Saint-Gobain Merrimack Community Advisory Council

Final Meeting Notes

December 8, 2020 - Via Zoom

Prepared jointly by Lia LoBello of Saint-Gobain and Sandra Liburd of Leadership Strategies

Attendance

Community Advisory Council Members Present

- Ron Miner, Superintendent, Merrimack Village District
- John Henderson, Saint-Gobain
- Wolfram von Schoen, Merrimack Village District
- Sharon Connary, Saint-Gobain
- Rosemarie Rung, State Representative
- Mike Wimsatt, New Hampshire Department of Environmental Services
- Don Provencher, Merrimack Village District
- Wendy Thomas, Executive Director, NH Challenge
- Laurene Allen, Merrimack Citizens for Clean Water
- Mark Smith, Leadership Strategies
- Sandra Liburd, Leadership Strategies

Other Guests:

- Mark Rayfield, Saint-Gobain
- Chris Angier, Saint-Gobain
- Brett Slensky, Saint-Gobain
- Lia LoBello, Saint-Gobain
- Peter Clark, Special Assistant for Projects & Policy, Office of U.S. Senator Shaheen
- Justin Troiano, Outreach Coordinator & Veterans Liaison, Office of U.S. Senator Maggie Hassan
- Colin Pio, Office of U.S. Representative Chris Pappas

Declined/No Response:

- Matthew Gage, Merrimack Resident
- Mike Apfelberg, United Way

Zoom Functionality Overview

Mark Smith: Overview of participant, chat and raise hand functionality. Overview of chat function and appropriate use. Instruction on how to toggle between gallery and speaker view.

Agenda Overview and Opening Remarks

Mark Smith: Mentioned that in this meeting agenda, we tried to incorporate the group's feedback from the November meeting and briefly reviewed the notes from last meeting. He also reviewed

the agenda for the evening, which includes the topics of the air permit update, Regenerative Thermal Oxidizer (RTO), and sampling. Also introduced and acknowledged Mark Rayfield, CEO of Saint-Gobain North America.

Mark Rayfield:

- Looking forward to meeting everyone in person one day, and virtually for now
- Happy to answer questions that may be directed his way

Mark Smith:

- Shared the agreements made in the last meeting regarding meeting success, including:
    - Largest ground rule is respect. No talking over one another; use the Zoom tool of the blue hand; and that clarity equals brevity.
    - Asked everyone work to keep camera on to build relationships and get to know one another.
    - Then asked new attendees introduce themselves

Colin Pio:

- Attending on behalf of Congressman Pappas
- Here to listen in and provide him with updates on what is happening in community and conversations between all parties

Don Provencher

- Here to get up to speed on a lot of the agenda items, including the status of the key items tonight: testing, site remediation, private well testing, and bottled water updates
- Get tangible solutions to these items and hear what everyone has to say

Wolfram von Schoen

- Wasn't sure there was a future for the group/his attendance, but complimented the November meeting minutes and feels more comfortable if this is the trajectory

Air Permit Review Update

Brett Slensky:

- Wanted to provide feedback and context for the RTO update by walking through the air permit and why we landed on Best Available Control Technology (BACT). This will include how we got to this point, as part of the permit process.
- Knowing we are talking about air emissions and the RTO, this is a good foundation and context for that conversation.
- Goal and intent is to walk the Community Advisory Council (CAC) through the permit from a factual perspective and provide objective information.
- The Town of Merrimack has appealed the air permit and we are working with the Department of Environmental Services (DES) and the Air Resource Council (ARC) on this front.
    - If there are questions on these issues, we need to be respectful of the litigation but will also work to answer as best we can.

    - Will try to answer as fully as possible, but if questions get into areas related to the appeal may not be able to do so
- This update will also set the table for the points Chris will walk through. The particular use of an RTO in this instance – which is to treat per- and polyfluoroalkyl substances (PFAS) emissions – is a first of its kind project in the country. Points of the permit show this.
- The RTO and what preceded its selection was a five step BACT analysis. Saint-Gobain, with its external engineering partners, evaluated 10 different control technologies, ultimately landing on the RTO.
- Relative to the permitting process we went through -- it was rigorous. The process included the issuance of a draft permit, a public meeting, a public review and comment process, and then final permit with supporting document wherein the DES went through the changes from draft to final -- and why those changes were made.
- The result from Saint-Gobain's point-of-view is a very thorough permit.
    - It contains conditions that address things other than PFAS. It also includes conditions related to Volatile Organic Compounds (VOCs) and there are 14 different types of emissions and operating limits within the permit.
    - Altogether, the permit is a complex document. All in all, what it amounts to is several layers of on-going checks and validation steps that we will report to the DES on. These reports will be public information and accessible by the public.

Chris Angier:
- Tonight, we will walk through key provisions and highlights.
- This is a 34-page permit, with a number of different reporting requirements – it has 14 different operating and emissions limits, 18 different monitoring and testing requirements, 15 different record keeping requirements and 12 different reporting requirements.
- We can use future CAC meetings to dive deeper on any the topics we cover this evening as part of the permit
- We start with the BACT process
    - A BACT process is how we settled on RTO.
        - If you read the BACT definition, this is done on a case by case basis. You get all potential control technologies on the table and then whittle down to the best available.
        - The best available control technology means it's an emissions limit based on the maximum degree of reduction for each contaminant. What's the best control technology for something that's emitting thousands of pounds a year may be different from what's best for something that's emitting pounds and ounces per year.
        - This is a five-step process. Step one is to get all potential control technologies out on the table. And then it uses the Environmental Protection Agency's (EPA) top-down approach where you start with really the most effective control and then work your way down through and evaluate all of them.

        - In the second step, you eliminate technically infeasible control options and in the third step, rank what remains after you've done that screening. The fourth step, we document the results of the BACT in the application that we submitted to the DES and then the fifth step is the permit issuance. The DES has to agree what the BACT is and then issues a permit for it.
        - Options range through a number of different technologies. For this project, three ultimately screened through from 10: (i) the RTO, (ii) a filtration system and (iii) absorption (aka scrubber)
        - If interested why others screened out, we can review that as part of the permit. Also this is Q&A – please interrupt with questions
    - Option 1: Filtration system
        - Saint-Gobain did do a pilot test – called a slipstream test. This was done in 2018 and there is a resulting report. We rented a small scale unit and ran our emissions through it to see how it would perform.
        - We had less than 90 percent control effectiveness; some PFAS were controlled much higher than 90 percent, but some were virtually uncontrolled.
        - And that was our concern and why we ultimately did not select that technology.
    - Option 2: Absorption
        - In this process, you take PFAS from the air stream and pass into water; then you need to take them out of the water.
        - Therefore, this is not an efficient system for PFAS removal which is why this was removed
    - Option 3: RTO
        - In addition to performing well in tests, this is one we liked because it had high control effectiveness for VOCs as well -- especially when compared to absorption
        - In the end it was clear that from a technology standpoint this was head and shoulders above the rest -- and DES agreed in the permit
- However, it's not just enough to have the right technology - but need to operate it in the right way. The permit spells out how the RTO should operate to control PFAS
- We then reviewed Page 7 of the permit – and particularly Sections 5C and 5D.
    - The RTO will operate at 1000 degrees Celsius or 1832 Fahrenheit, and the air that passes through emissions from RTO has to pass through for at least one (1) second to achieve breakdown.
    - This is what breaks the carbon fluorine bonds. This time and temperature requirement in the final permit was based on a comment about EPA guidance that came to the agency's attention during the public comment process – so the public feedback really did result in permit changes and conditions
- The permit, when it was written, included annual emission limits: .45 pounds per year for PFOA and .75 pounds per year for PFOS. Based on calculations, PFOA will have to be destroyed at 40 percent efficiency to meet the limit.

Question from Rosemarie Rung: Are there other PFAS besides the four (4) in the permit that will be passing through RTO? If so, will the operating conditions destroy them as well?

Chris Angier: Yes. The RTO will treat all of them. And there will be post-installation testing to prove that out

Question from Donald Provencher: Does the 0.45 pounds per year perflourooctanoic acid (PFOA) limit mean that an emission of that concentration will cause groundwater concentrations of PFOA to be 12 ppt?

Chris Angier: This was done as part of DES work to understand "cause or contribute." The way the math is done can be found in the Findings of Fact and Director's Decision from DES. It means that at this emission rate, this would be non-detect in groundwater at that emission rate.

Rosemarie Rung: What is the non-detect limit?

Chris Angier: Non-detect limit, we would have to double check in Findings of Fact document, it was 2 parts per trillion (ppt) according to memory but will double check. Temperature can be checked on a real time basis.

((Laurene Allen joined meeting.))

Wolfram von Schoen:

- Acknowledged Laurene joining.
- Lia LoBello apologized for copy/paste error in meeting invite
- Lia also mentioned Wendy Thomas' state email was working over the weekend, but received a bounce back on Tuesday. Wolf emailed Wendy's email during the meeting and also forwarded the meeting invite direct.

Chris Angier:

- Moving on to the testing discussion
    - If modeling was to show that that we are out of compliance, there is a plan as to how we would need to report that. If needed, there would be a rigorous document to be submitted within 30 days of the stack report to DES.
    - In this document, we would have to provide plan for both the short-term and long-term in addressing why we went out of compliance.

Question from Rosemarie Rung: Is the testing of those chemicals done on site or do they go to an outside lab?

Chris Angier: All of these samples would go to an outside lab to be independently certified by USEPA and NHDES. Their quality assurance programs will help us be sure we are getting reliable data in decision making

Chris Angier: Moving onto annual reporting.

- Once the RTO is tested initially, there is an obligation for annual emission reports to look at long-term effectiveness of the system.
- This goes to the long-term testing needs outlined in the permit

Question from Wolfram Von Schoen: Is there an automated alarm or shut down mechanism for the plant if the emissions – or recording of process parameters – are exceeded?

Chris Angier: The temperature has to be recorded and reported every 15 minutes and averaged every hour. The permit spells out the actions that would be required if the temperature were to be too low for too long.

Question from Wolfram Von Schoen: And the flow rate of the emissions – it's a one (1) second time period?

Chris Angier: Going to have more than a full second of residence time
Brett Slensky: And these reports will be submitted to DES and that will be a public document

((Wendy Thomas joined the meeting))

Question from Rosemarie Rung: What is current schedule for RTO installation and expected date of compliance with permit?

Chris Angier: Currently, we have electrical construction and duct support construction underway. Just today, we submitted the building permit application to the Town for concrete foundations and that contractor is ready to go once permit is granted.

The electrical contractor is scheduled for December 19- 20 to make connections to a new transformer. All onsite infrastructure will be ready for RTO when it ships.

What's giving us the most concern is that RTO manufacturer has not given confirmation of the ship date yet and we are not sure we will get it for February. Saint-Gobain is putting the pressure on and hoping they can ship in time.

Question from Donald Provencher: The air discharge limits were set by DES and those limits are such that so long as you don't exceed those limits there won't be detectable PFAS concentrations in groundwater? Correct?

Chris Angier: Yes

Question from Donald Provencher: Did DES use any consultants to assist them? How were those limits set and how were they determined? By the DES air emissions staff?

Chris Angier: Passed to Mike Wimsatt

Mike Wimsatt: I am not aware that one was used (or not used) – but do know that the inside staff worked on those numbers and did some of those calculations.

Question from Wendy Thomas: Can you give us an update on the percentage of private well owners who have returned the permission for private well testing?

Chris Angier: Will have to double check and will share with notes after meeting

Question from Laurene Allen: What is the status of the Hydrogen Fluoride (HF) scrubber?

Chris Angier: Will be evaluated after post install testing of the RTO. The permit requires HF testing and so then will know if a scrubber is needed.

Mark Smith – asked the group if the RTO update could be closed, if all questions were asked and answered in Brett and Chris presentation. Group nodded its ascent.

Sampling Update: When and Where

Chris Angier: We also wanted to provide a well sampling update to provide sense of how this piece of the project is going. This is in response to a request from our November 10 meeting, where we said we would provide insight into the expected dates and locations for sampling, as well as a rationale for the approach.

- When things changed with Maximum Contaminant Limits (MCLs) last fall a sampling work plan that outlined an iterative sampling process was submitted to DES. A series of five (5) addendums identifying additional locations for sampling have been submitted to NHDES, the most recent being November 16, 2020
- Each step of the way, addendums are issued to NHDES so they are informed of the sampling progress, and NHDES has been quick to approve the addendums so the Golder team stays in the field collecting data and samples to keep making decisions moving forward
- Chris then showed a test from the most recent work plan addendum to show how additional properties are being identified, walking through how Golder is looking at adjacent and proximal parcels to gather data and make decisions
- Another thing Golder does is look at low sample density and identify areas where we need samples to get a leading edge indication of where those areas might be

Chris Angier: Then walked through Addendum 5, Figure 1 of the most recent work plan. Showed the group that the purple line is the Groundwater Management Zone (GMZ); walked through the coloring of each map and what it means.

- Zoomed into the northern portion of the map to view greater detail. Shared that the yellow dots mean it tested above current limit of 12. Circles are samples by DES from approx. 2016. Light green parcels are those connected under original agreement. Those homes connected now to water supply lines. Now that Golder is doing the samples, the triangles indicate the most recent data
- As we step outside the old GMZ, the green triangles show recent data points. You can see how things change from door to door – and so the rigorous work plan is for evaluating all the conditions in the area and we are not relying on single data points

Question from Donald Provencher: Do the lower PFAS MCLs mean that the outer boundary of the GMZ should change? Or just the inner boundary?

> Chris Angier: The way the agreement is written, it obligates SG to take action between inner and outer boundary. But it doesn't speak to the outer boundary.
>
> Brett Slensky: Just be the inner boundary. The pre-GMZ line (inner boundary) is part of what we are obligated to do under the Consent Decree. Once we complete the water line work, we'd have to go back and do well sampling to define where the final GMZ line should be. So now that the GWQS is lower, the final GMZ line could shift depending on geographic parcel. The outer boundary is fixed regardless of the lower levels and will not change.

Chris Angier: For the purposes of today's CAC, we are focusing on Merrimack

Question from Rosemarie Rung: Is there a similar map available for Bedford?

Chris Angier: Yes – that is another map we can share with the CAC

Chris Angier: Resumes presentation.

- Light green shading is Litchfield; dark green shading is where water lines are up.
- Homes above, below and at non-detect are next to each other. From well to well you see different things, and that why it may be some time to get through the sampling process and make decisions.
- On the timeline, the MCL legislation says public water supplies have to be finished within one year. We have challenged Golder to meet that. We have hundreds of homes in each addendum.

Question from Rosemarie Rung: What is the plan to reach out to private home owners to get their permission for testing? The PFAS commission members are working on a plan to reach out to those people who haven't yet given their ok.

Chris Angier: Once Golder gets permission from DES, they reach out with letters via FedEx so that it doesn't get lost. Golder includes in this letter an FAQ and paperwork to request permission for sampling. Then, when Golder receives a signed agreement they schedule with homeowner at their convenience. Because of the pandemic, we are going to exterior spigots. Samples are collected and then sent to independent lab; when Golder gets the results, if they are above the standard, they get bottled water. The homeowner then gets the contact info for Mondandock to get setup.

Question from Wendy Thomas: You're doing a lot of testing, that's a lot of possible new homes going onto bottled water. Is there any talk of assisting with Merrimack's recycling? Also - with regard to the permission papers - only a witness is needed correct? No notary?

Chris Angier: Correct – no notary and one witness - and that's now in FAQ. Have not yet had discussions with the Town regarding a recycling program. If there is a need, we can listen to and take up in future CACs.

Question from Rosemarie Rung: I'm not sure I've seen the FAQ - can we get that shared?

Chris Angier: Yes.

Question from Rosemarie Rung: Some people have been on bottled water for a long time. Is the idea to keep them on bottled water permanently or get them information on water line connection?

Chris Angier: We were testing last fall and then this was paused due to court action – so yes, some have been on bottled water since that time. We need to collect more data for DES and then Town to do whole neighborhoods vs individual houses to move forward with next steps.

Question from Rosemarie Rung: When do you expect to get all the data?

Chris Angier: The way we have been approaching it is to submit new data sets every two weeks to DES. When we have enough – and it's a situation that we will know it when we see it – and when we all think we have enough data then that will support the next steps.

Question from Wendy Thomas: In situations where you are taking the sample from outside the house, what if the household already has a filtration system installed? Are you taking the filters and treating them as bio-hazards?

Chris Angier: I'm not sure that's a situation we've dealt with.

Mark Smith and Chris Angier recap items to follow up with:

- Confirmation of the non-detect limit
- How many private well owners have provided permission for sampling
- FAQ document
- Will keep ideas for recycling in mind

Open Issues and Next Steps

Mark Smith: For the next meeting – any open items that we want to flag?

- Lia LoBello: Brought up Dick Hinch's request to be replaced with Rep. Bob Healey. Everyone approved. However, Wolf Von Schoen asked we reach out to Dick to reconsider. (Saint-Gobain offers its condolences to all who knew or worked with Rep. Hinch.)
- Lia to reach out to Rep. Healey to formally invite him to the group.

Mark Smith: Saint-Gobain will take up as a team and draft a policy re: how to best govern around the replacement of new members.

Question from Wolfram Von Schoen: Will the information shared here be public?

Lia LoBello: Saint-Gobain can make the notes public via the website merrimackwater.com once approved each month, at which point anyone can repost the notes on sites they see fit

Question from Donald Provencher: NHDES sent letters to Saint-Gobain regarding a soil and groundwater management plan for the Saint-Gobain and Flatley properties. Was this submitted and if not, what is the timeframe for this? Is groundwater remediation being considered?

Chris Angier: Flatley has had to prepare soil management and groundwater management plans for development. Saint-Gobain is not a piece of this. For our site, the groundwater remediation questions are all considered once the remedial site investigation is complete and we are still working with DES on this.

Question from Donald Provencher: The concern is that Flatley is moving forward with developing some properties and is common sense to be sure their development would work with any type of remediation plan. I think Flatley is under the impression there would be a comprehensive "remediation plan" or "management plan" to cover all of Flatley and Saint-Gobain's properties and it doesn't quite sound like the perspective we have. What are the

communications with Flatley? I encourage everyone to talk so that they are not building without taking into account remediation efforts.

Mark Smith: We will add this as an open question. We will use future meetings to connect directly with Flatley and report back – or we can have Flatley come present.

Question from Wendy Thomas: One issue to address in future meetings is how many families are on bottled water. This is a heavy load on the recycling station. How can Saint-Gobain plan to help the town with extra recycling? Those same people with bottled water, also have filtration systems where the cartridge has to be replaced every six months. Can we have these filters addressed to create this conversation via the CAC or to report back?

Mark Smith: Noted this as an action item for follow up for the CAC.

Question from Rosemarie Rung: A few open items. One - is it possible to get photos of the RTO as it is being installed or to give public a visual to reduce the PFAS going into the soil? There are lots of different learners – seeing this may help. Two – the meeting notes. I can bring this up to SB 737/PFAS commission site - make it a one-stop shop? Three - thank you for focusing on PFAS issue. Expressed appreciation for keeping this focused on PFAS - and thanked Brett and Chris for the presentation.

Mark Smith: Makes a note for future CACS to find construction photos and reach out to the RTO supplier for examples of others projects that can provide a visual

Meeting Review

Mark Smith: Asked the CAC to rate the meeting on scale of 1-5 for meeting the needs of everyone. One (1) would be a waste of time and five (5) a valuable use of time.

- Rosemarie Rung:
  - 4, don't give 5's much.
  - Very pleased with this meeting. Educated me more and I got info I can give info to my constituents.
  - Only critique is slides no one can read. May next time we can give in advance, blow up, share in chat, or provide as pre-read

- Ron Miner:
  - Very good meeting. Strong 4.
  - One comment: would like to hear monthly update on the RTO project and the well testing. Can be brief.

- Donald Provencher:
  - Pleased with the meeting: 4.5.
  - Look forward to getting more detailed information about Saint-Gobain and Flatley project, groundwater and soil remediation plan.
  - First discussions on this were November 5, 2019 and at that time, the site investigation was still ongoing.

    - Would like an update on timing. Get a summary of what was done from last year and what the timeframe is and scale of possible remediation efforts out there. Thanked Chris for his presentation and information.

- Wendy Thomas:
    - Have noticed a difference in way meeting is being run and organized.
    - Can't give a number yet. Couldn't make last meeting and email issue prevented coming on time this evening.

- Wolfram Von Schoen:
    - I give this a 4. But this is an easy one for Saint-Gobain – because we are now making progress.
    - We are implementing the RTO after a legal battle and haven't talked money, private well owners or the Town of Merrimack.
    - Will change score to a 5 until we talk about money.

- Mike Wimsatt:
    - What I want is for people of Merrimack to get people what they need. Take the geometric mean for people of Merrimack.

- Peter Clarke:
    - Sen. Shaheen advocated for this so people could get info they need. So if our constituents are happy with the way meetings are going so are we.

- Justin Troiano:
    - Echoes Peter's comments.
    - Great to see stakeholders coming together and having conversations in earnest.

- Colin Pio:
    - Concur with my colleagues from Senators Hassan and Shaheen. If residents in Merrimack are encouraged so are we.

- Laurene Allen:
    - Missed very beginning but will give it a 4. Very well run. Agenda was clean and there are things to discuss move forward, not just where the minutes will go but how do we think about how to run these alongside the map and bring in people who are hungry for information.
    - We can't have community meetings with DES right now, so how can we use this platform so people can see how and what questions are being asked and answered.
    - Make sure there are things with DES where timelines aren't clear - who owns the plan but how we move forward. Provide information to people and make sure that word gets out on the work plan, including who can be contacted at DES and how to make sure everyone has the information they need.

    - Referenced the work of some CAC members around public water, petitioning, presentations to MVD. Shared members of the community are seeking solid plans for the remaining remediation.

- Rosemarie Rung addition: adding Londonderry to the 737 Commission