

**RESTORATION ADVISORY BOARD (RAB) MEETING
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT CALVERTON
SUFFOLK COUNTY COMMUNITY COLLEGE, RIVERHEAD, NEW YORK
NOVEMBER 5, 1998**

The third meeting of the RAB began at 6:00 pm and ended at 10:45 pm. RAB members attending were: community members Sid Bail, Lorraine Collins, Louis Cork, Bill Gunther, Sherry Johnson, Jean Mannhaupt, Randolph Manning, Bob Pohlman, and Warren Voegelin; Marsden Chen, Stan Farkas, and Jeff McCullough from New York State Department of Environmental Conservation (NYSDEC); and Joe Kaminski (representing Judith Hare) and Jim Colter from the Navy. Members absent included community members Henry Bookout, Herb Golden, Ann Miloski, Joe Pannone, John Quinn, and Vanie Tuthill; Andrea Lohneiss representing the Town of Riverhead; Martin Simonson representing DCMC; and representatives from New York State Department of Health (NYSDOH), Suffolk County Department of Health Services (SCDHS), U.S. EPA Region II, and The Nature Conservancy.

In addition, there were approximately 5 people from the general public attending the meeting.

WELCOME AND AGENDA REVIEW

Mr Joe Kaminski, representing Ms. Judith Hare, welcomed everyone. Mr. Kaminski explained that Ms. Hare was not able to attend the meeting. Mr. Jim Colter acted as the Navy Co-Chair for the meeting.

REVIEW AND APPROVAL OF MINUTES

The stenographer transcripts from the August 4, 1998 RAB meeting were paraphrased and summarized into meeting minutes. The minutes were mailed out to all the RAB members for review. No comments were made on the August 4, 1998 RAB meeting minutes and the minutes were approved as written.

AMENDMENT OF RAB OPERATING PROCEDURES

The Steering Committee had its first meeting on September 29, 1998. At the meeting, the committee prepared language to add to the RAB operating procedures that would put a cap on the number of RAB community members. The amendment to membership limits the number of community members to 15 and allows for 3 non-voting alternate community members. The alternates would be given first consideration as openings on the RAB occur. Currently there are 15 community members.

The RAB voted on and approved the new language to be incorporated into the membership section of the RAB workbook. The revision to the operating procedures is provided as an attachment to these meeting minutes.

STEERING COMMITTEE QUESTIONS & ANSWERS

The Steering Committee met twice to discuss the draft Phase 2 RCRA Facility Investigation (RFI) Report for Sites 1, 2, and 7 (dated January 1998). At the Steering Committee meetings, the RAB community members decided they needed an extension for providing comments on the draft Phase 2 RFI Report so they could review regulator comments on the report and obtain additional information.

To date the EPA comments (previously provided to the RAB) are the only comments that have been submitted to the Navy. The Navy is planning to set up a technical meeting to discuss the report with the regulators. Because the RAB community members would like regulator comments before providing community comments, the Navy agreed to an extension of 60 days from the technical meeting with the regulators.

The RAB questioned whether they could attend the technical meeting and asked for notification of the meeting. The Navy explained that the technical meetings are generally held in the Albany or Stony Brook NYSDEC office or in the Navy office in Philadelphia. The technical meetings are working meetings where the regulators and the Navy make decisions. However, the meetings are open to the public. If there is enough RAB interest, the Navy could hold technical meetings closer to the facility.

The Steering Committee also requested maps. The Navy provided Ms. Sherry Johnson (RAB Community Co-chair) with an aerial map and also several copies of the groundwater contour maps that The Nature Conservancy prepared (April 1998). The Nature Conservancy maps were prepared based on four rounds of water level data taken from March through December 1997. These maps show groundwater levels and flow direction of groundwater in and around the Calverton facility. Currently, the Navy is incorporating the groundwater data into the Geographic Information System (GIS) for NWIRP Calverton. In addition, the Navy is inputting groundwater data obtained by Grumman during closure of the Calverton facility (sample locations and chemistry analytical results). The GIS can be used to prepare various presentations of the results of environmental investigations. For example, the RAB community members would like a map showing all the locations where groundwater samples are greater than State drinking water standards. The Navy is currently working on such a figure, as this was a previous request of the regulators. The RAB questioned the Navy on the schedule for the completion of the GIS and the maps. The Navy stated that they are currently inputting the data; however, they do not have a specific time frame for completion.

Mr. Sy Robbins of Suffolk County Health Services attended the Steering Committee meeting on October 22, 1998. The attendees at the October Committee meeting asked Mr. Robbins various questions about sampling activities. The Steering Committee did not believe there was enough information in the Phase 2 RFI report. Mr. Colter clarified that this report is only presenting analytical data from the latest sampling program and that results from previous sampling efforts were summarized in the Phase 2 report.

The RAB community members questioned whether the facility had a current RCRA permit. The Navy indicated that currently the permit has expired and the Navy needs to renew the permit. The permit was for Northrop Grumman to operate a hazardous waste management facility. There are no longer any hazardous waste operations occurring at NWIRP Calverton and the Navy has questioned the need for permit renewal. However, NYSDEC has told the Navy that the permit can not be terminated until the Navy meets the corrective action portion of the permit. NYSDEC indicated that only the corrective action module of the permit (Module III) is required and that the rest of the permit does

not need to be renewed. The Navy needs to get information to NYSDEC to get the permit renewed and is hoping to do so by the end of 1998. Once the Navy gets the information to NYSDEC, they will try to expedite review of the permit application. The RAB community members also questioned NYSDEC about the expected expiration date for the renewed permit. NYSDEC said they would look into the expiration date during their review.

The RAB community members questioned the Navy about the program under which remedial investigations/activities for the sites were being conducted. The Navy explained that remedial activities at NWIRP Calverton were being conducted under RCRA facility corrective action, but that this process is parallel to the CERCLA process.

The RAB community members also questioned where citizen's participation fits into the remedial process since RCRA does not allow for as much citizen's participation as does CERCLA. The Navy indicated that community input to the remedial process is through the Navy's IR Program. The Navy explained that community involvement is described in the Navy's Installation Restoration Handbook. The Navy will provide a copy of the handbook to the RAB.

One means of community participation in the process is through the RAB. The community is able to comment on remedial action for all sites by participating on the RAB. The Navy will work with the state and county regulators as far as making decisions. Although the RAB does not make decisions, they can still provide input regarding the decisions. As an example, the Navy talked about the action memorandum for free product recovery at some of the sites. The Navy will put the action memorandum in the Information Repository and will put a notice in the paper that this document is available for public comment. The public will then have 30 days to look at the document and submit comments to the Navy. The Navy will then consider the comments received before proceeding with the action. The Navy asked for verification that each RAB member received a copy of the engineering evaluation/cost analysis (EE/CA) for free product recovery. The Navy explained that the EE/CA was the document that evaluates and recommends different alternatives.

The RAB also questioned whether documents (and other information) are available on the Internet. The Navy explained that, at this time, the Northern Division (NorthDiv) office of the Naval Facilities Engineering Command does not have any other installation's environmental data on the Internet. (Note that NorthDiv has recently found that some Navy sites have had their environmental data made available on the Internet. NorthDiv is currently discussing the possibility of putting some of their installation's data on the Internet. If NorthDiv does decide to pursue Internet capability, it will be on a site-by-site basis and availability of funding will be a critical issue.)

At this time, the Navy asked whether there were any other issues raised at the steering committee meeting that needed to be discussed. No other issues were raised and the Navy then moved on to the presentation of the Draft Phase 2 RCRA Facility Investigation Report.

DRAFT PHASE 2 RCRA FACILITY INVESTIGATION REPORT (SITES 1, 2, and 7) **PRESENTATION AND QUESTION & ANSWER**

David Brayack of Tetra Tech NUS, Inc., a subcontractor to the Navy, provided a presentation regarding the Draft Phase 2 RCRA Facility Investigation (RFI) Report for Sites 1, 2, and 7 (January, 1998). A copy of the presentation is provided as an attachment to these meeting minutes. The presentation began with Site 7, then Site 1, and finally Site 2.

First Mr. Brayack explained that while the Navy was conducting the Phase 2 investigation, it became apparent that the investigation of Sites 1, 2, and 7 was closer to being completed than the remaining sites for various reasons; one being an access issue which has delayed investigation at Site 9 – ECM Area. Therefore, Sites 1, 2, and 7 were separated out and the results of the Phase 2 investigation for these sites were provided in a separate report from the other four sites. The report on the other four sites (Sites 6A, 10A, 10B, and the Southern Area) is currently under Navy review and has not been released for regulator or public review.

The RAB questioned why the Navy was holding onto the other Phase 2 RFI report since February 1998. The Navy explained that the property transfer of NWIRP Calverton to the Town of Riverhead had taken precedence. Also, the Navy decided to wait for comments on the first RFI report (for Sites 1, 2, and 7) submitted in January 1998, before forwarding the RFI report for the remaining sites.

Mr. Brayack also explained that the objective of the presentation of the three sites was to briefly summarize the Phase 1 RFI and Phase 2 RFI activities and then present the Navy's conclusions and recommendations for each site. Detailed discussion of the RFI activities are provided in the RCRA Facility Investigation report (dated August 1995) and addendum (dated September 1995) and the Phase 2 RFI (dated January 1998). During the presentation, the Navy indicated that the goal now for these sites is to determine whether sufficient information is available to identify and select an appropriate remedial action for each site. The Navy cautioned that the goal at this point should not be to pinpoint the exact extent of contamination, but to be reasonably confident that the bulk of contamination has been identified. The Navy can then attempt to remove the bulk of contamination and make adjustments in the field to address any contamination that may not have been identified during the RFI stage. The Navy also explained that until a decision is made to move into the Corrective Measures Study (CMS) portion of the remedial program, remedial designs and implementations could not be initiated.

Mr. Brayack continued with the presentation for Site 7. Site 7 is the Fuel Depot. Grumman used to have a series of underground storage tanks at the site. The tanks were used for jet fuel, diesel, and gasoline storage. All of the tanks have been removed as of spring, 1998. Soils surrounding the tanks that were brought up as part of the excavation and exhibited evidence of contamination were disposed offsite and replaced with certified "clean" fill from a nearby quarry. The tank removal was overseen by regulators from Suffolk County and NYSDEC. It was thought that contamination at the site was related to spills that occurred during tank filling operations and not leaks since the excavated underground storage tanks appeared intact. Mr. Brayack explained that during the 1980's, Grumman installed a passive free product recovery system to remove fuel that was found floating on the water table. As part of the recovery system, Grumman installed monitoring wells that allowed floating free product to go into the well

and then bailed the free product out of the well. During the Phase 2 RFI field activities in the spring/summer of 1998, a free product layer was not observed.

Investigations that were conducted as part of the Phase 1 and Phase 2 RFIs included a soil gas survey, as well as soil and groundwater sampling. These techniques were used to try to delineate the horizontal and vertical extent of contamination. Based on the Phase 1 and Phase 2 results for Site 7, the Navy found that contamination in shallow soils was not a concern. In addition, most of the contaminated soils found at deeper depths were around the tanks and were excavated during the tank removal. It was explained that contaminated saturated soils were not addressed during the tank removal since these soils will be addressed as part of any groundwater remedy that is pursued.

The Navy found fuel-related contaminants in shallow groundwater (including toluene, ethylbenzene, and xylene). Since fuels are generally lighter than water, the undissolved constituents of fuel tend to float on top of the water table. Since fuels tend to float, plus the fact that only minimal vertical gradient was measured at Site 7, fuel-related contamination would not be expected at depth. This theory is supported by the absence of groundwater contamination at depths deeper than 20 feet below the water table (35 feet below ground surface). Looking at data available from 1991 to present, TtNUS has seen a trend that seems to indicate that the concentration of contaminants in groundwater appears to be decreasing or at least staying the same.

There was an extensive discussion regarding the location, depth, and method for sampling groundwater at Site 7. The RAB expressed concern that sufficient information was not presented to determine whether the groundwater contaminant plume has been sufficiently characterized. In particular, the RAB wanted more information on the vertical extent of groundwater contamination. The Navy explained that the concerns at Site 7 were limited to shallow groundwater as indicated by the type of contaminants and absence of contamination at greater depths. However, the Navy agreed to develop a figure showing the vertical profile of Site 7 using data collected to date.

In addition, the RAB questioned whether spill records for Site 7 were available. The Navy indicated there were some spills recorded for the site that were from tank filling

operations and that these spills were addressed by the Northrop Grumman Corporation and verification of close-out obtained during the closure process.

After the normal meeting duration (two to three hours) had elapsed, the Navy asked whether to continue with the presentation or adjourn the meeting. The RAB decided to continue with the meeting after a brief recess. After the recess, Mr. Brayack concluded the presentation for Site 7 and then began discussing Site 1, Northeast Pond Disposal Area. Site 1 was a landfill for miscellaneous waste and debris. The site was covered with soil in 1984. Test pitting, soil sampling, groundwater sampling, surface water and sediment sampling were conducted as part of the Phase 1 and 2 RFI investigations. Groundwater under the site flows into the pond, which has no surface outlet. Therefore, the water from the pond flows back into groundwater downgradient of the site. Various metal contaminants (including arsenic, copper, chromium, lead, and mercury), VOCs, pesticides, and PCBs were detected in soil from the landfill. Low levels of VOCs were detected in a couple of the groundwater monitoring wells. Metals, pesticides, PCBs, and PAHs were detected in sediment and/or surface water and are thought to be from the edge of the landfill that continues to erode into the pond. A benthic macroinvertebrate evaluation of the ecology of the pond was conducted to determine whether the macroinvertebrate population in the sediment was considered healthy. The evaluation involves counting the number of different macroinvertebrate species that are present in the sediment and determining the number of macroinvertebrates in a specific area. The study of the pond did not indicate any obvious impacts to the ecological community.

The RAB questioned whether munitions or explosives had been landfilled at the site. The Navy has no information to suggest that munitions or explosives have been landfilled at the site. Mr. Brayack went on to point out that the presence of munitions or explosives is a particular safety concern when conducting intrusive field investigations, and that the possibility of disposal of munitions and explosives at the site was investigated thoroughly prior to sampling.

The RAB also questioned whether sulfuric acid was disposed in the landfill. The Navy indicated that although analysis was not conducted for sulfuric acid, as part of the

sampling, the pH of groundwater and surface water is measured. If any acid was disposed and was affecting groundwater or surface water, the pH of the water would be very low. A low pH was not observed.

At this time, the presentation of results for Site 2, Fire Training Area was commenced. Mr. Brayack began by explaining that the site was used for fire training exercises. Originally earthen and later concrete pits were constructed and filled with water, waste fuels, waste oils, and waste solvents and then ignited for fire training exercises. Grumman installed an active free product recovery system at the site. Phase I and Phase II RFI work included ground penetrating radar (GPR) survey, test pitting, and soil and groundwater testing. The GPR survey was conducted over all of the accessible areas of the site. Based on the GPR survey, the Navy went back with a test pit at each anomaly to see if there was any metallic contamination. Most of the test pits contained natural peat. At one location, the remnants of an aluminum shed were found.

Soil contaminants detected included PAHs, chlorinated VOCs, and low levels of PCBs in the source area. Chlorinated solvents (1,1,1-TCA and degradation products) and fuel-related contaminants in groundwater are the major contamination of concern at the site. A vapor extraction/air sparging system has been running at the site to address VOC contamination in soil and groundwater in the source area. The system injects air into the groundwater and extracts soil vapors, which contains VOCs from the soil and groundwater. The system is in operation from spring to fall and is shut down in the winter. To date there has been about 93 percent removal of VOC contaminants at the source area.

Mr. Brayack explained that based on investigation of the groundwater, groundwater flows south and east. Groundwater moves approximately 30 to 100 feet per year, however, the rate that chemicals move in the groundwater will be less and depends on the chemicals' properties. For example, some chemicals absorb more to soil particles than others, which will slow the movement of the chemicals in groundwater. Groundwater contamination has been detected up to approximately 70 feet below ground surface. Mr. Brayack indicated that the main groundwater plume at the site consisted of chlorinated contaminants. However, there was another fuel-related plume

within the chlorinated plume, but much closer to the fire training area. In addition, a plume with VOCs was identified in the western portion of the site. This plume appears to be stable.

A free product layer is still present at the site. An engineering evaluation/cost analysis (EE/CA) was prepared by the Navy and submitted for regulator review which evaluates remedial alternatives to address the free product layer at Site 2 (as well as free product at the sites at NWIRP Calverton).

The RAB questioned how close the contaminated groundwater plume was to McKay Lake and Swan Pond. Because of the proximity of Swan Pond to the plume, the Navy collected samples at the pond. However, contamination from the site was not detected. McKay Lake is located about 500 feet from site. The Navy did not know whether McKay Lake discharged to Swan Pond or to one of the lakes of the Peconic River.

The RAB also questioned whether the Site 2 plume could be the source of chlorinated solvents in the Peconic River basin. The Navy was not aware of chlorinated solvent contamination in the basin and requested additional information.

In answer to a RAB question of whether Suffolk County or Riverhead Water Department has any wells between the plume from Site 2 and Swan Lake, the Navy indicated that there were no supply wells.

DATES AND DISCUSSION TOPICS FOR FUTURE MEETINGS

Although one RAB member requested to have the next meeting in January 1999, the other RAB members indicated that the regularly scheduled RAB meeting (beginning of February 1999) would be better. Discussion topics for the next RAB meeting were not specifically discussed; however, some of the information the RAB requested from the Navy are potential topics. The requested information would include an up-date on the RCRA permit renewal, GIS presentation, results of any technical meetings held prior to

the next RAB, historical records on the fuel usage and handling at the facility (particularly at Site 7), and historical records on thallium usage at the facility.

CLOSING REMARKS

In closing, Mr. Colter indicated the Navy would like to have a technical meeting soon with the regulators to discuss the Navy's conclusions and recommendations for Sites 1, 2, and 7. The Navy hopes to be able to get a consensus with the regulators on some of the less complex sites so the Navy can move ahead with remediation of those sites, while continuing to resolve the more complex issues on the remaining sites.

POSTSCRIPT NOTE

A stenographer's transcripts are prepared for the RAB meetings to assist the Navy in preparation of meeting minutes. The transcripts are available in the NWIRP Calverton Information Repository at the Riverhead Free Library. To assist the stenographer, RAB members and other attendees at the meeting need to speak one at a time for the stenographer to accurately transcribe the meeting discussions.

ATTACHMENTS

- Agenda
- Amendment to the RAB Operating Procedures
- Presentation on the RCRA Facility Investigation Results for Sites 1, 2, and 7

Agenda

**Restoration Advisory Board
Naval Weapons Industrial Reserve Plant Calverton**

**November 5, 1998
Suffolk County Community College, Riverhead, NY
6:00 p.m.**

Welcome and Agenda Review

Judithanne Hare
Naval Air Systems Command

Review and Approval of Minutes

All Members

Amendment of RAB Operating Procedures

All Members

Steering Committee Questions & Answers

All Members

Draft Phase 2 RCRA Facility Investigation Report (Sites 1, 2, & 7)

Presentation and Questions & Answers

David Brayack
Tetra Tech NUS, Inc.

Dates and Discussion Topics for Future Meetings

All Members

Closing Remarks

Judithanne Hare
Naval Air Systems Command

Presenters will be available after the program for questions.

Amendment to Operating Procedures
November 5, 1998

The language that the Steering Committee decided they would like to have inserted after the first sentence in the Operating Procedures under Membership is as follows.

The RAB shall consist of 15 members from the community and 3 non-voting alternate members. The alternates will be given first consideration as openings on the RAB occur.

Mission Statement and Operating Procedures
of the Naval Weapons Industrial Reserve Plant, Calverton
RESTORATION ADVISORY BOARD

I. NAME

This organization shall be known as the Naval Weapons Industrial Reserve Plant (NWIRP) Calverton Restoration Advisory Board (RAB).

II. PURPOSE

The NWIRP Calverton RAB exists to help give the community access to information about the progress of the Navy's environmental program, the Installation Restoration Program (IRP), at NWIRP Calverton. In addition, the RAB will provide an open forum for discussion of issues and concerns related to the IRP, and will encourage public participation in this forum.

Members of the NWIRP Calverton RAB shall work in partnership with each other and the decision-making agencies on environmental issues. The RAB will disseminate information to the community and solicit the community for comments.

The decision-making agencies are: Naval Air Systems Command (NAVAIR), Naval Facilities Engineering Command - Northern Division, (NORTHDIV), the New York State Department of Environmental Conservation (NYSDEC), the Suffolk County Department of Health Services (SCDHS) and the U.S. Environmental Protection Agency (EPA).

Actions taken by the NWIRP Calverton RAB will be in accordance with all applicable federal, state, and local laws and regulations.

III. STRUCTURE OF THE RAB

A. The RAB is an expansion of the existing Technical Review Committee (TRC), and is specifically created to include more community involvement. RAB membership will be comprised of Technical Review Committee members and representatives from the community.

B. The NWIRP Calverton RAB shall have a Co-Chairmanship, representing both the Navy and the community. The Navy's Co-chair will be appointed by the Commanding Officer, NAVAIR, and a community Co-Chair will be elected by community members of the RAB. The community Co-Chair position shall be revisited on an annual basis.

C. The RAB is not a decision-making body, but a forum for the open discussion of thoughts and ideas related to the Installation Restoration Program at NWIRP Calverton. Similarly, the RAB does not vote or reach consensus on cleanup methods or technical issues.

D. Meetings will be called by joint agreement between the NWIRP Calverton RAB chairpersons on a quarterly basis or as needed. Agenda items will be submitted 30 days in advance to the Co-Chairs. The Navy Co-Chair will then mail the agenda to board members 10 days in advance of the given meeting.

IV. OPERATING PROCEDURES

A. Meetings will be held at a location convenient to community members.

B. The Navy Co-Chair will be responsible for the minutes of each meeting and for dissemination of the meeting minutes 30 days after each meeting, and other data requiring committee review and comments. Approval of prior meeting minutes will be an agenda item for each meeting.

C. The Navy will make available copies of technical and other documents pertinent to the environmental programs. These documents will be made available in the Information Repository located in the Riverhead Free Library in Riverhead. Members are encouraged to provide written reviews, when possible, to the chairpersons. NYSDEC, SCHDS and EPA will review work plans and reports in accordance with their responsibilities as regulatory agencies.

D. During RAB meetings, the Navy Co-Chair will provide a progress report on environmental activities to the board. At a minimum, these reports will describe the activities since the previous RAB meeting.

E. Sub-committees may be established by joint agreement between chairpersons, and as deemed necessary to facilitate RAB operations.

V. MEMBERSHIP

A. Community RAB members, or their alternate, not attending two consecutive meetings without reasonable explanation may be subject to removal by vote of the remaining community RAB members. The RAB shall consist of 15 members from the community and 3 non-voting alternate members. The alternates will be given first consideration as openings on the RAB occur. Additions to and removals from the RAB must be submitted to either RAB co-chair in writing.

B. Members will serve without compensation. All expenses related to serving on the board will be borne by the respective member or his/her organization.

NWIRP CALVERTON

SUMMARY OF RCRA FACILITY INVESTIGATION RESULTS AND RECOMMENDATIONS FOR SITES 1, 2, AND 7



WHY NOW?

The Navy's Installation Restoration Program Field Investigation and Analysis (RCRA Facility Investigation) at Three Priority Sites is nearing completion.

OBJECTIVES OF THIS PRESENTATION

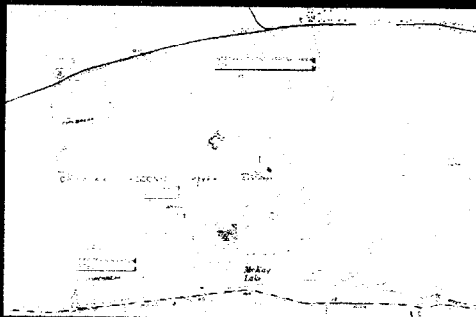
Summarize Phase 1 RFI Activities

Summarize Phase 2 RFI Activities

Present and Discuss the Navy's
Conclusions and Recommendations

2

Site Locations



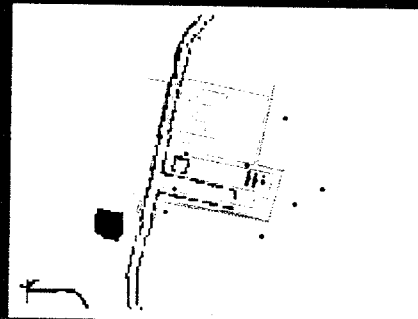
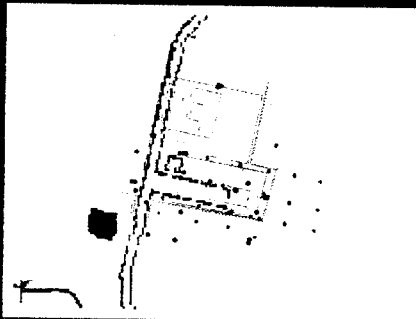
- Site 1 - Northeast Pond Disposal Area
- Site 2 - Fire Training Area
- Site 7 - Fuel Depot

3


Site 7
Fuel Depot



Site 7
Fuel Depot



Focus for Fuel Depot

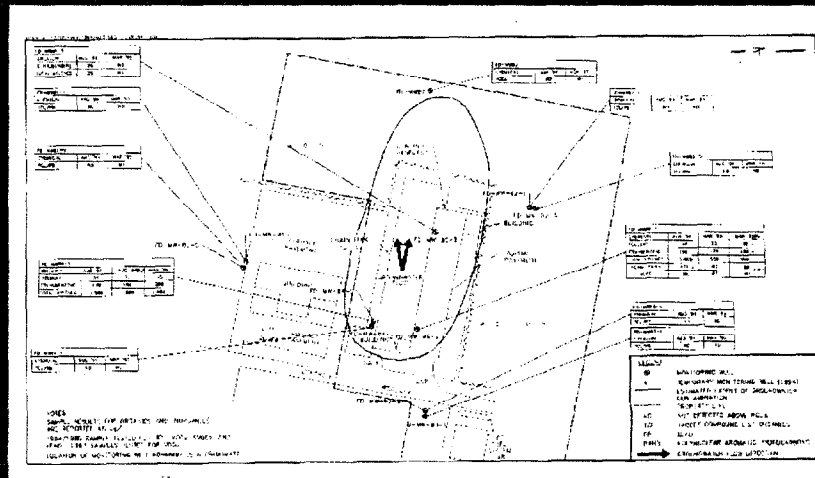


- Fuels in groundwater.
- Contaminants in soils are associated with groundwater.

6



- Fuels in groundwater.
- Contaminants in soils are associated with groundwater.

[illegible]

Previous Remedial Activities at Fuel Depot

- Removal of all tanks.
- Removal of some contaminated soils.
- Passive free product recovery system.

8

Conclusions for Fuel Depot

- Surface soils do not represent a significant risk to human health.
- Subsurface soils will be addressed with groundwater.
- Site groundwater exceeds State of New York drinking water standards (VOCs).

9

Conclusions for Fuel Depot (continued)

- Sources of historic contamination have been removed.
- Extent of groundwater contaminant plume may be stable or potentially shrinking.

10

Recommendations for Fuel Depot

- Proceed to a Corrective Measures Study to evaluate groundwater remediation alternatives.
- Develop No Further Action Decision Document for site soils.

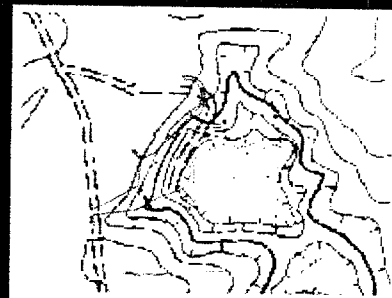
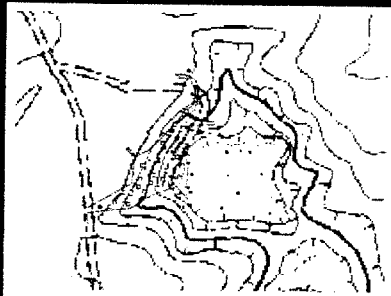
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Site 1 - Northeast Pond Disposal Area



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Site 1 - Northeast Pond Disposal Area



13

Remedial Focus at Northeast Pond Disposal Area



Metals in Subsurface
Waste Materials

Metals, Pesticides,
PCBs, and PAHs in
Sediments

14

Previous Remedial Activities at Northeast Pond

- Waste was covered with soil in 1984.

15

Conclusions for Northeast Pond Disposal Area

- Surface soils and sediments do not represent a significant risk to human health for periodic activities at the site. Site would not be acceptable for residential use.
- Site groundwater slightly exceeds State of New York drinking water standards.

16

Conclusion for Northeast Pond Disposal Area (continued)

- Chromium and PCBs in site soils, metals and pesticides in site sediments and surface water represent a potential threat to ecological receptors, however
- Benthic macroinvertebrate testing did not find evidence of adverse impact.

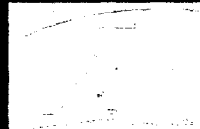
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Recommendations for Northeast Pond Disposal Area

- Proceed to a Corrective Measures Study to evaluate waste and sediment remediation alternatives.
- Develop groundwater monitoring program as part of waste and sediment CMS alternatives.

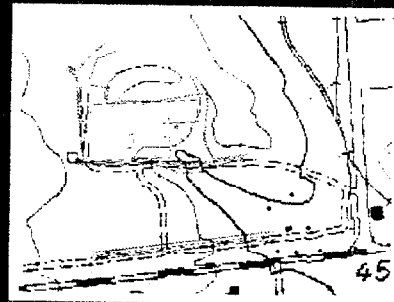
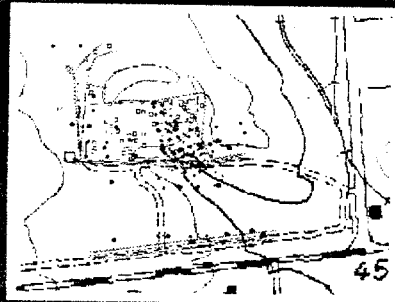
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Site 2 Fire Training Area



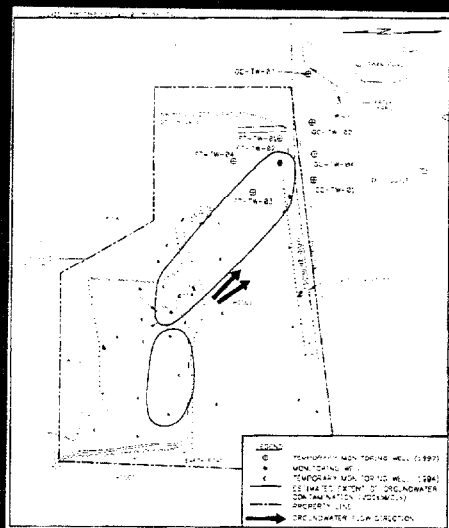
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Site 2 - Fire Training Area



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Extent of Groundwater Contamination at Fire Training



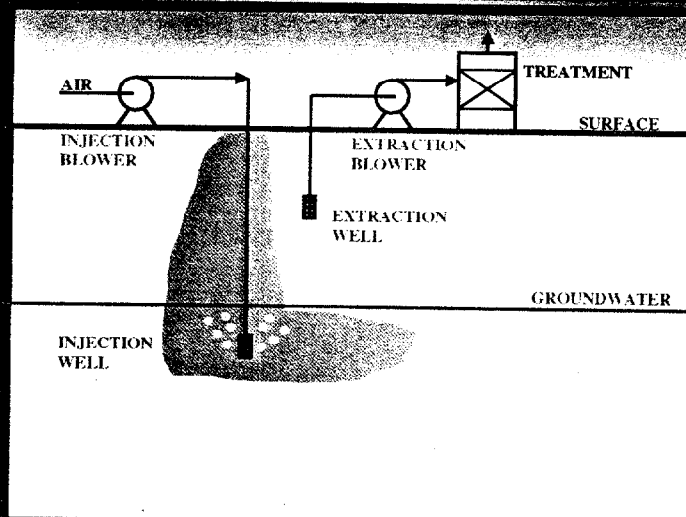
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Previous Remedial Activities at Fire Training Area

- Periodic removal of fuel contaminated soils.
- Removal of floating free product from above the groundwater.
- Pilot-scale air sparging/soil vapor extraction.

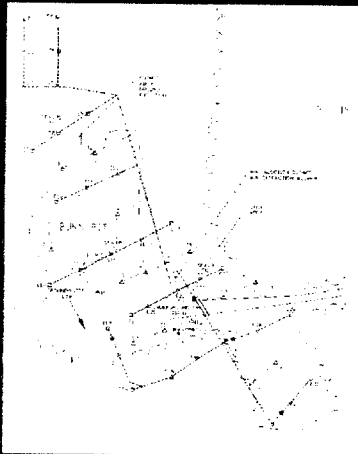
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Air Sparging/Soil Vapor Extraction Technology



23

AS/SVE Pilot Study at Site 2 - Fire Training Area



24

Conclusions for Fire Training Area

- Minor risks to human health from site contaminants in surface soils may be present for casual use of the site.
- Contaminated groundwater represents the most significant site concern.

25

Conclusions for Fire Training Area

- AS/SVE has reduced soil and groundwater contamination by approximately 90%.
- Contaminated groundwater and a floating free product layer must be addressed.

26

Conclusions for Fire Training Area (continued)

- Remedial alternatives for soils need to be evaluated.

27

Recommendations for Fire Training Area

- Install Floating Free Product Recovery System.
- Proceed to a Corrective Measures Study to evaluate soil and groundwater remedial alternatives.

28

Legend

- AS/SVE Well Point
- Monitoring Well
- Soil Boring
- Sediment
- Soil Gas
- Surface Soil
- Test Pit