



PUBLIC INFORMATION MEETING

Environmental Soil Management of New York, LLC
Research, Development & Demonstration (RD&D) Permit
Fort Edward, New York
NYSDEC Application #: 5-5330-00038/00027

June 18, 2025

PUBLIC INFORMATION MEETING – AGENDA

INTRODUCTION

- Who is ESMI and Clean Earth?
- What does the Fort Edward Facility do?

RD&D PERMIT APPLICATION

- What is the proposed project?
- What is the project's purpose and importance?
- How might the project affect the surrounding community?
- Generally, what is the RD&D permit application process?

PUBLIC COMMENTS

- Guidelines
- Further Information

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INTRODUCTION

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WHO IS ESMI AND CLEAN EARTH?

ENVIRONMENTAL SOIL MANAGEMENT OF NEW YORK, LLC

Also known as:

- **ESMI** (name on NYSDEC Solid Waste and NYSDEC Air Permit)
- **Clean Earth**

CLEAN EARTH

- Division of Enviri Corporation
- Company provides recycling and beneficial reuse solutions for industrial waste and contaminated soil
- In 2023, over 90% of the material processed by Clean Earth was reused/recycled, saving precious landfill space
- Services help commercial, industrial, government, and retail businesses:
 - Safely manage their waste
 - Achieve their sustainability goals
 - Reduce their carbon footprint
 - Engage in the circular economy

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WHAT DOES THE FORT EDWARD FACILITY DO?

GENERAL INFORMATION

- ESMI has safely and compliantly cleaned soil in Fort Edward since 1995
- Utilizes a well-established process called thermal desorption
 - Soil is tumbled in a rotating cylinder where heat is used to desorb (or separate) the contaminants from the soil
 - Similar to a clothes dryer
 - The remediated soil, cleaned of contaminants, is discharged from the process, and after testing, is reused per state regulations
 - The contaminants separated from the soil are sent to a thermal oxidizer which destroys contaminants/controls air emissions
 - Contaminants removed and destroyed under current permits may include fuels, lubricants, and oils.

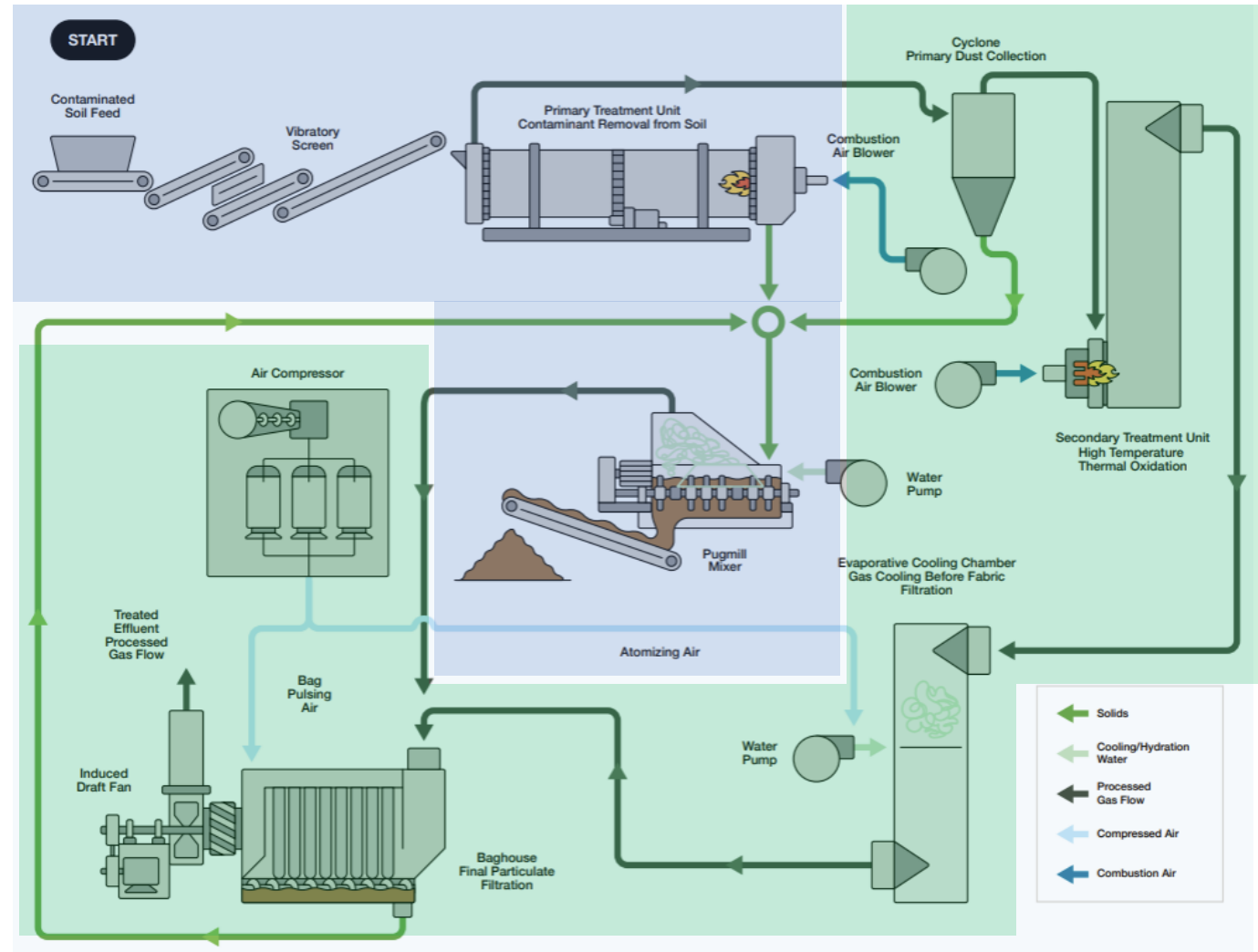


IMPORTANT FACTS

- The facility **DOES NOT** manufacture or use concentrated PFAS
- The facility **DOES NOT** currently process soil identified as containing PFAS
- The facility **IS NOT** permitted to receive liquid wastes of any kind (including concentrated PFAS; Example: Fire Fighting Foam)

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UNDERSTANDING THE THERMAL DESORPTION PROCESS



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Research, Development & Demonstration

PERMIT APPLICATION

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WHAT IS THE PROPOSED PROJECT?

ESMI has submitted an RD&D Permit application to treat approximately 5,000 tons of PFAS-contaminated soil. This tonnage will provide the soil to support both soil and emissions testing. NYSDEC will have oversight of the project.

How long will the testing be performed?

- ESMI has requested approximately 2 weeks of operations to complete the testing

What will occur during the short-term test?

- Third-party accredited laboratory analysis of soil received prior to treatment
- Thermally treat approximately 5,000 tons of soil contaminated with PFAS
- Third-party accredited laboratory analysis of potential emissions during thermal treatment of PFAS-contaminated soil
- Third-party accredited laboratory analysis of soil post-treatment

How will the results of the test be shared?

- ESMI will generate an RD&D Permit Closure Report, which will include all modeling, analysis, data evaluation, and documentation as required by NYSDEC

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HOW WOULD THE PROJECT BE COMPLETED?

- NYSDEC will have to approve the RD&D Permit. The project cannot start without an approved permit.
- ESMI/Clean Earth would identify specific PFAS-contaminated soil to utilize during the test
 - Soil will be analyzed by a third-party accredited laboratory prior to ESMI acceptance
- ESMI will receive the soil
 - Soil will be stored in the soil storage building, separate from other non-project soils
 - Once all soil is received, soil will be analyzed per the NYSDEC RD&D Permit application
- ESMI/Clean Earth will thermally treat the soil
 - Soil will be conveyed from the soil storage building to the thermal desorption unit (TDU)
 - During soil treatment, TDU air emissions samples will be collected and analyzed by a third-party accredited laboratory
 - Soil will be discharged from the TDU
 - Discharged soil will be analyzed by a third-party accredited laboratory

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HOW WOULD THE PROJECT BE COMPLETED? (cont.)

- Post-treatment soil will be managed in accordance with the NYSDEC RD&D Permit
 - Soil will either be sent to beneficial reuse (soil used as a product) or as landfill daily cover
- RD&D Permit will require a closure report to be submitted to NYSDEC
 - The closure report will contain all project data as required by the NYSDEC RD&D Permit
- If NYSDEC approves this RD&D Permit, the approval is only for the approximately 2-week test
 - An approval does not authorize ESMI to accept additional PFAS soil beyond this short test
 - Future PFAS activities would require a Solid Waste and Air Permit modification and would go through another permit application and the CP-29 process

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WHAT IS THE PROJECT'S PURPOSE AND IMPORTANCE?

PURPOSE: Validate USEPA and DoD research at full-scale & supply data to NYSDEC

IMPORTANCE & VALUE

- **PFAS-contaminated soil can contaminate drinking water**
 - Rainwater washes PFAS into groundwater and rivers
 - Remediating PFAS-contaminated soil prevents water contamination
- **Current soil management options do nothing to remove PFAS from the environment**
 - Leave it in place
 - Transfer to another location
 - Most likely a landfill, which can contaminate the landfill leachate
- **This project will validate a technology that destroys PFAS and permanently removes it from the environment**
 - Provide NYSDEC with the scientific data to support future PFAS cleanup and management decisions

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HOW MIGHT THE PROJECT AFFECT THE SURROUNDING COMMUNITY?

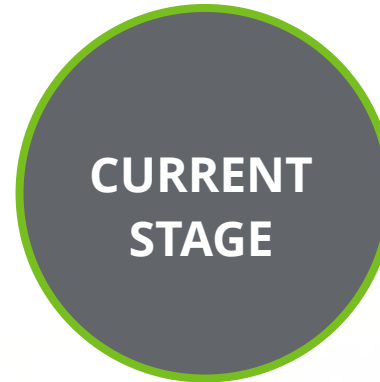
- **Air modeling shows no adverse impact on the local community**
 - Permit application includes modeling of potential air emissions
 - Potential emissions of PFOA will be below the NYSDEC health-based annual guidance concentration (AGC)
 - In fact, potential total of all PFAS emissions will be only 0.005% percent of the PFOA limit
 - Potential emissions of other regulated pollutants (HF, CF₄) will be well below the NYSDEC health-based AGC
- **No new construction or other land disturbance at the facility**
- **No additional solid or dust emissions**
- **No additional noise, odor, or light from the facility**
- **No additional truck traffic**
- **No liquid water discharges**

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GENERALLY, WHAT IS THE RD&D PERMIT APPLICATION PROCESS?



- Submit initial permit application to NYSDEC
- NYSDEC review and comment/Applicant updates as necessary



- Applicant develops and implements a public participation plan
 - Includes tonight's public information meeting



- NYSDEC decides if the permit application is complete
- If yes, NYSDEC drafts an RD&D permit
- NYSDEC gives public notice and asks for written comments
- NYSDEC addresses comments, including changes to permit
- NYSDEC decides yes or no to issue the RD&D permit

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PUBLIC QUESTIONS & STATEMENTS

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PUBLIC QUESTIONS & STATEMENTS – IN-PERSON GUIDELINES

We kindly ask that you uphold the following rules during this Public Information Meeting:

1. Each speaker has an opportunity to make a statement and/or ask questions
2. To ensure everyone gets their opportunity, each speaker will be limited to 3 minutes
3. Only one speaker at the microphone at a time
4. Only the speaker at the microphone should speak
5. The moderator will call speakers up in groups of 5, otherwise the audience is asked to remain seated
6. If you have signed up to speak and then later choose not to speak, please kindly let the moderator know when your name is called, and we will move on to the next person

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PUBLIC QUESTIONS & STATEMENTS – VIRTUAL GUIDELINES

We kindly ask that you uphold the following rules during this Public Information Meeting:

1. Those individuals attending virtually can speak or ask a question by doing the following:
 - Raise your hand in the Zoom Meeting
 - Submit a question via the Chat function within Zoom
 - Follow instructions for asking questions by phone
2. To ensure everyone gets their opportunity, each speaker will be limited to 3 minutes

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PUBLIC QUESTIONS & STATEMENTS – ADDITIONAL INFO

1. If during his or her comments, a speaker has asked one or more questions, the Clean Earth Team will attempt to provide short, plain language answers
2. If long technical questions are asked, or reference is required to specific information, ESMI will provide written answers to such questions within 14 days of this meeting
3. These written responses will be made available on the Public Participation Plan website (website noted at the bottom of presentation slides)
4. If you did not have an opportunity to speak tonight or think of a question after the meeting ends, you may submit additional questions or comments by email, phone or our website.
5. Information to help you submit questions after this meeting is available on the next slide, in the handout distributed to those here in-person, and on the website.
6. To ensure that your questions are answered and included in our report to the NYSDEC, please submit no later than June 25.

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FURTHER INFORMATION

WHERE CAN I GET MORE INFORMATION AND HOW CAN I DELIVER ADDITIONAL COMMENTS?

- Visit our online document repository at: <https://pages.cleanearthinc.com/new-york-ppp>
 - View detailed materials
 - Submit additional comments
 - View responses to this evening's questions

CONTACTS:

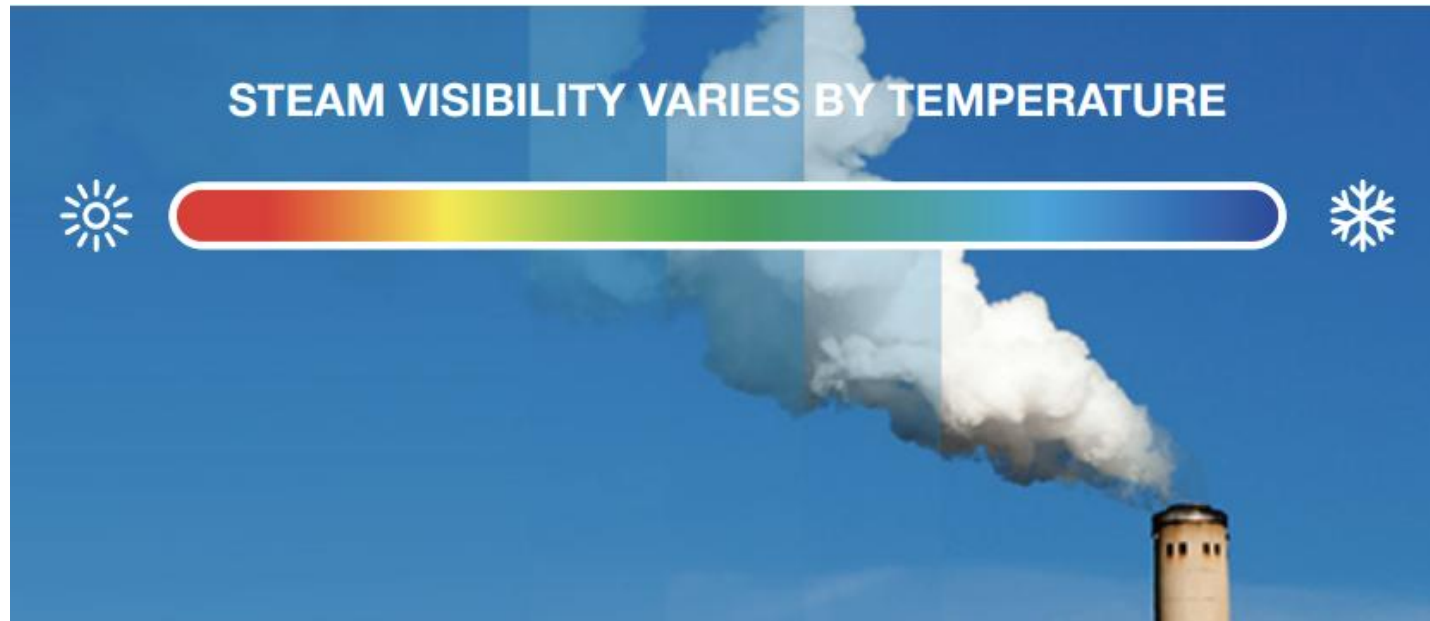
- | | |
|---|---|
| <ul style="list-style-type: none">• Robert Martin – ESMI/Clean Earth<ul style="list-style-type: none">• (877) 685-8312• Attn: Public Participation Plan<ul style="list-style-type: none">• 304 Towpath Lane, Fort Edward, NY 12828• rmartin@cleanearthinc.com | <ul style="list-style-type: none">• Beth Magee – NYSDEC<ul style="list-style-type: none">• (518) 623-1283• NYSDEC Region 5 Warrensburg Sub-Office, 232 Golf Course Road, Warrensburg, NY 12885• beth.magee@dec.ny.gov |
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APPENDIX

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UNDERSTANDING STEAM VISIBILITY

What you may see coming from the ESMI stack is steam, or moisture. When we clean the soil, water is used in the process, and the water turns into steam. On cooler days the steam cools down and forms tiny water droplets, making the plume visible.



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UNDERSTANDING THE EMISSIONS MODELING

Table 3 – Summary of Concentration Data from Modeling

Contaminant	Max Hourly Dispersion Concentration	SGC	% of SGC	Max Annual Dispersion Concentration	AGC	% of AGC
	All values in ug/M ³					
Total Sampled PFAS (99.9% DRE, full receptor grid)	2.75E-05	N / A	N / A	2.72E-07	0.0053 ¹	0.005%
Total Sampled PFAS (99.9% DRE, 1.5 mile endpoint))	5.39E-06	N / A	N / A	7.08E-08	0.0053 ¹	0.001%
Hydrogen Fluoride (HF)	1.26	5.6	23%	0.0124	0.071	17%
Carbon Tetrafluoride (CF ₄)	5.28E-03	N / A	N / A	5.21E-05	330 ²	1.58E-05 ³

¹ Individual ACG for PFOA

² NYSDOH recommended AGC, formally accepted by the NYSDEC

³ This value has been corrected, as requested in the June 5, 2024, letter from James E. Hogan III, PE, NYSDEC to Robert Martin, EMSI

UNDERSTANDING THE EMISSIONS MAP



UNDERSTANDING THE MAP



The **thermal desorption unit** is located within the Clean Earth/ESMI facility property line, show by the red outline.



The **maximum concentration receptor** is the location where the highest emissions are modeled. This location is just outside the boundary of the Clean Earth/ESMI facility.

Modeling shows that the potential PFAS emissions at the maximum concentration receptor are 0.005% of the NYSDEC health-based annual guideline concentration.



A potential **Environmental Justice** area (PJEA) is a minority or low-income community that may bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

Modeling shows that the potential PFAS emissions in the Environmental Justice community are 0.001% of the NYSDEC health-based annual guideline concentration.

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