

TECHNICAL MEETING SUMMARY

November 17, 2021 | Virtual Meeting No. 16

Summary of Presentations and Discussion¹

A full recording of the meeting is available here: <https://youtu.be/rG11CK7QfFc>

Questions and discussion regarding the material presented are included in bullets in the sections below. *Direct responses are in italics.*

UPDATE ON THE FEASIBILITY STUDY PROCESS AND OTHER ACTIVITIES

Mark Schmidt, US EPA Region 2 remedial project manager, shared that much work will be done as part of the feasibility study (FS). Key initial tasks are defining preliminary remediation goals (PRGs) and refining the conceptual site model (CSM). Once those are completed, EPA can start the screening process of remedial technologies. EPA is also working on the lateral groundwater study and hopes to have access and monitoring wells set up next year. EPA is also developing background sediment concentrations, along with the treatability study, which is scheduled for summer 2022. EPA can include these as CAG agenda items for 2022.

EPA also received an updated version of the hydrodynamic model and fate and transport model from NCG. EPA submitted comments to NCG and hopes for responses in December.

REMEDIAL INVESTIGATION/FEASIBILITY STUDY PROCESS CLARIFICATIONS

Stephanie Vaughn, US EPA Region 2 remedial property manager, clarified several questions around how the RI feeds into the FS. EPA thinks of both as components of one RI/FS process. Both will inform the remedy, and both interact with and inform one another. The process is set up in this way to minimize data redundancy and maximize data quality. EPA intends to work through that process for the site.

The potentially responsible parties (PRPs) submitted an RI report which contains data collected to date. That, however, does not mean that new data cannot emerge, and the summation of data collected throughout the joint process will inform the remedy. We completed the first 2 portions of our modelling framework during the RI and decided that the remainder would go into the FS (in order to avoid delaying the process). If during the design of the remedy, new information comes to light that requires additional data and adjustments, then we can collect more data. We are not at the end, this is merely the beginning of the process.

¹For additional detail of the presentations, refer to the slides found at <https://newtowncreekcag.wordpress.com/presentation-slides/>

The questions asked by CAG members follow **bolded** with presenter answers in *italics* and additional CAG commentary on that question in regular text.

- **I would like to report that there has been another bulkhead collapse in Dutch Kills at 29th Street. Could your team look into that situation? There are real consequences to not acting in situations like these.**
 - *EPA: Thank you for letting us know. NYC DEP also monitors events on the Creek. There is a need to balance the need for a robust procedure with responding to situations as they arise.*
 - **I remember when this process first began, EPA made it clear that in emergent situations like new sources of pollution or entries into the Creek, the appropriate agencies would be able to address those issues despite the Superfund process. Is that no longer the case?**
 - *EPA: Whenever we learn of an issue like this, the state is the first to respond. The state sends someone out almost immediately to look into the issue and determine next steps. For emergencies beyond state and city capacity, EPA has a removal program that can assist.*
 - **We have had several instances of direct contamination into the site (such as a contractor pumping groundwater above an oil spill in violation of MS4). I am not aware of any direct contamination in this instance, but what is EPA's role? It seems that we need more than a NYS DEC fine in these cases.**
 - *EPA: If Newtown Creek were not an EPA National Priorities List (NPL) site, these infractions would still take place, and EPA would not have a role. Uplands and related contamination are the purview of the state on the Creek. It is important that we monitor these issues for Superfund, but we do not have direct authority to address those concerns.*
 - *NYS DEC: That is correct. Our agency is reactive and counts on people in the community to help us identify problems. Once we get the information, we can move forward with enforcement. I would encourage you to continue sending us information, which we take very seriously, and we can move forward with enforcement when appropriate. I can track down someone to help with the bulkhead issue.*
 - *CBI: Whose job is it to ensure that bulkheads do not collapse?*
 - *NYS DEC: Ultimately, it is the responsibility of the property owner. They are required to apply for a permit to replace bulkheads, and we review designs and other submittals.*
 - **The property owner the Metropolitan Transit Authority (MTA).**
- **EPA's [Guide to Preparing Superfund Proposed Plans, Records of Decision, and other Remedy Selection Documents](#) suggests that the RI is mandated to determine sources of non-aqueous phase liquids (NAPL) and potential routes of migration into the site. The RI draft text, however, indicates that this mandate is unfulfilled as there are no quantified data. These data should be made available to the CAG.**
 - *EPA: That document is guidance, not a mandate. The essence of the RI/FS process structure is to avoid getting caught up in administrative procedure. The FS report will*

- contain new data that we have collected since the drafting of the RI report. It does not matter where that data is, it just matters that it is part of the administrative record. The Conceptual Site Model (CSM) is a living document and will continue to be updated. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulations require us to not finalize the FS report until a Record of Decision (ROD) is signed (although we can finalize the RI report). This ensures, among other things, that public comment can be included up until the ROD is signed.*
- **What guarantee do we have that data on sources and routes of contamination will make its way into the administrative record?**
 - *CBI: One study of interest is NYC DEP's NAPL fluorescence study. Is DEP's study publicly available?*
 - *Daby Marulanda (NYC DEP): I am not able to answer that question here. Please submit any questions in writing to the agency and/or our director of Superfund.*

SUMMARY OF EXISTING STUDIES RELATED TO NAPL

Joseph Mayo, CDM Smith technical consultant to EPA for the Newtown Creek site, shared an overview of studies done by several entities related to NAPL on Newtown Creek. The presented the studies in 3 groups – NAPL sediment studies, ebullition studies, and shoreline sediment & seep studies. He noted that the City did other studies, but data from those studies are not available.

Phase 2 of the RI (2012-2013) sought to characterize sediments chemically and visually in a broad sense. EPA evaluated Phase I sediment cores, and many were visibly coated or stained with oil (visibly indicating the presence of NAPL). EPA also evaluated cores from NYS DEC's uplands data.

Phase 2 of the RI (2014-2015) sought to characterize NAPL in a more formal and structured way. Newtown Creek Group and their technical consultant Anchor QEA carried out a study based on NYS DEC guidance for identification of NAPL (with EPA approval). The methodologies included visual observations and shake testing to identify sheens. The study also involved the collection of 165 additional cores.

In 2016, NYC DEP carried out a study that involved using laser-induced fluorescence (LIF) to evaluate on sediment samples for NAPL. DEP presented the data to EPA in 2016, which led EPA to consider additional cores that would need to be studied. NYC DEP also transmitted the LIF logs to EPA.

LIF is considered a screening tool (relative response instrument) in response to a calibrated standard. Many compounds fluoresce, not only oil and heavy petrochemicals, so the tool needs to be calibrated to background sediment. The City told EPA that they would perform some verification, but a report from the City has not been forthcoming.

As part of the FS field investigations, EPA issued a memo stating that NCG/Anchor QEA's NAPL data contained gaps. EPA directed NCG/Anchor QEA to collect additional cores in specific areas

where NAPL was known to be present but had not been delineated horizontally or vertically. This was done using the Phase 2 methodologies.

Mr. Mayo also shared additional diagrams displaying locations where cores were collected and sampled, along with the methodologies used to evaluate those cores. Mr. Mayo also shared slides from NYC DEP's presentation to EPA which show areas where LIF methodologies (TarGOST and UVOST) were used. NYC DEP's slides show significant NAPL areas in the turning basin and part of English Kills.

Mr. Mayo gave an overview of studies related to ebullition, which is the mechanism by which NAPL moves from sediment into the water column around the Creek. As part of the initial phase 2 work, NCG/Anchor QEA conducted an ebullition survey in August 2015. The survey was only designed to identify sheen blossoms and similar visual indicators. The data did not identify many sheen blossoms and seemed to be focused on only a few areas. The City also carried out a similar survey at a slightly different time in the month when the tides were lower. The data from that survey showed much more ebullition and sheen blossoms. EPA then asked NCG/Anchor QEA to conduct a second ebullition survey, the data from which looked a lot more like the City's. The ebullition was focused on areas where NAPL was known to be present. Mr. Mayo noted that the City's data was instrumental in alerting the EPA to look into additional ebullition studies.

EPA now knew that ebullition was occurring on the Creek and understood the distribution of its occurrence but needed to understand how it was distributed quantitatively. NCG/Anchor QEA carried out a pilot study to assess methodologies to quantify ebullition on the Creek. Mr. Mayo displayed the apparatus that was used, along with the locations where they were placed. EPA is now able to measure ebullition at the locations identified and get a general sense of ebullition loading in these areas. NCG/Anchor QEA carried out the study twice in the year (July and October). EPA also extrapolated the data to areas identified as ebullition areas elsewhere in the Creek (though this was not possible for the entire Creek). As a result, EPA has a general sense (a range) of ebullition loading across key areas of the Creek. The forthcoming *Gas Ebullition Data Evaluation Report* will compile this data and will feed into the FS.

Mr. Mayo concluded by sharing that the key takeaway is that EPA has a good understanding of the distribution of NAPL in the Creek. EPA believes that that understanding is suitable to move ahead with the FS and develop remedial alternatives.

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- **The UVOST (designed to identify lighter petrochemicals) logs show areas other than those identified in the RI report. Has there been any discussion as to why there was this discrepancy?**
 - *CDM Smith: That data did show some other areas. We have identified "significant" NAPL. The RI report also outlines the distribution of "residual" NAPL, which are small*

blabs in sediment, which are typically not mobile. (Appendix C of the RI describes NAPL distribution.) We also knew the further data needs for the FS.

- **In the Appendix, sheen was not identified as NAPL. Could this explain the discrepancy between the City’s data and the RI? The City data tends to correspond more with what we see in terms of sheen on the Creek.**
- *CDM Smith: The key point is that we understand the distribution of “significant” and “less significant” NAPL areas in the Creek and have the data we need to go into the FS both for areas of higher and lower concentration. The Creek is impacted by NAPL almost everywhere, the question is whether we have enough data to be able to understand impacts.*
- **Is there a concern around the “aeration line”?**
 - *Willis Elkins: The aeration line runs through the National Grid area (identified as the “highest priority” area) and the lower section of English Kills. It is a line on the bottom of the Creek that has a high concentration of sediment contamination that is being transported to the surface water. It is an area of concern regarding NAPL.*
- **We tend to observe most significant ebullition in August and September? Is water temperature a factor in the quantity of ebullition?**
 - *CDM Smith: Our study aligned with the spring tides, which when there is the highest difference between high and low water. We also have sediment temperature probes in place throughout the year, which generate profiles for the entire year. It may not have been at the absolute maximum temperature, but our observations suggest that there is more ebullition taking place in July and October than at other times in the year (based on sediment temperature and hydrostatic pressure from water levels).*
- *CBI: The data suggests more intense NAPL in some areas than in others, but essentially that NAPL is an issue throughout the Creek. What does the data collected to date suggest in terms of a remedy?*
 - *EPA: We ought not to get ahead of ourselves. The goals of a remedy would be based on remedial action objectives, which would include preventing exposure to contamination, preventing migration, and others. That would be a topic for the future.*
- **Will the FS proceed before the location of current seeps and sources of contamination are firmly established?**
 - *CDM Smith: We know where there are seeps (based on the work done by NYS DEC). The question for the FS is what needs to be done given that the seeps exist.*
 - **Will NYS DEC’s data have the same value as part of the FS even though it is not in the RI?**
 - *EPA: Yes.*

NEXT STEPS

Upcoming CAG Meeting Dates (proposed)	December -- OFF
	January 19, 2022
	February 16, 2022
	March 16, 2022

CAG Items to cover at future meetings	29 th Street Bulkhead Collapse
	2022 FS Activities