ARCADIS GERAGHTY & MILLER

ARCADIS Geraghty & Miller, Inc.
88 Duryea Road
Melville
New York 11747
Tel 631 249 7600
Fax 631 249 7610

ENVIRONMENTAL

Mr. Steven Scharf, P.E.
New York State Department of Environmental Conservation
Bureau of Eastern Remedial Action
Division of Hazardous Waste Remediation
50 Wolf Road
Albany, New York 12233-7010

Subject:
Comments on the Proposed Remedial Action Plan for Operable Unit 2 (Groundwater), Northrop Grumman and US Navy Bethpage, New York Facilities.
ARCADIS Geraghty & Miller Project No. NY000008.0213.00001

Date:
2 February 2001

Contact:
Carlo San Giovanni

Extension:
(631) 391-5259

Dear Mr. Scharf:

This letter was prepared by ARCADIS Geraghty & Miller, Inc. on behalf of the Northrop Grumman Corporation (Northrop Grumman) for entry into the administrative record, and to provide comments on the Proposed Remedial Action Plan (PRAP), Operable Unit No. 2 (OU-2): Groundwater for the Northrop Grumman and US Navy Bethpage, New York Facilities, dated November 2000. Northrop Grumman supports the selection of Alternative 3 as the groundwater remedy for the sites. For the reasons stated in the PRAP and as clearly demonstrated in the Feasibility Study (FS), Alternative 3 meets all the remedy selection criteria set forth in the Environmental Conservation Law and the regulations promulgated there under at 6 NYCRR Sec. 375-1.10, and eliminates or mitigates all significant threats to public health (to the extent that any such threat exists) and to the environment through the proper and reasonable application of scientific principles. Furthermore, Alternative 3 is fully consistent with the National Oil and Hazardous Substance Pollution Contingency Plan.

Northrop Grumman does not support the selection of other Remedial Alternatives evaluated in the FS (i.e., Alternatives 2, 4, 5, 6, 7 or 8) because the selection of those alternatives is not supported or justified by the FS, and because those alternatives do not meet the remedy selection criteria established in 6 NYCRR Sec. 375-1.10 (c). In particular, any alternative that includes treatment of the HN-24 Area or full, off-site plume containment as an element does not constitute a remedy that is feasible. A feasible remedy, as required by NYCRR Sec. 375-1.10 (c) (6), is one that is suitable to site conditions, capable of being successfully carried out with available technology, and that considers, at a minimum, implementablity and cost-effectiveness. Any remedy that addresses specific treatment for the HN-24 Area or involves full, off-site plume containment is clearly not suitable given site conditions identified in the Remedial Investigation (RI), FS, and recent vertical profile boring

(VPB) data. Further, as articulated in the PRAP and as demonstrated by the FS, off-site plume containment is neither feasible nor cost effective. The shear size (both in aeral and vertical extent) of the degraded groundwater makes full containment impossible, and the detected concentrations of the contaminants of concern do not warrant it, especially in light of the wellhead treatment contingency planning envisioned in the PRAP and the success and availability of wellhead treatment, if necessary. Simply put, off-site plume containment is not feasible, implementable, or cost effective and any remedial alternative that includes either full, off-site plume containment or the HN-24 Area treatment option should not be considered further.

Additionally, Alternative 3 must not be modified in any material way unless the proposed modifications were evaluated in the FS and are consistent with the preferred remedy. Pursuant to 6 NYCRR 375-1.10 (d), the NYSDEC documents its final remedy selection for Inactive Hazardous Waste Disposal Sites and provides the rational for its remedial choice in the ROD. The elements of the ROD that are established by regulation are the following: the location and description of the site, the site history, the current environmental and public health status, an enforcement history, goals and objectives of the remedial action, a description and evaluation of alternatives considered, a summary of the basis for the Department's decision; and a listing of the documents that the Department used in its decision making. The ROD is not an engineering plan or document and should not include engineering or remedial details, which are properly included in the Remedial Design. The State requirements for a ROD are virtually identical to the federal requirements as set forth at 40 CFR 300.430. (See for example, the ROD issued by USEPA Region II for the Hooker/RUCO site.) The Northrop Grumman/Navy PRAP, which serves as the basis for the ROD, includes all the elements required by 6 NYCRR 375-1.10 (d) and 40 CFR 300.430, serving the purposes set for in the regulations and meeting the requirements: to summarize and document the basis for the Departments remedy selection; discuss the comparative merits of the considered remedial alternatives; and provided a vehicle for soliciting public comment. The implementation details included in the PRAP, such as sampling methodology, precise schedules, pumping rates, "trigger values", financial documentation, well installation locations, precise contingency components, etc. are by regulation are not elements properly included in a ROD, and should not be included in the ROD. Subject to the comments provided below, Alternative 3 is sufficiently described and should not be modified. Further, it should be made clear in the PRAP and subsequent ROD that Northrop Grumman is not "closing" its operations at the Bethpage facility. Northrop Grumman is committed to maintaining a presence at the Bethpage facility for the foreseeable future.

Our comments on the PRAP are provided below, and are separated into the following two types: (1) general comments, which describe our position on issues that appear

throughout the PRAP, and (2) page-specific comments, which address specific issues relative to the page(s) specified in our comment.

General Comments

1. There does not now exist a significant threat to public health. Unfortunately the language in the PRAP, at Page 1 and elsewhere, gives an impression to the contrary. There are no current routes of exposure to contaminated groundwater. Where degraded groundwater has impacted or could threaten public supply wells, treatment systems have been installed. Consequently, there is no current exposure to groundwater, (by ingestion, dermal contact, inhalation or otherwise) which exceeds State standards. Likewise there is no exposure to contaminated soil. Soil found to be contaminated on the site was not transported from the site to the surrounding community, and all areas of contaminated soil have been addressed. See Specific Comment No. 2 in regard to Risk statements made, and General Comment No. 2 in regard to OU-1 soil issues.

2. The discussions of OU-1 (soil) impacts, exposures, remedial goals, and remedial actions presented in the PRAP are confusing to the reader. The goal of the PRAP is to present the proposed remedial plan for OU-2 (groundwater), and OU-2 should be the focus of the document. Although it may be appropriate to briefly describe the status of OU-1 in the site history section of the PRAP, discussions of OU-1 should be eliminated from the remainder of the PRAP and subsequent Record of Decision (ROD).

3. The PRAP states that the reason Northrop Grumman Corporation and the Navy are involved in the NYCRR Part 375 process is "...to address the significant threat to human health and/or the environment created by the presence of hazardous waste at the..." sites, and "... disposal activities have resulted in ... threats to the public health and/or the environment." Statements of this nature, which are made throughout the PRAP, could lead the reader to believe that these improper handling/disposal activities are presently occurring at the site(s). The PRAP and subsequent ROD should be revised to reflect the historic nature of the management of hazardous wastes and/or historic waste disposal practices that resulted in impacts to groundwater.

4. Based on input from the various water districts affected or having the potential to be affected by impacted groundwater from the Northrop Grumman Corporation and Navy sites, statements made in the PRAP (and statements to be made in the subsequent ROD) concerning the development of a carbon polishing contingency plan should be replaced with more general

language that gives the flexibility to select the appropriate remedial technology that best fits the specific situation. Discussions concerning this issue should be addressed in the Wellhead Treatment Contingency Plan.

5. The basic elements of the Wellhead Treatment Contingency Plan need to be described in sufficient detail to give the reader a sense of the tasks that will be involved in the plan. The letter (attached) dated December 4, 2000 from ARCADIS Geraghty & Miller to Mr. Larry Leskovjan provides all the details needed. Specific details of the plan, such as "trigger values" should not be spelled-out in the PRAP or ROD as it is premature for this level of specificity. The appropriate place to address the issue of trigger values is in the Wellhead Treatment Contingency Plan.

6. Based on recent groundwater sampling data, the on-site hot spot, which is also referred to as the HN-24 area, no longer exists. A statement should be added to the PRAP and ROD reflecting this fact, and remedial alternatives that include the HN-24 area should be ruled-out for this reason.

7. Throughout the PRAP, multiple reasons are given for the GM-38 treatment system. For the purpose of clarity, it is recommended that one purpose be defined and carried throughout the document. Based on ARCADIS Geraghty & Miller's current understanding and as stated on Page 16, Item E of the PRAP, the original purpose of the GM-38 treatment system was to remove contaminant mass from within an area of the plume that has contaminant concentrations that were higher than the surrounding area. The other reasons given in the PRAP for the GM-38 option, such as: reduction of future contaminant loading to the Bethpage Water District well fields is not appropriate language because it is not validated by the modeling conducted.

8. The Navy and Northrop Grumman have worked in a mutually supportive fashion to complete the RI, IRM, FS and undertake the ongoing investigative and operational work. That relationship is continuing. To that end, Northrop Grumman and the Navy have allocated certain tasks and responsibilities between themselves, for example the on-going off-site Vertical Profile Boring Program. Northrop Grumman expects that the implementation of the preferred remedy will continue in the same vein. Northrop Grumman expects and intends to enter into a mutually acceptable consent order with the DEC reflecting Northrop Grumman's commitment to complete the remedial work. We understand that the Navy will concurrently enter into a memorandum of understanding with the DEC that will have the same substantive effect of legally binding the Navy to undertake the work

envisioned in the ROD. Thus the Navy and Northrop Grumman's commitment to implement the preferred remedy that is identified in the ROD, including the implementation of any contingency plans related to water district resources, will be reflected accordingly in legally binding and mutually supportive agreements.

Page Specific Comments

1. Page 2. Paragraph 3. The contingency for the BWD well fields 4, 5, & 6 may involve technology other than "carbon treatment". The applicable technology has not been identified or selected. This language must be modified so as not to leave the impression that "carbon polishing" is the "remedy" selected, and allow for the flexibility envisioned. See also General Comment No. 4.

2. Page 7-8. OXY Hooker RUCO. The PRAP states that "The USEPA is [sic] recently released a PRAP for offsite groundwater contamination in the near future [sic]." It our understanding that the EPA has issued the OU-3 ROD for the RUCO site, therefore, the PRAP needs to be revised to reflect this. More importantly, the Northrop Grumman/Navy PRAP and ROD should explicitly state that under the EPA OU-3 ROD, RUCO is required to monitor and treat the VCM sub-plume and explicitly recognizes that the RUCO treatment must ensure that the Northrop Grumman/Navy treatment systems will meet the air emission limitations and other ARARs to the extent that those emission limitations are threatened by the RUCO VCM sub-plume. Thus the discussion at Page 16 Item D. (Vinyl Chloride Contingency Plan) is not necessary and should not be included as a Northrop Grumman obligation in any remedy. Rather NYSDEC should incorporate by reference the EPA remedy and state VCM sub-plume remediation as a RUCO obligation under EPA jurisdiction. Consequently the discussion of "Remedial Alternative D" incorporated in Alternative 3, as well as all the others, must be corrected.

3. Page 8. Section 3.3. The subparagraph discussing RCRA is irrelevant and should be deleted.

4. Page 9. Section 4.1.1. The description of the Lloyd aquifer as one of the "important formations for the purpose of this PRAP" is inaccurate. The Lloyd aquifer should only be discussed in the context of the general hydrogeologic setting of Long Island (consistent with language used in the RI and FS reports). The PRAP and subsequent ROD should be revised to state that the Upper Glacial and Magothy aquifers are the aquifers of

importance to the study. Since the Lloyd aquifer underlies the Magothy Aquifer and is protected by the Raritan Clay, which is an extensive and continuous clay layer, the Lloyd aquifer is not a part of the site investigations. This revision is particularly important considering the attention the Lloyd aquifer received during the recent public meeting.

5. Page 10. Section 4.1.3. The contaminants to be addressed in OU-2 are certain "VOCs" in groundwater, not soil. This paragraph leaves the impression that metal constituents found in the soils at certain areas may have migrated offsite.

6. Page 13. Section 4.3. It is our understanding that no data exist that definitively shows that members of the community or site workers were or are being exposed to site-related contaminated groundwater. For this reason, the discussion of human exposure pathways needs to be revised to state that the exposure pathways discussed are only potential or hypothetical scenarios. The PRAP and ROD need to be very clear that there are no known past or current exposures to site-related groundwater contamination. In addition, to avoid confusing the reader, all references to exposure scenarios relative to soils should be deleted. See General Comment No. 1 for additional comments relative to risks posed by the sites.

7. Page 15. Section 7.1, Item C. The description of the VPB Program needs to be updated to include a description and objectives of the VPB Program conducted and planned south of Hempstead Turnpike.

8. Page 17. Item F. The action level of "one half the concentration of the respective MCL" stated in the PRAP for the enactment of carbon polishing should be deleted. As we state in General Comment No. 5, it is premature to determine if carbon treatment is necessary. Therefore, it is also premature to set an action level for carbon polishing. The establishment of action levels is best left for the Wellhead Treatment Contingency Plan.

9. Page 20. Section 7.2. Item 1. The PRAP and subsequent ROD should reference the EPA ROD for OU-3 RUCO site, which states that any remedial measures required to address VCM would be implemented and funded by the Occidental Chemical Corporation (OCC). See also Specific Comment No. 2.

10. Page 21. Section 7.2. Item 2. As previously requested by ARCADIS Geraghty & Miller and the various water districts located south of the sites, all language concerning the additional protection provided by the GM-38

area remedy should be deleted from the PRAP and subsequent ROD, because it gives the reader the false impression that the wellhead treatment measures currently in place are not protective of human health. Examples of this language can be found in the first and third full paragraphs on page 21 of the PRAP, and specific quotes are as follows: "...risk of exposure remains in the event current engineering controls fail. For this reason, additional groundwater remedies...would offer an additional margin of protection..." and "The main objective of the GM-38 well area remedy would be additional protection of human health...." As stated elsewhere in the PRAP, there is no current risk to human health, primarily due to the treatment measures currently in place at affected public supply wells.

11. Page 27. Section 8. Item 10. As stated in General Comment No. 5, it is premature to establish "trigger values" in the PRAP or ROD, as additional data collection and groundwater modeling need to be conducted before a trigger value(s) can be established. The establishment of a trigger value(s) should therefore be left for the Wellhead Treatment Contingency Plan. The general plan for establishing the trigger value(s) will be to develop a contaminant transport model for the site using the data in the RI, public supply well pumpage information, and the data collected during the ongoing VPB Program. Once calibrated, the model will be used to determine the appropriate trigger value for each threatened supply well. As used herein, the term "trigger value" means a specified concentration of VOCs detected in a groundwater sample collected from an upgradient outpost monitoring well that would initiate, or trigger the start of design efforts for wellhead treatment. A trigger value would be established for each downgradient public supply well that has the potential to be impacted by the plume, and the trigger value established would be set at a concentration such that there would be sufficient time to design and construct the appropriate remedy prior to the public supply well being impacted. See also General Comment No. 5.

Please call if you have any questions or need any additional information.

Sincerely,

ARCADIS Geraghty & Miller, Inc.

Carlo San Giovanni

Carlo San Giovanni
Project Manager

Michael F. Wolfert
Project Director

Copies:
Larry Leskovjan, Northrop Grumman
John Cofman, Northrop Grumman
Mike Tone, Nixon, Peabody
Jim Colter – NAVFAC
Frank Flood – Massapequa Water District
Matt Snyder – New York Water Services Corp.
Al Licci – South Farmingdale Water District
Arnold Palleschi – Town of Hempstead Department of Water
Ron Krumholz – Bethpage Water District