REMEDIAL ACTION REPORT

PHILMAR ELECTRONICS SITE

Work Assignment No. D002520-24

Town of Schuyler Falls **Site No. 5-10-008**

Clinton County

Prepared for:

SUPERFUND STANDBY PROGRAM
New York State
Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233

Prepared by:

Rust Environment & Infrastructure
12 Metro Park Road
Albany, New York 12205

15 (12-75)

New York State Department of Environmental Conservation

MEMORANDUM

TO: Daniel Steenberge, Regional Hazardous Waste Remediation Engineer, Region 5
FROM: James Van Hoesen, Chief, Central Field Services Section, Bur. of Construction Services
SUBJECT: Philmar Electronics Site, Site #5-10-008

DATE: JUL 18 1996

Attached is the Post Remediation Report for the above-referenced site developed by our Consultant.

This report includes the required certification that the remedy was complete. The attached report is for your files.

Attachment

cc: w/att.: D. Smith
R. Fedigan - NYSDOH

REMEDIAL ACTION REPORT

PHILMAR ELECTRONICS SITE

Work Assignment No. D002520-24

Prepared for:

State Superfund Standby Program
New York State
Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

Submitted By:

Rust Environment & Infrastructure
12 Metro Park Road
Albany, New York 12205

June 28, 1996

Gary T. Kerzic, P.E.
NYS Loc. #064559

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1.0 INTRODUCTION

1.1 GENERAL

This Remedial Action Report (RAR) was prepared by Rust Environment and Infrastructure (Rust), formerly Dunn Engineering Company (Dunn) for the New York State Department of Environmental Conservation (NYSDEC) under the State Superfund Standby Program (Work Assignment D002520-24). The purpose of the report is to document the completion of remedial activities at the Philmar Electronics Site (ID # 5-10-008), Town of Schuyler Falls, Clinton County, New York. The remedial activities involved the installation of a groundwater collection system and an on-site groundwater treatment system to remediate the volatile and semi-volatile organic compounds identified as contaminants of concern in the Remedial Investigation and Feasibility Study (RI/FS), performed by Dunn. The remedial activities were completed under two separate contracts; Contract No. 1 entailed the installation of a groundwater collection and discharge system including a collection trench, pump station, forcemain, equalization tank and leach field. Contract No. 2 entailed the construction of an on-site groundwater treatment system consisting of a shallow tray air stripper, a pre-treatment boiler, activated carbon canisters, and bag filters for solids removal.

1.2 SITE HISTORY

The Philmar Electronics Site (Site) is located on Mason Street in Morrisonville, which is in the Township of Schuyler Falls, Clinton County, New York (Figure 1). The 7.2 acre site houses an active scrap/salvage yard. The southern and western portions of the Site contain various piles of metal scrap and debris, while the northeastern portion of the Site contained the drum burial area. The Site is surrounded by an apple orchard to the north, a gravel pit and wooded areas to the east, and farmlands to the south and west. Residential areas exist immediately to the north, south, and west of the Site. The Saranac River is approximately 3,000 feet northeast of the Site.

In August, 1989, a Phase I Investigation was completed by Lawler, Matusky and Skelly Engineers (LMS) for the NYSDEC. This investigation was a compilation of existing information relating to past operations and disposal practices at the Site, and included the results of past environmental sampling performed on and around the property. It indicated that the Site owner purchased several hundred 55-gallon drums containing waste products, some of which were buried or the contents disposed on-site.

In February, 1988, under the supervision of the NYSDEC, eighty-one drums were excavated and overpacked by the Site owner. Laboratory analyses of the waste from the excavated drums characterized it as jet fuel, lubricating oil, gasoline, kerosene, and unidentified petroleum products. Various organic compounds, metals and polychlorinated biphenyls (PCBs) were also identified.

In March 1988, under the NYSDEC Spill Program, a total of twelve groundwater monitoring wells were installed by Groundwater Technology, Inc. Samples collected from the twelve wells contained

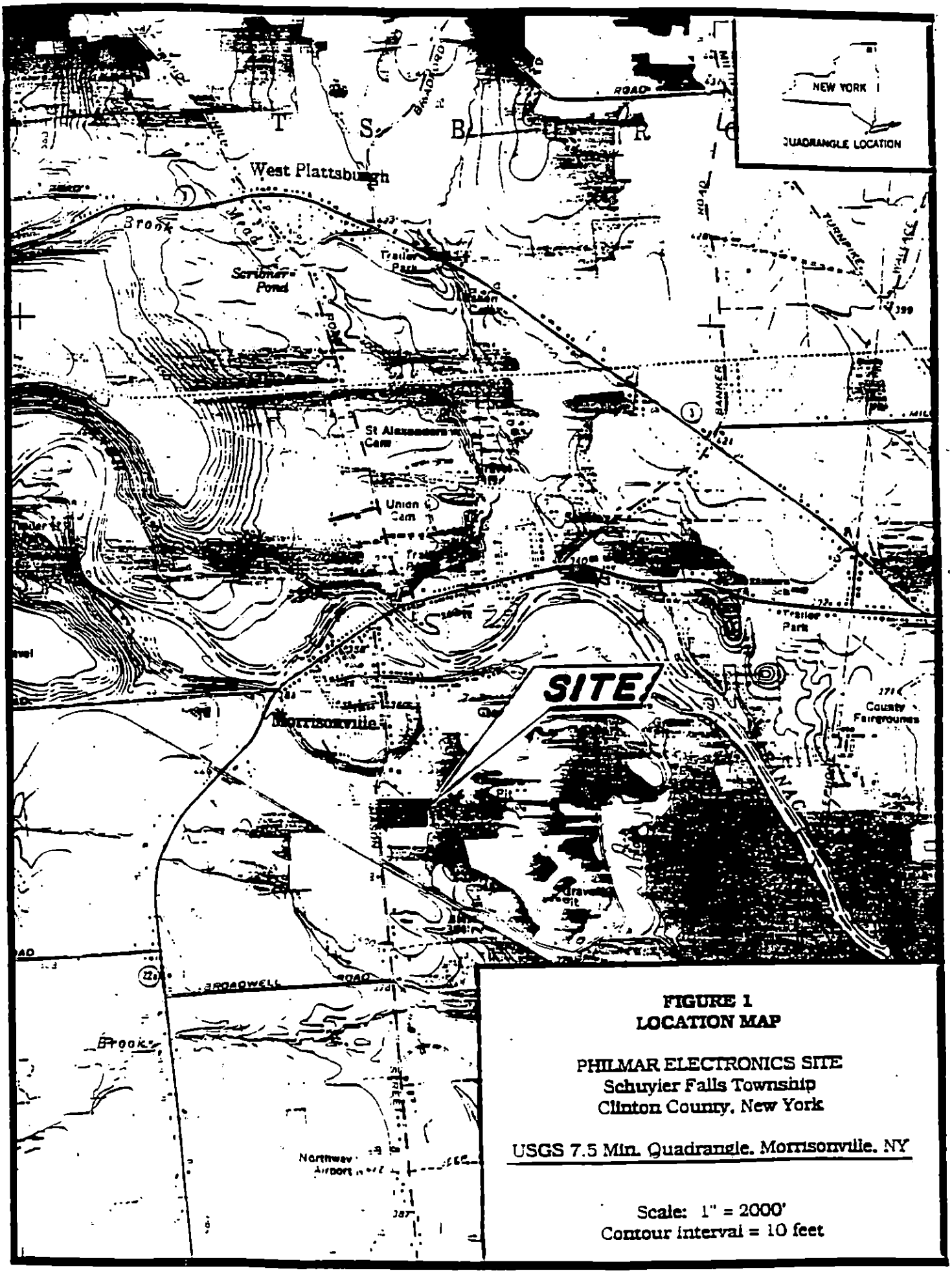


FIGURE 1
LOCATION MAP

PHILMAR ELECTRONICS SITE
Schuyler Falls Township
Clinton County, New York

USGS 7.5 Min. Quadrangle, Morrisonville, NY

Scale: 1" = 2000'
Contour Interval = 10 feet

vinyl chloride, trichloroethylene, benzene and other organic compounds. Various organic compounds, including PCBs, were detected in surface water samples collected from a low area near the drum burial area. The Site was scored under the United States Environmental Protection Agency's (USEPA) Hazard Ranking System (HRS).

An RI/FS for the Site was completed by Dunn in December, 1992 to supplement and verify information gathered during previous investigations. Activities undertaken included: geophysical surveys; subsurface soil classification; groundwater sampling; surface water, surface soil and sediment sampling; hydraulic conductivity testing; human health evaluation; habitat assessment; and Site mapping. The results of the RI/FS revealed that the presence of volatile organic contaminants in groundwater, surface and sediment samples was limited to the drum disposal area. The RI/FS recommended the remediation of all contaminated media on the Site using the most cost-effective, long-term, environmentally-sound permanent treatment technology.

After the completion of the RI/FS, the USEPA excavated and removed for off-site disposal, over 300 drums and 500 cubic yards of soil from the drum disposal area.

On March 31, 1993, the NYSDEC issued a Record of Decision (ROD) for the Site. The major components of the selected remedy are as follows:

- Extraction of contaminated groundwater utilizing a groundwater collection trench;
- On-site treatment of contaminated groundwater through a granular activated carbon (GAC) treatment system;
- On-site discharge of the treatment system effluent for reinjection using an upgradient leachfield; and
- Long-term monitoring to determine the effectiveness of the remedy.

2.0 CONSTRUCTION ACTIVITIES

The remedial construction activities for the Site were completed under two contracts. The first contract was for the installation of the groundwater collection trench and groundwater recharge system, while the second contract involved the construction of the groundwater treatment system.

Rust was responsible for performing engineering inspection for both contracts during all construction activities. Rust's responsibilities during construction included: inspection of the contractor's work to ensure compliance with the design; review of shop submittals and any design modifications proposed by the contractor; documentation of daily activities; and reporting to NYSDEC any discrepancies noted in the application of health and safety or other standard working protocols.

In addition, Rust addressed complaints from a local resident, Bonnie Thacker, concerning a black sludge-like substance in her well at the corner of Rickson St. and Mason St. A site visit by NYSDEC and Rust on November 21, 1994 determined that because of the age and depth of the well, the iron staining and sulphurous odors, the well's history of high iron and manganese levels and the fact that the well is hydrologically upgradient of the Site, it would appear the sludge is due to a high concentration of inorganic compounds in the bedrock at this locale. As a further course of action it was suggested Ms. Thacker have her water sampled and analyzed by the Clinton County Department of Health.

2.1 CONTRACT NO. 1

The NYSDEC advertised for bids to perform the work required by Contract No.1. The bid received from Maxymillion Technology Inc. (MTI) was selected as the lowest responsive, responsible bid and MTI was awarded the contract. Under Contract No. 1, MTI responsible for the installation of: the groundwater collection trench; the forcemain from the collection trench pump station to the location of the treatment system; and the groundwater recharge system.

MTI and Rust mobilized to the Site on November 9, 1994. Materials were unloaded and the location of the collection system was surveyed and cleared of vegetation. During the next week the work zone was fenced and materials and equipment continued to arrive. A field office was established in a temporary trailer and a mobile treatment facility was brought on Site.

Three test pits were dug in order to determine how compacted the soil was and how much water could be expected during the collection trench excavation. The first test pit was located roughly 20 feet north of the pump station in the direction of clean out no. 1 and its depth was approximately 15 feet below ground surface (BGS). A small seep was noted on the west wall of the pit, perched above a clayey silt seam about 4 feet BGS. The second test pit was located approximately 75 feet north of the pump station in line with clean out no. 2. It was about 13 feet BGS and contained a seep at the same orientation and depth as the first test pit. The third test pit was located to the south of MW-10 and was dug to a depth of 20.5 feet BGS. No water infiltrated into this pit, despite a water level of 11.59 feet below top of PVC in MW-10.

During collection trench excavation, MTI treated approximately 26,860 gallons of groundwater pumped. Water was stored in one of four fractionation tanks before being treated. After treatment, water was transferred into a clean fractionation tank, in order to prevent cross contamination, and sampled prior to discharge to the ground. Water was sampled for the compounds and quality levels specified in Section XI, Division 2, Section 02426 of the Contract Documents and Technical Specifications.

All excavated soil was field screened for organic vapors using an HNu photoionization detector to ensure a safe working conditions while excavating the trench. On November 21, while excavating the trench to contain the 3" PVC force main running from the pump station to the treatment building location, a 55 gallon steel drum was encountered approximately 30 feet west of the pump station at a depth of approximately 3.5 feet BGS. The drum was corroded and half-crushed with a small leak on one side. It was approximately 1/4 full of a black waste oil-like fluid, but was not labeled. Since some fluid was released from the drum, a small earthen berm and absorbent boom were placed in the trench downgradient of the drum's location. The drum was placed in a properly labeled plastic overpack drum and stored on-site within a temporary plastic fence on a wooden pallet and plastic sheeting. In addition, an empty steel gas cylinder was found in the same general vicinity as the drum. Both the drum and cylinder was later properly disposed of off-site.

Construction of the leachfield occurred concurrently with other site work. Soil excavated in order to install the leachfield were stripped of debris and used as fill. Due to the excessive amounts of debris in the excavated soil, an additional 345 cubic yards of fill was brought on-site for use in the leachfield construction.

A step-rate and constant rate pumping test was to be performed at the pump station manhole (PS-1) upon completion of the groundwater collection trench, as defined in Amendment No. 1 to the RD/RA Work Plan. However, during the later stages of the installation of the groundwater collection trench and recharge system, the methodology of the pumping test was modified to the following:

- Pump out groundwater from PS-1 below the collection pipe inverts and manually, via the collection of water-level measurement data, chart equilibration rates or the rate of recovery of fluid levels within PS-1 and the groundwater collection trench. This pumping test would be performed, at a minimum, three times to evaluate the actual trench yield during this period. All pumping water would be directed to on-site fractionation tanks for temporary storage and subsequent treatment in an on-site mobile treatment facility.

- Collect water-level measurement data from groundwater monitoring wells contiguous to the groundwater collection trench during the actual pumping and recovery periods. The objective of this task would be to assess various capture zones and general aquifer response to pumping in order to adequately design the groundwater treatment system. Groundwater level fluctuations throughout the pumping tests were monitored utilizing an electronic water-level detector in monitoring wells DGC-6S,

DGC-6I, DGC-8S, DGC-8I, DGC-11S, DGC-11I, MW-3, MW-4, MW-6, MW-7 and MW-10.

In addition, groundwater samples were collected at the beginning, middle and end of each pumping test in order to characterize the influent water quality for refinement of the treatment system design. A description of the pumping tests and sampling, and their conclusions, are located in the Engineering Design Report prepared for Contract No.2.

A change order to the original construction contract was approved to cover the costs of additional work items. The change order included:

- an extension of the contract duration by 252 days to account for the delay resulting from the winter shutdown;
- additional material costs for an aluminum hatch for the pump station, necessary because the impending winter weather wouldn't allow enough lead time to purchase the steel hatch specified;
- an additional concrete riser section to prevent surface runoff from entering the pump station;
- the removal, overpacking and staging of the drum found while excavating the force main, and the analyses, transportation and disposal of its contents;
- the transportation and disposal of the gas cylinder found while excavating the force main; and
- the additional cost of approximately 344 cubic yards of fill material which was necessary to construct the leachfield because a large portion of the on-site fill was unusable debris.

The total construction costs for this contract were as follows:

Original Contract Amount	$246,523.00
Change Order No. 1	13,121.34
Total Cost	$259,644.34

2.2 CONTRACT NO. 2

The NYSDEC advertised for bids to perform the work required by Contract No.2. The bid received from Groundwater Technology Inc. (GTI) was selected as the lowest responsive, responsible bid and GTI was awarded the contract. Under Contract No. 2, GTI was responsible for the installation of the groundwater treatment system and its' enclosure.

GTI and Rust mobilized to the Site on October 10, 1995, bringing two mobile offices and a decontamination trailer. Temporary power and telephone lines were installed, and a garden hose was installed to supplied water to the decontamination trailer from the Site owner's water supply. The work area was fenced with temporary plastic fencing and the gate at the entrance to the site was locked during non-work hours.

Construction of the treatment building began on October 18, 1995. The building's concrete floor and foundation were excavated, formed, and poured in three separate pours from October 18 to 26. Slump tests were performed on site and samples were taken to test the compressive strength at 7 and 28 day intervals. During all site excavation, work areas and spoils were monitored with a photo-ionizing device (PID). Levels did not exceed the action level of 1 ppm sustained for a 5 minute period.

From October 31 to November 3, the treatment building was framed, insulated, sheathed, sided, and roofed. The 10' x 10' overhead door was installed on November 6 and the entry door to the building was installed on December 1. The GAC tanks and GAC arrived on October 31, before the walls of the treatment building had been constructed, and were moved into place with a crane. The air stripper arrived on November 6 and was moved into position with a forklift.

Installing of the hot water heater and associated plumbing began on November 13 and it was operational by December 4. Confined space entries were required on both November 16 and 17 and December 14 and 15 in order to install the pump and associated plumbing in the equalization tank and pump station, respectively. Excess water from the equalization tank was discharged to the ground. Excess water from the pump station sump was pumped to the treatment building via a temporary above ground pipe, where it was treated by the treatment system and discharged to the leachfield. Approximately 50,000 gallons were removed and treated from the collection trench.

A change order to the original construction contract was approved to cover the costs of additional work items. These work items include the upgrading of the strip chart recorder to include a totalizer and the cost of the initial propane tank filling.

The total construction costs for this contract were as follows:

Original Contract Amount	$159,950.00
Change Order No. 1	1,090.38
Total Cost	$161,040.38

3.0 PERFORMANCE STANDARDS AND CONSTRUCTION QUALITY CONTROL

Selection of a qualified construction contractor for each contract involved a qualification screening based on past performance on projects of a similar nature. Furthermore, the contractors were required to prepare a number of shop submittals for materials and equipment. No materials or equipment were installed without prior approval from Rust that they met the requirements of the contract documents. Additionally, Rust provided a full-time inspector to oversee the performance of the work. Where appropriate, equipment was tested to ensure its proper installation.

Included in Appendix A is a series of photographs documenting construction activities.

4.0 FINAL INSPECTION

A Substantial Completion inspection for Contract No.1 was held on December 28, 1994 with representatives of the NYSDEC, MTI and Rust. A list of deficiencies or remaining work items (punchlist) was developed from this inspection. A Final Completion inspection was held on June 28, 1995 to review the completion of the punchlist items. All outstanding work was found to have been satisfactorily completed and the contract work was deemed complete.

Rust developed a punchlist for the second contract, and on December 28, 1995 held the Substantial and Final Completion inspections. These inspections were attended by representatives of the NYSDEC, GTI and Rust, and it was verified that all punchlist items were satisfactorily completed and the contract work was deemed complete.

5.0 CERTIFICATION THAT THE REMEDY WAS COMPLETE

Based on regular field inspections performed by Rust and the results of the final inspections, it has been determined that construction of the groundwater collection, treatment and recharge systems have been completed in accordance with the plans and specifications developed for Contract Nos. 1 and 2.

6.0 OPERATION, MAINTENANCE AND MONITORING

Operation, maintenance and monitoring requirements for the groundwater collection, recharge and treatment system are addressed in a separate Operation, Maintenance and Monitoring (OM&M) Plan.

APPENDIX A

Photographs

Philmar Electronics Site
Construction Photographs

Forcemain Cleanouts

Groundwater Monitoring Wells (foreground)
Collection Trench Cleanouts and Leachfield (background, left)

Philmar Electronics Site
Construction Photographs

Pump Station

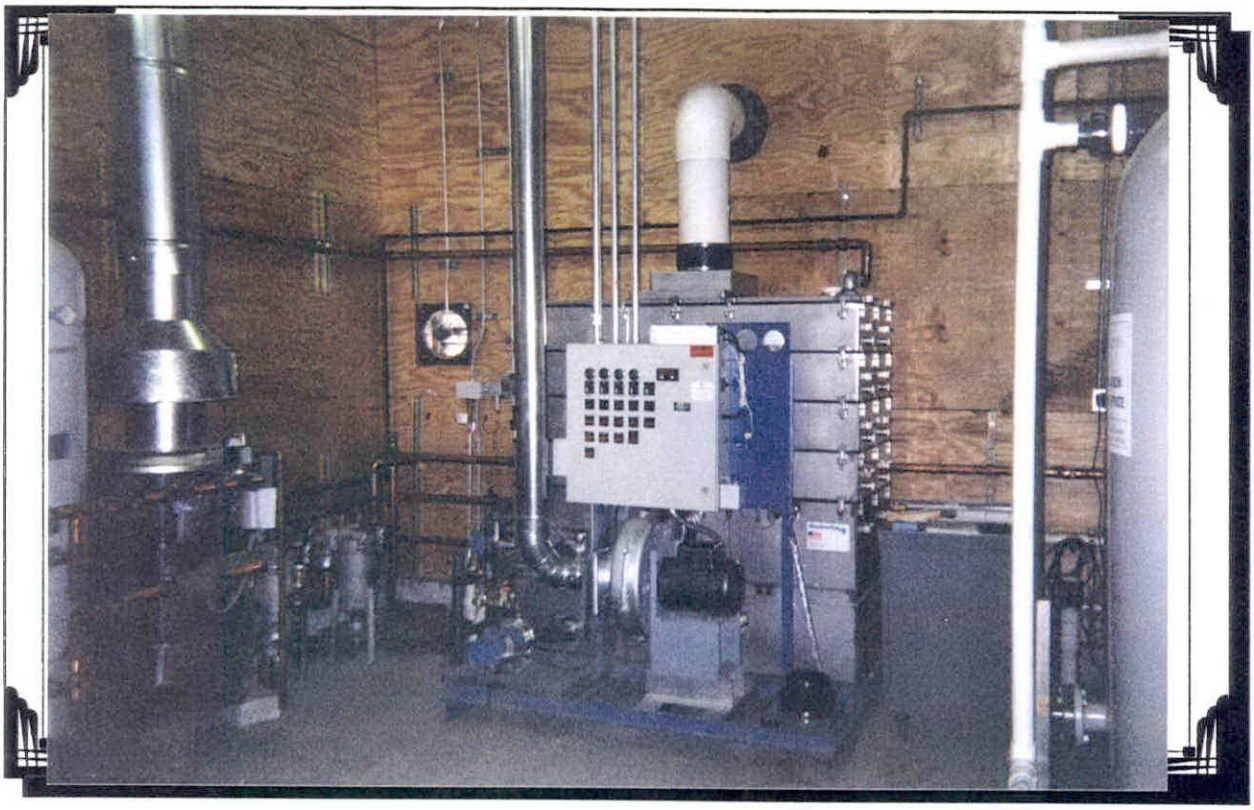
Collection Trench Cleanout (foreground)
Leachfield (background, left)

Philmar Electronics Site
Construction Photographs

Treatment Building

Propane Storage Tank

Philmar Electronics Site
Construction Photographs

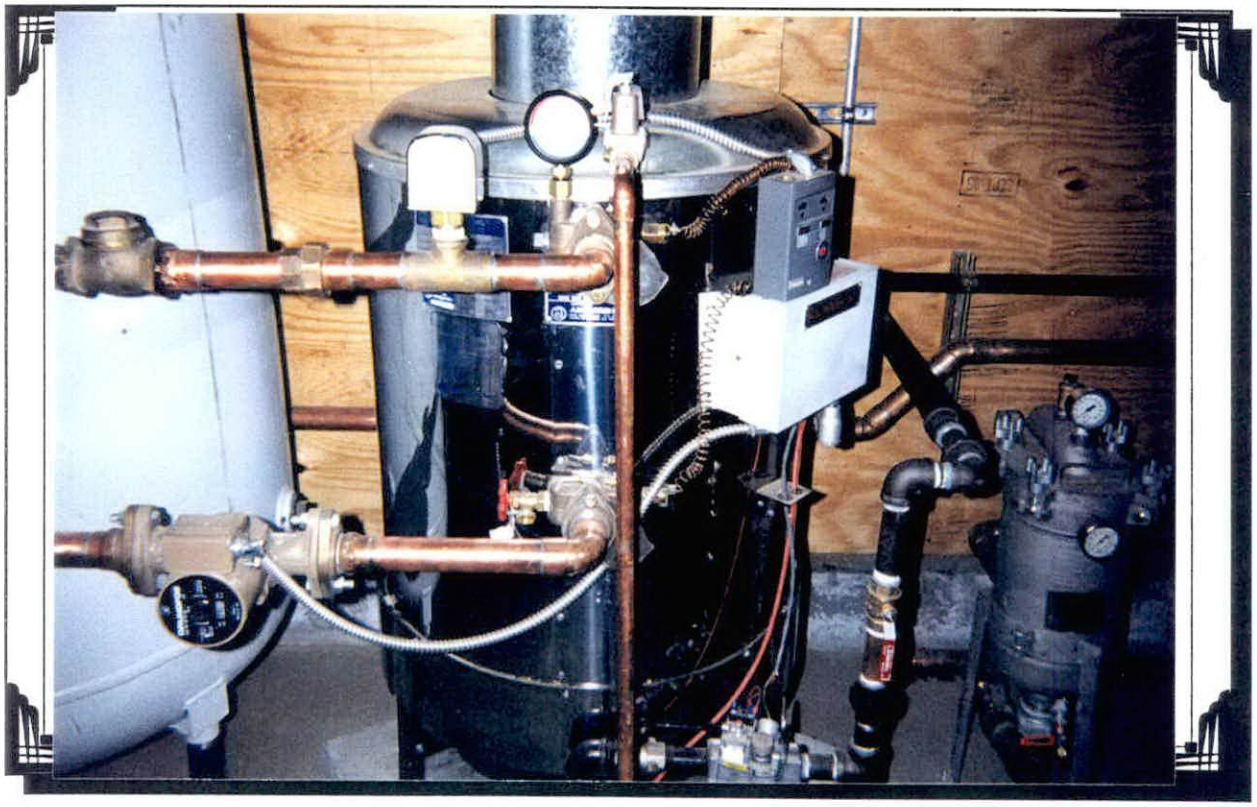


Shallow Tray Air Stripper and Control Panel

Boiler and Storage Tank

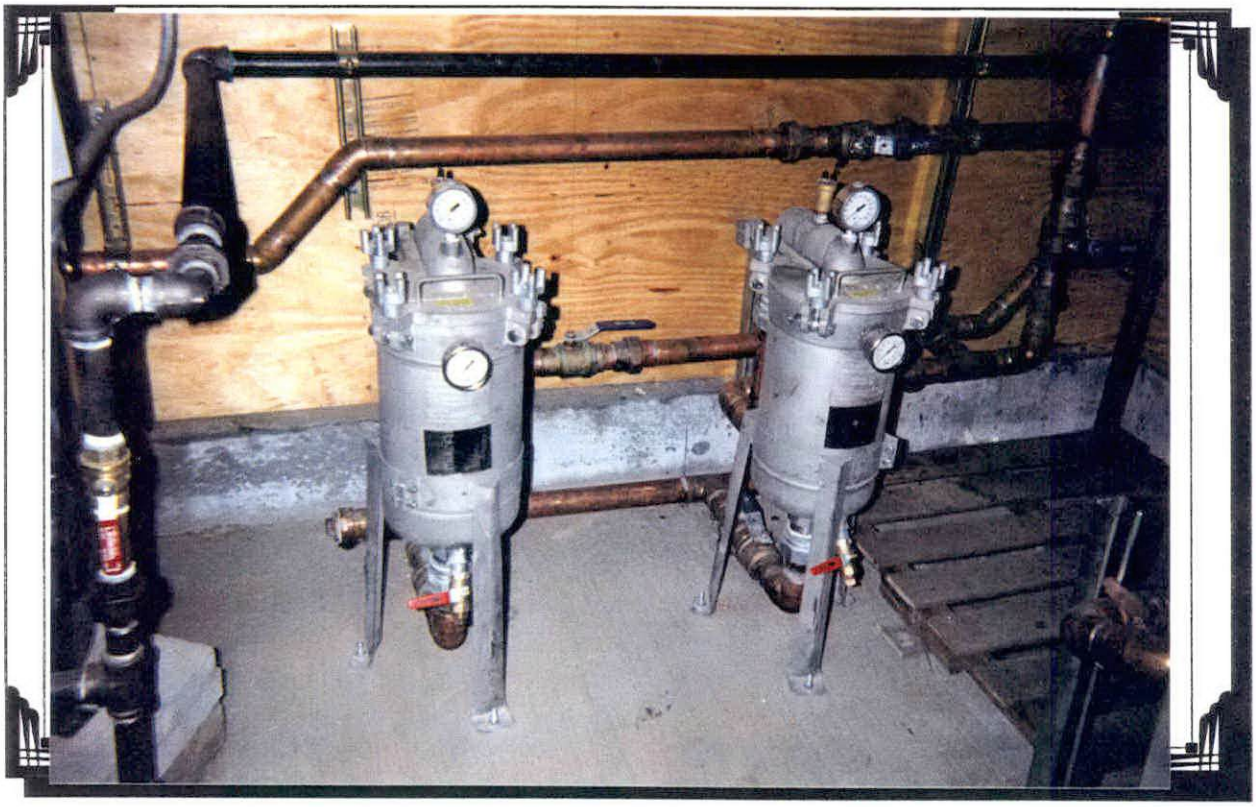
Philmar Electronics Site
Construction Photographs

GAC Canisters



Boiler

Philmar Electronics Site
Construction Photographs



Secondary Bag Filters

Primary Bag Filter and Wash Sink