the small municipality of Whites Creek WRF. The new OE facility location is currently unknown.

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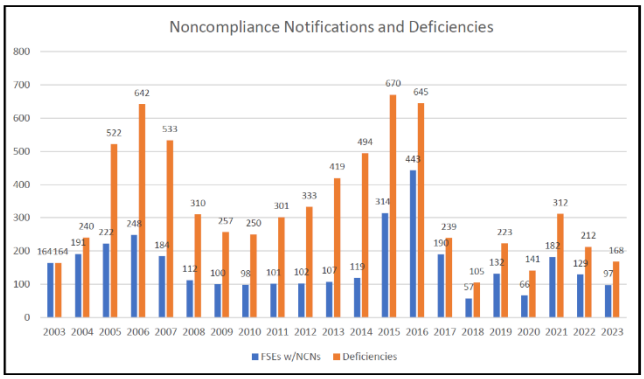
c. **Requests:** Onsite Environmental has recently requested a pH variance of up to 11. (The current ordinance is between 5 and 10 standard units.) Onsite Environmental's history of ammonia exceedances meeting a higher pH creates concerns for volatility within the collection system. With increased alkalinity, Onsite would have a higher metal removal efficacy. The Authority has granted pH variances to others in the past. Onsite's formal presentation request is likely to be on the agenda sometime this year.

V. Review of the 2023 FOG Program Summary Report

a. **Enforcement** Dr. Thackston commented on the significant improvement in enforcement over the last twenty years, as represented in Figure 7.

Dr. Thackston asked about the significant increase in noncompliance between 2010 and 2016, as indicated in Figure 8. Mr. Welch addressed the increase by discussing the department's change in recordkeeping around that time. Beginning in 2016, grease haulers began reporting directly to MWS Environmental Compliance rather than reporting through food service establishments (FSEs.) This change in practice has given MWS Environmental Compliance a clearer picture of which FSEs are responsible for collection system issues and which are simply poor record keepers.

Figure 8 – FSE Noncompliance Notifications Issued and Number of Deficiencies Identified



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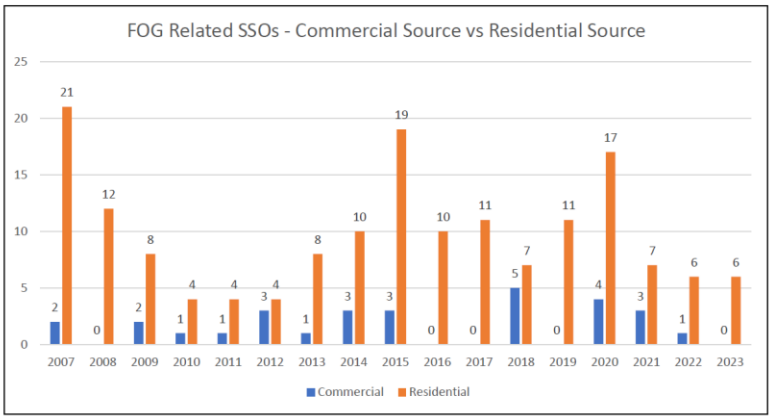
b. Residential Awareness & Prevention of Overflows

In the portion of the FOG report related to Sanitary Sewer Overflows (SSOs), Dr. Thackston shared his confusion about the "No Flush Zone" handouts that were defined as "for preventing discharge to the sewer of FOG, flushable wipes, and other debris." Whenever MWS Environmental Compliance encounters a blockage or overflow in a neighborhood, these leaflets are distributed to residents nearby. The flyer offers best management practices for food waste and non-flushable items. There was an open discussion in which Authority members expressed that the term "Zone," which Mr. Welch explained referred to the non-flushable items, was somewhat confusing. Mr. Block clarified that the term was used as a marketing technique to explain that recipients of the pamphlet reside in an area where the listed items were not to be sent to the sewer system.

c. SSO Causes

While reviewing Figure 10, Dr. Thackston inquired about the increase in Residential SSOs in 2013 after the incidents had been consistently reduced since the early 2000s. Mr. Welch noted that flushable wipes gained market popularity at the beginning of the 2010s. The graph notes the impacts of public education on the effects of flushable wipes through the Coronavirus Pandemic when there was an additional spike due to increased residential populations for the year.

Figure 10 – Commercial Source vs. Residential Source FOG Related SSOs



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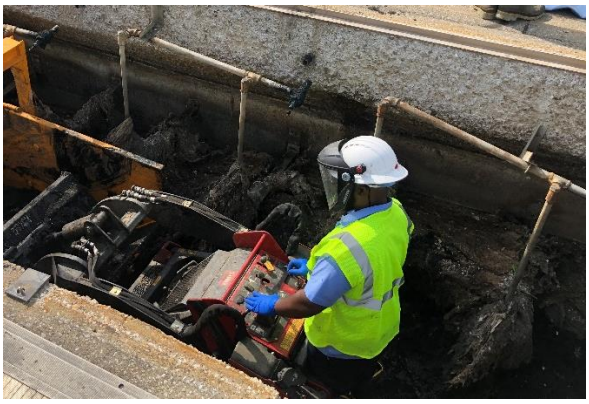
Dr. Wingfield asked about what happens to the flushable wipes once they enter the sewer system. Mr. Grant explained that depending on the facility that receives them, they are either removed by screening or they end up in Primary Treatment. No portions of the process provide any degradation of the flushable wipes. They move through the processes until they are caught on equipment. They have also been found throughout the Biosolids processes. When the flushable wipes or "rags" end up in Primary Treatment, they catch and accumulate on various pieces of equipment. When this happens, tanks are taken out of service, and technicians remove them manually.



Images from the Dry Creek Water Reclamation Facility Channel Cleaning (Summer 2023) depicting the accumulation of flushable wipes along aeration lines in Primary Treatment.

Other than FOG and wipes, the leading causes of SSOs are speculated to be grit, structural line issues, inflow and infiltration from tree roots (I/I), and line issues associated with mechanical and structural errors.

d. Future Concerns

After recently attending a presentation on microplastics in biosolids, Dr. Wingfield inquired about MWS's plans to address future microplastic regulations. Dr. Ojo commented that potable water has been tested and shown to be non-detect. For wastewater, Mr. Taylor referred to the current phase of microplastic management as "data-gathering." Dr. Ojo believes that the wastewater final effluent is likely to contain microplastic concentrations; however, due to the high temperature during the drying phase of biosolids production, our finished product does not show detectable microplastics.

Mr. Gilles asked MWS Environmental Compliance officers about the approach to addressing PFOS. Mr. Taylor and Dr. Ojo informed the Authority that MWS spent the entirety of 2023 sampling and analyzing all phases of treatment for drinking water, wastewater, and biosolids streams to develop a base-level knowledge of current concentrations to prepare for regulations. The research also involved domestic background investigations. The data collected is valuable for establishing local limits. Any concentrations of PFOS compounds discovered in the treatment facilities were all significantly below the current CERCLA-suggested standards. Although no current limits have been set, the State of Tennessee has provided communications for monitoring guidance in preparation for permit limitations that may come in the future.