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December 20, 2013

Lauren P. Charney
Assistant Regional Counsel
U.S. EPA Region 2
290 Broadway, 19th Floor
New York, New York 10007

Re: Cost Analysis Regarding Acceptance of Dredged Sediment from Lower Ley Creek Subsite

Dear Ms. Charney:

We understand from a presentation made by the Palmerton Group, consultant for the private potentially responsible parties ("PRPs") to the Lower Ley Creek subsite, that a portion of the former Town of Salina Landfill site (the "Landfill") represents a suitable location for the disposal of dredged sediments coming from Lower Ley Creek. Based on our consultant's ("CHA") preliminary analysis, Parcel 2 of the Landfill may accommodate the estimated 200,000 cubic yards ("cy") of dredged sediment potentially containing PCBs at levels below 50 ppm.

With the assistance of CHA, this letter both identifies preliminary issues and provides initial estimated costs associated with a proposal that the Town accept disposal of the dredged sediments at the Landfill.

Assumptions

The Town's analysis is centered on the logistics and costs of modifying the current Landfill cap to accept the dredged sediment. However, the following actions are required regardless of the final disposal site, and, therefore, the costs associated with these items are not addressed herein:

1. Access/Coordination Agreements.
2. Site Mobilization.
3. Site Health and Safety and Community Air Monitoring.
4. Odor and Dust Control and Control of Tracking on Roads.
5. Sediment Dredging.
6. Characterization of dredging materials as work proceeds to verify PCBs are <50ppm.
7. Dewatering of sediments prior to disposal.

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Alternatives Assessment

There were two (2) disposal alternatives that the Town requested CHA to analyze:

Alternative 1: Removal of the Landfill's existing capping system and placement of dredged sediment with existing waste, followed by restoration of the capping system:

a. Pros:
   1. Eliminates need for installing an expensive leachate collection system as any leachate would eventually be captured in the existing collection trench that parallels Ley Creek.
   2. Relatively simple to design. No special leachate or gas collection systems required.
      Estimated to be least expensive option.

b. Cons:
   1. Anticipated elevated levels of PCBs as wells as high organic and metals concentrations could eventually make it into the groundwater collection system. The current pretreatment system is not designed for higher loadings.
   2. Impacts to groundwater may not be realized immediately. However, after the initial project is completed, the Town could be responsible for any plant modifications needed in the future to treat the leachate.
   3. The Town will retain ownership of Parcel 2 and the associated liability. This could potentially result in long-term liability for the Town.

c. Unknowns:
   1. Effects of leachate from dredge spoils on the wastewater treatment plant ("WWTP"), and the costs associated with those effects.
   2. Liability associated with mingling the Landfill's existing waste and Ley Creek dredge sediments.

Alternative 2: Placement of dredge sediment in a separate cell over the existing capping system:

a. Pros:
   1. Could reduce long-term liability for Town by separating this material given the anticipated higher levels of PCBs (≤50 ppm).
   2. Contaminants in the spoils/sediments shouldn't impact the water quality in the existing collection trench, but WWTP modifications would be required if the leachate is sent to the on-site treatment plant.
      May be able to use the existing geomembrane of the Parcel 2 cap as a primary or at least a secondary liner system subject to NYSDEC agreement.

b. Cons:
   1. Off-site treatment of leachate could be expensive. Alternatively, significant upgrades to the on-site treatment plant may be required to handle this leachate. In addition to capital costs for upgrading the plant, there would be increased O&M costs associated with such modifications.
   2. Design of a lined cell over the existing waste is more complicated (although possible).
   3. The existing gas collection system would have to be modified to a horizontal system beneath the new cell.
   4. Potential settlement could adversely impact the integrity of the existing capping system or adversely impact the flow of leachate in the upper cell. The design of engineering controls to limit settlement would be needed.

c. Unknowns:
   1. Liability incurred by treating leachate onsite vs. sending leachate offsite for treatment.
   2. Effects of leachate from dredge sediment on the WWTP, and the costs associated with those effects.

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Cost Analysis

A cost comparison of Alternatives 1 and 2 is provided below. Due to the significant amount of unknown factors associated with this analysis, it should be noted that these costs are preliminary. Moreover, the projected costs are based on the assumption that 11 acres of Parcel 2 would be utilized for either option.

Alternative 1: Removal and replacement of current cap	**Estimated Costs**
Construction Costs	
Removal of current cover materials and membrane	$500,000
Placement/Grading of 200,000 CY	$1,360,000
Re-capping and replacement of cover materials ($200,000/acre)	$2,200,000
Pretreatment plant upgrades	$350,000
Subtotal	**$4,410,000**
Operations and Maintenance Costs	
Present worth of pretreatment plant O&M ($18,000/yr for 30 years assuming 8% interest rate)	**$203,000**
Engineering and Legal Costs	
Engineering Design (5% of Construction)	$220,500
Engineering Construction Oversight (6% of construction)	$264,600
Legal	$50,000
Subtotal	**$535,100**
Total Cost for Alternative 1	**$5,148,100**

Alternative 2: Create a separate cell on top of existing cap	**Estimated Costs**
Construction Costs	
New cell construction* (11 acres at a ($750,000/acre)	$8,250,000
Placement/Grading of 200,000 CY	$1,360,000
Pretreatment Plant Upgrades **	$350,000
Subtotal	**$9,960,000**
Operations and Maintenance Costs	
Present worth of pretreatment plant O&M ($18,000/yr for 30 years assuming 8% interest rate)	$203,000
Engineering and Legal Costs	
Engineering Design (5% of Construction)	$498,000
Engineering Construction Oversight (6% of construction)	$597,600
Legal	$50,000
Subtotal	**$1,145,600**
Total Cost for Alternative 2	**$11,308,600**

* Assumes current cap can be used as liner, including leachate collection system and gas venting system

**Costs will change significantly if leachate is disposed and treated offsite.

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As noted above, the costs projected are in no way inclusive of all of the possible costs associated with these alternatives. Some items, which may result in additional expenses to the Town with the implementation of either option, include (but are not limited to):

a. Installation of access road to handle increased truck traffic; and
b. Restoration and cleanup of the Landfill post-construction.

While it is the most cost efficient option, Alternative 1 may expose the Town to additional risks. By combining the two waste streams, the Town would not be able to identify causes of possible future issues. The Town remains responsible for 30 years of operation and maintenance of the pretreatment plant, even if increased loadings (due to the dredged sediments) impact the current treatment flow. Costs associated with upgrades due to increased organic matter or PCB loadings are also difficult to estimate. On the other hand, by segregating the waste streams in Alternative 2, the Town will be able to specifically identify potential future issues, including operational issues that may result to the pretreatment plant associated with the dredged sediments.

Cost Proposal

The costs presented above only cover the actual cost of modifying the Landfill to accept the dredged sediment from the Lower Ley Creek subsite. The Town would incur, however, other costs related to the acceptance of these wastes that need to be considered, including the Town's assumption of risks and liability associated with acceptance of the wastes on Town property; the additional management and oversight responsibilities; and the loss of potential re-use opportunities associated with Parcel 2 of the Landfill.

The Town understands that the EPA and Palmerton Group's current estimated cost for off-site transportation and disposal of the sediment and dredged spoils is in excess of $24,000,000 based on a volume of 200,000 cy; a density of 1.5 tons/cy; and a unit rate of $80/ton. Therefore, both alternatives analyzed by the Town represent a significant reduction in the estimated potential cost of disposing Lower Ley Creek dredged sediments. The out-of-pocket expense to be incurred for Alternative 1 represents a little more than half of the projected off-site disposal cost; while Alternative 2 is about 80% of the cost.

In light of the considerations discussed above, the table below identifies the alternative payment proposals the Town would consider in permitting the disposal of dredged sediments from the Lower Ley Creek subsite at the Landfill.

Alternatives	Cost Proposal
Alternative 1- Removal and replacement of current cap	$13.1M
Alternative 2 - Create a separate cell on top of existing cap	$19.3M

We suggest arranging a meeting or conference call between the appropriate EPA and Town representatives to discuss further how one of these significant, cost-saving alternatives can be accomplished. Please feel free to contact my office to make the necessary arrangements.

Sincerely,

Mark A. Nicotra
Supervisor, Town of Salina

cc: Town Board of the Town of Salina
Christopher A. Burns, Ph.D., P.G.
Robert D. Ventre, Esq.
Frank C. Pavia, Esq.

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