



POMPTON LAKES WORKS SITE
POMPTON LAKES STUDY AREA DREDGING/REMOVAL
RECENT QUESTIONS & ANSWERS – DECEMBER 2015

1. Where will contaminated soil/sediment be collected and staged?

ANSWER: Soil/sediment that is processed will be temporarily stockpiled and covered on the processing pad in the staging area as depicted on Drawing 2 of Appendix A in the draft Corrective Measures Implementation Work Plan (CMI WP). This is in the Uplands Soil Area which includes Rotary Park. The overall footprint of the work area is small and is a constraint to stockpiling large volumes of processed soil/sediment.

The Uplands Soil Areas, including Rotary Park will also be used for material and equipment staging. Generally, Rotary Park will be used for equipment staging during mobilization and load out of stabilized soil materials. The non-maintained park area will be used for staging the mechanical solidification equipment used to support dredging operations following the removal of targeted soils.

2. Will contaminated soil/sediment be removed from the Borough of Pompton Lakes?

ANSWER: Yes, impacted soil and sediment will be processed and shipped to an off-site licensed disposal facility for final disposition.

3. How is the liquid that is going to be de-watered during the dredging process being treated?

ANSWER: Water that comes in contact with the soil or sediment to be dredged and/or excavated will be collected and processed pursuant to the requirements of a permit that will be issued by the New Jersey Department of Environmental Protection (NJDEP). The specific requirements of the permit are being discussed with NJDEP.

A water treatment system is proposed to be installed that will handle all decontamination water, rainwater coming in contact with the stored sediments, and filtrate (i.e. the de-watered liquid) from the filter presses. Water will be collected in the filtrate tank that will serve as a wet well for the settling tank feed pumps. The filtrate water will be pumped through a static mixer to add polymer (if needed) into two large settling tanks. The settling tanks are designed to allow the solids to floc together until they become denser than water, thus giving them the ability to settle out in the bottom chambers of the tanks. The effluent from the settling tanks will be pumped into a tank and subsequently pumped through a bank of micron bag filters for polishing. From there, it will be discharged through a flow meter and auto sampler, to the final discharge point of a rock filter to the Acid Brook Delta (ABD).

4. Can “sand pods” be utilized versus sheet pile during dredging?

ANSWER: The Environmental Protection Agency (EPA) was unable to locate information about “sand pods” that could be utilized instead of sheet pile during dredging. Regarding the technologies proposed to be utilized for work area isolation (i.e. separating the work area from the non-work area in the Lake and Uplands); approximately 600 feet of sheet pile would be installed between the Upland Soil Areas and the in-water ABD to mitigate surface water from Pompton Lake into the active removal areas in the Uplands.

The majority of in-water isolation proposed will be via a turbidity containment system to be utilized as part of the ABD and Pompton Lake sediment remediation. The turbidity containment system proposed for installation is approximately 3600 feet and is anticipated to be a three-tier approach including:

- 1st tier: an oil/debris boom off-set from the dredge area over non-targeted sediment installed from above the water surface extending approximately 1.5 feet below the water surface;
- 2nd tier: a bed load baffle installed bottom-up such that the top of the bed load baffle is installed 2 feet above the sediment surface; and
- 3rd tier: a traditional permeable turbidity curtain, installed such that the fabric extends to within one foot above the sediment surface.

5. Has removal of contaminated soil/sediment by rail been considered?

ANSWER: Please note that this question was responded to in the Responsiveness Summary that addressed written and oral comments provided to EPA during public comment period associated with the Permit Modification related to the Pompton Lake Study Area. Regarding potentially piping the contaminated sediment up to the site for processing and subsequent off-site disposal via rail, an evaluation of the efficacy of this approach was performed. This approach was not considered the most effective approach for the following reasons:

Access – multiple private property owners would need to provide access to their property. If the Acid Brook stream bed is used as the route to convey contaminated sediment to the site, the home owners who own portions of the brook would have to agree to provide access. In addition, the pipe conveying contaminated sediment for processing would occupy stream volume which could contribute to flooding.

Road and Railroad Crossing – a road crossing could occur by using existing culverts but the railroad culvert is too small for both the dredge pipe and the storm water flow. In both cases access agreements would need to be obtained from property owners including the railroad. Access under the railroad would need to be constructed that would require an access agreement between the Permittee and the railroad be executed. Previous experience with another aspect of the environmental clean-up requiring access to railroad property has shown that the process to

execute an access agreement (assuming the railroad were amenable to such an agreement) can be lengthy. Additionally, there is not an active rail spur at the Pompton Lakes Works.

Hydraulic and Mechanical Dredging – It is important to note that even if conveying hydraulically dredged sediment to the Pompton Lakes Works site for processing and off-site disposal via rail was viable, it would not be possible to treat the ABD Upland Soil Areas nor mechanically dredged material in the same way as hydraulically dredged material. The main reason is that the ABD Upland Soil Areas and mechanically dredged material will not be suitable for pumping as they will contain too high a solids content. Therefore, this material will still need to be processed at the lake prior to transportation to the disposal facility.

6. Is there a back-up power source if JCP&L cannot provide power due to an outage?

ANSWER: No. In the event of a power outage, work would be temporarily suspended until JCP&L was able to restore power. Should there be a longer term power outage, consideration would be given to utilizing generators as a source of power.

7. Can the level of Pompton Lake be lowered prior to dredging to minimize leaving contaminated sediment behind?

ANSWER: With regard to de-watering the lake and removing sediment “in the dry” versus mechanical/hydraulic dredging; the following implementation considerations resulted in mechanical/hydraulic dredging being selected as the preferred approach:

- Control of surface water during heavy storm events would be difficult in areas sectioned off for removal;
- Controlling groundwater infiltration during removal would yield large quantities of water to handle;
- Odor control may be a more significant issue since a larger area around the sediment would be opened;

8. Will there be a refueling location on land for the equipment used on Pompton Lake?

ANSWER: Chemour’s contractor has proposed to place a floating pier along the edge of the sheet pile installed in the shallow water adjacent to Rotary Park. Equipment fueling is proposed to be performed from the pier. Proper containment and spill prevention techniques will be used during fueling activities and spill clean-up kits will be located in this area.

9. Will there be security on-site during non-working hours?

ANSWER: Security is proposed to be continuously maintained during non-working hours.

10. Will children attending Lakeside Middle School and/or residents living close to the work area be temporarily relocated during dredging?

ANSWER: The decision on whether or not to move the students temporarily to another facility is the Pompton Lakes School District's Board of Education and not EPA's. EPA has assured representatives of the School District that we are confident this work can and will be done in a safe manner that the work does not present any unacceptable health risks to the students, faculty or staff of Lakeside Middle School. This also applies to residents in close proximity to the area where dredging will be performed.

11. Can there be prior notification if the contractor performing the dredging is working on a given Saturday?

ANSWER: Make up work days on Saturday are proposed as a possibility should delays in the work schedule occur due to inclement weather or other reasons. EPA/Chemours will establish a protocol for notification to the community for the situation when work would be performed on a Saturday. However, situations could arise (e.g. unanticipated adverse weather) that could result in the notification of Saturday work to be short. Best efforts will be made to avoid a short notification period prior to any Saturday work being performed.

12. Concern: maintaining the integrity of the "cap", particularly after a storm event.

ANSWER: Please note that this question was responded to in the Responsiveness Summary that addressed written and oral comments provided to EPA during public comment period associated with the Permit Modification for the Pompton Lake Study Area.

Capping of sediments was not required in the permit modification for remediation of mercury-contaminated sediments within the expanded area of the ABD (and in selected areas outside the ABD). The permit modification requires that all areas be remediated by dredging to below the level of contamination-- the dredging depth will generally be to the peat layer. However, there will be selected areas of dredging below the peat layer where previous investigation has detected elevated levels of mercury that could become available to ecological receptors. Following dredging, a layer of clean sand is to be placed over the dredged areas. The purpose of this layer of clean sand is not to serve as a barrier to cover contaminated-sediment in-place (which would require regular maintenance), but to encourage the re-establishment of the ABD bottom's ecological community. Nevertheless, the clean cover will provide an additional measure of protection by isolating much of any residual mercury that may be left behind following dredging. EPA anticipates that this layer should remain in place as data from the vertical sections of cores indicates that the ABD appears to be a stable sedimentary environment where bottom sediments are not readily redistributed even during major flow and flooding events. This expectation is further supported by EPA's comparison of 2007, 2011 and 2013 depth data which showed little effect of the 2010 flooding events on bottom depths across the Pompton Lakes Study Area. Post-construction monitoring through the Long-Term Monitoring Plan will help confirm that the ABD is a stable sedimentary environment where bottom sediments are not readily redistributed such that concentrations of mercury appear in surface water and/or biota that result in increased exposure to ecological receptors.

13. Will there be an On-Scene Coordinator available to monitor the environmental clean-up in the Pompton Lake Study Area and to serve as an Ombudsman should any issues arise?

ANSWER: EPA and/or NJDEP will provide field oversight during the implementation of the environmental clean-up of the Pompton Lake Study Area. Oversight personnel would be available to address concern/complaints from the community. In addition, EPA's Community Involvement Coordinator and Project Manager would continue to serve as points-of-contact should issues arise.

14. What are the clean-up level standards?

ANSWER: Please note that this question was responded to in the Responsiveness Summary that addressed written and oral comments provided to EPA during public comment period associated with the Permit Modification related to the Pompton Lake Study Area.

Remedial action objectives (RAOs) are developed to address potential unacceptable human health or environmental risks associated with site conditions and the exposure pathways identified. Narrative qualitative RAOs were developed to set goals for protecting human health and the environment. There are no promulgated applicable remediation standards for mercury in sediment to use as numeric RAOs or clean-up levels.

There are both human and ecological receptors in the Pompton Lake Study Area. Humans may have direct contact with surface water and sediment during recreational activities although recreational activities on Pompton Lake are restricted due to elevated levels of coliform bacteria within the surface water. Swimming and wading in Pompton Lake are prohibited. It is expected that current restricted human use of Pompton Lake can be enforced and will continue in the future.

Ecological receptors, aquatic species in particular, have direct contact with surface water and sediment. While the potential for significant risks were shown to be minimal, the ecological data for the ABD sediments and two additional areas identified in Pompton Lake indicated that mercury concentrations in some biota were higher than in reference areas. The focus on risk management for mercury impacted sediment is the potential concern for ecological receptors.

In order to be protective of ecological receptors, the following qualitative RAOs for the ABD sediments and additional areas identified in Pompton Lake were developed:

- Remove sediments with the potential to methylate mercury and reduce the potential for further mercury methylation in near-shore sediment in the ABD;
- Reduce the area of exposure of ecological receptors to elevated mercury concentrations in sediments;
- Reduce the potential of ecological receptor exposure by removing sediment which has the potential to methylate mercury and which reduces the mass of mercury in the surficial

sediment (i.e. sediment found at 0 to 0.5 feet) in the ABD and additional areas of concern identified in Pompton Lake (Area A and the Island Area); and

- Reduce the potential for ecological receptor exposure by removing the sediment which has the potential to methylate mercury and thereby reduces the mercury mass in the deep sediment (i.e. the sediment found at > 0.5 feet) in the ABD and additional areas of concern identified in Pompton Lake (Area A and the Island Area).

A multiple lines of evidence approach was utilized (because as stated above, there is no promulgated sediment clean-up standard for mercury) to determine which mercury contaminated sediment should be remediated to meet the RAOs. The multiple lines of evidence used to identify and delineate areas of mercury impacted sediment that would be subject to dredging/removal included the following:

- Surface water characterization;
- Sediment characterization including measuring concentrations of total and methyl mercury in sediment, sediment toxicity studies and sediment pore water analysis;
- Biota sampling and/or analysis as part of ecological investigations including fish, amphibians, insects and birds;
- Bathymetry (or water-depth analysis) and side scan sonar analysis and grain size analysis to characterize the river bed; and
- Evaluation of river/lake bed stability and changes in sediment bed elevation patterns (i.e. identification of erosional and depositional areas).

The 2 ppm concentration of mercury is not a clean-up standard for mercury in sediment. The permit modification of December 2012 that was appealed by DuPont and the Passaic River Coalition and subsequently withdrawn by EPA states that in March 2004, NJDEP required DuPont to delineate the ABD sediment mercury contamination to 2 ppm. The 2 ppm mercury concentration level is not a remediation goal and not a promulgated standard. The information contained in the delineation was used to facilitate development of RAOs that are protective of ecological receptors.

15. How will EPA know the clean-up levels are being met during dredging?

ANSWER: The Upland Soil Area includes two distinct areas: 1) areas located outside the established wetlands and wetlands transition zone and 2) land areas within the established wetlands and wetlands transition zone.

Areas located outside the wetlands/wetlands transition zone will be excavated based on the New Jersey Department of Environmental Protection's Residential Direct Contact Soil Remediation Standards and impacted soil will be disposed of off-site.

For the Upland Soil Areas located within the wetlands/wetlands transition zone, the November 2012 draft permit modification required DuPont to design and implement a Remediation and

Restoration Plan, subject to EPA approval, that would adequately address the ecological exposure pathway to site contaminants or develop updated ecological soil delineation criteria on which the excavation limits will be based. Utilizing data collected subsequent to DuPont's permit appeal and taking into account concerns expressed by the United States Fish & Wildlife Service, the November 2014 draft permit modification required excavation to a depth of three feet below the final restoration elevation (as will be defined in the updated CMI WP or one foot below the assumed water table elevation of 200.5 feet (i.e., 1 foot below full pool lake level), whichever is encountered first. EPA believes this excavation coupled with restoration work will address contamination in both the wetlands and the wetlands transition zone, and be protective of human health and the environment.

Overall, the horizontal and vertical extent of sediment removal was defined by the multiple lines of evidence approach described in the response to Question 11, above. Sediment removal in the ABD target mercury impacted sediments down to the peat layer and removal in Area A and the Island Area targets mercury impacted sediments down to native cobble or the gravel area.

Confirmation of dredging completion will be conducted using both traditional and dredge mounted survey techniques. For the ABD Uplands Soil Areas, removal completion confirmation surveying will be used to verify that the horizontal and vertical limits of removal have been achieved.

16. Will there be a formal public meeting to cover traffic safety and other concerns about contaminant exposure?

ANSWER: The draft Corrective Measures Implementation Work Plan (CMI WP) is currently under review by EPA and NJDEP. The CMI WP describes the scope of the work, methods for performing the work and plans to address the health and safety of workers as well as those in the surrounding community, which includes the Lakeside Middle School.

EPA has met with various stakeholder groups, including local officials and community advisory groups in an effort to understand concerns regarding the dredging of Pompton Lake. Although no formal public meeting is required at this time, EPA will conduct a public availability session on December 10, 2015. The purpose of the public availability session is to update the community regarding the status of EPA/NJDEP's review of the draft CMI WP. EPA/NJDEP will subsequently provide its comments on the draft CMI WP to Chemours (formerly known as DuPont), which consider include input from community.

EPA also expects to perform community outreach once its review of the CMI WP is complete and prior to its finalization.

The draft CMI WP is available at EPA's website at:

http://www3.epa.gov/region02/waste/duPont_pompton/additionaldocs.html

17. What is the truck route?

ANSWER: A draft traffic control plan, including the route for trucks removing excavated/dredged material is being reviewed by EPA/NJDEP.

The proposed traffic route under review by EPA/NJDEP for trucks traveling to or from the Pompton Lakes Works site (which is where trucks will be staged) during sheet pile installation is as follows:

- South along Cannonball Road;
- West along Wanaque Avenue;
- South along Ringwood Avenue;
- East along Paterson-Hamburg Turnpike to Terhune Drive (US 202);
- North on Terhune Drive (US 202) to Lakeside Avenue;
- West on Lakeside Ave. over the bridge, and
- West on Lakeview Ave. to the site entrance.

The proposed route designated for delivery of materials, equipment and clean fill to the construction site and the removal of remediated material from the site is as follows:

- East on Lakeside Ave. to the stop at the bridge;
- East on Lakeside Ave. over the bridge to Terhune Ave. (US 202);
- South on Terhune Ave. (US 202) to Paterson-Hamburg Turnpike;
- North on Paterson-Hamburg Turnpike; and
- West on Paterson-Hamburg Turnpike to I-287 Interchange 53.

18. Who is responsible for any road damage repair that occurs during the dredging project?

ANSWER: Chemours would be responsible for any road damage that resulted from the environmental clean-up activities associated with the Pompton Lake Study Area.

19. How many and what are the locations of the air monitoring stations?

ANSWER: Air monitoring is proposed to be performed during soil excavation (Uplands Soil Areas) and sediment handling and processing on shore at locations around the material handling/processing area. Four fixed locations (depicted in Figure 2-2 of the Draft CMI WP) are proposed comprised of one location on the property of the Lakeside Middle School and three locations in the Uplands Soil Areas (i.e. Rotary Park area). The number of samples, locations and sampling parameters are being reviewed by EPA and NJDEP.

20. Will toxic deodorizers be released into the air?

ANSWER: Deodorizers were not specifically proposed to be utilized for odor control. Any product(s) proposed to be used for odor control in the revised CMI WP will have their associated Material Safety Data Sheet(s) submitted for review and approval for use.

21. Concern: members of the community should be participating in meetings with EPA/NJDEP/Chemours

ANSWER: Regulatory agency meetings with private parties are a routine component of advancing the process of performing environmental investigations/remediation under the Resource Conservation and Recovery Act (RCRA). There has been an extensive community involvement program undertaken by EPA/NJDEP at this site that ensures information concerning the status of the environmental clean-up is communicated, community concerns are heard and community input is taken into consideration. Please note that this question was responded to in the Responsiveness Summary that addressed written and oral comments provided to EPA during public comment period associated with the Permit Modification related to the Pompton Lake Study Area.

For the Pompton Lakes Works site, EPA community outreach efforts involve interface with residents as well as three different organized community groups. In addition, elected officials including the Mayor and Council of Pompton Lakes have met with EPA and are engaged in site remediation activities. There are also many residents in Pompton Lakes who have expressed interest in the environmental clean-up activities associated with the Pompton Lakes Works, including the proposed dredging remedy. While each of these different groups and individuals have a shared interest in an environmental clean-up of the Pompton Lakes Study Area that is protective of human health and the environment and is completed as soon as possible, they also have very different concerns and questions about how the environmental clean-up is to be accomplished.

In its efforts to provide opportunities for input into the remedy selection process as well as keep the community informed about the status of the environmental clean-up at the Pompton Lakes Works, EPA has employed a multi-faceted community outreach approach. EPA's approach has included:

Public Availability Sessions

EPA conducted a public availability and information session specific to the draft permit modification for the Pompton Lakes Study Area on November 12, 2014 to review the proposed remedy and answer questions from attendees.

EPA also conducted public availability and information sessions prior to November 2014 as part of its community outreach. These other public availability sessions including status updates on various aspects of the environmental clean-up, both on-site and off-site. Public availability sessions held on June 13, 2013; November 14, 2013 and March 19, 2014, typically included a status update on the progress of determining a remedy for contaminated sediment in the Acid Brook Delta/Pompton Lake and on the preparation of the permit modification necessary to propose and implement a selected remedy. Generally, these meetings were attended by 20 – 40 interested residents and other stakeholders.

EPA will hold additional public availability and information session(s) prior to the implementation of the remedial action contained in the final permit modification. The purpose

of the session(s) will be to provide information and receive input regarding areas of community concern including, but not limited to: truck traffic, noise, odor control, air monitoring, general worker and community health and safety and considerations arising from the dredging operations being in proximity to the Lakeside Middle School.

Weekly Public Availability by EPA

In response to residents' concerns regarding wider community outreach, EPA established a weekly presence in Pompton Lakes as of November 2013. EPA's Remedial Project Manager and Community Involvement Coordinator are available at the Pompton Lakes Municipal Building on Thursdays between 10AM and 4PM to answer questions and respond to residents' concerns about any aspect of the environmental clean-up. Beyond the weekly presence, EPA also communicated its availability by appointment outside of the stated hours on Thursdays (i.e. including days other than Thursdays).

Publication of EPA Newsletter

EPA prepares and issues a periodic newsletter (the "DuPont/Pompton Lakes Works Site Clean-up Newsletter") to keep residents informed of environmental clean-up activities at the DuPont PLW. The newsletter includes information about the permit modification related to remediation of contaminated sediment in the Acid Brook Delta/Pompton Lake. Newsletters were issued in October 2012, April 2013, August 2013, February 2014, September 2014 and June 2015 and will continue to be periodically prepared and released.

Attendance at Stakeholder Meetings

Another aspect of EPA's community engagement process has been to meet with a variety of stakeholders to present status updates and answer questions about the environmental clean-up activities, including remediation of contaminated sediment in the Acid Brook Delta/Pompton Lake. Local and other stakeholders with whom EPA has met include: the Borough of Pompton Lakes Mayor and Council, the Pompton Lakes Board of Education's Environmental Committee, the Pompton Lakes Community Advisory Group ("PLCAG") also known as the Concerned Citizens for Pompton Lakes ("CCPL"), the Pompton Lakes Residents for Environmental Integrity ("PLREI") in conjunction with an environmental class of students at William Paterson College, the original Pompton Lakes Community Advisory Group, Rotary Club, the League of Women Voters and the Passaic County Board of Realtors.

EPA will continue its community outreach and be available to meet with local stakeholder groups and other interested parties at their request prior to, and during the implementation of the final remedy documented in the permit modification for the Pompton Lakes Study Area. With regard to concerns about the proximity of the remedial work to Lakeside Middle School, EPA has put additional emphasis on interface with and support to the Pompton Lakes Board of Education in its efforts to provide information and respond to concerns/questions from parents/teachers of Lakeside Avenue School. EPA prepared a Fact Sheet that was disseminated by the School District regarding the status of the plans to implement the dredging/removal

remedy and met with parents, teachers and staff of the Lakeside Middle School in November 2015.

Other Methods of Community Outreach

EPA has used a number of other methods to provide community outreach. Notification of significant milestones for the project (e.g. issuance of a permit modification) as well as project status updates have been through newsletters, electronic mail to a list of recipients maintained by EPA, posted on EPA's website, posted on the Borough of Pompton Lakes website and/or hand delivering flyers to local businesses. EPA intends to continue to use these communication tools as part of its overall community outreach during the implementation of the remedy documented in the final permit modification. In addition, EPA will have an on-site presence during the implementation of the remedy to provide field oversight and to be available to answer questions/concerns from residents/local stakeholders.

EPA believes these methods of communication as part of the overall community outreach constitute a comprehensive community notification program. As such, EPA does not believe the resource intensive method suggested of mailing approximately 12,000 notifications via the United States Postal Service is justified. The elements of EPA's community outreach approach previously described provides sufficient opportunity for local stakeholder groups as well as residents to provide input about the environmental clean-up activities.

Public Comment Period/Public Hearing

In conjunction with issuing draft permit modifications regarding the dredging of Pompton Lake (originally in November 2011 and then again in November 2014), EPA conducted public information sessions to review the proposed remedy and answer questions from attendees. EPA established a public comment period, which allowed interested parties, including community groups, local officials and residents, the opportunity to provide input into the EPA proposed remedy. EPA also held formal public hearings that included preparation of a written transcript documenting community concerns/comments. EPA prepared a Responsiveness Summary, which formally responds to those community comments expressed during the public availability session/public hearing on the proposed permit modification and submitted in writing during the public comment period.

EPA gave the public notice on November 2, 2014 that it planned to issue its draft permit modification. The public comment period, originally established from November 3, 2014 to December 18, 2014 was extended to February 2, 2015 at the request of two interested parties in order to provide additional time to review documents/submit comments to EPA.

Regarding the draft permit modification issued November 2014, a public information session was held on November 12, 2014 at which EPA made a presentation and provided information on the proposed dredging remedy, and public participants asked questions, stated their concerns and offered their views on the matter. EPA held a public hearing on December 8, 2014 regarding the dredging proposed in the draft permit modification. Approximately 22 individuals provided comments at the public hearing. During the public comment period (between November 3, 2014

and February 2, 2015), written comments were received from approximately 74 individuals, the Borough of Pompton Lakes, two community groups, the Passaic River Coalition, DuPont and the United States Fish & Wildlife Service.

After a review of all comments received by EPA, including those made at the public hearing, EPA issued its final permit modification to impose corrective action for the Pompton Lakes Study Area. Changes made from the draft permit modification were identified in the Responsiveness Summary.

22. What other forums can be used to make sure all residents in the community are notified of environmental clean-up activities related to Chemours?

ANSWER: EPA's response to Question #18 summarizes our approach to make sure all residents in the community are notified of environmental clean-up activities related to Chemours. At the PLCAG meeting on October 19th, EPA expressed its willingness to meet with community advisory group representatives to discuss other forums that could be used to help ensure all residents in the community are notified of environmental clean-up activities related to Chemours.

23. What community outreach can be done to ensure senior citizens are engaged regarding the environmental clean-up activities related to Chemours?

ANSWER: EPA will make arrangements to try to meet with one or both of the Senior Citizen clubs within the Borough or another venue where those senior citizen residents of the Borough might be willing to meet.

24. Can the Board of Education provide notices to the parents of school children as part of the community engagement process?

ANSWER: The decision on whether the School District should provide notices to parents of school children as part of the community engagement process is their decision to make.

EPA did prepare/provide a Fact Sheet as part of the School District's notification of an initial meeting they held on November 30th to inform parents and answer questions about the upcoming dredging project for the Pompton Lakes Study Area. EPA is prepared to continue to support the School District in their efforts to keep the school community informed about the status of the dredging project.

25. Can the sign board at the Pompton Lakes Library be used to notify residents of upcoming environmental clean-up meetings/events?

ANSWER: The sign board at the Pompton Lakes Library has been utilized to notify residents for the December 10th Public Availability session. EPA will continue request its use for future notifications for Public Availability sessions.

26. Can the reverse 911 feature be made available to use for notification of meetings related to the environmental clean-up?

ANSWER: Local officials have been reluctant in the past to utilize the reverse 911 feature for notification of meetings related to the environmental clean-up as the reverse 911 feature was not intended for this purpose. However, EPA will make another inquiry about its potential utility for meeting notification purposes.

27. Comment: Chemours should pay for outreach to the town versus any expense being on the community and the taxpayers of Pompton Lakes.

ANSWER: The Borough of Pompton Lakes is not responsible for any expenses related to community outreach activities associated with the environmental clean-up of the Pompton Lakes Study Area.

28. How much soil is being removed from the former manufacturing site?

ANSWER: Chemours is calculating on-site waste volumes to be removed as part of their revision to the draft Corrective Measures Study. The volume of soil to be removed will be provided in the revised Corrective Measures Study.

29. Can the dollar figure for financial assurance secured by NJDEP be provided?

ANSWER: \$33.3 million dollars in financial assurance has been established with NJDEP via a letter of credit to cover estimated costs associated with the environmental clean-up work under NJDEP lead (e.g. on-site clean-up).

30. Will Pompton Lake/Upland Soil Areas be put at risk to become re-contaminated if the source, DuPont site/groundwater contamination are not addressed?

ANSWER: Acid Brook was the key migration pathway for contaminants (mainly lead and mercury) from the former manufacturing operation to impact sediment in the Pompton Lake Study Area. Acid Brook was remediated in the 1990's and no longer represents a complete migration pathway to the Pompton Lake Study Area. On-site impacted groundwater is hydraulically controlled and subject to an extraction and treatment system such that there is no migration of contaminated on-site groundwater off-site. The contaminants of concern in groundwater (volatile organic compounds) are not impacting sediment in the Pompton Lake Study Area.

31. Is EPA taking all the recommendations made by the United States Fish and Wildlife (USFWS) Service from 2012 and 2014 into the final CMI WP?

ANSWER: Please note that this question was responded to in the Responsiveness Summary that addressed written and oral comments provided to EPA during public comment period associated with the Permit Modification related to the Pompton Lake Study Area.

EPA and the USFWS have coordinated during the development of the permit modification in an effort to address USFWS concerns. In February 2012, USFWS provided EPA with its review of the then proposed dredging/removal project pursuant to the Endangered Species Act of 1973. A known occurrence or potential habitat for two threatened or endangered species (Small whorled pogonia {threatened} and the Indiana bat {endangered}) were identified as being located on or near the project's impact area. However, the USFWS concurred that the proposed project is not likely to adversely affect federally listed or candidate species. USFWS determined that no habitat for the Small whorled pogonia exists in the footprint of the project area or in the surrounding areas. Regarding the Indiana bat, there will be a seasonal restriction on the clearing of trees greater than 5" diameter at breast height to avoid incidental taking of any bats that may roost in the project area. EPA will coordinate with USFWS regarding any update to their 2012 review pursuant to the Endangered Species Act of 1973 based on the change in the footprint in the area subject to remediation.

EPA and the USFWS met several times to discuss the permit modification and exchange data/reports in an effort to facilitate the USFWS' understanding of the Pompton Lake Study Area and support each agency's efforts under corrective action (EPA) and natural resource damage assessment (USFWS). The USFWS completed its review of the proposed permit modification and provided comments to EPA in its correspondence dated November 10, 2014. EPA is committed to continuing its coordination with the USFWS during the development of the plans (e.g. Long-term Monitoring Plan and the Remediation and Restoration Plan) as well as the field implementation of the corrective action contained in the permit modification.

EPA believes the most pertinent USFWS comments to address are those in their November 10, 2014 correspondence as they specifically relate to the corrective action proposed by EPA in its permit modification. Rather than prepare a separate response letter for the USFWS comment letters, EPA has summarized the major points contained in the USFWS November 10, 2014 comment letter below and addressed them in this response and/or cross-referenced to where a specific USFWS point was addressed in the Responsiveness Summary.

Acid Brook Delta (ABD)

The USFWS is supportive of EPA's plan to increase the removal area within the ABD to approximately 36 acres from the originally proposed 26 acres and to address removal of sediment from approximately 3 acres with higher rates of mercury methylation outside the ABD (i.e. Area A and the Island Area). However, the USFWS believes long-term post – construction monitoring is critical given that there will be mercury-impacted sediment that will remain outside the removal areas. To that end, the USFWS recommends development of a detailed work plan for post-construction monitoring that incorporates performance measures and potential thresholds for corrective action.

EPA shares the USFWS concern about the criticality of the long-term post-construction monitoring (i.e. long-term monitoring). The USFWS acknowledges EPA's requirement for post-construction monitoring and that the permit modification provides a general description of the types of sampling that will be included. EPA's permit modification requires submittal of a

Long-term Monitoring Work Plan (LTMP WP) by Chemours within 45 days of the approval of the CMI WP, or by such other date as is approved by EPA. The LTMP WP will be designed to measure key indicators of the overall condition of the Pompton Lake Study Area over an initial five year monitoring period. The LTMP will be used to evaluate the Pompton Lake Study Area ecosystem as a result of the removal of mercury sediments with the greatest potential for methylation. The results of the five year monitoring period will be utilized to determine the scope of further remedial action (if required) and/or any changes to the monitoring. EPA will coordinate with the USFWS regarding DuPont's development of the LTMP WP to address the USFWS concern about the level of specificity presented in the LTMP WP. Coordination with USFWS includes invitation of its representatives to meetings as well as soliciting its comments on the LTM WP that will be prepared by DuPont.

The USFWS recommended incorporating spider sampling in the vicinity of the ABD into the LTMP WP. EPA intends to further evaluate this recommendation in consultation with the USFWS as part of the development of the LTMP.

The USFWS service also recommended a minimum of a 12-inch cap be placed over the entire removal area of the ABD. Surface sediments in the ABD project area are underlain by a layer of peat. The occurrence of this peat layer ranges from several inches to several feet below the present lake bottom. This peat layer corresponds to turf that was flooded in 1908 upon the construction and operation of the Pompton Lake Dam which resulted in an impoundment of Ramapo River (referred to as Pompton Lake). Water flowing down the Acid Brook transported mercury-contaminated sediments to the impoundment and deposited them across the ABD. (DuPont started operations in the Eastern Manufacturing Area in 1928.)

Sediment cores collected from throughout the ABD were vertically sectioned and analyzed to delineate the vertical and horizontal distribution of mercury in the area. Analysis of the vertical sections of core established that mercury contamination is largely limited to sediments that are above the peat layer and that in most areas the highest concentrations are located below the sediment surface.

Capping of sediments is not being required in the permit modification for remediation of mercury-contaminated sediments within the expanded area of the ABD (and in selected areas outside the ABD). The permit modification requires that all areas be remediated by dredging to below the level of contamination-- the dredging depth will generally be to the peat layer. However, there will be selected areas of dredging below the peat layer where previous investigation has detected elevated levels of mercury that could become available to ecological receptors. Following dredging, a layer of clean sand is to be placed over the dredged areas. The purpose of this layer of clean sand is not to serve as a barrier to cover contaminated-sediment in-place (which would require regular maintenance), but to encourage the re-establishment of the ABD bottom's ecological community. Nevertheless, the clean cover will provide an additional measure of protection by isolating much of any residual mercury that may be left behind following dredging. EPA anticipates that this layer should remain in place as data from the vertical sections of cores indicates that the ABD appears to be a stable sedimentary environment where bottom sediments are not readily redistributed even during major flow and flooding

events. This expectation is further supported by EPA's comparison of 2007, 2011 and 2013 depth data which showed little effect of the 2010 flooding events on bottom depths across the Pompton Lake Study Area. Post-construction monitoring through the LTMP will help confirm that the ABD is a stable sedimentary environment where bottom sediments are not readily redistributed such that concentrations of mercury appear in surface water and/or biota that result in increased exposure to ecological receptors.

Upland Remediation (i.e. Upland Soil Areas)

EPA shares the belief of the USFWS that "...expeditious removal of mercury-laden soil and sediment in the ABD and surrounding wetland, wetland transition, and upland habitats is of paramount importance to returning Pompton Lake to a functionally intact ecosystem." The USFWS does express concern about the use of a 20.5 mg/kg remedial action objective for mercury in the Upland Soil Areas. The USFWS commented that protectiveness of the removal should be enhanced to block potential transport pathways to ecological receptors by providing a minimum of two feet of clean protective material (sand cap or "eco-layer") be placed on top of the entire Upland Soil Areas.

EPA evaluated the concerns raised by USFWS during the 2012 permit modification process and the 2014 permit modification. The 20.5 mg/kg RAO for mercury is not going to be applied in the wetland/wetland transition zone of the Upland Soil Areas because EPA has determined that the corrective measures for the Upland Soil Areas in the permit modification will effectively accomplish the objective of blocking potential pathways to ecological receptors.

EPA's RAO is to eliminate or minimize the potential exposure to ecological receptors within the wetland and wetland transition zone to surface and subsurface soils in these areas by limiting the potential for mercury methylation, bioaccumulation, and translocation. To accomplish this RAO, areas landward of the ABD removal area within the wetland and wetland transition zone will be excavated to a depth of three feet below the final restoration elevation (as will be defined in the updated CMI WP or one foot below the assumed water table elevation of 200.5 feet (i.e., 1 foot below full pool lake level), whichever is encountered first. The resulting excavation will be backfilled with certified clean fill material (base material and a planting medium) to establish a supportive medium of clean fill material at optimal surface elevations to provide a primary rooting zone for restoration plantings. EPA expects to consult and coordinate with the USFWS to address its concern about the type of plantings for restoration (i.e. plantings whose root depth should have a high potential to not go below the depth of backfill placed).

The inclusion of additional excavation in the wetland/wetland transition zone adds an additional measure to support ecological protectiveness of the aforementioned approach as it relates to restoration planting rooting depths and the potential for translocation of mercury remaining at depth following removal activities. By providing a clean layer to facilitate the growth of restoration planting, it will minimize or eliminate the potential for ecological receptor exposure by limiting the potential for mercury methylation, bioaccumulation and/or translocation.

Pompton Lake Remediation

In its comments, the USFWS supports EPA's approach of moving forward with an environmental clean-up of the Pompton Lake Study Area that removes the vast majority of contaminant load in the system. However, the USFWS is concerned about the concentrations of mercury in sediment within the Pompton Lake Study Area that remain after completion of the remedial action. Due to that concern, the USFWS emphasized the critical nature of the long-term monitoring program in documenting that mercury contamination does not make its way into the food web and/or migrate downstream.

EPA understands the USFWS concern regarding concentrations of mercury in sediment within the Pompton Lakes Study Area that will remain after completion of the remedial action. To that end, EPA's permit modification requires development and implementation of a LTMP WP designed to establish baseline conditions and conduct long-term monitoring of the Pompton Lakes Study Area. The LTMP WP will be designed to measure key indicators of the overall condition of the Pompton Lakes Study Area over a five year monitoring period. The LTMP will be used to evaluate the ecosystem as a result of the removal of mercury sediments with the greatest potential for methylation. The results of the initial five year monitoring period will be utilized to determine the scope of further remedial action (if required) and/or any changes to the monitoring.

Existing data and any new data collected in order to address identified data gaps will be utilized to (1) develop baseline conditions of mercury in surface water so that significant increases or decreases in mercury exposure can be identified and, (2) develop baseline conditions of mercury bioaccumulation in fish tissue so that significant increases or decreases in mercury exposure to fish or piscivorous wildlife can be identified.

The field sampling plan that will be a component of the LTMP will contain the following monitoring elements: surface water, sediment, and sediment pore water, young of year fish tissue, adult fish tissue, larval insect tissue, and emergent insect tissue. The conceptual framework and details for the study design/sampling approach, types of chemical analyses and biological samples, and frequency and location of samples will be provided in the LTMP WP. As such, specific recommendations provided by the USFWS (e.g. sampling of spiders, measuring mercury in suspended solids in surface water) will be further assessed during the LTMP WP development to determine whether these monitoring elements will be part of the final LTMP. The development of field sampling plan will be by Chemours with input and review by EPA, NJDEP, and the USFWS. EPA will provide final approval.

Once finalized, the field sampling program will provide sufficient detail and will endeavor to address the USFWS concern of being able to document that mercury contamination does not make its way into the food web and/or migrate downstream. As monitoring data from the LTMP becomes available, EPA will work collaboratively with the USFWS as well as NJDEP and Chemours in the evaluation of performance measures to assess the effectiveness of the removal of mercury contaminated sediment in reducing bioaccumulation of mercury, in reducing downstream transport, and in assessing the potential need for further corrective action.

Contamination Downstream of Pompton Lake Dam

The USFWS expressed concern about evaluating potential transport of mercury from Pompton Lake to areas downstream of the Pompton Dam and the desire to provide input on downstream evaluations and the potential need for corrective action.

Chemours performed a riverbed substrate mapping survey and sediment characterization sampling based on its Ramapo River/Pompton River Substrate Characterization Memorandum, DuPont Pompton Lakes Works dated February 2014, which was approved by EPA and NJDEP in July, 2014. The scope of work in the technical memorandum pertains to the Ramapo River and Pompton River from the Pompton Lake Dam approximately three miles downstream to Riverside Park in Wayne, New Jersey. The objective of the work is to determine how far downstream mercury might have migrated. The results of this work will be analyzed and reported to EPA and NJDEP. Remedial work, if any, in this area will be addressed in a separate permit modification.