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ENVIRONMENT

Mr. Steven Scharf, P.E.
Remedial Section C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7015

Subject:
Technical Comments on Town of Oyster Bay Final Engineering Report, Bethpage Community Park, Bethpage, New York.

Date:
June 25, 2008

Contact:
David E. Stern

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Our ref:
NY001464.1008.00001

Dear Mr. Scharf:

On behalf of Northrop Grumman Systems Corporation (Northrop Grumman), ARCADIS has reviewed the March 2008 Final Engineering Report, Town of Oyster Bay, Bethpage Community Park, Interim Remedial Measure – Construction Area (Town IRM Report) that has been prepared by H2M Group (Town engineering consultant) for the Town of Oyster Bay (Town). The Town Report addresses implementation of a soil Interim Remedial Measure (IRM) pursuant to Order on Consent # W1-0018-02-03 between the Town and the New York State Department of Environmental Conservation (NYSDEC). In general, the Town IRM intended to address soil contamination in the eastern portion of the Bethpage Community Park (Site) (referred to in the Town Report as the "Construction Area"). ARCADIS submits this letter to reiterate Northrop Grumman's objection to the IRM in principle, and to present general and specific comments and objections to the Town IRM Report. Northrop Grumman had previously provided comments prior to implementation of the Town IRM. Provided below are Northrop Grumman's comments on the Town Report, including "General Comments" regarding the Town IRM Report, followed by "Specific Comments" that focus on particular report sections.

General Comments

Remedial Alternative (RA) IV (as described in the Town Work Plans [H2M 2005; 2006]) was selected by the Town and implemented by the Town engineering consultant, even though RA IV was not endorsed by the NYSDEC as the RA was not the most cost effective of the applicable RAs evaluated. For the reasons discussed below, the Town IRM was planned and implemented in a manner that was inconsistent with NYSDEC guidance and policy and failed to meet the requirements of the National Contingency Plan (NCP). Furthermore:

1. The Town IRM Report contains numerous misleading statements and the NYSDEC should instruct the Town to remove such statements. See "Specific Comments" for details.

2. The Town IRM Report speculates, incorrectly, that Site contamination addressed as part of the Town IRM resulted from former Grumman operations. Specifically, soil gas and groundwater data collected by the Town as part of its IRM pre-design investigation in 2005 and by ARCADIS, as part of the Operable Unit 3 (OU3) Remedial Investigation (RI)/Feasibility Study (FS), at and near the former ice rink revealed that the former Park ice rink was a historical source of two freons: Dichlorodifluoromethane (Freon 12) and Chlorodifluoromethane (Freon 22). Those compounds were found to be contaminating the soil gas and groundwater at significant concentrations. The NYSDEC should require that the Town investigate and remediate Freons 12 and 22 in all media affected, in accordance with the Environmental Conservation Law.

3. The Town cannot disclaim responsibility for potentially having introduced or contributed to contamination of the Park during or subsequent to its 1962 redevelopment or for having precipitated or exacerbated the migration of contaminants during earthwork in 1962 or as part of the IRM in 2006 and 2007 (for the latter, see "General Comment 4" below for more information).

4. Importantly, during the conduct of the excavation phase of the Town IRM ARCADIS observed that low permeability soils retaining perched water were excavated without the implementation of even basic engineering controls, thus allowing contaminated perched water to drain into underlying soils. This violated a basic standard of care, the NCP, and NYSDEC technical guidance, all of which must be observed when undertaking such remedial projects. Unfortunately, this failure by the Town engineering consultant likely exacerbated the groundwater contamination, the full extent of which has yet to be determined. We invite your attention to NYSDEC DER-10, Section 5, Paragraph c, subsection 4, which states:

   "Each remedial design/remedial action is to not result in an uncontrolled or unapproved discharge or transfer of contaminants from one media to another."

   The excavation of the low permeability soils and release of contaminated perched water in the subsurface will result in additional impacts to groundwater in the area.

5. Since the Town used New York State funds to implement their IRM remedial activity, NYSDEC DER-10 Section 5.8(b)(7) requires that the Town provide in the IRM Report detailed costs, including any and all change orders, for the IRM implementation. Without this information, the Town Report is deficient.

Specific Comments

1. Abstract – under Contaminants, there is no mention of Freon 12 or Freon 22, nor chlorinated volatile organic compounds (VOCs) yet on page 8, the Town Report discusses cis-1,2 dichloroethene (cis-1,2-DCE) and trichloroethene (TCE) in describing what they found in soils.

2. Section 1.0 – ARCADIS disagrees that The IRM Report fulfills the final requirement of the Consent Order, as contaminant plumes in soil gas and groundwater attributable to Town operations have been identified (see below) and therefore must be investigated and remediated. Additionally, the Town IRM likely exacerbated groundwater contamination, as described in other sections of this letter.

3. Section 3.2 – At Page 6 the Town IRM Report states that, "For the IRM, surface soils were conservatively expanded to include the top 10 feet of soil..." Importantly, the NYSDEC did not require the "conservative" expansion. To the contrary, the NYSDEC determined that excavation to that depth was excessive and not cost effective. Thus, this statement is misleading because a casual reader could infer that the NYSDEC expanded the depth, which is not the case.

4. Section 3.2.1 – The Town defends the decision to utilize the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 surface soil Recommended Soil Cleanup Objective (RSCO) for polychlorinated biphenyls (PCBs) of 1 milligram per kilogram (mg/kg) to a depth of 10 feet below land surface (ft bls) by stating that "the depth for surface soils can also be specifically set by the NYSDEC". This statement is misleading as the NYSDEC had formally advised the Town that it did not support the Town remedy, citing that the Town remedy is "well in excess" of its requirements (NYSDEC letter to Town of Oyster Bay, October 2006). The Town's decision to assign the 1 mg/kg RSCO for PCBs as the remedial objective to depths of 10 ft bls is without merit.

5. Section 3.2.3 – Given the fact that the Town utilized TAGM #4046 as the primary reference for soil remedial objectives, it is inappropriate to categorize soils to depths of 10 ft bls as surface soils, as TAGM #4046 considers soils deeper than 2 ft bls as subsurface soils.

6. Section 3.2.2 – The statement that "no source areas for the VOC contaminants of concern..." is inaccurate. The OU3 RI and Town pre-design data collectively indicate that a residual source of Freons 12 and 22 in soil gas and groundwater is located beneath the former Park ice rink. Additionally, the NYSDEC independently tested the indoor air in the Bethpage High School, which indicated the presence of Freon 12. The Town should be required to investigate freons and evaluate and implement the appropriate remedy(ies).

7. Section 3.2.3 - RI and Town data indicate that the source of Freon 12 in soil gas is located beneath the former Park ice rink. The Town should be required to investigate Freon 12 and evaluate and implement the appropriate soil gas remedy.

8. Section 3.3 –the NYSDEC letter of October 27, 2006 indicated that the Town selected remedy (Alternative IV) is "well in excess" of what NYSDEC would require and that NYSDEC would have required Remedial Alternative II. Remedial Alternative IV resulted in excavation of 173,032 tons of soil. Remedial Alternative II would have resulted in meeting the remedial objective consistent with NYSDEC Part 375 requirements, but at a much lower cost.

9. As predicted by Northrop Grumman prior to initiation of the IRM remedial work, the Town did little to control the cost or scope of its remedial action, as their initial soil volume estimate provided in their IRM Work Plan of 100,000 tons was substantially less than the actual scope completed, whereby a total of 173,032 tons of soil and debris were removed. Such work was performed without adequate documented consideration of remedial alternatives that would have achieved the same remedial goals.

10. Section 3.3- The Report incorrectly states that the selected remedy "resulted in the removal of ...100 percent of the PCB impacts identified during the remedial investigation that exceeded the cleanup guidelines." As an example PCBs were found in Boring O4 at 100 milligrams per kilogram but the IRM did not remove these PCB impacted soils.

11. Section 4.1 –: A "properly" calibrated scale – What documentation exists to demonstrate the proper calibration of the scale? The records should be provided with the report as this relates to the volume of soil actually removed.

12. Section 4.2 – Pages 22 and 23. Paragraphs contain numerous statements (based on field observations describing origins of the fill material encountered) that are speculative in nature and without justification and should be removed from the report. Some examples include:

a. "...the wood blocks appeared to be consistent with flooring blocks used within the NGC and/or Navy facilities on Long Island."

b. "Many debris artifacts appeared consistent with aircraft manufacturing..."

c. "Distinct debris artifacts included a polymeric bladder similar to an aircraft cell..."

13. Section 4.6 – Based on observations made by ARCADIS during the excavation phase of the project, dust suppression was not performed on a proactive basis and as a result windblown fugitive dust was generated during the IRM, which significantly increased the risk of spreading contaminants to off-site areas. This inaction was in direct violation of the Community Air Monitoring Plan program requirements of the NYSDEC as well as the NCP.

Please contact us if you have questions or need additional information.

Sincerely,

ARCADIS U.S., Inc.

David E. Stern
Associate Project Manager/Senior Hydrogeologist

Michael F. Wolfert
Project Director

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