

**Hoosick Area Community Participation Work Group (CPWG)
Meeting Summary – January 27, 2020**

CPWG Member	Present	Excused	Absent
Marianne Zwicklbauer			X
Emily Marpe	X		
Loreen Hackett	X		
Barbara Lancour	X		
Brian Bushner	X		
Eric Sheffer	X		
Mark Surdam	X		
Rob Allen	X		
Pat Dailey	X		
David Lukas	X		
Michael Hickey	X		
Facilitator			
Nancy Pattarini, The Paige Group	X		
Carrie McMurray, The Paige Group	X		
Presenters			
Ian Beilby, NYSDEC	X		
Tim Watkins, EPA	X		

Note: The January 27, 2021 meeting of the CPWG was conducted via an online video/conference platform due to the restrictions associated with the COVID-19 pandemic. A press release reminder of the meeting date was issued to local media. A meeting date reminder and log-in directions were emailed to all community members who have signed up on the CPWG Listserv. Meeting-related materials may be found on the Hoosick Area CPWG website www.hoosickareacpwg.org and on the NYSDEC website <http://www.dec.ny.gov/chemical/108791.html>

Discussion Summary:

- I. Welcome – The Paige Group
 - a. Facilitator – The Paige Group
 - i. The Facilitator provided an overview of meeting protocol for online participation
 - ii. The Facilitator noted that the opportunity for comments from participating community members will be provided at the end of each presentation
 - iii. The Facilitator introduced CPWG Co-chairs, Loreen Hackett and Brian Bushner
 - b. Co-Chairs
 - i. The co-chairs provided an overview of the meeting agenda
- II. EPA Update – Following are excerpts from the EPA presentation
 - a. PFAS Innovative Treatment Team (PITT) Update
 - i. Focus: how to remove, destroy, and test PFAS-contaminated media and waste
 1. Assess current and emerging destruction methods
 2. Explore efficacy of methods while considering by-products to avoid creating new environmental hazards

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3. Evaluate methods' feasibility, performance and costs to validate potential solutions
- ii. Goals and timing
 1. Develop a "toolbox" of solutions
 - a. Traditional (combustion) destruction
 - b. Innovative non-traditional approaches
 2. Provide officials with state of the science data on incineration effectiveness to better manage end-of-life disposal
 3. Contribute to Office of Land and Emergency Management (OLEM) interim guidance required by the NDAA by 2020
- iii. PFAS sources
 1. Biosolids, sludge
 2. Aqueous film forming foam (AFFF) concentrate, spent AFFF
 3. AFFF contaminated soils
 4. Municipal waste combustors, landfills, landfill leachate
 5. Spent granular activated carbon (GAC), anion exchange resins
- iv. PITT challenges
 1. COVID-19
 2. Finding test partners
 3. Concurrent field sampling and sampling methods development
- v. PFAS destruction challenges
 1. Complicated chemistry (thousands of PFAS)
 2. Widely used in industrial processes and consumer products
 3. Efficacy of thermal treatment
- vi. Technology assessment factors and methods
 1. Factors
 - a. Readiness
 - b. Applicability
 - c. Costs
 - d. Required development remaining
 - e. Risk/reward of adoption
 2. Methods
 - a. Subject matter expert discussions
 - b. Literature reviews
 - c. PITT discussions
- vii. Selected non-combustion technologies for further investigation
 1. Mechanochemical – introduction of dry solids into a ball mill
 - a. In-house study to verify effectiveness, data gaps
 - b. Contract with EDL: AFFF impacted soil study and AFFF destruction study
 2. Electrochemical – high overpotential is applied to an electrolytic cell
 - a. Testing on AECOM reactors
 - b. Data gaps: uncertain byproducts, volatile loss, matrix effects
 - c. Results expected early 2021
 3. Supercritical water oxidation – converts organic waste into clean water, heat, electricity, and carbon dioxide
 - a. Focus on AFFF concentrate

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- b. In-house lab study on hydrothermal oxidation
- c. Contract for Battelle's SCWO
- d. Contract with 374Water/Duke
- e. Procurement with Aquarden
- f. General atomics MCRADA
- 4. Pyrolysis/Gasification – decomposes materials at moderately elevated temps in an oxygen-free environment. Gasification is similar to pyrolysis and uses small amounts of oxygen
 - a. Pyrolysis field test completed in August of 2020
 - i. No reportable PFAS found in biochar product
 - ii. Additional research needed to understand potential releases to air and water
- viii. Combustion Technologies
 - 1. Goals
 - a. Develop sampling method
 - b. Determine destruction efficiency
 - c. Evaluate air pollution cleaning system effectiveness
 - 2. Lab studies
 - a. EPA – indicators for destruction removal efficiency and products of incomplete combustion; FTIR applicability
 - b. Dayton Research Institute – temp and time effects, by-products, flame radical studies, spent GAC/ion exchange resin
 - 3. Field sampling – currently being considered
 - a. Muni waste
 - b. Wastewater treatment
 - c. Rotary kiln incineration
- ix. Outputs – <https://www.epa.gov/innovation/innovative-ways-destroy-pfas-challenge> and <https://www.epa.gov/chemical-research/pfas-innovative-treatment-team-pitt>
- x. Accomplishments to Date
 - 1. Significantly accelerated research to evaluate traditional thermal treatment of PFAS waste and to identify and evaluate potential innovative approaches for treatment
 - 2. Demonstrated 99% loss of initial PFAS compounds in contaminated waste; identified need to more fully understand the potential for fluorinated byproduct formation
 - 3. Contributed to EPA Interim Guidance on Destroying and Disposing of Certain PFAS and PFAS-containing Materials that are in Consumer Products
- xi. Next Steps
 - 1. Continue lab and pilot-scale studies
 - 2. Explore opportunities for field efforts with industry and utility sites
 - 3. Release paper on innovative PFAS destruction technologies in spring of 2021
 - 4. Announce winners of PFAS challenge
 - 5. Enlist support to develop/demonstrate/validate innovative technologies
- b. CPWG Comments/Questions

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Key: C=Comment, Q= Question, A= Answer

- i. Q: Are there by-products of incineration?
A: HF has been detected and there are ways to treat it. We are looking at other PFAS and non-targeted analysis (a procedure that searches for unknown compounds in a sample) is yet to happen.
 - ii. Q: How many PFAS are you testing?
A: Those on the EPA list and non-targeted PFAS.
 - iii. Q: Field work in NJ was declined, where are you conducting field work?
 - iv. A: It has been a challenge to find sites for field work due to community concerns. We are in the process of using lab results to demonstrate safety and identify a potential site.
 - v. Q: Is it accurate to say there is no way to destroy PFAS without giving off something?
A: Research is underway to identify the most effective solutions for destroying and managing PFAS contaminated waste, and includes analysis of any effects of the destruction methods themselves. The next step is larger field scale studies to see if results align with EPA's preliminary laboratory studies. In addition, EPA is partnering with other research organizations to co-sponsor a technical challenge regarding the destruction of per- and polyfluoroalkyl substances (PFAS).
 - vi. Q: Water and air testing methods are limited in that some PFAS can be identified while others cannot. Are these limitations being addressed?
A: Yes, we are using non-targeted analysis to understand if there is PFAS and if it can be treated.
 - vii. Q: During the stack testing there were compounds found that couldn't be identified. Are there possibly more?
A: Non-targeted analysis will help determine if there are others.
 - viii. Q: Is there a list of all PFAS chemicals?
A: The EPA has a list of all chemicals that are recognized as PFAS.
 - ix. Q: Has non-targeted analysis been done in Hoosick Falls?
A: The stack emissions report was non-targeted analysis done in Hoosick Falls.
 - x. Q: What is the timeline for administration changes at the EPA?
A: Typically, this occurs within several months.
- c. Public Comments/Questions
- i. None
- III. NYSDEC Update – Following are excerpts from the NYSDEC's update
- a. Water Study Proposed Remedial Action Plan (PRAP)
 - i. A PRAP identifies Remedial Action Objectives (RAOs) for impacted media and:
 1. Presents remedial alternatives
 2. Identifies applicable Standards, Criteria & Guidance (SCGs)
 3. Provides a comparative analysis of alternatives (analyze each against each other in seven criteria against applicable SCGs) that is used to identify the preferred option
 - ii. Typical PRAP Rollout
 1. Release PRAP fact sheet via mailing list & list serve
 2. Public Meeting (required in statute) hosted by NYSDEC

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- 3. Present the PRAP: Questions and Comments accepted and NYSDOH participates
 - 4. Minimum 30 day public comment period; evaluate public input
 - 5. Issue Record of Decision
 - iii. NYSDEC would like suggestions from the CPWG regarding how best to rollout the PRAP to the community
 - b. DAR Air Emission Guidelines – Comments due 2/12/21
 - i. NYSDEC will get back to the CPWG with answers to previously submitted questions
 - c. CPWG Comments/Questions
 - Key: C=Comment, Q= Question, A= Answer
 - i. C: The village consultant will be looking over the report.
 - ii. Q: What is the expected timeframe once the report is released?
A: The 30-day comment period begins on the day the report is released. A public meeting will be scheduled during that time, typically this occurs approximately 15 days after the release date. NYSDEC anticipates the report being released by the end of March/beginning of April.
 - d. Public Comments/Questions
 - i. None
- IV. Other Hoosick Area CPWG Business
- a. Co-chair Action Items/Updates
 - i. Roles/responsibilities
 - 1. Co-chair support roles – email will be sent to CPWG members requesting assistance with tasks associated with the monthly meeting
 - 2. The Paige Group ongoing support through Feb 2022
 - ii. CPWG Communications
 - 1. NYSDEC email re: Ambient Air Contaminants Under 6NYCRR Part 212 request for clarification regarding DAR Emissions Guidelines
 - 2. WQC email regarding suggestions for next meeting and public comment period distributed
 - iii. Multi-community study
 - 1. Next meeting is scheduled for 2/2/21
 - 2. Currently compiling studies
 - 3. Dr. Erin Bell was selected to the National Academies of Sciences, Engineering, and Medicine (NASEM) panel
 - iv. Other national and NYS activities relevant to Hoosick Falls
 - 1. NYS Senate: S528 that states *Each person shall have a right to clean air and water, and a healthful environment*
 - 2. NYSDEC proposed ban on pesticides that contain chlorpyrifos
 - 3. EPA proposal to collect new PFAS data under the fifth Unregulated Contaminant Monitoring Rule (UCMR 5)
 - b. CPWG Member News
 - i. Resignation: Brian Keegan, thank you for 19 months of services
 - ii. New CPWG member recruitment; invite to be sent asking all current members to stay on for another 2-year term
 - c. Meeting Summaries
 - i. Posted on hoosickareacpwg.org

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- d. Meeting Schedule – Meeting Location/Format TBD
 - i. Next meeting is 2/24/21. A survey will be sent to the CPWG to gain feedback on remaining 2021 dates.