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December 21, 2007

Mr. Guy Bobersky, P.E.
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7015

Re: Former Pall Corporation Facility
30 Sea Cliff Avenue, Glen Cove, NY
IHWDS No. 1-30-053B
RD / RA Work Plan Submittal

Dear Mr. Bobersky,

On behalf of Pall Corporation (Pall), Apex Companies, LLC (Apex) is pleased to submit four (4) copies of the attached Remedial Design / Remedial Action (RD / RA) Work Plan for the above-referenced site. The scope of work set forth in the RD/RA Work Plan and Site Management Plan (Section 4 of the RD/RA Work Plan) is consistent with the requirements of the Record of Decision and our meeting discussions on November 30, 2007. The associated Quality Assurance Project Plan (QuAPP) will be provided under separate cover.

If you have any questions or comments, please do not hesitate to contact me at (631) 567-1777 extension 102.

Sincerely,
Apex Companies, LLC

Daniel J. Smith, P.E.
New York Division Director

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cc: V. Robbins / BSK
S. Ervolina / NYSDEC
R. Rusinko / NYSDEC
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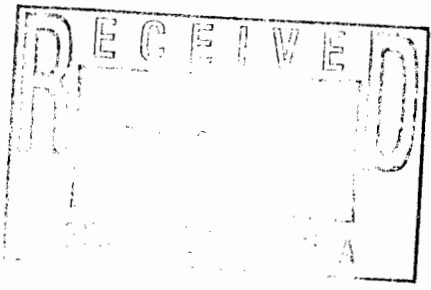
G. Litwin / NYSDOH
B. Palmer / Pall

REMEDIAL DESIGN / REMEDIAL ACTION WORK PLAN FOR OPERABLE UNIT 1



PALL

NYSDEC SITE NO. 1-30-053B
FORMER PALL CORPORATION FACILITY
30 SEA CLIFF AVENUE
GLEN COVE, NEW YORK 11542

Prepared for:

Pall Corporation
2200 Northern Boulevard
East Hills, New York 11548

and

New York State Dept. of Environmental Conservation
Bureau of Eastern Remedial Action
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7015

December 21, 2007

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TABLE OF CONTENTS:

TABLES:

FIGURES:

REFERENCES:

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REMEDIAL DESIGN / REMEDIAL ACTION WORK PLAN FOR OPERABLE UNIT 1

NYSDEC SITE NO. 1-30-053B
FORMER PALL CORP. FACILITY
30 SEA CLIFF AVENUE
GLEN COVE, NY

1.0 INTRODUCTION

The former Pall Corporation (Pall) property is listed by the New York State Department of Environmental Conservation (NYSDEC) as a Class 2 Inactive Hazardous Waste Disposal Site (IHWDS No. 1-30-053B). In March 2004, the NYSDEC issued a Record of Decision (ROD) for Operable Unit 1 (OU-1) of the former Pall site. The ROD identified the remedy for the Site as In-Situ Chemical Oxidation (ISCO) for OU-1. However, data obtained since finalization of the ROD has presented several technical challenges to implementation of the ROD. These challenges are primarily related to contaminant migration from upgradient properties that would make implementation of ISCO technically impracticable at this time without addressing regional issues affecting cleanup of the OU-1 Site. On November 30, 2007, Pall met with representatives of the NYSDEC to discuss the technical challenges at the OU-1 Site and the best path forward to assure successful remediation of the region as a whole. This Remedial Design (RD) / Remedial Action (RA) Work Plan presents the technical approach for cleanup of the OU-1 Site consistent with the ROD and the November 30, 2007, discussions with the NYSDEC.

1.1 Site Location and Operational History

The Pall IHWDS, as defined in the ROD, includes three contiguous areas / properties in Glen Cove, New York:

- The former Pall facility at 30 Sea Cliff Avenue, Glen Cove, New York;
- The current August Thomsen property located at 36 Sea Cliff Avenue; and,
- The City of Glen Cove property adjacent to and north of the former Pall and August Thomsen facilities.

The 30 Sea Cliff Avenue was constructed in 1918 and was used as an ice house until approximately 1953 when Pall acquired the property. Pall occupied the 30 Sea Cliff Avenue parcel from approximately 1953 through 1999 when operations were discontinued. The building on 30 Sea Cliff Avenue is currently vacant.

The 36 Sea Cliff Avenue building was constructed by Pall in 1958 and was owned and operated by Pall from approximately 1958 until 1971. In 1971, Pall sold the building to August Thomsen, the current owner of the property. August Thomsen currently occupies the 36 Sea Cliff Avenue building.

The adjacent City of Glen Cove property includes a day care center and former Emergency Medical Services (EMS) garage that borders the former Pall and August Thomsen sites and the inactive Carney Street public water supply well field. The Carney Street Well Field has been out of service since approximately 1978.

1.1.1 Terminology Used in the Work Plan

To facilitate the discussion in this RD/RA Work Plan, the 30 and 36 Sea Cliff Avenue properties shall collectively be referred to as "the Site" or "the Property" within the context of this document. When the intent of the discussion is to also include the City of Glen Cove property as included in the NYSDEC listing of the Pall IHWDS site, the term "OU-1" or "OU-1 Site" shall be used.

The term "on-site" shall include the 30 and 36 Sea Cliff Avenue properties only. The term "off-site" shall include any other properties within the OU-I boundary or upgradient sites. There are two primary types of "off-site" properties that will be discussed within this RD/ RA Work Plan:

- "Upgradient" properties shall refer to properties that are hydrogeologically upgradient of the Site. Upgradient properties primarily will refer to the Photocircuits Corporation and Pass and Seymour sites to the south across Sea Cliff Avenue. The term "upgradient" may also be used to reference groundwater quality in wells along Sea Cliff Avenue. However, it is important to note that this term also includes deeper groundwater zones in areas of OU-2 (as defined in ***Section 1.1.2***) where artesian flow conditions allow deeper contaminants to flow upward into OU-1. Both the Photocircuits (Site No. 1-30-009) and the Pass and Seymour site (Site No. 1-30-053B) are also Class 2 sites under the NYSDEC IHWDS program.
- "Downgradient" properties shall include properties to the north of the former Pall and August Thomsen sites in the context of this RD/RA Work Plan and shall primarily represent the City of Glen Cove properties bordering the Site. This terminology differentiates the upgradient properties and downgradient regions of the OU-1 Site which is critical to understanding the remedy presented in this RD/RA Work Plan. The reader is reminded that the City of Glen Cove property north of the Pall property is included within the OU-1 boundary defined by NYSDEC in the ROD.

A site location map is presented in ***Figure 1***. A site plan indicating the key areas of the Site and the terminology to be used in this RD / RA Work Plan is presented in ***Figure 2.***

1.1.2 Operable Unit Definition

In addition to the horizontal boundaries discussed above, vertical boundaries have also been established by the NYSDEC for the Operable Units (OUs). Operable Unit 1 (OU-1) of the Site encompasses the subsurface contamination zone from grade to sixty feet below grade surface (bgs). OU-1 contains two vertical layers which have been termed "shallow" and "intermediate." Shallow OU-I includes subsurface contamination from grade to approximately 25 feet bgs. Intermediate OU-1 includes subsurface contamination from approximately 25 to 60 feet bgs. The differentiation of shallow and intermediate zones was necessary to account for different screened intervals in monitoring wells and differences in contaminant distribution and migration within OU-1.

Operable Unit 2 (OU-2) consists of subsurface contamination zones greater than 60 feet bgs. This RD/ RA Work Plan addresses OU-1 only. OU-2 is being addressed by the NYSDEC independent of this RD/ RA Work Plan. Where coordination between the two operable unit programs is required, it is addressed herein.

1.2 Physical Site Description

The topography of the Site is relatively flat with a gentle slope from the southeast corner (grade elevation of approximately 60 feet above mean sea level, msl) toward the northeast corner of the Site (grade elevation approximately 52 feet above msl). The majority of the Site is paved and has been since the 1950s. Further upgradient (hydrogeologically, i.e., on the Photocircuits property) to the south, the grade elevation varies from about 77 feet to the south to about 60 feet along Sea Cliff Avenue. West of the Site, the topography rises to elevations of greater than 100 feet above msl and the raised arterial highway is located to the east. These factors essentially create a "bowl" with the bottom of the bowl located near the northern half of the Pall and August Thomsen properties and at the City of Glen Cove site. This elevation difference, combined with the shallow water table, is the cause of flooding that routinely occurs in the area.

Glen Cove Creek is situated parallel to the west side of the Site and runs from the southwest corner, through the western boundary of the Site, to the northwest corner. The streambed is approximately 3 to 4 feet below the finished grade. Glen Cove Creek is dry the majority of the time, but the Creek has flooded in the past during storm events, thereby causing much of the Pall and August Thomsen properties to receive floodwaters from the Creek. The Creek flows from the south toward the north when sufficient water is present to sustain flow.

Groundwater flows horizontally from southeast to northwest across the site. However, local groundwater elevation variations imply that there may also be an east-west component of the groundwater flow direction along Glen Cove Creek. Based on the predominant groundwater

flow direction, properties south of Sea Cliff Avenue are located hydrogeologically upgradient of the Pall Corporation site. Vertically, there has been evidence of artesian flowing wells near the north side of the Site and on the adjacent City of Glen Cove property. For this reason, portions of OU-2 underlying the OU-1 are hydrogeologically upgradient of OU-1. This concept will be discussed further later in the RD/RA Work Plan.

1.3 Environmental History

A summary of the environmental history of the Site is presented in the ROD and other documents and is therefore not included in detail herein. The following is a brief summary of the key elements of previous environmental activities at the Site:

- 1990: Nassau County published a report entitled "Investigation of Contaminated Aquifer Segment, City of Glen Cove, Nassau County." This document identified the presence of regional chlorinated Volatile Organic Compound (VOC) contamination in groundwater;
- 1994: The Nassau County Department of Public Works (NCDPW) submitted a Preliminary Site Assessment (PSA) identifying individual properties, including the Pall, August Thomsen, and several upgradient properties, where soil and groundwater contamination was present.
- 1996: The OU-1Site was listed as a Class 2 site in the Registry of IHWDSs;
- 1998: NYSDEC implemented a Focused Remedial Investigation (RI) at the OU-1Site;
- 1999: Pall and NYSDEC executed an Order on Consent to complete a RI / Feasibility Study (FS);
- 2000: Pall completed a more comprehensive RI at the OU-1Site;
- 2001: Pall completed a FS for the OU-1Site;
- 2002-2003: Pall completed pilot testing using ISCO to address groundwater contamination and also completed a Soil Vapor Extraction (SVE) pilot test in the small area of contaminated soil at the Site;
- 2004: NYSDEC issues the ROD for the OU-1Site;
- 2005-2006: Pall completed additional ISCO pilot testing. Concerns related to localized upward groundwater gradients and artesian flow during pilot testing confirmed that a more regional solution is needed to effectively remedy the OU-1 Site;
- 2007: Pall completed a Source Evaluation Report and developed a Conceptual RD/RA Work Plan to address technical challenges identified

during pilot testing. Subsequent discussions with NYSDEC yielded the framework for this RD/RA Work Plan.

1.4 RD / RA Work Plan Objectives

This document outlines the recommended approach to remediate OU-1 as part of the area-wide soil and groundwater remediation program which involves other properties in the Sea Cliff Avenue Industrial Area. The approach presented herein is consistent with the ROD and the discussions of the November 30, 2007, meeting with NYSDEC and will allow the property to be returned to beneficial use during the OU-1 remediation program. This document is intended to be used in conjunction with the Quality Assurance Project Plan (QuAPP) submitted separately and the Site Management Plan (SMP) included as ***Section 4*** of this RD / RA Work Plan.

2.0 OVERVIEW OF PROPOSED REMEDIATION PROGRAM

This section of the RD/RA Work Plan presents the selected remedy, discusses the technical challenges related to remedy implementation, and presents the plan to overcome those challenges. The proposed remedy is consistent with the ROD; however, the confirmation of artesian flowing wells on the Site and the migration of contaminants from upgradient locations that was confirmed following ROD issuance necessitates that the implementation of the ROD be sequenced in coordination with other remedial actions at IHWDS properties in the region. Toward this end, the RD/RA Work Plan will also include a discussion of coordination with NYSDEC with respect to remedy implementation on this and other properties.

2.1 Summary of ROD Requirements

The following is a summary of the selected remedy and associated program requirements as outlined in the ROD:

- Completion of a remedial design program, including pilot tests, to provide details necessary for construction, operation, maintenance, and monitoring of the remedial program;
- Installation of additional on-site and off-site injection wells to actively treat contaminated groundwater;
- Injection of chemical oxidant into injection wells to destroy groundwater contaminants;
- Remediation of contaminated soil by excavation and off-site disposal or in-situ chemical oxidation;
- Development of a Site Management Plan (SMP) to: (a) address residual contaminated soils that may be excavated from the site during future redevelopment; (b) evaluate potential for vapor intrusion into any buildings developed on the site, including provisions for mitigation as applicable; and (c) limit property use to commercial or industrial use.
- Imposition of institutional controls in the form of an environmental easement that will require compliance with the SMP; restrict use of groundwater as a source of potable or process water without treatment; and require submittal of annual certifications.
- Development and implementation of a long-term monitoring program.

Each of these issues is addressed in this RD/ RA Work Plan and the associated SMP. ***Table 1*** provides a summary of the ROD requirements and how each issue is to be addressed at OU-1.

2.2 Technical Challenges Related to ROD Implementation

Pilot testing completed after ROD issuance identified and confirmed several technical challenges related to ROD implementation including:

- Upgradient contaminants migrating into OU-1 from off-site would render any on-site and downgradient ISCO approach ineffective and unproductive until the upgradient migration of contaminants onto the Site is eliminated or adequately controlled;
- The presence of an upward groundwater flow gradient beneath the northern portion of the Site and the City of Glen Cove property allows for contaminated groundwater from OU-2 (i.e., deeper groundwater) to flow into OU-1 (shallow groundwater).

To address these challenges, implementation of the remedy must be sequenced at a regional level so that upgradient contaminant sources – including deeper groundwater contamination from OU-2 flowing into OU-1 is addressed prior to additional chemical oxidant injections within OU-1 that otherwise would be ineffective and unproductive. By properly sequencing activities and coordinating all area-wide work at the regional level, the intent of the ROD can be achieved and the specific remedy elements can be implemented. This RD/RA Work Plan will address regional sequencing of activities to overcome the technical challenges identified.

2.3 Overview of Proposed Remedy Approach

The following is a summary of the work proposed to implement the ROD:

- Complete Pilot Testing to further evaluate oxidation effectiveness and design criteria (already performed and summarized in the "ISCO Phase II Pilot Test and Source Evaluation Report", May 2006);
- Excavate residual, contaminated soil near the northeast corner of the former Pall building in the vicinity of the former SVE pilot test;
- Complete a SVI investigation of the Pall building area and the August Thomsen building area. The City of Glen Cove day care center was previously evaluated and a mitigation system was previously installed as an Interim Remedial Measure (IRM);

- Implement SVI mitigation system(s) to protect human health in occupied areas of the Site if determined to be necessary following the SVI investigation;
- Repair the asphalt parking lot above areas of significant contamination to serve as a vapor barrier and a protective cap above impacted soil and groundwater in artesian areas where groundwater can potentially rise to the surface;
- Continue groundwater monitoring at OU-1 while upgradient sources of contaminants are remediated (by other parties) to prevent continuing contaminant migration into OU-1.
- Following elimination or adequate control of upgradient migration of contaminants into OU-1 and review of monitoring data trends, the need for additional oxidant injection will be re-evaluated. If determined to be necessary, additional injection wells will be installed and additional oxidant injections will be completed as a Contingent Remedy.
- Implementation of a long-term groundwater and site monitoring program, including completion of annual certifications required by NYSDEC.

Concurrent with the remediation program identified above, engineering and institutional controls will be developed to limit the use of the property to commercial or industrial usage and to restrict the use of groundwater for potable or process use without appropriate treatment subject to approval of NYSDEC and the Nassau County Department of Health (NCDH).

As summarized above, the proposed remedy is consistent with the requirements of the ROD and will result in protection of human health and the environment.

2.4 Coordination with NYSDEC and Other Regional IHWDS Properties

This section of the RD/RA Work Plan discusses the need for coordination and access with neighboring facilities for sampling, system installation and monitoring. As necessary, site access agreements and easements will be obtained to complete the work. In addition, the presence of upgradient contamination migrating into OU-1 requires that work on-site be coordinated with upgradient activities by others to allow for effective site remediation.

As per the ROD,

> *"The operation of the remedy will continue until the remedial objectives have been achieved or until the NYSDEC determines that continued operation is technically impracticable."*

Since the levels of contaminants on the Site cannot be reduced and maintained to meet ambient NYSDEC Groundwater Quality Standards due to continued migration of contaminants into OU-I (horizontally and vertically) from off-site sources at levels exceeding ambient Groundwater Quality Standards, groundwater remediation is technically impracticable at OU-1 at this time. Therefore, it is critical that work identified in this RD / RA Work Plan be properly sequenced in coordination with remedial actions at other, upgradient properties to eliminate continuing contaminant migration into OU-1.

2.5 Related Work Plans and Documents

This RD / RA Work Plan is intended to be implemented in conjunction with two related documents, the SMP (***Section 4*** of this RD / RA Work Plan) and the QuAPP (under separate cover). The RD / RA Work Plan focuses on overall remedy implementation as well as the details of the soil excavation program, repair of the asphalt site cap, groundwater monitoring (short- and long-term), coordination with upgradient remedy completion, and contingent oxidation injections. The SMP focuses on the SVI investigation and mitigation program (if needed), cap maintenance, and the engineering and institutional controls required by the ROD. The QuAPP is a supporting document that outlines the quality assurance and quality control procedures in place to ensure successful completion of work identified in the RD / RA Work Plan and the SMP.

3.0 REMEDY IMPLEMENTATION

The previous sections included an overview of remedy implementation. This section discusses the detailed work to be completed at the OU-1 Site.

3.1 Pilot Testing

Several pilot tests have been completed throughout the project, including an SVE pilot test to address localized soil contamination; an ISCO pilot test using potassium permanganate to address contaminated groundwater; and a second ISCO pilot test that considered an alternate oxidizer (hydrogen peroxide using Fenton's-like chemistry). The results of those pilot tests have been presented in several past documents and are not repeated in this RD / RA Work Plan.

With respect to future remediation at the site, the following is a summary of the pertinent findings of the most recent ISCO pilot testing program:

- Injection of oxidants into the ground at the Site is hampered by artesian flow conditions that cause injected oxidants to be carried back to the surface, thus limiting the effectiveness and permanence of *in-situ* oxidation until a regional program prevents upward flow of contaminated groundwater into OU-1.
- Effectiveness of in-situ oxidation is also limited by horizontal recontamination from upgradient sources of contaminants migrating into the treatment zone.

Based upon these technical concerns, additional oxidant injections are not recommended until migration of contaminants from upgradient locations, including OU-2, is eliminated or controlled. The proposed schedule for remediation addresses this technical concern and the need for coordination with the regional remediation program.

3.2 Soil Remediation

3.2.1 Area Requiring Remediation

An extensive soil investigation program was completed at the Site in several phases. The results of the soil investigation were discussed in detail in the Remedial Investigation Report, the Feasibility Study Report, and the SVE Pilot Test Report. Results were summarized in the ROD. In accordance with the ROD, only the area near the northern exterior wall of the former Pall building, southeast of the former outdoor storage shed, requires soil remediation (see ***Figure 3***, Proposed Soil Remediation Area). This area is referred to as the 5-SB-15 area.

Soil sample results after completion of SVE pilot testing[1] (i.e., the most recent data for the remediation area) is also presented on ***Figure 3***.

Although SVE pilot testing reduced contaminant concentrations over 80% from an initial concentration of 950 parts per million (ppm) of Tetrachloroethene (PCE) to less than 180 ppm PCE, the residual PCE concentration of 180 ppm exceeds the NYSDEC Recommended Soil Cleanup Objective of 1.4 ppm. Excavation and off-site disposal of contaminated soils is proposed for an approximately 15 foot wide by 20 foot long by 3 to 4 foot deep area. The final extent of excavation required will be based upon characterization and post-excavation confirmation sample results. Upon completion of excavation, all soil source areas on the Site will have been remediated to meet NYSDEC Standards, Criteria, and Guidelines (SCGs).

3.2.2 Characterization Soil Sampling

Three (3) soil sample locations are proposed to characterize soils for off-site disposal prior to the start of excavation. Samples will be collected at two (2) depths at each location; the shallow sample will be collected at approximately 12" to 18" below grade, and the deep sample will be collected at approximately 36" to 42" below grade. Proposed sample locations are presented on ***Figure 4***. Each sample will be analyzed for Toxicity Characteristic Leaching Procedure (TCLP) Volatile Organic Compounds (VOCs) and Metals and total VOCs. Additional parameters may be analyzed if required by the disposal facility for acceptance. Laboratory analyses will be performed by an NYSDOH ELAP certified laboratory.

Data obtained from characterization samples will be used to complete waste profile forms and to obtain pre-approvals from the waste disposal facility chosen to receive the excavated soils. The actual disposal facility will be determined prior to the start of work and will be licensed and permitted to receive the wastes / soils excavated.

Utilities will be marked prior to the start of work and the utility locating service number recorded to confirm utility markout completion. In addition, available site-specific drawings will also be reviewed to identify any known on-site utilities that may not be identified by the utility locating services. If necessary, a private utility locating service will also be utilized prior to characterization borings.

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[1] *Data presented on Figure 3 includes initial characterization data from the RI as well as post-pilot test data after shut-down of the SVE pilot test system.*

3.2.3 Mobilization and Temporary Facility Construction

Upon receipt of disposal facility approvals for waste shipment and receipt, the excavation crew, equipment and materials will be mobilized at the site. Site mobilization will include the following general tasks: demarcation of safety and work zones; construction of decontamination pads and stations; identification of soil loading / staging areas and traffic control systems; and field safety reviews prior to the start of excavation. Preliminary work zone locations and key elements of the excavation program are indicated in ***Figure 4***.

The temporary decontamination pad will be constructed of polyethylene sheeting with berms to contain decontamination fluids. A small, temporary sump may be excavated and lined with polyethylene if necessary to create a low point for collection of decontamination fluids. The decontamination pad shall be large enough to contain the largest piece of excavation equipment to be utilized on the project. All decontamination fluids will be properly disposed off-site.

A soil staging area is not planned for the site because work will be scheduled such that all disposal facilities are pre-approved and excavated material can be loaded directly onto transportation vehicles for off-site disposal (i.e., "load and go" excavation is planned). However, the soil loading area will be clearly defined as indicated on ***Figure 4***. If "load and go" excavation is not possible, then an appropriate soil staging area with polyethylene lining and berms or a lined roll-off container will be utilized. In addition, a staging area for removed asphalt material will also be established. The removed asphalt will be disposed as non-hazardous material.

The Pall site is currently vacant and therefore site access restrictions are minimal. Transportation routes shall be organized so that the main access way to the site via Sea Cliff Avenue is open at all times. In addition, work will be completed to avoid blockage of access ways to August Thomsen parking areas from the west access lane off Sea Cliff avenue to the August Thomsen facility.

3.2.4 Soil Excavation

Soil excavation will begin by removing the asphalt surface in the designated excavation area. Asphalt material will be staged separately from contaminated soils to be excavated. It is anticipated that asphalt will be disposed off-site as non-hazardous, construction and demolition (C&D) debris.

Soils underlying the asphalt will then be excavated within the footprint identified on ***Figure 4*** to a depth of approximately 4 feet deep. The actual excavation profile may be changed prior to the start of excavation based upon the characterization sampling results. Soils removed

will be placed directly in transportation vehicles licensed and permitted to haul the material (either dump trucks or roll-off containers that are lined). Based upon the proposed excavation area, approximately 45 cubic yards (roughly 68 tons) of contaminated soils are to be excavated. It is likely that at least some portion of the excavation may occur below the water table. If necessary, wet soils excavated will be stabilized for transportation using approved stabilizing materials such as ash or lime. Due to the relatively small size of the excavation, dewatering is not proposed during excavation and any liquids in the excavated material will be addressed post-excavation. However, if groundwater in the excavation becomes problematic (i.e., freezing during winter excavation, dragout etc.), then a sump pump dewatering system may be implemented and the removed liquids containerized in a temporary holding talk for subsequent off-site disposal.

3.2.5 Post-Excavation Sampling

Upon completion of excavation to the intended depths, post excavation samples will be collected from the bottom of the excavation and the sidewalls. Preliminary post-excavation soil sample locations are identified on ***Figure 4***.

All post-excavation samples will be analyzed for total VOCs and the results compared to applicable NYSDEC Soil Cleanup Objectives (TAGM 4046 Recommended Soil Cleanup Objectives and 6 NYCRR Part 375-6 Soil Cleanup Objectives identified in Tables 375-6.8(a) and 375-6.8(b)).

The need for additional excavation, if any, will be determined in coordination with the NYSDEC after reviewing post-excavation sample results.

3.2.6 Excavation Safety and Maintenance

Sheeting and shoring is not anticipated for the shallow excavation. However, all excavation work will be performed in accordance with OSHA requirements to protect personnel. All open excavations will be barricaded to prevent unauthorized access and will remain protected until backfilling is completed and the site is restored. It is important to note that the excavation may remain open for several weeks while post-excavation sample results are generated and the data is evaluated in coordination with the NYSDEC.

3.2.7 Excavation Restoration

Upon receipt of post-excavation data that is satisfactory, or upon determining that additional excavation is not beneficial (i.e., institutional or engineering controls could be utilized to address any residual contamination), the excavation will be backfilled. Backfilling will be completed using clean fill which will be compacted. A new asphalt cover will be installed as

part of the site-wide asphalt paving program that is included as part of this RD / RA Work Plan.

3.3 Site Groundwater Monitoring Program (Short-Term)

As discussed previously, additional active remediation in the form of oxidant injections is to be deferred as a contingent remedy until after upgradient sources of contribution are eliminated or adequately controlled to the extent further site remediation is practical and effective. However, during this period, it is important to monitor groundwater conditions for several reasons:

- Monitoring data is needed to ensure that there is no change in the contaminant nature and extent to the degree that an immediate management plan must be implemented prior to completion of upgradient remedial actions;
- Monitoring will be necessary to evaluate the effect of upgradient contaminant remediation and / or hydraulic control on downgradient contaminant concentrations and distribution.
- Monitoring data obtained will be used to evaluate the necessity for, and extent of, the contingent oxidant injection remedy for the Site.

Monitoring of selected wells will be completed semi-annually (two events per year) until the upgradient contaminant plumes have been remediated or completely effective hydraulic control prevents both the horizontal flow of contaminants onto the OU-1 site and the upflow of contaminants from OU-2 into OU-1. Semi-annual events will be completed every February and every August with monitoring reports provided within 60 days of sampling (e.g., February sample event results will be reported no later than the end of April, August sampling results will be reported no later than the end of October). The wells to be included in the semi-annual groundwater sampling for OU-1, and the parameters to be analyzed for each sampling event, are indicated in ***Table 2***. Wells to be included in the short-term monitoring program are indicated in ***Figure 5***. Additional sample collection procedures and the QA/ QC program for the monitoring program are provided in the QuAPP.

It is important to note that this RD / RA Work Plan addresses OU-1 only. Groundwater monitoring in OU-1 must be coordinated with OU-2 monitoring on a regional basis by NYSDEC to obtain data necessary to evaluate contaminant distribution and migration in the Sea Cliff Avenue area in the shallow, intermediate and deep groundwater zones.

3.4 Contingent Oxidation Remedy

3.4.1 General Elements of the Remedy

After the upgradient and deep contaminant plumes have been remedied or adequately controlled to prevent further migration of contaminants into OU-1, the groundwater monitoring data generated during the short-term monitoring program will be evaluated to determine if additional oxidant injections are necessary to meet remedial objectives.

Although the exact details of the contingent remedy cannot be determined until after evaluation of all data, the following general elements will be incorporated in the oxidant injection program as necessary:

- Estimates of the soil oxidant demand (SOD) will be updated and the final oxidant will be selected. Based upon past pilot testing at the site, potassium permanganate or hydrogen peroxide will be the oxidant.
- The concentrations and mass of contaminants in the groundwater at the time of implementation of the contingent remedy will be utilized to develop dosing calculations to meet remedial objectives.
- The need for additional injection points (i.e., in addition to the well network already present on the Site) will be evaluated. Additional injection points will be designed and installed as necessary to meet remedial objectives.
- An injection monitoring and post-injection sampling program will evaluate injection effectiveness and ensure protection of identified sensitive receptors.

3.4.2 Consideration of Historic, Upgradient Migration of Contaminants

It is important to acknowledge that some portion of the contaminants in OU-1 is the result of historic migration of contaminants from upgradient sources and vertical migration from OU-2 into OU-1. Therefore, the contingent remedy implementation must also consider appropriate cleanup objectives for upgradient contributions to the total mass of contaminants at the site. In addition, while it is potentially possible to prevent horizontal migration of contaminants from upgradient into OU-1, it is significantly more challenging to prevent upward migration of contaminants from OU-2 into OU-1 without considering the overall regional remediation program, which is outside the control of Pall.

3.4.3 Technically Practicable Oxidant Injection Area Definition

The current distribution of contaminants at the Site based upon the most recent sampling events and the proposed areas for active soil and groundwater remediation are presented in ***Figure 6*** (shallow zone) and ***Figure 7*** (intermediate zone.

The following rationale was used to initially identify areas for possible future, active OU-1 remediation that also considers historic, upgradient contributions of contaminants to the Site:

- Soil contamination above Recommended Soil Cleanup Objectives (RSCOs) is well defined and limited to a small, localized area near 5-SB-15. This area is to be excavated until applicable SCGs are obtained (see ***Section 3.2***). Upon completion of this excavation event, all soil contamination identified in the ROD as requiring remediation will have been addressed and no source areas will remain on the OU-1 Site.

- The extent of possible future, groundwater remediation at the Site was determined by delineating the current groundwater plume(s) and then creating a subset of the existing plume(s) containing contaminants that are approximately an order of magnitude above upgradient contamination levels *and* are downgradient of areas where Pall historically may have stored or used the chemicals of concern. Any contaminated areas outside of this zone were considered to be the result of upgradient contaminant migration and are not addressed as part of the contingent remedy.

- The result of this analysis is an approximation of the area of groundwater contamination where future remediation may be technically practicable (i.e., the areas can be remediated to the level of contaminants migrating onto the property). This analysis resulted in no active groundwater remediation for the intermediate zone since upgradient contaminant levels were higher than all on-site intermediate zone wells[2]. In the shallow zone, the areas in ***Figure 6*** remained for active groundwater remediation.

- Groundwater remediation in all other areas of OU-I is considered technically impracticable at this time since upgradient recontamination (including upflow of contaminants from OU-2 into OU-1) will continually render any active site remediation approach to achieve Class GA Groundwater Quality Standards ineffective without completion of a regional remedy.

3.4.4 Shallow Zone Contingent Remedy Area

Based upon preliminary mass balance calculations, Pall has effectively reduced the total mass in the shallow OU-1 zone by approximately 26.3 kg of total VOCs in the subsurface (17.8 kg during active oxidation injections and the balance in the post-injection periods). Since the starting mass of total VOCs was estimated at 41.6 kg total VOCs, Pall has already reduced the total VOC mass by almost 64% in the shallow OU-1 zone as an incidental

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[2] *It should be noted that MW-2GI was above upgradient concentration levels when horizontal flow only is considered. However, this area had the greatest observed artesian flow such that upgradient contamination from the deep zone (OU-2) is migrating into OU-1. Therefore, active remediation in this area is also considered technically impracticable at this time.*

benefit of past pilot testing. The residual areas that may need to be addressed as part of the contingent oxidation remedy based upon the criteria discussed previously are indicated in ***Figure 6***.

3.4.5 Intermediate Zone Contingent Remedy Area

Based upon preliminary mass balance calculations, Pall has effectively reduced the total mass in the intermediate OU-1 zone by approximately 18.1 kg of total VOCs. Since the starting mass of total VOCs was estimated at 34.9 kg, Pall has already reduced the total VOC mass by at least 52% in the intermediate OU-1 zone. More importantly, as indicated in **Figure 7**, the total mass reductions were likely much greater when recontamination is considered. Permanent contaminant reductions are not technically practicable until the continued migration of contaminants from off-site sources (including upflow from OU-2) is stopped or adequately controlled.

Given that the upgradient contaminant concentrations in the intermediate groundwater are higher than on-site intermediate zone concentrations, and the only other elevated concentration areas in OU-1 are in the artesian flow areas where contamination from OU-2 is flowing upward into OU-1, remediation of intermediate OU-1 is technically impracticable at this time and is not included in this RD / RA Work Plan. No Further Action (NFA) in the intermediate zone groundwater is recommended. To facilitate the NFA declaration, OU-1 should be subdivided into additional Operable Units as necessary to allow for NFA in the intermediate zone.

Additional site controls to facilitate implementation of the contingent remedy, if necessary, are presented in the SMP.

3.5 Long-Term Monitoring

Following implementation of the contingent remedy or the determination that the contingent remedy is not required, the long-term monitoring program will be implemented. The long-term monitoring program will be the same as the short-term monitoring program identified in ***Section 3.3*** for the first two years following remedy completion with the exception that only the shallow and intermediate wells be included. The deep well monitoring program will be implemented under the OU-2 RD / RA program to be completed by others. It is important that the two programs be coordinated regionally to ensure proper and thorough data collection, and to eliminate inefficiencies related to duplicative sampling and analysis.

After the first two-years of monitoring are completed, the frequency of monitoring will be reduced to once per year to be completed each August with the results reported by the end of October each year. Further reductions in both the frequency of monitoring and the

number of wells requiring monitoring will be evaluated each year to determine if the long-term monitoring plan should be modified. The long-term monitoring program proposed is summarized in ***Table 3***.

4.0 SITE MANAGEMENT PLAN

In accordance with the ROD, this section of the RD/RA Work Plan presents the Site Management Plan (SMP) specifically to:

> *"(a) address residual contaminated soils that may be excavated from the site during future redevelopment; (b) evaluate the potential for vapor intrusion for any buildings developed on the site and above the contaminant plume, including provision for mitigation of any impacts indentified; and (c) limit the property use to commercial or industrial."*

These three issues are specifically addressed within the SMP by:

- Re-pairing/re-paving asphalt paved surfaces to act as a cap over identified on-site residual contaminated soils, as well as annual inspection/certification of the capping surfaces to ensure the long-term integrity of same. The annual certification of any Institutional Controls (ICs) and/or Engineer Controls (ECs) implemented to protect human health and the environment will also be performed

- Completion of a Soil Vapor Intrusion (SVI) investigation in accordance with NYSDOH protocols to evaluate whether VOCs present in the sub-slab environment, if any, could potentially migrate to the indoor air environment of present or future on-site buildings. Further, the SMP includes the discussion of conceptual, NYSDOH-approved mitigation measures to address future impacts, if necessary;

- Preparation and execution of a deed restriction for the former Pall Corp. property to ensure that same could only be utilized in the future for industrial and/or commercial purposes. Further, there will be a site restriction regarding the use of any groundwater extracted from on-site wells, unless the extracted water is treated to remove contaminants prior to its use.

4.1 Asphalt Cap

The primary EC selected to prevent contact between future on-site users of the subject property and residual soil contamination will be through the repair/replacement of on-site, asphalt-paved surfaces (see ***Figure 8***). Further, any non-paved areas overlying residual contamination (e.g., landscaped areas) will be improved with two-feet of clean soils/materials. A facility Capping Operations and Maintenance (O&M) Plan will be developed to ensure the integrity of the capping materials in the future.

4.1.1 Capping Plan

According to the City of Glen Cove, there are no building requirements or codes with respect to pavement on private properties. All parking and other paved surfaces on the subject property will be improved with asphalt paving applied in accordance with industry standards which include:

- A minimum six-inch-thick layer of compacted aggregate base materials;
- A prime coat of bituminous pavement; and
- A minimum two-inch-thick layer of bituminous asphalt paving.

4.1.2 Landscaped Area Plan

Any on-site areas such as lawns, landscaped areas, etc. overlying residual contamination will be capped with a minimum of two feet of clean soils/materials. The interface between the underlying soils and the imported materials will be demarcated with a layer of filter fabric to act as a visual indicator.

All materials imported as part of this task will be from a reputable source. Further, prior to its emplacement, aliquots of the materials will be collected and analyzed for NYSDEC TCL VOCs by EPA Method 8260. If no TCL VOCs are present above NYSDEC RSCOs and / or unrestricted-use SCOs, the materials will be defined as acceptable for on-site use.

4.1.3 Capping O&M Plan

As a combination IC/EC, a facility Capping O&M Plan will be prepared and include the following components:

- Facility Restrictions – Future facility personnel will be prohibited from penetrating any on-site capping materials. In the event that future on-site activities (e.g., plumbing repairs, re-planting, etc.) require penetration of the asphalt cap or two-foot-thick landscaped areas, only OSHA-trained personnel utilizing appropriate personnel protective equipment (PPE) and monitoring equipment will be allowed to excavate on-site soils containing residual contamination. In the event that excavated soils need to be disposed of off-site, they will be analyzed for waste characterization purposes and disposed of at an appropriately-licensed facility in accordance with applicable regulations.
- Annual Inspections – Annual inspections of the capping materials shall be conducted by, or under the supervision of, a New York State licensed Professional Engineer (PE). Any required repairs, or other identified maintenance issues, will be conducted to the satisfaction of the PE. The PE

will prepare and submit a Cap Certification Report to the NYSDEC on an annual basis. The Certification Report will include a discussion of any cap repair or modification activities conducted during the reporting period. The PE will certify that the implemented ICs and/or ECs are unchanged from the previous reporting period and no changes have occurred that impair the ability of the control(s) to protect public health and the environment or that result in a failure to comply with the SMP or O&M Plan. In the event that any IC or EC required revision or repair, or a contravention to the O&M Capping Plan was observed, the PE will provide details regarding the remedial measures which were implemented to address the concern.

4.2 SVI Investigation/Contingency Mitigation Measures

As required by the ROD, a SVI investigation will be conducted within the former Pall Corp. building, the former chemical shed building and the August Thomsen Corp. building (a former Pall Corp. facility) to evaluate the potential for VOCs in on-site groundwater and/or contaminated soils (if any), to migrate through existing or future building foundation slabs and deleteriously impact the indoor air quality.[3]

All work will be conducted in accordance with the applicable New York State Department of Health (NYSDOH) guidance document entitled "*Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York*," dated October of 2006, (hereinafter, the NYSDOH Guidance Document).

4.2.1 Installation and Sampling of Sub-Slab Soil Vapor Points

At the seven locations discussed below, one-to-two-inch-diameter access holes will be cut with a coring machine through any overlying cover materials, as required (e.g., concrete surfaces). The sub-slab soil vapor sampling implants will be installed utilizing hand-powered equipment (e.g., hand auger, post-hole digger, etc.). Each soil vapor probe will consist of a six-inch-long stainless-steel screen with one-quarter-inch-diameter Teflon tubing set two-inches below the floor slab/surface. The annular space surrounding the screens will be filled with decontaminated glass beads or filter pack sand. A hydrated seal will be installed atop of the glass beads/sand pack to prevent outdoor air infiltration.

The sub-slab soil vapor sampling implants will be allowed to equilibrate for a minimum of 24 hours prior to sampling. Prior to sampling, each point will be purged of a minimum of three tube volumes of soil vapor utilizing hand pump or the equivalent. A six-liter, laboratory-supplied vacuum Summa canister will be connected to the Teflon tubing subsequent to the

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[3] *The results from the existing buildings will be considered as relevant and appropriate for future slab-on-grade constructed buildings.*

purging and the samples will be collected over a two-hour period at a flow rate of 0.05 liters per minute (LPM), which is less than the maximum flow rate of 0.2 LPM as established in the NYSDOH Guidance Document. Upon completion of the sampling, the soil probes will be removed, the holes backfilled and the surfaces repaired with appropriate materials (e.g., concrete).

As a quality assurance/quality control (QA/QC) measure, helium will be introduced into a closed/sealed space surrounding the sampling tube as a tracer gas to confirm the integrity of the probe seals to ensure that no outdoor air intrusion impact the soil vapor sample (e.g., no "short circuiting" occurs). The closed/sealed space around the sampling tube will be an inverted container placed atop the ground around the point where sampling tubing exits the subsurface. Teflon sampling tubing will be pass through an air-tight fitting installed on the top of the container. Polyethylene tubing will extend from the helium supply through another air-tight fitting on the side of the container.

In accordance with NYSDOH protocols, during the sampling period, a facility-wide inspection will be conducted to evaluate chemical-use practices at the facilities. Labels will be reviewed to determine the chemical nature of various products including, but not limited to, cleaners, lubricants, glues/adhesives, paints, pool chemicals, etc. The data will be compared to the indoor air analytical data to determine if on-site chemical use has deleteriously impacted the indoor air quality of the facility.

The following provides the selection and rationale for the seven (7) on-site sub-slab soil vapor sampling points (see ***Figure 9***):

- Four sampling points would be conducted within the former Pall Corp. building. One point would be located within and/or adjacent to the former tank storage and research and manufacturing areas. The remaining three points would be placed to provide a building-wide evaluation of sub-slab soil conditions;
- One sampling point would be placed in the former chemical storage shed; and
- Two points will be in the August Thomsen Corp. building in the reported former Pall Corp. machine shop area.

4.2.2 Indoor/Outdoor Ambient Air Sampling

Three (3) indoor air samples (i.e., two within the former Pall Corp. building and one within the August Thomsen Corp. building), co-located with sub-slab soil vapor sampling implant locations, and two outdoor air/ambient samples will be collected utilizing six-liter, laboratory-supplied Summa canisters set atop three-foot-tall stands, table tops or desks over a eight-hour period, concurrent with the indoor sub-slab sampling. The samples will be collected to

establish indoor air concentrations and background conditions at the subject property. The sample elevation will be selected to represent the air quality within the typical breathing zone (between three-and-five-feet above grade, as required in the NYSDOH Guidance Document).

4.2.3 Analysis of Soil Vapor / Air Samples

The soil vapor and air samples will be analyzed by a NYSDOH Environmental Laboratory Accreditation Program (ELAP) certified laboratory (with appropriate chain-of-custody) for NYSDOH-specified VOCs. To meet NYSDOH-specified minimum detection limits, the indoor / outdoor air samples will be analyzed for low level minimum reporting limits (MRLs) VOCs by EPA Method TO-15. The sub-slab soil vapor samples will be analyzed at normal MRLs VOCs by EPA Method TO-15 and for helium by EPA Method 3C Modified.

The following QA/QC samples will be utilized:

- One Summa canister trip blank will be utilized to determine if cross contamination occurs during sample shipment;
- One blind duplicate will be collected to ensure repeatability of analytical results. The blind duplicate sample will be assigned a fictitious field sample identification number such so the analytical laboratory will not know the sample is a blind duplicate; and
- One equipment blank be collected to evaluate the sampling equipment for the presence of VOCs;
- The analytical laboratory will use a site-specific sample for running Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) samples to evaluate whether the sample matrix affected the analytical results.

4.2.4 SVI Summary Report

The NYSDOH Guidance Document provides specific contaminant thresholds only for the following VOCs in sub-slab and indoor air samples: carbon tetrachloride (CT), Tetrachloroethene (PCE), 1,1,1-Trichloroethane (TCA) and Trichloroethene (TCE). The Guidance Document provides the following recommendations based upon both the sub-slab vapor and indoor air sampling results:

- No further action;
- Take reasonable and practical actions to identify sources(s) and reduce exposure;
- Monitor; or

- Mitigate.

The NYSDOH Guidance Document provides the results of studies which provide indoor air background concentrations for a wider range of VOCs (including petroleum-related VOCs) for fuel oil heated homes, and public and commercial buildings. As the subject property will be restricted to commercial or industrial uses, it will be appropriate to assess the analytical data in conjunction with the USEPA Building Assessment and Survey Evaluation (BASE) database for comparison purposes. Specifically, as discussed in other NYSDOH guidance, the 25th and 75th percentile of the BASE data will be utilized as "Background." Further, the NYSDOH Guidance document allows for the use of outdoor ambient air sample analytical results to indentify site-specific background concentrations.

4.2.5 Potential Mitigation Measures

The NYSDOH Guidance Document provides a reasonably-implementable technology in the event that soil vapors are, or potentially could, impact indoor air quality conditions in the form of a sub-slab depressurization system (SSDS). Such systems, which are very similar to radon-abatement systems utilized in areas of exposed bedrock, are designed and operated to provide a lower pressure condition under a building slab than that of the ambient air pressure within a building. SSDS's typically consist of the following components:

- Horizontal slotted wells installed in a gravel/sand base under the building slab foundation. A vapor barrier is installed atop the gravel/sand base;
- The horizontal wells are piped to an electric in-line fan mounted on the building roof, the operation of which results in a low-pressure environment underlying the slab;
- If required, the effluent will be treated by passage through granulated activated carbon (GAC) prior to its discharge to the atmosphere;
- The effluent is discharged through a roof top-mounted stack;
- Slab vacuum monitoring points are installed and evaluated with a magnahelic gauge to confirm the pressure gradient from the building interior to the sub-slab soils;
- The alarm system is typically installed to notify building operators/occupants if the system goes down; and
- A SSDS system O&M Plan is prepared and implemented to ensure that the system is operated effectively. Typically, one to two rounds of system effluent and indoor air monitoring are conducted yearly to confirm the effectiveness of the system.

An existing building can also be retrofitted with a SSDS. Rather than horizontal pipes, retrofit SSDS's typically consist of multiple vertical vapor extraction wells installed surrounding and under the building. The remaining components are similar to those of a SSDS for a new construction

4.3 Engineering and Institutional Controls

The ROD requires the implementation of ICs and environmental easements as part of the selected remedy. ICs are methods to restrict the use of a property to ensure it eliminates or limits exposures to remaining contaminants. ICs could include deed restrictions preventing the use of groundwater for drinking water, or prohibiting the use of a site for residential purposes if it is only cleaned up to industrial standards. It provides a warning notice to potential owners, operators and the public and prevents actions that would interfere with the long-term remedial operation or maintenance activities at a site. Environmental easements are required for engineering or institutional controls, meaning a notice on any controls is recorded with the deed to the site.

4.3.1 Institutional Controls

The ICs for the subject property will be in the form of the following deed restrictions:

- The subject property, which is currently zoned by the City of Glen Cove as I-2, Light Industrial, will remain as currently zoned until such time as NYSDEC consents to possible re-zoning applications. This is to ensure that the subject property can only be utilized for commercial or industrial uses. The deed restriction will ensure that the subject property is never utilized for unrestricted or restricted purposes without NYSDEC consent. The deed restriction will be filed with the appropriate municipal agency which may include, but not be limited to the Village of Sea Cliff, the City of Glen Cove, the County of Nassau and the State of New York;

- The deed restriction will include a prohibition of the use of groundwater extracted from on-site wells for potable or process uses without first ensuring it is treated to remove contaminants, as required by the Nassau County Department of Health; and

- The deed restriction will also reference the prohibition of penetrating any on-site capping materials by inappropriate parties, as discussed in the Capping O&M Plan.

4.3.2 Environmental Easements

This is an interest in real property, created under and subject to the provisions of ECL Article 71, Title 36 which contains a restriction/prohibition on the use of the land that would be inconsistent with the remedy selected for the site.

4.4 Annual Certifications

Annual certifications of compliance with the Site Management Plan will be completed and reported to the NYSDEC. If necessary, plans to correct any deficiencies will be included in the Annual Certification reports. It is anticipated that Annual Certification reports will be provided by the end of February for activities completed in the previous calendar year.

5.0 SCHEDULE

The following is the preliminary schedule for implementation of this RD / RA Work Plan:

NYSDEC Review and Acceptance of RD / RA Work Plan:	February 2008
Soil Excavation Remedy Implementation:	March-April 2008
Asphalt Cap Installation:	April-May 2008
Short-Term Monitoring Program:	Starts February 2008*
Contingent Remedy Evaluation:	After completion of upgradient remediation program **
Long-Term Monitoring Program:	After completion of contingent Remedy or decision that contingent remedy is not necessary **

* Actual start to be coordinated with NYSDEC OU-2 Investigation.

** To be coordinated with regional remediation program.

6.0 HEALTH AND SAFETY

The existing Health and Safety Plan (HASP) will been modified as necessary to specifically address the elements of the RD / RA Work Plan. Tailgate safety meetings will be held and documented for each day of field activities. In addition, all Apex employees working on the OU-1 Site will attend an internal training program to ensure that the field program is completed safely and effectively. Parties other than Apex or persons who have contracted directly with Apex shall be responsible for developing and implementing their own site-safety procedures.

An ambient air monitoring program will be included during the soil excavation program and during well sampling. Ambient air monitoring will be performed each day of soil excavation. Wellhead monitoring for VOCs will be completed during all well sampling events. In addition, breathing zone monitoring will be performed on the Site and immediately downgradient at the Glen Cove day care center property. VOC and particulate monitoring, if necessary, will be completed in accordance with the New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan (CAMP). Additional information, including levels of VOCs, that will trigger actions to reduce potential exposures, will be provided in the Health and Safety Plan prior to the start of field activities.

At a minimum, all work is to be completed in accordance with OSHA requirements.

TABLES

Table 1
ROD Conformance Summary

ROD Requirement	How ROD Requirement is Addressed in RD / RA Work Plan
Completion of a remedial design program, including pilot tests, to provide details necessary for construction , operation, maintenance, and monitoring of the remedial program	Pilot testing was completed in 2005 through 2006 and was documented in a report entitled "ISCO Phase II Pilot Test and Source Evaluation Report", May 2006. The report identified several important technical concerns with implementation of the ISCO remedy as stated in the ROD.
Installation of additional on-site and off-site injection wells to actively treat contaminated groundwater	The installation of additional injection wells on-site and off-site is considered in the Contingent Remedy discussed in the RD/RA Work Plan.
Injection of chemical oxidant into injection wells to destroy groundwater contaminants	The injection of additional oxidant to destroy groundwater contaminants was completed in the Phase II Pilot Test as documented in the May 2006 report. Additional oxidant injections, if necessary, area also considered in the Contingent Remedy discussed in the RD/RA Work Plan.
Remediation of contaminated soil by excavation and off-site disposal or in-situ chemical oxidation	Excavation of contaminated soil is proposed in the RD/ RA Work Plan.
Development of a Site Management Plan (SMP) to: (a) address residual contaminated soils that may be excavated from the site during future redevelopment; (b) evaluate potential for soil vapor intrusion (SVI) for any buildings developed on the site, including provisions for mitigation as applicable; (c) limiting property use to commercial or industrial use	The SMP includes residual contaminated soil management (if present); SVI investigation and mitigation as necessary; and restrictions on future property use.
Imposition of industrial controls in the form of an environmental easement that will require compliance with the SMP; restrict use of groundwater as a source of potable or process water without necessary treatment; and require submittal of annual certifications	The SMP includes environmental easement recommendations to limit future use to commercial or industrial use; identifies restrictions on groundwater usage without appropriate treatment, and requires annual certifications
Development and implementation of a long-term monitoring program	The RD/RA Work Plan identifies the proposed long-term monitoring program for the Site.

Table 2
Short-Term Monitoring Summary[1]

Well To Be Sampled[3]	Screened Interval[4]	Analytical Parameters[2,5]
MW-4P	Shallow	TCL VOCs + Freons
MW-5P	Shallow	TCL VOCs + Freons
MW-7P	Shallow	TCL VOCs + Freons
MW-10PS	Shallow	TCL VOCs + Freons
MW-11PS	Shallow	TCL VOCs + Freons
MW-12PS	Shallow	TCL VOCs + Freons
MW-14PCS	Shallow	TCL VOCs + Freons
MW-19PS	Shallow	TCL VOCs + Freons
MW-1A	Shallow	TCL VOCs + Freons
MW-2A	Shallow	TCL VOCs + Freons
MW-1PI	Intermediate	TCL VOCs + Freons
MW-4PI	Intermediate	TCL VOCs + Freons
MW-5PI	Intermediate	TCL VOCs + Freons
MW-6PI	Intermediate	TCL VOCs + Freons
MW-10PI	Intermediate	TCL VOCs + Freons
MW-11PI	Intermediate	TCL VOCs + Freons
MW-12PI	Intermediate	TCL VOCs + Freons
MW-18PI	Intermediate	TCL VOCs + Freons
MW-19PI	Intermediate	TCL VOCs + Freons
MW-14PCI	Intermediate	TCL VOCs + Freons
MW-2AI	Intermediate	TCL VOCs + Freons
MW-1PD[6]	Deep[6]	Gauging Only[6]
MW-4PD[6]	Deep[6]	Gauging Only[6]
MW-5PD[6]	Deep[6]	Gauging Only[6]
MW-6PD[6]	Deep[6]	Gauging Only[6]
MW-8PD[6]	Deep[6]	Gauging Only[6]
MW-10PD[6]	Deep[6]	Gauging Only[6]
MW-11PD[6]	Deep[6]	Gauging Only[6]
MW-12PD[6]	Deep[6]	Gauging Only[6]
MW-13PD[6]	Deep[6]	Gauging Only[6]
MW-14PCD[6]	Deep[6]	Gauging Only[6]
MW-15PCD[6]	Deep[6]	Gauging Only[6]
MW-16PCD[6]	Deep[6]	Gauging Only[6]
MW-2AD[6]	Deep[6]	Gauging Only[6]

Notes:

1. All wells indicated above are to be samples semi-annually in February and August.
2. Analytical services are to be provided by an ELAP certified laboratory and reporting is to be in accordance with ASP Category B deliverables.
3. Well locations are indicated in ***Figure 5*** of the RD/RA Work Plan.

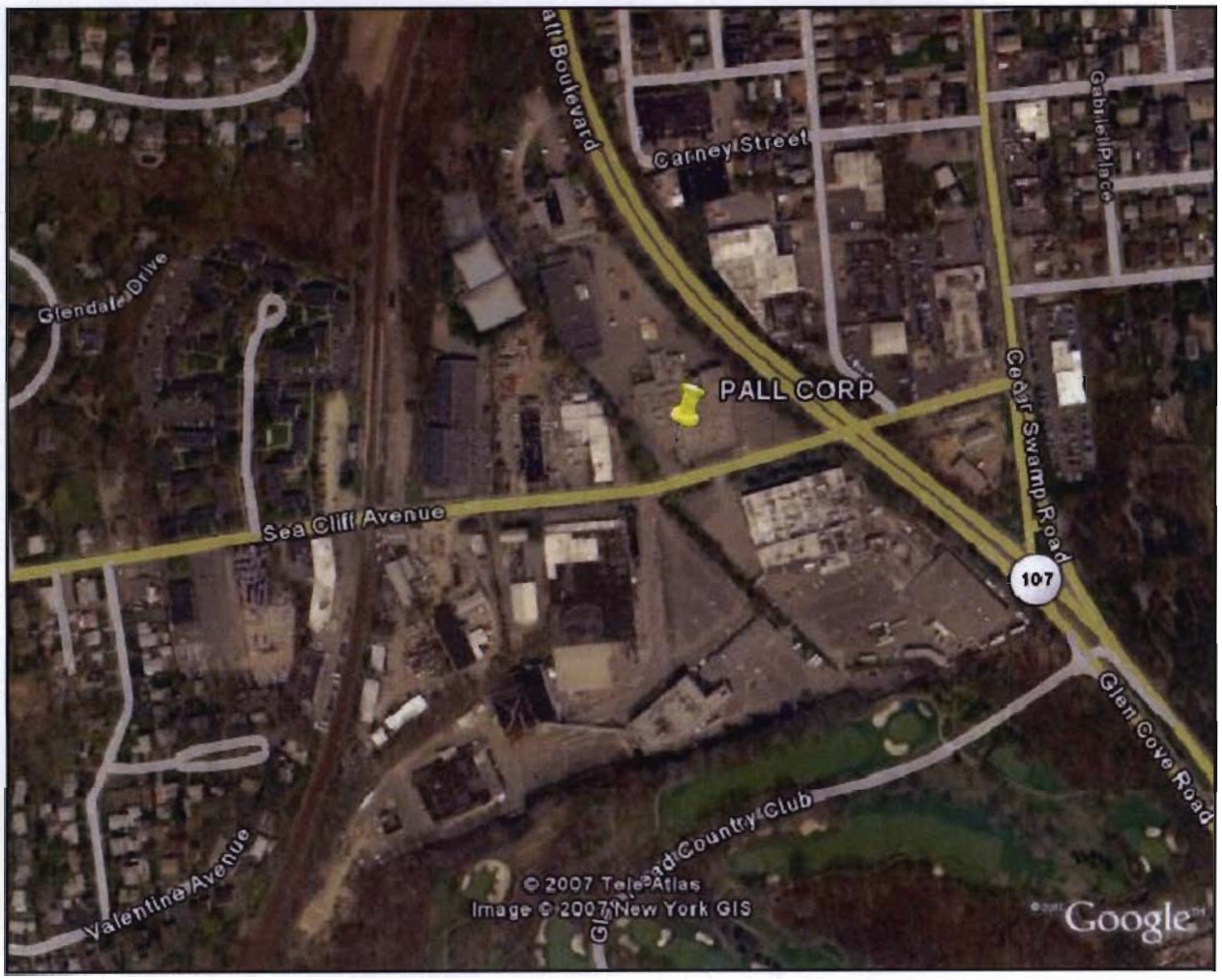
4. Shallow wells are screened from approximately 5 to 15 feet bgs, intermediate wells are typically screened from approximately 50 to 60 feet bgs and deep wells are screened from 90 to 100 feet bgs.
5. See QuAPP for additional sample procedure information.
6. Deep well sampling under the OU-2 program should be coordinated (i.e., completed simultaneously) with shallow and intermediate sampling. Sampling of OU-2 wells other than well groundwater elevation gauging, is not included in this RD / RA Work plan but should be addressed by NYSDEC in the OU-2 monitoring program.

Table 3
Long-Term Monitoring Summary

Timeframe	Monitoring Summary
Years 1 and 2 following remedy completion	Same wells, parameters, and sampling frequency as short-term program (see ***Table 2***)
Year 3 following remedy completion	Same wells and parameters as short-term program. Frequency of sampling reduced to annual sampling only.
Years 4 through 20	Sampling program to be evaluated each year to determine wells, parameters, and frequency of sampling.

Note:

End of long-term sampling program to be adjusted as necessary based upon data trends and coordination with NYSDEC



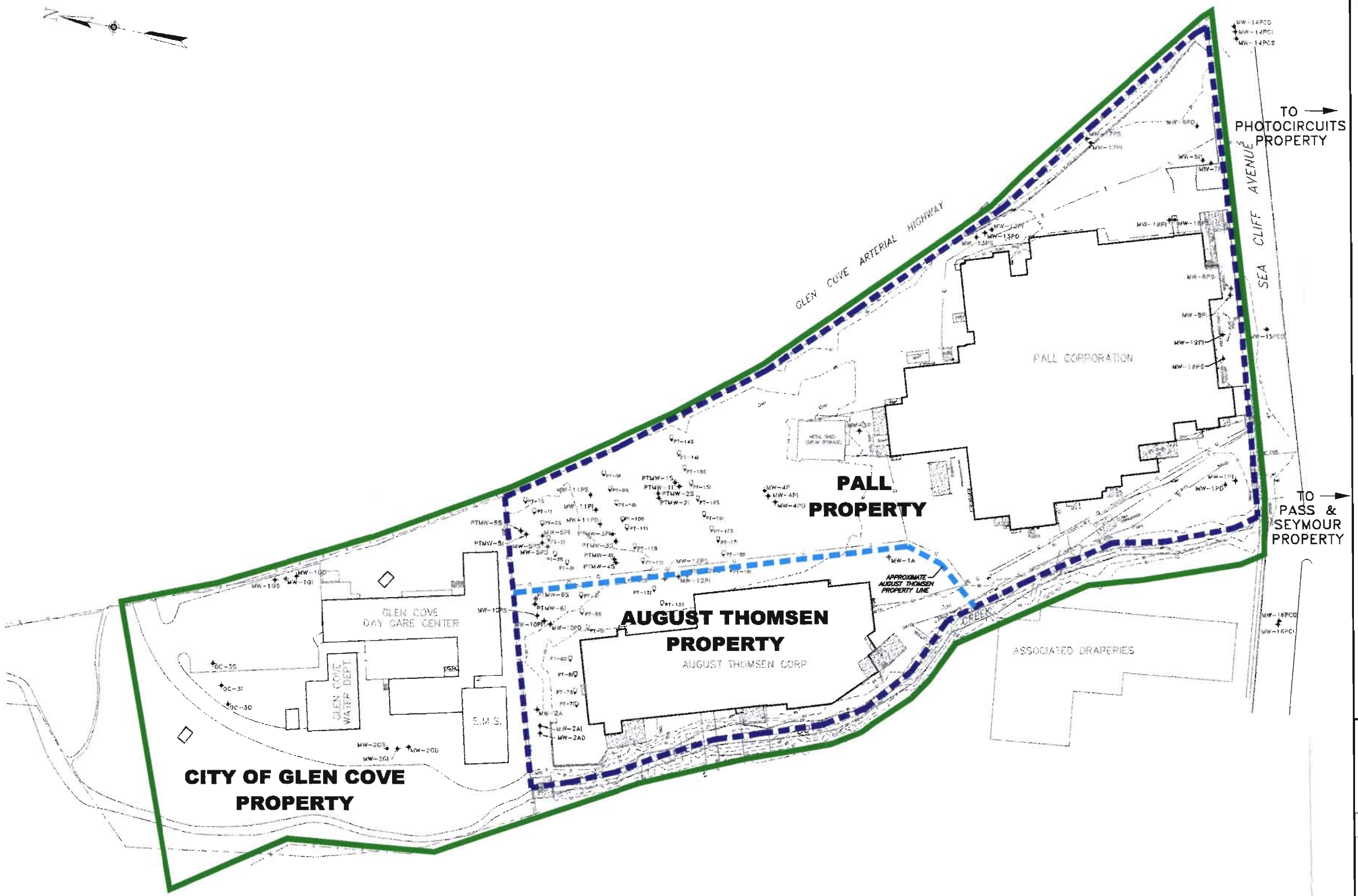
SOURCE: GOOGLE EARTH
2007 NEW YORK GIS

SATELLITE IMAGE

N

Apex Companies, LLC
120-D WILBUR PLACE
BOHEMIA, NEW YORK
(631) 567-1777

DESIGNED: DJS	**SITE AREA MAP**	
DETAILED: TRS	CLIENT: PALL CORPORATION	DRAWING DATE: 12/18/07
CHECKED: DJS	LOCATION: 30 SEA CLIFF AVENUE GLEN COVE, NEW YORK	FIGURE: 1



LEGEND

- OU-1 BOUNDARY
- SITE BOUNDARY
- MONITORING WELL
- INJECTION WELL
- ABANDONED/DESTROYED MONITORING WELL
- HYD FIRE HYDRANT
- CB CATCH BASIN
- WV WATER VALVE
- GV GAS VALVE
- SMH SEWER MANHOLE
- MH MANHOLE
- UP UTILITY POLE
- E UNDERGROUND ELECTRIC LINE
- T UNDERGROUND TELEPHONE LINE
- S SANITARY SEWER
- G UNDERGROUND GAS LINE
- W UNDERGROUND WATER LINE
- OW OVERHEAD WIRE

SOURCE: *WELL LOCATIONS AND ELEVATIONS*
MUNICIPAL LAND SURVEY P.C.
MIDDLE ISLAND, N.Y. 11953
DATE: 9/2/04

BUILDING LOCATIONS BASED ON SURVEY BY
SYDNEY B. BOWNE & SON
MINEOLA AND SMITHTOWN, N.Y.
DATE: 2/25/00 REVISED: 3/16/00
LOTS 37, 246, 273, 314, 319-320
BLOCK H, SECTION 21

SITE FEATURES BASED ON MAP FROM
"FOCUSED REMEDIAL INVESTIGATION REPORT"
TAMS and GZA
DATE: 4/99

OFF-SITE FEATURES BASED ON MAP OF
"PROPOSED GLEN COVE DAY CARE CENTER"
BENTEL & BENTEL, AIA
DATE: 3/16/91

SURVEY NEW WELL LOCATIONS/ELEVATIONS
APEX FIELD PERSONNEL
DATE: 2/1/06

0 100 200
SCALE FEET

Apex Companies, LLC
120-D Wilbur Place
Bohemia, N.Y. 11716
Phone: (631) 567-1777

REV. NO.:	DRAWING DATE:	ACAD FILE:
-	12/14/07	PALLST1207-1

OPERABLE UNIT 1

CLIENT:	PM:
PALL CORPORATION	DS
LOCATION: FORMER PALL CORP. SITE	PE/RG:

DESIGNED:	DETAILED:	PROJECT NO.:	FIGURE:
SEE SOURCE	TS	8501	**2**

DATA BOX LEGEND

CONF-2	SAMPLE ID
PCE	15 — TETRACHLOROETHENE (ug/L)
TCE	44 — TRICHLOROETHENE (ug/L)
111TCA	8 J — 1,1,1-TRICHLOROETHANE (ug/L)
12DCE	130 — 1,2-DICHLOROETHENE (ug/L)
VC	4 J — VINYL CHLORIDE (ug/L)
FRE	ND — TOTAL FREON TIC's/ 1,1,2-TRICHLOROTRIFLUOROETHANE (ug/L)

E – ESTIMATED VALUE (OUT OF RANGE)
J – ESTIMATED VALUE
D – COMPOUND IS IDENTIFIED AT A SECONDARY DILUTION FACTOR
N – PRESUMPTIVE EVIDENCE OF A COMPOUND (TIC's ONLY)

NOTE
1) ALL SAMPLES COLLECTED FROM GRADE TO 4' BELOW GRADE SURFACE.
2) ALL RESULTS IN ug/kg.

LEGEND

- PROPOSED AREA OF EXCAVATION
- VEHICULAR TRAFFIC
- SUPPLEMENTAL DELINEATE SAMPLE LOCATION (COLLECTED 6/00)
- CONFIRMATORY SOIL BORING LOCATION (COLLECTED 3/01)
- RI SOIL BORING LOCATION
- GEOPROBE BORING LOCATION (COLLECTED 1999)
- EXCLUSION ZONE
- DECON ZONE
- STAGING AREA
- FENCE
- OVERHEAD WIRE
- UTILITY POLE
- GAS VALVE

DECON ZONE

EXCLUSION ZONE

STAGING AREA

POST-IRM PILOT TEST

CONF-3(3/14/01)		CF-3 (12/7/01)	
PCE	<6	PCE	22
TCE	<6	TCE	<12
111TCA	<6	111TCA	<12
12DCE	<6	12DCE	<12
VC	<13	VC	<12

POST-IRM PILOT TEST

CONF-4(3/14/01)		CF-4 (12/7/01)	
PCE	18	PCE	22
TCE	<6	TCE	<12
111TCA	<6	111TCA	<12
12DCE	<6	12DCE	<12
VC	<12	VC	<12

POST-IRM PILOT TEST

CONF-1(3/14/01)		CF-1 (12/7/01)	
PCE	21	PCE	9J
TCE	<6	TCE	<11
111TCA	<6	111TCA	3J
12DCE	<6	12DCE	<11
VC	<12	VC	<11

POST-IRM PILOT TEST

CONF-5(3/14/01)		CF-5 (12/7/01)	
PCE	12	PCE	28
TCE	<6	TCE	<11
111TCA	<6	111TCA	<11
12DCE	<6	12DCE	3J
VC	6J	VC	<11

SB-5 (3-4')		SB-5 (8-10')	
PCE	ND	PCE	6J
TCE	ND	TCE	ND
VC	ND	VC	ND
FRE	NS	FRE	NS

5-SB-1	
PCE	ND
TCE	ND
VC	ND
FRE	NS

5-SB-2	
PCE	1J
TCE	ND
VC	ND
FRE	NS

5-SB-3	
PCE	ND
TCE	ND
VC	ND
FRE	NS

5-SB-6	
PCE	44
TCE	4J
VC	ND
FRE	NS

5-SB-9	
PCE	ND
TCE	ND
VC	ND
FRE	NS

5-SB-12	
PCE	4J
TCE	2J
VC	ND
FRE	NS

5-SB-5	
PCE	1J
TCE	ND
VC	ND
FRE	2J

SHED

SGB-39	
PCE	ND
TCE	ND
VC	ND
FRE	NS

ELECTRIC TRANSFORMER

SGB-22 (3')		SGB-22 (3R')	
PCE	700	PCE	10
TCE	21	TCE	ND
VC	ND	VC	ND
FRE	NS	FRE	NS

5-SB-17	
PCE	<62
TCE	<62
111TCA	<62
12DCE	<62
VC	<62

5-SB-7	
PCE	10
TCE	2J
VC	ND
FRE	NS

5-SB-4	
PCE	1J
TCE	ND
VC	ND
FRE	NS

5-SB-10	
PCE	480
TCE	28
VC	ND
FRE	NS

5-SB-8	
PCE	2J
TCE	ND
VC	ND
FRE	NS

OW

DRUM STORAGE AREA
(W/OVERHEAD ROOF)

5-SB-21	
PCE	<13
TCE	<13
111TCA	<13
12DCE	3 J
VC	<13

5-SB-18	
PCE	<12
TCE	1 J
111TCA	<12
12DCE	5 J
VC	<12

METAL SHED
(DRUM STORAGE)

5-SB-22	
PCE	29
TCE	2 J
111TCA	1 J
12DCE	65
VC	<11

SB-6 (3-4')		SB-6 (8-10')	
PCE	ND	PCE	ND
TCE	ND	TCE	ND
VC	ND	VC	ND
FRE	NS	FRE	NS

COMPACTER

5-SB-15	
PCE	950000
TCE	19000J
VC	17
FRE	NS

BEFORE PILOT TEST

5-SB-14	
PCE	10
TCE	21
VC	ND
FRE	NS

5-SB-13	
PCE	180
TCE	9
VC	ND
FRE	NS

5-SB-11	
PCE	22
TCE	4J
VC	ND
FRE	NS

POST-IRM PILOT TEST

CONF-2(3/14/01)		CF-2 (12/7/01)	
PCE	210000	PCE	180000
TCE	790	TCE	71
111TCA	36	111TCA	2J
12DCE	<28	12DCE	11
VC	<57	VC	<11

PALL CORPORATION
(ONE-STORY BLOCK BUILDING)

NOTES

1) SAMPLES CONF-1, CONF-2, CONF-3, CONF-4 AND CONF-5 WERE COLLECTED AFTER START OF PILOT TESTING TO SERVE AS PILOT TEST PROGRESS MONITORING SAMPLES.

2) FREON WAS NON-DETECTABLE AS A TIC IN ALL SAMPLE RESULTS.

3) SAMPLE 5-SB-17 WAS REEXTRACTED DUE TO EXCEEDING RECOVERY OF ONE OF THE SURROGATE COMPOUNDS. THIS IS THE REASON FOR THE ELEVATED DETECTION LIMITS.

N

0 10 20
SCALE FEET

Apex Companies, LLC
120-D Wilbur Place
Bohemia, N.Y. 11716
Phone: (631) 567-1777

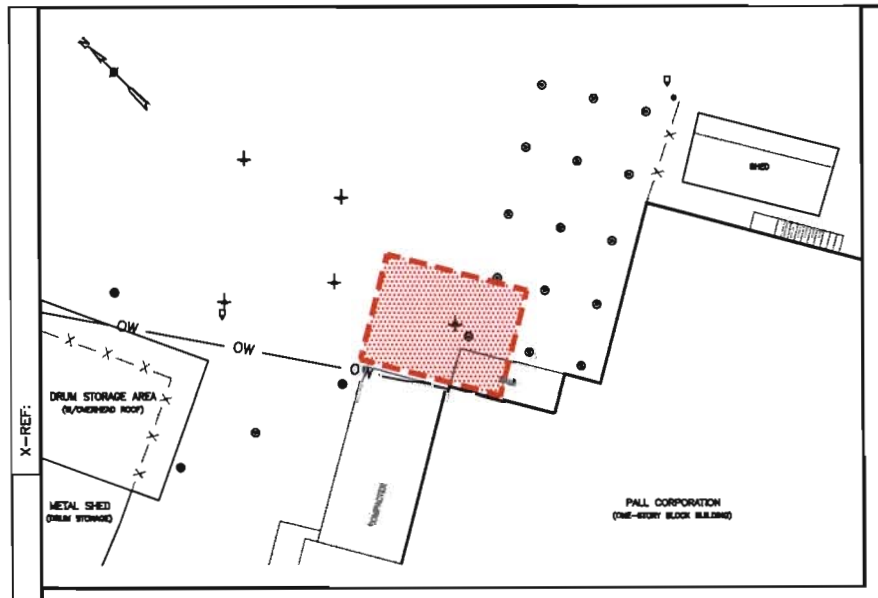
PALL

Pall Corporation
30 Sea Cliff Avenue
Glen Cove, New York 11542

PROPOSED EXCAVATION AREA

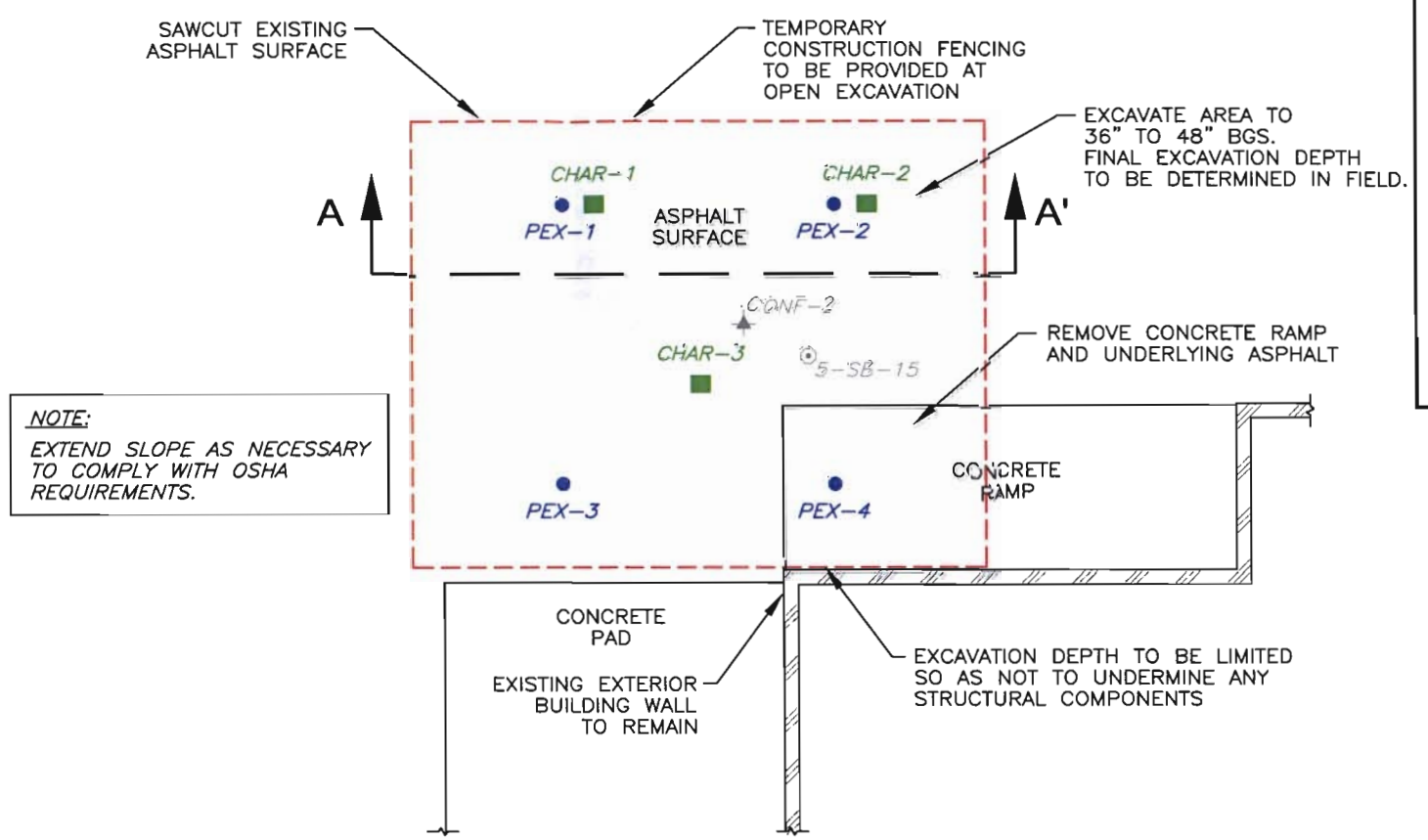
DATE:	12/18/07	DRAWN:	TRS
REV. NO.	-	DESIGNED:	DJS
PROJECT NO.	8501.008	FILE:	PALLSVESOILDATA

FIGURE: 3



AREA OF EXCAVATION

NOT TO SCALE



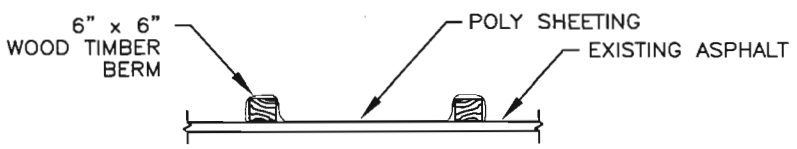
NOTE:
EXTEND SLOPE AS NECESSARY TO COMPLY WITH OSHA REQUIREMENTS.

LEGEND

- PROPOSED AREA OF EXCAVATION
- PEX-2 — POST-EXCAVATION SAMPLE
- CHAR-2 — CHARACTERIZATION SAMPLE LOCATION
- CONFIRMATORY SOIL BORING LOCATION (COLLECTED 3/01)
- RI SOIL BORING LOCATION
- FENCE
- OW — OVERHEAD WIRE
- UP — UTILITY POLE
- GV — GAS VALVE

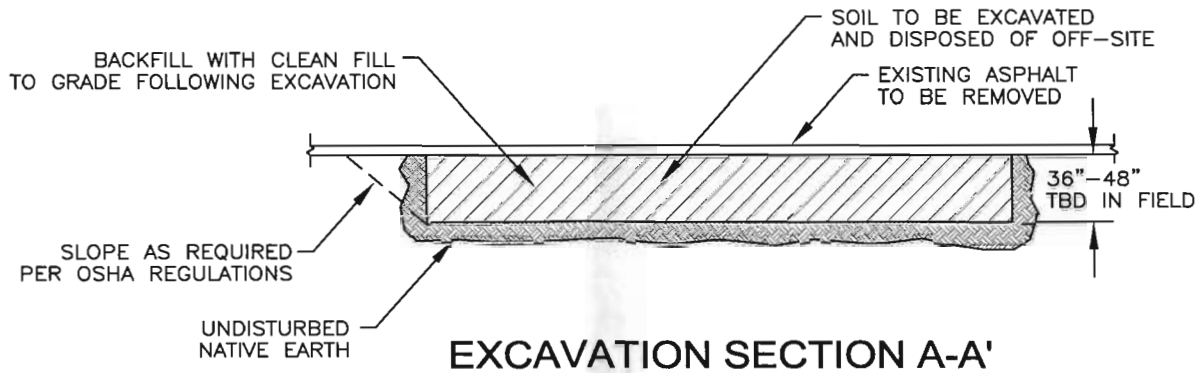
EXCAVATION PLAN

NOT TO SCALE



TYPICAL DECON AND STAGING AREA CONSTRUCTION

NOT TO SCALE



EXCAVATION SECTION A-A'

NOT TO SCALE

Apex Companies, LLC
120-D Wilbur Place
Bohemia, N.Y. 11716
Phone: (631) 567-1777

REV. NO.:	DRAWING DATE:	ACAD FILE:
–	12/18/07	EXCAVATION DETAILS

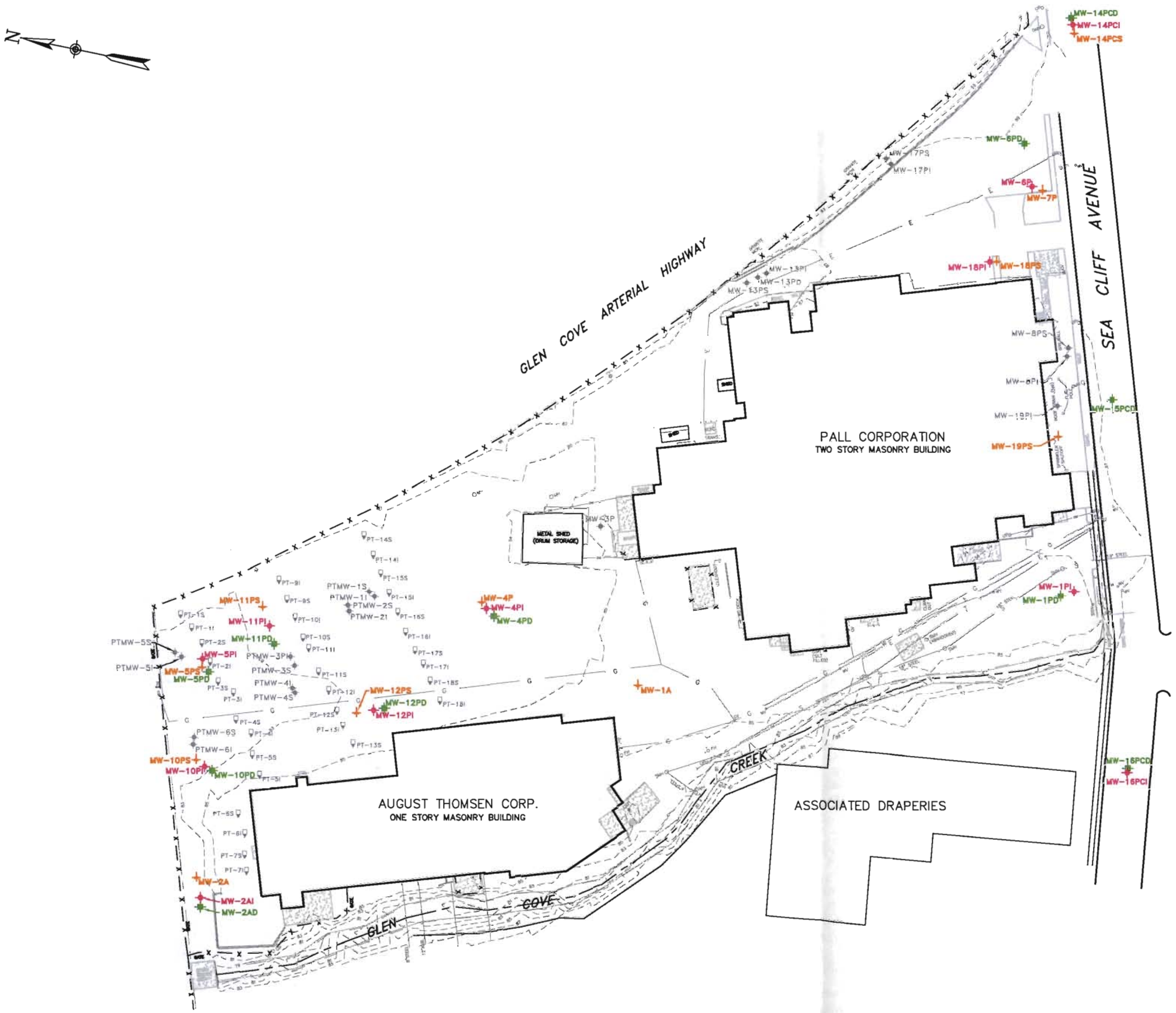
EXCAVATION DETAILS

CLIENT:		PM:
PALL CORPORATION		DS
LOCATION: 30 SEA CLIFF AVENUE GLEN COVE, NEW YORK		PE/RG:
DESIGNED: SEE SOURCE	DETAILED: TS	PROJECT NO.: 8501.008	FIGURE: 4

X-REF:

REPORT:

DRAWING FILE LOCATION: P:\ACTIVE PROJECTS.../PALL/8501 GLEN COVE/DRAWINGS & CADD/1207



LEGEND

- MONITORING WELL – SHALLOW
- MONITORING WELL – INTERMEDIATE
- MONITORING WELL – DEEP
- MONITORING WELL
- INJECTION WELL
- ABANDONED/DESTROYED MONITORING WELL
- HYD FIRE HYDRANT
- CB CATCH BASIN
- WV WATER VALVE
- GV GAS VALVE
- SMH SEWER MANHOLE
- MH MANHOLE
- UP UTILITY POLE
- E — UNDERGROUND ELECTRIC LINE
- T — UNDERGROUND TELEPHONE LINE
- S — SANITARY SEWER
- G — UNDERGROUND GAS LINE
- W — UNDERGROUND WATER LINE
- OW — OVERHEAD WIRE

SOURCE: *WELL LOCATIONS AND ELEVATIONS*
MUNICIPAL LAND SURVEY P.C.
MIDDLE ISLAND, N.Y. 11953
DATE: 9/2/04

BUILDING LOCATIONS BASED ON SURVEY BY
SYDNEY B. BOWNE & SON
MINEOLA AND SMITHTOWN, N.Y.
DATE: 2/25/00 REVISED: 3/16/00
LOTS 37, 246, 273, 314, 319–320
BLOCK H, SECTION 21

SITE FEATURES BASED ON MAP FROM
"FOCUSED REMEDIAL INVESTIGATION REPORT"
TAMS and GZA
DATE: 4/99

OFF–SITE FEATURES BASED ON MAP OF
"PROPOSED GLEN COVE DAY CARE CENTER"
BENTEL & BENTEL, AIA
DATE: 3/16/91

SURVEY NEW WELL LOCATIONS/ELEVATIONS
APEX FIELD PERSONNEL
DATE: 2/1/06

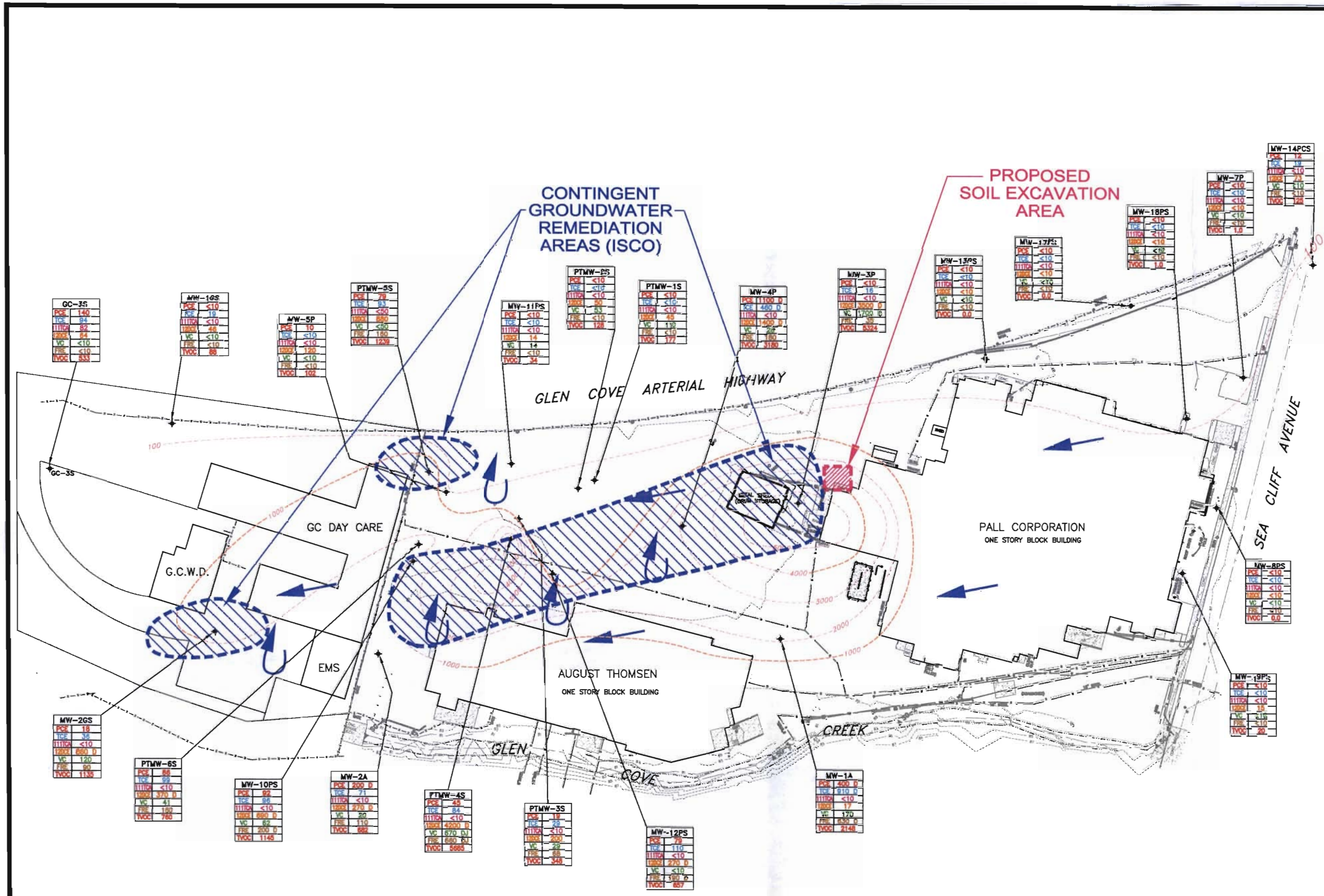
0 80 160
SCALE FEET

Apex Companies, LLC
120–D Wilbur Place
Bohemia, N.Y. 11716
Phone: (631) 567–1777

REV. NO.:	DRAWING DATE:	ACAD FILE:
–	12/17/07	PALLGWM1207

GROUNDWATER MONITORING WELLS FOR SHORT TERM MONITORING

CLIENT:			PM:
PALL CORPORATION			DS
LOCATION: 30 SEA CLIFF AVENUE GLEN COVE, NEW YORK			PE/RG:
DESIGNED: SEE SOURCE	DETAILED: TS	PROJECT NO.: 8501	FIGURE: 5



NOTE:

Total VOC contours are preliminary only to support discussion in the text.

NO.	DATE	BY	REVISION

LEGEND

- MW-12PS — SHALLOW MONITORING WELL
- SOIL EXCAVATION AREA
- GROUNDWATER REMEDIATION AREAS (CONCENTRATION ABOVE ORDER OF MAGNITUDE AT UPGRADIENT LEVELS)
- INFERRED CONTOUR OF TOTAL VOC's IN SHALLOW GROUNDWATER (3/27-4/3/06)
- APPROXIMATE HORIZONTAL GROUNDWATER FLOW DIRECTION
- AREA WHERE UPFLOW FROM OU-2 INTO OU-1 HAS BEEN EVIDENT

DATA BOX LEGEND

MW-12PS	WELL ID
PCE	TETRACHLOROETHENE (ug/L)
TCE	TRICHLOROETHENE (ug/L)
111TCA	1,1,1-TRICHLOROETHANE (ug/L)
12DCE	1,2-DICHLOROETHENE (ug/L)
VC	VINYL CHLORIDE (ug/L)
FRE	FREON 113 (ug/L)
TVOC	TOTAL VOLATILE ORGANIC COMPOUNDS (ug/L)

E – COMPOUND WHOSE CONCENTRATIONS EXCEEDED THE CALIBRATION RANGE OF THE GC/MS. SAMPLE WAS DILUTED AND REANALYZED.

J – ESTIMATED VALUE

D – COMPOUND IS IDENTIFIED AT A SECONDARY DILUTION FACTOR

N

40 0 40 80
SCALE FEET

SIGNATURE	DATE
REVIEW ENGR:	
PROJECT ENGR:	
PROJECT MGR:	
CLIENT:	

Apex environmental, inc.
120-D Wilbur Place
Bohemia, N.Y. 11716
Phone: (631) 567-1777

PALL

PALL CORPORATION

30 SEA CLIFF AVENUE
GLEN COVE, NEW YORK

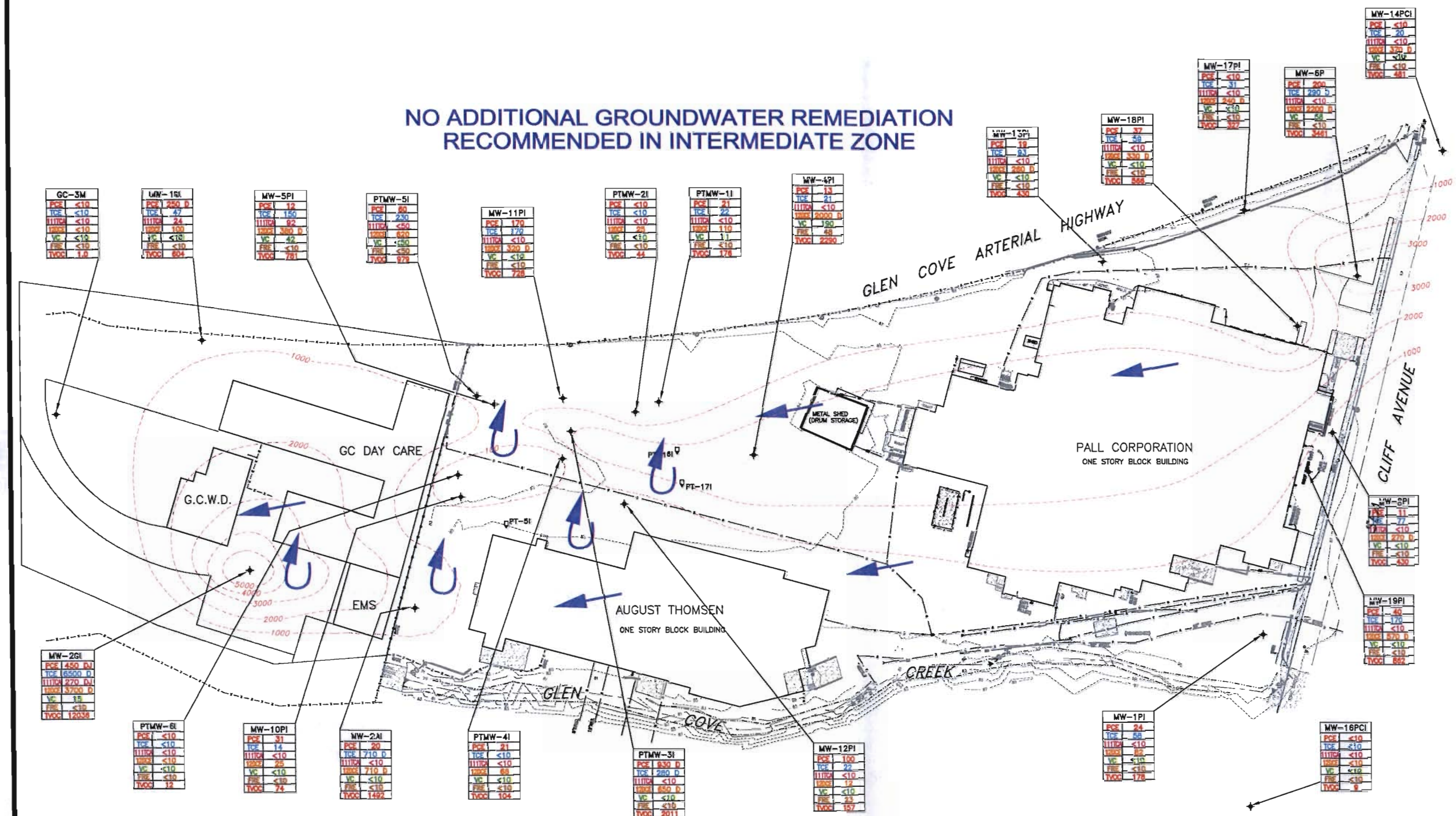
REMEDIATION AREAS (SHALLOW ZONE)

DESIGNED BY:	DETAILED BY:	CHECKED BY:
DJS	TRS	

DRAWING DATE:	ACAD FILE:
12/18/07	REMAREA-SHALLOW
PROJECT NO.: 8501.007	CONTRACT:
DRAWING: 6	REVISION:

All wells < upgradient levels at MW-6P except MW-2GI which was artesian with flow in from OU-2.

NO ADDITIONAL GROUNDWATER REMEDIATION RECOMMENDED IN INTERMEDIATE ZONE



NO.	DATE	BY	REVISION

LEGEND

MW-4PI — INTERMEDIATE GROUNDWATER MONITORING WELL

INFERRED CONTOUR OF TOTAL VOC'S IN INTERMEDIATE GROUNDWATER (3/27-4/3/08)

APPROXIMATE HORIZONTAL GROUNDWATER FLOW DIRECTION

AREA WHERE UPFLOW FORM OU-2 INTO OU-1 HAS BEEN EVIDENT

DATA BOX LEGEND

MW-12PI	WELL ID
PCE 100	TETRACHLOROETHENE (ug/L)
TCE 22	TRICHLOROETHENE (ug/L)
1111TCA <10	1,1,1-TRICHLOROETHANE (ug/L)
1DCE 12	1,1-DICHLOROETHENE (ug/L)
VC <10	VINYL CHLORIDE (ug/L)
FRE 23	FREON 113 (ug/L)

E - COMPOUND WHOSE CONCENTRATIONS EXCEEDED THE CALIBRATION RANGE OF THE GC/MS. SAMPLE WAS DILUTED AND REANALYZED.

J - ESTIMATED VALUE

D - COMPOUND IS IDENTIFIED AT A SECONDARY DILUTION FACTOR

N

40 0 40 80
SCALE FEET

SIGNATURE	DATE
REVIEW ENGR:	
PROJECT ENGR:	
PROJECT MGR:	
CLIENT:	

Apex environmental, inc.
120-D Wilbur Place
Bohemia, N.Y. 11716
Phone: (631) 567-1777

PALL

PALL CORPORATION

30 SEA CLIFF AVENUE
GLEN COVE, NEW YORK

REMEDIATION AREAS (INTERMEDIATE ZONE)

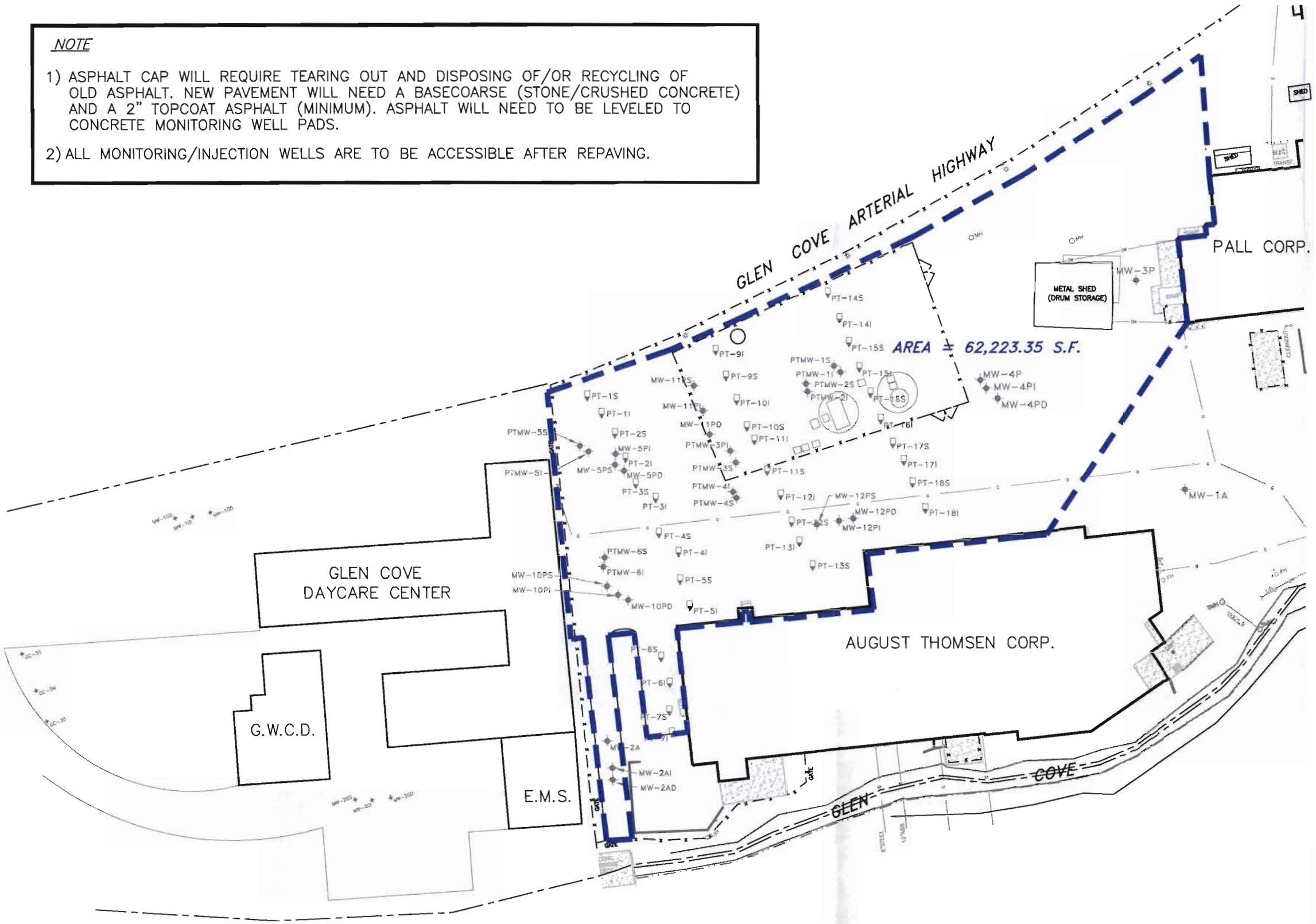
DESIGNED BY:	DETAILED BY:	CHECKED BY:
DJS	TRS	

DRAWING DATE:	ACAD FILE:
12/18/07	REMAREAS-INTERMEDIATE
PROJECT NO.:	CONTRACT:
8501.001	
DRAWING:	REVISION:
7	

NOTE

1) ASPHALT CAP WILL REQUIRE TEARING OUT AND DISPOSING OF/OR RECYCLING OF OLD ASPHALT. NEW PAVEMENT WILL NEED A BASECOARSE (STONE/CRUSHED CONCRETE) AND A 2" TOPCOAT ASPHALT (MINIMUM). ASPHALT WILL NEED TO BE LEVELED TO CONCRETE MONITORING WELL PADS.

2) ALL MONITORING/INJECTION WELLS ARE TO BE ACCESSIBLE AFTER REPAVING.



LEGEND

- NEW ASPHALT PAVEMENT
- PT-16S INJECTION WELL
- PTMW-2I MONITORING WELL
- HYD FIRE HYDRANT
- CB CATCH BASIN
- WV WATER VALVE
- GV GAS VALVE
- SMH SEWER MANHOLE
- MH MANHOLE
- UP UTILITY POLE
- E UNDERGROUND ELECTRIC LINE
- T UNDERGROUND TELEPHONE LINE
- S SANITARY SEWER
- G UNDERGROUND GAS LINE
- W UNDERGROUND WATER LINE
- OW OVERHEAD WIRE
- X CHAIN-LINK FENCE

N

0 60 120

SCALE FEET

SOURCE: *WELL LOCATIONS AND ELEVATIONS*
MUNICIPAL LAND SURVEY P.C.
MIDDLE ISLAND, N.Y. 11953
DATE: 9/2/04

BUILDING LOCATIONS BASED ON SURVEY BY
SYDNEY B. BOWNE & SON
MINEOLA AND SMITHTOWN, N.Y.
DATE: 2/25/00 REVISED: 3/16/00
LOTS 37, 246, 273, 314, 319-320
BLOCK H, SECTION 21

SITE FEATURES BASED ON MAP FROM
"FOCUSED REMEDIAL INVESTIGATION REPORT"
TAMS and GZA

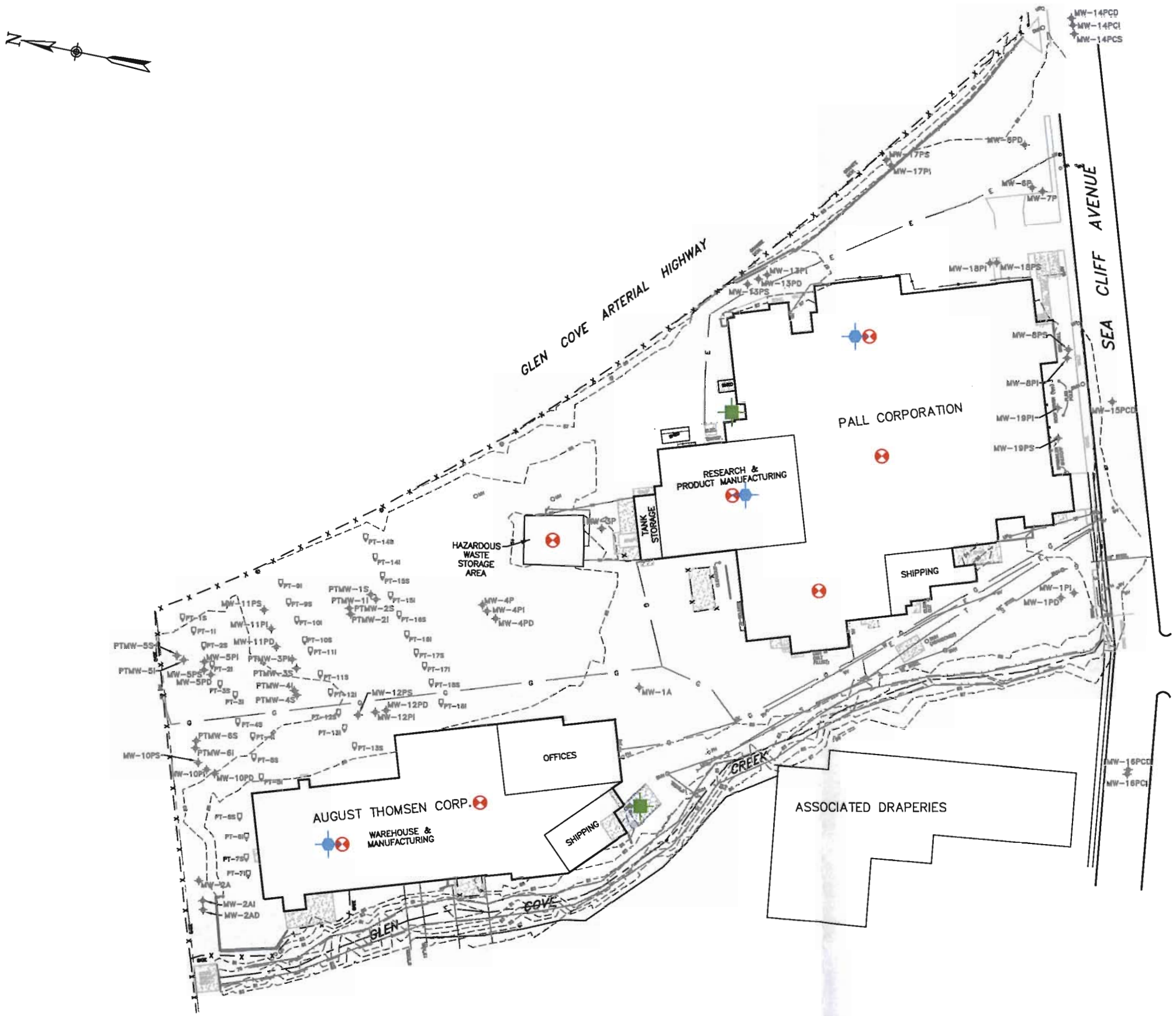
Apex Companies, LLC
120-D Wilbur Place
Bohemia, N.Y. 11716
Phone: (631) 567-1777

REV. NO.:	DRAWING DATE:	ACAD FILE:
-	12/17/07	PALLASPHALTCAP

PROPOSED ASPHALT CAPPING PLAN

CLIENT:	PM:
PALL CORPORATION	DS
LOCATION: 30 SEA CLIFF AVENUE GLEN COVE, NEW YORK	PE/RG:

DESIGNED:	DETAILED:	PROJECT NO.:	FIGURE:
SEE SOURCE	TS	8501	8



LEGEND

- PROPOSED SOIL VAPOR SAMPLING POINT
- PROPOSED OUTDOOR AMBIENT AIR SAMPLE LOCATION
- PROPOSED INDOOR AMBIENT AIR SAMPLE LOCATION
- MONITORING WELL
- INJECTION WELL
- ABANDONED/DESTROYED MONITORING WELL
- HYD — FIRE HYDRANT
- CB — CATCH BASIN
- WV — WATER VALVE
- GV — GAS VALVE
- SMH — SEWER MANHOLE
- MH — MANHOLE
- UP — UTILITY POLE
- — E — UNDERGROUND ELECTRIC LINE
- — T — UNDERGROUND TELEPHONE LINE
- — S — SANITARY SEWER
- — G — UNDERGROUND GAS LINE
- — W — UNDERGROUND WATER LINE
- — OW — OVERHEAD WIRE

SOURCE: *WELL LOCATIONS AND ELEVATIONS*
MUNICIPAL LAND SURVEY P.C.
MIDDLE ISLAND, N.Y. 11953
DATE: 9/2/04

BUILDING LOCATIONS BASED ON SURVEY BY
SYDNEY B. BOWNE & SON
MINEOLA AND SMITHTOWN, N.Y.
DATE: 2/25/00 REVISED: 3/16/00
LOTS 37, 246, 273, 314, 319–320
BLOCK H, SECTION 21

SITE FEATURES BASED ON MAP FROM
"FOCUSED REMEDIAL INVESTIGATION REPORT"
TAMS and GZA
DATE: 4/99

OFF–SITE FEATURES BASED ON MAP OF
"PROPOSED GLEN COVE DAY CARE CENTER"
BENTEL & BENTEL, AIA
DATE: 3/16/91

SURVEY NEW WELL LOCATIONS/ELEVATIONS
APEX FIELD PERSONNEL
DATE: 2/1/06

0 80 160
SCALE FEET

Apex Companies, LLC
120–D Wilbur Place
Bohemia, N.Y. 11716
Phone: (631) 567–1777

REV. NO.:	DRAWING DATE:	ACAD FILE:
–	12/14/07	PALLSVISP1207

PROPOSED SOIL VAPOR INVESTIGATION SAMPLING POINTS

CLIENT:		PM:
FORMER PALL CORPORATION SITE		DS
LOCATION: 30 SEA CLIFF AVENUE GLEN COVE, NEW YORK		PE/RG:
DESIGNED: SEE SOURCE	DETAILED: TS	PROJECT NO.: 8501.008	FIGURE: 9