ENVIRO-SCIENCES, INC.
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July 16, 1999

Mr. Richard Gabarow
New York State Dept. of Environmental Conservation
Bureau of Eastern Remedial Action
Division of Hazardous Waste Remediation
50 Wolf Road
Albany, New York 12233-7010

Re: Pall Corporation
NYSDEC IHWDS No. 1-30-053B

Dear Mr. Gabarow:

On behalf of Pall Corporation and Maupin Taylor & Ellis, P.A., Enviro-Sciences, Inc. is pleased to submit this revised Supplemental Work Plan for Remedial Investigation. The revised work plan incorporates your comments as discussed during our July 14, 1999, telephone conversation. Specifically, the following changes have been made:

- We have clarified the language in the work plan referencing additional well sampling. The specific wells to be sampled are now listed in the text.
- We have added language acknowledging the five (5) days advance notice to NYSDEC prior to initiation of field activities as requested.

It is our understanding that this re-submittal will be approved by the NYSDEC and that we should begin scheduling the additional field work. If you have any questions or comments, please do not hesitate to contact me at (516) 207-9005.

Sincerely,
ENVIRO-SCIENCES, INC.

Daniel J. Smith, P.E.
Project Director

DJS/djs
d:\projects\pall\swpcovlet.doc

JUL 20 1999

cc: M.A. Bartlett / Pall
W. Benzinger / Pall
K. Olson / Maupin Taylor
C. Vasudevan / NYSDEC

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SUPPLEMENTAL WORK PLAN FOR RI/FS

PALL CORPORATION
30 SEA CLIFF AVENUE
GLEN COVE, NEW YORK

Prepared for:

Pall Corporation
c/o Maupin Taylor & Ellis, P.A.
Attorneys at Law
P.O. Drawer 19764
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and

New York State Department of Environmental Conservation
Bureau of Eastern Remedial Action
Division of Hazardous Waste Remediation
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Prepared by:

Enviro-Sciences, Inc.
312 East Main Street
Patchogue, New York 11772

July 16, 1999

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1.0 INTRODUCTION

At the request of the New York State Department of Environmental Conservation (NYSDEC) , Pall Corporation (Pall) will complete additional investigation activities at the 30 Sea Cliff Avenue facility located in Glen Cove, New York. This Supplemental Work Plan outlines the scope of the additional investigation work to be completed. Detailed procedural steps (i.e., method of sampling, development, etc.) are not provided in this document because this type of information was previously provided to, and approved by, the NYSDEC in the original RI/FS Work Plan and RI/FS Quality Assurance Project Plan. These work plans are considered a part of this Supplemental Work Plan by reference.

2.0 SCOPE OF WORK

The supplemental investigative activities to be performed include additional groundwater investigation, additional soil investigation, and additional research into the historical operations of USTs on the Pall and August Thomsen properties. The following sections of this Supplemental Work Plan outline the detailed scope of work to be completed.

2.1 Historical Tank System Research

Pall will confirm the absence or presence of, and research the historical operations of tank systems (aboveground and belowground) at the Pall and August Thomsen facilities. Specifically, the research will focus on the north side of the August Thomsen property. The research will attempt to define the operating period of any tanks determined to have existed and the manner in which the tanks were operated (e.g., method of fill and disposal, leak monitoring, etc.). In addition, the method of closure (if applicable) will be documented. As a minimum, the following sources of information will be reviewed for possible tank information:

- Review of NYSDEC tank registration permit records, if any;
- Review of Nassau County Department of Health (NCDH) tank registration permit records, if any;
- Review of City of Glen Cove tank registration permit records, if any;
- Review of any Certificate of Occupancy files that may indicate tank records;
- Acquisition and review of an independent database company's records for the Pall and August Thomsen properties (e.g., ERIIS, Vista, etc.); and
- Field observations indicating the possible presence of aboveground or underground tanks (e.g., vent pipes, fill ports, etc.).

It should be noted that the above research my not provide any significant data on the absence or presence of tanks on the subject properties. Therefore, Pall cannot guarantee that this research will provide the information desired by the NYSDEC.

2.2 Additional Groundwater Investigation

Based upon preliminary groundwater data obtained during the Remedial Investigation, it was determined that several data gaps exist with regard to distribution of contaminants in the groundwater underlying the subject property. Additional groundwater investigation is necessary to better delineate the extent of groundwater contamination and to more thoroughly assess potential source areas. The additional

groundwater investigation will also be utilized to compare groundwater quality data collected from "permanent" monitoring wells to data previously collected from temporary Geoprobe points.

Specifically, the following additional investigation work is to be completed:

- Installation and development of four (4) new monitoring well triplets (four locations with one shallow, one intermediate, and one deep well at each location for a total of twelve wells) in the on-site locations indicated in Figure 2-1.
- Installation and development of two (2) new monitoring well triplets (two locations with one shallow, one intermediate, and one deep well at each location for a total of six wells) in the off-site locations indicated in Figure 2-1.
- Sampling of newly installed monitoring wells and existing monitoring wells on the Pall and August Thomsen properties;
- Sampling of existing off-site monitoring well clusters GC-2, GC-3, GC-4, GC-5, GC-8, GC-9 (all cluster depths, if located) and new off-site monitoring well clusters MW-1G and MW-2G (all cluster depths);
- Collection of an additional round of water level measurements for monitoring wells on the Pall and August Thomsen properties.

2.2.1 Installation of New Monitoring Wells

Monitoring wells will be installed and constructed following the procedures of the previously submitted RI/FS Work Plan. All new deep wells (MW-##PD) will be installed to a depth of approximately 105 feet below grade and screened from approximately 90 to 100 feet below grade. New intermediate depth wells (MW-##PI) will be installed to a depth of approximately 55 feet below grade and screened from approximately 40 to 50 feet below grade. The new shallow wells (MW-##PS) will be installed to a depth of approximately 15 feet below grade and screened from approximately 10 to 15 feet below grade. The actual screened interval depths may be modified slightly in the field based upon geologic data obtained during drilling activities. All wells will be constructed of 2-inch diameter PVC, screened with 0.020 slot well screen, and completed at grade as flush mount monitoring wells. Well drilling logs and completion diagrams will be developed during installation.

The following is a description of the rationale behind the new, on-site monitoring well locations.

- One (1) new monitoring well triplet (total of 3 wells to be designated MW-11PS, MW-11PI, and MW-11PD) will be installed between SGB-32 and SGB-33 (approximately 50 feet southeast of the MW-5P triplet. Information from this well triplet will be used to further delineate the MW-5P plume. In addition, data from this well will be used to better evaluate the cause of the significant difference in groundwater quality data between monitoring well samples and Geoprobe water samples collected from this area during past studies.

- One (1) new monitoring well triplet (total of 3 wells to be designated MW-12PS, MW-12PI, and MW-12PD) will be installed approximately 100 feet southwest of the new MW-11 triplet, adjacent to the east wall of the August Thomsen facility. Information from this well triplet will be used to further delineate the MW-5P plume by more thoroughly defining the western extent of the MW-5P plume.

- One (1) new monitoring well triplet (total of 3 wells to be designated MW-13PS, MW-13PI, and MW-13PD) will be installed near DGB-4 at the northeast corner of the Pall building. Information from this well triplet will be used to fill in data gaps which exist between the upgradient wells at MW-6 and the downgradient wells at MW-4P and MW-5P. This data point will also help define the extent of the plume located near MW-6P at the upgradient property line.

- One (1) new monitoring well triplet (total of 3 wells to be designated MW-14PS, MW-14PI, and MW-14PD) will be installed near SGB-4 approximately 80 feet northwest of MW-6P. Information from this well triplet will be used to better define the extent of the plume located near MW-6P and the MW-8P couplet at the upgradient property line.

In addition to the four, new on-site well triplets, two new off-site well triplets are proposed to better define the downgradient extent of the plumes located near MW-5P and the plume centered off-site near Geoprobe point GP-41. The following is a description of the rationale behind the new, off-site monitoring well locations.

- One (1) new monitoring well triplet (total of 3 wells to be designated MW-1GS, MW-1GI, and MW-1GD) will be installed off-site near GP-45 approximately midway between the MW-5P triplet and the City of Glen Cove well triplet at GC-3. Information from this well triplet will be used to better define the extent of the plume located near MW-5P.

- One (1) new monitoring well triplet (total of 3 wells to be designated MW-2GS MW-2GI, and MW-2GD) will be installed near GP-41. Information from this well triplet will be used to better define the extent of the plume located near GP-41. In addition, data collected from this well triplet will be utilized in conjunction with new off-site soil data to determine if the two apparently separate plumes at MW-5P and GP-41 are related to a common source or multiple sources.

2.2.2 Sampling of New and Existing Wells

Following installation and development of the new monitoring wells, Pall will sample all existing on-site and immediately off-site monitoring wells to obtain a second round of groundwater data. The same sampling procedures and analytical methods presented in the RI/FS QAPP approved by the NYSDEC previously will be followed for consistency. A total of 49 groundwater samples will be collected during this supplemental groundwater investigation (18 new wells plus the 21 existing on-site monitoring wells and off-site wells at GC-2S, GC-2D, GC-3S, GC-3I, GC-3D, GC-5S, GC-5D, GC-8S, GC-8D and GC-9S). The NYSDEC will be notified a minimum of 7 calendar days prior to all field sampling activities.

2.3 Additional Soil Investigation

Based upon preliminary soil data collected during the RI, the NYSDEC has requested additional soil investigation at four locations. Three of the locations are located on-site (area near SB-5, area near SB-7, and area near SGB-29). One of the locations (near GP-41) is located off-site in the vicinity of the elevated groundwater concentrations detected during the previous investigation. A description of the sampling program to be implemented at each of these locations is presented below: Figure 2-2 indicates the areas to be investigated. The NYSDEC will be notified a minimum of 7 calendar days prior to all field sampling activities.

2.3.1 SB-5 Soil Investigation

At the NYSDEC's request, Pall will implement a soil sampling program to better define the extent of impacts to soils near SB-5, located along the north-central wall of the Pall facility. The area near SB-5 will be marked in a fifteen foot by fifteen foot grid with a total dimension of approximately 60 feet by 30 feet. Soil samples will be collected from a depth of approximately 1 to 2 feet above the water table at each node on the grid. This configuration will result in collection of approximately fifteen (15) soil samples to better define the extent of any contamination in this area. Each soil sample will be analyzed for volatile organic compounds in accordance with the sampling procedures and laboratory methodologies outlined in the previously approved RI/FS QAPP.

Deeper soil sampling is not proposed because the soil quality at deeper depths may have been impacted by groundwater contamination and interpretation of deeper soil data may lead to erroneous conclusions regarding soil quality and determination of possible source areas.

2.3.2 SB-7 Soil Investigation

At the NYSDEC's request, Pall will implement a soil sampling program to better define the extent of impacts to soils near SB-7, located along the northwest wall of the Pall facility. The area near SB-7 will be marked in a fifteen foot by fifteen foot grid with a total dimension of approximately 60 feet by 45 feet. Soil samples will be collected from a depth of approximately 1 to 2 feet above the water table at each node on the grid. This configuration will result in collection of approximately twenty (20) soil samples to better define the extent of any contamination in this area. Each soil sample will be analyzed for volatile organic compounds in accordance with the sampling procedures and laboratory methodologies outlined in the previously approved RI/FS QAPP.

Deeper soil sampling is not proposed because the soil quality at deeper depths may have been impacted by groundwater contamination and interpretation of deeper soil data may lead to erroneous conclusions regarding soil quality and determination of possible source areas.

2.3.3 SGB-29 Soil Investigation

At the NYSDEC's request, Pall will implement a soil sampling program to better define the extent of any impacts to soils near SGB-29, located along the northwest wall of the August Thomsen facility. Two soil samples will be collected in the area bounded by SGB-29, SGB-30, and SB-1. Each soil sample will be analyzed for volatile organic compounds in accordance with the sampling procedures and laboratory methodologies outlined in the previously approved RI/FS QAPP.

Deeper soil sampling is not proposed because the soil quality at deeper depths may have been impacted by groundwater contamination and interpretation of deeper soil data may lead to erroneous conclusions regarding soil quality and determination of possible source areas.

2.3.4 Off-Site Soil Investigation Near GP-41

At the NYSDEC's request, Pall will implement a soil sampling program to better define the extent of impacts to soils near GP-41, located off-site at the City of Glen Cove property approximately 100 feet north-northwest of the MW-2A triplet. Pall is implementing this additional investigation at the request of the NYSDEC. The additional work to be completed is subject to all covenants and qualifications in the Order on Consent under which this work is being performed.

Three (3) soil samples will be collected in the vicinity of GP-41. Soil samples will be collected from a depth of approximately 1 to 2 feet above the water table. Each soil sample will be analyzed for volatile organic compounds in accordance with the sampling procedures and laboratory methodologies outlined in the previously approved RI/FS QAPP.

3.0 REPORTING

Data collected during this supplemental investigation will be reported as part of the Remedial Investigation Report already initiated by Pall. No separate report will be made.

4.0 PROJECT SCHEDULE

The project schedule for the additional investigation outlined in this Supplemental Work Plan and the completion of the Remedial Investigation Report is provided in Figure 4-1. As indicated in the figure, the work is to be initiated immediately upon NYSDEC approval of the work plan and will be completed within 17 weeks.

FIGURES

FILE NAME: SWP2-1.DWG

LEGEND

- PROPOSED MONITORING WELL TRIPLET
- MW-# EXISTING MONITORING WELL
- DGB-# EXISTING DEEP GEOPROBE SOIL BORING
- SGB-# EXISTING SHALLOW GEOPROBE BORING (P-PEIZOMETER)
- SW/SED SURFACE WATER/SEDIMENT SAMPLE LOCATION

NOTES

1. BASE MAP ADAPTED FROM NYSDEC FOCUSED RI REPORT, APRIL 1999.
2. WELL LOCATIONS BASED ON SURVEY DATA FROM SIDNEY B. BOWNE & SON, 6/9/99
3. NEW WELL LOCATIONS ARE APPROXIMATE AND SUBJECT TO CHANGE BASED UPON ACTUAL FIELD CONDITIONS.

NEW MW-2G
NEW MW-1G
NEW MW-11P
NEW MW-12P
NEW MW-13P
NEW MW-14P
GENERATOR BUILDING
WATER DEPARTMENT CONTROL BUILDING
EMS
DAY CARE CENTER
AUGUST THOMSEN
ONE STORY BLOCK BUILDING
PALL CORPORATION
ONE STORY BLOCK BUILDING
GLEN COVE ARTERIAL HIGHWAY
COVE
CREEK
SEA CLIFF AVENUE
N

FIGURE No. 2-1	PROJECT No. M371	PALL CORPORATION 30 SEA CLIFF AVENUE GLEN COVE, NEW YORK	0 40 80 160 SCALE IN FEET
		PROPOSED MONITORING WELL LOCATIONS	DRAWN BY: DJS DATE: 7/15/99

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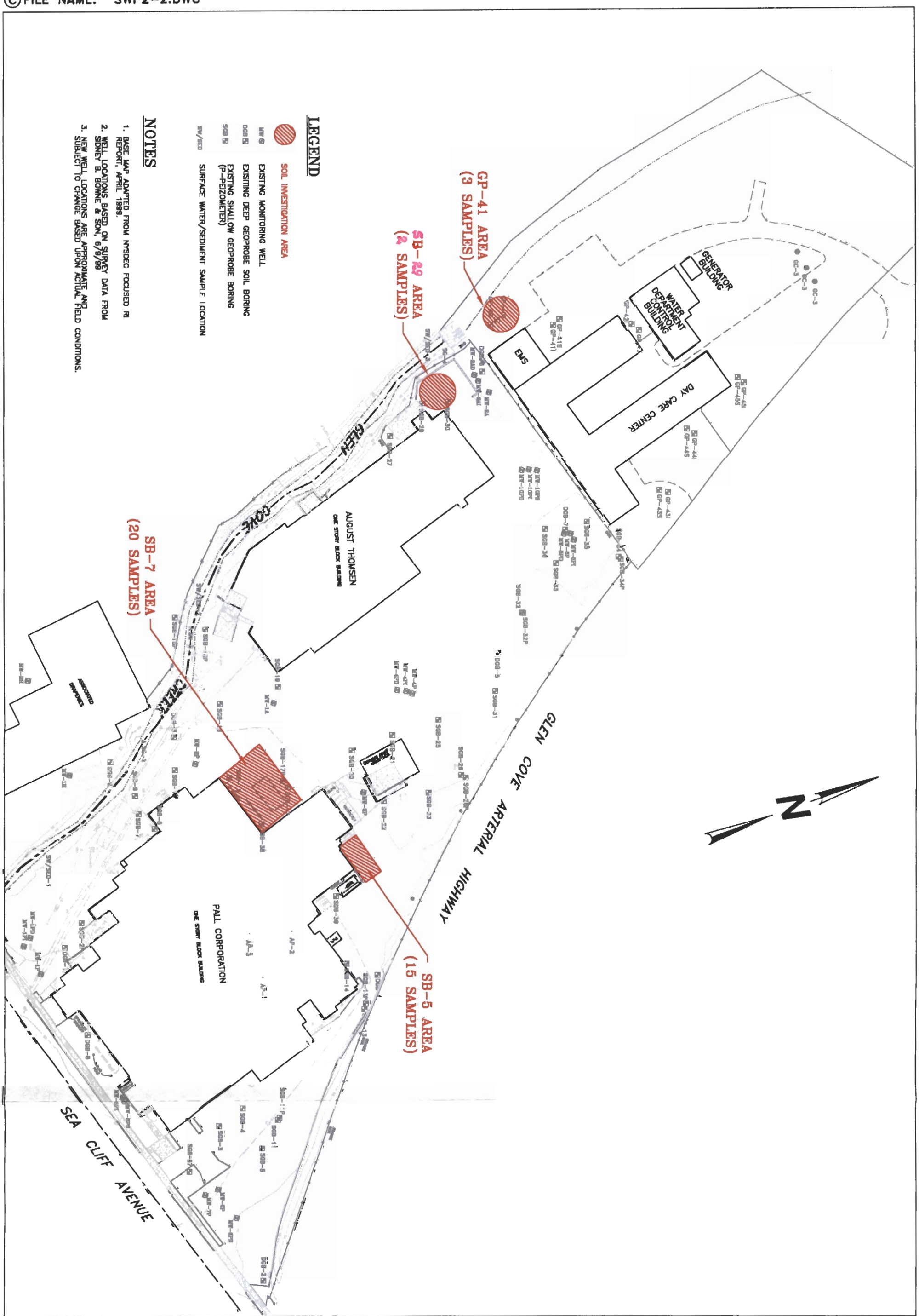
FILE NAME: SWP2-2.DWG



LEGEND

- SOIL INVESTIGATION AREA
- MW-6 EXISTING MONITORING WELL
- DGB-5 EXISTING DEEP GEOPROBE SOIL BORING
- SGB-5 EXISTING SHALLOW GEOPROBE BORING (P-PEIZOMETER)
- SW/SED SURFACE WATER/SEDIMENT SAMPLE LOCATION

NOTES

1. BASE MAP ADAPTED FROM NYSDEC FOCUSED RI REPORT, APRIL 1999.
2. WELL LOCATIONS BASED ON SURVEY DATA FROM SIDNEY B. BOWNE & SON, 6/9/99
3. NEW WELL LOCATIONS ARE APPROXIMATE AND SUBJECT TO CHANGE BASED UPON ACTUAL FIELD CONDITIONS.

FIGURE No. 2-2	PROJECT No. M371	PALL CORPORATION 30 SEA CLIFF AVENUE GLEN COVE, NEW YORK	0 40 80 160 SCALE IN FEET
		PROPOSED SOIL INVESTIGATION AREAS	DRAWN BY: DJS DATE: 7/15/99

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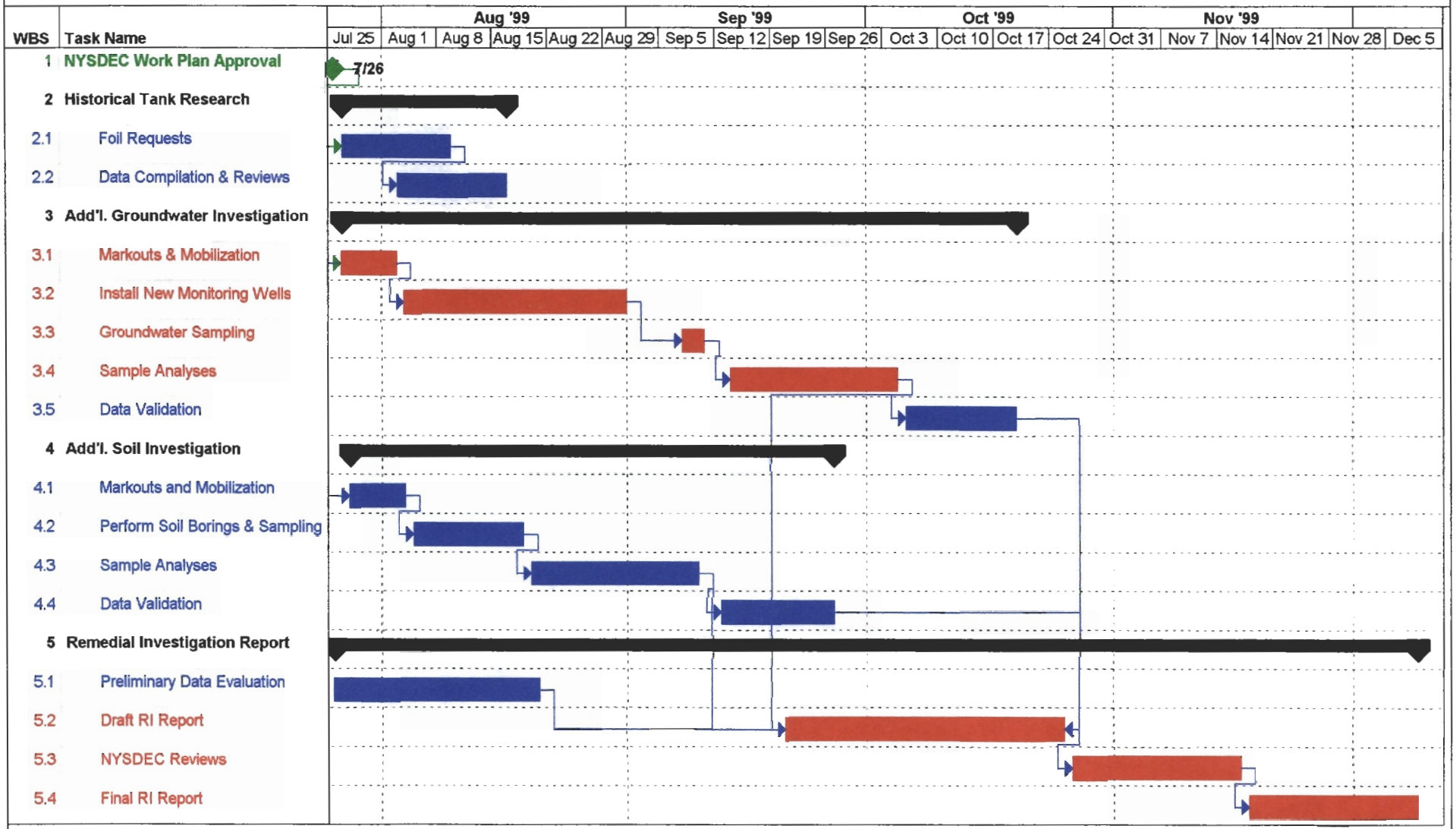
Figure 4-1
Project Schedule



Project:
Date: 7/16/99

Task
Critical Task
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Milestone
Rolled Up Progress