CHEMOURS

CORRECTIVE MEASURES IMPLEMENTATION WORK PLAN

EPA COMMENTS

CORRECTIVE MEASURES IMPLEMENTATION WORK PLAN (CMI WP)

Section 1.0 – Introduction

1. Page 1, Paragraph 2 – Reference the two technical memoranda dated October 2014 that were utilized in the preparation of the permit modification. Those documents are: 1*) Technical Support for the Additional Sediment Removal Areas, Pompton Lake Corrective Action Implementation, Pompton Lakes, New Jersey Technical Memorandum (URS, October 2014a* and 2) *Technical Support for Acid Brook Delta Upland Soil Areas Corrective Implementation, Pompton Lakes, New Jersey Technical Memorandum (URS October 2014b).*

2. Page 5, "Installation of a Containment System" – In sentence 1, indicate the investigation(s) were geotechnical. Clarify in sentence 2 that Section 2.5.1 indicates the types of investigation(s) performed as well as a summary of the results.
   In sentence 4, reference that the three-tiered approach is described in Section 2.5.1.

3. Page 6, "Processing and Treatment" -- Reference the section that more fully describes the solidification that is anticipated to be performed.

4. Page 6, "Restoration" – Clarify what is meant by "ecological services" in the second to the last sentence.

5. Page 6, "Material Disposal" – Add language to clarify that the off-site facility is licensed and permitted to accept the material subject to disposal.

6. Page 7, top – Reference Appendix A as well as Section 2.7.

Section 1.4 -- Public Involvement Plan

7. Page 7, Paragraph 3 -- Add the address of the Chemours Public Information Office.

Section 1.5 – Document Organization

8. Page 8 – Add reference to presence of Appendices, Figures, and Tables.

Section 2.2 -- Pre-Construction Activities

9. Page 11, last paragraph – Reference that the inventory to document the number, types, and locations of facilities (e.g. structures, pavement, benches) and other physical features (e.g. trees, fences) in the areas noted in this subsection will be listed as a task on the revised schedule as part of "Pre-construction Activities".

Section 2.3 -- Preparation and Access

10. Page 11, "Security and Traffic Control" - Indicate whether there will be a security guard on-site and what their hours of service will be (e.g. 24 hours, just during working hours, etc.).

11. Page 11, "Security and Traffic Control" -- Text should be developed and/or referenced that addresses security of the work area, security as it relates to proximity of work to Lakeside Middle School, evacuation procedures, etc. Specifically regarding the Lakeside Middle School, Chemours should indicate that there will be interface with school officials pre-construction and also describe in the text what the elements of the interface with the school are in the event of an emergency.

12. Page 12, "Management of Existing Utilities" – Indicate in the revised schedule as part of "Pre-construction Activities", the Remedial Action Contractor will determine the location of utilities and coordinate with the owners of the utilities regarding relocation/termination of utilities. Also, indicate that other activities (e.g. One-call) involving utilities are required to be performed as part of mobilization.

13. Page 12, "Erosion and Stormwater Control Measures" – Incorporate into the revised schedule under "Pre-Construction Activities" and briefly describe in the text that the storm sewer outfalls in the Upland Soil Removal Areas have to be managed and coordinated with the Municipal Utilities Authority.

14. Page 13, "Access for Mobilization of Equipment", Paragraph 2 – Verify that the two locations identified as access points for mobilization/demobilization are owned by the Borough of Pompton Lakes and the Board of Education and if so, indicate that access has been secured.

15. Page 13, "Establishing Appropriate Material and Equipment Staging Areas" – Reference Drawings 2, 3 and 8 of Appendix A as to where the design/configuration for the upland material and equipment staging area can be found.

Section 2.4.1 – Acid Brook Flow, Sewers, Outfalls and Groundwater Management

16. Page 14, Paragraph 1 - Reference is made to Acid Brook in Figure 2-1. The location of Acid Brook is unclear. Please revise the text to more clearly identify Acid Brook.

17. Page 14, Paragraph 2 – Indicate that Area A1's area of excavation has been delineated and that it is approximately 1 cubic yard. Verify if additional delineation sampling will be performed.

18. Page 14, Paragraph 2 – The coordination with the Pompton Lakes Municipal Utilities Authority described in the text should be included as a task in the "Pre-construction

Activities" portion of the revised schedule. Indicate that this coordination has been initiated.

19. Page 14, Paragraph 2 – The text should be revised to reflect that the additional sampling and analysis to be performed to refine the extent of the removal area near the two sanitary sewers has completed, that appropriate figures will be updated that the analytical results will be provided as an appendix to the to the revised CMI WP.

Section 2.4.2 – Uplands Work Area Isolation and Erosion Control Measures

20. Page 15, Paragraph 1 – Reference that the erosion control measures to be implemented in the Uplands work area as well as the rainfall diversion and surface water runoff measure will be pursuant to the requirements in the approved Soil Erosion and Sediment Control Plan (SESC).

21. Page 15, Paragraph 3 – Indicate that the erosion and sediment control practices that will be performed throughout construction activities will be done in accordance with the "approved" SESC.

22. Page 15, Paragraph 3 – Indicate the frequency of inspection of the erosion and sediment control measures will be pursuant to the approved SESC.

Section 2.4.4 – Uplands Soil Removal Process

23. Page 16, Paragraph 1 – The text states, "Removal (of sheet pile) will occur from land and then the areas will be backfilled. Following backfill placement, the sheeting will be removed." This does not make sense. Please provide clarification regarding the sequence of sheet pile removal and backfilling.

24. Page 17, Paragraph 1 – The schedule should indicate when the horizontal limits of removal can be surveyed and staked in the field.

25. Page 17, Paragraph 3 – Indicate that the soil materials that will be removed will be characterized to comply with disposal facility requirements prior to off-site disposal.

26. Page 17, Paragraph 4 – What TCLP parameters were exceeded in Area B?

27. Page 17, Paragraph 4 – Cross reference Table 3-1, Item E in the Construction Quality Assurance Plan regarding the parameters that will be analyzed for post-treatment/pre-excavation to confirm the appropriate standards will have been achieved prior to removal.

28. Page 18, Paragraphs 1-3 - The discussion of the backfilling procedures in the Uplands is confusing. The CMI WP indicates that after removal operations and backfilling, a geotextile liner will be placed on top of the backfill. The ecological layer will be spread on top of that, and then another geo-textile liner will be laid down to form a barrier between the work surface and the ecological layer. The CMI WP goes on to say, "Following dredging and demobilization of the solidification equipment, the additional

fill material under the liner will then be reused for the ecological-layer. Finally, the Uplands will be restored by establishing design elevations and installing the final surface layer or restoration features..." The interpretation of this description is that the second (upper) liner will be removed after dredging and demobilization and the ecological layer laid underneath will remain in place, upon which additional backfill material (presumably soil) will be placed until the design elevations are reached. Clarify if this interpretation is not correct.

29. Page 18, Paragraph 3 – Provide a brief description of the geo-textile liner and the impermeable liner proposed for installation by providing a reference to a cut sheet that will be provided in Appendix A – Project Operations Plan.

Section 2.5.1 – In-water Work Area Isolation

30. Page 19, Paragraph 1 – Provide the geotechnical data collected in the spring 2010 and summer 2015 that supports the conclusion that a sheet pile wall would not be feasible along much of the eastern boundary of the removal area in the ABD. Are there any discreet areas where sheet piling can be utilized to surround work areas during implementation of the corrective measures? In areas where sheet pile cannot be used, can a triple curtain be used, or please provide supporting documentation that a single turbidity curtain is sufficient.

31. Page 19, Paragraph 2 – The description of the 3-tier containment system should include distances between the baffle and permeable curtains.

32. Page 19, Paragraph 2 -- EPA consulted with personnel at the Environmental Laboratory of the United States Army Corps of Engineers' Engineer Research and Development Center in Vicksburg, Mississippi. Based on that consultation, EPA requires further support for the conclusion that the permeability curtains will be effective. The gap between the sediment baffle and permeable curtains is not a continuous barrier and there is a potential for transport of colloid associated mercury through the permeable silt curtain. Describe how this will be addressed.

33. Page 19, Paragraph 2 – Is there sufficient flow velocity between the permeable curtain and the baffle curtain to result in scouring of fine sediments deposited there?

34. Page 20, Paragraph 3 – Describe the plan for curtain removal and how resuspension and loss of sediment trapped between the permeable curtain and baffle curtain will be prevented.

35. Page 20, Paragraph 4 - Define the term "prop-wash".

36. Page 20, Paragraph 4 – Provide the plan/protocol and/or permit for the collection and relocation of fish and other large aquatic species from the containment area.

37. Page 21, top – Reference that the erosion and sediment control work will be performed in accordance with the "approved" SESC.

38. Page 21, top – Indicate the frequency of erosion and sediment control device inspection will be in accordance with the "approved" SESC.

Section 2.5.2 – Debris Removal

39. Page 21, Paragraph 2 – Incorporate language from the Project Operations Plan (Appendix A), page 19 that submerged aquatic vegetation (SAV) removed from the area to be dredged will be loaded onto trucks for off-site disposal.

40. Page 21, Paragraph 2 – The CMI WP should provide additional details regarding how the removal of trees and shrubs (including stumps and roots) will be accomplished at the site, and what impact vegetation removal and the presence of any stumps or roots may have on dredging operations and residuals. The National Research Council recommends that the following best management practices (when appropriate) will act to minimize residuals:

- Reducing the impact speed of the dredge bucket with the bottom, the rate of ascent of a filled bucket, and the swing rate of cutter-head dredge;
- Avoiding overfilling buckets through accurate and controlled bucket placement while also maximizing the bite of the bucket to avoid thin lifts;
- Allowing time for draining of a sediment-filled bucket before breaking the water's surface;
- Once the water's surface is broken, holding the buckets just above the water's surface to allow water to drain before swinging the bucket to the barges/scows;
- Protecting the overwater swing path of a filled bucket (e.g., by placing an empty barge/scow or apron to catch lost material);
- Preventing water entrained with the dredged sediment from being released back to the water (i.e., controlling sediment runoff from barges/scows and handling areas by filtering water through hay bales or fabric, or using baffles to contain sediment);
- Over-dredging into clean material, and where removal is designed to extend to native peat, inspecting bucket materials to ensure that all fine-grained sediment has been removed before moving on to the next area;
- Incorporating a two-pass dredge approach to remove soft find-grained sediment that sloughs along the dredge cut face back on to previously dredged areas;
- Performing frequent inspection of the bedded baffle, silt curtain, and anchors to ensure the baffle is in contact with the lake bed;
- Creating incentives for contractors to reduce resuspension and residuals;

- Allowing sediment particles to settle a minimum of 6-12 hours prior to placement of the ecological layer, and

- Providing sufficient time for ecological layer to settle prior to removal of the turbidity curtain.

Section 2.5.3 – Limit and Depth of Sediment Removal

41. Page 21, Paragraph 1 – Please clarify where those areas are that require removal of peat based on historical data gathered by updating Figure 2-3 to show those areas where peat will be removed and referencing Figure 2-3 in the text.

42. Page 22, Paragraph 1, bullet 1 – The sentence comprising this bullet is incomplete. Please clarify.

43. Page 23, Paragraph 1 – The shoreline reconnaissance originally performed in the fall of 2010 to locate and identify structures along the shoreline that may influence the removal of sediment is proposed to be performed in more detail and discussed with the property owner(s) prior to construction. Incorporate this task under "Pre-construction Activities" that will be incorporated into the revised schedule.

Section 2.5.4 – Sediment Removal Process and Sequencing

44. Page 24, Paragraph 3 – Provide a reference in the text that the sampling locations/results for those sediments that exceeded TCLP for lead will be provided in an appendix.

45. Page 24, Paragraph 3 – Provide a brief description of what MAECTITE is and include an MSDS or cut sheet in an appendix.

Section 2.5.5 – Sediment Removal Completion Confirmation

46. Page 25, Paragraph 1 -- The Revised Permit Module indicates that removal in the ABD, Lake Area A, and Island Area will, "…focus on the mercury-impacted sediments including sediments down to the native cobble or gravel", and include, "…select areas of the peat layer which have elevated mercury concentrations". The Revised Permit Module further states that, "Confirmation of sediment dredging/removal completion shall be conducted…to verify that dredging down to the peat layer has been achieved." However, the CMI WP does not include information regarding methods that will be used to confirm that removal of material down to, and in some areas including, the native substrate has been achieved.

47. Page 25, Paragraph 1 -- Why isn't multi-beam bathymetry conducted to survey post excavation depths? In some cases, depths would preclude its use, but typically multi-beam (or single beam) bathymetry would be the standard method to survey.

Section 2.6.1 – Material Transportation and Re-handling

48. Page 26, Paragraph 2 – State that the actively used grounds of the Lakeside Middle School (e.g. athletic fields) will not be utilized for any remedial activities.

49. Page 26, Paragraph 2 – Reference Drawings 2 and 8 in the Project Operations Plan that specifies the configuration and placement of equipment in the staging area.

50. Page 27, Paragraph 1 – Clarify sentence two and indicate transport of processed sediment is off-site.

51. Page 27, Paragraph 2 - Define what is considered "porous debris".

Section 2.6.2 – Soil and Sediment Solidification

52. Page 29, top – The results of the bench-scale sediment solidification testing are presented but no conclusions are made. The revised CMI WP needs to include the methods/results/conclusions of sediment and soil treatability testing. Revise paragraph two to indicate that additional soil treatability testing to confirm the solidification/stabilization methods are completed.

Section 2.6.3 -- Hydraulically Dredged Sediment Particle Separation and Compression

53. Page 29, Paragraph 1 – Include as an appendix the report provided to DuPont/Chemours prepared by Waste Stream Technology that included methods/results of the treatability study to assess particle separation and compression technologies for sediment from the ABD.

Section 2.6.4 – Water Treatment

54. Page 30, Paragraphs 1 and 2 – Cross reference the permit with the requirements for addressing Chemours' defined "contact water".

55. Page 30, Paragraph 2/Page 31, top – Clarify the last sentence beginning on Page 30 that carries over to the top of page 31.

Section 2.6.5 – Material Disposal

56. Page 31, Paragraph 1 – Note in the text that off-site disposal will be at licensed and permitted facilities and cross-reference the Project Operations Plan which contains the proposed facilities to be utilized.

57. Page 31, Paragraph 3 – Cross-reference the Project Operations Plan, which is where decontamination procedures for trucks/equipment are fully described in the CMI WP.

Section 2.7 – Monitoring Program

58. Page 32, Paragraph 1 – Note in the text that all monitoring data will be field logged and included in the Construction Completion Report in addition to any other types of monitoring reporting performed for the duration of construction.

59. Page 32, Paragraph 1 – Indicate that Table 2-4 includes the types, locations as well as the monitoring parameters to be conducted with each remedial activity and also cross-reference Table 3-1 of the CQAP.

60. Page 34, bullet #1 (Water Column Monitoring) - > 50 NTUs over upstream turbidity levels prompts evaluation of a possible cause and water column sampling for TSS and dissolved mercury upstream, adjacent to (if applicable) and downstream. What actions are being taken by the Remedial Action Contractor while the samples are being analyzed? Chemours should execute the following based on exceedance of NTU thresholds: a threshold of greater than 25 NTU above background requires modification of construction procedures and increased frequency of testing. At greater than 50 NTU above background, cessation of work activities or implementation of additional engineering controls is required until monitored levels reach below the threshold level for 24 hours.

61. Page 34, bullet #2 (Water Column Monitoring) – Regarding the discussion of the action level for mercury, the NJDEP Surface Water Quality Standard of 0.77 ug/l (chronic value) should be used since chronic exposures to aquatic life stages can occur if releases are continuous. Explain the rationale for making a correction to the upgradient concentrations.

62. Page 34, bullet #3 (Water Column Monitoring) – Provide the basis for using an action level of 25 mg/L for TSS above background.

63. Page 34, Paragraph 2 (Water Column Monitoring) – The text should indicate that if the results from water monitoring exceed either TSS or dissolved mercury action the NJDEP Surface Water Quality Standard of 0.77 ug/l (chronic value) should be used since chronic exposures to aquatic life stages can occur if releases are continuous Explain the rationale for making a correction to the upgradient concentrations.

64. Page 35, Paragraph 1 (Water Monitoring) - One mid-depth water column turbidity sample in each area (ABD, Island Area, Area A) to evaluate whether the turbidity containment system can be removed does not seem sufficient. Chemours should provide its rationale that one sample is sufficient.

65. Page 35, Paragraph 1 (Water Discharge Monitoring) – What action(s) will be taken in the event that water discharge monitoring shows exceedances of the NJDEP permit?

66. Page 37, Paragraph 1 (Mercury Verification Sampling) – The pre-design investigation data obtained from the flux chamber analysis and modeling performed should be provided in an appendix.

67. Page 37, Paragraph 3 (Mercury Verification Sampling) – The proposed monitoring approach for mercury needs to be enhanced. While Chemours contends that "….mercury in its vapor phase is not expected to be released during sediment processing and handling", the need for enhanced monitoring of mercury is appropriate in light of the

proximity of the work to sensitive populations (i.e. school children) and nearby residents. The mercury monitoring approach should include sampling of mercury for the duration of the soil excavation and sediment handling/processing with provisions for increasing/decreasing the frequency of mercury monitoring factoring in the results of dust monitoring and site conditions.

68. Page 38, Paragraph 2 (Meteorological Monitoring) – Indicate whether a site-specific meteorological station will be established or will a nearby weather station (provide location) will be utilized to obtain meteorological data.

69. Page 39, top (Odor Monitoring) – Please state whether deodorizers are an option that would be employed to control odors. If so, provide information including representative types that might be used and associated MSDSs, if available.

70. Page 39, Paragraph 1 (Noise Control) - What is the basis for the 65dBA sound level as an action level?

71. Page 39, Paragraph 1 (Noise Control) – Include the representative type(s) of noise controls or operational modifications that may be employed to reduce noise levels, if needed.

72. Page 39, Paragraph 2 (Vibration Monitoring) – The pre-construction survey, including securing appropriate access agreements, should be tracked as a pre-construction task in the revised schedule.

73. Page 40, Paragraph 3 - Define "PPV and RMS" and include in the list of acronyms.

74. Page 40, Paragraph 1 – The results of noise and odor monitoring should also be posted on the website for public access.

Section 2.8 - Restoration

75. Page 41, Paragraph 1 (Restoration) – Cross-reference Section 3 (Permits) and indicate which permit applications specifically address restoration of regulated natural resources.

76. Page 41, Paragraph 2 (Restoration) – Indicate when the detailed restoration design be submitted for review.

77. Page 43, Paragraph 1 (2.8.1.1 - Public) – Add language to this paragraph indicating the updated Remediation and Restoration Plan required by the Permit Modification is also provided in Appendix A of the CMI WP. Cross-reference the specific section of the Project Operations Plan that constitutes the Remediation and Restoration Plan.

78. Page 44, Paragraph 1 (2.8.2 – Pompton Lake – Delta Area, Lake Area A, and Island Area) – Indicate that the Cowardin system is a classification system for wetlands and deep water habitats.

79. Page 45, Paragraph 1, (*Preliminary Restoration*) – Provide the rationale for base layer being approximately 2" and the final layer being approximately 4" for a total ecological layer of 6".

80. Page 46, Paragraph 1, (*Preliminary Restoration)* – Page 45 indicates that the base layer will not be placed until suspended sediments in the water associated with the dredging have declined to acceptable levels. What is considered an "acceptable" level of suspended sediments? One way to achieve this is described as isolating active areas of dredging from ecological layer placement via a turbidity curtain. Why would this be necessary if there is no ecological layer placement until dredging is completed?

81. Page 46, Paragraph 2, (*Preliminary Restoration*) – The borrow source will require EPA/NJDEP approval and chemical testing will be required to verify the borrow material is acceptable.

82. Page 47, Paragraph 1 (2.8.3 – Delta Area Wetlands and Wetland Transition Areas: *Preliminary Restoration*) – Add language to this paragraph indicating the updated Remediation and Restoration Plan required by the Permit Modification is also provided in Appendix A of the CMI WP. Cross-reference the specific section of the Project Operations Plan that constitutes the Remediation and Restoration Plan.

83. Page 50, Paragraph 1 (2.8.4 – Acid Brook Stream and Delta Area Riparian Zones: (*Preliminary Restoration*) -- Add language to this paragraph indicating the updated Remediation and Restoration Plan required by the Permit Modification is also provided in Appendix A of the CMI WP. Cross-reference the specific section of the Project Operations Plan that constitutes the Remediation and Restoration Plan.

84. Page 50, Paragraph 2 (2.8.4 – Acid Brook Stream and Delta Area Riparian Zones: (*Preliminary Restoration*) -- Reference where the proposed design for the re-establishment of Acid Brook is located in the CMI WP or permit.

85. Page 50, Paragraph 3 - Given that some locations in wetland and wetland transition zones may have only one foot of backfill material placed on top of undredged soil / sediment, the Service recommends that an evaluation be performed of the root depth of plant species to be used for the restoration. Plants with root systems likely to be more than a foot in depth should not be planted where they may come into contact with the contaminated soil underlying the backfill material.

Section 2.11 – Summary of Green Remediation Practices

86. Page 54, Paragraph 1 (2.11 – Summary of Green Remediation Practices) – Briefly define Tier 3 and Tier 4 standards.

Section 2.12 – Completion Report

87. Page 55, Paragraph 1 (2.12 – Completion Report) – Per EPA's RCRA Corrective Action Plan Guidance, the document to be prepared following

completion of the work is the Construction Completion Report and not the Corrective Measures Completion Report. Revise sentence accordingly.

88. Page 56, top (2.12 – Completion Report) – Revise the sentence to convey that all as-built drawings, including those for the restoration activities will be included in the Construction Completion Report.

Section 3.0 – Permitting and Other Approvals

89. Page 57, (3.0 – Permitting and Other Approvals) – Reflect updated information on the permits/other approvals Chemours is required to submit for Federal, State, local and other agencies.

90. Page 59, bottom (3.0 – Permitting and Other Approvals) – Provide the name and purpose of any other permits required that will be obtained by the Remedial Action Contractor.

91. Page 59, bottom (3.0 – Permitting and Other Approvals) - Please note that while informal consultation with the USFWS regarding potential impacts to listed species was undertaken in advance of the proposed removal in 2012, the project has changed, and the northern long-eared bat (Myotis septentrionalis) has since been federally listed as threatened. This species is known to be present in the vicinity of the project site. A new consultation will be initiated by EPA with the USFWS to ensure that there are no potential impacts to federally listed species.

Section 6.0 – Project Schedule and Management

92. Page 62, (6.0 – Project Schedule and Management) – Cross-reference the detailed schedule provided with the Project Operations Plan (Appendix A).

93. Page 62, (6.1 – Schedule) – The last paragraph on this page first indicates that work hours will be Monday to Saturday, but later states that the work hours will be Monday to Friday, with make-up work hours being considered for Saturday. Please clarify this discrepancy.

94. Page 62: (6.1 – Schedule) - The sheet pile barrier and turbidity curtains should be installed before the Pompton Lake fish stocking activities take place.

95. Page 63 (6.2 Project Management) – Provide a detailed Project Team Organization Chart in the revised CMI WP.

CMI WP: APPENDIX A – POMPTON LAKES STUDY AREA PROJECT OPERATIONS PLAN (POP)

INTRODUCTION

96. Page 3, Paragraph 2 -- Pompton Dam should be Pompton Lake Dam

OPERATION PLAN COMPONENTS

97. Page 5, Paragraph 2, bullet 2 -- Have additional treatability studies to support the project design of the solidification work been conducted? The submitted schedule does not indicate when the work is to be performed.

PREMOBILIZATION, MOBILIZATION SUPPORT ACTIVITIES & SITE PREPARATION

Pre-mobilization

98. Page 8, top bullets 2 and 3 -- What is the status of the bench-scale studies described in bullets 2 and 3.

Mobilization

99. Page 8, Paragraph 1 – See comment #85.

100. Page 8, Paragraph 2 – See comment #11.

Site Preparation

101. Page 9, Paragraph 1, bullet 9 – Coordination with property owners regarding the removal of docks and storage should be tracked as a Pre-construction Activity in the revised CMI WP schedule.

102. Page 10, Paragraph 1, bullet 1 – Clarify that installation of a "visual screen" is the installation of a fence. Will the fence include a visual screen?

Clearing and Grubbing

103. Page 11, Paragraph 1 – Cross-reference Drawing #1 of the Project Operations Plan and note where the Lakeside Middle School is located on Drawing #1.

104. Page 12: The document indicates that: "The areas that are cleared will only be grubbed if the rooting systems and stumps of the cleared vegetation will interfere with the temporary infrastructure and restoration design." However, roots and stumps will likely interfere with the effective removal of contaminated soil and are often associated with the presence of both undredged and generated residuals. Why can't grubbing of root systems and stumps to the maximum extent possible within the proposed horizontal and vertical dredging footprint be conducted?

WORK AREA ISOLATION MEASURES

Structural Inspection Prior to Isolation Measures

105. Page 13, Paragraph 1- Identify within the text the number of structures within 100 feet of the work location.

106. Page 16, top - The text states, "Removal [of sheet pile] will occur from land and then the areas will be backfilled. Following backfill placement, the sheeting will be

removed." This is unclear and requires clarification regarding the sequence of sheet pile removal and backfilling.

FISH REMOVAL WITHIN CONTAINMENT SYSTEMS

107. Page 16, Paragraph 2 – During the fish collection that precedes containment system installation, can consideration be given to removing those species (rather than relocating them outside the containment system) that are invasive?

ODOR, DUST, AIR AND NOISE MITIGATION

Odor

108. Page 16, Paragraph 1 – Provide examples of the foaming agent products that might be used on open material surfaces as well as associated MSDSs.

109. Page 17, Paragraph 2, - Provide examples of the odor control products that might be used during mechanical dredging operations as well as associated MSDSs.

Air Monitoring

110. Page 18, Paragraph 1 – Insert language regarding Chemours' commitment to provide field personnel to walk the exterior of the Lakeside Middle School property with a hand-held air monitoring instrument.

Noise Mitigation

111. Page 19, Paragraph 2 – Reference Section 2.7 of the CMI WP regarding noise control and monitoring measures.

DEBRIS REMOVAL

112. Page 20, Paragraph 1 – Provide information on the potential off-site disposition of removed debris. Indicate that the removed debris would be disposed of at a licensed, permitted facility.

UPLANDS SOIL AND SHALLOW WATER DELTA AREA SEDIMENT REMOVAL

113. Page 21, Paragraph 1 – The description provided, specifically when the backhoe loads the drained material into Moxy trucks for hauling to the process area appears inconsistent with Drawing 6. Please reconcile.

UPLANDS BACKFILL AND SHALLOW WATER DELTA AREA ECOLOGICAL LAYER PLACEMENT ACTIVITIES

114. Page 22, Paragraph 1 – Indicate that certification as to the quality of the backfill will be provided as well as identifying a back-up source.

115. Page 22, Paragraph 2 – There is no specification provided for the ecological layer. Refer the reader to the CMI WP Section 2.8.2.

116. Page 22-23: The discussion regarding backfilling, placement of the ecological layer, and geotextile liners is not clear. In particular, it is unclear whether the "additional material" that is going to be re-used as part of the ecological layer (page 23, first sentence, second paragraph) will be separated from work activities by a geotextile liner. Any material that is not overlain by a geotextile liner to separate it from work activities should not be used as part of the ecological layer.

LAKE AREA A & ISLAND AREA MECHANICAL DREDGING AND ECOLOGICAL LAYER

117. Page 25, Paragraph 1 – There is no specification provided for the ecological layer. Refer the reader to the CMI WP Section 2.8.2.

DELTA AREA HYDRAULIC DREDGING

118. Page 25, Paragraph 1 – Indicate the volume of material dredged will be reported weekly on the website to be established by Chemours.

IN-SITU STABILIZATION

119. Page 30, Paragraph 3 – The text indicates that there are multiple areas that will require in-situ treatment for lead. Figure 2-1 illustrates one area. Please clarify that Figure 2-3 illustrates four areas that will be cross-referenced.

DELTA AREA ECOLOGICAL AREA PLACEMENT

120. Page 31, Paragraph 1 – See comments #103 and #104 for the Project Operations Plan.

121. Page 32, Paragraph 2 – See Comment #74 for the CMI WP and clarify.

METHOD FOR CONTROLLING EXCAVATION ELEVATIONS, DREDGING ELEVATIONS AND HORIZONTAL CONTROL

Uplands and Shallow Water Delta Area Surveys

122. Page 33, Paragraph 1 – Sentence 2 indicates that survey spot elevations will be performed as defined in the CMI WP. Reference the reader to where this is defined in the CMI WP and/or CQAP.

Ecological-Layer Thickness Verification for Open Water Areas

123. Page 35, Paragraph 1 – Table 3-1 of the CQAP states that one core per acre will be collected to verify ecological layer thickness. This is insufficient. Six to eight cores per acre should be performed. Additionally, what would the follow-up action(s) be in the event that one or more of the cores indicates less than 6' of ecological layer placement?

MATERIAL HANDLING AND TRANSPORT FOR OFF-SITE DISPOSITION

124. Page 36, Paragraph 1 – Clarify how trucks will be brought into the Borough for hauling dredged material/soil.

CMI WP POP: APPENDIX C – CONSTRUCTION SCHEDULE

125. The revised construction schedule needs to include Pre-construction Activities, those upfront/pre-implementation activities including, but not limited to, permit acquisition, property access, bathymetric survey, vibration monitoring, bench-scale treatability testing and any other activities noted as Pre-construction Activities in the aforementioned comments.

CMI WP: APPENDIX B – CONTINGENCY PLAN

1.0 Introduction

126. Page 1, Figure 1 – See Comment #79 of the CMI WP

3.0 Odor Control Methods

127. Page 6, Paragraph 2 – SDSs of representative foaming agents needed to be provided as an appendix.

6.0 Marine Contingency Measures

128. Page 11, Paragraph 2 (Section 6.1) – Page 11 of the Project Operations Plan (Office Infrastructure) indicates that equipment fueling will be from the pier. Please reconcile.

10.0 Offsite Disposal Truck Material Spills

129. Page 21, Paragraph 1 – Notification by the trucking company to the Remedial Action Contractor of an accident should be as soon as practical no later than a timeframe less than 24 hours.

11.0 Evacuation Procedures

130. Page 22, Paragraph 1 (Section 11.2) – Indicate in the text that evacuation procedures will be reviewed with the Pompton Lakes Police Department, Fire Department and their emergency management agency.

CMI WP: APPENDIX C – HEALTH & SAFETY PLAN

131. Section 3.2.1.8 describes the procedures to monitor heat stress. Who will measure the heart rate, pulse, and oral temperature on site?

132. Section 3.2.3.4 describes poisonous plants but it is recommended that the HASP include pictures so personnel can identify them on site.

133. Section 7.1.1 describes the real time action level for mercury as .0125 mg/m^3. Reference the derivation of the action level?

134. Section 10.6 - Provide the rally point for emergencies.

135. General - Hand signals are referenced as a control measure in several activities. How will site personnel be made aware of the hand signal meanings? Tool box meetings, some other method?

136. General - Will DEET be provided as personal protection equipment for mosquitoes? The HASP mentions the risks associated with using DEET so it is recommended that a fact sheet for DEET be provided so personnel can be aware of them.

CMI WP: APPENDIX D – TRAFFIC CONTROL PLAN

137. Passaic County will be performing work on two nearby bridges, including Lakeside Avenue. The Passaic County contact for coordinating the work is Aura Mayer of the Passaic County Engineering Department at 973-881-4450. EPA will make the initial inquiry regarding this, but Chemours should be aware of this for purposes of overall schedule planning and implementation.

138. The report recognizes that the intersection of Terhune/Lakeside could be an issue. Propose a signing plan to address this, such as "TRUCKS ENTERING", etc… Other signs to be included could be an intersection warning sign, along with an advisory speed limit. Also, your contractor should clear all vegetation from the intersection that is blocking the sight distance. This can only be done within the County Right-of-Way.

CMI WP: APPENDIX E – CONSTRUCTION QUALITY ASSURANCE PLAN

2.0 Project and Personnel Roles and Responsibilities

139. Page 4, Paragraph 1 -- See comment #85 regarding the CMI WP.

140. Page 6, Paragraph 2 (Section 2.3) – Indicate who will be responsible for posting results on the website to be established by Chemours. If not a "Technical Team" member, indicate the correct entity.

141. Page 6, Paragraph 2, bullet #1 (Section 2.4) - Provide the QC organization chart in the revised CMI WP.

142. Page 7, Paragraph 1 (Section 2.5) – Indicate that Chemours will provide the identity the certified New Jersey laboratories to be used once the laboratory services have been procured.

4.0 Documentation

143. Page 11, Paragraph 1 (Section 4.1) – Regarding submittals to EPA, the text should reflect that submittals provided to EPA would include those that demonstrably change the scope of work and/or schedule for the implementation of the corrective action.

144. Page 12, Paragraph 2 (Section 4.2.1) – The permit compliance matrix/database proposed to be prepared that is inclusive of all permits procured should be provided to EPA prior to mobilization.

145. Page 13, Paragraph 1 (Section 4.2.2) – The text should reflect that imported materials testing results need to be provided to EPA.

146. Page 13, Paragraph 1 (Section 4.3.1) – The section should include a provision for a weekly construction meeting to be attended by EPA, Chemours, the Remedial Action Contractor that will be based on a written weekly agenda/progress report of performed activities and activities for the following week. The weekly agenda/progress reports would be provided as an appendix in the Construction Completion Report.

147. Page 13, Paragraph 1 (Section 4.3.1) – It should be noted that copies of Daily Construction Summary Reports should be available to EPA upon request.

148. Page 15, Paragraph 1 (Section 4.3.1) - Revise the text to reflect that the photographic log will be submitted to EPA as part of the Construction Completion Report.

149. Page 15, Paragraph 2 (Survey Data) - The text states a post-remediation survey will be performed to document final remediation conditions and verify placement of all ecological layer material. Cross-reference Table 3-1 of the CQAP which describes the surveys to be performed.

150. Page 15, Paragraph 3 (Survey Data) – Indicate that the survey results will be included as an appendix in the Construction Completion Report.

151. Page 16, Paragraph 2 (Section 4.3.2) – Indicate that a summary of the Monitoring Data Report will be a component of the weekly agenda/progress reports.

152. Page 17, Paragraph 1 (Section 4.3.3) – Disposal records for soil/sediment/debris should be provided as an appendix in the Construction Completion Report.

153. Page 19, Paragraph 1 (Section 4.4.2) – See Comments #80 and #81.

154. Page 19, Paragraph 1 (Section 4.5) – Construction deficiencies and corrective measures need to be summarized in the Construction Completion Report.

155. Page 20, Paragraph 2 (Section 4.5.1) – Problems/deficiencies should be summarized in the weekly agenda/progress report.

156. Page 22, top (Section 4.6) – The text should indicate that changes to the QC measures will be communicated to EPA for concurrence prior to implementation.

157. Table 3-1 (page 2 of 9) – Regarding the Uplands survey, etc., what inventory is being referred to?

158. Table 3-1 (page 2 of 9) – Regarding permits, provide a note that permits will be tracked via a permit compliance matrix/database.

159. Table 3-1 (page 3 of 9) – Under "Sheet pile installation/extraction" (QA/QC Elements), there is a notation to "See also monitoring rows". Clarify what that means.

160. Table 3-1 (page 4 of 9) – Under "Uplands excavation" (QA/QC Elements), the same comment as in Comment #139.

161. Table 3-1 (page 6 of 9) – Under "Material handling, transport, and disposal", there is a notation to "See Appendix A". The appropriate content from Appendix A should be inserted in the columns with the notation.

162. Table 3-1 (page 7 of 9) – Under "Restoration Earthwork", list the intervals referenced in the "Measurement Approach" column.

163. Table 4-1, Page 1 – Under "Construction – All Activities", list the weekly agenda/progress report as a documentation requirement.

164. Attachment B (Project-Specific Waste Management Plan), Page 8 (Section 4.2.3, Paragraph 2) – Where will the permitted waste accumulation area be located?

165. Attachment B (Project-Specific Waste Management Plan), Page 10 (Section 6.0) – Wouldn't a spill of contaminated soil/sediment on the truck haul route enact spill reporting?

166. Attachment B (Project-Specific Waste Management Plan), Page 10 (Section 6.3) – Clarify the entity/project team member responsible for spill reporting to Federal, State and Local agencies.