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ENVIRONMENTAL

VIA E-Mail and Regular Mail

Mr. Steven Scharf, P.E.
Project Manager
New York State Department of Environmental Conservation
Bureau of Eastern Remedial Action
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7015

Subject:
Response to Comments on Operable Unit 2 Remedial Activities,
Northrop Grumman Corporation/Naval Weapons Industrial Reserve Plant Sites,
Bethpage, New York (NYSDEC Site IDs 1-30-0003A and B).

Date:
21 April 2004

Contact:
Michael Wolfert

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Our ref:
NY001348.0014.00001

Dear Mr. Scharf:

ARCADIS has received copies of the following letters/ e-mail that provide various comments to the New York State Department of Environmental Conservation (NYSDEC) regarding Operable Unit 2 (OU2) remedial activities currently underway:

- Anthony J. Sabino, dated February 28, 2004, (Sabino Letter #1).
- Anthony J. Sabino, dated March 26, 2004, (Sabino Letter #2).
- Dvirka & Bartilucci (D&B), dated February 23, 2004, (D&B Letter).
- H2M Group, dated March 10, 2004, (H2M Letter).
- New York State Department of Health (NYSDOH), dated February 26, 2004, (NYSDOH Letter).
- NYSDEC e-mail dated March 26, 2004, (NYSDEC e-mail).

On behalf of Northrop Grumman Corporation (NGC) and Naval Facilities Engineering Command Northeast (Navy), ARCADIS is providing responses to the comments made. In the following italicized text, the above letters are referred to

using the parenthetical notation given above, along with the subject of their comment(s). The ARCADIS responses (in indented text) immediately follow each comment.

1. ***Sabino Letters #1 and 2. Testing for Perchlorate in Groundwater Samples.***

   NGC is currently reviewing their site chemical database to determine whether products potentially containing perchlorate were used at the Bethpage facility (presently or historically). Subsequent to the completion of this review, NGC will provide a response to this request.

2. ***D&B Letter, First Bullet – Quarterly Report Submittal.***

   Starting with 2004 ARCADIS and NGC will produce the final quarterly and annual groundwater monitoring reports no later than 90 days after receipt of the last analytical result from the laboratory for each quarterly event.

3. ***D&B Letter, Second Bullet – GM-75D2 Area.***

   Based on available budget and prioritization of work (i.e., current attention to outpost wells and GM-38 area remedy), Navy will commence investigation activities in late 2005 or early 2006, with the needed regulatory approval. A work plan for this investigation will be submitted for NYSDEC review within the next few months.

4. ***H2M Letter, First Bullet– Quarterly Report Submittal.***

   Please refer to the Item 2 response above.

5. ***H2M Letter, Second and Third Bullets– Remedial Wells Specific Capacities.***

   The specific capacity data collected during the past few quarters indicated that the efficiency of the ONCT remedial wells was apparently decreasing. However, data collected during the Fourth Quarter of 2003 indicated an apparent improvement in well efficiency, as the specific capacities had returned to values close to those measured when the wells were initially brought online in November 1998. Since well specific capacity normally does not improve with

time without some sort of redevelopment effort, ARCADIS reviewed other hydrologic factors that may have accounted for these fluctuations.

ARCADIS reviewed and analyzed historical water-level data (early 1980s to present) from a deep observation well that is located approximately 3.6 miles northeast of the NGC site in an area sufficiently away from local pumping influences so that the water-level data represented changes only from regional pumping and seasonal hydrologic factors. Based on this analysis, we determined that the static depth to groundwater declined more than 13 feet in this sub-region of Long Island between 1991 and 2002. It is apparent that static water-level changes of or close to this magnitude can make it appear that a well's specific capacity has declined (by causing a lower pumping level) when the well's efficiency has not actually changed. For future determinations of specific capacity we will apply a correction factor for the static water level based on the observation well mentioned above or if available, one closer to the site. Such a correction factor will insure that the specific capacity calculated will not be biased by the changing static water-level.

Therefore, redevelopment of the ONCT remedial wells is not recommended at this time.

6. H2M Letter, Fourth Bullet– Remedial System Design VS. Actual Pumpage

ARCADIS conducts quarterly water-level monitoring when all remedial wells are pumping, as the monitoring purpose is to determine/document that pumping at or close to design rates is effective in maintaining the hydraulic barrier that prevents off-site flow of VOC-impacted groundwater. This regular monitoring has demonstrated the continuity of the hydraulic barrier through time. However, like all mechanical systems, there are scheduled as well as unplanned system shutdowns for maintenance and repairs. If a well is off temporarily or even if the entire system shuts down briefly the effectiveness of the capture system is not completely comprised. The vast majority of impacted groundwater that is within the capture zone of the remedial system will remain within the local area during a temporary shutdown. Once the well(s) is pumping again the impacted water will once again flow towards the remedial well, such that it will be captured. Moreover, NGC has personnel available 24 hours per day seven days a week to respond to non-routine system shutdowns or operational difficulties. In addition,

NGC is actively pursuing additional measures to minimize routine system maintenance downtime and improve non-routine system shutdown/decreased function response time to improve the overall operational efficiency of the remedial system over the longer term. Such measures include upgrading system controls and system monitoring.

7. NYSDOH Letter, Vapor Intrusion Potential

Navy has received the final Finding of Suitability to Transfer (FOST) (Navy 2003) containing the approval of the transfer of the approved portion of the 105 acre property from the NYSDEC in a letter dated December 17, 2003. Therefore, based on the approved FOST, additional investigation or remedial activity on this parcel is not warranted. Furthermore, Well HN-24I is located 160 feet from Plant 3 and is screened 148 to 158 feet below landsurface making the possibility of vapor intrusion into Plant 3 unlikely based on this data.

8. NYSDOH E-Mail, Outpost Well Split Sampling

In a March 18, 2004 letter from ARCADIS to the NYSDEC, the issue of split sampling was addressed as it had not been covered in the Public Water Supply Contingency Plan (ARCADIS, 2003).

In the letter the following was stated:

> "However, only the samples collected/analyzed by ARCADIS and their laboratory will be used in the context of the PWSCP to determine if trigger values have been reached."

In a March 25, 2004 letter the NYSDEC concurred with ARCADIS' letter. In the referenced e-mail however, the NYSDEC stated the following:

> "As far as the sampling of the out-post wells and use of the analytical data, split sampling is to be used to verify the results of uniform sampling program. If there is some discrepancy identified by the split sample(s), then the

> Navy/Grumman will go out immediately and re-sample those wells."

Navy/NGC intend to base decisions on re-sampling and determination of trigger values on samples collected and analyzed by ARCADIS and their laboratory and not on split sample results. This is consistent with the ARCADIS and NYSDEC letters discussed above.

We trust the foregoing is satisfactory. If you have any questions, please feel free to contact us.

Sincerely,

ARCADIS G&M, Inc.

David E. Stern
Senior Scientist

Michael F. Wolfert
Project Director

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