7/03

State of New Jersey

Department of Environmental Protection

James E. McGreevey
Governor

Bradley M. Campbe
Commissioner

Christopher Anderson
Director Environmental Affairs
L.E. Carpenter and Company
33587 Walker Road
Avon Lake, OH 44012

RE: L.E. Carpenter Superfund Site
Wharton, Morris County, New Jersey

The New Jersey Department of Environmental Protection (NJDEP or Department) and the United States Environmental Protection Agency (USEPA) have completed a review of the document titled Focused Feasibility Study (FFS), Lead Impacted Soil Remediation dated February 28, 2003. This document was prepared by RMT, Inc. on behalf of L.E. Carpenter and Company (LE). The NJDEP and USEPA have the following comments, which must be addressed in a revised FFS. A revised FFS shall be submitted within sixty (60) days after receipt of this correspondence.

Specific Comments (NJDEP):

1. Section 2.2.4, Determination of Lead Impacted Soils, page 2-3: The results of the November 2001 investigation (Nature and Extent of Lead in Soils and Groundwater, March 2002), indicated that elevated lead concentrations associated with the dark-colored forging and mining era fill material are in the range of several hundred to 2700 mg/kg of lead. The supporting information for the on-site soil reuse option therefore relies on the data from the lead soil investigation which documents that most soils have lead concentrations less than 3000 mg/kg. Therefore, based on the details provided, any lead contaminated soil at levels above 3000 mg/kg does not meet the criteria of the soil reuse option. This must be confirmed by post-excavation sampling of stockpiled soils.

2. Section 4.4.3, Removal, Stockpiling and Disposal, page 4-5: Any areas on the site where soil excavation is conducted, including all categories of contaminated soil, shall be verified during the remediation phase by way of post-excavation samples as required by N.J.A.C. 7:26E. In addition, all excavated/stockpiled soils proposed for reuse as fill must be sampled prior to back-filling.

3. Section 5.1.7, Cost, page 5-3: It is noted in the FFS report that O&M costs have not been included in the cost comparisons of the alternatives. Pursuant to EPA RI/FS guidance, the alternatives are assessed based upon estimated present worth cost, considering capital costs and long-term O&M costs. The FFS cost estimates shall include the above.

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4. The report states that on-site soil with elevated concentrations of lead do not pose a risk to ground water. This assessment is based upon lead leaching studies, which indicated impacts to ground water were less than the Ground Water Quality Criteria. In addition, the report states that ground water sampling data also shows no lead is detectable above drinking water criteria downgradient of the lead impacted zone. LE states that the soils of concern will be placed above the highest recorded water table and below at least two feet of clean fill, thus this alternative will not result in an increased potential for mobilization of lead into the shallow aquifer. To further substantiate this, LE shall sample ground water in the lead impacted and downgradient zones for total lead as part of this FFS effort. LE should be aware that the New Jersey Ground Water Quality Criteria for lead is 10 ppb total. LE may collect dissolved lead for comparison purposes.

Specific Comments (USEPA):

-Hotspots?

1. The current ROD remedy (FFS Alternative 1) calls for the excavation and off-site removal of wastes and soils contaminated with lead above 600 ppm. The FFS recommended Alternative 2, which involves the use of soil with lead concentrations greater than 400 ppm as backfill and fill material within an on-site containment area of approximately 1.5 acres. The proposed remediation goal for lead of 400 ppm is based on a New Jersey residential soil cleanup value. The FFS proposes that soils are to be categorized and handled, as follows:

   Category A will be stockpiled for potential reuse or off-site disposal depending on whether alternative 2 is approved.

   Category B soils representing process-waste contaminated soils will be transported to an approved off-site disposal facility as a hazardous waste. Thus, category B soils will not be treated differently than the ROD.

   Category C soils are considered "clean" soils and will be used as backfill. Thus, category C soils will not be treated differently than the ROD.

   Category D sols contaminated with free-product will be disposed of off-site. Thus category D soils will not be treated differently than the ROD.

   EPA concurs that the recommendation in the FFS to consider a change in the selected 1994 Record of Decision (ROD) remedy may be appropriate if supported by the FFS. Based upon USEPA's review of appropriate guidance on this matter and an evaluation of the proposed change, the proposed change is a fundamental change to the ROD remedy and therefore requires a ROD Amendment (See Guide to Addressing Pre-Rod and Post-ROD Changes, OSWER Publ: 9355.3-02FS-4, April 1991). Because the FFS recommends a change in the hazardous waste management approach for the site, alters the scope of remedy (i.e., remediation goals, type and volume of wastes) and the long-term effectiveness of the current remedy, in order to justify such a change in the ROD, the FFS should be revised in accordance with the following comments:

The preference for off-site disposal that is detailed in the current ROD must be shown to be outweighed by other factors in order to justify changing the selected remedy. The FFS should include detailed cost estimates for disposal, as presented, as well as capping and long term monitoring and maintenance (O&M) for the proposed new remedy. The latter was not presented and considered in the FFS. Even though there is a stated assumption that these costs will be borne by the municipality, they must be included for estimating purposes. All associated O&M should be presented and evaluated in a revised FFS. O&M costs should be projected for a 30 year period, and added to the total costs for the proposed new remedy, so that an adequate comparison to the ROD remedy can be made. In addition, it is anticipated that deed restrictions and institutional controls will be needed. These considerations must similarly be sufficiently presented and evaluated in the FFS. Furthermore, since lead contaminated soils are to be left on site, in order to ensure that the revised remedy remains protective; this remedial alternative must also require a long term monitoring plan for lead in groundwater at appropriately selected sampling points, considering local public water supplies, if necessary, as well as at selected groundwater discharge points to the Rockaway River. The estimated cost of this monitoring must similarly be projected for a 30-year O&M period.

Also, the cost comparison between Alternatives 1 and 2, as presented in the FFS, show what the text on page 1-1 labels a "significant" difference in costs between the two remedies, amounting to approximately $562,420. However, Alternative 2 (capping) comparison does not include 30 year Operation & Maintenance (O&M) costs. Remedial costs for Alternative 2 must include O&M costs, which become necessary in this case when leaving lead soils on-site. O&M costs are typically factored into CERCLA remedies. O&M costs would include all operating costs such as those associated with maintaining the cap, groundwater monitoring, repairs, engineering fees. Once these costs have been factored into the comparison, it is possible that there may not be much practical or "significant" cost differential, if any, between the two alternatives. Because the ROD remedy requires all contamination to be removed permanently off-site, it is the more permanent remedy. Leaving waste on-site is a less permanent remedy and would entail the township assuming long term O&M costs, not just for the 30-year period that would be costed out, but for as long as the township were to hold deed to the property and thus could be a potential long-term drain on taxpayers.

In addition, if the replacement of wetlands losses (mitigation) were to become necessary due to the remedial action, as stated in the comment below, any associated replacement costs, O&M costs, and post-mitigation wetlands monitoring should be presented and factored into the cost of the remedy.

Also, the FFS should specifically describe how the new proposed conceptual plan for LNAPL is more aggressive than what had been proposed in the ROD. As previously stated in the review of the Findings and Recommendations Regarding a Conceptual Free Product Remediation Strategy (the LNAPL conceptual plan) USEPA supports the aggressive approach that was outlined in the LNAPL conceptual plan. For purposes of considering Alternative 2 the FFS would benefit by specifically outlining key differences between the

LNAPL and groundwater remedy outlined in the ROD, and the new approach outlined in the LNAPL conceptual plan and FFS.

2. Page 2-1, states that 4 of 11 hot spots identified during the RI are hot spots associated with lead-impacted soils. These hot spots are A, B, C, and D. To date, it appears that there is no documentation regarding the final disposition of soils from these areas when they were excavated in the mid 1990s. It is believed that some soils from most of these hot spots were disposed of off-site, while some were consolidated on top of the demolition debris associated with Building 14. Please clarify whether this is where the soils are also presently located. In addition, in itself, the mixing of a large volume of demolition debris with lead contaminated soils that should have been sent off-site for disposal is a variation in the ROD remedy. This issue should be clarified in the FFS. Moreover, the FFS states that the remediation of Hot Spots A and D are complete and meet the requirements of ROD. This statement should be modified. The ROD required off-site disposal, which has not been complied with and which is the subject of the remedy change being proposed in the FFS. Excavation of the Hot Spots is only a partial requirement of the ROD. Moreover, Hot Spots B and C are only partially excavated.

   In addition, the ROD called for the excavation and disposal of soils containing Polychlorinated biphenols (PCBs). Clarification is requested as to what happened to the PCB soils (i.e. were they excavated and removed off-site, or were they placed in the same areas as the above mentioned lead and demolition debris). The FFS should clarify this point.

3. Page 2-4, third paragraph, the text should identify the applicable New Jersey Ground Water Quality Criteria for lead.

4. Page 2-4, third paragraph, as stated above, the text should be modified as it is not the case that implementing the ROD remedy for off-site disposal of lead "represents a significant post-ROD change and is considered the major driver in the preparation of this FFS". The FFS has not yet presented a clear argument to substantiate that this is the case, and needs to be modified.

5. Page 2-4, of the FFS states that the November 2001 investigation concluded that there is approx. 7,700 cubic yards of materials on-site exhibiting concentrations of lead in excess of 600 mg/kg. This appears to be a site-wide figure. Does this reference pertain to the Nature and Extent of Lead in Soils and Groundwater? Please clearly identify the report in the FFS. Later, on page 5-11, the figure increases to "approximately 10,000 cubic yards (cy)," (note that page 5-13 lists 10,190 cy), which may have been updated in the FFS to include additional lead and soils that are proposed to be remediated to the lower 400 ppm level, however, this was not clearly stated in the text. Please clarify if this is the case. In addition, clarification is needed where the FFS states that the original ROD remedy had anticipated an estimated amount of lead soils for excavation and disposal, was 30 cy and 67 cy, for hot spots B and C, respectively. Based on a total estimate of 97 cy, the FFS then concludes that there is now a substantial increase in volume of lead-impacted materials requiring excavation and off-site disposal. The 1994 ROD, table 4, selected alternative 4 remedy

clearly identifies that the estimate for excavation and off-site disposal is 1400 cy for the entire site. The FFS needs to compare the original figure in the ROD, to the 7,700 cy figure that came out of the November 2001 investigation, and any justifiable increase, as stated above. The FFS should not compare the original figures for hot spot B and C removal with the current site-wide lead-contaminated soil figure.

The FFS again states this on page 3-1 where it compares the site-wide removal figures with the volumetric estimates for hot spots B and C alone. However, what about hot spots A and D? In addition, as stated in the FFS, we do not know the final disposition of the lead-contaminated material excavated from hot spots from A and D. Some is believed to have been disposed of off-site, and some left on-site in the debris identified as the "Former Waste Disposal Area," which also appears to contain a large amount of demolition debris, the volume of which appears to have been added to the total volume of material to be re-used on-site as fill. Please clarify these issues.

6. The FFS proposes the reuse of course subsoil material. Page 2-6 states greater than 3-inch fraction, and page 4-6 states greater than 2.5 inch fraction, will be used as backfill. Please clarify which screen size will be used, or both sizes. In addition, the FFS should clearly indicate whether any coarse fill material will be located either adjacent to wetlands or below the seasonal high and low water tables. Page 4-8 indicates that reused site materials, apparently coarse and otherwise, will be above the high water table, however any imported fill must also be fine grained. During the meeting in September 2002, between the NJDEP, EPA and representatives of LE, held at EPA's facility in Edison, there was discussion of the possible inclusion of both a bottom and top synthetic liner, to prevent contact of the lead wastes with both rainwater and groundwater, however, there is no mention of either in the FFS. Costing for the synthetic liner(s) is also not included. Clarification is needed on these issues. Coarse materials in the backfill may act as a "french drain" and conduit facilitating water movement, potentially inundating and bathing the lead in place, causing leaching, and/or dewatering parts of the wetlands. Both should be avoided, and the bottom of the containment area should be located an adequate distance above groundwater. Moreover, a synthetic liner would also help in the event that the bottom of the containment area cannot be optimally located an adequate distance above groundwater. The FFS should clearly provide cross-section diagrams through the containment area, which identify that the bottom of the fill will be a certain adequate minimum distance above high groundwater. More information must be presented pertaining to an on-site capping remedy, in order to ensure lead contaminated soils will not impact groundwater. A revised FFS should be submitted which includes this evaluation.

   Moreover, in this regard, there does not appear to be a significant enough distance separating the groundwater table from the proposed buried contaminated soils. If burial is conducted, steps should be included to monitor and maintain the groundwater level below the contaminated soils containment area. However, this may be technically impracticable as the document "Findings and Recommendations Regarding a Conceptual Free-Product Remediation Strategy", states that installation of groundwater controls to aid in excavation of soils beneath the water table are not practical for a variety of purposes. USEPA has

experience at several sites where the control of groundwater levels has proven to be much more expensive than originally anticipated. If on-site burial of the contaminated soils is implemented, depth to water needs to be maximized to prevent direct contact with the water table. The concerns for potential surface water contamination do not appear to have been adequately addressed in the FFS. As mentioned above, no details are provided or costed (as per page 4-9) with respect to the type of cap, what type of material, how much fill will be used except that it will be "coarse granular fill material," its thickness, or the use of a synthetic liner, clay, or asphalt. These details should be provided. Anything that is necessarily a part of the proposed remedial action, and the mitigation of contamination, preventing the infiltration of rainwater or groundwater and spread of contaminants, must be included for evaluation and costed out as part of the remedy. Based on the FFS, there are no details provided on the cap. These issues must be addressed.

7. Page 2-6, while USEPA strongly favors the proposal outlined in the LNAPL conceptual plan, the details must be fully presented and outlined in an approved design plan.

8. Page 3-2, Section 3.2.2: Since the likely future land use has changed from industrial/commercial to recreational and commercial, the cleanup goal for lead in soil must be revised to 400 mg/kg. The value of 600 mg/kg is protective for adults only, and is not meant to be applied to locations at which children will be present. The recreational area in particular is of most concern. The text throughout the FFS should clearly state that the cleanup goal is lowered to 400 mg/kg based on the likely future land use and that children will now be a population of concern.

9. Page 4-3, regarding the well replacement plan, it is not clear why ten wells are to be replaced for monitoring purposes once the remedy has been implemented, as no rationale and location map have been provided. It is noted that "approximately" 28 existing wells are proposed to be removed and abandoned, but no adequate explanation is provided as to what criteria are to be used to determine whether a well needs to be replaced, protected, or abandoned. These specifics need to be clarified and tailored to the objectives identified, in this case, MNA. We would want to see and approve any well replacement plan that might be put into use. This can be presented within the Remedial Action Plan, however, the FFS should identify and clarify that this will be the case.

10. Page 4-4, S Section 4.4.2: Site Control Measures, the text does not identify where the items presented will be clearly outlined. As with the above comment, they can be outlined within the remedial action plan.

11. Page 4-4, Section 4.4.2: The soil erosion and sedimentation control measures must include a component that monitors the lead concentrations in surface water and sediment. Due to the high concentrations of lead in the soils near the Rockaway River and the possibility of ongoing soil erosion into the river, ongoing monitoring of both the surface water and the sediment must be part of this plan. As mentioned previously, associated costs should also be included and factored into O&M, as part of the proposed remedy.

12. Page 4-4, Section 4.4.2: This section should also detail the groundwater-monitoring plan. With four public community supply wells within one-mile downgradient of the site, the groundwater should continue to be monitored to ensure that leaching does not occur in the future.

13. The location for stockpiling and staging should be clearly identified in the text and labeled on the figures. These areas should be located as far away from the wetlands and river, as possible.

14. The USEPA has previously commented that potential ecological impacts of any proposed remedy change must be adequately addressed. In 1992, a baseline ecological assessment was conducted on aquatic community level biological assessment of species in the Rockaway River. An ecological assessment on the terrestrial community was not conducted. The baseline assessment concluded that historical and current conditions of the site are not impacting the biological community in the sediment or water environments of the Rockaway River. This conclusion was not based on a specific presumptive remedy (i.e., a soil lead excavation alternative). The original clean up level in the ROD was based on the understanding that receptors were protected with levels of lead remaining on-site below 600 ppm, (the Non-Residential Direct Contact Soil Cleanup Criteria) in soils, without any engineering controls. The new containment remedy will leave lead levels of 400 ppm, therefore, based on the original ecological assessment and the fact that the proposed remedy involves a remediation level of 400 ppm, vs. the ROD remediation goal of 600 ppm, further ecological assessment is not necessary at this time. However, it is important to note that an ecological risk assessment should be conducted in the future to develop a remediation goal, which is ecologically protective, if for any reason the proposed cleanup level of 400 ppm were to increase, or remediation activities, which will be later outlined during design, were to prove to directly impact or alter portions of the wetlands or Rockaway River. During the meeting in September 2002, between the NJDEP,USEPA and representatives of LE, held at USEPA's facility in Edison, New Jersey, a representative of the Biological Technical Assistance Group (BTAG) made a similar note to this point.

15. Page 4-8, Section 4.5.2: This alternative proposed to use soils with lead concentrations greater than 400 mg/kg as backfill in the excavation areas. This concentration is protective of human health based on chronic long-term exposures. LE should clarify what the maximum concentration of lead would be included in this backfill material. In addition, clarification is requested regarding the thickness of the proposed cap of granular fill material, as well as they type of liner included in this proposal and the thickness of the proposed optional cover of topsoil. This information is necessary to determine the appropriateness of using soil contaminated with lead at a concentration exceeding cleanup goals onsite. See also comment 6 above.

16. The text in this paragraph states that the value of 600 mg/kg was developed based on a soil ingestion exposure pathway. This is not entirely correct. This value was identified from an integrated exposure uptake model, which looked at exposure through several relevant pathways. Please revise the text to more accurately describe the basis for this value.

17. Regarding the Conceptual End-Use Plan (as presented on Figure 4). During several telephone discussions, including during the September 2002 meeting between the NJDEP, USEPA and representatives of LE, held at USEPA's facility in Edison, LE indicated that the FFS would consider the future use of the site to be a combination of mixed municipal usage which involved a new municipal building, bike/hiking trail, roadway, and might possibly also involve a play area, tennis or basketball courts, swimming pool, and other similar recreational usage and an attendant parking lot. However, Figure 4 appears not to include a footprint for a municipal building or swimming pool, and a possible building or buildings have not been clearly identified in the text. If either are being proposed, then both the text and the figures should clearly indicate this. The current figure 4 only includes a roller/ice hockey rink, tennis and basketball courts, horseshoe pits and roadway. USEPA requests clarification regarding these issues, specifically the location of the municipal buildings or swimming pool. In addition, please clarify if the large gray areas are to be parking lots. For the purposes of the FFS and any potential ROD change being considered, it is important that the conceptual end use plans being presented and evaluated match the ultimate end use, or the evaluation and assumptions may no longer be protective of public health and the environment. In addition, it should be noted that the conceptual end-use plan presented in the FFS is not a credible design. The FFS should model specific proposed remedial options for projected risks associated with contamination present and projected future site use.

18. Page 4-17 states that the proposed future use of the property is a mixed municipal use and that exposures to site-related environmental media under this scenario are expected to be much less than what would be expected for a residential exposure scenario. From Figure 4, it appears that the property will be used solely for recreational purposes. Clarification is requested on this issue. Please also refer to Comment 17 above.

19. Page 5-3 Community Acceptance, the text states, "The community has expressed support for the proposed end use plan of this site for municipal use". It further states, "this criterion is not discussed in this FFS, but will be addressed upon receipt of comments". Please clarify what community acceptance has been noted and received, how was it obtained, by whom and when and where will this be documented. The original ROD called for the excavation of lead impacted soils to be excavated and removed off-site, the community did not comment on a possibility of a remedy that proposed to leave lead impacted soils on-site during the original ROD process. Because the FFS recommends a change in the hazardous waste management approach for the site, alters the scope of the remedy (i.e. remediation goals, type and volume of wastes) and the long-term effectiveness of the current remedy, in order to justify such a change in the ROD, USEPA believes this will require a ROD Amendment, with a public comment period. Please refer to comment 1 above.

20. Page 5-4, it would help the reader if the comparison of alternatives were specifically compared to the 9 criteria, which present a standard and not arbitrary criteria for comparison, in order to help evaluate which remedial approach and alternative is ultimately better.

21. Page 5-9, Section 5.3.1: Please clarify the depth of soils considered to be "surficial" and "deeper."

22. Tables 4, 5, 6, and 7 - Total costs for Alternative 2, capping reuse, is presented as $3,215,540, and for original ROD approach, Alternative 1, is $3,777,960, a difference of approx. $555,000. This is not a large amount, however, Table 7 has the cost differential as $703,025, a higher amount attributed to the difference in Engineering and Consulting fees. Why are the Engineering costs reportedly the same for both alternatives 1 and alternative 2? See also Table 3 and Table 5, reported as $515,000 for each. In addition, as mentioned previously, remedial costs for Alternative 2 must include O&M costs.

23. Figures 4-9: It would be helpful to include the hot spot areas on all maps, so that it is easy to identify these areas relative to redevelopment plans (Figure 4), floodplains (Figure 5), lead-impacted soils (Figure 6), remedial excavation plans (Figure 7), and the plans for the two alternatives (Figures 8 - 9).

24. Figure 7, Remedial Excavation Plan, states that A-2 soils are predominantly under 400 mg/kg lead, but anticipated to have some "hot spots", and that the material will be stockpiled and tested to determine suitability of reuse. Clarification is requested regarding the overall extent of the site soils impacted by levels of lead exceeding 600 mg/kg. It appears that the proposed criterion for differentiating between Category B (process waste) soils and other lead-impacted soils (Category A) is to be visual inspection. How will the materials be segregated? Continuous oversight from the regulatory agencies will be needed to document full segregation of these materials, and it should be noted that some quantities of Category A materials may be highly contaminated. There is also uncertainty as to the proposed remediation goal of 400 mg/kg lead. Section 4.7.2 states that this limit is only for "exposed" soils. Clarification is requested regarding the depth to be considered for an "exposed soil" and the maximum limit proposed for lead impacted soils that are to be buried on site.

25. The National Historic Preservation Act is an ARAR for this site. USEPA had previously reviewed the 1991 Stage IA Cultural Resource Survey (CRS) for this site and found that the report presented the results of an adequate Stage IA CRS.

    Based on the conclusions presented in the original Stage IA CRS report that had been completed for the site in 1991, and a site visit of 5/20/03 by the Remedial Project Manager, archeologist and representatives of the USEPA, the overall sensitivity of the project area for the potential discovery of unidentified prehistoric and historic resources remains a moderate concern for this site, especially as the site is located adjacent to the Rockaway River.

    The original 1991 Stage IA CRS had indicated the overall sensitivity of the project area for the potential discovery of unidentified prehistoric and historic resources. The purpose of the site visit was to carry out a surface inspection of the ground, and associated environmental features, to evaluate the effect of past ground disturbing activities on the historic potential of the site.

    While there is clear evidence of past ground disturbance, it does not appear to have been

uniformly applied to the entire area of potential effect. This is especially the case below the asphalt pad for the original parking area, as well as in the wetlands area and area adjacent to the Rockaway River. That coupled with the overall close proximity of the river to the entire project area, continue to define this as having a moderate sensitivity, especially below any fill, as had been identified in the Stage 1A CRS. To determine the presence or absence of historic properties it will be necessary to carry out limited subsurface archaeological testing, therefore, a Stage IB CRS should be carried out for selected areas within the project area. To assist in this effort, and to maintain project continuity and progress, this work can be completed as soon as possible. If needed, the New Jersey State Historic Preservation Office (NJSHPO) can supply the contacts for other qualified CRS firms working in New Jersey, and meeting the requirements for hazmat environmental work.

Wetlands

Executive Order 11990 ("Protection of Wetlands") and EPA's 1985 "Statement of Policy on Floodplains and Wetlands for CERCLA Actions" require that remedial action alternatives be evaluated for how they may potentially impact wetland areas. In order to comply with these wetlands ARARs/TBCs, a wetlands delineation, wetlands assessment, and wetlands mitigation plan is needed for any wetlands impacted or disturbed by contamination and/or remedial activities. For example, it is not enough for the FFS to simple say that it is not expected that a significant number and variety of species will inhabit the potentially impacted areas. On what basis does L.E. Carpenter not expect a significant number and variety of species to inhabit these areas?

A wetlands delineation ("Wetland Investigation Report") was completed in December, 1992 and the results were presented in the January 15, 1992 Wetlands Assessment Report ("Wetlands report") for the site. The Wetlands report determined that wetlands and State open waters occur on-site and on immediately adjacent properties. Three vegetative communities were identified within the property: disturbed successional area, palustrine emergent wetlands (PEM) and palustrine forested wetlands (PFO1). Based on review of the FFS (see also Figures 5 and 7), it appears that an area of wetlands could possibly be excavated as part of the proposed remedial. If this is the case, the approximate square footage of this area and vegetative community types impacted should be provided in the FFS for review and analysis. In addition, any areas of wetlands that will be impacted must be clearly identified on a map in sufficient scale, and a wetlands assessment will also be needed in order to comply with applicable ARARs/TBCs. Therefore, in addition, the January 15, 1992 Wetlands Assessment Report ("Wetlands report") for the site would have to be modified and updated. This is because the remedial options evaluated in 1992 are different from the remedial action being proposed in the current FFS. The remedial action in the FFS proposes that the contaminated soil (with the exception of Category B process wastes) be stockpiled for reuse as backfill.

The FFS should clearly identify the footprint location where the excavated materials will be stockpiled and staged. These areas should be clearly identified on a wetlands map. If stockpiled and staged material will be located in or adjacent to the wetlands, then the

potential impacts of stockpiling, transportation and then replacing the contaminated soil on site would have to be evaluated with respect to the surrounding wetlands, therefore, as above, the existing 1992 Wetlands report would need to be updated and modified to account for these changes and impacts.

In addition, the excavation of contaminated soils that were evaluated for Alternatives 5 and 6 of the 1992 Wetlands report are similar to the remedial action currently being proposed in the FFS. Alternatives 5 and 6 were determined to cause extensive disturbances within both the wetlands and the floodplains. As a result, the Wetlands report concluded that a wetlands mitigation plan would need to be prepared if these alternatives were to be selected. Since the present remedial action being proposed in the FFS maintains the excavation component of Alternatives 5 and 6 outlined in the 1992 Wetlands report, as above, there may be disturbances within both the on-site wetlands and floodplains. If this proposed alternative is selected, a wetlands mitigation plan will be needed and must be completed as part of this remedial action. The FFS makes no indication that this has been or will be completed. A revised FFS report should comment and clarify these points.

Based on the above, if a revised wetlands assessment and wetlands mitigation plan must be completed, the wetlands delineation and assessment should include the following: a brief discussion of the impacts of the preferred remedial alternative as well as those alternatives not selected; A functional assessment of wetlands resources (including the completed characterization of existing flora and fauna); the potential effects of contaminants on wetlands resources; measures to minimize potential adverse impacts that cannot be avoided, replacement for wetlands losses (mitigation); and a post-mitigation wetlands monitoring plan. In addition to this, any associated O&M costs should be presented and factored into the costs of the proposed remedy.

Floodplains

A floodplains delineation has been provided (Figure 5). The majority of the site lies within the 100-year floodplain of the Rockaway River. Parts of the site may also be located within the 500-year floodplain although this has not been indicated on the map. Accordingly, in compliance with Executive Order 11988 ("Floodplain Management") and EPA's 1985 "Statement of Policy on Floodplains and Wetlands for CERCLA Actions", a floodplains assessment must be completed for the site. At this time, there is no indication that the assessment has been completed or will be completed. In addition to a floodplains delineation where both 100-year and/or 500-year floodplains found within the site are delineated on maps of the site, a floodplains assessment should also include: a description of the proposed action; the effects of the proposed action on the floodplain; a description of the other remedial alternatives considered and their effects on the floodplain; and measures to mitigate potential harm to the floodplain if there is no practicable alternative to locating in or affecting the floodplain, including impacts to the proposed remedial action from flooding events during and after implementation of the remedy.

Once the floodplains delineation and floodplains assessment are completed, they should be forwarded for review and comment.

Endangered Species

A "Draft Habitat Survey Work Plan for the Threatened Swamp Pink" was completed in 1992. At the present time, there is no evidence that swamp pink either exists onsite or on adjacent wetlands. In addition, at this time there are no concerns with respect to other threatened and endangered species at or in the vicinity of the site. However please submit two copies of the habitat survey report for swamp pink that was conducted by Ecolsciences in 1991 or 1992.

Should you have any questions or wish to schedule a meeting to discuss this matter please feel free to contact me at (609) 633-1416.

Sincerely,

Anthony Cinque, Case Manager
Bureau of Case Management

C: Mayor Chegwidden, Wharton Boro
Nick Clevett, RMT, Inc.
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