

SWANA

SOUTHERN NEW ENGLAND CHAPTER

Newsletter

June 2021

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Message from the President

Where has the time gone? Welcome to June and the kickoff of the summer season. As we celebrate Memorial Day let us take the time to remember those who have made the ultimate sacrifice for this Country. Their sacrifices allow us to live in a world where we can freely exchange ideas and choose how we live our lives. Take time this holiday to get out and pay tribute where you can and to pass on the ideals to the next generation, lest we start to forget.

SAFETY MATTERS

2021 Safety Award Submissions – As we all know, safety of our employees, our customers, our community, and ourselves is one of the most important and difficult aspects of the solid waste industry. Has your team developed innovative ways to implement sound safety practices? Have you seen improvements in your safety record year over year? If so, wouldn't it be great to be recognized and to share your success stories. Right here in our Chapter we had one of the very first awards given to the RI Resource Recovery Corporation for its prior success. SWANA is currently seeking out applications for its annual safety awards. This year there is a third category associated with the COVID-19 Pandemic Response. Check out the website and [apply](#) for your chance to be recognized. Applications are due by June 30, 2021.

REGULATORY UPDATES

Update on Landfill Related Air Regulations: Beginning on September 27, 2021, revised regulatory requirements will apply to certain MSW landfills. On March 26, 2020, the U.S. Environmental Protection Agency (EPA) finalized amendments to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste (MSW) Landfills under 40 Code of Federal Regulations (CFR) Part 63, Subpart AAAA. EPA originally issued these air toxics standards in 2003 for the MSW Landfills source category,

which established emission limitations based on maximum achievable control technology (MACT) standards for hazardous air pollutants (HAP) from major and area source landfills. The NESHAP rule applies to landfills that are major HAP sources, co-located with HAP sources, or those subject to the GCCS requirements of an NSPS or EG rule with emissions greater than 50 Mg/year of NMOCs. Key components of the revised NESHAP regulation are:

- Startup, shutdown, and malfunction (SSM) protections are eliminated. NSPS requirements still apply at all times (e.g., 3-hour block average for temperatures must be in compliance during startup). SSM plans are no longer needed
- Allows wellhead temperatures up to 145 degrees F, with additional provisions for operation between 145 and 170 degrees F

Effective on June 21, 2021, the Federal Plan for MSW landfill emissions will apply to nearly 1,600 landfills across the U.S. in the 42 states and two territories that do not have a plan approved by EPA (e.g., the New England states).

MSW landfill owners and operators subject to the Federal Plan will have 30 months to install gas collection and control systems after meeting the new emissions thresholds. The Federal Plan applies to MSW landfills that commenced construction on or before July 17, 2014 and have not been modified or reconstructed since then.

One timely recommendation is as follows. For those landfills that are not yet conducting SEM monitoring at penetrations (still subject to Subpart WWW/EG Cc), you should schedule and complete your 2nd quarter SEM event prior to June 20. That way, penetration SEM

monitoring (required under Subpart 000) will begin with the 3rd quarter event.

The new Federal Plan aligns with the 2016 New Source Performance Standards (Subpart XXX) and NESHAP Subpart AAAA.

TRAINING OPPORTUNITIES

Do you have a topic you wish someone would talk about? Please reach out and let us know. Our Board will see if we have the local expertise to help pull together a training event focused on issues that concern you.

ODDS & ENDS

New Biosolids Gasification Facility Proposed:

Northeast Biosolids & Residuals Association (NEBRA) member Aries Clean Technologies is proposing a biosolids gasification facility in Taunton, Massachusetts. The proposed facility would be located at the City's former landfill site on East Britannia Street and could become a significant – and much needed -- new outlet for up to 470 tons per day of biosolids in Massachusetts. The project is currently undergoing environmental and local planning reviews. The Taunton City Council approved a Host Community Agreement back in February. Information about the project can be found on the City of Taunton's [website](#).

Gasification is one of the thermal technologies that the U.S. Environmental Protection Agency (EPA) is studying for its potential to destroy per- and polyfluoroalkyl substances (PFAS) that collect in wastewater solids. EPA's PFAS Innovative Technologies Team (PITT) has generated a [Research Brief](#) on pyrolysis and gasification and has included these technologies in its interim guidance on the destruction/disposal of PFAS-containing materials. There is ongoing research and active debate about what temperature is required to break the carbon-fluorine bonds in PFAS but Aries says its process can destroy PFAS.

For septage haulers and biosolids managers on Cape Cod, this proposed regional gasification facility is welcomed. It has become more difficult to manage biosolids and other residuals generated on the Cape as outlets have been shrinking and costs increasing as a result of market pressures on all three biosolids management methods. Incineration capacity continues to be tight and few landfills accept sludge in Massachusetts.

According to a 2018 study by NEBRA for the Massachusetts Clean Energy Center, about 43% of the

biosolids generated in the Commonwealth are sent to incinerators and about 18% goes to landfills, almost all of which are out-of-state. About 38% of the Massachusetts biosolids are beneficially reused as soil amendments. But those patterns are changing as the Massachusetts Department of Environmental Protection (MassDEP) has initiated the process for setting screening standards for PFAS in land-applied residuals. MassDEP requires quarterly testing of those materials.

UPCOMING EVENTS

- EBC Solid Waste: Conference of State Solid Waste Directors – June 18, 2021 – Virtual Conference – [REGISTER HERE](#).
- SNE SWANA – Annual Scholarship Golf Outing & Clambake will be held either July 15th or July 26th. We are still working on the final details and will send more information shortly. Come and enjoy and wonderful time with your friends.

WHATS IN THE NEWS?

- Connecticut passed an update to its bottle bill increasing the fee from \$0.05 to \$0.10 for deposits. In addition, they have expanded the list of drink containers now requiring a deposit to now include juice, tea, coffee, sports and energy drinks, and a few others. The legislation also requires a \$0.05 surcharge on 50 milliliter liquor bottles known as “nips”. This money is to be transferred to municipalities to aid in the cleanup of litter. This is the first major change to the bottle bill since its inception over four decades ago. The legislation had cleared both the CT House and Senate and is heading to Governor Lamont for signature. More information on the legislation can be found [here](#).
- MIRA Request for Proposals (RFP's): CT MIRA has two (2) RFP's on the street looking for entities to assist with the Transportation and Disposal of Municipal Solid Waste. Both are due on August 16th, 2021 and can be accessed [here](#).

TECHNOLOGY / VENDOR SPOTLIGHT?

SNE SWANA looks to bring to its members new and innovative ways to assist in performing our jobs. As part of that effort, we are offering a section of our newsletter dedicated to a technology or supplier that offers something

of interest that may be of benefit to you. We hope you will take advantage and reach out as needed to these supporters of our Chapter.

Heartland Water Technology, Inc.

Heartland Water Technology, Inc. works at the intersection between wastewater, renewable energy, and resource recovery.

Its platform technology, the Heartland Concentrator™, has a proven track record of successfully treating challenging wastewaters, including landfill leachate, with unparalleled reliability, little to no pre-treatment, and at a lower life-cycle cost than traditional evaporation technologies. Unique to Heartland is the ability to use waste heat from a variety of sources as thermal energy for evaporation.

Challenge: Three Rivers, like many landfills, had a long-standing relationship with its local Publicly Owned Treatment Works (“POTW”) which had been accepting 12,000 to 24,000 GPD of its landfill leachate for many years.

Unfortunately, transport and disposal (“T&D”) costs were consistently rising and Three Rivers was paying over \$0.09/gallon for off-site leachate disposal. Adding to Three Rivers concerns was talk that the local POTW may discontinue accepting leachate and the T&D cost for the next closest disposal outlet would be over \$0.20/gallon.

Faced with rising costs and the threat of a steep change that could double or triple its costs without warning, Three Rivers took proactive steps to ‘control its own destiny.’

Solution: After extensive analysis, Three Rivers selected the lowest total life-cycle cost option that met its requirements, which was the Heartland Concentrator in a 25,000 gpd Hybrid CoVAP configuration.

Hybrid CoVAP™ Configuration: CoVAP™ stands for Cogeneration for Industrial Evaporation. The Heartland Concentrator was designed and patented for using waste heat from engines or turbines beneficially to evaporate wastewater. This is a classic Cogeneration solution. A Hybrid CoVAP™ configuration combines cogeneration with additional heat from a landfill gas flare. This configuration is particularly valuable when you want to use the thermal energy from cogeneration beneficially but there is insufficient heat to evaporate all your leachate.

The Hybrid CoVAP solution provided clear economic benefit to Three Rivers by allowing Three Rivers to run at full capacity while using less LFG. This capability maximizes the value of landfill gas by always running the

energy plant and never having to compromise between generating renewable energy and evaporating leachate.

The flare design provides sufficient thermal energy to run the evaporation plant at capacity, if required, without the need for the exhaust from the energy plant should the energy plant be down for any reason. A simple and easy-to-configure control system automatically balances thermal demand between the flare and the engine waste heat.

Cogeneration: The Heartland Concentrator is designed to evaporate 25,000 gallons per day. Thermal energy from the exhaust of the on-site 2G supplied 999kW Caterpillar-MWM Landfill Gas engine is sufficient to evaporate 5,000 gallons of leachate per day. The balance of the required heat for evaporation is provided by the landfill gas flare.

The simple engine integration drafts the waste heat from the engine exhaust stack. Consequently, there is no backpressure whatsoever placed on the engine making this a safe, and fail-safe, integration.

As of September 2020, Three Rivers had treated an average of over 23K gallons per day of landfill leachate achieving volume reduction of over 96% and over 90% up-time.

Conclusion: Prior to installing the concentrator, 3 Rivers was spending a minimum of \$0.095 per gallon in transportation and disposal costs and faced the possibility of costs increasing to levels above \$0.20 per gallon. With Heartland’s concentrator, Three Rivers estimates total cost, including operating costs and capital recovery, to be \$0.06 per gallon. Importantly, the system is in place for the long – term providing cost-certainty for Three Rivers and giving Three Rivers full control of their leachate treatment.

Inquiries and questions about Heartland should be sent to: Casey Cammann, Chief Marketing Officer, at ccammann@heartlandtech.com.



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Scott Alfonse **Director**
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SNE SWANA Chapter Committee Members

Membership

Brian Card (C) bcard@wtienergy.com
Greg McCarron
Ron St. Michel

Programming (see below)

Brian Card (C) bcard@wtienergy.com
Jackie Caceci - CT Program
Lindsey Welcome - MA Program
Inga Lermontov-Hoit - RI Program

CT - Program Development

Jackie Caceci (C) jmcaceci@tighebond.com
Greg McCarron
Amy Knight

MA - Program Development

Lindsey Welcome (C) lwelcome@brwncald.com
Barry VanLaarhoven
Amy Knight
Scott Alfonse

RI - Program Development

Inga Lermontov-Hoit (C) ingal@rirrc.org
Joseph Brennan

Young Professional

Joseph Brennan (C) jpbrennan@rirrc.org
Katie Scott

Scholarship

Ron St.Michel (C) rstmichel@sanbornhead.com
Scott Alfonse
Katie Scott

Audit

Scott Alfonse (C) scott.alfonse@gnbrrmdistrict.com
Phil Goddard
Katie Scott

Advocacy / Legislative

Phil Goddard (C) pgoddard@townofbourne.com
Barry VanLaarhoven