RESTORATION ADVISORY BOARD MEETING
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT BETHPAGE
BETHPAGE COMMUNITY CENTER
BETHPAGE, NEW YORK
November 3, 2004

The thirteenth meeting of the RAB began at approximately 7:00 pm. Meeting attendees included representative from the Navy (Jim Colter), New York State Department of Environmental Conservation (Steve Scharf), Town of Oyster Bay (Richard Pfaender) and RAB community members (Roy Tringali and Rosemary Styne).

WELCOME AND AGENDA REVIEW

The Navy representative, Mr. Colter, Engineering Field Activity, Northeast (EFANE), welcomed everyone to the RAB and reviewed the topics on the agenda. The agenda for the meeting is included as Attachment 1.

Ms. Doreen Pennica (Nassau County Legislation), announced that the redevelopment plan for the 105-acre parcel will be on display at the High School on November 9, 2004, at 7:00 pm. She asked the RAB members to help inform the community.

REVIEW AND APPROVAL OF MINUTES

Mr. Colter inquired if the RAB members received the minutes from the August 4, 2004 meeting. The RAB members acknowledged the receipt of minutes. Mr. Colter explained the change in the format of the RAB meeting minutes. Since a stenographer is no longer being used to prepare the meeting minutes, the minutes will be presented in a summary format. Because of the low turn out among RAB members, the August 4, 2004 meeting minutes were not officially approved.

PROGRAM SCHEDULE

Mr. Colter provided an update on the project budget (Attachment 2). Mr. Colter described the Site 1 cost line item for Fiscal Year (FY) 2004 (04). He also noted that "ESD" meant "explanation of significant difference" for the Remedial Design for Site 1 Soil Excavation. Mr. Colter explained that over $3.5 million dollars were spent at NWIRP Bethpage in FY04. The majority of the money was spent on the GM-38 Pre-design Work Plan and associated field work ($1.3 million) and the Pilot Study at AOC 22 ($1.7 million).

Mr. Colter goes on to explain that the FY05 planned execution budget for NWIRP Bethpage is approximately $4.6 million. This budget includes $334,086 for Site 4 (AOC 22) and approximately $4.2 million for the design at Site 1, construction at the GM-38 area, and GM-75 Pre-design Investigation activities. Mr. Colter noted that the Pre-design Investigation at GM-75 is a swing project, which means that there may not be enough funding for the project in FY05. Mr. Scharf questioned asked what the budget for GM-75 included. Mr. Colter stated that the budget included six vertical borings. Also, a resident inquired where the GM-75 area was located. Mr. Colter noted that GM-75 area will be discussed later.

PROGRESS REPORT – GM-38 REMEDIAL DESIGN

Mr. Patselas from Tetra Tech FW (formerly Foster Wheeler Environmental) provided a progress update on the GM-38 Remedial Design and Implementation. Mr. Patselas explained that GM-38 is located southeast of Northrop Grumman facility. Current activities involve the installation of several wells. Mr. Patselas noted that the drilling is scheduled to start in two weeks and letters will be sent to residents in the area. Mr. Patselas explained that the Basis of Design for the project has been developed and that the draft final design has been started. In general, the two recovery wells will be installed in the Department of Transportation right-of-way along South Oyster Bay Road and four monitoring wells will be installed along North Windhorst Avenue (See Attachment 3).

The treatment plant design is due to the Navy in late January 2005. Mr. Patselas explained that the treatment plant building is currently approximately 75 feet x 75 feet and will appear to be similar to the Bethpage Water District and Northrop Grumman plants, except that the air stripping tower will be located inside the building. The height of the building will be approximately 25 feet and the stripper is estimated to be 15 feet above the roof and is to be located in the rear of the building (closer to the expressway). Mr. Patselas noted that the goal is to leave as much of the buffer zone (trees) between the residents homes and the treatment plant. Currently, Tetra Tech FW is looking into utility access.

A local resident asked when this site was identified and when were the residents going to be notified. Mr. Colter responded by stating that the area the resident was inquiring about was Plant 4. Mr. San Giovanni (Arcadis G&M) also added that the study on the Northrop Grumman property was completed in 1991 and that all the public documents are in the local library. The resident goes on to state that if the Navy feels that it is important to spend $4.5 million to prepare a project shouldn't you at least inform the residents and then asked when the GM-38 area was identified. Mr. Colter explained that the fieldwork for the GM-38 Area was conducted in 2001 and determined the extent of contamination. He noted that the local residents in the area live above the contamination and that the construction will have no impact on the majority of the area. Mr. Colter also noted that New York State Department of Environmental Conservation sent out approximately 5,000 mailers and the Navy has an advisory board (RAB). Mr. Colter explained that the Administrative Record is accessible on the website and includes the Navy activities. The record starts with an investigation conducted in 1986. Mr. Scharf noted that Bethpage Water District provides potable water and that the Navy holds quarterly meetings. The resident concluded by stating that his main issue is with Bethpage Water District. Mr. Colter explained that Bethpage Water District is required to report water results to Nassau County and that it has encouraged residents to join the RAB.

AOC 22 PILOT STUDY

Mr. Lohavanijaya from Tierra Technologies provided a project update on the Closed Loop Bioremediation (CLB) Pilot Study at AOC 22 (Attachment 4). Mr. Lohavanijaya gave a brief project overview of the system. The system operates on a series of injection wells and extraction wells. After locating the underground utilities, drilling and treatment wells were installed. Soils were sampled and analyzed for contaminants and microorganisms needed to degrade the contamination. The wells were installed in approximately three weeks. Mr. Lohavanijaya noted that the remediation system is complete and has been operating for approximately one month. The system is expected to run for approximately twelve months, with treatment modification once a month. Mr. Lohavanijaya also explained that groundwater and microbiological sampling will be done once a month and soil sampling will be done every other month.

Mr. Tringali asked if there will be a tour of the system. Mr. Colter will work with Jim McBride on setting up a tour of the AOC 22 pilot study system.

OUTPOST MONITORING WELL PROGRAM

Mr. San Giovanni from Arcadis G&M provided an explanation of the Outpost Well Monitoring Program (Attachment 5). The outpost wells are designed to monitor contaminants and to provide an early warning of approximately five years prior to potential impact to downgradient water districts. Nine wells have been installed and are monitored on a quarterly basis.

ONSITE MONITORING WELL ABANDONMENT

As part of the Navy property transfer, unneeded monitoring wells on the Navy property are being abandoned. Of the 105-acre Navy property, the Navy will keep approximately nine acres. Well abandonment should be completed in the next two months.

Mr. Brayack from Tetra Tech NUS, provided an update on the Onsite Monitoring Well Abandonment (Attachment 6). The wells that are being abandoned were installed between 1991 and 1992. In accordance with the NYDEC process, the exposed portion of the well will be removed and covered with natural soils. The downhole portions of the well will be filled with a combination of sand (in the screen interval), cement, and bentonite (to prevent shrinkage of the cement).

Mr. Scharf inquired if a work plan will be submitted to NYDEC for the record on the well abandonment. Mr. Colter and Mr. Brayack agreed to submit a letter Work Plan to NYDEC within a week, but that the well abandonment was scheduled in the next couple of weeks and that a quick review would be needed. Wells on property to be retained by the Navy and wells that are used as part of the regional groundwater monitoring programs will remain.

A resident also inquired on why the Navy is holding onto the nine acres. Mr. Colter stated that this property has soil contamination that requires remediation. Provided that a remedy is selected in FY05, Site 1 soil remediation is scheduled for FY06.

CLOSING REMARKS

Mr. Colter asked if there were additional questions of topics for discussion. Mr. Brayack announced that the updated Administrative Record (pre- and post-ROD) CDs were available to the RAB. The meeting was adjourned at approximately 9 pm.

Action Items:

1. RAB members will work with Jim McBride on setting up a tour of the pilot study area (AOC 22).
2. The Navy will prepare a Letter Work Plan on the Well Abandonment.

ATTACHMENT 1
NOVEMBER 3, 2004 MEETING AGENDA

Agenda

Restoration Advisory Board
Naval Weapons Industrial Reserve Plant Bethpage

November 3, 2004
Bethpage Community Center, Bethpage, NY
7:00 p.m.

Welcome and Agenda Review
Joe Kaminski, Naval Air Systems Command

Review and Approval of Minutes
All Members

Program Schedule
Jim Colter
Engineering Field Activity, Northeast

Progress Update – GM-38 Remedial Design
Stavros Patselas, Tetra Tech FW

AOC 22 Pilot Study
Dan Lohavanijaya
Tierra Technologies

Outpost Monitoring Well Program
Carlo San Giovanni, Arcadis G&M

Onsite Monitoring Well Abandonment
Dave Brayack
Tetra Tech NUS

Closing Remarks
Joe Kaminski, Naval Air Systems Command

Presenters will be available after the program for questions.

ATTACHMENT 2
BUDGET UPDATE - FY04 ACTUAL COST
AND FY05 EXECUTION PLAN

NAVFAC
Naval Facilities Engineering Command

EFA NORTHEAST

NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP) BETHPAGE, NEW YORK INSTALLATION RESTORATION PROGRAM

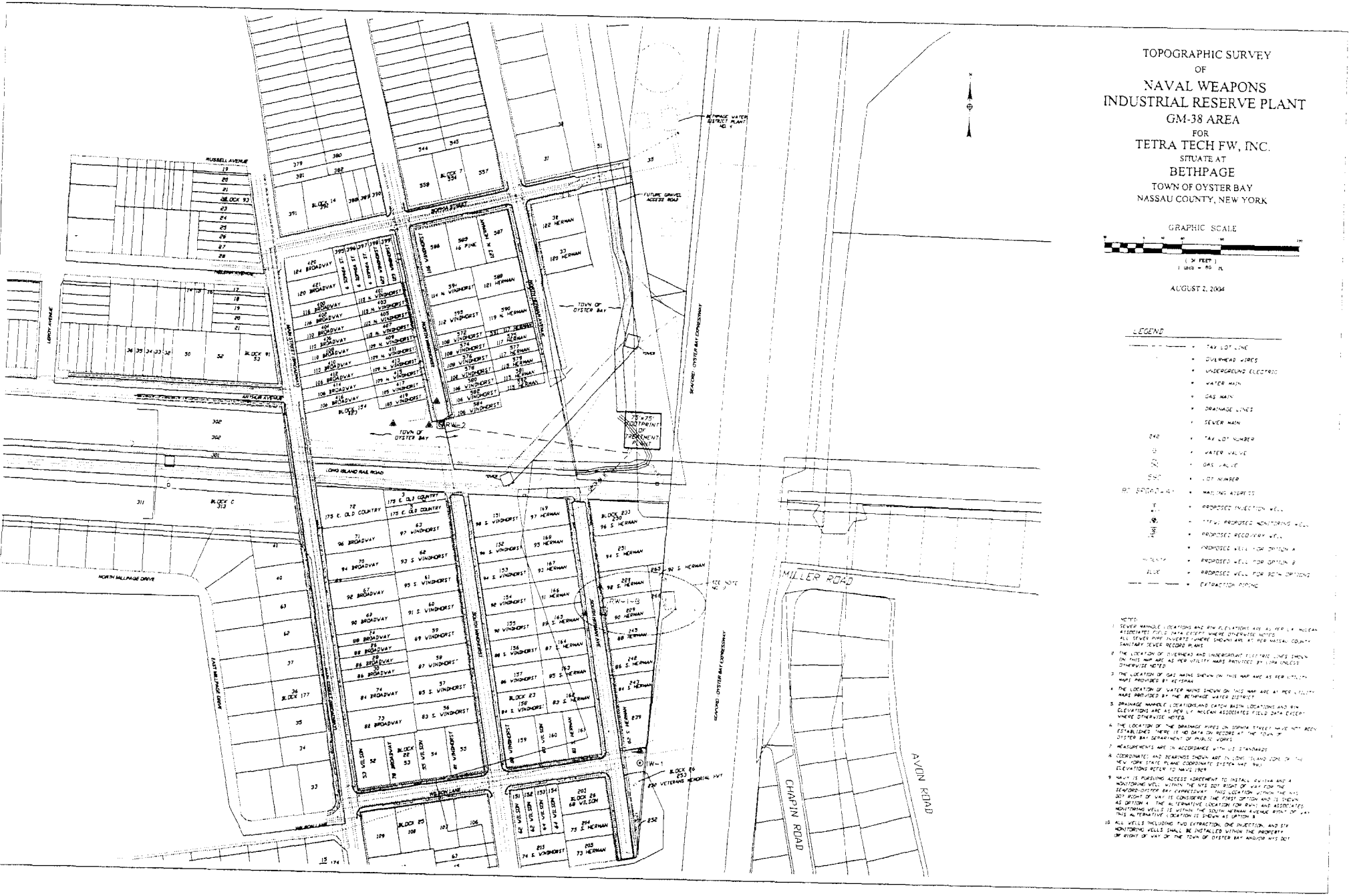
BUDGET UPDATE – FY04 ACTUAL COSTS AND FY05 EXECUTION PLAN

11/03/2004

FY05 PLANNED EXECUTION

PROJECT	COST
Site 1 – Construction of GM-38 Remedy	$3,121,165 (Estimated)
Site 4: - Install Monitoring Wells for AOC 22 CLB Pilot Study - Monitoring Well Abandonment (105-ac)	$334,086 (Actual)
- Monitoring Well Maintenance (off-site) - Collect Additional Soil Data (IR Site 1)	
Site 1 – GM75 Pre-Design Investigation (SWING PROJECT)	$1,100,000 (Estimated)
TOTAL:	***$4,555,251***

ATTACHMENT 3
GM-38 AREA LAYOUT



TOPOGRAPHIC SURVEY
OF
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
GM-38 AREA
FOR
TETRA TECH FW, INC.
SITUATE AT
BETHPAGE
TOWN OF OYSTER BAY
NASSAU COUNTY, NEW YORK

GRAPHIC SCALE

(IN FEET)
1 inch = 80 ft.

AUGUST 2, 2004

LEGEND

- TAX LOT LINE
- OVERHEAD WIRES
- UNDERGROUND ELECTRIC
- WATER MAIN
- GAS MAIN
- DRAINAGE LINES
- SEWER MAIN
- 840 TAX LOT NUMBER
- WATER VALVE
- GAS VALVE
- 592 LOT NUMBER
- 87 BROAD WAY MAILING ADDRESS
- PROPOSED INJECTION WELL
- PROPOSED MONITORING WELL
- PROPOSED RECOVERY WELL
- PROPOSED WELL FOR OPTION A
- PROPOSED WELL FOR OPTION B
- PROPOSED WELL FOR BOTH OPTIONS
- EXTRACTION PIPING

NOTES:

1. SEWER MANHOLE LOCATIONS AND RIM ELEVATIONS ARE AS PER L.K. NELSON ASSOCIATES FIELD DATA EXCEPT WHERE OTHERWISE NOTED. ALL SEWER PIPE INVERTS (WHERE SHOWN) ARE AS PER NASSAU COUNTY SANITARY SEWER RECORD PLANS.
2. THE LOCATION OF OVERHEAD AND UNDERGROUND ELECTRIC LINES SHOWN ON THIS MAP ARE AS PER UTILITY MAPS PROVIDED BY LIPA UNLESS OTHERWISE NOTED.
3. THE LOCATION OF GAS MAINS SHOWN ON THIS MAP ARE AS PER UTILITY MAPS PROVIDED BY KEYSPAN.
4. THE LOCATION OF WATER MAINS SHOWN ON THIS MAP ARE AS PER UTILITY MAPS PROVIDED BY THE BETHPAGE WATER DISTRICT.
5. DRAINAGE MANHOLE LOCATIONS AND CATCH BASIN LOCATIONS AND RIM ELEVATIONS ARE AS PER L.K. NELSON ASSOCIATES FIELD DATA EXCEPT WHERE OTHERWISE NOTED.
6. THE LOCATION OF THE DRAINAGE PIPES ON SOPHIA STREET MAY NOT BEEN ESTABLISHED. THERE IS NO DATA ON RECORD AT THE TOWN OF OYSTER BAY DEPARTMENT OF PUBLIC WORKS.
7. MEASUREMENTS ARE IN ACCORDANCE WITH U.S. STANDARDS.
8. COORDINATES AND BEARINGS SHOWN ARE IN LONG ISLAND ZONE OF THE NEW YORK STATE PLANE COORDINATE SYSTEM NAD 1983. ELEVATIONS REFER TO NAVD 1988.
9. MAP IS PURSUING ACCESS AGREEMENT TO INSTALL OW-1/MW AND A MONITORING WELL WITHIN THE NYS DOT RIGHT OF WAY FOR THE SEAFORD-OYSTER BAY EXPRESSWAY. THIS LOCATION WITHIN THE NYS DOT RIGHT OF WAY IS CONSIDERED THE FIRST OPTION AND IS SHOWN AS OPTION A. THE ALTERNATIVE LOCATION FOR OW-1/MW AND ASSOCIATED MONITORING WELLS IS WITHIN THE SOUTH HERMAN AVENUE RIGHT OF WAY. THIS ALTERNATIVE LOCATION IS SHOWN AS OPTION B.
10. ALL WELLS INCLUDING TWO EXTRACTION, ONE INJECTION, AND SIX MONITORING WELLS SHALL BE INSTALLED WITHIN THE PROPERTY OR RIGHT OF WAY OF THE TOWN OF OYSTER BAY AND/OR NYS DOT.

ATTACHMENT 4
CLOSED LOOP BIOREMDIATION PILOT DEMO
PROJECT STATUS UPDATE

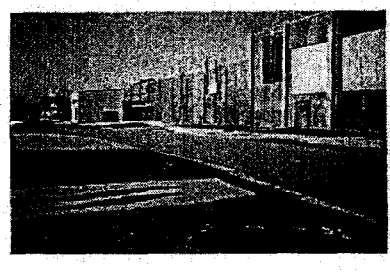
tierra technologies
A DIVISION OF AR UTILITY SPECIALISTS, INC.

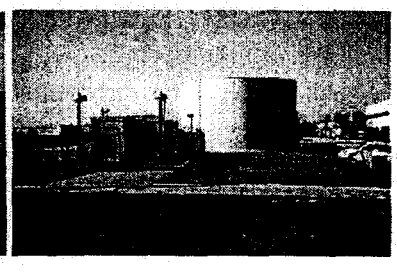
Locus

Closed Loop Bioremediation Pilot Demo, NWIRP Bethpage, AOC 22 Project Status Update

Agenda

- Project Overview
- Site Construction and System Installation
- System Operation
- System Monitoring

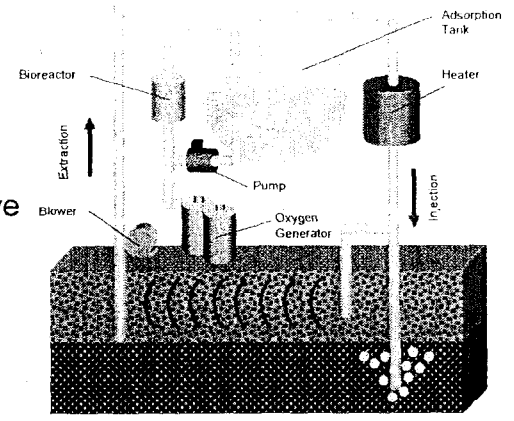




Project Overview

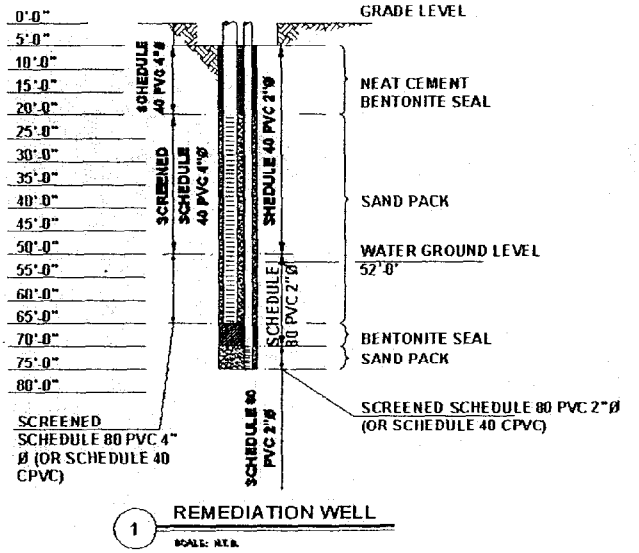
System Description

- *In-Situ* Bioremediation
- Utilizes Indigenous Microorganisms
- Creates a Subsurface Environment Conducive to Biodegradation of Contaminants
- Continuous Monitoring of the Environment Using Above Ground Bioreactor



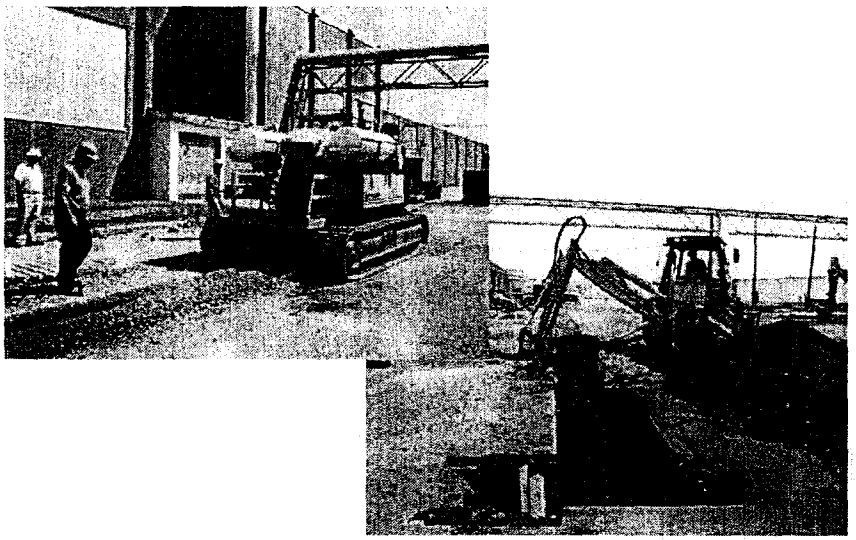
Project Overview

Remediation Wells and Infrastructure Design



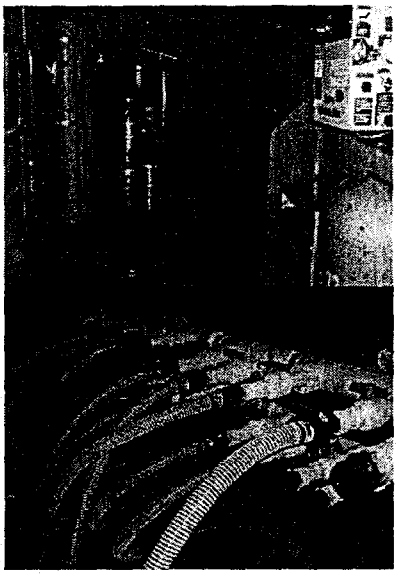
Underground Utility Location

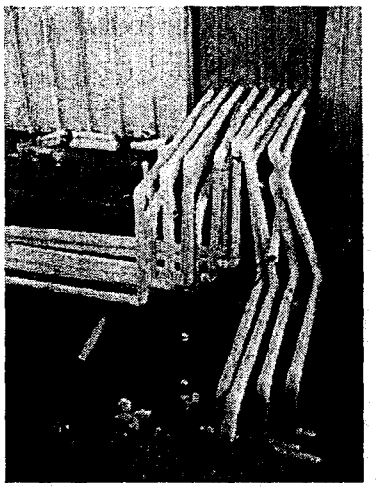
Drilling and Treatment Well Installation



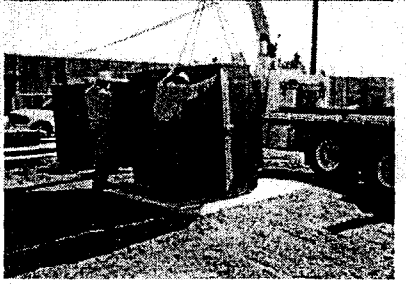
Trenching & Infrastructure Installation

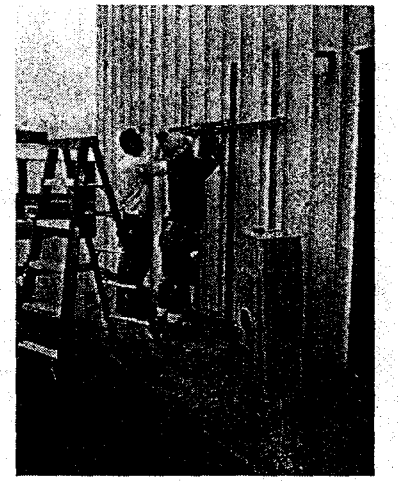
Steam Raising System - Site





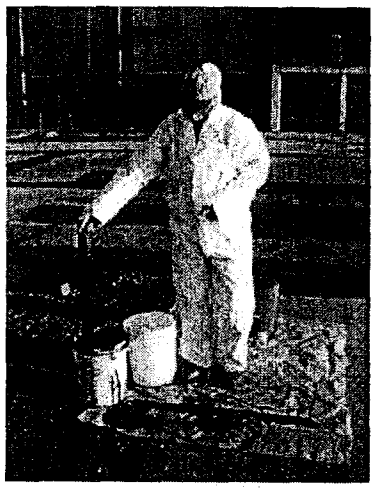
Site Electrical





System Operation

- Free Product Recovery
- Closed-Loop Bioremediation
  - Creation of subsurface bioreactor
  - 12 treatment cycles, 1 month each



System Monitoring

Groundwater Monitoring Program

- Collect groundwater samples monthly
- Analyze samples for VOCs, Semi Volatile Organic Compounds (SVOC), and total petroleum hydrocarbons (TPH), surfactants and nitrates

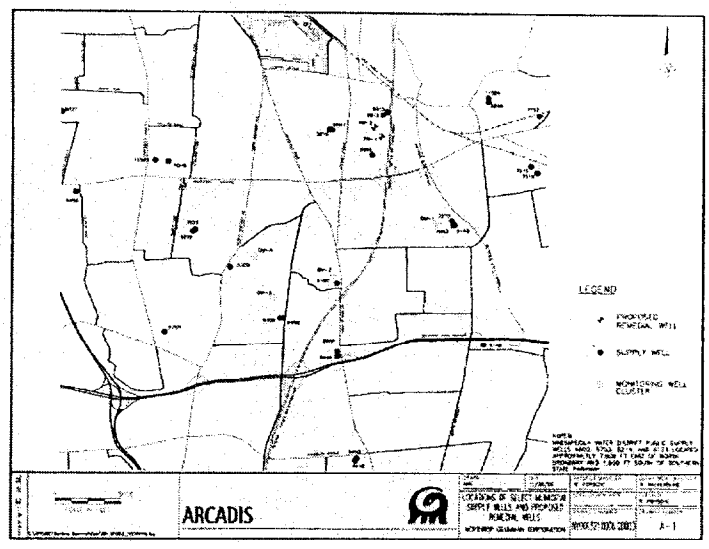
Microbiological Monitoring Program

- Collect monthly samples from selected monitor and remediation wells
- Analyze samples for heterotropic plate counts and petroleum hydrocarbon degraders

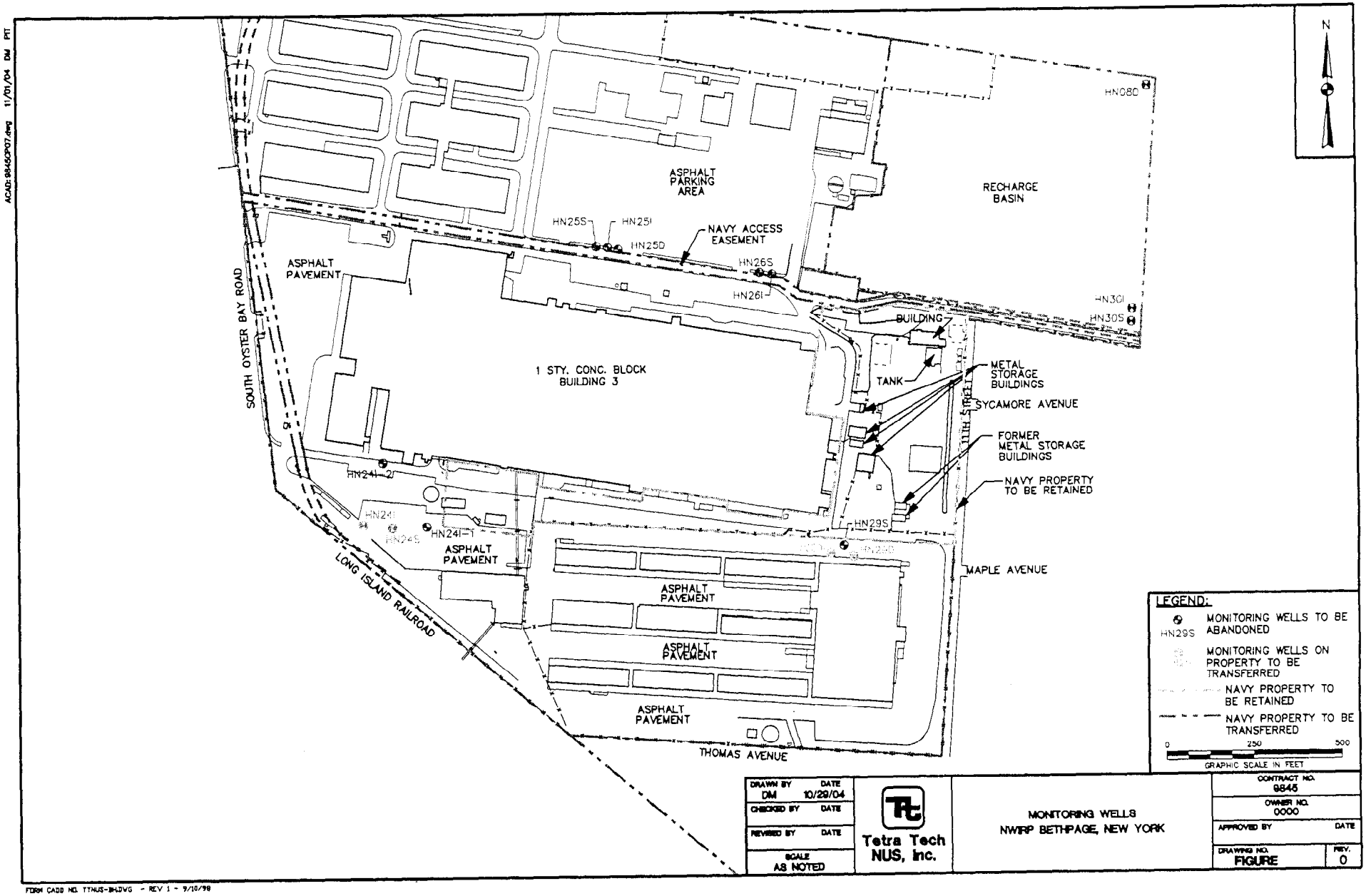
ATTACHMENT 5
OUTPOST WELL MONITORING PROGRAM
PROJECT UPDATE

OUTPOST WELL MONITORING PROGRAM

- Required by NYSDEC and Navy OU2 Records of Decision (RODs).
- Goal: Provide early warning (approx. 5 yrs) to water district(s) of anticipated water quality impact.
- Implemented in accordance with NYSDEC-approved Public Water Supply Contingency Plan (PWSCP).



ATTACHMENT 6
ONSITE MONITORING WELL ABANDONMENT



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