

RAB Comments Dated January 31, 1999
NWIRP Calverton
Phase 2 RCRA Facility Investigation

Those members of the RAB that provided input to these comments include. Lou Cork, Lorraine Collins, Bill Gunther and myself. Anne Miloski reviewed the comments and supports them. The submission of these comments does not preclude RAB members from submitting additional comments.

General comments

1. **Comment:** There was discussion at the 12/15 Steering Committee meeting as to what standard should be achieved through remediation. It was agreed by those present (Collins, Cork, Gunther & Johnson) that the standard for residential use should be used as the clean-up goal for all sites.

Response: The Navy understands and does recognize the community's desire to have property, that will someday be conveyed to the Town, to be remediated to the most stringent standards. However, the Navy also has a responsibility to achieve a level of remediation that would allow the most "reasonable" reuse of that property in a timely manner using taxpayer funding appropriated from Congress. In order to determine a reasonable reuse, the Navy turns to the entity that will ultimately be receiving the property, in this case the Town of Riverhead, to dictate what that reuse will be through their land reuse plan that is required as part of the Environmental Impact Statement (EIS) process. For Calverton, the preferred reuse, as described in Riverhead's Land Reuse Plan, called for an industrial park to be created along with various commercial-type uses. These "industrial" levels will be used during the Corrective Measures Study (CMS) phase to evaluate different cleanup technologies that will remediate the sites to those levels. Please understand that many times a "residential", or TAGM value is achieved indirectly, especially when excavation and disposal is the preferred method unless the additional volume required to reach the "residential" value becomes cost prohibitive.

The above explanation has been issued as the Navy's policy with regards to property that this to be transferred out of federal ownership. A copy of the policy can be forwarded to the RAB if desired.

In addition, the special legislation that was issued which allows the Navy to convey this property, without compensation, to the Town of Riverhead may have also contained a restriction that the property must be used for economic redevelopment. In such a case, a residential reuse would not seem to be consistent with this use restriction.

2. **Comment:** The sections were written differently and information given in some sections was more detailed than in other sections. This made review difficult. The format of each section should be the same with information presented by media (soil, sediment, groundwater), then health and ecological impacts for each given.

Response: The Navy will continue the IR Program by forwarding information on a site-by-site or parcel-by-parcel basis. The Navy will begin by breaking out those sections of the draft RFI reports that deal with Sites 7 and 10A which will be the focus of the first of several technical subcommittee meetings. It is hoped that by handling the information in this manner, a better understanding of the data can be achieved.

3. **Comment:** There should be a list of acronyms at the beginning of this, and future documents.

Response: A list of acronyms will be developed for use by the RAB.

Site 1 - Northeast Pond Disposal Area

4. **Comment:** Page 2-57, conclusion 2. It is stated in this conclusion that thallium may not be a site contaminant, however, it is also stated that thallium did exceed groundwater standards. It should be determined conclusively whether in fact

thallium occurs naturally at the site. In a preliminary data screening in 1992 (See attached Table 5-1, Draft Site Investigation Report, January 1992) no thallium was detected in soils. Why is it now showing up in groundwater?

If thallium is background, explain the reasons for the extreme variations in test results at contaminated sites -

NP-MW02, Aug 94, 12.4 ug/l

NP-MW04, Jun 97, 5.8

NP-MW05, Jun 97, 3.6

FT-MW02-S, Mar 95, 3.5

FT-MW02-I, Mar 95, 6.3

(Will be interested to see your response to the NYSDEC comment on Thallium.)

Response: The response presented here is identical to that for the state comment, as follows.

The Navy has contacted Northrop Grumman and inquired about the potential for thallium -based detectors to have been disposed of in the Northeast Pond area. To date, Northrop Grumman had not yet responded. Further discussions relating to this issue is required and will be discussed as part of a focused technical subcommittee meeting regarding future actions at Site 1.

However, based on the evaluation of the analytical results, the probability that thallium is site related is low. Two rounds of groundwater testing were conducted during each of two phases of investigation, for a total of four rounds. For the first two rounds, samples were collected using a bailer and sample results may be biased high because of fill intrusion into the wells. The second phase samples were collected using low flow sample techniques. As a result, the Phase 2 results are considered more representative of site groundwater.

Thallium was detected in the upgradient monitoring well (NP-MW01) in two of the four rounds at concentrations of 4.0 and 4.1 ug/l, (MCL is 2.0 ug/l). Thallium

was detected in more than half of the downgradient monitoring well samples, but at concentrations ranging from 3.3 to 6.7 ug/l. In addition, thallium was detected in 6 of 13 laboratory and field QA/QC data at concentrations ranging from 2.9 to 4.0 ug/l. Thallium was also detected in one QA/QC sample collected in August 1994 at a concentration of 12.4 ug/l. However this single data point was a duplicate of a sample with a non detected result. The poor comparison between original and duplicate result raises a concern about the accuracy of the result. In addition, the 1994 sample results may be biased high because of fill intrusion into the well.

The relative consistency between the upgradient and downgradient data and the finding of similar concentrations of thallium in blank samples is a general (although not conclusive) indication that the presence of thallium in the groundwater is not site related. In addition, thallium was not detected in the soil or waste samples from the site. However, long term monitoring may be required to resolve whether or not thallium is a site related contaminant.

5. **Comment:** Page 2-58, conclusion 7. This conclusion, that the chemicals in soil and sediment are not adversely impacting groundwater quality, is not supported by statements within the section. On page 2-11, it is stated that **State groundwater quality standards have been exceeded** by 10 chemicals. On page 2-13 it is stated that federal and state **drinking water standards have been exceeded** by the same 10 "chemical concentrations," and that "the risk assessment has identified the soils **and groundwater at the Northeast Pond Disposal Area site to pose unacceptable human health risks...**"

Given the extent of the contamination at this site, particularly the concentrations of PCBs listed in the sediments in Figure 2-4, a remediation solution that calls only for groundwater monitoring is not acceptable. The Corrective Measures Study for this site must consider excavation and removal of the contaminated soil for the disposal offsite and should also include the evaluation of active groundwater treatment alternatives.

Response: The statements made regarding that the soils and groundwater may pose unacceptable risks to human health were based solely on Phase I RFI data which did appear to be valid until the Navy conducted low flow sampling of the same wells during the Phase 2 RFI. When lower concentrations were found during the Phase 2, it was concluded that the higher values found in the Phase 1 may have been caused by fill intrusion into the well and the samples may not have been a true representation of groundwater, hence the need for low-flow sampling techniques

This above concern was specifically addressed in the Phase 2 Investigation as identified under the Data Gap section (page 2-16). "The actual presence of relatively non-mobile constituents (PCBs, pesticides, and metals) in groundwater. " To address this concern, low flow sample techniques were used to collect Phase 2 groundwater samples

With regards to remedial alternatives for soil, various alternatives, including full excavation of the landfill, will be evaluated during the Corrective Measures Study (CMS) for this site. The main focus of the alternative analysis will center around the cost of each alternative versus how much more protection to human health can be achieved.

However, the Navy is hesitant to proceed to the CMS until the regulatory community becomes comfortable that the Navy has collected sufficient data at this site to proceed with alternative analysis. This decision will be the focus of a future technical subcommittee meeting to discuss Site 1.

Site 2 - Fire Training Area

6. **Comment:** Page 3-1, paragraph 3. It is stated that the water table is located 10 - 15 feet below grade. It should be noted that in Table 3-2 the depth to water in MW08 was less than 8 feet. While most of the wells did show a depth to within this distance, further work is necessary to obtain accurate, detailed information.

This discrepancy and the notoriously variable water table across the entire area supports the need for a dependable, current groundwater map.

Response: The reference on Page 3-1 is a range for most of the wells at the site and in particular for wells in the vicinity of the fire training ring. In general the water table is very flat at the fire training area. However, what does vary by several feet is the ground surface elevation. Monitoring Well MW08 happens to be located within a small depression, which accounts for the difference in depths to water table.

Note that all permanent monitoring wells have been accurately located both horizontally and vertically by licensed surveyors. Several local and groundwater contours maps have been developed and submitted to the RAB for review. These maps have consistently demonstrated a relatively simple groundwater flow pattern at the site.

7. **Comment:** Page 3-2, first paragraph. The statements in this paragraph are somewhat confusing ". A free product recovery system operated until 1993 when the system was shut down. Then, it is stated that free product recovery has continued from the shallow monitoring wells until 1996. Finally, it is stated that 270 gallons of petroleum product was recovered as of December 1993..." Is this an error? Should it be December 1996? Or was the amount recovered from the shallow monitoring wells too insignificant to be measured?

Response: To clarify the operation, the paragraph will be revised as follows.

A groundwater recovery system was installed in December 1987. This system consisted both of an active and a passive recovery system. The active recovery system included a groundwater pumping well, an oil recovery well, and an oil water separator tank. The passive recovery system consisted of hydrophobic filters located in shallow wells. The active recovery system was shut down in 1993 due to concerns with the quality of the discharged water. Passive free product recovery continued until 1996. As of December 1996, approximately 325 gallons of petroleum product have been removed from this site.

Please note that the Navy will be installing a new "active" free product recovery system this summer to continue the efforts of Northrop Grumman and will continue to operate the system to address free product at Site 2.

8. **Comment:** Page 3-3, paragraph 4 It is stated that there is no information available on the irrigation well, yet statements about that well were made at our November meeting. If information is available, it should be added to the report.

Response: The referenced statement will be deleted. Data on the irrigation wells is provided in Appendix A, but is not discussed in the text. The following statement will be added to Page 3-25. "VOCs were not detected in the Golf Course irrigation well."

9. **Comment:** Page 3-4, first paragraph. It is stated that "25,000 pounds of organics have been destroyed through biodegradation." Additional information on how this estimate was obtained should be included. If the estimate is supported by testing or analyses, that too should be included. And, if there are supporting analyses, why such a wide variable in the reduction of VOC concentrations (70 to 95 percent)?

Response: The destruction of organics is presented in the Phase 2 Air Sparging/ Soil Vapor Extraction Pilot Study Report dated December 1996. The value is based on the calculation method presented in Summary Results Report of Pilot Study Air Sparging/Soil Vapor Extraction System dated June 1996. Both of these reports have been forwarded to the RAB. The following statement will be added to the report.

"The range of VOC reductions is based on individual chemicals, not variability in the data. Some chemicals are more biodegradable and/or volatile than others. Measured removals for these chemicals were in the 95% range. Other less volatile and biodegradable chemicals averaged closer to 70% reduction."

10. **Comment:** Page 3-6, fifth bullet. Sorry, can't help noting that "one" drum was found at this site, too. Just out of curiosity, are there records that show that chemicals or hazardous wastes were stored in drums anywhere onsite, and how if they were, are there documents showing proper disposal?

Response: Records for storage and disposal of hazardous waste were kept by Northrop Grumman and submitted to the state in accordance with the specific regulations. The appropriate areas of drum storage were identified in Northrop Grumman's Site Assessment effort and summarized in the Navy's EBS documents during the closure process for the Calverton facility. As explained in the reports, these potential AOCs were identified, sampled and remediated, if required, by Northrop Grumman to the satisfaction of the NYSDEC Regional offices in Stony Brook, NY.

11. **Comment:** Page 3-16, paragraph 3. It is stated that soil sample results are "included in Appendix C." There is no Appendix C (or any other appendices referenced) in the document, nor are any appendices listed in the Table of Contents. This made it rather difficult to review sample results.

Response: Appendix C is in Volume II of the document submitted to the RAB. The appendices will be added to the Table of Contents.

12. **Comment:** Page 3-16, paragraph 4. It isn't clear that the statement "the extent of groundwater contamination is defined and currently does not extend off site" is a reliable conclusion (Also conclusion #1, page 3-30). The EPA was justified in their comment that the offsite sampling conducted was not adequate. In fact, it is somewhat ironic that the Navy response to the EPA claims that "...missing small ribbons or pockets of contaminated groundwater..." is unavoidable, after making the acknowledgment in conclusion #2 on page 3-30, that the contamination at this site is "...not contiguous, but pockets of discrete contamination..." This is all the more reason that additional offsite sampling at closer intervals with wells located closer together is needed.

Response: This specific concern along with the need for additional off site testing will be the focus of an upcoming technical subcommittee meeting to discuss Site 2 and its off-site component. A data package similar to the one forwarded for Sites 7 and 10a will be forwarded for review prior to the meeting. Decisions made between the Navy and the Calverton regulatory community will then be presented to the community during subsequent RAB meetings.

13. **Comment:** It should be noted that Figure 3-1 is not to scale, therefore, it is difficult to determine exactly where the GC-TWs are located in relation to the permanent monitoring wells at the FT site.

Response: Figure 3-1 is to scale and all temporary and permanent monitoring wells are shown on this map. A scale is provided on the figure.

14. **Comment:** Page 3-21 Reference is made to additional appendices that have not been included with this document.

Response: The Appendices are in Volume II of the document submitted to the RAB. The appendices will be added to the Table of Contents.

15. **Comment:** Page 3-30, Conclusions. Soil and groundwater pollution at the FT area and vicinity is well documented. Among the contaminants found, high levels of VOCs (particularly solvents) were detected in FT-MWs 05-S and 08-I, which are located at the fence line, in 1994, '95 and '97. It is stated on page 3-7 that "...VOC contamination to the south (offsite) and east is not completely characterized ." In order to address this data gap 4 temporary monitoring wells were drilled.

Given the extent of the contamination at this site, the previous comments on the Draft RCRA Facility Investigation Report from regulators including the NYSDOH and EPA regarding offsite testing, the Navy's position that "...contamination is likely to exist offsite..." stated in a response to EPA comments (See attached), and EPA and NYSDEC comments on this report, it seems that concluding that "...groundwater contamination does not extend offsite..." based on one-time

testing of 4 wells drilled and sampled at questionable depths is in itself a highly questionable conclusion. I reiterate the comment made above, additional offsite testing needs to be done.

Concurrent with drafting a CMS to address overall soil and groundwater remediation, additional offsite testing should be conducted, and free-product recovery should resume immediately.

Response: The need for additional off site testing will be determined during an upcoming detailed re-evaluation of the site data. Construction of a free product recovery system is underway and is scheduled for installation in the summer of 1999.

Site 7 - Fuel Depot

16. **Comment:** Page 4-2, paragraph 2. Several storage tanks are described. Are the remaining tanks scheduled for removal? If so, when? If not, do they meet Suffolk County Health Codes (Articles 6 and 12)?

Response: The remaining tanks were removed after preparation of the report. As of spring of 1998, all tanks have been removed from the Fuel Depot. The text will be revised.

17. **Comment:** paragraph 4. This paragraph is very confusing. Certainly wells have been installed since May of 1989, and while maybe there was no direct remediation of soils or groundwater, 114 gallons of petroleum were removed from this site as of December 1993, which counts for something -- unless it was simply pumped out of the storage tanks and "removed." Please clarify.

Response: The paragraph is accurate as stated. Free product is a separate media and removal of free product does not directly clean up either soils or groundwater.

18. **Comment:** Page 4-3, last paragraph It is stated that spills have been documented at the fuel depot. Information (at least a total figure) on these spills should be given

Response: This information is in the IAS, which has been provided to the RAB.

19. **Comment:** Page 4-4, bullet 5. How much additional free-product was recovered between 1993 and 1996?

Response: Based on Grumman records, 60 gallons of free product were removed from December 1993 to December 1996. The text will be revised to reflect this update.

- 20 **Comment:** Page 4-6, first bullet. In 1992, the results of the analysis on lead were 11.8 to 692 ug/l and 25 ug/l was detected in FDMW -06 during testing in Mar '95. The effort should be made to get a good sample and evaluate the risk.

Response: The Navy will conduct the modeling with all data currently available.

21. **Comment:** Page 4-13. Can't review soil samples because there's no Appendix C.

Response: Soil sample results are presented in Table 4-3 of Volume I and Appendix C of Volume II Both volumes have been provided to the RAB.

22. **Comment:** Page 4-16, Table 4-2. Site 7 is not the Fuel Calibration Area, this title should be corrected.

Response: Agreed.

23. **Comment:** Concur with the NYSDEC comment that well #FDMW-07 may not be deep enough to intersect contamination.

Response: The need for deeper monitoring wells will be considered and discussed at an upcoming technical subcommittee meeting.

24. **Comment:** Page 4-19, paragraph 3 The very last sentence states that "... based on the data collected the extent of the groundwater contamination is adequately defined .," however, the sentence directly above states that "...Figure 4-2 depicts the estimated extent of groundwater contamination..." If the results in Figure 4-2 only show an estimate, then clearly additional sampling is required.

Response: The Navy agrees that additional sampling is needed at this site. The question is when and for what purpose. The Navy believes that sufficient information is available to proceed from the study phase to the alternative analysis phase. The primary reason for identifying the extent of contamination at this time is to generate a reasonably accurate cost estimate in the corrective measure study

During the design of a remedy, additional characterization and delineation is normally conducted in accordance with site specific remediation goals to ensure that a remedy is properly designed. Monitoring is also conducted overtime to check the effectiveness of the remedy. This evaluation is particularly needed for groundwater at the fuel depot, because the contaminants are fuels that can both migrate and biodegrade

To help clarify this approach, the following text will be added to the end of Page 4-19: "... to proceed from the study phase to the alternative analysis phase."

25. **Comment:** Page 4-24 Conclusion 1 is not supported given the depth of monitoring well 07. Additional testing is necessary to determine the extent of groundwater contamination

Response: Conclusion 1 is supported based on the finding of no contamination in groundwater samples collected at three different depths at this location. Monitoring Well 07 was placed based on the finding of trace fuels in the shallow

groundwater (5 feet and 20 feet below the water table) and no fuels in the deeper groundwater.

Please refer to the handouts provided to Sherry Johnson which are part of this response document. The handouts show the vertical profile of this site based on data collected to date. These figures will be focus of the first of several technical subcommittee meetings which will be required in order to make specific decisions on a site-by-site or parcel-by-parcel basis.

26. **Comment:** Recovery of the free-product should resume immediately.

Response: Discussion on free product at Site 7 is provided in the EECA – September 1998 that was distributed to the RAB. In overview, there is no recoverable free product remaining at Site 7. However, as part of a remedy, the potential presence of free product will continue to be investigated. If detected, an evaluation of options would be conducted to ensure that the presence of any free product won't interfere with the effectiveness of a groundwater remedy.